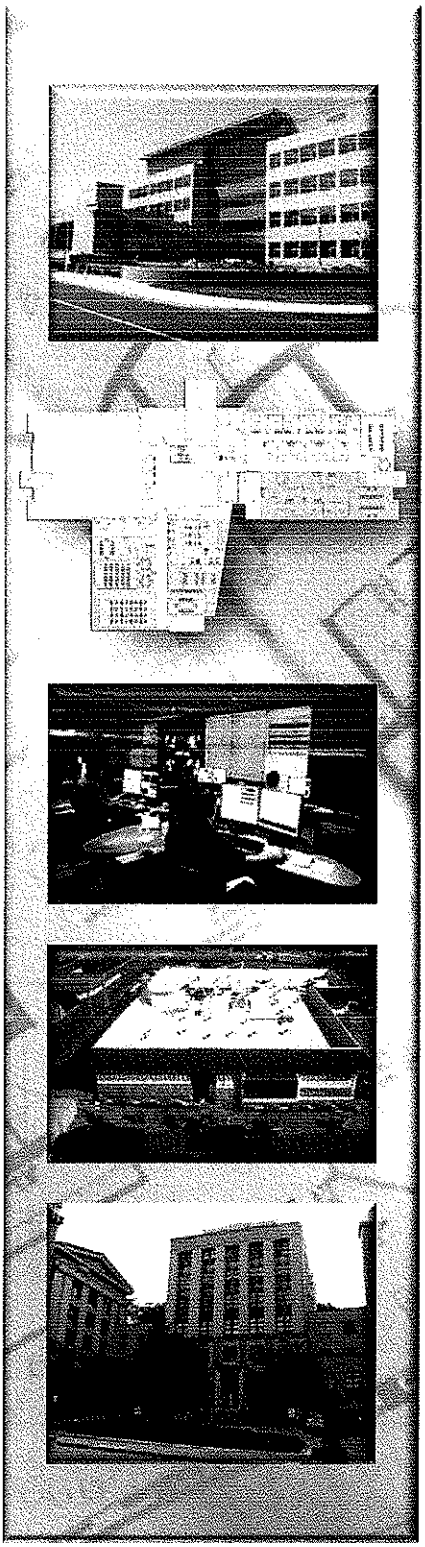
Loftus ENGINEERS
555 North Bell Avenue Carnegie PA 15106 PHONE 412.489.9100 FAX 412.429.6474 www.LOFTUSLLC.com



Expression of Interest

West Virginia Army National Guard Construction and Facilities Management Office

Joint Operations Center

Requisition # DEFK11 028

For
Architectural and Engineering Services

Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

Buyer:	**TU32**
Req#:	**DEFK11028**
Opening Date:	**03/22/2011**
Opening Time:	**1:30 PM**

Loftus
ENGINEERS

555 North Bell Avenue • Carnegie PA 15106 • PHONE 412.489.9100 • FAX 412.429.6474 WWW.LOFTUSLLC.COM

March 21, 2011

Ms. Tara Lyle
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

Re: Requisition # DEFK11028 Expression of Interest – West Virginia Army National Guard – Joint Operations Center – for Professional Architectural and Engineering Services

Dear Ms. Lyle;

We are pleased to submit our Expression of Interest to provide Professional Architectural and Engineering Services for the planned new West Virginia Army National Guard – Joint Operations Center (JOC).

For your review and consideration, included herein is our submittal as requested by and in the format itemized in Requisition # DEFK11028 and DEFK11028_01-Addendum 01. We have assembled a uniquely qualified and experienced team for this particular project.

We welcome the opportunity to work with you, the WV Army National Guard and all the additional supporting agencies to be served by the new JOC. Please let me know if we can provide any additional information, references or answer any questions you may have. Thank you for your consideration of our team for this exciting project.

Sincerely,

Loftus Engineers LLC

Glenn Avick, PE, LEED AP
President

GA/amc

CC: file

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	PAGE
DEFK11028	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
LOFTUS ENGINEERS LLC
555 NORTH BELL AVENUE
CARNEGIE, PA 15106-4310

SHIP TO
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
02/01/2011				

BID OPENING DATE: 03/15/2011 3/22/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-00-00-001	N/A	N/A

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

EXPRESSION OF INTEREST (EOI)

THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WV NATIONAL GUARD, DIVISION OF ENGINEERING AND FACILITIES, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ARCHITECTURAL ENGINEERING DESIGN SERVICES FOR A JOINT OPERATIONS FACILITY TO BE LOCATED IN THE VICINITY OF THE WEST VIRGINIA NATIONAL GUARD STATE HEADQUARTERS IN CHARLESTON, WV PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

TECHNICAL QUESTIONS 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 2/23/2011 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
[signature]	412.489.9100	March 21, 2011

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	81-0564429	

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.

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3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

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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***.

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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.htm** 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	PAGE
DEFK11028	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

LOFTUS ENGINEERS LLC
555 NORTH BELL AVENUE
CARNEGIE, PA 15106-4310

SHIP TO
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
02/01/2011				

BID OPENING DATE: 03/15/2011 3/22/2011 BID OPENING TIME 01:30PM

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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.:----------DEFK11028----------

BID OPENING DATE:-------03/15/2011----------

BID OPENING TIME:-------1:30 PM----------

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
[signature]	412.489.9100	March 21, 2011
TITLE: President	FEIN: 81-0564429	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
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DEFK11028	3

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LINE	QUANTITY	UOP	CAT. NO	ITEM NUMBER	UNIT PRICE	AMOUNT

Fax 412-429-6474

CONTACT PERSON (PLEASE PRINT CLEARLY):
Glenn Avick, President
LOFTUS ENGINEERS LLC
phone: 412-489-9101
email: GAvick@LoftusLLC.com

****** THIS IS THE END OF RFQ DEFK11028 ****** TOTAL: N/A

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
Glenn Avick	412.489.9100	March 21, 2011

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	81-0564429	

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

RFQ No. DEFK11028

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 owed 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 exceed 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 SIGNATURE

Vendor's Name: LOFTUS ENGINEERS LLC

Authorized Signature: [signature] Date: March 21, 2011

State of Pennsylvania

County of Allegheny, to-wit:

Taken, subscribed, and sworn to before me this 21 day of March, 2011.

My Commission expires 11-22-2014, 20___.

AFFIX SEAL HERE

NOTARY PUBLIC Stephanie Lynne Marcione

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Stephanie Lynne Marcione, Notary Public
Carnegie Boro, Allegheny County
My Commission Expires Nov. 22, 2014
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

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

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ADDENDUM NO. 1

1. QUESTIONS AND ANSWERS ARE ATTACHED.
2. TO MOVE THE BID OPENING FROM 03/15/2011 TO 03/22/2011.
3. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.

EXHIBIT 10

REQUISITION NO.: DEFK11028

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

ADDENDUM NO.'S:

NO. 1 - rec'd 3/9/11 /s/ _____, President, LOFTUS ENGINEERS LLC

NO. 2 .....

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	412.489.9100	March 21, 2011

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	81-0564429	

State of West Virginia
Department of Administration
Purchasing Division
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VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.

SIGNATURE

LOFTUS ENGINEERS LLC
COMPANY

March 20, 2011
DATE

NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.

REV. 09/21/2009

END OF ADDENDUM NO. 1

0001	1	JB		906-00-00-001	N/A	N/A

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE | TELEPHONE 412.489.9100 | DATE March 21, 2011

TITLE President | FEIN 81-0564429 | ADDRESS CHANGES TO BE NOTED ABOVE

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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).

Expression of Interest

for the

West Virginia Army National Guard

Construction and Facilities Management Office (CFMO)

Joint Operations Center
Requisition # DEFK11028

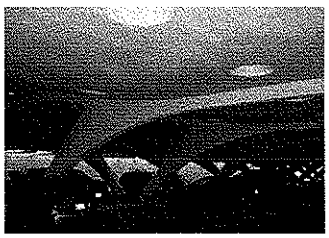
Table of Contents

Expression of Interest

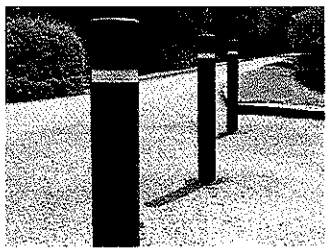
Our Understanding of Your Project:

The Owner is seeking professional design services to construct a new Joint Operations Facility for the West Virginia National Guard and related emergency service state organizations to be located in the vicinity of the West Virginia National Guard State Headquarters, Charleston WV.

The Joint Operations Center is to be of a permanent masonry type construction, brick and concrete block with concrete floors, and metal or single membrane roof with supporting facilities. Facility will be designed to support elements of the WV National Guard, the National Weather Service, elements of the WV State Road, the State of WV, Emergency Operation Center and other smaller state elements active during state emergencies. Initial estimates indicate that facility will be approximately 65,000 to 70,000 square feet. Facility will conform to established Force Protection standards.

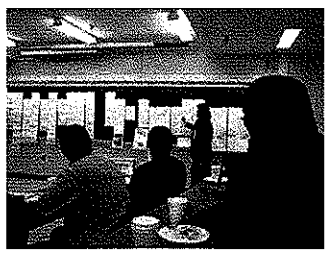


Outside supporting facilities include parking, fencing, sidewalks, exterior fire protection (if needed), outside lighting, access roads and facility sign. Physical security measures will be incorporated into the design to include maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas. Berms, heavy landscaping, and bollards can be used to prevent access when standoff distance cannot be maintained. Cost effective energy conserving features will be incorporated into design, including energy management control systems and high efficiency motors, lighting and HVAC systems.



The Loftus/FPR Team

We have assembled a uniquely qualified team for the WV National Guard. The Loftus/FPR Team has successfully worked together on many previous projects together.



Architectural design will be lead by Facility Planning & Resources, Inc. (FPR) a full service architectural firm specializing in the planning, programming, and design of advanced technology facilities.

Engineering design will be lead by Loftus Engineers LLC (Loftus) specializing in HVAC, plumbing, electrical and structural engineering, including engineering for technology facilities, such as 24/7/365 emergency operations centers, data centers, computer facilities and telecommunications hubs (data/telecomm).

Both firms' Key Staff and Firm qualifications are presented in greater detail in later sections of this submittal.

The Loftus/FPR Team has experience on many emergency operations centers (EOCs), secured data centers, and 24/7/365 related projects both as a team, and separately, as we'll show you in our submittal.

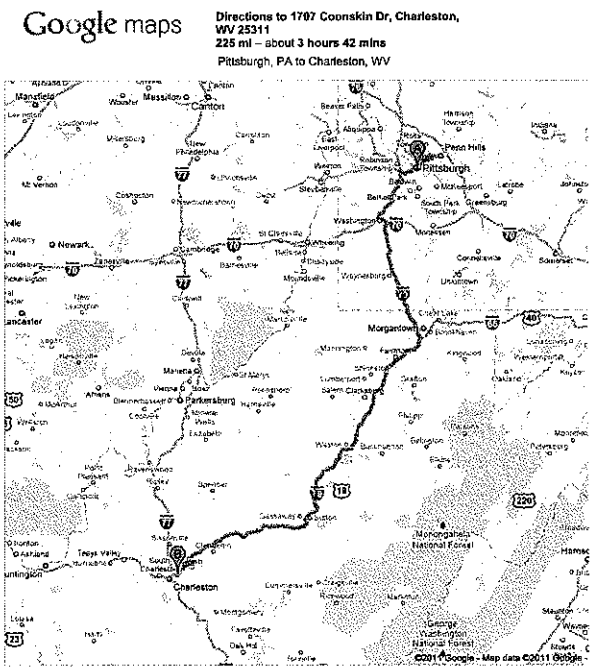
We present our Related Prior Experience later in this submittal. In this section we highlight the successful working relationship The Loftus/FPR Team has achieved when we were part of the total design team brought together to develop a facilities program and design for a 54,500 sq. ft. comprehensive complex for the Dept of Defense/ Dept of Energy – National Energy Technology Lab located at Camp Dawson, a West Virginia Army National Guard installation located near Kingwood, WV. This facility includes:

- Emergency Operations Center - 12,200 sq.ft. designed to provide for efficient Command and Control of all operations and resources in response to any energy-related incident.
- High Security Spaces - 1,800 sq.ft. with Sensitive Compartmented Information Facility (SCIF) with the complete separation of electrical, communication, mechanical, and access from the remainder of the building.

Location and Proximity to the West Virginia National Guard, Charleston, WV site

Both Loftus Engineers LLC and Facility Planning & Resources, Inc. are nearby in the Pittsburgh area, a 3½ hour drive (see map). Loftus is located in Carnegie, a western suburb of Pittsburgh, and maintains its headquarters offices and resources that readily enable an on-site presence at the proposed West Virginia site in less than four hours notice. Some of our WV projects have included:

- Charleston, WV – U.S. GSA, Federal Building
- Beckley and Clarksburg, WV – The VA Medical Center (VAMC)
- Morgantown, WV – West Virginia University Medical Center
- Morgantown, WV – West Virginia University – Many projects, a long-term, open-end, client relationship.
- Morgantown, WV – U. S. Department of Energy, National Energy Technology Laboratory (NETL)



Generally, our staff is a senior team who has spent their careers working in the Western Pennsylvania and West Virginia marketplace.

LEED Silver Design

Loftus always has energy efficiency on the forefront of any engineering design strategy, as it is in the best interest of the owner. The Loftus/FPR Team has extensive experience working with USGBC LEED certifications and qualifications, as we have outlined in the Qualifications Tab of this submittal.

We specialize in energy efficient and green building designs for both renovations and new construction. The Loftus/FPR team has sixteen LEED Accredited Professionals (AP) and a Certified Energy Manager on staff. Our expertise canvasses the structural, mechanical, electrical, lighting and plumbing engineering disciplines as well as energy management, construction management, whole building commissioning and building operation and maintenance. Loftus has designed more than fifteen buildings that have achieved LEED certification including commissioning of the 18,000 sq. ft., LEED Silver office and training building for the PA Army Corps of Engineers in Erie PA. Loftus Engineers is also Certified Commissioning Authority.

Our Certified Energy Manager is included on the proposed team. Dave Ondechek, CEM, LEED AP BD&C leads the Loftus Energy Services and has more than eighteen years experience in all facets of facilities in the specialized field of energy management.

FPR is currently under construction with LEED Silver and Gold certified projects for Northwestern University, City University of New York and the University of Chicago. Previous LEED certified projects have been designed for NASA, National Energy Technology Lab and ALCOSAN.

Loftus is currently in its' second 5-year contract with the National Energy Technologies Laboratories (NETL) division of the DOE where Loftus perform all the structural, mechanical, electrical, lighting and plumbing designs for NETL. As a Federal entity, all new construction and major renovations must be designed to achieve LEED Gold Certification and all construction projects must meet federal High Performance & Sustainable Building guidelines.

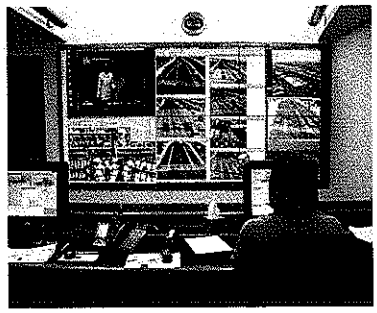
Proposed Approach –

A vision of our approach to the proposed project.

The Loftus/FPR Team Understands Operation Centers

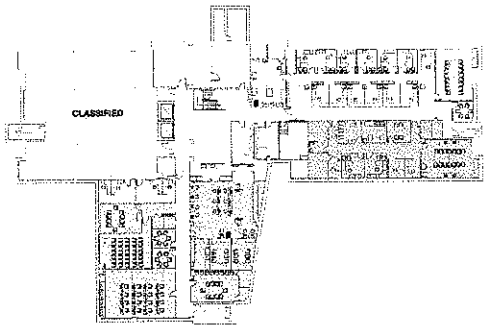
An operations center is the heart of any critical process or emergency response situation. Assets must be controlled in a fast-moving, quick decision making environment. Effective communications are essential. The West Virginia National Guard needs a high performing, efficient operations center.

The Loftus/FPR approach is perfectly suited for the effective organization and development of a modern day, technology driven operations center. We know how to bring the appropriate stakeholders to the table at the beginning of the project work. Our approach focuses attention on the most critical and far reaching issues from day one.



Programming and Planning: As we develop the systems requirements for the command center, the Loftus/FPR Team will flush out the critical issues for the infrastructure and Information Technology. Merging the server driven functions along with the human functions and critical activities will result in a coordinated, failsafe infrastructure for performance and back up. We will also review multiple levels of security for audio, video and data transfer applications.

We make sure that the operations center program works in conjunction with the appropriate ISO 27001 requirements along with appropriate industry standards and government codes.



Design & Layout: Based upon key design criteria developed with the client, the Operations Center design will be based upon various inputs in terms of size, scope, applications, and other criteria required for the client application.

Video Wall Layout: These tools allow effective control operations. Clearly displayed data effectively communicate with all personnel. A critical aspect of the wall display is Line of Sight design. We combine the factors of distance, resolution, font size and elevation to determine correct screen sizes and placement.

Interior Furnishings: The interior furnishings and work related systems range from highly secure SCIF facilities to the ergonomic, individual personal work space. Advanced A/V solutions optimize the organization of data screens throughout the operations center itself, allowing operators to easily prioritize and process information from multiple sources

Network Security Design: Access to the Operations Center is tightly managed to provide various levels of entry; once inside the facility additional levels of security are provided based on job description and requirements.

ARCHITECTURE:

Statement of Qualifications – Facility Planning & Resources, Inc.

Facility Planning & Resources, Inc. is a full service architectural firm specializing in the planning, programming, and design of advanced technology facilities. We are supported by a wide cross section of engineering firms, specialty consultants and constructors who are our resources.

FACILITY PLANNING & RESOURCES

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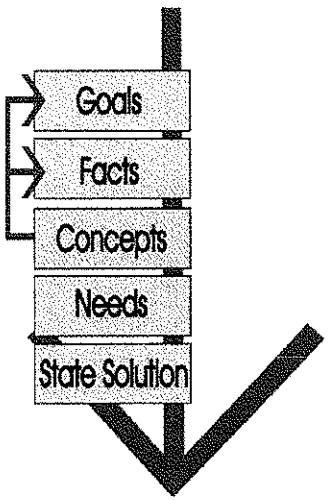
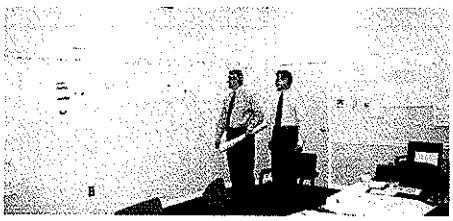


The FPR Planning Process

Facility Planning & Resources, Inc. is best known as FPR. We are an architectural firm specializing in the programming, planning and design of government and corporate facilities. We have extensive experience in developing secure and interactive facilities for communications, teaching, and analytical facilities as well as master plans.

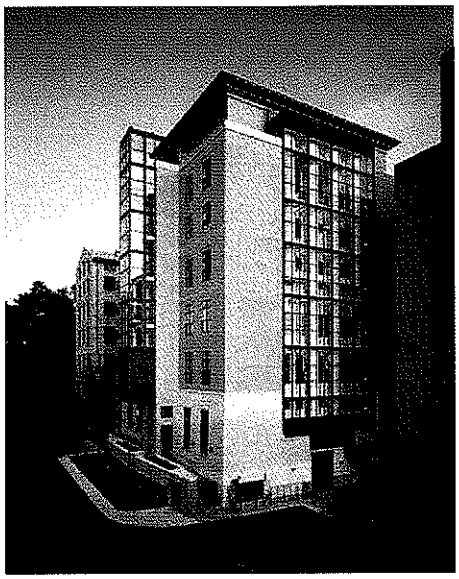
FPR was founded on the principle of excellence in project definition and execution. We commit a well-managed project team, including the hands-on involvement of a LEED certified design principal, to each of our clients. Through interactive planning sessions, innovative concepts and unique models of secure environments are developed then tested to meet the specific goals. We do not superimpose preconceptions on our clients.



