JANUARY 31, 2013

RFQ # DEP16074

Statement of Qualifications

Hopewell Church
Refuse & AMD Project

Preston County
West Virginia

THRASHER
ENGINEERING

www.thrashereng.com

WEST VIRGINIA ■ OHIO ■
MARYLAND ■ VIRGINIA

PREPARED FOR THE
WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF ABANDONED MINE LANDS & RECLAMATION

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Solicitation

NUMBER	PAGE
DEP16074	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER
304-558-2316

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
Thrasher Engineering, Inc.
30 Columbia Blvd.
Clarksburg, WV 26301

SHIP TO
ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV
25304 304-926-0499

DATE PRINTED
12/21/2012

BID OPENING DATE: 01/31/2013 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		

HOPEWELL CHURCH REFUSE & AMD DESIGN

EXPRESSION OF INTEREST

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE HOPEWELL CHURCH REFUSE & AMD PROJECT IN PRESTON COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

****** THIS IS THE END OF RFQ DEP16074 ****** TOTAL:

SIGNATURE	TELEPHONE	DATE
Chuck Bell	304-624-4108	1/21/13
TITLE: Principal-In-Charge	FEIN: 55-0633596-6	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

THRASHER ENGINEERING

January 31, 2013

West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands and Reclamation
c/o State of West Virginia Department of Administration
Purchasing Division
2019 Washington Street, East
PO Box 50130
Charleston, WV 25305-0130

RE: DEP 16074: Hopewell Church Refuse & AMD Design, Preston County, WV

To the Members of the Selection Committee:

Thrasher Engineering, Inc. (TEI) has successfully completed six (6) projects for the Office of Abandoned Mine Lands and we will soon be completing two others. Our team of engineers - who are assigned specifically to AML projects - are ready to move forward on the Hopewell Church Refuse & AMD Design project, and others. As proven by our recent projects, the DEP can be confident that TEI will provide the highest level of service and technical proficiency, in a cost efficient manner, and meet or beat all deadlines.

TEI has experience in Preston County unmatched by other firms. Our client base in the county includes municipalities, public service districts, and economic development authorities. Our knowledge of the area, in addition to our proximity to the site will prove to be advantages to the successful completion of this project.

We look forward to the opportunity to discuss your needs and demonstrate how TEI can continue to provide successful projects with the service you deserve.

Sincerely,

THRASHER ENGINEERING, INC.

CHADWICK D. BILLER, PE
Partner / Principal-in-Charge

30 COLUMBIA BLVD | PO BOX 1532 | CLARKSBURG, WV 26301
TEL: 304.624.4108 FAX: 304.624.7831 EMAIL: thrasher@thrashereng.com

selection criteria

A. West Virginia Professional Engineers (Civil or Mining) in the Primary Office.

Thrasher Engineering, Inc. employs 14 West Virginia registered Professional Engineers based at our Primary Office located in Clarksburg, WV.

Woody Thrasher, PE
Chad Biller, PE
Mike Nestor, PE
Daniel Ferrell, PE
Ken Moran, PE
Clay Riley, PE
Matt Fluharty, PE
Tom Urquhart, PE, BCEE
Chad Riley, PE
Jeff Gola , PE
Doug Forni, PE
Rob Milne, PE
Richard Hovatter, PE
Brad Messenger, PE
Garrett Grubb, PE

B. Reclamation engineering design experience of the Primary Office's WV RPE as it relates to the specific project problem areas.

Chadwick Biller, PE, will serve as Principal-in-Charge and has more than 19 years of civil engineering experience with specific emphasis on mine reclamation, site development, highways, roads, bridges, and airports. Mr. Biller has managed the design and construction administration for a number of large grading and drainage projects in West Virginia. These projects have included design for mine reclamation, industrial/business parks, highways, and airports. Mr. Biller is also familiar with reclamation of mine portals, using either wet or dry seals.

April Rohrbaugh, Staff Engineer, has completed the design of four (4) AML projects, under the direction of Chad Biller. **Robert "RJ" Hovatter**, Project Engineer, joined Thrasher Engineering in 2011, bringing extensive experience in grouting projects for the WVDEP during his tenure with his previous employer, CTL.

Larry Nottingham, PE, with NGE will serve as our Geotechnical sub-consultant. He has over 30 years of AML design experience.

C. Available WV-AML Design Teams within the Primary office (A design team should consist of one Project Engineer (Civil or Mining), one CAD person and available support personnel as required by the particular project).

Thrasher Engineering has 11 WV-AML Design Teams within the Primary Office, and over 120 additional support personnel that are available if required by the project.

Civil Engineer	CAD
Chad Biller, PE	*Cliff Cleavenger, PE*
RJ Hovatter, PE	*Brandon Hinkle*
Mike Nestor, PE	*John Pitman, EIT*
Dan Ferrell, PE	*Jason Heflin*
Ken Moran, PE	*Joe Lowther*
Clay Riley, PE	*Phil Lantz*
Matt Fluharty, PE	*John Sirianni*
Tom Urquhart, PE, BCEE	*Robert Hebb*
Chad Riley, PE	*Mike Oldaker*
Jeff Gola, PE	*Zack Gain*
Doug Forni, PE	*Trudy Heil*

statement of qualifications

Established 1983

Officers/Partners

H. Wood Thrasher, P.E., President
Kenneth P. Moran, P.E., P.S. Vice-President
Ron Stanley, CPA Sec./ Treasurer

Partners

Wm. Randy Watson Public Utilities
Chadwick Biller, P.E. AML/Site/ Transportation
Chad Riley, P.E. Site Development
Robert Milne, P.E. Site Development
Clay P. Riley, P.E. Public Utilities
Daniel E. Ferrell, P.E. Public Utilities
Craig Baker, Assoc. AIA Architecture
Jonathan Carpenter, P.E. Charleston Branch Manager/Public Utilities

Scope of Services

Public Work – *Water / Sewer / Treatment Plants / Facility Plans / Business and Industrial Parks*
Site Development – *Industrial / Business / Commercial / Residential*
General Civil Engineering – *Municipal Engineering / Subdivisions / Paving / Highway / Roadways*
Environmental Engineering
Architecture
Landscape Architecture
Land Surveying, Platting, Legal Description Preparation
Construction Management / Materials Testing / Inspection
GIS Mapping

Locations

30 Columbia Boulevard, Clarksburg, WV
300 Association Drive, Charleston, WV
3000 Thayer Center, Oakland, MD
380 Airport Circle, Beckley, WV – Lab & Field Office
4150 Belden Village Street, Canton, OH
Princeton, WV – Pentree, Incorporated – Affiliate
Fredericksburg, VA—GeoMetrics, Inc.—Affiliate

Thrasher Engineering, Inc. (TEI) is a civil engineering consulting firm, specializing in public works projects. The majority of TEI's work involves publicly funded water treatment and distribution systems, sewage collection and treatment systems, and industrial and business parks. Over $600 million in water, sewer, site development, survey and construction management projects have been designed and supervised by the firm.

H. Wood Thrasher and Henry A. Thrasher formed the company in 1983 with a commitment to excellence and professionalism in engineering. H. Wood Thrasher, P.E. remains principal of the company. Providing a full range of professional engineering services, Thrasher Engineering, Inc. currently maintains a staff of 200+ full-time employees. Our staff includes registered professional engineers, graduate engineers, registered professional surveyors, and support staffing of surveyors, design technicians, CADD technicians, construction managers, and secretarial / clerical personnel. This professional staff has a wealth of experience and is our greatest asset. This includes not only the principals but also the technicians, surveyors, construction managers, and office support staff. Combining education with experience, the qualified staff of TEI strives to provide service that is second to none and is committed to maintaining a strong reputation for quality work. The company's full and diverse staff has the resources to handle many projects, both large and small, simultaneously.

Specific Design for AML Projects

The expertise of our company is confirmed in the variety of projects successfully completed. As demonstrated below, Thrasher Engineering has, or is in the process of, completing eight (8) Abandoned Mine Lands (AML) projects for the West Virginia Department of Environmental Protection (WVDEP)

THRASHER ENGINEERING'S WVDEP / AML PROJECTS

- *Squires Creek: Reclaim Refuse Piles; Highwall Re-grading*
- *Anglin's Run: Seal Portals; Highwall Re-grading*
- *Roaring Creek: Sink Hole Repair; Portals; Re-grading*
- *Overfield (Lafferty): Landslide Repair; Portals; Re-grading*
- *Laurel Run: Bat Gates; Portals; Re-grading*
- *Clarksburg Lyons Landslide: Retaining Wall; Re-grading*
- *Pleasant Valley : Highwall; Portals; Re-grading*
- *Roger Camp Hill: Access Road; Drainage and Culverts; Re-grading*

The scope of the above projects has varied; Thrasher has applied the follow design aspects for these projects:

Reclaim Refuse Piles: Refuse piles were incorporated into the backfill of re-graded highwalls. Areas of refuse were also covered with soil and re-seeded.

Highwall Re-grading: Miles of highwall have been backfilled and re-graded utilizing plans developed by Thrasher Engineering. Balancing the amount of cut/fill and keeping the amount of disturbance to a minimum is a challenge on any AML project; Thrasher has successfully met that challenge on these projects.

Sealing of Portals: Thrasher has developed plans for dozens of portal seals for AML projects, which also included bat gates.

Sink Hole Repair: Shallow mine voids caused sink holes that diverted a natural stream underground, subsequently lowering the water elevation of an existing farm pond. To address the problem, Thrasher developed a plan to backfill the voids, thereby reestablishing the stream to its original location.

Landslide Repair: Two different landslide repair projects have been completed by Thrasher Engineering. Each repair required extensive geo-technical designs for "H" pile wall with concrete lagging and concrete segmental block walls. Both projects were in close proximity to residential areas that required special care during construction.

Drainage Design: All of the AML projects assigned to Thrasher required design of drainage structures . These have included ditches, culverts, and grouted ditches. Drainage calculations were completed and a report generated for each project.

Permitting: The permitting process can delay projects if permits are not submitted correctly and in a timely manner. Thrasher Engineering prides itself on our ability to quickly obtain permits for our clients; we are able to utilize our excellent relationship with the WVDEP for NPDES permits as well as our relationship with the West Virginia Division of Highways for entrance and drainage permits. Accurate permit applications receive less scrutiny and are reviewed in a timely maner.

Additional Related Services

SITE DEVELOPMENT

TEI has planned, surveyed, designed and provided construction management services for more than 40 site development projects for both public and private clients. Projects ranging from sites for residential housing to business and industrial parks to multi-purpose "live, work and play" communities are included in our range of site development projects.

