



**Statement of Qualifications for  
A-E Planning and Design  
To  
The West Virginia Department of  
Environmental Protection  
Office of Abandoned Mine Lands  
and Reclamation**

**Pines Country Club (Ponds)  
Subsidence**

**Requisition # DEP14622**

**May 7, 2009**

RECEIVED

2009 MAY 11 PM 12:37

WV PURCHASING  
DIVISION

**THRASHER**  
ENGINEERING  
CIVIL • ENVIRONMENTAL • CONSULTING • FIELD SERVICES

Northgate Business Park  
300 Association Drive  
Charleston, WV 25311  
304-343-7601  
304-343-7604 Fax

30 Columbia Boulevard  
P.O. Box 1532  
Clarksburg, WV 26301  
304-624-4108  
304-624-7831 Fax

3000 Thayer Center  
Oakland, MD 21550  
301-334-3866  
301-334-4020 Fax

[www.thrashereng.com](http://www.thrashereng.com)  
[thrasher@thrashereng.com](mailto:thrasher@thrashereng.com)



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

# Request for Quotation

RFQ NUMBER  
 DEP14622

PAGE  
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF  
 CHUCK BOWMAN  
 304-558-2157

RFQ COPY

TYPE NAME/ADDRESS HERE  
 THRASHER ENGINEERING  
 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	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
05/04/2009				

BID OPENING DATE: 05/14/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
***** ADDENDUM NO. 1 *****						
ADDENDUM ISSUED FOR THE PINES COUNTRY CLUB SUBSIDENCE DESIGN PROJECT TO DISTRIBUTE THE AGENCY RESPONSE TO A VENDOR REQUEST FOR ADDITIONAL INFORMATION RELATING T THE EXISTING IRRIGATION SYSTEM.						
Q) WHEN WAS THE CURRENT SYSTEM INSTALLED?						
A) THE CURRENT SYSTEM WAS INSTALLED OVER TIME FROM THE ORIGINATION OF THE GOLF COURSE OVER 40 YEARS AGO WITH THE EXISTING PUMP STATION UNTIL THE PRESENT.						
Q) WHAT TYPE OF SYSTEM IS CURRENTLY IN PLACE?						
A) THE SYSTEM IS A TORRO IRRIGATION SYSTEM, WHICH IS SATALLITE CONTROLLED, HYDRAULICALLY BALANCED, AND AUTOMATIC.						
Q) WHO WAS THE CONSULTANT / PROVIDER OF THE CURRENT SYSTEM?						
A) THE CONSULTANT/PROVIDER HAS CHANGED OVER THE YEARS BUT THE CURRENT IRRIGATION CONSULTANT IS MR. MIKE KUHN- CELL PHONE # (248.891.1685).						
BID OPENING DATE AND TIME HAVE BEEN EXTENDED FROM 05/07/09 TO 05/14/09 AT 1:30 PM.						
***** NO OTHER CHANGES *****						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *Chris Bell* TELEPHONE 304-624-4108 DATE MAY 7, 2009

TITLE PROJECT MANAGER FEIN 5506335966 ADDRESS CHANGES TO BE NOTED ABOVE

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



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

# Request for Quotation

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 DEP14622

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ADDRESS CORRESPONDENCE TO ATTENTION OF:  
 CHUCK BOWMAN  
 304-558-2157

RFQ COPY

PROPERTY  
 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	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
04/02/2009				

BID OPENING DATE: 05/07/2009 BID OPENING TIME 01:30PM

LINE	QUANTITY	UQP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29	N/A	N/A
PINES COUNTRY CLUB (PONDS) SUBS. 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 PINES COUNTRY CLUB (PONDS) SUBS. PROJECT IN MONONGALIA COUNTY, WV, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.  BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID AND IS TERMINATED WITHOUT FURTHER ORDER.  ***** THIS IS THE END OF RFQ DEP14622 ***** TOTAL: _____						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Chris Belle</i>	TELEPHONE 304-624-4108	DATE MAY 7, 2009
TITLE Principal	FERN 55 0633596 6	ADDRESS CHANGES TO BE NOTED ABOVE

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



P.O. Box 1532  
Clarksburg, WV 26301  
www.thrashereng.com

Fax: 624•7831  
thrasher@thrashereng.com

May 15, 2009

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  
Charleston, WV 25305

**RE: *Expression of Interest – Pines Country Club (Ponds) Subsidence***  
***RFQ #DEP14514***

To Whom It May Concern:

Thrasher Engineering, Inc. is pleased to have the opportunity to submit this expression of interest and qualifications to provide engineering design services for the Pines Country Club (Ponds) Subsidence Design Project. Our qualifications will provide the Department of Environmental Protection's Office of Abandoned Mine Lands and Reclamation with the highest level service and technical proficiency in a timely and cost efficient manner.

As demonstrated on the front cover, we have visited and documented the site. Following our review of the project, we have developed a thorough understanding of the project needs. With that understanding, we offer the following qualifications that the selection of Thrasher Engineering for this project will bring to the DEP and the Office of Abandoned Mine Lands:

***Experience to Meet the Scope of Services:*** Through our site development department, Thrasher Engineering has provided survey, design and construction management services for site development projects which required detention ponds. Additionally, we have mapped and designed numerous open channel drainage systems, and provided stream bank protection. As demonstrated in our qualifications, Thrasher Engineering has surveyed, mapped, designed and provided construction management services for more site projects than any other West Virginia engineering firm.

***Successful Project Experience with AML:*** We currently are providing engineering design services for AML DEP projects in Barbour County at Anglin's Run and in Randolph County at the Roaring Creek Stream project site. Each of those projects has been designed, allowing our team the ability to quickly move forward if assigned the Pines Country Club project. Additionally, in 2005, we were selected by the DEP to provide engineering design and mapping services for the Amherstdale and Ragland Road AML water line projects in Mingo and Logan Counties. As you are aware, each of these projects was completed on time. Thrasher Engineering also has extensive experience with water line projects in areas that are partially affected by AML; we recently provided engineering services for two partial AML projects for the Town of Masontown in Preston County.

**Project Team:** The qualifications of professionals on the team we have assembled to provide design services for this project are unmatched for this type of work. We have 25 engineers on staff, 14 of who are Registered Professional Engineers. The team includes Jeff Gola, P.E., who specializes in hydrology and hydraulics related to storm water management, and Wes Morrow, who brings extensive experience in the decommissioning of ponds and dams. Wes formerly served as State Design Director for the Aging Dam Rehabilitation Project for the National Resource Conservation Service. Our Environmental Manager, Sheirl Fletcher, has over 20 years of environmental experience with a major coal company, with specific experience in mine drainage reclamation. Thrasher Engineering offers 10 fully staffed survey crews with experience in mining survey including pre and post subsidence and acid mine drainage. Our construction management team currently employs nearly 30 construction managers and inspectors, many with experience in site development and remediation projects. Our depth of personnel will allow us to start this project immediately.

**Location and Area Knowledge:** For 25 years, Thrasher Engineering, Inc. has provided top quality engineering services throughout West Virginia, including numerous clients in Monongalia County where the Pines Country Club is located. As the selected firm for this project we can bring time and cost efficiencies to the Department.

With our experience with AML and drainage projects, our qualified personnel and our expertise, Thrasher Engineering is the right choice for this AML project.

Following the instructions outlined in the RFQ, this proposal contains information regarding Thrasher Engineering's history, qualifications and management and staffing capabilities along with the required DEP /AML Consultant's Confidential Qualifications Questionnaire and Matrix and an affidavit stating Thrasher Engineering has no debt owed to the State of West Virginia.

We thank you for your consideration of our qualifications and look forward to the opportunity to present our qualifications and project methodology to you in person.

Sincerely,

THRASHER ENGINEERING, INC.



CHADWICK D. BILLER, P.E.  
Principal-In-Charge / Project Manager

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# STATEMENT OF QUALIFICATIONS

## **FIRM OVERVIEW**

### **THRASHER ENGINEERING, INC.**

**Established** 1983

#### **Officers**

H. Wood Thrasher, P.E.,	President
Kenneth P. Moran, P.E., P.S.	Vice-President
Kurt L. Newbrough, P.S.	Secretary / Treasurer

#### **Partners**

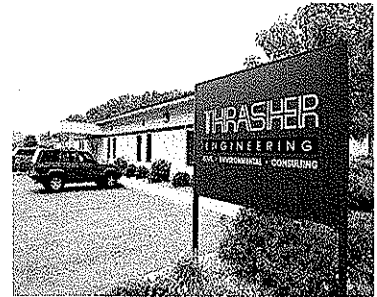
Wm. Randy Watson	Public Utilities
Chadwick Biller, P.E.	Site Development / Highways / Airports
Chad Riley, P.E.	Site Development
Clay P. Riley, P.E.	Public Utilities
Daniel E. Ferrell, P.E.	Public Utilities
Aaron Denham	Construction Inspection / Testing

#### **Scope of Services**

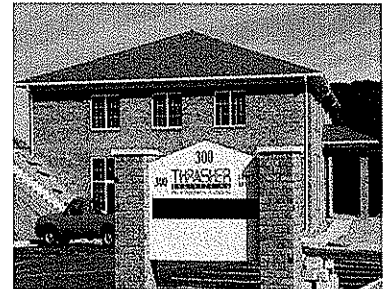
Public Work – Water / Sewer / Treatment Plants / Facility Plans  
/Business and Industrial Parks  
Site Development – Industrial/ Business / Commercial / Residential  
General Civil Engineering – Municipal Engineering / Subdivisions/  
Paving  
Highway/ Roadways / Recreational Trails Design  
Environmental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

#### **Offices**

30 Columbia Boulevard, Clarksburg, WV  
300 Association Drive, Charleston, WV  
3000 Thayer Center, Oakland, MD  
Foxcroft Avenue, Martinsburg, WV  
Princeton, WV – Pentree, Incorporated – Affiliate



*Thrasher Engineering, Inc. Office – Clarksburg, WV*



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## STATEMENT OF QUALIFICATIONS

Thrasher Engineering, Inc. is a civil engineering consulting firm, specializing in public works projects. The majority of Thrasher Engineering'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; also serving as principals are Kenneth P. Moran, P.E., and Kurt L. Newbrough, P.S.

Providing a full range of professional engineering services, Thrasher Engineering, Inc. currently maintains a staff of 170 full-time employees with. 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 Thrasher Engineering 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.

## SERVICES

The expertise of our company is confirmed in the variety of projects successfully completed. Areas of expertise that we believe are most beneficial to the WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation for the Pines Country Club Ponds Subsidence Design Project include:

### 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.



*(Above) Storm water Pond, Canaan Federal Prison, Scranton, PA  
(Below) Storm water Pond, VA National Cemetery, Grafton, WV*



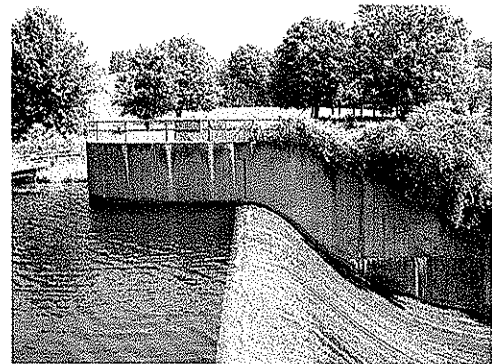
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Capabilities in the evaluation and design storm water drainage include:

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

### **DAM SAFETY ENGINEERING**

Thrasher Engineering, Inc. engineers have conducted dam safety (hazard classification / rehabilitation assessment) investigations on a total of 11 structures, for both public and private clients. The dams investigated vary in function from single purpose structures (flood prevention or recreation) to multiple-purpose structures (flood prevention, water supply, and/or recreation).



Our Dam Safety Engineering Investigation Services Include:

**Determining Existing Condition of Dam** – by reviewing available design documentation and Dam Safety Inspection (Operation and Maintenance) Reports; the current Monitoring and Emergency Action Plan; and by conducting an on-site inspection of the structure in order to establish the present condition of the dam including problems and deficiencies; and how it functions with respect to the original design purpose(s).

**Hazard Classification Determination** – by reviewing available structure and downstream development information which was used to determine the existing hazard classification. Hazard classification is determined using current State Dam Safety Regulations and other applicable state codes and/or regulations, using updated downstream development information.

**Determining Dam Rehabilitation and New Dam Design:** – using results of the hazard classification determination, recommendations from available Dam Safety Inspection Reports, and the on-site inspection to determine rehabilitation requirements.

Capabilities in dam safety engineering investigation and rehabilitation recommendations include:

- ❑ Dam hydrology and hydraulic studies
- ❑ Dam hazard classifications
- ❑ Sedimentation requirements
- ❑ Geologic investigations
- ❑ Earth embankment and foundation design
- ❑ Principal and auxiliary spillway design



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## **SITE DEVELOPMENT**

Thrasher Engineering has planned, surveyed, designed and provided construction management services for over 30 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 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.

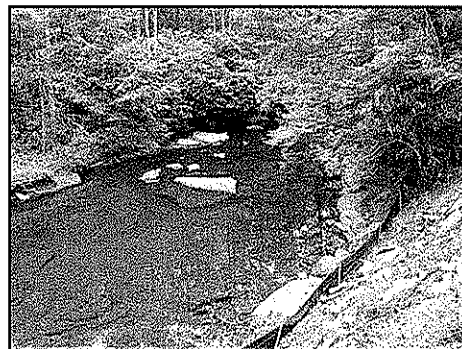
**Utility Layout/Mapping** - includes design of utility extensions to serve existing and proposed facilities, as well as the complete mapping of existing utilities.

## **ENVIRONMENTAL REPORTING SERVICES**

Thrasher Engineering, Inc. provides full environmental assessment and clearance services. We have more than 18 years 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)



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- 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, Thrasher Engineering maintains a complete surveying department which includes four licensed professional land surveyors, ten full-time survey crews, CADD technicians, and office support staff.

