



West Virginia Purchasing Division

2019 Washington Street, East
Charleston, WV 25305
Telephone: 304-558-2306
General Fax: 304-558-6026
Bid Fax: 304-558-3970

The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header

List View

General Information | [Contact](#) | [Default Values](#) | [Discount](#) | [Document Information](#)

Procurement Folder: 146150

Procurement Type: Central Contract - Fixed Amt

Vendor ID:

Legal Name: THRASHER GROUP INC

Alias/DBA:

Total Bid: \$0.00

Response Date:

Response Time:

SO Doc Code: CECI

SO Dept: 0310

SO Doc ID: DNR1600000005

Published Date: 10/21/15

Close Date: 11/18/15

Close Time: 13:30

Status: Closed

Solicitation Description:

Total of Header Attachments: 0

Total of All Attachments: 0



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder : 146150

Solicitation Description : Addendum; A&E-Campground Improvements Beech Fork/Pipestem

Proc Type : Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
	2015-11-18 13:30:00	SR 0310 ESR11181500000002321	1

VENDOR

000000204789
 THRASHER GROUP INC

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
 (304) 558-2596
 guy.l.nisbet@wv.gov

Signature X **FEIN #** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Architectural engineering				

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description : AE Services Pipestem and Beech Fork Campground improvements.



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Expression of Interest
 02 – Architect/Engr

Proc Folder: 146150

Doc Description: Addendum; A&E-Campground Improvements Beech Fork/Pipestem

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-10-21	2015-11-18 13:30:00	CEOI 0310 DNR1600000005	2

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:
 The Thrasher Group, Inc,
 PO Box 940, 600 White Oaks Blvd.
 Bridgeport, WV 26330
 304-624-4108

FOR INFORMATION CONTACT THE BUYER

Guy Nisbet
 (304) 558-2596
 guy.l.nisbet@wv.gov

Signature X

FEIN # 55-0633596

DATE 11/17/15

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

Addendum

Addendum No.01; issued to publish and distribute the attached information to the vendor community.

CEOI

The West Virginia Purchasing Division for the Agency, The West Virginia Division of Natural Resources, Parks and recreation Division is soliciting CEOI responses from qualified firms to provide engineering, landscape architectural and other related services to design improvements to campgrounds at Pipestem Resort State Park, Pipestem, WV. 25979 and Beech Fork State Park, Barboursville, WV. 25504, per the attached CEOI specifications, and terms & conditions.

INVOICE TO	SHIP TO
DIVISION OF NATURAL RESOURCES PARKS & RECREATION-PEM SECTION 324 4TH AVE SOUTH CHARLESTON WV25305 US	STATE OF WEST VIRGINIA JOBSITE - SEE SPECIFICATIONS No City WV 99999 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Architectural engineering	0.00000	

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

AE Services Pipestem and Beech Fork Campground Improvements.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

The Thrasher Group, Inc.

Company



Authorized Signature

11/17/15

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: The Thrasher Group, Inc.

Authorized Signature: *[Signature]* Date: 11/17/15

State of West Virginia

County of Harrison, to-wit:

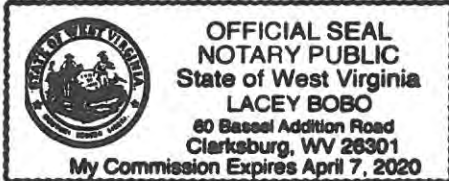
Taken, subscribed, and sworn to before me this 17 day of November, 2015.

My Commission expires April 7, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC *[Signature]*

Purchasing Affidavit (Revised 08/01/2015)

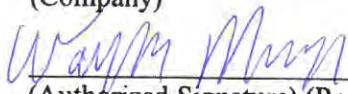


CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

The Thrasher Group, Inc.

(Company)



Wayne Morgan, PE - Project Manager

(Authorized Signature) (Representative Name, Title)

phone (304) 431-7800 fax (304) 624-7831 11/17/15

(Phone Number) (Fax Number) (Date)

THRASHER

West Virginia Division of Natural Resources A/E Campground Improvements at Beech Fork and Pipestem SP



Submitted by:
THE THRASHER GROUP
NOVEMBER 18, 2015

November 18, 2015

Division of Natural Resources
Parks & Recreation-PEM Section
324 4th Avenue
South Charleston, WV 25305

RE: AE Campground Improvements at Beech Fork and Pipestem SP

Dear Members of the Selection Committee,

The WVDNR needs to have an engineering firm that knows specifically about campground utility extensions and system evaluations. Thrasher knows better than any other firm in West Virginia how to assist you in accomplishing this important task. We have earned a positive reputation with countless utilities and entities around the state for our ability to complete projects, maintain budgets, and adhere to schedules.

