



11283 Emerson Avenue • Parkersburg, WV 26104  
304.464.5305 • 800.954.5305 • 304.464.4428  
www.pickeringusa.com

*Architects • Engineers • Surveyors*

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

To Whom It Concerns,

Pickering Associates is grateful to have the opportunity to outline our environmental and engineering services for the Leachate Holding Tank Study, Recommendation, and Construction QA/QC for the Monongalia County and City of Morgantown Landfills. We are pleased to present our proposal outlining our technical expertise, management, staff capabilities and experience for providing high quality environmental and engineering services. Our approach will offer advantages in methodology and delivery, which will elevate the success of your project both now and for years to come. While our specific experience with landfill leachate storage design is limited, our Civil and Environmental engineering professionals have completed hundreds of projects focused around managing, storing, and processing contaminated stormwater.

Like all of the projects we engage, this project will require a methodical scientific based investigation and sound engineering, all of which will be conducted by the Pickering Associates team. Our well aligned team plans to meet the goals of this project through the following phased approach:

- Phase I – Conduct a topographic survey of the project area at 1 foot contour intervals. Perform a desktop review of pertinent existing GIS and other readily available site specific data. Execute site visits to assess the current condition of the leachate tanks and holding ponds. Develop a conceptual model subsurface sampling plan.
- Phase II – Coordinate with Double J Drilling to utilize a mobile drilling rig equipped with a split spoon hollow auger to obtain subsurface media samples. Process laboratory analysis of all samples through Microbac Laboratories, Inc. Analyze and interpret laboratory results.
- Phase III – Prepare a written report detailing the findings of the investigation and assessing the current systems functionality. Create conceptual designs and a construction cost estimate for modifying the existing leachate processing system.
- Phase IV – Procure and coordinate geotechnical services for completion of soil borings and soil report. Develop detailed construction drawings based on approved conceptual plans. Provide contract administration and construction administration throughout construction and completion of the project.

You will see from our resumes and company experience that we are uniquely qualified to offer the professional services required to ensure the success of your project. We look forward to personally discussing our qualifications to complete this project on time, within budget and exceeding the standards of any firm you may have worked with previously.

Should you have any questions regarding this proposal, please do not hesitate to contact us.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Jesse Daubert".

Jesse Daubert

Project Manager

jdaubert@pickeringusa.com

06/13/17 09:07:09  
WV Purchasing Division

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
CONSULTANT QUALIFICATION QUESTIONNAIRE**

PROJECT NAME  
**Leachate Holding Study**

DATE (DAY, MONTH, YEAR)  
12 June 2017

FEIN

1. FIRM NAME  
Pickering Associates

2. HOME OFFICE BUSINESS ADDRESS  
11283 Emerson Avenue  
Parkersburg, WV 26104

3. FORMER FIRM NAME

4. HOME OFFICE TELEPHONE  
(304) 464-5305

5. ESTABLISHED (YEAR)  
1988

6. TYPE OWNERSHIP  
CORPORATION

6A. WV REGISTERED DBE (DISADVANTAGED BUSINESS ENTERPRISE)

NO

7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL EACH OFFICE

11283 Emerson Avenue, Parkersburg, WV 26104 / (304) 464-5305 / Ryan Taylor / 82 employees

Parkersburg, West Virginia Office (Main): 69 employees  
Charleston, West Virginia Office: 5 employees  
Marietta, Ohio Office: 4 employees  
Athens, Ohio Office: 4 employees

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM

Ryan Taylor, President, (304) 464-5305

8a. NAME, TITLE, & TELEPHONE NUMBER-OTHER PRINCIPALS

David Boggs, Vice President, (304) 464-5305

9. NUMBER OF PERSONNEL BY DISCIPLINE (Bold Lettering Indicates Minimum Design Team Members)  
Detailed information On Team to Be Included

11 ADMINISTRATIVE

10 ARCHITECTS

1 BIOLOGIST

6 CADD OPERATORS

8 CHEMICAL ENGINEERS

2 CIVIL ENGINEERS

2 CONSTRUCTION INSPECTORS

2 DESIGNERS

\_ DRAFTSMEN

\_ ECOLOGISTS

\_ ECONOMISTS

12 ELECTRICAL ENGINEERS

\_ ENVIRONMENTALISTS

2 ESTIMATORS

1 GEOLOGIST

\_ HISTORIANS

1 HYDROLOGISTS

2 LANDSCAPE

ARCHITECTS

8 MECHANICAL ENGINEERS

\_ MINING

ENGINEERS

\_ PHOTOGRAMMETRISTS

\_ PLANNERS:

URBAN/REGIONAL

SANITARY

ENGINEERS

1 SOILS ENGINEERS

1 SPECIFICATION

WRITERS

5 STRUCTURAL ENGINEERS

7 SURVEYORS

\_ OTHER

82 TOTAL PERSONNEL

**TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 12**

\*RPEs other than Civil must provide supporting documentation that qualifies them to supervise and perform this type of work.

10. If submittal is by joint venture, list participating firms & outline specific areas of responsibility (including administrative, technical, & financial) for each firm. Each participating firm must complete a "Consultant Confidential Qualification Questionnaire".

10a. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?

YES

NO

11. OUTSIDE KEY CONSULTANTS/ SUB-CONSULTANTS ANTICIPATED TO BE USED.		
NAME AND ADDRESS: Double J Drilling 1207 Williamstown Pike Williamstown, WV 26187	SPECIALTY: Subsurface drilling	WORKED WITH BEFORE YES
NAME AND ADDRESS: Microbac Laboratories, Inc. 158 Starlite Drive Marietta, OH 45750	SPECIALTY: Full service laboratory testing of multiple media types	WORKED WITH BEFORE YES

12. A. Is your firm experienced in solid waste landfill leachate storage design?  
**NO**
- B. Is your firm experienced in solid waste landfill leachate capacity assessment?  
**NO** – however, Pickering Associates Civil Engineers have experience with multiple stormwater capacity assessments. Please see our attached Statement of Qualifications for specific examples of our project experience.
- C. Is your firm experienced in solid waste landfill closure construction inspection?  
**NO** - however, Pickering Associates has provided construction administration/inspection services for numerous projects since our founding in 1988. Please see our attached Statement of Qualifications for specific examples of our project experience.
- D. Is your firm experienced in aerial photography and the development of contour mapping?  
**YES** – Pickering Associates Civil Engineer John Bentz is a registered Unmanned Aerial Vehicle pilot registered to provide commercial services. He frequently utilizes aerial imagery for pre and post construction documentation and assessment of project areas. The Civil and Surveying departments within Pickering Associates have captured and utilized aerial imagery and contour mapping on hundreds of projects. Please see our attached Statement of Qualifications for specific examples of our project experience.
- E. Is your firm familiar with the requirements of 33CSR1, the ground-water protection act, under-ground and above-ground storage tank rules?  
**YES** – Pickering Associates Civil engineers and Environmental Scientists have completed numerous projects both assessing existing storage tank systems and designing new tank systems. These projects have accounted for multiple regulatory considerations to insure our projects are designed within compliance of applicable legislation.
- F. Is your firm experienced in solid waste landfill closure cost estimating?  
**NO** - However, we have extensive experience and knowledge in providing construction cost estimates for both new project sites and renovations of existing sites.

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN (describe project) (Furnish Complete data but keep to essentials)			
NAME& TITLE (Last, first, Middle Int.)	YEARS OR EXPERIENCE		
	YEARS OF (type) EXPEIRENCE:	YEARS OF (type) EXPEIRENCE:	YEARS OF (name type) EXPEIRENCE:
Brief Explanation of Responsibilities:			
<hr/> <hr/> <hr/>			
EDUCATION (DEGREE, YEAR, SPECIALIZATION)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:		REGISTRATION (Type, Year, State)	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN (name type of design or work) (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPEIRENCE		
	YEARS OF EXPEIRCENE (name type):	YEARS OF EXPEIRENCE (name type):	YEARS OF EXPEIRENCE (name type):
Brief Explanation of Responsibilities:			
<hr/> <hr/> <hr/>			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

**13b. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE QA/QC (Furnish complete data but keep to essentials)**

NAME & TITLE (last, first, middle Int.)	YEARS OF EXPEIRENCE		
	YEARS OF EXPERIENCE (name type):	YEARS OF EXPERIENCE (name type):	YEARS OR EXPEIRENCE (name type):

Brief Explanation of Responsibilities:

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

**13c. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES REPONSIBLE FOR HEAVY EARTH WORK CONSTRUCTION PROJECTS (Furnish complete data but keep to essentials)**

NAME & TITLE (last, first, middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF EXPERIENCE (name type)	YEARS OF EXPERIENCE (name type)	YEARS OF EXPERIENCE (name type)
<b>Kimble, Spencer, L.</b>	6 years as a PE		

Brief Explanation of Responsibilities

- Lead Civil engineer, project manager, construction manager for numerous commercial, industrial, and oil/gas projects.

