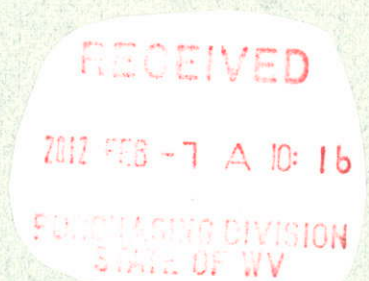


**West Virginia Army National Guard
Mail Processing Center | ID Card Issue Center
Camp Dawson
Kingwood, West Virginia**

**Expression of Interest
for
Architectural & Engineering Services
RFQ#: DEFK12012**

**February 7, 2012
1:30 pm**



Par-a-digm - (pă-r'-ə-dīm') n. An example that serves as pattern or model.



February 3, 2012

Ms. Tara Lyle
Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

Re: DEFK12012 – Mail Processing Center and ID Card Issue Center, Camp Dawson, Kingwood, WV

Dear Ms. Lyle:

On behalf of **Paradigm Architecture Inc.** and our team members, it is my pleasure to present this proposal for the Mail Processing Center and ID Card Issue Center at Camp Dawson in Kingwood, West Virginia. As residents of West Virginia, we appreciate what the National Guard does for our country and communities, and we are excited about the opportunity to work on such an important project!

We feel that we are **uniquely qualified** for this project because of the following attributes and experience:

- Local presence
- Implementation of Anti-Terrorism and Force Protection (AT/FP) requirements
- Similar project types, including Mail Processing, Storage/Distribution, and X-Ray
- Pre-engineered buildings
- Federal and State Design Guidelines
- Multiple LEED Certified and Energy Conservation projects
- Quality Control
- Successful record of budget control

N
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305--22

At Paradigm, we believe that **service** and **responsiveness** are critical to project success and client satisfaction. Located in Morgantown, we are well positioned to respond rapidly throughout the entire project's design and construction. We have included several key projects with this proposal to demonstrate our expertise in designing your facility. In particular, bring to your attention the new **US Dept of Energy Office of Legacy Management [and Storage Facility]**, the **CVS Caremark Mail Processing Facility**, and the **Mining Controls Facility**. Each of these projects represents one or more key aspects of your proposed facility. In addition, we have recently been awarded an IDIQ Contract for A/E Services with the **US Postal Services**. I encourage you to contact any of our references to confirm our past performance.

We have assembled team of highly qualified consultants with appropriate project experience, technical ability, and close proximity to complete this project. **KCI Technologies** will provide civil engineering. **Allegheny Design Services** will provide structural engineering. **H. F. Lenz Company** will provide Mechanical, Electrical, Plumbing and Commissioning Services. We have successfully completed many projects together in north central West Virginia.

It is our **goal** on every project to provide a high level of personal service and design solutions that reflect the unique requirements of our clients' project. We look forward to the opportunity to work with the West Virginia National Guard!

Best regards,

Paul A. Walker, AIA
President



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

Request for Quotation

RFQ NUMBER

DEFK12012

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

TARA LYLE

304-558-2544

RFQ COPY

TYPE NAME/ADDRESS HERE

Paradigm Architecture, Inc.
2223 Cheat Road, Suite 300
Morgantown, WV 26508

DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
12/22/2011				

BID OPENING DATE:

02/07/2012

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-07		
A/E SERVICES						
EXPRESSION OF INTEREST (EOI)						
THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, DIVISION OF ENGINEERING & FACILITIES, WV ARMY NATIONAL GUARD, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ARCHITECTURAL ENGINEERING DESIGN SERVICES FOR A MAIL PROCESSING CENTER AND ID CARD ISSUE CENTER AT CAMP DAWSON LOCATED IN KINGWOOD, WV PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO TARA LYLE VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS EOI, VIA FAX AT 304-558-4115, OR VIA EMAIL AT TARA.L.LYLE@WV.GOV.						
DEADLINE FOR ALL TECHNICAL QUESTIONS IS 01/20/2012 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.						
CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	304.284.5015	February 3, 2012
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	63-1263568	

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.
5. Payment may only be made after the delivery and acceptance of goods or services.
6. Interest may be paid for late payment in accordance with the *West Virginia Code*.
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process.
11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.html and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.
2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130
5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).



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

Request for Quotation

RFQ NUMBER

DEFK12012

PAGE

2

ADDRESS CORRESPONDENCE TO ATTENTION OF:

TARA LYLE

304-558-2544

RFQ COPY

TYPE NAME/ADDRESS HERE

Paradigm Architecture, Inc.
2223 Cheat Road, Suite 300
Morgantown, WV 26508

DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV

25311-1099 304-341-6368

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12/22/2011				

BID OPENING DATE:

02/07/2012

BID OPENING TIME

01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.						
NOTICE						
A SIGNED BID MUST BE SUBMITTED TO:						
DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130						
THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:						
SEALED BID						
BUYER:-----TL/32-----						
RFQ. NO.:-----DEFK12012-----						
BID OPENING DATE:-----02/07/2012-----						
BID OPENING TIME:-----1:30 PM-----						
PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	304.284.5015	February 3, 2012
TITLE	FAX	
President	63-1263568	

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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

Request for Quotation

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DEFK12012

PAGE

3

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TARA LYLE
304-558-2544

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Paradigm Architecture, Inc.
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Morgantown, WV 26508

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12/22/2011				

BID OPENING DATE:

02/07/2012

BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
TO CONTACT YOU REGARDING YOUR BID:						
304.284.5014						
CONTACT PERSON (PLEASE PRINT CLEARLY):						
Paul A. Walker, AIA						
***** THIS IS THE END OF RFQ DEFK12012 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE

TELEPHONE

304.284.5015

DATE

February 3, 2012

TITLE

President

FEIN

63-1263568

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

000015

RFQ No. **DEFK12012**STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: 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 the debt owned is an amount greater than one thousand dollars in the aggregate

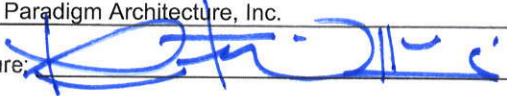
DEFINITIONS:

"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.

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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.

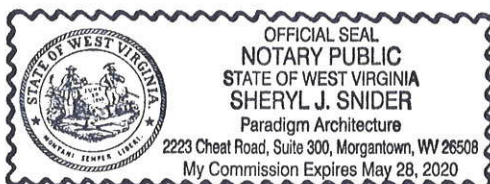
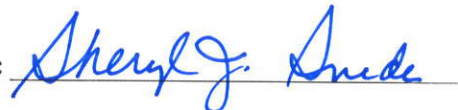
EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a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

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

WITNESS THE FOLLOWING SIGNATUREVendor's Name: Paradigm Architecture, Inc.Authorized Signature: Date: February 3, 2012State of West VirginiaCounty of Monongalia, to-wit:Taken, subscribed, and sworn to before me this 3rd day of February, 2012.My Commission expires May 28, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC



Purchasing Affidavit (Revised 12/15/09)

Firm History



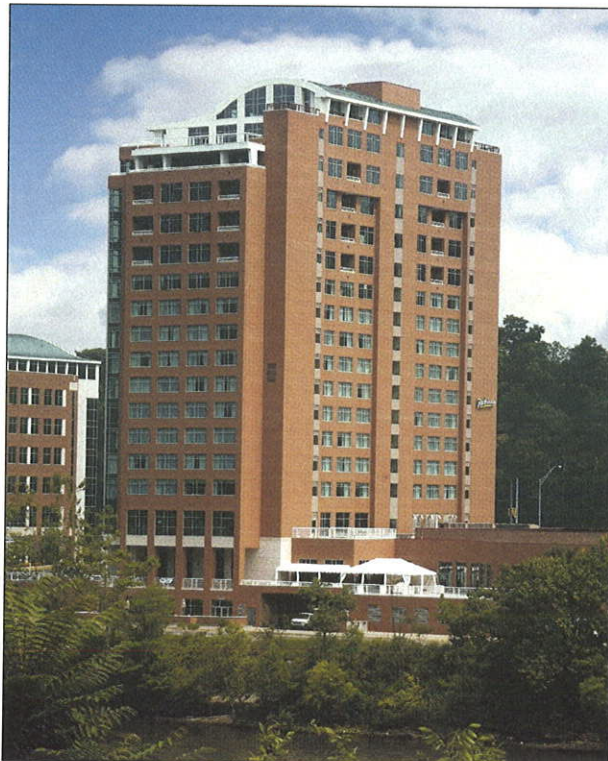
Paradigm Architecture was formed in October of 2000 by a group of likeminded individuals who believe that architecture provides the opportunity to practice the career that we love. We as individuals and as team members of a firm have a responsibility to exhibit that passion in the manner in which we live our lives.

We chose the name Paradigm because it means a model that serves as an example:

This represents our highest ideals...
that our architecture would serve as an example
that our client service would serve as an example
that our service to our God would serve as an example.

Originally established in Birmingham, Alabama, Paradigm Architecture expanded in 2002 by opening an office in Morgantown, West Virginia. Our staff of eleven includes five registered architects, one intern architect, three CAD/BIM technicians, and two administrative assistants. We utilize the most current technical hardware and software including AutoCAD, Revit, 3D site and building rendering programs, and SpecLink specifications software.

It is our belief that we should assemble consultants that are uniquely skilled to satisfy the particular requirements of a project. We have close professional relationships with many engineers and specialized consultants and choose those that we feel will best serve the technical specialization, location of the work and sometimes even personality of the client. We choose not to work with firms who do not share our commitment to service and quality.



Two
Waterfront
Place



Waterfront Marina



Para·digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Firm Profile



Trinity Christian School



Trinity Christian School



Trinity Christian School

Paradigm by definition means an example that serves as pattern or model. The goal of Paradigm Architecture is to be an example in client service, design quality, and technical proficiency. We practice architecture. For every project, Paradigm works closely with the unique requirements of the particular client to design a structure that reflects both the appropriate image and proper function to optimize the working or living environment.

EXPERIENCE

Paradigm Architecture has experience in a broad range of project types. This work includes private individual, corporate, governmental, educational, and institutional clients.

Governmental

Members of Paradigm have been involved in various government projects at the Federal, State, and Local levels. Federal Clients include the GSA, Social Security Administration, Federal Bureau of Investigation, Drug Enforcement Agency, Small Business Administration, Mine Safety and Health Administration, USDA, and DOE. These projects range from new construction for new buildings to tenant fitups in shell buildings. State and local agencies include Department of Natural Resources, multiple higher education clients, Morgantown Chamber of Commerce, and Trussville City Hall.

Educational

Educational experience includes administrative office space, parking facilities, student housing, libraries, student centers, athletic facilities, master planning, classrooms, and research laboratory facilities. We have worked on campuses that include: WV School of Osteopathic Medicine, West Virginia University, Fairmont State University, Davis and Elkins College, The College of West Virginia, Hampden Sydney College, Wake Forest University, Ayers State Technical College, The University of North Carolina at Greensboro, and The University of Alabama at Birmingham. Paradigm's staff has also been involved in educational facilities at the elementary and high school level including new and renovated buildings.

Healthcare/Institutional

Medical and retirement life care projects dominate our staff's institutional portfolio. Medical projects include master planning, outpatient surgery centers, patient care rooms, emergency medicine, surgery suites, labor & delivery suites, Magnetic Resonance Imaging, X-ray diagnostic services, and heart catheterization spaces for hospital clients, radiation and chemotherapy treatment areas in cancer centers, and professional medical office space for private physicians. Retirement life care facilities range from independent elderly housing and assisted living facilities to full nursing care centers.



Trinity Christian School

Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Firm Profile



Russell Medical Center



Glenmark Office Building

Parking

Paradigm Architecture has a wide variety of parking facility experience. Examples include the award winning WVU Transportation Center and Garage, FSU Parking Garage, MEC Garage, and One Waterfront Place Garage. In addition, we have completed mixed use facilities that include integrated structured parking. These include housing projects such as The View at the Park Phase 1, The Dayton, and Avery Court. We also have performed parking garage feasibility studies and post construction reviews for clients such as Fairmont State University. In addition, we are currently working with Davis and Elkins College on a parking feasibility study which includes a future parking facility. We recently completed a master planning contract for WV School of Osteopathic medicine which will include transportation/parking studies and future growth plans.

Corporate

Paradigm has designed entire office buildings as well as tenant fit-up spaces for clients such as Jackson Kelly PLLC, A.G. Edwards, Acordia, Petroplus & Associates Inc., National Biometric Security Project, Simpson & Osborne, DMJM Harris, and the West Virginia University Foundation. Projects also include banking regional and branch offices.

Master Planning

Paradigm Architecture has successfully completed master planning for the Waterfront Development and Trinity Christian School, in Morgantown, Avery Court in Parkersburg, and Glade Springs Resort, in Daniels. In addition, we have performed master planning for Asian Plaza in Birmingham, AL, and have recently updated the master plan for Russell Medical Center in Alexander City, AL, as well as the West Virginia School of Osteopathic Medicine in Lewisburg, WV.

Residential

Paradigm's residential experience spans a variety of client types. Student Housing/dormitory facilities for higher education, hotel projects, elderly housing, and private residential that includes single family homes, townhouses, and high end condominium units.



*WVU
Downtown
Student
Housing*



Par·a·digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Sustainable Design



LEED / Green Building

Today, everyone is concerned with energy conservation, life cycle analysis, and green building techniques; and Paradigm Architecture is no different. We have completed two projects that are or will be LEED Certified.

U.S. Department of Energy Office of Legacy Management, Morgantown, WV
LEED Gold Certified — Core & Shell
LEED Gold Certified — Commercial Interiors

U.S. Department of Agriculture Office Building, Morgantown, WV
LEED Certified



These projects have incorporated sustainable design elements in all elements of construction such as white roofs, energy efficient building envelopes, non irrigated landscaping, on site bio filtration systems, use of local and regional materials, indoor air quality, enhanced commissioning, building automation controls, occupancy sensors, energy recovery systems, and energy efficient mechanical systems, energy modeling, low flow plumbing fixtures, sunshades, and daylighting.

In addition, we have been able to assist clients who are interested in applying green building techniques such as improving the energy efficiency of the building and reducing long term life cycle costs, even though they may not wish to pursue LEED Certification. An example of this includes the Morgantown Event Center and Garage. Although it was originally designed for LEED Certification, the Owner decided not to pursue. As a method of organization, we will utilize the LEED Checklist, even though the Owner does not want to pursue certification.

We have one LEED Accredited Professional on staff and others who are pursuing green building education. All of our consultants have experience with not only green building construction, but also life cycle cost evaluations, value engineering, and materials/systems comparisons in order to give the Owner the best value in a project.



U.S. Department of Energy



U.S. Department of Agriculture

Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Honors & Awards



WVU Transportation Center
& Garage



Upper Monongahela
River Center

Upper
Monongahela
River
Center

Excellence in Construction by the Associated Builders & Contractors, Inc.

- 2010 – Morgantown Event Center
Morgantown, WV
- 2010 – GSA USDA Office Building
Morgantown, WV
- 2010 – WVU Transportation Center
and Garage, Morgantown, WV
- 2007 – Waterfront Marina
Morgantown, WV
- 2007 – Chestnut Ridge Church
Morgantown, WV
- 2004 – Madden Student Center at
Davis and Elkins College, WV
- 2004 – Two Waterfront Place Hotel
And Conference Center
Morgantown, WV
- 2003 – The Jackson Kelly Building
Morgantown, WV
- 2001 – Russell Cancer Center
Alexander City, AL

Alabama Masonry Institute

- 2004 – Top Block Award—Russell
Professional Office Building III
Alexander City, AL

Main Street Morgantown

- 2008 – Best New Construction Award
Marina Tower, Morgantown, WV
- 2008 – Best New Office Award, Spilman
Thomas Battle, Morgantown, WV

Pittsburgh Corning Glass Block

- 2004 – Circle of Design Excellence
Award
Lightning Strikes Family Fun
Center, Trussville, AL

West Virginia American Institute of Architects

- 2010 – Honor Award, Upper
Monongahela River Center
Morgantown, WV
- 2010 – Merit Award, West Virginia
University Transportation Center
and Garage, Morgantown, WV

International Parking Institute Awards of Excellence

- 2011 — Honorable Mention, Mountaineer Station (WVU Transportation Center), Morgantown, WV



Par·a·digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Organization Chart



West Virginia Army National Guard
Owner

Paradigm Architecture
Architecture & Project Management

Paul A. Walker, AIA
Principal-in-Charge

Todd Christopher AIA
Project Manager

Grant Gramstad, AIA
Project Architect

David H. Snider AIA
Specifications

Aaron White
CAD/Bim Manager, Production

Tyler Etris
Intern, CAD/Bim Manager, Production

Steve Konya
Construction Administration

**Allegheny Design
Services**
Structural

David R. Simpson, PE
Jason D. Robinson, EI

KCI Technologies
Civil

John Rudmann, PE, RLA
Daniel Garcia, PE
Eric Lord, RLA

H. F. Lenz
*Mechanical/Electrical/Plumbing
Commissioning*

Thomas F. Deter, PE
Stephen P. Mulhollen, PE
John C. Stewart, PE
Gregory D. Rummel, CPD
Paul E. Petrilli, PE

Paul A. Walker, AIA

President, Principal-in-Charge and Design Architect



Mr. Walker has twenty-nine years of experience as an architect and received his registration in 1986. He became a business owner in October 2000 when he created Paradigm Architecture. Mr. Walker's design responsibilities include programming, development of construction documents, project management, and construction administration. Among the variety of projects he has designed and supervised are: commercial, corporate, educational, governmental, industrial, institutional, recreational, religious, and residential. The scope of projects ranges from a few thousand dollars to over 30 million dollars.

Architectural Registration

NCARB

WV / AL / FL / MS

NC / PA / SC

Education

University of Tennessee

Knoxville, TN

Bachelor of Architecture,
1982

Professional, Civic and Other Activities

American Institute
of Architects

Board Member
Chestnut Ridge Church

**United States Department of Energy
Office of Legacy Management
Records Storage Facility
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$8 Million (Shell)

**Canaan Valley Resort State Park
Lodge Addition and Renovations
Davis, West Virginia**
Estimated Completion: Fall 2013
Cost: \$25 Million

**West Virginia University
Downtown Student Housing
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$15.3 Million

**Davis and Elkins College
Athletic Center
Elkins, West Virginia**
Completed: Spring 2007
Cost: \$5.5 Million

**Morgantown Event Center
and Parking Garage
Morgantown, West Virginia**
Completion: Spring 2010
Cost: \$26.3 Million

**Two Waterfront Place
Hotel and Conference Center
Morgantown, West Virginia**
Completed: Summer 2003
Cost: \$35 Million

**West Virginia University
Mylan Puskar Stadium
Touchdown Terrace Club Addition
Morgantown, West Virginia**
Completed: Fall 2007
Cost: \$800,000

**United States Department of Agriculture
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$6.5 Million (Shell)

**Cacapon Resort State Park
Lodge Expansion
Berkeley Springs, West Virginia**
Completed: TBD
Cost: \$22 Million

**Pillar Innovations
Morgantown, West Virginia**
Completion: Winter 2011
Cost: \$4.1 Million

**Glade Springs Resort
and Conference Center
Daniels, West Virginia**
Completed: Fall 2005
Cost: \$6 Million

**West Virginia University
Coliseum and Athletic Office Renovations
Morgantown, West Virginia**
Completed: Summer 2008
Cost: \$1.5 million

**Glade Springs Resort
Clubhouse Expansion
Daniels, West Virginia**
Completed: Summer 2006
Cost: \$1.1 Million

**West Virginia University
Intermodal Garage
Morgantown, West Virginia**
Completed: Fall 2009
Cost: \$14.5 Million

**Marina Tower
Morgantown, West Virginia**
Completed: Winter 2008
Cost: \$10 Million (Shell)

Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Todd G. Christopher, AIA

Project Manager



Mr. Christopher's responsibilities have included development of construction documents and drawings, project management, marketing presentations, bidding procedures, and construction administration. He has a combined nine years of experience in commercial, educational, governmental, and residential architecture and joined Paradigm Architecture in February 2009. Project experience includes commercial, corporate, educational, performing arts, healthcare, continuing care retirement communities, laboratories, industrial, institutional, sports facilities, and multi-family residential.