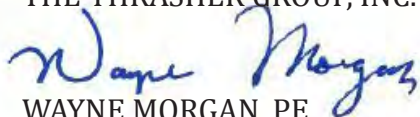
Thrasher is the right engineering firm for these campground utility extensions based on our teams' credential and past project history. Other advantages Thrasher brings to the project include:

- **Resources for immediate action:** Our engineers and field personnel will assure timely response to your needs. We have employees covering every corner of the state.
- **Stellar reputation with regulatory and administrative agencies:** You will have a partner that knows the process and has the respect and cooperation of regulatory agencies giving your project a distinct advantage.
- **Construction and environmental management:** An engineering design is only as good as its construction management. Thrasher's Construction Managers and Project Representatives know how the projects should be built and are on site to ensure the designs integrity. We also have a full environmental staff in-house to ensure these projects are 100% compliant with all environmental agencies.

We have a vested interest in these parks because we not only work here, but live here and play here. ***We want to help the WVDNR make Beech Fork and Pipestem a true camping destination for West Virginians and out-of-state adventure seekers alike.***

Sincerely,

THE THRASHER GROUP, INC.



WAYNE MORGAN, PE
Project Manager

The Thrasher Group, Inc.

Formed in 1983, Henry A. Thrasher and H. Wood Thrasher created Thrasher with a commitment to excellence and professionalism in engineering. As the leading consulting engineering firm in the state of West Virginia, Thrasher specializes in all facets of engineering from site development to public works projects.

In 2005, the company added architecture services to our ever-expanding list of capabilities. In early April of this year, it was confirmed that Thrasher acquired the Marion County-based Blackwood Associates architectural firm. Blackwood Associates brings over 40 years of experience throughout the state of West Virginia to the ever-growing Thrasher architecture division.

Throughout the past 5 years, Thrasher has grown from roughly 200 employees to the over 300 people we presently employ. Thrasher is growing at a rapid pace and that has allowed us to bring aboard some of the most sought after talent around.

We believe that the partnership we establish with our clients is what makes them and their projects successful. This philosophy is the foundation of our growing company.



We have learned, regardless of our size, our commitment to this philosophy leads to successful projects.

The Thrasher philosophy is
PARTNERSHIP.

*Thrasher was recently named #37 on the
Zweig White Hot Firms - Fastest Growing
Firms in the Country.*

Main Point of Contact:

Wayne Morgan, PE - *Project Manager*
155 Blue Angel Lane
Beaver, WV 25813
phone: 304-431-7800
cell: 304-989-3232
fax: 304-624-7831

Office Locations:

Beaver, WV
Bridgeport, WV
Charleston, WV
Oakland, MD
Fredericksburg, VA
Canton, OH
Canonsburg, PA

Thrasher Information:

Incorporated in 1983
www.thrashereng.com

The Thrasher Group, Inc.

With multi-discipline capabilities, Thrasher covers all of the professional services needed to deliver successful projects to both public and private clientele. The firms' roots were planted in civil engineering and consulting services for public utility projects. Over the years, our success has allowed us to branch out, expanding our services to meet both the needs of our clients and the growing need for more responsive and effective solutions.

By providing a full range of quality professional engineering, surveying, architectural, environmental and related field services, this partnership has positioned itself as one of the leading consulting teams in the Mid-Atlantic region.

Disciplinary Practices :

- Water Treatment and Distribution
- Wastewater Collection and Treatment
- Civil Engineering
- Architecture
- Land & Site Development
- Roadways / Bridges /Streetscapes
- Storm Water Systems
- Dams and Levees
- Land Planning and Landscape
- Parks and Recreation
- Survey
- Construction Monitoring
- Materials Testing
- Environmental Services
- Pipeline Inspection
- GIS Mapping Software Development

Areas of Service:

- Planning
- Preliminary engineering
- Funding direction & application assistance
- Regulatory permitting
- Design and construction document preparation
- Bid documentation & process oversight
- Construction administration & monitoring
- Post construction service & on-going commitment
- Cost estimating

Successful projects require more from an engineering firm than just technical design expertise. At Thrasher, our project managers and engineers focus on all aspects of "getting the job done."

THRASHER

Project Approach

Thrasher will conduct a kickoff meeting with Division of Natural Resources to refine the scope of the project and project budget. During the project scope meeting, a communication plan and schedule will be developed along with major milestones.

Thrasher would conduct site visits and review as-built information that is available. Once the as-built information is reviewed, any additional information, such as survey data, will be gathered by Thrasher. Once all information is gathered and evaluated, the capacity of the existing water, sewer, and electrical system are known the scope and budget of the project will be reviewed. Any necessary changes to the scope and budget will be agreed upon at this time.

