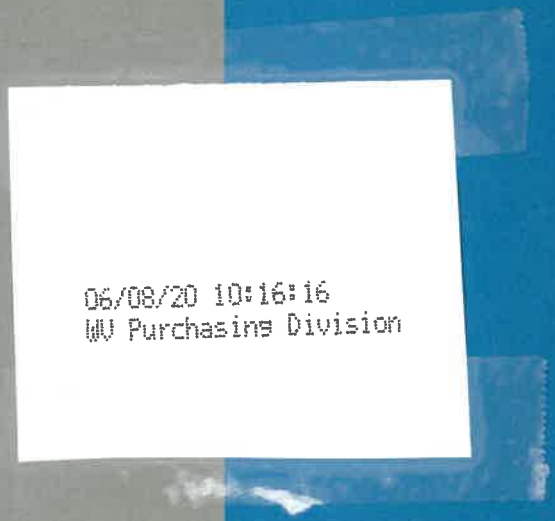
Original

EXPRESSION OF INTEREST FOR

JFHQ Building 1703 Fiber & Copper Cabling Design

Charleston, WV



PREPARED FOR

WV Department of Administration
Purchasing Division
Charleston, WV

Prepared by:

H.F. LENZ COMPANY
1407 Scalp Avenue
Johnstown, PA 15904
Phone: 814-269-9300
FAX: 814-269-9301

HFL File No. 2020-8003.77

June 5, 2020

H.F. LENZ
COMPANY
Engineering

1407 Scalp Avenue
Johnstown, PA 15904
Phone: 814-269-9300

June 5, 2020

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

Subject: Expression of Interest
JFHQ Building 1703 Fiber & Copper Cabling Design Services
HFL File No. 2020-8003.77

Purchasing Division:

H.F. Lenz Company (HFL) is enthusiastic about the opportunity to provide the Architecture/Engineering Services required for upgrading the fiber and copper cabling infrastructure at the Joint Forces Headquarters Building 1703 in Charleston, West Virginia. The analytical skills, design capability, creativity, and overall knowledge possessed by our Team will enable us to successfully complete all aspects of the work within the allotted budget and timeframe. Our Team is fully prepared to bring the following strengths and benefits to this project:

- Extensive and recent experience with similar communications cabling projects for government buildings.
- Qualified and experienced subconsultants. Omni Associates (architectural services), KCI (utility locating) and Hanscomb Consulting (cost estimating) are all experienced, reputable firms who have worked with us on numerous projects.
- Our Project Manager for this project, David B. Schmidt, Jr., P.E. is a Registered Communications Distribution Designer (RCDD) with extensive structured cabling system design experience.
- Senior-Level Personnel. Our Team consists of senior-level professionals who will remain involved with the project throughout its duration.
- The project team has provided data cabling design for more than 150 projects ranging from less than a hundred ports to tens of thousands of ports, including multi-building campus systems, throughout the U.S.
- Firm Stability. This is our 74th year in business. We have one of the lowest rates of employee turnover in our industry.
- Proven ability to work in collaboration with Owners and other consultants throughout the project while placing the Owner's interests first.

Thank you for the opportunity to submit this Expression of Interest. We look forward to the next steps in the selection process, including a possible oral presentation. In the meantime, we will be happy to answer any questions you may have regarding our submission.

Sincerely,

H.F. LENZ COMPANY

Robert J. Ford, Jr., P.E., LEED AP
Principal

H. F. LENZ COMPANY

Richard A. Madzar, P.E.
Chief Executive Officer

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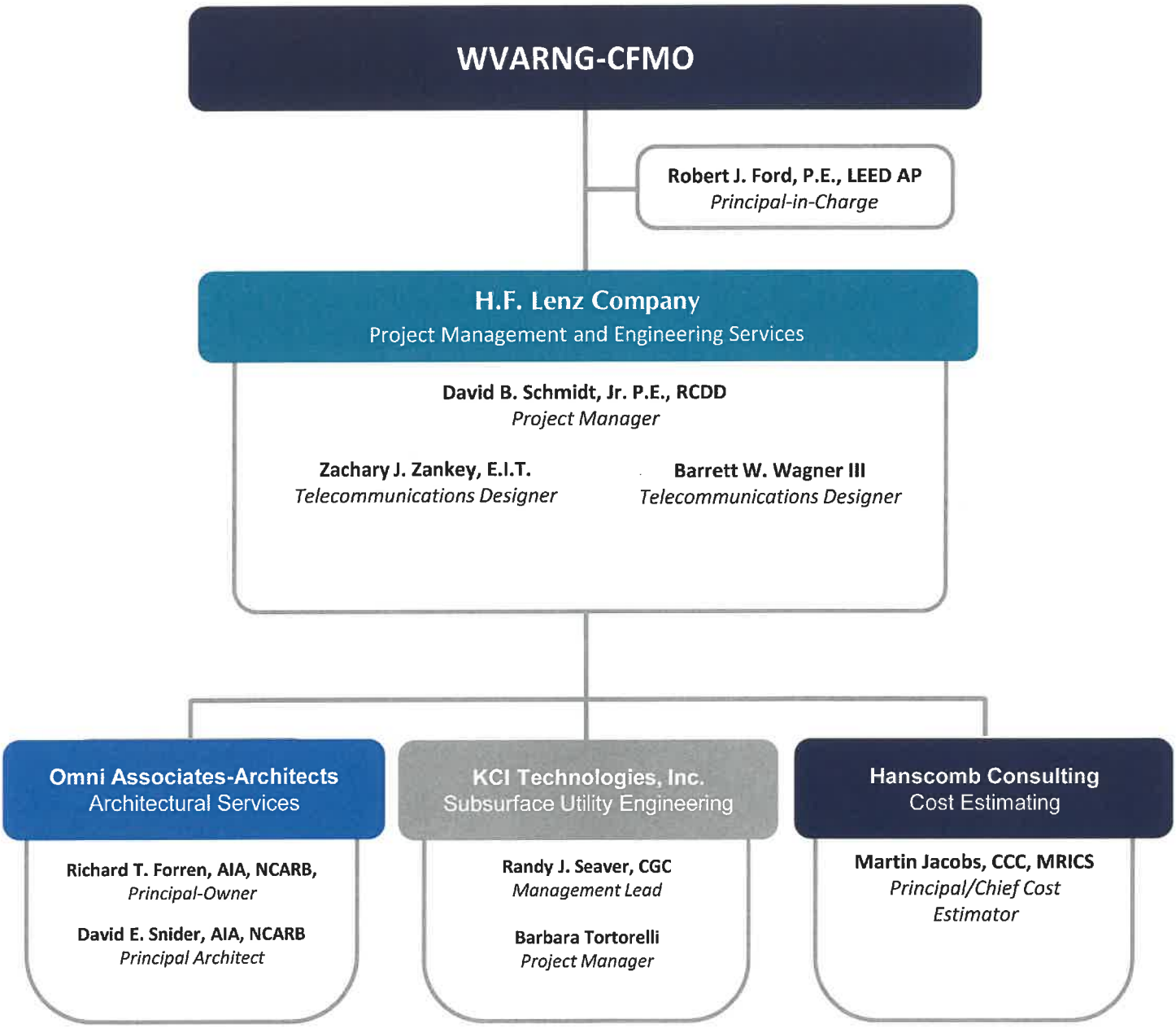
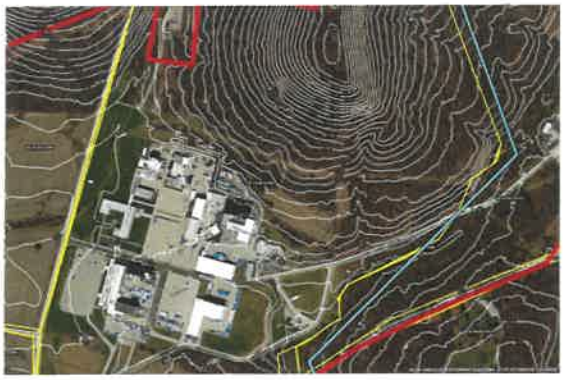
ORGANIZATIONAL CHART


WVARNG-CFMO
Robert J. Ford, P.E., LEED AP
Principal-in-Charge
H.F. Lenz Company
Project Management and Engineering Services
David B. Schmidt, Jr. P.E., RCDD
Project Manager
Zachary J. Zankey, E.I.T.
Telecommunications Designer
Barrett W. Wagner III
Telecommunications Designer
Omni Associates-Architects
Architectural Services
Richard T. Forren, AIA, NCARB,
Principal-Owner
David E. Snider, AIA, NCARB
Principal Architect
KCI Technologies, Inc.
Subsurface Utility Engineering
Randy J. Seaver, CGC
Management Lead
Barbara Tortorelli
Project Manager
Hanscomb Consulting
Cost Estimating
Martin Jacobs, CCC, MRICS
Principal/Chief Cost
Estimator

TEAM PROFILES



H.F. Lenz Company

Currently in its 74th year, the H.F. Lenz Company (HFL) is a nationally ranked multi-discipline engineering firm with a strong commitment to technical excellence and unparalleled customer service. From planning and design through commissioning and operations support, we work with our clients to find the best solutions that meet current needs while providing the flexibility to accommodate future growth.