Programming Squatters

A distinguishing feature of FPR is the manner in which we work with our clients. Highly organized, five-day work sessions for programming, master planning, schematic design and pre-construction services take place in our client's facilities. Prescheduled work sessions are conducted with the stakeholders and their managers gaining insight, knowledge and perspective.

FPR Creates Forward Looking Designs

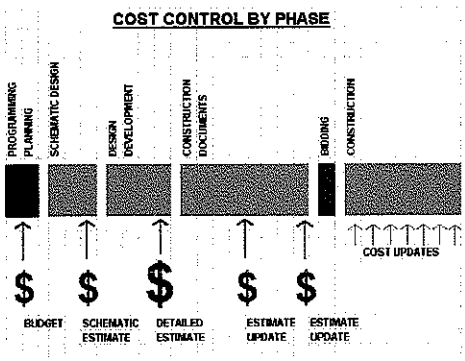


The project illustrated to the left is the Undergraduate Chemistry Labs for Carnegie Mellon University. This is a remarkable example of how FPR provides design solutions that not only serve present needs, but that also provide opportunities for future academic programs.

As an addition to Doherty Hall the architecture harmonizes with the century old building without imitating the details. The teaching environment and auditorium were designed to support a unique academic program. The result is a learning environment that encourages teamwork and nurtures tomorrow's pioneers. This project was programmed, planned and design by Thomas Hansz while associated with the firm of record. Thomas Hansz as a Principal of FPR completed the schematic design.

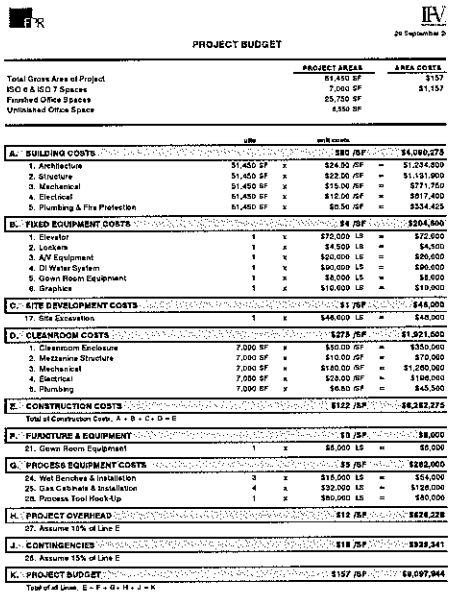
The following organizations had operation centers and high security facilities planned by FPR

- ALCOSAN Analytical Laboratories
- Carnegie Mellon University
- Department of Energy
- Huntsman Polypropylene Corporation
- Indspec Chemical Corporation
- Jet Propulsion Lab
- Lawrence Berkeley National Laboratory
- NASA
- National Energy Technology Laboratory
- Northwest Energy Efficiency Alliance
- South Florida University
- University of California/Santa Barbara
- University of North Carolina
- Verizon



LEED Design

Currently under construction are LEED Silver and Gold certified projects for Northwestern University, City University of New York and the University of Chicago.. Previous LEED certified projects have been designed for NASA, National Energy Technology Lab and ALCOSAN.



PROJECT BUDGET

				PROJECT AREAS		AREA COSTS
Total Gross Area of Project				51,450 SF		$157
ISO 6 & ISO 7 Spaces				7,000 SF		$1,157
Finished Office Spaces				25,750 SF		
Unfinished Office Space				8,550 SF		
	site		unit costs			
A. BUILDING COSTS			$80 /SF			$4,090,275
1. Architecture	51,450 SF	x	$24.00 /SF	=		$1,234,800
2. Structure	51,450 SF	x	$22.00 /SF	=		$1,131,900
3. Mechanical	51,450 SF	x	$15.00 /SF	=		$771,750
4. Electrical	51,450 SF	x	$12.00 /SF	=		$617,400
5. Plumbing & Fire Protection	51,450 SF	x	$6.50 /SF	=		$334,425
B. FIXED EQUIPMENT COSTS			$4 /SF			$204,500
1. Elevator	1	x	$72,000 LS	=		$72,000
2. Lockers	1	x	$4,500 LS	=		$4,500
3. A/V Equipment	1	x	$20,000 LS	=		$20,000
4. DI Water System	1	x	$90,000 LS	=		$90,000
5. Gown Room Equipment	1	x	$8,000 LS	=		$8,000
6. Graphics	1	x	$10,000 LS	=		$10,000
C. SITE DEVELOPMENT COSTS			$1 /SF			$46,000
17. Site Excavation	1	x	$46,000 LS	=		$46,000
D. CLEANROOM COSTS			$275 /SF			$1,921,500
1. Cleanroom Enclosure	7,000 SF	x	$50.00 /SF	=		$350,000
2. Mezzanine Structure	7,000 SF	x	$10.00 /SF	=		$70,000
3. Mechanical	7,000 SF	x	$180.00 /SF	=		$1,260,000
4. Electrical	7,000 SF	x	$28.00 /SF	=		$196,000
5. Plumbing	7,000 SF	x	$6.50 /SF	=		$45,500
E. CONSTRUCTION COSTS			$122 /SF			$6,262,275
Total of Construction Costs, A + B + C + D = E						
F. FURNITURE & EQUIPMENT			$0 /SF			$8,000
21. Gown Room Equipment	1	x	$8,000 LS	=		$8,000
G. PROCESS EQUIPMENT COSTS			$5 /SF			$262,000
24. Wet Benches & Installation	3	x	$16,000 LS	=		$54,000
25. Gas Cabinets & Installation	4	x	$32,000 LS	=		$128,000
26. Process Tool Hook-Up	1	x	$80,000 LS	=		$80,000
H. PROJECT OVERHEAD			$12 /SF			$626,228
27. Assume 10% of Line E						
J. CONTINGENCIES			$18 /SF			$938,341
28. Assume 15% of Line E						
K. PROJECT BUDGET			$157 /SF			$8,097,944
Total of all Lines, E + F + G + H + J = K						

FPR Knows How to Control Budgets

FPR develops project budgets during the Programming Squatters week achieving a balance between client expectations and available funds. Before pencil is put to paper, FPR reviews our client's budget and determines its sufficiency. It is not uncommon that the original budget has been established using partially correct information and is not sufficient. Our record for developing accurate budgets is outstanding. During our history, we have found most often the final construction cost differs less than five percent from the FPR program budget.

Another policy of FPR that keeps our budgets on target is to assign budget amounts to each design discipline and to closely manage those amounts during the entire series of design phases. We do not wait until the completion of construction documents to see if the project is on budget or not. By doing the major detailed estimate at the end of design development, we can make any necessary adjustments during the construction document phase as keep the project on schedule as well as on budget.

FPR works under our motto which states,

TAKE THE TIME TO DO IT RIGHT!

ENGINEERING:

Statement of Qualifications – Loftus Engineers, LLC

Loftus Engineers, LLC develops attractive, cost effective, energy smart spaces. Our primary services include HVAC, plumbing, electrical and structural engineering. This includes technology such as 24/7/365 emergency operations centers, data centers, computer facilities and telecommunications hubs (data/telecomm).

Loftus ENGINEERS

Our roots trace back to 1923 when Peter F. Loftus formed an engineering company bearing his name. Throughout our history, we have remained true to our founding principles of providing quality engineering and exceptional client value. In 2002, we incorporated as **Loftus Engineers, LLC**, and joined the growing family of engineering companies of the **Carnegie Strategic Alliance**.

Loftus alone has 39 individuals located in two offices. Our Pittsburgh office is dedicated to serve the Tri-State region including Western Pennsylvania, West Virginia, and Ohio. Our Downingtown, PA office serves the Eastern Pennsylvania, Delaware, New Jersey area.

Our work for this project will tap into the resources of our mechanical, electrical, plumbing, fire protection, telecommunications and structural engineers and professionals from all locations as needed.

Loftus specializes in the following:

Mechanical/HVAC:
Heating Systems
Ventilation for indoor air quality and industrial process
Air Conditioning
Energy Analysis
Energy Recovery
Steam and Chilled Water Distribution
Central Utility Plant Design

Electrical & Technology:
Power Design
Lighting Design (IES award winner)
Data / Telecom
(RCDD Registered Designers on Staff)
Fire Alarm
Security and CCTV
Audio/Visual

Plumbing:
Hot and Cold Water Distribution
Waste and Vent
Roof Drainage
Grey Water and Water Recovery
Booster Pumps
Fire Sprinkler Layout
Fire Pumps

Structural:
Steel Structure Design
Wood Framing Design
Foundations
Concrete

Energy Services
LEED Certification
ASHRAE Level 2 Energy Audits
Energy Efficient Designs

Commissioning

Through **The Carnegie Strategic Alliance (CSA)** our resources and professional services may extend beyond the Loftus doors. The CSA includes Loftus Engineers and:

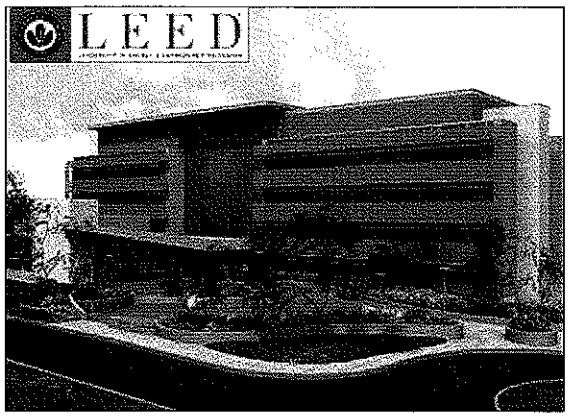
- **Carnegie Strategic Design (CSD) Engineers** – a construction engineering company serving heavy industry

CSD Engineers combines in one organization over thirty years of multi-discipline industrial engineering, government planning and construction management experience. CSD's industrial engineering group is one of the premier facilities engineering groups serving the chemical, petroleum, pulp and paper, power generation and metals industries.

- **Sargent Electric Company** – a full service electrical contractor
  Sargent's experience and reputation for project management is unsurpassed. Sargent is a full-service electrical contractor established in 1907, and serves all segments of the electrical contracting industry, including client needs in steel-making, refining, chemical processing, foundries and electrical power generation (coal, combined-cycle and nuclear).
- **CORE Technologies** – a chemical and process control engineering company
  CORE Technologies is a full service provider of high quality cost effective process control programming and engineering and multi-disciplined industrial construction engineering. They serve a wide range of industries including metals, chemicals, utilities, environmental, and wastewater.
- **SE Technologies** – a civil and environmental engineering company
  SE Technologies is a comprehensive environmental consulting and management services firm whose strength is the ability to provide experienced and cost effective project design and management ranging from initial problem analysis, through design and implementation of activities.
- **StepOne Systems** – designs, deploys, and manages mobile technologies
  For more than fifteen years the StepOne Systems team has leveraged its expertise in the design, deployment, and management of mobile technologies to increase productivity, reduce expenses, and establish competitive advantages for their international client base.
- **Loftus Associates West** – provides full MEP and Structural engineering services to facility owners and operators, architects, and contractors. LW provides consulting services in mechanical, electrical and plumbing design, as well as project management and LEED® sustainable designs

The CSA affiliation enables shared resources between more than 100 mechanical, electrical, plumbing, environmental, industrial, structural, chemical, and process control engineers, consultants and designers to support most any project and provide our clients with exceptional value from a broad base of expertise.

NETL Technology Building



CCAC West Hills Center

OUR FIRM BACKGROUND

The roots of Loftus Engineers trace back to 1923 when Peter F. Loftus formed an engineering company bearing his name. The firm grew and expanded its service when it was acquired in 1982 by Eichleay Engineers. In 2002, we incorporated as Loftus Engineers, LLC, joining a growing consortium of engineering firms known as the Carnegie Strategic Alliance (CSA), which expanded our services and areas of expertise to include industrial and environmental engineering.

This strategic affiliation with our CSA sister companies enables shared resources between almost 100 mechanical, electrical, environmental, energy, industrial, structural, chemical and process control engineers and designers. As a result, Loftus is able to support virtually any project and provide clients with exceptional value from a broad base of combined expertise.

Throughout our history, Loftus has maintained a reputation for remaining true to our founding principles—providing quality engineering service and exceptional client value. Our core values of professionalism, corporate and personal integrity, and respect for each other and our clients drive our reputation.

INTEGRATED ENGINEERING SERVICES

Systems Design, Bidding and Construction Documents, Construction Administration, Project Delivery Process & Project Management, Energy Consulting, USGBC LEED as well as Sustainability Consulting, and Commissioning for Structural, Mechanical and Electrical Systems.

LEADERSHIP

- *Patrick Branch, P.E., LEED AP, Chief Executive Officer,* Mechanical Engineer first registered in 1980 with extensive experience in design and firm management. He has managed and designed projects in more than 20 states and internationally.
- *Glenn Avick, P.E., LEED AP, CxA, President,* has more than 35 years experience managing the design and construction of MEP Systems. He has worked as a consulting engineer, engineering department head for a major university, and design-build contractor.
- *John Reese, P.E., RCDD, Vice President and Director of Electrical Engineering,* has worked as a consulting engineer for nearly 20 years specializing in electrical distribution systems and data/telecommunication systems.

Engineering Directors:

- *Craig Kurtzhals, P.E., LEED AP, Director, Northeast Division*
- *Mark Wolfgang, P.E., LEED AP, Mechanical Engineering*
- *Chuck Urso, P.E., RCDD, Electrical Engineering*
- *Erin Pelligreno, Plumbing & Fire Protection*
- *Steve Farris, P.E., Structural Engineering*
- *Cyril (Skip) Fox, P.E., Structural Engineering*
- *Dave Ondechek, LEED AP, CEM, Energy Services*

LOFTUS ENGINEERS LLC

A RIGHT-SIZED, STRATEGIC PARTNER

PROVIDING INTEGRATED ENGINEERING: STRUCTURAL AND MEP SYSTEMS DESIGN

FOR THE BUILDING CONSTRUCTION INDUSTRY

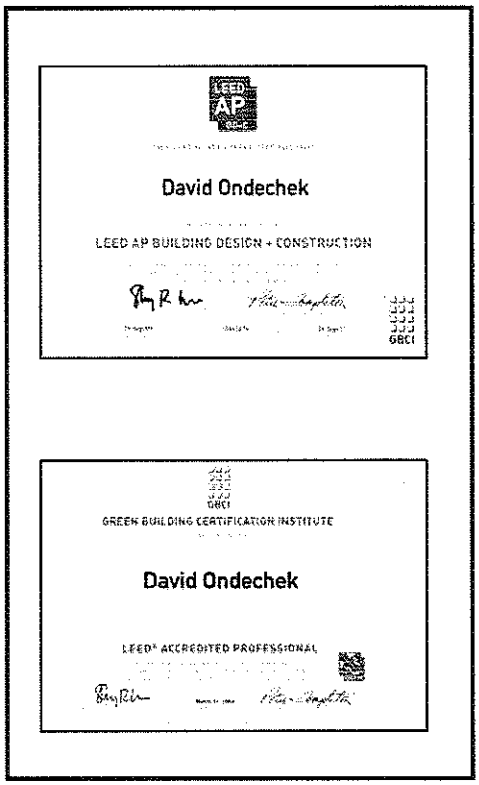
OUR CORE EXPERTISE

- Structural Systems
- Mechanical Systems
  - HVAC
  - Plumbing
  - Fire Protection
- Electrical Systems
  - Power
  - Lighting
  - Data/telecom
  - Security

Energy Services and LEED Designs

Certified Energy Manager: Dave Ondechek, CEM, LEED AP BD&C

Our Certified Energy Manager (CEM), Dave Ondechek, is Loftus' Manager of Energy Services and has more than 18 years experience in all facets of the construction and operation & maintenance of buildings and facilities in the specialized field of energy management. He is a LEED Accredited Professional (LEED AP) and specialist LEED Accredited Professional Building Design + Construction (LEED AP BD+C).He has worked in the HVAC and Energy Management fields as a project manager, project engineer, energy management specialist, and commissioning agent.



Dave is also experienced in performing energy audits in general, and ASHRAE Level Energy Audits specifically, as well as green building design and operation. He is well versed in energy conservation strategies and practices in many different kinds of facilities and is actively involved in the Association of Energy Engineers both locally and nationally.

Related ASHRAE Level 2 Energy Audit Experience:

Department of Energy, National Energy Testing Laboratories, (DOE, NETL) PA, WV and OR – High Performance & Sustainable Building compliance for 112 buildings from 3 sites including offices and laboratories. The analysis included *ASHRAE Level 2 Energy Audits* on 7 buildings to improve the energy efficiency to 20% better than ASHRAE 90.1 2004. Details of these audits are classified due to the confidential nature of the client.

NRG Energy, Pittsburgh, PA – *ASHRAE Level 2 Energy Audit* which resulted in upgrades to lighting and motors with a 1.2 year payback and $17,000 rebate from Duquesne Light.

Mountainline Transit Authority, Morgantown, WV – *ASHRAE Level 2 Energy Audit* which resulted in the approval of a $1M TIGGER Grant. Audit included HVAC, lighting and feasibility analysis of using photovoltaic (solar) charging station for electric busses.

University of Pittsburgh, Pittsburgh, PA – Employed directly by the University of Pittsburgh as Energy Management Coordinator from 2002 to 2007, Dave coordinated and managed *ASHRAE Level 1 and 2 Energy Audits* on more than 20 of the campus' academic and office buildings, resulting in a lowering of energy costs of more than $1M per year, as well as campus wide HVAC, Laboratory, Lighting and Energy Management systems; energy optimization of central chilled water plants and building distribution systems; HVAC, Laboratory and Energy Management systems on the Bio-Medical Science Tower 3, and HVAC and Energy Management systems for the Peterson Events Center.

Loftus Engineers on LEED, Sustainable Design and Energy-Efficient Projects:

... it's in the best interest of the owner!

Energy Efficiency – Loftus always has energy efficiency on the forefront of any design strategy, as it is in the best interest of the owner. We often assist the owner in weighing the upfront costs versus the proposed payback for features. We assist owners in making the best choices for each building or project or system. We are proud to have 12 engineers and designers registered with the USGBC as LEED Accredited Professionals.

For example, the NETL TSF Office Building and NETL Daycare are both on the cutting edge of green technology. Loftus has also designed many other green buildings including office buildings, recreation centers, and even GREEN pizza shops. Several of our engineers also assisted on the design of the new Consol Energy Center – designated as the first LEED National Hockey League arena, and the home of the Stanley Cup Champion Pittsburgh Penguins.

Energy-Efficient Projects – When designing for energy-efficient projects (whether or not they are to apply for LEED certification) typically efficient systems have a higher initial cost. As a result in all energy-efficient projects, an analysis is made of the total lifecycle cost in order to make a fair comparison among systems. Lifecycle cost calculations include the first cost, less any grants rebates or tax incentives resulting from higher efficiency systems, and the anticipated energy costs over a 10, 15 or 20 year lifespan. It is up to the client to make a decision in this regard. Some of our projects are for developers where the overriding requirement is low first cost. For clients like Department of Energy, it is important to show leadership and low operating cost is of prime importance. In between those two extremes are clients who are truly interested in determining the project with the best value and that is, of course, the one with the lowest lifecycle cost. Loftus Engineers has experience working with all three of these client types.

Energy Efficient HVAC and Electrical Systems – Loftus Engineers is known for its design of energy efficient HVAC and Electrical Systems. As a recognized leader in LEED design, each of our green projects must be modeled on a computer simulation for energy use. As such, we have extensive knowledge of energy efficient products and applications.