With an updated and agreed upon scope and budget detail, the design will be completed. The Sanitary Sewer lines will be laid out first, since grade and slope is a controlling factor. The environmental clearances will be completed once the design is started. Once the location of the sewer line is known, the water line and electrical lines will be laid out. Reviews from the Division of Natural Resource will be completed throughout the design process as determined in the kick off meeting.

Bidding documents will be completed and the project will be advertised. Pre Bid meetings will be conducted by Thrasher and the Division of Natural Resources. Once the Bids are received, the project will be awarded and construction will start. Thrasher will conduct the inspection during construction if desired by the Division of Natural Resources. Once construction is completed the project will be closed out and bonds released.

THRASHER

Project Management Scheduling and Budgeting

Scheduling:

Thrasher realizes the importance of establishing and maintaining project schedules. Time means money and making sure we help you spend your money wisely is our number one goal. Our team puts an extra emphasis on making sure our projects stay on schedule. One of the ways we accomplish this, is by utilizing specialized scheduling software to track every stage of a project from design and bidding, through construction completion.

We also require contractors working on our projects to regularly update their project schedules and give a detailed progress report at each job meeting. This helps to ensure all parties are informed and aware of potential delays. Keeping our owners up to speed with progress is our number one goal and ensures occupancy and owner supplied equipment are scheduled accordingly.

Budgeting:

At Thrasher we take construction estimating and budgeting very seriously. As a matter of fact it is considered the most important facet of what we do. Without accurate budgets, there is no tool to guide the design process. This is why we make cost estimating an integral part of the project from day one.

Our estimates go beyond the typical cost per foot of lump sum price. At Thrasher we do contractor grade estimates that look at every part of the project. We do detailed take-offs of materials and look at every man hour needed to complete a project. We also have a great understanding of the local market and material costs which allows us to accurately design to meet your budget.

THRASHER



WASTEWATER COLLECTION AND TREATMENT

Thrasher has planned, designed, and supervised the construction of municipal, industrial, and individual wastewater collection and treatment projects throughout West Virginia and its surrounding states. When designing a wastewater system, many factors including the environment, technology and cost-effectiveness come into play. Wastewater system projects require both experience and a strong understanding of regulations and requirements.

Having successfully designed and completed wastewater system projects ranging from \$100,000 to \$50 million dollars, the Thrasher team employs some of the most skilled and sought after professionals in the industry. Our approach allows us to develop unique solutions for our clients while providing a helping hand through difficult funding and regulatory hurdles.

WASTEWATER SERVICES:

- New Collection Systems and Extensions
- Rehabilitation and Replacement of Existing Systems
- Combined Sewer Overflow (CSO) Reduction
- Long-Term Control Plans
- Construction Monitoring
- Wastewater Treatment Plant Design
- Feasibility Studies
- Facility Planning
- Geographical Information Systems (GIS)
- Inflow and Infiltration (I&I) Testing and Evaluation

WATER TREATMENT AND DISTRIBUTION

Meeting increasingly stringent water quality standards demands experienced and dedicated water system specialists. Since our very first water project over 30 years ago, there has always been a potable water project underway at Thrasher. These projects provide safe drinking water to towns, cities, and entire counties. The team at Thrasher are highly skilled and practiced in both conventional ground and surface treatment systems involving rapid mix, flocculation, sedimentation, filtration, membrane, and reverse osmosis processes.

Whether it is designing more efficient processes, integrating alternative energy sources, reducing water loss, increasing system capacity; our clients can count on Thrasher to find practical, low cost, environmentally friendly solutions to their supply needs.

WATER SERVICES:

- Distribution System Design
- Booster Stations and Hydraulic Modeling
- Water Loss Evaluation and Analysis Studies
- Feasibility Studies/Facility Planning
- Water Treatment Plant Design
- SCADA and Telemetry Systems
- Existing System Evaluation
- Storage Facility Design
- Pump Station Design
- Construction Monitoring
- Geographical Information Systems (GIS)

CONSTRUCTION MANAGEMENT

Effective management of our projects ensures that both clients and contractors work in an efficient and safe manner. From pre-construction activities such as bid conferences and surveys, to inspections, job progress reviews, through final completion, our goal is work that proceeds in accordance with plans and specifications.

At Thrasher, we inspect and manage a wide variety of projects designed by our firm in addition to projects for contractors and other designers. We have certified project representatives responsible for overseeing every element of design integrity. Our methods have earned the respect of not only our clients, but contractors and project owners alike.

