



Architects • Engineers • Surveyors

*Expression of Interest:
Hopemont Hospital Boilers &
Mildred Mitchell-Bateman Hospital Generator*

02/25/16 09:24:12
WU Purchasing Division

www.PickeringUSA.com

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Founded in 1988, Pickering Associates has been providing architectural, engineering and surveying services to the Mid-Ohio Valley for over twenty-five years. Our company is the product of three generations and more than 75 years of construction experience. This experience plus state-of-the-art engineering practices create a full-service, multi-discipline, architectural, engineering and surveying firm serving a wide range of needs and featuring innovative, customized solutions.

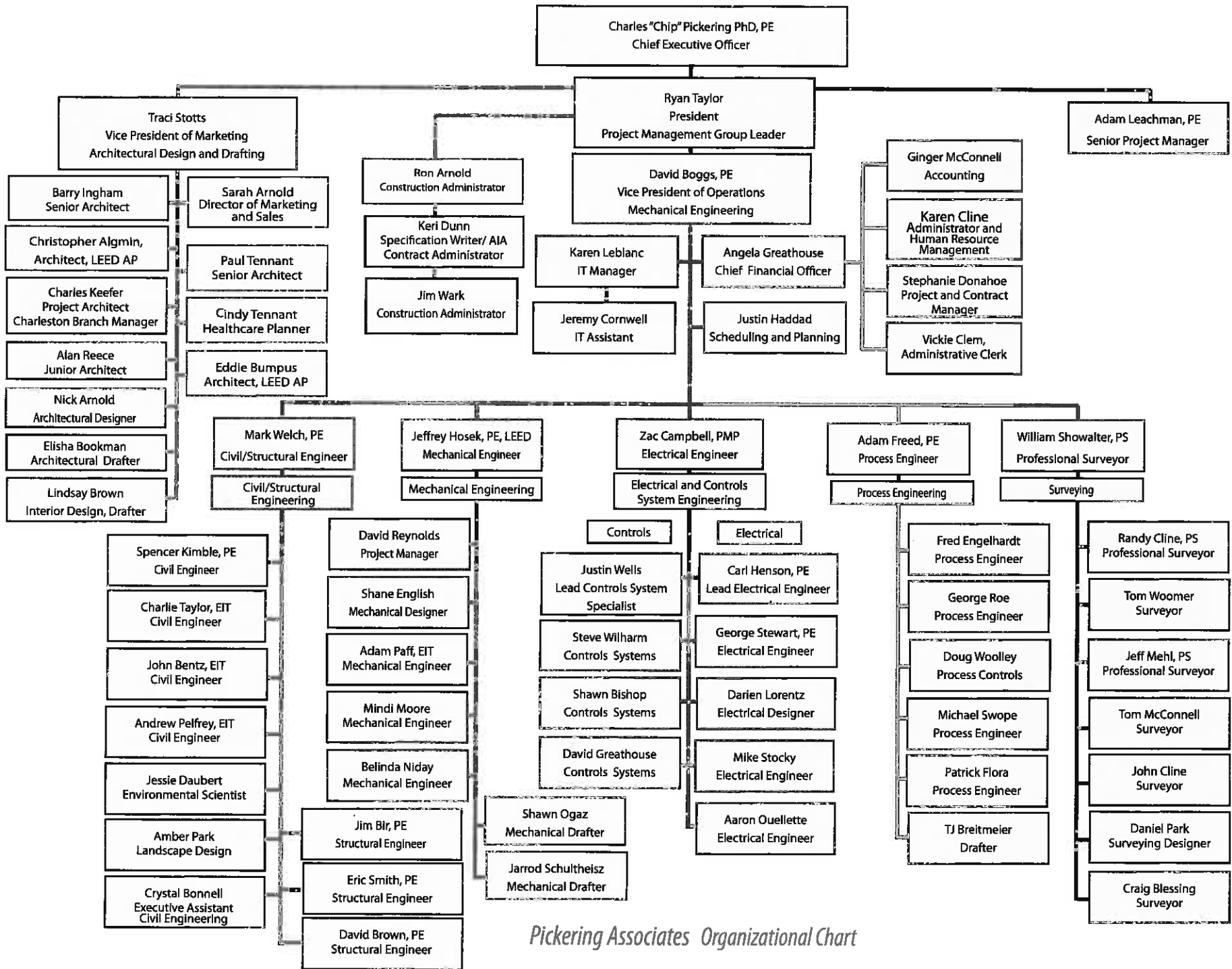
Our architectural, engineering and surveying firm consists of an exceptional balance of experience and the desire to provide our customers with a quality product at a fair price. Our highly qualified staff includes licensed professional engineers, professional surveyors, licensed architects, designers, and drafters as well as support personnel. The disciplines we cover include architecture, surveying, project management, civil engineering, structural engineering, mechanical engineering, electrical engineering, process engineering, automation and control, and construction administration. Pickering Associates specializes in the above listed disciplines with education, government, healthcare, industrial, oil & gas and private sector clients.

Successfully executing more than 10,000 projects in its history, the firm has built a tremendous wealth of experience gaining insight into what works for each of our client types. Those lessons learned add substance to our work and provide our clients with unparalleled value. Our objective is to partner with our clients improving their performance, flexibility, life-cycle cost, sustainability and ultimately well-being.

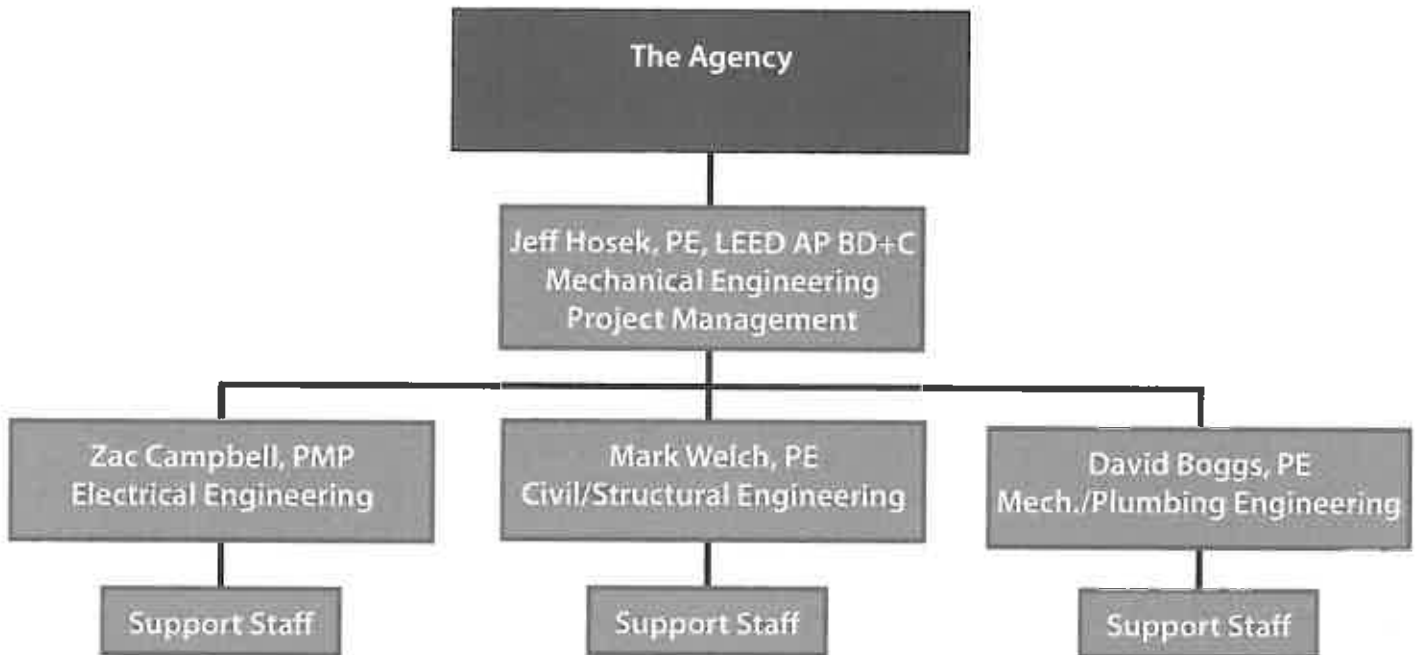
Our broad client base is representative of the area and includes education, healthcare, retail, utilities, municipal, chemicals and plastics, metals, and power generation among others. The types of projects we provide range from conceptualization and construction estimates to full turn-key design including construction management. Every project is unique and our approach to the solution is determined accordingly. Whether the project is a small electrical or mechanical modification, a larger multi-discipline new building or retrofit, or a green field installation, it receives all the attention and care required to make the project a success.

