**JANUARY 23, 2013** 

Statement of Qualifications

ORIGINAL

# MACARTHUR SUBSIDENCE PHASE 2 DESIGN DEP16030

RALEIGH COUNTY, WEST VIRGINIA



E.L. Robinson Engineering Co. 5088 Washington Street West Charleston, West Virginia 25313 Phone: (304) 776-7473 www.elrobinsonengineering.com

01/23/13 08:42:32 AM West Virginia Purchasing Division.



VENDOR

RFQ COPY

TYPE NAME/ADDRESS HERE

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

#### Solicitation

NUMBER DEP16030

ADDRESS CORRESPONDENCE TO ATTENTION OF

FRANK WHITTAKER

304-558-2316

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

DATE PRINTED 12/17/2012 BID OPENING DATE OPENING TIME 30PM 01/23/2013 CAT. AMOUNT ITEM NUMBER UNIT PRICE UOP QUANTITY LINE JB 906-29 0001 1 MACARTHUR SUBSIDENCE PHASE 2 DESIGN EXPRESSION OF INTEREST THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS DF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE MACARTHUR SUBSIDENCE PHASE & PROJECT IN RALEIGH COUNTY, WV, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. IS THE END OF REQ DEP16030 \*\*\*\*\* TOTAL: THIS

BIGNATURE RIBORD W.	Walls	TELEPHONE 304-776-7473	DATE 1/18/13
Project Manager	FEIN 550594633	ADDRESS	S CHANGES TO BE NOTED ABOV
WHEN RESPONDING	G TO SOLICITATION, INSERT	NAME AND ADDRESS IN SPACE	ABOVE LABELED 'VENDOR'





5088 Washington St. West Charleston, Wy 25313 January 10, 2013

elrobinsonengineering.com

West Virginia Department of Environmental Protection Office of AML & R 601 57<sup>th</sup> Street Charleston, WV 25304

Attn: Eric J. Coberly, P.E., Chief

Re: Macarthur Subsidence Phase 2

DEP16030

**Expression of Interest** 

Dear Mr. Coberly:

E. L. Robinson Engineering Co. (ELR) is pleased to submit this proposal in response to your request to perform professional engineering design services, and construction monitoring services associated with the design of the Macarthur Subsidence Phase 2 design project located in Raleigh County.

We have completed plans and specifications for numerous reclamation and waterline projects for WVDEP/AML over thirteen years. In addition, we have completed numerous projects with ODNR. We have descriptions of these projects in the attached proposal. Please note that the majority of staff that worked on these projects are still with ELR.

The ELR staff has combined experience in the design of more than 181 AML projects.

We are able to assemble multiple design teams with our current staff. The Charleston office has:

- A. Thirteen (13) registered professional engineers (civil or mining), two (2) geologists, two (2) Landscape architects, four (4) engineers in training as well as several CADD technicians that may be used on these teams.
- B. ELR Corporate experience in designing nearly sixty-eight (68) abandoned mine land remediation projects. Personal experience on approximately one hundred eighty-one (181) AML projects. This number does not include surveying/mapping/drilling projects.
- E. L. Robinson Engineering Co. has grown from 13 employees in 1996 to over 110 employees today. Throughout this growth period we have continued to meet project deadlines while providing a high quality engineering product.

In 2012, ELR was named to the Engineering News Record (ENR) 500 at number 485. This prestigious honor is reserved for the top performing civil engineering companies throughout the country. ELR is one of the few West Virginia based firms ever to be included on this list.

We have also recently opened offices in Clarksburg, WV and Cleveland, OH.

Our office location in Charleston is centrally and conveniently located in respect to the WVDEP offices and the referenced project.

We at E.L. Robinson Engineering Co. look forward to serving your agency under this contract. If you have any questions or need clarification, please feel free to contact me at (304) 776-7473.

Sincerely,

E. L. Robinson Engineering Co.

By:

Richard W. Watts, P.G.

