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30 Columbia Boulevard PO Box 1532 Clarksburg, WV 26301 304-624-4108 304-624-7831 Fax Northgate Business Park 300 Association Drive Charleston, WV 25311 304-343-7601 304-343-7604 Fax

thrasher@thrashereng.com www.thrashereng.com 2018 OCT 21 A 10: 09

TO THE OF THE

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



RFQ COPY

TYPE NAME/ADDRESS HERE

CLARKSBURG, WV 26301

30 COLUMBIA BLVD.

THRASHER ENGINEERING, INC.

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

# Request for Quotation

DEP14386

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ADDRESSICORRESPONDENCE TO ATTENTION OF

CHUCK BOWMAN 304-558-2157

6H-P # 5

ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV

25304

304-926-0499

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CLARKSBURG, WV 26301

THRASHER ENGINEERING, INC.

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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ADDRESS CORRESPONDENCE TO ATTENTION OF

CHUCK BOWMAN 304-558-2157

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

ATE PRINTED TERMS OF SALE SHIP VIA FOB. FREIGHT TERMS 0/01/2008 NG DATE: 10/21/2008 BID OPENING TIME 01:30PM QUANTITY. ITEM NUMBER UNIT PRICE AMOUNT RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE (1) YEAR PERIODS. CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN. OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANS-PORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.) QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY DRDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN. ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY SEE REVERSE SIDE FOR TERMS AND CONDITIONS TELEPHONE <u>304-624-4108</u> 10/20/2008

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

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25304 304-926-0499

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

ATE PRINTED TERMS OF SALE 5HIP VIA FOB FREIGHT TERMS 0/01/2008 NG DATE: 10/21/2008 BID OPENING TIME 01:30PM QUANTITY UOP ITEM NUMBER UNIT PRICE **AMOUNT** NO. 5 N/A.... I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS. VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING KURT NEWBROUGH, P.S. SIGNATURE THRASHER ENGINEERING, COMPANY 10/20/2008 DATE REV. 11/96 NOTICE A SIGNED BID MUST BE SUBMITTED TO: DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130 SEE REVERSE SIDE FOR TERMS AND CONDITIONS TELEPHONE 304-624-4108 10/20/2008 FFIN ADDRESS CHANGES TO BE NOTED ABOVE <u>55 0633 596 6</u> WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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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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DEP14386

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CHUCK BOWMAN 304-558-2157

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THRASHER ENGINEERING, INC. 30 COLUMBIA BLVD. CLARKSBURG, WV 26301

TERMS OF SALE

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

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0/01/2008 NG DATE: 10/21/2008 BID OPENING TIME 01:30PM QUANTITY: UOP ITEM NUMBER UNIT PRICE AMOUNT THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED: SEALED BID BUYER: CB-23 RFQ. No.: **DEP14386** BID OPENING DATE: 10/21/2008 BID OPENING TIME: 1:30 PM PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: 30|4-624-7831 CONTACT PERSON (PLEASE PRINT CLEARLY): KURT NEWBROUGH, P.S. THIS IS THE END OF REQ DEP14386 \*\*\*\*\* TOTAL: SEE REVERSE SIDE FOR TERMS AND CONDITIONS TELEPHONE 304-624-4108 10/20/2008 ADDRESS CHANGES TO BE NOTED ABOVE 55 0633596 6 EN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

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10/20/2008

eck any combination of preference consideration(s) indicated above, which you are entitled to receive.