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 Thrasher Engineering varies greatly as well and covers virtually all aspects of land surveying, such as:

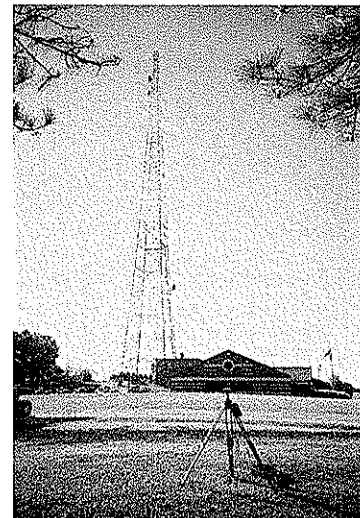
**Pre- and Post-Mining Surveys** - vertical and horizontal control, inspector's report of protected structures, interior and exterior photographs, and videos. Thrasher Engineering provides these survey services for numerous coal companies, including Eastern and Martinka. Additional services performed 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, and 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



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## **CONSTRUCTION MANAGEMENT AND INSPECTION**

Thrasher Engineering 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**

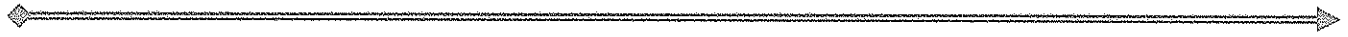
Thrasher Engineering's Materials Testing Department is capable of performing a wide range of field and laboratory tests. Our laboratory at our Clarksburg, WV office is one of only three nationally certified facilities in the State of West Virginia. Additionally, our engineers and technicians who perform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

### Services Include:

- Concrete Testing and Inspection
- Soil Testing and Inspection
- Aggregate Testing and Inspection
- Mortar and Grout
- Asphalt
- Paint Coatings
- Sprayed-on Fireproofing
- Subsidence Inspecting
- Caisson and Piling Inspection

## **GEO-TECHNICAL SERVICES**

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



## **EQUIPMENT AND SOFTWARE**

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

AutoCAD Landdesktop 2008 and Microstation V8 software is utilized at 48 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

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## FIRM MANAGEMENT AND STAFFING

Thrasher Engineering offers the largest engineering staff in the State of West Virginia. The expertise of the Thrasher Engineering 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.

**H. Wood "Woody" Thrasher, P.E.** President of Thrasher Engineering, Inc. graduated from West Virginia University in 1977 with a degree in Civil Engineering. Since that time, he has utilized his engineering skills and entrepreneurial spirit to build Thrasher Engineering, Inc. into West Virginia's largest civil and consulting engineering firm. Mr. Thrasher has extensive experience in all aspects of the engineering process, with emphasis on management and administration of multi-million dollar projects including funding and regulatory issues. Mr. Thrasher forms and supervises multi-project design teams and conducts client needs assessments.

**Kenneth P. Moran, P.E.** is Vice-President and Chief Engineer. Mr. Moran has 24 years of experience in civil engineering. He provides project management and technical review for both site development and public utilities projects. A graduate of Fairmont State University, Mr. Moran is a registered Professional Engineer (P.E.) in addition to a registered Professional Land Surveyor (P.S).

Also a partner and principal of Thrasher Engineering is **Kurt L. Newbrough, P.S.** Mr. Newbrough provides supervision of all survey activities for the firm performed by ten full-time survey teams. Mr. Newbrough is a licensed Professional Surveyor and has specialized training in OSHA Hazardous Waste Operations and Emergency Response Center in Addition to the US Department of Labor / Mine Safety and Health Administration. He also serves in the elected position as Harrison County (WV) Surveyor.

Public utilities system projects are the responsibility of **Wm. Randall Watson**. A graduate of Fairmont State University, Mr. Watson joined Thrasher Engineering in 1984 and is a firm partner. **Clay P. Riley, P.E.**, also a firm partner, is involved in both water and sanitary sewer utilities projects. He is a graduate of the West Virginia University College of Engineering. **Daniel E. Ferrell, P.E.** is a graduate of West Virginia University and received his Master of Science Degree in Civil Engineering from Old Dominion University. He also is responsible for public utilities projects.

**Chadwick Biller, P.E.** and **Chad M. Riley P.E.**, round out the senior engineering managers of the company. Mr. Riley is a graduate engineer from Fairmont State University and supervises site development projects. Mr. Biller received his engineering degree from West Virginia University. He is responsible for AML remediation design projects in addition to roadways, bridges and airport projects.

**Aaron Denham** is the firm partner responsible for construction management and inspection in addition to materials testing including the materials testing laboratory. Mr. Denham received his Bachelor of Science in Civil Engineering Technology from Fairmont State University.

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## PROJECT TEAM

Thrasher Engineering has assigned a team of experienced professionals to the project.

**Kenneth P. Moran, P.E.** will serve as **Principal-In-Charge and Chief Engineer** for the project. Mr. Moran is Vice-President of Thrasher Engineering, Inc. and oversees all engineering services provided by the firm.

**Chadwick D. Biller, P.E.** will be the **Project Manager**. 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, Inc. and manages site development and survey projects, many of which include remediation, soil and erosion control and drainage aspects.

**Jeff Gola, P.E., Mike Nestor, E.I.T. and Wes Morrow** will each bring their specific areas of expertise to the project for project design. Mr. Gola specializes in hydrology and hydraulics, specifically related to storm water management and site development projects, while Mr. Nestor, who currently serves as design engineer for the AML Roaring Creek and Anglin projects experience includes drainage and sediment control design projects for site development projects. Mr. Morrow will bring experience in the assessment, design, rehabilitation and decommissioning of impoundments to the team. Prior to joining Thrasher, he served as State Design Engineer for the U.S. Natural Resources Conservation Service for Public law 566 the Aging Dam Rehabilitation project.

**Jeff Pine** will be responsible for CAD design for the project. Mr. Pine provides design infrastructure projects including street and lot layout, street profiles, extension of the public sewer and water systems including utility plans and profiles, storm water drainage, storm water management, erosion and sediment control plans and NPDES permitting.

Environmental services will be managed by **Sheirl Fletcher**, Environmental Manager for Thrasher Engineering, Inc. Ms. Fletcher joined Thrasher Engineering, Inc. after serving 23 years as a geologist, hydrologist and environmental specialist with Consol Energy, Corporation. In that position, she participated in the engineering and final reclamation of five Consol Energy mines in Monongalia County.

The survey aspects of the project will be under the direction of **Kurt Newbrough, P.S.** Mr. Newbrough has over 20 years of experience in survey projects and significant project experience in pre and post mine subsidence surveys. These surveys have been conducted for numerous coal companies at sites throughout the state.

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

Should the DEP choose to retain Thrasher Engineering, Inc. for the construction monitoring aspect of the project, Thrasher Engineering, Inc. has one of the largest construction inspection teams in the State. **Aaron Denham** serves as supervisor of Construction Management and Materials Testing. He is a graduate of Fairmont State University and is a Level V Certified Inspector by the WV DOH.

**KENNETH P. MORAN, P.E., P.S.**  
*Vice President / Chief Operating Officer/ Chief Engineer*



### **SUMMARY OF EXPERIENCE**

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**

- ❑ *B.S., Civil Engineering Technology, 1983 – Fairmont State University*

### **CERTIFICATIONS**

- ❑ *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*

### **REPRESENTATIVE PROJECT EXPERIENCE**

- ❑ *City of Belmont, Sanitary Sewer Project – Project Manager and Project Engineer.* Mr. Moran was involved in the Wastewater Treatment Plant Expansion and inflow filtration improvements. Mr. Moran negotiated with the West Virginia Department of Environmental Protection for the removal of the sludge blanket for French Creek. Improvements for the Plant included designs for new clarifiers, sludge thickening, sludge processing and the relocation of the outfall to the Ohio River.
- ❑ *Brooke County PSD, Sanitary Sewer Project – Principle in Charge and Chief Engineer.* The project entailed planning and design, new sanitary sewer collection systems in and around Wellsburg and Follansbee. The project negotiations with the West Virginia Department of Environmental Protection and various municipalities to determine the sanitary sewer treatment provider.
- ❑ *Town of Tunnelton Sanitary Sewer Project - Project Manager and Project Engineer.* Mr. Moran designed a sanitary sewer collection system for the Town of Tunnelton and a new 40,000 gallons per day (gpd) Wastewater Treatment Plant.
- ❑ *Greater Harrison County PSD, Sanitary Sewer Project –Project Manager and Project Engineer.* This project included Wastewater Collection System Extensions in the areas of Lost Creek, Good Hope and Mount Clare. We were involved in the upgrade of the existing West Milford Wastewater Treatment Facility from 300,000 gpd to 600,000 gpd. The improvements included a new pre system upgrade of the aeration system and disinfection systems.
- ❑ *Huttonsville PSD, WWTP, Sanitary Sewer, Collection System, Extensions - Project Manager.* The inflow filtration improvement project removed and replaced the gravity part collection system in the areas of Valley Bin, Daley and East Daly in Randolph County. The project included upgrading the District's existing Wastewater Treatment Facility. The improvements included head works facility, aeration system, filtering system improvements and disinfection system improvements.

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- ❑ **Pea Ridge PSD, WWTP, Sanitary Sewer, Collection System, Extensions – Project Manager.** This project included extensions in the existing system, inflow infiltration collection system improvements, upgrades of two (2) Wastewater Treatment Facilities, and abandonment of an existing lagoon system which was converted to wetlands.
  - ❑ **Scott's Run PSD, Sanitary Sewer, Collection System Extensions – Project Manager.** Mr. Moran was involved in the extension of a new gravity sewer collection system in the areas of Osage, Cassville, Wade's Run, Chaplin Hill of Monongalia County. The project removed the existing Wastewater Treatment Facility in the area of New Hill. The project negotiations with the Morgantown Utility Board for the wastewater treatment, operation and maintenance and system boundary.
  - ❑ **Canaan Valley Public Service District Waste Water Treatment System – Project Manager.** This project entailed analyzing the Canaan Valley area for implementation of a public sanitary sewer system. There were multiple tasks involved with this project from working with the Environmental Protection Agency and the West Virginia Department of Environmental Protection with regards to the TMDL on the Blackwater River. The project solution provided a managed stream point discharge solution for the Valley.
  - ❑ **Pocahontas County PSD, WWTP, Sanitary Sewer, Collection System, Extensions – Project Manager.** The project involved designing a new sanitary sewer collection and treatment system to serve the areas of Snowshoe, Linwood, and Slatyfork of Pocahontas County. The project involved multiple alternative analyses due to the varied environmental and social interest of the county.
  - ❑ **City of Bridgeport, Sanitary Sewer Lift Station Improvements, WWTP Upgrades – Project Engineer, Project Manager and Principal in Charge.** Mr. Moran has managed multiple projects for the City of Bridgeport for over 17 years. He has designed multiple pumps station and collection system for the City of Bridgeport. He also designed the City's 2.5 million gpd Wastewater Treatment Facility and has worked with the City of Bridgeport to establish their GIS and Long Term Control Plan solutions.
  - ❑ **City of Clarksburg, WWTP Upgrades, Inflow and Sanitary Sewer System Improvements, Colonial Village Line Replacement – Project Engineer, Project Manager and Principal in Charge.** Mr. Moran has managed multiple projects for the City of Clarksburg for over 17 years. He has designed multiple pump stations and collection system for the City. Mr. Moran also worked on various pump station systems and collection systems throughout the City of Clarksburg and as Engineer in Charge management upgrades of their existing Wastewater Treatment Facility. This facility was a 6 million to 8 million gpd facility. Mr. Moran worked with the City to establish their GIS and Long Term Control Plan solutions.
  - ❑ **Town of Terra Alta, Sanitary Sewer Collection Improvements and WWTP –Project Engineer and Project Manager.** Mr. Moran designed a new collection system for the Town of Terra Alta and a 250,000 gpd expandable Sequencing Batch Reaction (SBR) Wastewater Treatment Facility.
  - ❑ **Hundred-Littleton PSD, New Sanitary Sewer Collection and Treatment System Water System – Project Manager, Project Engineer and Principal in Charge.** Mr. Moran was involved in the Sanitary Sewer Collection System project in and around the Town of Hundred. This was a 50,000 gpd Wastewater Treatment Facility. As Principle in Charge, Mr. Moran was involved with multiple tank replacements and water line replacements throughout the district.
  - ❑ **Preston EDA, Chief Engineer for Water Extension to Prison and Project Manager.** This project entailed the design of an eight (8) mile water distribution system to provide service to the Hazelton Federal Bureau of Prisons. This system included development of well fields for water supply and a new water treatment facility, multiple booster stations, and a 1 million gallon elevated storage tank.
  - ❑ **Preston EDA, Chief Engineer for Park Utilities at Northpointe Industrial Park – Chief Engineer.** Mr. Moran designed the water, storm sewer, sanitary sewer improvements for a new Industrial Park. This Industrial Park is located in the Hazelton area in Preston County. He also designed a 50,000 gpd Sanitary Sewer Treatment Facility to serve the park.
  - ❑ **Food Lion, Clarksburg, Nutter Fort, Sabarton – Project Engineer and Project Manager.** Mr. Moran was involved in the site development for Food Lion in the areas of Clarksburg, Nutter Fort, and Sabarton. His designs included grading, sighting of the buildings, storm water management systems, water, and sewer.



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- ❑ **US Army Reserve Center, Clarksburg and Jane Lew – Project Engineer.** This project was a Design/Build. The project team consisted of Mr. Moran and members of March Westin. Designs included grading, drainage, storm water management, water and sewer.
  - ❑ **Mineral County High School – Project Engineer.** Mr. Moran provided site drainage, design services including grading, drainage, storm water management, water and sewer.
  - ❑ **Calhoun County High School – Project Engineer.** Mr. Moran designed the wastewater treatment facility for the package plant. He also provided site drainage, design services including grading, drainage, storm water management, water and sewer.
  - ❑ **Harrison County Bank – Project Engineer.** Mr. Moran was involved in the design of site grading, storm water management, site drainage, design services, water and sewer.
  - ❑ **Peoples State Bank – Project Engineer.** Mr. Moran designed the site grading, storm water management, site drainage, all design services, water and sewer.
  - ❑ **Big Elm Elementary School – Project Engineer.** Mr. Moran was primarily involved with the Department of Highway's road widening of Route 19 and turning lanes for the entrance of the Big Elm Elementary School.
  - ❑ **Robert C. Byrd High School Access Road – Project Engineer.** This project included road widening and turning lanes of the intersection of Route 98 and Robert C. Byrd Drive. Mr. Moran designed the complete roadway of Robert C. Byrd Drive including pavement, alignment, drainage, relocation of all utilities and he was involved in all aspects of the project.
  - ❑ **Lincoln High School, Widening of US Route 19 and Turning Lanes - Project Engineer.** Mr. Moran's involvement with this project was the widening of US Route 19 and turning lanes. Mr. Moran was involved in the design of the pavement, alignment, drainage, relocation of all utilities and was involved in every aspect of the project.
  - ❑ **Hardy County EDA – Robert C. Byrd Industrial Park – Project Engineer and Project Manager.** Mr. Moran worked on the design for the road widening of Route 58, new roads through the industrial park, stormwater management pond facility, water, sewer, communication, utilities, lighting, and a 20,000 gpd expandable Wastewater Treatment Facility.
  - ❑ **City of Kingwood - Project Engineer and Principal in Charge.** Over the last 15 years Mr. Moran was involved in multiple water projects and sanitary sewer projects for the City of Kingwood. He also worked on various sewer pump station systems, sewer collection systems throughout the City of Kingwood sanitary sewer and water system. As Principal in Charge, he was involved with the upgrades of their existing Wastewater Treatment Facility.
  - ❑ **Preston County Sewer PSD WWTP- Project Manager-** Project included design of a 0.5 MGD expandable (SBR) wastewater treatment plant.
  - ❑ **City of Weston. Sanitary Sewer Project, Project Engineer/Project Manager.** Mr. Moran designed a new 2.5 million gallon wastewater treatment plant

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**CHADWICK D. BILLER, P.E.**  
*Partner / Project Manager*