In choosing Pickering Associates, your project will be performed to your specifications with frequent meetings and status reports to keep you up-to-date on the status of the project. Our sole focus is your full satisfaction with the completed quality installation.





Pickering Associates Organizational Chart



Technical Expertise



Jeffrey D. Hosek, P.E.

*Sometimes the questions are
complicated and the answers
are simple.*

Dr. Seuss

Position/Title

Mechanical Engineer

LEED Project Engineer

Mechanical Engineering Department Manager

Duties

Mechanical Engineer

Education

University of Akron

B.S., Mechanical Engineering

Licenses

Professional Engineer WV, OH, KY, PA

Lead Mechanical Engineer for Emergency Department Consolidation and Patient Room Expansion project. Project scope includes providing design and engineering for the steam connection to the existing heating plant on the south tower with an underground feed to the new facility, coordinating heating tie-in, provide design and engineering for the heating piping distribution, provide design and engineering for the building's new chiller plant and piping distribution, provide design and engineering for the building's air moving equipment and distribution, provide design and engineering for the installation of miscellaneous equipment for the new floor plan arrangements.

Prepared construction plans for the installation of a new high temperature hot water boiler. Provided onsite construction administration and submitted for an EPA emissions permit.

Prepared construction plans for the installation of a new steam water boiler. Plans included new secondary fuel source for all 4 boilers. Provided onsite construction administration and submitted for an EPA emissions permit.

Lead Mechanical Engineer and Project Manager for OR Chilled Water project at Cabell-Huntington Hospital. Provided design options for reducing the levels of acceptable ranges, and implemented installing another chiller in series and replacing fan and coil components of the existing operating room air handling units.

Lead Mechanical Engineer for a new 5,400 SF medical office building located in Belle, Ohio. This office is a satellite office for a previous client who wished to expand services. The new building is home to an Osteoporosis Clinic and DXA scanning suite which are capable of operating independently of each other.

Lead Mechanical Engineer for OB and pediatric department renovations. Project included re-routing existing portions of the supply, return and exhaust ductwork and modify/install new as necessary for the renovated spaces. Project also included relocated air devices and thermostats.

Lead Mechanical Engineer for Fifth Floor Medical/Surgical Nursing Unit Renovations. Project included removing two P-TAC units from each of the patient rooms on the north wing of the project area and replace with a 4-pipe heating-cooling unit in the ceiling space and new chilled and steam piping routed from the mechanical penthouse. Control for the units was connected to the existing facility automation system.

Lead Mechanical Engineer for a new Healthsouth suite on the fourth floor of the main hospital. Project included re-routing existing portions of the supply, return and exhaust ductwork and modify/ install new as necessary for the renovated spaces. Project also included relocated air devices and thermostats.

Lead Mechanical Engineer for the renovation of the first floor for Nursing and Dialysis. Project included design of new system for isolation rooms, re-routing existing portions of the supply, return and exhaust ductwork and modify/install new as necessary for the renovated spaces. Project also included relocated air devices and thermostats.

Lead Mechanical Engineer for the renovation of First East. Project included the renovation of over 11,000 SF of existing space on the first floor of the main hospital. Design included a medical/surgical nursing unit, dialysis and isolation area. The isolation rooms each required separate HEPA filter systems among other precautionary steps.

LEED project manager for converting a downtown Columbus, Ohio fire station into a local family health center. Replaced existing mechanical and electrical systems with updated energy-efficient systems. Existing equipment was recycled to limit construction waste and utilized local and regional materials to comply with LEED requirements.

Prepared plans for new VAV indoor steam and chilled water air handler with humidification for new surgery rooms. Reworked existing piping and ductwork to work with floor plan revisions.



Zac A. Campbell, P.M.P.

Position/Title

*Electrical Engineer,
Electrical and Controls System Engineering
Department Manager*

Duties

Electrical Engineering

Education

*Fairmont State University
B.S., Electrical Engineering and Technology
Marshall University,
M.S., Engineering Management*

Licenses

*Project Management Professional,
Project Management Institute*

*The difference between the
possible and the impossible lies
in a person's determination.*

Tommy Lasorda

Lead Electrical Engineer for new Emergency Department Consolidation and Patient Room Expansion project. Project scope includes providing design and engineering for the electrical connection to the existing 15kV Mon Power switch tap and the installations of the new medium voltage underground feed to the new facility electrical room, providing design and engineering for the building's electrical distribution system to meet the expectations of the new electrical loads, providing design and engineering for the installation of new receptacles, light fixtures, light switches, electrical equipment for the new floor plan arrangements, providing design and engineering for the life safety requirements, emergency power requirements, and emergency lighting requirements for the new floor plan arrangements, etc.

Electrical Engineer for a new medical office building located in Belpre, Ohio. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, and telecommunication. Extensive coordination was required for the specialized scanning equipment.

Electrical Engineer for OB and Pediatric department renovations. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, telecommunication, nurse call and facility paging to fit the new floor plan.

Electrical Engineer for Fifth Floor Medical/Surgical Nursing Unit Renovations. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, telecommunication, nurse call and facility paging to fit the new floor plan.

Electrical Engineer for Third Floor Medical/Surgical Nursing Unit Renovations. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, telecommunication, nurse call and facility paging to fit the new floor plan.

Electrical Engineer for renovation of the first floor Nursing and Dialysis. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, telecommunication, nurse call and facility paging to fit the new floor plan. Project also included necessary connection for specialized dialysis equipment.

Electrical Engineer for an emergency room, fast-track, and central registration renovation project. Project included new receptacles, light fixtures, life safety, emergency power and lighting, fire alarm detection, telecommunication, nurse call and facility paging to fit the new floor plan.

Electrical Engineer for the design and construction administration of a new 1200A, 480V electrical service and electrical distribution system in an existing building in Downtown Parkersburg, WV for West Virginia University at Parkersburg's new Downtown Center. The project includes a new main panel and subpanels throughout the building for future building loads.

Electrical Engineer for the relocation of three cardiac catheterization laboratories. Project consisted of three new cath labs, adjacent control rooms, equipment rooms, special procedure bays, echo room, stress testing room and various support spaces.

Electrical Engineer for the installation of two (2) uninterruptable power supplies for the main operating rooms and the ambulatory surgery rooms at Marietta Memorial Hospital.

Electrical Engineer for the Fourth Floor Acute Care Unit Renovations. Project included renovations to approximately 19,600 SF of the fourth floor at the north tower and east/west wings of the main building at the Memorial Campus. The area was renovated to accommodate 33 private acute care patient rooms, 10% of which are ADA compliant. The project also included provisions for nurse stations, clean utility, soiled utility, nourishment, medication rooms, storage rooms, central bathing facilities, offices, staff locker rooms, and various other support spaces as required by the functional program.



