

State of West Virginia

Department of Administration
Purchasing Division

Statement of Qualifications

Architectural & Engineering Design Services

New Consolidated State Laboratory Facility Project

CEOI: 0211 GSD2400000002

November 14, 2023

11/14/23 13:18:57
WV Purchasing Division

OMNI
ARCHITECTS

**EXPRESSION OF INTEREST
ARCHITECT AND ENGINEERING SERVICES
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION**

NEW CONSOLIDATED LABORATORY FACILITY

CEOI 0211 GSD2400000002

NOVEMBER 14, 2023

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November 14, 2023

Melissa Pettrey, Senior Buyer
State of West Virginia
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305

Dear Ms. Pettrey:

Omni-Associates Architects is pleased to submit our qualifications to provide professional architectural and engineering services for the proposed new Consolidated State Laboratory Facility.

Over our 40+ year history as a firm, Omni has earned a reputation for design excellence by working intimately with our clients, listening to their needs and creating spaces that meet their needs and exceeds their expectations. Omni brings a deep portfolio of large office and multi-tenant building design experience that includes multiple projects for Federal, State and Local governmental agencies; projects that involve multiple stakeholders; projects that included phased design and construction, and for over 25 years Omni provided architectural services to Mylan Pharmaceutical for their laboratory and R&D spaces. Omni is very familiar with State projects having completed the WV State Office Complex in Fairmont, the WVAFRC facilities in Buckhannon, Eleanor and Fairmont as well as the WV State Police Troop 1 Headquarters to name a few.

Our partners for the Consolidated State Laboratory Facility are **HKS Architects**, who will serve as a **Subject Matter Expert** in laboratory planning and design. HKS is one of the largest architecture firms in the United States with experience on 150 science, technology and research projects totaling over 34 million square feet of lab space. **H.F. Lenz Company**, who brings vast expertise in the design of specialized MEP/FP systems for strictly controlled laboratory and research environments. Our partnership is based on a shared culture and trusted relationships, structured in a fully integrated project approach. We are currently working together at Fairmont State University on the renovation of their Health Sciences program. The final member of our team is **Barber & Hoffman, Inc.**, who we share a long history with and has provided structural engineering services for large educational, technology and science related facilities.

Our team has extensive experience in designing state laboratory facilities and planning state-of-the-art laboratories, and imaging facilities but most importantly, our work fosters collaboration and a sense of community for users and supports each department and agency's unique purpose and vision. Our team brings all of these aspects together as the foundation of a successful process to deliver a facility that advances the goal and objectives set forth for the Consolidated State Laboratory Facility.

In the following pages, we demonstrate how our team has successfully worked with state agencies like yours, with similar programs, goals, and challenges and how we propose to approach the Consolidated State Laboratory Facility based on its unique needs and mission.

We are eager to bring our experience to a collaboration with you and to help move this exciting project towards its realization, combining Omni's deep experience in West Virginia with HKS's legacy of enduring design and laboratory expertise.

Thank you for the opportunity to present our qualifications, we would certainly welcome the time to meet with the selection committee to discuss this project further and expand on how our TEAM is best positioned to assist the State of West Virginia in completing this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Adam L. Rohaly", with a horizontal line extending to the right from the end of the signature.

Adam L. Rohaly, AIA
Principal Architect

APPROACH TO GOALS AND OBJECTIVES

The planning and design process for multi-department laboratory has the program components at its heart. The experience of laboratory users and the resulting outcomes that support the agency missions are achieved across a platform of spaces and capabilities that must align with each unique mission but also realize efficiencies and synergies possible in a consolidated facility, leveraging all the advantages of a co-located operation.

The program for the Consolidated State Laboratory Facility will include not just laboratories but also administration areas; amenities; gathering and seminar spaces; and shared core resources. Each program component and space type has unique characteristics and specific technical requirements that are critical to their function. The manner in which these program components are arranged; their relationships with one another; their transparency and access to users; and the spaces between that provide common support, circulation, and collaboration opportunities have the potential to contribute significantly to the outcome of each stakeholders mission.

Our team offers the following brief synopsis of anticipated concepts and proposed methods of approach for achieving the listed goal and objectives provided in the Expression of Interest. Additional documentation is provided within.

Goal/Objective 1:

Our team brings a vast amount and a varied array of experience on the design and construction of similar laboratory facilities. Staff includes Registered Architects, LEED Accredited Professionals, Laboratory Planners, Subject Matter Experts, Project Managers and Drafters with experience on 150 science, technology and research projects totaling over 34 million square feet of lab space. The team's qualifications and experience are more specifically highlighted within the provided Project Team resumes and Past Projects contained within.

Goal/Objective 2:

The Past Projects within the response documents various experience from Iowa to China working with combining multiple entities in a single building. There are significant advantages combining multiple laboratories into a single location. But there can also be challenges when operating multiple laboratories with distinct missions within a shared facility. By their definition, laboratories are one of the most highly specialized space types to both build and operate and there are many efficiencies to be gained by combining them into a single facility. Successful approaches for this pursuit include reconciling standard equipment basis of design models across multiple agencies, gaining efficiencies in cores services, like HVAC, emergency generators, and piped gas services, managing the allocation of shared resources and ensuring isolation of each entity for shutdown and maintenance. Our team's experience can facilitate an efficient solution for combination of any combination of laboratory services.

Goal/Objective 3:

Laboratory facilities must be designed to allow for multiple phased projects, either as part of the initial build-out or as part of the long-term life of the building as occupants change or parts of the building are renovated over time. In both instances, the highly specialized laboratory equipment must be able to continue to function while work is occurring in adjacent areas. A strategy for phasing of specialized equipment within a shared facility includes sharing cores. Where multiple departments have need for similar or identical equipment, consolidate them into shared cores, allowing for a focused area of highly sensitive equipment that can be more effectively isolated. In addition to these benefits, shared cores also are more efficient to operate with a consolidated staff that serves multiple departments/agencies that will maximize resources for all occupants. Much of the experience contained within reflects strategies of successfully phased projects.

APPROACH TO GOALS AND OBJECTIVES

Goal/Objective 4:

Omni Associates is located a short drive away in Fairmont, West Virginia which allows our team to offer an almost immediate site presence as needed to service the project. HKS provides the team with a Subject Matter expert in the form of a global firm that is one of the largest Architecture Firm in the US with 1,600 employees. This reach allows our team to assemble and begin work immediately upon notification.

Goal/Objective 5:

Omni has over 40 years of experience in Architecture in West Virginia. Past Projects show our involvement working with WV state purchasing regulations on state owned, leased, advertised bid and other types of projects. Our approach to administering construction on these, and other, types of projects involve open communication early in the process to understand exact procurement and reporting requirements. We also incorporate necessary specifications during bidding ensuring a Contractor is aware and prepared to complete all required progress and completion documentation.

TAB 3

**DESIGN TEAM
QUALIFICATIONS**

DESIGN TEAM QUALIFICATIONS

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 and experience to create a diverse body of work.

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 public safety 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 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 firmly believe that the best gauge in determining our performance and abilities is the quality of the personnel of

which we are comprised. Omni's greatest resource is our professional staff of dedicated, experienced, and creative individuals. Our project team goes beyond our in-house staff however. Omni carefully selects its project team based on each member's ability to add directly-related experience, ensuring our ability to meet the specific challenges and goals of each client.

Throughout our years of experience, we have worked with a variety of consultants specializing in structural engineering, civil engineering, mechanical and electrical engineering, and other disciplines as each project dictated. You can be assured that the consultants we select for your project are selected for their particular and relevant experience as well as their superior work ethic.

It is the mutual respect of each team member's skills and perspectives that enables the design process to conclude with a successful project of which we all can be proud.

In short, for each project we undertake at Omni, we carefully staff our teams, including in-house professionals and outside consultants, with the type of personnel we would want working for us, to work for you.

DESIGN TEAM QUALIFICATIONS cont'd

Omni Associates - Architects provides comprehensive, in-depth professional architectural services for new construction, renovation, addition, and adaptive reuse utilizing a variety of delivery methods to best serve our clients' needs.

Design-Bid-Build Delivery Method

Omni has performed private and public projects of every building type using this traditional method of project delivery. We organize your entire project in advance of bidding and work extensively with you to achieve alternates to program goals. Construction documents are prepared and bid to multiple general contractors to achieve competitive pricing. Omni has successfully negotiated with contractors to maintain changes and costs to a minimum and still achieve the initial time schedule.

Omni has also worked on "fast-track" and "multiple-prime" contract projects to achieve an accelerated building construction time schedule. As a variation of the traditional design-bid-build delivery, the negotiated select team approach allows for selection of a contractor early in the design process. We prepare construction drawings in stages and bid these "parts" of the total building program so construction can be ongoing as the next phase is programmed and designed. We have worked with General Contractors, Construction Managers and multiple prime subcontractors to successfully complete this type of project delivery.

Design-Build Delivery Method

More and more owners and developers are seeking a simpler delivery style with a single point of responsibility for both design and construction. Under design-build, a consolidated entity provides both design and construction services to the owner. A single contract is established between the owner and the architect-contractor or design-

builder. Omni has experience with both scenarios and has contracted with owners and with general contractors to achieve this streamlined method of project delivery for two West Virginia schools as well as numerous private Owners. Additionally, Senior Principal, Richard T. Forren is a member of the West Virginia Design Build Board.

Construction Administration

Omni has worked on projects for only the construction phase of the total building life. This would include projects designed by another firm who needs local supervision or a "pre-designed" project from a national restaurant or store, which requires local implementation. Omni has also performed bank or financing inspections to determine the completion status of the project for periodic applications for payment.

DESIGN TEAM QUALIFICATIONS cont'd

Upgrading existing technology and utilizing the latest design tools available is a key component of our business model. Technology facilitates innovative design, results in economic benefits for our clients, and enhances communication with clients and consultants.

BIM: Building Information Modeling

In 2006, Omni Associates began the transition from traditional CAD software to Autodesk® Revit® Building Information Modeling (BIM). We immediately recognized the basic benefits to both designers and owners: more efficient, cost-effective project delivery, and an accurate building model that can later assist in both energy analysis and building management.

Omni implemented the use of BIM as our primary software platform for all projects in 2006. In utilizing BIM, we discovered the real depth of its value.

With a virtual model of the building, clients can clearly see the design intent as the project progresses and design options can be explored with greater ease than ever before.

Sharing the model among all disciplines as the design progresses allows early input from all of the design professionals involved, resulting in efficient designs.

Creating a building in the virtual world before constructing it in the real world allows the design team to anticipate conflicts and objections before they arise, eliminating many issues which could result in project change orders or Requests For Information from the contractor.

Omni is proud to show that we do not just use Revit software, but we are adept at utilizing it, and can provide skilled support as needed.

Omni Project Manager, Reuben Losh is now an Autodesk Revit Architecture 2011 Certified Associate.

Electronic Submission of Project Documents

Since 2007, Omni has utilized a web-based solution for secure file storage and project team collaboration. The site employs a simple and intuitive interface, similar to social networking sites, that is much easier to navigate than an FTP site. This encourages communication among team members while leveraging the security of data encryption and controlled access.

This tool supports building information modeling (BIM) workflows and can be used throughout all phases of a project for such tasks as file storage, RFI and Shop Drawing management, and project milestone tracking. Since these processes are electronic, the time it would take to mail or fax documents is eliminated and project information is centralized. Project information is hosted on secure third-party servers, which means that it is available to team members from wherever they have internet access. The Owner and Architect work together to determine to whom and to what extent site access is given.

ORGANIZATIONAL CHART



PRINCIPAL OWNERSHIP

Richard T. Forren, AIA, President
Adam L. Rohaly, AIA, Vice President
David A. Stephenson, Treasurer
John I. Rogers, III, Secretary
David E. Snider, AIA, Member

REVIT OPERATORS

Rich Greathouse
Greg Morris
Riley Tonkery

INTERIORS

Catherine Testerman

ARCHITECT EMERITUS

Stephen A. Barnum Founding
Member | Est 1980

INTERN ARCHITECTS

Sarah Crumit
Mariah Falcon

PROJECT MANAGERS

Reuben Losh, BIM Manager
Dan Baldwin

PROJECT SUPPORT

Shelly McLaughlin-Snider, Project Administrator
Eileen Layman, CPA
Allison Paton, Accounting Manager
Katie Nunan, Administrative Assistant

Firm Name

HKS, Inc.