# State of West Virginia

# **VENDOR PREFERENCE CERTIFICATE**

tification and application\* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to istruction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) ference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in ordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing ision will make the determination of the Resident Vendor Preference, if applicable.

ordz ision	ance with the <b>West Virginia Code</b> . This certificate for application is to be used to request such preference. The Purchasing will make the determination of the Resident Vendor Preference, if applicable.
	Application is made for 2.5% resident vendor preference for the reason checked:  Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
_	Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately
~_	preceding the date of this certification; or, Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
	Application is made for 2.5% resident vendor preference for the reason checked:  Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
	Application is made for 2.5% resident vendor preference for the reason checked:  Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
	Application is made for 5% resident vendor preference for the reason checked:  Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
-aug	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked: Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
_	Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:  Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
uirer iinst	understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the ments for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency cted from any unpaid balance on the contract or purchase order.
noriz requ	nission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and es the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid irred business taxes, provided that such information does not contain the amounts of taxes paid nor any other information by the Tax Commissioner to be confidential.
lace	penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true curate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate is during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.
der:	THRASHER ENGINEERING, INC. Signed: '////

# RFQ# DEP14386

# **BID SCHEDULE**

Company Name:	THRASHER ENGINEERING, INC.	
Address:	30 COLUMBIA BLVD.	_
· · · · · · · · · · · · · · · · · · ·	CLARKSBURG, WV 26301	

The DEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

EM			UNIT	
).	QUANTITY	DESCRIPTION	PRICE	AMOUNT
)	60	2-Man Surveying Crew (per hour)	\$95.	\$ 5,700.00
)	20	3-Man Surveying Crew (per hour)	\$135.	\$ 2,700.00
)	50	Aerial Photograph Production (per sheet)	\$300.	<b>\$</b> 15,000.00
)		Topographic Mapping from Aerial Photography (per acre)		
		(List only one rate for each category)		
	25	0-50 Acres	\$100.	<b>\$</b> 2,500.00
	75	51-100 Acres	\$ 75.	\$ 5,625.00
	101	101 and Up Acres	\$ 70.	<b>\$</b> 7,070.00
)		Professional Rates (Listed Disciplines Only) (per hour)		
	80	Licensed Land Surveyor	\$ 90.	<b>\$</b> 7,200.00
	30	CAD Operator	\$ 60.	<b>\$</b> 1,800.00
	30	Draftsperson	\$ 55.	<b>\$</b> 1,650.00
	8	Secretary -	\$ 35.	\$ 280.00
	8	Word Processor	\$ 35.	<b>\$</b> 280.00
)		Travel and Per Diem		
	7	Per Diem (Rate/Person/Day)	\$110.00	<b>\$</b> 770.00
			<b>************</b>	
		<b>XX</b> TOTAL		<b>\$</b> 50,575.00

<sup>\*</sup>Quantities listed for bid evaluation purposes only.

RFQ No. DEP 14386

# STATE OF WEST VIRGINIA Purchasing Division

# PURCHASING AFFIDAVIT

# IDOR OWING A DEBT TO THE STATE:

st Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the e or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective dor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount iter than one thousand dollars in the aggregate.

# **3LIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:**

I require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West inia Code. A public improvement construction contract may not be awarded to a vendor who does not a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West inia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia e may take place before their work on the public improvement is begun.

#### **TRUST:**

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

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

#### **INSING:**

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

#### FIDENTIALITY:

vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally ifiable information or other confidential information gained from the agency, unless the individual who is ubject of the information consents to the disclosure in writing or the disclosure is made pursuant to the cy's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for lotice of Agency Confidentiality Policies.

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

ors Name:	THRASHER	ENGINEERING,	INC.	
orized Signature	: <b>//</b> ////	-	Data	10/00/0000
sing Affidavit (Revise			Date: _	10/20/2008



30 Columbia Boulevard P.O. Box 1532 Clarksburg, WV 26301 (304) 624 • 4108 Fax: 624 • 7831 thrasher@thrashereng.com www.thrashereng.com

October 20, 2008

Mr. Chuck Bowman
Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, West Virginia 25305-0130

RE: Price Quotation and Qualifications - Mapping Services for Southern Counties

RFQ DEP 14386

Dear Mr. Bowman:

As West Virginia's largest owned and operated engineering and survey services company, Thrasher Engineering offers the West Virginia Department of Environmental Protection / Office of Abandoned Mine Lands and Reclamation the technical expertise, equipment and experience to provide you with the quality of mapping services you require. In order to provide you with top quality services in an efficient manner, we will also be utilizing the photgrammetry services of Pentree, Incorporated, located in Princeton, West Virginia. Thrasher Engineering and Pentree, Inc. are affiliate companies within the Resource Engineering Group, Inc.; we frequently "team" on projects when it will be advantageous to our clients.