David A. Boggs, P.E.

Position/Title

*Senior Mechanical Engineer, Plumbing Engineer
Vice President of Operations*

Duties

Mechanical and Plumbing Engineer

Education

*Viginia Tech,
B.S., Mechanical Engineering
Marshall University,
M.S., Engineering Management*

Licenses

Professional Engineer WV, OH

*Determine that the thing can
and shall be done, and then we
shall find the way.*

Abraham Lincoln

Lead Plumbing Engineer and Mechanical Engineer for Emergency Department Consolidation and Patient Room Expansion project. Plumbing and mechanical scope included review existing conditions for medical gas tie-ins to existing systems in South Tower, reviewing and evaluating water source requirements for proposed addition with CCMC Engineering Department, reviewing existing drawings and work to determining underground sanitary tie-in location, providing design and engineering for the medical gas distribution systems for the expansion, etc.

Mechanical/Plumbing Engineer of record for new \$7MM medical office facility in Parkersburg, West Virginia. Building was designed for multiple HVAC zones to reflect tenant separation requirements of the building owner. Tenant design was based on Pharmacy, prosthetic laboratory, medical offices and a restaurant. Common restrooms, private bathrooms, and exam room sinks comprised the plumbing system design requirements.

Mechanical Engineer of record for a \$1MM medical/dental office facility in Parkersburg, West Virginia. Design included packaged HVAC systems with multiple zones and facility exhaust systems. Plumbing design included dental vacuum and air systems as well as domestic water distribution systems for building tenants, including tenant restroom requirements to meet code requirements.

Plumbing Engineer of record for a new 5,400 SF medical office building located in Belpre, Ohio. Design included domestic water distribution system for exam room sinks and facility restrooms as well as sanitary and storm water drain, waste vent system design all in within the state plumbing code requirements.

Plumbing Engineer of record for the renovation of first floor patient rooms and dialysis center for a hospital facility in Parkersburg, WV. Project design included 18 private patient room bathrooms four with ante room lavatories and ADA accessibility, all equipped with a shower fixture. Design also included the relocation of the hospital's dialysis unit and plumbing systems, a 4 bed unit. Plumbing design for the 18 patient rooms included a new medical gas distribution system specification for the med-gas outlet headwalls.

Lead Plumbing Engineer for OB and pediatric department renovations. Project included new triage, waiting, private rooms with new enlarged toilet rooms including showers, and rework of existing tub rooms to relocate an existing pediatric tub and add a new shower.

Lead Plumbing Engineer for Fifth Floor Medical/Surgical Nursing Unit Renovations. Project included replacing/relocating fixtures for ADA compliance.

Lead Plumbing Engineer for Third Floor Medical/Surgical Nursing Unit Renovations. Project included replacing/relocating fixtures for ADA compliance in the twenty-seven patient rooms, staff rooms and various shower/tub rooms. Also replaced an existing shower room tub with a shower and designed a new shower room.

Lead Plumbing Engineer for a new Healthsouth suite on the fourth floor of the main hospital. The project included 8 private patient toilet rooms, one semi-private room with ADA accessible toilet rooms, two new shower rooms, and one bath room with tub. Project also required the addition of medical gas and relocation of existing sprinkler heads.

Lead Mechanical and Plumbing Engineer for a new 37.5 bed Behavioral Health Unit which was designed to be located in existing space on the third floor of the Main Hospital. Spaces included eighteen semi-private and one private patient room, two group therapy rooms, dining area, laundry room, shower rooms, nurses station, physicians offices, consultation area, activity area, family visitation area, support area and staff locker room.



Mark Welch, P.E.

Position/Title

*Civil Engineer,
Civil Engineering Department Manager*

Duties

Civil Engineer and Project Manager

Education

*West Virginia University
B.S., Civil Engineering*

*Marshall University,
M.S., Engineering Management*

Licenses

Professional Engineer WV, OH, LA

*The joy of engineering is
turning today's dream into
tomorrow's reality.*

Abraham Lincoln

Lead Civil/Structural Engineer for new Emergency Department Consolidation and Patient Room Expansion project. Project consisted of evaluating storm water management requirements per City, County, State, and NPDES requirements, create site layout showing proposed structure(s), retaining walls, major signs, sidewalk, landscaping, drives, and parking lots, designing grading, drive alignment, parking lot geometry, and storm water drainage, Coordinate proposed design with respective utility providers, etc.

Lead Civil Engineer for new 930 SF equipment room addition and renovations to approximately 6500 SF of existing space on the ground floor of the main hospital at the Memorial Campus of the Camden Clark Medical Center.

Assisted in the design to enclose an existing courtyard between two buildings in order to house both transportation and phlebotomy offices in a hospital in Parkersburg, West Virginia. Designed combination structural steel/cold-formed metal roof and lateral-resisting system to accommodate existing building characteristics and movement.

Project Manager for an investigation and reporting on the cause of a structural collapse of the fifth floor roof at a hospital in Parkersburg, WV. Responsibilities included the development of the structural analysis report and recommendations to fix the issues at hand.

Assisted with the design and drafting of the structural and architectural work on a rad room renovation at a hospital in Parkersburg, WV. Work included installation of a new x-ray machine and new structural supports.

Lead Civil Engineer for CCMC memorial campus documentation – located existing outside utilities on the entire memorial campus master plan including water, sanitary sewer, electrical main, fire truck water connections, etc.

Designed site grading and parking layout for bank in Parkersburg, WV. Responsibilities included performing storm water drainage calculations to obtain permits and designed a swale to hold excess storm water and outlet pipe.

Designed storm water system and new grading layout for a fire department annex in Vienna, WV. Other duties also involved assisting with the design, drafting and construction estimate of the architectural, civil and structural project elements of the new twostory facility.

Lead Civil Engineer for a polymer recycling facility located in the Polymer Alliance Zone in Davisville, WV. Civil design included utilities, grading, site layout, roadways, parking, loading docks, retaining walls, site drainage, sediment erosion control.

Lead Civil Engineer for a brownfield development of approximately 30 acres to be used for a new manufacturing facility in West Virginia. Design includes utilities, grading, site layout, roadways and parking and erosion control.

Lead Civil Engineer for an expansion of operations at a refinery in Marietta, Ohio. Civil design included utilities, grading, site layout, roadways, and site drainage of approximately one acre.

Designed a new storm sewer system for a higher education roadway project in Athens, OH. Responsibilities included designing and drafting site plan, profiles, etc., creating front end bid documents and construction specifications as well as performing construction administration.

Project Manager and Civil Engineer for multiple fresh water storage ponds for vertical and horizontal Marcellus Shale natural gas drilling operations throughout West Virginia. Design typically included site grading, cut and fill design, storage volume analysis and design, and embankment slope stability design.

Our Services

Comprehensive Design

At Pickering Associates, we understand the importance of keeping the Client informed and engaged throughout the entire design and construction process. It is crucial to the project to get the Client involved early in the process along with other key stakeholders, in order to understand the needs of the facility. Our plan would be to engage the key stakeholders in weekly design meetings to ensure expectations and schedule constraints are met.

Our design process will begin with schematic design. We have already spent a large amount of time with your staff and end-users to better understand the needs for this project. We feel that this time already spent with your staff, will allow us to be more efficient in completing the schematic design phase for this project and progress us to the next phase quicker than our competitors, therefore allowing us to meet your anticipated design schedule.