Founded

1939

Global Headquarters

350 N Saint Paul Street
Suite 100
Dallas, Texas 75201, USA

Type of Organization

Subchapter S Corporation

Employees

1,600

Offices

29

Locations

Atlanta
Austin
Brisbane
Chicago
Dallas
Denver
Detroit
Dubai
Fort Worth
Houston
London
Los Angeles
Mexico City
Miami
New Delhi
New York
Orlando
Phoenix
Raleigh
Richmond
Riyadh
Salt Lake City
San Diego
San Francisco
Seattle
Shanghai
Singapore
Tokyo
Washington D.C.

About HKS

HKS is a global firm of architects, designers, planners and advisors who create places noted for their beauty and performance. Our 1,600 people in 29 offices are united by the belief that an environmental, social and governance approach to design achieves design excellence. In 2023, we became a carbon neutral firm. We value honesty, diversity and inclusion and we celebrate creative thinking. In partnership with our clients and collaborators, we craft powerful ideas and solutions. Together we create places that stand apart.

Rankings

No. 2 Ranked Architecture Firm

Ranked #2 in Building Design+Construction's 2023 Giants Top Architecture Firms list.

No. 3 Ranked Architecture Firm

Ranked #3 in Architectural Record's 2023 Top 300 Architecture Firms list.

No. 8 Ranked Green Building Firm

Ranked #8 in Engineering News-Record's 2022 Top 100 Green Buildings Design Firms.

1,122 Design Awards Firmwide

Since the firm's founding, HKS has earned 1,122 design awards, plus more than 100 individual and overall firm awards.

Practices

Aviation
Cities & Communities
Commercial
Cultural
Education
Government
Health
Hospitality
Life Science
Mission Critical
Mixed-Use
Residential
Senior Living
Sports & Entertainment

Service Lines

Architecture
Advisory Services
Computational Design
Experiential Branding
Interior Design
Master Planning
Programming
Project Management
Research
Resilience Design
Space Planning
Structural Engineering
Sustainable Design
Urban Design

HKS



150 Academic science, technology
or research projects completed

34M Designed 34 million sf
of academic lab space

\$6.2B \$6.2 billion in academic
science construction



H.F. Lenz Company

H.F. Lenz Co. was established 1946 in its present form, under the name H.F. Lenz Co., R.E., and in 1953 the company was incorporated, as a Private Corporation, in Pennsylvania as H.F. Lenz Company. Our projects span the nation, with the heaviest concentration in the Northeast, and exceed \$1.5 billion in MEP, Civil and Structural construction annually. Each market sector—corporate, government, health care, education, and industry—is served by a team of specialists who understand the unique needs of the clients they serve. Our staff consists of 170+ individuals, including 40 Licensed Professional Engineers and 15 LEED Accredited Professionals. Our headquarters is in Johnstown, Pennsylvania with branch offices in Pittsburgh and Lancaster, Pennsylvania; Conneaut, Ohio; and Middletown, Connecticut.

Disciplines/services offered in-house include:

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

H.F. Lenz Company has vast expertise in the design of specialized MEP/FP systems for strictly controlled laboratory and research environments for a wide variety of clients. Several of our projects have included multi-tenant/multi-use facilities. A few of our projects have included:

- Mylan Pharmaceuticals (approximately 20 projects completed with Omni Associates)
- Experience with government agencies, including multiple consecutive term contracts for CDC/NIOSH for work on the Morgantown and Pittsburgh campuses (approximately 20 projects completed with Omni Associates), and projects for USDA, DEA, DOE/NETL, GSA, the State of West Virginia and Pennsylvania Department of General Services (DGS)
- New PA State Police DNA Lab and New Headquarters Buildings - (PA DGS projects, multiple prime contracts, variety of lab spaces, offices and conference areas)
- New Bolton Center - New 55,000 SF facility with multiple pathology labs, BSL 3 labs, mass spectrometers, necropsy suite and bioprocessor (PA DGS projects, multiple prime contracts, collaboration between the University of Pennsylvania and multiple government agencies)
- Penn State University, New 132,000 SF Erikson Food Science Building with pathogen labs, a working dairy, laboratory and classroom spaces (PA DGS projects, multiple prime contracts)
- Penn State and West Virginia University - Multiple Ag Science projects involving labs, greenhouses, classrooms and collaboration spaces
- Cellomics (now Thermo Fisher Scientific) - New 160,000 SF multi-tenant building with various labs, research areas and Class 10,000 clean rooms
- Evoqua Water Technologies - New 18,000 SF lab and office building
- University of Delaware, 12,000 SF addition to house two fMRIs and associated lab space
- Extensive healthcare experience including a variety of laboratories, autopsy and morgue spaces and decontamination units

Our team members for this project have been working together for an average of 15 years. H.F. Lenz Company has been working with Omni Associates for approximately 30 years. We are currently collaborating with Omni and HKS architects on renovations at Fairmont State University for their Health Sciences program.



Johnstown Headquarters

1407 Scalp Avenue
Johnstown, PA 15904
Phone: 814-269-9300
Fax: 814-269-9301
www.hflenz.com



FIRM OVERVIEW



FOUNDED
1934

HISTORY

Barber & Hoffman, Inc. (B&H) is a prominent **structural engineering** firm serving the Midwest and Mid-Atlantic regions since 1934. Founded in Cleveland by C. Merrill Barber, operations have expanded with firm growth within offices in Pittsburgh and Columbus. This vision coupled with the ongoing efforts of the firm leadership and dedicated staff has created a remarkable legacy of notable public and private landmarks.

B&H serves design and construction professionals, medical, commercial, and educational institutions, building owners and managers, government agencies, contractors, fabricators, and developers. Versatile professional engineers, designers, and technicians couple their experience and knowledge with the latest design techniques, materials technology, and engineering software to produce efficient and effective design solutions.

B&H combines its extensive experience with technical design/drawing software to develop creative and effective solutions. Leadership believes successful project management is accomplished through the collaboration and targeted client communication.

B&H is a professional corporation with various small business enterprise (SBE) certifications.

RELEVANT EXPERIENCE

WEST VIRGINIA UNIVERSITY Advanced Engineering Building	Morgantown, WV
BELMONT COLLEGE Health Science Center	St. Clairsville, OH
BLUFFTON UNIVERSITY Science Laboratory Building	Bluffton, OH
CLEVELAND CLINIC Pathology & Laboratory Medicine Institute	Cleveland, OH
CLEVELAND DIVISION OF POLICE Police Headquarters and Police SWAT <i>(In Design Phase)</i>	Cleveland, OH
CORNING, INC. Research, Lab, and Manufacturing Facility	Corning, NY
HIRAM COLLEGE Gerstacker Science Hall	Hiram, OH
JOHN CARROLL UNIVERSITY Dolan Center for Science & Technology	University Heights, OH
MANSFIELD UNIVERSITY Grant Science Center	Mansfield, PA
MOUNT ALOYSIUS UNIVERSITY Pierce Science Building Addition	Cresson, PA
THE OHIO STATE UNIVERSITY Biological Sciences Building 6th Floor Laboratory	Columbus, OH
OHIO UNIVERSITY Heritage College of Osteopathic Medicine: Phase I and Phase II	Athens, OH
UH AHUJA MEDICAL CENTER Sports Medicine Institute	Beachwood, OH
UNIVERSITY OF PITTSBURGH Chevron Science Center Annex Graduate School of Public Health Addition	Pittsburgh, PA

barberhoffman.com

PERSONNEL

4 Principals
25 Engineers (16 Registered)
4 LEED AP Personnel
5 Technicians

CAPABILITIES

New Structures
Existing Structures
Parking Garages
Building Assessments
Restoration
Facades
Forensic

MARKET SECTORS

Education
Healthcare
Commercial
Institutional
Housing
Recreation
Parking Garages
Municipal
Civic
Design-Build

STATE REGISTRATIONS

Ohio
Pennsylvania
District of Columbia
Florida
Illinois
Indiana
Maryland
Michigan
New Jersey
New York
North Carolina
South Carolina
Missouri
Virginia
West Virginia
Texas



West Virginia University
Advanced Engineering
Research Building
Morgantown, WV

ADAM L. ROHALY, AIA, NCARB, LEED AP BD+C

PRINCIPAL - OWNER, VICE PRESIDENT

Adam joined Omni Associates—Architects in 2013 after a 10 year career with Stubs Muldrow Herin Architects in South Carolina. Adam became a Principal in 2015 and an Owner in the Company in 2018. Adam combines a strong technical background with a creative design experience portfolio includes health care, governmental, commercial office, retail, educational and recreation projects. Adam has served as a Principal In Charge and Project Architect on projects ranging from single tenant fit-outs to large multi-story structures.

T: 304.367.1417 M: 304.816.2810 E: arohaly@omniassociates.com

RECENT AND NOTEABLE EXPERIENCE

Adam has been involved in the following projects:

City of Fairmont East Side Fire
Station No. 2
Fairmont, West Virginia

WVU Athletic Performance Center
Morgantown, West Virginia

Middletown Commons
Fairmont, West Virginia

Mon Health Medical Park
Morgantown, West Virginia

Corduroy Inn
Snowshoe, West Virginia

Mountain Laurel Medical Clinic
Westernport, Maryland

Mon Health Heart & Vascular Center
Elkins, West Virginia

WV State Police Troop 1
Headquarters
Fairmont, West Virginia

East Marion Pool
Fairmont, West Virginia

Suncrest Town Centre Building 525
Morgantown, West Virginia

Tuscan Sun Spa
Canonsburg, Pennsylvania

* - *Davis Science and Research Hall*
Completed while working for SMH
Architects

Glennville State University
Athletic Facility Renovation
Glennville, West Virginia

Washington Jeep
Washington, Pennsylvania

WVU Golf Practice Facility
Bridgeport, WV

Curative Growth
Romney, WV

The Innovation Center
Fairmont, West Virginia

Preston Memorial Clinic
Renovation and Expansion
Kingwood, West Virginia

Transformations Care
Martinsburg, West Virginia

Technocap Expansion
Weirton, West Virginia

Mountain Laurel Medical
Center *Oakland, MD*

- WV Relief
- *Buckhannon, West Virginia*
 - *Clarksburg, West Virginia*
 - *Elkins, West Virginia*
 - *Martinsburg, West Virginia*

EDUCATION

University of Tennessee
Bachelor of Architecture: 2003

Cracow Technical University, Poland
Fairmont State College

REGISTRATIONS & AFFILIATIONS

American Institute of Architects, Member

American Institute of Architects—West Virginia,
Member

LEED Accredited Professional

U.S. Green Building Council, Firm Membership

Associated Builders and Contractors, Firm
Membership

Licensed General Contractor

International Council of Shopping Centers,
Member

Registered in West Virginia, Maryland, Pennsyl-
vania, North Carolina and South Carolina

DAVID E. SNIDER, AIA, NCARB

PRINCIPAL - OWNER, PROJECT ARCHITECT

David joined Omni Associates in 1995 and became a Principal Architect in 2015. In 2022, David became an Owner in the firm.

David's practice has included diverse project types including primary, secondary, and higher-education facilities, office buildings, secure, mission critical facilities, health care facilities, commercial design, multifamily and single-family housing, and manufacturing facilities.

David has extensive experience with the preparation of construction documents, material specifications, and bidding documents as well as construction administration. Known as one of Omni's most effective project managers.