Per the requirements of your solicitation, the enclosed proposal contains detailed information regarding the qualifications of our personnel, our technical expertise and equipment, and our previous experience. To briefly summarize, we offer the following advantages to working with Thrasher Engineering for your projects:

- 1. Previous Experience with mine projects: Our survey teams have provided research, plotting, mapping and staking, along with other services to various coal companies for numerous projects throughout West Virginia. We have full working knowledge of each of the counties in the Southern area as identified in the RFQ. Our experience in coal surveys, mapping and familiarity with the project areas will be a benefit to the DEP.
- 2. Personnel: Thrasher Engineering offers Licensed Professional surveyors, fifteen fully staffed crews and a complement of trained and experienced CAD operators to ensure your work is done to exact specifications. Because of our depth in the number of survey personnel we offer, you can be assured that your work will be done to meet your deadlines.
- 3. **Equipment:** We believe the most up-to-date equipment and software is essential to quality product deliverables to our clients. Thrasher Engineering continually evaluates our resources and updates it as necessary for technology.

We appreciate the opportunity to submit our credentials to the WV DEP/ AML and look forward to demonstrating our abilities and high level of client satisfaction to you.

Sincerely,

THRASHER ENGINEERING, INC.

KURT NEWBROUGH, P.S.
Partner / Survey Manager

# **MANAGEMENT AND STAFFING QUALIFICATIONS**

#### PROFESSIONAL QUALIFICATIONS:

Thrasher Engineering, Incorporated holds Certificate of Authorization #7-5433 from the West Virginia Board of Professional Surveyors.

The team that will be assigned to the WV DEP / AML Mapping Projects and their professional qualifications includes:

# Kurt Newbrough, P.S: WV Registered Professional Surveyor – License # WV PSD 1618

Mr. Newbrough joined Thrasher Engineering in 1990 and is Principal and Partner in the firm and. serves as General Manager of Survey Services and is responsible for assignment and review of all survey activities. He has extensive experience in all aspects of surveys, including but not limited to landfill closures, GPS ground control, boundary and easement surveys and the preparation of plats and legal descriptions. As General Manager, Kurt oversees all contracts and technical performance of survey personnel, 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 serves in the elected position of Harrison County (WV) Surveyor.

## Chad Biller, P.E.: WV Registered Professional Engineer – License WV # #13620 PA Registered Professional Engineer- License- #PE056012E OH Registered Professional Engineer- License -#64594

Mr. Biller will serve as Project Manager for all assignments made under this contract by the WV DEP / AML. He serves in this same capacity on Thrasher Engineering, Inc. projects for land reclamation design projects with the WV DEP.; through this experience Chad brings a thorough understanding of the requirements of the DEP. A graduate of West Virginia University with a Bachelor of Science degree in Civil Engineering, Chad is a Partner in Thrasher Engineering. His expertise is in project management for survey, site development, airports, along with roadways and bridges

#### Mike Hyman, P.S.: WV Registered Professional Surveyor – License WV PS# 983

Mr. Hyman joined Thrasher Engineering in 2000 and serves as Crew Supervisor for the firm. Mike is responsible for project set-up, review and coordination of his field crew for all types of survey including but not limited to aerial GPS ground control, landfill closure, boundary and easement surveys and the preparation of plats and legal descriptions. He also performs courthouse research, computes field data for construction layout, and processes GPS raw data. Mike received his Bachelor of Science Degree from Fairmont State University in Civil Engineering Technology, along with his Associates Degree in Design/Drafting.

#### Josh Hauser: Survey Crew Chief:

Mr. Hauser joined Thrasher Engineering in 1994 and serves as Survey Crew Chief for the firm, responsible for supervising and directing surveys for GPS and conventional surveys. His experience includes pre and post mine surveys for Eastern Associated Coal Company, along with numerous site development projects including boundary and topographical surveys along with horizontal and vertical stakeout. Josh attended Waynesburg College and is certified in CADD training.