Richmy W. Walls

Project Manager



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#### Executive Summary

For more than 14 years, E.L. Robinson Engineering Company has been a prime and preferred engineering and surveying consultant to the WV Division of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP/AML) program. We have provided this Executive Summary to directly respond to the Expression of Interest and provide ease for the evaluators to score this proposal.

#### **Understanding of Project Requirements**

E.L. Robinson Engineering Co. fully understands the requirements for this project and is committed to giving the WVDEP/Office of Abandoned Mine Lands and Reclamation the time and attention that is necessary for the reclamation project. Professional services may include: civil; structural; geological; surveying and mapping; preparation of all necessary permit applications; construction monitoring and other services that may be required.

#### Firm's Capacity

E.L. Robinson Engineering Co. approaches all engineering projects with the same attention to detail and fiscal responsibility to ensure the client receives the most cost effective plan, design and operationally functional project possible. Our approach truly makes the WVDEP/AML engineering staff an integral part in the design of the project. We want to make sure that the review staff is comfortable with the design concept before the project is submitted for review. During this process, we evaluate all technical alternatives to determine the most cost effective plan and technically acceptable project for the WVDEP/AML staff.

E.L. Robinson Engineering Co. has more than 50 professionals on staff and individuals experienced in mine reclamation. This capacity allows for the development of innovative and alternative methods to address complex issues involved in reclamation projects of this nature. Our QA/QC process also allows for a different perspective to be brought to the project before submission to the client and for review. E.L. Robinson Engineering Co. has the capacity to take this project from conception to completion with a wide variety of experienced professionals with in-house staff for planning, design, permitting, bidding and construction monitoring.

E.L. Robinson Engineering Co. will work diligently to deliver the highest quality, cost effective solution that the WVDEP/AML deserves. We have extensive knowledge in mine reclamation and are currently working with WVDEP/AML on similar projects. We have an excellent understanding of the requirements for this type of project and a good working relationship with NEPA, permitting and regulatory issues.



#### Project Approach

E.L. Robinson is familiar with the project area and the type of project for which you are seeking engineering services. We believe that we have a thorough understanding of the work to be provided to the WVDEP/AML for the subject reclamation project.

We are anxious to become an extension of your staff by providing prompt planning, design and construction monitoring services as needed. We interact with the various review and permitting agencies. As you will see from our resumes, we are uniquely diversified to provide quality engineering services to your agency.

E.L. Robinson will work closely with the WVDEP/AML and all regulatory and permitting agencies to complete this project. We feel that our extensive knowledge and experience in the planning and design of similar projects are significant assets in developing a cost-effective solution to your reclamation project.

The scope of services will include but are not limited to:

- Conceptual engineering and identification of permitting requirements
- Surveying and contour mapping
- Geotechnical services
- Design
- Preparation of plans and specifications
- Participation in the pre-bid meeting
- Participation in the pre-construction meeting
- Preparation of all necessary permit applications
- Construction monitoring
- Other services that may be required by the WVDEP/AML





#### Our Project Team

Our firm has put together a project team that is experienced in the design and construction of mine reclamation projects and has the capacity to perform the project's scope in a timely and efficient manner.

Mr. Rich Watts, P.G. will be assigned as the Project Manager.

Mr. John Kelly, II, E.I. will be assigned the CADD designer and principal production person for the project. He has performed this role for numerous mine reclamation projects.

Mr. Timothy Cart, P.E., Mr. Randall Lackey, P.E. and Mr. Mark McGettigan, P.E. will be assigned as the Project Engineers.

Mr. James Rayburn, P.S. will be assigned to oversee all surveying and mapping activities.