T: 304.367.1417 M: 304.844.0877 E: dsnider@omniassociates.com

RECENT AND NOTEABLE EXPERIENCE

David has been involved in the following projects:

Town of White Hall: Municipal & Public Safety Building
White Hall, WV

WV High Technology Foundation:
White Collar Crime Offices
Fairmont, WV

WV High Technology Foundation:
White Collar Crime Data Center
Fairmont, WV

Confidential Client: Secure Facility
Mid-Western United States

Northrup Grumman
Fairmont, West Virginia

West Fairmont Middle School
Fairmont, West Virginia

Robert C. Byrd Aerospace Center
Bridgeport, West Virginia

Confidential Secure Inspection Facility
Mid-Western, United States

Fairmont State University
Fairmont, West Virginia

- Wallman Hall Renovations
- Colebank Hall Renovations

United Technical Center
Clarksburg, West Virginia

Wardensville Community Center
Wardensville, West Virginia

Pendleton County Courthouse
Franklin, West Virginia

Morgantown Utility Board Office
Morgantown, West Virginia

Confidential R&D Facility
Northeastern, United States

EDUCATION

Master of Architecture - Virginia
Polytechnic Institute: 2001

B.S. Engineering Technology
(Architecture) - Fairmont State College:
1989

Associate of Applied Design
(Drafting and Design) - Fairmont State
College: 1989

REGISTRATIONS & AFFILIATIONS

American Institute of Architects, Member

American Institute of Architects—West
Virginia, Member

Accredited Learning Environment Planner
(ALEP)

U.S. Green Building Council, Firm
Membership Associated Builders and
Contractors, Firm Membership

Registered in Colorado, Ohio, Michigan
and West Virginia

MARIAH FALCON

Project Manager

Mariah joined Omni Associates in May of 2021. Previously worked as an Intern Architect for the Mills Group. Prior to joining Omni Mariah worked as a BIM Application Specialist for MicroCAD providing training and detailed instruction for various architectural and engineering software including REVIT and CAD.

In her short time at Omni, Mariah has demonstrated the ability to quickly understand project development and management with a keen sense to think beyond the parameters of the task before her.

T: 304.367.1417 E: mfalcon@omniassociates.com

RECENT AND NOTEABLE EXPERIENCE

Mariah has been involved in the following projects:

- Moorefield Volunteer Fire Company:
New Fire Station
Moorefield, WV
- First Exchange Bank:
Renovation of existing building for a
new branch bank
Morgantown, WV
- Mountain Laurel Medical Center:
Renovation/addition to existing
building for a new medical clinic
Westernport, MD

EDUCATION

Master of Architecture: Lawrence
Technological University 2017

Master of Architecture:
University of North Carolina at
Charlotte; 2012

B.S. Architecture: Fairmont State
University; 2011

REGISTRATIONS &

AFFILIATIONS

U.S. Green Building Council, Firm
Membership

Associated Builders and Contractors
Inc., Firm Membership

Don Bush

AIA, LEED AP

Principal

Regional Practice Director, Life Science

Role: Sr. Project Manager

Don has dedicated his career to designing facilities that advance research and create life changing scientific breakthroughs for human health.

For over 26 years, Don has led large project teams on the programming and design of research facilities for many different science disciplines for pharmaceutical companies, universities, government agencies, research institutions, and private sector research and development clients. He has deep experience with science research facilities, vivaria, biocontainment facilities, research cores and medical education programs, from undergraduate science education to BSL-4 laboratories.

Background

Master of Architecture, Georgia Institute of Technology

Bachelor of Science in Architecture, Georgia Institute of Technology

American Institute of Architects

Construction Owners Association of America

LEED Accredited Professional

Society for College and University Planning



Relevant Projects

National Institutes of Health, Integrated Research Facility*

Ft. Detrick, Maryland

The new National Institutes of Health (NIH) / National Institute of Allergy and Infectious Disease (NIAID) Integrated Research Facility, the first new BSL-2/3/4 building constructed at the new National Interagency Biodefense Campus at Fort Detrick, mission involves using a clinical approach, with animals as surrogates, to develop vaccines and therapeutics to combat Select Agents. Prior experience with Smith Carter (now WSP)

New York City Public Health Laboratory*

New York, New York

The new building will replace the existing laboratory in Kips Bay with a modern and flexible facility to equip the institution to respond to a variety of pressing public health issues. It will offer testing and monitoring services for a wide range of clinical and environmental health concerns to provide advanced facilities for the laboratory's numerous focus areas. Prior experience with SOM

Norfolk Public Health Building, Eastern Virginia Medical Center*

Norfolk, Virginia

The Norfolk Public Health facility protects the health and environment of Norfolk through surveillance, service, and enforcement. The Public Health building provides an array of programs including Epidemiology, Emergency Planning, Environmental Health and Vector Control, Nursing and Clinical, Population Health, and Women, Infant and Children (WIC) services. It houses the Medical Examiner and the Virginia Bureau of Investigation Laboratories. Prior experience with Cooper Carry

Georgia Department of Agriculture, Tifton Agricultural Laboratories Facility*

Tifton, Georgia

26,000 sf building that houses a seed lab, four chemistry labs and multi-purpose areas and a 27,000 sf fuel and metrology laboratory. Project includes the renovation of the existing 5,500 sf building and new a 3,000 sf hazardous storage building. Prior experience with Cooper Carry and ERA Architects

HKS

*Experience prior to joining HKS

Ken DeBoer

Vice President

Role: Subject Matter Expert



As a young architect, Ken found his passion for the design of science facilities after working on several laboratory projects. He has a complete understanding of the complex laboratory planning and technical systems design issues, but also knows the importance of creating environments that encourage collaboration, discovery and learning among investigators, faculty and students. He works with the planning team to carefully consider operational costs and stewardship, understanding the business and operational can far exceed the investment in capital construction.

With over four decades of experience in laboratory planning and programming, Ken knows how to speak the language of scientists and relate to them on both a technical and creative level. He has a complete understanding of the new pedagogical models, instructional building concepts and the institutional challenges frequently encountered in implementing laboratory programs. Ken works closely with stakeholders to develop a unified future state that is supported by administrators, faculty and students.

Background

Bachelor of Architecture, University of Nebraska

NCARB Certified

Society of Collegiate & University Planners

Relevant Projects

Santa Cruz County Forensic Laboratory and Coroner Facility

Santa Cruz, California

Laboratory design services for a 26,900 sf forensic lab for the Sheriff's Department consisting of latent prints, toxicology, anthropology, vehicle processing and coroner autopsy suite

Alaska Department of Public Safety Statewide Crime Laboratory Project Program*

Anchorage, Alaska

Physical assessment and development of the project program for the proposed forensic laboratory including; laboratories for the analysis of ballistics, latent prints, DNA, trace evidence, drug chemistry, question documents and toxicology. Prior experience with Earl Walls Associates

San Mateo County Sheriff's Forensic Laboratory / Coroner's Office*

Redwood City, California

29,000 sf forensic facility for the analysis of trace evidence, fire arms, biological and toxicological evidence management and storage units. LEED Gold certified. Prior experience with Earl Walls Associates

National Institute of Biologicals Biomedical and Animal Facility*

Uttar Pradesh, India

146,723 sf laboratory to test all vaccine and antivenins imported into India, including safety assessment facilities utilizing rodents, rabbits and primates.

State of Iowa Laboratories Facility*

Ankeny, Iowa

167,013 sf, five-building laboratory complex including laboratory facilities for the Iowa Department of Agriculture and Land Stewardship, the University of Iowa Hygienic Laboratory, the Iowa Department of Public Safety Division of Criminal Investigation Crime Labs and the Iowa Department of Public Health Chief Medical Examiner. Prior experience with Earl Walls Associates

*Experience prior to joining HKS

Robert DeGenova

AIA, NCARB

Vice President

Role: Senior Laboratory Planner



Robert is a senior laboratory programmer and planner with over 30 years of experience specializing in master planning and design of science and technology facilities including pharmaceutical research and development, vivaria, biomedical and translational research, high-containment, cGMP manufacturing and government facilities. He has designed state-of-the-art projects on three continents for major corporations and research institutions. He brings leadership to large, collaborative teams combining his experience and unique perspective to the integration of the planning and design process

for each project. Robert is adept at understanding each project's needs and combines analytical problem-solving and definition to the balancing of project requirements, translating them into high-performance solutions.

Background

Bachelor in Architecture, New Jersey Institute of Technology

NCARB Certified

American Institute of Architects

Ad hoc committee member, Scientific and Technical Review Board

The National Institutes of Health, National Center for Research

Resources

Relevant Projects

Sterling Bay Heritage Square Master Plan

Durham, North Carolina

2 million sf, three-phase mixed-use master plan encompassing life science, office, retail and residential. The site includes a landscaped pedestrian plaza which is open to the community

Capstone Phase 2

Austin, Texas

1 million sf multiple-building campus for a tech company featuring a mixture of office, amenities and research and development facilities

Cardiovascular Research Foundation*

New York, New York

Skirball Science Center. Prior experience with Hillier Architecture

Duke University*

Durham, North Carolina

Medical science research building II, global health research building, (NIH funded, regional biocontainment laboratory), primate research center master plan, renovations to Main Vivarium. Prior experience with Hillier Architecture

New York University (NYU)*

New York, New York

College of Nursing, Dentistry and Bioengineering Institute Biomedical Chemistry Institute. Renovations to the Meyer Vivarium and NYU School of Dentistry. Prior experience with EYP

*Experience prior to joining HKS

Tom Giuggio

LSSYB

Vice President

Role: Senior Laboratory Planner



Tom's job is to work closely with the lab users, engineers and general contractor to orchestrate a successful project. He enjoys taking the hands-on approach to getting the job done.

As a project manager with more than 25 years of experience, Tom is responsible for planning, coordinating and supervising the document production for projects beginning in programming and continuing through construction. He continuously demonstrates his dedication and commitment to his clients. Throughout the project, Tom works closely with the lab users, engineers and the general contractor and develops custom details and researches special applications of materials and equipment.

Background

Associate of Science in Mechanical and Electrical Design,
Glendale College

International Society for Pharmaceutical Engineering International
Institute for Sustainable Laboratories BSL3 Facilities: Design
and Operation

Alpha Gamma Sigma Honor Society

Relevant Projects

Riverside Public Health Lab Program and Concept Design

Riverside, California

9,850 sf clinical lab renovation and expansion with 5,000 existing sf of renovation and 4,800 sf of expansion handling infectious specimens including a BSL-3 suite

Santa Cruz County Forensic Laboratory

Santa Cruz, California

Laboratory design services for a 26,900 sf forensic lab for the Sheriff's Department consisting of latent prints, toxicology, anthropology, vehicle processing and coroner autopsy suite

U.S. Department of Justice Drug Enforcement Administration Western Laboratory Renovation

Pleasanton, California

42,500 sf regional forensic facility with three, 10-chemist laboratories, NMR, evidence vault, offices, and in-process and evidence work room

State of Iowa Laboratories Facility*

Ankeny, Iowa

167,013 sf, five-building laboratory complex housing labs for the Iowa Department of Agriculture and Land Stewardship, the University of Iowa Hygienics Laboratory, the Iowa Department of Public Safety Division of Criminal Investigation Crime Labs and the Iowa Department of Public Health Chief Medical Examiner. Targeting LEED certification. Prior experience with Earl Walls Associates

Wisconsin Bureau of Criminal Investigation Madison Crime Laboratory*

Madison, Wisconsin

53,790 sf conversion of a state agriculture laboratory to a forensic laboratory conducting analysis of DNA, drug chemistry, toxicology, computer evidence, latent prints, ballistics and imaging. Prior experience with Earl Walls Associates

*Experience prior to joining HKS



Steven J Gridley, P.E.

Project Mechanical Executive/Quality Control

Mr. Gridley, as Senior Vice President of the H.F. Lenz Company, has served as a Team Leader for complex laboratory and research facility projects for over 35 years. He is responsible for overseeing the master planning and design of these facilities for government agencies, colleges and universities, healthcare facilities and industrial facilities throughout the U.S. He specializes in the design of modern, flexible, energy efficient laboratory and research facilities for a wide variety of end users. With over 44 years of experience in Mechanical Engineering and over 35 years of experience in Project Management, Mr. Gridley will oversee the project design and provide QA/QC for our project team. He has a long resume of successful project experience and a strong personal commitment to remaining directly involved with his projects and his clients to foster long-term working relationships.

