

ENGINEERING ARCHITECTURE FIELD SERVICES

December 13, 2017

Division of Natural Resources Property & Procurement Office 324 4th Avenue South Charleston, WV 25303

RE: A/E Services for Modifications/Repairs of six (6) Dams 0310 DNR 1800000005

Dear Members of the Selection Committee.

We are excited for the opportunity to submit this Expression of Interest. Our understanding and past project experience make us the right partner for this project.

The Thrasher team understands that addressing these six dam locations in Preston and Jackson Counties is important to the respected areas. As a result of this, we have assembled the right team that is experienced with dam modifications and repairs. We are a full-service A/E firm that can carry these projects from concept through construction closeout. Thrasher can also provide inspection and materials testing services to better enhance your projects.

Thank you for considering the Thrasher Team and the opportunity to further enhance our working relationship with the WVDNR and the State of West Virginia. We look forward to your positive reception of our proposal and to meet with you to further demonstrate the commitment, dedication and support we will bring to the state.

Sincerely,

THE THRASHER GROUP, INC.

Robert Milne, PE Principal-in-Charge DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title) PRINCIPAL
Robert R Milne Principal (Printed Name and Title)
600 White Oaks Blvd Bridgeport WV a6330 (Address)
(Address) 304-624-4106 / 304-624-7831 (Phone Number) (Fax Number)
rmine @ the thrashergroup. com

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contained herein: that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated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

The Thrasher Group
(Authorized Signature) (Representative Name, Title)
Robert R. Milne Principal (Printed Name and Title of Authorized Representative)
12 11 2017 (Date)
304-624-4108 / 304-624-7831

20171020v



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)		
Addendum No. 1 Addendum No. 2 Addendum No. 3 Addendum No. 4 Addendum No. 5	☐ Addendum No. 6 ☐ Addendum No. 7 ☐ Addendum No. 8 ☐ Addendum No. 9 ☐ Addendum No. 10	
discussion held between Vendor's represent	ipt of addenda may be cause for rejection of this bid. Itation made or assumed to be made during any oral tatives and any state personnel is not binding. Only id to the specifications by an official addendum is	
The Thrasher Grou	P. Inc.	
Authorized Signature R ml		
Date 12/11/2017		
NOTE: This addendum acknowledgement shorocessing.	ould be submitted with the bid to expedite document	

20171020v



STATE OF WEST VIRGINIA Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, saies and use taxes, fire service fees, or other fines or fees.

ALL OTHER CONTRACTS: 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 definquent 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 into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the

"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: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, 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 Throsher Group, Inc.
Authorized Signature Ralit R m Q Date 12 14 12 013
State of West Virginia
County of Harrison to-wit:
Taken subscribed, and sworn to before me this 11 day of December, 2017.
My Commission expires October 24 2022
AFFIX SEAL HERE OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA Eleni K. H. Brick P.O Box 58 Eltzabeth, WV 26143

My Commission Expires October 24, 2022

West Virginia Ethics Commission Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Contracting Business Entity: The Thrasher Group Address: 600 White Oaks Blud
Bridgeport WV 26330
Authorized Agent: Robert Milne Address:
Contract Number: AEO1 0310 DNR 1800000005 Contract Description: Modification / Repair 6 dams
Governmental agency awarding contract: WV DNR
☐ Check here if this is a Supplemental Disclosure
List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):
 Subcontractors or other entities performing work or service under the Contract □ Check here if none, otherwise list entity/individual names below.
2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities) Check here if none, otherwise list entity/individual names below.
3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract) Check here if none, otherwise list entity/individual names below
Signature: Lalit R me Date Signed 12/11/2017
Notary Verification
State of West Virginia County of Harrison
entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.
Taken, sworn to and subscribed before me this
Notary Public's Signature OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA Eleni K. H. Brick P.O Box 58 Elizabeth, WV 26143 My Commission Extrem Official SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA Eleni K. H. Brick P.O Box 58 Elizabeth, WV 26143 My Commission Extrem Official SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA Eleni K. H. Brick P.O Box 58 Elizabeth, WV 26143

ABOUT THRASHER

With over 34 years of experience in the architecture/engineering industry, The Thrasher Group, Inc. has grown into one of the Mid-Atlantic Region's largest full-service and privately-owned firms. Thrasher's long standing commitment to building business through "successful projects and repeat clientele" remains the goal of our ownership.

At Thrasher, we pride ourselves on the wide array of services provided to our clientele. The ability to continuously adapt and be successful is a testament to the over 300 members of the Thrasher team. Each employee is committed to maintaining the highest standards of professional service. Our standards are reflected throughout the quality work of our employees. This commitment to excellence is the bedrock of the Thrasher Team.