We have also teamed with a seasoned emergency department design team composed of physicians and nurses that will work closely with Pickering Associates and your staff during the schematic design phase, to ensure that the new design flows and functions properly for your needs. We always involve the authorities-having-jurisdiction during the schematic design to make certain that we address any and all concerns that they may have, thus reducing costly changes during design and/or construction. We have a close working relationship with agencies such as the West Virginia State Fire Marshal's Office, The Office of Health Facility Licensure and Certification (OHFLAC), and the City of Parkersburg - and are familiar with the local and state requirements that need to be addressed for your project. At the end of the schematic design phase Pickering will present rough sketches to the owner for approval. These sketches will provide the owner with the opportunity to verify that we have correctly interpreted your desired functional relationships between various activities and spaces. The sketches will also provide the client with a general indication of the exterior design and overall look of the addition. Once schematic design is complete, we will move into the design development phase for the project.

The design development phase is a transitional phase where the design team moves into developing the contract documents. In this phase, the architects and engineers prepare drawings and other presentation documents to crystallize the design concept and describe it in terms of architectural, electrical, mechanical, and structural systems. In addition, we will also prepare an estimate of probable construction costs so you will have a better indication of anticipated project costs. By preparing this estimate early in the design process, it will allow us to identify potential cost savings that may be required to keep the project within your anticipated budget. At the end of the design development phase, the architect will provide the client with drafted to-scale drawings that will illustrate the project as it would look when it's constructed. These drawings will specifically define the site plan, floor plans and exterior elevations. It is important that the client provide input to the architect at this time as the design development drawings are used as the basis for the construction drawings and used to further develop and refine the estimate of probable construction costs for the project.

Once the Owner has approved the design development phase, the Architect prepares detailed working drawings, thus progressing into the construction document phase of the project. During this time, final drawings and specifications are produced for the project. These documents will be used for bidding the project to contractors. These drawings and specifications become part of the construction contract. The construction documents will include all necessary information to ensure that the project will be constructed as conceived by the Owner and design team. Renderings of both the interior and exterior of the new addition will be prepared and provided to the Owner to use for marketing purposes. A physical 3D model can also be prepared (if desired by the client) to accurately portray the final design and to use as a marketing tool.

Pickering Associates will handle the bidding & negotiation phase of the project with our experienced in-house construction administration team. We have systems in place, and are equipped to electronically distribute the bidding documents to contractors and equipment suppliers interested in bidding the project, as well as produce hard copies as required. We will assist in contacting contractors to get interest in bidding the project, answer requests for information during the bidding process, assemble addendums, schedule, coordinate and lead a pre-bid meeting, and assist the owner with bid opening and contractor evaluation.

During construction administration Pickering Associates will be an agent of the owner, overseeing construction to ensure conformity to construction drawings, specifications, and standards. Pickering will assist the owner in awarding the contract, lead and coordinate weekly construction meetings, produce meeting agendas and meeting minutes, answer RFI's from contractors, review submittals, process change orders and pay applications, perform regular site visits, complete a punch list at the end of the project, and keep the owner informed throughout the entire process. This closely monitored process helps to ensure that the final project represents the intended design as indicated in the construction documents.

Consensus Building

Consensus building is essentially mediation of a conflict which involves many parties and is usually carried out by a facilitator that moves through a series of steps.

In the beginning, our facilitator or project manager identifies all of the parties who should be involved, and recruits them into the process. We propose a process and an agenda for the meeting, but allow the participants to negotiate the details of the process and agenda - giving the participants a sense of control of the process. This process builds trust between the participants and the facilitator, between the participants themselves, and with the overall process.

Defining and often re-defining the conflict is usually the next step. The project manager will get the participants to define the issues in terms of interests, which are usually negotiable, rather than positions, values, or needs, which usually are not. The project manager will then get the participants to brainstorm alternative approaches to the problem. This is typically done as a group effort, in order to develop new, mutually advantageous approaches. After the participants generate a list of alternate solutions, these alternatives are carefully examined to determine the costs and benefits of each (from each party's point of view), and any barriers to implementation are documented. Eventually, the choice is narrowed down to one approach which is modified, until all the parties at the table agree to the solution. The project manager then takes the agreement back to the owner for discussion and approval.



Special Design Concerns

Our architects design to the most current 2010 ADA standards. We understand how important it is to make your space compliant for your patients, visitors, and staff. ADA compliance is automatically designed into every project we complete. Compliance begins with conceptual design, to ensure that spaces are the appropriate size and contain all necessary ADA components - and carries through the entire project.

Our staff implements ADA design and compliance into every project. Some specific examples of projects where ADA compliance was important include:

- A long-term care facility where a minimum of 50% of the patient rooms and adjacent toilet rooms as well as all shower rooms were required to be ADA compliant.
- Recent renovations to a City Hall complex required complete ADA compliance with title II regulations to ensure that the facility met all obligations as required for a public entity. This included addition of a new elevator to accommodate access to all floor levels, a new lower-sloped 1:12 ramp to gain access to the main entrance of the building, and exterior site compliance to get visitors from the ADA parking spaces into the building.
- A recent addition to a local middle school required interior ramps that met ADA compliance in several locations. The new addition was situated between two existing buildings with different floor elevations and the ramps were required to connect all spaces - so students and staff could easily get to all portions of the buildings.

Sustainable Design

Pickering Associates is a LEED affiliated firm. We have architects and engineers that are current with LEED registration and the firm has completed multiple projects ranging from the certified level to platinum. We use software and best engineering practices to provide the end user the most energy efficient building systems. When you combine this with providing architectural design that works with these systems for insulation and avoidance of solar heating, you end up with an energy efficient building.

Multi-discipline Team

We also believe that because we are a full-service firm, (having the majority of the designers, architects, engineers, landscape designers, surveyors, project managers, and construction administration professionals on staff and under one roof), we are able to provide a better coordinated project than firms who are required to use many outside consultants. We organize regular in-house project team coordination meetings throughout the design phases of a project to discuss and work-out any issues or concerns that may arise. We feel that this face-to-face coordination with our design team is more effective and efficient than coordinating via email or over the phone. Our close coordination efforts have proved valuable in many cases where the design schedule is accelerated and/or where there is equipment in the project that require the effort and coordination of several disciplines. Typically, there are more change orders in firms that are not full service due to the difficulty and time required for drawing coordination.

Cost Estimation

In order to provide estimates for probable construction costs with accuracy, Pickering subscribes to and utilizes RS Means CostWorks On-Line. This tool provides comprehensive, localized, and up-to-date construction costs to help us create reliable estimates for our projects.

We know the importance of not only understanding our client's budget, but ensuring that the project is designed to fit into (and stay within) that budget. When an exterior addition is involved, we do our best to give our client a project that will not only look nice, but provide a design that will fit into the context of the existing facility by making it look like it belongs. We do not feel that it is appropriate to over-design a project to make a statement – thus increasing construction costs and making it difficult to stay within the client's project budget. We believe that it is more important to design features into the project that will allow for a better functioning project.

We utilize cost control methods to make sure that the overall project budget does not increase without the client's knowledge or prior approval. We typically provide an updated estimate of probable construction costs for each phase of design, thus monitoring and providing control for the project budget. If scope items are added to the project during the design phase we make certain that the client understands the implications and costs associated with each change or addition - prior to officially adding it to the project.

Building Information Modeling

Pickering Associates approaches Building Information Modeling as a very useful tool that can accomplish goals that extend beyond the typical design and construction phases of the project. Defining the specific project expectations is critical for the owner and designers. We work with the owner and start with their anticipated use of the BIM model once construction is complete. From there, we work through the design schedule incorporating all aspects of BIM that will enhance the owners understanding of the project. We will assign model management responsibilities, quality assurance responsibilities, and level of development criteria – all linked to specific schedule milestones. We incorporate clash detection, collaboration tools, visualization capabilities, and analytical studies throughout to benefit the project development process. We utilize these aspects of BIM and elevate them with in-house 3D printing services to provide exceptional professional services.