Our objective in site development engineering is to go beyond just the engineering aspect of the project; we work as a team with our clients to understand their present and future needs. With that information, we work with them to evaluate site locations that best suit their short and long-term goals.

Our Site Development Services Include:

Planning and Conceptual Design- evaluation of potential sites; recommendation of most functional, most cost-effective alternative; layout of site reflecting best use of land available; design of off-site and on-site (underground) including water service, sanitary sewer service, storm drainage facilities, telephone, electrical service, and television cable service; obtaining all permits necessary to allow construction including State Health Department for extension of water and sewer lines, WV Division of Environmental Protection Sediment and Erosion Control Permit, WV Division of Highways

entrance permit, as well as any local permits required; roadway design; layout of industrial lighting; and construction management services to assure compliance with design.

Grading Plans - which includes development of cut and fill quantities and construction plans (showing existing and proposed contours, structures, and facilities on site) to allow for the best use of available land.

Utility Layout/Mapping - includes design of utility extensions to serve existing and proposed facilities, as well as the complete mapping of existing utilities.

STORM WATER DRAINAGE / SEDIMENT AND EROSION CONTROL

Our experience includes development of Sediment and Erosion Control measures on all types of construction sites as required by the WV Division of Environmental Protection, design of drainage facilities including piping, intake structures, etc., for site stabilization and flood control.

Our staff members have considerable hydrologic and hydraulic design experience and have successfully obtained local, state, and federal erosion and sediment control permits and National Pollutant Discharge Elimination System (NPDES) permits for point source and storm water discharges.

Capabilities in the evaluation and design storm water drainage include:

- ***Hydrology Studies / Hydrographic Mapping***
- ***Storm Water Collection Systems***
- ***Detention Ponds***
- ***Injection Wells***
- ***Underground Storage***
- ***Combined Sewer Overload (CSO) separation***

ENVIRONMENTAL REPORTING SERVICES

Thrasher Engineering, Inc. provides full environmental assessment and clearance services. We have more than 20years of experience conducting environmental/natural resource compliance consultation with West Virginia Division of Environmental Protection, (WVDEP), Federal Aviation Administration and Federal Highways Administration, US Department of Agriculture-Rural Development Utility Program, and US Environmental Protection Agency (EPA).

Experience includes:

- ***Permitting Related Activities (401 and 404)***
- ***NEPA Environmental Document Preparation***
- ***Wetland Delineation and Mitigation***
- ***Rare, Threatened and Endangered Species Section 7 Informal Consultation***
- ***Rare, Threatened and Endangered Species Section 10 Habitat Conservation Plans***
- ***Water Use and Water Quality***
- ***Air and Noise Impacts, Assessments, and Controls***
- ***Soils and Geological Resources***
- ***Cultural Resources –(Sub contracted to a reputable and approved Cultural Resource Consultant)***
- ***Hazardous Materials***
- ***Sediment and Erosion Control***
- ***Consent Orders***
- ***Compliance Schedules***
- ***Site investigations***
- ***SPCC Plans, Contingency Plans, Ground Water Protection Plans and Storm Water Pollution Prevention Plans***
- ***Waste Treatment and Site Remediation***
- ***Waste Disposal***
- ***Channel Restoration***
- ***Stream Bank Stabilization***
- ***Enforcement Actions***

SURVEY

In addition to a full service professional engineering staff, maintains a complete surveying department which includes 10 licensed professional land surveyors, twenty full-time survey crews, CADD technicians, and office support staff.

at your service

We perform our work utilizing the most current methods and equipment available. Our survey ***work is*** accomplished using global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities.

The type of surveys provided by TEI varies greatly as well and covers virtually all aspects of land surveying, such as:

Pre- and Post-Mining Surveys - vertical and horizontal control, inspector's report of protected structures, interior and exterior photographs, and videos. TEI provides these survey services for numerous coal companies, including Eastern and Martinka. Additional services performed for Eastern includes construction layout for impoundments, shaft site boundary and topographic surveys, map editing, and collection of well inventory data.

Boundary Surveys - verification of land owners, traverse and location of existing monuments, computations of closure, establishment of property corners, actual field stakeout, and preparation of plats and legal descriptions for property owners.

Topographic Surveys - location of existing features and determination of contours used in engineering layout of water distribution systems, sewer collection systems, industrial park layouts, etc.

Construction Layout - providing horizontal and vertical control for contractor's use and using this information to establish construction controls.

GPS Surveys - horizontal and vertical control networks.

Thrasher Engineering, Inc. also utilizes top-of-the line survey equipment. Our survey work is accomplished with global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities. Additional Survey Services, added in 2012 include: ***High Accuracy Monumentation, Astronomic Observations / Orientation, NGS Blue booking, Hydrographic, Terrestrial Scanning, 3D As-builts, 3D monitoring, Sub-surface Utility Location / Designation.***

CONSTRUCTION MANAGEMENT AND INSPECTION

TEI knows how projects should be built. We can provide the knowledgeable and experienced personnel necessary to manage the construction phase of your project. Our project managers and inspectors are experienced in all types of construction activities. From utilities, site development and storm water management to roads, bridges and airports, we apply our construction management and inspection expertise to ensure successful projects. Our construction managers and our inspectors have years of experience; many of our inspectors are certified by the West Virginia Department of Transportation / Division of Highways for roadwork and materials testing.

MATERIALS TESTING

TEI's Materials Testing Department is capable of performing a wide range of field and laboratory tests. Our laboratory at our Clarksburg, WV office is one of only three nationally certified facilities in the State of West Virginia. Additionally, our engineers and technicians who perform tests both in the field and in the lab are also certified by the State.

GEO-TECHNICAL SERVICES

For these projects, we will utilize Novell Geo-Environmental, a Certified Minority / Women Business Enterprise (MBE/WBE).

EQUIPMENT AND SOFTWARE

TEI provides one of the largest networks of computer aided design (CAD) equipment, software and trained personnel in the State of West Virginia.

Civil 3D, Carlson and Microstation V8 software is utilized at 70 CAD stations within the Group. Additionally, equipment includes 10 large format (size E) plotters and 5 large format plotter / scanners.

CAD plans are prepared by both dedicated CAD employees and by staff engineers and engineering technicians in each of the firm's offices. This equipment allows our design department to perform accurate work quickly and efficiently. All departments have the capability to electronically transmit data to clients requesting this service. This blend of experienced personnel utilizing modern equipment results in successful projects and satisfied clients.

TEI offers the largest engineering staff in the State of West Virginia. The expertise of the TEI staff is a combination of education and experience; it is reflected in all aspects of our services. The firm is led by a talented group of principals and partners who are dedicated to the success of our projects and the satisfaction of our clients.

PROJECT TEAM

Thrasher Engineering has assigned a team of experienced professionals to the WVDEP for Abandoned Mine Land Projects.

Chadwick D. Biller, P.E. will be the Principal-in-Charge. His role in this project will be to oversee all design aspects of the project and work closely with the DEP / AML office to ensure timeliness client satisfaction and oversee budgetary aspects. Mr. Biller is a Partner in Thrasher Engineering and manages AML, site development, and transportation projects.

April Rohrbaugh will serve as Project Manager and her responsibilities regarding AML projects includes design of wet and modified mine seals, grading associated with reclaiming, storm water management, and erosion and sediment control. April has played a significant role in the design of each AML project assigned to Thrasher.

Mike Nestor, P.E. will serve as Project Engineer and be responsible for design of the project. Mr. Nestor's experience includes drainage and sediment control design projects for site development projects. He served as design engineer for the Roaring Creek and Anglin Run AML projects.

Richard (RJ) Hovatter, P.E. will serve as Project Engineer for the project. Mr. Hovatter has extensive knowledge of abandoned mine land and emergency situations such as landslides and mine subsidence of abandoned mine lands. Mr. Hovatter is responsible for the designs, scheduling, collection and reporting of mine surface, sediment erosion control plans and waterline feasibility studies.

Geo-technical services will be under the direction of ***Larry Nottingham of NGE***, a Certified DBE business.

Resumes of the project team members follow in additions to the information included in the AML Consultant's Confidential Qualifications Questionnaire.

Chadwick D. Biller, P.E.

Partner / Principal-In-Charge

Chadwick D. Biller, P.E. joined Thrasher Engineering, Inc. in 1999, and is a partner with the firm. Mr. Biller has experience in all aspects of engineering. His primary emphasis has been on site development, including projects related to the rehabilitation of Abandoned Mine Lands. He also leads highways, roads, bridges and airport projects along with managing the Transportation Department in Thrasher Engineering, Inc.

Mr. Biller manages and designs engineering projects for the WVDOH. These projects include four-lane divided highways, bridges, two-lane roads and road widening projects. He is the airport engineer for the North Central West Virginia Airport. His responsibilities include day-to-day ad long term upgrades for the airport to promote safety and develop airport properties. Mr. Biller manages site development projects for private and public clientele. These projects included mass, grading, roads, drainage, storm water management, erosion and sediment control and numerous regulatory permitting activities.