Architectural Registration

NCARB

WV / NC

Education

Virginia Polytechnic Institute
& State University
Blacksburg, VA
Master of Architecture
2002

Fairmont State College
Fairmont, WV
Bachelor of Science
in Engineering Technology
1999

Professional, Civic and Other Activities

American Institute
of Architects

U.S. Green Building Council

AIA Peer Mentor
in conjunction with
UNC Charlotte

College of Arts + Architecture

AIA Intern Development
Program Mentor

United States Department of Agriculture
Morgantown, West Virginia
Completed: Summer 2009
Cost: \$6.5 Million (Shell)

Pi Kappa Alpha
Renovation and Addition
Morgantown, West Virginia
Completed: May 2010
Cost: \$1.6 Million

Booz Allen Hamilton Office Space
Marina Tower
Morgantown, West Virginia
Estimated Completion: May 2010
Cost: \$200,000

Star City Waterfront Masterplan
Morgantown, West Virginia
Estimated Completion: Undetermined
Cost: Undetermined

GSA Office Space
Marina Tower
Morgantown, West Virginia
Completed: August 2009
Cost: \$770,000

KeyLogic Systems, Inc.
Morgantown, West Virginia
Completed: Fall 2010
Cost: \$1.5 Million

Camp Washington Carver
Feasibility Study
Clifftop, West Virginia
Estimated Completion: TBD
Cost: \$1.5 Million

University of South Carolina*
Discovery I Biomedical Research Facility
Columbia, South Carolina
Completed: Winter 2008
Cost: \$12 Million

Middletown Tractor Sales
Fairmont, West Virginia
Completed: Spring 2011
Cost: \$1.7 Million

Pillar Innovations
Morgantown, West Virginia
Completion: Winter 2011
Cost: \$4.1 Million

National Institute of Aerospace*
Hampton, Virginia
Completed: Summer 2006
Cost: \$6 Million

Cacapon Resort State Park
Lodge Expansion
Berkeley Springs, West Virginia
Completed: TBD
Cost: \$22 Million

Canaan Valley Resort State Park
Lodge Addition and Renovations
Davis, West Virginia
Estimated Completion: Fall 2013
Cost: \$25 Million

West Virginia University Greenhouse
Morgantown, West Virginia
Estimated Completion: Spring 2012
Cost: ≈\$8.8 Million

South Ridge Church
Fairmont, West Virginia
Estimated Completion: Fall 2012
Cost: \$2.2 Million

North Carolina State University*
Frank Thompson Theatre Renovation
Raleigh, North Carolina
Estimated Completion: August 2009
Cost: \$11.5 Million

*Key involvement in project with firm(s)
other than Paradigm Architecture, Inc.

Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Grant T. Gramstad, AIA

Project Architect



Mr. Gramstad has eighteen years of experience in the design industry as an intern and registered architect. He has been with Paradigm Architecture since its inception in November 2000. His roles have included project management, design, and supervision of small to mid-sized architectural projects. Project experience includes commercial, corporate, educational, governmental, healthcare, industrial, institutional, recreational, and residential.

Architectural Registration

Alabama

**CVS Caremark Mail Order Facility
Birmingham, Alabama**
Completed: 2004 through current
Cost: \$2 Million

**Glade Springs Resort
and Conference Center
Daniels, West Virginia**
Completed: Fall 2005
Cost: \$6 Million

Education

Tulane University
New Orleans, Louisiana
Master of Architecture
2004

**United States Department of Energy
Office of Legacy Management
Records Storage Facility
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$8 Million (Shell)

**Enterprise Rent-A-Car
Airport Cleanup Facility
Birmingham, Alabama**
Completed: Spring 2004
Cost: \$400,000

Tulane University
New Orleans, Louisiana
Bachelor of Architecture
Salutatorian, 1993

**Two Waterfront Place
Hotel and Conference Center
Morgantown, West Virginia**
Completed: Summer 2003
Cost: \$35 Million

**Marina Tower
Morgantown, West Virginia**
Completed: Winter 2008
Cost: \$10 Million (Shell)

University of Bath
Bath, England
Junior Year Abroad
1991-1992

**Russell Medical Center
Professional Office Building #3
Alexander City, Alabama**
Completed: Spring 2004
Cost: \$4.1 Million

**Fairmont State University
Parking Facility
Fairmont, West Virginia**
Completed: Spring 2004
Cost: \$10 Million

Professional, Civic and Other Activities

American Institute
of Architects

Certified Construction
Contract Administrator

**Benjamin Russell High School
Addition and Renovations
Valley, Alabama**
Estimated Completion: 2010
Cost: \$2.5 Million

**The View at the Park
Morgantown, West Virginia**
Completed: Summer 2004
Cost: \$6 Million

**Morgantown Event Center
and Parking Garage
Morgantown, West Virginia**
Completion: Spring 2010
Cost: \$26.3 Million

**Waterfront Marina
and Boathouse Bistro
Morgantown, West Virginia**
Completed: Summer 2007
Cost: \$4.2 Million

**CMC Metal Recyclers Baler Building
Birmingham, Alabama**
Completed: Winter 2009
Cost: \$550,000

**Coca-Cola Cross-Dock Facility
Walker County, Alabama**
Completed: Fall 2002
Cost: \$800,000

**West Virginia University
Downtown Student Housing
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$15.3 Million

**Performance Fitness
and Trussville Rehab
Trussville, Alabama**
Completed: Fall 2003
Cost: \$1.5 Million

David H. Snider, AIA

Specifications



Mr. Snider graduated from Auburn University with a degree in architecture and has practiced in North Carolina, Alabama, and West Virginia. He has spent the last eleven years of his twenty-seven year career with Paradigm Architecture. His responsibilities with Paradigm Architecture have included project management, construction documents, contract administration, and writing specifications. Project experience includes educational, healthcare, churches, libraries, schools, historic office buildings, airports, and commercial facilities.

Architectural Registration

NC

AL—Pending

Education

Auburn University
Auburn, Alabama
Bachelor of Architecture
1984

Roofing Technology
The Roofing Industry
Educational Institute
1995

Professional, Civic and Other Activities

American Institute
of Architects

**United States Department of Agriculture
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$6.5 Million (Shell)

**West Virginia University
Mylan Puskas Stadium
Touchdown Terrace Club Addition
Morgantown, West Virginia**
Completed: Fall 2007
Cost: \$800,000

**Two Waterfront Place
Hotel and Conference Center
Morgantown, West Virginia**
Completed: Summer 2003
Cost: \$35 Million

**Glade Springs Resort
and Conference Center
Daniels, West Virginia**
Completed: Fall 2005
Cost: \$6 Million

**Davis and Elkins College
Athletic Center
Elkins, West Virginia**
Completed: Spring 2007
Cost: \$5.5 Million

**Fairmont State University
Parking Facility
Fairmont, West Virginia**
Completed: Spring 2004
Cost: \$10 Million

**Russell Medical Center
Professional Office Building #3
Alexander City, Alabama**
Completed: Spring 2004
Cost: \$4.1 Million

**The View at the Park
Morgantown, West Virginia**
Completed: Summer 2004
Cost: \$6 Million

**Davis and Elkins College
Madden Student Center
Elkins, West Virginia**
Completed: Spring 2003
Cost: \$1.5 Million

**Lanier Hospital
ICU Renovations
Valley, Alabama**
Completed: Fall 2008
Cost: \$1.6 Million

**Fairmont State University
Colebank Hall Renovations
Fairmont, West Virginia**
Completed: Winter 2007
Cost: \$1.5 Million

**Trinity Christian School
Morgantown, West Virginia**
Completed: Summer 2005
Cost: \$8 Million

**Waterfront Marina
and Boathouse Bistro
Morgantown, West Virginia**
Completed: Summer 2007
Cost: \$4.2 Million

**Morgantown Event Center
and Parking Garage
Morgantown, West Virginia**
Completion: Spring 2010
Cost: \$26.3 Million

**The Jackson Kelly Building
Morgantown, West Virginia**
Completed: Spring 2002
Cost: \$4.5 Million (Shell)

**Waterfront Marina
and Boathouse Bistro
Morgantown, West Virginia**
Completed: Summer 2007
Cost: \$4.2 Million

Aaron White

CAD/BIM Manager, Production



Mr. White's responsibilities have included development of construction drawings and documents and project management tasks. He was a custom, high-end residential carpenter for four years. He has project management experience in commercial carpet for two years and commercial casework for two years. He has a combined nine years of experience in commercial architecture and has been with Paradigm Architecture for three years. Project types have included healthcare, commercial, corporate, educational, hospitality, institutional, residential, and retail.

Architectural Registration

Morris County Vocational/
Technical School
Denville, NJ
Certificate in Computer-Aided
Drafted/Design, 1990

**Morgantown Event Center
and Parking Garage**
Morgantown, West Virginia
Completion: Spring 2010
Cost: \$26.3 Million

United States Department of Agriculture
Morgantown, West Virginia
Completed: Summer 2009
Cost: \$6.5 Million (Shell)

West Virginia University
Intermodal Garage
Morgantown, West Virginia
Completed: Fall 2009
Cost: \$14.5 Million

United States Department of Energy
Office of Legacy Management
Morgantown, West Virginia
Completed: Summer 2009;
Cost: \$8 Million (Shell)

Canaan Valley Resort State Park
Lodge Addition and Renovations
Davis, West Virginia
Estimated Completion: Fall 2013
Cost: \$25 Million

Cacapon Resort State Park
Lodge Expansion
Berkeley Springs, West Virginia
Completed: TBD
Cost: \$22 Million

WV School of Osteopathic Medicine
Master Plan
Lewisburg, West Virginia
Completed: Spring 2011

Pillar Innovations
Morgantown, West Virginia
Completion: Winter 2011
Cost: \$4.1 Million

West Virginia University
Marina Tower—Fourth Floor
Morgantown, West Virginia
Completed: Winter 2010
Cost: \$395,400

KeyLogic Systems, Inc.
Morgantown, West Virginia
Completed: Fall 2010
Cost: \$1.5 Million

West Virginia University Greenhouse
Morgantown, West Virginia
Estimated Completion: Spring 2012
Cost: ≈\$8.8 Million

Ruby Memorial Hospital*
Emergency Department Addition & Renovation
Morgantown, West Virginia
Completed: 2003
Cost: \$1.9 Million

West Virginia University
Engineering Sciences Building
Addition and Renovation*
Morgantown, West Virginia
Completed: 2008
Cost: \$12 Million

*Key involvement in project with firm(s)
other than Paradigm Architecture, Inc.

Par-a-digm - (pär'e-dīm') n. An example that serves as pattern or model.

Tyler Etris

Intern Architect, CAD/BIM Production



Mr. Etris' responsibilities have included development to schematic design, schematic design, design development, and construction drawings. While a student at the University of Tennessee, he taught AutoCad and 3dsMax and other computer skills. He has been with Paradigm since 2007 and has provided marketing support for proposals and presentations. Project types have included healthcare, commercial, corporate, educational, hospitality, institutional, and retail.

Education

University of Tennessee
College of Architecture
NAAB Accredited Program
Bachelor of Architecture,
2011
Krakow Polytechnic
University
Krakow, Poland
Spring 2010

United States Department of Agriculture Morgantown, West Virginia

Completed: Summer 2009
Cost: \$6.5 Million (Shell)

West Virginia University Intermodal Garage Morgantown, West Virginia

Completed: Fall 2009
Cost: \$14.5 Million

Morgantown Event Center and Parking Garage Morgantown, West Virginia

Completion: Spring 2010
Cost: \$26.3 Million

West Virginia University Downtown Student Housing

Completed: Summer 2009
Cost: \$15.3 Million

Canaan Valley Resort State Park Lodge Addition and Renovations Davis, West Virginia

Estimated Completion: Fall 2013
Cost: \$25 Million

Cacapon Resort State Park Lodge Expansion Berkeley Springs, West Virginia

Completed: TBD
Cost: \$22 Million

WV School of Osteopathic Medicine Master Plan

Lewisburg, West Virginia
Completed: Spring 2011

Pillar Innovations Morgantown, West Virginia

Completion: Winter 2011
Cost: \$4.1 Million

Lakin Hospital Capital Improvements Window Replacement & Electrical Upgrade Beckley, West Virginia

Estimated Completion: Spring 2012
Cost: \$626,000

KeyLogic Systems, Inc. Morgantown, West Virginia

Completed: Fall 2010
Cost: \$1.5 Million

West Virginia University Greenhouse Morgantown, West Virginia

Estimated Completion: Spring 2012
Cost: ≈\$8.8 Million

South Ridge Church Fairmont, West Virginia

Estimated Completion: Summer 2012
Cost: \$2.8 Million

Steve Konya II

Construction Administrator



Mr. Konya's responsibilities have included development of construction drawings and documents, construction administration, project management tasks, marketing, and photography. He has a combined fifteen years of experience in commercial architecture and has been with Paradigm Architecture for six years. Project types have included commercial, corporate, educational, hospitality, institutional, and retail.

Education

Fairmont State College
Fairmont, West Virginia
Bachelor of Science
in Engineering Technology
1996

Professional, Civic and Other Activities

Professional Photographers
of West Virginia

**United States Department of Energy
Office of Legacy Management
Records Storage Facility
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$8 Million (Shell)

**Glenmark Office Building
Morgantown, West Virginia**
Completed: Spring 2009
Cost: \$1.6 Million

**West Virginia University
Intermodal Garage
Morgantown, West Virginia**
Completed: Fall 2009
Cost: \$14.5 Million

**Fairmont State University
Hardway Hall Portico Renovations
Fairmont, West Virginia**
Completed: Summer 2010
Cost: \$333,200

**West Virginia University
Mylan Puskar Stadium
Touchdown Terrace Club Addition
Morgantown, West Virginia**
Completed: Fall 2007
Cost: \$800,000

**WVU Stewart Hall
Morgantown, West Virginia**
Completed: Winter 2008
Cost: \$250,000

**Morgantown Event Center
and Parking Garage
Morgantown, West Virginia**
Completed: Spring 2010
Cost: \$26.3 Million

**Fairmont State University
Conference Center & Classroom Fitup
Fairmont, West Virginia**
Completed: Fall 2006
Cost: \$770,000

**West Virginia University
Downtown Student Housing
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$15.3 Million

**Fairmont State University
Colebank Hall Data Center Build-Out
Fairmont, West Virginia**
Completed: May 2007
Cost: \$400,000

**Waterfront Marina
and Boathouse Bistro
Morgantown, West Virginia**
Completed: Summer 2007
Cost: \$4.2 Million

**United States Department of Agriculture
Morgantown, West Virginia**
Completed: Summer 2009
Cost: \$6.5 Million (Shell)

**Marina Tower
Morgantown, West Virginia**
Completed: Winter 2008
Cost: \$10 Million (Shell)

**Glade Springs Resort Clubhouse
Daniels, West Virginia**
Completed: Fall 2005
Cost: \$6 Million

**WV Fairmont State University
Colebank Hall Renovations
Fairmont, West Virginia**
Completed: Winter 2007
Cost: \$1.5 Million

**Fairmont State University
Hunt Haught Hall Renovations
Fairmont, West Virginia**
Completed: 2008
Cost: \$233,000

**Chestnut Ridge Church
Morgantown, West Virginia**
Completed: Fall 2006
Cost: \$10 Million

John Rudmann, PE, RLA, LEED AP

Project Manager

Education

BS / Civil Engineering /
West Virginia
University

BS / Landscape
Architecture / West
Virginia University

Registration

PE / WV / 14779

Also PE in MD and
PA.

PE / MD / 200442

Also RLA in MD and
PA.

LEED AP

Years Experience:

19 years

Mr. Rudmann is a licensed civil engineer, a licensed landscape architect, and a LEED Accredited Professional. Mr. Rudmann's responsibilities have included being a project manager, a senior civil engineer, and a senior landscape architect for many design projects. As a designer his tasks have included completing WV/NPDES General Stormwater Construction Permitting, completing local stormwater and erosion and sediment control permits and plans, stormwater design, utility design, grading, site master planning, and completing project specifications. He has designed several different methods of bio-filtration and has completed all the necessary credit paper work to achieve LEED Certification.

The Dayton, Morgantown, WV. Senior Design Engineer. KCI was a subconsultant for the Dayton, a three-story mixed use building located at the corners of Ridgeway Avenue, Dayton Street, and Richwood Avenue in Morgantown, providing retail space and parking on the ground level with residential housing on the upper floors. KCI was responsible for overall site/civil design, water lines, sanitary sewer, general utility coordination, site/civil permitting, and erosion and sediment control. Mr. Rudmann was responsible for the overall design of all aspects of the project. Since the

budget for this project was very tight, Mr. Rudmann utilized cost efficient design principles to keep the project under budget, while still meeting strict environmental standards.

Morgantown Event Center and Garage, Morgantown, WV. Senior Design Engineer. Project involved site/civil engineering and landscape architecture services for this design/build project. Mr. Rudmann was responsible for the overall design of all site/civil services, which included local stormwater permitting, stormwater retention, grading plans, landscaping, erosion and sedimentation control, access roads and parking lot, and utility lines. While this building did not seek LEED certification, Mr. Rudmann designed the site to maximize sustainable sites and water efficiency credits. The stormwater quantity control was achieved through oversized storage collection pipes and quality through a series of filters.

West Virginia University Downtown Student Housing Project, Morgantown, WV. Senior Design Engineer. This project involved overall site design, courtyard, utility lines, sidewalks, drainage, storm-water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting. Mr. Rudmann was responsible for the overall design of all site/civil services which included an extensive landscaping plan and courtyard pedestrian design. Due to severe space limitations, Mr. Rudmann utilized oversized piping and developed a gravel layer to be used for water detention to meet the requirements of the City of Morgantown's stormwater ordinance. Provided a design for the plaza area using stamped concrete patterns, in conjunction with strategically placed patios and pergolas to create a warm friendly environment. Required technical innovation and creative design to combine functional storm water management requirements with the creation of an attractive, inviting outdoor space.

Northside Fire Station, Morgantown, WV. Senior Design Engineer. The project involved overall site design, access roads, utility lines, sidewalks, drainage, stormwater quality and retention, grading plans, erosion and sedimentation control plans, and site/civil permitting. This project was designed to achieve LEED certification. Mr. Rudmann was responsible for the overall design of all site/civil services which included site design, local stormwater permitting for the Morgantown Utility Board, drainage, stormwater quality and retention, grading plans, and erosion and sedimentation control plans. Mr. Rudmann was responsible for completing the sustainable sites and water efficiency categories. The water quantity credit was achieved through a stormwater cistern.

The View II at the Park, Morgantown, WV. Senior Design Engineer. KCI was a subconsultant to Paradigm Architecture for the View II. The View II is the second phase of a three-phased development along the waterfront in Morgantown, West Virginia. The View II is a four-story structure housing the Morgantown Area Chamber of Commerce on the first floor, with residential condominiums on the upper floors. Project involved overall site design, utility lines, sidewalks, drainage, stormwater retention, grading plans, erosion and sedimentation control plans, and the site/civil permitting. Mr. Rudmann was responsible for the overall design of all site/civil services which included maintenance of traffic control, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, all the site/civil permitting, and the project specifications.