Company History

Harold F. Lenz began offering his services as a registered engineer in 1927. He established the H.F. Lenz Company in its present form in 1946, and in 1953 the company was incorporated in Pennsylvania. Today the firm employs 160 individuals working out of our Johnstown-based headquarters and satellite offices in Lebanon, Pennsylvania; Pittsburgh, Pennsylvania; Conneaut, Ohio; and Middletown, Connecticut.

IT Infrastructure Experience

The H.F. Lenz Company offers a full range of data and communications engineering services for single building or campus-type environments. The HFL communications cabling design team, headed by a Professional Engineer who also has a Registered Communications Distribution Designer (RCDD) designation, has frequently been a pioneer in this specialized field. Our team was the first to utilize 864 strand optical fiber cables, both multimode and singlemode, for commercial applications. They have developed many products for the communications cabling industry, such as alternate space cable runway and zone distribution enclosures for raised floor systems.

Communications Services We Offer Include:

- Needs Assessments and Requirements Analyses
- Project Planning / Project Management
- Inside, and Outside Cabling Plants for Data, Voice, and Video
- Horizontal Cabling and Riser Systems
- Optical Fiber or Copper Backbones
- Outside Plant Pathways including Underground Ductbank, Aerial, and Directional Bores
- Cabling Design Topologies including Star, Ring, and Mesh
- Specification of Cabling Termination Equipment and Devices
- Service Entrance Facilities, Main Equipment Rooms, and Telecommunications Closets
- Detailed Room and Rack Layouts
- Cable Management Systems, Cable Schedules
- RFP/RFQ Preparation and Vendor Evaluation
- Development of Standards.

Omni Associates—Architects

Firm Profile/Corporate Information

OMNI ASSOCIATES - ARCHITECTS is an award-winning architectural firm located in Fairmont, West Virginia. Our approach to design has allowed us to avoid the confines of specialization and afforded us the opportunity to create a diverse body of work.

Corporate Office

207 Jefferson Street
Fairmont, WV 26554

Contact

Phone: (304) 367-1417
(855) 367-1417
Fax: (304) 367-1418
Email:
info@omniassociates.com
Web:
www.omniassociates.com

Principal Ownership

Richard T. Forren, AIA
Adam L. Rohaly,AIA
John I. Rogers, III
David A. Stephenson

Established

1980

Since the beginning in 1980, Omni has earned recognition for the programming, planning, and design of a variety of structures; which includes corporate office and governmental buildings, health care facilities and medical campuses, academic and educational buildings, recreational, religious, military and multipurpose facilities.

Our reputation and superior work product are the result of efficient and effective communication with our clients and consultants.

Each project is a unique undertaking that begins with analyzing the needs and desires of the client, and interpreting them into a distinctive design that exceeds expectations.

Omni has a successful history of designing intimately with each client and creating collaborative solutions that meet the project goals, resulting in an impressive record of customer satisfaction. These are qualities that draw our clients back, resulting in lasting relationships.

Omni Associates provides clients with the results they value most: Innovative designs consistent with the building program, cost effective designs which meet the budget, and efficient project management to provide on-time deliverables.

We're proud of our reputation and expertise, and our clients are confident that they will receive superior services.

KCI Technologies, Inc., is a 100% employee-owned engineering, planning, and construction firm serving public and private clients throughout the United States and beyond. Engineering News-Record ranks KCI the 65th top consulting engineering firm in the country. Our 1,700 employee owners operate out of more than 54 offices in 20 states.

KCI has provided subsurface utility engineering (SUE) as a core service since 1998 and is one of the largest and fastest growing providers of SUE services in the US. KCI maps over one million linear feet of utilities annually utilizing ASCE Standard 38-02 quality levels A, B, C and D. Nearly 100 SUE professionals and more than 400 utility professionals serve KCI's clients nationwide.

KCI'S Subsurface Utility Engineering Practice maintains a uniquely qualified staff with extensive experience. We offer comprehensive technical expertise to perform underground utility locating and mapping. All requested utility locates are performed by NULCA/UTA Certified Professional Utility Locators with a high degree of coordination, efficiency and quality. The strength of our staff lies in its commitment to generating practical solutions to resolve any irregularities that may arise within a project. Our full-service, in-house capabilities allow us to provide streamlined and efficient deliverables.

KCI offers complete subsurface utility designating, vacuum excavation, drafting, and plotting capabilities. In-house equipment includes:

- 109 pieces of designating equipment, including single and multi-frequency instruments from Metrotech, Ditch Witch Subsite, Pipe Horn, Heath, Vivax/Metrotech, Radio Detection, and Dynatel
- 50 designating trucks including 15 Vac Trucks
- 1 AM gradiometry / AMG
- 15 ground penetrating radar sensors and associated software including Noggin, LMX, and MALA Easy Locator and IDS-Opera DUO)
- Access to IDS GeoRadar, Stream C (34 Channel) and Stream EM (40 Channel) multi-frequency GPR units.

When warranted, the following specialized equipment can be utilized:

3D Radar Tomography. KCI uses the IDS GeoRadar Stream-C (portable 34 channel multi-axial array) and the Stream-EM (40 channel multi-axial towed array for high capacity data collection) for more complex subsurface 3D utility mapping. The Stream-C offers real time data acquisition and the Stream-EM requires post processing.

Core Drill and Restoration. KCI has the in-house ability to perform test holes using a coring rig. With this process, the pavement core is removed, the test hole is excavated, and the test hole is backfilled to the bottom of the pavement section, ensuring proper compaction ratings. The removed core is then replaced and

epoxied for a permanent, almost unnoticeable, restoration that virtually eliminates cold patch deterioration and allows patching at any time of year.

AM Gradiometry / AMG. KCI has exclusive rights to AMG, a new, innovative, and award-winning utility locating technology. AMG uses AM radio waves that, unlike GPR, penetrate concrete, rebar, asphalt, and poor soil conditions to detect the horizontal and vertical position of both known and unknown subsurface utilities as well as anomalies of all types at up to five times the depth detectable by GPR. Finding utilities not detected by a traditional SUE mark-out or shown on existing plans can help avoid costly and time-consuming delays. In certain situations, AMG can help minimize the number of test holes and pinpoint the exact locations where they are needed, ultimately reducing costs, time spent in the field, downtime, required traffic control, and impacts to the community.

ProStar - PointMan/Transparent Earth. PointMan is a GPS-centric mobile software application that enables field personnel to capture, bind, and deliver precise cable and pipe locating data from an Android mobile device directly to a database. PointMan is designed to capture in the field precision location points and pedigreed metadata including forms, photos, and sketches. PointMan eliminates the need to reprocess data or remobilize utility location crews due to missed data or disappearing marks.

Key Staff. **Randy Seaver, CGC,** is responsible for the supervision and daily operations of SUE and coordination of surveying and UC services throughout the Mid-Atlantic region. An accomplished Senior Project Manager, he has 39 years of SUE experience for campus facilities, roadways, railroads, utilities, and right-of-way easements.

Barbara Tortorelli, Project Manager, has 34 years of SUE experience. She has been involved in on-site fieldwork with location and vacuum equipment as well as overall project coordination and team management. She is responsible for project preparation and planning, scheduling, field operations, coordination of survey and CADD efforts, quality control review of field data, and production of project deliverables.