Working with Thrasher means we cover all of the professional services needed to deliver successful projects to both public and private clientele. Our firm's roots were planted in civil engineering and consulting services for public utility projects, but our success has allowed us to branch out, expanding our services to meet the ever growing needs of our clients.

MAIN POINT OF CONTACT

Mr. Robert Milne, PE
Principal-in-Charge
rmilne@thethrashergroup.com
600 White Oaks Boulevard
P. O. Box 940
Bridgeport, WV 26330

Cell: 304-677-1209 Office: 304-326-6141 Fax: 304-624-7831

THRASHER INFORMATION

www.thethrashergroup.com Established in 1983

HEADQUARTERS

Bridgeport, WV

OFFICE LOCATIONS

Bridgeport, WV Charleston, WV Beckley, WV Fredericksburg, VA Canton, OH Oakland, MD Lexington, KY Canonsburg, PA



QUALIFICATIONS

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

DISCIPLINARY PRACTICES:

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

AREAS OF SERVICE:

- · Planning/Programming
- · Preliminary Design
- Funding/Grant Application Assistance
- Design and Construction Document Preparation
- Bid Documentation and Process Oversight
- Construction Administration and Monitoring
- Regulatory Permitting
- Post Construction Service and On-going Commitment
- Cost Estimating



Tygarts Valley Conservation District (Water Supply Dam)

Thrasher was contracted by the Tygarts Valley Conservation District (TVCD) to perform an engineering assessment (Phase – 1 of the Barbour County Water Resources Study) of potential dam sites in the immediate vicinity of Philippi, WV to serve as a supplemental source of drinking water for the Philippi and Barbour County areas. Seven dam-sites were initially evaluated; however, only one (Little Laurel Run) met all of the requirements of the TVCD. Major components of the engineering assessment for each site included development of watershed hydrology and hydraulics, impoundment sediment and water supply storage capacities, and determination of hazard classification.

The Thrasher team utilized the NRCS SITES computer program and NRCS Technical Release – 60 (TR-60) to evaluate each dam. The assessment investigation, findings, recommendation, preliminary quantities and costs estimates were presented to the TVCD as the Phase 1 Report.

Based upon the findings and recommendations in the Phase I Report, the TVCD directed Thrasher to develop a preliminary design (Phase II) of the Little Laurel Run Dam. The Thrasher team refined the parameters of the initial engineering assessment for this site in order to better define site conditions and to accurately assess its water storage capability. Thrasher developed an investigation plan and coordinated the drilling and borrow pit. Evaluation of the site demonstrated that it is a suitable location and has sufficient storage capacity to meet the water supply objectives of the TVCD.





Buffalo Lake Dam

Thrasher conducted a dam safety inspection, rehabilitation assessment, rehabilitation plan, and Monitoring and Emergency Action Plan (EAP) for the Buffalo Lake Dam (WV03305).

Buffalo Creek Reservoir was originally designed and constructed during the late 1950's as a domestic water supply source for the Clarksburg Water Board. Our assessment determined that the lake had a normal pool elevation of 1018.5, covering a surface area of approximately 55 acres, with a storage capacity of 903 acre-ft. Although the maximum elevation of flow through the spillway could reach an elevation of 1028.5 ft., the top of dam elevation was only 1028.0. At maximum elevation, the pool surface area was 82.3 acres with a storage capacity of 1579 acre-ft. The spillway (ogee spillway) had a crest elevation of 1018.5 ft. with an 85 ft bottom width. Based off of the dimensions of the existing spillway, the approach depth was 10 ft. in height and had a design head of approximately 10 ft. Flow from the spillway travels down Buffalo Creek, under US Rt. 19 to its confluence with the West Fork River.

Our watershed hydrology and dam/spillway hydraulics analysis determined that the existing dam would only pass 58% of a PMP/6 hour design storm; therefore modifications to the existing dam/spillway would have to be made to safely pass the 70% PMP/6 hour design storm. In order to achieve that goal, Thrasher determined that the most efficient and economical solution would be to raise the dam to elevation and spillway to elevation 1031.0.