USDA Design/Build IDIQ 8(a), Sabraton, WV. Design Engineer. This LEED certified project involved site/civil engineering and landscape architecture design services. The existing state road providing access to the project site lies within the flood plain. KCI proposed raising the finished floor elevation and utilizing bio-retention areas within the project site to not only capture the onsite stormwater, but to also protect the proposed buildings from the recurring flood conditions. The bio-retention areas were designed within the proposed traditional parking islands eliminating the need for additional stormwater management devices. KCI was able to effectively design the proposed contour grading plans to minimize the height and length of the retaining walls and to provide the contractor with plant seed mixes and traditional plants for the landscape plan that minimized project costs. Mr. Rudmann was responsible for the overall design of all site/civil services, which included parking lot design, access road design, landscape design, WV DEP erosion and sediment control permitting, local permitting for the Morgantown Utility Board, drainage design, stormwater quality and retention, grading plans, and erosion and sedimentation control plans. The parking lot was designed to hold 154 spaces with 24 spaces in a secured area. To maintain ADA compliance and efficiently fit the parking lot into the existing terrain, the parking lot was design at a 5% running slope with a 2% cross slope. This cross slope allowed the asphalt to be contoured into swales to direct water into a series of bio-filtration cells within the parking lot areas and swales located closer to the building. The location of the site is well known for stormwater problems and frequent flooding. The bio-retention areas have effectively alleviated the flooding condition for this site due to a significantly slower time of concentration which allows for water to slowly infiltrate on side and the excess to discharge off site. Mr. Rudmann also completed all the necessary LEED® submittal paperwork for sustainable site and water efficiency credits. The site was also previously disturbed and certified a brownfield site.

Daniel Garcia, PE *Project Engineer*

Education

BSCE / Civil
Engineering / West
Virginia University

Registration

PE / WV / 17912
Also PE in MO and
OH.

Years Experience:

19 years

Mr. Garcia is a Senior Designer in KCI's Morgantown, W.Va., office and has more than 19 years experience in the design of municipal projects, including water, sewer, stormwater, and environmental services. His experience includes solid waste landfills; public drinking water supply, treatment, storage, and distribution; wastewater collection, treatment, and disposal; and site development. Activities on these projects include proposal and cost estimating, modeling and analysis, design, advisory and review of plans, construction observation, construction quality assurance, inspection and troubleshooting operations, and regulatory relations.

Morgantown Event Center and Garage, Morgantown, WV. Civil Engineer. Project involved site/civil engineering and landscape architecture services for this design/build project.

Potomac Street Improvements, Harpers Ferry, WV. Civil Engineer. KCI is providing design services to the Town for improvements along Potomac Street between Hog Alley and the railroad crossing, approximately 1,140 linear feet. This project will include seamless transitions for the improvements within the historic district and adjacent private and NPS properties. This project will include close coordination with the NPS and SHPO. KCI is assisting the City with funding to undertake extensive stormwater sewer improvements.

West Virginia University Downtown Student Housing Project, Morgantown, WV. Civil Engineer. This project involved overall site design, courtyard, utility lines, sidewalks, drainage, storm-water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting.

Northside Fire Station, Morgantown, WV. Senior Designer. The project involved overall site design, access roads, utility lines, sidewalks, drainage, stormwater quality and retention, grading plans, erosion and sedimentation control plans, and site/civil permitting. This project was designed to achieve LEED certification. Provided review and markup after value engineering revisions, adding revisions per construction change requests, and construction administration. Provided construction observation for site work.

Cacapon Resort State Park Lodge Expansion and Park Improvement, Berkeley Springs, WV. Civil / Site Engineer. The project involves engineering and landscape architecture services for improvement to the golf course, upgrades to the Park's water and wastewater system, and an addition to the existing resort building. Mr. Garcia is responsible for overseeing design of water supply, treatment, storage, and distribution. He is also designing upgrades to the wastewater treatment plant.

Janaan Valley Resort State Park, Davis, WV. Civil Designer. KCI is a subconsultant for the Canaan Valley Resort State Park improvement project, providing engineering and surveying services for the lodge expansion and facility improvements. The surveying scope involved aerial photogrammetry for

approximately 4,400 acres with supplemental ground survey. KCI is also providing landscape design to enhance the aesthetic appeal of the resort.

USDA Design/Build IDIQ 8(a), Sabraton, WV. Civil Engineer. This LEED certified project involved site/civil engineering and landscape architecture design services. The existing state road providing access to the project site lies within the flood plain. KCI proposed raising the finished floor elevation and utilizing bio-retention areas within the project site to not only capture the onsite stormwater, but to also protect the proposed buildings from the recurring flood conditions. The bio-retention areas were designed within the proposed traditional parking islands eliminating the need for additional stormwater management devices. KCI was able to effectively design the proposed contour grading plans to minimize the height and length of the retaining walls and to provide the contractor with plant seed mixes and traditional plants for the landscape plan that minimized project costs.

Architectural, Engineering, and Land Planning Services, Ranson, WV. Civil Engineer. KCI was recently awarded an open-end contract by the City of Ranson to provide engineering support for capital improvement projects. Our first task order is the 3rd Avenue Revitalization project. This task will involve design services along 3rd Avenue between Fairfax Boulevard and Preston Street and Mildred Street between intersection with traffic circle and 2nd Avenue for a distance of approximately 1,460 LF. The proposed facilities and amenities for this project include replacement sidewalks, replacement curb and gutter, ADA curb cuts with truncated domes, and pavement crosswalk striping.

Eric Lord, RLA *Landscape Architect*

Education

BS / Landscape
Architecture / West
Virginia University

Registration

RLA / WV / 338
Also RLA in MD and
PA.

Years Experience:

17 years

Mr. Lord has more than 17 years of experience in the planning, execution, design, and project management of a wide array of landscape architecture related projects. These projects include numerous transportation enhancements related projects involving streetscape beautification/revitalization and various pedestrian and bicycle facility projects, planning studies, and streetscape and trail design guideline development. Additionally, he has spent a considerable amount of time in the public involvement of these projects as well as preparing presentation graphics. Mr. Lord is one of KCI's proficient graphic designers providing valuable skills developing hand renderings, photo-simulation computer generated images displaying "before" and "after" concepts, as well as 3-D animations, modeling, and fly-throughs.

Cacapon Resort State Park Lodge Expansion and Park Improvement, Berkeley Springs, WV. Landscape Architect. The project involves engineering and landscape architecture services for improvement to the golf course, upgrades to the Park's water and wastewater system, and an addition to the existing resort building. For the lodge facility, Mr. Lord is responsible for completing the overall design of all landscape and pedestrian facility services, which includes sidewalks and ADA compliant routes, landscaping, erosion and sedimentation control, and permitting. The outdoor plaza area is being designed to enhance the pedestrian experience and maximize views from the lodge. Project amenities include stamped/colored concrete and scored/colored concrete, as well as numerous benches, seating walls, fire pits, and plant material.

Canaan Valley Resort State Park, Davis, WV. Landscape Architect. KCI is a subconsultant for the Canaan Valley Resort State Park improvement project, providing engineering and surveying services for the lodge expansion and facility improvements. The surveying scope involved aerial photogrammetry for approximately 4,400 acres with supplemental ground survey. KCI is also providing landscape design to enhance the aesthetic appeal of the resort. Mr. Lord is responsible for developing the landscape plans to enhance the aesthetic appeal of the resort, including estimates and specifications for the project while ensuring to address the ecological sensitivity of the plant communities of Canaan Valley which are unique in the world, ranked as high as "G1" (Globally Critically Imperiled), which is the highest conservation priority ranking a plant community can receive.

Architectural, Engineering, and Land Planning Services, Ranson, WV. Landscape Architect. KCI was recently awarded an open-end contract by the City of Ranson to provide engineering support for capital improvement projects. Our first task order is the 3rd Avenue Revitalization project. This task will involve design services along 3rd Avenue between Fairfax Boulevard and Preston Street and Mildred Street between intersection with traffic circle and 2nd Avenue for a distance of approximately 1,460 LF. The proposed facilities and amenities for this project include replacement sidewalks, replacement curb and gutter, ADA curb cuts with truncated domes, and pavement crosswalk striping. Mr. Lord is

responsible for the landscape architecture and pedestrian facilities of the project which include design services along 3rd Street between Fairfax Boulevard and Preston Street and Mildred Street between intersection with traffic circle and 2nd Street for a distance of approximately 1,460 LF. The proposed facilities and amenities for this project include replacement sidewalks, replacement curb and gutter, ADA curb cuts with truncated domes, and pavement crosswalk striping.

Potomac Street Improvements, Harpers Ferry, WV. Landscape Architect. KCI is providing design services to the Town for improvements along Potomac Street between Hog Alley and the railroad crossing, approximately 1,140 linear feet. This project will include seamless transitions for the improvements within the historic district and adjacent private and NPS properties. This project will include close coordination with the NPS and SHPO. KCI is assisting the City with funding to undertake extensive stormwater sewer improvements. Mr. Lord is involved in the development of the proposed facilities and amenities which include undergrounding all utilities, mini parks, creation of outdoor dining areas, incorporating the Armory Wall foundation in the design, replacement sidewalks, replacement of curb and gutter, period lighting, ADA compatibility, and crosswalk improvements. He will also be responsible for development of traffic calming measures and additional site amenities such as benches/seat walls, wayfinding, and informational kiosks. Additional tasks for Mr. Lord include development of presentation graphics, 3-D modeling, and public involvement.



Allegheny

Design Services

Structural & MEP Engineering

102 Leeway Street
Morgantown, WV 26505

Phone: (304)599-0771

Fax: (304)599-0772

E-Mail: Dave@AlleghenyDesign.com

Web: www.AlleghenyDesign.com

David R. Simpson, P.E., SECB, MBA

President

Education:

West Virginia Institute of Technology
B.S. Civil Engineering

West Virginia University
Masters Business Administration

West Virginia State College
Architectural Technology

Professional Registrations:

Year first registered: 1984
Structural Engineering Certification Board
West Virginia
Pennsylvania
Maryland
Virginia
District of Columbia
South Carolina
Ohio
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

Continuing Education:

2005 AISC Specification for Structural Steel Buildings – September 27, 2006 – Pittsburgh, PA
ASCE Testifying Skills for Engineers – February 16, 2007 – Orlando, FL
Peter Vallas Associates, Inc. "Fire Investigation Certification" – July 16, 2010 – Ft. Lauderdale, FL

Professional Experience:

Responsible for project management and design at Allegheny Design Services. Experience includes over 30 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
West Virginia University, Assoc. Director 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

Additional Professional Experience:

Experience encompasses design, project management, and construction administration for reinforced concrete, structural steel, precast concrete, masonry, and wood structures.

Project experience includes:

Fairmont Senior High School, Fairmont, WV
Belmont Community Center, St. Clairsville, OH
Monongalia General Hospital Operating Room Addition, Morgantown, WV
Chestnut Ridge Church, Morgantown, WV
Morgantown Event and Conference Center, Morgantown, WV
Allegheny Energy Transmission Center, Fairmont WV
West Virginia University Business and Economics Building, Morgantown, WV
West Virginia University High Density Book Storage Facility, Morgantown, WV
West Virginia University Life Sciences Building, Morgantown, WV
West Virginia University Student Recreation Center, Morgantown, WV
West Virginia University Wise Library Addition, Morgantown, WV
West Virginia University White Hall Computer Center, Morgantown, WV
UPMC Hillman Cancer Center, Pittsburgh, PA
Carnegie Museum of Natural History Addition, Pittsburgh, PA
Cultural Trust District Parking Garage, Pittsburgh, PA
Delaware Valley Veterans' Home, Philadelphia, PA
Fairmont State University Parking Garage, Fairmont, WV
First Avenue Parking Garage, Pittsburgh, PA
Hillman Cancer Center (UPMC), Pittsburgh, PA
New Enterprise Precast Corporate Headquarters, New Enterprise, PA
Respironics Corporate Office Facility, Pittsburgh, PA
International Brotherhood of Electrical Workers Headquarters Training Center, Pittsburgh, PA
Laurel Highlands Middle School Addition, Uniontown, PA
Trinity High School, Morgantown, WV
Mylan Pharmaceuticals Parking Garage, Morgantown, WV
Phipps Conservatory Addition, Pittsburgh, PA
Radisson Hotel and Conference Center, Morgantown, WV
Western Pennsylvania School for Blind Children, Pittsburgh, PA
In-Situ Vitrification Nuclear Waste Encapsulation Project, Richland, WA
Dominion Transmission Office Building, Clarksburg, WV
Multiple structural evaluations and expert witness for structural damage due to subsurface mining subsidence, floods, ice, wind and construction errors
Over 400 low-rise metal building projects from Maine to South Carolina, including warehouses, aircraft hangar facilities, shopping centers, industrial facilities, and office facilities.



Allegheny **Design Services**

Structural & MEP Engineering

102 Leeway Street
Morgantown, WV 26505
Phone: (304)599-0771
Fax: (304)599-0772
E-mail: Jason@AlleghenyDesign.com
Web: www.AlleghenyDesign.com

Jason D. Robinson, E.I. **Engineering Intern**

Education:

West Virginia University
B.S. Civil Engineering

Awards/Achievements/Organizations:

Dean's List
Member of AISC
Associate Member of ASCE

Professional Registrations:

West Virginia, Engineering Intern License #8699

Professional Experience:

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

Experience record:

Bridgeport Public Safety Substation, Bridgeport, WV
Canaan Valley Institute, Davis, 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
Mylan Upper Warehouse to Labs, Morgantown, WV
The Dayton, Morgantown, WV
The View at the Park Phase 2, Morgantown, WV
WVU Child Development, Morgantown, WV
White Oaks Progress Center, Bridgeport, WV

Courses and 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



H.F. LENZ
COMPANY

Thomas F. Deter, P.E., LEED™-AP
Principal-in-Charge of MEP Systems Engineering

Mr. Deter 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 is responsible for coordination with the client, the architect, regulatory agencies, and the engineering staff; project scheduling; and other project management functions. Mr. Deter is experienced 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; nurse call; security; sound; and telephone systems. His project experience includes:

West Virginia Army National Guard
Kingwood, West Virginia
Design for a new billeting facility at Camp Dawson

U.S. Air Force – 911th Airlift Group
Corapolis, Pennsylvania
Various projects under two indefinite delivery contracts

U.S. Postal Service
Indefinite Delivery Contracts
Western Pennsylvania and West Virginia
Over 300 various repair and alteration projects under 11 indefinite delivery contracts
– *Developed design/build RFP package for two new 75,000 sq.ft. Postal Distribution Facilities in Johnstown, PA and Lima, OH*
– *Renovations to the Bulk Mail Center in Warrendale, PA*
– *Investigative survey reports, seven post office facilities*
– *Parking lot design, two post office facilities*
– *Site feasibility study for a proposed bulk mail center*
– *Façade replacement and loading dock improvements for the Main Post Office in Johnstown, PA*
– *Upgrades and HVAC replacement at the Main Post Office in New Castle, PA*

New Armory, Pennsylvania Department of Military Affairs, Ford City, Pennsylvania
New 24,400 sq.ft. training center

Pennsylvania National Guard Facility
Johnstown, Pennsylvania
New regional maintenance facility

U.S. Army Reserve Center Aviation Facility
Johnstown, Pennsylvania
New 120,000 sq.ft. multi-building reserve center

U.S. Army Reserve Center
Wheeling, West Virginia
Design/build reserve center

U.S. Army Reserve Aviation Center
Weirton, West Virginia
Design/build reserve center

Letterkenny Army Depot
Chambersburg, Pennsylvania
Various projects under 6 indefinite delivery contracts

Pennsylvania Department of Conservation and Natural Resources, Penn Nursery
Spring Mills, Pennsylvania
New 8,000 sq.ft. office building, designed to attain LEED™ Gold

Education

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

Experience

H.F. Lenz Company 1992 – Present • Parfitt/Ling Consulting Engineers 1990 - 1992
Gary Johnston & Assoc., Inc. 1987 - 1990

Professional Certification

Licensed Professional Engineer in Pennsylvania, Illinois, Maryland, New Jersey, Ohio, Virginia, and West Virginia; LEED™ Accredited Professional

Professional Affiliations

Professional Engineers in Private Practice; NSPE/PSPE; APPA; U.S. Green Building Council



**H.F. LENZ
COMPANY**

Steven P. Mulhollen, P.E.
Electrical Engineer

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. Mr. Mulhollen's project experience includes (*indicates prior experience):

West Virginia Army National Guard
Kingwood, West Virginia
*Project management and electrical design for
Camp Dawson billeting facility*

U.S. Air Force – 911th Airlift Group
Corapolis, Pennsylvania
*Various projects under two indefinite delivery
contracts*

Baltimore Corps of Engineers
New Cumberland, Pennsylvania
Electrical design for new billeting facility

New Armory, Pennsylvania Department of
Military Affairs, Ford City, Pennsylvania
New 24,400 sq.ft. training center

U.S. Postal Service
Indefinite Delivery Contracts
Western Pennsylvania and West Virginia
*Various repair and alteration projects under
several indefinite delivery contracts*
– *Developed design/build RFP package for two
new 75,000 sq.ft. Postal Distribution
Facilities in Johnstown, PA and Lima, OH*
– *Renovations to the Bulk Mail Center in
Warrendale, PA*
– *Investigative survey reports, seven post office
facilities*
– *Parking lot design, two post office facilities*
– *Site feasibility study for a proposed bulk mail
center*
– *Façade replacement and loading dock
improvements for the Main Post Office in
Johnstown, PA*
– *Upgrades and HVAC replacement at the
Main Post Office in New Castle, PA*

Pennsylvania Department of Conservation and
Natural Resources, Penn Nursery
Spring Mills, Pennsylvania
*New 8,000 sq.ft. office building, designed to
attain LEED™ Gold*

Lincoln County
Hamlin, West Virginia
*Electrical design for new 911 center with 500
kW Generator 277/480 volts*

U.S. Drug Enforcement Administration
Pittsburgh, Pennsylvania
*New 50,000 sq.ft. design/build office building
with a state-of-the-art communications system.
LEED Certified.*

Fayette County
Uniontown, Pennsylvania
Electrical design for courthouse renovation

Letterkenny Army Depot
Chambersburg, Pennsylvania
*Various projects under 6 indefinite delivery
contracts*

Anthony Juvenile Correctional Center*
Neola, West Virginia
Electrical design of correctional facility

Education

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

Experience

H.F. Lenz Company 1999
L. Robert Kimball & Associates 1996 – 1999
Leach Wallace Associates, Inc. 1990 - 1996 • E.A. Mueller, Inc. 1988 - 1990

Professional Registration / Certification

Licensed Professional Engineer in Pennsylvania • Alabama • Florida • Maryland • Missouri • New
Jersey • New Mexico • Ohio • Tennessee

Professional Affiliations

Institute of Electrical and Electronics Engineers, Inc.



H.F. LENZ
COMPANY

John C. Stewart, P.E., LEED™-AP
Mechanical Engineer and LEED™ Accredited Professional

Mr. Stewart has over 20 years 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, cost estimating. His experience includes the design of mechanical systems for military installations, industrial plants, office buildings, hospitals, and educational facilities. He has also been involved in the design of chiller and boiler plants. Mr. Stewart's project experience includes (*indicates prior experience):

U.S. Postal Service
Indefinite Delivery Contracts
Western Pennsylvania and West Virginia
Various repair and alteration projects under several indefinite delivery contracts
– *Developed design/build RFP package for two new 75,000 sq.ft. Postal Distribution Facilities in Johnstown, PA and Lima, OH*
– *Renovations to the Bulk Mail Center in Warrendale, PA*
– *Investigative survey reports, seven post office facilities*
– *Parking lot design, two post office facilities*
– *Site feasibility study for a proposed bulk mail center*
– *Facade replacement and loading dock improvements for the Main Post Office in Johnstown, PA*
– *Upgrades and HVAC replacement at the Main Post Office in New Castle, PA*

Letterkenny Army Depot
Chambersburg, Pennsylvania
Various projects under 6 indefinite delivery contracts

Education

Master of Science, Mechanical Engineering, University of Pittsburgh, 1995
Graduate Courses in Facilities Engineering, Air Force Institute of Technology, 1984-1987
Bachelor of Science, Mechanical Engineering, University of Pittsburgh, 1984

Experience

H.F. Lenz Company 1996 - Present
Peter F. Loftus Division, Eichleay Engineers, Inc. 1989 - 1996
Newport News Shipbuilding 1988 - 1989
U.S. Air Force 1984 - 1988

Professional Registration / Certification

Licensed Professional Engineer in Pennsylvania • LEED™ Accredited Professional • Adjunct Assistant Professor for the University of Pittsburgh at Johnstown in HVAC Design for the Mechanical Engineering Technology Curriculum

Professional Affiliations

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

U.S. Air Force – 911th Airlift Group
Corapolis, Pennsylvania
Various projects under two indefinite delivery contracts

Kee Federal Office Building and Courthouse
Bluefield, West Virginia
– *Replacement of 1,200-ton chiller plant*
– *Chilled water distribution modifications*
– *Replacement of industrial air compressors*
– *Replacement of dust collection systems*
– *Cooling towers*
– *Gatehouse structural design*

New Armory, Pennsylvania Department of
Military Affairs, Ford City, Pennsylvania
New 24,400 sq.ft. training center

Squadron Operations, Dyess Air Force Base*
Abilene, Texas
Renovations and additions to five office buildings ranging from 5,000 to 15,000 sq.ft.