### **SUMMARY OF EXPERIENCE**

*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**

- B.S., Civil Engineering, 1992 – 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*

### **REPRESENTATIVE PROJECT EXPERIENCE**

#### **Site Development Projects**

- WV DEP Anglin's Run and Roaring Creek Projects*
- Taylor County Commission, Re-roofing of Courthouse and Jail*
- Fairmont State University Aerospace Center*
- Raleigh County Memorial Airport Industrial Park*
- Putnam Business Park*
- 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, Fairmont, WV*
- 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 Bridge*

#### **Airports**

- Harrison Marion Regional Airport – Improvement Master Plan*
- Raleigh County Airport – Business Park and Master Plan*
- Grafton Hospital, Helipad Relocation*

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## Highway/Road/Bridge Projects

- 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 5<sup>th</sup> Street Bridge, Parkersburg*
- Rehabilitation of the 35<sup>th</sup> and 36<sup>th</sup> 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*

**JEFFREY GOLA, P.E.**  
**Project Engineer**



## **SUMMARY OF EXPERIENCE**

*Mr. Gola joined Thrasher Engineering in 1998 and serves as Project Manager/Engineer on Highway Projects, Community Improvement Projects, and Commercial Site Development Projects. He is experienced in all aspects of the project control, from design and drafting to the bidding process to the over site of the construction inspection. Specialties include:*

- *Highway Engineering: planning and design of roadways and sidewalks.*
- *Structural Engineering: design of bridges, retaining walls, and utility plant structures/demolition plans*
- *Site/Land Development: design of roads, drainage, storm water manager, erosion and sediment control and numerous regulatory permitting activities.*
- *Hydrology and Hydraulic Engineering: stream modeling and dam break analysis.*

## **EDUCATION**

- ❑ *B.S., Civil Engineering – West Virginia University, Summa Cum Laude 1998*

## **CERTIFICATIONS**

- ❑ *Registered Professional Engineer (PE), State of West Virginia #15621*
- ❑ *Registered Professional Engineer (PE), State of Maryland #33492*
- ❑ *American Society of Civil Engineers*
- ❑ *American Society of Highway Engineers*
- ❑ *City of Mannington Code Enforcement Appeal Board*

## **REPRESENTATIVE PROJECT EXPERIENCE**

- ❑ *Mid-Atlantic Aerospace Complex: Design of approximately 5400 linear feet of a storm water system and a detention pond. The proposed system will provided drainage infrastructure for future development along an existing airport taxiway.*
- ❑ *Buffalo Lake Dam Improvements: Provided a dam break analysis of the existing dam to provide a report on improvements that would be needed to bring the dam within compliance with the WV Dam Safety Act. The procedure included determining the hazard class of the dam and compiling plans that would enable the dam to be brought up to the latest standards. During the project we were able to form a close working relationship with WVDEP Dam Safety Section.*
- ❑ *Raleigh County Memorial Airport Industrial Park: Designed the roadway and drainage for a 100 acre industrial park. The project included a detailed erosion and sediment control plan. The job was unique to me in that I took the role in handling all invoices and project administration between the owner, contractor, and funding agencies.*

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- ❑ **Benedum Airport Authority:** *Provided a grading, drainage, and erosion and sediment control package for improving the North Central WV Airport runway safety area approach slopes. The project is now proceeding to the design of an 800 foot runway extension.*
  - ❑ **WVDOH Indian Fork:** *Two span steel beam bridge 127 feet long in Gilmer County West Virginia. Design of a bridge structure and roadway approaches. A Hec-Ras analysis was performed to determine stream water elevations. The bridge is unique in that the steel girders were simple supported made composite.*
  - ❑ **WVDOH Jakes Run:** *Single span steel girder bridge 95 feet long. Design consisted of a bridge, roadway approaches, detour road, waterline relocation, and right-way-plans.*
  - ❑ **WVDOH Corley Bridge and Little Grassy Creek Box Beam Bridge:** *Single concrete box beam bridges. Provided the construction plans for the bridge, road approaches, and right of way plans. The stream was modeled to provide stream elevations for different storm events. Worked directly under the WVDOH District 7 bridge engineer to provide plans in shorten time frame of 3 months.*
  - ❑ **WVDOH Corridor H – Davis to Bismarck:** *Design of over 2 miles of a four-lane divided highway, including an additional 1.5 miles of secondary roads. The project also includes a three span bridge spanning Corridor H and a set of twin mainline bridges spanning a secondary road.*
  - ❑ **Three Forks Bridge:** *Complete design of a three span steel girder bridge 325 feet long. The purpose of the bridge was to provide access for a new mining facility owned by the International Coal Group. bridge had to span both a stream and railroad tracks.*
  - ❑ **City of Salem Slip Repairs:** *The goal of the project was to repair two slip areas that occurred below a city street and above some residential structures. The problem areas were investigated by a geotech engineer. Based on site conditions and funds, the most efficient method to correct the problems were to use gabion walls.*
  - ❑ **Fairmont State University, Athletic Field Improvement:** *The goal of the design was to provide grading and the aggregate sub base for the installation of field turf. The field turf was to be installed on both the main football field and softball field. The design included a retaining wall, drainage structure, and a new access road to the fields. The biggest obstacle for the project was that the contract had to be designed and built before the first football game. Having not started the design until late spring, we were still able to competitively bid and award the contract and work with the contractor to meet the deadline.*

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**MIKE NESTOR, E.I.**  
**Project Engineer**



**EXPERIENCE**

*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**

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

**CERTIFICATIONS**

- ❑ *Engineer Intern, State of West Virginia*

**AFFILIATIONS**

- ❑ *American Society of Civil Engineers*
- ❑ *Eastern Panhandle Home Builders Association*

**REPRESENTATIVE PROJECT 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.*
- ❑ *MILLARDSVILLE VILLAGE – 26 townhouse lots on approximately 3.15 acres. Completed sketch plat, storm water management design, and street profiles.*
- ❑ *FAIRFAX FARM Section 2 – 15 single family residential lots on approximately 36.73 acres. Completed development of drainage areas, grading plan, erosion and sediment control plan, layout of lots, and Preliminary Plat design.*
- ❑ *PIKESIDE MEADOWS Section E – 63 townhouse lots on approximately 17.51 acres. Prepared drawings for Public Service Districts.*
- ❑ *LITTLE GEORGETOWN ESTATES Sections 1 and 2 – 64 single family residential lots on approximately 127 acres. Completed lot layout, septic layout, design of sediment basin, turning lane, erosion and sediment control, and Preliminary Plat.*
- ❑ *WEBBER SPRINGS Section 3 – 119 single family residential lots on approximately 32.81 acres. Completed design of turning lane on WV Route 51.*
- ❑ *BROOKSIDE ESTATES Section 1 – 60 single family residential lots on approximately 101.86 acres. Completed Sketch Plat design along with septic reserve layout and initial grading and profiles.*
- ❑ *CREEKSIDE MEADOWS – 95 single family residential lots on approximately 101.86 acres. Completed lot layout, Sketch Plat design, water and sewer extensions, and design of storm water management facilities.*
- ❑ *MULLBERRY KNOLL – 10 townhouse lots on approximately 1.5 acres. Completed Sketch Plat design, water and sewer extension, grading plan, erosion and sediment control plan, and design of storm water management facilities.*

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- ❑ **SHENANDOAH OFFICE PARK** – Two commercial buildings totaling 50,000 sf. Sketch Plat design.
  - ❑ **SPRING HILL Section 6** – 15 single family residential lots on approximately 10 acres. Completed design of storm water management, grading plan, and preparation of drawings for Preliminary Plat submittal.
  - ❑ **MAIDSTONE ON THE POTOMAC** – 108 single family residential lots on approximately 40.5 acres. Completed Sketch Plat design, water and sewer extensions, grading plan, erosion and sediment control plan, drainage plan, design of storm water management facilities, and Preliminary Plat design.
  - ❑ **NATIONAL PROPANE** – Bulk Propane Storage Facility and office space on approximately 5.5 acres. Completed Sketch Plat, water and sewer extensions, grading plan, erosion and sediment control plan, drainage plan, design of storm water management facility, and Preliminary Plat design.
  - ❑ **BACK CREEK ACRES** – 3 single family residential lots on approximately 6 acres. Completed Preliminary Plat, grading plan, and erosion and sediment control plan.
  - ❑ **MARTINSBURG INTERNAL MEDICINE** – Completed Site Plan for city approval of 800 sf office addition.
  - ❑ **CHESTNUT HILL ESTATES** – 29 single family residential lots on approximately 66 acres. Completed Sketch Plat design, lot and street layout, grading plan, and profiles.
  - ❑ **MVB BANK ADDITION** – Completed Site Plan for approval of 900 sf bank addition.
  - ❑ **SPRING HILL Section 7** – 7 single family residential lots on approximately 7 acres. Completed lot layout, water and sewer extensions, grading plan, erosion and sediment control plan, profiles, grading plan, drainage plan, storm water management, and Preliminary Plat design.
  - ❑ **WILLIAMSPORT PARK ROAD EXTENSION** – 650 foot road extension in Williamsport, MD. Completed design of road, including grading, drainage, storm water management, profiles, permitting, and specifications.
  - ❑ **INWOOD AND BAKER HEIGHTS WASTE WATER TREATMENT PLANTS** – Completed Site Plans for county approval of facility upgrades.
  - ❑ **LEISURE LIVING ESTATES Section 4** – 10 single family residential lots on approximately 7 acres. Completed Sketch Plat design, water and sewer extensions, grading plan, profiles, erosion and sediment control plan, drainage plan, storm water management, and Preliminary Plat design.
  - ❑ **CHUCK'S PIZZA** – Completed Site Plan for 1,200 sf pizza shop on approximately 1.67 acres. Design included site layout, grading plan, erosion and sediment control plan, drainage and storm water management.
  - ❑ **FEDEX SMARTPOST** – Upgrades to existing FedEx SmartPost location, including the addition of a guard shack and extension of gravity sewer system. Proposed work was granted approval with county building permit.
  - ❑ **OAK HILL, WV DRAINAGE PROJECT** – Design of storm sewer upgrades for the town of Oak Hill. Project included the addition of a 2' x 6' box culvert under Trump Avenue, construction drawings, and specifications.
  - ❑ **TBA OFFICE SITE** – Construction of two new office buildings totaling 6,200 sf on approximately 1.6 acres. Completed Sketch Plat, grading plan, and erosion and sediment control plan.

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**WYNARD (WES) MORROW**  
**Project Engineer**



**SUMMARY OF EXPERIENCE**

*Mr. Morrow joined Thrasher Engineering Inc. (TEI) in 2007 and serves as Project Engineer for the planning and development of sanitary sewer projects and Long Term Control Plans (LTCP). Prior to joining TEI, Mr. Morrow worked for the USDA Natural Resources Conservation Service (NRCS) and Soil Conservation Service (SCS), and the U.S. military. Positions held include:*

- Project Engineer - TEI*
- State Design Engineer - NRCS-WV Design Unit Head*
- Design Engineer - NRCS*
- Civil Engineer – NRCS/SCS*
- Planning Engineer - SCS*
- U.S. Army Commissioned Officer - Corps of Engineers, 82<sup>nd</sup> Airborne Division and 18<sup>th</sup> Airborne Corps*

**EDUCATION**

- B.S. Civil Engineering - Water Resources Emphasis, West Virginia University*
- U.S. Army Officer's Candidate School - Commissioned Officer, Corps of Engineers*

**AFFILIATIONS**

- American Society of Civil Engineers (past member)*

**REPRESENTATIVE PROJECT EXPERIENCE**

- Combined Sewer Overflow (CSO) - Long Term Control Plans: developed LTCPs for the communities of Kingwood, Clarksburg, Bridgeport, and Parsons. Directed sewershed data collection and assessments in accordance with West Virginia Department of Environmental Protection (WVDEP) and U.S. Environmental Protection Agency policy and criteria requirements, used the EPA Storm Water Management Model (SWMM) to predict existing condition and future with-project CSO impacts on the communities, developed alternatives and costs to minimize CSO impacts, and wrote the LTCP reports.*
- WVDEP (Dam Safety Division) Annual Safety Inspections: assisted with annual dam safety inspections and report preparation for the City of Salem's and Town of Lumberport's water supply dams.*
- Tennerton Public Service District - Phase III Sanitary Sewer Extension: developed preliminary design layout for a proposed service extension.*
- NRCS Aging Dam Rehabilitation Program: led interdisciplinary team of NRCS specialist with the prioritization, assessment, and evaluation of aging dams and preparation of Rehabilitation Assessment Reports, as requested by sponsoring local organizations in West Virginia. The evaluation/assessment process involved reviewing available design data, conducting field reviews of each dam and its appurtenant structures, and used the ARS/NRCS SITES program to evaluate dam structural stability and integrity during passage of 100 percent of the probable maximum precipitation event without overtopping. Results of the evaluations, which were documented in the Rehabilitation Assessment Reports,*
  - include determination of hazard classification, total failure index, population at risk, and total risk index. Dams evaluated include:*
  - Brush Creek Sites 7A and 19A located in Mercer County, WV*



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- **Upper Deckers Creek Sites 1, 4, and 6 located in Preston County, WV**
  - **Patterson Creek Sites 14, 46, and 49 located in Mineral and Grant Counties, WV**
  - **New Creek Sites 14 and 16 located in Grant County, WV**
  - **State Design Engineer: supervised and provided leadership to a staff of three civil engineers and three civil engineering technicians; designed and reviewed PL-566 flood control measures including earthfill dams, stream channel modifications, non-structural flood reduction measures, and emergency watershed protection projects throughout West Virginia.**
  - **Design Engineer (NRCS Design Unit): designed PL-566 flood control measures including dams, stream channel modifications, non-structural flood reduction measures, and emergency watershed protection projects throughout West Virginia. Projects designed include:**
    - **Howard Creek Site 12 - a flood prevention dam located in Greenbrier County, WV. Performed dam hydrology and hydraulics evaluation using the NRCS TR-48 (DAMS2) program, embankment and foundation design; developed site layout, quantities, cost estimates, contract specifications, directed development of construction drawings, and provided technical assistance during construction of the dam.**
    - **Wheeling Creek Site 3 – a flood prevention dam located in Marshall County, WV. Performed dam hydrology and hydraulics evaluation, embankment and foundation design; developed contract specifications, and provided technical assistance during construction of the dam.**
    - **Howard Creek Channel, located in Greenbrier County, WV. Served as the NRCS Contracting Officer's (CO) Technical Representative for an architectural and engineering firm's design of flood control channel work. Review of all design submittals and billing invoices; made recommendations to the CO concerning acceptance/corrections of design submittals, contract modifications, and the accuracy and justification for payment invoices.**
  - **Civil/Planning Engineer: conducted preliminary investigation studies including dams in the Howard Creek, Upper Mud River, and Wheeling Creek watersheds; stream channel modifications in Howard Creek, Piney Creek (Cranberry Creek, Little Whitestick Creek, and Soak Creek), Upper Buffalo Creek, Lower Mud River, Evitt's Run, and Pleasant Valley watersheds/sub-watersheds; and evaluation of non-structural flood reduction measures for the above mentioned watersheds projects.**
  - **Emergency Watershed Protection Program Damage Survey Teams: assessed damage caused by severe flooding incidents, and developed designs, construction specifications, and cost estimates for rehabilitation of the damaged areas. Served as project engineer during construction of rehabilitation measures.**

