Statement of Qualifications

prepared specifically for the

Village of

Construction of a Water Processing Facility

March 14, 2022

Successful partnerships start with Fluid thinking®

Submitted by Jones & Henry Engineers, Ltd.
4357 Ferguson Drive, Suite 220, Cincinnati, Ohio 45245

Jones & Henry
Engineers

Jones & Henry
ENGINEERS, LTD.

Fluid thinking®
4357 Ferguson Drive, Suite 220, Cincinnati, OH 45245
Phone: 513.528.5599 JHEng.com

March 14, 2022

Mr. Franklin Christman
Village Administrator
200 E. Station Street
Ashville, OH 43103-1532

Subject: Village of Ashville, Ohio
Construction of a Water Processing Facility
Statement of Qualifications

Dear Mr. Christman:

We sincerely appreciate your consideration of Jones & Henry Engineers for the construction of a Water Processing Facility also referred to as "Water Processing Facility Project." Jones & Henry Engineers prides itself in providing practical solutions to meet our client's needs while simultaneously implementing the latest software and technology to meet those goals. We are ready to help the Village execute a plan and design that addresses the needs for current and future water treatment demands.

The Village of Ashville is at the starting line, as you embark on your next capital improvement project — water treatment plant improvements. The Village efforts may be challenged by the need to raise rates in order to accomplish improvements at the water treatment plant. A successful project design and construction will need to minimize capital needs and ongoing operating costs of the new facilities. This in turn will maximize the long-term value to the rate payers.

Maximizing value to the Village and its ratepayers is the keystone to our project approach. Jones & Henry Engineers has a reputation for delivering high-value projects by using the following approach:

- **Communication** – We build strong relationships with our clients and enjoy developing long-lasting infrastructure that will serve the needs for generations to come. A complete understanding of the Community's needs will only come through honest communication from trusted team members. The Village and staff will be involved and informed throughout the process.
- **Combined Funding Sources** – Jones & Henry has extensive experience working with the funding agencies available for this type of project. We will work with the Village to identify multiple funding sources that can be used for the project. Combining different sources of funding will help reduce the impact of the project seen by ratepayers.
- **Project Team** – Our project team is maintained from preliminary design through construction and startup. Our mission is to provide an experienced team that will be available to the Village from start to finish to assist the Village with every phase of this project.

- **Implementation** – The communication, Village participation, and focus on value-added benefits will lead to great ideas that need to be incorporated into the water treatment plant design and construction. **Our team has the experience to turn great ideas into great infrastructure**.

We know that the Village of Ashville takes pride in its community, in all aspects, and the water treatment plant will be no different. The presence of the facility itself, being of high quality on the exterior, will reflect the level of technical quality inside and will become a visual point of pride in your community. We are excited to work on this project and looking forward to working with the Village and staff. We look forward to the opportunity to assist in providing the citizens a better, safer, and more reliable facility than exists today. Jones & Henry Engineers is ready for the challenge this project represents and we welcome the opportunity to discuss our qualifications with your Village staff.

Sincerely,

JONES & HENRY ENGINEERS, LTD.

Jake Meinerding, PE, Assoc. DBIA
Principal, Cincinnati Office Director

Bryan Bailey, PE
Director of Water

contents

SECTION 1 — JONES & HENRY ENGINEERS SERVICES

Unrivaled experience. Personal commitment. Professional dedication. Quality results.

Jones & Henry Engineers was founded in 1926 on the premise of providing quality service. We remain true to that mission today, over 90 years later, providing high-quality solutions to support the needs of communities like yours. No one is more prepared or well-practiced to provide your community a solution for success.

Jones & Henry Engineers offers a wide range of consulting engineering services with expertise in water resource and sanitary engineering — including wastewater and water treatment, stormwater, as well as related collections and distribution infrastructure work, allowing the firm to deliver solutions for a wide variety of municipal needs. Being Ohio owned and operated, we take tremendous pride in utilizing our team's expertise to enhance the success of our region.

Office Location

While Jones & Henry Engineers has five regional offices across Ohio, Indiana, and Michigan — we plan to work with you from our offices located at:

4357 Ferguson Drive, Suite 200, Cincinnati, OH 45245 / 513-538-5599 / **www.JHEng.com**

Contact

Jake Meinerding, PE, DBIA, Cincinnati Office Director / 513-208-2926 JMeinerding@JHEng.com

Ownership / Certifications

Jones & Henry Engineers is a limited liability firm licensed to provide professional engineering services in Ohio, Indiana, Kentucky, and Michigan. The firm is owned by 8 principals, 6 of which are licensed professional engineers specializing in the firm's area of professional practice.

Ohio PE/PS Certificate of Authorization: 02387

Legal and Financial Capabilities

Jones & Henry Engineers foresees no conflict of interest or financial concerns in regard to providing the proposed professional engineering services for the Village of Ashville.

Why Choose Jones & Henry Today?

Client partners of the Jones & Henry Engineers staff have noted the firm provides a level of service exceeding their expectations of quality on every project due to our:

- sophisticated technical abilities
- wide range of experience, from time-honored, successful solutions to evaluating innovative offerings
- the collection of perspectives on our team, including staff members who once were public employees in the very roles of our clients
- accessibility of our team from the top down and from start to finish
- pride in our craft and commitment to the success of our local communities

The technical expertise of our current staff includes 25 Professional Engineers — 48 percent of these with advanced degrees. Our staff includes one water treatment operator and three wastewater treatment operators. Over 58 percent of our current employees have twenty or more years of total experience, and 34 percent have at least thirty years of experience. Numerous are active in professional associations through committees or as officers.

We encourage your involvement, which we develop through establishing respect with your staff, understanding your challenges, and having team members who understand implementation**. In an era where communities are challenged to do more with less, our team is well-experienced in the practice of assessment, planning, design, preparation of probable construction costs, and other engineering services for existing and proposed water and wastewater systems.**

SECTION 2 – STATEMENT OF INTEREST AND QUALIFICATIONS

Jones & Henry Engineers is interested in providing the required engineering services for the Water Processing Facility Project. We have assembled an experienced team of engineers, technicians, and specialized personnel to perform the work. We will work closely with the Village, sharing ideas, evaluating alternatives, and helping guide you to the best solution for you and your customers. Project implementation will be the key to success. Jones & Henry Engineers has worked on several projects identical in scope to what the Village is proposing. The majority of our clients are communities of similar size to Ashville. Therefore, a project of this nature is of particular interest to our firm.

Our specialization in water enables us to maintain staff with a higher level of technical expertise and experience, while providing the personal service of a smaller firm. Our team members are focused on water and wastewater facilities and conveyance, allowing them to better forecast your long-term infrastructure needs. Even our Support Team members approach electrical, structural, and mechanical engineering differently because of their depth of expertise in water-focused environments. Communities we work with share that this refined focus is a big contributor to the value of our work.

Water

- Water Treatment
- Water Distribution & Storage
- Water Supply
- Water Distribution Modeling
- Source Protection
- Asset Management

Wastewater

- Wastewater Treatment
- Wastewater Collection
- Wastewater Infiltration and Inflow
- CSO Abatement
- Residuals Management
- Sewer Modeling
- Municipal Industrial Pollution Prevention (IPP)
- Asset Management

Stormwater

- Planning
- Flood Studies
- Conveyance
- Storage
- Utilities
- Storm System Modeling
- Quality
- Detention

Support Services

- Electrical Systems
- Civil Site Design
- Structural Engineering
- Mechanical Engineering
- Construction Engineering Administration
- Instrumentation
- Operations & Maintenance
- Training Services
- Compliance Assistance
- Rate Studies
- Financing

SECTION 3 – PROJECT UNDERSTANDING

The Village of Ashville is experiencing residential, commercial, and industrial growth which will require the Water Treatment Plant to provide up to 4 times the amount of water that is currently being produced for the Village. The situation is complicated by the condition of the current Water Treatment Plant and its ability to simply increase its production its output.

The current Water Treatment Plant was placed into operation in 1935 with a simple groundwater treatment process consisting of aeration and filtration with softening process added in 1948. In 1970 the WTP was expanded by essentially doubling the filtration and softening capacity housed within a building addition to the existing 1935 facility. Additional improvements have been made to the WTP and equipment throughout the years.

The WTP's primary objectives are to remove iron and manganese from the groundwater while also softening the hard water and chlorinating the finished water prior to moving the water into the Village's distribution system for consumption. While there were no violations noted during the most recent Ohio EPA inspection in February, 2022, there were recommendations and actions that are required to be taken.

The inspection report noted that during 2020 and 2021 the hardness goal for finished water was exceeded and that the Secondary MCL for Iron was exceeded multiple times and many other times the finished water level was fairly close to the limit. As noted, the condition of the filtering media and the softening resin is most likely exhausted and significant work will be required to remedy the filters and softeners. Additionally, the plant is nearing its production capacity as it is consistently producing over 75% of the capacity of the system.

The Village is seeking assistance to plan and design a new WTP which will be located on the same lot as the existing WTP. The expectation is that the planning and design work will begin in late April 2022 and complete the planning phase by the end of August and complete the design work by the end of April 2023.

The initial phase of work (Phase 1) will include multiple tasks associated with developing and delivering a Detailed Design Memorandum (DDM). In order to accomplish this work, Jones & Henry Engineers will assign a single point of contact for the Village for communications and work activities. This single point of contact will take on the role of Project Manager and in addition to communications will be responsible for scheduling of meetings, agendas, meeting minutes, task schedules and invoicing amongst other duties.

The main purpose of Phase 1 will be to develop the DDM, and the Project Manager will be responsible for planning, directing and coordinating all of the our team's activities required to complete the report. The design report establishes the plan to complete the new facility and as documentation required for funding acquisition. The team will amongst other activities, identify the current condition and capacity of the existing WTP and future needs to accommodate growth; review population projections and potential development projects; determine if measures are required before the WTP reaches 2.0 mgd capacity; meet with WTP operators to review O&M issues; review existing As-Built drawings of WTP; evaluate alternatives to expand each process with different manufacturers, different process technologies or a combination; evaluate WTP expansion alternatives; perform a field review of the existing WTP; provide

capital costs for equipment in each alternative and Present Worth Analysis of costs over a 20 year life cycle; provide process flow diagrams, preliminary site plans and figures based on alternatives all the while providing all the necessary quality control reviews. Jones & Henry Engineers will supply a draft deliverable report to the Village for review and comment. Jones & Henry Engineers will accommodate the Village's review and comments into a final deliverable in a report format that will be delivered electronically and in paper copy format.

During the Phase 1 activities, Jones & Henry Engineers' team will assist with funding strategy, applications and procurement. We will assist with identification of state/federal funding programs, prep of funding applications, coordinating with funding agencies and other work to secure low interest loans or grant funds; identify applicable funding sources for implementation of the recommended WTP expansion improvements including WSRLA, OWDA, ODSA, OPWC and General Obligation or Revenue Bonds; perform a general evaluation of the Village's current revenue system and sewer rates. If the Village wants to pursue USDA RD funding, the DDM will need to be modified in the PER format.

Upon the agreement of the alternative approach, Jones & Henry Engineers will transition into the Engineering Design Services phase (Phase II). During this phase the design team will continue with a single point of contact for the Village in the Project Manager. The Project Manager role will also stay consistent with Phase 1 responsibilities for scheduling all meetings and providing agendas and minutes, supplying monthly invoices and maintaining the overall project schedule.

The Engineering Design Services include all necessary tasks to provide the village with deliverables at the 30%, 60%, 90% and 100% stages of design. The tasks include performing all field surveys, site investigations and base mapping with the survey work provided by a licensed Ohio Professional Surveyor. It is our recommendation to have at least monthly design meetings to ensure the project stays on schedule, and discussions on progress and design concepts are understood by all. The different design stage deliverables will consist of design plans, specifications, opinions of probable costs and permit applications. Additional deliverables such as hydraulic profiles, equipment details will be provided at various design stages along with permit applications and government agency meetings. There is also the possibility of add on services during Phase 2 such as subsurface and geotechnical investigations along with development of O & M manuals.

The Bidding and Construction work (Phase III) will be handled through a future RFP, but is expected to include tasks associated with Project Management; Bidding Assistance; Engineering Services during Construction; Construction Inspection Services and Startup Services.

Jones & Henry Engineers does not perceive any issues at this time with the schedule, scope of services or the ability to perform the activities as outlined above and in the Village's RFP. The proximity of the new facility with that of the existing and open area at the site eliminates many of the headaches associated with new plant construction such as environment concerns, property acquisition, plant shutdowns and connection to the existing raw water, distribution and sanitary collection system.

One item of concern is capacity of the wastewater treatment plant. With increasing flows at the water plant, there are subsequent increasing flows at the wastewater plant. This includes wastes from filter backwashing and ion exchange regeneration. We are unaware of future improvements at the wastewater plant and a capacity evaluation can be included with our Phase I services, if requested.

SECTION 4 – FIRM'S ABILITY AND EXPERIENCE

THE JONES & HENRY APPROACH TO MANAGING WORKLOAD, PROJECT SCHEDULING, AND DEADLINES

Our repeat work speaks to our regional leadership in the planning, design, and construction engineering of water and wastewater infrastructure systems. Jones & Henry Engineers has completed over 7,000 projects for communities in Ohio, Indiana, Kentucky, and Michigan. The firm is capable of providing design services with in-house technical staff specializing in all phases of the system — from water treatment and distribution to wastewater collection and treatment — including evaluation, feasibility planning, financing, design, permitting, and construction as well as operation and maintenance.