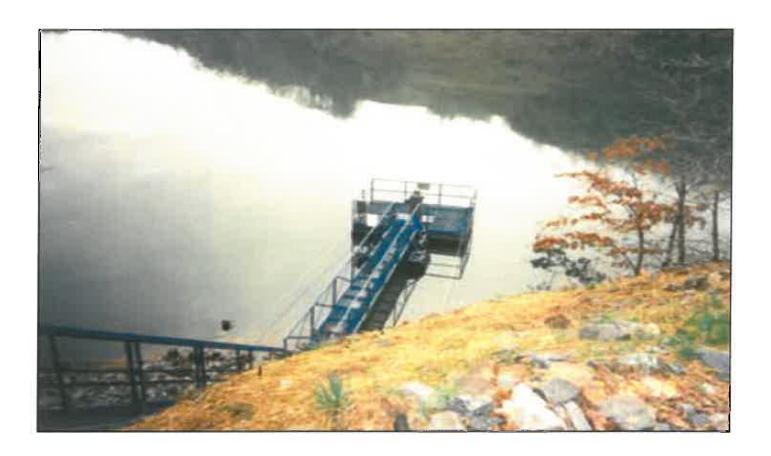


City of Mannington Water Supply Dam - Huey's Run

The City of Mannington needed additional raw water supply, so an existing flood control dam was modified to raise the normal pool elevation by thirteen (13) feet.

A floating pump station was installed to transmit water approximately four miles to the City of Mannington's water treatment plant. The pumping rate was 350 gpm for 24 hours a day. This enabled the City of Mannington to lift a water curtailment on its customers.

This project was funded through the combination of a USDA-RUS loan and grant money.



City of Salem - Upper and Lower Dog Run Dam

Thrasher first performed a dam safety inspection of the Upper Dog Run Impoundment for the City of Salem in July, 2008 and then a second inspection more recently on the Lower Dog Run Impoundment.

Results of the inspection of the Upper Dog Run facility revealed numerous concerns about the following:

- Erosion
- Vegetation
- Inadequate rock rip-rap protection
- Seepage into the inlet (riser)
- Obstructions in the outlet channel
- Obstructions in the outlet channel
- Undercutting of the outlet structure
- Displaced rock rip-rap in the outlet channel
- Scouring in the outlet channel

Based upon the initial review of the data plus on-site observations, we developed a straight-forward method for assessing existing conditions. Our strategy identified deficiencies relative to State Dam Safety criteria, hazard classification determination, assessed rehabilitation needs, and development of a cost effective rehabilitation plan. Construction of the improvements were tied into the bidding process for the City's waterline replacement project, allowing for time and cost efficiencies.

During the dam safety inspection of the Lower Dog Run Impoundment, similar concerns were found. To bring the Lower Dog Run Impoundment into compliance, Thrasher had to design a new riser structure, modify and amend the axillary spillway. The Upper and Lower Dog Run Dam project was completed in 2016.





City of Kitzmiller, MD - Levee Inspection

Thrasher was hired by the City of Kitzmiller, Maryland to provide an inspection and prepare a report of the Kitzmiller Levee for recertification. The engineering and survey team conducted a field review and prepared a preliminary engineering analysis of the levee and a watershed model.

The Kitzmiller Levee flood protection system was judged to be an excellent candidate for recertification, with the exception of a few locations where the levee did not meet the 3-foot minimum free-board requirement.

The Thrasher team recommended two feasible options for achieving the required free-board. These options are:

- Option 1 involved dredging the existing channel where sediment had accumulated over time.
- Option 2 would consist of physically raising the levee in areas to achieve the necessary free-board.

The team recommended Option 1, dredging the existing levee. This is a more permanent solution that would provide the levee with a more uniform shape and bring it closer to its original design.



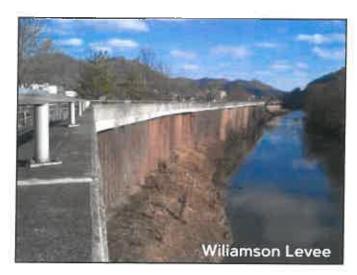


Town of Matewan and City of Williamson - Floodwalls

Thrasher was hired by the Mingo County Commission to re-certify two existing levees within the county. For the re-certification, Thrasher had to gather an evaluation of the existing data, perform an in depth field inspection, determine a preliminary freeboard, determine the likeliness of certification, and prepare a fully executed Preliminary Engineering Report for each levee.

Once this portion was complete, Thrasher performed a survey, evaluated the operations and maintenance, performed hydrology and hydraulics, did a full structural evaluation, made all recommendations to bring the levee into compliance with FEMA, and finally obtained a levee certification report and letter for each floodwall.