Dyess Air Force Base*
Abilene, Texas
– *Base Headquarters*
– *80,000 sq.ft. office building renovation*



H.F. LENZ
COMPANY

Gregory D. Rummel, C.P.D.
Plumbing and 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. Mr. Rummel has been involved in the design of plumbing and fire protection systems for the following projects:

U.S. Postal Service
Indefinite Delivery Contracts
Western Pennsylvania and West Virginia
Over 300 various repair and alteration projects under 11 indefinite delivery contracts

- *Developed design/build RFP package for two new 75,000 sq.ft. Postal Distribution Facilities in Johnstown, PA and Lima, OH*
- *Renovations to the Bulk Mail Center in Warrendale, PA*
- *Investigative survey reports, seven post office facilities*
- *Parking lot design, two post office facilities*
- *Site feasibility study for a proposed bulk mail center*
- *Façade replacement and loading dock improvements for the Main Post Office in Johnstown, PA*
- *Upgrades and HVAC replacement at the Main Post Office in New Castle, PA*

Letterkenny Army Depot
Chambersburg, Pennsylvania
Various projects under 6 indefinite delivery contracts

U.S. Air Force – 911th Airlift Group
Corapolis, Pennsylvania
Various projects under two indefinite delivery contracts

New Armory, Pennsylvania Department of
Military Affairs, Ford City, Pennsylvania
New 24,400 sq.ft. training center

Pennsylvania National Guard Facility
Johnstown, Pennsylvania
New regional maintenance facility

U.S. Army Reserve Center
Wheeling, West Virginia
Design/build reserve center

U.S. Army Reserve Aviation Center
Weirton, West Virginia
Design/build reserve center

U.S. Army Reserve Center
Beckley, West Virginia
Plumbing and fire protection design for a new 300-member Reserve Center

U.S. Army Reserve Center
Kingwood, West Virginia
Plumbing and fire protection design for a new 100-member Reserve Center

Pennsylvania Department of Conservation and
Natural Resources, Penn Nursery
Spring Mills, Pennsylvania
New 8,000 sq.ft. office building, designed to attain LEED™ Gold

Education

B.S. in Mechanical Engineering Technology, 2000, Point Park College
Associate in Specialized Technology 1984, Architectural Drafting and Construction with CAD
Technology, Triangle Institute of Technology

Experience

H.F. Lenz Company 1989 - Present
Newport News Ship Building 1984 - 1989

Professional Certification

Certified in Plumbing Design, ASPE



H.F. LENZ
COMPANY

Paul E. Petrilli, P.E., LEED® AP, BD + C
Commissioning Agent

Mr. Petrilli, a Principal of the firm and LEED Accredited Professional, heads up the Commissioning and LEED Related Services for H.F. Lenz Company. In addition to commissioning, these services include energy modeling, measurement and verification, ENERGY STAR®, and LEED® consulting and documentation services.

Mr. Petrilli as served as the Principal-in-Charge on numerous projects and is responsible for the development and review energy audits and plans; commissioning project plans and specifications; system performance testing; review of design documents; site visits; preparation, review and submittal of O&M manuals; preparation of systems manual; training of Owner's staff; and Owner interviews.

Mr. Petrilli has experience commissioning progressive mechanical systems including dedicated outdoor air systems, energy recovery, geothermal systems, photovoltaics, and building automation systems. He has been involved in the following projects:

United Parcel Service (UPS), Beaver Avenue
Pittsburgh, Pennsylvania
ASHRAE Level I Energy Audit for the 15,500 sq.ft. office building at UPS's Beaver Avenue Distribution Hub; the results of the Level I audit identified two primary energy conservation measures (ECM), a boiler system replacement and a window replacement project, as having the greatest potential for savings

Franklin County Public Facilities Management
New Courthouse
Columbus, Ohio
LEED Fundamental and Enhanced Commissioning services for a new 300,000 sq.ft. county courthouse; Project goal is LEED Gold

Regional Learning Alliance
Cranberry Township, Pennsylvania
LEED Fundamental Commissioning services for a new 75,500 sq.ft. conference and learning center; Project has received a LEED Silver Rating

USX Technology Center (Formerly Siemens Westinghouse)
Pittsburgh, Pennsylvania
LEED™ Commissioning services for a new 197,000 sq.ft. fuel cell manufacturing facility; Project has been LEED™ Certified

CarMax, Inc.
Richmond, Virginia
LEED™ Fundamental Commissioning services plus LEED™ Enhanced Commissioning services for a new 240,000 sq.ft. corporate office building; Project has received a LEED™ Silver Rating

National City
Columbus, Ohio
Energy audit and Building Automation study for the 35-story, 1,000,000 sq.ft. National City Center

Education

Bachelor of Architectural Engineering 1987, Mechanical/Electrical Systems in Buildings, Pennsylvania State University

Experience

H.F. Lenz Company 1987 - Present

Professional Registration / Certification

Licensed Professional Engineer in Pennsylvania • Illinois • Maryland • Michigan • Missouri • New Jersey • Ohio • Virginia • Washington, DC • West Virginia and LEED Accredited Professional

Professional Affiliations

American Society of Heating, Refrigerating, and Air-Conditioning Engineers • American Society of Plumbing Engineers • U.S. Green Building Council • Geothermal Heat Pump Consortium • Illuminating Engineering Society of North America • Green Building Alliance • **Member of the BCA-NCC Board of Directors for 2008-2009**



United States Department of Energy Office of Legacy Management

West Virginia University Research Park, Morgantown, West Virginia



A new sustainable office and Records Storage Facility for the United States Department of Energy Office of Legacy Management which was awarded through a Design-Build Competition sponsored by the General Services Administration. This one story building includes 37,000 square feet of NARA Certified Records Storage space, including a 1,200 square foot Cold Room, and 23,000 square feet for administration. The administration portion includes both open and individual office space, several conference rooms, a wellness center, locker rooms, a data center, a public research area, and an area for receiving / processing. The security systems are designed and operated to meet the Minimum Security Standards for Level III Federal Facilities and are in compliance with Homeland Security Presidential Directive 12.

LEED Gold (Core & Shell)

LEED Gold (Commercial Interiors)

2010 Excellence in Construction by the Associated Builders & Contractors, Inc.—WV Chapter

Owner: FD Partners, LLC

Design Architect: Paul A. Walker, AIA
Project Manager: Grant T. Gramstad, AIA

Completed: Fall 2009

Cost: \$8 Million (Shell)

\$2.7 Million (Tenant Improvements)

Size: approximately 60,000 Square Feet

Delivery Type: Design-Build-Negotiated

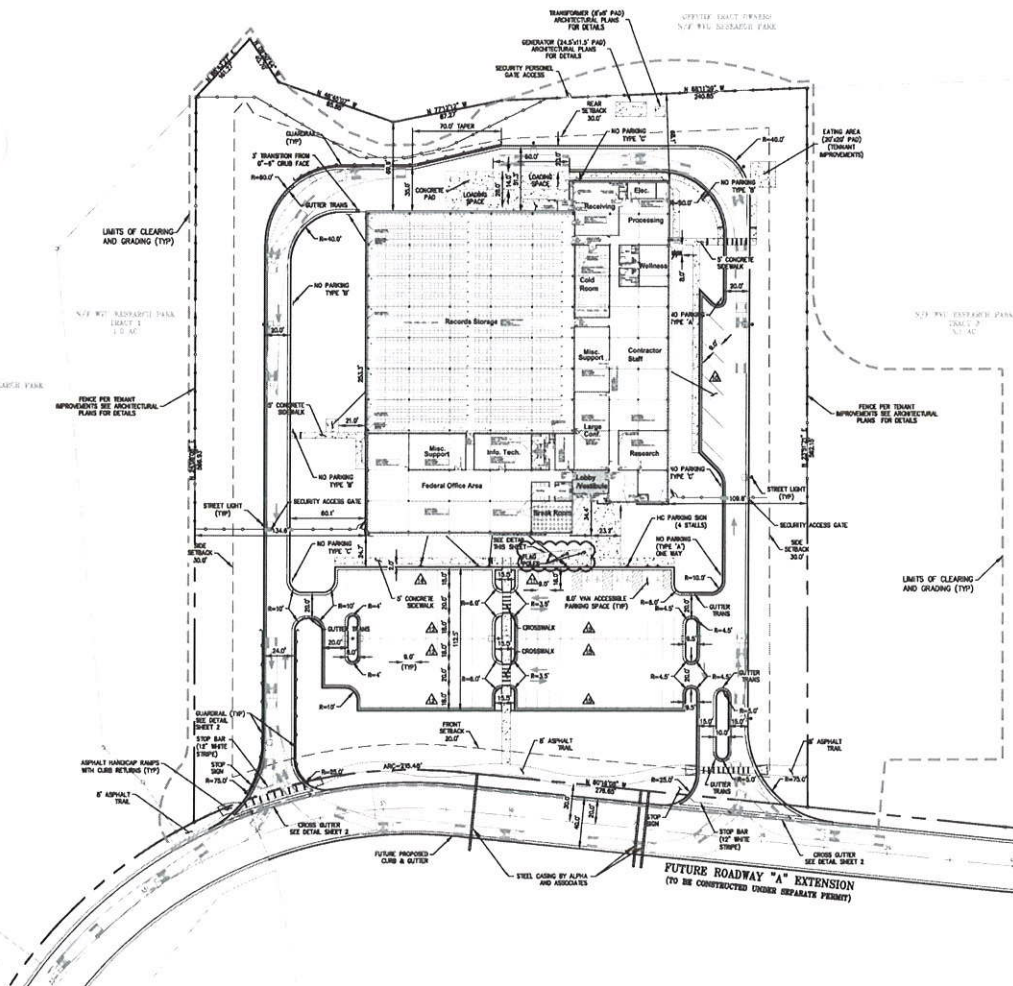
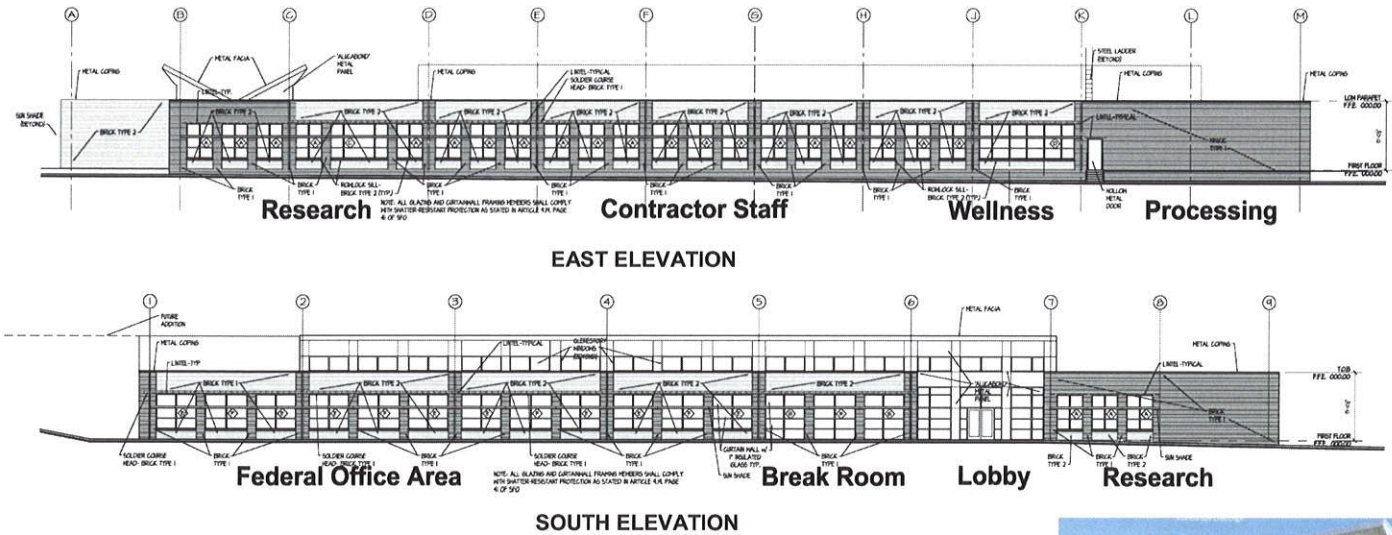
Contractor: dck North America, LLC



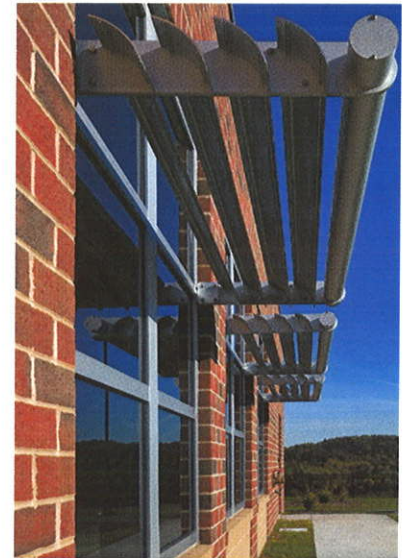


United States Department of Energy Office of Legacy Management

West Virginia University Research Park, Morgantown, West Virginia



GEOMETRIC LAYOUT PLAN





The General Services Administration for the United States Department of Agriculture

Morgantown, West Virginia



Awarded through a Design-Build Competition sponsored by the General Services Administration. This facility houses five agencies of the USDA including: the Credit Union, Rural Development, Farm Services Administration, Natural Resource Conservation services, and the USDA Information Technology Services. Support groups such as Information Technology and the Tri-Ag Federal Credit Union will be located in the new facility as well. The program required Federal security standards related to the building, roads, and parking area. Common areas were required for conference/training rooms, break room, mail room and fitness center. In addition, the project was required to achieve LEED Certification.

This project is registered as a LEED Certified Building.

Owner: Glenmark Holdings, LLC

Design Architect: Paul A. Walker, AIA
Project Manager: David H. Snider, AIA

Completed: Summer 2009

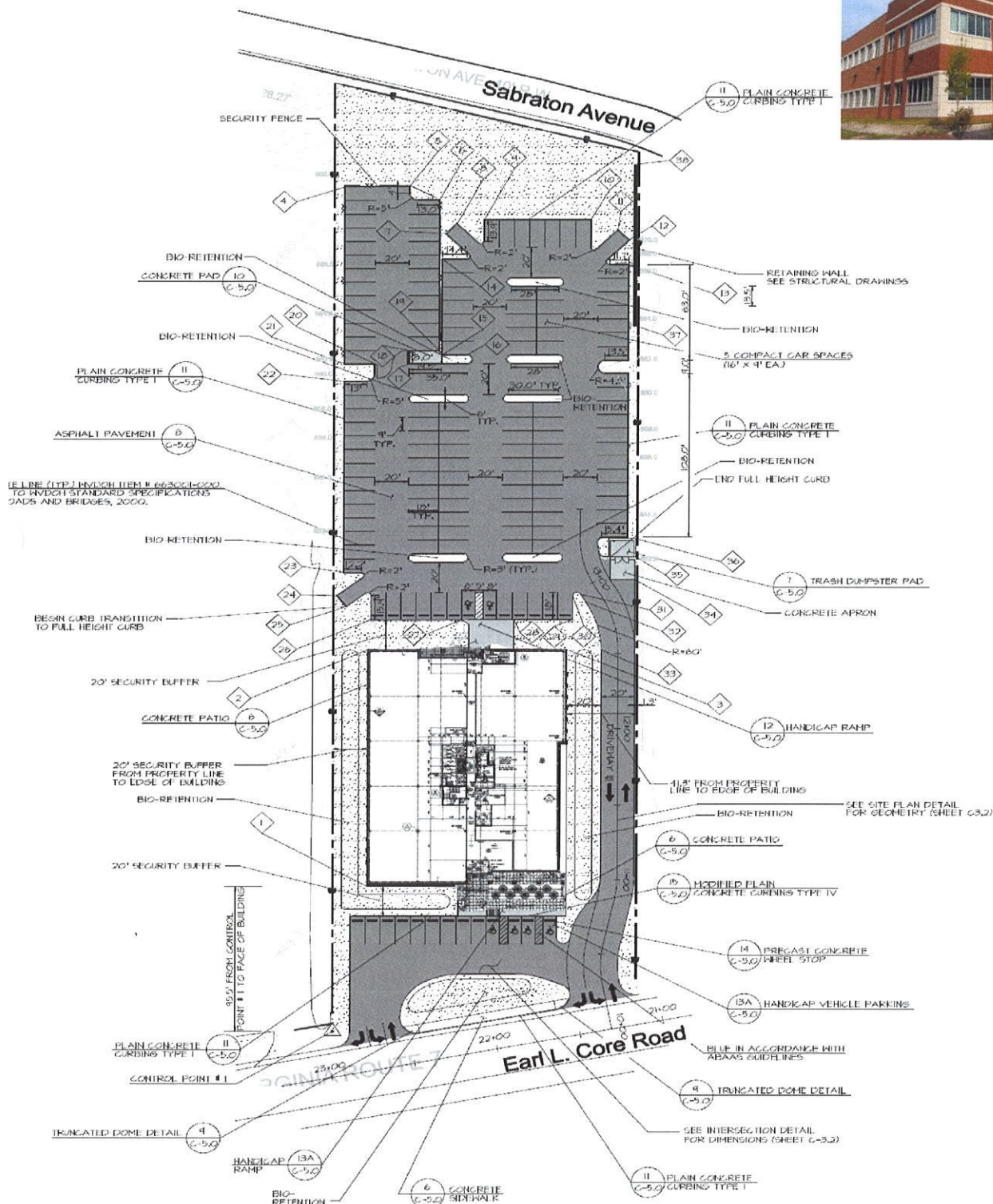
Cost: \$6.5 Million (Shell)

Size: 36,000 Square Feet

Delivery Type: Design-Build Competition

Contractor: The March-Westin Company

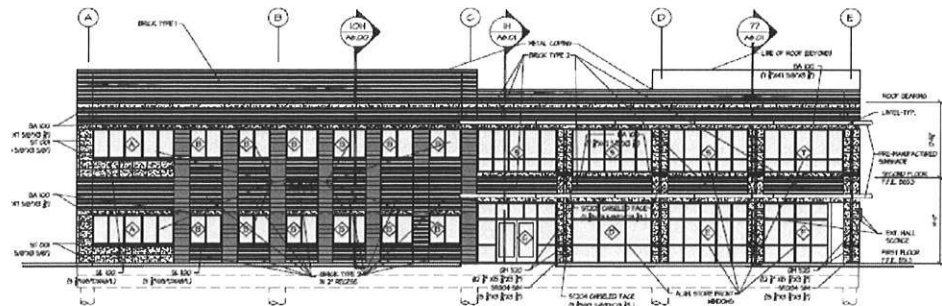
The project site was a relatively flat rectangular parcel along the commercial section of Earl Core Road in Sabraton. The property was a former "Brown Field" site owned by the WV Department of Highways. A portion of the land was within the 100-year floodplain of Deckers Creek which limited the positioning of the building. The security standards established the perimeter set-backs and the limitations in property width dictated that only visitor parking could be located in front of the building with employee and secured parking in the rear.