CONSTRUCTION INSPECTION SERVICES:

- Construction Materials
- Structural Steel and Concrete
- Paving
- Drainage
- Embankments
- Work Zone Safety and Traffic Control
- Erosion and Soil Control

QUALITY CONTROL AND ASSURANCE METHODS:

- Regularly Scheduled Planning and Progress Meetings
- Engineering During Construction
- Daily Logs and Progress Sheets
- Cut Sheets
- Quantity Tracking

THRASHER SURVEY

SURVEY

Thrasher employs one of the largest survey departments in the Mid-Atlantic region and offers a wide range of land surveying and related services for federal, state, and private clients. We are committed to evolving our techniques and equipment to best serve our clients and their growing needs.

At Thrasher, we are able to provide both surveying and engineering services which provide a distinct advantage over survey-only companies. The combination of these two services provide our surveyors with a better understanding of what engineers and architects require to develop an appropriate design for different types of projects. Our field and survey personnel offer extensive experience, certified training, and flexibility to meet our clients' unique project schedules.

GENERAL SURVEY SERVICES:

- Large-scale Boundary Work
- Topographic Survey and Mapping
- ALTA/ACSM Survey and Mapping
- Lake and River Soundings
- Accident Reconstruction Survey and Mapping
- Drug-free Zone Mapping
- Expert Witness Testimony
- Construction Layout
- Permanent Project GPS Base Stations
- Building Control and Layout
- Road/Bridge Alignment and Staking
- Sewer/Water/Pipeline
- Site Layout
- Quality Assurance Surveying
- Volume/Quantity Surveys
- As-Built Surveys

GPS SURVEYS:

- Geodetic Control Networks
- Ground Control for Aerial Mapping
- Telecommunications
- FAA 1A and 2C Letters

ROUTE LOCATION SURVEYS:

- Transmission Lines
- Natural Gas Pipelines
- Wind Turbine
- Roadway, Railway and Rec Trails

COAL AND ENERGY SURVEYS:

- Pre and Post Mining Blast Surveys
- Water Quality Monitoring Plan
- Construction Layout
- Emergency Control Survey/Plans



Project Team



Randy Watson
Principal-in-Charge
cell #: 304-626-0703

Clay Riley, PE
Quality Assurance/Quality Control
cell #: 304-288-5011

Wayne Morgan, PE
Project Manager
cell #: 304-989-3232

Ted Hamb, PE
Project Engineer

Tom Urquhart, PE, BCEE
Hydraulics Modeling Engineer

Randy Watson

Principal-in-Charge



Randy Watson has extensive experience in water and wastewater projects across the Mid-Atlantic Region. Randy joined Thrasher in 1984 and has worked in and helped develop the utility department in that time. His responsibilities include overseeing engineering design, project acquisition, project funding applications, and construction management.

Randy undertakes each project with an extreme level of knowledge and experience which is beneficial to clients. Randy specializes in wastewater systems, water treatment and water plant design and rehabilitation. Randy has been very successful in assisting clients who face funding challenges.

Education:

- Bachelor of Science, Mining Engineering Technology - Fairmont State University
- Associate of Science, Design and Drafting - Fairmont State University

Registrations/Certifications:

- American Water Works Association

Related Experience Includes:

- **Brooke County PSD Sanitary Sewer Extension** - Brooke County, West Virginia
- **City of Weston Sanitary Sewer Extension** - Lewis County, West Virginia
- **Town of Franklin Sewage Treatment Lagoon** - Pendleton County, West Virginia
- **Federal Bureau of Prisons FBOP Sanitary Sewer and Potable Water Design** - Lackawanna County, Pennsylvania
- **Pocahontas County PSD Water Line Replacement** - Pocahontas County, West Virginia
- **Town of Elizabeth Water Line Extension** - Wirt County, West Virginia
- **Town of Farmington Public Service District Sewer Plant Upgrades and Water Replacement Projects** - Marion County, West Virginia



Clay Riley, PE

Quality Assurance/Quality Control



As a key member of Thrasher's Utility Department, Clay focuses on the administration of water and wastewater projects in addition to serving as the Project Manager for utility clients. Assignment of the right project team for each client, project scheduling, quality assurance and quality control, and ensuring positive client relations are Clay's primary responsibilities.

Mr. Riley is a Partner within Thrasher and has spent his entire engineering career with the firm, where his portfolio of work includes multi-phased projects to provide public utility service to areas within the Mid-Atlantic region. Clay also serves as the Infrastructure Chairman for the state of West Virginia ACEC Organization.