## **PUBLICATIONS**

- **Co-authored SCS Engineering Guide: "Planning Non-Structural Measures in West Virginia"**

**JEFF PINE**  
***CADD Operator***



## **SUMMARY OF EXPERIENCE**

*Mr. Pine joined Thrasher Engineering in 2005 and serves as CADD Operator for the firm. His duties entail all aspects of infrastructure design including street and log layout, street profiles, extension of the public sewer and water systems including utility plans and profiles, storm water drainage, storm water management, erosion and sediment control plans and NPDES permitting.*

## **EDUCATION**

- Certificate, Computer Aided Design – Hagerstown Community College*
- Diploma – Clear Spring High School*

## **CERTIFICATIONS**

- Certified Forklift Operator through Bragunier Masonry*

## **REPRESENTATIVE PROJECT 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.*
- Mockingbird Mobile Home Park – 25 lots with public utilities, draft lot layout and concept plan for proposal*
- Maidstone on the Potomac – Single family residential lots with public utilities; slope analysis*
- Brookside Estates – 60 Single family residential lots on 125 Acres with individual wells and septic area, created profiles and lot layout, road profiles, street layout, road widening and well locations*
- Oak Hill Drainage – Profiled box culvert*
- Leisure Living Estates – Utility profiles*
- Huyett Road Goodyear – concept plat, utility plan and profile*
- The Berkeley Associates Office - Concept plan*
- Mockingbird – Minor subdivision*
- Eco-Lab IWTP Upgrade – Define site data*
- Fed Ex Smart Post – Site plan, pricing for barriers and parking cable*
- Washington Heights, Section 1 – 20 single family residential lots served by public utilities, site plan, road profile, street profile*

**SHEIRL FLETCHER, LPG**  
*Environmental Manager*



**SUMMARY OF EXPERIENCE**

*Sheirl Fletcher joined Thrasher Engineering, Inc. in 2007 and serves as Environmental Manager for the firm. Prior to joining Thrasher, Sheirl served as Environmental Manager for a major coal firm. She has more than 20 years experience and brings comprehensive knowledge of environmental regulatory programs and reporting requirements in multiple states to our clients' projects, along with technical expertise in environmental engineering, geology and hydrology*

**EDUCATION**

- West Virginia University, Morgantown, WV - Bachelor of Science- Geology*

**Additional Training**

- Contemporary Supervision*
- Conflict Management*
- Influence Management*

**CERTIFICATIONS**

- Licensed Professional Geologist (LPG), Commonwealth of Pennsylvania*
- Certified Professional Geologist (COG), State of West Virginia*

**EXPERIENCE:**

**Environmental Management and Safety Compliance**

- Preparations of applications for required operating permits and licenses regarding air quality, wastewater and construction projects ensuring compliance with all state and federal regulatory requirements.*
- Responsible for compliance with all environmental regulations, including interface with environmental regulators, in a manner consistent with company's policies and procedures.*
- Assure full compliance with OSHA (Occupational Safety and Health Administration) regulations*
- Responsible for the preparation of NEPA documents including Environmental Impact Statements and Environmental Assessments.*
- Developed Probable Hydrologic Impact Studies and provided technical report of findings.*
- Prepare, organized, and maintained inspection reports and records, assuring on-time and accurate filings.*
- Compiled and reported environmental statistics and remedial initiatives to Corporate Environmental Quality Control.*
- Monitored projects to ensure that they were on task in reaching goals and objectives while staying within budgetary limits.*
- Inspected construction sites, and waste water treatment and disposal facilities and systems for conformance with federal, state, or local regulations.*
- Informed company personnel of inspection findings and explained how problems were prevented or corrected.*
- Contributed to the development of company policies, goals, objectives, and procedures, with respect to compliance of environmental regulations.*
- Oversaw activities of outside consultants providing necessary services.*
- Managed staff, prepared work schedules and assigned specific duties.*

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### **Geology**

- Analyzed and interpreted geological, geochemical, and geophysical information from sources such as survey data, well logs, bore holes, and aerial photos.**
- Planned and conducted geological field studies and surveys by: development of drilling pad sites, soils and subsurface drilling to collect data for interpretation**
- Prepared geological maps, cross-sectional diagrams, charts, and reports concerning mineral extraction, land use, and resource management, using results of field work and laboratory research.**

### **Hydrology**

- Studied and documented quantities, distribution, disposition, and development of underground and surface waters.**
- Designed and conducted scientific hydro-geologic investigations to ensure that accurate and appropriate information was available for use in water resource management decisions.**
- Coordinated and supervised the work of professional and technical staff, including consultants, engineers, technologists, and technicians.**
- Drafted final reports describing research results, including illustrations, appendices, maps, and other attachments.**
- Studied wastewater and storm water issues, including flood and drought risks, water quality, wastewater, and impacts on wetland habitats.**
- Assessed ground and surface water movement to provide advice regarding issues such as waste management, route and site selection, and the restoration of contaminated sites.**
- Applied research findings to help minimize the environmental impacts of pollution, water-borne diseases, erosion, and sedimentation.**
- Investigated complaints or conflicts related to the alteration of public waters, gathering information, recommending alternatives, informing participants of progress, and preparing draft orders.**
- Determined sampling locations and methods, and collected water or wastewater samples for analysis, preserving samples with appropriate containers and preservation methods.**

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## **Larry C. Nottingham, PhD, PE**

Mr. Nottingham served as a Principal Engineer at Triad Engineering, Inc. for over 25 years before joining the professional staff at NGE. During that time he has accumulated a broad range of experience in the numerous disciplines of geotechnical engineering. Mr. Nottingham also served as a professor and department chair of the Civil Engineering Department at the West Virginia University Institute of Technology in Montgomery, West Virginia. Mr. Nottingham was involved with consultation and review of many subsidence-related projects performed for BRIM as well as the WVDEP.



### **Fields of Competence**

- Foundation Investigations
- Landslide Analysis & Remedial Design
- Mine Subsidence Investigations
- Highway & Airport Geotechnical Design
- Pavement Analysis & Design
- Retaining Wall Design
- Forensic & Insurance Investigations
- Expert Witness Consultation
- Ground Water and Seepage Analysis & Design
- Dam Analysis & Design
- Personnel Management
- Project Management
- Project Estimating

### **Education**

- B.S.C.E., Civil Engineering, West Virginia Institute of Technology, 1965
- M.S.C.E., Civil Engineering, University of Pittsburgh, 1966
- Ph.D., Civil Engineering, University of Florida, 1975

### **Registration/Certifications**

Registered Professional Engineer in West Virginia, Kentucky, and Ohio

### **Employment History**

- May 2005 – Present  
Senior Engineer, Novel Geo-Environmental, PLLC
- 1979 – May, 2005  
Principal Engineer, Triad Engineering, Inc.
- 1989 - 1994  
Professor and Department of Civil Engineering  
Chair, West Virginia Institute of Technology
- 1975 - 1979  
Senior Engineer, Fugro Gulf, Inc., Houston, Texas
- 1970 - 1974  
Project Engineer, Florida Department of  
Transportation
- 1967 – 1970  
Project Engineer – Ackenheil & Associates, Inc.

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**KURT NEWBROUGH, P.S.**  
*Partner / Survey General Manager*



*Mr. Newbrough serves as Secretary of Thrasher Engineering in addition to being a Partner of Resource Engineering Group and is Survey Supervisor for the firm. Mr. Newbrough has extensive knowledge in all aspects of surveys and is responsible for the assignment and review of all survey activities of his seven fully staffed survey teams. He is experienced in various types of surveys including, but not limited to boundary, topographical, construction layout and GPS for both public and private clientele. Survey projects are performed for each of the Resource Engineering Group companies' public and private clientele, as well as on an independent contract basis.*

*Mr. Newbrough is a Registered Professional Surveyor and held the elected position of County Surveyor for Harrison County, West Virginia.*

**EDUCATION**

*Surveying*

*John Tyler Community College, Chester, Virginia  
United Career Center, Clarksburg, West Virginia*

**REGISTRATIONS**

*Professional Land Surveyor, State of West Virginia  
Certification, OSHA Hazardous Waste Operations and Emergency Response Center  
Certification, U.S. Department of Labor/Mine Safety and Health Administration*

**AFFILIATIONS**

*West Virginia Association of Land Surveyors  
American Congress on Surveying and Mapping*

**REPRESENTATIVE PROJECTS**

**Construction Layout**

- Fairmont State University; Various Projects Associated with the 10-Year Infrastructure Improvement Master Plan*
- City of Bridgeport; Charles Pointe Development*
- Harman Construction, Incorporated*
- Calvert Excavating and Paving, Incorporated*
- Howard Concrete*
- Dodd Corporation*
- Mid-Atlantic Storage System, Incorporated*

**Topographical Surveys**

- West Virginia Department of Transportation/Division of Highways*
- Harrison County Board of Education*
- Gandee and Partners; Huntington... Summit High School*
- William A. Bruce, AIA; Food Lion Stores*

**Boundary Surveys**

- WV National Cemetery*
- Fairmont State University; Various Projects Associated with the 10-Year Infrastructure Improvement Master Plan*
- Town of Moorefield; North and South Levee Areas*
- US Army Corps of Engineers*
- Flood Control*
- USARC Sites*
- US Department of Justice; FBI Fingerprint Identification Complex*
- Hardy County Rural Development Authority*

**GPS Surveys**

- US Army Corps of Engineers, Baltimore District*
- Benatech Associates*
- IDG, Incorporated*

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## **AARON DENHAM**

**Partner / Construction Management and Materials Testing**



### **SUMMARY OF EXPERIENCE**

*Mr. Denham joined Thrasher Engineering in 2000 and serves as a Partner in the firm. Mr. Denham is responsible for construction management, inspection and materials testing for highway, airport, site development, structural and public utilities projects.*

### **EDUCATION**

- B.S. Civil Engineering Technology, 1999 – Fairmont State University*

### **CERTIFICATIONS**

- Fairmont State University Level V Certification – Transportation Engineering Technologist – Engineering Specialization*
- WVDOH Compaction Inspector*
- WVDOH Concrete Inspector/Technician*
- WVDOH Aggregate Sampling Inspector*
- WVDOH Aggregate Technician/Inspector*
- WVDOH Bituminous Inspector/Technician*
- WVDOH Radiation Safety*
- Troxler Basic Safety – Nuclear Compaction Gauge*

### **REPRESENTATIVE PROJECT EXPERIENCE**

- Army Corp of Engineers, Tygart Dam*
- Jackson County Airport*
- Benedum Airport Authority 2001 Master Plan*
- Benedum Airport Authority 2002 Master Plan*
- Benedum Airport Authority 2003 Master Plan*
- Benedum Airport Authority, 2004 Master Plan*
- Ruby Memorial Hospital NE Addition*
- Health Science Learning Center*
- WV National Cemetery Expansion*
- Fairmont State University*
- Institute for Scientific Research*
- I-68 Welcome Center*
- Stockmeier Urethanes*
- Fairmont State University Squibb Wilson Boulevard Demolition and Parking Lots; Lead Inspector & Testing*
- Fairmont State University Renovation; Testing*
- City of Pleasant Valley Sidewalk Project; Lead Inspector & Testing*
- WVDOH South High Street Bridge*
- Wheeling Route 2 Bypass*
- Lake Floyd Dam*
- Baker Dam Site 10*
- City of Bridgeport 279 By-Pass*
- Mon-Fayette Expressway*
- WVDOH Meadowbrook Road*
- Fetterman Bridge*

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## **REPRESENTATIVE EXPERIENCE**

Thrasher Engineering offers significant experience in open drainage and sediment and erosion projects in addition to abandoned mine lands projects, covering a broad range of expertise. In the following section are examples of our experience in each of these areas related to the Pines Country Club project

### **ABANDONED MINE LAND PROJECTS**

#### **WV DEP ABANDONED MINE LANDS – ANGLIN'S RUN #1 AND ROARING CREEK STREAM RESTORATION PROJECTS**

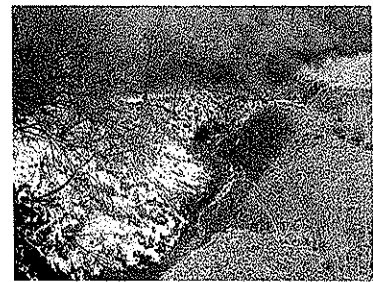
**Client:** WV DEP  
Office of Abandoned Mine Lands and Reclamation  
304-926-0485

##### **Anglin's Run #1 Barbour County**

This area includes 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 preferred scope and preliminary plans for this project include 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 will be constructed. All areas disturbed by construction will be soil covered, conditioned and re-vegetated.

##### **Roaring Creek Stream Barbour County**

This project involves 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 consists of 3 open and 3 closed portals discharging AMD, AMD seeps along the unnamed tributary and an area of subsidence, which drains surface water into the mine workings. AMD flow from the deep mine portals ranges from 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. Construct and rehabilitate access roads to the sites. Install wet seals at the portal locations (4 Portals total). Thrasher Engineering's preliminary plans include re-grading the subsidence area to prevent surface water from entering the mine workings, and installing an emergency spillway on the existing pond which will be designed to handle the additional flow.





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**WV DEP ABANDONED MINE LANDS – AMHERSTDALE (LOGAN COUNTY)  
PRE-SETTLING BASIN AND PRE-TREATMENT FACILITY PROJECT**

**Client:** WV DEP  
Office of Abandoned Mine Lands and Reclamation  
304-926-0485

**Project Description:** The AML affected area is 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 is 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**

**Client:** WV DEP  
Office of Abandoned Mine Lands and Reclamation  
304-926-0485

**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. Upon construction, Thrasher will provide construction management services.

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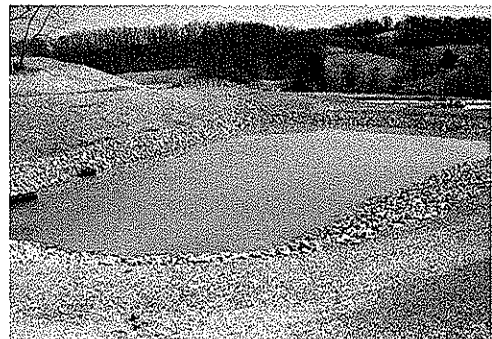
**SITE DEVELOPMENT PROJECTS – SEDIMENT AND EROSION MEASURES**

**WHITE OAKS BUSINESS PARK – BRIDGEPORT, WV**

**Client:** High Tech Development, LLC  
Mr. Jack Keeley  
304-626-5099

As a portion of the site development engineering for the 60 acre Phase I of this total 300 acre development, Thrasher engineering provided all survey, design, construction management/ inspection and materials testing for

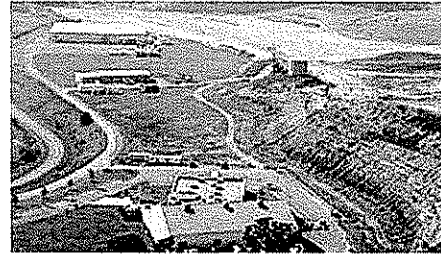
An earthfill sediment basin measuring 13 acre-feet The embankment of the basin was designed at a 2:1 slope with the top of the berm at an elevation of 1114.0. The basin was designed to contain a maximum water surface elevation of 1110.68 (25-year event).