EDUCATION (Degree, Year, Specialization)

- B.S., 2011, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)  
Professional Engineer, 2011, West Virginia



**15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD ASSOCIATED WITH OR RELATING TO LANDFILL CLOSURE OR CONSTRUCTION.**

PROJECT NAME,TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
<b>TOTAL NUMBER OF PROJECTS:</b>			<b>TOTAL ESTIMATED CONSTRUCTION COSTS:</b>	
# _____			\$ _____	





**17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (List 5 to 7)**

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Belle Rose Truck Station	Enlink Midstream	\$5 million	2016	Yes
McIntire Well Pad	Triad Hunter	\$1.3 million	2016	Yes
Wells Meckley Well Pad	Triad Hunter	\$1.7 million	2015	Yes
Line 2 Expansion	Kuraray America, LLC	\$12.9 million	2017	In Construction
Emergency Department Expansion	Camden Clark Medical Center	\$19.7 million	2016	Yes
NESHAP Compliance	Eramet Marietta Inc.	\$5 million	2017	Yes
First Colony Phase II Development	Larry Lang Excavating	\$2.6 million	2017	In Construction



19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the WV Department of Environmental Protection.

**Please see the attached Statement of Qualifications document.**

20. The foregoing is a statement of facts

Signature: Jesse Daubert

Date: June 12, 2017

Title: Project Manager, Environmental Scientist

Printed  
Name: Jesse Daubert

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

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

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Pickering Associates

Authorized Signature: Uraci L. Stott Date: 6-12-2017

State of WEST VIRGINIA

County of WOOD, to-wit:

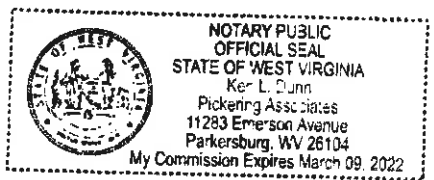
Taken, subscribed, and sworn to before me this 12<sup>TH</sup> day of JUNE, 2017.

My Commission expires 03/09/22, 20  .

**AFFIX SEAL HERE**

**NOTARY PUBLIC** Ker L. Dunn

*Purchasing Affidavit (Revised 08/01/2015)*



**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Traci L. Stotts VP of Marketing/Architect  
(Name, Title)

Traci L. Stotts VP of Marketing/Architect  
(Printed Name and Title)

11283 Emerson Ave Parkersburg, WV 26104  
(Address)

304-464-5305 304-464-4428  
(Phone Number) / (Fax Number)

tstotts@pickeringusa.com  
(email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Pickering Associates  
(Company)

Traci L. Stotts VP of Marketing/Architect  
(Authorized Signature) (Representative Name, Title)

Traci L. Stotts VP of Marketing/Architect  
(Printed Name and Title of Authorized Representative)

6-12-2017  
(Date)

304-464-5305 304-464-4428  
(Phone Number) (Fax Number)



*Architects • Engineers • Surveyors*

Statement of Qualifications

for

*Leachate Tank Study*

*Monongalia/Morgantown LFs*

*CEOI 0313 DEP1700000003*

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Respectfully submitted,

A handwritten signature in blue ink that reads "Jesse Daubert". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jesse Daubert  
Project Manager  
[jdaubert@pickeringusa.com](mailto:jdaubert@pickeringusa.com)



# *Management and Staffing*



**Parkersburg**

11283 Emerson Ave  
Parkersburg, WV 26104  
(P) 304.464.5305  
(F) 304.464.4428

**Charleston**

318 Lee Street W.  
Charleston, WV 25302  
(P) 304.345.1811  
(F) 304.345.1813

**Marietta**

326 3rd Street  
Marietta, OH 45750  
(P) 740.374.2396  
(F) 740.374.5133

**Athens**

2099 East State Street, Suite B  
Athens, OH 45701  
(P) 740.593.3327  
(F) 800.589.3755



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.

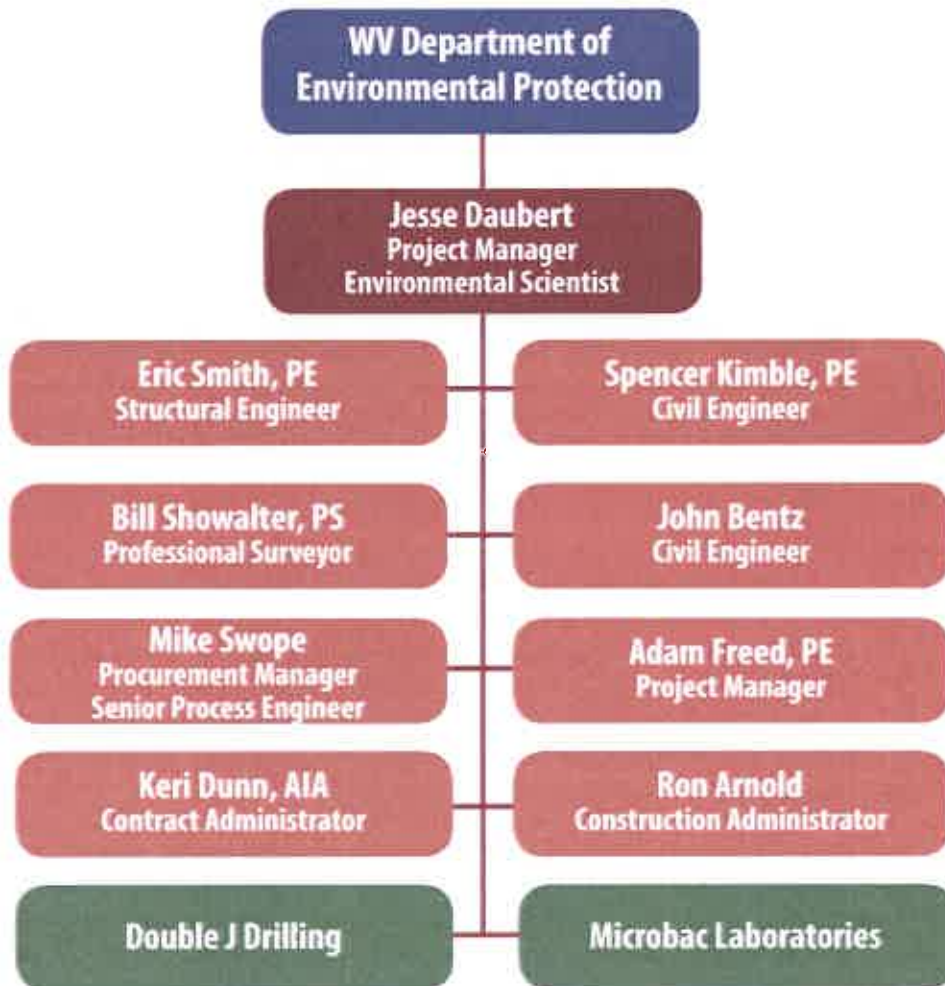
Our architectural, engineering and surveying firm consists of an exceptional balance of experience and the desire to provide our customers with a quality product at a fair price. Our highly qualified staff includes licensed professional engineers, professional surveyors, licensed architects, designers, 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.

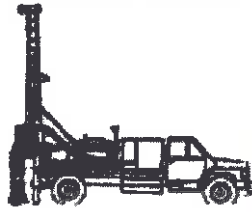
Our broad client base is representative of the area and includes education, healthcare, retail, utilities, municipal, chemicals and plastics, metals, and power generation among others. The types of projects we provide range from conceptualization and construction estimates to full turn-key design including 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 of Proposed Team



# DOUBLE J DRILLING OF W. VA.

## ENVIRONMENTAL, GEOTECHNICAL AND MINING DRILLING AND RELATED SERVICES

### Site Access and Reclamation Services

In addition to our ability to meet your site drilling and well installation needs, Double J Drilling has the added advantage of being able to provide our own access for our drills and then re-grading, seeding and mulching our work areas. We provide the dozers, backhoes and excavators, skid-steers, ATV support vehicles, straw blowers, etc., to cut-in roadways and drill pads, conduct test pitting, dig mud pits, lay lines and haul water, cut trees and brush to allow rig set-up and then go back and re-claim and seed the site to original or better condition.