Quality of Work

An integral part of building long-term relationships with our clients involves our approach to our clients and their needs The assurance and control of the quality of our work is paramount to Jones & Henry Engineers. Building quality into each task of a project requires well, thought-out project management techniques. The following describes our philosophy to projects, which promotes quality assurance and project delivery in a timely and cost conscious manner.

Team Approach – We utilize a team approach to our evaluations and designs. Our team for this project has been selected specifically for the needs of this project. This team has worked together on water treatment plant projects in the past. This method ensures good project continuity, better efficiency, and the best possible results.

Team Composition - The team typically is composed of a project manager with discipline leaders and discipline personnel assigned as needed. Other in-house specialists include experts in hydraulics and computer-aided drafting (CAD) and design.

The project manager will maintain contact with the Village of Ashville to ensure that the engineer/owner interface enhances the long-term integrity of the project.

Owner Involvement - The Village of Ashville and their staff will be an integral part of the team that develops concepts, selects equipment, and reviews and critiques the preliminary and completed work. The most successful projects are those that have considerable attention given to detail. Typically monthly

meetings are planned however we have utilized bi-monthly when needed. We are proficient in utilizing virtual meeting platforms of all kinds and willing to participate in virtual meetings as well.

Quality Assurance/Quality Management Program - We recognize that the best way of assuring high quality services requires a two pronged approach. It is important to build quality into the everyday tasks performed on a project. It is, however, vital that the nearly completed project be reviewed in its final form by experienced professionals. Building quality into each task of a project, requires well thought-out project management techniques. We have established a project management process which promotes communications among project participants, planning of the projects, and coordinating the efforts of the project team.

Each project begins with the preparation of a project memorandum. This memorandum communicates the project scope, requirements, and background to all project participants. It is intended to reduce misunderstandings and rework that result from a lack of information or unclear scope. The client is asked to review the project memorandum to ensure that there is a mutual understanding of the expectations for the project. The memorandum is periodically updated, expanded, and distributed as the project progresses.

Task lists are used to ensure that each project team member understands what he/she is expected to accomplish and by what date. This information can then be used in preparing an overall project schedule including milestones, target dates, and deadlines. Depending on the size and complexity of a project, project scheduling software is typically used. This schedule becomes a tool for communicating requirements, as well as for keeping a project on schedule and on budget.

Throughout the design of the project, the drawings and specifications are to be submitted for review by the applicable discipline director(s). The number of reviewers and the time expanded on the review is dependent on the project size. The purpose of this review is to ensure that critical design calculations have been checked, that the contract documents are coordinated, and that the finished product addresses all project requirements.

After the project is complete, the project manager meets with the project team to discuss the project and any suggestions for future improvements. In this way, continuous improvements in our quality management program can be assured.

reliable service to the residents throughout the construction phase.

Our design will provide the Contractor an outline to perform a complex project with the scope of shutdowns during bidding, eliminating uncertainty in the bidding process.

We are experience in the Ohio Construction reform which has taken placed. We have been actively involved in all the available construction delivery methods which include:

- Traditional Design / Bid / Build
- Multiple Prime Contracting
- Design / Build
- Construction Management at Risk

We will be able to discuss the various alternatives when the need arises and help choose which delivery method will be most beneficial.

Meeting Deadlines

We can proudly state as a company, that no client has ever paid any penalties or fines in regard to our design schedules.

The expertise of our project delivery team allows us to rapidly identify potential problems and quickly arrive at solutions for the betterment of our client partners. Below are highlights of past assignments that delivered on demanding schedules:

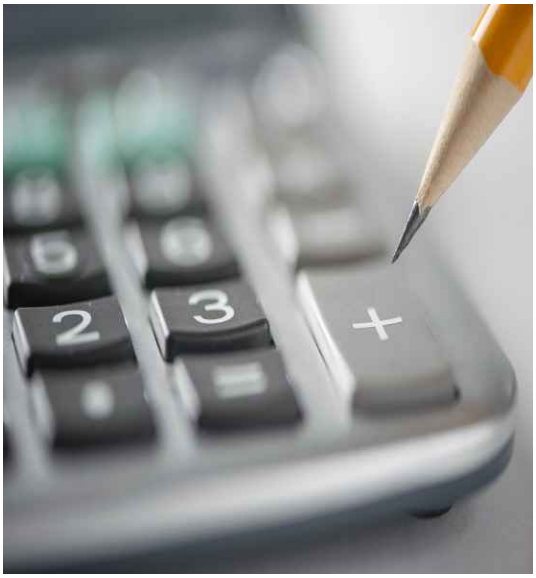
- **City of Portland**
  Submittal of Construction Permit and Full Design for Tertiary Filters and Anaerobic Digesters
  Design of this $1.66 million construction project Completed in 3 weeks to avoid losing funding.
- **Defiance**
  WPC UV Improvements
  Design of this $2.153 million project Completed in 3 months.
- **West Alexandria**
  Oxidation Ditch
  Wastewater Treatment Plant
  Design of this $7.3 million project
  Completed in 4 months.
- **Northwestern Water & Sewer District** ***Curtice Road Water Line Replacement and Extension***
  Design of this $1 million construction project
  Completed in 3 weeks.
- **Lorain**
  18th Street and Lexington Avenue Water Line Replacement
  Design of $700,000 project
  Completed in 6 weeks.

Our team understands the importance the schedule plays with a capital improvement project and potentially your ability to secure funding. We will work to meet the Village's schedule whether it is funding, design review or OEPA related so the milestones are achieved.

Cost Control

Jones & Henry considers the control of project costs and engineering cost to be a key consideration throughout the design and construction of a project.

Prior to commencing the design or evaluation of a project, Jones & Henry typically prepares a preliminary project cost estimate to provide the client with an approximation of the value of the contemplated improvements. This preliminary cost estimate is essential to the understanding of the scale of the proposed improvements and provides a basis for proceeding with the further evaluation. We are cost conscious even in the initial project cost estimates due to the impact on funding, rate structure and ultimately the affordability of the project.



Our teams remain attentive to the project cost throughout the design process refining the design and respective cost estimates starting from preliminary cost estimate until the Engineer's Opinion of Construction Cost is developed at the bidding process.

We track the engineering budget for the project on a weekly basis, comparing the completed work against the budget amount exhausted.

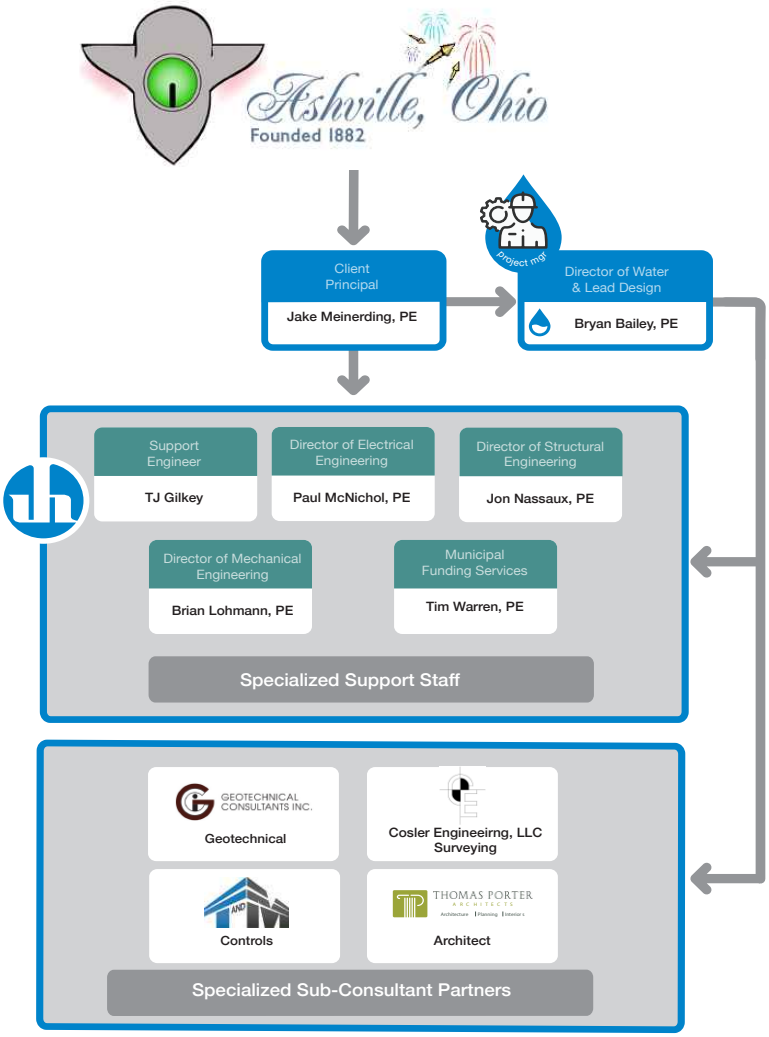
The following table is an example of project Cost Control as demonstrated in our past projects:

Project Title	"Engineers Estimate"	"Original Contract Amount"	Final Amount
Water Treatment Plant			
Archbold, Ohio			
GAC, UV and WTP Improvements, 2020	$8,200,000	$7,593,700	TBD
Battle Creek, Michigan			
WTP/RIM Plant	$2,466,000	$2,750,447	$2,799,964
Botkins, Ohio			
Water Treatment Plant Improvements	$1,132,000	$1,237,000	Not available
Bucyrus, Ohio			
Water Treatment Plant	$23,800,000	$22,274,000	$22,641,660

Project Title	"Engineers Estimate"	"Original Contract Amount"	Final Amount
Carmel, Indiana			
Water Treatment Plant No 1	$20,100,000	$19,870,000	$20,327,010
Jackson Center, Ohio			
New Wells Nos. 5 & 6	$520,000	$520,000	$408,003
Lima, Ohio			
WTP Improvements	$720,000	$704,000	$708,526
WTP Diesel Fuel Tank Replacement	$160,506	$269,000	$253,706
WTP PAC Feed Facilities Replacement	$750,000	$749,000	TBD
North Baltimore, Ohio			
Clearwell Aeration	$113,400	$120,100	$126,212
WTP Clarifiers 1&2 High Performance Coatings	$100,000	$101,768	$102,311
Ottawa County			
Regional WTP Clarifier Re-coating	$500,000	$412,000	$403,000
St. Marys, Ohio			
New WTP	$16,800,000	$14,675,000	$13,750,462
Toledo, Ohio			
Collins Park Water Treatment Plant West and East Plant	$13,600,000	$13,745,000	$13,350,121
Collins Park Water Treatment Plant Roof Replacement	$1,700,000	$1,787,517	$1,786,310
Collins Park Intake Crib Structural Repair	$4,100,000	$3,915,830	NA
Water Line			
Allegan, Michigan			
2019 Neighborhood Roads, Water & Sewer	$2,575,065	$2,726,427	$2,958,007
Bucyrus, Ohio			
Water Transmission Mains and Force Main Contract 1B	$3,600,000	$2,243,049	$2,371,168
Delta, Ohio			
Raw Water Pump Station	$1,950,000	$1,932,000	$1,968,662
Raw Water Service to Nature Fresh Farms	$1,000,000	$403,439	$498,458
Hicksville, Ohio			
New Well No.7	$200,000	$181,741	$198,951
New Wells Nos. 8 & 9, Division A	$550,000	$434,544	TBD
Water Line to Well Nos. 8 & 9, Division B	$1,550,000	$1,253,849	TBD
Hudson, Michigan			
Phase 1, Lead Service Line Replacement, 2018	$182,000	$157,480	$182,000

Project Title	"Engineers Estimate"	"Original Contract Amount"	Final Amount
Lorain, Ohio			
6wa Water Main - Washington Avenue	$3,313,000	$2,992,000	$2,620,000
6wa Water Main - Reid Avenue	$3,636,900	$4,947,000	$3,220,000
6wb Water Main Replacement Project	$5,963,718	$5,216,075	$3,858,744
6wc Broadway/Jaeger/Skyline	$4,000,000	$4,003,187	$3,671,393
6wc 18th Street and Lexington	$840,000	$702,500	$525,844
West Lorain Water Line Improvements	$5,000,000	$4,368,413	$4,132,697
Maumee, Ohio			
Anthony Wayne Trail Water Main Crossing Emergency Replacement	$154,000	$164,689	$150,000
Lochhaven Area Water Main Replacements	$1,150,000	$814,075	$725,093
Northwestern Water & Sewer District			
Andrus Road Water Line Extension & East Broadway Water Line Replacement	$940,000	$832,192	$800,000
Curtice Road Water Line Improvements WL-212A	$1,250,000	$899,393	$818,707
100 Area Lead Service Elimination/Replacement	$870,000	$883,365	$763,092
Deimling Road Water Main Extension WL-5011	$400,000	$317,975	$310,017
Ampoint Road Water Main Replacement Phase 1 WL-139E	$1,550,000	$990,140	$985,850
Bowling Green 2020 Water Main Improvements	$1,890,000	$1,532,228	TBD
McComb Water Line Replacement - Phase 2	$765,000	$613,180	$581,548
McComb Water Line Replacement - Phase 3	$807,000	$538,587	TBD
WL-101 Trunk Water Main Repairs	$450,000	$480,320	$497,952
St. Marys, Ohio			
Water Transmission Mains and Force Main Contract 1B	$1,425,000	$937,837	$952,311
Stryker, Ohio			
SR 2 Water Line Replacements	$96,500	$91,085	Not available
Toledo, Ohio			
2014 Water Main Replacement – Phase 1	$3,100,000	$2,951,300	Not available
Heatherdowns Booster Pump Station Renovation - Phase 1	NA	$2,279,600	Not available
Waterville, Ohio			
Maumee River Water Transmission Main	$2,550,000	$2,311,632	$2,244,785
Dutch Road and Anthony Wayne Trail Waterline Extension	$177,080	$133,708	$131,297