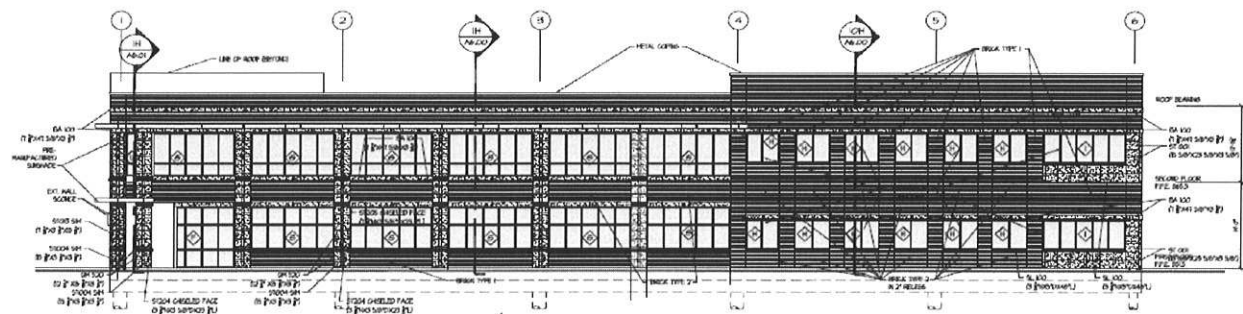
SITE PLAN



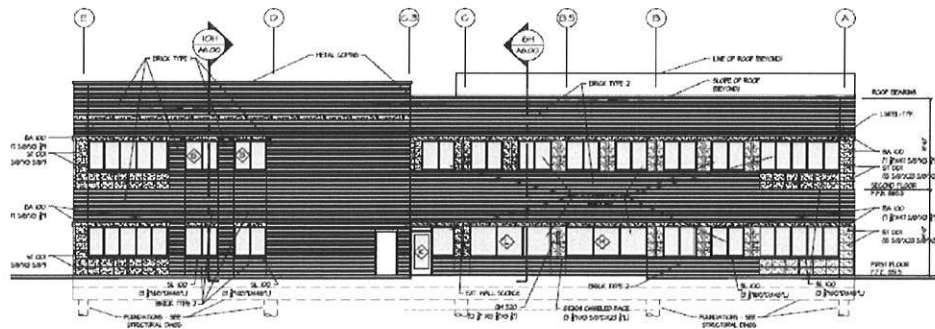
Morgantown, West Virginia



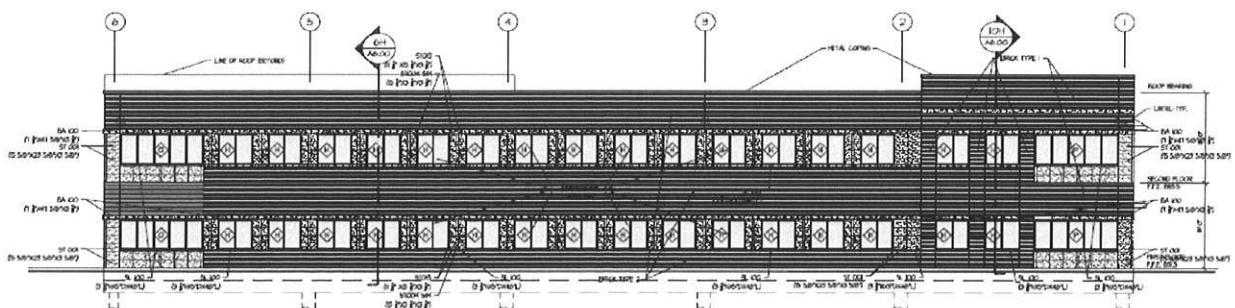
SOUTH ELEVATION



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION

The General Services Administration for the United States Department of Agriculture

Morgantown, West Virginia





CVS Caremark Mail Order Facility

Birmingham, Alabama



This 114,000 SF mail order facility has had 16 renovations over the last seven years using the same architect and contractor team. The facility is home to a prescription mailing distribution center. One of the first renovations was in the existing mail receiving room. This included reorganization of the floor plan and a new separate mechanical exhaust system for the receiving area that would protect the rest of the building from a mailed terrorist attack such as from anthrax. We improved the flow of operations by relocating the mail scanner and other mail equipment in an a separate room and partitioned off the check processing room from the mail receiving area.

Other renovations included coordination and installation of a new overhead conveyor system, office reorganization of the materials department, redesign of the open office area, a new loading dock, the installation of a new café, a new smoker's patio, a new operable partition to divide the training room and other mechanical and electrical projects.

Owner: CVS Caremark

Project Architect: Grant T. Gramstad, AIA

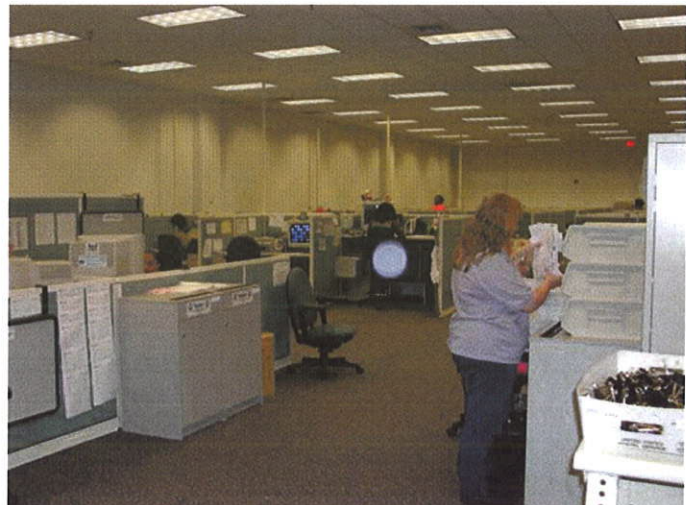
Completed: miscellaneous renovations from 2003 thru 2010

Cost: approx. \$2 million

Size: 114,000 Square Feet

Delivery Type: Design-Build-Negotiated

Contractor: Powers & Associates, Inc.



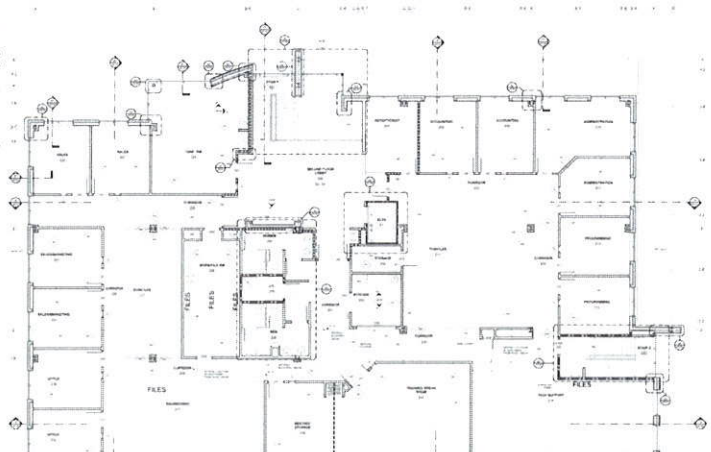


Pillar Innovations Office Building & Warehouse

Morgantown, West Virginia



The new facility for Pillar Innovations is comprised of 19,830sf over two floors. The first floor of the building will house the manufacturing & laboratory spaces of the building as well as core components. The second floor consists of offices, open office areas, a training facility, conference room, catering kitchen, support spaces, and core components. The brick exterior of the building is accentuated with brick banding, composite metal panels, and LOW-E reflective glass. The design allows for future expansion for Pillar Innovations in their ever growing market.



Owner: Beitzel Resources, LLC

Project Manager: Paul A. Walker, AIA
Project Architect: Todd Christopher, AIA

Completed: Fall 2011

Cost: \$4.1 Million

Size: 19,828 Square Feet

Delivery Type: Design-Build-Negotiated

Contractor: TEDCO Construction
Corporation



Middletown Tractor Sales

Fairmont, West Virginia



(Architectural Rendering)

A new, pre-engineered metal building with a stacked stone veneer architectural accent for the Middletown Tractor Sales which was awarded through a Design-Build Competition. This one story building includes a John Deere and third party showroom, parts counter, full-service repair shop and administrative offices. The administration portion includes a conference and training room with state-of-the-art video/teleconferencing. The service area includes ten service bays, a wash bay, a 2-ton overhead crane, a welding shop and loading docks for semi-trailers and pickup trucks. The site includes an outdoor equipment showroom and test course area.

Owner: Middletown Tractor Sales

Project Manager: Todd Christopher, AIA

Estimated Completion: February 2011

Cost: \$1.7 Million

Size: approximately 23,100 Square Feet

Delivery Type: Design-Build Competition

Contractor: Commercial Builders, Inc.

(Architectural Rendering of Front Elevation)





Coca-Cola Cross-Dock Facility

Walker County, Alabama



A pre-engineered metal building with a 10,500 square foot footprint on approximately 3 acres near Carbon Hill, Alabama. The program consisted of two stories of offices at 3,000 square feet per floor and a 7,500 square foot one story warehouse. This facility was built to accommodate freight shipments being delivered and then picked up by crossing truck routes.

Owner: Birmingham Coca-Cola Bottling Co.

Project Architect: Grant T. Gramstad, AIA

Completed: Fall 2002

Cost: \$800,000

Size: 24,000 Square Feet

Delivery Type: Design-Build-Negotiated

Contractor: Powers and Associates



Enterprise Cleanup Facility Airport

Birmingham, Alabama



This new building was constructed on a site leased from the Birmingham Airport Authority to move the cleanup facilities closer to the point of rental demand. It employs state-of-the-art automatic carwash equipment from Belanger and is set in a secure site with parking for 159 vehicles. Because of the linear nature of the layout and the industrial environment, it was most economical to use load-bearing masonry for the walls and steel bar joists for the roof structure. The project includes two offices, restrooms, break room, mechanical & storage rooms, and the car wash bay.

Owner: Enterprise Rent-A-Car

Project Architect: Grant T. Gramstad, AIA

Completed: Spring 2004

Cost: \$400,000

Size: 2,120 square foot building & a parking lot for 159 vehicles

Delivery Type: Design-Build-Negotiated

Contractor: Powers and Associates





CMC Metal Recyclers Baler Building

Birmingham, Alabama



This 10,000 SF free-standing, pre-engineered metal building is used for storage and baling of scrap copper and aluminum. The non-conditioned facility houses a large baling machine which is fed scrap copper & aluminum on one end and produces cubes of metal on the other end that are ready for shipment. The facility enhances the production of recycling scrap metal for CMC Recyclers.

Owner: CMC Metal Recyclers

Project Architect: Grant T. Gramstad, AIA

Completed: Winter 2009

Cost: \$550,000

Size: 10,000 Square Feet

Delivery Type: Design-Build-Negotiated

Contractor: Birmingham and Associates





H.F. LENZ
COMPANY

U.S. Postal Service
Erie and Pittsburg Areas, Pennsylvania

INDEFINITE DELIVERY CONTRACT (IDC) 2005-2009

H.F. Lenz Company recently completed two concurrent IDCs, one as the Prime Consultant and one as a subconsultant to an architectural firm. Projects under these contracts included:

Johnstown Processing and Distribution Facility - HVAC Controls Replacement (Prime Consultant)

H.F. Lenz Company was retained to review the HVAC controls at the United States Postal Service, Johnstown, Pennsylvania – Processing and Distribution Facility. The facility consists of a single-story, slab-on-grade structure with a total area of approximately 70,323 sq.ft., and an additional 2,151 sq.ft. of postal inspector gallery. The project included developing a scope of work and associated cost for the replacement of the HVAC controls and to identify any recommended alternates regarding the heating/cooling problems that existed at the facility, which included uneven space temperatures, poor air circulation and distribution, and thermostats in hard to access or unoccupied spaces. We were subsequently retained to provide the design services and construction phase services for the new controls and associated upgrades. The project was completed in 2008, at an estimated construction cost of \$150,000.

USPS Indiana, PA HVAC System Replacement (Prime Consultant)

H.F. Lenz Company was retained to provide the engineering services for the replacement of the HVAC system serving this 19,000 sq.ft. facility. The project included the removal of the existing AHU's in the basement and the existing chiller and cooling tower including all associated piping and ductwork. The new HVAC system included five AHU's, four of which were rooftop units with dx cooling, the fifth was a split system AHU with dx cooling. A new electrical panel, conduits, wire and disconnects were also provided. Total construction cost was approximately \$314,000. Construction was completed in 2009.

New Castle Carrier Annex Facility Renovation (Subconsultant)

H.F. Lenz Company provided the engineering services for the complete gut renovation of an existing 10,000 sq.ft. supermarket for use as a carrier annex facility. The project included partial demolition of the building to create a new truck dock and renovation of interior spaces to include offices, conference rooms, visitor entrance, employee entrance, break room, 60 mail sorting stations, locker rooms and restrooms. The construction was completed in 2009 at an estimated cost of \$3.6 million.

USPS Dubois Retail Facility Fit-out (Subconsultant)

H.F. Lenz Company was retained to provide the engineering services for the fit-out of an existing 1,900 sq.ft. space in a strip mall facility for use by the U.S. Postal Service. The project included the reconfiguration of the existing MEP systems to serve a new loading dock, workroom, rent-a-box, self-service area, lobby and service desk. Construction was completed in 2009 at an estimated construction cost of \$60,000 (MEP only).

Additional Projects included:

- Curwensville fire damage correction (Prime)
- Johnstown elevator door replacement (Prime)
- State College lobby study (Prime)
- Warrendale bulk mail center parking lot repaving (Prime)
- Warrendale bulk mail center retaining wall study (Prime)
- Tipton damage assessment (Prime)
- New Castle workroom lighting replacement (Prime)



**H.F. LENZ
COMPANY**

***U.S. Postal Service
Pennsylvania and West Virginia***

INDEFINITE DELIVERY CONTRACT (IDC) 2005-2009

USPS Weston, WV Study for HVAC System Replacement

Under a term contract, H.F. Lenz Company was requested to prepare an investigative study for an HVAC systems replacement at the Weston – Main Post Office. The two-story building with full basement is approximately 15,200 sq.ft. The original building was constructed in the early 1930s and is considered historic. No major renovations to the building had taken place since it was constructed. The project included developing a scope of work and schematic level documents for the replacement of the HVAC systems and to address any heating/cooling problems that may occur at the facility as a result of decommissioning the existing boiler. The study was completed in 2008.



USPS Saint Mary's, WV Study for HVAC System Replacement

H.F. Lenz Company was retained to provide engineering services related to an evaluation of the existing HVAC system serving the basement and first floor areas of the Saint Mary's, West Virginia Postal Facility. The project included a detailed report of existing conditions and recommendations for the demolition of the existing rooftop AC unit, decommissioning of the existing hot water boiler, and installation of a new packaged gas-fired rooftop HVAC unit along with new ductwork, electrical upgrades and controls. The study was completed in 2007.



References



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*Waterfront
Place*



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*Waterfront
Marina
&
Boathouse
Bistro*



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*Glade
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Clubhouse
Expansion*



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*Chestnut
Ridge
Church*



*Fairmont
State
University
Conference
Center*



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Customer Relationships & Quality Assurance



Paradigm Architecture prides itself on providing excellent client service. When asked one time whether Paradigm Architecture was primarily a Design Firm or a Technical Firm, the response was simply "We are a Client Service Firm." Our portfolio of projects exemplifies this as the majority of our work comes from repeat clients. In addition to designing award winning projects, we are known for providing fast, local response, as well as personal attention to each and every project, no matter how large or small. The following pages are brief summaries of techniques used to maintain these valuable relationships.



Glade Springs Resort



Chestnut Ridge Church

Project Management

The **Principal-in-Charge** for this project will be **Paul Walker**. His impressive portfolio includes award winning designs for both large and small projects, including recent AIA Honor Awards for the WVU Transportation Center and Garage and the Waterfront Marina, both of which are located in Morgantown, WV. Paul's approach to design involves practical, yet compelling solutions, to meet the client's goals. From embracing an historical context, such as his designs in the Morgantown Wharf District Redevelopment or embellishing the contemporary, progressive style of a corporate environment, such as the U.S. Department of Energy office building, Paul's designs have always received rave reviews, and resulted in many repeat clients. Paul's personal attention will be prevalent throughout the duration of this project.

*Fairmont
State
University
Hardaway
Hall*



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Customer Relationships & Quality Assurance



Project Management (continued)

The **Project Manager** will be **Todd Christopher** for the entire design team from conception to project closeout. The **Project Architect** will be **Grant Gramstad**. Together, Paul, Todd, and Grant have successfully completed many projects together. Their system of delivering projects involves direct, personal attention to every project, open communication between the Owner and Design Team, and innovative methods that push the boundaries of traditional architectural firms.

Communication is of utmost importance for any project to be successful and a workflow of communication, including identifying key individual's responsibilities and authorities will be established at the onset of the project. Unlike most design teams, we feel that it is important for the Owner to have direct contact with the consultants on the design team. There will be scheduled meetings throughout the duration of the project where the Owner will have the opportunity to be directly involved with all aspects of the project's design. An organized flow of all communication and project management is of utmost priority. The design team has an established hierarchy in which each subconsultant will have a single Point of Contact with Paradigm Architecture's Project Manager. Paradigm Architecture will then in turn have a single Point of Contact with the Owner, who will then manage all of their internal flow of communication between the two parties. Paradigm Architecture has abundant experience in managing multiple projects with critical deadlines. Meeting these deadlines all starts with a clear definition of the schedule constraints. The ultimate project completion date is not the only date that should be targeted on the delivery schedule. Paradigm utilizes **critical path method scheduling** to define "Milestone" dates for the entire project. These include deliverables dates for various phases, design time, Owner's review, Agency and Authority having Jurisdiction Review, procurement time, and construction time. Rather than viewing the schedule as a linear process, it is of utmost importance to determine those items that fall on the "critical path." If those deadlines are missed, then the schedule must be adjusted immediately or the project will fall behind. We prefer to view the Schedule as a method of monitoring and control throughout the duration of the project. The entire design team and the Owner will be constantly informed and updated regarding schedule performance and corrective action will immediately be taken as necessary.



Glade Springs Resort



Glade Springs Resort



*Two Waterfront Place
Hotel & Conference Center*

Cacapon Resort State Park



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Customer Relationships & Quality Assurance



Construction Contract Administration

Steve Konya will be assigned to this project as **Construction Contract Administrator**. Mr. Konya has extensive experience with the Client's established Design Guidelines and Standards and Construction Contract procedures. Steve will be actively involved with the project during design and will have firsthand knowledge of the project's design and construction documents. The Construction Administrator's roles will include managing and reviewing shop drawings, submittals, and RFIs for the entire design team. Additional roles include attendance at job site meetings, documenting construction progress and actively keeping the Owner informed through direct correspondence. The Contract Administrator will endeavor to have a good working relationship with the successful contractor bidding on the project to ensure that the project is a success for all parties involved.



Morgantown Event Center

All of our engineers and consultants perform construction administration including shop drawing review and site visits to observe mechanical/electrical systems compliance with drawings and specifications. We believe the involvement of the design engineer during this phase allows for verification that the designed systems are installed as specified, thereby reducing occupant complaints and improving energy efficiency.



Morgantown Event Center

The majority of Paradigm's team is located within 45 minutes of the project site, and we have a consistent track record of providing quick response times to immediate issues that arise. In addition, we take advantage of electronic shop drawing reviews, videoconferencing, and web-based collaboration to provide expedited response for those consultants who are not immediate to the project site. All of our clients know that we are "just a phone call away" and readily available to address any need that they may have.