Education

Bachelor of Science, Architectural Engineering, 1979, Pennsylvania State University

Experience

H.F. Lenz Company 1979-Present

Professional Registration / Certification

Licensed Professional Engineer in all 50 States and the District of Columbia

Professional Affiliations

First Place, 1987 ASHRAE International Energy Award

National Society of Professional Engineers

Pennsylvania Society of Professional Engineers
American Society of Heating

Refrigerating and Air-Conditioning Engineers

Building Officials Code Administrators International

Professional Engineers in Private Practice

National Fire Protection Association

Project Experience

West Virginia University, Morgantown, WV

- PIC for over 120 projects in the past 25 years
- Ag Science Building addition and renovation
- New Forestry Greenhouse
- White Hall, renovation of the 95,000 SF Physics Lab Building

CDC/NIOSH Morgantown, West Virginia and Pittsburgh, PA

- Multiple laboratory renovation projects and infrastructure studies and upgrades under consecutive term contracts

Cellomics (now Thermo Fisher Scientific), Pittsburgh, PA

- New 160,000 SF headquarters and research facility and multiple fit-outs for tenant and lab spaces throughout the building

University of Pittsburgh, Pittsburgh, PA

- Renovation of the 400,000 SF Benedum Hall, Swanson School of Engineering building and new 42,000 SF Mascaro Center for Sustainable Innovation addition - LEED Gold
- Life Sciences Complex - renovations to various buildings and building systems for the 200,000 SF complex
- Grad School of Public Health - Master plan and renovations to the 173,600 SF Parran Hall and 63,900 SF Crabtree Hall buildings

Yale University and Yale School of Medicine, New Haven, CT

- Multiple laboratory renovation projects under several consecutive term contracts

Rutgers University, Piscataway, NJ

- Addition and renovations to the School of Engineering EP2, Fiber Optics Building



Ryan W. Buff, P.E., C.E.M.
Project Engineer/Mechanical Engineer

Mr. Buff is experienced in the master planning and design of research facilities, health care facilities including acute care hospitals, and medical office buildings. He is also experienced in the design of heating, ventilating, and air conditioning systems including steam, hot water, chilled water, refrigeration, and air distribution systems. Mr. Buff's involvement has encompassed field survey of existing conditions, engineering analyses, systems design, and the preparation of cost estimates. He has been involved in several energy conservation studies.

Education

Bachelor of Architectural Engineering, 2005,
The Pennsylvania State University

Experience

H.F. Lenz Company 2005-Present

Professional Registration / Certification

Licensed Professional Engineer
PA and OH

Certified Energy Manager,
sponsored by the Association of
Energy Engineers

Professional Affiliations

American Society of Heating,
Refrigerating and Air-Conditioning
Engineers

Pittsburgh Chapter - Pennsylvania
Society of Professional Engineers

Project Experience

Yale University and Yale School of Medicine, New Haven, CT

- More than 15 Laboratory Projects including the following
- Wright Nuclear Structures Laboratory: study, cost estimates, and renovation of 52,000 SF lab and office space
- Electron Accelerator Laboratory: renovations of 65,000 SF of lab and office space
- W-ISTC EM Core: Renovate electron microscope lab facility
- W-ABC glass wash facility upgrade
- W-ABC Freezer Farm: cooling, monitoring, and exhaust system for 350 SF freezer and cryogenic storage room
- W-SRC clean room - Class 10,000 clean room new build
- 300 George St. 2nd floor laboratory renovation: multi-discipline fit-out of entire 2nd floor for future lab tenant
- 300 George St. 6th floor laboratory renovation: multi-discipline fit-out of entire 6th floor lab tenant
- Greeley Memorial Laboratory: Chemistry Lab & Offices
- BCMM 437 Laboratory Microscope
- BCMM B03 Laboratory Microscope Rooms
- TAC NL MRI Upgrade

WVU Medicine, Ruby Memorial Hospital, Morgantown, WV

- Design of New 10,000 SF. Clinical lab - current project
- New 176,000 SF addition and 47,000 SF renovations and morgue

Veterans Affairs Medical Center, Philadelphia, PA

- Renovation of the clinical lab in 10 phases and maintain operations during construction

Allegheny Health Network (AHN) West Penn Hospital, Pittsburgh, PA

- New Melanoma/Skin Care Research Lab - current project
- Grossing and Histology Lab
- Evaluation of HVAC and electrical systems for upgrades

**Education**

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

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

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

Experience

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

Professional Registration / Certification

Licensed Professional Engineer in PA • Certified LEED Professional

Professional Affiliations

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

John C. Stewart, P.E., LEED-AP
Mechanical Engineer

Mr. Stewart has over 39 years' experience in the design of HVAC, plumbing, and fire protection systems. His responsibilities include code compliance verification, schematic layout, calculations, equipment selection, control system selection, specification writing, coordination, life cycle cost analyses, and cost estimating. His experience includes the design of mechanical systems for laboratories, hospitals, educational facilities, industrial plants, and military installations. He has also been involved in the design of chiller and boiler plants.

Project Experience**Pennsylvania State Police, Greensburg, PA**

- New 31,000 SF State Police Headquarters building with forensics unit and various types of lab spaces
- New 50,000 SF DNA lab building

New Bolton Center, Chester County, PA

- New 55,000 SF facility with Microbiology Lab, a variety of Pathogen Labs, BSL 3 labs, PCR/Molecular Diagnostics and 20 mass spectrometers - current project

The Pennsylvania State University, Various Campuses

- Berks Campus: New 62,000 SF Gaige Technology and Business Innovation Center with Café and outdoor terrace with flexible collaboration spaces - LEED Gold
- University Park Campus - New 132,000 SF Erickson Food Science and The Creamery with outdoor terrace
- Ag Sciences Building renovations

U.S. Drug Enforcement Administration, Pittsburgh, PA

- New two-story, 50,000 SF office building

NETL (National Energy Technology Laboratory), Various Locations

- Indefinite Delivery-Indefinite Quantity (IDIQ) contract for NETL facilities in Morgantown, WV, Bruceton, PA, and Albany, OR - Over 100 projects completed and facilities include 81 buildings and 14 major research facilities on nearly 200 acres

Carnegie Mellon University, Pittsburgh, PA

- College of Fine Arts study and design for renovations
- Mellon Institute lab projects
 - Urban Lab, 1,800 SF, Biology Lab
 - Linstedt Lab, 1,400 SF, Biology Lab
 - Das Lab, 1,400 SF, Chemistry Lab
 - McCullough Lab, 1,200 SF, Biology Lab
 - MacBeth Lab, 4,000 SF, Biology Lab
 - Hinman Lab, 1,900 SF, Biology Lab
- Full MEP renovation of the 217,000 SF Doherty Hall chemistry lab building

University of Delaware, Newark, DE

- Life Sciences Complex addition for new MRI and lab spaces



Thomas F. Deter, P.E., LEED AP
Project Electrical Executive/Quality Control

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

Education

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

Experience

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

Professional Registration / Certification

Licensed Professional Engineer in PA, AR, ID, IL, IN, MD, NE, NJ, NC, OH, OK, OR, SD, VA, and WV

LEED Accredited Professional

Professional Affiliations

NSPE/PSPE
U.S. Green Building Council

Project Experience

Pennsylvania State Police, Greensburg, PA

- New 31,000 SF State Police Headquarters building with forensics unit and various types of lab spaces
- New 50,000 SF DNA lab building

New Bolton Center, Chester County, PA

- Feasibility study and engineering design for the 55,000 SF Center including Microbiology Lab, Large Animal Pathology Lab, Poultry Pathology Lab, Toxicology Lab, a Field Investigation Office, lab space convertible to Biological Safety Level 3 Facilities

The Pennsylvania State University, Various Campuses

- Altoona Campus: Feasibility study and conceptual design for Smith Hall including specialized laboratories
- Behrend Campus: New 179,000 SF Burke Research and Economic Development Center including various lab spaces
- Berks Campus: New 62,000 SF Gaike Technology and Business Innovation Center with Cafe - LEED Gold
- University Park Campus: New 132,000 SF Erickson Food Science facility with a variety of labs and a working dairy

U.S. Drug Enforcement Administration, Pittsburgh, PA

- New two-story, 50,000 SF office building

NETL (National Energy Technology Laboratory), Various Locations

- Indefinite Delivery-Indefinite Quantity (IDIQ) contract for NETL facilities in Morgantown, WV, Bruceton, PA, and Albany, OR - Over 100 projects completed and facilities include 81 buildings and 14 major research facilities on nearly 200 acres

Carnegie Mellon University, Pittsburgh, PA

- College of Fine Arts study and design for renovations
- Full MEP renovation of the 217,000 SF Doherty Hall chemistry lab building
- Mellon Institute lab projects
 - Urban Lab, 1,800 SF, Biology Lab
 - Linstedt Lab, 1,400 SF, Biology Lab
 - Das Lab, 1,400 SF, Chemistry Lab
 - McCullough Lab, 1,200 SF, Biology Lab
 - MacBeth Lab, 4,000 SF, Biology Lab
 - Hinman Lab, 1,900 SF, Biology Lab



Brian D. Schmidt, P.E. **Electrical Engineer**

Mr. Schmidt has extensive experience in electrical system modeling and computer calculations (SKM Power Tools) for producing engineering drawings for various types of higher educational, commercial, institutional, and governmental facilities. His experience in the electrical field includes the design of generators, emergency lighting and power distribution systems; exterior high-voltage underground and overhead pole line distribution systems; medium-voltage switchgear building interior and exterior electrical power distribution systems; lightning protection systems; theatrical stage dimming systems; computer room grounding systems and signal reference grid systems; uninterruptible power supply systems; paralleling and synchronizing switchgear; interior and exterior building lighting systems; site utilities; grounding systems; and signal, communication, security, and fire alarm systems.

Education

Bachelor of Science, Electrical Engineering Technology, 2006, University of Pittsburgh at Johnstown

Experience

H.F. Lenz Company - 2006

Professional Registration / Certification

Licensed Professional Engineer in PA • Completion of PTW Software and Power Systems Application Courses through IEEE • Completion of Battery Technology and Battery Monitoring through Liebert Corporation

References

Ron Lincoski
Assistant Director of Trades
California University of Pennsylvania
724-938-5356
lincoski@calu.edu

Nathan Patrick
Project Manager
Pennsylvania State University
814-865-3640
NTP111@psu.edu

Project Experience

New Bolton Center, Chester County, PA

- Feasibility study and engineering design for the 55,000 SF Center including Microbiology Lab, Large Animal Pathology Lab, Poultry Pathology Lab, Toxicology Lab, a Field Investigation Office, lab space convertible to Biological Safety Level 3 Facilities

NETL (National Energy Technology Laboratory), Various Locations

- Indefinite Delivery-Indefinite Quantity (IDIQ) contract for NETL facilities in Morgantown, WV, Bruceton, PA, and Albany, OR - Over 100 projects completed and facilities include 81 buildings and 14 major research facilities on nearly 200 acres

Carnegie Mellon University, Pittsburgh, PA

- College of Fine Arts study and design for renovations
- Full MEP renovation of the 217,000 SF Doherty Hall chemistry lab building
- Mellon Institute lab projects
 - Das Lab, 1,400 SF, Chemistry Lab
 - McDonough lab renovation study
 - Hinman Lab, 1,900 SF, Biology Lab

The Pennsylvania State University, Various Campuses

- Altoona Campus: Feasibility study and conceptual design for Smith Hall including specialized laboratories
- Berks Campus: New 62,000 SF Gaige Technology and Business Innovation Center with Cafe - LEED Gold
- University Park Campus: Feasibility study for new resource lab
- College of Agricultural Sciences: Multiple renovations, infrastructure upgrades, laboratory spaces and greenhouse projects - Multiple sizes and budgets
- Beaver Campus: Baker Engineering and Sciences Building Feasibility Study and Harmony Building Feasibility Study
- Allegheny Campus: Ostermayer Lab Building study



Joel C. Shumaker, P.E., LEED AP Electrical Engineer

Mr. Shumaker is responsible for client contact, project scheduling, preparation of reports and cost estimates, coordination and supervision of project design teams, and other project management functions. Mr. Shumaker is experienced in the design of electrical systems for both new buildings and building retrofits for educational, health care, commercial, government, industrial, residential, and utility-related facilities. He is experienced in the design of power distribution systems; emergency power systems and monitoring; uninterruptible power supplies; lighting and emergency lighting systems; fire alarm systems; nurse call; security; sound; and telephone systems.