Highlighted Experience

Principal-in-Charge—Abandoned Mine Land Restoration

- **WVDEP Abandoned Mine Lands: Responsible for contractual issues, scheduling, budget and quality control**
  - ***Squires Creek:*** Reclaim Refuse Piles; Highwall Re-grading
  - ***Anglin's Run:*** Seal Portals
  - ***Roaring Creek:*** Sink Hole Repair
  - ***Overfield (Lafferty):*** Landslide Repair
  - ***Laurel Run:*** Bat Gates
  - ***Clarksburg Lyons Landslide:*** *Retaining Wall*
  - ***Pleasant Valley :*** Highwall
  - ***Roger Camp Hill:*** Access Road; Drainage and Culverts

Education:

Bachelors of Science, Civil Engineering—West Virginia University

Certifications:

Registered Professional Engineer (PE)—State of West Virginia #13620
Registered Professional Engineer (PE) - State of Pennsylvania #PE056012E
Registered Professional Engineer (PE) - State of Ohio #64594

Affiliations:

American Society of Civil Engineers
American Society of Highway Engineers
Society of American Military Engineers
National Society of Professional Engineers

Principal-in-Charge/ Project Manager—Site Development

- ***Taylor County Commission,*** Re-roofing of Courthouse and Jail—Taylor County, WV
- ***Fairmont State University Aerospace Center—*** Marion County, WV
- ***Raleigh County Memorial Airport Industrial Park—***Raleigh County, WV
- ***Putnam Business Park—***Putnam County, WV
- ***Wood Products Business Park***
- ***Aurora Flight Sciences***
- ***Various Subdivision in Berkeley County*** Ranging From 12 to 420 Lots
- ***Site Plan for Hi-Tech Consortium Expansion***
- ***Site Plans for Nippon Thermostat,*** Green Metals and Schwans, Putnam County
- ***Pendleton County Courthouse Annex***
- ***Wingate Hotel, Charles Pointe,*** *Bridgeport, WV*
- ***Daycare Center and USDA Parking Lot,*** *Hardy County*

- ***City of Pleasant Valley, Sidewalks***
- ***Snowshoe Mountain Resort / Intrawest*** – *The Seneca*
- ***Wetland Replacement Project,*** Putnam County
- ***Hurricane Business Park***
- ***Shinnston City Park,*** Including Pool and Bathhouse
- ***City of Bridgeport,*** Walking Trail and Pedestrian Bridge

Principal-in-Charge/ Project Manager—Airports

- ***Harrison Marion Regional Airport*** – Improvement Master Plan
- ***Raleigh County Airport*** – Business Park and Master Plan
- ***Grafton Hospital,*** Helipad Relocation
- ***Parkersburg Airport*** – Industrial Park
- ***Huntington Tri-State*** – Industrial & Business Park

Principal-in-Charge/ Project Manager—Roadways/ Bridges

- ***Old Bridgeport Hill New Storm Drainage System***
- ***Snowshoe Drive Upgrade***
- ***King Coal Highway***
- ***Terra Alta Curve***
- ***Lodgeville Road***
- ***North Bridgeport Bypass***
- ***Corridor H***
- ***Upgrade of US Route 19***
- ***East Street and US Route 50, Parkersburg***
- ***Merrick Creek Connector***
- ***City of Bridgeport, Valley Drive, Chenoweth Drive, Village Drive and Meadowbrook Mall Road***
- ***Lodgeville Bridge***
- ***Indian Fork Bridge***
- ***Jakes Run Bridge***
- ***Littleton and Watersnake Bridges***
- ***Verner Bridge***
- ***Rehabilitation of the 5th Street Bridge, Parkersburg***
- ***Rehabilitation of the 35th and 36th Street Bridges, Charleston***
- ***Kittonsville Bridge Replacement, Lewis Co.***
- ***Water Street Bridge Replacement, Logan Co.***
- ***Wayne County High School Bridge Replacement***
- ***David Morgan Memorial Bridge, Marion County***

April Rohrbaugh

Project Manager / Engineer

April Rohrbaugh joined Thrasher Engineering in January of 2006 and serves as Staff Engineer in the site department at the Oakland Maryland Branch. Mrs. Rohrbaugh has experience in all aspects of site engineering, taking projects from survey to concept to construction. Specialties include: Design Surveying consisting of both field traversing and survey locations and aerial mapping,

Conceptual Planning: planning for residential, commercial, and recreational developments,

Site/Land Development Engineering: geometric layout of sites, subdivisions, and roads, grading, drainage, storm water management, erosion and sediment control, and various regulatory permitting requirements, with focus on Abandoned Mine Lands Projects

Education:

Bachelors of Science, Civil Engineering—West Virginia University

Highlighted Experience

Project Manager / Engineer —Abandoned Mine Land Restoration

- ***Squires Creek:*** Reclaim Refuse Piles; Highwall Re -grading
- ***Anglin's Run:*** Seal Portals
- ***Roaring Creek:*** Sink Hole Repair
- ***Overfield (Lafferty):*** Landslide Repair
- ***Laurel Run***: Bat Gates
- ***Clarksburg Lyons Landslide:*** Retaining Wall
- ***Pleasant Valley :*** Highwall
- ***Roger Camp Hill***: Access Road; Drainage and Culverts

Project Manager / Engineer — Site Development

- ***MCHENRY BUSINESS PARK*** *(McHenry, MD) - Provided infrastructure design for a 180 acre Business Park located in McHenry, Maryland. Design responsibilities included: Design survey and various platting requirements for land transfer and utility easements. Access road designs including horizontal and vertical alignments and an entrance off of a county road. The design of erosion and sediment controls for construction activities and swale and culvert conveyances to 5 basins to control storm-water run off from the proposed roadway infrastructure. Consulted with local utility companies to devise utility plans and sections for cable, electric and telephone extensions and provided a roadway lighting plan. Assisted in the design and layout of potable water line extension including a site plan for a proposed 250,000 gal water tank. Assisted in the design and layout of sanitary sewer gravity and force main lines including site plans for 2 sewage lift stations. Participated in weekly construction progress meetings and provided updates/reports to owner/developer*
- ***ASHBY CREST ESTATES*** *(Ashby, WV)- Responsible for design survey and topographic mapping and road design. Completed plat work for Mineral County Planning and Land Development approval. 54 Lot Subdivsion*
- ***ASPEN WOODS WEST*** *(Garrett County, WV) - Redesigned lot layout to incorporate more common area to accommodate equestrian use. Complete plat work for the Garrett County Planning and Land Development. 28 Lot Subdivision*
- ***CRYSTAL SPRINGS WALKING TRAIL*** *- Completed a concept and design, as well as, overcame difficult site constraints which included wetlands, a stream crossing and slope compliance to meet ADA Standards.*
- ***G&W LUMBER*** *- The existing lumber yard was extended to add approximately 1 acre of storage area. The site was graded to removing an excess of 17,000 CY of soil from the property. Also, an underground stormwater detention system was designed to maximize the storage area.*
- ***GINSENG HILL*** *- On this design grass lined swales and stormwater structures were used to treat run-off. To drastically reduce the volume requirements of the stormwater structures, a clear water diversion swale along with a storm sewer system that carried the "clean water" to an existing outlet was utilized.*
- **JOHN FRAM** (Garrett County, MD) - *Completed a sand mound design which was approved by the Garrett County Health Department.*

Michael Nestor, PE

Project Manager / Engineer

Mike Nestor , PE joined Thrasher Engineering in 2005 and serves as Project Manager and Engineer. Mr. Nestor has a wide range of experience in residential and commercial site development projects, utilizing all aspects of infrastructure design including street and lot layout, street profiles, extensions of public sewer and water systems, storm water drainage, storm water management, erosion and sediment control plans, and NPDES permitting.

Highlighted Experience

- ***WV DEP AML PORTAL AND DRAINAGE DESIGN****- Design for access roads, drainage control channels, re-grading and wet-seal of deep mine portals for Anglin's Run and Roaring Creek sites in Barbour County.*
- ***Hawks Nest****—Berkeley County, WV—Developed Stormwater Management Plan for residential subdivision using low impact development methods. Scope included site grading, storm water management, erosion and sediment control and other misc. items.*
- ***WVU Milan Puskar Stadium Silver Lot Improvements****—Morgantown, WV—3-phase project to improve the lot, including the replacement of a stormwater detention pond with an underground system, design of curb, new lighting and parking refigure plan.*
- ***Fairmont State University Stormwater Management Program****—Fairmont, WV—Development of a stormwater management program (SWMP) for FSU campus, which is classified as an MS4 entity. Scope included meeting MS4 requirements in addition to preparing and submitting all necessary permit applications to the WVDEP.*
- ***City of Clarksburg Stormwater Management Program*** *—Clarksburg, WV—Development of a stormwater management program (SWMP) that works for the City and satisfies permit requirements.*

Education:

Bachelor of Science, Civil Engineering Technology, Fairmont State University

Certification:

Registered Professional Engineer (PE), State of West Virginia #18467

Affiliations:

North Central WV American Society of Highway Engineers—ASHE (President)

American Society of Civil Engineers

Eastern Panhandle Home Builders Association

Additional Stormwater Projects:

- ***Inwood Drainage Project****—Berkeley County, WV*
- ***Oak Hill Drainage Project***
- ***AML****—Roaring Creek & Anglins Run, WV*
- ***Chuck's Pizza****—Berkeley County, WV*
- ***Leisure Living Estates*** *-Section IV Berkeley County, WV*
- ***Maidstone on the Potomac****-Berkeley County, WV*
- ***Mulberry Knoll****—Berkeley County, WV*
- ***National Propane****—Berkeley County, WV*

Additional Sidewalk Projects:

- ***Westover Sidewalk Replacement and Repair****—1500 feet of new sidewalks along Dunkard Avenue, WV 100 and U.S. 19 to provide a safe route for pedestrians in the City.*
- ***North Middle School "Safe Routes to School" Project****—Martinsburg, WV—Developed construction plans for approximately 1,300 LF of asphalt walking path in accordance with Safe Routes to Schools Program. Project included miscellaneous drainage structures as well as coordination with various local utilities.*
- ***Town of Capon Bridge Sidewalk Project****- 170 SY of concrete sidewalk that included curb work, gutters stromwater drainage and other miscellaneous accessories to enhance the sidewalk.*
- ***Berkley County Schools "Safe Routes to School" Project****- for Opequon School consisted of 2,000 LF of walking path.*

Richard (RJ) Hovatter Jr., P.E.

Project Manager/Project Engineer

Richard (RJ) Hovatter Jr. joined Thrasher Engineering, Inc. in 2011 and serves as Project Manager from Thrasher Engineering's Clarksburg Office. As a graduate of Fairmont State University and previous experience, Mr. Hovatter has extensive knowledge of abandoned mine lands. Mr. Hovatter is responsible for the designs, scheduling, and management of site designs, oil and gas well site designs, sediment erosion control plans, stormwater plans, and waterline feasibility studies.

RJ's areas of expertise include:

- Abandoned Mine Lands: Managed the development of design, grading, storm water and sediment erosion control plans for over fifteen projects in West Virginia, Indiana, and Maryland. The focus of these projects included high wall reclamation, AMD collection and treatment, waterline feasibility studies, and grout stabilization plans for abandoned underground workings.
- Abandoned Mine Land Emergency : Managed the design of over twenty AML Emergency projects in both Ohio and West Virginia. These projects varied from landslides to mine subsidence events directly
- Civil Site Design: Directly responsible for site design, grading, storm water and sediment erosion control plans and bid documents for over twenty private and commercial developments. related to abandoned mine lands.
- Mining and Surface Mine Permit Projects : Completed Multiple Blast home inspections : Phase I Environmental Site Assessments, valley fill foot printing for surface mines and various sampling procedures relative to the surface mine permit process.