Education:

- Bachelor of Science, Electrical Engineering - West Virginia University
- Bachelor of Science, Computer Engineering - West Virginia University

Registrations/Certifications:

- Registered Professional Engineer (PE)
 - States of West Virginia, Maryland, Ohio, Pennsylvania, Kentucky, and North Carolina

Awards/Affiliations:

- ACEC Water Resources Gold Award
- ACEC Waste and Storm Water Gold Award
- West Virginia State Journal "Generation Next -40 Under 40" Recipient
- West Virginia Executive "Young Gun" Recipient

Related Experience Includes:

- **Hardy County Public Service District Caledonia Heights Sewer Project** - Hardy County, West Virginia
- **Hamrick Public Service District Blackman Flats Extension and WWTP Upgrade** - Tucker County, West Virginia
- **Greater Paw Paw PSD Crown Community Wastewater Project** - Marion County, West Virginia [ACEC Gold Award - Waste and Storm Water 2014]



Wayne Morgan, PE

Project Manager



Wayne Morgan has over 30 years of experience in regulated and unregulated water and wastewater management and consulting. Mr. Morgan's direct engineering experience with consulting and public utilities include environmental and civil/structural services with integration responsibility for control/instrumentation and electrical and mechanical piping.

Also, Mr. Morgan is highly experienced in the design and oversight process for Water Treatment Plants (WTPs) and Wastewater Treatment Plants (WWTPs). As a Project Manager, Mr. Morgan has a track record of exemplary performance especially in the areas of environmental and operational compliance, budgetary control and schedule adherence.

Education:

- Executive MBA - University of Charleston
- Bachelor of Science, Civil Engineering - West Virginia University

Registrations:

- Registered Professional Engineer
 - States of West Virginia Maryland, Missouri, and Virginia

Awards/ Affiliations

- Class IS Wastewater Operator Certification for WV
- Class IV (greater than 50,000 population) Water Operator Certification for WV
- Thames Water Evening Management Training, Reading, UK - 2003
- Thames Water Oxford Leadership Program, Oxford, UK - 2003
- Member, American Water Works Association, 1977 – Present
- Board Member, University of Charleston, WV

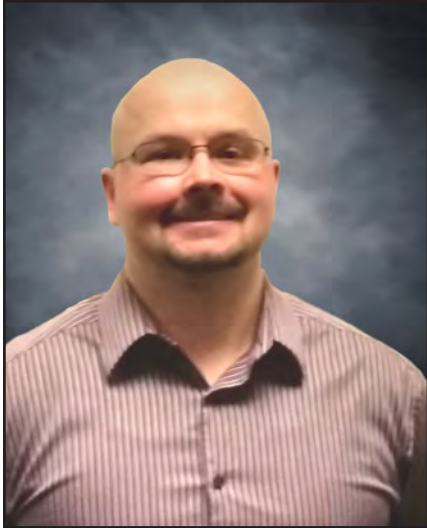
Related Experience Includes:

- **Charleston Sanitary Board Evaluation Study and Interceptor Sewer Lift Station Improvements** - Kanawha County, West Virginia
- **Bluefield Sanitary Board Evaluation Study Project** - Mercer County, West Virginia
- **Cowen Public Service District Inflow and Infiltration Reduction and WWTP Upgrades** - Webster County, West Virginia



Ted Hamb, PE

Project Engineer



Ted Hamb, PE joined Thrasher in 2014 bringing extensive experience with the management of engineering projects, construction observation and direct administrative planning to the engineering team. Prior to joining Thrasher, Ted served as Chief of the Facilities Management Service Line for the Veterans Administration Medical Center in Beckley, West Virginia, and prior to that position was a civil engineer and project manager with the United States Army Corps of Engineers.

Ted's expertise includes numeric modeling for hydrology and hydraulics which he applies to water, wastewater and storm water projects. He has provided computer generated water surface profiles for pre and post conditions and developed velocity data, stone slope protection design, overtopping analyses and interior flooding analysis for project alternatives. While with the Army Corps of Engineers, Ted coordinated a \$250 million architectural/engineering project to develop hydraulic numerical model for 23 tributaries (103 miles of stream).

Education:

- Bachelor of Science, Civil Engineering -West Virginia Institute of Technology, Montgomery, WV (2000)
- Master of Science, Engineering - Marshall University, Huntington, WV (2006)

Registrations:

- Registered Professional Engineer:
 - States of West Virginia and Ohio

Related Experience Includes:

- **Oak Hill Sewer Upgrade Preliminary Engineering Report** - Fayette County, West Virginia
- **Sophia Wastewater System Improvements** - Raleigh County, West Virginia
- **Lewis County Economic Development Authority Water Line Extension Project** - Lewis County, West Virginia



Tom Urquhart, PE, BCEE

Hydraulics Modeling Engineer



Following 33 years as chief engineer and general manager for the Morgantown Utility Board. Tom Urquhart joined Thrasher to focus his engineering expertise in quality control and hydraulics modeling for both water and wastewater systems, utilizing the KY Pipe Modeling. Tom, a Board Certified Environmental Engineer (BCEE) and has experience in civil engineering of public utilities including design and construction of water storage tanks, new and replacement water and sanitary sewer lines, pump stations, water treatment and wastewater treatment plants. He also has extensive experience in management and operations of public utilities systems, including budgeting and rate structures.