SECTION 5 – PERSONNEL ASSIGNED TO PROJECT



Jake Meinerding, PE

Vice President

Cincinnati Office Director

Experience:
- **15 Years of Industry Experience**
- 14 Years with Firm
- 3 Years as Principal

Professional Engineer: OH, IN, MI, KY

Certification:
- DBIA — Associate

Education:
- **Master Environmental Engineering**
  University of Cincinnati
- **BS Civil Engineering**
  Ohio Northern University

Specialties:
Water Plant Design, Lift Stations, Collection Systems, Distribution

Professional Affiliations:
DBIA Associate Design-Build Professional; Water Environment Federation; American Water Works Association; DBIA

cincinnati

Bryan Bailey, PE

Director of Water Treatment

Senior Engineer

Experience:
- 26 **Years of Industry Experience**
- 2 Years with Firm

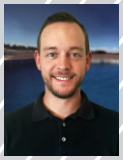
Professional Engineer: OH, IN, MI, KY

Education:
- **MS Mechanical Engineering**
  Wright State University
- **MBA**
  University of Dayton
- **BS Civil Engineering**
  The Ohio State University

Specialties:
Water, Wastewater, Municipal Engineering

Professional Affiliations:
American Water Works Association; ASCE American Society of Civil Engineers; ACEC

cincinnati



TJ Gilkey

Engineer

cincinnati

Experience:
- **7 Years of Industry Experience**
- 3 Years with Firm

Education:
- **BS Civil Engineering**
  University of Cincinnati

Specialties:
Water, Wastewater

Professional Affiliations:

ASCE American Society of Civil Engineers

Jon Nassaux, PE

Director of Structural Engineering

toledo

Experience:
- **29 Years of Industry Experience**
- 17 Years with Firm

Professional Engineer: OH

Education:
- **BS Civil Engineering**
  Lawrence Technological University

Specialties:
Concrete Tanks, Foundations, Steel and Masonry Structures, Drilled Piers and Piles

Paul McNichol, PE

Director of Electrical Engineering

toledo

Experience:
- **39 Years of Industry Experience**
- 15 Years with Firm

Professional Engineer: OH

Education:
- **Bachelor Engineering Technology**
  University of Toledo

Specialties:
Electrical Power and Controls

Professional Affiliations:

IEEE Illuminating Engineering Society

Brian Lohmann, PE

Director of Mechanical Engineering

toledo

Experience:
- **32 Years of Industry Experience**
- 3 Years with Firm

Professional Engineer: OH, MI, IN

Education:
- **BS Mechanical Engineering**
  University of Toledo

Specialties:
HVAC and Plumbing Systems for Municipal Water and Wastewater Treatment Plants

Professional Affiliations:

ASME ASPE American Society of Plumbing Engineers ASHRAE

Tim Warren, PE

Senior Engineer

toledo

Experience:
- **37 Years of Industry Experience**
- 8 Years with Firm

Professional Engineer: OH, MI

Education:
- **BS Civil Engineering & MBA**
  The Ohio State University

Specialties:
Public Infrastructure Financing, Rate Studies, Funding Options, Capital Improvements Planning

Professional Affiliations:

Water Environment Federation

Subconsultants

Geotechnical – Geotechnical Consultants, Inc.

Geotechnical Consultants Inc. (GCI), located in Westerville, Ohio, provides a complete range of practical, cost-effective geotechnical engineering, environmental and construction materials engineering and testing services to help clients manage risk and make timely informed decisions.

With GCI's sound engineering principles, in-depth knowledge of regulatory requirements, experienced personnel and innovative approach, clients trust that their projects will be completed on time with future risk mitigated.

Surveying – Cosler Engineering, LLC

Cosler Engineering LLC, established in 1986, is a civil engineering and land surveying firm located in Beavercreek Township, Greene County, Ohio. The firm has provided topographic surveys, road right of way surveys, and base map plans for new and replacement water main projects. These projects, as consultant or sub-consultant, have been performed for City of Huber Heights, Greene County Sanitary Engineering, Indian Hills, Yellow Springs and City of Xenia.

Architect – Thomas Porter Architects

Thomas Porter Architects is a regional architectural design firm, located in the center of downtown Toledo's Historic Warehouse District since 2009. Our staff has a much longer working relationship, contributing to prominent area projects for over 30 years. As a relatively small firm of approximately 9 staff, we strive to exceed expectations from much larger firms, providing progressive personalized services and design solutions. New teaming relationships continue to allow expansion into Higher Ed, Healthcare, Industrial, Sustainability markets, as well as larger project capabilities. As sustainable design trends continue to emerge, our firm is prepared with 70% of staff LEED accredited.

Controls – T&M Associates

T&M Associates, located in Dublin, Ohio, is a leading national consulting, environmental, engineering, technical services and construction management company that has delivered proven results for a broad spectrum of public and private clients for more than 50 years. Through a team of 350 business and technical professionals, they service clients from 17 office locations throughout the U.S., including California, Texas, Indiana, Michigan, Connecticut, New Jersey, Pennsylvania and Ohio.

Our professionals proactively apply the insights and value of their experience to our clients' benefit, increasing efficiencies, anticipating new regulations and requirements and identifying alternate budget sources. Our clients count on us to provide smart counsel and always protect and promote their best interests.

SECTION 6 – PROJECT RELATED EXPERIENCE

Our experience on projects of this nature is highlighted in the next section. Jones & Henry has completed preliminary design reports, final design and construction administration and inspection on water treatment plants in Ohio ranging from 0.13 mgd to 30 mgd. Recently we have completed new and renovated water treatment facility planning and design in Ohio communities similar to Ashville such as Yellow Springs, Englewood, St. Marys, Archbold, Antwerp, and Ripley.

While several treatment alternatives will be evaluated during the Phase I services, it is our understanding the Village prefers conventional open-top gravity filters and ion-exchange softening. Jones & Henry has completed several designs with these processes recently. The new St. Marys, Yellow Springs and renovated Archbold water plants implement conventional filters. Englewood, Ohio; Ripley, Ohio; and Carmel, Indiana water plants implement ion-exchange softening.

The Client Principal for this project, Jake Meinerding, has spent the majority of his time at Jones & Henry working exclusively on municipal water treatment related projects. This includes completing preliminary engineering reports; pilot studies; design of different types of filtration, softening, chemical feed, and high service pumping facilities; construction administration; construction inspection; and assistance with plant start ups.

The Project Manager and primary point of contact for this project would be Bryan Bailey. Bryan has over 25 years of experience delivering water projects to municipalities and industrial clients all over the world. He was responsible for the engineering and project management activities at Veolia in which he led projects involving different membrane technologies, various types of filtration and ion exchange systems and chemical feed equipment. Prior to joining Jones & Henry, Bryan was the Director of Project Delivery for ECT2 which holds several patents for regenerable ion exchange technology focused on the removal of PFAS and other emerging contaminants.

As previously noted the rest of our team focuses on water and wastewater related facilities only. This allows our electrical, structural and mechanical engineers to specialize in water-focused projects.

We ask for the Owner's involvement early and often in the project planning and design stages. We want to ensure the Owner has the finished product they want and deserve. One of the ways we can accomplish this is to provide 3D modeling for all our plant designs – from concept phase through final design. This will enhance the Village's understanding of the project and visualization of the finished project. Renderings such as the ones on the next page provide a clear picture to the Owner and community of what to expect with the completed project.

Nearly all of our water designs are submitted to OEPA for review and receipt of plan approval and most involve funding acquisition. Early in the project we contact OEPA to obtain results of recent sanitary surveys or other information they may have pertaining to the treatment plant or distribution system. We will be sure to address any concerns they have in the evaluation and future design. We will also send them a copy of the PER for their review. We have staff devoted solely to funding assistance. Tim Warren will be assigned to assist the Village with acquiring funding, and organizing applications and procedures.

In summation, the scope of services provided by the Village of Ashville is typical for the projects and clients we work for and with. Our staff has the expertise and experience to expedite and assist with all aspects of the new treatment facility. Completing a new water treatment facility project is a large undertaking for any community, our goal is to guide the Village through the entire project to make the process as efficient and effortless as possible.

SECTION 7 – RELATED PROJECT EXPERIENCE

Experience in Water

Water Treatment Plant Studies and Design

Jones & Henry Engineers has extensive experience in evaluating and designing water treatment plants that remove iron and manganese, clarify and soften using lime, lime-soda ash, lime-caustic soda, ion exchange, and membrane processes. Our experience includes existing and new plants treating ground and surface water supplies. Our designs range in capacity from 0.13 mgd to 30.0 mgd.

We have prepared preliminary and/or final designs for over 40 water treatment plants in the last 30 years. The material that follows describes the most recent work in the field of surface water and groundwater treatment.

Ion Exchange Softening and WTP Improvements

water treatment

City of Englewood

The City of Englewood has a 3.3 mgd ground water treatment plant with the primary focus on removing iron and manganese. The City was interested in adding softening to their treatment and in 2016 Jones & Henry Engineers began investigating alternatives. After piloting different softening methods and completing a Preliminary Engineering Report, it was determined Ion Exchange Softening was the best alternative for the City.

Design of the new Ion Exchange Softening facility included an addition to the existing plant to house the new equipment. Improvements included site design; a 2.2 mgd Ion Exchange Softening system; piping and valves; new chemical feed facilities for gas chlorine, caustic soda and phosphate; two new high-service booster pumps and VFDs; architectural improvements; a new generator; new HVAC system and upgrades to the existing system; new electrical and controls and upgrades to the existing systems.

We provided the final plans and specifications, all Ohio EPA and building permits, construction oversight, and shop drawing review. A corrosion control analysis was required due to the softening addition. This is considered a treatment change and the study was performed in order to ensure stable water in the distribution system.

treatment alternatives for softening

estimated completion on time

1 **change orders**
zero budget impact to date

0 **budget increases**

Eric Smith
City Manager
937-836-5106
smith@englewood.oh.us

City of Englewood
33 West National Road
Englewood, OH 45322

Optimizing Archbold's WTP

water treatment

Village of Archbold

The Village of Archbold has a 7.6 mgd surface water treatment plant and serves several outlying communities. Recent struggles with THM's and an aging plant led the Village to seek out Jones & Henry to development a plan to reduce THM's and upgrade the aging infrastructure. We started the process with a complete plant evaluation, proceeded with a granular activated carbon (GAC) pilot study, completed a preliminary engineering report (PER) and are currently in the process of design a new 7.6 mgd GAC and ultraviolet disinfection (UV) facility for the Village.

The plant evaluation and PER entailed a full process and equipment evaluation, filter media study and recommendations for plant improvements. During this time a GAC pilot study was also completed to determine the most effective GAC media to reduce total organic carbon and ultimately system THM's. We worked with the Village and Ohio EPA on developing the pilot protocol and a General Plan for all water treatment plant improvements.

Construction on the project is nearly complete and the system is expected to go online in the coming months. Total improvements include converting a gaseous chlorine system to sodium hypochlorite; replacing existing filter media and

bringing the Village into regulatory compliance

estimated completion on time

3 change orders to date

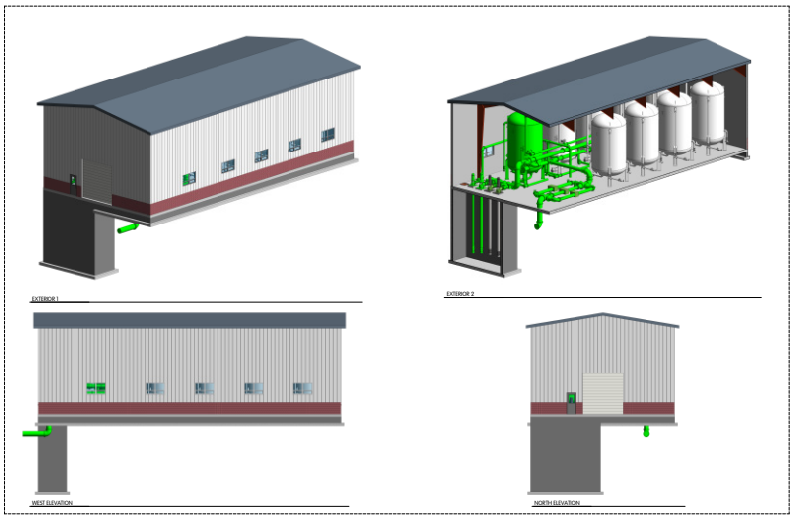
$190k construction budget increase by request of the owner.

Scott Schultz
WTP Superintendent
419-446-4726
sschultz@archold.com

Village of Archbold
700 North St. Archbold
Archbold, OH 43502

Optimizing Archbold's WTP

adding an air scour system; other chemical feed improvements; a new GAC and UV facility; adding mixers to two existing clearwells; and additional site and yarding piping design. Jones & Henry Engineers will complete the process, site, architectural, structural, mechanical, electrical and controls design. As the new GAC and UV facility is coming online, Jones & Henry Engineers is also completing an Optimization Study on the current plant processes. The goal of the study is to reduce TOC and improve overall water quality before water enters the GAC facility.