#### D. Duane Perkins: Survey Crew Supervisor

Mr. Perkins joined Thrasher Engineering in 1992 and serves as Crew Supervisor for the firm. He is responsible for project set-up, review and coordination of his field crew for all types of survey including but not limited to topographical surveys and the preparation of plats and legal descriptions. He also performs courthouse research, computes field data for construction layout, and processes GPS raw data. Duane studied survey at Old Dominion University and Rappahonnock Community College. His project experience includes pre and post mine surveys for Eastern Associated Coal and various topographic surveys for the West Virginia Department of Transportation / Division of Highways.

# Robert Holmes: Photogrammetrist

Mr. Holmes has over thirty-five years of experience in Photogrammetric mapping and related operations. He is responsible for providing mapping and detailed images for use during the planning, design and field inspection of projects. Additionally, he provides project mapping quotations and mapping system maintenance. His experience encompasses field survey, flight planning and control scheme, analytical triangulation, aerial triangulation, orthophotographic scanning, stereo compilation, interactive graphics, drafting, digital capture and digital editing. Mr. Holmes' knowledge spans across a variety of purposes including: transportation corridors, municipal, industrial, mining, utility, military and land development.

#### Chris Irvine: CADD Supervisor

Mr. Irvine joined Thrasher Engineering in 1994 and serves as a CAD Manager for the firm's Survey Department. He is responsible for the delegation of workload, quality assurance, project communication and reviews and technology for the Department. Additionally, Mr. Irvine has extensive experience in field survey including boundary and topographic surveys

# PROJECTEXPERIENCE

Over our 20-year history, Thrasher Engineering has provided survey services to hundreds of clients through West Virginia and surrounding states. The services provided for these clients include:

- GPS Ground Control for Aerial Photography
- Geospatial Data Collection
- **■** Boundary Surveys
- Digital Mapping
- Flood Control Easement Mapping
- Right of Way Mapping and Legal Description Preparation
- Right of Way Acquisition
- Stream Topographic Surveys



#### **CURRENT MAJOR PROJECTS**

Dominion Transmission: Six current pipeline projects located in New York, Pennsylvania and West Virginia.

Velocitel: Raw-land, Co-locate, Rooftop, 1A and 2C FAA letters for tower sites in the State of Virginia

Geoline: Raw-land, Co-locate, Rooftop, 1A and 2C FAA letters for tower sites in the States of Virginia, West Virginia and Maryland.

RECENT EXPERIENCE

# NedPower Mount Storm, LLC / Shell Wind Energy

Client:

Jerome Niessen,

5160 Parkstone Drive, Suite 260

Chantilly, Va 20151 540-987-8766

**Project Description:** Providing ALTA / ASCAM surveys on approximately 7,000 acres with multiple land owners for Phase I and Phase II of the Development of the Mount Storm wind turbine area in Grant County, West Virginia. Additional scope of services includes construction layout / location of wind turbines and coordinating data for FAA 1A letters

#### **Dominion Transmission, Inc.**

Client:

Kelly Harris/ Coby Lattea

445 West Main St., Clarksburg, WV 26301

Phone 304-623-8000

**Project Description:** Conducting surveys and providing drawings of a pipeline corridor, approximately 8,000 lineal feet, consisting of an area 50 (fifty) feet on each side of the centerline. Within the survey, the firm was responsible for the location of all houses, buildings and related structures located within the corridor; location of all visible taps of the existing pipeline, all cathodic protection test stations, and all valves and other pipeline structures. Additional services included profiles of all streams or other water bodies and all roads within the corridor and crossed by the pipeline. Surface elevations were also performed.

### Eastern Associated Coal LLC

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.