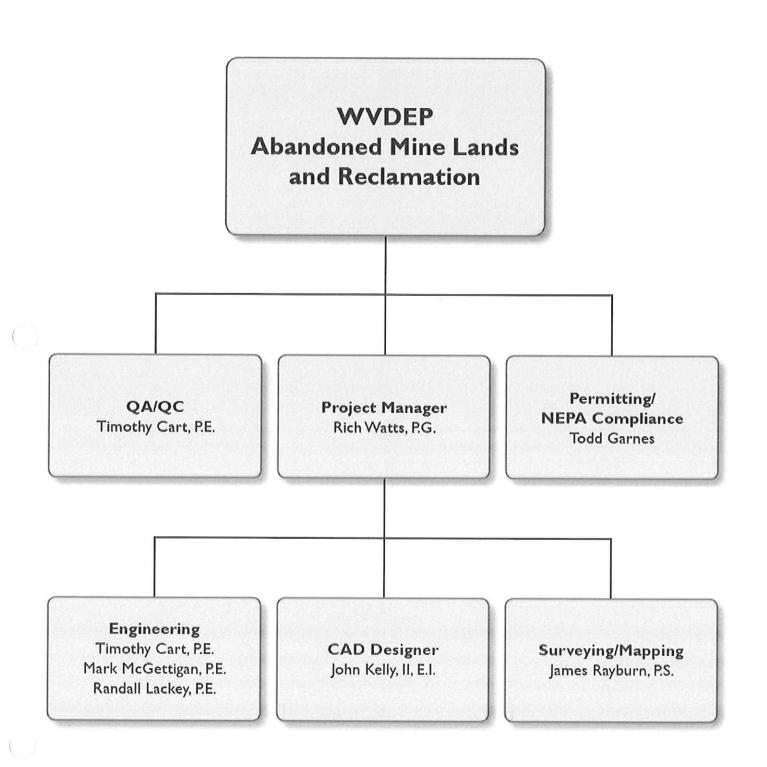
Our staff is well-qualified and experienced in related reclamation projects. They have the knowledge and capabilities to perform all of the tasks required for your project. In addition to your primary project team, other members of our organization may be called upon from time to time to provide their expertise and assistance to ensure this important project is completed on time and on budget.

Our team of construction inspectors, led by Ronnie Williams, offers years of experience with construction monitoring.

Also, our team of surveyors, managed by James Rayburn, P.S., provides the WVDEP/AML with the latest in technology and experience in surveying and mapping. By using GIS-based mapping and high-tech instrumentation, E.L. Robinson's survey team can evaluate any type of surface. Other services pertaining to surveying that our company specializes in are aerial photogrammetric consulting, hydrographic surveying, land surveying and GPS surveying.



#### Our Project Team





#### Our Capabilities

Over the past 30 years, E.L. Robinson Engineering Co. has focused its efforts on delivering quality projects to our clients and building strong relationships based on trust and partnership. We believe building lasting relationships with our clients is key to delivering exceptional service for many years to come.

E.L. Robinson provides WVDEP/AML with the capabilities, expertise and resources of one of the top-notched civil engineering firms in the region. Our offices are staffed with professionals experienced in AML reclamation mapping, permitting, design and construction monitoring projects with more than 50 employees, including 13 registered professional engineers, degreed design engineers, construction inspectors and a support team of administrative and technical personnel to assist the WVDEP/AML.

We are very familiar with the requirements of the permitting and regulatory agencies. This experience expedites the completion of projects.

As part of our commitment to quality, E.L. Robinson realizes that every project, client and location is very different. As a result, we look at each project independently to determine the most cost-effective solution. Specifically, we look at ways we can maximize the project benefit and minimize the construction cost while at the same time completing projects on time and within budget.





#### Previous Experience

E.L. Robinson is well-qualified and experienced in mine reclamation projects. We are very familiar with the requirements of the project. We have demonstrated abilities in developing practical and cost-effective reclamation and improvement projects and are dedicated to meeting project schedules and budgets.