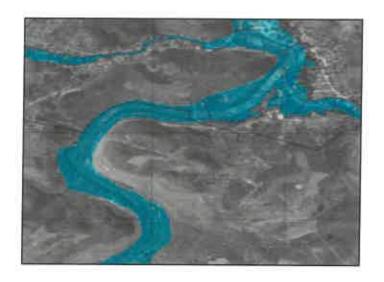




City of Philippi - Flood Protection

This project consisted of Geospatial Data collection of various drainage structures for the flood reduction project for the City of Philippi, West Virginia.

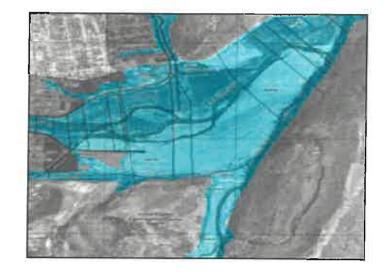
Mapping and Digital Geospatial Metadata Information was provided in the US Army Corps of Engineers format.



Town of Petersburg - US Army Corps of Engineers Flood Protection

This project consisted of Boundary Surveys, Legal Description Writing, Flood Control Mapping, and GPS Control for Levee Projects consisting of roughly 200 acres and 20 property owners.

Mapping and Legal Descriptions were both prepared in the US Army Corps of Engineers format.



City of Green, Ohio

The City of Green requested that Thrasher review the existing conditions and determine preliminarily what could be done to alleviate the stormwater surcharge near the address of 5600 Mayfair and the Metro RTA Bridge. The City was interested in determining if the detention basin could be created or improved to route the storm events. Over the last several years, the City has had several calls concerning the ditch.



Review of Existing Condition Summary Report

Thrasher used the information gathered through a property owner survey of the area to develop the alternatives. Each alternative was discussed, along with its estimated probable construction cost, potential environmental permits, and additional pending issues. The City of Green has selected the preferred alternative. The preferred alternative is to raise the existing levee of Basin Number 1, on property owned by the Akron/Canton Airport. This regional detention basin will greatly impact the watershed known as the Zimber Ditch. The effects of the preferred alternative will be to retain 30%additional during a 100-year storm. The Akron/Canton Airport provided an additional requirement to the basin: we have to release the water that is being stored in the wooded wetland within 24 hours to prevent the water fowl from roosting at the edge of the runway.

Preliminary Engineering Funding

Thrasher worked with the City of Green to develop the funding application from the Muskingum Watershed Conservancy District (MWCD). The City and Thrasher had submitted the application to the MWCD in December, 2016. The MWCD had interviewed the two parties concerning the concept that was the preferred alternative. The funding was granted for the preliminary study in the amount of\$50,000.00.

Preliminary Engineering Study

Thrasher performed the as-built survey that will be used to determine the actual construction of the existing dikes and the topography of the localized area. The as-built survey information was used to physically determine the existing basin's volume; also, the inlets, outlets, and emergency overflow to see if they matched the original design. Additionally, while the survey crew was gathering the above data, the Thrasher environmental crews recommended that a stream and wetland delineation be performed to identify potential jurisdictional features on the project location, as well as identify the exiting trees and determine what the impact of the water levels may have of the various species of trees.

Hydraulic Preliminary Design

Thrasher used all of the above-gathered information to develop the preliminary design to increase the elevation of the dikes and reduce the outlets to accomplish the project's intent. Thrasher performed the Hydrological and Hydraulic Study and the flood routing through the dam's spillway system. Using this information, we developed the preliminary design of the basins, including the new levee and improved spillway. Ultimately, this project will be a Class II Dam Structure, but the benefits far outweigh the regulatory permitting and review concerns. The next step was submitting the preliminary report and design information and drainage model to the USGS for ratification. Once the USGS review is completed, Thrasher will submit the preliminary design to the City of Green. The City of Green will forward the preliminary study to the MWCD for consideration for funding of the final design and construction.

PROJECT APPROACH

Many projects follow similar project approaches which include: field evaluation, site survey, design, permitting, contract documents and bidding, and construction administration. However, Thrasher understands that each site is unique and that the same design process does not always apply across the board. Thrasher excels at evaluating projects in a way that provides our clients with superior technical proficiency. Our team utilizes our past project experience and in-depth understanding of each potential project to successfully take it from concept through to completion.

Communication throughout any project is a primary key to a successful project! Upon notification of award our communication procedure will begin with the WVDNR. We will maintain this line of communication throughout the project in an effort to avoid surprises to the owner, contractor, engineer, and ultimately the end user, the citizens of West Virginia.