Jones & Henry Engineers developed the pilot protocol and General Plan for all plant improvements.

water treatment

Providing Safe and Reliable Drinking Water

City of St. Marys, Ohio

St. Mary's Superintendent, Jeff Thompson, shares "Untreated well water pumped into the treatment plant goes through a complex, multi-stage treatment process that takes about 12 hours, producing a consistent supply of high-quality drinking water. The treatment plant is a lime-soda ash softening facility; softening the water makes it 'kinder' to appliances, machinery, and the human body."

Because of the success of our previous work, Jones & Henry Engineers was retained by the City in 2016, to prepare a preliminary design for the new water treatment plant. The ensuing report noted the new treatment plant capacity of 2.4 mgd, a new well, preliminary building layout, treatment train recommendations, project costs, water system rate study, and preliminary schedule. We also assisted with funding source recommendations. The City elected to use the Water Supply Revolving Loan Account through OEPA for construction and an Ohio Water Development Authority design loan.

water treatment

designing for successful treatment – and funding

completed on time

6 change orders

$88k construction budget increase by request of the owner.

Jeff Thompson
Supt. of Water & Wastewater
419-394-4114
jthompson@cityofstmarys.net

City of St. Marys
101 East Spring Street
St. Marys, OH 45885

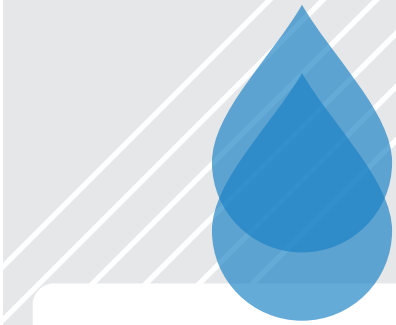
water treatment

Providing Safe and Reliable Drinking Water

The new plant is also a groundwater supply, lime-soda softening plant located on a City-owned parcel adjacent to the lime sludge lagoons and a well field. The project consists of the new plant, a new well, two water transmission mains to connect the new plant to the distribution system and serve potential customers, and a sewer force main to connect to the existing collection system.

The treatment plant includes: a treatment train of two rapid mixers, two upflow clarifiers, two recarbonation basins, four rapid sand gravity filters, and two precast concrete clearwells; vertical turbine pumps for transfer, high-service and filter backwash applications; submersible lime sludge, waste filter wash-water, and sewage pumps; chemical feed facilities for ferric chloride, gaseous chlorine, pebble lime, soda ash, and carbon dioxide; and an administration area for offices, restrooms, laboratory, lunch/training area, and garage/work area. The plant will feature Green initiatives including: LED light fixtures and VFDs for the vertical turbine pumps. The project went out for bid in April 2018, and the Notice to Proceed was dated July 3, 2018. The start-up date was April of 2020.

Jones & Henry Engineers provided preliminary and final design, and construction administration services.



The treatment plant is a lime soda ash softening facility; softening the water makes it 'kinder' to appliances, machinery, and the human body

Scan with your smart phone to watch a video overview

Below Maximum Price. Exceeding Maximum Quality

water treatment

Village of Yellow Springs, Ohio

Jones & Henry Engineers teamed with Shook Construction Company for the design and construction of a new ground-water supply 1.0 mgd water treatment plant. The framework for the contract followed DBIA form 530 Agreement Between Owner and Design-Builder - Cost Plus Fee with Option for a Guaranteed Maximum Price and 540 Agreement Between Design-Builder and Design Consultant. The Guaranteed Maximum Price Option was included in the agreement, where Jones & Henry Engineers was a subcontractor of Shook Construction. In this format, the Village originally contracted with a consulting engineering firm to serve as the Criteria Engineer that prepared approximately 30% complete project documents. These documents were used for the Design-Build Request for Qualifications and the Request for Proposals. Four D-B teams were shortlisted from the Statement of Qualifications submission to prepare proposals. Two teams prepared proposals for the ensuing preparation/ interview. The Jones & Henry Engineers and Shook Construction team was chosen with Jones & Henry performing the duties of the Design Consultant and ultimately, the Engineer of Record for the project.

design-build "engineer of record"

completed on time

2 change orders

$275k construction budget decrease by request of the owner.

Brad Ault
Supt. of Water & Wastewater
937-767-7208
bault@vil.yellowsprings.oh.us

Village of Yellow Springs
100 Dayton Street
Yellow Springs, OH 45387

water treatment

Below Maximum Price. Exceeding Maximum Quality

The existing treatment plant included a filter building, pump building, and below-grade clearwell situated under the pump building. The original 30% design included new pump facilities located inside the new treatment plant, new two-celled clearwell situated under the plant, and mechanical dewatering system for waste filter backwash and red water filters. Also included was chemical feed equipment for gaseous chlorine and sulfur dioxide. The D-B team offered cost-saving construction options for utilizing the existing pump building and clearwell, replacing the mechanical dewatering system and red water filters for lagoons, and a safety option of feeding sodium hypochlorite in lieu of gaseous chlorine. With the lagoon option, sulfur dioxide for chlorine neutralization was not required. The Village accepted the cost/safety recommendations.

The construction project consisted of a new well and treatment plant, and improvements to the existing pump building and clearwell. The electric power for the wells was underground from the new plant, replacing aging aerial power and control wires and enabling backup power from the new diesel-powered generator. The new plant included a treatment train of two aluminum induced draft aerators, two below-grade concrete detention basins; two transfer pumps; two pellet softeners; inline pressurized solution carbon dioxide feed system; three rapid sand gravity filters; new pumping equipment for two high-service and one filter washwater supply pumps; chemical feed facilities for potassium permanganate, sodium hypochlorite, sodium hydroxide, and carbon dioxide; super sack sand feed system to convey sand to the pellet softeners; and an administration area for restroom, laboratory, and control/office rooms. Site construction included a spent sand bin, two-celled waste filter backwash lagoon, storm retention pond, and addition of an overflow for the clearwell. The pellet softening system is a form of a preceptive softening system, whereby, sodium hydroxide is added to the aerated water to increase pH to above the calcium solubility threshold in the bottom of a

The Village expressed their satisfaction on the project, noting the budget came in below the maximum price, while quality and overall project management were above expectations.

Below Maximum Price. Exceeding Maximum Quality

conically-shaped, vertical vessel with narrow cone at the bottom. Approximately 7 to 10 feet of sand is installed in the softening vessel. Water flow is inserted tangentially to form an upward circular motion, enhancing the sand/calcium carbonate contact and partially expanding the sand bed. Calcium carbonate precipitates adhere to the sand, causing the sand to grow into larger particles or pellets. Periodically, the larger pellets must be removed from the softener and conveyed as a slurry to the sand storage bins. After pellets are removed, more sand is added to maintain the proper sand depth. Spent pellets are trucked off-site for disposal.

"In 2011, the discussion began to address our current aging water plant that is over 50 years old. The decision was made to build a new water plant in early 2016. The new design-build plan will be complete late 2017. This new plant will be built to remove iron and manganese from our water as well as soften. We are very excited for…improved water quality for the entire Village."

The new plant (bottom image) was brought on-line in December 2017.

The Village Manager notes "We are very excited for the improved water quality for the entire village"

water treatment

A Model to Guide Major System Decisions

water treatment

Carmel, Indiana

The City of Carmel acquired additional service area, distribution mains and customers from the City of Indianapolis in 2006. Jones & Henry Engineers developed a distribution system model in WaterCAD and evaluated near term and ultimate projected demands within the existing City service area, as well as the newly acquired service area. The model was used as the basis for developing the plan for transitioning customers from Indianapolis to the City of Carmel. Our team also developed an overall master plan for improving the City's four existing water treatment plants and constructing a new treatment plant. We subsequently designed and assisted with construction of the needed improvements to these plants.

Jones & Henry Engineers used the 'Concept Development' approach for the new water treatment plant. We developed the initial concepts, evaluated site options, treatment alternatives, provided the hydro-geologic consultation necessary for determining future groundwater supplies and have designed many of the additional transmission mains. The City elected to incorporate pressure filters with zeolite softening (ion

improve existing and design of a new plant

completed on time

2 change orders

$457k a construction budget increase by request of the owner.

John Duffy
Utilities Director
317-571-2443
jduffy@carmel.in.gov

City of Carmel
30 West Main Street, Suite 200
Carmel, IN 46032

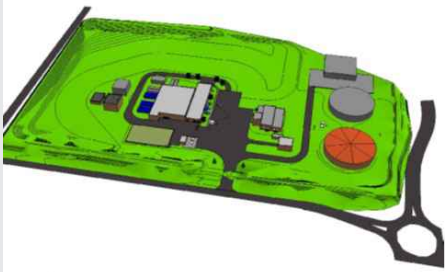
A Model to Guide Major System Decisions

exchange) in the treatment plant project. A 4 MG prestressed concrete ground storage clearwell was constructed on the site with provisions for a second clearwell. The water plant was designed for ultimate expansion of up to 32 mgd. The City completed construction of the first phase of the new treatment plant with a capacity of 18 mgd. Included with this project is approximately 18 mgd of additional groundwater exploration & supply, raw water mains, well houses and multiple finished water transmission mains.

The design included a number of challenges. The water treatment plant was constructed on a previously mined quarry. The sand and gravel quarry was subsequently filled in with lime sediment, thereby resulting in extremely poor soils. To compound the issue, mining of the limestone is continuing underneath this site along with blasting on a daily basis. In addition to the issues of site context and the reuse of former industrial site, the City explored a number of other sustainable infrastructure opportunities. Wind and solar pilot projects have been studied and reviewed for possible future implementation as a renewable energy source. Jones & Henry also worked with Fort Wayne based, Water Furnace International, to design a geothermal system making use of the City Water as a BTU source. This will provide extremely efficient heating and cooling of the administration, laboratory and operations building.

The new treatment plant features: two induced draft aerators; one 2-celled vertical concrete detention basin; six 2-celled horizontal pressure filters loaded with dual media anthracite and filter sand; five transfer pumps; six vertical pressure softeners; one 4-MG baffled prestressed concrete clearwell; a pump building that includes five high-service pumps, two filter backwash pumps, and bladder style 25,000 gallon surge tank; chemical feed facilities for sodium permanganate, filter aid polymer, hydrofluosilicic acid, and gaseous chlorine with 1-ton cylinders; and an administration area that includes restrooms, shop area, offices, laboratory, lunch/meeting room, and electric and control rooms.

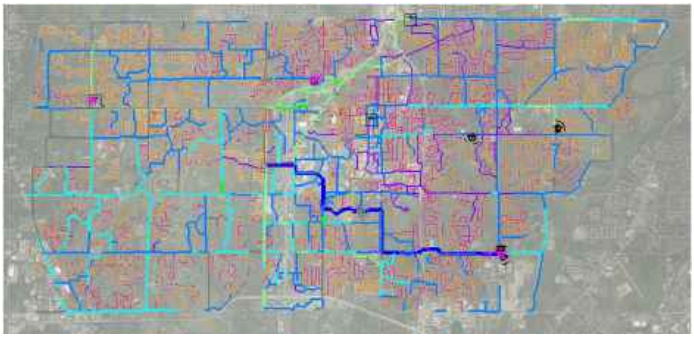
The new water treatment plant was constructed on a previously mined sand and gravel quarry, where mining would be continuing below the surface. Structural implications and knowledge was of the utmost importance.



water treatment

A Model to Guide Major System Decisions

The high-service pumps are five-stage, can style, vertical turbine units, and include; two 8.0 mgd, two 4.0 mgd, one 3.0 mgd units, as well as piping and electrical provisions for a third 8.0 mgd pump. The 3.0 mgd pump is currently driven by a VFD motor, and the piping and pump can be sized for a fourth 8.0 mgd pump as needed. Ultimate high-service pump capacity will be 40 mgd. The pumps presently convey water to the newly acquired service area that is approximately 100 feet higher in elevation than the City and requires a separate pressure zone. A unique design feature of the two 8.0 mgd and two 4.0 mgd pumps are the ability to meet current and future conditions. In the future, a booster pump station and elevated tank will be included and located at the high/low pressure zone line. The elevated tank overflow will be set for low pressure zone. The booster pumps will then add the required head to convey water to the high-pressure zone. To enable the existing high-service pumps to be used for this lower head condition, the lowest stage of each pump was designed to be removed to meet this operating condition. Thereby negating the need for purchasing new pumps.



Among other benefits, a detailed WaterCAD model can assist with predicting other major changes in a system, industrial and residential developments and other changes in demands, throughout the system. The model is an invaluable tool to show decision makers how improvements will effect a water system.