Such demonstrations can be seen in our recent and past work on reclamation projects, including:

- Thorpe Refuse Pile -2011
- Abney Refuse Piles 2011
- Shinnston-Lumberport Subsidence 2011
- Keaton Branch Complex
   2010
- Gordon "C" Refuse 2010
- Newtown-Kinder Portals 2010
- Island Creek #18 Mine Complex –2010
- Keystone (Avery) Landslide and Portal –2010
- Jacob's Fork Complex –2008
- Rhodell Refuse and Portals –October 2008
- Gilmer B Sites 3-8 –2008
- Ohio DNR Emergency Reclamation 19 sites completed
- Toney Fork Landslide Emergency –2006



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PROJECT NAME Macarthur Subsidence Phase 2 DEP16030		DATE (DAY, MONTE January 10, 2013		FEIN 55-059463	3	
1. FIRM NAME		2. HOME OFFICE B	BUSINESS ADDRESS	3. FORMER	FIRM NAME	
E.L. Robinson Engineering Co.		5088 Washington Charleston, WV 2	Street, West	J. I OIGIDIC		
4. HOME OFFICE TELEPHONE 304-776-7473	5. ESTABL 1978	ISHED (YEAR)	6. TYPE OWNERSHIP Individual x Corpor Partnership Joint-V		6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES x NO	
7. PRIMARY AML DESIGN OFFICE: 5088 Washington Street, West Charleston, WV 25313	304-776-	7473/Tim Cart, P.	.E./56 Staff in Charlest	on Area	debalación comment Primite Conditation Contration	
8. NAMES OF PRINCIPAL OFFICER Ed Robinson, P.E. 304 776-747		RS OF FIRM	8a. NAME, TITLE, & TELE	PHONE NUMB	ER - OTHER PRINCIPALS	
9. PERSONNEL BY DISCIPLINE						
ARCHITECTS BIOLOGIST 7 CADD OPERATORS — CHEMICAL ENGINEERS	<ul><li>ENVIROR</li><li>ESTIMA'</li><li>GEOLOGI</li></ul>	ISTS ICAL ENGINEERS NMENTALISTS FORS ISTS	2 LANDSCAPE ARCHITE  — MECHANICAL ENGIN  MINING ENGINEERS  — PHOTOGRAMMETRIST  PLANNERS: URBAN/  — SANITARY ENGINEE  1 SOILS ENGINEERS  — SPECIFICATION  WRITERS	EERS S REGIONAL RS	6 STRUCTURAL ENGINEERS 7 SURVEYORS — TRAFFIC ENGINEERS — OTHER 56 TOTAL PERSONNEL	
TOTAL NUMBER OF WV REGION *RPEs other than Civil supervise and perform to	and Mining	must provide sug	ERS IN PRIMARY OFFICE: poporting documentation t	<u>13</u> hat qualif:	ies them to	
					2	
10. HAS THIS JOINT-VENTURE WO	RKED TOGET	HER BEFORE?	YES NO X This	is not app	licable	

11. OUT THE KEY CONSULTANTS/SUB-CONSULT	TANTS ANTICIPATED TO TUSED. Attach "AML	Consultant Confidential Qualification
Que connaire for each if copy is	not on file with AM	consultant confidential qual cacton
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
	Drilling	11 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Novel Geo – Environmental (NGE)		X YES
806 B Street, St. Albans, WV		
Sec. 13.70%		NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
		YES
		NO
NAME AND ADDRESS:	SPECIALTY:	NO WORKED WITH BEFORE
	or bon E. T.	WORKED WILD BEFORE
		YES
		NO
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		NO
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NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
		XXXX
		YES
		NO