- 1. State of WV awards project to Thrasher
- 2. Thrasher's Project Manager will contact the WVDNR to set up a project scoping meeting.
- 3. Following project scoping meeting Thrasher will submit a detailed proposal identifying our scope of services and proposed fee for the project, as well as project design schedule.

COMMUNICATION DURING DESIGN

Prior to the initiation of the design services, Thrasher's Project Manager will discuss with the DNR's point of contact how communication during the design phase of the project will be handled. Updates during the design phase can occur in numerous ways weekly status updates via email, conference calls, and monthly progress meetings. Our project teams are well versed in keeping our clients abreast of project status during the design phase in numerous ways, and we tend to customize communication during the design phase to our clients desires.

COMMUNICATION DURING CONSTRUCTION

Thrasher will conduct monthly progress meetings with the contractor, the WVDNR, and key project stakeholders throughout the duration of the project. Meeting minutes will be distributed to all attendees and any other agents identified by the WVDNR. Action items will be documented within the meeting minutes.

Throughout construction Thrasher will have people on-site for project representation as well as material testing. Anytime a Thrasher employee is on site during construction a field report will be prepared. Field reports will be reviewed by the engineering team and distributed to the DNR's construction representative on a weekly basis.

Prior to the start of construction, Thrasher's project manager will meet with the DNR's field rep to determine how communication throughout construction phase of the project will be handled to ensure that DNR is well informed throughout the construction project.

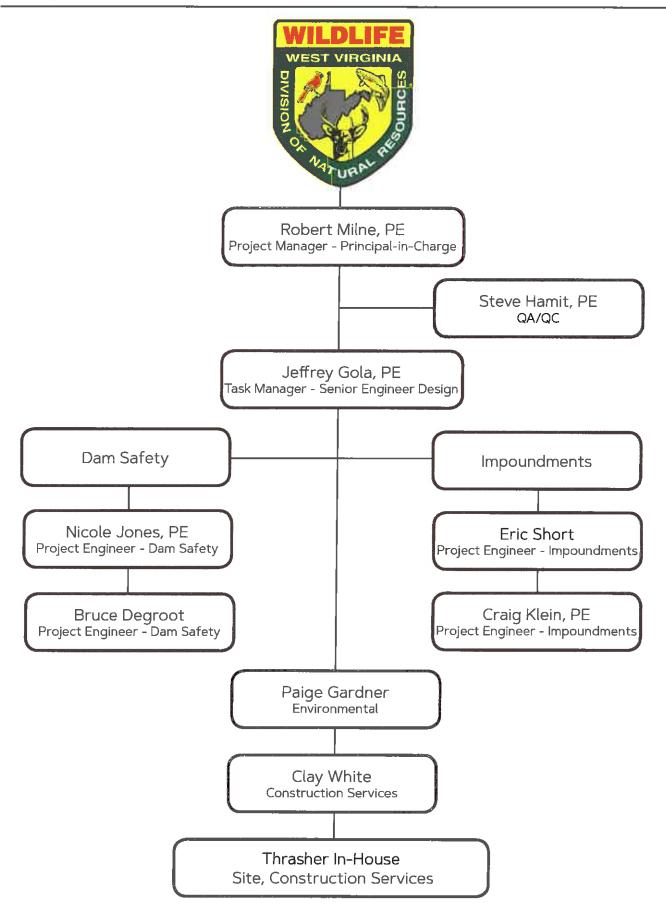
Thrasher does not just work for a client, we partner with them. This type of working relationship helps ensure projects that are on-time and within budget. Thrasher will work with the DNR to clearly define the scope of services and establish a project approach for the individual boating access project sites. After an initial project review, you will find a few preliminary key points which Thrasher believes should be taken into account while establishing the project scope and approach on the following pages:



PROJECT APPROACH

STEP	DESCRIPTION
STEP 1 -	Review existing conditions.
STEP 2 -	Make sure all dams design meets WV code and is still adequate based on existing conditions
STEP 3-	Complete surveys for base mapping
STEP 4 -	Complete construction documents
STEP 5 -	Advertise/Bid/Award contracts for construction (if needed)
STEP 6 -	Construction management and supervision
STEP 7 -	As-built dam certification
STEP 8 -	Project closeout





ROB MILNE, PE

Project Manager - Principal-in-Charge



Robert Milne, PE, joined Thrasher in 2010 and was named Partner in the firm in 2012. Mr. Milne has over 27-years of experience working throughout the tri-state area. He is responsible for the overall management of projects including staff supervision, assignments, contract administration, cost control and on-time project delivery.

Mr. Milne is experienced in civil/site design, public utilities, buildings, as well as roadways, highways, bridges, traffic studies and storm sewer design and construction administration and inspection.