SECTION 8 – REFERENCES

Name of Owner	City of Englewood, Ohio
Project Name	Ion Exchange Softening Addition
Brief Description of Firm's Involvement	Preliminary Engineering Report and Design
Contact Person	Eric Smith, City Manager
Address	33 West National Road Englewood, Ohio 45322
Telephone Number	937-836-5106
Firm's Key Personnel Assigned to Project	Jake Meinerding, PE Paul McNichol, PE Jon Nassaux, PE
Name of Owner	Village of Archbold, Ohio
Project Name	GAC, UV and Water Treatment Plant Improvements
Brief Description of Firm's Involvement	Preliminary Engineering Report, Design and Engineering During Construction
Contact Person	Scott Schultz, Water Treatment Plant Superintendent
Address	700 North Street Archbold, Ohio 43502
Telephone Number	419-445-4729
Firm's Key Personnel Assigned to Project	Jake Meinerding, PE Bryan Bailey, PE TJ Gilkey Paul McNichol, PE Jon Nassaux, PE Brian Lohmann, PE
Name of Owner	Village of Yellow Springs, Ohio
Project Name	New Design-Build Water Treatment Plant
Brief Description of Firm's Involvement	Design and Engineering During Construction
Contact Person	Brad Ault, Water and Wastewater Superintendent
Address	100 Dayton Street Yellow Springs, Ohio 45387
Telephone Number	937-767-7208
Firm's Key Personnel Assigned to Project	Jake Meinerding, PE Paul McNichol, PE Jon Nassaux, PE

Name of Owner	City of St. Marys, Ohio
Project Name	New Water Treatment Plant
Brief Description of Firm's Involvement	Preliminary Design, Final Design, Engineering During Construction, and RPR
Contact Person	Jeff Thompson, Superintendent of Water and Sewer Departments
Address	503 S. Wayne Street St. Marys, Ohio 45885
Telephone Number	419-394-4114
Firm's Key Personnel Assigned to Project	Jake Meinerding, PE TJ Gilkey Jon Nassaux, PE Brian Lohmann, PE
Name of Owner	City of Carmel, Indiana
Project Name	Water Treatment Plant No. 1
Brief Description of Firm's Involvement	Distribution System Model, Design, Engineering During Construction
Contact Person	John Duffy, Utilities Director
Address	30 West Main Street, Suite 200 Carmel, Indiana 46032
Telephone Number	317-571-2443
Firm's Key Personnel Assigned to Project	Jake Meinerding, PE Jon Nassaux, PE

SECTION 9 – PROJECT FEES RELATED TO PHASE 1

The primary goal of Phase I is to determine a course of action for implementing the design and construction of the new facilities, determine project costs for identifying promising funding sources and preparation of funding applications. It is our recommendation to prepare the report following the OEPA Elements of a General Plan that is required for the Water Supply Revolving Loan Account (WSRLA) fund application. This report can be modified to fit other funding source standards such as USDA funding. The General Plan will also be required to be submitted to Ohio EPA in plan approval form before design can commence on the new facilities.

We have provided these Phase I services are several projects in the past five years on several water treatment plant projects for the following communities:

- St. Marys, Ohio (WSRLA)
- Delta, Ohio (USDA)
- Antwerp, Ohio (WSRLA)
- Archbold, Ohio (OPWC)
- Ada, Ohio (Ohio BUILDS Grant)
- Ashley, Indiana (Funding TBD)
- North Manchester, Indiana (Indiana State Revolving Loan Fund)

Our fees for Phase I services including Tasks 1.1, 1.2 and 1.3 as outlined in Preliminary Scope of Services are $34,000.

appendix – resumes

Cincinnati Office Director

Jake Meinerding, PE, Vice President

Jake has been a valuable employee for over thirteen years following his graduation from Ohio Northern University, where he gained his degree in Civil Engineering before pursuing his Master of Engineering degree in Environmental Engineering from the University of Cincinnati. Jake has been intricately involved in studies, designs, and construction projects and was recently the lead designer and project manager for his hometown of St. Marys' new water treatment plant, which was recently completed. His dedication to the success of Jones & Henry Engineers' clients and internal team leadership made him a natural choice for leadership as Principal of the firm, and Cincinnati Office Director.

M Environmental Engineering
University of Cincinnati
BS Civil Engineering
Ohio Northern University

PE

Ohio
Michigan
Indiana
Kentucky

Years of Experience
14: Jones & Henry
15: Total Industry

Professional Affiliations

American Water Works Association

Water Environment Federation
the water quality people

DBIA ASSOCIATE DESIGN-BUILD PROFESSIONAL

DBIA DESIGN-BUILD INSTITUTE OF AMERICA

Water Treatment

- Lima, Ohio, Chemical Feed Improvements - Evaluation of all chemical feed systems at the water treatment plant and design of replacement systems for alum, two phosphate compound, powdered activated carbon and sodium permanganate. Project manager and lead designer for all system upgrades.
- Carmel, Indiana, Water Treatment Plant 1 – Original plant design for a facility with maximum buildout of 32.0 mgd. The plant features induced draft aeration/detention; pressure filtration; ion exchange softening; 4.0 MG clearwell; high service pumping and chemical feed facilities. Project Engineer responsible for site design, process piping schematics, clearwell piping design, estimating and shop drawing review.
- Carmel, Indiana, Water Treatment Plant 1 Expansions – Two expansions to the original WTP 1 occurred in 2013 and 2021. Improvements for addition pumping, filtration, chemical feed upgrades and site work were required. Project Engineer responsible for hydraulic and process piping design, chemical feed calculations, specifications, estimates, assisting with equipment procurement, and shop drawing review.
- Carmel, Indiana, Water Utility PER – Preliminary Engineering Report for water utility needs for wells, treatment and distribution systems. Assisted with needs and costs at water treatment plants and booster pumps stations. Worked on team to determine preliminary design concepts for booster pump stations and water treatment plan expansion.

Jake Meinerding, PE
Cincinnati Office Director

- Lake Erie Utilities, Ohio, 230,000 gpd Water Treatment Plant– The design incorporated two unitized conventional water treatment processes, chemical feed, high service, and backwash pumps, partially below grade clearwell, and office and laboratory.
- Quincy, Ohio, Water Treatment Plant Improvements and Design – Water Treatment Plant addition included new pumps, GAC filters, chemical dosing, and wastewater tank. Project Engineer responsible for calculations for chemical dosing, layout of the new equipment and piping; coordination and checking of drawings and specifications for all new equipment.
- Bucyrus, Ohio, Water Treatment Plant – New 3.0 mgd water treatment plant including lime softening, GAC filters, chemical feed, and sludge lagoons. Project Engineer responsible for assisting in process piping, pump selection, plant hydraulics, site design including storm calculations, grading, pavement plan, and design of a chemical feed building for the reservoir.
- Yellow Springs Ohio, Water Treatment Plant – New 1.0 mgd water treatment plant including well improvements, aeration, pellet softening, conventional filtration, and chemical feed facilities. Project Engineer responsible for process piping and pump design, plant hydraulics, and site design.
- St. Marys, Ohio, Water Treatment Plant – New 2.4 mgd water treatment plant including lime/soda ash softening, conventional filtration, chemical feed, and a new well. Project manager and engineer responsible for process piping, pump selection, plant hydraulics, site design, and chemical feed.
- Englewood, Ohio, Water Softening Addition – New 3.3 mgd ion exchange softening addition to the existing plant. Improvements included the softening system, new chemical feed, and controls. Project engineer responsible for softening system design and chemical feed facilities.
- Archbold, Ohio, GAC, UV and WTP Improvements – Improvements at the 7.6 mgd water plant included a new granular activated carbon (GAC) and UV facility, existing gravity filter rehabilitation and air scour addition, new sodium hypochlorite feed facilities, replacement of a carbon dioxide storage tank and corresponding site work. Project Manager responsible for process design, plant hydraulics, pump selection, site design, and chemical feed. Preliminary design included a pilot study of GAC media and existing gravity filter media investigation.

Water Distribution

- Hamilton, Ohio, Water Main Replacement – Brookwood Avenue water main replacement included the replacement of 6,600 lineal feet of 6, 8, and 12-inch water lines, 16 fire hydrants, 56 valves, and service lines. Assisted in topographical survey and was project engineer for design, specification, and estimating purposes.
- Oak Hill, Ohio, Water Distribution – 15,000 lineal feet of water line replacement and other system improvements including a generator at three

Speaking Engagements

Ohio AWWA, NW District Meeting, 2021

Ohio One Water, 2021

Alliance of Indiana Rural Water, 2020

Ohio Rural Water Association, 2019

Ohio AWWA, NW District Meeting, 2018

pump stations, and an altitude valve at a storage tank. Project Engineer responsible for water line layout; coordination and checking of drawings and specifications, shop drawing review, and construction meetings. Filled in for Resident Project Representative, when necessary.

- Bucyrus, Ohio, Water Transmission Main and Force Main – 10,000 lineal feet of new 18-inch and 24-inch finished water and 24-inch raw water lines. Included jack and bore under US Route 30, the Sandusky River, and a railroad. Assisted in design and Project Engineer for construction administration and inspection.
- St. Marys, Ohio, Water Transmission Mains and Force Main – 8,700 lineal feet of 12-inch finished water lines and 4,800 lineal feet of force main. Included jack and bore under a canal and directional drilling under streams.

Wastewater Treatment

- Eaton, Ohio, Wastewater Treatment Plant Evaluation Study – Project Engineer duties included evaluation of the tertiary filter media, hydraulic capacity evaluation, and preliminary design for increasing filtration capacity to 9.0 mgd and control improvements.
- Greenville, Ohio, Clarifier Replacement – Project included the replacement of 4 final clarifiers and piping and valve modifications to improve plant hydraulics. Clarifiers were hydraulically rated for 4.33 mgd at peak flow. Project Manager responsible for client correspondence, design plans and specifications, construction oversight, and shop drawings review.
- Greenville, Ohio, UV and Screen Replacement – Project included a new UV disinfection system to replace the gas chlorine system, replacement of an influent screen and installation of effluent metering. The existing chlorine contact tank was converted to a new building for placement of the UV system. Project Manager responsible for process design, drawing preparation, specifications, client correspondence, and construction administration.
- Georgetown, Ohio, Wastewater Treatment Plant Upgrades – Project Engineer for construction administration. Project included a new SBR treatment facility, headworks improvements, new pump stations, new UV, new digesters and solids handling facilities. Duties included shop drawing review, inspection, and other construction oversight.

Pump Stations and Force Mains

- Warren County, Ohio, Wayne-Massie Sewer District System Improvements – Major components of the project included: smoke testing of the gravity sewers within the Village of Harveysburg; elimination of the Clark Street lift station; replacement of the Maple Street lift station; new gravity sewer from Clark Street to Maple Street lift station; replacement of existing Maple Street

lift station force main with a larger pipe; replacement of the 50 Springs lift station; new force main paralleling State Route 73 to eliminate need of Grant Street lift station to convey flow to 50 Springs lift station; new gravity sewer and force mains in the park; evaluation of future flows tributary to the Grant Street lift station and force main from Harveysburg to the Waynesville wastewater treatment plant; and development of a computer model for the force main from Grant Street lift station to Waynesville wastewater treatment plant.

- Quincy, Ohio, Pump Station and Force Main – Pump station improvements included new piping and layout, new generator, and removal of existing structures no longer in use. New force main approximately 300 feet long. Project Engineer responsible for coordination and checking of drawings and specifications; checking of shop drawing submittals.
- Warsaw, Indiana, Force Mains – Two new force mains of approximately two miles and a half mile respectfully. Project Engineer responsible for coordination of drawings and specifications.
- Georgetown, Ohio, Possum Run Pump Station and Storage – Pump station replacement including existing force main connection, two valve vaults, two normal flow pumps, and two wet weather pumps, pumping to a 750,000-gallon equalization basin. Project Engineer responsible for site layout, pump selection, obtaining permits, shop drawing review, and construction meetings.
- Georgetown, Ohio, Town Run Sewer, Pump Station and Storage – Sewer Improvements including 3,600 lineal feet of 15 inch to 30-inch relief sewer, a 2,000,000-gallon equalization basin, two pumps, several manholes, and three junctions boxes where the existing sewer overflows into the relief sewer. Project Engineer responsible for the design of sewer, junction boxes, pump selection, obtaining permits, and tank site design.
- Dayton, Ohio, Storm Water Pump Stations – Project included upgrades to two storm water pump stations as part of a design-build project. Modeling of the existing collection system was required and pumps ranging from 13,000 to 23,500 gpm were rebuilt or replaced. A new 3,000 gpm pump was also installed. Electrical, structural, and architectural upgrades were also included. Project Engineer responsible for hydraulic modeling review, pump sizing, and project coordination between MEP designers.
- Clermont County, Ohio, Booster Pump Stations – Project included upgrades to two Booster Pump Stations in the distribution system. High service booster pumps, piping, valves, electrical switch gear, controls and HVAC components were replaced. Site and building improvements were also required. Project Engineer responsible for hydraulic design, pump sizing, site design and project coordination.

Director of Water Treatment

Bryan Bailey, PE, Associate

Bryan joined the Jones & Henry Engineers team in 2021, bringing with him a tremendous depth of expertise in the water industry. Bryan graduated from The Ohio State University in 1996, where he gained his Bachelor of Science degree in Civil Engineering. He earned his Master of Science degree in Mechanical Engineering from Wright State University and lastly, his Master of Business Administration degree from the University of Dayton. Bryan has held leadership positions within manufacturing and engineering companies, designing and managing projects involving Drinking Water, Industrial Wastewater, Stormwater, Remediation Solutions as well the design/build of new commercial and manufacturing facilities. Bryan has vast experience in leading "alternative delivery" projects with multi-disciplined engineering teams. His work has been as close to home as in Ohio and as far away as Mexico, Germany, Sweden, and Australia.

Project Experience

These projects are currently in progress.