Hanscomb Consulting, Inc: Firm Profile

Addresses

Virginia
225 Reinekers Lane, Suite 200
Alexandria, VA 22314

Washington, DC
1077 30th Street, First Floor
Washington, DC 20007

New Jersey
197 Route 18 South, Suite 3000
East Brunswick, NJ 08816

Colorado
1801 North Broadway
Denver, CO 80202

Number of Employees

Hanscomb has a total of 25 employees.

Number of Years in Business

Hanscomb has been in business for six years; since 2013.

Licensing, Accreditation, & Registration

SWaM Number: 706075

CBE Number: L49390112022

Federal Tax ID Number: 46-1878215

Industry Sectors

Specific areas of focus are:

- Government (Federal, State, & Local)
- Multi-Family Residential
- Hospitality
- Commercial
- Healthcare
- Judicial
- Cultural/Religious
- Education (Higher Education & K-12)
- Aviation

Services

We provide a variety of services to the industry, which are summarized as:

- Establishing Budgets & Benchmarking
- Cost Planning & Estimating
- Condition Assessments
- Owner's Representation
- Procurement Advice
- Insurance Claims/Disaster Recovery
- Construction Phase Cost Management
- Contractual Disputes

Contact Information

Office: 703.706.0400
www.HanscombConsult.com

Hanscomb Consulting, Inc. is a leading provider of construction cost and project management consulting services. We are a national Small Business Enterprise (SBE), a certified small business (SWaM) in Virginia and a certified business enterprise (CBE) in Washington, DC. Our clients include real estate developers, architecture & engineering firms, federal government agencies, state and local authorities, colleges and universities, major corporations and institutions, health care providers, law firms and other organizations with an interest in achieving best value in construction. Our firm's extensive cost database and knowledgeable estimating team, together with our project/construction management and industry experience, provide integrated and continuous resource support to our clients and their projects from the very early stages of preconstruction - during budgeting and planning and design phase management - through procurement and construction phase execution administration and oversight. The company is certified as a small business both at the federal and state level, providing responsible services and value to any team pursuing work with agencies with small business goals.

Our Business Philosophy

Our philosophy is straightforward and easy, but nonetheless very important to grasp if we want to be successful. "We look after people's money when they build things". We treat every project, no matter its size and complexity, as if it's our own money being spent. We pride ourselves in having great communication skills. We often ask ourselves the question, "would we want to know?" if any challenge or question arises on any given project. If the answer is "yes", then we inform our clients. An informed client is a satisfied client. We operate on a "no surprises" philosophy. We make sure that our client knows and understand all information we generate during our cost estimating services delivery. If a budget is going to change, or a line item in a budget is changing, we track and inform. We also continuously compare numbers to previous submissions and to our cost data base of similar projects and ensure we track where the changes are, why the changes occur and what the result of any change is (whether the change is an increase or a decrease to the budget/estimate). We continuously track and ask for customer feedback and references to ensure that our clients are satisfied and so we can use that customer feedback to always upgrade, improve or maintain our customer satisfaction ratings. We ensure that our senior staff and principals always stay involved in our project delivery. We understand the knowledge and experience our senior staff brings to the table and we believe that that knowledge and understanding should be part of all projects we deliver.

Cost Estimating

Knowing how much the building under design is going to cost is a fundamental requirement on most projects. Our cost experts cover all disciplines and all components of a facility, resulting in a complete, reliable cost plan that is continually monitored and refreshed as the design progresses. Using leading-edge technology, cost estimates can be created and updated quickly and cost-effectively, while maintaining the level of accuracy we are known for throughout the industry.

The level of service provided ranges from early concept stage cost models, based on limited project information and relying heavily on past project data combined with current market trends, through to very detailed pre-bid estimates founded on complete quantity take-offs, with prices broken down into labor, materials and equipment. At every stage of design the owner and design team can clearly see where the cost has changed and what will be required to steer it back on track.

We include in all of our cost plans an assessment of risk in the project, and how that impacts the contingency levels required. We also participate in risk management workshops, have developed and maintained risk registers, and offered advice on identifying and mitigating project risks. The firm also has extensive Value Engineering (VE) experience, having participated in dozens of studies over the years. We have a deep understanding of the cost drivers of projects, and can quickly pinpoint prime areas for further analysis for higher-value solutions.

TAB 2 – Staffing Plan

Management & Staffing Plan

We have developed the management techniques, accountability protocols, and reporting methods to successfully and efficiently manage projects and while meeting schedules and budgets. Contributing to this is the direct involvement of our senior-level Principals and Project Managers who possess the technical expertise, fully understand the Client's business or mission, and have the ability to create and maintain a collaborative environment among all Team members.

Senior Level Leadership

H.F. Lenz Company is well known for maintaining senior level leadership involvement throughout a project and this effort is no different. **Robert J. Ford, Jr., P.E.,** will serve as the **Principal-in-Charge**, and **David B. Schmidt, Jr., P.E. RCDD** will be the Project Manager and Lead Telecom Engineer. These individuals will remain involved throughout the duration of the contract to maintain a level of consistency and oversight of the project team.

Project Manager

The Project Manager for this IT project will be David B. Schmidt, Jr., P.E. RCDD. David is an Electrical Engineer and a Registered Communications Distribution Designer (RCDD). He has served as the Lead Communications Engineer for most of the firm's data/communications projects—including on-call term contracts for federal government agencies.

David was the Lead Communications Engineer for an Indefinite Delivery/Indefinite Quantity contract to provide communications engineering services to the Social Security Administration for facilities in various parts of the country. These cable plant projects included optical fiber backbones, fiber-to-the desk, UTP for data and voice, high pair count voice cables, and coax video.

David Schmidt and his team can apply design practices beyond EIA / TIA standards to find opportunities to enhance network functionality and support both short- and long-term strategic initiatives.

Subconsultants

Omni Associates-Architects, KCI Technologies, Inc. (subsurface utility engineering) and **Hanscomb Consulting** (cost estimating) join our team as subconsultants. Each of these firms has recent and relevant experience working with H.F. Lenz Company. Their qualifications and resumes are located elsewhere in this submission.

Project Management Plan

The Project Manager's objective is to achieve ideal balance among cost, schedule, design quality, and life cycle cost, and will direct all Team Members towards this end. To accomplish this, our Project Manager will adhere to the following approach, which has proven to be successful on past projects.

Establish a Dedicated Project Team that does not change

Consistency of the team is very important in keeping all personnel aligned with the objectives and goals of the project—including budget and schedules adherence. H.F. Lenz Company has one of the lowest employee turnover rates in our industry.

Clear and efficient communication.

Clear and timely communication among the Project Team is critical to developing high quality, well- coordinated construction documents that meet the project schedule and budget. During the pre-design phase of a project ideas and knowledge are shared, processes are collectively developed, and common goals are defined.

Communication is maintained throughout the entire Project through team meetings, participating in benchmarking processes, telephone and teleconferencing calls, and online collaborative applications.

Assigning Responsibilities

Maintaining the quality of work while meeting schedules and budgets, is achieved through an ongoing planning process involving dialogue among the various team members in the relationship. The key is the development of a mutual understanding of individual responsibilities, well-defined group goals, and the establishment of real communication. Early on in the process, it is extremely important to identify and assign both group and individual responsibilities. The responsibilities of each Team Member are identified for each phase of the project, from programming and design through construction and commissioning.

Coordination of Subconsultants

The Project Manager is responsible for keeping all subconsultants up to date and in the communications loop. During a project kickoff meeting, we collaborate with the subconsultants to develop well defined and mutually understood project goals and priorities—including project budgets and schedules. We then maintain close communication with all subconsultants through project meetings, partnering sessions, telephone and teleconference sessions, email, and on-line project management applications.

Promoting a collaborative environment

We place a high value on creating and supporting a dynamic collaborative environment among the Project Team where ideas and knowledge are shared, processes are collectively developed, and common goals are defined. The objective is to draw upon the collective intelligence of the entire Team, while supporting the Client's values and mission.

TAB 3 – Resumes | Certifications

Education
Bachelor of Science, Electrical Engineering Technology, 1991, University of Pittsburgh

Experience
H.F. Lenz Company 1996-Present • Dynamic Design Engineering 1992-1996 • US Army and PA National Guard 1987-2007

Professional Registration / Certification
Licensed Professional Engineer in Pennsylvania, Arizona, Colorado, Connecticut, Delaware, Georgia, Maine, Maryland, New Hampshire, New Jersey, New Mexico, Nevada, New York, Ohio, Texas, Vermont, Virginia, Washington, and West Virginia • LEED Accredited Professional

Professional Affiliations
Pennsylvania Society of Professional Engineers (PSPE) • National Society of Professional Engineers (NSPE) • 7x24 Exchange International • National Eagle Scout Association

Robert J. Ford, Jr., P.E., LEED AP
Principal-in-Charge

Mr. Ford has 27 years of experience as a project/design engineer in M/E consulting firms and more than 20 years of hands-on military construction experience as both a noncommissioned and commissioned officer in the Army National Guard.