### Environmental Drilling Services

Double J Drilling has conducted environmental drilling and monitoring well installations for consultants and engineering firms throughout the Mid-Atlantic region. We drill utilizing hollow-stem augers, air and mud rotary, and direct-push methods. Our drillers are licensed to drill in all surrounding states and have the necessary health and safety training. Our safety record is excellent with a .76 experience mod. rating. Double J Drilling has conducted environmental investigations ranging from simple geoprobe borings at gas stations to major studies at governmental facilities such as Pikeston, Fernaid, and various military bases. We welcome the opportunity to assist you with your drilling, sampling, and well installation requirements.

### Geotechnical Drilling Services

Double J Drilling of WV, Inc. has many years of experience performing soil borings and rock coring services for developers, industry consultants, and governmental agencies. We utilize both truck mounted, as well as, ATV drills. These are both mid-size rigs for deeper or larger diameter drill programs and small tracked rigs to access more difficult terrain. Double J Drilling can easily conduct investigations ranging from shallow direct-push and hollow-stem augers to deep wire-line coring. Our central location in Williamstown, WV allows us to easily mobilize to all areas of WV, OH, VA, KY, PA, NY and MD.

### References

Jon Raab  
GTA Energy  
717-318-5451

Tim Kerby  
Professional Services Industries  
304-395-1016

Raj Goyle  
Goyle Engineering  
740-374-5607

## Company Overview

Soon after arriving in the United States in the mid-1960s, A. Wayne Boyce founded Microbac with the purchase of a dairy laboratory located in Pittsburgh, Pennsylvania. Since then, Microbac has grown into a diverse independent testing and measurement firm, serving clients with highly personal service and custom solutions for the environmental, life sciences and food markets.

### Mission Statement

Microbac Laboratories, Inc. provides scientific information, expertise, partnering, and solutions to clients needing testing, measurement, and personalized services.

Today, the Microbac network exceeds 30 locations and 650 employees capable of supporting a wide range of analytical needs through microbiological, chemical, physical, microscopic, virology, radiological, and toxicology capabilities. Throughout its network, Microbac also supports comprehensive environmental sampling and analytical services for the private and government sectors.

Microbac is dedicated to nurturing long-term relationships with its clients through quality data, reliable turnaround times, and superior customer service. Technology is also a tool to enable client satisfaction, and the following features of our laboratories offer a glimpse into how technology serves our clients' businesses each day.

- Automated instrument uploads to deliver fast, accurate data reporting.
- Flexible data delivery in any media and across multiple user interfaces.
- Extensive EDC capabilities (including a variety of custom-build capabilities).
- Customized compound lists and project reporting limits.
- Automated field data transfer & electronic Chain-of-Custody.
- AXIS™ Web Platform.

## Project Experience Highlights

Microbac is an approved laboratory for a number of industrial and commercial clients. Projects range from weekly NPDES to phytoremediation/vegetation uptake studies, and span multiple sites and regulatory programs. We routinely analyze samples from Superfund sites, Brownfields, Public Water Utilities and Voluntary Action programs across all USEPA Regions.

Supported programs and experience include:

- RCRA/Hazardous Waste Characteristics (SPLP, TCLP)
- Natural Attenuation Monitoring
- National Pollution Discharge Elimination System (NPDES)
- Priority Pollutants
- Indicators of Groundwater contamination
- Appendix IX (40 CFR Part 264)
- Appendix I: Detection Monitoring and Appendix II: Assessment Monitoring
- UST Removals
- Voluntary Remediation Programs
- Superfund Sites
- Phase I and II Site Assessments
- Remediation and Investigation
- Brownfields
- Safe Drinking Water Act (SDWA)
- DoD QSM
- Oil and Gas

### TOTAL PROJECT MANAGEMENT

Consisting of over 5,000 sampling points per month, Microbac managed sample container inventories, sample transportation, and state eDMR reporting for a large energy company. Additionally, Microbac's electronic capabilities provided automated exceedance notifications and contaminate trending capabilities.

### EMERGENCY RESPONSE

Microbac recently performed an emergency response project for a chemical spill involving stream contamination. Microbac analyzed over 2,000 VOA samples, while reporting real data as it came off the instrument 24/7. The project lasted for five weeks.

### CAPACITY FOR COMPLEX PROJECTS

Microbac performed a project for metals analysis consisting of 3,000-4,000 samples per month with a five-day turnaround and a full level-four, legally defensible data package.

### METHOD DEVELOPMENT / R&D

In light of recent court rulings regarding the liability of non-regulated compounds, Microbac has provided method build/R&D services for a global chemical company. These services are provided when EPA methods do not exist for certain process chemicals.



*Technical Expertise*



*Engineering is the art of  
directing the great sources of  
power in nature for the use and  
convenience of man.*

*Thomas Freigold*

## *Jesse Daubert*

---

### *Position/Title*

*Environmental Scientist*

### *Duties*

*Environmental Science*

### *Education*

*Marietta College,  
B.S., Environmental Science*

### *Certification*

*Wetland Professional in Training - Society of  
Wetland Scientists*

*Certified Environmental Scientist - National  
Registry of Environmental Professionals*

*Ohio EPA Credible Data Program: Level 2 - Habitat  
Assessment - QHEI*

*Ohio EPA Credible Data Program: Level 2- Benthic  
Macroinvertebrate Assessment- Sample  
Collection, Identification and Data Evaluation*

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**Pickering Associates**

• **Phase 1 Environmental Site Assessments**

- o Conduct Phase 1 Assessment in accordance with ASTM Standard Practice E1527-13

• **Stream and Wetland Delineations**

- o Delineate the boundaries of streams and wetlands within sites being designed for development

- o Aid Civil Engineers and the associated clients in determining project impacts to these resources and the appropriate avoidance/minimization measures to be taken

• **Threatened and Endangered Species Surveys**

- o Conduct surveys for potential Indiana Bat habitat and maternity roost trees
- o Develop Indiana Bat Conservation Plans

• **Permitting and Consultations**

- o Write and manage all activities associated with Clean Water Act Section 404 and 401 permitting including application development, submitting section 7 (threatened and endangered species) and section 106 (historical significance) consultations, and mitigation planning and assistance

• **Mitigation Planning**

- o Identify mitigation opportunities, construct detailed Mitigation Plans, and coordinate all required mitigation activities

• **ArcGIS Cartography**

- o Coordinates all GIS mapping associated within the Civil Engineering department utilizing aerial imagery, land use data, Digital Elevation Models, topography, GPS data and numerous other sources of GIS data

- o Create representations of GIS data/projects in useable formats including .pdf files, images and Google Earth data

• **Environmental Due Diligence**

- o Assess the environmental impact and integrity of vertical oil/gas wells
- o Conduct Phase 1 Environmental Site Assessments

• **Erosion and Sediment Control Reviews**

- o Review the integrity and functionality of post construction erosion and sediment control BMP's on oil/gas well pads and other construction sites

**Friends of Lower Muskingum River**

• **Southern Watershed Action Plan**

- o Through a grant from the Ohio Department of Natural Resources, developed a Watershed Action Plan that was fully endorsed by the State of Ohio
- o Assisted the Ohio EPA TMDL program in inventorying surface water resources

**Related Course Work:**

- Modern Biology
- Environmental Toxicology
- Field Biology Techniques
- Flowering Plants
- Environmental Impact Assessment
- Ecology
- Politics/Global Ecology
- Environmental Policy and Law
- Land Use Planning
- GIS/GPS Mapping
- Environmental Geology
- Scientific Imaging
- General Chemistry I
- General Chemistry II
- Biology Research Capstone

**Training Certificates**

- Ohio Department of Transportation, Office of Environmental Services – Ecological Training (February 18, 2015)
- Richard Chinn Environmental Training, Inc. – 38 Hour Army Corps of Engineers Wetland Delineation Program (July 2014)
- Ohio EPA Primary Headwater Habitat Training (May 2012)
- Ohio EPA Credible Data Program: Habitat Assessment Method Training - Level 2 QHEI (October 2011)
- Ohio EPA Credible Data Program: Biological Method Training - Level 2 Macro-invertebrate (June 2011)
- Ohio Watershed Academy (June 2011)





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*Spencer Kimble, P.E.*

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*Position/Title*

*Civil Engineer*

*Duties*

*Civil Engineer*

*Education*

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

*Louis Brown*

*Licenses*

*Professional Engineer WV, OH*

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*Engineering is a form of art and has  
filled the world with things of obvious  
visual beauty but also subtle forms.*

**Project Manager and Civil Engineer** for over 60 horizontal drilling locations throughout WV and Ohio. Typical projects included a new access road, drill pad, production pad, above or in-ground water storage location, and sediment/erosion control measures. Work also includes coordinating with local highway departments and utility providers to obtain permission for proposed work.