Project Experience

CDC/NIOSH Bruceton Research Center, Bruceton, PA

- Evaluation/assessment of the entire power distribution system for the 100+ acre campus with a total of 104 buildings
- Boiler study for 51 buildings and subsequent design for decentralization

CDC/NIOSH Morgantown, WV and Pittsburgh, PA

- Multiple laboratory renovation projects and infrastructure studies and upgrades under consecutive term contracts

U.S. Department of Agriculture, Morgantown, WV

- Tenant-fit out of approximately 40,000 SF of a GSA-leased building - LEED Certified

Evoqua Water Technologies, Pittsburgh, PA

- New 18,000 SF building with wet lab and office space

Mylan Pharmaceuticals, Morgantown, WV

- Multiple projects involving design of laboratories, clean rooms, warehouses, offices and storage space

University of Pittsburgh, Pittsburgh, PA

- Phased renovation of the 400,000 SF Benedum Hall and new 42,000 SF Mascaro Center for Sustainable Innovation building housing wet and dry lab - LEED Gold
- Life Sciences Complex – renovations to various buildings and building systems for the 200,000 SF complex
- Grad School of Public Health - Master plan and renovations to the 173,600 SF Parran Hall and 63,900 SF Crabtree Hall buildings

University of Pittsburgh at Johnstown, Johnstown, PA

- Engineering and Science Building renovations and addition and new chemical engineering building addition

Education

Bachelor of Science, Electrical Engineering Technology 1993, University of Pittsburgh at Johnstown

Experience

H.F. Lenz Company 1985-Present

Professional Registration / Certification

Licensed Professional Engineer in PA, CT, DE, MD, NY, VT, VA and WV

Professional Affiliations

Pennsylvania Society of Professional Engineers, Johnstown Chapter Secretary

National Society of Professional Engineers

Keystone Chapter of Association of Physical Plant Administrators

International Society of Pharmaceutical Engineers (ISPE)



Jeffrey L. Jarvis

Plumbing/Fire Protection Designer

Mr. Jarvis is highly experienced in all aspects of the design and commissioning of plumbing systems including medical gas systems, acid waste and vent, plumbing fixture requirements, decontamination chambers and complete plumbing system requirements for health care, correctional, institutional, industrial, educational, and commercial facilities. He also has several years of hands-on experience with a variety of field plumbing healthcare systems including laboratory, medical gas, and balancing return systems. Mr. Jarvis coordinates with other trades, municipal fire protection authorities, utility companies, and with the Project Engineer and project Architect.

Project Experience (*indicates previous experience)

WVU Medicine, Ruby Memorial Hospital, Morgantown, WV

- Design of New 10,000 SF. Clinical lab (current project)
- New 176,000 SF addition and 47,000 SF renovations and morgue

Children's National Medical Center, Washington, DC

- New 150,000 SF addition and 5,200 SF renovations to create a new Animal Research including BSL-1 and BSL-2 spaces

MetroHealth, Cleveland, OH

- New GMP (Good Manufacturing Practice) Cleanroom Facility

UPMC Altoona, Altoona, PA

- 600 SF morgue relocation
- T3 clinical lab renovation
- T2 pharmacy renovation with both hazardous and non-hazardous clean rooms
- Laboratory expansion and renovation, CSR expansion and renovation, surgical suite expansion

Veterans Affairs Medical Center, Philadelphia, PA

- Full Dental Clinic renovation, which required a temporary dental lab to be built prior to the demolition of the old lab

Pennsylvania Department of Labor, Pittsburgh Job Corps, Pittsburgh, PA

- New Medical/Dental Building including simulation labs

University of Pittsburgh, Pittsburgh, PA

- Various projects involving research labs, office facilities, and conference spaces at the main and branch campuses

Education

Associate Degree, Specialized Technology, Mechanical Drafting, 1988, Hiram G. Andrews Center, Johnstown, PA

Experience

H.F. Lenz Company 1989-Present

L. Robert Kimball and Associates, 03/89 – 09/89, US Government, The Pentagon, 06/85 – 08/85

Professional Registration / Certification

ASSE 6005 Certified Medical Gas Specialist

American Society of Plumbing Engineers, Medical Gas Professional Healthcare Organization



Education

B.S. in Mechanical Engineering
Technology, 2000, Point Park
College

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

Technology, Triangle Institute of
Technology

Experience

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

Professional Registration / Certification

Certified in Plumbing Design,
ASPE

Gregory D. Rummel, CPD

Plumbing/Fire Protection Systems Designer

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

Project Experience

PA State Police, Greensburg, PA

- New DNA Laboratory Building
- New 31,000 SF Headquarters

New Bolton Center (NBC) Feasibility Study, Chester County, PA

- Feasibility study and design services for a new 55,000 SF, facility to provide diagnostic, forensic, and research support services to the PA Dept of Agriculture through the PA Animal Diagnostic Laboratory System (PADLS) and the PA Equine Toxicology and Research Laboratory (PETRL)

DOE/NETL - Morgantown, WV, Pittsburgh, PA and Albany, OR

- Multiple laboratory renovation projects and infrastructure studies and upgrades under consecutive term contracts

U.S. Drug Enforcement Agency, Pittsburgh, PA

- New 50,000 SF office building and parking garage –LEED Certified

The Pennsylvania State University, University Park, PA

- College of Agricultural Sciences - Multiple renovations, infrastructure upgrades, laboratory spaces and greenhouse projects
- New 132,000 SF Erikson Food Science Building
- Swine Research facility renovations
- NARCO Building – Steady Thermal Aero Research Turbine (START) Lab
- Nano Tech Modular Clean Room Lab

University of Delaware, Newark, DE

- New 12,000 SF addition to the Life Sciences building to house two MRIs and 5,000 SF of associated lab space

Carnegie Mellon University, Pittsburgh, PA

- Mellon Institute - various infrastructure upgrades and fit-outs for a variety of lab spaces in the 350,000 SF lab building

MICHAEL R. MILLER, PE

ROLE: Structural Project Manager

Joined the Firm
1990

Mr. Miller is a Principal in Charge and Project Manager on commercial, institutional, medical, research and restoration projects. He is experienced in structural analysis and design of new structures; investigation, restoration/renovation and reuse of existing structures; building masonry facade investigation, remediation/restoration; preparation of feasibility studies; contract documents and specifications.

In addition, Mr. Miller's collaborative design approach has allowed his clients to develop and incorporate unique, but practical solutions on their projects. His project structural systems capabilities encompass; steel, composite steel, steel joist and joist girder, wood, timber, masonry, reinforced concrete and precast concrete. Foundation systems design includes conventional spread footings, drilled piers (caissons), auger cast concrete piles and slab-on-grades on expansive soils, as well as performance specifications for concrete underpinning and soil nailing.



Education

Cleveland State University, 1996
Master of Science in Civil
Engineering

The Pennsylvania State University,
1990 Bachelor of Architectural
Engineering (Structural)

Registration: PE 1997

Ohio
Pennsylvania
Maryland
New Jersey
New York
Virginia
West Virginia

Professional Affiliations

Structural Engineers Association
of Ohio

Code Management Review Board
for City of Butler, PA

American Institute of Steel
Construction

First Sergeant (retired)
Pennsylvania Army National Guard



University of Pittsburgh
Chevron Science Center
Pittsburgh, PA

REPRESENTATIVE EXPERIENCE

★ = Projects completed with Omni Associates.

CITYNET CENTER ★The Bridge Sports Complex	Bridgeport, WV
FAIRMONT FEDERAL CREDIT UNION ★Drive Through Bank	Fairmont, WV
HARRISON COUNTY SCHOOLS ★Additions and Renovations	Bridgeport, WV
OHIO COUNTY SCHOOLS ★Additions and Renovations	Wheeling, WV
WEST VIRGINIA UNIVERSITY Advanced Engineering Building	Morgantown, WV
GLENVILLE STATE COLLEGE Science Building Renovations	Glenville, WV
GRAND VUE PARK ★Tree Top Villas	Pittsburgh, PA
UH AHUJA MEDICAL CENTER Sports Medicine Institute	Beachwood, OH
UPMC EAST HOSPITAL AND PARKING GARAGE	Monroeville, PA
UPMC LEMIEUX SPORTS COMPLEX	Cranberry Twp., PA
CARNEGIE MELLON UNIVERSITY Ansys Hall and Doherty Hall Additions (Phases 1 and 2)	Pittsburgh, PA
UNIVERSITY OF PITTSBURGH Biomedical Science Tower Infrastructure Chevron Science Center Annex Graduate School of Public Health Addition	Pittsburgh, PA
MOUNT ALOYSIUS UNIVERSITY Pierce Science Building Addition	Cresson, PA

TAB 5

PAST PROJECTS

CDC / NIOSH

National Institute for Occupational Safety and Health



SERVICES PROVIDED

Architectural Design

YEAR COMPLETED

2005-2010

2011-2015

Omni Associates – Architects was selected from among many national firms for an open-ended agreement to design laboratory additions and renovations for the Morgantown, WV and Pittsburgh, PA CDC/NIOSH facilities. This was part of the Federal “Set-Aside” procurement process for Small Business Concerns.

Omni worked jointly with Karlsberger and H.F. Lenz to provide comprehensive laboratory and Mechanical, Electrical, Plumbing Engineering.

Omni Associates — Architects was required to perform a minimum of 50 percent of the work as a part of the contract agreement. The 5 year agreement was implemented through individual work scope assignments that entailed on-site evaluations, program feasibility, construction documents, and construction administration. Omni Associates’ close proximity to both sites made the implementation of design criteria easier to coordinate with the CDC/NIOSH personnel.

MYLAN PHARMACEUTICALS

Research & Development Center

**SERVICES PROVIDED**

Architectural Design

DELIVERY METHOD

Design-Build

PROJECT SIZE

153,000 SF

PROJECT COST

\$14.8 million

YEAR COMPLETED

2009

Mylan Pharmaceuticals 14.8 million dollar Research and Development facility was constructed to help the expanding generic drug manufacturer grow by moving many non production functions into a separate state-of-the-art building. The existing plant was in need of more room but was unable to grow due to its confined site. The new building was sited several miles away on a sloping riverside area. Along with research and laboratory programs, the new building holds the sales and marketing teams, the accounting and information system departments and an expansive warehouse.

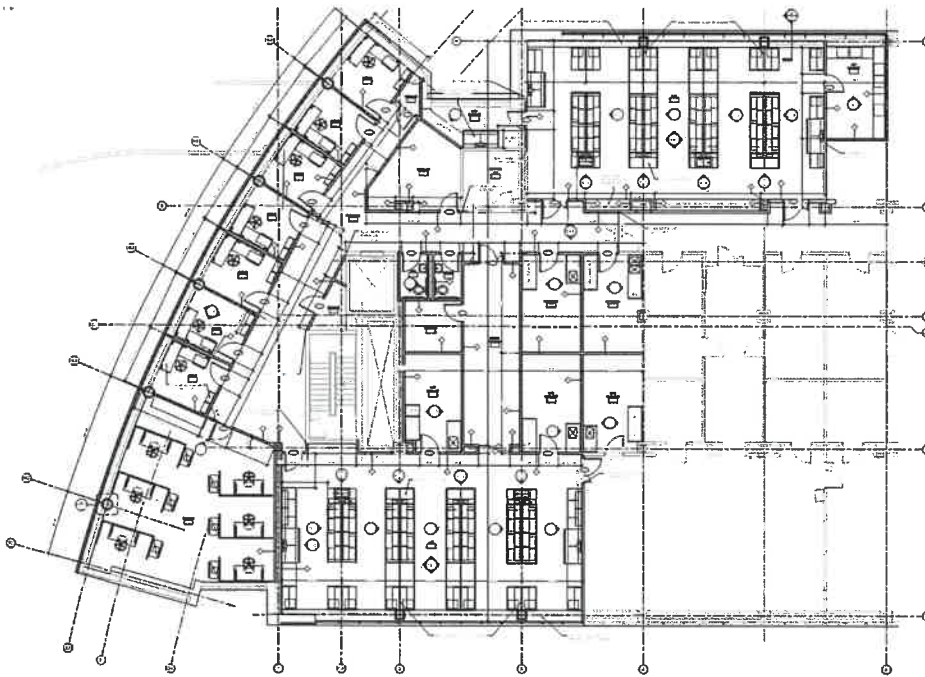
The site, due to its severe slope to the river, had to be excavated down twenty feet to create enough area for the 153,000 square foot building; the footprint being nearly one acre. The main entrance is located on the Third floor. Functionally, the building is divided by its program. The upper floor has research labs (Pharmacokinetics, Analytical Chemistry and Material Management) and a prototype production plant to manufacturer samples of new research. Teleconference and executive office space keep the research members near the work at hand as well as Mylan's other facilities and offices.