Tom was awarded the George Fuller Award from the American Water Works Association for his management and operations of the Morgantown Utility Board. This included his recognition of his ability to budget and develop rate structures.

Education:

- Master of Science, Civil Engineering - West Virginia University
- Bachelor of Science, Civil Engineering - West Virginia University

Registrations/Certifications:

- Registered Professional Engineer (PE)
 - States of West Virginia, Ohio, Maryland, and Pennsylvania

Related Experience Includes:

- **Norton Harding Jimtown Public Service District Kingsville Water Line** - Randolph County, West Virginia
- **Timberline Four Seasons Resort Complete Hydraulic Modeling** - Tucker County, West Virginia
- **Pocahontas County Public Service District County-wide Hydraulic Modeling** - Pocahontas County, West Virginia
- **Mingo County Public Service District Water Line Extensions Modeling** - Mingo County, West Virginia



West Virginia Division of Natural Resources State Park Utility Experience

Chief Logan State Park Conference Center

The Chief Logan State Park was in need of a conference center. Thrasher, as the site development consultant, teamed with an architectural firm was hired by the West Virginia Division of Natural Resources to provide the State Park with **utility, site development and roadway design for the new conference center.**

Lost River Wastewater Collection System

The West Virginia Division of Natural Resources hired Thrasher to provide services for **a new wastewater collection system for the Lost River State Park.** Along with the construction of the wastewater collection system, Thrasher provided erosion and sediment analysis, roadway repairs and the construction of an underground electrical system, eliminating over 49 poles and 12,400 LF of electrical lines.

Watoga Water and Sanitary Sewer Improvement

Thrasher was able to provide the West Virginia Division of Natural Resources at Watoga State Park with **water and sewer system improvements.** The Thrasher team provided design and construction services at the park of various degrees. It was important to the Division of Natural Resources to keep the areas of construction with the least amount of disturbance as possible.



Greater Paw Paw Public Service District Crown Community Wastewater System

In 2008, the Monongalia County Health Department (MCHD) issued a report regarding health issues in the community of Crown brought about by the lack of appropriate wastewater collection systems for the citizens of the area. Some of the 43 residencies utilized undersized and failing individual septic systems while other residencies' sewer discharged directly into drainage areas or streams.

Comparing the waste conditions in the area to those seen in Third World countries, the MCHD turned to The Greater Paw Paw Public Service District (PSD) to assist in the improvements of this condition as the Crown community is located within the geographic area that could be served by the PSD.

Thrasher was highly involved in the preliminary assessment and planning for the project and worked with the PSD to best address the issues. This identifying various options, including the use of a package treatment system for the area. Additionally, preliminary cost estimates and possible funding options were reviewed, including the use of a "green funds" grant from the West Virginia Department of Environmental Protection's (WV DEP) State Revolving Funds.

Working with the WVDEP, utilization of an environmentally friendly package plant system with a drip irrigation field was selected and CWSRF "Green" Infrastructure Fund was utilized.



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Grandview-Doolin Public Service District Water Treatment Plant Upgrades and Line Extensions

Grandview-Doolin Public Service District and Thrasher have worked in partnership on numerous projects to improve and expand the PSD's water treatment and distribution system to support economic development within their region, serving manufacturing and coal industries.

Water Storage Tank and Extension

The PSD was approached by BPB to extend a potable water line to a new gypsum wallboard manufacturing facility located along Route 2 near Graysville. Thrasher was hired to work with the PSD to analyze their system, determine what upgrades might be needed to serve the BPB facility and provide engineering services to complete the project. Thrasher performed a hydraulic analysis utilizing a KY Pipe Hydraulic Model that determined feed lines to the water tank would need upgraded in size. The project included upgrading the feed lines from 2" to 6" and installing a 1.4 mile water distribution line extension to the manufacturing facility.

Water Line Extension to McElroy Coal Mine and Mitchell Power Plant

After the successful BPB project, the PSD again chose Thrasher to assist them in planning and engineering a water line extension related to expanding economic development within the area. This extension, consisting of approximately 1.5 miles of 6" line, now provides potable water to McElroy Coal on WV State Route 2 and to the Mitchell Power Plant.

Water System Upgrades: Water Treatment Plant, Storage, and Line Extensions

The PSD again selected Thrasher to assist with a water line extension project. The Grandview Doolin PSD serves 848 residential customers, 33 commercial customers, and 2 industrial customers in Wetzel County and southern Marshall County. However, there were still numerous households in the PSD's service area without potable water.