- Antwerp, Ohio, General Plan for New Groundwater Treatment Plant
- Ashley, Indiana, General Plan for Groundwater Treatment Plant Expansion
- Ripley, Ohio, Existing Conditions Assessment
- Toledo, Ohio, Alum Feed System Improvements Design Memorandum
- Toledo, Ohio, I-65 Chlorination/Dechlorination System Renovation

Previous Experience

Water

- ZLD System, Energy Client, Gila Bend, AZ – Program Manager for water treatment system including process design, equipment design and procurement and construction of the system. The near zero liquid discharge process consisted of a 4,500 gpm integrated well water and wastewater recovery system including multi-pass Reverse Osmosis systems, multi media

MBA
University of Dayton

MS Mechanical Engineering
Wright State University

BS Civil Engineering
The Ohio State University

PE

Ohio
Indiana
Michigan
Kentucky

Years of Experience
2: Jones & Henry
26: Total Industry

Professional Affiliations

American Water Works Association

ASCE American Society of Civil Engineers

ACEC American Council of Engineering Companies

filters, sludge handling systems and chemical feed systems.

- Feed Water System, Energy Client, Alberta, Canada – Program Manager for project that provided high purity feed water at a remote site location. Provided process design, equipment design and procurement and construction for high purity water system. The 600 gpm system included chemical feeds, softening, reverse osmosis, ultra-violet, ultra-filtration and an evaporator for waste.
- Nuclear - High Purity Feed Water System, Energy Client, Catawba, South Carolina – Program Manager for high purity water system for nuclear facility. Provided process design, equipment design, procurement and construction services. System consisted of ultra-filtration, chemical feeds, reverse osmosis, degas system and SDI tanks.
- Feed Water System, Refinery, St Charles, Louisiana – Program Manager for feed water system consisting of process design, equipment design, procurement and construction. Included treating raw river water used for cooling tower makeup, service water and high purity boiler feed water. The 1,300 gpm system included multimedia filtration, softening and reverse osmosis.
- Raw Water System, Refinery, Texas City, Texas – Program Manager for raw water feed system which included process design, equipment design and procurement for this raw water system. System design included treating raw water used for cooling tower makeup and service water. The system included clarification, chemical feed systems and strainers.
- Feed Water System, Refinery, Corpus Christi, Texas – Program Manager for feed water system that included process design, equipment design and procurement and construction for high purity water system. The 1,300 gpm system included multimedia filtration, softening and reverse osmosis.
- PFAS Pilot Study, Wright-Patterson AFB, Dayton, Ohio – Program Manager for water treatment system pilot study focused on demonstrating Ion Exchange technology and PFAS destruction technology.
- Residential POET System Program, Reece Air Force Base, Texas – Program Manager, Implementation of over 200 drinking water systems in rural Texas.
- PFAS Drinking Water, Portsmouth, NH, Program Manager for drinking water system including the design and supply of Ion Exchange system and cartridge filters.
- PFAS Treatment, Various Sites, Australia – Program Manager for various remediation projects for the Department of Defense. Provided ion exchange treatment systems for removal of PFAS as part of remediation projects.

Facility Improvement Projects

- Chilled Water System, General Motors, CVC Plant, Kettering, Ohio – Project Manager and Engineer for chilled water system for production facility. System design and installation of air cooled chillers and associated piping, pumps and electrical improvements to the site.

Bryan Bailey, PE
Director of Water Treatment

Site and Building Projects

- Propane Power Station, Electric Company, Roatan Honduras – Design Manager for the civil/site design of a 27 MW propane fired power facility on the island of Roatan. The design elements include the site design, deep foundations, diesel storage and transmission systems, water treatment and distribution systems, spill containment and treatment systems and seawater fire pump and pipeline system.
- Manufacturing Facility, Defense Contractor, Beavercreek, Ohio – Project Manager for a defense contractor's new 125,000 manufacturing facility. Responsible for maintaining owner's interest in project as the commercial developer provided design and construction services. Activities included determining owner's facility requirements, assisting in manufacturing planning and construction monitoring.
- Education and Research Facility, Defense Contractor, Beavercreek, Ohio – Project Manager for a defense contractor's new educational support facility for the defense industry. Responsible for maintaining owner's interest in project as the commercial developer provides design and construction services. Activities included site selection, developer selection, determining owner's requirements and overseeing design activities for the owner. During construction, responsibilities included documenting activities, maintaining schedules, managing the move in activities of the owner and the commissioning of systems.

Engineer

TJ Gilkey

TJ joined Jones & Henry Engineers as a graduate of the University of Cincinnati with a degree in Civil Engineering and also brings with him four years of experience as a plumbing designer at Thorson Baker & Associates. TJ is excited to be working for Jones & Henry Engineers, because we deal with all things water. TJ noted, water is one of the most valuable resources on the planet and dictates quality of life.

Project Experience

- Lima, Ohio, Chemical Feed Improvements - Evaluation of all chemical feed systems at the water treatment plant and design of replacement systems for alum, two phosphate compound, powdered activated carbon and sodium permanganate. Engineer responsible for permitting, specifications, system layout, and construction administration.
- Archbold, Ohio, Water Treatment Plant Improvements – Project involves removal of existing Anion Exchange reactors and associated building, new GAC filters and larger building, switch to sodium hypochlorite feed system, installation of air scour system at filters, replace filter media, provide mixing systems for the reservoir and clearwell, and site work. Responsible for drafting design and layout. Visited Archbold to perform filter media expansion test and inspect condition of existing filter media.
- St. Mary's, Ohio, Water Treatment Plant, Contract 3A – New 2.4 mgd water treatment plant including lime/soda ash softening, conventional filtration, chemical feed, and new well. Responsible for reviewing shop drawings and equipment O&M manuals, developing water treatment plant O&M manual including process sketches and diagrams.
- Swanton, Ohio, Water Treatment Plant Improvements – Investigate replacement of existing hydrated lime feed system, develop proposal for preliminary design, construction, and cost estimates for two options: bulk dry system with self-contained steel silo feed, and bulk liquid storage and feed system. Responsible for site layout design, lime system cost estimates.
- MDOT, Coldwater Welcome Center Well & Filtration System Replacement/ Building Addition – Upgrade welcome center's existing water filtration system, new building addition to existing maintenance building to house new filtration equipment, new red water lagoon, site work. Responsible for drafting and design layout, site plan.

BS Civil Engineering
University of Cincinnati

Years of Experience
3: Jones & Henry
7: Total Industry

Professional Affiliations

ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS

Director of Electrical Engineering

Paul McNichol, PE, Associate

Paul earned his Bachelor of Science degree in Engineering Technology from the University of Toledo, where he began his focused career in Electrical Engineering. Paul pursued his career in numerous positions in the industry, working to design electrical systems for commercial, institutional, and industrial facilities. As our Electrical Team Leader, Paul brings over 35 years of technical experience to guide our engineers to success on their electrical project needs. He is responsible for electrical designs associated with water and wastewater facility systems including the interface and coordination with various engineering disciplines, evaluation of existing systems, and development of installation drawings and specifications. Electrical designs include new facilities as well as upgrades to existing facilities where maintaining facility normal operations during construction is a key element of the design. Paul notes that he enjoys being part of a team responsible for the design of water and wastewater treatment systems. The work is extremely rewarding knowing that through our efforts, we play an important role in maintaining overall community health.

Project Experience

- Napoleon, Ohio, Wastewater Treatment Plant Improvements – Electrical lead for upgrades to several facilities within the treatment plant. Drawings and specifications for the associated improvements included 480V power and controls for:
  - Addition of a new influent screw pump, headworks screening, screening compaction and grit facilities.
  - Conversion of the anaerobic digester tanks to aerobic digesters.
  - Improvements to the existing sludge holding tank.
  - New dewatering equipment and conveyors in the existing dewatering building.
  - Replacement of the existing plant telemetry radio system network with a site wide fiber optic network which included interface with a replacement generator and remote facilities in the wastewater collection system.
  - Coordinated the addition of new or replacement PLC Controls for

Bachelor
Engineering Technology
University of Toledo

Ohio

Years of Experience
15: Jones & Henry
39: Total Industry

Professional Affiliations

IEEE

Illuminating Engineering Society

Paul McNichol, PE
Director of Electrical Engineering

Headworks, Main Lab Building, Dewatering Building, Recirculation Pump Station Building and UV Building.
  - Revisions to the plant power system included additions or upgrades to the 480V electrical services associated with the following facilities:
  - Chlorine Building (Upgrade from 800 to 1200 amps for addition of new Recirculation Pump Station standby generator/automatic transfer switch replacement)
  - UV Building (Added new Screw Pump and Headworks Building Feeders)
  - Digester Building (New Electrical Utility Service to feed the Digester Building, existing Blower Building, new service equipment for the existing Sludge Storage and Dewatering Buildings.)
- Kalamazoo, Michigan, Water Reclamation Plant – Electrical lead for upgrades to several facilities within the water reclamation plant. Drawings and specifications for the associated improvements included 480V power and controls for:
  - Replacement of Bar Screens, Screenings Conveyor, Screenings Collection equipment, Sluice Gate Stems and addition of Odor Control /HVAC equipment.
  - Installation of Foul Air Treatment/Gas Detection equipment for the Fine Screen Building, Grit Tanks and and Primary Tanks. Revised esting power sources to accommodate new electrical loads.
  - Installation of new Levelodor systems for each of the dumpster in the Fine Screen Building.
  - Installation of Centrifuge Dewatering equipment and HVAC in the Stabilization Building.
  - Installation of new Screw Conveyors and Sludge Cake Pumps for transfer of Dewatered Sludge to existing storage Bunkers in the Stabilization Building. Revised existing motor control and added new power distribution equipment to accommodate new electrical loads.
  - Installation of new HVAC and pumping equipment in the Sludge Control Building supplying sludge to the Stabilization Building. Upgraded existing 480V distribution and motor control equipment.
  - Coordinated replacement and networking of existing PLC equipment in the Stabilization Building as well as connecting to existing PLC equipment in the Sludge Control and Fine Screen Buildings.
- Kalamazoo, Michigan, Tertiary Process Building Addision – Electrical lead for installation of a new tertiary disc filter process building. Drawings and specifications for the new process building and associated improvements included the following scope:
  - Replacement of two existing 4.8KV to 480V outdoor substations with 480V indoor double ended indoor draw out style switchgear installed in the new Tertiary Process Building. The switchgear is used to feed building loads associated with the two replaced outdoor substations and have provisions to feed future process loads. The 4.8KV primary

Technical Training

SKM Power System Software Arc Flash Study Seminar, 2006

NEC Code Change Seminar, 2005

Problem Solving with the BMI 8000 Power Scope

OSHA Hazardous Communication Training, 1986

Allen-Bradley PLC-2 Programmable Controller Training

switches and transformers feeding the 480V switchgear are located outdoors. The transformers are each generally sized to carry the entire load of the double ended switchgear should either a 4.8KV feeder or transformer fail. The 480V switchgear is also designed to be connected to a portable generator should a plant wide power outage occur.

- Provision of an electric manhole system at the site to distribute 480V power to the new switchgear loads.
- Provision of 480V power to the tertiary process building lights, HVAC, disc filters, gates and process controls.
- Connection of a process equipment to a Master SCADA panel.
- Connection of the Master SCADA Panel to a telemetry radio for status communications with the WRP central control room.

Above projects generally include a construction phase that involves review and approval of shop drawings for equipment submittals, Operation and Maintenance Manuals and Arc Flash/Short Circuit/Coordination Studies. Additionally we are called on to interface with contractors to address field issues that arise during the course of construction. Electrical designs are generally based on NFPA 70 (National Electric Code) and NFPA 820 (Standard for Fire Protection in Wastewater Treatment and Collection Facilities).

- Lima, Ohio, Wastewater Treatment Plant Replacement Project. Electrical lead for an upgrade at the wastewater treatment plant and off-site pump station. Project scope included paralleling controls and automation of the 4160V plant standby generators as well as replacement of the 4160V main switchgear at the wastewater treatment plant. In addition, the project included replacement of aging 480V distribution transformers and switchgear. Replacement of all equipment was designed to meet the Ten State Standards for redundancy at both the 4160V and 480V levels. Instrumentation and PLC control associated with the existing equipment was verified and reconnected to existing sources where necessary. The scope of the pump station work included the replacement of the emergency generator as well as the off-site pump station's major electrical distribution equipment. A new flow meter was installed and tied into the existing pump station SCADA system via radio communications. A sequence of work was developed to allow installation of all new equipment with minimal disruption to both the pump station and the treatment plant day-to-day operations.• Toledo, Ohio - Reynolds Area Pump Station. Electrical lead for an upgradeof the pump station including:
  - Replace an existing pump with a new pump and motor with a variable frequency drive (VFD).
  - Replace the 200 HP motors on three existing pumps, and install new

VFD drives. The drives have soft starter bypass for redundancy.
  - Install new radar, sonic, and pressure-type level controls for redundancy and improved reliability.
  - Install a new control system to operate the pumps in a manner consistent with City standards and capable of being operated and monitored from the Bay View Wastewater Treatment Plant.
  - Install a new upsized diesel generator and a new transfer switch, capable of running two large pumps and the rest of the pump station load in the event of a power outage.
  - Coordinate with the contractors to develop a sequence that ensures minimal disruption of service to the pump station.
- Sandusky, Ohio, Wastewater Treatment Plant Upgrade. Electrical lead for addition to the wastewater treatment plant. Additions included new Clarifier Tanks, Aeration Tanks, UV System, Centrifuge, Mixing Tank, Secondary Digester, and Final Effluent Pumping Station. Responsible for all electrical and instrumentation systems associated with these additions. Scope also included upgrade of the utility service voltage to the plant from 4160V to 12,470V.
- Toledo, Ohio, Ash/Columbus Pipeline Storage. Electrical lead for the design of a pump station to dewater the new Ash-Columbus CSO Storage Tunnel. Project scope included design of a pump control panel in accordance with City of Toledo Standards that could be operated either locally from the pump station or remotely via a 2.4/5Ghz radio link from the Bay View Wastewater Treatment Plant. Additionally, the control panel was also designed to communicate with a remote overflow structure via a 900Mhz radio link. Path studies were coordinated to verify signal strength, antenna heights, and locations for the two radio links. Pump station auto control and flow/level monitoring was via a local PLC in the control panel. Project scope also included coordination and design of electrical service to the pump station and remote overflow structure. Incorporated features into the design of the pump station that allowed for ease of pump removal and maintenance as well as mitigation of hazards associated with volatile gases associated with the storage pipeline.
- Pontiac, Michigan, Water Pumping Station Upgrade Project. Electrical lead for an upgrade to the water pumping station for the City. Project scope included the replacement of existing 4160V switchgear, pump motor starters, and motors with new 480V distribution equipment, motors and an emergency generator. The project scope also included development of a SCADA system for incorporation of the pump station and a remote elevated water tank. The SCADA system was designed to include several existing remote sites in the future via radio communications. The pump station electrical service upgrade was coordinated with Detroit Edison to maintain

the existing rate structure as well as eliminate any interruptions to the electrical service during the installation process. The scope also included the replacement of new cone valve controls on each pump, new compressors, a new accumulator, and a new electric cone valve for the incoming water service to the pump station.