Highlighted Experience

- ***WVDEP Thomas NE Phase I, II, III***- *developed group stabilization plan for multiple structures in the Town of Thomas to protect them from mine subsidence damage. Designed grout injection hole layout for structures based on existing utility locations to provide protection. Completed construction drawings, bid quantities, specifications and bid package.*
- ***Ohio DNR Merkel Landslide***- *Designed emergency reclamation for a landslide that developed from an abandoned surface mine pit.*

Education:
B.S. Civil Engineering Technology– Fairmont State University

Registrations:
West Virginia Professional Engineer
Pennsylvania Professional Engineer

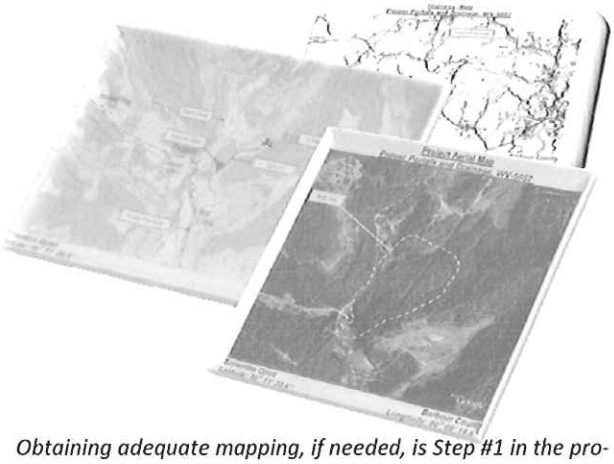
Certifications:
State of Maryland Erosion and Sediment Control
Level I Rosgen Natural Stream Construction
Level II Rosgen Natural Stream Construction
HEC– RAS Operator Training Short Course
Annual Oil and Gas training PA– Certified for expedited review of ESCGP-1
Annual MSHA Training
Twelve plus years' experience in AutoCad and site Development software

- ***Ohio DNR Riddles Run Landslide***- *Designed emergency reclamation for a landslide that developed down slope from abandoned deep mine entry. Reclaimed slip area.*
- ***Ohio DNR Chaney Highwall***- *Designed a reclamation plan for an abandoned surface mine highwall and pit area. Designed a borrow site and reclaimed pit and highwall area.*
- ***DRURY INN***- *Developed a grout stabilization plan for Drury Inn (St. Louis, MO) to protect proposed structure from possible mine subsidence damage. Designed grout injection hole layout.*
- ***Maryland Bureau of Mines Permit 436 Haulroad Landslide***- *Designed emergency reclamation plan for a landslide that developed down slope from active surface mine haulroad. Reclaimed slip area.*
- ***Ohio DNR General Clay IM-0455***- *Site design and reclamation plan for abandoned clay surface mine. Consisted of several highwall and regrade areas. Provided positive surface runoff drainage to two storm water control ponds.*
- ***Ohio DNR General Clay IM-0021***- *Site design and reclamation plan for abandoned clay surface mine. Consisted of several highwall and regrade areas. Provided positive surface runoff drainage.*
- ***Ohio DNR McCourt Landslide***- *Designed reclamation plan for a landslide that developed in a previously reclaimed surface mine. Reclaimed slip area. Designed a rock toe key and finger drains to collect subsurface drainage and help stabilize the slip area.*

our approach to successful projects

In order to develop an understand of the WV DEP's needs for each project, TEI studies the information provided in the RFQ. Based upon our findings, we have developed the following project approach to demonstrate our technical abilities and straight forward method of design and construction.

This project approach is a general approach that can be used on any WV DEP reclamation project and may be modified depending on the existing information that is available for the specific project. Also some steps may not be need on every project.



Obtaining adequate mapping, if needed, is Step #1 in the project approach process

Step #1 Obtain adequate mapping. The limits of construction will be flown and digitally mapped or, if the area is small enough, survey crews will field survey the area. TEI will then provide 1" = 50' scale mapping with 2' contours. Spot elevations and critical cross sections may be completed in the field if necessary to make tie-ins.

Step # 2 Design the project. TEI will work closely with the WV DEP in designing the project. Field reviews will be conducted to determine the most cost effective method to be used to reclaim the area. A preliminary design based on the field reviews will be submitted to the WV DEP. After receiving comments or corrections, TEI will submit the final plans, specifications and design report.

The design report will consist of the bore logs, piezometer elevations, quantity calculations, right entry forms and any other assumptions that were made during the design process.

Step #3 Prepare for construction. TEI will also set up reference points, benchmarks and control points outside of the construction limits so the contractor will be able to construct the project in the future. TEI will complete any permits, right-of-ways and easements that are necessary to construct the project. The project manager and engineer will attend the pre-bid meeting to answer any questions that contractors may have about the design.

Step #4 Construct the project. The project manager will be available during construction to answer any questions the contractor or inspector may have TEI inspectors that are certified by the State of West Virginia are available to be used it the WV DEP requests this service.

The pictures above were taken at the project site of the WV DEP's Hopewell Church Refuse and AMD Design in Preston County, WV.

WV DEP ABANDONED MINE LANDS

ANGLIN'S RUN #1
ROARING CREEK STREAM RESTORATION

Anglin's Run #1 Barbour County

This area included a total of eight (8) collapsed mine portals with at least 5 of them having discharges ranging from 1 to 10 gpm. Total flows were estimated to be between 25 and 30 gpm. Thrasher Engineering's scope and plans for this project includef construction of an access road into the site, excavation and wet seal of at least eight (8) deep mine portals and the re-grade and fill of subsidence sinkholes. To carry water safely off site, drainage control channels, conveyance pipe and under drain were constructed. All areas disturbed by construction were soil covered, conditioned and re-vegetated.

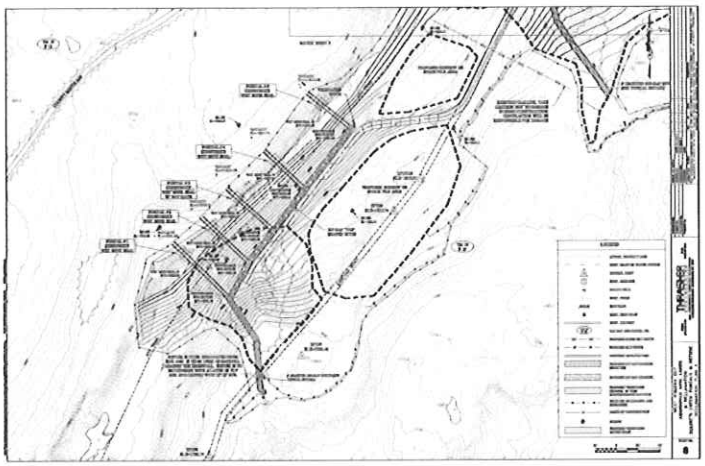
Roaring Creek Stream Randolph County

This project involved the elimination of subsidence depressions, the closure of open portals and the treatment of AMD. The Roaring Creek Watershed was heavily deep mined and surfaced mined prior to 1977. The project area consisted of 3 open and 3 closed portals discharging AMD; AMD seeped along the unnamed tributary and an area of subsidence, which drainedsurface water into the mine workings. AMD flow from the deep mine portals rangedfrom 10 gpm to 100 gpm with PH ranging from 3.1 to 5.0. The seeps along the UNT showed an average PH of 3.3. Thrasher's design plans called for the construction and rehabilitation of access roads to the sites, and installation of wet seals at the portal locations (4 Portals total). The plans also included re-grading the subsidence area to prevent surface water from entering the mine workings, and installing an emergency spillway on the existing pond which was designed to handle the additional flow.

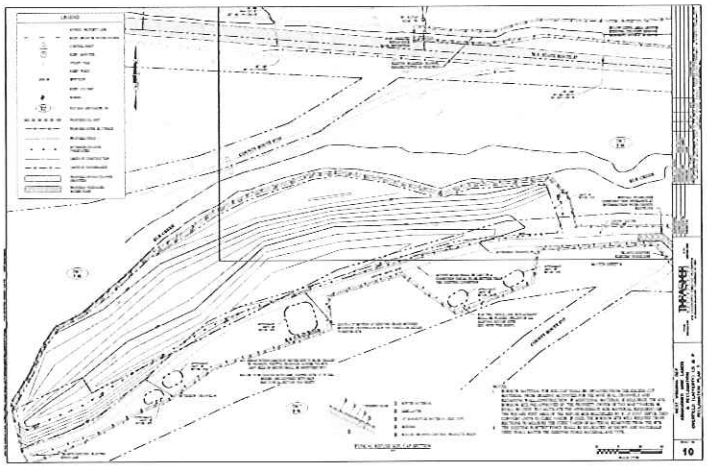
WV DEP ABANDONED MINE LANDS

SQUIRES CREEK PORTALS AND REFUSE

Squires Creek abandoned mine lands site consists of one mine building (mixer), unvegetated coal refuse, deep mine portals and acid mine drainage. The site included two refuse piles covering an area of about 2.5 acres and a fly ash site covering an area of about 1 acre. Nearly all of this material was unvegetated with signs of severe erosion; the toe of the eastern refuse pile extends down to the Squire's Creek. Also on site were one (1) open and seven (7) collapsed deep mine portals with only one discharging about 2 to 3 gpm of acid mine drainage (AMD). Of these portals, one wasopen enough to easily allow entrance to a person. This opening was 4 to 5 feet high and about 20 feet in width. Thrasher Engineering Inc.'s preferred scope and design for this project included repairing and upgrading the access road through the site, excavation and installation of seven (7) wet/modified mine seal for the collapsed portals and one (1) bat gate mine seal for the open portal. Then, re-grade the site was planned to entomb the onsite refuse and promote positive drainage away from the portals. The fly ash onsite was excavated and used to neutralize the refuse material (in lieu of limestone) prior to the installation of the soil cap. Site drainage conveyances including vegetated and grouted riprap channels we constructed to safely carry water through the site.



Design plans for Squires Creek Portals and Refuse Project



Reclamation Plan for Overfield (Lafferty)

OVERFIELD (LAFFERTY) CS & P

This project involved a significant mine discharge 300 feet upslope from a private residence. The water emanated from a strip pit located on the bench. The pit measured 20' wide, 40' long with depth unknown; it appeared that the pit was situated within old mine workings based on visible coal pillars near the pit outlet and there seemed to be a possible collapsed portal. Two natural drainages were observed entering the pit. Both of the drainages were completely dry, yet 50 gallons a minute was discharging from the pit. Due to the area being mined the natural drainage had been eliminated. The continual flow of water from the strip pit created a ditch that flowed off the hill through the private residence's yard and down to the county road. The hill behind the residence was constantly wet and minor sliding had already occurred. When it rained, the drainage ditch exceeded its carrying capacity and flooded the residence's yard and basement. Also, an approximately 2 acre un-vegetated refuse pile adjacent to Elk Creek was a part of this project. Thrasher Engineering Inc.'s scope and design for this project included the installation of a modified mine seal in the collapsed portal and re-grading the existing strip pit to drain positively offsite into a grouted riprap channel, thereby eliminating the flow of both mine water and storm water from reaching the residence. A 12' gravity retaining wall was designed to mitigate the existing landslide and diversion channels were designed above and below the proposed wall carry the water safely away from the residence. The unvegetated refuse area was to be re-graded to drain positively and the material excavated to be from the strip pit and the retaining wall was used to cap (entomb) the refuse for re-vegetation.