Loftus is currently designing four projects using the highly efficient ground source heat pumps. This technology uses the earth as a heat sink to store the summer's heat in the ground for use in the winter. In addition, our work for the Department of Energy has enabled us to design innovative systems using rain water capture, solar photovoltaics, vegetative roofs, radiant cooling, natural ventilation, and numerous other green technologies.

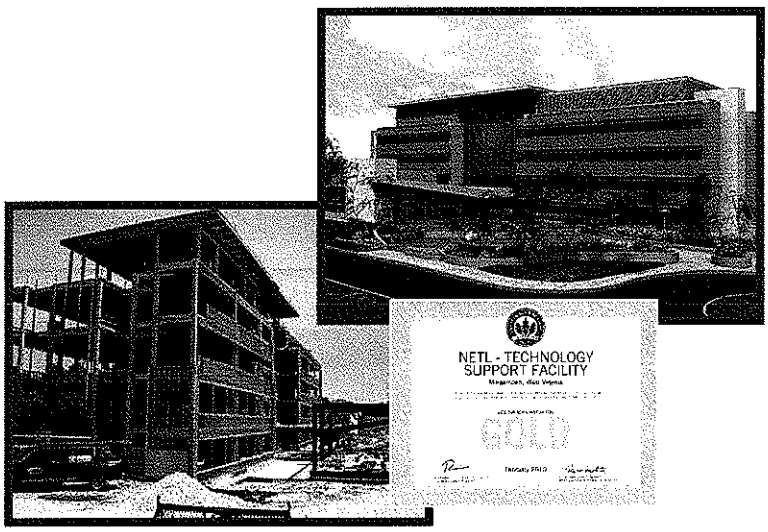
Loftus Engineers is one of only a few firms also registered as Certified Commissioning Agents (CxA). With this accreditation, Loftus can ensure that any improvements to your building's envelope or mechanical and electrical systems are correctly installed and operating as designed.

Loftus Engineers is pleased that twelve (12) key members of our staff are LEED™ Accredited Professionals as granted by the U.S. Green Building Council (USGBC). This includes registered engineers in each of our design disciplines.

LEED Accredited Professionals at Loftus:

Patrick Branch, PE	LEED AP	CEO
Glenn Avick, PE, CxA	LEED AP	President
Craig Kurtzhals, PE	LEED AP	Managing Director, Northeast Division
Mark Wolfgang, PE	LEED AP BD+C	Manager, Mechanical Engineering
Dan Shafer, PE	LEED AP BD+C	Manager, Structural Engineering
Dave Ondechek	LEED AP BD+C	Manager, Energy Services
Ron Mahinske, PE	LEED AP BD+C	Staff Electrical Engineer
Rob Druga, PE	LEED AP BD+C	Staff Mechanical Engineer
Dino Bagatti, EIT	LEED AP BD+C	Staff Mechanical Engineer
Linda Rumbaugh	LEED AP BD+C	Staff Engineer
John Zaramba	LEED AP	Electrical Designer
Dave Dunn	LEED AP	Construction Manager

While achieving LEED accreditation is an important academic achievement, the Loftus team also has the LEED-related experience, including completing the engineering design on a new project for the Department of Energy. This 100,000 SF building is the new Office and Technology Demonstration Facility for the National Energy Technology Laboratory's Morgantown, WV campus, a division of the DOE. The building and systems achieved the LEED Gold rating.



Among many energy-saving engineering features are radiant slab heating and cooling, rain water (gray water) recovery, raised floor dedicated ventilation, and waterless urinals. *Before recommending waterless urinals to the DOE, we first tested the devices in the offices of Loftus, and we were the impetus in having Allegheny County Health Department approve this technology in LEED applications. This is an example of Loftus taking that 'extra step' before specifying new systems.*

We are also proud to have designed the NETL Day Care Center. For this Green Building, Loftus programmed the facility to define spatial requirements and design work included civil, structural, architectural, mechanical, and electrical disciplines.

You can look to Loftus as your building engineer for HVAC, plumbing, fire protection, electrical, and structural systems when you're considering 'Building Green'.

ENERGY SERVICES, SUSTAINABLE DESIGN,
KEY LEED® - COMMISSIONING (CxA) & ENERGY AUDITING EXPERIENCE

Loftus Engineers LLC has provided professional services for energy conservation projects for nearly a century before the LEED movement was formed. We are a full service engineering firm that provides engineering design of LEED certified building mechanical, electrical, plumbing and structural systems. An important part of the LEED certification is Commissioning Services. We are an AABC Certified Commissioning Agent (CxA) which is an attribute unique for an engineering firm. Our other skills include energy modeling, energy auditing and building assessments. We have a Certified Energy Manager on staff (see below) who heads our Energy Services and Commissioning Division. This division was set up to provide energy surveys and energy audits which complement our design services.

One of our major clients is the Department of Energy's NETL division for which Loftus has a term engineering contract. Loftus routinely provides LEED certification and design services on various DOE projects. We have twelve (12) LEED AP accredited design professionals on staff; all committed to sustainable design. This know-how is evidenced in both our corporate history and company philosophy as well as in the knowledge, skill and commitment of our current staff.

The following list is a representative sampling of LEED Design and Commissioning projects performed by our staff to illustrate our capability to assist you in your sustainable design project.

LEED Certification: NC-2.1 - Platinum
Department of Energy (DOE) –
National Energy Technology Labs (NETL) –
Technologies Support Facility (TSF), Morgantown, WV (03-728)

- 80,000 sq. ft. lab/office bldg
- High performance glass "window wall"
- High "U" value walls
- Under floor fresh air distribution
- Radiant heating and cooling
- Low temperature supply air distribution
- Rainwater recovery
- Use of tepid water for lavatories
- Ventilation air heat recovery
- Natural ventilation in atrium
- CO2 ventilation control
- A/C system uses no make-up water
- Low flow fixtures, motion control faucets
- Variable speed drives on fans and pumps
- Low friction loss in fans and ducts by over sizing
- Use of relief fans verse return fans
- Condensing boilers
- Condensing type domestic water heaters
- Direct/indirect lighting
- Lighting controls
- Indigenous plantings, vegetative roof plantings – No irrigation

LEED Certification: NC-2.1 - Platinum
Department of Energy (DOE) –
National Energy Technology Labs (NETL) –
Daycare Center, Morgantown, WV (09-749)

- 14,000 sq. ft. Child Daycare bldg.
- High performance glass
- High "U" value walls
- Active Chilled Beams Cooling
- In-floor Radiant heating
- Low temperature Dedicated Outdoor Air System (DOAS)
- Ground source heat pumps serves chilled beams, DOAS and in-floor heat
- Rainwater recovery
- Ventilation air heat recovery
- CO2 ventilation control
- Low flow fixtures, motion control faucets
- Variable speed drives on fans and pumps
- Domestic water heat provided by ground source heat pump
- Light "tubes" provide Direct/indirect day lighting
- Lighting controls
- Photovoltaic cells provide energy for building
- Indigenous plantings requires no irrigation
- Geo-thermal
- Projected completion June 2011

LEED Certification: Target: Silver
McKeesport Cornell School – LEED Target: Silver
Scheduled completion August 2012

LEED Certification: Target: Silver
McKeesport New MEIS – LEED Target: Silver
Scheduled completion August 2013

LEED Certification: NC-2.1 - Silver
Arlington Heights Community Center,
Youngstown, OH (07-082)

- 15,000 sq. ft. exercise/meeting center
- High performance STP wall construction
- Low velocity/low energy, VAV air distribution
- Radiant heating
- Ventilation air heat recovery
- CO2 ventilation control
- Low flow fixtures, motion control faucets
- Variable speed drives on fans and pumps
- Use of relief fans verse return fans
- Condensing boilers
- Condensing type domestic water heaters
- Direct/indirect high efficiency lighting
- Lighting controls

LEED Certification: NC-2.1 - LEED Silver
Golden Triangle Construction – Office Building,
Imperial, PA (08-011)

- 15,000 sq. ft. Office Bldg.
- High performance glass
- High "U" value walls
- Geothermal, water to air heat pump system
- Dedicated Outdoor Air System (DOAS)
- Ventilation air heat recovery
- CO2 ventilation control
- Low flow fixtures, motion control faucets
- Variable speed drives on fans and pumps
- Direct/indirect day lighting
- Lighting controls
- Indigenous plantings require no irrigation
- Geo-thermal

LEED Certification: NC-2.1 - LEED Silver
McKeesport Area School District (09-155)
McClure Middle/Elementary School
Additions/renovations

- 105,000 sq. ft. middle/elementary school
- High performance wall construction
- Individual classroom heat pump units
- Dedicated Outdoor air system
- Ground Source Geothermal system (300 tons)
- Ventilation air heat recovery
- CO2 ventilation control
- Low flow fixtures, motion control faucets
- Variable speed drives on fans and pumps
- Direct/indirect high efficiency lighting
- Lighting controls
- Geo-thermal

LEED Certification: NC-2.2 - LEED Certified
Commonwealth of Pennsylvania – Department of
Conservation & Natural Resources (DCNR),
District # 20 – Loyalsock State Park Office
Building (07-065)

- 8,000 sq. ft.
- Passive cooling system
- Ground Source Geothermal heat pump system
- CO2 monitoring
- Day lighting
- High efficiency direct/indirect lighting
- High "U" values walls
- Geo-thermal

LEED Certification: NC-2.2 - LEED Certified
Commonwealth of Pennsylvania – Department of Conservation & Natural Resources (DCNR), District # 5 – Rothrock State Park Office Building (07-068)

- 9,000 sq. ft.
- Passive cooling system
- Ground Source Geothermal heat pump system
- CO2 monitoring
- Day lighting
- High efficiency direct/indirect lighting
- High "U" values walls
- Geo-thermal

LEED Certification: NC-2.2 - LEED Certified
Pizza Fusion – Natural Pizza Restaurant, Cranberry, PA (07-175)

- Heat recovery from pizza oven
- High efficiency air conditioner
- High "U" value walls
- Infrared lamps used for pizza cooking

LEED Certification: Core & Shell-2.1 - LEED Certified
Leetsdale Industrial Park – Office/Industrial Warehouse Building, Leetsdale, PA (09-109)

- 35,000 sq. ft. Warehouse/Light Industrial/Office Bldg.
- Heat Absorbing glass
- High "U" value walls & Roof
- Direct fired heating units
- High Efficiency air-conditioning System
- Low flow fixtures, motion control faucets
- Direct/indirect day lighting
- Lighting controls
- Indigenous plantings require no irrigation

LEED Certification: NC-2.2 - LEED Silver
Commissioning of Pennsylvania Army Corps of Engineers, Erie PA (09-143)

- 18,000 sq. ft. office/training bldg
- Provided commission service for LEED certification
- Includes testing of electrical, mechanical and plumbing systems

LEED Certification: Core & Shell-2.1 - LEED Silver
Commissioning of Leetsdale Industrial Park – Office/Industrial Warehouse Building, Leetsdale, PA (09-109)

- 35,000 sq. ft. Warehouse/Light Industrial/Office Bldg.
- Provided commission service for LEED certification
- Includes testing of electrical, mechanical and plumbing systems

LEED Certification: NC-2.2 - LEED Silver
Commissioning of SRWC Office/Warehouse building for Confidential Client, West Mifflin, PA (09-058)

- 25,000 sq. ft. Office/Warehouse Bldg.
- Provided commission service for LEED certification
- Includes testing of electrical, mechanical and plumbing systems

LEED Certification: NC-2.2 - LEED Silver
Commissioning of A4 Office building for Confidential Client, West Mifflin, PA (09-059)

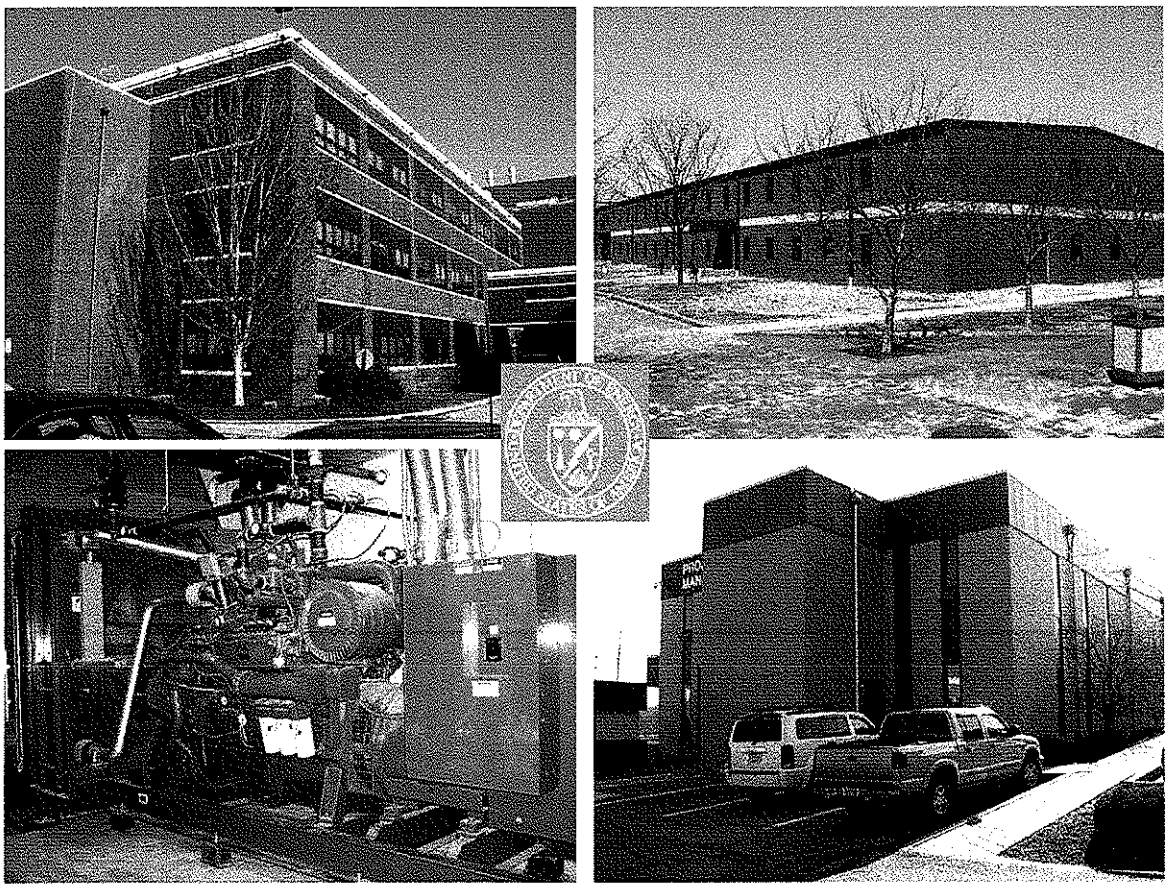
- 30,000 sq. ft. Office Bldg.
- Provided commission service for LEED certification
- Includes testing of electrical, mechanical and plumbing systems

Department of Energy, National Energy Technology Labs (DOE, NETL)

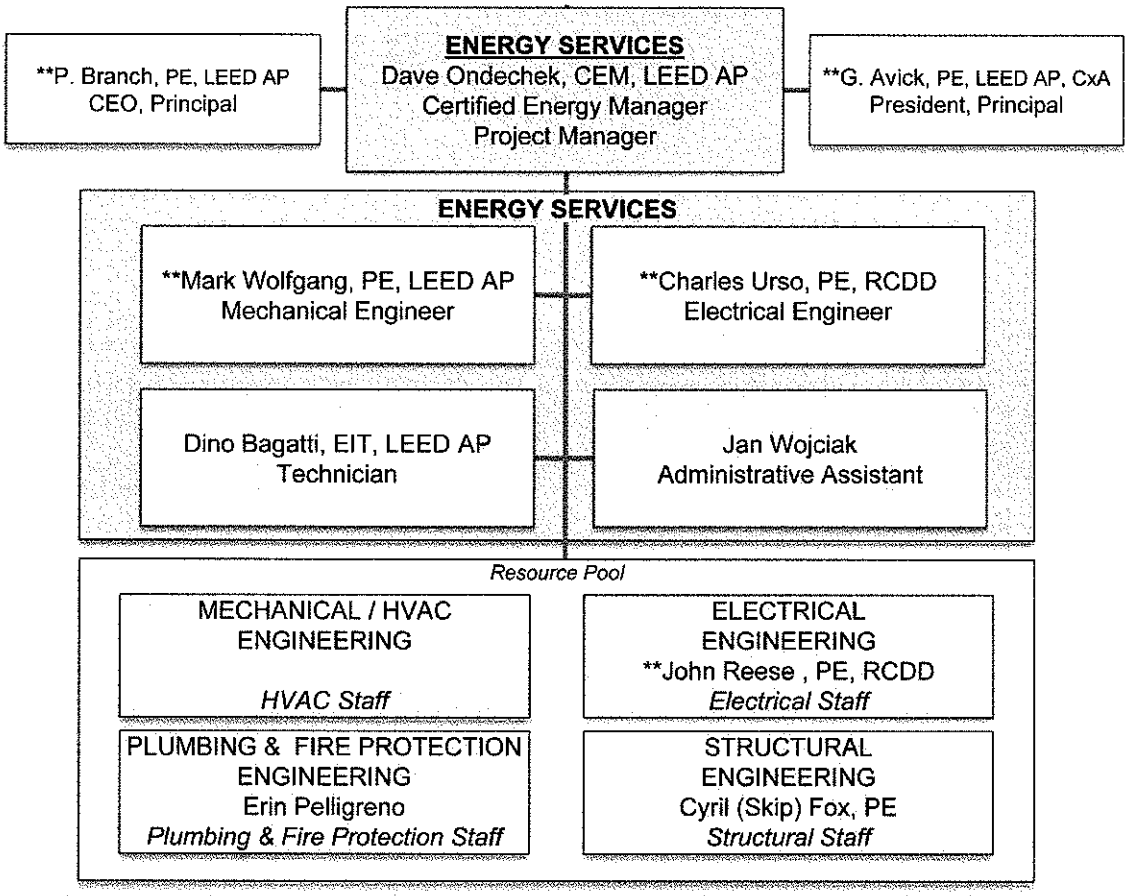
High Performance & Sustainable Building Assessments in Pennsylvania, West Virginia, and Oregon

As part of our 2008 IDIQ with the US Department of Energy, Loftus performed High Performance & Sustainable Building (HPSB) Assessments per Executive Order 13423 for multiple buildings at three campuses. These were located in Pittsburgh, Pennsylvania; Morgantown, West Virginia, and Albany, Oregon. At each campus, representative buildings were selected to most likely meet the HPSB requirements.