- Northwestern Water and Sewer District, Arc Flash Studies. Performed Arc Flash Studies for the East Broadway Pump Station, Ford Road Pump Station, and Hille Drive Pump Station facilities. Project scope included:
  - Verification of all feeder lengths and sizes as well as all electrical equipment ratings.
  - Performance of a Short Circuit Study to determine the available short circuit current magnitudes at each bus.
  - Performance of a Phase Over Current Protective Device Coordination Study.
  - Performance of an Arc Flash Study to determine available arc flash energy at equipment buses from the Service Equipment Rack to the Pump Station.
  - Development of Arc Flash Stickers for electrical equipment identifying the potential associated incident energy hazard as well as the level of personnel protective equipment required to mitigate the stated hazard.
  - Recommendations to reduce the incident energy hazards as well as eliminate any National Electric Code violations at each of the facilities.
  - Worked with Northwestern Water and Sewer District personnel to implement an electrical safety policy and training to compliment the Arc Flash Study.

Director of Structural Engineering

Jon Nassaux, PE, Associate

After graduating from Lawrence Technological University (Detroit) with his Bachelor of Science in Civil Engineering, Jon pursued his career as part of numerous well-respected teams such as SSOE, Jenkins and Charland, Inc., Matrix Technologies, and Structural Design Systems before working as an independent consultant for a number of years. With nearly 30 years of industry experience in total, Jon joined the Jones & Henry Engineers team over 15 years ago. Jon reviews output and quality control of the engineering staff, as well as contributing to proposals, value engineering, and structural design. Jon enjoys supporting the process engineers in their effort to design water and wastewater treatment plants. He finds satisfaction in helping to provide safe and durable facilities that deliver environmentally-safe, processed wastewater and clean drinking water to the communities we serve.

BS Civil Engineering
Lawrence Technological University

PE

Ohio

Years of Experience
17: Jones & Henry
29: Total Industry

Project Experience

- Toledo, Ohio, Bay View Wastewater Treatment Plant Additions - The plant additions consist of a 4,550 square feet grit building, 8,520 square feet of grit tankage, an interconnect chamber, storage building, and other miscellaneous building restorations. The grit building included a 25 feet-0 inch high bay that housed grit collector bucket elevators and classifiers. Several monorail cranes were hung off the roof to service this equipment. The building walls were constructed of 4-inch split-face block veneer with a 12-inch block wall back-up. The roof was constructed with double-tee planks. The interconnect chamber is covered with fiber reinforced plastic removable cover plates and framing system. An 80-year-old uptake chamber and building was restored by encasing the uptake chamber in 12-inch of reinforced concrete and replacing cracked brick and tuck pointing mortar joints of the old masonry walls, after which they were cleaned and sealed. All the new structures are supported on auger cast concrete plies.
- Toledo, Ohio, Ash/Columbus CSO Storage Pipeline – This project consists of a dewatering pump station, two interconnect chambers, an out flow chamber, several manholes, and more than a mile of RCP pipeline. The pump station is 38 feet deep and required massive concrete walls to retain

the soil. A masonry control build was constructed on top of the pump station chamber. The outflow chamber included two large bar screens, large access doors, and two large outflow flap gates.

- Carmel, Indiana, Water Treatment Plant – The plant consists of a 26,100 square foot main facility building, a 6,800 square foot high service pump station, a 2,100 square foot generator building, a 1,640 square foot flow splitter building, eight 73,600 gallon cluster filter tanks, 151,000 gallon transfer wall, 168,400 gallon waste regeneration tank, 561,000 gallon water detention tank with four large aerator machines, 646,000 gallon waste washwater tank with service building, and three 47,000 gallon salt tanks. The main plant houses the eight cluster filters, eight 10-foot diameter steel softener tanks, a 5-ton bridge crane, and 8,800 square feet of office administration area. The main plant's roof, over the cluster filters, is constructed of double-tee planks supported by reinforced split-face masonry block walls and steel moment-frames. The main plant's roof, over the softer tanks and administration area, is constructed of open-web steel joist supported by reinforced split-face masonry block walls and steel brace-frames. The high service pump station houses four high horse power pumps, an electrical sub-station, a chemical room, a 5-ton bridge crane, and a 2-ton mono-rail crane. The pump station's roof is constructed from hollow core concrete plank supported by reinforced split-face masonry block walls. The large water and salt retaining tanks are constructed from reinforced concrete walls and mats. The concrete tank walls have reached heights of 26 feet and 2 feet thick.
- Leoni, Michigan, Wastewater Treatment Plant – The plant consists of a 21,800 square foot pre-engineered main plant building with two bridge cranes and several large membrane tanks, an 1,800 square foot headworks building with screens and a vortex conical grit chamber, three 276,000-gallon pre-aeration tanks, three 338,000-gallon pre-anoxic tanks, 54-feet by 22.5-feet cascading aeration water fall, VU disinfection channels, and many other supporting structures. The headworks building consists of hollow core concrete plank roof supported by split faced reinforced block on a concrete spread footing foundation.
- Ripley, Ohio, Water Treatment Plant – One-story building that houses offices, laboratory, and three 9-feet and 12-feet diameter softener tanks. The structure is built over a 140,000-gallon detention tank and a 100,000-gallon backwash tank. The superstructure consists of a wood truss roof supported by reinforced block walls with a brick veneer. Knock-out panels are provided to facilitate softener tank removal. The substructure consists of concrete reinforced tank walls and mats.
- Ripley, Ohio, Wastewater Treatment Plant – This plant consists of an 840 square foot laboratory building built over an existing sludge storage tank, two 232,000-gallon oxidation ditches, two 92,000-gallon clarifiers, and many other supporting structures. The laboratory construction consists of a concrete plank roof supported by reinforced block walls with a brick veneer.

The oxidation ditches and clarifier tanks are constructed from reinforced concrete walls and mats. Due to the poor soils condition under the clarifiers, the base mats are supported by 14 and 18-inch diameter auger cast piles.

- Mason, Michigan, Water Treatment Plant – One-story building that houses offices, laboratory, piping trenches, pumps, and several iron/radium filters. Knock-out panels are provided to facilitate the installation of future filter tanks. The superstructure consists of a wood truss roof supported by reinforced block walls with a brick veneer. The substructure consists of reinforced concrete grade walls and trenches on footings and mats.
- North Baltimore, Ohio, Wastewater Treatment Plant Sludge Dewatering Facility – One-story pre-engineered building housing a screw conveyor and screw press sludge dewatering system. The building is supported on reinforced concrete grade wall and spread footing foundation.
- L&W Engineering, Blissfield, Michigan, New Addition Phase III – One-story 96,720 square feet manufacturing facility with 60-feet by 80-feet column bays. The facility consists of conventional steel framing and concrete spread footing foundations. The roof structure consists of long span joists and joist girders designed to carry heavy mechanical process loads. The lower portion of the walls are constructed of masonry block for impact resistance, and the upper portion of the walls are constructed of steel channel girts and metal siding for economics. Moment frames that integrate joist girders, columns, and footings are utilized to resisting lateral gravity and wind forces. The moment frame design method made it possible to achieve 36-feet clear height without interfering X-bracing. The large clear span and clear height allows for flexibility in process operations and modifications.

Employment Experience

- Director of Structural Engineering. Duties include overview of output and quality control of the engineering staff. Further duties include writing proposals, value engineering, and structural design.
- President of structural engineering company. Duties included marketing clients, writing proposals, negotiating fees, value engineering, accounting, billing, and design engineering.
- Vice President and Production Manager responsible for the output and quality control of the engineering staff. Further duties include marketing clients, writing proposals, negotiating fees, value engineering, and design.
- Special Skills: Designed spreadsheets to determine employee total hourly cost, billable rates, profit margins, and company's profit goals.
- Project Engineer responsible for structural design, construction drawings, specifications, site construction inspection, and consultant coordination.
- Structural Engineer responsible for producing complete sets of electronic structural working drawings for several-story commercial, institutional, and industrial buildings.

Director of Mechanical Engineering

Brian Lohmann, PE

Brian joined the team in 2018 and is the Jones & Henry Engineers Director of Mechanical Engineering. After graduating from the University of Toledo in 1987 with his Bachelor of Science degree in Mechanical Engineering (BSME), Brian pursued his career and gained experience at Arcadis for over 28 years before he joined our team. Brian is involved with the design of both HVAC and plumbing systems for buildings and treatment facility process buildings and pump stations. This also includes the construction phase of projects. He has also been involved with the design of cooling, fuel, and exhaust systems for emergency engine generator sets. Brian is excited to provide our clients with the best consulting services using his experience in the HVAC and plumbing design fields.

Water Experience

- Carmel, Indiana, West Ground Storage Tank Pump Station – Designed HVAC and plumbing systems for a new Pump Building.
- Great Lakes Water Authority (GLWA), Michigan, Southwest Water Treatment Plant Improvements Design/Build – Designed for the replacement of the existing emergency chlorine wet scrubber system with a new dry type system.
- Northwestern Water & Sewer District, Ohio Oregon Road Altitude Valve Improvements – Designed HVAC and plumbing systems for an Altitude Valve Building.
- Delta, Ohio, Connection to Fulton County Water System – Designed HVAC and plumbing systems for a Meter Station Control Building.
- Archbold, Ohio, Water Treatment Plant Improvements - Designed HVAC and plumbing systems for a new Granular Activated Carbon (GAC) facility.
- Hicksville, Ohio, Water Treatment Plant Wellfield Improvements – Designed propane fuel gas system for a standby generator that serve as backup power for the wellfield pumps.
- Bowling Green, Ohio, Water Treatment Plant – Designed for the replacement of the freight elevator that serves the three-story Chemical Building.

BS Mechanical Engineering
University of Toledo

PE

Ohio
Michigan
Indiana

Years of Experience
3: Jones & Henry
32: Total Industry

Professional Affiliations

ASHRAE®

ASME

ASPE
American Society of Plumbing Engineers

Brian Lohmann, PE
Director of Mechanical Engineering

- Lima, Ohio, Water Treatment Plant – Designed a diesel fuel system consisting of a new above ground storage tank, piping, and appurtenances to replace the existing underground storage tank system for a standby engine driven water booster pump.
- Monroe, Michigan, South Custer Booster Pump Station Improvements – Designed HVAC and plumbing systems for an addition to the existing Booster Pump Station.
- Monroe, Michigan, Water Treatment Plant Steam Boiler Replacement – Helped the City prepare specifications for the replacement of three existing steam boilers.
- Oregon, Ohio, HAB Water Treatment Plant Improvements – Served as the project mechanical engineer for a new Ozone Facility. Responsibilities included HVAC and plumbing design for this structure.
- Oregon, Ohio, Raw Water OCE Pump Station Improvements – Served as the project mechanical engineer for a new Raw Water Pump Station and upgrades to the existing Raw Water Pump Station. Responsibilities included HVAC and plumbing design for both these structures. Exhaust, fuel, and cooling systems were designed for the standby engine generators located at each of these facilities.
- Toledo, Ohio, Water Initiatives CSO Storage Basin Improvements – Served as the project mechanical engineer for the Oakdale and Maumee CSO Storage Basins. Responsibilities included HVAC and plumbing design for Utility/Electrical Buildings at each storage basin location. Served as the project mechanical engineer for a new Raw Water Pump Station and upgrades to the existing Raw Water Pump Station.
- Perrysburg, Ohio, Southwest Fort Meigs and Roachton Roads 1.5 MG Elevated Tank Improvements – Designed HVAC and plumbing systems for the base area of two new 1.5 MG elevated water storage tanks.
- Detroit, Michigan, DWSD Northeast Water Treatment Plant Filter Improvements – Designed dehumidification systems for the filter and pipe galleries located in the existing filter building.
- Lucas County, Ohio, Southwest 2.0 MG Elevated Tank Improvements – Designed HVAC and plumbing systems for the base pumping area of a new 2.0 MG elevated water storage tank.
- Oregon, Ohio, Water Treatment Plant Emergency Generator Improvements – Designed diesel fuel piping system for the installation of a new standby emergency generator.
- Fremont, Ohio, Raw Water Pumping Station – Designed HVAC and plumbing systems for a new raw water pumping station.
- Lima, Ohio, Bresler Road Raw Water Pump Station Improvements – Designed HVAC systems for renovations to the existing pump station and natural gas piping design for the installation of new standby emergency generators.