Mr. Ford has a wide range of engineering experience with mechanical and electrical infrastructure projects for commercial and governmental facilities. His background includes accomplishments in project planning, facility design, security measures, estimating, bid document preparation, construction management, and operations support. He is also experienced in the preparation of project and fee cost estimates along with projected completion schedules.

Project Experience

Veterans Affairs Medical Center – Lebanon, Pennsylvania

› Principal–in-Charge of E/A Team for campus-wide IT study and design for fiber optic upgrade and capacity expansion and renovate the main computer room/data center building

Federal Reserve Bank of Cleveland – Cleveland, Ohio

› Principal–in-Charge for the replacement of existing UPS system with a new appropriately sized system for the Bank's current uninterruptible power needs

The Vanguard Group – Malvern, PA and Scottsdale, AZ

› Principal–in-Charge and Project Manager for the restacking of 10 corporate office buildings totaling 1.2 million sq.ft. involved upgrades/ replacement of electrical systems including lighting and UPS systems

Progressive Insurance Company – Highland Heights, Ohio

› Principal–in-Charge of the renovation of the Omega North Building including 37,000 sq.ft. of print shop and 17,000 sq.ft. of support space, project required specialized space temperature and humidity control

Discover Financial Services – Various Locations

› Office building fit-out, Fairport, NY
› Branch bank renovation & upgrades, Greenwood, DE
› Office building M/E renovations, New Castle, DE
› Processing center M/E upgrades, Salt Lake City, UT
› Contact center M/E upgrades, Phoenix, AZ

West Virginia State Board of Registration for Professional Engineers

ROBERT J. FORD JR
WV PE [redacted]

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

EXPIRES December 31, 2020

Education

Graduate Studies, Manufacturing Systems Engineering, 1995, University of Pittsburgh

Bachelor of Science Electrical Engineering Technology, 1990, University of Pittsburgh at Johnstown

Associate in Specialized Technology, Electronics, 1979, Penn Technical Institute

Experience

H.F. Lenz Company 1995-Present • Johnstown America Corporation 1994-1995 • LTV Steel 1991-1994 • Metalworking Technology, Inc. 1989-1991 • Lincoln Contracting & Equip. Co. 1982-1984

Professional Registration / Certification

Licensed Professional Engineer in Pennsylvania, Maryland and West Virginia • Registered Communications Distribution Designer

Professional Affiliations

Building Industry Consulting Service International (BICSI) • National Society of Professional Engineers (NSPE)

David B. Schmidt, Jr., P.E., RCDD

Project Manager

Mr. Schmidt has served as the communications engineer for numerous projects involving structured cabling systems for commercial and institutional facilities. He is a Registered Communications Distribution Designer (RCDD) with an extensive background in communications systems design including both optical fiber and copper backbone cabling systems. He is responsible for overseeing the design team, schedule & budget, subconsultant coordination, attending progress meetings, coordinating with other team members, and the checking of construction documents. His duties also include project planning, conceptual and final design, construction administration, and training of O&M personnel. He is experienced in power distribution systems, lighting systems, energy management, direct digital controls, fire detection and alarm systems, on-site power generation, and all types of structured communications cabling systems for telephone, voice, and data.

Project Experience

Veterans Affairs Medical Center – Lebanon, Pennsylvania

› E/A Team Project Manager for campus-wide IT study and design for fiber optic upgrade and capacity expansion and renovate the main computer room/data center building

Robert M. Ball Federal Building – Woodlawn, Maryland

› Project Manager for the communications design in both the 1.2 million sq.ft. Operations Building and the 500,000 sq.ft. Annex Building

DOE National Energy Technology Laboratory – Various Locations

› Project Manager and Telecom Group Leader for upgrading the communications cabling infrastructure at NELT facilities in Pittsburgh, Pennsylvania, Morgantown, West Virginia, and Albany, Oregon.

University of Pittsburgh Medical Center – Armstrong County Pennsylvania

› Project Manager for the data cabling plant for a new 40,000 sq.ft. data center that involved working closely with various stakeholders to develop interconnection media technical requirements and topology for a complex, multi-layered, mesh network

Carnegie Mellon University – Pittsburgh, Pennsylvania

› Telecom Group Leader for the communications cabling plant for Scott Hall, a new 109,000 sq.ft., multi-story, multi-function building on CMU's Pittsburgh campus

West Virginia State Board of Registration for Professional Engineers

DAVID B. SCHMIDT JR
WV [redacted]

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

EXPIRES December 31, 2020

Building Industry Consulting Service International

THE PROFESSIONAL DESIGNATION OF

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER®

IS AWARDED TO

David B Schmidt, Jr.

by BICSI in recognition of having successfully completed BICSI's registration and examination requirements.

Designation Number: [redacted]
Registration Start Date: 1/1/2019
Registration End Date: 12/31/2021

Chair, Registrations & Credentials Supervision Committee

Bicsi RCDD
Since
1/20/1997

Director of Credentialing

Education

Bachelor of Science, Electrical Engineering Technology, 2003, University of Pittsburgh at Johnstown

Experience

H.F. Lenz Company 2011-Present • Outside Plant Engineering Consultant with Verizon North, Inc. 2003-2010

Professional Registration / Certification

Engineer in Training, Pennsylvania

Zachary J. Zankey, E.I.T.

Telecommunications Designer

Mr. Zankey is an electrical designer with experience in the telecommunications industry as an outside plant engineering consultant. His background in telecommunications includes project planning, fiber optic design, hi-cap and special circuit design, aerial, buried, and underground cable design, and collaborating with other utilities, consulting firms, contractors, and state and local governments. He has also had experience with the design and installation of security systems, door entry systems, security camera surveillance systems, and audible paging systems. As an electrical designer with H.F. Lenz Company, Zach has had involvement designing telecom, electrical, lighting, and fire alarm systems for buildings. He has also played a role in performing several arc flash and coordination studies.

Project Experience

Carnegie Mellon University – Pittsburgh, Pennsylvania

- Telecommunications designer for the communications cabling plant for Scott Hall, a new 109,000 sq.ft., multi-story, multi-function building on CMU's Pittsburgh campus

Veterans Affairs Medical Center – Lebanon, Pennsylvania

- Telecommunications designer for a campus-wide IT study and design for fiber optic upgrade and capacity expansion and renovat the main computer room/data center building

National Energy Technology Laboratory (NETL) – Morgantown, WV, Pittsburgh, PA, and Albany, OR

- Telecommunications designer for the upgrade of the copper and optical fiber cabling plant for NETL campuses in West Virginia, Pennsylvania, and Oregon

University of Pittsburgh Medical Center – Armstrong County Pennsylvania

- Telecommunications designer for the data cabling plant for a new 40,000 sq.ft. data center that involved a complex, multi-layered, mesh network

Flight 93 National Memorial, National Park Service – Shanksville, Pennsylvania

- Telecommunications designer to develop the cabling infrastructure for the Visitor and Learning Center Buildings

National Park Service, Ellis Island, Statue of Liberty National Monument – New York/New Jersey

- Telecommunications designer to update the cabling infrastructure at this existing campus facility

Barrett W. Wagner III

Telecommunications Designer

Mr. Wagner is a telecommunications designer with experience in the telecommunications industry. His background in telecommunications includes project planning, fiber optic design and special circuit design, aerial, buried, and underground cable design, and collaborating with other utilities, consulting firms, contractors, and state and local governments. He is also experienced in the design and installation of security systems, door entry systems, security camera surveillance systems, and audible paging systems. As a Senior Engineering Technician with H.F. Lenz Company, Barrett has had involvement designing telecom, electrical, lighting, and fire alarm systems for commercial and institutional buildings.