WV DEP ABANDONED MINE LANDS

LAUREL RUN #1

Laurel Run #1 abandoned mine lands project has four (4) main sites which are on opposing sides of the Laurel Run stream and the Laurel Run (Decker's Creek) dam. These sites consists of mixed coal refuse sites with some vegetation, ± 4,200 linear feet of highwalls with an average height of 20 feet, water impoundments along/ around highwalls and multiple open and collapsed portals. Of these portals, one has a 4 ft. x7 ft. opening; however the opening only extends into the highwall 3 ft. to 4 ft. While some of the portals are producing acid mine discharge (AMD) and have pools of AMD at their entrances; not all portals are producing. Because of the slope and dip of the coal seam, some portals are allowing stormwater drainage to infiltrate the underground mine. Some passive AMD treatments had already been installed/ constructed on this site by the Natural Resources Conservation Service (NRCS). The passive treatment systems installed/ constructed include limestone riprap channels, limestone ponds, highwall subsurface drain (12 in. underdrain) and three (3) settling ponds with limestone rock sediment dams. Thrasher Engineering Inc.'s preferred scope and design for this project included the installation of six (6) wet/modified mine seals in the existing collapsed and open mine portals, plugging five (5) collapsed portals with a 3' clay layer or dry seal to prevent stormwater infiltration, and entombing onsite (mixed) coal refuse. The channel conveyances for this site were designed to utilize the existing passive systems by transporting AMD from the portals to those existing treatment structures. Approximately 160,000 cubic yards of material will be moved to backfill existing high walls, cover onsite coal refuse, and grade the project area.

Laurel Run Highwall

WV DEP ABANDONED MINE LANDS

CLARKSBURG (LYONS) LANDSLIDE

This project involveD a two (2) acre slide mass composed of strip mine spoil and natural slip prone material located above and behind a residence and recreational pond. Thrasher Engineering Inc.'s preferred scope and design for this project included the construction of a ± 22' soldier pile and concrete lagging retaining wall with appurtenances to stabilize the slope above the existing residence and pond, as well as, regrading the slip area while installing underdrains and channels to carry water safely through or around the slip area.

Lyons Landslide

ROGER CAMP HILL

Roger Camp Hill abandoned mine lands project has three (3) main refuse sites. Site 1 is a relatively small unvegetated refuse pile along and existing access road. Site 2 consists of a one-half (1/2) acre impoundment located in the middle of a one (1) acre refuse area, partially vegetated strip spoil, and acid mine drainage (AMD). Most of the refuse is completely unvegetated, as well as toxic, and leaches into the pond, which has a pH of 2.6. The pond has a maximum depth of three (3) feet with a volume of approximately 169,000 gallons. About 700 feet to the west of the refuse area, there is an AMD seep location at the toe of the old spoil outslope. Field measurements of the seepage indicated a pH of 3.3 Fe>10 mg/l; the flow was estimated at 15 gpm. Site 3 consists of a one-half (1/2) acre refuse pile that is primarily unvegetated with deep rills. Thrasher Engineering Inc.'s preferred scope and design for this project included dewatering the impoundment, bury or entomb all onsite coal refuse (spoil). Approximately 8,250 cubic yards of material will be moved to backfill the impoundment, cover on-site coal refuse, and grade the project area to drain positive toward proposed vegetated conveyances.

Roger Camp Hill Impoundment

WV DEP ABANDONED MINE LANDS

PLEASANT VALLEY (BROWN) HIGHWALL & PORTALS

Pleasant Valley (Brown) abandoned mine lands project has four (3) main sites which runs along a highwall bench parallel with the Monongalia River. These sites consists of mixed coal refuse sites with some vegetation, ± 4,800 linear feet of highwalls with an average height between 20 to 50 feet, water impoundments along/around highwalls and multiple open and collapsed portals. Of these portals, three have openings and will require bat gates. Some of the portals are producing acid mine discharge (AMD) and have pools of AMD at their entrances. Thrasher Engineering Inc.'s preferred scope and design for this project included the installation of six (6) wet/modified mine seals in the existing collapsed and open mine portals, the installation four (4) bat gate mine seals, and entombing onsite (mixed) coal refuse. Approximately 48,000 cubic yards of material will be moved to backfill existing high walls, cover on-site coal refuse, and grade the project area. Storm water and portal conveyances have been designed to outlet at multiple locations along the highwall to better mimic the natural drainage of the site. This also prevents concentration of flows along the slope to help mitigate future soil erosion.

Pleasant Valley Site

WV DEP ABANDONED MINE LANDS

AMHERSTDALE (LOGAN COUNTY)

PRE-SETTLING BASIN AND
PRE-TREATMENT FACILITY PROJECT

The AML affected area was located in Logan County on CR 16, west of the city limits of Man, a distance of approximately 12.6 Miles.

The scope of the project was the design and construction of a pre-settling basin and pre-treatment system to remove metals and turbidity from the existing water sources, allowing the water existing treatment facility to utilize the surface and groundwater.

The scope of services Thrasher Engineering provided for this project included:

Survey, supervision of subsurface investigation, environmental review, preparation of design, drawings, development of construction documents. .

WV DEP ABANDONED MINE LANDS – RAGLAND (MINGO COUNTY) WATER LINE EXTENSION PROJECT

Project Description: The AML affected area is located in the Midwestern portion of Mingo County. The area is approximately 2.6 square miles. The scope of services Thrasher Engineering provided for this project included: survey, supervision of subsurface investigation, environmental review, design, development of construction documents.

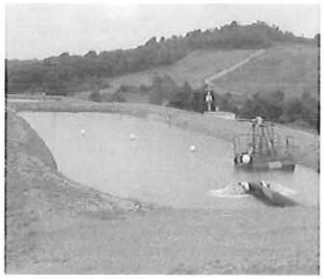
ACID MINE DRAINAGE / COAL COMPANY EXPERIENCE

Martinka Water Treatment Plant
Client: Martinka Coal
Mr. Gary Timms
Water Treatment Plant Supervisor
Fairmont, WV
304-366-5516

This project consisted of the design of a 17.3 MGD Water Treatment Plan to blend mine borehole water with acid mine drainage; the plan removes iron (1000 mg/l (ferric hydroxide) to less than 1 mg/l.

The plant design included:

- Aeration – Blending and Stripping Carbon Dioxide
- Feed Hydrogen Peroxide – Shifts chemical equilibrium for utilization of naturally calcium carbonate for neutralization
- Coagulation/Flocculation – Three (3) stage tapered flocculation with axial flow propeller mixers and variable frequency drives
- Sedimentation – Six (6) settling ponds with ferric hydroxide sludge removal and underground injection wells
- Polishing Pond – Sodium hexamataphosphate for calcium stabilization.



Dayton Carpenter, P.E., BCEE, Project Engineer was awarded the following for the project:
2002 WV ACEC Gold Award – Engineering Excellence
2002 WV Manufacturer's Association Environmental Leadership Award for Innovative Technology

LAMBERT RUN MITIGATION PROJECT

HIGH TECH CORRIDOR DEVELOPMENT LLC

CLIENT: HIGH TECH CORRIDOR DEVELOPMENT LLC

Mr. Jack Keeley
304-326-0191
PO Box 1532
Clarksburg, WV 26302

This was a cooperative project between High Tech Corridor Development, Inc., WVU National Mine Land Reclamation Center, WVDEP and Guardians of the West Fork Watershed. The project involved the development and construction of a passive treatment system to eliminate a significant AMD source and improve Lambert Run water quality.

TEI's scope of services included:

- Conducted wetland studies
- Developed stream quality monitoring program including chemical and benthic values
- Prepared a mitigation plan that met with USACE approval.
- Survey services
- Prepared engineering drawings and construction documents
- Developed permit applications
- Provided construction services

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE Attachment "B"

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
HOPEWELL CHURCH REFUSE & AMD DESIGN DEP16074	**JANUARY 1, 2013**	**55-0633596-6**

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
THRASHER ENGINEERING, INC.	**30 COLUMBIA BLVD., CLARKSBURG, WV 26301**	**NOT APPLICABLE**

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
304-624-4108	**1983**	Individual Corporation **X** Partnership Joint-Venture	YES NO **X**

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE

30 COLUMBIA BLVD, CLARKSBURG, WV / 304-624-4108 / CHAD D. BILLER, P.E., PARTNER / 12
300 ASSOCIATION DRIVE, CHARLESTON, WV / 304-343-7601 / JONATHAN CARPENTER, MANAGING PARTNER / 2
3000 THAYER PLACE, OAKLAND, MD/301-334-3866 / CHAD RILEY, PE / 1
380 AIRPORT CIRCLE, BEAVER, WV 25813 /304-860-1924 / ROBERT CRADDOCK/0
4150 BELDEN VILLAGE STREET, SUITE 101, CANTON, OHIO 44718 / 330-491-8170/ STEVE HAMIT, P.E./2

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
H. WOOD THRASHER, P.E. – PRESIDENT **KENNETH P. MORAN, P.E. – VICE PRESIDENT**	**WM. RANDY WATSON -304-624-4108 – PARTNER** **CHAD BILLER, P.E.-304-624-4108 –PARTNER** **CHAD M. RILEY,P.E.-304-624-4108 – PARTNER** **CLAY P. RILEY, P.E.-304-624-4108-PARTNER** **DANIEL E. FERRELL, P.E. -304-624-4108 –PARTNER** **RON STANLEY, CPA -304-624-4108 –PARTNER** **ROBERT MILNE, P.E. -304-624-4108 –PARTNER** **CRAIG BAKER, ASSOC. AIA -304-624-4108 -PARTNER** **JONATHAN CARPENTER, P.E. -304-343-7601 -PARTNER**

9. PERSONNEL BY DISCIPLINE

25 **ADMINISTRATIVE**	— ECOLOGISTS	2 LANDSCAPE ARCHITECTS	__ STRUCTURAL ENGINEERS
5 **ARCHITECTS**	— ECONOMISTS	_ MECHANICAL ENGINEERS	50 **SURVEYORS**
— **BIOLOGIST**	— ELECTRICAL ENGINEERS	— MINING ENGINEERS	— TRAFFIC ENGINEERS
14 **CADD OPERATORS**	2 **ENVIRONMENTALISTS**	PHOTOGRAMMETRISTS	25 OTHER
— CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL	
44 **CIVIL ENGINEERS**	GEOLOGISTS	— SANITARY ENGINEERS	
29 **CONSTRUCTION INSPECTORS**	— HISTORIANS	— SOILS ENGINEERS	
2 DESIGNERS	— HYDROLOGISTS	SPECIFICATION WRITERS	**196 TOTAL PERSONNEL**
— DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 18

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

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? ☐ YES X NO NOT APPLICABLE

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Confidential Qualification Questionnaire".