The Second floor is shared by Information Systems and Accounting. This floor also contains the building's lunch room and has the company's wellness center, good health being a company mission. The First floor has executive offices and a training center for sales and marketing. The bulk of this lower floor is designated for a materials warehouse. Raw materials and equipment for the research facility above is received, tested and quarantined.

All of the laboratories, production rooms and offices are design and equipped with the latest technologies from computer systems to room finishes. The Research and Development Center has enabled Mylan Pharmaceuticals to create new products and expand its manufacturing.

BLANCHETTE ROCKEFELLER NEUROSCIENCES INSTITUTE (BRNI)

Laboratory Fit Out

**SERVICES PROVIDED**

Architectural Design

DELIVERY METHOD

Design-Build

PROJECT SIZE

Vivarium: 1,727 SF

Lab: 9,288 SF

PROJECT COST

\$2.8 million

YEAR COMPLETED

2014

Omni Associates was selected to provide architectural and engineering services for the interior fit-out of unfinished spaces of the Blanchette Rockefeller Neurosciences Institute (BRNI) at West Virginia University. The spaces consist of 1,727 square feet of vivarium animal research rooms and working space for an electron microscope on the ground floor as well as 9,288 square feet of laboratory, office and conference room space on the first floor, including a multifunctional work space in the entrance lobby.

Because the building was partially occupied, special conditions were required during construction. All access to the building was through the exterior window system. In addition to the staffing working environment remaining intact, it was critical that animal research not be disturbed. Consequently, the timing of the project became a design element as there is only a two week period allotted for cutting and demolition work when animal research was between cycles.

The project included laboratory casework and some custom furniture millwork. The laboratory case-work is custom designed and allows for multiple functions within the lab. Likewise, the conference room and support offices had custom furniture millwork designed to accommodate the specific needs and geometries of those spaces. Modifications to the existing HVAC ductwork, electrical system, plumbing system, sprinkler system, generator connection and life safety systems will be provided as needed to support the newly finished spaces.

Engineering Sciences Building—Lab G85

West Virginia University



The lab in G85 was one of the final spaces in the College of Engineering's Lane Innovation HUB to be updated. The existing space received minor adjustments to walls to improve the layout of the main fabrication lab, create an enlarged interior room for finishing and layout from a small office, and to improve the separation of the mezzanine storage and the electrical equipment areas from the main fabrication floor. Selected ceilings were removed and new lighting installed to increase the height of the space and improve visibility when working on detailed projects. Bright finishes enhanced the light throughout the lab, relocated electrical service provided single access to service panels, a new shop floor provided a slip resistant and chemical resistant surface, and improved separation of spaces allowed for more hazardous activities to occur adjacent to non-hazardous fabrication work.

SERVICES PROVIDED

Architectural Design

DELIVERY METHOD

Design-Bid-Build

PROJECT SIZE

4,900 SF

PROJECT COST

\$422,000

YEAR COMPLETED

2022

Size:

167,000 sf

15,500 sqm

Completion:

2005

Services:

Laboratory design

Features:

5-building complex

consolidation

Department of Criminal

Investigation

Chief Medical Examiner

Department of Agriculture

and Land Stewardship

University of Iowa Hygienics

Laboratory

4 receiving areas

Forensic laboratory

Metrology laboratory

Certifications:

LEED certified

Project completed by Ken DeBoer
and Tom Giuggio prior to HKS as
a lab consultant to HDR/KJWW/
Shive-Hattery - a Joint Venture

State of Iowa Iowa Laboratories Facility

Ankeny, Iowa

The State Laboratories Facility consolidates Iowa's 4 State laboratories into a single 5-building complex improving operations, public access and public service. The complex houses the Department of Criminal Investigation, the Chief Medical Examiner, the Department of Agriculture & Land Stewardship and the University of Iowa Hygienics Laboratory and Metrology Lab.

The laboratories are highly adaptable, recognizing that scientific programs and methods will continue to evolve. Anticipating continued programmatic growth, the laboratory buildings can be easily expanded with minimal disruption to ongoing operations.

Each agency is provided separate facilities for the receipt of evidence, bodies, specimens, equipment and supplies. Two service yards provide access to the 4 receiving areas. The service yard between the medical examiner's facility and the forensic laboratory is secure, enabling the receipt of evidence and the transfer of bodies to occur in a secure and discrete environment.

The facility earned LEED Certification, and the laboratories are fully accredited.



Size:

268,000 sf

24,898 sqm

Completion:

2017 design only

Services:

Programming

Conceptual design

Laboratory planning

Features:

Clinical laboratories

Research laboratories

Public health laboratory

Blood bank

Vivarium

Core imaging

Forensic pathology and
mortuary services

Macau Government Hospital Phase 2 Laboratory Building

Macau, China

HKS provided programming, planning and laboratory fit-up for an 18-story, 268,000-square-foot shell building at the Macau Island Medical Center. The laboratory replaces deficient facilities and provides critical public programs for the Island of Macau, including: The Macau Island Hospital Clinical Laboratories, Blood Donation Center and Blood Bank; Biomedical Research Laboratories including animal resources and core imaging technologies; The Macau Drug Control Institute; The Macau Public Health Laboratory; Macau's Forensic Pathology and Mortuary Services.

HKS planners assisted laboratory leadership to benchmark space, evaluate new automation technologies and set the stage for their emergence as a world class service provider. Creating quality environments supporting recruitment, retention and adaptability were important project goals. The laboratories are based on the principles of modular planning with accessible/maintainable systems and right-sized systems capacity. Two additional floors of shell space were provided supporting anticipated program growth. Where possible, laboratories are open with access to ample natural light and views.



Size:

11,000 sf

Completion:

Study

Services:

Laboratory design

Features:

BSL 3 suite

Tuberculosis

Virology

Parasitology

Blood lead

Bac. T.

Necropsy

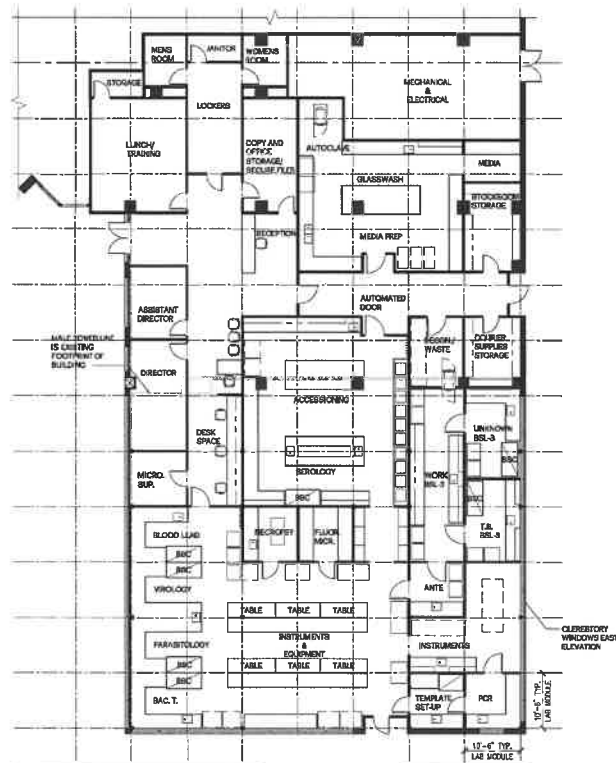
Glass-wash/Autoclave

Accessioning

Riverside Public Health Laboratory

Riverside, California

HKS completed a study to establish recommended design criteria for the modernization and expansion of the Riverside County Department of Public Health Laboratory. The existing facility was designed in 1982 and currently has a significant space and infrastructure shortfall; laboratory workstations are overcrowded, and special workspaces are required for the handling of infectious specimens. HKS incorporated project goals in the study that included right-sizing the laboratory to support the County's public health mission for the next 10 years, and to accommodate potential areas for future testing programs such as molecular diagnostics, indigent medical testing, and expansion of BSL-3. The facility would also improve operational efficiency and workflow, including specimen receiving, accessioning and testing.



PROPOSED PARTIAL FLOOR PLAN
GROUND LEVEL
SCALE 1/16"=1'-0"

Size:

26,900 sf
2,500 sqm

Completion:

2012

Services:

Laboratory design

Features:

Sheriff's crime/forensic lab

Crime scene investigation

Medical examiner's
coroner facility

Evidence handling and
property room

Laboratory design as a consultant
to Berry Swenson Builder

Santa Cruz County Center for Public Safety

Santa Cruz, California

This project converted a complex of existing commercial buildings into the County Center for Public Services. The 35,000-square-foot Building D was renovated and houses four primary functions including; sheriff's crime laboratory including vehicle exam, latent prints, ballistics, trace evidence and computer/cell phone; crime scene investigation unit; medical examiner's coroner facility; and evidence handling and property room.

In addition to replacing deficient and outgrown facilities this project creates quality work environments, consolidates programs, improves operations and will support accreditation of the crime laboratory and coroner facility.



Size:

42,500 sf

3,948 sqm

Completion:

2015

Services:

Architecture

Programming

Interior design

Laboratory planning

Laboratory design

Structural engineering

Features:

2-story renovation

Forensic sciences laboratory

Three, 10-chemist

laboratories

Three latent print examiners

U.S. Department of Justice Drug Enforcement Administration Western Regional Laboratory Renovation

Pleasanton, California

The Western Regional Laboratory is a 42,500-square-foot forensic sciences laboratory housing 30 chemists and three latent print examiners. Unlike the other regional laboratories, this facility is a renovation rather than new construction. The workspaces and functional organization of the building are modeled on the prototypical regional laboratory within the context of the selected existing structure. The project delivery system for the Western Regional Laboratory is design / build-to-suit / lease back. HKS was responsible for project programming, design, laboratory planning and construction administration services.

The client's team included representatives from the DEA, the GSA and the USACE. Additionally, the schedule for the programming, design and construction were extremely aggressive. To accommodate the DEA's scheduling requirement, the HKS team established an equally aggressive schedule of workshops and over-the-shoulder client reviews. This process and the extraordinary collaboration among the extended project team enabled the completion of programming and conceptual design in one month and the completion of the design development and construction document phases of work in four months.





NEW BOLTON CENTER

Feasibility Study and Design Services for New Facility

Chester County, PA

Services

Mechanical, Electrical,
Plumbing and Fire Protection

Square Feet

55,000

Completed

2019

Cost

\$55 million - Construction
\$37,320 - Study

Reference

Kim Kopple
University of Pennsylvania
School of Veterinary
Medicine
Penn Vet Facilities
3800 Spruce Street
Philadelphia, PA 19104
215-898-4228
kkopple@vet.upenn.edu

H.F. Lenz Company provided a feasibility study for the 55,000 SF New Bolton Center (NBC). We were subsequently retained to provide the MEP/FP design services for the project, which is currently in progress. The NBC will provide diagnostic, forensic, and research support services in various agencies including the Pennsylvania Department of Agriculture through the Pennsylvania Animal Diagnostic Laboratory System (PADLS) and the Pennsylvania Equine Toxicology and Research Laboratory (PETRL).

The existing facilities are scattered, outmoded and inadequate to effectively meet the needs of the laboratories providing diagnostic and forensic services. Consolidating the facilities in one building will greatly facilitate work flow, and create efficiencies and opportunities for collaboration. The study provided detailed cost estimates for all options, breaking out specialized building and mechanical systems costs, and projected operating costs. The new facility will connect to the bioprocessor that was sited per the first phase of the master plan. The necropsy suite will be adjacent to the bioprocessor.

Spaces in the new facility will include Microbiology Lab, Large Animal Pathology Lab, Poultry Pathology Lab, Toxicology Lab, a Field Investigation Office, lab space convertible to Biological Safety Level 3 Facilities, PCR/Molecular Diagnostics and 20 mass spectrometers. Both the PADLS and PETRL Departments need safe, efficient, and effective labs. Our study addressed these goals through performing a risk assessment and addressing both the primary and secondary containment. Space pressurization is key as well as designing air intake and exhaust systems to avoid re-entrainment of hazardous air.

The new facility will also include a large conference room, pharmacy, robotic sample prep area, human sample testing area, refrigerators and freezers for samples and a bio-safety cabinet.

The principles of the Labs21 Program are being incorporated into the design. Lab spaces are designed to provide user friendly access to utilities, equipment, fume hoods, etc. Lighting of spaces incorporates the use of daylighting and appropriate controls to maintain its usage.