Project Closeout & Post Project Review

Project Closeout Procedures will involve inspections by all members of the design team for Substantial Completion, and again at Final Completion. Each team member will generate a punch list of items that are either deficient or need to be completed. Closeout Submittals are required on every project and include not only Operations and Maintenance Manuals, but also Record Drawings, Approved Shop Drawings/Submittals, Attic Stock, and Contact Information for all Subcontractors on the project. A careful review and confirmation of the Closeout Submittals will be conducted prior to approval of the Final Payment Application.

Paradigm encourages Post Project Review on all projects and will conduct a "post mortem" meeting upon request by the Owner. Key team members of the project will be present at this meeting, including but not limited to the Owner, Architect, and Contractor. We feel that these meetings are important so that all parties involved have the opportunity to provide constructive input and learn from the completed project.



Morgantown Event Center

Project Coordination



Technology



Two Waterfront Place Hotel & Conference Center

Paradigm Architecture prides itself on streamlining our project delivery and management methods. One of the ways we do this is to utilize the latest technology, including web-based project collaboration sites, electronic communication, electronic submittals for review and approval, video conferencing and the latest software packages for 3-dimensional renderings, Computer Aided Drafting (CAD), and Building Information Modeling (BIM). Our current software packages include the latest versions of Revit Architecture, Autocad Architecture, 3-D Studio, and Speclink. Far from the older methods of hand drafting, these tools help us to deliver faster and better coordinated projects, have fewer problems in the field, and provide the owner with excellent visualization tools during project development. We are always pursuing additional training and education for all our staff, including "in house" workshops, seminars, and online education for topics such as green building, BIM, project delivery and management, and current codes.



WVU Milan Puskar Stadium Concession Stand Addition

Building Information Modeling (BIM)

Of particular interest is our use of BIM. More than just a 3D visualization tool, BIM allows for all disciplines to conduct "clash detection" tests for various disciplines and building components before the project goes to bid. This is extremely crucial for above ceiling coordination among the structural and MEP components. Use of BIM technology can result in better coordinated construction documents and less changes in the field. In addition, BIM allows the Owner to virtually experience the project before it is constructed. Utilizing animations, we can "walk" the Owner through the building so that room layout surprises are eliminated during design. The use of renderings allows for careful material selections and presentations to internal departments and project stakeholders. At the conclusion of the project, the as-built model can be turned over to the Owner's Facilities Management Department for an actively working database to be used for years to come.

Two Waterfront Place Hotel & Conference Center



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Project Coordination



File Transfer Protocol (FTP)

Throughout the life of the project, Paradigm hosts the FTP site. Paradigm sets up the site and all permissions for the site. If necessary, we lead a training session for the entire project team on how to use the site. The site will be maintained from the signing of Owner/Architect Agreement until the Project Closeout. All formal correspondence, as well as all required deliverables, throughout the duration of the entire project shall be uploaded to the FTP site. Paradigm creates an archive CD or DVD of all files on the project's FTP site at Project Closeout and delivers to the Owner.

Document Review and Coordination

In addition to using BIM, Paradigm has a tested methodology of coordination reviews and "check set" submissions throughout various stages of the project. These typically fall at the conclusion of Schematic Design, Design Development, 50% Construction Documents, and 95% Construction Documents. The Project Manager will carefully review and coordinate the documents from all disciplines and issue markups back to the team for incorporation. These checks will include (but are not limited to) coordination of utility layouts above ceiling with the structural systems, all vertical risers, life safety and code reviews, building program backchecks, specifications, and incorporation of the Owner's **Design Guidelines and Standards**. The Owner will be given an identical "check set" at each submission for review and comment.

Facilities Operations and Maintenance

Recognizing the importance of long-term building operations and maintenance concerns, as well as building lifecycle costs, we encourage the involvement of the Owner's Facilities Management and/or Physical Plant staff throughout the project. We prefer to allow the engineers to get direct feedback from these individuals and we value their input to the selection of materials and systems. We diligently work to avoid past issues and concerns that have risen on past projects. In addition, our consultants have abundant experience in providing solutions and alternatives to pre existing maintenance conditions to alleviate those problems, provide a better building environment, and reduce lifecycle costs. This experience gives our team first-hand experience on the importance of having this staff involved with the design and allows for better decision making with the materials and systems selection.



Fairmont State University
Hunt Haught Hall



Fairmont State University
Hunt Haught Hall

Chestnut
Ridge
Church



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Methodology & Approach



*Two Waterfront Place
Hotel & Conference Center*

Design Conformance

Paradigm Architecture designs in conformance with all local, State, and Federal regulations applicable to the project. We have longstanding relationships with code officials and work closely with them throughout the life of the project. Everyone is concerned with energy conservation, life cycle analysis, and green building techniques; and Paradigm Architecture is no different. We have completed two projects that are LEED Certified. In addition, we have been able to assist clients who are interested in applying green building techniques such as improving the energy efficiency of the building and reducing long term life cycle costs, even though they may not wish to pursue LEED Certification.

Planning / Programming Tools

Paradigm believes that defining the problem is the single most important step towards designing and constructing a successful facility. This will be the ultimate purpose of a program of requirements. Paradigm uses a strongly interactive programming process that engages multiple project stakeholders in open communication. This programming methodology depends on interaction and exchange within a systematic process of establishing goals, collecting facts, uncovering concepts, determining needs, and stating the problem.



*Two Waterfront Place
Hotel & Conference Center*

*Two
Waterfront
Place
Hotel
&
Conference
Center*



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Methodology & Approach



Planning / Programming Tools (continued)



*Davis & Elkins College
Madden Student Center*



*Fairmont State University
Classroom*



*Two Waterfront Place
Hotel & Conference Center*

This process was utilized in the Programming process for the reconfiguration planning of WVU's Administration at One Waterfront Place. This project involved 40 Divisions in 8 distinct departments. Initial meetings were conducted to describe the programming exercise and clarify the requirements related to the process. Programming Information Forms were distributed for documentation of base data including personnel, position, type of work space, size of workspace, degree of confidentiality, functional relationships, equipment, and furniture. Interviews were then conducted to review the information on these forms and understand the nature and operation of each group. We use standard questionnaires to aid this activity, but each interview tends to have a "life of its own." All of this information is recorded in the form of meeting minutes. This data is compiled, analyzed, and summarized in a document which will serve as a basis for design. Often functional diagrams are included to illustrate relationships and work flow. It is common to provide Executive Summaries of the findings in order to provide a simplified overview of the conclusions. In the case of the One Waterfront, WVU Administrative Services Center project, the Programming process yielded a 300+ page document that was used to plan for expansion, relocation, and reconfiguration of virtually every department located in the building.

Part of the goal of the Planning Phase of any project is to identify the MEP/FP scope of work for the project. To this end, Tower Engineering's team of mechanical and electrical engineers and designers address and determine how the final system selection is impacted by such major issues as advancing technology, changes in design standards, higher expectations of comfort levels, greater awareness of environmental concerns, the needs and availability of practical energy conservation measures, forecasting future needs, and maintaining construction and operating costs within budget constraints. For renovation projects, our evaluation approach involves the visual inspection of existing conditions by a team of engineers. An assessment report, including a description of the present systems, evaluation of existing conditions and defects, recommendations, and an estimate of budget/cost implications is provided to assist in the decision-making process. Using information gathered by site visits and during meetings, we then develop a list of applicable MEP system options that can be considered. These options are compared on a qualitative and quantitative basis using sophisticated energy analysis software.

As stated above, the programming process will primarily involve a series of in-depth interviews with various department heads, administration, and end users of the facility(ies). These interviews session will be documented, analyzed, and summarized by the design team. These summaries will be delivered to the Owner for review and verification. This Program not only defines Spatial Requirements (Scope), but also defines the Budget, Schedule, and Quality of Work for the entire project. Once finalized, this program is the Statement of Work that all future decisions surrounding the project are based on.

Methodology & Approach



From Program to Design to Construction



Trinity Christian School



WVU Intermodal Garage



Two Waterfront Place
Hotel & Conference Center

Once a program has been established, Paradigm Architecture will lead the design team through Schematic Design, Design Development, and Construction Documents. Our experienced architects, engineers, and designers perform design calculations, review applicable codes and prepare construction drawings and specifications to allow the project to be competitively bid. Those drawings and specifications detail the construction requirements of the project, and describe the quality, configuration, size and relationship of all electrical and mechanical components to be incorporated into the project.

Schematic Design Deliverables will include Preliminary Architectural Floor Plans and Elevations, as well as Systems Narratives by all consultants. An initial building and life safety review will be completed.

Design Development Deliverables will include detailed floor plans, elevations, sections, schedules, and single line engineering drawings. An outline specification will also be part of these deliverables, as well as 3-dimensional renderings for better visualization. Preliminary color selections will be presented by the Interior Designer. Preliminary "in person" reviews with the WV State Fire Marshal will be conducted.

Construction Documents Deliverables will include fully developed and completed drawings and specifications from all disciplines. Final color selection boards will be presented by the Interior Designer during this phase. Another review will be conducted with the WV State Fire Marshal's office prior to bidding. The construction documents must be consistent with the project program, the construction budget, and the project schedule.

At all phases, an updated cost estimate will be provided by our construction manager that represents the current status of the project. As required for budget control, value engineering will take place prior to bidding and alternates will be included in the final bidding documents. In addition, our construction manager will be reviewing the project for constructability analysis and will assist in developing phasing sequences for the renovation of these existing facilities.



Fairmont State University
Hunt Haught Hall

Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Methodology & Approach



Design Assurance



*Fairmont State University
Falcon Center*

Paradigm Architecture and its consultants will each have a Principal-in-Charge assigned to the project. As is done at Paradigm Architecture, we insist that our consultants have an active role throughout the duration of the project. These roles include providing design assurance quality control reviews at each stage of the project to ensure that the program requirements, design goals, schedule, and budget requirements are being met.

Procurement



Chestnut Ridge Church

Once Bidding Documents have been approved by the Owner, Paradigm Architecture will assist the Owner in the Procurement Phase by prequalifying contractors, holding a Pre-Bid Conference, responding to questions, and issuing Addenda. After bids have been received, Paradigm Architecture will review the lowest responsible bidder submission to verify that all requirements have been met. At that point a Construction Contract will be issued to the Contractor for signature. Upon receipt of a Notice to Proceed from the Owner, we will begin our Construction Contract Administration Services.

*Glade Springs
Clubhouse
Addition*



Par·a·digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Project Approach



Firm's Ability



Glade Springs Clubhouse



*Two Waterfront Place
Hotel & Conference Center*

We have successfully used a wide range of project delivery types on both public and private projects: design-bid-build, negotiated, design-build, develop-design-build, fast track, construction management agency, and construction management where the construction manager is also the contractor. We have extensive experience on fast-track construction projects, ranging from \$1 million to \$35 million. We assist the owner in developing critical path items and developing multiple early release packages while the design is still ongoing. These packages typically include initial site work, foundation, superstructure, long lead equipment, shell, and interior fit out. Although there are greater risks that must be assumed by the owner with this method, the benefits from meeting tight deadlines typically outweigh these risks. Expedient decisions must be made by all involved and open lines of communication and transparency are crucial. On any given type of project delivery, we have a quality control plan that includes developing an initial schedule with the owner for the entire project through the design, bid, and construction phases. Milestone points will be established and will include deliverables from both the design team and the owner. These milestone points will include sets of progress drawings and specifications for both the owner's and design team's review. We have an extensive "in house" coordination and review process that includes engineering coordination, specification coordination, code and life safety reviews, and the owner's program review. Before moving to each subsequent phase, the Owner will have an opportunity to review and "sign off" on each progress set so that all parties are always clear as to the direction the project is heading.

Teamwork

It has always been our philosophy that successful projects are the result of successful team relationships. And on any given construction project, there are a lot of relationships that come into play: owners, developers, facilities managers, architects, engineers, contractors, subcontractors, financial institutions, attorneys, code agencies, and tenants. We have learned a lot about how to work successfully together with all parties involved. Every project, whether large or small, is unique and requires strong leadership. Being a small business, you can be assured that local, senior staff and an experienced project manager will be assigned to all of our projects. Based on the specific requirements of the project, we always put together a team of consultants and staff who would best serve the needs of that individual project and client – while always maintaining a constant flow of communication and personal service with the owner.

Quality Control & Management

Project Management



Project Delivery

We have successfully used a wide range of project delivery types on both public and private projects: design-bid-build, negotiated, design-build, develop-design-build, fast track, construction management agency, and construction management where the construction manager is also the contractor. We have extensive experience on fast-track construction projects, ranging from \$1 million to \$35 million. We assist the owner in developing critical path items and developing multiple early release packages while the design is still ongoing. These packages typically include initial site work, foundation, superstructure, long lead equipment, shell, and interior fit out. Although there are greater risks that must be assumed by the owner with this method, the benefits from meeting tight deadlines typically outweigh these risks. Expedient decisions must be made by all involved and open lines of communication and transparency are crucial. On any given type of project delivery, we have a quality control plan that includes developing an initial schedule with the owner for the entire project through the design, bid, and construction phases. Milestone points will be established and will include deliverables from both the design team and the owner. These milestone points will include sets of progress drawings and specifications for both the owner's and design team's review. We have an extensive "in house" coordination and review process that includes engineering coordination, specification coordination, code and life safety reviews, and the owner's program review. Before moving to each subsequent phase, the Owner will have an opportunity to review and "sign off" on each progress set so that all parties are always clear as to the direction the project is heading.



WVU Marina Tower
Fourth Floor



WVU Marina Tower
Fourth Floor

Lightning
Strikes
Trussville
Family
Fun
Center



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Quality Control & Management

Schedule / Costs



Critical Path Method

Paradigm Architecture has abundant experience in managing multiple projects with critical deadlines. Meeting these deadlines all starts with a clear definition of the schedule constraints. The ultimate project completion date is not the only date that should be targeted on the delivery schedule. Paradigm Architecture utilizes critical path method scheduling to define "Milestone" Dates for the entire project. These include deliverables dates for various phases, design time, Owner's review, Agency and Authority having Jurisdiction Review, procurement time, and construction time. Rather than viewing the schedule as a linear process, it is of utmost importance to determine those items that fall on the "critical path." If those deadlines are missed then the schedule must be adjusted immediately or the project will fall behind. We prefer to view the Schedule as a method of Monitoring and Control throughout the duration of the project. The entire design team and the Owner will be constantly informed and updated regarding schedule performance and corrective action will immediately be taken as necessary.



Glade Springs Resort
Hotel and Conference Center



WVU Intermodal Garage

Fast Track

We have been involved with multiple project delivery types where time is of the essence and have the capability to perform Fast Track Delivery Services if necessary. With Fast Track Delivery, the project is broken up in multiple construction packages with early release dates. Examples of these packages include Earthwork / Site Utilities, Foundations, and Superstructure. This allows construction to begin before the design has been complete.

Glade
Springs
Clubhouse
Addition



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Quality Control & Management

Schedule / Costs



Cost Control



WVU Touchdown Terrace Club
Addition



WVU Ag Sciences Greenhouse

Paradigm Architecture understands the importance of the project budget and takes great pride in being able to meet these budgets. Project budget is not just the construction budget. We assist the owner in reviewing all aspects of the total project budget, including pre-design services, such as surveys, field investigations and geotechnical explorations, furniture, fixtures, and equipment (FFE) packages, and project closeout. Due to our vast experience with multiple project delivery types, including design-build and construction management, we have firsthand experience with monitoring costs throughout the entire project. In our nearly ten years of operations, we have never had an Owner "reject all bids" due to cost overruns. Many times, to help control costs on the project, we will work with the Owner early on to establish a base bid package that will deliver within budget. We will then establish a series of alternate packages that can be selected from once bids are received. We will also work with the Owner to establish an Owner's contingency allowance for those unforeseen issues that may arise.

Using internal cost data, and national databases, we are able to provide the Owner rough order of magnitude and schematic cost estimating for initial project development. We often conduct feasibility studies for clients to help them with initial project evaluations. We feel that utilizing the services of a contractor or construction manager is extremely beneficial to the design process and helps keep the project moving in the right direction. Their services, such as cost estimating, constructability reviews, value engineering, current bid market analysis, and CPM scheduling have proven to be valuable assets to both the architect and owner. They are the experts in this area, just as we are the experts in the area of design, so why shouldn't we work together from day one to give the owner the best possible project? At times, we recommend both the architect and owner hire these consultants so that two third party reviews can be conducted and then any major differences be reconciled prior to bidding the project. Using these unique approaches we find that it is rare for one of our projects to be over budget or behind schedule.

Firm's Ability to Provide Services Within the Project Time Frame

Paradigm Architecture is confident that we can provide a high level of service in a timely manner. We have historically managed multiple complex projects with significant construction budgets.

Cacapon Resort
State Park Lodge



Par-a-digm - (pär'e-dīm') *n.* An example that serves as pattern or model.

Firm Profile

As one of the nation's leading multi-discipline, full-service engineering firms, KCI is consistently ranked among the top 100 consulting engineering firms in the country by *Engineering News Record*.

With a professional staff of engineers, planners, scientists, surveyors, and construction managers, we offer a broad range of engineering services, including civil, structural, transportation, environmental, hazardous waste, mechanical, electrical, telecommunications, and soils. We also provide cultural and environmental resource management services, land planning and landscape architecture, geology, hydrology, ecology, surveying, and construction management and inspection.



The professional staff is supported by CADD designers, BIM designers, GIS experts, and database analysts, programmers, and technicians; as well as state-of-the-art computer, field, and lab equipment. KCI's computer network supports the firm's core production systems, including BIM, CADD, GIS, three-dimensional visualization/animation tools, document processing and desktop publishing, and project management. The firm's integrated approach to automating design, drafting, documentation, and presentation minimizes costs, facilitates coordination among engineering disciplines, and expedites the production of high-quality products.

At KCI, we believe that our broad technical expertise, combined with our unique commitment as employee owners, has enabled us to emerge as industry leaders whose customers can count on excellent service time and again.

Location

KCI has been working throughout the state of West Virginia for more than 10 years and is familiar with conditions and infrastructure of rural West Virginia. Our local office has a wide range of experience working with various state agencies, as well as private developers and contractors. Our backgrounds range from WVDOH to USDA Rural Development. We have engineers who understand and advocate for the needs of rural communities and public service districts. KCI has the knowledge to aid our clients in all aspects of this project including but not limited to preliminary study, preliminary design, funding assistance, final design, bidding services, construction administration, construction inspection, or any other service needed to complete these types of projects.

Experience with Military Facilities

The KCI Team has been recognized for our performance on numerous projects exemplified by our frequent reselections, various project awards, ACASS ratings, and commendations from our clients. Successful past performance on federal, state, local, and private sector work has resulted in repeat contracts with clients. The following table illustrates this long-term history:

Client	Years
Naval Facilities Engineering Command	35+ years
US Army Corps of Engineers	25+ years
US Department of Agriculture	25+ years
General Services Administration	25+ years
Maryland Procurement Office	15+ years
Federal Highway Administration	10+ years
Marine Corps Combat Development Command	10+ years

Quality Assurance/Quality Control

KCI committed to achieving ISO 9001: 2008 certifications for all of our regions and was successful as of December 2010.

ISO Auditing Program

As part of the ISO certified quality management system, KCI has developed an internal auditing program to measure our performance with respect to our business and service delivery processes. Select employees within the firm have been trained as internal ISO auditors and are charged with completing audits of our internal systems throughout the organization. The results are evaluated so the root causes of nonconformities can be determined and opportunities for improvement can be identified. This information is then used by senior management in order to develop and implement process improvements.

In addition to requiring ongoing internal audits, ISO certification requires annual third-party audits by an independent certification body.

ISO Quality Control Manuals

Work performed in each of KCI's technical disciplines conforms to the quality control procedures described in the quality control manual specifically developed for that discipline. The purpose of the procedures is to eliminate potential errors, omissions, ambiguities and inconsistencies in the design and development of project documents. The procedures are developed by the technical staff and contain specific instructions on how to prepare, check, review and coordinate the various work products generated by each discipline. Separating the quality control procedures by discipline allows for the customization necessary to ensure rigorous quality control standards.