Education:

- Masters of Science, Civil Engineering West Virginia University
- Bachelors of Science, Civil Engineering West Virginia University

Registrations and Certifications:

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

Affiliations

- · Leadership Monongalia County, West Virginia
- Foundations of Leadership / National Leadership

- West Virginia DNR Elk River Boating Access (Active) Kanawha County, West Virginia
- Oil and Gas Permitting Impoundments Various Counties, West Virginia
- West Virginia DNR Palatine Park Master Plan: Boat Ramp and Parking Improvements Marion County, West Virginia
- Marion County Economic Development Council Master Plan and Splash Park Marion County, West Virginia
- Canal Place Master Plan Allegany County, Maryland
- West Virginia University Evansdale Pedestrian Improvements Monongalia County, West Virginia
- Westridge Development 800-Acre Industrial and Commercial Site Development Project Monongalia County, West Virginia
- WVU Milan Puskar Stadium Renovations Monongalia County, West Virginia



STEVE HAMIT, PE, CPESC

QA/QC



Steve Hamit, PE, CPESC, joined Thrasher in 2012, and was named Partner in 2017. He is responsible for Client Services, Project Management, and Business Development within the State of Ohio. He has over 30 years of extensive civil engineering experience in the municipal and public works field.

As former city engineer with the City of Massillon, Ohio, Mr. Hamit had a strong focus on project funding and scheduling. Mr. Hamit has successfully designed and provided construction administration for numerous roadway, storm sewer, sanitary sewer, site development, and design build projects. He is a highly-motivated, solution-oriented professional focused on client services.

Education:

Bachelor of Science, Civil Engineering - Valparaiso University

Registrations and Certifications:

- Registered Professional Engineer (PE)
 - States of West Virginia, Indiana, Ohio, Florida, Louisiana, Michigan, and Pennsylvania
- Certified Professional in Erosion and Sediment Control

Affiliations

- ODOT prequalifications: Bicycle & Enhancement Design, Non-complex Roadway Design, Safety Studies, and Construction Inspection - Construction Engineer Levels 1 and 2
- American Society of Highway Engineers, Ohio Contractor's Association, American Society of Civil Engineers, and the Society of American Military Engineers

- Crouse Pond Dam (Class II Dam) Preliminary Analysis and Rehabilitation Summit County, Ohio
- Mayfair Regional Stormwater Basin Modification of Class II Dam Summit County, Ohio
- Sippo Reservoir Dam Rehabilitation and Dredging Stark County, Ohio
- Seneca Hydro Electric Plant High Head Penstock Capping for Valve Maintenance Design,
 Confidential Client Warren County, Pennsylvania
- Seneca Reservoir Risk Analysis, Confidential Client Warren County, Pennsylvania
- Big Island Water Works Emergency Water Intake & Chemical Feed Project Erie County, Ohio
- Turkeyfoot Heights 48" Energy Dissipater Summit County, Ohio
- Sandalwood Culvert Summit County, Ohio
- Park Drive Extension Hancock County, West Virginia
- East River Street Lorain County, Ohio
- Stanley Ave. & Bell South Ave. Stormwater Project Phases | & II Summit County, Ohio
- · Rolling Green Subdivision Preliminary Drainage Study Summit County, Ohio
- 12th Street NW Improvements Stark County, Ohio
- Chestnut Trail Head Summit County, Ohio



Task Manager - Senior Engineer Design



Jeff Gola, PE joined Thrasher in 1998 and serves as Project Manager and Engineer on storm water, transportation, community improvement, and site development projects. He is experienced in all aspects of project control, from design and drafting, to bidding and over site of the construction inspection. Jeff knows his projects, he has extensive training in hydrology and hydraulics.

Jeff works closely with clients to ensure timeliness, client satisfaction and budgetary aspects. Mr. Gola's experience includes conducting dam safety inspections and assessment, and development of rehabilitation plans and Monitoring and Emergency Action Plans (EAP).

Education:

Bachelor of Science, Civil Engineering - West Virginia University

Registration:

- Registered Professional Engineer(PE)
 - · States of West Virginia and Maryland

- Buffalo Lake Dam, Dam Improvements and Inspections Harrison County, West Virginia
- Dent's Run Dam, Inspections and Monitoring Marion County, West Virginia
- Salem Upper and Lower Dog Run Dam, Improvements and Inspections Harrison County, West Virginia
- Rock Lake Dam, Improvements and Inspections Marion County, West Virginia
- Camp Galilee Dam, Improvements Certifications and Inspections Preston County, West Virginia
- Flat Run Lake Dam, Emergency Rehabilitation and Inspection Tucker County, West Virginia
- Philippi Dam, New Design Barbour County, West Virginia

NICOLE JONES, PE

Project Engineer - Dam Safety



Nicole Jones, PE, serves as a Dam Safety Inspector in the Site Development. Nicole is able to combine her formal education with the knowledge she has gained working in the field to develop effective and creative solutions to problems that arise throughout projects. Her primary focus at Thrasher has been working with the various site development projects on different levels.