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## **MID-ATLANTIC AEROSPACE COMPLEX STORM WATER DRAINAGE**

**Client:** Tracy Gossard, President  
Telephone: 304-842-9419  
Fax: 304-842-9417  
Email: tracygossard@maacinc.com



**Project Description:** The North Central WV Airport has been creating developable property east of the existing runway for the last decade. The development included a mass grading project that involved the filling of natural drainage areas. Now that the current project is nearing completion and the drainage areas have been filled there is no outlet for storm water runoff. The absence of a natural drainage area causes water runoff from existing businesses to sheet flow across the property and pool in low areas until it can reach a ditch or swale. The overland flow is then directed into a pipe that goes under the taxiway and empties into an existing pond. The pipe and pond are not designed to handle the runoff that is and will be generated for the industrial park. The system of inlets that will be installed will be underground and be sized to accommodate additional flows in the future.



*Current Storm Water Management Pond*

This project will install a series of inlets and underground piping that will transport storm water runoff from existing and future businesses. This new system will replace an existing system of swales, ditches, and pipes. The existing system is not sufficient to carry the runoff from a 50 acre industrial park. The runoff will be diverted into an existing storm water detention basin that will be modified to handle the additional flows and release the runoff in a controlled fashion into an existing stream. The new storm drain system will be sized large enough to handle all existing and future development in the area.

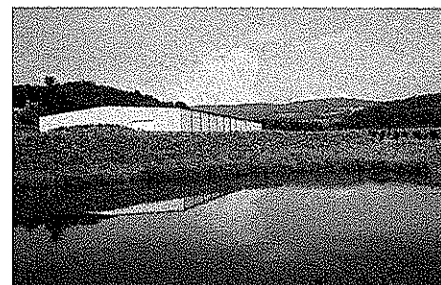
Construction on the project is nearly complete.

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## **BELINGTON INDUSTRIAL PARK**

**Client:** Barbour County  
Office for Economic Development  
304-456-1225

This project consisted of the development and conceptual layout and final design drawings for the park. The work consisted of on-site utilities including water and sanitary sewer. Additionally, this project included an access road conforming to WV DOT/Department of Highways specifications and criteria, earthwork for building site preparation and storm water detention. Construction management services were also provided.



## WEST VIRGINIA NATIONAL CEMETERY

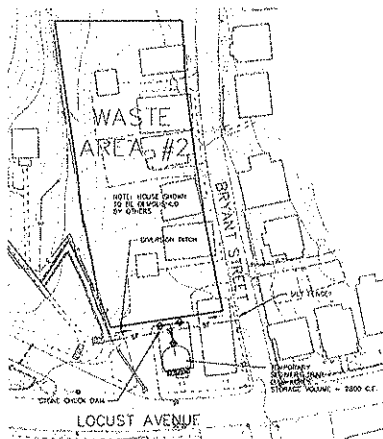


**Client:** U.S. Department of Veterans Affairs  
National Cemetery Administration  
Peter Fernandez,  
Carter VanDyke Associates  
215-345-5053

**Project Description:** The project consisted of the planning, design and bidding for the expansion of the WV National Cemetery. The scope of the work included site utilities, storm sewers, roads, sidewalks, retaining walls, pre-cast concrete crypt burial areas, site grading and sediment and erosion control including storm water detention basins. Construction management and survey services were also provided.

## FAIRMONT STATE UNIVERSITY

**Client:** Fairmont State University  
Mr. Jim Decker, Ass't. VP Facilities  
304-367-4000



Thrasher Engineering is providing civil engineering services throughout the Fairmont State University campus within the scope of FSU's 10-year \$10 million master plan for infrastructure improvements. This portion of the project included storm water management during and after construction. During the construction phase erosion and sediment control was contained by installing silt fence, water barriers, temporary sediment traps, inlet protection, diversion ditches and utility matting. The final site improvements contain swales, ditches, vegetation, landscaping and culverts to control the storm water and limit the pollution from the site. Ditches are protected from erosion and all unpaved areas are stabilized with vegetation.



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## **CANAAN FEDERAL PRISON, SCRANTON, PENNSYLVANIA**

**Client:** Federal Bureau of Prisons  
202-514-6461.

**Project Description:** Thrasher Engineering served as a Team Member on this design-build project of US Penitentiary and Federal Prison Camp. The scope of services included sewer, water, storm water management and gas utilities, site grading, sediment and erosion control, relocation of a township road, layout of the facility and oversight during construction. The drainage of this project required the design of a storm water detention pond.



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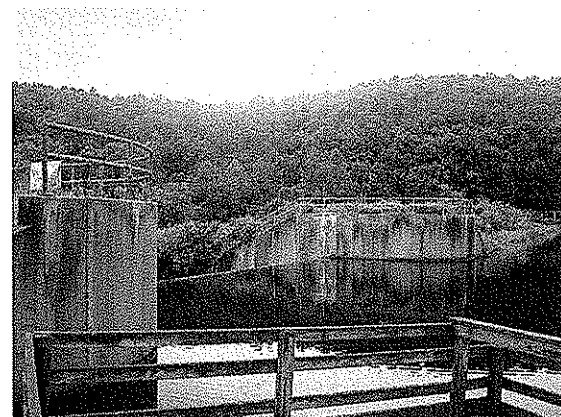
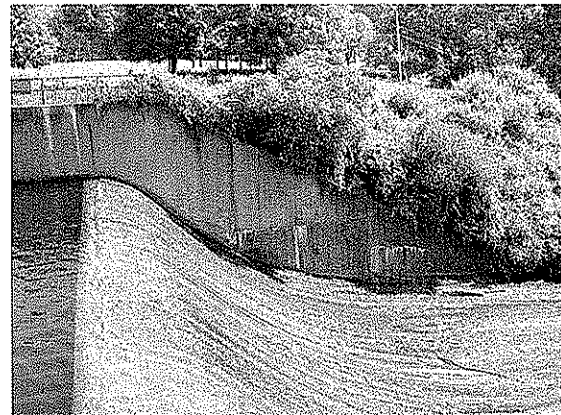
## **IMPOUNDMENT PROJECTS - DAMS**

### **BUFFALO LAKE DAM**

**Client:** Buffalo Lake Homeowners Association  
Mr. David Alvarez  
304-592-5175

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

.Buffalo Creek Reservoir was originally designed and constructed during the late 1950's for the Clarksburg Water Board as a source of a domestic water intake. The lake has a normal pool elevation of 1018.5 ft covering a surface area of approximately 55 acres and a storage capacity of 903 acre-ft. The actual top of spillway is 1028.5 ft while the top of dam is at elevation 1028 with a surface area of an 82.3 acres and a storage capacity of 1579 acre-ft. The source of outflow is a concrete ogee spillway that crests at elevation 1018.5 ft. and has a width of 85 ft. Based off of the dimensions of the existing spillway, the approach depth was 10 ft. in height and has a design head of approximately 10 ft. Once the water leaves the dam it travels down Buffalo Creek, under US Rt. 19 and dumps into West Fork River.



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The existing dam would pass a 58% PMP/6 hour design storm; therefore modifications to the existing dam would have to be made to safely pass the 70% PMP/6 hour design storm. In order to achieve that goal, TEI determined that the most efficient and economical solution would be to raise the dam to elevation 1031. To achieve the extra height a proposed concrete retaining would be installed along the top of the existing dam and the sections of the existing concrete spillway would have to be raised. The extra impoundment of water will not affect any existing structure or roadways upstream of the dam that were not previous disturbed by the original dam impoundment

The rehabilitation plans, specifications, and EAP were subsequently reviewed and approved by the West Virginia Department of Environmental Protection, pending completion of legal advertisement requirements.

Thrasher Engineering, Inc.'s scope of services for the project included:

- Collecting survey data: obtaining dimensions and elevations of the existing spillway, surveying cross sections of the stream from the dam to the West Fork River, and locating any structures or roadways adjacent or surrounding the stream.
- Obtaining flow values from watershed and PMP storm event
- Setting up the hydraulic model in the HEC-RAS program; performing hydraulic analysis using all three conditions and determining the hazard classification
- Defining classification and providing additional analysis
- Compiling input and results from the dam break analysis and making recommendations
- Determining adequacy of lake and dam under Dam Safety Regulations and providing solutions
- Providing Construction Plans
- Performing slope stability test on dam and spillway
- Providing final report to DEP with geo-technical data and construction plans for approval.

## **EXPERIENCE OF WES MORROW, PROJECT ENGINEER**

### ***Watershed Protection and Flood Protection Act, Public Law 83-566***

Mr. Morrow has served as **Planning Engineer, Design Engineer, and State Design Engineer** for implementation of NRCS/SCS flood control dams in West Virginia. These dams include the following:

- **Wheeling Creek 3 (WV05120)** – as design engineer, he co-designed the final design of the dam. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates, construction drawings, contract specifications, instructions to the project (field engineer), and contract documentation. This dam was subsequently installed under the NRCS PL-566 Program.



*Wheeling Creek #3 Nearly Full During Hurricane Ivan*

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- **Upper Mud River 2A (WV04307)** – as planning engineer, he developed all aspects of the dam (structure size, spillway sizes and capacities) to a planning level of detail, which was included in the Watershed Plan and Environmental Impact Statement. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates. This dam was subsequently installed under the SCS PL-566 Program.
  - **Howard Creek 12 (WV02507)** – as design engineer, he developed final design of the dam. This effort included development of dam hydrology and hydraulics, embankment and foundation design, sediment requirements, quantity and costs estimates, construction drawings, contract specifications, instructions to the project (field engineer), and contract documentation. This dam was subsequently installed under the NRCS PL-566 Program.

### ***NRCS Aging Dam Rehabilitation Program***

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Mr. Morrow led an interdisciplinary NRCS planning team during the initial stages of the Aging Dam Rehabilitation Program in West Virginia. Each dam was evaluated to determine if it met current NRCS hazard classification, hydrology and hydraulic criteria. Results of the evaluation of two dams in the Brush Creek Watershed confirmed results of a watershed wide evaluation which he performed in the early 1990s.

The evaluation / assessment process involved developing a description of each dam (engineering design parameters), an assessment of current structure conditions, and status of the owner's operation and maintenance program, a determination of eligibility under the NRCS Watershed Rehabilitation Program, and the scope of potential rehabilitation alternatives; including structural solutions such as upgrading the principal spillway system and / or auxiliary spillway, raising top of dam, and decommissioning.

Dams that were evaluated included:

- Upper Deckers Creek Site 1 (WV07706) - performed engineering assessment and developed assessment report
- Upper Deckers Creek Site 6 (WV07712) -performed engineering assessment, conducted sediment survey (which determined that over 50% of sediment pool capacity was still available), and developed assessment report
- Salem Fork 11 (WV03308) – performed engineering assessment and developed assessment report
- Salem Fork 11A (WV03309) – performed engineering assessment and developed assessment report
- Brush Creek 7A (WV05506) – performed engineering assessment, directed sediment survey (which determined that over 50% of sediment pool capacity was still available, and developed assessment report
- Brush Creek 19A (WV05531) – performed engineering assessment and developed assessment report
- Patterson Creek 37 (WV05714) – performed engineering assessment and developed assessment report

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- New Creek 14 (WV02404) – performed engineering assessment and developed assessment report. Recommended protocol for sediment pool survey. The NRCS has subsequently developed a “draft” Supplemental Watershed Plan – Environmental Assessment for the project.
  - New Creek 16 (WV05705) – performed engineering assessment and developed assessment report.

## **EXPERIENCE OF SHEIRL FLETCHER, ENVIRONMENTAL MANAGER**

### **CONSOL COAL COMPANY: AML REMEDIATION / MINE RECLAMATION**

The projects included engineering and final reclamation of the following Consol Energy mines in Monongalia County, West Virginia: Blacksville No. 1, Pursglove Mine, Arkwright Mine, Osage Mine and Humphrey Mine.

Final reclamation included AMD and site remediation of the following types of surface support facilities:

- Refuse / slurry impoundments
- AMD treatment plants including impoundments and sludge lagoons
- Preparation plants and coal stockpile areas
- Shaft and drift openings
- Boreholes.

### **CONSOL COAL COMPANY – HYDROLOGY AND HYDRAULICS**

During the final abandonment of the Morgantown operations of Consolidation Coal Company, performed geologic hydrologic study of the Arkwright, Osage, Pursglove and Humphrey Mine pools and their inter-relationship to one another and to adjacent mining operations.

## **MINING RELATED SURVEY PROJECT EXPERIENCE**

### **EASTERN ASSOCIATED COAL CORPORATION**

**Client:** Eastern Associated Coal Corporation  
Allen Moore, Project Manager  
304-449-1911

**Project Description:** This ongoing project consists of performing pre and post-mining subsidence surveys on structures and dwellings located within and surrounding the permit boundaries of the Federal No. 2 Mine.

A typical project of this nature consists of establishing horizontal and vertical control, preservation of control points, elevations on critical structure points, baseline establishment and profile, collection of water samples for springs and wells, inspectors report of protected structures, interior and exterior digital photography, and digital CADD mapping of the field survey.

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## **EASTERN ASSOCIATED COAL CORPORATION**

**Client:** Eastern Associated Coal Corporation  
Allen Moore, Project Manager  
304-449-1911

**Project Description:** Past and ongoing projects have been performed at the Federal No. 2 Mine which includes:

- Water line surveys and design for replacement of existing water sources
- Structure identification surveys, water well inventories, and stream monitoring surveys
- Ground control for aerial mapping
- Gas well locations for down-hole surveys
- Subsidence stream locations and profiles
- Permit boundary staking
- Construction layout for refuse impoundments
- Scott's Run Railroad Bypass project design survey, design, and construction layout
- Boundary surveys for fee purchase property acquisitions
- Construction layout for new shaft sites
- Powerline profiles and construction layout
- Topographic design surveys and soundings for impoundment ponds
- Drainage control surveys and design for surface water runoff

## **MARTINKA COAL COMPANY**

**Client:** Martinka Coal Company  
Gary Timms, Project Manager  
304-366-5516

**Project Description:** This project consisted of the collection of data to be used in conjunction with the design of an acid mine drainage facility, designed by Thrasher Engineering, Located at the Tygart River Mine.