NAME AND ADDRESS: **NOVEL GEO-ENVIRONMENTAL**	SPECIALTY: **GEO-TECHNICAL SERVICES**	WORKED WITH BEFORE _X__ Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No

12. A. Is your firm experienced in Abandoned Mine Land Remediation/Mine Reclamation Engineering?

YES Description and Number of Project: THRASHER ENGINEERING HAS PERFORMED ENGINEERING DESIGN SERVICES TO THE WV DEP FOR BOTH DRAINAGE AND PORTAL AML PROJECTS AS WELL AS FOR WATER LINE AND WATER TREATMENT PLANT PROJECTS RELATED TO AML. NUMEROUS PROJECTS INVOLVING LAND REMEDIATION, STORM WATER DRAINAGE, SLIP REPAIR, MASS GRADING IN RELATION TO SITE DEVELOPMENT AND HIGHWAY PROJECTS.

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: THRASHER ENGINEERING MAINTAINS AN AASHTO CERTIFIED MATERIALS TESTING AND ANALYSIS LAB AT ITS CLARKSBURG AND BECKLEY OFFICES. SOIL ANALYSIS EXPERIENCE IS SPECIFICALLY IN GRADATIONS AND CLASSIFICATION.

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: THROUGH OUR WORK IN THE PLANNING AND DESIGN OF BRIDGES FOR THE WEST VIRGINIA DEPARTMENT OF HIGHWAYS AND WATER LINE EXTENSION PROJECTS, THRASHER ENGINEERING HAS EXTENSIVE EXPERIENCE IN HYDROLOGY. WE ALSO HAVE EXTENSION EXPERIENCE IN HYDRAULIC MODELING FOR WATER AND WASTEWATER PROJECTS THROUGHOUT WEST VIRGINIA.

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?

YES Description and Number of Projects:

NO WE UTILIZE THE SERVICES OF NUMEROUS FIRMS, INCLUDING PENTREE, INC. WHICH IS AN AFFILIATE COMPANY OF THRASHER ENGINEERING INC. THROUGH THE RESOURCE ENGINEERING GROUP HOLDING COMPANY.

E. Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: THRASHER ENGINEERING HAS DESIGNED OVER 100 WATER LINE EXTENSION PROJECTS IN THE PAST 20 YEARS OF BUSINESS. PROJECTS INCLUDE LINES, BOOSTER STATIONS, WATER TREATMENT PLANTS, AND STORAGE FACILITIES. MANY OF THESE PROJECTS ARE IN AREAS WITH AML AFFECTED WATER

F. Is your firm experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: TEI HAS BEEN AWARDED AND HAS (OR IS CURRENTLY DESIGNING) EIGHT (8) RECLAMATION PROJECTS FOR WVDEP RELATED SPECIFICALLY TO ACID MINE DRAINAGE AND ABATEMENT . THE CHARLESTON WV BRANCH OF OUR COMPANY DESIGNED AN AWARD WINNING WATER TREATMENT PLANT FOR MARTINKA MINES IN MARION COUNTY, WEST VIRGINIA TO TREAT DRAINAGE.

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
MORAN, KENNETH P.	**8**	**18**	**26**

Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Operations Officer and Chief Engineer.

Mr. Moran is responsible for management feasibility studies and design of public utility and site development projects for local state, federal and private clients. Additionally, Mr. Moran has extensive experience in all aspects of engineering and with funding and regulatory agencies in conjunction with projects.

EDUCATION (Degree, Year, Specialization) ***B.S., Civil Engineering Technology, 1983 – Fairmont State University***

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- ***Friendship Lodge No.56 A.F. & A.M.***
- ***WV Society of Professional Engineers***
- ***Member of American Society of Civil Engineers***

REGISTRATION (Type, Year, State)

- ***Registered Professional Engineer (PE), State of West Virginia #11309***
- ***Registered Professional Engineer (PE), State of Virginia#0102021855***
- ***Registered Professional Engineer (PE), State of Ohio #64412***
- ***Professional Land Surveyor (PS), State of West Virginia#1333***

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
BILLER, CHADWICK D. P.E.	**5**	**19**	**19**

Brief Explanation of Responsibilities: ***Mr. Biller has experience in all aspects of engineering with specific emphasis on site development, highways, roads, bridges, and airports. Mr. Biller joined Thrasher Engineering in 1999 and is a partner of Thrasher Engineering. For Thrasher Engineering, Mr. Biller is responsible for WV DEP AML project and public and private site development projects, specializing in airports, highways, roads and bridges. As Project Manager for all of the firm's WVDOT/DOH projects, he has extensive knowledge of state and federal building standards .***

EDUCATION (Degree, Year, Specialization:

- ***B.S., Civil Engineering, 1992 – West Virginia University***

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- ***American Society of Civil Engineers***
- ***Society of American Military Engineers***
- ***National Society of Professional Engineers***

REGISTRATION (Type, Year, State)

- ***Registered Professional Engineer(PE),State of West Virginia #13620***
- ***Registered Professional Engineer (PE),State of Pennsylvania #PE056012E***
- ***Registered Professional Engineer (PE),State of Ohio #64594***

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
NESTOR, MICHAEL – PROJECT ENGINEER	3	9	9

Brief Explanation of Responsibilities ***Mr. Nestor joined Thrasher Engineering in 2005 and serves as Project Manager and Engineer. Mr. Nestor has a wide range of experience in residential and commercial site development projects, utilizing all aspects of infrastructure design including street and lot layout, street profiles, extensions of public sewer and water systems, storm water drainage, storm water management, erosion and sediment control plans, and NPDES permitting. In addition, Mr. Nestor oversees all general operations within The Berkeley Associates, directing administrative staff, CAD technicians, and staff engineers to ensure successful completion of projects covering site development, surveying, material testing, and environmental services.***

EDUCATION (Degree, Year, Specialization)

- ***B.S. Civil Engineering Technology – Fairmont State University, 2003***

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers ***Eastern Panhandle Home Builders Association***	***PROFESSIONAL ENGINEER (P.E.), 2009, State of West Virginia***

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
ROHRBAUGH, APRIL	2	7	-

Brief Explanation of Responsibilities

Ms. Rohrbaugh joined Thrasher Engineering in January of 2006 and serves as Staff Engineer in the site department at the Oakland Maryland Branch. Mrs. Rohrbaugh has experience in all aspects of site engineering, taking projects from survey to concept to construction. Her responsibilities with AML projects include: Design of wet and modified mine seals, grading associated with reclaiming, storm water management, and erosion and sediment control. Ms. Rohrbaugh's other responsibilities include: Design Surveying consisting of both field traversing and survey locations and aerial mapping. Conceptual Planning: planning for residential, commercial, and recreational developments. Site/Land Development Engineering: geometric layout of sites, subdivisions, and roads, grading, drainage, storm water management, erosion and sediment control, and various regulatory permitting requirements.

EDUCATION (Degree, Year, Specialization)

- ***B.S. Civil Engineering – West Virginia University, 2005, Civil Engineering***

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
HOVATTER, RICHARD (RJ) – PROJECT MANAGER	8	8	-

Brief Explanation of Responsibilities: ***Richard Hovatter Jr. joined Thrasher Engineering, Inc. in 2011 and serves as Project Manager from TEI's Clarksburg Office. As a graduate of Fairmont State University and previous experience Mr. Hovatter has extensive knowledge of abandoned mine land and emergency situations such as landslides and mine subsidence of abandoned mine land. Mr. Hovatter is responsible for the designs, scheduling, collection and reporting of mine surface, sediment erosion control plans and waterline feasibility studies.***

EDUCATION (Degree, Year, Specialization)

- ***Bachelor of Science, 2002, Civil Engineering Technology – Fairmont State University***

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Professional Engineer (P.E.), 2009, State of West Virginia ***Professional Engineer (P.E.), 2010, State of Pennsylvania***

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:

Brief Explanation of Responsibilities

EDUCATION (Degree, Year, Specialization)

-

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
-	

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE DESIGN SERVICES

Thrasher Engineering, Inc. will design work for AML utilizing one of the largest networks of computer aided design (CAD) equipment, software and trained personnel in the State of West Virginia.

Connected through a Virtual Private Network, our CAD staff has the ability to share necessary plans among our locations. This will allow work designed for AML to be prepared and updated at the office location that best meets the needs of the scope of services.
Civil 3D, Carlson and Microstation V8 software is utilized at 70 CAD stations throughout our locations. Additionally, equipment includes 10 large format (size E) plotters and 5 large format plotter / scanners.CAD plans are prepared by both dedicated CAD employees and by staff engineers and engineering technicians in each of the firm's offices.

Thrasher Survey only subcontracts the acquisition of Aerial Photography. All other services associated with Mapping are performed in-house including Aero-Triangulation, Planimetric compilation, surface modeling, contouring and Digital Ortho-rectified imagery.