Education

Associates Degree, Electronics Engineering Technology, 2002, Pittsburgh Technical Institute

Experience

H.F. Lenz Company 2018-Present • Network Engineering Technician, IBM 2013-2018 • Network Engineering Technician, CSC 2010-2013 • Foreman/Installation Technician, American Systems 2009-2010, 2004-2006

Project Experience

VA Medical Center – Lebanon, Pennsylvania

- Telecommunications designer to provide study of existing campus cabling infrastructure and data center to include recommendations on path forward with future design considerations

Confidential Client – Eastern United States

- Telecommunications designer to provide pathway, grounding, and main equipment room designs for this data center colocation provider
- Fire Alarm designer to provide air sampling smoke detection system, smoke detection and audio visual device designs

Confidential Client – Central United States

- Telecommunications designer to provide pathway, grounding, and main equipment room designs for this data center colocation provider
- Site and building security system designer to provide CCTV, access control and site security system designs

University of Connecticut Public Safety Building – Connecticut

- Telecommunications designer to provide temporary relocation and upgrade of the copper and optical fiber cabling and pathways to the dispatch center and building addition

Richard T. Forren, AIA, NCARB
Principal—Owner

EDUCATION

Master of Architecture : Virginia Polytechnic Institute, 1983

BS, Civil Engineering Technology: Fairmont State College, 1980

REGISTRATION

American Institute of Architects, Member

American Institute of Architects—West Virginia, Member

NCARB: National Council of Architectural Registration Boards

U.S. Green Building Council, Firm Membership

Associated Builders and Contractors Inc., Firm Membership

International Association of Emergency Managers, Member

International Council of Shopping Centers, Member

Association for Learning Environments, Member

Registered in West Virginia, Pennsylvania, Ohio, Kentucky, Florida, and New Jersey

GENERAL EXPERIENCE

Senior Project Architect in charge of design and construction for Omni Associates - Architects since 1984.

Responsible for coordinating and designing all aspects of a project from programming through construction administration and project close-out.

RELATED EXPERIENCE

West Virginia Board of Architects, President

West Virginia Design-Build Board

Retired Colonel in the United States Army Reserves most recently assigned to the Fifth United States Army as the Army's Emergency Preparedness Liaison Officer (EPLO) for West Virginia.

City of Bridgeport Emergency Services Council

Member of the Faculty Advisory Committee for Civil Engineering Technology and Architectural Engineering Technology, Fairmont State College.

SELECT PROJECT EXPERIENCE

WV Army National Guard:
Buckhannon, Armed Forces Readiness Center
Fairmont, Armed Forces Readiness Center
Eleanor Armed Forces Readiness Center
Eleanor Maintenance Facility
Eleanor Access Road & Guard House

GSA Federal Building Renovations:
Wheeling, WV
Martinsburg, WV
Huntington, WV
Beckley, WV

I-79 Technology Park:
5000 NASA Boulevard
Allan B. Mollohan Innovation & Incubator Center
WVHTCF Training Center
Mon Power Regional Headquarters

Fairmont State University:
Wallman Hall Renovations
Engineering Tech Addition & Renovations
Library Addition & Renovation
Feaster Center Addition & Renovation
Colebank Hall Renovation
Inner Campus Renovation
New Education & Health Sciences Building
Robert C. Byrd Aerospace Center

WV GSD:
WV State Office Complex—Fairmont
WV State Police Troop 1 Headquarters

The West Virginia Board of Architects

certifies that

RICHARD T FORREN

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

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

Certificate Number [redacted]

The registration is in good standing until June 30, 2021.

Board Administrator

David E. Snider, AIA, NCARB
Principal Architect

EDUCATION

Master of Architecture
Virginia Polytechnic Institute, 2001
B.S. Engineering Technology
Fairmont State College, 1989
Associate of Applied Design
Fairmont State College, 1989

REGISTRATION

American Institute of Architects, Member
American Institute of Architects—West Virginia, Member
U.S. Green Building Council, Firm Membership
Associated Builders and Contractors Inc., Firm Membership

GENERAL EXPERIENCE

Joined Omni Associates in 1995.
Practice has included diverse project types including primary, secondary, and higher-education education facilities, office buildings, health care facilities, commercial design, multifamily and single-family housing, and manufacturing facilities.
Extensive experience with the preparation of construction documents, material specifications, and bidding documents as well as construction administration.
One of Omni's most effective project managers with a strong background in K-12, higher education and GSA projects.

RELATED EXPERIENCE

SELECT PROJECT EXPERIENCE

Town of White Hall Public Safety Building

I5000 NASA Boulevard
Tenant Fit Outs

Fairmont State University:
Wallman Hall Renovations
Colebank Hall Renovation
Inner Campus Renovation
Robert C. Byrd Aerospace Center

WV GSD:
WV State Police Troop 1 Headquarters

Building 88 HVAC
Building 84 HVAC
Building 11 Structural Repairs
Building 97 Slab Repairs

Mylan Pharmaceuticals Manufacturing North Expansion

Mylan Pharmaceuticals Warehouse

The West Virginia Board of Architects

certifies that

DAVID E. SNIDER

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

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

Certificate Number [redacted]

The registration is in good standing until June 30, 2021.

Board Administrator

RANDY J. SEAVER CGC

Regional Practice Leader

Education:
Diploma / 1983 / Architectural/Civil Engineering (2 years) / Pinellas Technical Institute
Coursework / 1981 / University of Central Florida

Registrations/Certifications:
Construction - General Contractor / FL / CGC 62320 / 2001

Years Experience:
39 years

Years with KCI:
4 years

Mr. Seaver is responsible for the supervision and daily operations of SUE and coordination of surveying and UC services throughout the Mid-Atlantic and Northeast regions, including Pennsylvania, West Virginia, Virginia, Delaware, Maryland, Washington, DC, the entire eastern seaboard from New Jersey to Maine, and as far west as Indiana. He has overseen SUE and UC services for more than 200 projects for PennDOT alone.

An accomplished Senior Project Manager, Mr. Seaver has 39 years of experience in SUE for roadways, railroads, utilities (stormwater, reclaimed water, force mains, communication towers, and gas lines) and right-of-way easements. He has both public and private experience in the designation, location, and design of utilities.

He is experienced in the preparation of engineering construction plans, specifications, permitting, and coordination between client and agencies.

Both with KCI and with a previous employer, Mr. Seaver has served as SUE Agreement Manager for the SUE-specific contracts listed below. His responsibilities in this role include designating and locating utilities, overall contract oversight, cost control, schedule control, quality assurance, and client satisfaction.

His project experience includes:

Replacement of Steam/Condensate Piping, White Hall Library
West Virginia University, Morgantown, WV

Emergency Power for Campus Fire Pumps
Penn State Health Milton S. Hershey Medical Center, Hershey, PA

Pennsylvania Turnpike Highspire Service Plaza
Pennsylvania Turnpike Commission, Dauphin County, PA

LCTA Transit Facility / Demolition for Murray Complex Site
Luzerne County Transit Authority and PennDOT Bureau of Public Transportation, Wilkes-Barre, Luzerne County, PA

Call-in Expert Professional Subsurface Utility Designating/Locating Services
Port Authority of NY and NJ. Statewide, NJ

Open-End Contract for SUE Services Districtwide
Pennsylvania Department of Transportation - District 1-0, Various Locations, PA

Open-End Contract for SUE Services Districtwide
Pennsylvania Department of Transportation - District 3-0, Various Locations, PA

Open-End Contract for SUE Services Districtwide
Pennsylvania Department of Transportation - District 12-0, Various Locations, PA

SR 0068-360 Reidsburg Bridge Project
Pennsylvania Department of Transportation - District 11-0, Allegheny County, PA

SR 0058 Foxburg Project
Pennsylvania Department of Transportation - District 10-0, Clarion County, PA

SR 3020-250 Freedom Road over PA Turnpike
Pennsylvania Department of Transportation - District 10-0, Butler County, PA

SR 0119 Indiana Hill Project
Pennsylvania Department of Transportation - District 10-0, Indiana County, PA

BARBARA TORTORELLI

SUE Manager

Education:
AS / 1983 / Business Accounting / Pennsylvania State University

Years Experience:
34 years

Years with KCI:
1 year

Ms. Tortorelli has over 30 years of experience in the fields of surveying and subsurface utility engineering. Her experience covers positions ranging from field crew management to project management. She has been responsible for the supervision of both designating and locating field crews. She has supervised up to four designating and locating crews and coordinated up to six simultaneous SUE contracts with public agencies and engineering firms.