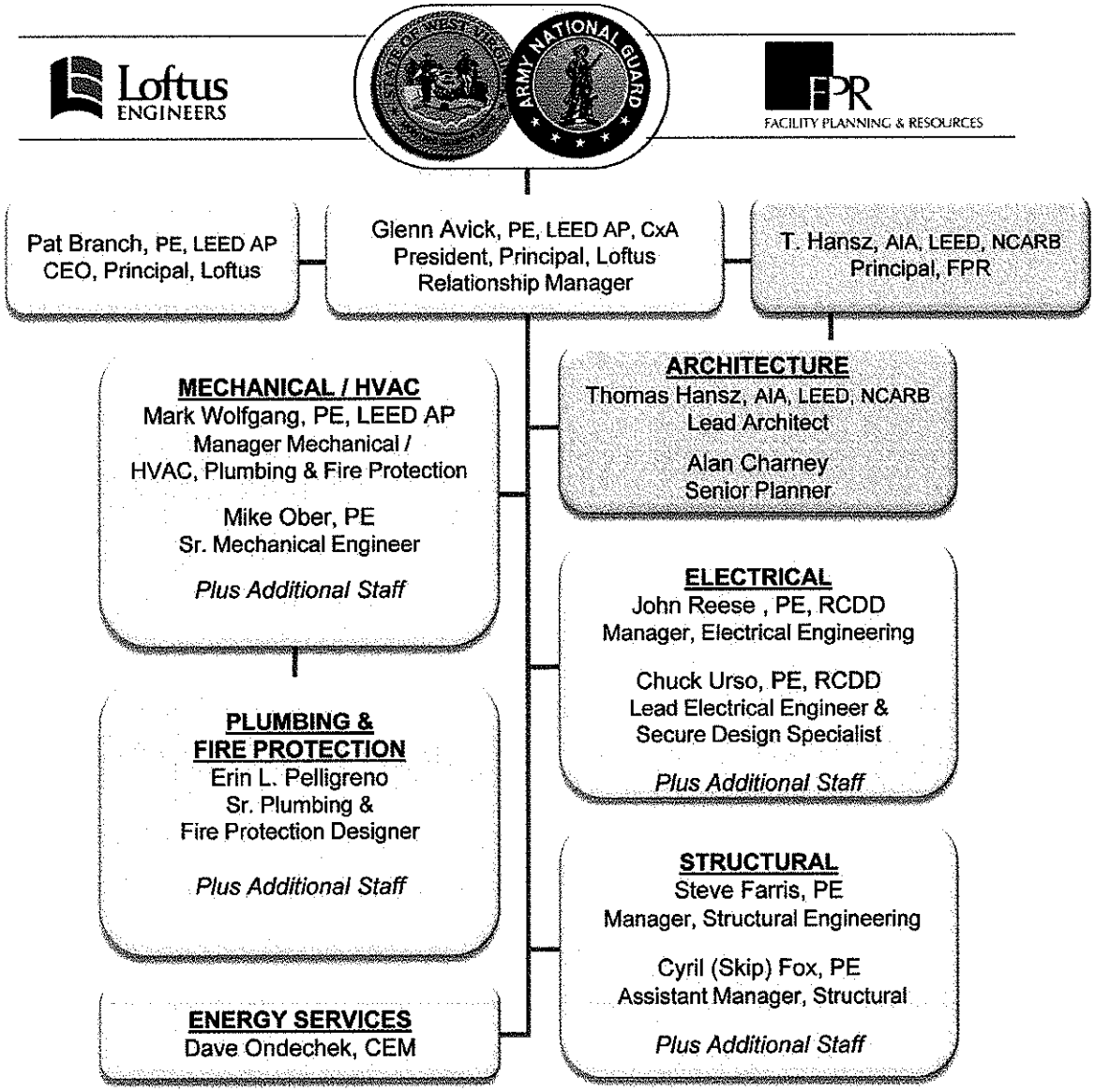
ASHRAE Level II Energy Audits were performed on those buildings to determine each building's energy profile. Energy Conservation Measures were provided to reduce each building's energy and water use to meet HPSB requirements. Construction cost estimates and payback analysis were also provided.



LOFTUS
ENERGY SERVICES



Qualifications of Key Staff – Proposed Organization Chart



Quick Facts:

# Professionals on Staff	Loftus	FPR
Architects		4
Mechanical Engineers	8	
Electrical Engineers	7	
Fire Protection Engineers	3	
Structural Engineers	5	
Communications Engineers	2	
Specifications Writers	4	
Construction Inspector	2	
CADD Technicians	2	2

LEED APs on Loftus/FPR Team = 16
AIAs on FPR Staff = 1
P.E.s on Loftus Staff = 12
West Virginia P.E.s on Loftus Staff = 5

1. Patrick Branch PE (mechanical) -**WV**, PA, OH, NY, NJ
2. Mark S Wolfgang PE (mechanical) -**WV**, PA, OH, MD
3. Dan Shafer PE (structural) -**WV**, PA, NY, NJ, OH, MI, SC
4. John Reese PE (electrical) -**WV**, PA, FL
5. Charles Urso PE (electrical) -**WV**, PA, OH

Loftus – CEO: PATRICK BRANCH, PE, LEED AP – Pat Branch is the CEO of Loftus Engineers, has nearly 30 years experience and is responsible for the executive leadership, as well as conceptual engineering, project management and quality control. He is a Professional Engineer Registered in West Virginia, and Pennsylvania among others. As a LEED Accredited Professional, he is considered an advocate, a leader and an authority on sustainable design.

Mr. Branch has served as engineering manager for hundreds of prestigious A/E projects, including the $80 million UPMC sports complex that includes a sports medicine clinic as well as training facilities for the Pittsburgh Steelers and Pitt Panthers; the $125 million, LEED rated Silver, PNC Firstside Banking Center; and, the $100 million, LEED rated, PNC Three Office/Hotel/Condo tower.

Loftus – President: GLENN AVICK, PE, CxA, LEED AP – Glenn Avick has worked in HVAC and engineering for 40 years including as chief facilities engineer for the five million sq. ft. campus at the University of Pittsburgh. He has managed more than $50M in construction related activities. Mr. Avick is actively involved in complex engineering projects and favors a "hands on" approach.

Mr. Avick is a Registered Professional Engineer, as well as a Certified Commissioning Agent (CxA) and a LEED Accredited Professional (LEED AP). His experience includes several projects for West Virginia University over the years, including the Public Rapid Transit System and hydronic heating system modifications; and, prior on-going task order for facilities engineering services. In addition Mr. Avick has played a senior role on several projects related to the Bellefield Boiler Plant which is owned by the consortium it services (University of Pittsburgh, University of Pittsburgh Medical Center (UPMC), Carnegie Mellon University, the Carnegie Museum, the City of Pittsburgh, and the Pittsburgh Public Schools).

FPR – Principal and Lead Architect: THOMAS HANSZ, AIA, LEED AP, NCARB – Thomas Hansz is the founder of FPR and Senior Principal. His understanding of advanced technologies and secure facility design is extensive, covering thirty years of national and international experience. Thomas was fortunate to have studied at the prestigious Cranbrook Academy of Art, where he received his Master of Architecture degree. As the leader of FPR, Thomas continues to practice as a "hands-on" principal.

During the 1980's Thomas directed projects with the renowned architectural firm of CRS/Caudill Rowlett Scott in Houston. He was a Vice President and Project Director responsible for major corporate and institutional clients, which resulted in the establishment of the Advanced Technology Group within CRS. Tom's studio of architects and engineers programmed and designed advanced technology projects throughout the country and overseas. Major clients of his have included, Intel Corporation, Motorola, Hewlett Packard, AT&T, Nortel, Herman Miller and the Cummins Engine Company.

FPR – Senior Planner: ALAN CHARNEY has more than 30 years experience in the design of innovative facilities for corporate, institutional and government clients. Alan's responsibilities have included preparing feasibility studies, project programming, master planning, space planning, conceptual engineering, writing specifications for specialized equipment and systems, preparing construction documents, inspecting new construction, preparing safety and hazard reviews, solving environmental problems, and preparing state air permit applications.

Loftus – CRAIG KURTZHALS, PE, LEED AP, Director, Northeast Division – serves as Managing Director for the Loftus Northeast Division. Recently joining Loftus, Craig brings 25 years experience in the industry, and has proven leadership in the design and project management of MEP systems for a wide array of projects including government, corporate office buildings, financial services operations, information technology, healthcare, education, museums and industrial facilities.

HVAC ENGINEERING

Ever evolving codes and standards, along with the correlation between a healthy indoor environment and productivity, have made HVAC design a crucial issue in all buildings. Our design professionals take into consideration comfort control, indoor air quality, system operating efficiency, and noise before selecting and designing your HVAC system. Loftus understands that comfort goes far beyond controlling temperature. Humidity, ventilation rates, building pressurization, and vibration control are all crucial aspects to maintaining optimal indoor conditions.

- Energy recovery systems
- Sound Attenuation and vibration
- Laminar airflow for surgical suites and clean rooms
- Infection control
- Radiant heating and cooling
- HEPA filtering for hazardous material
- Preservation of artifacts
- LEED certified systems design
- Process cooling systems (industrial and medical)

Loftus – MARK WOLFGANG, PE, LEED AP – Mark Wolfgang is Director of HVAC Engineering. Mr. Wolfgang began his career in mechanical systems engineering and construction for Peter F. Loftus Engineers in 1974. Mark provides a wide range of engineering experience from educational and research facilities design to industrial process design. His main area of expertise is advanced HVAC systems design. Mark's managerial skills and design experience make him an asset to any project team.

PLUMBING & FIRE PROTECTION ENGINEERING

Plumbing and fire protection systems are critical elements to a building's operation and safety. These systems, once taken for granted, are advancing as new and important ways to save energy and protect the investment in your building and property. Further, we believe that serious fire protection is a harmonious blend of the various aspects of life safety. Construction types, exiting strategies, fire detection and alarm, as well as fire fighting, all contribute to the safe working environment.

- Fire and smoke control
- Water saving and reuse strategies
- Special fire protection systems

Loftus – ERIN PELLIGRENO – Erin Pelligreno leads the Loftus Plumbing and Fire Protection Engineering group for design and execution of P/FP systems both new facilities and existing renovations. She has more than 20 years experience which covers virtually all project types (K-12 and Higher Education) including Penn State-State College and Penn State-Erie, and Indiana University of Pennsylvania to name just a few.

Her experience includes designing domestic water, storm, sanitary, medical gas, and fire protection systems, and her responsibilities include field inspection, heat loss / gain calculations, coordination with utilities and code officials, construction of drawings and specifications, construction period services.

ELECTRICAL SYSTEMS EXPERIENCE AND ENGINEERING

The building system that most impact the user on a daily basis is the electrical system. Electrical systems are a necessary part of any building and include power, lighting, fire, security, data, cable and video wiring. The dependence on computers and data devices necessitate the need for special care in grounding to avoid harmonic distortion and related wiring problems. Lighting is a vital element in achieving the desired indoor environment. Loftus engineers design pleasing lighting schemes while keeping energy efficiency and high utilization at the forefront of the design.

- Emergency power distribution systems
- Harmonic and electromagnet filtering and shielding systems
- Fire alarm and security systems
- Specialized lighting for architectural and decorative effects
- Clean power, special grounding systems
- Telecommunications and data distribution systems
- Non-Interruptible power systems
- Closed circuit and master antenna TV systems
- Power conditioning
- RF and data collection systems
- Lightning Protection

Loftus has extensive experience with design engineering, review of existing systems and recommendations for correcting and/or improving electrical systems for occupied buildings. One example is Duquesne University-Brottier Hall (residence dormitory/apartments) where Loftus designed a complete renovation to the HVAC, electrical, and fire systems while it maintained occupancy year round. This entire upgrade is now successfully complete providing for a safer and code compliant building.

Loftus – JOHN REESE, PE, RCDD – A Registered Communications Distribution Designer and P.E., John Reese is Vice President and leads the Loftus Electrical Engineering Team. He has more than 17 years experience as a Consulting Engineer performing Electrical Distribution System Analysis, as a Communication System Engineer, and as an Electrical Consulting Engineer. His recent position was

Electrical Department Manager for a $20 million architecture, engineering, and design/build construction firm that employed over 200 professionals and support staff.

John has been engaged on a number of data/telecomm projects and has recently completed Advanced Solar Design Training. He has managed the campus-wide **Fiber Optic Distribution and Security System Upgrade** for the University of Pittsburgh; the **Bio Diesel Engine, Generator and Transfer switch and Solar Collectors for the Intelligent Workplace** at Carnegie Mellon University; and, was the Electrical Engineer of Record for the **Tier III Data Center and PBX** at the PA Turnpike Commission's $20 million Turnpike Industrial Park (TIP) Building Renovation project.

STRUCTURAL ENGINEERING, DESIGN AND ANALYSIS:

The Loftus Structural Engineering Staff provides expertise in all types of building projects including precast and cast-in-place concrete, steel, masonry, timber, and composite systems. The utilization of advanced design software coupled with our experienced staff results in reliable, efficient design for our clients. Recognizing the key interplay of structure with architectural design, we encourage an exchange of ideas between the architectural and structural design teams to blend form and function from the beginning of a project.

- All types of foundation systems
- Design of new multistory buildings
- Additions to commercial and light industrial facilities
- Modifications within historic structures
- Retrofitting structures for new occupancies and loading
- Coldrolled steel framing systems

Loftus – STEPHEN F FARRIS, PE – Steve Farris directs the Loftus Structural Engineering Group providing structural analysis, design, and detailing of the structural aspects of buildings including coordination and incorporation of architectural design and mechanical systems.

Loftus – CYRIL A (Skip) FOX, PE – Skip Fox serves as Assistant Manager for the Loftus Structural Engineering group, and brings more than 17 years experience in structural engineering. Project and client experience, with prior employers, has included work on PNC Park; Tribute to Children (the memorial to Mr. Fred Rodgers); The Port Authority of Allegheny County; Children's' Hospital of Pittsburgh/ UPMC; PNC Firstside Center; Penn State University/Louis E. Lasch Football Building; the University of Pittsburgh and many others.

Skip is currently serving as Senior Structural Engineer on the Cornell Intermediate/Elementary School and McKeesport Middle/Elementary School projects in McKeesport, PA where he's responsible for design of roof and floor framing, canopies, gym roof, cafeteria roof, wall detailing & lintels, gravity and lateral force resistance system; and foundations. He also has work on the Lindy Paving Office Building; the Blawnox, PA Volunteer Fire Company Station 111; and the PNC Park Baseball Stadium.

Resumes

Loftus ENGINEERS

PATRICK BRANCH, PE, LEED AP
CHIEF EXECUTIVE OFFICER

PROFILE

Mr. Branch is the CEO of Loftus Engineers, LLC. He is responsible for the executive leadership of Loftus Engineers, as well as conceptual engineering, project management and quality control.

For nearly 30 years, Mr. Branch has provided, and managed, consulting engineering services for virtually all project types from Healthcare to Commercial to Education. As a LEED Accredited Professional™ and USGBC LEED HC Core Committee Member, he is considered an advocate, a leader, and an authority on sustainable design.

RELATED EXPERIENCE

- Prior professional experience includes the position of President of Engineering Division, Vice President of Environmental Division, Corporate Vice President, Corporate Director, and COO for a $20 million architecture, engineering, and design/build construction firm that employed over 200 professionals and support staff. Also, responsible for the establishment and growth of an Environmental Division
- Engineering manager for hundreds of prestigious A/E projects, including:
  - $625 million University of Pittsburgh Medical Center Children's Hospital of Pittsburgh
  - $125 million, LEED rated Silver, PNC Firstside Banking Center
  - $100 million, LEED rated, PNC Three Office/Hotel/Condo tower
  - $100 million State Correctional Facility, Houtzdale, PA
  - $80 million UPMC sports complex that includes a sports medicine clinic as well as training facilities for the Pittsburgh Steelers and Pitt Panthers
- International experience includes design of a health care facility in Palermo, Sicily, and business development, negotiation, and projects in China.
- Successfully partnered with numerous international A/E firms including HOK, Gensler, and HDR.
- Established, provided leadership, and developed the Engineering Division that provided structural, HVAC, plumbing, fire protection, electrical, lighting, and telecom/data systems.
- Eighteen months experience as National City Bank's Director of Facilities and Projects. This included oversight of the banks two major Data Center Facilities.

EDUCATION & REGISTRATION

- Bachelor of Science in Mechanical Engineering, University of Pittsburgh
- Professional Engineer Registered in PA, OH, NY, NY, WV
- Accredited "LEED" (Leadership in Energy and Environmental Design) Design Professional

AFFILIATIONS

- Engineering Society of Western Pennsylvania
- American Society of Heating, Refrigeration, and Air Conditioning Engineers

Loftus ENGINEERS

GLENN AVICK, PE, LEED AP, CxA
PRESIDENT

PROFILE

Mr. Avick is President of Loftus Engineers, a full-service engineering consulting firm. Loftus Engineers was formed out of the former Peter F. Loftus Division of Eichleay Engineers, an organization that has provided engineering services for over 100 years. He has worked in HVAC and engineering for 36 years as a consulting engineer, construction project manager and as chief facilities engineer for a five million sq. ft. campus. His design and project management experience include central chiller and heating plants, industrial and institutional ventilation systems, hydronic heating, and clean room design. He has managed over 50 million dollars in construction related activities. Although business development and financial management are major duties as General Manager, Mr. Avick still is actively involved in complex engineering projects and favors a "hands on" approach.

RELATED EXPERIENCE

University of Pittsburgh – Pittsburgh, PA

- CFC compliance plan and chiller replacement program
- Comprehensive facilities audit assessment
- Energy planning and reduction program
- Steam distribution operations manager
- Operational deficiency analysis and correction
- Project manager for new $26 million dormitory complex
- Project oversight for $6 million football locker room and training room renovations

Bellefield Boiler Plant – Pittsburgh, PA

Long range planning consultant; Boiler operational analysis

West Virginia University – Morgantown, WV

Public Rapid Transit System and hydronic heating system modifications; On-going task order for facilities engineering services

Plasma-Therm

Clean manufacturing and research facility in St. Petersburg, Florida, from class 10,000 to class 10 space

Honda of America – Marysville, OH

Water distribution system study; Paint department air system; Electrical bonding study; Roof cable tray

Boiler System Design – Pittsburgh, PA

Gas fired, low-pressure steam boilers, Grant Building; Multiple hot water boiler installations

EDUCATION, REGISTRATION CREDENTIALS & AFFILIATIONS

- Bachelor of Science in Aeronautical Engineering, University of Pittsburgh
- Masters of Business Administration, Duquesne University
- Professional Engineer Registered – PA, OH, NV
- Certified Commissioning Agent (CxA)
- LEED Accredited Professional (LEED AP)
- Engineering Society of Western Pennsylvania
- American Society of Heating, Refrigeration and Air Conditioning Engineers
- American Society Plumbing Engineers

FPR

Thomas E. Hansz, AIA LEED AP
Principal Architect and Planner

FIRM: Facility Planning and Resources, Inc.
1910 Cochran Road, Suite 615. Pittsburgh PA 15220

EDUCATION: Master of Architecture – Architecture & Planning, Cranbrook Academy of Art
Bachelor of Science – Architecture, Lawrence Institute of Technology
Honors College – Western Michigan University

BIOGRAPHY: Thomas Hansz is the founder of FPR and our Senior Principal. His understanding of advanced technologies and secure facility design is extensive, covering thirty years of national and international experience. Thomas was fortunate to have studied at the prestigious Cranbrook Academy of Art, where he received his Master of Architecture degree.

During the 1980's Thomas directed projects with the renowned architectural firm of CRS/Caudill Rowlett Scott in Houston. He was a Vice President and Project Director responsible for major corporate and institutional clients, which resulted in the establishment of the Advanced Technology Group within CRS. Tom's studio of architects and engineers programmed and designed advanced technology projects throughout the country and overseas. Major clients of his have included, Intel Corporation, Motorola, Hewlett Packard, AT&T, Nortel, Herman Miller and the Cummins Engine Company.

As the leader of FPR, Thomas continues to practice as a "hands-on" principal. His relationships with outstanding design firms, engineers, contractors and consultants on a national basis allow him to incorporate valuable team members that provide unique insights to each project design and systems solution. As a team member, Tom supports the entire project team, Owner, Architect, Engineer and Constructor with the information needed for critical decision making.

Today Thomas leads architectural and engineering design teams with intensive, well-organized, hands-on work sessions, in the Client's offices. Each project regardless of its size is programmed with client involvement resulting in a consensus for moving forward. Working interactively with key client personnel administrative, technical and facilities, he has the unique ability for identifying the project's critical and unique requirements. Simultaneously, Thomas challenges clients to think creatively.