The study was completed in 2019. The estimated construction cost for the facility is \$55 million. The project is currently in design.





CELLOMICS, INC.

New Biotechnology Facility

Pittsburgh, PA

Services

Mechanical, Electrical,
Plumbing, Fire Protection
and Civil Engineering

Square Footage

160,000

Reference

Amanda Weaver
Community Manager and
Activation Specialist
Collaborative Real Estate
100 Technology Drive
Pittsburgh, PA 15219
PH: 412-357-5577
aweaver@ccollabre.co

Located in what is now Bridgeside Point, Cellomics Inc. was founded to utilize technology from Carnegie-Mellon University and produce instruments, software and reagents for use in drug discovery applications. That legacy is now part of Thermo Fisher Scientific.

The H.F. Lenz Company provided the MEP/FP and civil engineering services for Cellomic's original 160,000 SF corporate headquarters and research facility.

The high-tech facility contains approximately 30 fume hoods and three Class 10,000 Clean Rooms. The hoods were integrated with the building automation system to ensure that the amount of conditioned make-up air entering the lab space was controlled and a proper pressure differential to the adjoining spaces was maintained.

The exhaust system consisted of four laboratory exhaust fans mounted on the roof. In an effort to increase the efficiency of the heating and cooling system, heat exchangers were designed to be installed into the exhaust stream.

The plumbing system consisted of providing a separate distilled water system, a natural gas distribution system, a vacuum system, and a lab air system. The distilled water produced here will be used not only for the research being conducted at this facility, but it will also be sold to customers to be utilized as a reagent in the systems already in use.

The building is now utilized by multiple tenants. We have continued to provide engineering services for a variety of lab and office spaces throughout the building.

Recent additional projects in the facility have included:

- Gross Anatomy Third Floor Renovations
- Fit-out of second and fourth floors
- Tenant fit out laboratory space
- McGowan Institute Cell Sorter Changes
- Rousseau Lab Third Floor Renovation
- Third Floor Occupational Therapy Space
- Emergency Power Study



PENNSYLVANIA STATE POLICE
New DNA Lab and State Police Headquarters

Greensburg, PA

Services

Mechanical, Electrical, Plumbing and Fire Protection

Square Feet

50,000 DNA Lab
35,000 State Police Headquarters

Completed

2021 DNA Lab
2022 State Police Headquarters

Cost

\$22.5 million DNA Lab
\$15 million State Police Headquarters

Reference

James Danner
Facility Director
PA State Police
Facilities Management
Division
3rd Floor, Department
Headquarters
1800 Elmerton Avenue
Harrisburg 17110
717-705-0845
jamdanner@pa.gov

Through separate contracts with the Pennsylvania Department of General Services, H.F. Lenz Company provided the MEP/FP engineering for a new 50,000 SF DNA Lab Building and a new 35,000 SF State Police Headquarters building.

The **DNA Lab** building includes DNA Lab space, Lab Offices, Administration Offices, Evidence Storage and Evidence Control. Lab spaces include fixed and movable casework, chemical fume hoods, and biosafety cabinets, as well as administrative offices, conferences rooms, library, breakrooms, training rooms, wellness center, maintenance storage and loading docks. The facility is designed to accommodate 100 scientists and personnel.

Security and confidentiality of what goes on within this building must comply with special standards required for an accredited law enforcement lab. Special consideration is given to security of evidence.

The 35,000 SF **State Police Headquarters** building includes the following areas:

Headquarters

- Command staff
- Criminal investigation
- Forensic services unit
- Vice/intelligence
- Patrol section
- Collision analysis
- Commercial vehicle enforcement
- Motor carrier enforcement Vehicle fraud investigation
- Communications desk
- Records
- Staff services
- Troop administration

Lab

- Scientific services
- Drug identification Serology
- AFIS
- Ballistics
- Fire Marshal
- Polygraph

Space Requirements include:

- Headquarters building 31,000 SF
- Evidence storage (inside HQ) approximately 2,500 SF
- Impound yard approximately 10,000 SF
- Radio tower 150 SF



EVOQUA WATER TECHNOLOGIES

New Lab and Office Building

Pittsburgh, PA

Services

Mechanical, Electrical,
Plumbing and Fire Protection

Square Footage

18,000

Completed

2021

Cost

\$3.5 million

Reference

Frank Sassaman
Pittsburgh Lab Manager
Evoqua
210 Sixth Ave #3300
Pittsburgh, PA 15222
724-772-0044
frank.sassaman@evoqua.com

Evoqua Water Technologies provides water and wastewater treatment solutions to industries such as Centers for Disease Control and Prevention in Western Pennsylvania. H.F. Lenz Company provided mechanical, electrical, plumbing and fire protection engineering design for the interior fit-out of approximately 18,000 SF of wet lab and office space located in the Tech Forge Building in Pittsburgh, Pennsylvania.

The project focused on a section approach of working in the front of the building first then moving to the back of the building. Phase one focused on creating 100% buildout for a working lab with added fire safety systems in the front. Phase two was focused heavily on MEP, electrical, and plumbing systems in the back of the building. The new state-of-the-art facility will enable further advancement and development of cutting-edge and sustainable water treatment technologies critical to addressing emerging water trends, including water and climate risks, connectivity, and health and safety.

The 18,000 SF facility houses a hands-on demonstration and training area, pilot testing environment, and a state-of-the-art laboratory to grow Evoqua's analytical and feasibility study capacity. The collaborative workspace is designed to provide strategic and timely technical capabilities, illustrating the company's commitment to delivering excellence to its customers.

Additional features included:

- Private wastewater sump pump collection system to collect, process and clean the wastewater material
- HVAC venting
- Air and Water plumbing system
- Spill protection
- Sustainable rooftop



VAMC Philadelphia

Philadelphia, PA

Third Floor Research Lab

H.F. Lenz Company provided the mechanical, electrical, plumbing/fire protection, and structural engineering services for the \$4 million renovation of the Third Floor Research facility to accommodate researchers from the University of Pennsylvania completing research under grants from the Veterans Administration and various government agencies. The research space was designed to be capable of handling most types of research except radiological contaminants. The project scope included renovating the entire third floor into distinct and separate labs for BSL-1, 2, and 3 level research.



The existing primary air systems remained and new distribution, monitoring, and control systems were provided. The lab systems were designed for maximum flexibility so that simple changes can be made as research is completed and new projects are brought in. The area contains approximately fifteen (15) biosafety or fume hoods with future space for additional hoods, tissue culture labs, autoclave, microscopy, and large rooms for refrigerators and freezers. A separate controlled temperature room and instrument room with support spaces are also located on the floor.



Code Violations in the existing exhaust systems and building shafts were identified early in the project, thus the scope of work was expanded to complete an HVAC system distribution master plan to identify corrective actions. The corrective actions are integrated into the third floor renovations.

The existing plumbing and medical gas systems were renovated to support the new requirements. A new instantaneous hot water generation and distribution system was also design for the entire building.

Clinical Lab Renovations

H.F. Lenz Company provided Design and Commissioning Services for an 18,000 SF renovation of the Primary Clinical Lab, Building 2. The areas renovated include the Chemistry Lab, Histology, Microbiology, Sequencing Lab, Toxicology, Molecular, Blood Bank, and offices.



The project involved extensive coordination with the laboratory equipment planner and the architect. Designed in 6 phases, it required temporary and permanent utilities for each phase. The temporary lab required exhaust for fume hoods and supply make up air. The temporary air handling unit was provided during the replacement of the existing air handling unit. HVAC was maintained during all phases to maintain ventilation rates, air movement, and cooling requirements.



Room	Area (sq ft)	Area (sq m)
Cleanroom	1,100	102
Lab Space	800	74
Office	300	28
Changeroom	200	19
Supply Room	150	14
Storage Room	100	9
Corridor	500	46
Restroom	50	5
Breakroom	50	5
Electrical Room	50	5
Other	50	5
Total	3,150	292

APPROXIMATELY 3,150 GROSS SQUARE FEET;
APPROXIMATELY 700 FUTURE

80% ± CLEAR HEIGHT
80% ± CLEAR 100' ±



METROHEALTH

GMP Cleanroom Facility

Cleveland, OH

Services

Mechanical, Electrical

Cost

\$3 million

Reference

Debra Ann DeCapite, CHC
Sr. Owner's Rep Facilities
Management/Construction
MetroHealth
2500 MetroHealth Drive
FM-01
Cleveland, OH 44109-1998
216-778-5835
ddecapite@metrohealth.org

H.F. Lenz Company provided concept design services for a new GMP (Good Manufacturing Practice) Cleanroom Facility. The concept plan was developed as a prototypical space, with no specific existing building envelope or parameters to consider. The project goal was to establish a "prototypical model" in an effort to generate a probable cost of construction in order to secure the proper amount of funding for a future project. This will also establish best practices within the GMP facility for future consideration.

Concept Design plans for the area identified the following breakdowns of program space:

- Positive pressure cleanroom
- Negative pressure cleanroom
- Varying pressure cleanroom
- Changing room
- Storage and supply areas
- Office space
- Lab spaces (non-cleanroom)

The intent of this concept design narrative was to define the engineering systems proposed for use on this project. Close communication with facility representatives was maintained to aid in the continued process of design. Close review of this document was encouraged to ensure that all parties were aware of decisions made toward the design and engineering intent moving forward. The design incorporated sound sustainability practices, quality practice and design strategies that provide healthy, productive environments for staff while providing a secure setting for the occupants of the project area.

The design was incorporated into the new state-of-the-art vector and cellular Good Manufacturing Practice (GMP) facility, which opened in March of 2023. With this new facility, MetroHealth became the first safety-net hospital in the United States to offer in-house viral vector and cellular production for a wide spectrum of medical treatments.

Federal Agency Examples

General Services Administration (GSA), Charleston, WV

- H.F. Lenz Co. provided MEP/FP engineering services for the design of a new, two-story 19,427 SF office building to house an agency of the intelligence community offices. The facility includes GSA/FBI forensic evidence labs, investigators' work and technology spaces, and service bays to modify surveillance vehicles
- The building was designed with energy efficient systems and sustainable design criteria including water conservation, use of regionally manufactured materials, increased ventilation, use of renewable energy sources, and a pre-occupancy construction indoor air quality management plan. The project goal was to meet the requirements of LEED Silver (minimum) and attain an ENERGY STAR rating of 75 or above. The \$4.5 million project was completed in 2010.
 - Project Owner Representative: Mr. Nick Colasante, Glenmark Holding, LLC, 1399 Stewartstown Road, Suite 200, Morgantown, WV 26505, 304-599-3369 ,info@glenmarkholding.com

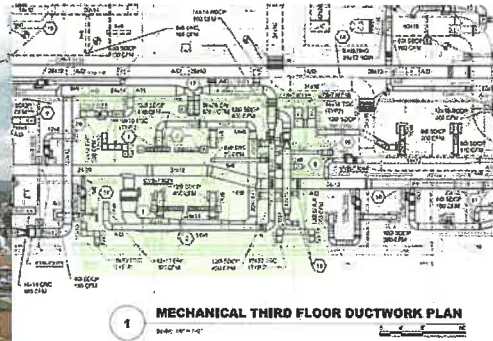
U.S. Drug Enforcement Administration, Pittsburgh, PA

- H.F. Lenz Company provided mechanical, electrical, plumbing, fire protection/life safety and structural engineering services as part of a design/build team selected by the U.S. General Services Administration for the delivery of a new office building for the Drug Enforcement Administration located in the Pittsburgh area. The two-story, 50,000 SF building has office space on the upper floor with the ground floor serving as a garage and storage space.
- The building systems also included specialized exhaust systems for carbon monoxide removal from the garage and filtration of exhaust system associated with drug evidence storage rooms. Multiple split systems supplement critical cooling applications throughout the building. Plumbing systems included shower facilities for the workout and clean lab prep areas and penal fixtures in holding cells.
- The building was designed and constructed to obtain a LEED Certified rating.
 - Project Owner: Robert Manns, Former Manager for GSA 412-432-4357, Robert.Manns@ic.fbi.gov

U.S. Department of Agriculture, Morgantown, WV

- H.F. Lenz Company provided MEP/FP engineering services for the tenant-fit out of approximately 40,000 SF of a GSA-leased building to be utilized by the U.S. Department of Agriculture. The fit-out space consists mainly of offices, conference areas, lobbies, mailroom, credit union, computer center, storage space and a loading dock.
- The project incorporated several sustainable concepts and was designed to attain LEED™ Certification.
 - Project Owner: John Pettit, Executive Office, Farm Service Agency, U.S. Department of Agriculture, 1550 Earl Core Road, Suite 102, Morgantown, WV 26505, 304-284-4881





UPMC ALTOONA

T-3 Clinical Lab Expansion and Morgue Relocation

Altoona, PA

Services

Mechanical, Electrical,
Plumbing, Fire Protection
and Structural

Square Feet

7,000

Completed

2015

Cost

\$1.9 million

Reference

Randy Isenberg
Facility Director
UPMC Altoona
620 Howard Avenue
Altoona, PA 16601
814-889-2456
isenbergrs@upmc.edu

T-3 Clinical Lab Expansion

H.F. Lenz Company provided the MEP/FP and structural engineering services for the 7,000 SF renovation of the T-3 clinical lab. The project included demolition of a portion of partitions, ceilings and floor finishes on T-3 and installation of new rooms configurations, ceilings, lights, finishes, equipment and specialties in order to expand the laboratory.