- Oregon, Ohio, Lallendorf Road 2.0 MG Elevated Tank – Designed HVAC and plumbing systems for the base area of a new 2.0 MG elevated water storage tank and electrical building.
- Lucas County, Ohio, Southwest Pumping Station Improvements – Designed HVAC and plumbing systems for renovations to the existing pumping station.

Wastewater Experience

- Logan County, Ohio, Eastern Regional Wastewater Treatment Plant Improvements – Designed HVAC and plumbing systems for an entirely new treatment plant. Facilities consisted of a Headworks Building, Primary Settling Tank Building, Chemical Feed Building, Aeration Tank Pipe Gallery, Blower Building, RAS Pump Station, U.V. Building, Anaerobic Digester Building, Sludge Thickening Building, Septage Building, Administration/Maintenance Building.
- Lima, Ohio, Wastewater Treatment Plant, Digester Boiler Replacement – Designed for the replacement of the three existing digester hydronic heating boilers and hydronic piping modifications
- Benton Harbor-St. Joseph, Michigan, Wastewater Treatment Plant – Designed the replacements for the HVAC systems and safety shower and eyewash units in the Ferrous Chloride Building.
- Northwestern Water & Sewer District, Ohio, Ford Road Pump Station Improvements – Designed HVAC and plumbing systems for the Pump Station Control Building.
- Greenville, Ohio, Wastewater Treatment Plant UV & Screen Improvements – Designed HVAC and plumbing systems for the UV Building.
- Summit County, Ohio, Pump Station 30 Replacement – Design HVAC and plumbing systems for a new Pump Station to replace and existing.
- Northwestern Water & Sewer District, Ohio, Willowbend Pump Station Improvements – Designed HVAC and plumbing systems for the Pump Station Control Building.
- Napoleon, Ohio, Wastewater Pump Station Improvements – Designed HVAC and plumbing systems for an entirely new wastewater treatment plant. The facilities consisted of Headworks Building and Recirculation Pump Building and upgrades for modifications to the Dewatering Building, Aerobic Digester Building, and Sludge Holding Tank below grade structure.
- Battle Creek, Michigan, Wastewater Treatment Plant Improvement – Designed HVAC systems for upgrades to the Headworks Building Electrical Room.
- Mansfield, Ohio, Park Avenue Pump Station Improvements – Designed HVAC and plumbing system updates for modifications to the existing pump station.

Brian Lohmann, PE
Director of Mechanical Engineering

- Defiance, Ohio, Wastewater Treatment Plant Improvements – Designed HVAC and plumbing systems for a new Headworks Building and Recirculation Pump Building and updates for modifications to the Dewatering Building, Aerobic Digester Building, and Sludge Holding Tank below grade structure.
- Perrysburg, Ohio, Wastewater Treatment Plant Improvements – Designed updates to the plumbing system at the Sludge Dewatering Building.
- Archbold, Ohio, Wastewater Treatment Plant Improvements – Design HVAC and plumbing systems for a new wet weather pumping station valve and meter vaults. Designed HVAC system upgrades for a new UV Building Electrical Room and plumbing system upgrades at the existing Screen Building.
- Summit County, Ohio, Clinton Vacuum Pumping Station Improvements – Designed HVAC and plumbing systems for a new wastewater pumping station.
- Toledo, Ohio, Waterways Initiative Oakdale CSO Storage Basin Phase II – Designed HVAC and plumbing systems for a Utility/Electrical Building at the CSO Storage Basin.
- St. Marys, Ohio, Southwest Pumping Station Improvements – Designed HVAC systems for two new valve vaults at the existing sewage pumping station.
- Toledo, Ohio Waterways Initiative Maumee CSO Storage Basin Phase II - Designed HVAC and plumbing systems for a Utility/Electrical Building at the CSO Storage Basin.
- Wauseon, Ohio, Wastewater Treatment Plant EQ Basin and Sludge Improvements – Designed upgrades and replacements to digester gas piping and appurtenances for an expansion to the wastewater treatment plant.
- Dundee, Michigan, Rawson Street Pumping Station Improvements – Designed natural gas piping system for an engine driven pump located in a new prefabricated pump building.
- Lucas County, Ohio, Maumee River Wastewater Treatment Plant Odor Control Improvements – Sized and provided pressure loss calculations for odor control systems ductwork that served different facilities located within the plant.
- Mansfield, Ohio, Wastewater Treatment Digester Cover Improvements – Designed upgrades and replacements to digester gas piping and appurtenances for an expansion to the wastewater treatment plant.
- Defiance, Ohio, Group 4 Wastewater Pump Station Improvements – Designed HVAC and plumbing systems for upgrades to the wastewater pump station.

Brian Lohmann, PE
Director of Mechanical Engineering

Utility Experience

- Sandusky, Ohio, Cedar Point, Trailblaze Frontier Wood-Fired Kitchen – Provided site water, sanitary, and natural gas piping design to the new Trailblaze Frontier Wood-Fired Kitchen. Coordinated natural gas piping with Columbia Gas of Ohio.
- Sandusky, Ohio, Cedar Point, Snake River Excursion Compressed Natural Gas (CNG) Station Build 1, Phase 1 – Coordinated with Columbia Gas of Ohio for sizing and the routing of site natural gas piping to the CNG Station and fueling stations.
- Sandusky, Ohio, Cedar Point, Lighthouse Point Expansion - Provided site water, sanitary, and natural gas piping design to the new Housekeeping and Shower Building for the expansion of the RV park. Also provided site water piping design to the RV hookup stations.

Condition Assessments

- Detroit, Michigan, Great Lakes Water Authority, Conner Creek and Freud Pump Station Improvements – This project involved the condition assessments of the existing HVAC and plumbing systems for both the Conner Creek and Freud Pump Stations. A study and preliminary design report were provided for upgrades to the facilities.

Senior Engineer / Financing Specialist

Tim Warren, PE, Associate

Jones & Henry Engineers' clients directly benefit from the unique and in-depth experience Tim brings to our team. Prior to joining our team, Tim served as Director of Public Utilities, responsible for water, wastewater, and storm water, for the City of Perrysburg. Prior to the City, Tim worked with Arcadis for 25 years, serving as a Project Manager, as well as Rates and Financing Specialist. With his Bachelor of Science degree in Mechanical Engineering and Master of Business Administration degree from The Ohio State University, Tim's business and municipal experience, as well as daily interaction with our civil engineering team, gives him a broad perspective on utility rates and financing. For our clients, Tim prepares utility rate studies, cost of service studies, and asset management plans. He assists our clients in understanding their financing options and developing viable financial plans for public infrastructure projects. Tim works closely with our clients' local, state, federal, and private partners to identify and administer funding for projects. Tim noted that he is excited to be part of this industry and our team, because it allows him to use his skills in a way that benefits society and the environment

Rate Studies

- Farwell, Michigan, Sewer Rate Study - A sewer rate evaluation was performed which addresses the requirements of an asset management program. The sewer rate evaluation weighs the anticipated operation and capital costs against projected revenue. Rates have been projected which recover operation and capital costs and eliminate funding gaps over a 20-year planning horizon. The projected rate increases are intended to allow a replacement reserve to be established and maintained based on the estimated annual replacement cost for assets with an estimated useful life of 20 years or less.
- Monroe, Michigan, Cost of Service Study – A Cost of Service Study was performed to evaluate the cost for the City of Monroe to provide water to the City of Petersburg. A breakdown of costs was provided and rate ratios were calculated to compare the estimated cost of service for Petersburg to the City's current rates under a wholesale scenario.

MBA
BS Mechanical Engineering
The Ohio State University

PE

Ohio
Michigan

Years of Experience
8: Jones & Henry
37: Total Industry

Professional Affiliations

Water Environment Federation
the water quality people

Tim Warren, PE
Senior Engineer / Financing Specialist

- Hudson, Michigan, Water System Rate Study – The objective of the Water System Rate Study was to develop equitable water rates which will generate sufficient revenue to meet operations, maintenance, replacement, capital improvement and debt service expenses of the City of Hudson Water System as part of a Michigan Department of Environment, Great Lakes and Energy (EGLE) Pilot Drinking Water Grant for lead service line replacement.
- Jonesville, Michigan, Wastewater Rate Study – The objective of the Wastewater Rate Study was to meet the Michigan Department of Environment, Great Lakes and Energy (EGLE) requirements for an Asset Management Program. Rates were developed which provide operation, maintenance and replacement (OM&R) budget and rate sufficiency in accordance with EGLE requirements.
- Monroe, Michigan, Cost of Service Study – A Cost of Service Study was performed to evaluate the cost for the City of Monroe to provide water to London Township. A breakdown of costs was provided and rate ratios were calculated to compare the estimated cost of service for London Township to the City's current rates under retail, wholesale and hybrid scenarios.
- Monroe, Michigan, Wastewater Rate Study – A Meter Read and Bond Recovery Charge Evaluation was performed to recommend proposed meter read and bond recovery charges to recover costs associated with meter reading and bond recovery for the Monroe Metropolitan Water Pollution Control System. The current method used to establish the meter read and bond recovery charges was compared to proposed methodology based on accepted American Water Works Association (AWWA) equivalent meter factors.
- Archbold, Ohio, Comprehensive Water and Wastewater Rate Study – Jones & Henry completed a comprehensive rate study for the Village's water and wastewater utilities which evaluated the impact of rate structure alternatives on the Village's industrial users and wholesale customers. The Village's largest industrial user and employer is a high strength industrial user. Alternative water and sewer rate structure and extra strength surcharge methodologies were evaluated.
- Battle Creek, Michigan, Comprehensive Water and Wastewater Rate Studies – Jones & Henry completed comprehensive water and wastewater rate studies for the City. The purpose of the studies was to ensure that the user charges supported the operations of the Water and Wastewater Departments, the billing office, system operations, maintenance, and replacement, and the debt service on past and projected future capital projects. Rate models were developed for the water and sewer systems to allow alternative approaches and "what-if" scenarios to be evaluated.
- Fremont, Ohio, Wastewater Rate Study – An Extra Strength Surcharge Analysis was performed to determine the impact on the Sewer Fund of potential changes to the extra strength surcharges as a result of major improvements to the Water Reclamation Center (WRC).

- St. Marys, Ohio, Water Rate Study – Prepared a water rate model to be used in projecting water rates necessary for financing the construction of a new water treatment plant. The rate model was used to evaluate funding options.
- Sandusky, Ohio, Wholesale Water Rate Study - Due to a new agreement, the City revised its procedure for billing water and sewer usage to Erie County. Jones & Henry completed a wholesale water rate study for the City to determine what they should charge the County.
- Fremont, Ohio, Water and Sewer Rate Study – Developed water and sewer rate projections to meet operations, maintenance, capital improvement and debt service expenses. The rate projections formed the basis for negotiating an alternative rate structure with a large industrial customer.
- Sandusky, Ohio, Water and Sewer Rate Model – Developed an Excel-based water and sewer rate model for the City's use in establishing water and sewer rates. The sewer rate model formed the basis for negotiating a CSO Long Term Control Plan Schedule with Ohio EPA. The model included criteria for evaluating the affordability of the CSO Long Term Control Plan.
- Genesee County, Michigan, Wastewater Rate Model – Developed a rate model for analyzing solids processing costs at the Linden Wastewater Treatment Plant for the Genesee County Drain Commission Water and Waste Services. The rate model will be updated on an annual basis and used to evaluate alternative technologies, energy savings measures, and asset management activities.

Funding Experience

- Bucyrus, Ohio, Funding Assistance – Assisted the City in applying for funding for Water Treatment Plant and Distribution Improvements. A design loan was obtained through the Ohio Water Development Authority (OWDA) that will be rolled into a construction loan through Ohio EPA's Water Supply Revolving Loan Account (WSRLA). The loans will save the City approximated $5.8 million when compared to conventional financing for the $29 million project. The loan application involved preparing a Capability Assurance Plan for Ohio EPA.
- Elida, Ohio, Funding Assistance – Assisted the Village in obtaining funding for wastewater treatment plant improvements. Loans were obtained for design and construction through the Ohio EPA Water Pollution Control Loan Fund (WPCLF). Credit enhancement was obtained through the Ohio Public Works Commission (OPWC).
- Lorain, Ohio, Funding Assistance – Assisted the City in applying for a loan through the Ohio Water Development Authority (OWDA) for a $5 million water main replacement project. The loan is being used in conjunction with funding through the Ohio Public Works Commission (OPWC) for water main

replacement and roadway rehabilitation. The project is part of a multi-phased program. The City was able to avoid costs associated with a conventional bond issue by going through OWDA. Also assisted the City with grant and loan administration, including preparing disbursement requests and status reports.

- Sandusky, Ohio, Funding Assistance – Assisted the City in obtaining funding for wastewater treatment plant and combined sewer separation projects. Construction loans were obtained through the Ohio Water Development Authority. Sewer rates were projected to meet the debt service requirements.

Please direct any questions
and additional instructions to:
Jake Meinerding, PE, Assoc. DBIA
Client Principal
JMeinerding@JHEng.com
office: 513-528-5599
direct: 513-208-2926