**Construction manager for multiple oil and gas projects throughout Ohio and West Virginia.** Work includes checking for conformance of construction activities to the design drawings, holding weekly progress meetings, and handling change orders.

**Civil Engineer for a new subdivision in Marietta, OH.** Work included design of new City streets, storm water drainage, public utilities, lot separations, and sediment/erosion control measures. Work also included coordinating with City officials and utility providers about the upcoming project to obtain approvals.

**Civil Engineer for a new retail business in Utica, OH.** Project was located within the 100 yr. flood elevation and design had to incorporate compensatory storage in conjunction with elevating the floor slab to 2 feet above the base flood elevation. Work also included grading, storm water, utility design, and coordinating with authorities.

**Civil Engineer for a new restaurant in Vienna, WV.** Project was located within City limits and had to incorporate very strict storm water management practices. Design of an underground storm water retention system to capture the first 1" of rainfall. Design also included grading, site layout, utility design, and coordinating with authorities.

**Lead Civil Engineer for the design of \$1.8M physical therapy administrative building on Parkersburg, West Virginia.** The project was developed to consolidate all administrative services for a busy multiple office physical therapy practice. As a part of the project a large portion of square footage was dedicated to a Cross-Fit training center.

**Lead Civil Engineer for the design of two medical office buildings totaling approximately 30,000 SF near the traffic circle in Parkersburg.**

**Civil Engineer for approximately 3,925 linear foot waterline replacement in Davoia, OH.** Project included close coordination with Putnam Community Water personnel to replace approximately 3,925 linear feet of existing infrastructure with 6" line, and design tie-in connections to existing water mains to remain in place. Design duties include an on-site meeting, proposed waterline alignment and profiles, on-drawing specifications, and construction-related details.



*Eric Smith, P.E.*

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**Position/Title**

*Structural Engineering Department Manager  
Civil/Structural Engineer*

**Duties**

*Civil/Structural Engineer*

**Education**

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

**Licenses**

*Professional Engineer WV, OH*

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*Perfection is not attainable, but  
if we chase perfection we can  
catch excellence.*

*Vince Lombardi*

**Civil Engineer on Eureka Hunter Pipeline, L.L.C. Low Water Crossing.** Duties included designing substructure (consisting of a concrete capped pile abutment with vertical and battered piles). Coordinated with the superstructure design engineer for bridge reactions and necessary abutment details to incorporate the superstructure bearing. Also, assisted with the construction drawing package.

**Civil Engineer on several projects for the City of Marietta including the Gilman Avenue Slip, Rathbone Area Drainage Study and Storm sewer assessment, Lancaster Street improvements, Sixth Street Area Mitigation flood control, and Water Treatment Plant slip repair.**

Generated detailed engineering drawings, quantities, and material estimates for bridge replacements for the following counties in Ohio: Meigs County (County Roads 1, 8, 10, 14, 22, 35, 43, 52, and 82), Morgan County (County Roads 16, 53, 62, and 66 and Township Roads 48 and 106), and Washington County (County Road 354, several Township Roads, and Veto Lake)

**Reviewed drawing designed for The Point Commercial Park for Lawrence Economic Development Corporation.** Responsible for foundation and column design. Modeled the structure using STAAD and performed wind load, connection, and foundation calculations.

**Reviewed structural drawings for a new addition of the Holzer Clinic and evaluated adequacy of the structural members and connections.**

**Collected field data, created a roof model, calculated loads and generated drawings and recommendations for roof repairs at First Congregational Church.**

**Professional experience also includes providing accurate field notes and sketches, development of drawing layouts, details, and section drawings, providing calculations, and writing investigation and observation reports.**

**Extensive technical experience with civil, structural, and geospatial software packages including STAAD Pro, Presto, Enercalc, AutoCAD, AutoDesk Land Desktop, AutoDesk Civil 3D, and Topo USA.**

**Senior Project Manager and Structural Engineer of Record for Catwalk at Ohio University.** Project included the reconstruction of a deteriorated portion of the elevated concrete walk in front of Crawford Hall. Involved inspection, design and construction administration.

**Senior Project Manager and Structural Engineer of Record for Catwalk at Ohio University.** Project included the reconstruction of a deteriorated portion of the elevated concrete walk in front of Brown Hall. Involved inspection, design and construction administration.



*John Bentz*

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*Position/Title*  
*Civil Engineer*

*Engineering is a form of art and has  
filled the world with things of obvious  
visual beauty but also subtle forms.*

*Duties*  
*Civil Engineer*

*Education*  
*Ohio University*  
*B.S., Civil Engineering*

*Louis Brown*

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Performed design services for commercial clients including conceptual design, grading, utility coordination, storm water system design, permitting, sediment and erosion control, and cost estimating.

Design of oil and gas drilling sites in Ohio and WV, including the design of access roads, production pads, and stockpiles.

Performed all necessary calculations for balancing of earthwork, drainage, and slope stability for oil and gas drilling site projects

Performed HAC-RAS analyses to serve as impact studies for water crossing infrastructure for various clients

Assisted with annual bridge inspections, collected necessary measurements of each bridge and performed load rating services

Performed research on freight transport trends, modeling, and optimization within the Ohio River Basin.

Designed various spreadsheets in Microsoft Excel to aid in engineering designs based on engineering codes and standards. (i.e. Elastomeric Bearing Pads)

Collected data, produced sketches, performed calculations, and compiled Fracture Critical Reports for load ratings of truss bridges

Served as team member with local high school teacher to present research presentations and promote STEM education to students in the classroom.

Collaborated with Computer Science students on the development of STEM-related educational games to be utilized in high school settings.

Assisted with traffic studies and data extraction for Transportation Engineering

Performed mapping and other elementary tasks within ArcGIS



*William B. Showalter, P.S.*

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*Position/Title*

*Professional Surveyor,  
Surveying Department Manager*

*Duties*

*Surveyor*

*Education*

*B.S., Civil Engineering*

*Licenses*

*Ronrad Adenau:*

*Professional Surveyor [REDACTED]  
WV Society of Professional Surveyors, National  
Society of Professional Surveyors*

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*We all live under the same sky,  
but we don't all have the same  
horizon.*

**Lead Professional Surveyor** for Jackson County Development Authority JCMC Utility and Rail Improvements. (See project write up below.)

**Lead Professional Surveyor** for Phase 1 and Phase 2 of the Larry Lang First Colony Development. (See project write up below.)

**Lead Professional Surveyor** for Polymer Technology Park Warehouse, Polymer Alliance Zone. (See project write up below.)

**Lead Surveyor on Camden Clark Memorial Hospital South Tower Expansion.** Boundary and topographic survey of pre construction (existing) facilities. Construction layout of South Tower Expansion. 2+- Acres, Cost >\$20,000, Manage office and field work.

**Lead Surveyor on Camden Clark Memorial Hospital Transportation & Phlebotomy Project.** Topographic survey of proposed expansion area. Cost < \$5000.00, Manage office and field work

**Lead Surveyor on St. Joseph Hospital Office Annex (DeSales Medical Center).** Boundary and topographic survey of pre construction (existing) facilities. Construction layout of Office Annex. 8+- Acres, Cost >\$30,000, Manage office and field work

**Lead Surveyor on First Colony Center commercial development, Marietta, OH.** Boundary, and topographic survey of pre construction (existing) facilities. Construction layout of development. 15+- Acres, Cost >\$80,000, Manage office and field work

**Lead Surveyor on City of Vienna Water Tanks Renovation Project, Vienna, WV.** Boundary, and topographic survey of pre construction (existing) facilities. Preparation of construction easements. 12+- Acres, Cost >\$10,000, Manage office and field work

**Lead Surveyor on American Land Title Association (ALTA) Survey for the construction of a cogeneration plant.** Land Survey and research of utility easements, road/highway rights of ways for the placement and construction of a new facility. Survey 50+- Acres, Cost <\$20,000, Manage office and field work.