These quality control manuals and their implementation constitute the principal mechanism for technical quality control at KCI. Conformance with these procedures is ensured through KCI's internal auditing process.

Resources

With approximately 850 employees, KCI has adequate resources available to commit to the project. Our key staff members identified in this document have years of successful experience providing project management and technical design activities for complex projects with challenging budget limitations and critical schedule milestones. We have a successful track record of executing projects of this size. KCI's strategically located offices share resources and personnel when necessary. It is our customary practice to shift personnel and resources between offices to meet the staffing and scheduling requirements of a particular project. We are ready to commit our expertise and resources required to complete this project.



Allegheny Design Services

Structural & MEP Engineering

102 Leeway Street
Morgantown, WV 26505
Phone: (304)599-0771
Fax: (304)599-0772
www.alleghenydesign.com



CONSULTING ENGINEERING FIRM SPECIALIZING IN STRUCTURAL BUILDING DESIGN AND BUILDING ANALYSIS

Allegheny Design Services is a consulting engineering firm specializing in structural building design and building analysis.

Dedicated to serving West Virginia and the surrounding region, ADS recognizes the need for reliable and full service structural engineering support. ADS provides all phases necessary for the successful completion of a building project including schematic design studies, design development, construction documents and specifications, and construction administration.

Over 20 years in Design and Project Management of:

- Commercial
- Industrial
- Institutional
- Educational Facilities



MIXED USE



HOTEL
CONFERENCE CENTERS



SECONDARY EDUCATION



OFFICE BUILDINGS



PARKING GARAGES



ATHLETIC FACILITIES



METAL BUILDING SYSTEMS



HEALTH CARE



Allegheny
Design Services

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FIRM PROFILE

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ADS's experience exceeds twenty-five years in the Design and Project Management of:

Commercial Facilities

Industrial Facilities

Institutional Facilities

Educational Facilities

ADS was established by David Simpson, P.E., MBA, in 2002 as a result of a need in North Central West Virginia for reliable structural engineering services. ADS utilizes a combination of office technology and a motivated staff to deliver projects typically up to \$25 million in construction value. We have completed design work for over \$300 million in construction since our inception. Our clients include architects, contractors, developers, attorneys, and insurance companies.

Building systems delivered by ADS include structural steel, reinforced concrete, precast concrete, and structural timber. ADS currently utilizes the latest engineering design and BIM software for the development of project work.

ADS is covered under a \$1 million liability policy for errors and omissions through Lexington Insurance Company.

ALLEGHENY DESIGN SERVICES' EXPERIENCE TEAMING WITH PARADIGM ARCHITECTURE

Boathouse Bistro Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Boathouse Bistro. The building houses a restaurant, a docking facility, and WVU Crew Team storage. The \$5 Million facility was completed in 2007.



Cacapon Resort State Park Addition and Renovations Cacapon, WV

ADS is a consultant to Paradigm Architecture for the Cacapon Resort State Park Improvement Projects. ADS will be providing design of foundations and structural system design. The new addition provides an additional 79 guest rooms, swimming pools, new dining facilities and commercial kitchen, and a spa and fitness area. Additional renovations to the resort includes golf course upgrades, as well as water and wastewater treatment upgrades. This is a Design-Bid-Build Project.



Chestnut Ridge Church Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Chestnut Ridge Community Church. At the time of completion in 2006 this was the largest church facility in West Virginia. At a cost of \$12 Million, it houses an education/gymnasium wing, administrative offices, and a 2000 seat sanctuary.





Allegheny
Design Services
Structural & MEP Engineering

Davis & Elkins College Athletic Center Elkins, WV

ADS was a consultant to Paradigm Architecture for the Davis & Elkins College Athletic Center. The building houses a gymnasium, offices, and classrooms. At a cost of \$6 Million it was completed in 2006.



Davis & Elkins College Benedum Hall Renovation Elkins, WV

ADS was a consultant to Paradigm Architecture for the Davis & Elkins College Benedum Hall Renovation. This 16,000 square foot renovation to Benedum Hall included the addition of a rotunda at the entrance. The work was completed in 2003.



The Dayton Morgantown, WV

ADS was a consultant to Paradigm Architecture for The Dayton. The Dayton is a 3 story modular building located at the corners of Ridgeway Avenue, Dayton Street and Richwood Avenue in Morgantown, WV. The building is a mixed used residential housing project with parking garage and retail space located on the ground level. ADS was responsible for foundation and structural system design.





Allegheny
Design Services
Structural & MEP Engineering

Fairmont State University Hardway Hall Entrance Renovation Fairmont, WV

ADS was a consultant to Paradigm Architecture for the FSU Hardway Hall Entrance Renovation. This project consisted of Water Damage Restoration, Porch Deck Restoration and Structural Stabilization. This project was completed in 2010 for approximately \$500,000.



Fairmont State University Parking Garage Fairmont, WV

ADS was a consultant to Paradigm Architecture for the FSU Parking Garage. This design-build project was completed in 2003 at a cost of \$9.2 Million. This 900 car capacity facility was built over mine cavities which required pre-grouting.



Glade Springs Hotel & Conference Center Daniels, WV

ADS was a consultant to Paradigm Architecture for the Glade Springs Hotel & Conference Center. The facility consists of a 40,000 sq. foot hotel wing, a 12,000 sq. foot conference center and a 2,000 sq. foot Porte Coche. It was completed in 2005 at a cost of \$5 Million.





Allegheny
Design Services
Structural & MEP Engineering

GSA - Department of Energy Morgantown, WV

ADS was a consultant to Paradigm Architecture for the GSA - DOE. This office and records storage building was completed in 2009. At a cost of \$8 Million (shell only). LEED Gold (Core & Shell); LEED Gold (Commercial Interiors); 2010 Excellence in Construction by the Associated Builders & Contractors, Inc.—WV Chapter.



GSA/USDA Building Sabraton, WV

ADS was a consultant to Paradigm Architecture for the USDA Building located in the Sabraton Area of Morgantown. ADS provided foundation and structural system design. This project is registered as a LEED Certified Building.



KeyLogic Renovation Morgantown, WV

ADS was a consultant to Paradigm Architecture for the KeyLogic Renovation. This project consisted of renovating the entire building, new elevator shaft tower and front façade addition. This renovation was completed in 2010 for \$1.6 Million.



Marina Tower Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Marina Tower. At a cost of \$10 Million (shell only) this building was completed in 2009. The eight story structure was a winner of an Excellence in Construction Award from Associated Builders and Contractors, WV Chapter.



Middletown Tractor Fairmont, WV

ADS was a consultant to Paradigm Architecture for the Middletown Tractor Building. This project consists of a 20,000 sq. ft. Sales and Supply Facility, Pre-Engineered Metal Building and Shallow Foundation System. This project was completed in 2011 for approximately \$1.7 Million.



Morgantown Event Center Morgantown, WV

ADS is a consultant to Paradigm Architecture for the new Morgantown Event Center and Parking Garage, located in the Wharf District of Morgantown, WV. ADS is providing foundation and structural system design.





Allegheny
Design Services
Structural & MEP Engineering

**Morgantown Event Center Parking
Garage**
Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Morgantown Event Center Parking Garage. This project consists of a 500 car parking garage. This project was completed in 2010 for approximately \$5 Million.



Pillar Innovations Office Building
Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Pillar Innovations Office Building. This project consists of a 2-Story Office Building with 20,000 Sq. Ft. Total Space, Structural Steel and Shallow Foundations. This project was completed in 2011 for approximately \$3.5 Million.



Trinity Christian School
Morgantown, WV

ADS was a consultant to Paradigm Architecture for the Trinity Christian School. The 50,000 square foot high school was completed in 2004 at a cost of \$5 Million.





Allegheny
Design Services
Structural & MEP Engineering

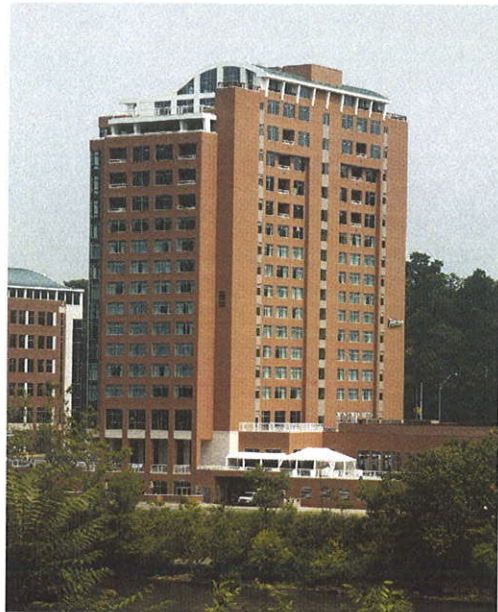
The View at the Park **Morgantown, WV**

ADS was a consultant to Paradigm Architecture for The View at the Park. The 6 story building contains 56 apartments. It was completed in 2003 at a cost of \$6 Million.



Waterfront Place Hotel & Conference Center **Morgantown, WV**

ADS was a consultant to Paradigm Architecture for the Waterfront Place Hotel & Conference Center. The \$33 Million hotel and conference center was completed in 2003. The 17 story building contains 300,000 sq. foot of heated space with a lower level parking garage.



West Virginia University Greenhouse **Morgantown, WV**

ADS was a consultant to Paradigm Architecture for the WVU Greenhouse. This project is a replacement facility for the current Greenhouse and Headhouse for the AG-Science Department on the Evansdale Campus. The size of the project is defined as roughly 8,500 SF for the Headhouse and 18,600 SF for the Greenhouse. The location of the project is on the current site of the existing Greenhouse facility. The new building will utilize the campus steam line for mechanical systems.





Allegheny
Design Services
Structural & MEP Engineering

West Virginia University Honors Dormitory Morgantown, WV

ADS was a consultant to Paradigm Architecture for the new Honors Dormitory located on West Virginia University's downtown campus. This project was completed in 2009 for approximately \$17.65 Million. ADS was responsible for overall foundation and structural system design.



WVU Mountaineer Station Morgantown, WV

ADS was a consultant to Paradigm Architecture for the WVU Mountaineer Station. The \$17 Million facility contains a 500 car parking garage, offices, public space, and retail space. It was completed in 2009. This project was a West Virginia AIA Merit Award Winner 2010; 2010 Excellence in Construction by the Associated Builders & Contractors, Inc.—WV Chapter; International Parking Institute 2011 Awards of Excellence Honorable Mention Winner.





H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

H.F. Lenz Company is a 175-person engineering firm encompassing the disciplines of mechanical, electrical, plumbing, fire protection/life safety, telecommunications, structural and civil engineering services including surveying services.



Over 85 percent of H.F. Lenz Company's projects are for repeat clients. Our government team, which is our core team for this project, has worked on all of our indefinite quantity contracts for the U.S. Army Corps of Engineers and the U.S. Postal Service since 1990. Our professional services have not only included the basic design and construction administration process but also preparation of DD Form 1391, feasibility studies, master plans, programming, site planning, space planning and other types of investigative services, as well as commissioning services. Since 1984, we have received over 20 indefinite quantity/indefinite delivery contracts from federal agencies.

Thomas F. Deter, P.E., Principal of our firm, will serve as Principal-in-Charge for this contract. Tom has successfully managed indefinite quantity contracts for the U.S. Army Corps of Engineers, U.S. Postal Service, U.S. General Services Administration, Pennsylvania DCNR, and several private clients.

In addition to our IDQ experience with DOD and USPS facilities, we have extensive experience with projects for various federal facilities including numerous courthouses and correction institutions, and projects that required strict security and anti-terrorism projection, advanced computer facilities, building automation systems, and substantial renovations for single and multi-tenant end users.

POSTAL FACILITIES EXPERIENCE

In 1987 the H.F. Lenz Company was awarded our first term contract with the U.S. Postal Service for the Johnstown, Pennsylvania MSC Area. The U.S. Postal Service exercised both possible option years under this contract. Subsequently, the firm has held three term contracts as the Prime Consultant and five term contracts as a subconsultant. Projects assigned under these contracts involved a variety of repairs and alterations requiring mechanical, electrical, plumbing, civil, and structural engineering services.





H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

Projects Under Our Most Recent IDQs with the U.S. Postal Service Have Included:

U.S. Post Office

New Castle, Pennsylvania

- New Carrier Annex facility

U.S. Post Office

Dubois, Pennsylvania

- Retail facility

U.S. Post Office

Pittsburgh, Pennsylvania

- Marquis One – First and third floor renovations

U.S. Post Office

Greenville, South Carolina

- Lifecycle cost analysis

Pittsburgh Bulk Mail Center

Warrendale, Pennsylvania

- Entrance drive widening
- Retaining wall study

U.S. Post Office

Indiana, Pennsylvania

- Main office HVAC study and replacement

U.S. Post Office

Johnstown, Pennsylvania

- HVAC controls replacement
- Elevator door replacement

U.S. Post Office

Curwensville, Pennsylvania

- Fire damage correction

U.S. Post Office

Duncansville, Pennsylvania

- ALTA/ACSM survey

U.S. Post Office

St. Marys, West Virginia

- HVAC system replacement

U.S. Post Office

Weston, West Virginia

- HVAC system replacement

U.S. Post Office

Altoona, Pennsylvania

- Lobby upgrades and retail store study

U.S. Post Office

State College, Pennsylvania

- Study for renovations to lobby

U.S. Post Office

Tipton, Pennsylvania

- Damage assessment

U.S. Post Office

New Castle, Pennsylvania

- Workroom lighting replacement
- ATC system replacement

U.S. Post Office

Lynchburg Courthouse

Lynchburg, Virginia

- Intrusion detection system
- Breakroom revisions

U.S. Post Office

Erie, Pennsylvania

- Vehicle maintenance facility fire alarm

Additional U.S. Postal Service Facilities

Projects Have Included:

Pittsburgh Bulk Mail Center

Warrendale, Pennsylvania

- Replacement of 1,200-ton chiller plant
- Chilled water distribution modifications
- Replacement of industrial air compressors
- Replacement of dust collection systems
- Cooling towers
- Gatehouse structural design

Proposed Bulk Mail Center

Davidsville, Pennsylvania

- Land survey and site feasibility study

General Mail Facility, EDC

Erie, Pennsylvania

- Office renovations



H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

**General Mail Facility
Pittsburgh, Pennsylvania**

- Security and closed circuit television system upgrade

**Processing and Distribution Center
Johnstown, Pennsylvania**

- Land survey for the new facility
- HVAC Controls replacement

**U.S. Post Office
Aliquippa, Pennsylvania**

- Investigative survey report
- HVAC system replacement
- Workroom lighting replacement

**U.S. Post Office
Altoona, Pennsylvania**

- Investigative survey report
- Handicapped accessibility modifications
- Parking lot renovation
- Loading dock renovation
- Elevator upgrades
- Toilet room alterations

**U.S. Post Office
Barnesboro, Pennsylvania**

- Investigative survey report

**U.S. Post Office
Bedford, Pennsylvania**

- Boiler repair study

**U.S. Post Office
Bellefonte, Pennsylvania**

- Investigative survey report
- Lobby modifications

**U.S. Post Office
Bethel Park, Pennsylvania**

- Investigative survey report
- Air handling unit replacement

**U.S. Post Office
Butler, Pennsylvania**

- Investigative survey report
- Loading dock renovations
- Parking lot upgrades

**U.S. Post Office
Central City, Pennsylvania**

- Roof survey and evaluation

**U.S. Post Office
DuBois, Pennsylvania**

- Investigative survey report
- Feasibility study for adaptive reuse

**U.S. Post Office
Dunlo, Pennsylvania**

- Investigative survey report

**U.S. Post Office
East Springfield, Pennsylvania**

- Lobby lighting retrofit

**U.S. Post Office
Emporium, Pennsylvania**

- Investigative survey report
- Replacement of lighting fixtures

**U.S. Post Office
Erie, Pennsylvania**

- Fire Alarm System Replacement
- Chiller and Air Handling Unit Replacement
- HVAC Control System
- Freight Elevator Study

**U.S. Post Office
South Station
Erie, Pennsylvania**

- Investigative survey report
- Corrections to HVAC system

**U.S. Post Office
Fairview, Pennsylvania**

- Structural damage report due to auto accident

**U.S. Post Office
Glenshaw, Pennsylvania**

- Indoor air quality investigation

**U.S. Post Office
Harrisburg, Pennsylvania**

- New distribution center and lubritorium
- Passenger elevator controls

**U.S. Post Office
Huntingdon, Pennsylvania**

- Handicapped accessibility modifications

**U.S. Post Office
Indiana, Pennsylvania**

- Parking lot design
- Boiler repair study
- Boiler replacement



H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

U.S. Post Office

Johnstown, Pennsylvania

- Loading dock renovation
- Investigative survey report
- Interior renovations
- Second door HVAC and controls
- Construction administration

U.S. Post Office

Meyersdale, Pennsylvania

- Investigative survey report

U.S. Post Office

New Castle, Pennsylvania

- Compressed air
- Loading dock

U.S. Post Office

Riverdale, Maryland

- Elevator report

U.S. Post Office

Rockville, Maryland

- Investigative survey report

U.S. Post Office

Sigel, Pennsylvania

- Investigative survey report
- Addition of air conditioning
- Replacement of lighting fixtures

U.S. Post Office

St. Mary's, Pennsylvania

- Investigative survey report
- Addition of air conditioning
- Electrical service upgrade
- Energy study

U.S. Post Office

State College, Pennsylvania

- Investigative survey report

- Fire alarm

- Lobby modifications

U.S. Post Office

Tyrone, Pennsylvania

- Sewer connection investigation survey

U.S. Post Office

Vehicle Maintenance Facility

Erie, Pennsylvania

- Fire alarm system replacement

U.S. Post Office

Warren, Pennsylvania

- Investigative survey report
- Elevator upgrades
- Structural revisions
- Elevator ventilation and heating upgrades
- Addition of elevator recall system

U.S. Post Office

Franklin, Pennsylvania

- Historic building – reconstructed cornice and parapets and replaced roof

U.S. Post Office

Greenville, Pennsylvania

- Historic building – completed a study and prepared design for reconstruction of cornice, parapets, and roof replacement

U.S. Post Office - Mail Processing and Distribution Facility

Johnstown, Pennsylvania

- Loading dock and dock door modifications

Architectural Barriers Compliance Surveys for approximately 55 facilities throughout Pennsylvania and West Virginia



**H.F. LENZ
COMPANY**

H.F. Lenz Company Professional Qualifications

EXPERIENCE WITH DOD PROJECTS

Camp Dawson

Kingwood, West Virginia

- Design of three new billeting 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

- 100-member reserve center with training building and 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

Letterkenny Army Depot

Chambersburg, Pennsylvania

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

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**

**Corps of Engineers Offices
The Wanamaker Building
Philadelphia, Pennsylvania**

- Tenant fit-up

**PENNSYLVANIA 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, NORTHERN DIVISION**

**Naval Air Station
Lakehurst, New Jersey**

- Air conditioning tune-up study

**Various Activities
Pennsylvania, New York, and New Jersey**

- Specialized energy studies

**Naval Ship Parts Control Center
Mechanicsburg, Pennsylvania**

- Administrative facility improvements

**NAVAL FACILITIES ENGINEERING
COMMAND, 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)

DEPARTMENT OF DEFENSE

**National Drug Intelligence Center
Johnstown, Pennsylvania**

- Tenant fit-up including base building support systems for SCIF areas

DEPARTMENT OF GENERAL SERVICES

**Pennsylvania National Guard
Johnstown, Pennsylvania**

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



H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

SECURE FACILITY DESIGN

Our entire team understands the absolute necessity of providing effective security protection for government and other facilities against the threat of terrorism. H.F. Lenz Company has recently completed a site design project for an Army Reserve Aviation Facility following the **“DOD Minimum Anti-Terrorism Standards for Buildings”**. We have also completed the project management and engineering services for a data center security upgrade for a major U.S. financial institution.