Thrasher Engineering, Inc. also utilizes top-of-the line survey equipment. Our survey work is accomplished with global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities. Additional Survey Services, added in 2012 include: High Accuracy Monumentation, Astronomic Observations / Orientation, NGS Blue booking, Hydrographic, Terrestrial Scanning, 3D As-builts, 3D monitoring, Sub-surface Utility Location / Designation.
Additional equipment – Robotic Total stations, Imaging Stations, 3D Terrestrial Scanners. Other equipment includes:

- *Leica T502 Total Station Instrument*
- *Trimble GPS*
- *Leica Geosystem System 500 GPS*
- *Leica Ski Post Processing Software*
- *Topcon G600 Total Station Instrument*
- *Leica 303 Total Station Instrument*
- *Leica 307 Total Station Instrument*
- *Leica 403 Total Station Instrument*
- *Leica 405 Total Station Instrument*
- *Lecia 407 Total Station Instrument*
- *Lecia 703 Total Station Instrument*

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: ***SITE DEVELOPMENT PROJECTS***

THRASHER ENGINEERING IS CURRENTLY THE DESIGNATED "ENGINEER OF RECORD" ON MORE THAN 200 ON-GOING PROJECTS. THESE PROJECTS RANGE FROM SIMPLE BOUNDARY SURVEYS WHICH ARE COMPLETED WITHIN A FEW DAYS' TIME TO COMPLETE MUNICIPAL PROJECTS WHICH ARE COMPLETED OVER AN EXTENDED AMOUNT OF TIME. A PARTIAL LISTING OF CURRENT PROJECTS FOLLOWS WHICH DEMONSTRATES THE RANGE OF SERVICES PROVIDED BY THRASHER ENGINEERING.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
ROGER (CAMP HILL) AML RECLAMATION TUCKER COUNTY, WV	WV DEP, OFFICE OF AML&R 601 57TH STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND RETAINING WALL	$500,000.00	5%
PLEASANT VALLEY AML RECLAMATION MARION COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57TH STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND RETAINING WALL	$500,000.00	5%
SQUIRES CREEK PORTALS / REFUSE PRESTON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57TH STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND BACKFILLING HIGHWALL WITH REFUSE	$500,000.00	95%
LAUREL RUN #1 PRESTON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57TH STREET, SE CHARLESTON, WV 25304	ENGINEERING DESIGN FOR PORTAL SEALING, DRAINAGE AND BACKFILLING HIGHWALL WITH REFUSE	$1,500,000.00	40%
LYONS LANDSLIDE HARRISON COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57TH STREET, SE CHARLESTON, WV 25304	REPAIR SLIP AREA WITH A PILE RETAINING WALL	$700,000.00	50%
EXTERRAN / WIILIAMS SITE DEVELOPMENT MARSHALL COUNTY, WV	EXTERRAN / WILLIAMS 2000 CLIFF MILE ROAD PITTSBURGH, PA 15275	SITE DEVELOPMENT	$20,000,000.00	50%
NORTH CENTRAL WV AIRPORT HARRISON COUNTY, WV VARIOUS – HANGERS /STORM WATER	BENEDUM AIRPORT AUTHORITY RICK ROCK, AIRPORT DIRECTOR 2000 AVIATION WAY BRIDGEPORT, WV	SITE DEVELOPMENT DESIGN (LAND PLANNING, GRADING, UTILITIES) SURVEY, CONST. MGT, MATERIALS TESTING	$500,000 to $1,000,000.00	ON-GOING

TOTAL NUMBER OF PROJECTS:	TOTAL ESTIMATED CONSTRUCTION COSTS:
7 (TOTAL IN FULL APPROXIMATELY 30 SITE DEVELOPMENT – APPROXIMATELY 75 MILLION)	$24,700,000.00 +

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: *WATER TREATMENT AND DISTRIBUTION PROJECTS THRASHER ENGINEERING IS CURRENTLY THE DESIGNATED "ENGINEER OF RECORD" ON MORE THAN 200 ON-GOING PROJECTS. THESE PROJECTS RANGE FROM SIMPLE BOUNDARY SURVEYS WHICH ARE COMPLETED WITHIN A FEW DAYS' TIME TO COMPLETE MUNICIPAL PROJECTS WHICH ARE COMPLETED OVER AN EXTENDED AMOUNT OF TIME. A PARTIAL LISTING OF CURRENT PROJECTS FOLLOWS WHICH DEMONSTRATES THE RANGE OF SERVICES PROVIDED BY THRASHER ENGINEERING.*

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
CHESTNUT RIDGE PSD BARBOUR/PRESTON EXTENSION BARBOUR COUNTY, WV	CHESTNUT RIDGE PSD 209 S MAIN STREET P.O. BOX 386 PHILIPPI, WV 26416	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION.	$4,500,000	50%
GILMER COUNTY PSD WATER LINE EXTENSION	GILMER COUNTY PSD PO BOX 729 GLENVILLE, WV 26351	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$3,200,000.00	40%
MINGO COUNTY PSD WATER LINE EXTENSION	MINGO COUNTY PSD PO BOX 98 NAUGATUCK, WV 25685	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$1,075,000.00	40%
HAMRICK PSD MOORE/PORTERWOOD EXTENSION TUCKER COUNTY, WV	HAMRICK PSD PO BOX 228 HENDRICKS, WV 26271	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$1,100,000.	35%
LINCOLN COUNTY PSD WATER LINE EXTENSION PROJECTS	LINCOLN PSD P.O. BOX 38 240 LITTLE COAL RIVER RD. ALUM CREEK, WV 25003	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$6,920,000.	25%
TOWN OF CAPON BRIDGE WATERLINE AND PUMP STATION REPLACEMENT	TOWN OF CAPON BRIDGE PO BOX 183 FRANK, WV 24920	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$1,925,000.00	50%
CITY OF SALEM, WEST VIRGINIA WATER LINE REPLACEMENT	SALEM, CITY OF P.O. BOX 352 229 W. MAIN SALEM, WV 26426	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$1,500,000.	80%

TOTAL NUMBER OF PROJECTS:	TOTAL ESTIMATED CONSTRUCTION COSTS:
7 REPRESENTED (APPROXIMATELY 20 ADDITIONAL CURRENTLY IN PRELIMINARY / DESIGN OR CONSTRUCTION PHASES	$18,220,000.00 REPRESENTED ESTIMATED COST OF ALL JOBS APPROXIMATELY $150,000,000.00

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: **SANITARY SEWER PROJECTS**

THRASHER ENGINEERING IS CURRENTLY THE DESIGNATED "ENGINEER OF RECORD" ON MORE THAN 200 ON-GOING PROJECTS. THESE PROJECTS RANGE FROM SIMPLE BOUNDARY SURVEYS WHICH ARE COMPLETED WITHIN A FEW DAYS' TIME TO COMPLETE MUNICIPAL PROJECTS WHICH ARE COMPLETED OVER AN EXTENDED AMOUNT OF TIME. A PARTIAL LISTING OF CURRENT PROJECTS FOLLOWS WHICH DEMONSTRATES THE RANGE OF SERVICES PROVIDED BY THRASHER ENGINEERING.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
KINGWOOD SEWER REPLACEMENT AND SERVICE EXTENSIONS KINGWOOD, WV	CITY OF KINGWOOD 313 TUNNELTON STREET KINGWOOD, WV 26537	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$10,000,000.00	50%
GREATER HARRISON COUNTY PSD PHASE II-B HARRISON COUNTY, WV	GREATER HARRISON COUNTY PSD P.O. BOX 190 WEST MILFORD, WV 26451	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$6,000,000.00	65%
TENNERTON PSD PHASE III SANITARY SEWER EXTENSION UPSHUR COUNTY, WV	TENNERTON PSD 188 FAYETTE ST. BUCKHANNON, WV 26201	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$6,800,000.00	5%
ENLARGED HEPZIBAH PSD SANITARY SEWER EXTENSION HARRISON COUNTY, WV	ENLARGED HEPZIBAH PSD DRAWER H HEPZIBAH, WV 26369	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$2,666,000.00	50%
CITY OF WEIRTON, WV PHASE II SEWER PROJECT	CITY OF WEIRTON 3031 BIRCH DRIVE WEIRTON, WV 26062	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$5,728,000.00	40%
MALDEN PUBLIC SERVICE DISTRICT SANITARY SEWER REHABILITATION KANAWHA COUNTY, WV	MALDEN PUBLIC SERVICE DISTRICT P.O. BOX 350 TAD, WV 25201-0350	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$13,600,000.	25%
TOWN OF JUNIOR WASTEWATER TREATMENT PLANT JUNIOR, WV	TOWN OF JUNIOR PO BOX 247 JUNIOR, WV 26275	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	$2,332,000.00	45%

TOTAL NUMBER OF PROJECTS: 7 REPRESENTED
TOTAL ACTIVE SANITRY SEWER PROJECTS APPROXIMATELY 38

TOTAL ESTIMATED CONSTRUCTION COSTS: $46,000,000.00

TOTAL FOR ALL PROJECTS APPROXIMATELY $150,000,000

15. CUR[illegible]NT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATE[illegible]ENGINEER OF RECORD: **HIGHWAY, BRIDGE, SIDEWALKS**

THRASHER ENGINEERING IS CURRENTLY THE DESIGNATED "ENGINEER OF RECORD" ON MORE THAN 200 ON-GOING PROJECTS. THESE PROJECTS RANGE FROM SIMPLE BOUNDARY SURVEYS WHICH ARE COMPLETED WITHIN A FEW DAYS' TIME TO COMPLETE MUNICIPAL PROJECTS WHICH ARE COMPLETED OVER AN EXTENDED AMOUNT OF TIME. A PARTIAL LISTING OF CURRENT PROJECTS FOLLOWS WHICH DEMONSTRATES THE RANGE OF SERVICES PROVIDED BY THRASHER ENGINEERING.