Her responsibilities have included project preparation and planning, scheduling, training, field crew management, quality control, client contact, coordination of necessary survey and CADD mapping, review of field data collected and production of final project deliverables.

Ms. Tortorelli is experienced in the operation of a variety of geophysical locating instruments, ground penetrating radar (GPR) and vacuum excavation equipment.

As SUE Manager, she has been responsible for scheduling, field crew oversight, processing of data, QA/QC and preparation of SUE submittal deliverables including client consult for the following projects:

Replacement of Steam/Condensate Piping, White Hall Library
West Virginia University, Morgantown, WV

Emergency Power for Campus Fire Pumps
Penn State Health Milton S. Hershey Medical Center, Hershey, PA

LCTA Transit Facility / Demolition for Murray Complex Site
Luzerne County Transit Authority and PennDOT Bureau of Public Transportation, Wilkes-Barre, Luzerne County, PA

Pennsylvania Turnpike Highspire Service Plaza
Pennsylvania Turnpike Commission, Dauphin County, PA

SR 0837 Section A42 Safety Improvement Project
Pennsylvania Department of Transportation - District 11-0, Allegheny County, PA

Southern Beltway Project - US 22 to I-79 Section 55C2
Pennsylvania Turnpike Commission Central Office, Washington County, PA

SR 19 Section S03 - Waterford Intersection Improvements
Pennsylvania Department of Transportation - District 1-0, Mercer County, PA

SR 981-SIG Latrobe Signals Project
Pennsylvania Department of Transportation - District 12-0, Westmoreland County, PA

Open-End Contract for SUE Services Districtwide
Pennsylvania Department of Transportation - District 1-0, Various Locations, PA

Open-End Contract for SUE Services Districtwide
Pennsylvania Department of Transportation - District 12-0, Various Locations, PA

On-Call Utility Locating Services Contract
Arizona Department of Transportation, AZ

Utilities Master Contract
Southwest Gas Corporation, Phoenix, AZ

SR 2014 Section 84M Third Street Reconstruction Project
Pennsylvania Department of Transportation - District 3-0, Lycoming County, PA

Martin Jacobs, CCC, MRICS

Principal/Chief Cost Estimator

Education

Bachelor of Science: Quantity Surveying, University of Port Elizabeth, 1992

Certifications/Affiliations

Member: Royal Institution of Chartered Surveyors (MRICS), December 2009

Certified Cost Consultant, American Association for the Advancement of Cost Engineers (CCC), 2010

Member: American Association of Cost Engineers (AACE)

Member: Society of American Military Engineers (SAME)

Years of Experience

27+

As principal of Hanscomb Consulting, Martin Jacobs serves as Project Executive on many of our projects. He is adept at problem solving and responding to client's needs in a timely manner to ensure client satisfaction. He has a keen ability to provide guidance and advice as well as building, establishing, and maintaining strong and long-term relationships with owners, developers, consultants, and contractors.

Martin has over 26 years of experience in the construction industry in the United States and overseas, with special emphasis on quantity surveying, conceptual/program budgeting as well as detailed milestone design estimating, assessing market conditions, facility condition assessments, developing cost models for ATFP requirements and measuring and producing Bills of Quantities. He has experience in architectural, structural, civil, and MEP work, as well as change orders, cost management, and value engineering. Martin's expertise includes the use of government software programs, such as M2 (Second Generation MCACES), SUCCESS, and PACES in performing budget planning and developing feasibility studies and detailed cost estimates in the management of construction costs. Martin has worked on all construction types ranging from government, commercial, and education, through to aviation, cultural, and hospitality.

Selected Project Experience

- General Services Administration: SSA Celebrezze; Cleveland, OH
- General Services Administration: Headquarters Modernization Phase II; Washington, DC
- International Monetary Fund; Washington, DC
- General Services Administration: Suitland House; Suitland, MD
- Federal Research Center: Food and Drug Administration Facility Consolidation; White Oak, MD
- John Hopkins University: Bernstein Office Building; Bethesda, MD
- 1712 Connecticut Avenue; Washington, DC
- COA Space Reduction/FISC Expansion; Washington, DC
- General Services Administration: Appraisers Building & US Customs House; Washington, DC
- Prince William County: Owens Communication Building; Woodbridge, VA
- Social Security Administration: Frank Hagel Building; Richmond, CA
- Smithsonian Institution: Office Support; Washington, DC
- International Monetary Fund HQ 1 & 2; Washington, DC
- 1200 17th Street; Washington, DC
- Food & Drug Administraction: Office Consolidation; White Oak, MD
- 1100 15th Street; Washington, DC
- 7272 Wisconsin Avenue; Bethesda, MD
- Environmental Protection Administration: Denver HQ; Denver, Co
- 655 New York Avenue; Washington, DC
- Baltimore Gas & Electric: Spring Garden; Baltimore, MD
- 2311 Wilson Boulevard; Arlington, VA

TAB 4 – Relevant Prior Experience

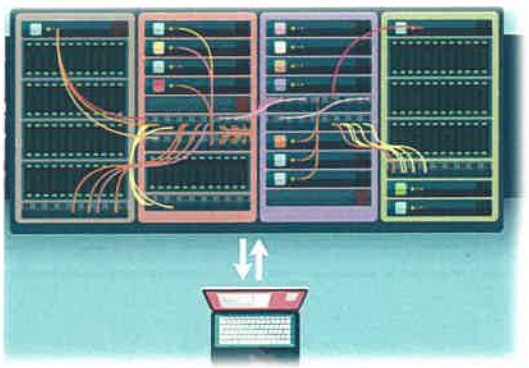
Veterans Affairs Medical Center

Lebanon, Pennsylvania

IT Infrastructure Improvements

H.F. Lenz Company is the Lead Firm for an Engineer/Architect Team selected for a campus-wide IT study and design to improve the IT infrastructure for this Veterans Affairs Medical Center. HFL is providing the Project Management, Telecom, Mechanical, Electrical, Plumbing, Civil/Survey and Structural engineering services. Geotechnical, Utility Locating, Architectural, Life Safety/Fire Protection, and Cost Estimating services are provided by subconsultants to HFL.

The primary focus of the project is improving the utilization of the main data center in Building 136, and upgrading the network backbone to Buildings 1, 17, and 104. The scope of work includes addressing the utilization, organization, and layout configuration issues of each of the telecommunications rooms within the buildings.



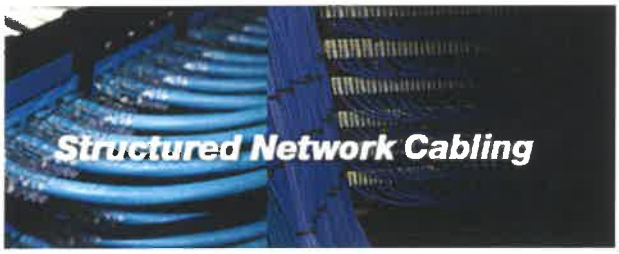
Recommendations included the following:

Network Backbone

- Provide single mode optical fiber cables to each telecom room
- Provide new backbone pathways through the existing tunnel/crawl space system under the buildings.

Computer Room/Data Center

- Improve space utilization through reconfiguration of the server cabinet layout, enhancing power distribution, cooling, cable management, and access control. This includes the development of phased implementation plans to maintain operation during renovations
- Replace the electrical distribution system in its entirety
- Replace/upgrade computer room cooling units
- Provide redundant UPS modules to feed UPS loads
- Replace all lighting with new LED fixtures
- Replace raised access floor in the computer room/data center
- Provide smoke detection and fire suppression systems
- Create a conference room, breakroom and electrical equipment rooms.



National Energy Technology Laboratory

Morgantown, West Virginia

Upgrade Communications Cabling Infrastructure

The National Energy Technology Laboratory (NETL), part of the U.S. Department of Energy (DOE) national laboratory system, is owned and operated by the DOE. NETL supports the DOE mission to advance the energy security of the United States. H.F. Lenz Company has been providing multi-discipline engineering services, including communications engineering services, to NETL under an Indefinite Delivery/Indefinite Quantity contract.

The Morgantown campus, consisting of approximately 45 buildings, is currently fed from three separate Area Distribution Nodes (ADN). The intent of this project was to establish one single ADN for the entire campus. This effort involved extensive surveys of the existing pathways and cabling infrastructure throughout the campus so that a plan could be developed to refeed each End User Building from the single ADN.