Ms. Jones' responsibilities include assisting with site design, drafting, creating and editing project specifications, and reviewing project plans. Ms. Jones' attention to detail has been an asset to the Site Department. Her ability to evaluate project sites and identify key challenges is beneficial to our clients and their bottom line.

Education:

Bachelor of Science, Civil Engineering - West Virginia University

Registration:

- Registered Professional Engineer (PE)
 - · State of West Virginia

- Upper Dog Run Impoundments Improvements: Harrison County, West Virginia
- Buffalo Lake Dam Improvements Harrison County, West Virginia
- Kitzmiller, Maryland Levee Garrett County, West Virginia
- City of Salem Slip Repair Harrison County, West Virginia



ERIC SHORT

Project Engineer - Impoundments



Eric M. Short joined Thrasher in 2003. Mr. Short was a double major at Fairmont State University and joined the firm upon graduation. Mr. Short's expertise lies in Commercial and Residential site development projects as well as oil and gas site development projects. As a Project Engineer, he has been apart of numerous oil and gas projects, residential, commercial and recreational developments.

Mr. Short provides a critical role by utilizing his knowledge of impoundments from working on oil and gas related projects. His experience makes him a valuable member of the team.

Education:

- Bachelor of Science, Civil Engineering Technology Fairmont State University
- Bachelor of Science, Architectural Engineering Technology Fairmont State University

- Confidential Oil/Gas Client, UNB Well Pad, Access Road, and Impoundments Preston County,
 West Virginia
- Confidential Oil/Gas Client, OES Well Pad, Access Road, and Impoundments Preston County,
 West Virginia
- Confidential Oil/Gas Client, Anderson Well Pad, Access Road, and Freshwater Impoundments
 Taylor County, West Virginia
- Confidential Oil/Gas Client, D'Annunzio Well Pad, Access Road, and Impoundments Harrison County, West Virginia
- Confidential Oil/Gas Client, Coaltrain Well Pad, Access Road, and Impoundments Taylor County,
 West Virginia
- Confidential Oil/Gas Client, Gepco-Paletta Well Pad, Access Road, and Impoundments = Harrison County, West Virginia
- PDC Anderson / Stout Emergency Freshwater Impoundments Taylor County, West Virginia
- Confidential Oil/Gas Client, Worthley Freshwater Impoundments and Access Road Brooke County, West Virginia
- Confidential Oil/Gas Client, Heartwood Forestland Fund Freshwater Impoundments and Access Road - Ritchie County, West Virginia
- Confidential Oil/Gas Client, Eisenbarth Freshwater Impoundments Monroe County, Ohio



BRUCE DEGROOT

Project Engineer - Dam Safety



Bruce Degroot joined Thrasher in 2008 following his graduation from Fairmont State University. He began his career at Thrasher as a Project Representative, and has proven his talent to advance with the firm. Currently, Mr. Degroot is serving as Staff Engineer in the Transportation and Site Divisions. Mr. Degroot is responsible for assisting with design, site plans, grading, field inspections, contract specifications, and other various project tasks.

Mr. Degroot's experience in the field has translated over to his work as a Dam Safety Inspector. He is able to apply the knowledge he gained on-site to the designs he develops now. This experience has made him a well-rounded member of the Division.

Education:

Bachelor of Science, Civil Engineering - Fairmont State University

Affiliations

Transportation Engineer Technician Level III Certification (TRET)

- Buffalo Lake Dam, Dam Improvements and Inspections Harrison County, West Virginia
- Dent's Run Dam, Inspections and Monitoring Marion County, West Virginia
- Salem Upper and Lower Dog Run Dam, Improvements and Inspections Harrison County, West Virginia
- Rock Lake Dam, Improvements and Inspections Marion County, West Virginia
- Camp Galilee Dam, Improvements Certifications and Inspections Preston County, West Virginia
- Flat Run Lake Dam, Emergency Rehabilitation and Inspection Tucker County, West Virginia
- Philippi Dam, New Design Barbour County, West Virginia



PAIGE GARDNER

Environmental



Paige Gardner joined Thrasher in 2014 and currently serves as a Project Manager/Environmental Scientist for the firm. Ms. Gardner has over 4 years of experience leading wetland delineations, submitting and coordinating Federal, State, and Local permits, and completing ArcGIS mapping. Ms. Gardner has a diversity of project experience across multiple sectors including transportation, energy, and site development projects.