12. A Is your firm experienced in Abandoned Mine Lance Remediation/Mine Reclamation Engineering?  X YES Description and Number of Projects: Eighty-nine (89) Projects - See Attached Sheet  NO  B. Is your firm experienced in Soil Analysis?  X YES Description and Number of Projects: Eighteen (18) Projects Listed - See attached Sheet  NO  C. Is your firm experienced in hydrology and hydraulics?  X YES Description and Number of Projects: Ten (10) Projects Listed - See attached sheet	
B. Is your firm experienced in Soil Analysis?  X YES Description and Number of Projects: Eighteen (18) Projects Listed - See attached Sheet  NO  C. Is your firm experienced in hydrology and hydraulics?	
B. Is your firm experienced in Soil Analysis?  X YES Description and Number of Projects: Eighteen (18) Projects Listed - See attached Sheet  NO  C. Is your firm experienced in hydrology and hydraulics?	
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YES Description and Number of Projects: Eighteen (18) Projects Listed - See attached Sheet NO C. Is your firm experienced in hydrology and hydraulics?	_
YES Description and Number of Projects: Eighteen (18) Projects Listed - See attached Sheet NO C. Is your firm experienced in hydrology and hydraulics?	
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NO NO C. Is your firm experienced in hydrology and hydraulics?	_
C. Is your firm experienced in hydrology and hydraulics?	_
C. Is your firm experienced in hydrology and hydraulics?	
C. Is your firm experienced in hydrology and hydraulics?	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
X YES Description and Number of Projects: Ten (10) Projects Listed - See attached sheet	
_ NO	
D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?	
	- 1
$\underline{\mathrm{X}}$ YES Description and Number of Projects: > 200 - in Firm History - 65 Recent Projects Listed	
All ELR WV & OH AML Projects since 2003 have been surveyed with ELR Surveying Staff	
NO NO	- 1
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.)	
X YES Description and Number of Projects: Sixty-eight (68) Total	- 1
Eleven (11) Domestic Waterline Experience (AML Related) Thirty-two (32) Evaluation of Aquifer Degradation	
Twenty Five (25) Non-AML Domestic Water Lines	
_ NO	
F. Is your firm experienced in Acid Mine Drainage	— I
Evaluation and Abatement Design?	
X YES Description and Number of Projects: Seven (7) Projects	
= 1-0 Jobbi poron dire Namber of Trojects. Seven (// Projects	
_ NO	
	_

13. PERSONAL HISTORY STATEMENT data but keep to essentials	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT 1	DESIGN (Furnish complete
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Edward L. Robinson, President	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE: 26	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 34
Brief Explanation of Responsibi	lities		
Mr. Robinson worked in the Righ major utility plans. He has ex land acquisition. He has provi Provide and coordinate Quality  EDUCATION (Degree, Year, Specia	tensive experience in propert ded quality control on all pr Control on all design project	y surveys, property title sea oiects designed by this firm	erchec serial manning and
Bachelor of Science 1969 Civil Master of Science 1981 Civil	Engineering		
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St	cate)
American Society of Civil Engin American Council of Engineering National Society of Professiona	Companies	1975 Civil Engineering Registered in West Virginia Professional Licensed Survey	and Kentucky or No. 1150
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT I	DESIGN (Furnish complete data
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Richard W. Watts, P.G.	YEARS OF AML DESIGN EXPERIENCE: 29	YEARS OF AML RELATED DESIGN EXPERIENCE: 34	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibi Mr. Watts has served as project include project management, fie analysis, specification writing Projects included surface and de EDUCATION (Degree, Year, Special B.S./1977/Geology	geologist on more than ninety ld reconnaissance, drilling control of the control	pordination, laboratory testings, estimates, pre-bid and pre-	ing and analysis, stability
M.S./1994/Geography			
MEMBERSHIP IN PROFESSIONAL ORGAN Geological Society of America Association of Engineering Geolo		REGISTRATION (Type, Year, St Professional Geologist/1992/ Professional Geologist/1993/	Virginia