Community Involvement

Pickering Associates is invested in the community of the Mid-Ohio Valley and works with several local non-profit organizations to accomplish their design goals within a minimal budget. A few of our clients include Wood County Habitat for Humanity, our local Boy Scout troops, the Latrobe Street Mission in Parkersburg, and the Gospel Mission Food Pantry in Marietta, Ohio. It is important to us that these organizations are able to fulfill their mission in the community and continue to serve the residents of the Mid-Ohio Valley.



Technology Expertise

Pickering has experience designing projects that include various types of diagnostic equipment. We understand the importance of creating spaces that are efficient, functional, and user friendly. We are familiar with Cath Lab equipment, hyperbaric chambers, linear accelerators, dexta-scans, magnetic resonance imaging (MRI's), digital fluoroscopy, Positron Emission Tomography – Computed Tomography (PET/CT), ultrasound, and others. We have proficiency working with both equipment vendors and radiation safety officers to make certain that the equipment is designed and installed properly and safely. We have worked with vendors to create and construct some of the most functional and efficient labs in the area.

We have extensive experience and a close working relationship with the WV State Fire Marshal's office, The Office of Health Facility Licensure and Certification (OHFLAC), and the City of Parkersburg - and are familiar with the local and state requirements for healthcare facilities. We involve the authorities having jurisdiction early in the design process to minimize issues or conflicts during the permitting phases. The State and Local Authority Having Jurisdictions (AHJ's) trust and know us!

Our Approach

Over the past 10 years, Pickering Associates has completed more 170 projects in the Healthcare Industry.

We understand the importance of designing and installing equipment and systems that can be easily serviced and maintained by your staff and maintenance personnel. We make every effort to provide the necessary clearances around, and access to, equipment in our designs. We know that making areas and equipment easily accessible will help minimize disruptions to staff and patients using the spaces. Our portfolio includes installation of just about every type and brand of diagnostic equipment popular today by medical professions.

We have extensive experience and a close working relationship with the WV State Fire Marshal's office, the Office of Health Facility Licensure and Certification (OHFLAC), and the cities of Charleston and Huntington, WV - and are familiar with the local and state requirements for healthcare facilities. We involve the authorities having jurisdiction early in the design process to minimize issues or conflicts during the permitting phases. The State and Local Authority Having Jurisdictions (AHJ's) trust and know us!

Your Project

Pickering Associates will perform a complete site survey and detailed review of the existing conditions to develop a complete as-built set of drawings to be utilized for the proposed system renovations. We will rely on our project team experience and previous applicable project development procedures to move forward with detailed design drawing development to meet the needs and expectations of the proposed project scope.

Project management and communication will be key in establishing and managing all project stakeholders expectations, and ensuring that we will continually meet and exceed those expectations along with the typical project constraints of scope, cost, and schedule. Internal and external design review meetings will be applied reduce the Project Team's risk to changes or adjustments during construction. Our experienced team will use established relationships and previous procedures with state and other governing authorities to make the permit and plan approval process streamlined.

Our approach to projects is to see the project through from conception to commissioning. We will support the project team through continuous communication and attention to detail from design throughout construction to deliver a successful project in the end.

Related Prior Experience

Our Work Experience

All Healthcare Projects completed by Pickering Associates in the last ten years:

Boone Memorial Hospital	2098008	BOO-Outdoor Air
Brad Payne, Architect	2119125	BP-MMH South Pavilion Entrance
Cabell-Huntington Hospital	2148007	CHH-Chilled Water Study
Cabell-Huntington Hospital	2148009	CHH-Cysto Room HVAC Replacement
Cabell-Huntington Hospital	2149137	CHH-Prenatal Center
Cabell-Huntington Hospital	2158000	CHH-Huntington Hospital Tempary Chiller
Cabell-Huntington Hospital	2158003	CHH-Central Chiller Plant
Cabell-Huntington Hospital	2158004	CHH-OR Chilled Water
Camden Clark Medical Center	2069036	CCMH-Campus Documentation
Camden Clark Medical Center	2069036.1	CCMH-Campus Documentation
Camden Clark Medical Center	2069044	CCMH-Engineering Transport. Phlebotomy
Camden Clark Medical Center	2069044.1	CCMH-Permits & Authority Coord. Phleboto
Camden Clark Medical Center	2069044.2	CCMH-Field Verification of EUU Phlebotom
Camden Clark Medical Center	2069044.3	CCMH-Construction Eng. Phlebotomy
Camden Clark Medical Center	2069051	CCMH-Psych Ward
Camden Clark Medical Center	2069051.1	CCMH-Reimb. Psych Ward
Camden Clark Medical Center	2069051.2	CCMH-ER Psych Room
Camden Clark Medical Center	2069053	CCMH-Campus Hazmat Plan
Camden Clark Medical Center	2069053.1	CCMH-Changes by Owner Campus Hazmat
Camden Clark Medical Center	2069067	CCMH-Engineering & Drafting Assistance
Camden Clark Medical Center	2069070 C	CMH-TCU Reno. for East Wing Expansion
Camden Clark Medical Center	2069070.1	CCMH-RMB TCU Reno. for East Wing Expansi
Camden Clark Medical Center	2069085	CCMH-New Dr. Office
Camden Clark Medical Center	2069087	CCMH-Linear Accelerator
Camden Clark Medical Center	2077000	CCMH-First Floor Oncology Renovations
Camden Clark Medical Center	2079023	CCMH-Add. Campus Documentation
Camden Clark Medical Center	2079026	CCMH-Ele. Riser Diagram
Camden Clark Medical Center	2079029	CCMH-Sprinkler Riser Diagram
Camden Clark Medical Center	2079030	CCMH-MOB-A Dep. Documentation
Camden Clark Medical Center	2079032	CCMH-2007 Engineering & Drafting
Camden Clark Medical Center	2079114	CCMH-Phase 1 Backfill Master Plan
Camden Clark Medical Center	2079114.1	CCMH-Phase 2 Backfill Master Plan
Camden Clark Medical Center	2079114.2	CCMH-Phase 2 Backfill Master Plan
Camden Clark Medical Center	2079115	CCMH-Capital Project Mastersheet
Camden Clark Medical Center	2087000	CCMH-Hospice Rooms-End of Life
Camden Clark Medical Center	2087001	CCMH-Women's Center
Camden Clark Medical Center	2087001.1	CCMH-Women's Center Bidding & Construction
Camden Clark Medical Center	2087002	CCMH-2008 Engineering & Drafting
Camden Clark Medical Center	2087003	CCMH-Physicians Mov Bldg
Camden Clark Medical Center	2087004	CCMH-End-of-Life Hospice Rooms
Camden Clark Medical Center	2087005	CCMH-Digital Fluro Room