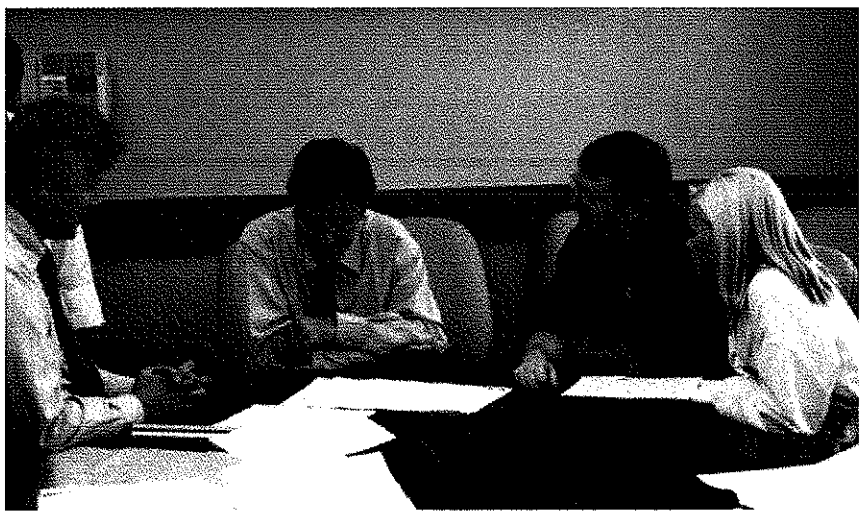
Alan R. Charney
Senior Planner

FIRM: Facility Planning and Resources, Inc.
1910 Cochran Road, Suite 615. Pittsburgh PA 15220

EDUCATION: Master of Architecture in Structural Engineering, University of Illinois
B.S., Architectural Studies, University of Illinois
B.S., Chemical Engineering, Carnegie Mellon University

BIOGRAPHY: Alan Charney has more than 30 years experience in the design of innovative facilities for corporate, institutional and government clients. Alan's responsibilities have included preparing feasibility studies, project programming, master planning, space planning, conceptual engineering, writing specifications for specialized equipment and systems, preparing construction documents, inspecting new construction, preparing safety and hazard reviews, solving environmental problems, and preparing state air permit applications.

Applying his working knowledge of building and fire codes, environmental and safety regulations, and recognized standards of practice, Mr. Charney has provided guidance for compliance with local and national codes and regulations and has participated with clients in presentations and discussions with regulatory agencies. In the design of facilities which require strict management of operations and materials, Alan has worked with local fire marshals, industrial risk insurers and environmental agencies to gain approval for both facility designs and internal operations.



Here Alan, seated at the left, is directing a group of stakeholders in quantifying their future requirements for work flow and functional layouts during the initial programming process.

LOFTUS ENGINEERS LLC
NORTHEAST DIVISION
55 Country Club Drive
Downingtown, PA 19335

CRAIG H. KURTZHALS, PE, LEED AP
MANAGING DIRECTOR, NORTHEAST DIVISION

PROFILE

Craig Kurtzhals serves as Managing Director for the Loftus Northeast Division. Recently joining Loftus, Craig brings 25 years experience in the industry, and has proven leadership in the design and project management of MEP systems for a wide array of projects including financial services operations, corporate office buildings, information technology, healthcare, government, education, museums and industrial facilities.

Mr. Kurtzhals has spent most of his career providing project management services in the Delaware Valley. His experience with redevelopment and redaptive reuse projects includes several projects for the Historical Society of Delaware; extensive renovations to the Grand Opera House in Wilmington, including the addition of The Baby Grand; renovations to the Mount Cuba Estate, converting an historic private residence to a horticultural center; renovations to Brantwyn, converting an historic private residence to a conference center for the DuPont Company; MEP upgrades to the Old Library Museum in Historic New Castle, DE and electrical upgrades to Fort Delaware in Delaware City, DE.

RELATED EXPERIENCE

Mission Critical Facilities

- **Delaware Emergency Management Agency Emergency Operation Center** (EOC), Smyrna, DE – Project Manager for a 28,000 sq.ft. facility including a 6,000 sq.ft. equipment yard programmed to coordinate statewide emergency response operations for technological and natural hazards, serves as the principal command and control nerve center for Delaware's response to natural and technological events.
- **Bank of America**, Deerfield Wing 5 site, Newark, DE – Project Manager for the design of two parallel-redundant 1600 KW diesel generating systems and two separate, multi-module 1000 KVA UPS systems with "on-line" synchronizing and tie systems for a 7,000 sq.ft. computer room and related critical loads.
- **Bank of America**, Christiana Center III & IV site, Newark, DE – Project Manager for two adjacent 130,000 sq.ft. office buildings with a 20,000 sq.ft. raised floor computer room and related credit-card statement processing and payment systems.
- **DataCentersNow**, Cyber Fortress II, Manassas, VA – Project Manager responsible for the design of a fast-track, 300,000 sq.ft. speculative 7X24 complex utilizing tilt-up panel construction methods.
- **YellowBook USA**, King of Prussia, PA – Project Manager responsible for the production of the Basis of Design (BOD), Basis of Estimate (BOE) and Construction Documents (CD's) for a 2 Megawatt data center.
- **Infocrossing**, Sterling, VA – Project Manager responsible for the design of an 85,000 sq.ft. co-location and web hosting facility.

EDUCATION & REGISTRATION

- Bachelor of Science in Electrical Engineering, The Pennsylvania State University
- Professional Engineer Registered in PA, AR, DC, DE, FL, GA, MD, ME, NJ, NY, OH, and VA
- Accredited "LEED" (Leadership in Energy and Environmental Design) Design Professional

AFFILIATIONS

- The 7X24 Exchange

Loftus ENGINEERS

MARK WOLFGANG, PE, LEED AP
MANAGER, HVAC ENGINEERING

PROFILE

Mr. Wolfgang has more than 30 years experience in building mechanical systems design, engineering and construction. Mr. Wolfgang provides our clients with wide range of engineering experience from educational and research facilities design to industrial process design.

His area of expertise is advanced HVAC systems design. Mark successfully manages the dual challenges of designing large, complex projects and scheduling engineering staff. The combination of managerial skills and design experience make Mark an asset to any project team. Mark is responsible for the production control of the HVAC Department, design review and engineering quality control. He also sets the CADD standards for the company and is the IT manager.

RELATED EXPERIENCE

- **Westinghouse Energy Center,** Monroeville, PA – Emergency Generator Building Heating and ventilation system design. (10-1200 kw units) and renovation of north tower air handlers and offices.
- **Westinghouse Energy Center,** Monroeville, PA – Renovation of north tower air handlers and offices.
- **Aristech Chemical (Sunoco) Polypropylene Laboratory**, Pittsburgh, PA – New 50,000 sq.ft. New Research and Demonstration Laboratory.
- **Westinghouse Electric Corporation**, Waltz Mills, PA – "T" Building HVAC, process piping design and radioactive exhaust system design.
- **Westinghouse Electric Corporation**, Waltz Mills, PA – Facility Engineering Task Order Services including:
  - "G" Building chiller plant and boiler replacement.
  - Site central radioactive water treatment system replacement.
  - Rooftop HVAC units replacements.
- **University of Pittsburgh**, Pittsburgh, PA – Allen Hall Classrooms; Old Engineering Hall Classrooms; Classroom Renovations; Crawford Hall – Laboratory HVAC System Replacement; & Clapp Hall – Laboratories 102 and 105 HVAC Replacement.
- **University of Pittsburgh**, Greensburg, PA – Library Air Conditioning Replacement
- **Duquesne University** – Brottier Hall & Student Union 1st floor renovations
- **The Carnegie**, Pittsburgh, PA – Mineral Hall Display & Baum Blvd. Archive and Display Storage Facility Building.

EDUCATION & REGISTRATION

- B.A.E., Bachelor of Architectural Engineering, The Pennsylvania State University (With advanced credits toward a minor in Construction Management)
- Professional Engineer Registered in PA, OH, WV, KY, MD
- Accredited "LEED" (Leadership in Energy and Environmental Design) Design Professional.

AFFILIATIONS

- ASHRAE, National Society of Professional Engineers, and Pennsylvania Society of Professional Engineers

Loftus ENGINEERS

MICHAEL OBER, P.E.
SENIOR MECHANICAL ENGINEER

PROFILE

Mr. Ober is a Senior Engineer in the Loftus HVAC Department. His areas of expertise include design of building HVAC systems, cleanrooms, and steam distribution. Projects that he has been involved with include industrial facilities, office buildings, microelectronics facilities, vehicle maintenance facilities, universities, hospitals, and naval facilities.

SELECTED PROJECTS

- **PACT Steam Heating Facility, Pittsburgh, PA** – Designed new steam vaults and steam distribution; Surveyed miles of buried tunnel steam lines to document condition and recommend improvements; Design repairs to the steam distribution on a regular basis, since 1998.
- **Duquesne University, Pittsburgh, PA** – Upgrade to science building HVAC system.
- **NRG Energy, Pittsburgh, PA** – Designed new steam vaults and steam distribution; Designed repairs to existing vaults
- **CCAC, Pittsburgh, PA** – Designed boiler replacement; Renovation of CCAC West Facility Tech Labs and Offices
- **West Virginia University, Morgantown, WV** – Upgrades to dormitories; Steam distribution; Upgrades to PRT heating system.
- **Custom Urethane Elastomers (C.U.E.), Wexford, PA** – Local exhaust project.
- **Oliver Building, Pittsburgh, PA** – Renovations to office spaces and mechanical utilities.
- **Federal Building, Charleston, WV** – Renovations to office spaces and mechanical utilities.
- **University of Pittsburgh, Pittsburgh, PA** – Upgrades to dormitories; Steam and chilled water distribution.
- **IBM Corporation, East Fishkill, NY** – Design of clean rooms and facilities that support clean rooms.
- **GMT Microelectronics,Norristown, PA** – Design of clean rooms and facilities that support clean rooms.
- **SVG Corporation, Wilton, CT** – Design of clean rooms and facilities that support clean rooms.
- **Delco Electronics, Kokomo,** IN – Design of clean rooms and facilities that support clean rooms.
- **Intel Corporation, Fab 12, Chandler, AZ** – Design of clean rooms and facilities that support clean rooms.

EDUCATION, REGISTRATION & AFFILIATIONS

- Bachelor of Science, Mechanical Engineering, Virginia Military Institute
- Registered Professional Engineer: PA, NV, VA
- American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)

Loftus ENGINEERS

ERIN PELLIGRENO
MANAGER, PLUMBING/FIRE PROTECTION

PROFILE

As the P/FP staff supervisor and lead designer, Mrs. Pelligreno is responsible for the design and execution of plumbing/fire protection systems for both new facilities and existing renovations. She has more than 20 years experience in the industry which covers virtually all project types; residential, commercial and institutional. Her experience includes designing domestic water, storm, sanitary, medical gas, and fire protection systems, and her responsibilities include field inspection, coordination with utilities and code officials, construction of drawings and specifications, construction period services.

RELATED EXPERIENCE

- **UPMC Children's Hospital of Pittsburgh, PA** – Designed and created construction documents for the utility systems for this million-square-foot campus and worked on many aspects of the new and renovated buildings, including all site work, in-patient services, ambulatory facilities, research capabilities and parking to accommodate the hospital both now and in the future.
- **Heinz Progressive Care Center Ambulatory Care Center – VAMC Pittsburgh Healthcare System, Pittsburgh, PA** – Designed and created plumbing and fire protection construction documents for the new 115,000 sq. ft. Ambulatory Care Center including all site work for this project. . The three-story, $40 million project includes physical rehabilitation, audiology, dental, adult daycare, out-patient pharmacy, patient education, prosthetics and primary care services. The project is pursuing LEED Silver certification.
- **Heinz Progressive Care Center Site Utility Improvements - VAMC Pittsburgh Healthcare System, Pittsburgh, PA** – Mrs. Pelligreno's design helped to facilitate the campuses needs in providing water, gas, sewer and fire protection systems including all site work for the projects. The site utilities needed to be upgraded and improved to support the addition of the Domiciliary and Ambulatory Buildings.
- **Domiciliary/Residential Villa -VAMC Pittsburgh, PA** – Designed and created plumbing and fire protection construction documents for this series of buildings including all site work. The $20 million dollar Domiciliary/Residential Villa Buildings consist of a 35,000 sq. ft., two-story assisted and unassisted living facility with kitchen and common areas, and six multi-unit residential dwellings.
- **Office Building Experience** – The following included all site work for these projects.
    - Crown Castle Office Building, Southpointe Complex, Canonsburg, PA
    - Stealth II Office Building, Southpointe Complex, Canonsburg, PA
    - Solutions Office Building, Southpointe Complex, Canonsburg, PA
- **Cornell Intermediate/Elementary School, McKeesport, PA** – Senior Designer for plumbing and fire protection engineering drafting and design responsible for drawing review; sanitary and ventilation diagrams; domestic water pipe sizing; rain conductor locations; kitchen plumbing layout and water services; rain water harvesting and water heater selection; riser diagrams; roof drain changes.

- **Francis McClure Middle School, McKeesport, PA – Addition/Renovation** – Senior Designer for plumbing and fire protection engineering drafting and design.
- **Moon Area Middle School Coraopolis, PA** – Senior Designer for plumbing and fire protection engineering drafting and design.
- **Magee Women's Hospital Research Institute Expansion, Pittsburgh, PA** –Mrs. Pelligreno provided design and construction documents for domestic water, fire protection, gas, sewer and laboratory systems for the facility.
- **School Project Experience**
  - Plum Senior High School, Addition and Renovation
  - North Allegheny Senior High School, Addition and Renovation
  - Milliones Elementary School, Renovation
  - Penn State Behrend, Addition and Renovation
  - Indiana University of Pennsylvania (IUP) Elkins Hall, Toilet Room Renovations
  - IUP Davis Hall, Chiller Replacement
  - IUP Pratt Hall, Renovation
  - IUP Whitmyre Hall, Renovation
  - IUP Langham and Wahr Hall, Lounge Renovations
  - IUP Mack, Stewart and Turnbull, Heating System Renovation
  - Penn State Main Campus-Watts Hall, Renovation
  - Moon Area High School
  - Grove City Middle School
  - George Junior Republic School
- **Healthcare Project Experience**
  - UPMC Children's Hospital, Pittsburgh, PA
  - UPMC Heights Plaza Center for Rehab Services (CRS) Suite, Natrona Heights, PA
  - UPMC Heights Plaza Primary Care, Natrona Heights, PA
  - UPMC Heights Plaza Urgent Care, Natrona Heights, PA
  - UPMC Mercy South Side Outpatient Center
  - UPMC Passavant, Addition. Pittsburgh, PA
  - UPMC West, Cancer Center Renovation, Moon Township, PA
  - UPMC BioTronics
  - Magee Womens Hospital of UPMC Health Suite
  - Magee Womens Research Institute Addition, Pittsburgh, PA
  - VA Pittsburgh Healthcare System – Ambulatory Facility, HJ Heinz Site
  - VA Pittsburgh Healthcare System – Domicilliary Facility, HJ Heinz Site
  - Benbrook Care Center

EDUCATION & AFFILIATIONS

- Triangle Institute of Technology, Associate Degree – Mechanical Computer Aided Drafting and Design
- American Society of Plumbing Engineers

Loftus ENGINEERS

JOHN REESE, PE, RCDD
VICE PRESIDENT
MANAGER, ELECTRICAL ENGINEERING

PROFILE

Since 1993, Mr. Reese has worked as a Consulting Engineer performing Electrical Distribution System Analysis, as a Communication System Engineer, and as an Electrical Consulting Engineer.

His recent position was Electrical Department Manager for a $20 million architecture, engineering, and design/build construction firm employing more than 200 professionals and support staff. The electrical and telecommunications department he managed employed 16 professionals including engineers, designers and CAD operators. He most recently completed Advanced Solar Design training. Project experience with this firm includes Engineer of Record responsibilities for dozens of Healthcare, Institutional, Corporate, Education, and Transportation projects.

RELATED EXPERIENCE

- **Tier III Data Center, PA Turnpike Commission** Harrisburg, PA – New $20 million Turnpike Industrial Park (TIP) Building Renovations included demolition, construction, equipment, and furnishing fit-out of a new TIER III Data Center, PBX Room, and associated mechanical and electrical support spaces and systems and generators for multiple facilities. The electrical systems were designed to meet the national electrical code, international building codes, EIA/TIA standards, BICSI standards, and comply with TIER III level redundancy requirements for data center construction as defined by the uptime institute. Mr. Reese was the Electrical Engineer of Record.
- **University of Pittsburgh**, Campus Wide Fiber Optic Distribution and Security System Upgrade
- **Carnegie Mellon University**, Pittsburgh, PA Bio Diesel Engine, Generator and Transfer switch and Solar Collectors for the Intelligent Workplace
- **BASF,** Pittsburgh, PA –Senior Electrical Design Engineer responsible for Security Lighting and CCTV design.
- **Ft. Lee Virginia Lodge**, 1,000 Bed Hotel – Telecommunications and Security Design.
- **Children's Hospital of Pittsburgh of UPMC**, Pittsburgh, PA Replacement Facility – Oversaw all electrical and telecommunications design activities for a $625 million site including a new central plant, Clinical Services Building, and Clinical Research Laboratory Facility. The Central Plant building included four-2,000 KW generators with parallel switchgear and 4,160 volt distribution throughout the campus. The Central Services Building is a $280 million state-of-the-art hospital and in-patient facility. All systems were designed to take advantage of a common network infrastructure and backbone, providing the most beneficial solution to the hospital and caregivers.
- **UPMC Bethel Medical** Site Lighting & Photometrics
- **Magee-Womens Hospital of UPMC**, Pittsburgh, PA Research Institute Renovation and Expansion – Responsible for the re-design of the electrical distribution, lighting, and fire alarm systems. This comprehensive design services project included vivarium and biological laboratory engineering design, including electrical and telecommunications.

- **Louis A. Johnson VA Medical Center**, Clarksburg WV – Electrical Distribution System Upgrades – Responsible to correct deficiencies in the normal and essential electrical systems, alternate source (generator) system, and the system of transfer switches and related items. Surveyed and evaluated the existing electrical systems, and provided the best solution alternatives to the client. Mr. Reese served as the Lead Electrical Engineer on this project.
- **Pittsburgh International Airport**, Pittsburgh, PA, Replacement of campus fire alarm systems in (34) Buildings and Flight Information Displays and Network Upgrades.
- **Pittsburgh Public Schools – Whittier Elementary** – Senior Electrical Design Engineer responsible for the power distribution system, electrical specifications, short circuit analysis, and add specifications for short circuit/ arc flash study.
- **Beaver County Human Services Building**, Beaver Falls, PA – Current Loftus staff worked on this new multi-story office building to relocate several county organizations to one location including Children and Youth Services, Office on Aging, Mental Health, and Development Program.
- **Pittsburgh Public Schools – West Liberty Elementary** – Senior Electrical Design Engineer responsible for fire alarm design.
- **VAMC Pittsburgh Healthcare System**, Pittsburgh, PA CARES Consolidation – Oversaw all electrical design activities for this 530,000 sq.ft. project. While with a previous firm contracted to provide design and construction of multiple new buildings and associated infrastructure for consolidation of three Medical Center sites into two Medical Center sites for the VA Pittsburgh Healthcare System, including Ambulatory Care new construction; Domiciliary/Residential Villa and Administration Building, a Mental Health Inpatient/Outpatient new construction; sustainable elements integration (including the use of recovered materials, waste reduction, energy efficiency, physical security and force protection. The approximate cost is $190M.
- **Cornell Intermediate/Elementary School, McKeesport, PA** – Senior Electrical Design Engineer responsible for the emergency system and fault current study.
- **Francis McClure Middle School, McKeesport, PA – Addition/Renovation** – Senior Electrical Design Engineer responsible for final documents and for review and mark-up drawings and specifications.
- **Edinboro University**, Cooper Science Hall, Renovation & Addition, Edinboro, PA

EDUCATION, REGISTRATION & TECHNICAL TRAINING

- Master of Science, Information Systems Management, Robert Morris University
- Bachelor of Science in Electrical Engineering, University of Pittsburgh
- Registered Professional Engineer: PA, OH, WV, FL
- Advanced Solar Design (AS110), ONtility, Pittsburgh, PA, January 2011

Loftus ENGINEERS

CHARLES URSO, P.E., RCDD
ASSISTANT MANAGER, ELECTRICAL ENGINEERING

PROFILE

Chuck Urso is the Assistant Manager for all Electrical Engineering and is a regional authority on low voltage cabling systems for fire alarm, data, security, communications and power distribution. He graduated Magna Cum Laude from Point Park College with a Bachelor of Science in Electrical Engineering.