**Lead Surveyor for Triad Hunter -Ormet 2-15 Boundary, topographic and construction layout of multi-million dollar oil and gas facility.** 300+ Acres, Cost > \$40,000, Manage office and field work

**Lead Surveyor for MPH Hotels Comfort Suites project.** Boundary (ALTA), topographic and construction layout of hotel location. 3+ Acres, Cost < \$15,000, Manage office and field work

**Lead Surveyor for Ohio University Steam Plant Line Expansion project.** Utility survey of existing buried lines, tunnels, etc. Topographic survey of proposed routing of new piping. 4000+ LF, Cost < \$20,000, Manage office and field work

**Lead Surveyor for City of Marietta Green Street Widening Project.** Survey of existing buried / aerial lines. Topographic survey of proposed widening area. 4000+ LF, Cost < \$7000, Perform Field work, prepare deliverables and manage office.





## *Adam D. Freed, P.E.*

*Project Manager*

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### *Position/Title*

*Chemical Engineer*

*Process Engineering Department Manager*

### *Duties*

*Chemical Engineering*

*PHA Facilitator / Process Safety*

*Project Management*

### *Education*

*West Virginia University*

*B.S., Chemical Engineering*

*M.S. Chemical Engineering*

### *Licenses*

*Professional Engineer WV, OH*

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*Intelligence provides ability; experience*

*yields understanding; combined*

*they lead to success.*

*Anonymous*

**Project Manager and Lead Process Engineer for design of a second dryer line to an existing manufacturing facility in Parkersburg, WV.** Lead multi-disciplinary engineering team through conceptual, preliminary, detail design and procurement. Pickering Associates is working with Kuraray America at their Washington Works Facilities to design a second dryer line to their existing operations. Pickering Associates has utilized several 3D design tools and techniques to help coordinate the design with existing conditions. Project is in construction. Mechanical completion is anticipated by the end of 2017.

**Project Manager and Process Engineer for the replacement of obsolescent reflux condenser systems on five kettles for an existing manufacturing facility in Parkersburg, WV.** The condenser replacement design included the relocation of the condensers, a new support structure, complex pipe design, an upgrade to the cooling system, electrical tracing design, updates to equipment specs, and D&R scope.

**Site Project Engineer and Lead Process Engineer for conceptual design of proposed USEPA WESHAP rule compliance.** Coordinated with plant management, lobbyists, environmental consultants and plant operations to scope out feasible design options. Process lead for FEL 1 and scope development for engineering bid package scope.

**Site Project Manager for Industrial Client.** Eighteen capital projects scoped and submitted for funding authorization. Project scopes addressed safety, productivity and reliability concerns. Executed project values up to \$1.4MM.

**Process Hazard Analysis (PHA) program implementation for multiple industrial facilities.** Facilitated hazard review meetings and issued final reports to maintain compliance with OSHA PSM and EPA RMP. Includes both 5 year revalidations and new projects.

**PSV design and sizing consultation for multiple industrial and Oil & Gas clients and Senior Process Development consultant for design teams on multiple small projects.**

**Project Manager for preliminary engineering with 1,000 ton industrial process chiller replacement.** Responsibilities included assessing existing cooling tower capacity, managing development of specifications, and project budget estimate.

**Project Engineer for electroplating process improvement project.** Scope included developing implementation schedule, engineering solutions for concerns identified through Potential Problem Analysis. Anticipated reduction in plant steam costs: \$40,000 per month.

**Conducted Layer of Protection Analysis (LOPA) studies. Issued recommendations on Hazard Reduction Factor required to meet facility process risk tolerance.**

**Research and Development with the National Energy Department Lab (NETL) Separation and Fuel Processing Division.** Projects included conducting sorption enhanced - water gas shift experimentation at 150 psi and up to 600 degree F, performing CO<sub>2</sub> sorbent regeneration experiments up to 1750 degrees F, and synthesizing sorbent materials for reaction experiments.

**Lab operations: calibrated and operated gas chromatograph, mass spectrometer and a UIC coulometer.** Trained new employees on operation of lab equipment and safe lab practices. Designed desulfurization test plans for HPR and TGA experimentation in fulfillment of a cooperative research and development agreement.

**Developed a model for diffusion and reaction processes in the catalytic partial oxidation of hydrogen sulfide.** Experimental test results and accepted theory were used to model deactivation resulting from liquid sulfur condensation in the catalyst pore space. Optimum operating conditions and catalyst textural properties were identified.



## *Michael J. Swope*

*Procurement Manager  
Chemical Engineer*

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### *Position/Title*

*Sr. Process Engineer  
Project Manager*

### *Duties*

*Process Engineering and Design  
Project Management  
Process/Mechanical Lead  
PSM and Hazard Assessment  
Application of Codes and Standards  
Procurement Support  
Root Cause failure Analysis  
Production Engineering and Support*

### *Education*

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

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*For many things we can find substitutes,  
but there is not now, nor will there ever  
be, a substitute for creative thinking.*

*Crawford Greeneswalt*

**Process Engineer for design of a second dryer line to an existing manufacturing facility in Parkersburg, WV.** Pickering Associates is working with Kuraray America at their Washington Works Facilities to design a second dryer line to their existing operations. The project site is land-locked and will be constructed within the footprints of existing buildings and active production areas. Construction activities will occur in over 30,000 sf of the plant. Pickering Associates has utilized several 3D design tools and techniques to help coordinate the design with existing conditions. Project is in construction. Mechanical completion is anticipated by the end of 2017.

**Process Engineer and MEP Lead for the design of engineering construction package as well as the construction to install a new mezzanine platform in and around existing kettles in manufacturing facility in Friendly, WV.** The project includes the addition of a dual gum press tandem pumping system for charging 1,000,000 CPs product to each of the kettles, and a new pump at the adjacent truck trailer area for charging the kettles from a truck trailer. Project was completed while process was in full operation.

**Process Engineer, Process Lead and Procurement Lead for the design of an MGL Truck Loading/ Unloading Storage Facility in Napoleonville, LA.** Project included designing, specifying, and managing the installation of four (4) 60,000 gallon bullet tanks, a new bay for truck loading/unloading, a truck scale for product measurement, and booster and transfer pumps. Pickering Associates provided equipment procurement services and made regular site visits to ensure that the goals of the owner, design team, and vendors were all satisfied.

**Process Engineering and Mechanical design lead for several natural gas and condensate production facilities.** Starting from a conceptual process design and continuing through detailed design. Tasks have included project management, facilitating siting analysis, PFD and P&ID development, development of piping codes, equipment, piping and instrumentation specification and layout, support for control system design, procurement support, start-up assistance, and writing operating troubleshooting procedures. Unit operations have involved gas production units, separation operations, compression, vapor recovery, combustors, storage tanks and truck loading.

**Project Manager and Senior Process Engineer for a feasibility study and site evaluation for new production line at a manufacturing facility in Marietta, OH.** This project included extensive code review, general arrangement and process flow development, cost estimation, risk assessment, and PSM services.

**Implemented a \$3.4 million capital project as process, technical and area lead to upgrade an extrusion compounding line at a leading plastics manufacturer.** Developed basic data, supported process engineering, developed designs, worked with contract groups, and led training and commissioning.

**Conceived and led a team that reduced production of off-spec material, increased consumption of rework to maximum levels, and generated cash from sales of second quality material.** Captured several million dollars in cost savings and additional revenue.

**Applied statistical techniques to plant data and justified feed control projects that ultimately achieved 75% variance reduction in polymer degree of substitution and 40% variance reduction in polymer solution viscosity.** Helped the production unit develop and use batch recipe control charts to eliminate special cause variability. The site achieved a \$1.2 million/yr cost reduction that was largely attributed to this work.

**Implemented several feed system upgrade projects that led to step-level improvements in quality and process robustness at a total investment of less than \$500,000 installed.**

**Conceived and developed ideas for screening improvements, designed upgrades, and installed equipment modifications which resulted in step-level reduction in product size defects.** Ideas were leveraged to other areas and sites. Total project cost was less than \$10,000 per unit.



*Ronald D. Arnold*

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*Position/Title*

*Senior Construction Administrator,  
Estimator*

*Duties*

*Project Administration  
Construction Estimating*

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*Real success is finding your  
lifework in the work that  
you love.*

*David McCallough*

**Project Manager for the design and construction of a new annex for Fire Department in Vienna WV.** This project included initial client meetings to establish project scope, design team coordination, multiple client reviews, bidding, and negotiation. As with any public project, there were a multitude of statutes to be adhered to.

**Project Manager/Estimator for the Marietta Levee Seating and Monument Project which included the fountain and surrounding sidewalks, terracing of the levee and seating walls.** Responsibilities included estimation of the project, coordination of the scope between the owner, architect and contractor, and project oversight. Challenges included maintaining traffic during construction. Also prohibitive was the weather, as construction took place during the winter months in order to meet the Owner's schedule.