Camden Clark Medical Center	2087006	CCMH-MOB RAD Room Renovation
Camden Clark Medical Center	2087006.1	CCMH-Const. Admin. Fluro/RAD
Camden Clark Medical Center	2087007	CCMH-PET/CT Areas
Camden Clark Medical Center	2087007.1	Const. Admin. Svcs. for PET/CT
Camden Clark Medical Center	2087008	CCMH-Cooling Tower Replacements
Camden Clark Medical Center	2087009	CCMH-Health South
Camden Clark Medical Center	2087013	CCMH-CCMH OB Phase 2 Renovations
Camden Clark Medical Center	2087014	CCMH-ED, Fast Track & Central Reg.
Camden Clark Medical Center	2087015	CCMH-Additional Campus Documentation
Camden Clark Medical Center	2087016	CCMH-CCMH 1st East Renovations
Camden Clark Medical Center	2087016.1	CCMH-CCMH 1st East Renovations Construct
Camden Clark Medical Center	2097000	CCMH-Cooling Tower Heat Trace
Camden Clark Medical Center	2097001	CCMH-2009 Engineering & Drafting Service
Camden Clark Medical Center	2097002	CCMH-CCMH Athen's Clinic
Camden Clark Medical Center	2097003	CCMH-Logistics and Support
Camden Clark Medical Center	2097004	CCMH-Physical Therapy
Camden Clark Medical Center	2097005	CCMH-Diesel Fuel for Boilers
Camden Clark Medical Center	2097007	CCMH-North Wing Brick Assessment
Camden Clark Medical Center	2097008	CCMH-North Wing Brick Rehabilitation
Camden Clark Medical Center	2107001	CCMH-Isolation Rooms Exhaust Fan Issue
Camden Clark Medical Center	2107002	CCMH-Cancer Center Support Services
Camden Clark Medical Center	2107003	CCMH-2010 Engineering & Drafting Service
Camden Clark Medical Center	2107004	CCMH-Third Floor Renovations
Camden Clark Medical Center	2107005	CCMH-Fifth Floor Renovations
Camden Clark Medical Center	2107006	CCMH-North Tower Fourth Floor Window Rep
Camden Clark Medical Center	2107008	CCMH-Ann Street Brick Facade
Camden Clark Medical Center	2107009	CCMH-Air Handler Replacement
Camden Clark Medical Center	2107010	CCMH-3rd Floor Administration Building S
Camden Clark Medical Center	2117001	CCMH-2011 Engineering & Drafting Service
Camden Clark Medical Center	2117002	CCMC-OB and Pediatric Renovations-Phase 1
Camden Clark Medical Center	2117003	CCMH-Boiler Replacement
Camden Clark Medical Center	2117005	CCMH-St. Joes Boiler
Camden Clark Medical Center	2119035	CCMC-St. Joseph Building Assessment
Camden Clark Medical Center	2127000	CCMH-2012 Engineering & Drafting Service
Camden Clark Medical Center	2127001	CCMC-St. Joseph's Sterile Processing
Camden Clark Medical Center	2127004	CCMC-Acute Care
Camden Clark Medical Center	2127005	CCMC-Cath Labs
Camden Clark Medical Center	2127006	CCMC-ED Expansion
Camden Clark Medical Center	2127007	CCMC-CVOR
Camden Clark Medical Center	2127008	CCMC-CVICU
Camden Clark Medical Center	2137000	CCMC-SJC-TCU Renovations
Camden Clark Medical Center	2137001	CCMC-MC-CV Recovery

Our Work Experience

Camden Clark Medical Center	2137002	CCMC-2013 Engineering & Drafting Service
Camden Clark Medical Center	2137003	CCMC-MOB-C Parkersburg Cardiology
Camden Clark Medical Center	2137004	CCMC-Rosemar Medical Office Building
Camden Clark Medical Center	2137006	CCMC-Phase 2 Consolidation Plans
Camden Clark Medical Center	2137008	CCMC-Acute Care
Camden Clark Medical Center	2137009	CCMC-Cath Labs
Camden Clark Medical Center	2137010	CCMC-CVOR Addition and Renovation
Camden Clark Medical Center	2137011	CCMC-CVICU Renovations
Camden Clark Medical Center	2137012	CCMC-Isolation Rooms
Camden Clark Medical Center	2147000	CCMC-2014 Engineering & Drafting Service
Camden Clark Medical Center	2147002	CCMC-Emergency Department Addition
Camden Clark Medical Center	2147002.1	CCMC-Diesel Tank Relocation
Camden Clark Medical Center	2147002.2	CMCC-South Tower Lobby Renovations
Camden Clark Medical Center	2147002.3	CMCC-Chiller Optimization
Camden Clark Medical Center	2147002.4	CCMC-ED Radiology Area
Camden Clark Medical Center	2147003	CCMC-OR Renovation & Addition
Camden Clark Medical Center	2147005	CCMC-2014 Roof Replacement
Camden Clark Medical Center	2157000	CCMC-2015 Engineering & Drafting Service
Camden Clark Medical Center	2157001	CCMC-2015 Roof Projects
Garfield Medical Group	2139021	GMG-Garfield Medical Complex
Health South Western Hills Hospital	2097006	CCMH-2009 Health South
Marietta Memorial Hospital	2060100	MMH-Drafting Assistance
Marietta Memorial Hospital	2060101	MMH-Electrical System Arc-Flash Analysis
Marietta Memorial Hospital	2070100	MMH-1st Floor
Marietta Memorial Hospital	2070101	MMH-2nd Floor
Marietta Memorial Hospital	2070102	MMH-3rd Floor
Marietta Memorial Hospital	2070103	MMH-4th Floor
Marietta Memorial Hospital	2070104	MMH-Strecker Cancer Center
Marietta Memorial Hospital	2070105	MMH-Allan Hall
Marietta Memorial Hospital	2079109	MMH-504 2nd St. Scale Drawings
Marietta Memorial Hospital	2089000	MMH-Fire & Smoke Barrier Drawings
Marietta Memorial Hospital	2089004	MMH-4th Floor Renovations
Marietta Memorial Hospital	2089005	MMH-Suite 304 Renovations
Marietta Memorial Hospital	2089014	MMH-Drafting
Marietta Memorial Hospital	2089048	MMH-Floorplan Drafting Updates
Marietta Memorial Hospital	2089073	MMH-Hildreth Office Building Drawing Upd
Marietta Memorial Hospital	2089076	MMH-South Pavilion Dwg. Updates
Marietta Memorial Hospital	2099008	MMH-Electrical Panel Drawing Updates
Marietta Memorial Hospital	2099032	MMH-Drafting & Design
Marietta Memorial Hospital	2099071	MMH-MMH Ground Fault Report
Marietta Memorial Hospital	2099078	MMH-Allan Hall Coordination Study
Marietta Memorial Hospital	2119077	MMH-Operating Rooms UPS Study
Marietta Memorial Hospital	2119105	MMH-Floor Plan Updates