Thrasher and PSD worked together to extend water to approximately 150 residents, which increased the customer base to nearly 1000.

Thrasher is currently working alongside the PSD to make improvements to the water treatment facility, which utilizes ground water for its raw water source. These improvements include chlorination, filtration, and repairs to its clearwell.



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Bluefield Sanitary Board Sanitary Sewer Evaluation Study

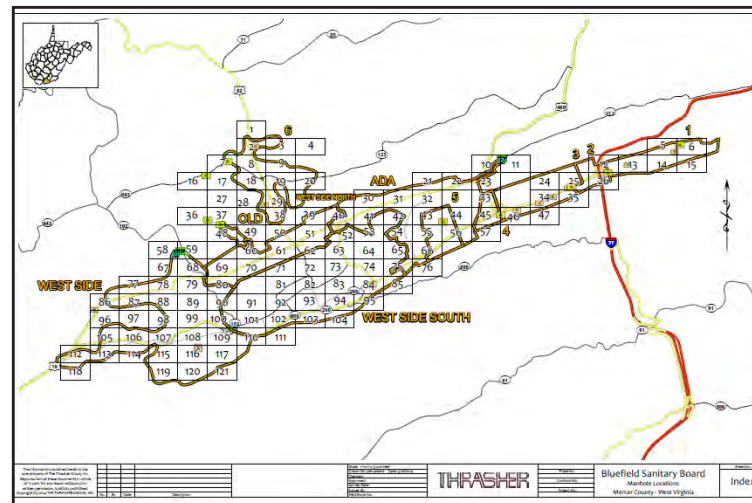
Thrasher was selected to provide the Bluefield Sanitary Board (BSB) the services necessary to complete its Sanitary Sewer Evaluation Study (SSES)

Working with the BSB, Thrasher is determining the priority of sewer line and manhole rehabilitation and replacement which will provide for continuous reduction of Inflow and Infiltration (I&I).

The approach to the project started with a review of the BSB system's existing information, followed by field investigation and mapping of the system. Working with the BSB staff, the Thrasher team identified and mapped all manholes within the system and determined the testing approach and methodology for all of the identified areas.

Testing methods include flow monitoring, smoke testing, closed circuit television inspections, and manhole visual inspections. Following the completion of all investigation, a draft comprehensive report will be compiled that will include:

- Approach to reduce Inflow and Infiltration (I&I)
- Current manhole status and needs
- Field reports / logs of all structures evaluated
- Prioritized schedule of work
 - Manhole rehabilitation or replacement
 - Pipes in need of rehabilitation or replacement
- Identification of sanitary and storm cross connections
- Repair and replacement approach with opinion of probable construction costs and probable system impacts.



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Greater Harrison County PSD

Sanitary Sewer System Extensions and Upgrades

Thrasher has provided engineering and construction management services for Greater Harrison PSD for sanitary sewer upgrades and extensions since 1998 in multiple phases. The goal of these projects is to provide public sewer service throughout the county thereby eliminating failing package wastewater treatment plants or home septic units.

The projects started with the upgrade of the PSD's aerated lagoon system WWTP from .3 to .6 MGD, in addition to modifying the screening aeration system to a complete mix system and repairing the chlorine disinfections system.

This \$21 Million project is providing Sanitary Sewer extensions to serve three areas in Harrison County, West Virginia. The PSD is extending service to approximately 747 customers throughout the county. The project is split into two (2) parts, Phase II and Route 73.

The Phase II portion of this project consists of providing sanitary sewer service to the areas of Clarksburg County Club and Laurel Park in Central Harrison County. Phase II transmits the collected sewage to the existing Greater Harrison County PSD Treatment plant in West Milford, WV.

The Route 73 section of this project consists of providing sanitary sewer service to areas along State Route 73 in Northern Harrison County, WV. The District will also be servicing customers in Marion County and Taylor County, due to the boundaries. Most homes in this area have private septic systems or are collected in to one of the nine (9) package wastewater treatment plants that will be decommissioned after the completion of this project. The sewage will be transmitted to a new 100,000 GPD Wastewater Treatment Plant that is to be constructed as part of this project. Additionally, due to the location of the new WWTP, an effluent pump station will be required to transmit the treated clean water to an acceptable discharge location, per WVDEP requirements. Along Routes 73 and 76 near Bridgeport serving 466 new customers.