**Project Manager for the construction of a new full service branch bank in Marietta, OH.** Responsibilities included building the project estimate, coordinating and managing the project scope, budget and schedule between field operations, architect and the owner.

**Project Manager for the historical renovation of a four story 100 year old building on a college campus in Marietta, OH.** Responsibilities included building the project estimate, coordinating and managing the project scope, budget and schedule between field operations, architect and the owner. Challenging aspects on this project included value engineering to meet the client's budget, meeting the client's 7 month construction schedule, installing an elevator in the center of the building, replacing the original wood windows with new mill-built insulated glass windows utilizing the old sash weight and chain counterbalance system, reinforcing the original wood floor and roof framing, replacing all the paneled wood doors and multi member wood trim with new to match existing the profiles, all new interior finishes, complete new plumbing, HVAC, sprinkler and electrical systems.

**Project Manager for the renovation of a two story 100 year old library in Marietta, OH.** Responsibilities included building the project estimate, coordinating and managing the project scope, budget and schedule between field operations, architect and the owner. Challenging aspects on this project included adding a dormer and third floor into the attic space, adding a mezzanine above one third of the main floor level.

**Project Manager for the construction of a 12,000 sq ft addition on a nursing home in Marietta, OH.** Responsibilities included building the project estimate, coordinating and managing the project scope, budget and schedule between field operations, architect and the owner. Challenges included value engineering to meet the client's budget, working on a small site, meeting the flood plain and storm water runoff requirements, and phased construction schedule.

**Project Manager for the design and construction of a 4,500 sq ft addition on an athletic facility on a college campus in Marietta, OH.** Responsibilities included coordinating program requirements between the client, architect and MEP subcontractors.

**Project Manager for the design and construction of a multiple building apartment complex in Marietta, OH.** Responsibilities included coordinating program requirements between client and subcontractors.

**Project Manager for the construction of a two new branch libraries in Washington County, OH.** Responsibilities included building the project estimate, coordinating and managing the project scope, budget and schedule between field operations, architect and the owner.

**Project Manager for the construction of an addition to a long-standing funeral home in Beira, OH.** Responsibilities included bid document coordination, addenda's, bidding, contractor coordination, oversight of field operations, punch-list, closeout documentation and final inspection before being handed over to the Owner for occupancy.



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***Keri L. Dunn***

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***Position/Title***

*Specification Writer  
A/A Contract Administrator*

***Duties***

*Specification Writer, Bid Administration  
and Contract Administration*

***Education***

*Washington State Community College  
A.S., Industrial Technology*

*If you want to be creative in your  
company, your career, your life, all it  
takes is one easy step ... the extra one.*

***Dale Gauter***

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Bidding Coordinator and Construction Contract Administrator. Bid duties include preparation of front end specifications required for procurement, addressing bidding questions, preparing addenda, receiving and tabulation of bids, and issuing letter of intent. Contract Administration duties include preparing and executing contract documents, change proposal requests, change orders, change directives, receiving bonds and insurance from contractors, processing pay applications and closeout documentation. Familiar with WV School Building Authority Requirements and various grant requirements including the American Recovery and Reinvestment Act. Projects have included:

**Recent projects include:**

- Facade Renovations at West Virginia University at Parkersburg's Downtown Center.
- New Elevator Installation at West Virginia University at Parkersburg's Downtown Center.
- Electrical Service and Distribution at West Virginia University at Parkersburg's Downtown Center.
- Roof Replacement at West Virginia University at Parkersburg's Downtown Center.
- Asbestos Abatement at West Virginia University at Parkersburg's Downtown Center.
- Chiller Replacement at West Virginia University at Parkersburg's main campus.
- Sait and Motorcycle Storage Building at West Virginia University at Parkersburg's main campus.
- HVAC Upgrade project at West Virginia University at Parkersburg's Caperton Center.
- Fire Alarm Upgrades at West Virginia University at Parkersburg's main campus.
- Elevator Control Modernization at West Virginia University at Parkersburg's main campus.
- New Spec Process Building in Davisville, WV - multiple prime contracts.
- New industrial Plant in Millwood, WV - multiple prime contracts.
- Energy Saving Implementation for Wood County Commission - multiple prime contracts.
- Access Safety at all Wood County School locations.
- Structural Repairs at Wood County Board of Education.
- Brick Repairs at an elementary school for Wood Co. Schools.
- Boiler Replacement at an Elementary School in Wood County, WV.
- Welding Shop Ventilation replacement at the Wood County Technical Center.
- Access Safety renovations at all Wirt County School locations.
- Access Safety renovations at several addition entrances for Wood County Schools.
- Access Safety and Main Entrance Renovations for Wood County Schools - four phases of implementation.
- Electrical Upgrades at two elementary schools for Wood County Schools.
- HVAC Renovations at the Wood County Courthouse for the Wood County Commission.
- Fifth Floor Renovations at Camden Clark Medical Center - Memorial Campus.
- Third Floor Renovations at Camden Clark Medical Center - Memorial Campus.
- Roof Replacement at the Polymer Alliance Zone in Davisville, WV.







158 Starlite Drive, Marietta, OH 45750

## ***Resume for:***

***Leslie Bucina, Managing Director***

***Status: Full-time***

As Managing Director, Ms. Bucina is responsible for business development and expansion; profit/loss analysis and implementation; general administrative and management duties; operation of Analytical Operations; and, supervision of approximately 70 full-time employees.

### **EXPERIENCE**

Ms. Bucina has over 33 years of laboratory related experience. Facets of her experience include quality control, laboratory management through operations, project management and chemistry at the bench level. Before joining Microbac in 1988 Ms. Bucina gained experience in industrial facilities. These industries included intraocular lens manufacturing, pesticide and herbicide manufacturing and a paint and coatings manufacturer.

Ms. Bucina has over 29 years of experience with Microbac and has held positions as Quality Assurance Officer, Operations Manager, Quality Assurance Senior Chemist, Laboratory Manager, Organic Department Manager, Client Services Manager, GC/MS Department Supervisor, GC/MS Chemist and Metals Department Supervisor.

### **APPLICABLE COLLEGE COURSES**

Principles of Chemistry I, II with labs  
Organic Chemistry I, II with labs  
Inorganic Chemistry and lab  
Physical Chemistry I, II  
Advanced Inorganic Chemistry  
Biochemistry  
Research (Chemistry)  
Seminar (Chemistry)  
Analytical Chemistry I, II with labs  
Biology I, II with labs  
Microbiology  
Immunology

### **PUBLICATIONS**

D.L. Bumgarner, L.S. Bucina, (1994) "Screening Waste by FT-IR", Waste Testing and Quality Assurance Proceedings

Bumgarner, David L., Bucina, Leslie, (1995), "Screening Waste by FT-IR", *ENVIRONMENTAL LAB*, 7:26-30.

David L. Bumgarner, Leslie Bucina, Gary Torf, (2002) "Metabolic Acid analysis in Support of Accelerated Anaerobic Attenuation Treatability" Waste Testing and Quality Assurance Proceeding

### **AFFILIATIONS**

American Chemical Society  
TNI (The NELAC Institute)

### **EDUCATION**

*College:* West Virginia Wesleyan College  
Buckhannon, WV  
1981, BS Chemistry  
Minor Biology

*Continuing Education:* Marshall University  
1982  
Huntington, WV  
Principles of Economics  
Basic Management  
  
Ohio University  
Athens, OH  
1997  
Advanced Analytical Chemistry

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*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 regular design meetings to ensure expectations and schedule constraints are met.

Our design process will begin with **schematic design**. We feel that time spent with your staff to better understand the project, 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 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 and are familiar with the local and state requirements that need addressed for a wide range of projects. 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 and/or 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 can 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 can 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.

### **Cost Control**

Through the development of the project scope, number of units to be designed and site evaluations, we take into consideration the budget available or targeted to assure funds are accounted for early in project development. Once a preliminary site and building footprint is defined, we take the time to develop an estimate of probable project costs and alert our clients of any differences between project budget and the anticipated project costs.

### **Quality of Work**

While a project budget may limit the use of traditionally expensive materials, Pickering still sees the importance of using proven materials which will provide a quality project while being cost effective. Importance is always placed on areas where small amounts of upcharge can create the largest impact to the future tenants and provide an inviting environment. As professionals, we are also tasked with finding cost effective solutions which still provide the building owners with years of excellent service. While every individual project we have designed is unique, there are common design elements and materials which have proven over the years to be best suited for similar projects.