Services provided by H.F. Lenz Company included:

- Consulting and collaborating with NETL on-site personnel to determine the requirements and criteria that will govern the design
- Developing and evaluating options for providing the ADN within an existing data center
- Providing a design for the grounding and bonding of new equipment in the data center and to each of the other communications closets within the building
- Eliminating the existing daisy chain network configuration prevalent between end user buildings on the campus by providing direct feeds from the ADN to each of the end user buildings designated by NETL. Each building will be stand-alone with direct feeds from the ADN making the network more robust and less susceptible to multiple building outages during faults or required maintenance
- Providing additional underground conduits to augment existing pathways where spare ducts were not available
- Providing single mode optical fiber cabling and low count copper (for emergency phone lines and alarm circuits) from the ADN to end user buildings to establish the new campus network
- Verifying and/or upgrading communications rooms in end user buildings throughout the campus to ensure that each is in a secure location or contained within a secure, lockable cabinet
- Upgrading bonding and grounding for communications rooms and equipment to be compliant with TIA standards and the National Electrical Code (NEC).

Estimated Construction Cost: $2.5 million.

Carnegie Mellon University

Pittsburgh, Pennsylvania

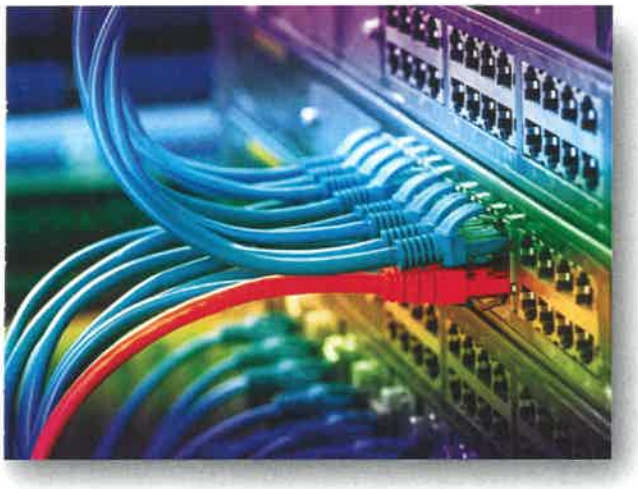
Mellon Institute Cable Plant Upgrade

CMU contracted with H.F. Lenz Company to provide design services to upgrade the 2200 outlet structured cable plant in the 320,000 sq.ft. research lab facility from IBM Twinax cable plant to a CAT 5e cable plant.

CMU's Mellon Institute was constructed in the 1930's and is registered on the National Register of Historic Places by the Nation Park Service. The Main distribution frame room was redesigned with all new fiber and copper backbone cabling provided to 11 new intermediate distribution frame closets. The MDF and IDF rooms were provided with new HVAC systems, emergency power, lighting, fire alarm and grounding.

H.F. Lenz Company coordinated with over 30 different laboratories for design and construction access.

H.F. Lenz Company incorporated the very thorough CMU Telecom design standards as the basis of design for the challenging project.



Carnegie Mellon University

Pittsburgh, Pennsylvania

Scott Hall Communications Cabling Project

H.F. Lenz Company was selected to provide the design of the communications cabling system for Scott Hall, a new, 109,000 sq.ft. multi-story, multi-function building on Carnegie Mellon's campus in Pittsburgh, Pennsylvania. In addition to housing the Wilton E. Scott Institute for Energy Innovation, it is also the new home to the Department of Biomedical Engineering, the Engineering Research Accelerator, the Disruptive Health Technologies Institute, and a nanotechnology research facility.

Services provided by H.F. Lenz Company included:

- Preparation of a site plan indicating pathways and cables required to connect Scott Hall to the existing campus network
- Floor plans indicating the layout and location of equipment and pathways associated with the communications cabling system.
- Riser diagrams for the communications cabling, schematically indicating the cable quantities and configurations
- Enlarged floor plans and elevations for cabinet and rack configurations, demarc rooms, MDF's and IDF's, as necessary. The enlarged floor plans indicate the location of the rooms or area. The rack elevations indicate the location of all patch panels (both copper and fiber), wire managers, ground bars, and space allocated for Client supplied equipment
- Installation details showing various mounting details for patch panels, information outlets, etc. and explaining specific installation
- Development of specifications for the communications cabling components. This section, in addition to describing the technical criteria of the components, also describes the qualifications for the installation contractor, the testing required of the cabling system, and documentation to be submitted.

The building officially opened April 30, 2016.

The approximate cost of the project was $450,000.

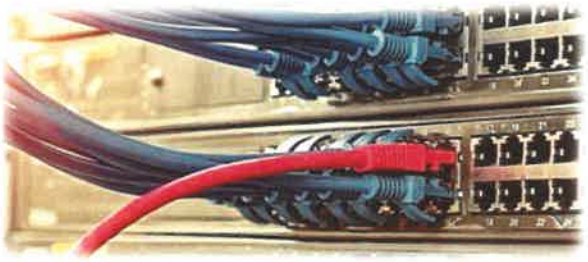
Town Place Building

Pittsburgh, Pennsylvania

Communications Cabling System

H.F. Lenz Company designed a Passive Optical Network (PON) as part of the renovation of this 12-story mixed-use building in downtown Pittsburgh. The main scope of the project consisted of converting the 10th, 11th, and 12th floors into executive apartments totaling 60,000 sq.ft. The project also included a new 9,800 sq.ft. Penthouse. The total building is approximately 280,000 sq.ft.

H.F. Lenz Company developed drawings that included floor plans, riser diagrams, and details that were the basis of design for the communications system



The Passive Optical Network included:

- Security Cameras /Security System tied into the PBX that provides authorization and personnel tracking with card readers
- Blue Light Stations in the garage that communicate with the guard station upon panic activation
- Telephone Service that operates similarly to a hotel system
- Cell Phone Coverage throughout the apartments, common spaces, conference room, and lobbies
- Internet Services and Network Access
- Wi-Fi service throughout the apartments, common spaces, conference room, and lobbies
- Television Service / Satellite TV
- Building Automation System.

The new system covered all areas in the building including residences, common areas, lobbies, conference rooms, and parking garage floors.

The approximate cost of the project is $1.4 million.

University of Pittsburgh Medical Center

Pittsburgh, Pennsylvania

Next Generation Data Center – Data Cabling and DC Power Infrastructure

The H.F. Lenz Company was selected to design the data cabling and DC power infrastructure for the University of Pittsburgh Medical Center's new 40,000 sq.ft. Next Generation Data Center.

The data cabling involved working closely with various IT stakeholders to develop interconnection media technical requirements and topology for this complex, multi-layered, mesh network. The requirements of the project required the H.F. Lenz Company to work closely with the optical fiber manufacturers to confirm availability of product in the required timeframe and to confirm compatibility with the selected IT hardware. This effort required development of multiple solutions for mounting the patch panels and network hardware to accommodate IT switches, SAN fabric switches, standard server and SAN cabinets, and pre-populated "roll-on" equipment cabinets.

In addition to the data cabling infrastructure, the H.F. Lenz Company was also chosen to design redundant, scalable, 2,000amp DC power plants for critical core network components. The development of the power system involved detailed coordination with both the manufacturers of the DC power plants and the IT equipment, in addition to the UPMC IT stakeholders, to assure all the proper components were supplied with the DC plants and the appropriate branch circuit capacities and quantities were provided for each piece of IT equipment. This system also required considerable effort to coordinate the installation of the power distribution cable trays and the above rack distribution panels with the base building systems and data cabling infrastructure.

The project timetable required an accelerated development of the construction documents. The acceleration required continued involvement with the IT stakeholders, after the construction documents were issued, as network and SAN data cabling and DC power requirements were refined by UPMC. Many of the refinements resulted in modifications to the issued construction documents requiring rapid production of revised documents and coordination with the selected contractor and equipment supplier.

Yale University

New Haven, Connecticut

Telecom Switch Room Relocation

H.F. Lenz Company was selected to provide a critical telecom-switching hub serving the central campus of Yale University is located in the sub-basement of the University Commons Building. Major construction activities are currently being planned in this area that will potentially put the University's communications systems at risk for failure. As an alternate to an elaborate protection scheme, Yale University has decided to relocate the switch room facility. This project involved relocating and consolidating the critical telecom switch room equipment serving approximately 100 buildings at the central campus as well as providing support for decommissioning an obsolete PBX system and consolidating the campus copper and fiber optic infrastructure.