Critical land survey components consisted of the following:

- Topographic surveys and digital mapping of approximately 50 acres
- Dewatering borehole layout
- Downstream cross-section surveys for volume computations
- Protected structures identification and mapping
- Pre-blasting surveys on nearly 200 structures
- Construction layout of the entire facility



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**MARTINKA COAL COMPANY – FAIRMONT, WV**

**Client:** Martinka Coal Company  
Gary Timms, Project Manager  
304-366-5516

**Project Description:** Past and ongoing projects have been performed at the Tygart River Mine including:

- Dewatering borehole computations and layout
- Stockpile surveys
- Certification of drainage system, ponds 5, 6, and 7 Permit No. 1001-87
- Topographic survey and construction layout of the existing Guyses Run AMD Facility
- Boundary surveys for fee purchase property acquisitions
- Subsidence stream locations and profiles
- Construction layout for refuse impoundment
- Ground control for aerial mapping
- Scanned mapping digital overlays
- Conceptual site plan for recreational facilities

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

Attachment "B"

PROJECT NAME **PINES COUNTRY CLUB POND SUBSIDIENCE DESIGN DEP 14622** DATE (DAY, MONTH, YEAR) **7-May 2009** FEIN **55 0633596 6**

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

4. HOME OFFICE TELEPHONE **304-624-4108** 5. ESTABLISHED (YEAR) **1983** 6. TYPE OWNERSHIP **Corporation x** (Disadvantaged Business Enterprise) **YES** 6a. WV REGISTERED DBE **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 / KENNETH P. MORAN, P.E., VICE PRESIDENT / 12**  
**300 ASSOCIATION DRIVE, CHARLESTON, WV / 304-343-7601 / JONATHAN CARPENTER, MANAGING PARTNER / 3**

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM  
**H. WOOD THRASHER, P.E. - PRESIDENT**  
**KENNETH P. MORAN, P.E., P.S. - VICE PRESIDENT**  
**KURT NEWBROUGH, P.E. - SECRETARY**  
8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS  
**WM. RANDY WATSON DANIEL E. FERRELL, P.E.**  
**CHADWICK D.BILLER, P.E. AARON DENHAM**  
**CHAD M. RILEY, P.E. JONATHAN CARPENTER, P.E.**  
**CLAY P. RILEY, P.E.**

9. PERSONNEL BY DISCIPLINE

22 ADMINISTRATIVE	—	ECOLOGISTS	—	LANDSCAPE ARCHITECTS	—	STRUCTURAL ENGINEERS
3 ARCHITECTS	—	ECONOMISTS	—	MECHANICAL ENGINEERS	28	SURVEYORS
— BIOLOGIST	—	ELECTRICAL ENGINEERS	—	MINING ENGINEERS	—	TRAFFIC ENGINEERS
14 CADD OPERATORS	1	ENVIRONMENTALISTS	—	PHOTOGRAMMETRISTS	4	OTHER
— CHEMICAL ENGINEERS	—	ESTIMATORS	—	PLANNERS: URBAN/REGIONAL	—	
23 CIVIL ENGINEERS	1	GEOLOGISTS	—	SANITARY ENGINEERS	—	
33 CONSTRUCTION INSPECTORS	—	HISTORIANS	—	SOILS ENGINEERS	—	
— DESIGNERS	—	HYDROLOGISTS	—	SPECIFICATION WRITERS	—	130 TOTAL PERSONNEL
— DRAFTSMEN	—					

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 12  
\*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  NO NOT APPLICABLE

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

NAME AND ADDRESS: <b>NOVEL GEO-ENVIRONMENTAL</b>	SPECIALTY: <b>GEO-TECHNICAL SERVICES</b>	WORKED WITH BEFORE <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
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NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No

12. A Are your firm's personnel experienced in Abandon Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: THRASHER ENGINEERING HAS PERFORMED NUMEROUS PROJECTS INVOLVING LAND REMEDIATION, STORM WATER DRAINAGE, SLIP REPAIR AND MASS GRADING IN RELATION TO SITE DEVELOPMENT, WATER LINE AND SANITARY SEWER PROJECTS. CURRENTLY, THRASHER IS WORKING WITH THE WV DEP ON LAND REMEDIATION FOR THE ANGLINS' RUN AND ROARING CREEK PROJECTS IN BARBOUR COUNTY, INCLUDING THE DESIGN PLANS FOR SLIP REPAIR AND WET SEALS OUR DESIGN TEAM ENVIRONMENTAL MANAGER HAS 23 YEARS OF EXPERIENCE AS GEOLOGIST, HYDROLOGIST AND ENVIRONMENTAL SPECIALIST WITH CONSOL ENERGY. PROJECTS INCLUDED THE ENGINEERING AND FINAL RECLAMATION OF THE BLACKSVILLE NO.1D, PURSGLOVE, ARKWRIGHT, OSAGE AND HUMPHREY MINES IN MONONGALIA COUNTY THE THRASHER ENGINEERING SURVEY DEPARTMENT HAS PERFORMED SERVICES FOR PRE AND POST MINE SUBSIDENCE FOR MAJOR COAL COMPANIES. ADDITIONALLY THRASHER ENGINEERING, INC.'S CHARLESTON, WEST VIRGINIA OFFICE WAS AWARDED TWO WATER LINE PROJECTS FOR AML AFFECTED AREAS IN 2005. THESE PROJECTS WERE THE AMHERSTDALE PROJECT AND THE RAGLAND PROJECT IN MINGO / LOGAN COUNTIES. MANY OF THE FIRM'S WATER LINE REPLACEMENT AND EXTENSION PROJECTS ARE PARTIALLY FUNDED BY WV DEP DEPARTMENT OF AML.

NO

B. Are your firm's personnel experienced in Soil Analysis?

YES Description and Number of Projects: THRASHER ENGINEERING MAINTAINS A MATERIALS TESTING AND ANALYSIS LAB AT ITS CLARKSBURG, WV OFFICE. SOIL ANALYSIS EXPERIENCE IS SPECIFICALLY IN GRADATIONS AND CLASSIFICATION WE PERFORM THESE SOIL ANALYSES ON ALL OUR PRIVATELY FUNDED SITE DEVELOPMENT PROJECTS.

NO

C. Are your firm's personnel experienced in hydrology and hydraulics?

YES Description and Number of Projects: OUR TEAM ENVIRONMENTAL MANAGER PARTICIPATED IN THE ENGINEERING AND ENVIRONMENTAL PERMITTING OF THE FINAL ABANDONMENT OF THE MORGANTOWN OPERATIONS OF CONSOL COAL COMPANY. THIS INCLUDED THE GEOLOGIC HYDROLOGY STUDY OF THE ARKWRIGHT, OSAGE PURSGLOVE AND HUMPHREY MINE POOLS AND THEIR INTER-RELATIONSHIP TO ONE ANOTHER AND TO ADJACENT MINING OPERATIONS. SHE ALSO WAS INVOLVED IN THE STRATEGIC PLACEMENT OF AACID MINE DRAINAGE TREATMENT FACILITIES AND PLANT DESIGN. 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.

NO

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.  Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: 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

NO

F.  Are your firm's personnel experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: IN CONJUNCTION WITH THE RECENT SITE DEVELOPMENT AT WHITE OAKS BUSINESS PARK, THRASHER ENGINEERING PROVIDED ENVIRONMENTAL ASSESSMENT, DESIGN AND CONSTRUCTION MANAGEMENT FOR A PASSIVE MINE TREATMENT FACILITY NEAR BRIDGEPORT, WEST VIRGINIA. ADDITIONALLY, OUR TEAM ENVIRONMENTAL MANAGER PARTICIPATED IN THE ENGINEERING AND ENVIRONMENTAL PERMITTING OF THE FINAL ABANDONMENT OF THE MORGANTOWN OPERATIONS OF CONSOL COAL COMPANY. THIS INCLUDED THE GEOLOGIC HYDROLOGY STUDY OF THE ARKWRIGHT, OSAGE PURSGLOVE AND HUMPHREY MINE POOLS AND THEIR INTER-RELATIONSHIP TO ONE ANOTHER AND TO ADJACENT MINING OPERATIONS. SHE ALSO WAS INVOLVED IN THE STRATEGIC PLACEMENT OF ACID MINE DRAINAGE TREATMENT FACILITIES AND PLANT DESIGN. THE CHARLESTON WY BRANCH OF OUR COMPANY DESIGNED AN AWARD WINNING WATER TREATMENT PLANT FOR MARTINKA MINES IN MARION COUNTY, WEST VIRGINIA TO TREAT DRAINAGE.

NO

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	
<b>MORAN, KENNETH P.</b>		YEARS OF AML DESIGN EXPERIENCE: 5	YEARS OF AML RELATED DESIGN EXPERIENCE: 15
Brief Explanation of Responsibilities		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 22	

Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Engineer. Mr. Moran is responsible for feasibility studies and design of public utility projects (sanitary sewer, water and storm water) for 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
- WV Society of Professional Engineers
  - Member of American Society of Civil Engineers
- REGISTRATION (Type, Year, State)
- Registered Professional Engineer (PE), State of West Virginia
  - Registered Professional Engineer (PE), State of Virginia
  - Registered Professional Engineer (PE), State of Ohio
  - Professional Land Surveyor (PS), 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	
<b>BILLER CHADWICK D. P.E.</b>		YEARS OF AML DESIGN EXPERIENCE: 2	YEARS OF AML RELATED DESIGN EXPERIENCE: 15
Brief Explanation of Responsibilities		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 15	

Mr. Biller joined Thrasher Engineering in 1999 and serves as Partner in the firm. Mr. Biller's paramount responsibility is supervision of design and construction of Thrasher Engineering reclamation projects for the WVDEP, highway and bridges and airport projects in the position of Principal In-Charge and Project Manager.

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
  - Registered Professional Engineer (PE), State of Pennsylvania
  - Registered Professional Engineer (PE), State of Ohio

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.)  <b>GOLA, JEFFREY L.</b>	YEARS OF AML DESIGN EXPERIENCE: <b>2</b>	YEARS OF AML RELATED DESIGN EXPERIENCE: <b>10</b>	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: <b>10</b>
	YEARS OF EXPERIENCE		

Brief Explanation of Responsibilities **Mr. Gola joined Thrasher Engineering in 1998 and serves as Project Engineer for the firm. He is responsible for hydrology and hydraulic studies, structural design and erosion and sediment control aspects of highway, roads, bridges, airports, site development and community improvement projects. Additionally, Mr. Gola is experienced directing the bidding process, drafting using both AutoCAD and Microstation and managing the overall budget of construction projects.**

EDUCATION (Degree, Year, Specialization)  
 **B.S., Civil Engineering Technology – West Virginia University, Summa Cum Laude 1998**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 **American Society of Civil Engineers**  
 **City of Mannington Code Enforcement Appeal Board**

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.)  <b>FLETCHER, SHEIRL</b>	YEARS OF AML DESIGN EXPERIENCE: <b>-23</b>	YEARS OF AML RELATED DESIGN EXPERIENCE: <b>23</b>	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: <b>-</b>
	YEARS OF EXPERIENCE		

Brief Explanation of Responsibilities  
**Sheirl Fletcher joined Thrasher Engineering, Inc. in 2007 and serves as Environmental Manager for the firm. Prior to joining Thrasher, Sheirl served as Environmental Manager for a major coal firm. She has more than 20 years experience and brings comprehensive knowledge of environmental regulatory programs and reporting requirements in multiple states to our clients' projects, along with technical expertise in environmental engineering, geology and hydrology**

EDUCATION (Degree, Year, Specialization)  
 **B.S., West Virginia University, Morgantown, WV - Bachelor of Science- Geology**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
**Certified Professional Geologist, 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 DOMESTIC WATERLINE DESIGN EXPERIENCE: 5
<b>NESTOR, MICHAEL, E.I.T.</b>	2	

Brief Explanation of Responsibilities Mr. Nestor joined Thrasher Engineering in 2004 and serves as Project Manager numerous site development related projects and most currently serves as design engineer for the reclamation of the Anglin's Run and Roaring Creek project for the WVDEP. 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 of Thrasher Engineering's Oakland, Maryland office, 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

- American Society of Civil Engineers
- Eastern Panhandle Home Builders Association

REGISTRATION (Type, Year, State)

- Engineer Intern, 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 DOMESTIC WATERLINE DESIGN EXPERIENCE: 23
<b>NEWBROUGH, KURT</b>		

Brief Explanation of Responsibilities Mr. Newbrough joined Thrasher Engineering in 1990 and is Principal and Partner in the firm. Mr. Newbrough serves as Survey Supervisor and is responsible for assignment and review of all survey activities. Mr. Newbrough has extensive experience in all aspects of surveys, including but not limited to boundary and easement surveys and the preparation of plats and legal descriptions. Mr. Newbrough also performs courthouse research, computes field data for construction layout, and processes GPS raw data for both public and private clientele in conjunction with Thrasher Engineering projects as well as separate contracts. He also served in the elected position of Harrison County (WV) Surveyor.

EDUCATION (Degree, Year, Specialization)

- Surveying -- John Tyler Community College, Chester, VA
- United Career Center, Clarksburg, WV

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- West Virginia Association of Land Surveyors
- American Congress on Surveying and Mapping
- Member Strathmore's Who's Who

REGISTRATION (Type, Year, State)

- Professional Land Surveyor (PS), West Virginia #1618 - 1995
- OSHA Hazardous Waste Operations and Emergency Response Center 29 CFR 1910.120
- US Department of Labor/Mine Safety and Health Adminis.



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. *AutoCAD Landdesktop 2008* and *Microstation V8* software is utilized at 48 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 Engineering, Inc. also utilized 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. This equipment includes: The equipment used to complete survey services for AML projects includes:

- 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
- Leica 407 Total Station Instrument
- Leica 703 Total Station Instrument
-

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
WVDEP ANGLINS RUN AND ROARING CREEK AML RECLAMATION DESIGN BARBOUR COUNTY, WV	Main WV DEP Office in Charleston 601 57th St., S.E. Charleston, WV 25304	Survey and design for site remediation / wet seals on abandoned mine land property	\$ 623,000.00	Design 95% - Awaiting final comments
MASON COUNTY BOE ATHLETIC FIELD AND TRACK	Mason County BOE 1200 Main Street Point Pleasant, WV 25550	Site Development and Architectural design / construction inspection for new sports facility	\$1,600,000.00	70% - Under Construction
SIDEWALK PROJECT PLEASANT VALLEY, WV	City of Pleasant Valley 2340 Kingmont Road Pleasant Valley, WV 26554	Engineering, survey and construction inspection services	\$15,000.00	95% - Near Completion
MCHENRY BUSINESS PARK GARRETT COUNTY, MD	Garrett County Office of Economic Dev. 203 South 4th Street Courthouse Room 208 Oakland, MD 21550	Engineering, survey and construction inspection services	\$6,200,000.	50%- Construction ready to start
CITY OF BRIDGEPORT, WV ATHLETIC COMPLEX	Bridgeport, City of PO Box 1310 515 West Main Street Bridgeport, WV 26330	Engineering, survey and construction inspection services	\$4,000,000.	15% - Design Phase
TOWN OF BAYARD, WV SIDEWALK PROJECT	Bayard, Town of Steven Durst, Mayor P.O. Box 243 Bayard, WV 26707	Engineering, survey and construction inspection services	\$93,542.00	75% - Under construction
HARRISON COUNTY COURTHOUSE	Harrison County Commission 301 West Main Street Clarksburg, WV 26301	Engineering, survey and construction inspection services	\$160,000.00	60% - Out to Bid - May

TOTAL NUMBER OF PROJECTS: \_\_\_\_\_  
 (NOTE: NUMEROUS PROJECTS ARE IN PLANNING STAGE - ONLY THOSE IN DESIGN OR UNDER CONSTRUCTION HAVE BEEN INCLUDED.)