### ***Performance Schedule***

With the selection of Pickering Associates, your organization gains the full depth of our organization. All projects are scheduled out through all phases of delivery by our resource manager and the project manager, assigning the necessary resources to perform to the schedule necessary for that project and highlight major milestones long before they could become an issue. With more than 70 professionals on staff, you can be confident that Pickering Associates has the resources to meet your project schedule.

### ***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 requires 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.



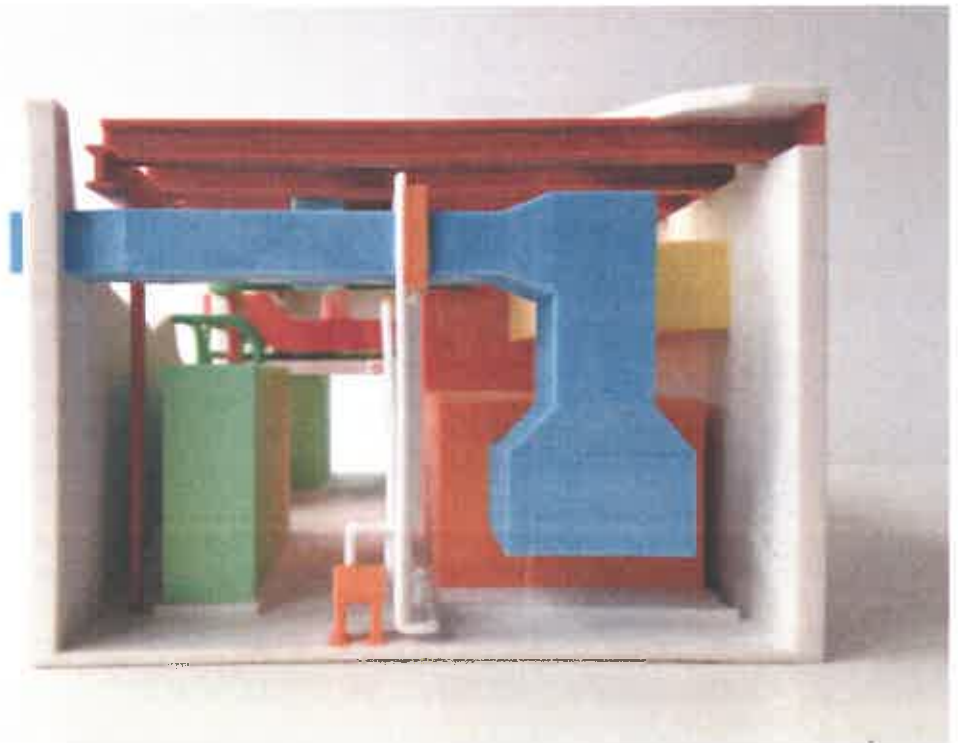
### *Building Information Modeling*

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. Many of our architectural and engineering leads, designers, and drafters are trained, proficient, and up to date on BIM software. We even have an in-house BIM coordinator that routinely provides training and updates to our staff to ensure that everyone has the proper training to perform the work we do.

### *Cutting Edge Technology*

In addition to utilizing BIM, Pickering Associates has an in-house gypsum-based 3D printer that allows our team to streamline communication and cooperation between stakeholders. Our firm uses 3D printed models to illustrate conceptual design, create fundraising materials, and problem solve complex space planning challenges.

Our firm also utilizes a 3D laser scanner to more quickly and accurately document existing site conditions. This tool is especially useful at facilities that are particularly dense with information. With ease, our team can capture existing conditions and create a measurable digital point-cloud model. Not only is this method more accurate than traditional field work, it reduces costs for stakeholders and our design team, and can expedite a project's schedule.





## *Related Prior Experience*

*Type*

Phase II Environmental  
Site Assessment

*Services*

Environmental



A Phase I Environmental Site Assessment (ESA) conducted by Pickering Associates indicated that property being considered for purchase by HSC Lore City, LLC for commercial development had the potential presence of Recognized Environmental Conditions (RECs) associated with asphalt and concrete stock piles previously imported onto the surface of the property. This potential for RECs was determined based on Pickering Associates staff Environmental Scientist's review of the site in accordance with ASTM E1527-13. Throughout this Phase I ESA review the potential of oil or hazardous materials being leached into the subsurface of the property from imported materials was identified as a REC based on database investigations, interviews with neighboring property owners, and a site assessment.

To further assess the presence of RECs at the property, Pickering Associates conducted a Phase II ESA subsurface investigation in accordance with ASTM E1903-11 and the Ohio Administrative Code (OAC) 3745-300-07. The scope of the services provided by Pickering Associates for this project included coordinating GUPS to locate buried utilities; procuring Double J Drilling to perform four (4) soil borings within targeted locations on the property; performed on-site monitoring of the drilling activities and collected soil samples for analysis; directed MicroLab Laboratories, Inc. in analyzing for VAP, PAH, DRO, and GRO; interpreted laboratory results and prepared a Phase II ESA report of findings.

The Phase II ESA subsurface investigation did not reveal any oil or hazardous materials throughout the soil media sampled and no further investigation was recommended. Upon completion of this subsurface investigation, Pickering Associates and HSC Lore City, LLC finalized Engineering and Architectural designs for the project and initiated construction.



## Our Work Oil & Gas Truck Loading/Unloading Storage Facility

### Type

Oil & Gas

### Services

Civil

Structural

Mechanical

Electrical

Process

Project Management

Construction Administration



Our client acquired property near Napoleonville, Louisiana for the purposes of creating a new storage facility that would allow trucks to load or unload normal butane and RGB. This project also planned to use existing 6" and 10" product lines that pass by this facility for the movement of product to/from the Napoleonville Storage caverns on the south side of the road.

Pickering Associates was retained by the client to provide engineering and project management expertise in developing this project site to meet their goals. The scope of work included designing, specifying, and managing the installation of four (4) 60,000 gallon bullet tanks, one new bay (with two truck spots) for truck loading/unloading, one truck scale for product measurement in and out of the facility, booster and transfer pumps, one bi-directional dual 3" Coriolis meter skid, and tie-ins to/from the 6" and 10" pipelines.

This multi-disciplined project utilized Pickering Associates expertise in Project Management, Civil Engineering, Electrical Engineering, Controls, Mechanical Engineering and Process Engineering. The teams Project Manager was responsible for consistent communication with the client representative, monitoring project progress through daily communications with the team, and identifying and addressing any concerns throughout the development of the project.

Working remotely from the site, the engineering team coordinated with local, regional, state, and federal agencies to ensure the project was properly permitted and developed according to code specifications. Also, multiple visits were made to the Louisiana site to ensure that the goals of the owner, design team, and vendors were all satisfied and project milestones were met in a timely manner.



#### Environmental Mitigation

Good planning, for any project, means needing to consider the effect the project may have on natural resources. Similarly, planning must also include how natural resources will impact existing conditions on the project.

Pickering is also deeply dedicated to mitigating the environmental impacts associated with our oil and gas projects. To ensure the well pads we develop have the least environmental impact we utilize an in-house Environmental Scientist to delineate the boundaries of streams and wetlands within the well pad and access road areas prior to final construction designs being issued to our clients. Our Environmental group works closely with the U.S. Army Corps of Engineers, the Ohio EPA, and West Virginia DEP to ensure that any of our proposed well site projects are properly permitted through section 401 and 404 of the Clean Water Act. Along with this permitting, Pickering's Environmental staff ensures that these well pads avoid impacting the habitat of any threatened or endangered species by conducting habitat assessments and coordinating with the U.S. Fish and Wildlife Service.

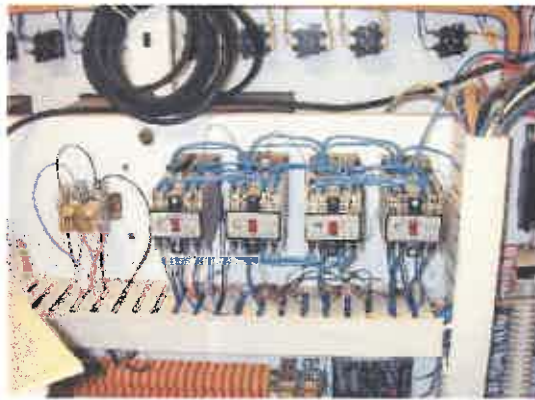
Not only do we work hard in the field to reduce the environmental impacts associated with our well pad layouts, but environmental impact reduction lies at the heart of our well pad designs. The Civil Engineering group within Pickering Associates works diligently to ensure their well pad layouts utilize the most effective Best Management Practices for handling all stormwater runoff from these sites. We work closely with state agencies and our clients to develop Stormwater Pollution Prevention Plans to ensure these sites will not have an impact on downstream water quality.