The project included selective demolition of existing MEP/FP systems. The new MEP/FP design included:

- Modifications an extension of the ductwork systems
- New exhaust systems
- Extension of the DDC Controls
- Modifications and extension of the hot water piping system
- Extension of the medical gas system
- Modifications and extension of the domestic water and sanitary system
- Modifications and extension of the fire protection system
- New lighting, power, data, and security

The project was phased to minimize disruptions to any activities in the facility and completed on time and within budget with no change orders related to errors and omissions.

Morgue Relocation

H.F. Lenz Company provided the MEP/FP engineering services for the relocation of the 600 SF morgue. The project included routing special exhaust via mixed flow fan to prevent re-entrainment of exhaust air to outside air intakes.

Additional Relevant Experience

CDC/NIOSH, Pittsburgh, PA

- Design of the Mine Rescue and Escape Training Laboratory (MRET), which occupies 180 acres and serves as one of two focal points for federal mine safety and health research. The project included design of a 360° Immersive Training Environment. Researchers utilize 3D technology to develop a supplemental tool, the BG 4 Benching Trainer Software, used to assist mine rescue personnel in learning and retaining knowledge of the process of benching (inspecting, assembling, and testing) a Draeger BG 4 breathing apparatus. The facility includes small and large specialized labs where researchers study heavy machinery, mechanical and electrical systems, ergonomic and biomechanic challenges, geological stresses, explosions, illumination, chemistry, dust control, and a host of other mining safety and health challenges.
 - Project Owner Representative: Mr. Ronald Cummings, NIOSH/CDC, Office of Administrative and Management Services, 626 Cochran's Mill Road, Pittsburgh, PA 15236 PH: 412-386-6681
- **Building 141 Renovation** - Multi-discipline renovation of interior spaces into functional office and laboratory spaces in Building 141. Task 1 project involved creating a new three-story structure inside of the high-bay Room 158 to house the dry lab and office space. Task 2 included design of 8 to 12 fume hoods within the laboratories being constructed within Rooms 148 and 151. Construction Cost: \$8 million
 - Project Owner Representative: Mr. William L. Porter, MS, FMP, NIOSH/CDC, 626 Cochran's Mill Road, Pittsburgh, PA 15236 PH: 412-386-5222

University Projects

Pennsylvania State University, Various Campuses

- Berks Campus – New 62,000 SF Gaige Technology and Business Innovation Building with engineering and tech labs, hands-on simulation labs, various shop spaces, vehicle labs, high bay area, computer labs, as well as collaboration spaces and a cafe – LEED Gold
 - Project Owner Representative: Mr. Scott W. Rhoads, Penn State University, Engineering Services, 155C Physical Plant Building, University Park, PA 16802 PH: 717- 865-1287
- Behrend Campus – New Burke Research and Economic Development Center (REDC), a 179,000 SF facility with engineering and tech labs, including the largest plastics lab in the U.S., various shop spaces and a high bay area. The building also houses classrooms, lecture halls, meeting spaces and a cafe and is home to several of the college's outreach programs
 - Project Owner Representative: Mr. Marcus Marasco, Penn State University, Engineering Services, 155C Physical Plant Building, University Park, PA 16802 PH: 814-865-6197





- Altoona Campus – Feasibility Study and conceptual design for Smith Hall which included student services, classroom and research spaces with engineering labs and several robotics areas, high bay area, a learning resource center, offices and lounge. The project included specialized laboratories focused on manufacturing, including systems used to weld and cut steel including research in thermal fluid control: sensing and control applications related to gases, liquids, reacting flows (flames), plasmas (electric arcs) and a dune buggy lab
 - Project Owner Representative: Mr. Douglas Wenger, Project Manager, Penn State University, 0325 The 328 Building, University Park, PA 16802
PH: 814-863-9622
- NARCO – Steady Thermal Aero Research Turbine (START Lab) which focuses on innovating turbine cooling using true-scale engine hardware, developing sensors and instrumentation for smart turbines, advancing additive manufacturing for turbine applications, and integrating and embedding sensors through additive manufacturing.
 - Project Owner Representative: Dwayne Rush, Penn State University, Engineering Services, 155C Physical Plant Building, University Park, PA 16802
PH: 814-865-6475

University of Pittsburgh, Pittsburgh, PA

- Benedum Hall Renovations - Phased renovation of the 419,000 SF Benedum Hall, home to the Swanson School of Engineering and contains classrooms, laboratories, offices, conference and seminar rooms, and library. Project is LEED Gold
- Mascaro Center for Sustainable Innovation - New 42,000 SF building housing wet and dry; features adaptable lab spaces and offices with large frosted windows for natural light; Project is LEED Gold
 - Project Owner Representative: Project Manager (Canard S. Grigsby, Jr.) is no longer with the University, current contact: Mr. Chris Niemann II, Facilities Manager, University of Pittsburgh, Facilities Management, 3400 Forbes Avenue, Pittsburgh, PA 15260 PH: 412-624-9529

University of Pittsburgh at Johnstown, Johnstown, PA

- Engineering and Science Building – Renovation of the 66,000 SF building that houses various types of engineering labs including Fluids and Hydraulics, Measurements, Soils, Electronics, and Power Labs, and a nuclear magnetic resonance (NMR) magnet that required special engineering criteria such as controlled airflow and vibration considerations, as well as classroom and collaboration spaces and an auditorium.
- New 26,000 SF, two-story Nursing/Health Science Facility with chemistry and biology labs as well as Nursing Simulation Labs with SimMan patient simulators to provide a wide range of signs and symptoms to teach the students how to react to various situations and control room. LEED Gold
 - Project Owner Representative: Mr. Dennis Heller, Director of Facilities, University of Pittsburgh at Johnstown, 450 Schoolhouse Road, Johnstown, PA 15904 PH: 814-269-7130



Yale University, New Haven, CT

- Wright Nuclear Structure Laboratory - Renovation of 42,000 SF of Physics Laboratory and office space
 - Project Owner Representative: Ms. Kari Nordstrom, Director of Project Architecture and Design, Yale University, 2 Whitney Avenue, New Haven, CT 06510 PH: 203-432-8405
- Electron Accelerator Laboratory - This 6,620 SF comprehensive renovation converted previous laboratory and non-laboratory spaces into new physics research laboratory facilities with associated office spaces, conference room and lounge.
 - Project Owner Representative: Ms. Sheri Miller, Director of Planning and Project Management, Yale University, 2 Whitney Avenue, New Haven, CT 06510 PH: 203-432-8885
- W-SRC Clean Room Core Facility - Engineering services for planning study and project formulation for both refurbishment of an existing Class 10,000 clean room and a new build Class 10,000 clean room at West Campus. Provided construction documentation services as the prime consultant for a new 2,500 SF. Class 10,000 clean room and office suite.
 - Project Owner Representative: Ms. Sheri Miller, Director of Planning and Project Management, Yale University, 2 Whitney Avenue, New Haven, CT 06510 PH: 203-432-8885

West Virginia University, Morgantown, WV

- White Hall - Phased renovation and life safety upgrades to the 95,500 SF Physics lab building with laboratories, classrooms, offices and a 175-seat auditorium. With the researchers' expanding use of lasers, and the technologies associated with them, the need to design the project with low vibration creating equipment and high-power capacity was a top priority. Due to the constantly changing research and researchers, the labs were designed with maximum flexibility for multiple uses.
 - Project Owner Representative: Mr. John Sommers, Sr. Construction Project Manager, West Virginia University, 979 Rawley Lane, Morgantown, WV 26506 PH: 304-293-2856

University of Delaware, Newark, DE

- New 12,000 SF addition to the Life Sciences building to house two MRIs and 5,000 SF of associated lab space. The new facility supports the research needs from many departments from multiple colleges and provides the structural imaging necessary for muscular skeletal studies (Physical Therapy, Biomedical Science), research on normal and cancerous tissue (Biology, Agricultural Studies) and research on the properties of materials (Chemistry, Biochemistry and Engineering). The facility also provides functional imaging essential to neuroscience research in both animal and human cognition and emotion (Psychology, Economics).
 - Project Owner Representative: John Davis, Project Engineer, University of Delaware, Real Estate & Auxiliary Services, PH: 302-831-1182



THE PENNSYLVANIA STATE UNIVERSITY

New Rodney A. Erickson Food Science Building

University Park, PA

Services

Mechanical, Electrical,
Structural and
Surveying

Square Footage

132,000

Completed

2005

Cost

\$36 million

Reference

Richard Riccardo, AIA
Physical Plant Building
University Park
814-865-7190
rar7@psu.edu

H.F. Lenz Company provided full-service mechanical, electrical, and structural engineering and surveying services to assist Penn State University with their pursuit to construct the Berkey Dairy Food Science Building which is a symbolic statement by the College and Administration concerning the importance of Food Science as a Department and an academic program. This \$36 million, 132,000 SF research and laboratory facility contributes to the Department's effectiveness in recruiting undergraduate and graduate students, retaining the best faculty members and staff, and allows the College of Agricultural Sciences to remain current with researchers in food science departments in the Big Ten Conference and the Northeast.

The Berkey Dairy Food Science Building is a truly unique building in that it contains all of the following components under one roof for one using agency:

- Teaching Laboratories
- A Dairy manufacturing facility
- Flexible, modern, ever-changing Pilot-Scale processing plants
- Research Laboratories
- Classrooms
- Academic offices
- The Creamery retail sales area with outdoor dining terrace

No other Food Science Department across the country operates a full-scale manufacturing plant.

A food sensory laboratory in which foods are sampled for taste is also included in the building.

Some of the specific laboratories include chemistry, food safety, and micro-biology. The pathogens lab is designed for bio-safety Level 2. Also, a food sensory laboratory in which foods are sampled for taste is included.

The pilot-scale processing plants are used to further develop research and manufacturing ideas. Research is initiated on a bench-top (laboratory) scale, and then tested on an intermediate scale (the "pilot scale") before full-scale manufacturing is performed.

B&H PROJECT EXPERIENCE



★ = Projects completed with HKS Architects. ★ = Projects completed with Omni Associates.

CITYNET CENTER

Bridgeport, WV

★ The Bridge Sports Complex

DICK'S SPORTING GOODS

Moon Township, PA

★ Day Care Facility

FAIRMONT FEDERAL CREDIT UNION

Fairmont, WV

★ Drive Through Bank

GRAND VUE PARK

Pittsburgh, PA

★ Tree Top Villas

HARRISON COUNTY SCHOOLS

Bridgeport, WV

★ Additions and Renovations

OHIO COUNTY SCHOOLS

Wheeling, WV

★ Additions and Renovations

PRO FOOTBALL HALL OF FAME

Canton, OH

★ Hall of Fame Hotel

PROMEDICA HEADQUARTERS

Toledo, OH

★ Renovation and Adaptive Reuse

UH AHUJA MEDICAL CENTER

Beachwood, OH

★ Medical Office Building

★ Sports Medicine Institute

TAB 6

REFERENCES

REFERENCES

Richard Donovan, Senior Director of Facilities
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Charleston, WV 25301

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Fairmont, WV 26554
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