#### Eastern Associated Coal LLC

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
- · Power line 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

#### Martinka Coal Company

Client: Martinka Coal Company

Gary Timms, Project Manager

304-366-5516

**Project Description:** Past and ongoing projects have been preformed at the Tygart River Mine which includes:

- 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

# Natural Resources Conservation Service - Southern District

Client:

**NRCS Southern District** 

Loren Rice 304-255-9255

Project Description: Thrasher Engineering has provided services on the following projects:

- □ Little Whitestick Creek Flood Control Project Phases II and III Raleigh County
  - o Property Research
  - o Property Location
  - Deed Plotting
  - o CAD Mapping
  - Easement Staking
  - o Easement Mapping
  - o Legal Descriptions
- □ Christian Fork Lake Mercer County Elevation Easement Project
  - o Property Research
  - o Property Location
  - o Deed Plotting
  - o CAD Mapping
  - o Easement Staking
  - Easement Mapping
  - o Legal Descriptions
- □ Mercer County Various Easement Locations
  - o Elevation Easement Locations
  - o Easement Staking
  - o Easement Mapping
  - o Legal Descriptions
  - o Dam Locations

#### Federal Bureau of Investigation

Client:

Federal Bureau of Investigation

Doug Grant, Project Manager

304-625-2341

**Project Description:** This project consisted of topographic surveys, horizontal and vertical control surveys, boundary surveys, seismic surveys, borehole location surveys, pond sounding surveys, location of underground mine openings, and construction layout surveys for a 900 acre parcel located in Clarksburg, West Virginia.

### City of Philippi Flood Protection Project

Client:

City of Philippi, WV

304-457-3700

**Project Description:** This project consisted of Geospatial Data collection of drainage structures for the proposed flood reduction project for the City of Philippi. Mapping and Digital Geospatial Metadata information was provided in the US Army Corp. of Engineers format.

# Town of Petersburg Flood Protection Project

Client:

Town of Petersburg

US Army Corp of Engineers Greg Barnes, Project Manager

410-962-4648

**Project Description:** This project consisted of Boundary Surveys, Legal Description Writing, Flood Control Mapping, and GPS Control for Levee Projects consisting of 200 acres ± and 20 property owners. Mapping and Legal Descriptions were prepared in the US Army Corp of Engineers format.

Town of Moorefield Flood Control Project

Client:

United States Army Corps of Engineers

Greg Barnes 410-962-4648

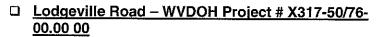
**Project Description:** The Moorefield Local Flood Protection Project located in Hardy County, West Virginia, included multiple tasks that needed to be performed for a proposed levy along the North and South Branch of the Potomac River. The project encompassed 1,500 acres along with 200 property owners. The primary tasks were to establish boundary lines for permanent easement takes, elevation control for flood ponding, mitigation areas, flood control mapping, and easement mapping. The project was performed through the United States Army Corps of Engineers.

# West Virginia Department of Transportation / Division of Highways

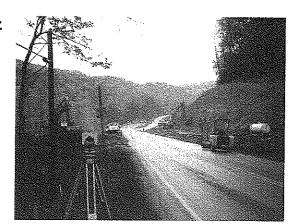
Thrasher Engineering offers the following projects, which included field surveys, plats, legal descriptions and right of way plans for the WVDOH:

☐ Hurricane Creek Road – WVDOH Project #U340-35-4.40 00

Centerline Stakeout, property corner verifications, GPS control verifications, GPS control confirmation, cemetery location, electronic deliverables, and other various survey functions as needed for 6 miles of proposed roadway.



Prepared right-of-way plans, legal descriptions, plats, field surveys



☐ Jakes Run Arch Bridge – WVDOH Project #BR0007(180)