TOTAL ESTIMATED CONSTRUCTION COSTS: \$ \_\_\_\_\_  
 CONTINUED ON NEXT PAGE

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
<b>RALEIGH COUNTY AIRPORT ROADWAYS</b>	Raleigh County Memorial Airport Authority 176 Airport Circle Room 115 Beaver, WV 25813	Engineering, survey and construction inspection services	\$1,000,000.00	50% Out to Bid - July
<b>TOWN OF FARMINGTON SIDEWALKS AND PEDESTRIAN BRIDGE</b>	Farmington, Town of 1314 Mill Street PO Box 520 Farmington, WV 26571	Engineering, survey and construction inspection services	\$300,000.00	35% - Bid July
<b>TOWN OF NUTTER FORT SIDEWALKS</b>	Nutter Fort, Town of 1415 Buckhannon Pike Nutter Fort, WV 26301	Engineering, survey and construction inspection services	\$175,00000	45% - Bid June
<b>WVDOH CORRIDOR H</b>	WV DOH Building 5, Room 725 1900 Kanawha Blvd., E. Charleston, WV 25305	Engineering design, survey and ,	\$25,000,000	95% Design Plans in to WV DOH for final review
<b>WV DOH ORLANDO BRIDGE</b>	WV DOH Building 5, Room 725 1900 Kanawha Blvd., E. Charleston, WV 25305	Engineering design, survey	\$900,000	95% - Design Plans in to WV DOH for final review
<b>CITY OF GRAFTON STREETSCAPE</b>	City of Grafton 1 West Main St. Grafton, WV 26354	Engineering, survey and construction inspection services	\$270,000	45%- Bid June
<b>NORTH CENTRAL WV AIRPORT</b>	Benedum Airport Authority 2000 Aviation Way Bridgeport, WV 26330	Engineering design,	\$100,000	80%
TOTAL NUMBER OF PROJECTS: 14			TOTAL ESTIMATED CONSTRUCTION COSTS:	\$40,436,542.00

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: WATER TREATMENT AND DISTRIBUTION

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
LINCOLN PSD WATER LINE EXTENSION	Lincoln PSD PO Box 38 Alum Creek, WV 25003	Engineering, survey and construction inspection services	\$2,800,000.00	40%
CITY OF PARSONS PHASE II - EXTENSION AND REHABILITATION	Parsons, City of 341 2nd St. Parsons, WV 26287	Engineering, survey and construction inspection services	\$2,200,000.00	50%
TOWN OF BATH / BERKELEY SPRINGS WATER WORKS - REPLACEMENT PHASE II	Bath, Town of 271 Wilkes Street Berkeley Springs, WV 25411	Engineering, survey and construction inspection services	\$3,750,000.00	40%
POCAHONTAS COUNTY PSD DURBIN AREA REPLACEMENT	Pocahontas County PSD HC 63 Box 122 Frank, WV 24920	Engineering, survey and construction inspection services	\$500,000.00	33%
HUNDRED-LITTLETON PSD	Hundred-Littleton PSD P.O. Box 880 8 Pennsylvania Ave. Hundred, WV 26575	Engineering, survey and construction inspection services	\$700,000.00	50%
TOWN OF TERRA ALTA CORINTH PROJECT	Town of Terra Alta 701-A State Ave. Terra Alta, WV 26764	Engineering, survey and construction inspection services	\$2,650,000.00	45%
MOUNTAIN TOP PSD	Mountain Top PSD PO Box 236 Mt. Storm, WV	Engineering, survey and construction inspection services	\$2,300,000.00	50%

TOTAL NUMBER OF PROJECTS: \_\_\_\_\_  
 (NOTE: NUMEROUS PROJECTS ARE IN PLANNING STAGE - ONLY THOSE IN DESIGN OR UNDER CONSTRUCTION HAVE BEEN INCLUDED.)

TOTAL ESTIMATED CONSTRUCTION COSTS: \$ \_\_\_\_\_  
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15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: WATER TREATMENT AND DISTRIBUTION

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
<b>SOUTHWESTERN PSD</b>	Southwestern Water PSD College Hill Addition P.O. Box 98 Flemington, WV 26347	Engineering, survey and construction inspection services	\$7,500,000.00	40%
<b>TOWN OF NUTTER FORT</b>	Nutter Fort, Town of 1415 Buckhannon Pike Nutter Fort, WV 26301	Engineering, survey and construction inspection services	\$1,300,000.00	55%
<b>TOWN OF TUNNELTON (2 Projects)</b>	Tunnelton, Town of P.O. Box 396 Bank St. Tunnelton, WV 26444	Engineering, survey and construction inspection services	Project 1 - \$900,000.00 Project 2 - \$1,200,000.00	Project 1 - 20% Project 2 - 80%
<b>GILMER COUNTY PSD</b>	Gilmer Co. PSD P.O. Box 729 232 W. Main St. (Glenville, WV 26351	Engineering, survey and construction inspection services	\$2,500,000.00	10%
<b>TOWN OF MASON TOWN</b>	Mason town (Water Works), Town of P.O. Box 645 Mason town, WV 26542 864-5561 ph.	Engineering, survey and construction inspection services	\$2,500,000.00	15%
<b>SUN VALLEY PSD</b>	Sun Valley PSD P.O. Box 95 Reynoldsville, WV 26422	Engineering, survey and construction inspection services	\$6,200,000.00	55%
<b>CITY OF MILTON</b>	City of Milton 1595 US RT 60 East Milton, WV 25541	Engineering, survey and construction inspection services	\$3,000,000.00	80%

TOTAL NUMBER OF PROJECTS: TOTAL ESTIMATED CONSTRUCTION COSTS: \$ 40,000,000.00

(NOTE: NUMEROUS PROJECTS ARE IN PLANNING STAGE - ONLY THOSE IN DESIGN OR UNDER CONSTRUCTION HAVE BEEN INCLUDED.)

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: WASTEWATER COLLECTION AND TREATMENT

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
BROOKE COUNTY PSD REPLACEMENT AND EXTENSION BROOKE COUNTY, WV	BROOKE CO. PSD 711 CHARLES ST. P. O. BOX 150 WELLSBURG, WV 26070	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$22,000,000.00	45%
GREATER HARRISON COUNTY PSD PHASE II 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	\$11,600,000.00	45%
TENNERTON PSD 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	\$1,675,000.00	90%
POCAHONTAS COUNTY WWTP AND COLLECTION SYSTEM POCAHONTAS COUNTY, WV	POCAHONTAS COUNTY PSD HC 63 BOX 122 FRANK, WV 24920	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$11,600,000.00	30%
HEPZIBAH PSD SANITARY SEWER EXTENSION HARRISON COUNTY, WV	ENLARGED HEPZIBAH DRAWER H HEPZIBAH, WV 26369	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$3,400,000.00	20%
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	\$13,600,000.00	45%
CANYON PUBLIC SERVICE DISTRICT SANITARY SEWER UPGRADE AND EXT MONONGALIA COUNTY, WV	CANYON PSD 12 WICHITA STREET MORGANTOWN, WV 26508	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$4,000,000.00	70%

TOTAL ESTIMATED CONSTRUCTION COSTS: \$

TOTAL NUMBER OF PROJECTS:

(NOTE: NUMEROUS PROJECTS ARE IN PLANNING STAGE - ONLY THOSE IN DESIGN OR UNDER CONSTRUCTION HAVE BEEN INCLUDED.)

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD: **WASTEWATER COLLECTION AND TREATMENT**

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
SCOTTS RUN PSD PHASE II	Scotts Run PSD P.O. Box 216 465 Scott's Run Road Osage, WV 26543	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$4,108,350.00	55%
HUTTONSVILLE PSD VALLEY HOMESTEADS REPLACEMENT	Huttonsville PSD P.O. Box 277 High Street Mill Creek, WV 26280	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$3,100,000.00	25%
CITY OF BRIDGEPORT, WV LINE EXTENSION	Bridgeport, City of PO Box 1310 515 West Main Street Bridgeport, WV 26330	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,800,000.00	75%
JANE LEW PSD PHASE II	P.O. Box 845 68 Park Ave. Jane Lew, WV 26378	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$4,800,000.00	25%
TOWN OF GRANTSVILLE	Grantsville, Town of P.O. Box 146 100 Court Street Grantsville, WV 26147	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$1,800,000.00	50%
SUN VALLEY PSD	Sun Valley PSD P.O. Box 95 Reynoldsville, WV 26422	FEASIBILITY STUDY, DESIGN, FUNDING AND PERMIT APPLICATIONS, CONTRACT DOCUMENTS, FIELD SERVICES OF SURVEY AND INSPECTION	\$6,500,000.00	45%

TOTAL NUMBER OF PROJECTS:  
(NOTE: NUMEROUS PROJECTS ARE IN PLANNING STAGE - ONLY THOSE IN DESIGN OR UNDER CONSTRUCTION HAVE BEEN INCLUDED.)

TOTAL ESTIMATED CONSTRUCTION COSTS: **\$89,983,350.00**





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	COMPLETED (YES OR NO)
NICHOLAS COUNTY BUSINESS PARK, NICHOLAS COUNTY, WV SITE DEVELOPMENT	NICHOLAS CO BLDG COMMISSION 700 MAIN STREET, SUITE 1 SUMMERSVILLE, WV 26651	\$1,890,000.00	2008	YES
MID ATLANTIC AEROSPACE COMPLEX	MID-ATLANTIC AEROSPACE COMPLEX, INC. (MAAC) CROSSWIND INDUSTRIAL PARK SAC BUILDING, 2ND FLOOR BRIDGEPORT, WV 26330	\$659,000.00	2008	YES
RITCHIE COUNTY BUSINESS PARK SITE DEVELOPMENT RITCHIE COUNTY	RITCHIE COUNTY ECONOMIC DEVELOPMENT AUTHORITY 217 WEST MAIN STREET HARRISVILLE, WV 26362	\$250,000.00	2008	NO
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	\$12,000,000.00	2008	YES
INTRAWEST CORPORATION SNOWSHOE MOUNTAIN RESORT POCAHONTAS COUNTY, WV SITE DEVELOPMENT	INTRAWEST RESORTS, INC. 301 E. PINE STREET, STE 450 ORLANDO, FL 32801	VARIOUS	2004- 2008	YES
HARRISON MARION REGIONAL AIRPORT HARRISON COUNTY, WV VARIOUS - HANGERS /STLRM WATER	BENEDUM AIRPORT AUTHORITY 2000 AVIATION WAY BRIDGEPORT, WV	VARIOUS	ON GOING	YES
CITY OF CAMERON WATER STORAGE TANK MARSHALL COUNTY, WV	CITY OF CAMERON 44 MAIN STREET CAMERON, WV 26033	\$2,016,000.00	2008	YES
TOWN OF ROWLESBURG WATER TREATMENT PLANT/ EXT. PRESTON COUNTY, WV	TOWN OF ROWLESBURG PO BOX 458 42 POPLAR STREET ROWLESBURG, WV 26425	\$2,591,000.00	2008	YES

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)
JESSICA LYNCH WATER LINE EXTENSION WIRT COUNTY, WV	TOWN OF ELIZABETH 200 BEVERLY STREET P.O. BOX 478 ELIZABETH, WV 26143	\$3,755,000.00	2008	YES
CITY OF RIPLEY – MAIN STREET REVITALIZATION – JACKSON CO.	CITY OF RIPLEY TIM KING, CITY SUPERINTENDENT 203 SOUTH CHURCH ST. RIPLEY, WV 25271	\$1,144,000.00	2008	YES
ICG – THREE FORKS BRIDGE TAYLOR COUNTY	INTERNATIONAL COAL GROUP, INC. 2000 ASHLAND DRIVE ASHLAND, KY 41101	\$1,300,000.00	2008	YES
JAKES RUN BRIDGE MONONGALIA COUNTY, WV	WV DOT/DOH 1900 KANAWHA BLVD EAST CHARLESTON, WV 25305	\$1,325,600.00	2008	YES
RALEIGH MEMORIAL AIRPORT RALEIGH COUNTY, WV	RALEIGH CO AIRPORT AUTHORITY 176 AIRPORT CIRCLE, ROOM 115 BEAVER, WV 25813-9475	\$5,000,000.00 – PHASE I	2007	YES
WOLFE CREEK PARK FAYETTE COUNTY, WV	FAYETTE COUNTY COMMISSION FAYETTE COUNTY COURTHOUSE 100 COURT STREET FAYETTE, WV 25840-0307	\$4,500,000. – PHASE 1	2007	YES
PINECREST DEVELOPMENT RALEIGH COUNTY, WV	PINECREST DEV AUTHORITY 200 MAIN STREET BECKLEY, WV 25801-4613	\$1,500,000.00	2007	YES
CITY OF PARSONS SANITARY SEWER LINE EXTENSION TUCKER COUNTY, WV	PARSONS, CITY OF 341 2ND ST. PARSONS, WV 26287	\$ 900,000	2007	YES
TOWN OF FARMINGTON WATER LINE REPLACEMENT PROJECT MARION COUNTY, WV	TOWN OF FARMINGTON 1314 MILL STREET FARMINGTON, WV 26571	\$1,300,000.	2007	YES
CITY OF KINGWOOD WHETSELL SETTLEMENT WATER LINE EXTENSION PRESTON COUNTY, WV	KINGWOOD, CITY OF 313 TUNNELTON ST. KINGWOOD, WV 26537-1462	\$ 420,000.	2007	YES

NORTON-HARDING-JIMTOWN PSD WATERLINE EXTENSION RANDOLPH COUNTY, WV	NORTON-HARDING-JIMTOWN PSF P.O. BOX 87 SCOTT ROAD NORTON, WV 26285	\$1,000,000	2007	YES
TOWN OF BATH - BERKELEY SPRINGS WATER WORKS MORGAN COUNTY, WV	TOWN OF BATH 271 WILKES STREET BERKELEY SPRINGS, WV 25411	\$2,000,000	2007	YES

RALEIGH COUNTY PUBLIC SERVICE DISTRICT 2 WATER LINE EXTENSIONS	RALEIGH COUNTY PSD 224 EAST MAIN PO BOX 1286 SOPHIA, WV	\$3,700,000.	2006	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
HAMRICK PUBLIC SERVICE DISTRICT, TUCKER COUNTY, WEST VIRGINIA; DESIGN, PREPARATION AND CONSTRUCTION MANAGEMENT TO UPGRADE THE WATER TREATMENT PLANT	HAMRICK PUBLIC SERVICE DISTRICT P.O. BOX 228 HENDRICKS, WV 26271	\$2,461,000	2004	YES
PUTNAM COUNTY BUSINESS PARK; MITIGATION OF 13 ACRES OF IMPACTED WETLAND	PUTNAM COUNTY DEVELOPMENT AUTHORITY P.O. BOX 167 SCOTT DEPOT, WV 25560	\$1,500,000	2004	YES
MARION REGIONAL DEVELOPMENT COUNCIL; SITE WORK, UTILITIES, ROADWAY FOR PHASE II DEVELOPMENT	MARION REGIONAL DEVELOPMENT COUNCIL 110 ADAMS STREET FAIRMONT, WV 26554	\$790,000	2004	YES
SHENANDOAH OFFICE PARK MARTINSBURG, WV	SHENANDOAH OFFICE PARK, LLC BILL WILLIAMS 304-343-2035	\$800,000.00	2007	YES


18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO 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
FAIRMONT STATE COLLEGE - STUDENT DORMITORY - SITE DEVELOPMENT - FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$6,000,000	2004	YES	VOA ARCHITECTS
FAIRMONT STATE COLLEGE - PARKING GARAGE- SITE DEVELOPMENT - FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$4,000,000	2003	YES	MARCH-WESTIN
FAIRMONT STATE UNIVERSITY FEASTER CENTER SITE DEVELOPMENT - FAIRMONT, WV	FAIRMONT STATE UNIVERSITY 1201 LOCUST AVENUE FAIRMONT, WV 26554-2491	\$400,000.	2005	YES	VOA ARCHITECTS
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.	2007	YES	DESIGN ALLIANCE OMNI ASSOCIATES

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.