Mr. Urso is experienced at analyzing complex projects and determining the most overall cost effective solution. He is experienced in illumination and power distribution for new and renovation projects. Such projects include commercial, education, light industrial, manufacturing and telecommunication clients.

He is also active in the industry and in 2008, Mr. Urso served on the Editorial Board, as well as a content provider/writer, for both first and second editions of the *BICSI – Electronic Safety and Security Design Reference Manual* (ESSDRM), a BICSI publication. "The ESSDRM is designed to educate and inform professionals in the safety and security arena." [*Ch 1. Overview, ESSDRM, 2nd Ed. 2008*]

RELATED EXPERIENCE

- **Verizon** Communications, Bridgeport and Charleston, WV – Security System Design; Designed security systems.
- **West Virginia University** – Senior Electrical Engineer for CCAS Rehabilitation Project.
- **UPMC South Security System Upgrade**, Pittsburgh, PA – Senior Electrical Engineer responsible for design and design review for UPMC South Security System Upgrade.
- **PNC Branch at West Virginia University**, WV – Student Union
- **Department of Energy, NETL,** Morgantown, WV – Child Care Center
- **Community College of Allegheny County** (CCAC) English Way – Senior Electrical Engineer for Repair of Communication Vault Failure.
- **U.S. Postal Service (USPS),** Warrendale, PA – Distribution Facility Security System Design - Security System Design for card access and CCTV design for the Warrendale Distribution Facility.
- **Duquesne University**, Duquesne Student Union – Senior Electrical Engineer responsible for design and design review meetings.
- **Penn State** – Senior Electrical Engineer for kitchen renovations at The Village.
- **Community College of Allegheny County** (CCAC) West Hills – Senior Field Electrical Engineer for engineering calculations and installation of PPE / Arc Flash Hazard warning labels.
- **Community College of Allegheny County** (CCAC) Boyce Campus – Senior Electrical Engineer for Lab Renovation.
- **Community College of Allegheny County** (CCAC) – Senior Electrical Engineer for Vault Study.

- **Community College of Allegheny County** (CCAC) South Campus – Senior Electrical Engineer for Data Design and design review including drawings, modifications, research specifications, security, and cost estimates.
- **McKeesport Area School District** modernization including the New Cornell School; the New McKeesport Elementary School and modifications to the McClure School
- **Cornell Intermediate/Elementary School**, McKeesport, PA – Senior Engineer for electrical engineering design and review including lighting, lighting controls, and plans and specifications.
- **Francis McClure Middle School**, McKeesport, PA – Addition/Renovation – Senior Engineer for electrical engineering design and design review including site visits lighting and in-house review.
- **Pittsburgh Public School District** – Senior Electrical Engineer working directly for the Pittsburgh Public School District as a Senior Electrical Engineering Consultant. Mr. Urso completed the electrical design in approximately 50 of the district's buildings. Various systems were designed including modern energy efficient lighting; power distribution; sound systems; security systems; fire alarm systems; telecommunications and data systems. Some of these 50 buildings included: Allderdice High School; Allegheny Elementary and Middle; Arsenal Elementary and Middle; Banksville Elementary; Baxter; Belmar; Brashear High School; Brookline School; Carmalt School; Carrick High School; Chartiers; Colfax School; Connelley; Conroy; Dilworth Elementary; East Hills; Fort Pitt Elementary; Frick; Grandview Elementary; King Elementary; Langley High School; Lincoln School; Miller Elementary; McKelvy; Mifflin Elementary; Minadeo Elementary; New Capa; Northview School; Oliver High School; Overbrook; Peabody High School; Perry High School; Phillips Elementary; Pioneer; Reizenstien; Schaeffer School; Spring Garden; Sunnyside School; Vann; Westinghouse High School and Whittier Elementary.
- **Pittsburgh Public Schools** – Power Factor Correction Various Schools– Senior Electrical Engineer for design review including drawings, specifications and modifications
- **Westinghouse Electric Company** – New High Bay Industrial Building/Office Complex, Madison, PA – Review of client medium voltage service; Review and provide testing/recommendations for repairing of client owned 1,500 KVA transformer; Complete design for client office complex (power; data; lighting); and Complete design of client high bay facility with crane; and specialized product handling area.
- **Walnut Capitol** – Design of $60M office/retail/hotel complex –Six building office/retail complex; Coordinate site with local utility company (Duquesne Light Co.). This complex requires seven Duquesne Light Company transformers ranging from 2500 KVA to 750 KVA; Refit existing seven-story industrial facility into office space

EDUCATION & REGISTRATION

- Bachelor of Science in Electrical Engineering & Technology, Point Park College. Magna Cum Laude
- Electrical, Lighting and Power Distribution Design Certificates: Duquesne Light Company
- Registered Professional Engineer: WV, PA and OH
- Registered Communications Distribution Designer: International

PROFESSIONAL AFFILIATIONS

- IEEE – The Institute of Electrical and Electronics Engineers – Executive Committee Member
- BICSI – Building Industry Consulting Service International

MILITARY SERVICE

- U.S. Army – Helicopter mechanic and crew chief. Specialist, Honorable Discharge
- U.S. Army – Army Reserve - Military intelligence, electronic specialist. Sergeant, Honorable Discharge

Loftus ENGINEERS

STEPHEN F FARRIS, PE
MANAGER, STRUCTURAL ENGINEERING

PROFILE

Mr. Farris is Manager of Structural Engineering for Loftus. Previously principal of Farris Structural, LLC, a Pittsburgh firm recognized in the field of consulting structural engineering from 1992 to 2008, which provided structural engineering services including analysis, design, detailing and inspection for commercial, institutional, private and public structures, due diligence reports and court testimony; he brings with him capabilities in economical design, contract document preparation, construction procedures review, and engineering problem solving for new construction and renovation/retrofit of existing construction.

He has 38 years of experience, all of which is in structural analysis, design, and detailing of the structural aspects of buildings including coordination and incorporation of Architectural design and Mechanical systems. His mandatory 5-year college education and 38 years of experience have been tailored to the incorporation of Architectural function and Environmental comfort into Structural framing and detailing necessary to blend all disciplines into one element: a functional, comfortable, structurally sound building.

RELATED EXPERIENCE

- **Carnegie Mellon University**, Pittsburgh, PA – GSIA/Posner Hall Addition (4-story classroom) – Designed structural engineering for the 4th floor addition to the Graduate School Facility including developing an alternate support framing.
- **Gannon University**, Erie, PA – Zurn Science Center – MEP Renovation – New rooftop HVAC units to air condition and renovate existing reinforced concrete multi-story Science Classroom Building. Provided rooftop structural steel framing screen to support ~24 rooftop units and transfer lead to concrete columns without bearing on reinforced concrete roof with insufficient strength to support units weighing as much as 30,000 pounds.
- **University of Pittsburgh**, Pittsburgh, PA – Franklin Interiors Building, 10th Street – Retrofit of existing commercial storefront and warehouse into a student and staff occupied space for offices, classrooms and support facilities including handicap accessibility via the addition of ramps and elevators connecting staggered floor levels.
- **Carnegie Mellon University**, Pittsburgh, PA – University Center Spiral Stair – Addition of spiral staircase to existing construction to connect to upper floor levels with vertical transportation access. Reinforced lower framed floor level to support additional weight of fully loading spiral stair.
- **Grove City College**, Grove City, PA – Rockwell Hall Fire Escape – Feasibility study to determine architectural and structural approach to construct interior fire escape from top level of 3-story, wood-framed dormitory hall.
- **Westminster College**, New Wilmington, PA – Stadium Bleachers – Preformed visual structural review of structural steel football stadium bleachers and press box, to determine structural integrity of structures and any necessary repairs, restoration or upgrades.
- **Westminster College**, New Wilmington, PA – Bookstore – Feasibility study to frame-in existing indoor swimming pool and locate university bookstore over pool area.

- **Penn State**, The Behrend College, Erie, PA – Robert and Sally Metzgar Admissions and Alumni Center (Metzgar Alumni Center) – New two-story stone-clad alumni center with 2-story clerestory on one half for alumni greeting area and conventional two-story office space on other half. Structural steel main windframe resisting system with wood truss roof framing.
- **Edinboro University**, Edinboro, PA – Edinboro Football Stadium Press Box
- **New Castle Jr. and Senior High School** – Multistory educational facility 650' x 300' footprint. Conventional structural steel framing, spread footings, one-story cantilevered retaining walls.
- **Hampton Township Middle School** – Two-story, mixed conventional steel frame and wall-bearing superstructure, spread footings, caissons and grade beams.
- **DuBois Middle School** – Multistory educational facility. Irregular footprint. Conventional structural steel framing, spread footings.
- **Hampton Township High School Addition** – Two-story additions to existing school. Gymnasium framed over wrestling room with castellated composite beams clear spanning width. Renovations to existing structure including multiple 10' x 30' rooftop mechanical units.
- **South Side Elementary School** – One-story addition to existing elementary school. Mixed conventional steel frame and wall-bearing superstructure spread footings.

ADDITIONAL SCHOOL & UNIVERSITY CLIENTS

- Mansfield University
- Westminister College Fitness Center
- McKeesport Elementary Schools
- Allegheny Valley School District, District Offices
- Dassa McKinney Elementary School
- Southmoreland High School
- Grove City Middle School
- Meadville High School
- Springdale Junior and Senior High School
- Franklin Regional Junior High School Redesign

EDUCATION, REGISTRATIONS & AFFILIATIONS

- Bachelor of Architectural Engineering (Structural Option), Pennsylvania State University
- Registered Professional Engineer PA, OH, MD, VA
- American Institute of Steel Construction
- American Concrete Institute

Loftus ENGINEERS

CYRIL A (SKIP) FOX, PE
ASSISTANT MANAGER, STRUCTURAL ENGINEERING

PROFILE

Mr. Fox is Assistant Manager of Structural Engineering for Loftus Engineers, and brings more than 17 years experience in structural engineering. Project and client experience, with prior employers, has included work on PNC Park; Tribute to Children (the memorial to Mr. Fred Rodgers); The Port Authority of Allegheny County; Children's' Hospital of Pittsburgh/ UPMC; PNC Firstside Center; Penn State University/Louis E. Lasch Football Building; the University of Pittsburgh and many others.

Skip has been named the Pittsburgh Business Times' "Who's Who in Engineering" in 2000 and the American Society of Civil Engineers Young Engineer of the Year, Pittsburgh Section, for 2001.

RELATED EXPERIENCE

- **Cornell Intermediate/Elementary School, McKeesport, PA** – Senior Structural Engineer responsible for design of roof, canopies, gym roof, cafeteria roof, wall detailing & lintels. Loftus teamed with JC Pierce, LLC for this project.
- **McKeesport Middle/Elementary School, McKeesport, PA** – Senior Structural Engineer responsible for design and coordination of ; Roof and Floor framing; Gravity and Lateral Force Resistance System; and Foundations. Loftus teamed with JC Pierce, LLC for this project.
- **Marbella Assessment** – Senior Structural Engineer responsible for construction quality reporting; building survey; and retaining wall investigation. Loftus teamed with R. Moller & Associates for this project.
- **Lindy Paving Office Building** – Senior Structural Engineer responsible for drafting design and project management; Roof Design framing; Roof and Columns; Wind Frame; Foundations and Floors; Terrace; Specifications; and Elevator Movement. Loftus teamed with DLA + Architecture & Interior Design for this project.
- **Blawnox Volunteer Fire Company Station 111** - Blawnox, PA – Senior Structural Engineer responsible for drafting, design, coordination of prominent architectural features.
- **Tribute To Children**, Family Communications, Pittsburgh, PA, Structural Project Manager. Memorial to Mr. Fred Rodgers. Reconstruction to a 100+ year old bridge pier to support for a 14 foot tall statue of Mr. Rodgers and new observation platform. Major design feature is the new 20 foot tall elliptical opening through the existing pier. Fast tracked project with Astorino Design Build.
- **VA Pittsburgh Asset Realignment Program,** Pittsburgh, PA – Residential Villas and Domiciliary and Ambulatory Care Center
- **PNC Park Baseball Stadium**, Pittsburgh Stadium Authority, Pittsburgh, PA, Structural Liaison for the architect of record.
- **First Ave LRT Station**, Port Authority of Allegheny County, Pittsburgh, PA, two platform and track roof structures composed of a wave roof with 3 different radius.

EDUCATION, REGISTRATION & AFFILIATIONS

- Bachelor of Architectural Engineering and Bachelor of Science, Architecture Drexel University
- Professional Engineer - Pennsylvania
- American Society of Civil Engineers, Structural Engineering Institute, Architectural Engineering Institute

Loftus ENGINEERS

DAVID W ONDECHEK, CEM, LEED AP BD&C
MANAGER, ENERGY SERVICES

PROFILE

Mr. Ondechek is the Manager of Energy Services at Loftus Engineers. Mr. Ondechek has over 18 years experience in all facets of the construction and operation & maintenance of buildings and facilities in the specialized field of energy management. He has worked in the HVAC and Energy Management fields as a project manager, project engineer, energy management specialist, commissioning agent and department manager.

Mr. Ondechek is experienced in performing energy audits, green building design and operation and is well versed in energy conservation strategies and practices in many different kinds of facilities. His experience includes chilled water plants and systems, educational facilities, clean rooms, laboratories, bio-hazard laboratories (up to level 3), office buildings, hospitals, and manufacturing plants.

RELATED EXPERIENCE

- **Department of Energy, National Energy Testing Laboratories**, (DOE, NETL)
  Pittsburgh, PA, Morgantown, WV and Albany, OR
  - Energy audits
  - High Performance & Sustainable Building compliance for 112 buildings from 3 sites including offices and laboratories.
- **University of Pittsburgh**, Pittsburgh, PA
  - Energy Management Specialist
  - Energy audits
  - Campus wide HVAC, Laboratory, Lighting and Energy Management systems
  - Energy optimization of central chilled water plants and building distribution systems.
  - Bio-Medical Science Tower 3 – HVAC, Laboratory and Energy Management systems
  - Peterson Events Center – HVAC and Energy Management systems.
- **Penn State University**, University Park, PA – Energy optimization of central chilled water plants and building distribution systems.
- **Carnegie Mellon University**, Pittsburgh, PA
  - Energy optimization of central chilled water plants and building distribution systems.
  - Campus wide HVAC, Laboratory and Energy Management systems
- **Sony Glass Plant**, New Stanton, PA
  - Energy optimization of central chilled water plant and building distribution systems.
  - HVAC and Energy Management systems
- **VA Medical Center**, Pittsburgh, PA
  - Energy optimization of central chilled water plant and building distribution systems.
  - Site wide HVAC and Energy Management systems
- **5th Avenue Place**, Pittsburgh, PA – HVAC and Energy Management systems

- **Monongahela Hospital**, Monongahela, PA – HVAC, Clean Rooms, laboratories and Energy Management systems
- **Forges Regional Hospital,** Monroeville, PA – HVAC and Energy Management systems

EDUCATION & REGISTRATION

- Bachelor's of Science in Mechanical Engineering, Point Park College
- Associates in Specialized Technology Degree, Electronics Technology
- Certified Energy Manager (CEM)

USGBC LEED PROFESSIONAL CREDENTIALS

- LEED Accredited Professional (LEED AP)
- LEED Accredited Professional Building Design + Construction (LEED AP BD+C)

AFFILIATIONS

- Association of Energy Engineers, Pittsburgh Chapter
- Association of Energy Engineers, National

ENERGY INFRASTRUCTURE TRAINING AND ANALYSIS CENTER

National Energy Technology Laboratory
Office of Energy Assurance
Department of Energy & Department of Defense
Camp Dawson, WV

EITAC

The Energy Infrastructure Training and Analysis Center (EITAC) is one element of a national program being developed by OEA to deliver energy assurance services to stakeholders. In concert with OEA, the purpose of EITAC is to provide a learning environment in which to help decision-makers and implementers develop the appropriate strategies, tools, and coordination mechanisms to assure the reliability and security of the energy infrastructure. These stakeholders represent Federal, State & local governments as well as private sector companies.

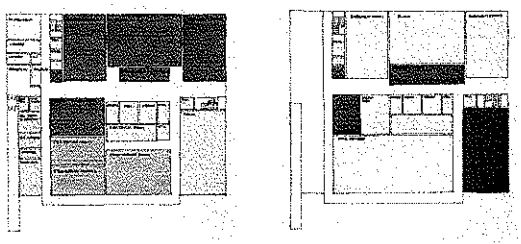
FPR and Loftus Engineers were part of a total design team brought together to develop a facilities program and design for a comprehensive complex of 54,500 SF that includes the following components:

Emergency Operations Center (COOP)	**12,500 SF**
Secure Operations2,400	**SF**
High Security Spaces (SCIF)	**1,800 SF**
DOE Spaces	**4,300 SF**
Disaster Recovery Server Room	**2,000 SF**
Training Spaces	**9,200 SF**
Dormitory	**17,800 SF**
Food & Convenience Spaces	**2,800 SF**
General Spaces 1,700	**SF**

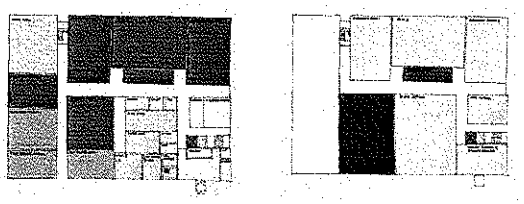
The diagrams to the left illustrate the four optional concepts developed for a 2-story building. The options concerned the location and functional affinities related to the 4 levels of security: Top Secret, High Security, Low Security and Secure. Special attention was accorded to the Sensitive Compartmented Information Facility (SCIF). Key to a successful SCIF facility is the complete separation of electrical, communication, mechanical, and access from the remained of the building.

A primary consideration of the site design and complex configuration was that it was to be located at Camp Dawson, a West Virginia Army National Guard installation located near Kingwood, WV.

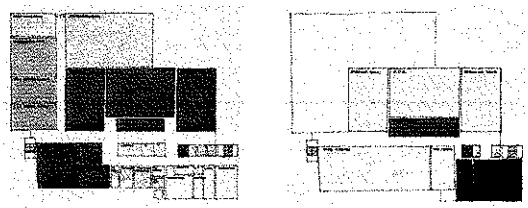
OPTIONS FOR HIGH SECURITY FUNCTIONS



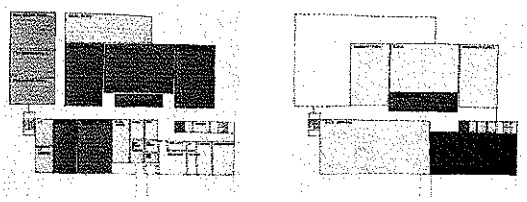
Option A



Option B



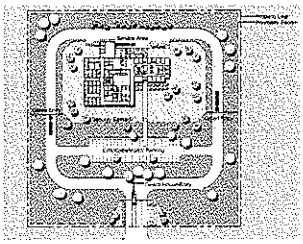
Option C



Option D

MSRF

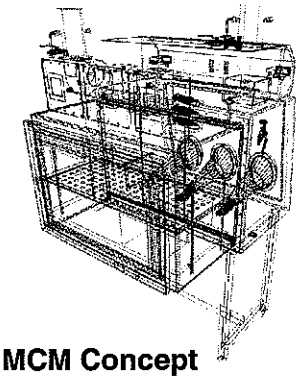
Mars Sample Receiving Facility



Containment modules will preserve the pristine nature of the Martian samples and to provide a containment barrier for any potential extraterrestrial biological or chemical hazards. Three types of modules are under consideration:

- **Mobile single shell,**
- **Fixed single shell and**
- **Fixed double shell**

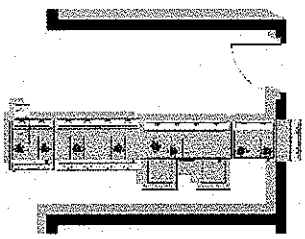
Most requirements for the containment vessels can be met using current technologies.