WVDOH- ENGINEERING DESIGN

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
MINERAL WELLS ROUTE 2 WOOD COUNTY, WV	WVDOT / DOH BLDG. 5, ROOM A-109 1900 KANAWHA BLVD., EAST CHARLESTON, WV 25305	CIVIL ENGINEERING DESIGN, SURVEY, CONSTRUCTION DOCUMENTS	$6,000,000.00	5%
COUNTY LINE BRIDGE MARSHALL COUNTY, WV	WVDOT / DOH BLDG. 5, ROOM A-109 1900 KANAWHA BLVD., EAST CHARLESTON, WV 25305	CIVIL ENGINEERING DESIGN, SURVEY, CONSTRUCTION DOCUMENTS	$1,800,000.00	98%
WVDOH DISTRICT 7 HEADQUARTERS LEWIS COUNTY, WV	WVDOT / DOH BLDG. 5, ROOM A-109 1900 KANAWHA BLVD., EAST CHARLESTON, WV 25305	ARCHITECTURE AND CIVIL ENGINEERING DESIGN, CONSTRUCTION MONITORING, SURVEY	$2,300,000.00	90%
I-64 WEIGH STATION PUTNAM COUNTY, WV	WVDOT / DOH BLDG. 5, ROOM A-109 1900 KANAWHA BLVD., EAST CHARLESTON, WV 25305	CIVIL ENGINEERING DESIGN, SURVEY, CONSTRUCTION DOCUMENTS	$800,000.00	90%

TOTAL NUMBER OF PROJECTS:	TOTAL ESTIMATED CONSTRUCTION COSTS:
4	#10,900,000.00

16. CU NT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A B-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
BERKELEY COUNTY PUBLIC SERVICE SEWER DISTRICT WASTEWATER TREATMENT PLANT BERKELY COUNTY,WV	DESIGN SUPPORT CONSTRUCTION ADMIN.	BERKELEY COUNTY PSSD PO BOX 944 MARTINSBURG, WV 25402	2015	$20,000,000.00	$10,000,000.00
RD BAILY WATER SYSTEM MCGRAWS, WV	DESIGN SUPPPORT CONSTRUCTION ADM.	RAVENCLIFF-MCGRAWS-SAULSVILLE PSD P.O. BOX 217 MCGRAWS, WV 25875	2016	$30,000,000.00	$12,000,000.00

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
McHENRY BUSINESS PARK SITE DEVELOPMENT AND UTILITIES GARRETT COUNTY, MD	GARRETT COUNTY EDA 203 SOUTH 4TH STREET COURTHOUSE ROOM 208 OAKLAND, MD 21550 301-334-1921	$3,500,000.00	2011	YES
OVERFIELD LAFFERTY CSP BARBOUR COUNTY, WV	WV DEP-DEPARTMENT OF AML 601 57TH STREET, SE CHARLESTON, WV 25304	$450,000.00	2012	YES
WHITE OAKS BUSINESS PARK SITE DEVELOPMENT AND UTILITIES HARRISON COUNTY, WV	HIGH TECH CORRIDOR DEVELOPMENT,LLC MR. JACK KEELEY PO BOX 1532 CLARKSBURG, WV 26302	$12,100,000.00	2010	YES
CANYON PUBLIC SERVICE DISTRICT SANITARY SEWER UPGRADE AND EXT MONONGALIA COUNTY, WV	CANYON PSD 12 WICHITA STREET MORGANTOWN, WV 26508	$6,500,000.	2009	YES
TOWN OF FARMINGTON SEWER LINE EXTENSION MARION COUNTY,WV	TOWN OF FARMINGTON 1314 MILL STREET FARMINGTON, WV 26571	$325,000	2008	YES
CHESTNUT RIDGE PSD BARBOUR/PRESTON EXTENSION BARBOUR COUNTY, WV	CHESTNUT RIDGE PSD 209 S MAIN STREET P.O. BOX 386 PHILIPPI, WV 26416	$9,500,000	2008	YES
TOWN OF ELIZABETH, JESSICA LYNCH WATER LINE EXTENSION WIRT COUNTY, WV	TOWN OF ELIZABETH 200 BEVERLY STREET P.O. BOX 478 ELIZABETH, WV 26143	$3,600,000	2008	YES
GILMER COUNTY PSD DUSK CAMP WATER LINE EXTENSION GILMER COUNTY, WV	GILMER COUNTY PSD 232 W. MAIN STREET GLENVILLE, WV 26351	$2,500,000	2008	YES
HAMRICK PSD MOORE/PORTERWOOD EXTENSION TUCKER COUNTY, WV	HAMRICK PSD PO BOX 228 HENDRICKS, WV 26271	$1,100,000	2008	YES
CITY OF CAMERON WATER STORAGE TAML MARSHALL COUNTY, WV	CITY OF CAMERON 44 MAIN STREET CAMERON, WV 26033	$200,000.00	2008	YES
TOWN OF ROWLESBURG WATER TREATMENT PLANT/ EXT. PRESTON COUNTY, WV	TOWN OF ROWLESBURG PO BOX 458 42 POPLAR STREET ROWLESBURG, WV 26425	$4,500,000	2008	YES
NORTON-HARDING-JIMTOWN PSD KINGSVILLE EXTENSION RANDOLPH COUNTY, WV	NORTON-HARDING-JIMTOWN PSD P.O. BOX 87 – SCOTT ROAD NORTON, WV 26285	$1,325,000	2008	YES

17. COMPLETED WORK WITHIN LAST 10 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
HEPIZIBAH PSD SANITARY SEWER EXTENSION HARRISON COUNTY, WV	ENLARGED HEPZIBAH DRAWER H HEPZIBAH, WV 26369	$3,400,000	2010	YES
CITY OF RIPLEY – MAIN STREET REVITALIZATION – JACKSON CO.	CITY OF RIPLEY 203 SOUTH CHURCH ST. RIPLEY, WV 25271	$1,200,000.	2008	YES
SUN VALLEY WATER AND SEWER SYSTEM IMPROVEMENTS REYNOLDSVILLE, WV	SUN VALLEY PSD PO BOX 95 REYNOLDSVILLE, WV 26422	$12,500,000	2010	YES
HODGESVILLE PUBLIC SERVICE DISTRICT; DESIGN AND CONSTRUCTION OF WATER LINE EXTENSION, BOOSTER STATIONS, AND WATER STORAGE TANK	HODGESVILLE PUBLIC SERVICE DISTRICT 188 FAYETTE STREET P.O. BOX 758 BUCKHANNON, WV 26201	$3,100,000	2004	YES
BROOKE COUNTY PSD REPLACEMENT AND EXTENSION BROOKE COUNTY, WV	BROOKE CO. PSD 711 CHARLES ST. P. O. BOX 150 WELLSBURG, WV 26070	$10,000,000	2009	YES
HUTTONSVILLE PSD PHASE II RANDOLPH COUNTY, WV	HUTTONSVILLE PSD P.O. BOX 277 MILL CREEK, WV 26280	$4,300,000	2009	YES
POCAHONTAS COUNTY PSD WWTP AND COLLECTION SYSTEM POCAHONTAS COUNTY, WV	POCAHONTAS COUNTY PSD HC 63 BOX 122 FRANK, WV 24920	$11,600,000	2009	YES
HARDY COUNTY WATER SYSTEM IMPROVEMENTS HARDY COUNTY, WV	HARDY COUNTY PSD 223 N. MAIN STREET MOOREFIELD, WV 26836	$8,000,000	2010	YES

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOU WERE THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
NICHOLAS COUNTY BUSINESS PARK, NICHOLAS COUNTY, WV SITE DEVELOPMENT	NICHOLAS CO BLDG COMMISSION 700 MAIN STREET, SUITE 1 SUMMERSVILLE, WV 26651	$2,500.000.00	2008	YES
GILMER COUNTY PSD DUSK CAMP WATER LINE EXTENSION GILMER COUNTY, WV	GILMER COUNTY PSD 232 W. MAIN STREET GLENVILLE, WV 26351	$2,500,000	2008	YES
SOUTHWESTERN PSD WATER LINE EXTENSION / REPLACEMENT	SOUTHWESTERN WATER PUBLIC SERVICE DISTRICT P. O. BOX 98 FLEMINGTON, WV 26347	$10,430,000	2012.	YES
CITY OF CAMERON WATER STORAGE TANK MARSHALL COUNTY, WV	CITY OF CAMERON 44 MAIN STREET CAMERON, WV 26033	$2,000,000.00	2008	YES
TOWN OF ROWLESBURG WATER TREATMENT PLANT/ EXT. PRESTON COUNTY, WV	TOWN OF ROWLESBURG PO BOX 458 42 POPLAR STREET ROWLESBURG, WV 26425	$4,500,000.	2010	YES
JAKES RUN BRIDGE MONONGALIA COUNTY, WV	WVDOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	$1,300,000.	2008	YES
ICG – THREE FORKS BRIDGE TAYLOR COUNTY	INTERNATIONAL COAL GROUP, INC. 2000 ASHLAND DRIVE ASHLAND, KY 41101	$1,119,000.00	2008	YES

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOU WERE ASSOCIATED WITH OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
MC DOWELL COUNTY FEDERAL PRISON WELCH, WV SITE DEVELOPMENT	US DEPARTMENT OF JUSTICE FEDERAL BUREAU OF PRISONS 500 FIRST STREET NW WASHINGTON, DC 20534	$25,000,000.00	2010	YES	BELL JUSTICE FACILITIES
FAIRMONT STATE UNIVERSITY CREATIVE ARTS AND ENGINEERING TECH BUILDING SITE DEVELOPMENT FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	$100,000.00	2008	YES	DESIGN ALLIANCE OMNI ASSOCIATES
CITY OF BECKLEY INTERMODAL GATEWAY	CITY OF BECKLEY 409 S. KANAWHA STREET BECKLEY, WV 25801	$250,000.00	2012	YES	PARSONS BRINCKERHOFF

19. USE THIS SPACE TO PROVIDE ANY ADDITIONAL INFORMATION OR DESCRIPTION OF RESOURCES SUPPORTING YOUR FIRM'S QUALIFICATIONS TO PERFORM WORK FOR THE WV ABANDONED MINE LANDS PROGRAM

SEE ATTACHMENT – STATEMENT OF QUALIFICATIONS

20. THE FOREGOING IS A STATEMENT OF FACTS.

SIGNATURE: _____ **TITLE: PARTNER / PRINCIPAL-IN-CHARGE**

DATE: JANUARY 21, 2013

PRINTED NAME: CHADWICK D. BILLER, P.E.

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Nitigation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	CHAD BILLER, PE	APRIL ROHRBAUGH	MIKE NESTOR, PE	RJ HOVATTER, PE	NOVEL - LARRY NOTTINGHAM, PE	
SQUIRE CREEK	C /P	5	X		X	X					X				X		X	M		P		P	
ANGLINS RUN	C /P	5	X		X	X					X						X	M		P		P	
ROARING CREEK	C /P	5	X	X	X	X			X		X					X	X	M	P			P	
OVERFIELD / LAFFERTY	C /P	5	X		X	X					X						X	M	P			P	
LAURAL RUN	C /P	5	X		X	X					X					X	X	M	P			P	
LYONS LANDSLIDE	C /P	5	X			X					X						X	M	P			P	
PLEASANT VALLEY	C /P	5	X		X	X					X						X	M	P			P	
ROGER CAMP HILL	C /P	5	X			X					X	X					X	M	P			P	
AMERHERSTDALE WTP	C	5	X								X			X			X						
MINGO COUNTY WATERLINE	C	5									X		X										
WHITE OAKS PASSIVE MINE TREATMENT	C	5		X		X					X	X	X	X		X	X						
WVDEP THOMAS NE PHASE I, II, III	P		X		X						X						X				P		
OHIO DNR MERKEL LANDSLIDE	P		X								X						X				P		

* List whether project experience is corporate or personnel based or both.

** Use this area to provide specific sections or pages if needed for reference.

*** List Primary Design personnel and their functional capacity for the projects listed.