Services provided by H.F. Lenz Company included:

- Determined the optimal dimensions and location of the room based on IT equipment requirements, cost effectiveness, site constraints and constructability.
- Consolidation and splicing approximately 3,500 strands of optical fiber to the new switch room location. Fiber included a combination of loose tube single-mode and multi-mode fiber as well as air blown fiber.
- Reduction and consolidation of copper telecom cabling by 75% from approximately 22,000 pair to 6,000 pair
- Designed a new consolidated conduit routing for the existing pathways affected by the new construction and connection to the new, relocated switch room.
- Designed new pathways connecting the new switch room to the existing switch room for the conduits unaffected by the construction
- Provided a logistics plan and point-to-point diagrams to enable the cut over from existing facility to the new relocated switch room.
- Designed equipment rack layout, wire management and two-tier cable tray system for the new telecom switch room. Provided rack elevations and locations of all new rack mounted and wall mounted telecom, security, fire alarm voice activated equipment components.
- Developed bonding and grounding network for the new switch room.
- Provided engineering design for power, cooling, fire protection, in addition to the communications infrastructure associated with the new switch room
- Provided Construction Administration Services (in progress).

WV Army National Guard
Buckhannon Readiness Center

Buckhannon, WV

The specially designed AFRC is permanent masonry type construction with standing seam roof, concrete floors, and mechanical and electrical equipment with emergency power generator backup. This 150 member training facility includes administrative, educational, assembly, library, learning center, vault, weapons simulator and physical fitness areas for one each WVARNG and USAR units. The maintenance shop provides work bays and maintenance administrative support. The project provided for adequate parking space for all military and privately owned vehicles.

This project has been coordinated with the installation physical security plan, and all physical security measures are included. All required antiterrorism protection measures are included. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123.

Supporting facilities include weapons cleaning, maintenance, issue, turn-in sheds, access roads, security fencing and dark motor pool lighting, vehicle wash system and pump house, fuel storage and dispensing systems, loading ramp, flammable materials storage building, controlled waste handling facility, and sidewalks. Extension of gas, electric, sewer, water and communication utilities to the building site is included. Physical security measures include maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, beams, heavy landscaping and bollards to prevent access when standoff distance cannot be maintained. Cost effective energy conserving features are incorporated into design.

services provided
Architectural Design

project delivery method
Design Bid Build

year completed
2017

project cost
$ 13.2 Million

project size
37,000 SF

WV Army National Guard
Eleanor Readiness Center

Eleanor, WV

The Armory facility in Eleanor, West Virginia is a single-story, brick masonry and steel structure located adjacent to the Maintenance Facility. The orientation of the building takes advantage of views of the wetland area and the Kanawha River. The Armory houses units of the state Army National Guard and one unit of the Navy.

The plan configuration is a result of meetings with each of the units and commanders, and consolidates areas under the responsibility of individual units to minimize travel. The separation of public versus unit specific spaces is dictated by the need for logical and efficient circulation as well as the direct relationship of spaces within those areas.

The location of the Assembly Hall is central to all spaces and adjacent to the main entrance due to its use for public and military functions. The hall is utilized by the military for drill training and dining, and by the public for gatherings such as banquets and dances. The Kitchen is located adjacent to the Assembly Hall to expedite meals to both civilians and the military. The Maintenance Work Bays and AFIST bay are located at the rear of the building for accessibility of military vehicles, as well as shielding the function of the areas from the entrance and the public. The AFIST bay is located adjacent to the Assembly Hall for the purpose of large group instruction within the hall and individual instruction within the bay area.

services provided
Architectural Design

project delivery method
Design Bid Build

year completed
2017

project cost
$ 13.2 Million

project size
83,900 SF

WV Army National Guard
Fairmont Readiness Center

Fairmont, WV

The specially designed AFRC is permanent masonry type construction with standing seam roof, concrete floors, and mechanical and electrical equipment with emergency power generator backup. This 150 member training facility includes administrative, educational, assembly, library, learning center, vault, weapons simulator and physical fitness areas for one each WVARNG and USAR units. The maintenance shop provides work bays and maintenance administrative support. The project provided for adequate parking space for all military and privately owned vehicles.

This project has been coordinated with the installation physical security plan, and all physical security measures are included. All required antiterrorism protection measures are included. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123.

Supporting facilities include weapons cleaning, maintenance, issue, turn-in sheds, access roads, security fencing and dark motor pool lighting, vehicle wash system and pump house, fuel storage and dispensing systems, loading ramp, flammable materials storage building, controlled waste handling facility, and sidewalks. Extension of gas, electric, sewer, water and communication utilities to the building site is included. Physical security measures include maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, beams, heavy landscaping and bollards to prevent access when standoff distance cannot be maintained. Cost effective energy conserving features are incorporated into design.

services provided
Architectural Design

project delivery method
Design Bid Build

year completed
2014

project cost
$ 25 Million

project size
91,500 sf

WV General Services Division
State Office Complex

Fairmont, WV

Omni Associates—Architects was selected by the West Virginia General Services Division to provide full architectural and engineering services for a new state office building located in downtown Fairmont.

It was important that the new building fit within the context of the downtown area's historical buildings while reflecting an era of progress and new growth. To that end, the building's exterior features traditional brick and cast stone masonry integrated with insulated formed metal panels and an aluminum curtainwall.

The building will be occupied by eight state agencies and include offices for the Secretary of State. Programming services included interviews of the individual agencies to determine the specific requirements of each. Interior fit outs include a variety of user-specific spaces including training rooms, interview rooms, waiting areas, individual offices, large open offices, break rooms, and kitchenettes.

Omni also provided all necessary surveying of the site, and all existing infrastructure systems and material to determine appropriateness for construction. Pre-construction services also included the verification, coordination, and documentation of extensions, tie-ins, and relocations of all utilities as well as an extensive demolition package released prior to the new construction package.

services provided
Architectural Design

project delivery method
Design Bid Build

year completed
2016

project cost
$ 17.6 Million

project size
80,000 SF

reference

Mr. Robert P. Krause, PE, AIA
WV General Services Division
1900 Kanawha Blvd. East
Building 1 Room MB-60
Charleston, WV 25305
304-558-9018

TAB 5 – Project Approach

PROJECT APPROACH

As the details of the project scope have not been provided, the initial phase of the project would begin with a kick-off meeting to clarify the project scope, objectives/expectations, and define other project specific design criteria. This phase will set project parameters by identifying:

- Project Requirements
- Project Objectives
- Telecom Basis of Design
- Base Access Requirements
- Challenges
- Schedule
- Project Budget for Construction Costs
- Available Existing Documentation

After the kick-off meeting, and prior to any site visits, we would like to obtain available documentation of existing conditions. After review of the documentation, a visit to the site will be conducted to observe existing conditions as they pertain to the scope of the project. Based on the information provided in the solicitation we anticipate this will include utility locating services. Observations of building interiors would also occur at this point and may include LIDAR scanning depending on the extent of work within the structures.

The 35% submission, in addition to indicating the data port locations and major cable runs, will focus on identifying potential conflicts between existing conditions and project objectives. Options for mitigating the conflicts will be presented for review, comment and resolution.

With each of the 35%, 65% and 95% submissions we would welcome the opportunity to meet with the appropriate parties to review the submission and discuss any comments.

Once the documents have been issued for construction we would expect to participate in a pre-proposal bidder's conference, respond to contractors RFI's, and provide comments to proposals received from the contractors.

While not specifically indicated, once the project is awarded for construction, HFL anticipates providing Construction Phase services generally consisting of submittal review, providing responses to the contractor RFIs, interpreting the construction documents, providing sketches or other clarifications for the contractor, and site visits during construction to observe construction with regard to the contract documents.

TAB 6 – References

Professional References

Mr. Max Dorosa
Campus Design and Facility Development
Carnegie Mellon University
417 South Craig Street
Pittsburgh, PA 15213
412-268-8936

Mr. Joseph Furmanski
Director, Data Centers Facilities
University of Pittsburgh Medical Center
Enterprise Technology Center
204 Forbes Tower
Pittsburgh, PA 15213
412-748-1765

Mr. Pete Bronder
Manager of Communications Cabling & Facility Infrastructure
Carnegie Mellon University
5000 Forbes Ave
Pittsburgh, PA 15213
412-268-8582