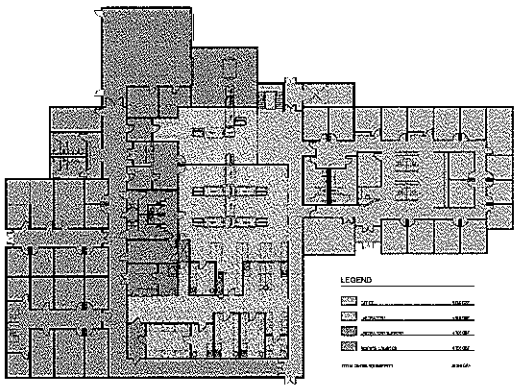
The miniaturization of laboratory analytical equipment is one major exception. Resolution vis a vis equipment size is the issue.

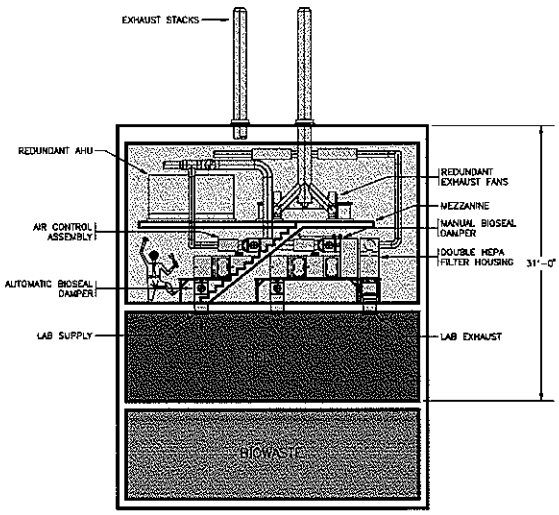
MCM Concept

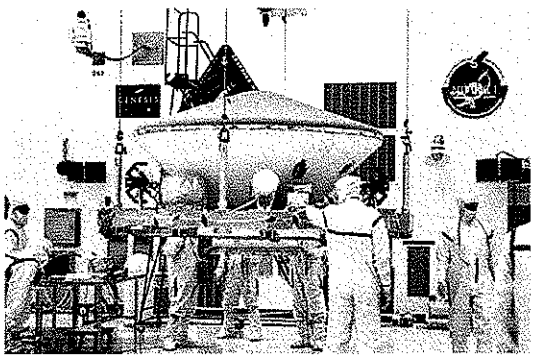
A single shell Mobile Containment Module (MCM) below will move the EEV from the landing site to the SRF. Lab 1 contains single shell Fixed Containment Modules (FCM) that receive the EEV, provides equipment to open the EEV, and cleans/opens the SRC.



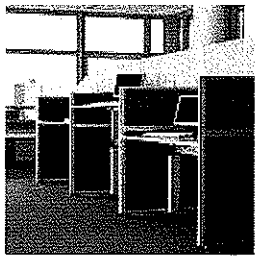
Laboratory 2 contains double shell fixed containment modules that receive the intact samples and provides test equipment and instrumentation to open the SRC.

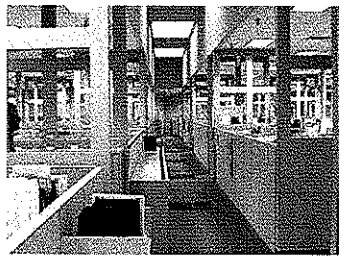






201 STANWIX
REORGANIZATION MISSION
Verizon Western Pennsylvania Headquarters





Verizon is consolidating their operations in the former Bell Telephone Building in downtown Pittsburgh. FPR developed a phased relocation plan which reduced Verizon's offices and call centers to 131,000 square feet on six floors. This move improved efficiencies and work flow from the existing floor plans.

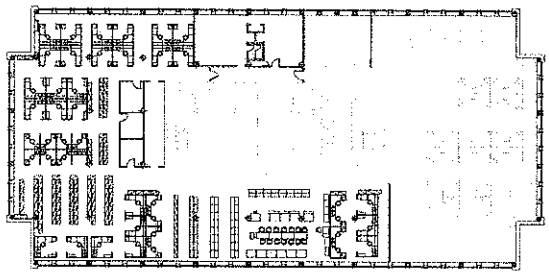
Working with Verizon's Portfolio division, FPR reconfigured floors 4 thru 9 of this 12 story building. Floors 1-3 and 10 – 12 remained open for future leasing to outside tenants.

The furniture layouts accommodate 542 employees with four corporate standard workstations, three standard office types and interactive spaces on each floor. The final plans allow for 10% growth across the twenty-seven departments.

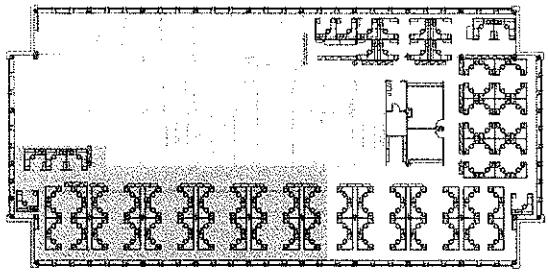
In addition to the restacking plan each of the six floors were given upgrades in finishes including new carpet, ceilings, wall finishes, graphics as well as HVAC, electrical power and data connections.

Critical to the success of this restacking program has been the strategy for making floor space available for the time of individual department moves. Certain departments have critical months of the year in which their business should not be disrupted.

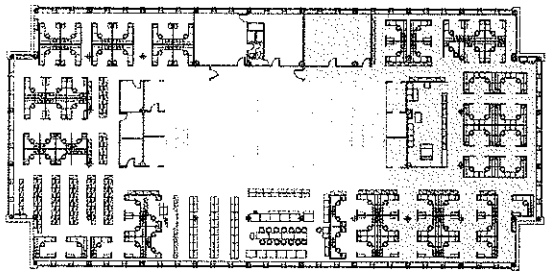
The diagrams to the right illustrate several of the phases developed for the strategic moves. During the interior space upgrades and the new furniture installations none of the departments experienced an interruption in their work schedules.



PHASE - 4A

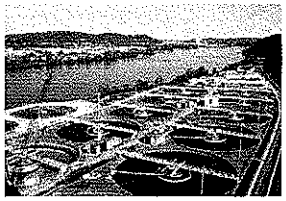


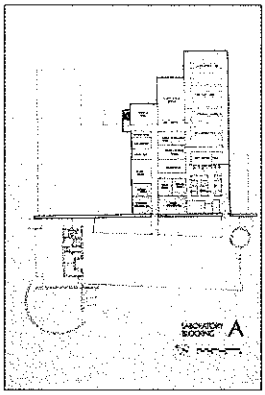
PHASE - 7C



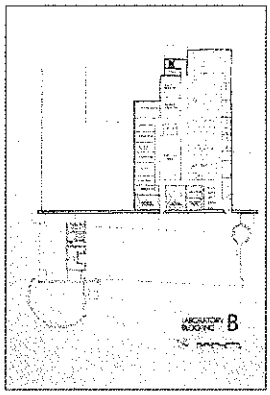
PHASE - 4B

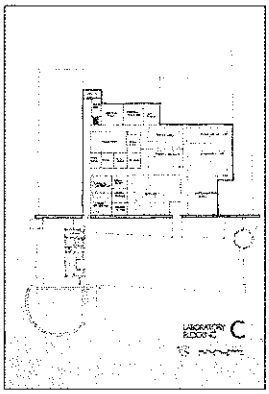
Allegheny County Sanitary Authority - ALCOSAN
Analytical and Testing Laboratories
Pittsburgh, Pennsylvania





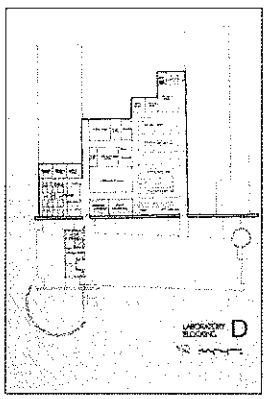
FPR served as the programming and planning in designing the new analytical and testing laboratories. Testing by the ALCOSAN scientists ranges from the detection of heavy metals, to toxic chemicals to various types of life forms.

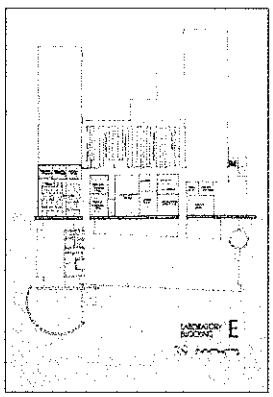


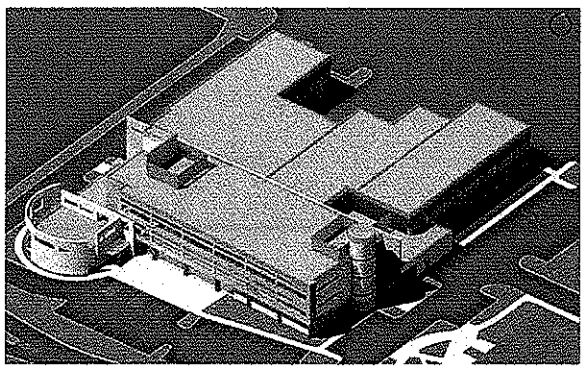


Due to the nature of the advanced testing operations and the opportunity for ALCOSAN to reorganize the laboratory activities, FPR interviewed each work group and administration of the laboratory. Based upon the resulting program, FPR then developed five optional layouts for ALCOSAN's review and comment. The final laboratory layout has not been cleared for release to the public.

The basic information for the facility consists of the completion date as 2008 with a construction cost of approximately $18,000,000. The overall square footage of the three story facility is 86,000 SF



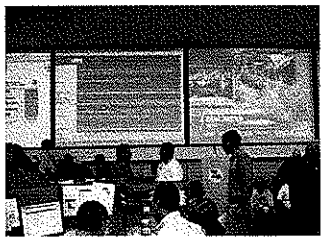




Loftus Engineers LLC

The projects below represent a representative sample of the MISSION CRITICAL centers the Loftus staff has performed in the recent past including Emergency Operations Centers (EOC), 24/7/365 Facilities; Secured Facilities; Communications & Computer/Data Centers, and related projects, followed by our work with Government, State, County and Municipal facilities. We trust you'll agree we have all the capabilities and expertise you'll need to support your needs.

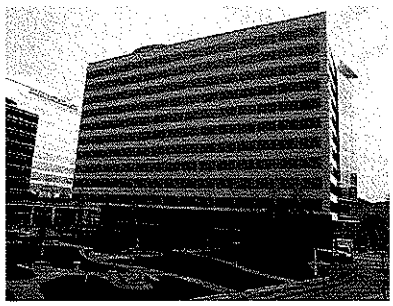
Delaware Emergency Management Agency's Emergency Operation Center, Smyrna, DE – This 28,000 sq.ft. facility, including a 6,000 sq.ft. equipment yard programmed to coordinate statewide Emergency Response Operations for Technological and Natural Hazards, serves as the principal command and control nerve center for Delaware's response to Natural and Technological Events. It features a multi-media operations theater allowing State and Federal Agency representatives to share data on resources while receiving up-to-date weather and live location information via large screen formats from satellite and land line feeds. Aerial mapping combined with resources displays allow agency operators to effectively deploy personnel and materials to affected areas. The response room allows 32 agency representatives such as State Police, National Guard, DelDOT, FEMA, DNREC, Emergency Services, etc., to receive information and allocate resources to coordinate the state's response in a unified and organized manner. The center features accident assessment planning areas as well as offices for DEMA personnel. A training room serves double duty as a bunkroom during 24-hour activation as well as a computer center cold site for OIS. A collocating tenant in the building is the State Police Communications Computer Center. This 24-hour a day operation handles all computerized network switching for the state. DEMA is the lead state agency for coordination of comprehensive emergency preparedness, training, response, recovery and mitigation services in order to save lives, protect Delaware's economic base and reduce the impact of emergencies. DEMA is a division within the Department of Safety and Homeland Security (DSHS)



Department of Homeland Security, U. S. Coast Guard Base Support Unit, Elizabeth City, NC – Loftus leads the mechanical, electrical, plumbing and fire protection (MEPF) design engineering on the Design/Build team to Replace Thrun Hall Barracks Building and Adjacent Galley Building. The D/B team is led by Veteran Constructors, Inc. of Lakewood Ranch, FL. The project scope includes the design and construction of the barracks building will be a 64,000 GSF, three-story structure with berthing, recreation and support spaces. The galley building will be an 11,000 GSF single-story structure including dining facilities and food preparation areas. Construction cost approx. $35M (2010 to present) The work includes site development, storm water management, roadways and parking lots, underground utilities, paving, sidewalks, kitchen equipment, sprinkler systems, fire protection, telecommunications, furniture outfitting of barracks and galley, public areas, and attaining LEED Certification. The U.S. Coast Guard is one of the five armed forces of the United States and the only military organization within the Department of Homeland Security. The Coast Guard protects the maritime economy and the environment, defends our maritime borders, and saves those in peril.

Blawnox Borough Fire Station, Blawnox, PA – In the Fall of 2010, Loftus was awarded a contract for the MEPS design for the new $1.2 million fire department building. MEPS design includes mechanical; plumbing/ fire protection; electrical and structural design for new building and related specialty equipment and power requirements. The systems design includes the possible future addition of an emergency generator; new plumbing fixtures so that the building will be fully sprinkled; separate electrical and gas service as to remain independent of any services from the existing municipal building. Fire truck garage will be slab-on-grade construction. Services includes review with local authorities and utility companies; construction documents and specifications for bidding; coordinate with architect to develop the basic framing concept and structural requirements prior to initial design and assist in preparing the AIA Geotechnical Scope of Services RFP; develop details of underpinning/ shoring of existing building foundations where needed; provide construction support services consisting of review of shop drawings, answering RFIs, and punch list at completion of project; site visits by structural staff during construction to confirm construction in compliance with design intent of Contract Documents. Construction is scheduled to begin March 25, 2011, and completion of the building is set for November.

Department of Homeland Security, Los Angeles Police Department, Protective Security Center, Los Angeles, CA – "Archangel" Anti-Terrorist Task Force – Designed all electrical and mechanical for basement level for new Protective Security Center. The building's existing emergency power system was modified and supplemented to meet the life safety and stand-by power needs of the building. Project cost: $1M. 2004



FBI Regional Office, Federal Bureau of Investigation, Pittsburgh, PA – Certain offices were being revised to accommodate the needs of the FBI. The key component of this renovation is the construction of "sound proof" offices. To accommodate, Loftus utilized return duct transfer details that have been developed specifically for this application.

Loftus utilized the HVAC drawings that we have on file as a basis for proceeding with the renovation. We conducted a field investigation of the existing conditions to verify the HVAC layout, as well as to document the lighting and the sprinkler head locations. Based on this information and the field visit, we produced new drawings showing relocated VAV boxes, heating coils, lighting systems and sprinkler heads to meet the needs and code requirements of the renovated office spaces.

U.S. General Services Administration – U.S. Federal Building Renovations in Charleston, WV

Tier III Data Center, PA Turnpike Commission Harrisburg, PA – New $20 million Turnpike Industrial Park (TIP) Building Renovations included demolition, construction, equipment, and furnishing fit-out of a new TIER III Data Center, PBX Room, and associated mechanical and electrical support spaces and systems and generators for multiple facilities. The electrical systems were designed to meet the national electrical code, international building codes, EIA/TIA standards, BICSI standards, and comply with TIER III level redundancy requirements for

data center construction as defined by the uptime institute. John Reese was the Electrical Engineer of Record.

Department of Energy, National Energy Technology Laboratory, Technologies Support Facility, Morgantown, WV – Loftus designed all mechanical, electrical, and structural systems for this state-of-the-art 106,000 sq. ft. office building. This building is certified as a LEED GOLD energy facility. Innovative design concepts were used throughout this building including rain water recovery, radiant cooling, vegetated roofs, and waterless urinals and low flow fixtures. Due to the highly efficient envelope and systems design, the chiller capacity could be downsized to only 180 tons. That's 600 sq. ft./ton as opposed to typical office building tonnage of 300 to 350 sq. ft./ton.

A 500 kVA generator was included in the building design. Fuel source for the generator is natural gas with automatic change over to propane. The generator provides continuous power for life safety requirements, security, 6,000 sq. ft. computer room/data center/communications hub, selected government functions, and the executive offices. The Building Management System sequentially adds and strips loads on the generator. A 1250 kVA unit substation included in the building design provides power to the building. Redundant 4160 volt feeders provide power to the unit substation.

Children's Hospital of Pittsburgh of UPMC, Pittsburgh, PA — John Reese oversaw all electrical and telecommunications design activities for this $625 million Replacement Facility including a new central plant, Clinical Services Building, and Clinical Research Laboratory Facility. The Central Plant building included four-2,000 KW generators with parallel switchgear and 4,160 volt distribution throughout the campus. The Central Services Building is a $280 million state-of-the-art hospital and in-patient facility. All systems were designed to take advantage of a common network infrastructure and backbone, providing the most beneficial solution to the hospital and caregivers.

DataCentersNow, Cyber Fortress II, Manassas, VA – Design of a 300,000 sq.ft. speculative office complex. The complex serves as a site for web hosting, server/modem farm, telecom switch facility, co-location facility or data center use. The design includes a high technology base building infrastructure including N+1 generator provisions and paralleling switchgear and provisions for direct expansion cooling units and CRAC units.

Infocrossing – Design of an 85,000 sq.ft. co-location and web hosting facility. The design includes a high technology base building infrastructure including N+1 generator provisions and paralleling switchgear and provisions for direct expansion cooling units and CRAC units.

Bank of America, Deerfield Wing 5 – Design of two (2) parallel-redundant 1600 KW diesel generating systems and two (2) separate, multi-module UPS systems with "on-line" synchronizing and tie systems, serving a 5,000 sq.ft. data center.

Bank of America, Deerfield Wing 1 – Nearly 10 years after the construction of the Wing 5 data center, a separate 2500 sq.ft. data center was constructed nearly 3500 feet away in Wing 1 of

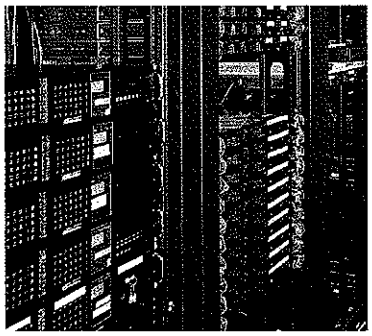
the Deerfield Office Complex. Due to reduced usage of the Wing 5 data center, it was decided to gain efficiency by serving the Wing 1 data center from the Wing 5 MEP infrastructure.

Bank of America, Christiana Center III & IV – Phase I – Two adjacent 130,000 sq.ft. office buildings with a 20,000 sq.ft., raised floor computer room.

Bank of America, Christiana Center III & IV – Phase II – CC III & IV added (2) 2MW parallel generators, new 4000A main-tie-main switchgear and two (2) paralleled 1000 KW UPS modules with synchronization equipment to the Phase I infrastructure.