SEE ATTACHMENT - STATEMENT OF QUALIFICATIONS

20. The foregoing is a statement of facts.

Signature:  Title: VICE-PRESIDENT

Printed Name: KENNETH P. MORAN, P.E., P.S.

Date: MAY 5, 2009

QUALIFICATION QUESTIONNAIRE

AML CONSULTANT CONFIDENTIAL

PROJECT NAME: Various WVDEP AML Design Projects DATE: February 25, 2008 FEIN: 52-2365940	
1. FIRM NAME: Novel Geo-Environmental, LLC	2. HOME OFFICE BUSINESS ADDRESS: 171 Montour Road Moon Township, PA 15108 3. FORMER FIRM NAME:
4. HOME OFFICE TELEPHONE: (412) 722-1970	5. ESTABLISHED: 2002 6. TYPE OWNERSHIP: Limited Liability Corporation 6a. WV REGISTERED DBE: YES NA
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE: 806 B Street St. Albans, WV 25177 304-201-5180 Office Manager: John E. Nottingham, P.E. No. AML Design Personnel in St. Albans, WV: 5 No. AML Design Personnel in Moon Township, PA : 5	
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM: 8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Amy L. Veltri - President John E. Nottingham - Vice President	
9. PERSONNEL BY DISCIPLINE (Bold lettering Indicates Minimum Design Team Members)	
ADMINISTRATIVE ARCHITECTS BIOLOGIST 1 CAD OPERATORS CHEMICAL ENGINEERS 2 CIVIL ENGINEERS 4 CONSTRUCTION INSPECTORS DESIGNERS DRAFTSMEN	LANDSCAPE ARCHITECTS MECHANICAL ENGINEERS MINING ENGINEERS PHOTOGRAMMETRISTS PLANNERS: URBAN/REGIONAL SANITARY ENGINEERS 2 SOILS ENGINEERS SPECIFICATION WRITERS STRUCTURAL ENGINEERS SURVEYORS TRAFFIC ENGINEERS 4 DRILLERS & HELPERS 5 OTHER PERSONNEL 20 TOTAL PERSONNEL
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>2</u> *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	

Quest. "maire" for each if copy is not on file with AML

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No

NO: Note at Novel Geo-Environmental (NGE) has not performed any AML design work to date, but our WV Office manager (John E. Nottingham) and project geologist (Chuck Montgomery) have extensive AML experience with their former firm. Additionally, NGE currently holds a contract with WVDEP-AML for geotechnical drilling for the northern district of WV and has completed several drilling projects under this contract.

B. Is your firm experienced in Soil Analysis?

YES: NGE specializes in Geotechnical Engineering including foundation investigations, subsurface investigations, cut slope design, fill embankment analysis and design, slope stability analysis, landslide analysis and corrective design, mine subsidence investigations, geologic studies, groundwater seepage analysis, foundation design, retaining wall design, pavement design, subsurface drilling and monitoring well installation. NGE has performed a total of several hundred geotechnical engineering related projects since the company was formed in 2002.

C. Is your firm experienced in hydrology and hydraulics?

NO: While our firm has not performed any hydrology/hydraulics projects to date, our personnel have experience with former employers.

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

NO

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.)

NO

Evaluation and Abatement Design?

NO



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:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
12	4	0	0
<p>data not keep to essentials)</p> <p>Mr. Nottingham was responsible for supervising field and design work for numerous AML related landslide abatement projects for the WVDEP while under the employment of Triad Engineering, Inc. In addition to landslide abatement projects, Mr. Nottingham was involved in subsidence determination investigations and subsidence abatement projects. Mr. Nottingham worked extensively on "emergency" projects which required quick field investigations and corrective designs.</p>			
<p>Brief Explanation of Responsibilities</p>			
<p>Mr. Nottingham was responsible for supervising field and design work for numerous AML related landslide abatement projects for the WVDEP while under the employment of Triad Engineering, Inc. In addition to landslide abatement projects, Mr. Nottingham was involved in subsidence determination investigations and subsidence abatement projects. Mr. Nottingham worked extensively on "emergency" projects which required quick field investigations and corrective designs.</p>			
<p>EDUCATION (Degree, Year, Specialization)</p> <p>Bachelor of Science in Civil Engineering, 1987, WVU, Specialization - Civil and Geotechnical Engineering</p> <p>Masters of Science in Civil Engineering, 1995, WVU, Specialization - Geotechnical Engineering</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p> <p>American Society of Civil Engineering (ASCE)</p> <p>West Virginia Chapter of AIA</p>			
<p>13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)</p>			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Montgomery, Charles, E.		4	
YEARS OF AML DESIGN EXPERIENCE:		YEARS OF AML RELATED DESIGN EXPERIENCE:	
10		4	
<p>Brief Explanation of Responsibilities</p>			
<p>Mr. Montgomery was responsible for coordinating field activities for AML landslide abatement projects for the WVDEP while employed with Triad Engineering, Inc. Mr. Montgomery has also participated in all project phases for other AML work involving subsidence determinations/abatement and impounded mine pools.</p>			
<p>EDUCATION (Degree, Year, Specialization)</p> <p>Bachelor of Science, Geology, 1991, Marshall University</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p> <p>Association of Engineering Geologists</p> <p>Geological Society of America</p>			
<p>REGISTRATION (Type, Year, State)</p> <p>Professional Geologist, 1999, Kentucky</p>			

data y keep to essentials)

NAME & TITLE (Last, First, Middle Int.)  
Nottingham, Larry C.

YEARS OF EXPERIENCE

YEARS OF AML DESIGN EXPERIENCE:  
15

YEARS OF AML RELATED DESIGN  
EXPERIENCE: 5

YEARS OF DOMESTIC  
WATERLINE DESIGN  
EXPERIENCE: 0

Brief Explanation of Responsibilities

Dr. Nottingham planned and supervised several AML investigation and reclamation projects for WVDEP while employed by Triad Engineering. Projects included burning refuse pile investigations, unstable refuse pile investigations and remedial designs, landslide investigations and remedial designs, subsidence investigations, and underground mine fire investigations.

EDUCATION (Degree, Year, Specialization)

Bachelor of Science in Civil Engineering, 1965, Civil Engineering, West Virginia Institute of Technology  
Master of Science in Civil Engineering, 1966, Geotechnical Engineering, University of Pittsburgh  
Doctor of Philosophy, 1975, Geotechnical Engineering, University of Florida

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Member, American Society of Civil Engineers  
Member, National Society of Professional Engineers

REGISTRATION (Type, Year, State)

Professional Engineer, 1969, WV  
Professional Engineer, 1985, KY  
Professional Engineer, 1985, OH  
Professional Engineer, 2006, PA

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. PROVI A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE / DESIGN SERVICES

Three rotary drill rigs, one mounted on a four wheel drive one-ton truck, and two track-mounted rigs. Drills are equipped with hollow stem augers, split-spoon soil sampling equipment, and rock coring tools.

Portable dynamic cone penetrometer.

Electric concrete coring drill.

Two equipment hauling trailers.

Software includes: Word processing, PCSTABL - Slope Stability Analysis, LPILE Plus 4.0 - Pile Foundation Analysis, PYWALL 2.0 - Retaining Wall Analysis, ResSA 2.0 - Reinforced Soil Slope Analysis, ResSlope 3.0 - Reinforced Soil Slope Design

Soil Laboratory Equipment: Soil Oven, Scales, Sieves, Liquid and Plastic Limits Machine

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Chesapeake Energy Office & Shop Complex, Geotechnical Investigation, Inez, KY	Chesapeake Energy Corporation, 6100 N. Western Avenue, Oklahoma City, OK 73154	Perform subsurface investigation, develop and provide recommendations for building foundation design	Unknown, Fee = \$6600.00	5
Annual Geotechnical Drilling Contract, Northern West Virginia	West Virginia Department of Environmental Protection	Perform geotechnical (drilling) investigations of abandoned mine land sites as directed by WVDEP/AML personnel.	Unknown	30
TOTAL NUMBER OF PROJECTS: 2			TOTAL ESTIMATED CONSTRUCTION COSTS: \$ Unknown	

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
Ten Cell Tower Sites, Geotechnical Investigations, Various Locations Throughout WV	Determine Site Subsurface Conditions, Provide Foundation Design Recommendations.	Terradon Corp. Nitro, WV	March, 2008	Unknown	Fee \$33,000
Six Cell Tower Sites, Geotechnical Investigations, Various Locations Throughout WV	Determine Site Subsurface Conditions	PSI, Inc. 153 Williams Hwy Parkersburg, WV	March, 2008	Unknown	Fee ≈ \$12,000
Toyota Meeting Room, Geotechnical Investigation, Buffalo, WV	Geotechnical Investigation for New Building Structure	Toyota Corp. Buffalo, WV	March, 2008	Unknown	Fee \$4000
I-64 Over Hal Greer Blvd, Bridge, CSL Testing, Huntington, WV	Perform Cross-Hole Sonic Logging of New Foundation Drilled Piers	West Virginia Dept. of Highways, Charleston, WV	August, 20008	Unknown	Fee ≈ \$17,000
Harrison Co. EMS Station, Geotechnical Investigation, Clarksburg, WV	Determine Site Subsurface Conditions, Provide Foundation Design Recommendations	Harrison Co. EMS Clarksburg, WV	February, 2008	Unknown	Fee \$4000
Corridor H Highway Construction, Quality Control Testing, Grant Co., WV	Perform soil compaction and concrete quality control tests.	West Virginia Dept. of Highways, Charleston, WV	November, 2008	Unknown	Fee ≈ \$75,000
Water Storage Tank, Subsurface Investigation, Gilbert, WV	Determine Site Subsurface Conditions	Gilbert PSD Gilbert, WV	March, 2008	Unknown	Fee \$3000

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)
	White Sulphur Hill Development, Retaining Wall Design, White Sulphur Springs, WV	Greenbrier Sporting Club, White Sulphur Springs, WV	\$30,000	2003	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE 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
S. Mineral Wells Interchange, Geotechnical Study, Mineral Wells, WV	WV Department of Highways Charleston, WV	\$5,000,000	2007	In Process	L. A. Gates Co.
Winefrede RR Overpass Bridge, Geotechnical Investigation, Winefrede, WV	WV Department of Highways Charleston, WV	\$1,500,000	2005	Yes	HNTB Corporation
Performing Arts Center, Geotechnical Investigation, Buckhannon, WV	West Virginia Wesleyan College, Buckhannon, WV	\$500,000	2007	Yes	R. D. Zande & Associates, Inc.
Mt. Gay Overpass Bridge, Geotechnical Investigation, Logan, WV	WV Department of Highways Charleston, WV	\$1,000,000	2004	Yes	HMB Professional Engineers, Inc.
Water Tanks, Geotechnical Investigation, Iager, WV	Iager PSD Iager, WV	\$100,000	2006	Yes	Stafford Consultants
5th Avenue Bridge, Geotechnical Investigation, Huntington, WV	WV Department of Highways Charleston, WV	\$2,500,000	2003	Yes	Modjeski & Masters, Charleston, WV

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.

20. The foregoing is a statement of facts.

Signature: John E. Nottingham Title: Vice President Date: 3/3/08  
 Printed Name: John E. Nottingham

NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.

AML and RELATED PROJECT EXPERIENCE MATRIX																	PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional													
PROJECT	Exp. Basis C=Corp. P=Personal	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS														Chadwick Biller, P.E.	Jeffrey Gola, P.E.	Michael Nestor, E.I.T.	Wyward (Wes) Morrow	Kurt Newbrough, P.S.	Aaron Denham								
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation	Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Managemen t	Water Treatment	Equipment/Structure Removal							Stream Restoration	Geotechnical/Stability						
WV DEP ANGLIN'S RUIN	C	4	X	X								X						M	P	P					M					
WV DEP ROARING CREEK	C	4	X	X								X						M	P	P					M					
WHITE OAKS BUSINESS PARK	C	4										X											X					M	M	
MID ATLANTIC AEROSPACE	C	4										X													M			M	M	
BELINGTON INDUST. PARK	C	4										X																M	M	
WV VETERANS CEMETERY	C	4																										M	M	
FAIRMONT STATE UNIV	C	4										X																M	M	
BUFFALO LAKE DAM	C	4									X																	P		
UPPER MUD RIVER	P	4									X																		M/P	
AGING DAM REHAB PROG	P	4									X																		M/P	
CONSOL COAL COMPANY	C	4	X	X								X																	M	
MARTINKA MINING CO.	C	4	X	X								X																	M	

\* 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.



STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**

029

**VENDOR OWING A DEBT TO THE STATE:**

**West Virginia Code §5A-3-10a** provides that: 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 the debt owed is an amount greater than one thousand dollars in the aggregate.

**PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:**

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor must make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

**ANTITRUST:**

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

**LICENSING:**

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

**CONFIDENTIALITY:**

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>.

Under penalty of law for false swearing (**West Virginia Code §61-5-3**), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

Vendor's Name: Thrasher Engineering Inc.Authorized Signature: [Signature] Date: 5/7/09