Some of the areas we have expertise in include:

- Phase I Environmental Site Assessments
- Wetland and Stream Delineations
- 404/401 Permitting
- Mitigation Planning
- Baseline Threatened and Endangered Species Surveys
- On-site GPS survey grade utility mapping
- Data creation, maintenance, and conversion
- Evacuation plan development
- Parcel/mineral tract cartography
- Geospatial database management

Type  
Government

Services  
Electrical  
Controls and  
Automation  
Construction  
Administration



Pickering Associates continues to support the Lubeck Public Service District through many projects including 24-hour on-site call-out service. Most recently, the Lubeck PSD has installed remote well control systems upgrades. Pickering Associates provided design, fabrication and programming to automate six water tanks, two booster pump stations, one valve vault, seven water wells and the main water plant at the Lubeck Public Service District.

Pickering Associates provided one control panel with an Allen Bradley MicroLogix PLC and level transmitter to each tank. These panels will now report current tank levels.

The valve vault was provided with one control panel with an Allen Bradley MicroLogix PLC in order to report flow, valve position and control valve position.

Each booster station was provided with one control panel with an Allen Bradley MicroLogix PLC and an Allen Bradley PanelView Plus. One booster station was provided with a level transmitter. These panels can report intrusion, pump running, auto and fail status, pressure switch status and VFD control. They shall enable local start and stop as well as speed control for three motors. All operator interface at these sites is via screens on the PanelView 550.

The well site was provided with one control panel with an Allen Bradley MicroLogix PLC. This panel is able to report well level, flow, pump running for each well, overload failure for each well, and a level alarm for each well. It was also provided with a local start/ stop.

The main plant utilized its existing control panel with an Allen Bradley PLC. This PLC is able to receive and report the data from the remote devices as well as monitor the north and south clear well levels, high service pump status, lead/lag status, auto status of wells, interlocks, set-points and communications status. It can also output to an automatic telephone dialer and control the air stripper.

Pickering Associates provided one computer with Rockwell Software RSView. All pertinent data on the existing Outlook software was converted and available on the new system. The HMI (Human Machine Interface) was programmed to display and control the new data.

*Type*

Government

*Services*

Electrical  
Controls and  
Automation  
Construction  
Administration



Newport Water and Sewer District has again contracted with Pickering Associates to provide electrical engineering and design support services. This most recent project is the replacement of the influent lift station. The influent pump control panel will be relocated to the existing equalization basin platform in order to get it out of the flood plain.

In 2003, the Newport Ohio Water & Sewer District installed a new chemical feed building at their Newport well field. The building is used to store the chemicals and chemical feed pumps and needed to be powered from the existing well field control platform service drop. Pickering Associates reviewed the existing well field control platform service drop for capacity, then provided design of electrical distribution for equipment, lights, heaters, receptacles and other electrical loads and design of control wiring connections.

In 2000, Pickering Associates provided the design of a new pump motor control station to be relocated out of the 100 year flood plain. Design also included equipment for radio telemetry system, relocation of incoming service to the pump motor control station, specification of new pump motor starters and control components, design of underground feed to new pump, design of underground conduit to existing and new tank for pump control and alarming, specifications for new floats for new tank, all instruments and electrical material and general electrical specifications. Pickering Associates also provided a construction labor and material estimate, review of all shop drawings and construction coordination.

*Type*  
Industrial

*Services*  
Electrical  
Mechanical  
Plumbing  
Structural  
Construction  
Administration



Pickering Associates was contracted through Davis, Pickering & Co. to provide 3D modeling and construction coordination for a new hydroelectric facility in Willow Island, WV. The project included providing generation of an electrical, masonry, and architectural component 3D computer model in AutoCAD 2012 3D format, incorporating the additional subcontractors (mechanical, piping, and sprinkler) 3D models generated by others into that master model. Pickering Associates also managed and participated in "crash coordination" throughout the duration of the contractor Coordination

Period. All services were coordinated with The Ruhlin Company and Davis, Pickering & Co.

Components and 3D model were generated based off the construction drawings provided to Pickering Associates and equipment cut-sheets and mark-ups for the participating contractor.

Pickering Associates was also responsible for the development of the 482 construction concrete lift drawings for field use constructing the powerhouse. The lift drawings involved detailed information for concrete, masonry, embedded anchors, electrical, mechanical, and hydroelectric devices in a 2D-plan and section as well as a 3D modelling sheet.

Our engineers provided construction coordination for the pour process and were on site for 30 meetings during the process. Pickering Associates also provided BOP Crash Review meetings and weekly reviews for the entire construction period. All Crash Review meetings included completion of model with design files from contractors, crash reports based on the received 3D electronic contractor files.



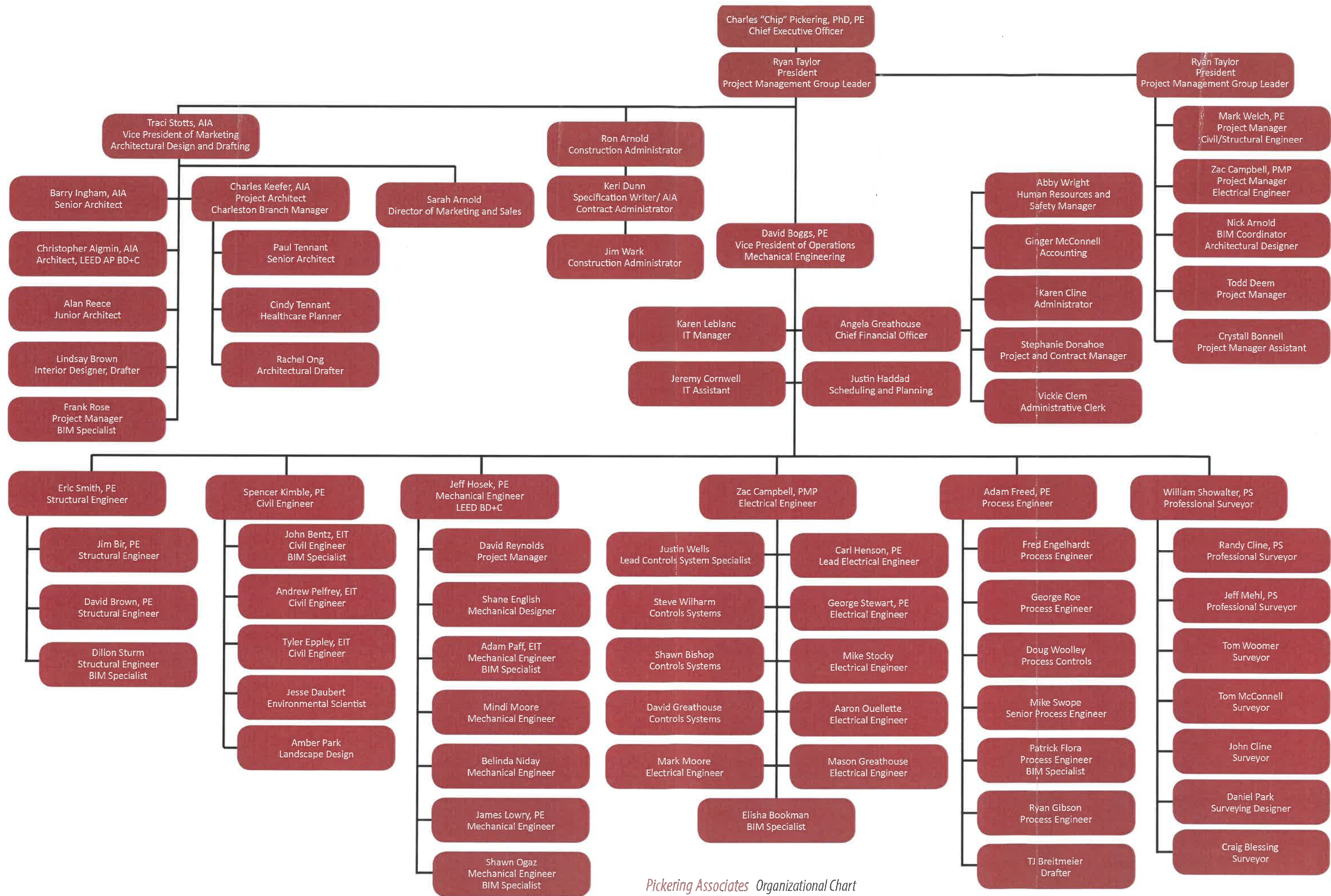
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Pickering Associates Organizational Chart