Ms. Gardner works hand-in-hand with Thrasher's Environmental Division Manager, to coordinate, review, and assess project data. Ms. Gardner's attention to detail and thorough understanding of Section 404/401 permitting and West Virginia (WV) regulations and consultation processes allows her to play a large role in the Environmental Division's internal quality assurance reviews.

Education:

Bachelor of Science, Environmental Studies - Shepherd University

Affiliations:

- Attend 38 Hour Army Corps of Engineers Wetland Delineation Training Program
- SafeLand/SafeGulf USA On-Site Safety 8-Hour Course

- West Virginia DNR Elk River Boating Access (Active) Kanawha County, West Virginia
- West Ridge, Inc., Wetland Delineation and Stream Identification Monongalia County, West Virginia
- Morgantown Utility Board, Cobun Creek Raw Water Line, Wetland Delineation Monongalia County, West Virginia
- Friends of the Cheat, Abandoned Mine Land Reclamationm Wetland Delineation Preston County,
 West Virginia



CLAY WHITE

Construction Services



Clay White joined the Thrasher team as a key member of the Construction Services Department. Mr. White currently serves as a Construction Manager and brings his nearly 10 year resume of successful projects to the table. Mr. White previously worked for The Whiting-Turner Contracting Company out of Baltimore, MD where he was a Project Manager overseeing multi-million dollar contracts.

In his role at Thrasher, Mr. White is responsible for the coordination of stakeholders and sub-contractors, the quality assurance of design development, creating baseline budgets, formulating contract schedules, and executing profitable performance.

Education:

Bachelor of Science, Civil Engineering - West Virginia University

Affiliations/Certifications:

- · Bluebeam Software
- · Primavera Suretrack Project Management
- Primavera P6 Project Management
- CMiC Accounting Software
- BIM Modeling Exposure
- Ebuilder Document Software

- City of Bridgeport Convention and Visitor's Bureau Harrison County, West Virginia
- National Gallery of Art WA 9.1 Renovation Washington, D.C.
- AMC Theaters Renovation Program Nationwide
- Opry Mills Mall Renovation Davidson County, Tennessee
- Aloft and Element Hotels Anne Arundel County, Maryland
- St. Regis Hotel Renovation Washington, D.C.
- Westin Dulles Hotel Fairfax County, Virginia
- Element Hotel Anne Arundel County, Maryland
- Lakeforest Mall Interior Tenant Fitout Montgomery County, Maryland



ICATE OF

ATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virdinia as a assional engineer for the noted firm, hereby certifies

THE THRASHER GROUP, INC. C00517-00

Engineer in Responsible Charge: CHAD M RILEY - WV PE 015189 has complied with section \$30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period

January 1, 2016 - December 31, 2017

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE. PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

> IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL AND SIGNED BY THE PRESIDENT OF SAID BOARD.

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS



Certificate of Authorization issued to:

The Thrasher Group, Inc.

Bridgeport, West Virginia



Certificate of Authorization # 17-5433

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with West Virginia Code § 30-13A-20 The person or organization identified on this certificate is licensed to conduct professional surveying and mapping services In the State of West Virginia for the period

February 6, 2017 through December 31, 2017

This certificate is not transferrable and must be displayed at the office location for which issued.

In witness whereof I have put my hand, this 7th day of February, 2017

KMichael Sheyy

R. MICHAEL SHEPP, P.S., Chairman JAMES T. RAYBURN, P.S., Member

NELSON B. DOUGLASS, P.E.P.S., Secretary SEFTON R. STEWART, P.S., Member

PAUL W. HILL, Public Member

REFERENCES

MR. CHARLIE REESE - DIRECTOR

Marion County Economic and Community Development Council 208 1/2 Adams Street P.O. BOX 1465 Fairmont, WV 26554 304-333-6732

MR. STEVE DEBAR - GENERAL MANAGER

City of South Charleston 1 Rockcrest Drive Box 8336 South Charleston, WV 25309 304-768-4140

MR. JOHN THOMPSON - ASSOCIATE DIRECTOR

Design and Construction Services - West Virginia University 975 Rawley Lane Morgantown, WV 26506 304-293-3625