Both sanitary sewer line extensions utilize 6", 8" and 10" gravity sewer line, force mains and service lines. These projects include lift stations and grinder stations. Design, survey, construction management and inspection services were provided for this project

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Union Public Service District

40th Street WWTP Upgrade and Tyler Mountain Extensions

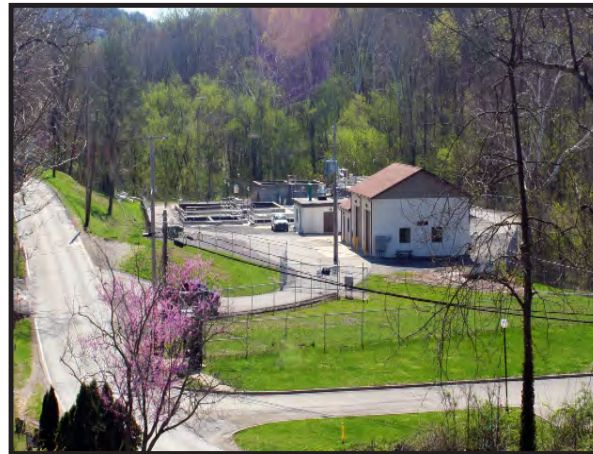
The Union PSD operates two (2) wastewater treatment plants. Thrasher performed a facility study of the 40th Street wastewater treatment plant - an extended aeration treatment plant operated in the contact stabilization mode, which was built in the 1960's and upgraded in 1991.

The 40th Street wastewater treatment plant was properly maintained, however during the investigation and study phase of the project, it was determined some of the wastewater equipment had come to the end of its useful life. It was also determined that this plant was in need of an increase in its capacity due to the commercial and residential growth in the area.

Upgrades to the 40th Street wastewater treatment plant consisted of replacing two (2) influent pumps, constructing a new screening and grit removal system, two (2) new contact stabilization tanks, four (4) new clarifiers, new sludge return pump station, a new office building, upgrading non-potable water system, demolishing existing office building, constructing new office building/garage, structural repairs to existing contact stabilization tanks, site work, piping, concrete electrical and mechanical.

Tyler Mountain Extensions

Also included in the project were gravity system extensions to the Big Tyler Mountain and Little Tyler Mountain areas, consisting of approximately 3 miles of pipeline for each extension.



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Canaan Valley Public Service District Regional Wastewater Collection System

This \$10.6 million dollar project involved addressing issues with the receiving stream of the upper Blackwater River, which was listed on the impaired stream (303D) list. The USEPA, WVDEP and USGS analyzed the upper Blackwater River for total maximum daily loads (TMDL).

Thrasher was brought in to address issues discovered by those agencies. Included in the process was Thrasher's participation in a series of Public Service Commission hearings on behalf of the Tucker County Commission to assist in the formation of the new Canaan Valley PSD.

Thrasher was then hired by the newly formed Canaan Valley PSD to analyze the valley area for the development of a public sanitary sewer system. Multiple tasks were performed with this project from working with the Environmental Protection Agency and the West Virginia Department of Environmental Protection regarding the TMDL on the Blackwater River. The project solution provided a managed stream point discharge solution for the Valley.

Working with the new PSD, Thrasher designed and provided all services to bid and construct a sewer system that includes two membrane biological reactor (MBR) wastewater treatment plants and a gravity collection system. Multiple funding sources, including USEDA, USEPA, West Virginia Infrastructure Jobs and Development Council, WVDEP Green Funding through the American Recovery and Reinvestment Act (ARRA or Stimulus Dollars) as well as local funding, were used to make this effort a reality.



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Hardy County Public Service District Water Extensions and Treatment Plant Project

Thrasher has served as the engineer of record for Hardy County Public Service District for over ten years in a multi-phase project to provide potable water throughout rural sections of the county.

Five-Phase Water Line Extension Project

In evaluating potential areas of water service for the Hardy County PSD, Thrasher and the PSD assessed every county route and mapped rural roads in the central region of the county for total distance, total number of customers, and customer density. Limits of the study area were defined by County lines, WV State line, and South Branch Mountain. Some areas of the PSD receive water from the Town of Moorefield while others are now served by the Hardy County PSD water treatment plant.

Raw Water Intake and Water Treatment Plant

The Baker / Mathias Water Distribution System, now provides water to the Central region of Hardy County to approximately to 518 customers at a total project cost of \$11,150,000 which included a new water treatment plant, adequately sized distribution lines, and associated soft costs. Thrasher developed a preliminary engineering study providing both surface water and ground water source alternatives. The selected alternative was to utilize the Lost River Site 10 dam, constructed by the Natural Resources Conservation District. This dam is a multi-purpose dam intended for water supply and flood control.



Treatment Pilot Study and Water Treatment Plant Design and Construction

Thrasher conducted a six-week pilot study to treat surface water to determine the effectiveness of chemical addition flocculation and sedimentation followed by membrane ultra filtration for removal of iron manganese and turbidity from the surface water.

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