Bank of America, Christiana Center I & II – Two adjacent 110,000 sq.ft. office buildings with two (2) 2,000 sq.ft., raised floor computer rooms.

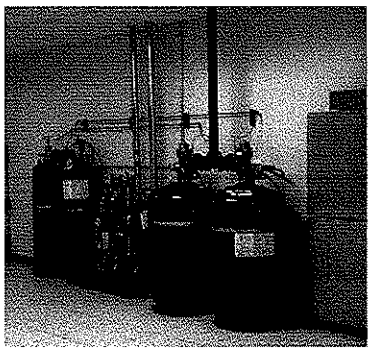
Bank of America, Bracebridge I, II, III and IV, Wilmington, DE – Four (4) high-rise office buildings, each with a 2,000 sq.ft., raised floor computer room. Each facility includes dual primary electrical feeders originating from separate utility company substations, 12 KV automatic transfer switchgear and dual 1600 KW generator sets.



Bank of America, Southern Regional Headquarters – Phase I, Boca Raton, FL – 60,000 sq.ft. office building with a 1,500 sq.ft., raised floor computer room served by a 75 KVA UPS System.

Bank of America, Southern Regional Headquarters – Phase II, Boca Raton, FL – 130,000 sq.ft. office building with a 1,500 sq.ft., raised floor computer room. served by a 125 KVA UPS System.

Bank of America, Operations Center, Belfast, ME – 130,000 sq.ft. office building with a 1,500 sq.ft. raised floor computer room and a 1,000 sq. ft. LAN/IDF Room.



Bank of America, Cole House, Newark, DE – 120,000 sq.ft. office building with a 3,000 sq.ft., raised floor computer room served by two (2) 125 KVA UPS Systems and two (2) 500 KW diesel generators. In addition to the computer room, the generators also serve 50,000 sq.ft. of telemarketing space.

Bank of America, White Wing – 130,000 sq.ft. office building with a 1,500 sq.ft., raised floor computer room served by a 125 KVA UPS System.

YellowBook USA, King of Prussia, PA – A 2 Megawatt data center, this project required close coordination with the local utility company to bring a second 35KV service from a separate substation through an existing corporate center to the facility.

University of Pittsburgh – Campus Wide Fiber Optic Distribution and Security System Upgrade

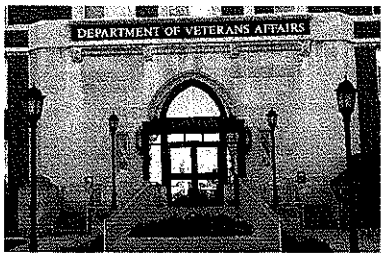
Carnegie Mellon University, Pittsburgh, PA – Bio Diesel Engine, Generator and Transfer switch and Solar Collectors for the Intelligent Workplace

BASF, Pittsburgh, PA –Senior Electrical Design Engineer responsible for Security Lighting and CCTV design.

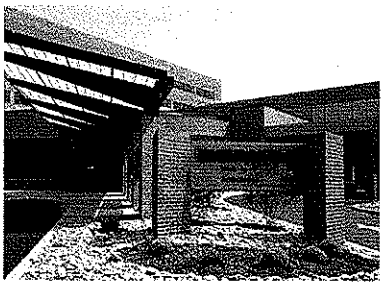
Ft. Lee Virginia Lodge – Telecommunications and Security Design for this 1,000 bed hotel.

Community College of Allegheny County Boyce Campus, Pittsburgh, PA – Loftus provided engineering design services to replace the Computer Lab Air Conditioning Unit. The scope of work included: calculation of the cooling load based on existing equipment; evaluation of various air conditioning systems based on the calculated cooling load to arrive at the optimum selection to: reduce noise, optimize energy performance and minimize maintenance; prepared design documents to install the equipment recommended for replacement of the existing computer room Air Conditioning Unit; installed new controls; installed new dry cooler or condensing unit as needed; revamped the existing return air system; and prepared the contract drawings and specifications based on the above design features.

Government, State, County and Municipal Facility Experience



Allegheny County Department of Public Works, Pittsburgh, PA
Beaver County Human Services Building, Beaver Falls, PA
Blawnox Borough Fire Station, Blawnox, PA
Byham Theater, Pittsburgh, PA
Children and Youth Services, Beaver Falls, PA
Delaware Emergency Management Agency's Emergency Operation Center, Smyrna, DE
FBI Regional Office, Federal Bureau of Investigation, Pittsburgh, PA
Los Angeles Police Department, Los Angeles, CA
Office on Aging, Mental Health, and Development Program, Beaver Falls, PA
U. S. Coast Guard, Elizabeth City, NC
U. S. Department of Energy, National Energy Technology Laboratory (NETL), Morgantown, WV.
U. S. Department of Homeland Security, Elizabeth City, NC
U. S. Department of Homeland Security, Los Angeles, CA
U.S. General Services Administration –U.S. Federal Building in Charleston, WV



Veteran's Administration Medical Center (VAMC) – Butler, Erie, Coatesville, Lebanon, Wilkes Barre and Altoona, PA; and Beckley and Clarksburg, WV
Washington County Arts Center, Washington County, PA
West Virginia University Medical Center, WVU, Morgantown, WV

Loftus ENGINEERS

555 North Bell Avenue • Carnegie PA 15106 • PHONE 412.489.9100 • FAX 412.429.6474 WWW.LOFTUSLLC.COM

PARKING FACILITIES EXPERIENCE

Loftus Engineers LLC has been providing significant engineering and professional services to the construction industry since 1923. The projects below represent a sampling of parking-related projects the Loftus staff has performed in the recent past. We trust you'll agree we have all the capabilities and expertise you'll need to support your project.

Children's Hospital of Pittsburgh, Pittsburgh, PA
- New Construction with Engineering Services for Parking Facility

Forbes Regional Hospital, Monroeville, PA
- 275 space parking lot, with an additional 100 spaces added later.
- Plumbing design for storm water management, and Electrical, lighting design

Forbes Semple Parking Garage, Pittsburgh, PA
- New Construction with Engineering Services for Parking Facility

Harmarville Rehabilitation Parking Facility, Harmarville, PA
- New Construction with Engineering Services for Parking Facility

NASA Lewis Research Center, Cleveland, OH
- Composite Technology Center Parking Lot
- 20 space parking lot (multi-lot connector).
- Plumbing design for storm water management, and Electrical, lighting design

Pittsburgh Public Parking Authority, Pittsburgh, PA
- New Construction with Engineering Services for Several Parking Facilities throughout the city.

United Community Hospital, Grove City, PA
- 200 parking spaces, revamp of existing 100 spaces around perimeter of building.
- Plumbing design for storm water management, and Electrical, lighting design

University of Pittsburgh, Pittsburgh, PA
- Professional Quadrangle Parking Facility
- New Construction with Engineering Services for Parking Facility

Washington Hospital, Washington, PA
- Parking Garage Addition
- This new $2 million, precast structure provides parking for 140 cars on three levels, and is designed to support a future six-story medical office building. The addition connects to an existing garage and spans the street on the upper two levels. Loftus provided the structural engineering services.

Watson-Rhenania, Inc., Pittsburgh, PA
- Site development for loading dock and additional support spaces.
- Plumbing and Electrical design

1 Project Name:	**U.S. Dept of Energy**, National Energy Technology Laboratory
2 Project Location:	Morgantown, WV

3 Project Description: Loftus designed all mechanical, electrical, and structural systems for this state-of-the-art 106,000 square-foot office building. This building is designed to be certified as a LEED GOLD energy facility. Innovative design concepts were used throughout this building including rain water recovery, radiant cooling, vegetated roofs, and waterless urinals. Due to the highly efficient envelope and systems design, the chiller capacity could be downsized to only 180 tons. That is 600 SF/ton as opposed to typical office building tonnage of 300 to 350 SF/ton.

The four-story, building was designed in accordance with IBC 2000 and with the additional criteria of resisting a explosive blast originating on the adjacent public roadway. A 350 KW emergency generator and transfer switches were provided to meet the life safety and stand-by power needs of the building and the relocated site data center.

Construction inspection is being provided throughout the construction period to ensure compliance with contract documents, LEED requirements and site Environmental Health and Safety standards. This project exemplifies Loftus' ability to design a complex LEED building as well as supervise the construction.

4 Scope of Services: Design Professional of Record as well as construction period field services and commissioning. HVAC, Electrical, Plumbing, Fire Protection, Structural and Commissioning

5 Construction cost: $25 million

6 Name of Project Owner, including phone number and address: Department of Energy, Don Wieczenski, 412-386-6056, 626 Cochrans Mill Road, Pittsburgh, PA 15236

7 Name of Owner's Project Manager, including phone and address: Department of Energy, Don Wieczenski, 412-386-6056, 626 Cochrans Mill Road, Pittsburgh, PA 15236

8 Name of Prime Contractor, including phone number and address: N/A

9 Contract information including date of project completion and/or percentage of work completed: 2008– 100%

10 What features/processes/outcomes made this project successful: See Project Description

11 Photographs of each project:

12 Any additional information you deem relevant: 108,000 GSF - Loftus is in its tenth straight year as an IDIQ engineer for the NETL. Our track record with the DOE is proven, and we have designed projects for the NETL in West Virginia, Pennsylvania, Oregon and California.

1 Project Name: **West Virginia University** - Platform Security System Upgrade & Video Monitoring

2 Project Location: Morgantown, WV

3 Project Description: The Communications and Control Ancillary Systems (CCAS) serving the Personal Rapid Transit System (PRT) have reached the end of their useful life and required replacement. The University secured a $1 million grant to replace the systems.

Loftus provided the professional engineering services to assist the University with budgeting, design, procurement, construction, and placing into operation the following replacement equipment or systems:

Central Control Room Communications Console with: New Elevator Control, New Platform Telephone Control, New Public Address Control, New concourse Display Control, New CCTV Control

Closed Circuit Television with: Real Time Transmission Of Video From 32 Primary Camera Locations, New Wall Monitor Display For 32 Primary Monitors And 1 Auxiliary Monitor, Auxiliary Monitor Capable Of Displaying A Selectable Video From Any Of The Cameras On The System, Video Recording Capabilities

Public Address System with: Automatic Noise Control, Ability To Display Visual Messages, Ability To Address Individual Platforms, Station Or The Entire System, Audio And Visual Message Recording Capabilities

4 Scope of Services: Electrical Design

5 Construction cost: Not available

6 Name of Project Owner, including phone number and address: West Virginia University Mr. Arlie C. Foreman, Assoc. Director Transportation, 304-293-8924, Morgantown, WV

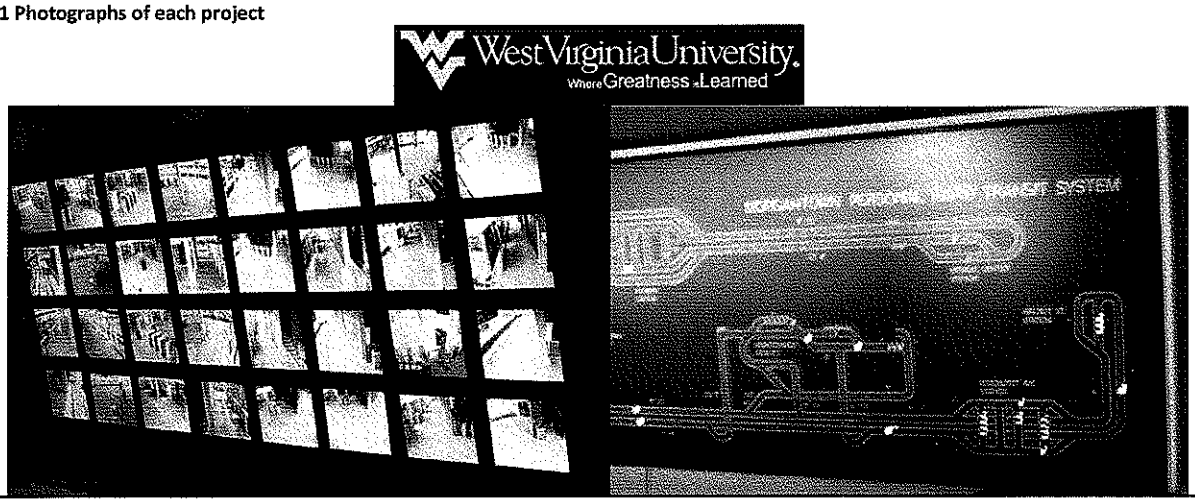
7 Name of Owner's Project Manager, including phone and address West Virginia University Mr. Arlie C. Foreman, Assoc. Director Transportation, 304-293-8924, Morgantown, WV

8 Name of Prime Contractor, including phone number and address: N/A

9 Contract information including date of project completion and/or percentage of work completed:
Engineering Design- 2008 – 2009 – Construction Completed: 2010

10 What features/processes/outcomes made this project successful: Successful completion of a complex design

11 Photographs of each project



12 Any additional information you deem relevant

1 Project Name: New Tier III Data Center, PBX Room and Electrical Support Systems Turnpike Industrial Park (TIP) Building Renovations

2 Project Location: PA Turnpike Commission, Dauphin County, Harrisburg, PA

3 Project Description: JOHN REESE ROLE: The Pennsylvania Turnpike Commission Data Center project included renovations of the single story, approximately 103,000 sq. ft. Turnpike Industrial Park (TIP) Building, which included demolition, construction, equipment, and furnishing fit-out of a new TIER 3 Data Center, PBX Room, and associated mechanical and electrical support spaces and systems. The renovation included new roof, renovated building envelope, new HVAC systems, equipment, and associated ductwork and piping, new normal, emergency, standby, and UPS electrical systems, equipment, and associated raceways, and new telecom systems and associated raceways.

John Reese was the Electrical Engineer of Record. The electrical systems were designed to meet the national electrical code, international building codes, EIA/TIA standards, BICSI standards, and comply with TIER III level redundancy requirements for data center construction as defined by the uptime institute.

Electrical work included selective demolition; complete normal and emergency electrical distribution systems; underground primary raceways and underground secondary distribution into the building from normal and alternate utility supplies, normal switchgear, emergency and stand-by generator systems, parallel switchgear, transfer switches, uninterruptible power supplies, battery racks and batteries, electrical distribution throughout the building; switchboards, panelboards, power distribution units, and transformers to serve data center and mechanical equipment loads, lighting, emergency lighting, and lighting control systems; fire alarm system, security systems, underground raceways for telecommunications, internal raceways and cable trays for telecommunication systems.

This project was designed using the criteria set forth by the U.S. Green Building Council for Leadership in Environmental and Energy Efficient Design (LEED).

John Reese, PE, RCDD was with a previous firm for this project. His current position with Loftus Engineers is Vice President and Manager of Electrical Engineering.

4 Scope of Services: Electrical Design – Tier III Data Center and PBX Room.

5 Construction cost: Electrical Contract ~$10M

6 Name of Project Owner, including phone number: PA Turnpike Commission, P.O. Box 67676, Harrisburg, PA 17106, 717-939-9551 x5520, cholupka@paturnpike.com

7 Name of Owner's Project Manager, including phone and address PA Turnpike Commission, Chuck Holupka, Sr Engineering PM, Engineering-Facilities Dept, POB 67676, Harrisburg, PA 17106, 717-939-9551 x5520

8 Name of Prime Contractor, including phone number and address: N/A

9 Contract information including date of project completion and/or percentage of work completed:
Professional Services 2008; Construction 2009

10 What features/processes/outcomes made this project successful:

11 Photographs of each project

12 Any additional information you deem relevant

CERTIFICATE OF LIABILITY INSURANCE

OP ID BR

DATE (MM/DD/YYYY) 03/01/11

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
Liberty Insurance Agency Manor Oak Two, Suite 800 1910 Cochran Road Pittsburgh PA 15220 Phone:412-571-5700 Fax:412-571-9909	PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: LOFTU-1

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Loftus Associates, LLC 555 North Bell Avenue Carnegie PA 15106	INSURER A: Continental Casualty Company	20443
	INSURER B: Valley Forge Insurance Co.	20508
	INSURER C: Transportation Insurance Co.	20494
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY [X] COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR [X] PER PROJECT AGG GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [ ] PRO-JECT [ ] LOC			B2057506542	09/03/10	09/03/11	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG [ ]	$ 1,000,000 $ 500,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY [ ] ANY AUTO [ ] ALL OWNED AUTOS [ ] SCHEDULED AUTOS [X] HIRED AUTOS [X] NON-OWNED AUTOS [ ]			B2057506542	09/03/10	09/03/11	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) [ ] [ ]	$ 1,000,000 $ $ $ $ $
C	[X] UMBRELLA LIAB [X] OCCUR [ ] EXCESS LIAB [ ] CLAIMS-MADE [ ] DEDUCTIBLE [X] RETENTION $ 10,000			B2066270773	09/03/10	09/03/11	EACH OCCURRENCE AGGREGATE [ ] [ ]	$ 5,000,000 $ 5,000,000 $ $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [ ] N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			WC412218986	08/14/10	08/14/11	WC STATU-TORY LIMITS [X] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
EVIDENCE OF COVERAGE

CERTIFICATE HOLDER

EVIDENC

EVIDENCE OF COVERAGE

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 3/1/2011

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Commercial Lines - (412) 765-3510 Wells Fargo Insurance Services USA, Inc. Four Gateway Center, 444 Liberty Avenue, Suite 1500 Pittsburgh, PA 15222-1233	**CONTACT NAME:** **PHONE (A/C, No, Ext):** **FAX (A/C, No):** **E-MAIL ADDRESS:** **PRODUCER CUSTOMER ID #:** 135468
INSURED Loftus Associates, LLC (D/B/A Loftus Engineers, LLC); Loftus Associates West, LLC 555 North Bell Avenue Carnegie, PA 15106	**INSURER(S) AFFORDING COVERAGE** — **NAIC #** **INSURER A :** OneBeacon Insurance Company — 21970 **INSURER B :** **INSURER C :** **INSURER D :** **INSURER E :** **INSURER F :**

COVERAGES **CERTIFICATE NUMBER:** 2425446 **REVISION NUMBER:** See below

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	GENERAL LIABILITY						EACH OCCURRENCE	$
	☐ COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
	☐ CLAIMS-MADE ☐ OCCUR						MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$
	☐ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$
								$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ ALL OWNED AUTOS						BODILY INJURY (Per accident)	$
	☐ SCHEDULED AUTOS						PROPERTY DAMAGE (Per accident)	$
	☐ HIRED AUTOS							$
	☐ NON-OWNED AUTOS							$
	☐ **UMBRELLA LIAB** ☐ OCCUR						EACH OCCURRENCE	$
	☐ **EXCESS LIAB** ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DEDUCTIBLE							$
	☐ RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						☐ WC STATU-TORY LIMITS ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ (Mandatory in NH)	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
A	Professional Liability			DPL032910	10/30/2010	10/30/2011	$1,000,000 Per Claim $2,000,000 Aggregate	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

Evidence of Coverage

CERTIFICATE HOLDER

FOR ILLUSTRATION ONLY

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Form **W-9**
(Rev. October 2007)
Department of the Treasury
Internal Revenue Service

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or type
See Specific Instructions on page 2.

Name (as shown on your income tax return)
LOFTUS ENGINEERS, LLC

Business name, if different from above

Check appropriate box: ☐ Individual/Sole proprietor ☐ Corporation ☐ Partnership
☑ Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ P
☐ Other (see instructions) ▶

☐ Exempt payee

Address (number, street, and apt. or suite no.)
555 NORTH BELL AVE

Requester's name and address (optional)

City, state, and ZIP code
CARNEGIE, PA 15106

List account number(s) here (optional)

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number
: :

or

Employer identification number
81 : 0564429

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign Here Signature of U.S. person ▶ Nancy Lania Date ▶ 3-10-11

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,