Marietta Memorial Hospital	2119136	MMH--UPS System Installations
Marietta Memorial Hospital	2129073	MMH-Laboratory Study for UPS Relocation
Marietta Memorial Hospital	2129087	MMH-Utility Documentation
Marietta Memorial Hospital	2137500	MMH-Selby Hospital Renovations
Marietta Memorial Hospital	2139003	MMH-Main Campus IT Room HVAC and Ele.
Marietta Memorial Hospital	2139127	MMH-Selby Fire Plans
Marietta Memorial Hospital	2139155	MMH- Suite 301 Floor Plan Updates
Marietta Memorial Hospital	2139156	MMH- Sports Med Floor Plan Updates
Marietta Memorial Hospital	2139181	MMH-Belpre BLDG II Plans
Marietta Memorial Hospital	2147500	MMH-2014 Electrical As-builts
Marietta Memorial Hospital	2147501	MMH-Lab & Health Info Services Reno
Marietta Memorial Hospital	2149126	MMH Design Assistance
Marietta Memorial Hospital	2156525	MMH-Parking Garage Beam Monitoring
Marietta Memorial Hospital	2156526	MMH-Boundary Caldwell Property
Marietta Memorial Hospital	2159003	MMH-Renovation of Physician Suite 208
Marietta Memorial Hospital	2159101	MMH-Physician Office Renovations
St. Joseph's Hospital	2089071	STJO-St. Joe's 6th Floor Roof Reinforcin
St. Joseph's Hospital	2089071.1	STJO-Phase II Alternate 1-B
St. Joseph's Hospital	2099012	STJH-Dr. Krause-Renovation
Stonerise Healthcare	2167500	STO-Heartland Clarksburg
Stonerise Healthcare	2167501	STO-Glenwood Acres
Stonerise Healthcare	2167502	STO-Valley View
Stonerise Healthcare	2167503	STO-Valley Haven Geriatric Center
Stonerise Healthcare	2167504	STO-The Brier Nursing Home
Stonerise Healthcare	2167505	STO-Camden Clark
Stonerise Healthcare	2167506	STO-Eagle Point
Stonerise Healthcare	2167507	STO-Heartland Beckley
Stonerise Healthcare	2167508	STO-Thomas Hospital Nursing Home
Stonerise Healthcare	2167509	STO-Eastbrook
Stonerise Healthcare	2167519	STO-Glenwood Park
Stonerise Healthcare	2167520	STO-Pack Preston Co Heartland
Stonerise Healthcare	2167521	STO-Pack Carehaven Alzhiemers Unit
Stonerise Healthcare	2167532	STO-Rainelle Heartland
Stonerise Healthcare	2167533	STO-Keyser Nursing Home
Stonerise Healthcare	2167534	STO-Martinsburg Heartland Nursing Home
Stonerise Healthcare	2167538	STO-Mapleshire Morgantown
Thomas Memorial Hospital	2167536	THO-4th Floor Pediatric Wing
Thomas Memorial Hospital	2167537	THO-1st Floor Oncology Office Renovation
Westbrook Health Services	2139014	WHS-Westbrook Space Planning
Westbrook Health Services	2139043	WHS-Arlington Personal Care Building
Westbrook Health Services	2139126	WHS-4000 Core Road Building Review
Westbrook Health Services	2139148	WHS-Westbrook Health Space Planning - 2
Worthington Nursing Home	2159085	WOR-Outpatient Therapy Renovations
Wirt County Nursing Home	2139101 P	HO-Wirt Co Nursing Home



Type

Education

Services

Electrical

Civil

Mechanical



West Virginia University at Parkersburg recently constructed a new Center for Early Learning and asked Pickering Associates to provide engineering and design services to install a new natural gas generator at the facility. The new generator was designed to carry the entire buildings electrical load. The project also included a security fence around the generator and concrete equipment pad. All work associated with the project was coordinated with WVU-P decision makers.

The electrical engineering scope of this project included a site visit to review and document the existing electrical distribution system and equipment locations. Our team developed electrical plans for the installation of a new generator system to meet the needs of the facility's electrical distribution system. The new system was designed to include a new automatic transfer switch for system transfer and the new generator and emergency system are sized to carry the entire facilities electrical load under outage conditions. All one-line diagrams were revised to represent the new electrical distribution system.

The civil scope of the project included a site visit to review and document the existing site conditions and perform limited survey of the generator location. Our engineers designed the site, grading and utility plans of the project area. Our team designed the generator foundation/equipment pad and created drawings and details as required.

The mechanical scope for this project included a review of the placement of the new emergency generator to ensure that proper clearance is maintained between the exhaust and the mechanical system intake louver. The mechanical team also sized the gas line from the new utility company meter to the new generator location.

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Type

Healthcare

Services

Architectural

Electrical

Mechanical

Plumbing

Construction
Administration



Camden Clark Medical Center (CCMC) desired to replace a 200 hp boiler with a 500 hp boiler so, after several successful projects, the hospital chose to utilize the services of Pickering Associates.

The mechanical engineer conducted field surveys to determine existing conditions and proper boiler room layout. In addition, a temporary boiler system was designed to operate while the new system was being installed. As part of this project, CCMC also replaced the current deaerator tank with one of adequate size including replacing all existing end suction style pumps with new vertical inline boiler feed pumps. The relocation of an existing 300 hp boiler was also required to allow for future replacement of equipment.

In addition to the boiler replacement, Camden Clark Medical Center also used our design services to replace the diesel fuel pump in the existing tank located outside the South Tower along with the fuel piping to each of the boilers. Electrical engineering and design were provided to disconnect electrical feeds to the existing boiler unit and diesel fuel pump, and install new electrical feeds to the new boiler unit and diesel fuel pump.

Pickering Associates also provided construction administration and project management throughout the project.

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Type

Education

Services

Electrical

Mechanical

Plumber

Construction

Administration



Pickering Associates has worked with Ohio University on several projects over the past decade. When the school was in need of replacing the existing boiler system at the Shoemaker Center, including the pumps, air separator, storage tank, etc., they contacted us for electrical and mechanical design for the heating system.

Pickering Associates evaluated the loads of the current system to assist in determining boiler selections, and made a new selection based on high efficiency condensing boiler cascading system based on Lochinvar Knight XL series boilers. The existing combustion air unit was removed and replaced with a modulating damper, operating on thermostat to assist in heat removal when needed.

Pickering Associates provided mechanical and electrical engineering and design services to prepare documents and drawings to replace the existing boiler system and storage tank. Documents were used for permits and construction, including plans, schedules and details. The system included new boilers, storage tank, distribution pumps, boiler pumps, air separator, and expansion tank.

Pickering Associates created a general arrangement plan and demolition plan required for the installation of the new boilers. In addition, design was created for piping to the new boilers. Electrical design was created to remove the existing feeds from the existing boiler units and install new electrical feeds to the new boiler units.

Pickering Associates also provided permitting assistance, and construction administration throughout the project.

Jeff Hosck, PE, was the lead engineer on this project.

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Type

Healthcare

Services

Architectural

Civil

Electrical

Mechanical

Plumbing

Structural



Pickering Associates was brought in to a design-build team with the General Contractor for a nursing home located in Wirt County, West Virginia. Our team worked with the owner to develop the programmatic requirements, space relationships, budget, and schedule.

Being the first new nursing home facility constructed in some time, the main challenges have been balancing the owner desires while maintaining adherence to the health care regulations and budget, and delivering an innovative facility that will last the test of time.

A 3D model was used to generate exterior renderings and interior views to help convey the nature of the space to the owner. BIM was utilized in a limited fashion to help with design and clash detection.

Design included Mechanical Engineering services to develop HVAC equipment, perform heating and cooling load analysis, create mechanical plans, schedules and details. Electrical Engineering services included providing design and engineering for the installation of receptacles, interior and exterior light fixtures, light switches, HVAC equipment, and all other miscellaneous electrical equipment for the new facility. Design also included a new communication system and emergency lighting requirements.

This project is both on budget and schedule. The project is currently in construction.

Contact: Tim Coffman, Phoenix and Associates | 304.485.3255 | tim@phoenixwv.biz

Type
Government

Services
Electrical Engineering



The City of Vienna, West Virginia contracted with Pickering Associates to review the emergency generator installations and configurations at both the Vienna Volunteer Fire Department and the Vienna Police Department. The generator was reconfigured to be connected to the existing fire department and the new facility.

The connection from the police department to the generator was removed and a new generator was installed and utilized for the police department only. All the existing installations were corrected to meet all applicable local codes and standards.

Our engineers reviewed all the existing emergency generator configurations and installations at the venues. They provided the design and engineering to correct all the existing electrical installations associated with the emergency generator and provided the design and engineering to reconfigure the existing emergency generator to the police station. The team provided the design and engineering to install a new natural gas emergency generator and all associated equipment to connect to the existing police station.

All aspects of the project were coordinated with the Mayor of Vienna and all associated parties.