Prepared right-of-way plans, legal descriptions, plats, field surveys

☐ Old Bridgeport Hill Drainage – WVDOH Project # S317-20/75-0.43 00

Prepared right-of-way plans, legal descriptions, plats, field surveys

SR 279 North Bridgeport By-Pass - WVDOH Project #X317-279-0.00

Prepared right-of-way plans, legal descriptions, plats, field surveys

☐ Route 11 Near Musselman High School – WVDOH Project # U302-11-4.36

Prepared right-of-way plans, legal descriptions, plats, field surveys

☐ King Coal Hwy Baisden-Mudlick – WVDOH Project #U330-52-44.70 00 C-2

Prepared right-of-way plans, legal descriptions, plats, field surveys

☐ Corridor H, Grant County, West Virginia – WVDOH Project #X312- H-79.05 00

Prepared right-of-way plans, legal descriptions, plats, field surveys

Indian Fork Bridge – WVDOH Project # BR-013 (033) E

Prepared right-of-way plans, legal descriptions, plats, field survey

# PROFESSIONAL CAPABILITIES

#### PROFESSIONAL CAPABILITIES:

Thrasher Engineering's Land Surveying Department performs a wide range of services, not only in conjunction with Thrasher Engineering projects, but independently for both public and private clients. The types of surveys performed include

- Right-of-way/Easement surveying.
- Pre and post mine subsidence surveys
- GPS ground control surveys for aerial mapping
- Landfill closure surveys
- Topographic surveys
- Construction layout for site development projects, highways, railroads, sanitary sewer
  - highways, railroads, sanitary sewer systems and water and wastewater treatment plants
- Lake and river sounding surveys
- Boundary surveys
- ALTA/ACSM surveys
- · Pre and post blasting surveys
- West Virginia Department of Transportation Division of Highways surveys



#### AERIAL PHOTOGRAPHY / PHOTOGRAMMETRY

Thrasher Engineering and Pentree, Inc. offer the only privately owned aerial mapping service in the state of West Virginia. Pentree, Inc. produces accurate plannimetric mapping from aerial photography, as well as differential volume calculations and contour mapping. By combining stereoscopic photos with CAD and terrain modeling software, computer models may be constructed to determine many topographic calculations at a substantial savings of time and money over manual field measurements and long-hand calculations.

### KNOWLEDGE OF GENERAL SURVEY AREA:

Thrasher Engineering's survey crews have worked in each of West Virginia's 55 counties, including performing local courthouse research for legal descriptions and plat mats. In the past 5 years, we have performed approximately **1200 surveys** throughout the state.

#### **CAPACITY:**

With 15 survey crews, including field supervisors along with a CADD Manager and CADD technicians, Thrasher Engineering offers full capabilities to quickly respond to the USDA / NRCS needs for their projects. Our offices, located in Clarksburg, West Virginia, Princeton, WV (Pentree, Inc.) and Oakland, Maryland will allow us the ability to assign a qualified crew that is close in proximity and readily available to begin any of your projects.

#### **EQUIPMENT:**

Our survey crews are equipped with the latest in conventional and GPS survey equipment. The equipment available and utilized from the various offices of Thrasher Engineering includes:

- □ Leica Geosystem 500 GPS
- □ Trimble 5800 GPS
- Leica Total Stations
- □ Topcom G600 Total Station
- Nikon Total Station
- Allegro Data Collectors

- □ Nikon DTM-420 Total Station
- □ Topcon AT-F2 Auto Level
- □ Topcon AT-S3 Auto Level
- □ K&E 30" Transit
- □ Thales ProMark 2 GPS Single Frequency

Connected through a Virtual Private Network, our CAD staff has the ability to share necessary plans among our locations *AutoCAD Landdesktop 2007* and *Microstation V8, Skipro* and *Trimble GPS Post Processing* software is utilized at 38 CAD stations within the company. 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.

#### SPECIALIZED TRAINING:

The management and staff of Thrasher Engineering's Survey department are dedicated to continuing education and training. Most recently, specialized training has been completed in the following:

# LEICA AND TRIMBLE GPS POST PROCESSING TRAINING AUTOCAD 2007 DESCRIPTION KEY INSTRUCTION

Our survey crews have earned a positive reputation for their fundamental value that safety is always a primary consideration. Along with our overall corporate safety policy, we have a Comprehensive Mine safety program, as well as a Permit Required Confined Space Entry Program. Our survey crew members have received training and receive annual refresher courses by an independent approved instructor.