Under a Term Contract with the Social Security Administration (SSA), the H.F. Lenz Company was hired to survey ten major SSA facilities in the U.S. to evaluate compliance with the guidance document titled **“Guidance for Protecting Building Environments for Airborne Chemical, Biological, or Radiological (CBR) Attacks”**. The work involved recommending ways of tightening physical security around building ventilation systems and other vulnerable areas to minimize the threat of CBR attacks. Areas and or issues investigated included: materials receiving areas, mail handling areas, particulate filtration systems, ATC single-point containment, and public vs. secure spaces. We are experienced in Mechanical and Electrical system issues including:

- Continuous Operation of Life Safety Systems
- Operational Redundancies
- Air Filtration Systems
- Placement of Mechanical Penetrations through Exterior Walls
- Placement of Plumbing, Electrical Fixtures, and Utility Lines
- Lockable Systems
- Electronic Systems for Intrusion Detection, Access Control, Door Alarms, and CCTV
- Exterior Building Illumination
- Self-contained Battery Lighting for Stairwells and Exit Signs
- Secured Dedicated Telephone Lines
- Warning and Evacuation Systems

Many of these issues were identified, discussed and incorporated into a project we recently completed for the new Childrens' National Medical Center Decontamination Facility project. An initiative partly funded under Homeland Security, the new 20-shower decontamination unit will support any response to natural or terrorist action in the Washington DC area.

We are also knowledgeable of the **“Physical Security Assessment for the Department of Veterans Affairs Facilities”** issued in September, 2002, and considered or implemented the recommendations with ongoing projects for several Veterans Affairs Medical Centers. We are also familiar with the following:

1. **ASHRAE – Report of Presidential Ad Hoc Committee for Building Health and Safety Under Extraordinary Incidents (26 Jan 2003)**
2. **Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings, FEMA (December, 2003)**
3. **Cost Effective Responses to Terrorist Risks in Constructed Facilities (March 2004)**

All of the above references provide guidance in determining risk and threat analysis, education and evaluation of the threats, and suggested responses. Many factors go into the formulas and the risk analysis is the most critical component needed to determine the level of response and changes or additions to the facility.



H.F. Lenz Company Professional Qualifications

PAST PERFORMANCE

Over 85 percent of the HFL's annual workload consist of repeat commissions from satisfied clients including the General Services Administration, the U.S. Postal Service, the National Park Service, the U.S. Army Corps of Engineers Baltimore District, and the U.S. Air Force. This is strong evidence of not only the quality of our work but also our responsiveness to clients and our ability to control costs and meet schedules.

The following are excerpts from letters we received from our clients:

U.S. Army Corps of Engineers, Baltimore Repairs to Bldgs. 12, 14, and 15, Walter Reed Army Medical Center

"Excellent cooperation with post in developing scope, request for proposals, and advertising for upgrade of three separate projects."

-David I. Roberts, Chief, Design Management Section, USAED, Baltimore
H.F. Lenz Company received a "Very Good" Performance Evaluation for this project.

U.S. General Services Administration Renovation of the Social Security Administration's Main Operations Building

"H.F. Lenz Company assisted GSA with interpretation of documents and technical support in discussions with the General Contractor. Their support assured GSA of getting a high quality product."

"H.F. Lenz Company turned around RFIs very quickly, even quicker than contractual requirements. The same applied to submittals."

"GSA was extremely satisfied with the services provided."

-John Morrell, GSA, Project Executive

Mellon (Now BYN Mellon) Mellon Client Service Center (Data Center)

"Your designs are of the highest quality and efficiency. In addition, you and your staff have consistently responded to our needs and inquiries in a timely and professional manner."

"The project was designed well within the scheduled time frame and on budget. The design also allows for flexibility and growth in space and equipment. H. F. Lenz has proven that they can be counted on for quick, decisive action and well-thought out, workable solutions. I highly value your attention to both our technical needs and your sensitivity to the needs of our employees and clients."

-Thomas T. Nichols, Former First Vice President, The Bank of New York Mellon



H.F. LENZ
COMPANY

H.F. Lenz Company Professional Qualifications

"H. F. Lenz Company has provided excellent engineering , design and consulting services for Mellon Financial Corporation for more than 20 years." . . . H.F. Lenz has repeatedly exceeded contractual obligations to ensure projects are completed to our satisfaction and has demonstrated the ability to implement state of the art and emerging technologies that have been instrumental in supporting our sustainability goals."

- Jim Marnik, Property Manager, The Bank of New York Mellon

Temple University Alter Hall, Fox School of Business

"The project was a great success in part because of the effort by H.F. Lenz, this was a project with many electronic and technological features which were seamlessly integrated into the facility. The Lenz team worked well with the University to coordinate the many power and HVAC requirements."

"I rarely give an excellent rating, however on this project H.F. Lenz did an outstanding job in coordinating the many requirements from the technology aspect."

-Mr. Thomas McCreesh, Director, Temple University

Erie International Airport Tom Ridge Field

"As an Engineer myself, I have been amazed at your firm's continued technical proficiency, all while meeting every schedule and budge. Your firm's ability to communicate with the client is second to none and your constant professionalism is excellent."

"Over the past seven and half years, our airport has made great strides in improving our appearance and functionality." Your firm has clearly served as a significant partner in helping us achieve our goals."

-Nelly J. Fredericks, P.E., AAE, Executive Director, Erie Municipal Airport Authority



RECOVERED MATERIALS AND ENERGY EFFICIENCY

Astutely evaluating building materials and methods and developing a conservation strategy in the initial phase of the project can avoid a tremendous amount of raw materials.

Opportunities for recycled and salvaged materials in the site design include the reuse of aggregate from existing roadways, which we did at the Fort Necessity National Historical Park, and the incorporation of waste materials in roadway base course, which we did for a power generating station.

An ever-growing supply of recycled and salvaged construction materials for building projects is emerging. As the demand for and availability of recycled and salvaged material is ever changing, it is imperative to keep attuned to what is becoming available in the marketplace. Another important part of materials and resource management is to specify products native to or produced locally or regionally. This not only reduces the energy required to transport the materials to the construction site, it also helps sustain the local economy supporting the project. It is our practice to employ materials available within a 500-mile radius of the project, provided they meet the efficient performance criteria that has been established for the project.

H.F. Lenz Company has extensive experience in the design of "green" facilities including:

- Developing sustainable sites that result in minimal impact on the surrounding environment, including natural habitats and resources, and preserving/restoring natural areas
- Using water efficiently to reduce the demand for potable water, the generation of wastewater, and the resultant burden on municipal systems
- Optimizing a building's energy performance through energy-efficient design, commissioning, and monitoring; using renewable energy technologies where possible, and reducing a building's impact on the atmosphere
- Selecting renewable, recycled or locally developed building materials to reduce the environmental impact of manufacturing and transport; extending the life cycle of existing building materials and systems; redirecting recyclable material back to the manufacturing process, and maximizing the use of rapidly renewable materials and certified wood
- Providing high indoor air quality, thermal comfort, and natural lighting to enhance the health, safety, comfort, and productivity of building occupants

The H.F. Lenz Company has been involved with energy planning and the design of energy-efficient mechanical and electrical systems for over 40 years. In the early 1960s, we designed a multi-building heat recovery system for the University of Pittsburgh at Johnstown. This was the first time a heat recovery concept had been applied to a multi-building configuration. The project was featured in *Life* magazine in 1968. Since then, we have been providing energy studies and energy conserving designs for research facilities, colleges and universities, financial institutions, health care facilities, and commercial office buildings. This work has entailed conducting energy audits, establishing energy baselines, identifying and prioritizing energy-conserving opportunities, and recommending energy projects.



COMMISSIONING EXPERIENCE

The commissioning process is a detailed and intense process that verifies that the systems are operating properly, efficiently, safely, and that they meet the design objectives.

H.F. Lenz Company has been providing commissioning services for over 30 years. In addition to our own projects, we commonly commission building systems designed by other professionals.

Our commissioning personnel each have from 10 to 32 years experience and are well versed in all aspects of the commissioning process from the design phase through the construction phase and operations phase/post acceptance phase. Commissioning services are carried out by our seven-member Field Services Division and also by members of our design teams. When these groups coordinate the commissioning responsibilities between them, the result is a fully commissioned project that has the benefit of our engineering knowledge of “hands-on” field installation/testing coupled with an in-depth understanding of design standards and practices.

Our commissioning experience includes college and university facilities, data centers, operations centers, office buildings, and industrial facilities.

H.F. Lenz Company has performed additional commissioning as required by LEEDTM Energy & Atmosphere Credit 3 in addition to the Fundamental Building Systems Commissioning required by the LEEDTM Energy & Atmosphere prerequisite. We have performed LEEDTM commissioning for LEEDTM registered projects such as the Siemens Westinghouse Fuel Cell Facility, the Western Pennsylvania Conservatory Bear Run Interpretive Center, CastCon Stone, Inc. and Carnegie Mellon University's Henderson House Dormitory.

LEEDTM Commissioning verifies and ensures that fundamental building elements and systems are designed, installed and calibrated to operate as intended.

Operation and Troubleshooting of HVAC System

All of our commissioning personnel have extensive experience in the installation, operation, repair, preventive maintenance, and commissioning of HVAC Systems and Building Automation Systems for institutional and commercial buildings. This allows our team members to assist the contractors during the testing phase to quickly and efficiently determine operating problems and implement resolutions. When possible, we prefer to resolve issues in lieu of forming a list of items to be resolved sometime in the future. This is just another attribute which enables our commissioning team to provide a superior service compared to others.

Direct Digital Control (DDC) Systems

The Direct Digital Control (DDC) System is one of the most important tools available to our commissioning team. Our experience ranges from simple to the most complex systems. Today's DDC systems can interact with multiple building systems including fire alarm, lighting control, power monitoring, security, card access, and telecommunications. Our intent is to verify that the DDC system has been installed and is working as designed, while looking for opportunities to improve upon its intended operation.

H.F. Lenz Company commissioning personnel is familiar with the various types of programming interfaces available from all of the major control vendors. Our team makes use of graphics and



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H.F. Lenz Company Professional Qualifications

trending capabilities available through the DDC system to analyze the operation of not only the individual equipment operation, but also how the system functions as a whole. Remote access to the DDC system allows our team to monitor and comment on the system operation even when not on site.

Our approach to commissioning the DDC system starts with installation verification checklists of all equipment and subsystems. Next, the prefunctional checklists document the basic monitored parameters such as time of day, start/stop control, temperature, proof of flow, voltage, and amperage that are not always recorded on the as-built control drawings. Functional testing commences once all start-up and checkout procedures are completed, and all systems have been 100% point-to-point tested. These checks are not intended to replace the contractor's normal responsibilities, but to add another level of verification and quality assurance. Functional testing procedures are developed specifically for each project and encompass all operational sequences.

Lighting Control Systems

Our Commissioning Team consists of Lighting Designers and Electrical Engineers who are experienced in a variety of control systems from digital addressable lighting interfaces (DALI) to daylight harvesting and schedule based controls systems.

The complexity of lighting control system testing ranges from visual inspection to data logging and trending. Our team utilizes light meters and data loggers equipped with Illuminance sensors to verify the systems operation and performance.

Testing, Adjusting, and Balancing (TAB) of HVAC Systems

Our Commissioning Team has extensive experience in the test and balance (TAB) of both air and water systems through a 30-year relationship with a mechanical contractor/TAB firm with whom we have collaborated on dozens of projects involving office buildings, college and university facilities, government buildings, and other commercial and institutional buildings. This experience consists of reviewing the TAB plan, reviewing TAB reports, spot testing, and rechecking selected readings to validate results. Our team is familiar with pitot tubes, thermal dispersion devices, manometers, pressure gages, digital thermometers, and other TAB equipment.

Our commissioning personnel hold a major advantage in that they understand the air and water systems from a holistic perspective. This comes from their experience with the design, control aspects, installation, operation, and maintenance of the systems they are being asked to commission.

Building Operations and Maintenance

Many of our commissioning engineers and technicians have "hands-on" experience in operations & maintenance procedures along with a facilities management background. Some of our clients find it difficult to hire qualified operations personnel, thus they have asked our firm to review their mechanical and electrical operations. As an example, we have recently assisted a major insurance company in conducting a nationwide Facilities Operations Program for their various sites. The program involves H.F. Lenz Company personnel conducting site audits to review standard operating procedures, preventive maintenance programs, and service agreements. A major part of the program involves the commissioning of critical mechanical and electrical systems to confirm proper operation. The systems are put through various operational and failure scenarios, results are documented, improvements recommended, and final reports issued. We then conduct training workshops with the owner's personnel to review findings and provide training on proper system operation.



Energy Efficient Systems Design

Our Commissioning Authority, Paul Petrilli, and the Commissioning Engineer, John Dombrowski, are licensed Professional Engineers with very strong backgrounds in the design of energy efficient mechanical and electrical equipment. Both of these individuals are LEED™ Accredited Professionals and head up most of the firm's Green Building projects. They have designed central heating and cooling plants that use 50% less energy through the proper matching of equipment to loads and by the use of high efficiency chillers and boilers. Their designs also incorporate water-side free cooling, high efficiency lighting systems, and the controlled use of outside air to maintain indoor air quality while limiting energy consumption. Their energy efficient design of the Siemens Westinghouse Fuel Cell Facility near Pittsburgh resulted in overall energy costs that are less than 50% of the cost of an ASHRAE/IESNA 90.1-1999 compliant building. Their design of a new visitor's center at New River Gorge National River in West Virginia used a closed, ground-coupled geothermal heat pump system, radiant floor heating, reduced ambient light levels, daylighting controls, dedicated ventilation with heat recovery and CO2 controls to reduce overall energy consumption by over 50%.

Control Strategy Optimization

Our Commissioning team has valuable experience in all aspects of control system optimization. Members of our team have been involved with sustainable designs for over 15 years, while others are previous employees of major controls and contracting companies. While the typical project's controls are written to simply "turn equipment off and on", we work with the design team, along with the equipment manufacturers, to determine the "sweet spots" in operation and perform computer systems modeling to look at the control sequence's affect on the whole system and not just a single component.

During the design review phase, our team assesses the Controls and Sequences of Operation to verify the proper function and data acquisition is occurring through the entire control system. We provide feedback to the Designers and Owner as to the possible adjustments that can be made in order for the system to operate more efficiently. In addition, our team examines the control system submittals to confirm that the system is complete and includes all the necessary components required for full operation as the design intention.

During the functional testing phase of commissioning, we verify that all sequences have been implemented, optimized, and are functioning as intended. Our commissioning personnel work with the Controls Contractor to develop trending logs and data acquisition procedures that are necessary to analyze how the components are operating and responding as a complete system.

Writing Commissioning Specifications and Test Procedures

Commissioning specifications and test procedures are written by our Commissioning Authority and/or Commissioning Engineers for all projects in which the firm has been hired as the Commissioning Provider.



Relevant Project Experience

**Franklin County
New Courthouse
Columbus, Ohio**

LEED™ Fundamental Commissioning and Enhanced Commissioning for a new 300,000 sq.ft. county courthouse; Project includes building envelope commissioning; Project goal is LEED™ Silver

**Adelphia Communications
Data Center
Coudersport, Pennsylvania**

Complete commissioning services for a new 80,640 sq.ft. data center designed to accommodate approximately 3,000 servers

**Adelphia Communications
Operations Building
Coudersport, Pennsylvania**

Commissioning of the UPS system, standby power system, automatic temperature controls, and fire alarm systems for a new three-story operations building

**Altoona Hospital
New Outpatient Tower
Altoona, Pennsylvania**

Commissioning services for a 153,000 sq.ft. outpatient tower

**Arcadia College
Health and Sciences Building
Philadelphia, Pennsylvania**

Commissioning services for a new 50,000 sq.ft. classroom/laboratory building

**BNY Mellon
BNY Mellon Center 30th and 31st Floors
Pittsburgh, Pennsylvania**

LEED Commercial Interiors (CI) Fundamental Commissioning services for a 2-floor, 41,000 sq.ft. tenant space renovation in a 55-story, 1,525,000 sq.ft. building; *Project has received a LEED Gold Rating*

**Butler Health System
Butler, Pennsylvania**

Commissioning Services for a new \$152 million, 200,000 sq.ft. seven-story patient tower; the project also included an expansion

of outpatient services and renovated quarters for heart and joint surgery including eight operating rooms

**CarMax, Inc.
Corporate Office Building
Richmond, Virginia**

LEED™ Fundamental Commissioning and Enhanced Commissioning for a new 240,000 sq.ft. corporate headquarters, designed to house approximately 600 employees, and consists of interconnected office buildings, a fitness center, and an 800-car parking garage; *Project has received a LEED™ Silver Rating*

**Carnegie Mellon University
300 S. Craig Street
Pittsburgh, Pennsylvania**

LEED™ Fundamental Commissioning services and engineering services for the renovation of the 72,500 sq.ft. former Association of the Blind building into a mixed-use facility including office, classroom, conference, retail/restaurant, and campus security spaces; *Project has received a LEED™ Silver Rating*

**Case Western Reserve University
Structural Biology Research Facility
Cleveland, Ohio**

Commissioning services for a new 20,000 sq.ft. Structural Biology Research Facility

**CastCon Stone, Inc.
New Office and Manufacturing Facility
Saxonburg, Pennsylvania**

LEED™ Fundamental Commissioning services for a new 35,000 sq.ft. “green” state-of-the-art precast concrete manufacturing facility; Project goal is LEED™ Certified

**Concord EFS (First Data) - UPS System
Wilmington, Delaware**

Commissioning of a new uninterruptible power supply system to improve the electrical power continuity and reliability of the data center



Eaton Corp.

Moon Township, Pennsylvania

LEED™ Fundamental Commissioning and Enhanced Commissioning for a new 120,000 sq.ft. technology center addition; Project goal is LEED™ Gold

Franklin County Convention Facilities Authority

Hilton Columbus Downtown

Columbus Ohio

LEED Fundamental Commissioning and Enhanced Commissioning for a new 532-room hotel attached via skybridge to the Greater Columbus Convention Center

Major Insurance Company

Several U.S. Locations

- Commissioning services for a 280,000 sq.ft. and a 320,000 sq.ft. call center
- Commissioning services for a 86,000 sq.ft. state-of-the-art mission critical data center
- Commissioning services for a new 197,000 sq.ft. Tier-4 data center
- Commissioning services for the critical power distribution and emergency power systems
- Facility operations audits including commissioning of critical systems at various locations throughout the U.S.

Massaro Corporation

New Building Addition

Pittsburgh, Pennsylvania

LEED Fundamental Commissioning and Enhanced Commissioning for a 8,100 sq.ft. office building addition; *Project has received a LEED Certified Rating*

Mellon Financial Corporation

Operations Center

Pittsburgh, Pennsylvania

Design and Commissioning of HVAC, plumbing, fire protection, electrical, and communications systems for the new 14-

story, 750,000 sq.ft. operations center, which also houses a data processing facility

Mountain State Blue Cross Blue Shield

Parkersburg, West Virginia

LEED Fundamental Commissioning and Enhanced Commissioning for a new 125,000 sq.ft., 4-story office building; *Project has received a LEED Silver Rating*

NaviSite Data Center

Andover, Massachusetts

Design and Commissioning of a new 150,000 sq.ft. internet data center and Network Operations Center

Pennsylvania DCNR

New Office Building at Penn Nursery

Potter Township, Pennsylvania

LEED Fundamental Commissioning for a new 5,200 sq.ft. office building; Project goal is LEED Gold

PRAXAIR

Emergency Power/UPS

Danbury, Connecticut

Commissioning of a new Emergency Power System consisting of two 400 kW generators, two 1,600 AMP ATS', and two 160 kW UPS serving an actively functioning data center

Social Security Administration

Operations Building

Wilkes-Barre, Pennsylvania

Complete commissioning services for a new 240,000 sq.ft. data operations center

U.S. Drug Enforcement Administration

New Office Building

Pittsburgh, Pennsylvania

LEED Fundamental Commissioning for a new 50,000 sq.ft., two-story office building; *Project has received a LEED Certified rating*