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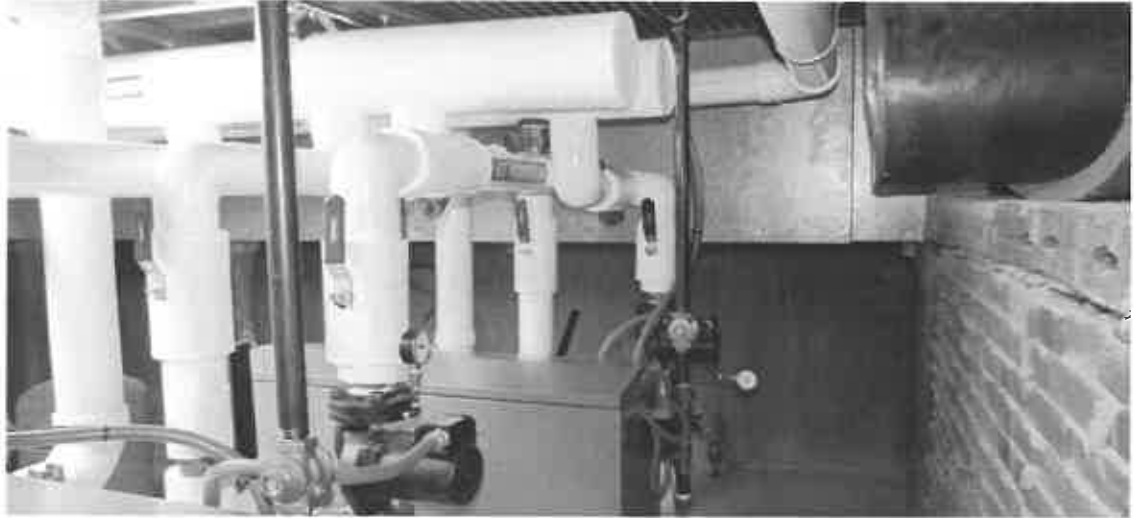
Type

Education

Services

Mechanical

Electrical



As part of Wood County School's on-going effort to maintain and replace aging boiler systems, Pickering Associates provided the engineering and construction administration to replace the existing facility boilers with high efficiency boilers.

The design eliminated the existing two (2) boiler system which served both the main building and the cafeteria. This was replaced with one centralized boiler system for the entire facility.

The new boiler system is comprised of three high-efficiency boilers, two pumps and hydronic system accessories. In addition, a hot water radiant heater was also installed in one of the previous boiler rooms to accommodate additional storage space.

Three alternates were included in the design for bids including a new rooftop HVAC unit for the gymnasium, new rooftop cooling unit for the cafeteria and replacement of an existing gymnasium utility supply fan. Only the alternate for the supply fan was accepted due to current available funding.

The electrical scope of work included new circuit breakers, pump motor starters, safety disconnect switches, fuses, conduit and control wiring. They also replaced the existing lighting fixtures in the mechanical room and teacher's lounge.

This project was designed and bid so that equipment could be ordered and construction could begin immediately following school dismissal for the summer break. The project was complete and inspected in time for school to resume in the fall.

Contact: Gary Cooper, Physical Plant Director | 304-420-9568 | gcooper@access.k12.wv.us

Type

Healthcare

Services

Architectural

Civil

Electrical

Mechanical

Plumbing

Construction
Administration

Project
Management



Pickering Associates completed the design of a new Emergency Department Addition at Camden Clark Medical Center and is currently providing construction administration services. The project scope includes the construction of a new three story addition adjacent to the south tower of the CCMC located in downtown Parkersburg, WV. The ground floor is designed to serve as an Emergency Department and will encompass approximately 26,200 SF. The first floor is designed to serve as a Patient Room/ Nursing Unit and will encompass approximately 24,600 SF. The penthouse will house mechanical equipment and storage and will encompass approximately 10,000 SF.

Contracts were broken into four multi-prime contracts consisting of general trades, mechanical, plumbing (including sprinkler system), and electrical packages. The hospital is remaining open and fully operational during the construction of the addition.

Challenges included working with existing utilities, connecting with the hospital's South Tower, and ensuring that the hospital remain fully functional throughout construction. The program includes 46 Emergency Department bays, 3 trauma rooms, 3 psychiatric holding rooms, a stat lab, CT scanner, a plain film x-ray unit, support service offices, waiting rooms, lounges, and emergency transport team offices.

Our team provided initial conceptual design services, including a scale model of the hospital campus printed using our gypsum based 3D printer. This allowed the Board and Hospital staff to more easily visualize the design and programming.

Contact: Barry Justice, Director of Engineering | 304.424.4111 | bkjustice@ccmh.org



Type

Healthcare

Services

Architectural

Electrical

Mechanical

Plumbing

Structural

Construction
Administration

Project
Management



Pickering Associates has been involved in the design and construction of multiple projects for Cabell Huntington Hospital in Huntington, West Virginia. Projects types range from one discipline to all disciplines depending on the requirements. Some of our projects include:

Full-service engineering and design services to develop construction documents to install two new rooftop HVAC units to supplement cooling to the two existing operating rooms.

Investigation of adjacent air handling systems to the Cystoscopy room to determine if the required airflow can be attained from the nearby system.

Mechanical, Plumbing, and Electrical Design for proposed renovations to the first floor of the medical building at Cabell Huntington Hospital, in coordination with Ed Tucker Architects.

The design for a permanent installation of piping and power to a temporary chiller to cool the operating rooms at Cabell Huntington Hospital to maintain operation while plans are developed for a new water-cooled chiller.

Study for centralizing the hospital's chiller plant operations, which include four water-cooled units and one air-cooled unit. Our team developed a five year plan for centralizing the chilled water operations of the CHH medical facility as well as replacing the existing operating room(s) air handling units.

Designed supplementary direct expansion (DX) coiling coils that were installed in OR rooms, which have maintained temperature and humidity levels within the ASHRAE Standard. We have also been asked to investigate options to reduce the overall room levels to within the Standard and prepare plans for implementing the necessary changes to meet humidity levels of 20-60% RH and temperature levels of 65-70 degrees F.

We used our 3D scanner to document the mechanical room to coordinate existing and new utilities, allowing for documentation to be completed quickly so that we could move into design.

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Type

Healthcare

Services

Architectural

Civil

Electrical

Mechanical

Plumbing

Structural

Construction
Administration

Project
Management



Pickering Associates has been involved in the design and construction of multiple projects for Camden Clark Medical Center in Parkersburg, West Virginia. Project types range from one discipline to all disciplines depending on the requirements. Some of our projects include:

CCMC recently acquired St. Joseph's Medical Center. Understanding that several high temperature hot water boilers were reaching their life expectancy and were operating at reduced capacity due to fouled tubes, Pickering Associates was asked to prepare installation drawings and obtain necessary permits (including EPA) as well as provide construction administration services.

A New Behavioral Health Unit was designed to be located in existing space on the third floor of the Main Hospital. Spaces included eighteen semi-private and one private patient room, two group therapy rooms, dining area, laundry room, shower rooms, nurses station, physicians' offices, consultation area, activity area, family visitation area, support area and staff locker room. Pickering Associates provided mechanical, electrical, and plumbing engineering.

Communication became an issue for the hospital after construction of the new Administration Building. It became necessary to design and implement a way to run communication conduit under Murdoch Avenue and Ann Street to connect with the main building.

The Transportation and Phlebotomy Project involved closing in a vacant courtyard between the cafeteria and materials management of the main building to house both departments. Project involved design of new foundations and structural steel, underground utility tie-ins, structural roof decking, HVAC, electrical and plumbing.

The Transitional Care Unit (TCU) Project entailed renovating semi-private rooms into private rooms.

A study was performed during the Trauma Unit Project to determine if there was sufficient ceiling area in the exam room to mount and support two types of ceiling mounted arms and recommendations were made to the hospital for installation.

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