13. PER AL HISTORY STATEMENT data out keep to essentials	OF PRINCIPALS AND ASSOCIATE	ESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish compl		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
John Kelly II, E.I.	YEARS OF AML DESIGN EXPERIENCE: 14	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:		
Brief Explanation of Responsibilities  Mr. Kelly has worked on many AML projects since joining ELR. His responsibilities have included drilling inspection, sampling of coal refuse materials, hydrology, hydraulics design of drainage structures, and development of regrading plans. Estimation of quantities developed estimated cost. Mr. Kelly is proficient with Auto Cadd.  Mr. Kelly has performed layout and inspection of core drilling operations for bridge and roadway projects. In addition, he has designed cut slopes for large-scale roadway projects such as the US Route 52 Kermit Bypass in Mingo County, WV and Meadowbrook Road in Harrison County, WV.					
	EDUCATION (Degree, Year, Specialization)  B.S. Civil Engineering/1998/WVU				
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, Statement Statement Intern, WV	ate)		
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES :	RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete data		
Dat Reep to essentiate,	YEARS OF EXPERIENCE				
NAME & TITLE (Last, First, Middle Int.)		TOTAL STATE OF THE			
NAME & TITLE (Last, First, Middle	YEARS OF AML DESIGN EXPERIENCE: 29		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 22		
NAME & TITLE (Last, First, Middle Int.)	lities mine reclamation projects unvegetation cover, disposal of and disposal of old mining studies to determine if ground ce in the design and construction ojects in Mingo; Kanawha; Putr	YEARS OF AML RELATED DESIGN EXPERIENCE:  29  der the AML program, including acid producing materials, and tructures. Designed passive advater had been affected by pation management of waterline and am; and Cabell counties.	DESIGN EXPERIENCE: 22  g regrading of coal refuse d developing methods for AMD treatment systems. re-law mining. extension projects. Mr. Cart		
NAME & TITLE (Last, First, Middle Int.)  Timothy B. Cart, P.E.  Brief Explanation of Responsibi Mr. Cart has completed numerous materials, re-establishment of extinguishing burning materials Conducted Phase I and Phase II Mr. Cart has extensive experien has recently completed water pr Mr. Cart has performed geotechn	lities mine reclamation projects unevegetation cover, disposal of and disposal of old mining studies to determine if ground ce in the design and construction ojects in Mingo; Kanawha; Putrical engineering calculations	YEARS OF AML RELATED DESIGN EXPERIENCE:  29  der the AML program, including acid producing materials, and tructures. Designed passive advater had been affected by pation management of waterline and am; and Cabell counties.	DESIGN EXPERIENCE: 22  g regrading of coal refuse d developing methods for AMD treatment systems. re-law mining. extension projects. Mr. Cart		

data out keep to essentials	OF PRINCIPALS AND ASSOCIATE	ESPONSIBLE FOR AML PROJECT I	DESIGN (Furnish compl		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
Mark McGettigan, P.E.	YEARS OF AML DESIGN EXPERIENCE: 7	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:		
Brief Explanation of Responsibi	lities				
Mr. McGettigan has worked on several AML projects since joining our firm. He has developed grading plans, cross sections, estimated and checked quantity calculations. He has also served as a field inspector for several waterline Projects designed by E. L. Robinson Engineering Co. He has been the lead designer on waterlines over the past five years.  Mr. McGettigan also has experience with surveying and equipment including; theodolites, levels, and total stations. He has also performed various concrete and soil tests and is certified on Troxler nuclear density gage.					
EDUCATION (Degree, Year, Special	lization)				
B.S. Civil Engineering Technicia					
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St	ate)		
	Professional Engineer WV				
13. PERSONAL HISTORY STATEMENT (but keep to essentials)	OF PRINCIPALS AND ASSOCIATES I	RESPONSIBLE FOR AML PROJECT I	DESIGN (Furnish complete data		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
Randall L. Lackey, P.E.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE: 8	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 1		
Mr. Lackey has performed hydrau	Brief Explanation of Responsibilities Mr. Lackey has performed hydraulics and scour for Ripley Town Bridge; Tallman Bridge; Meadowbrook Road Bridge; Simpson Creek Bridge; Kermit Bypass Bridge; Left Hand Fork Bridge; and Blennerhassett Bridge.				
Mr. Lackey has also performed calculations for deck drainage; performed girder design and analysis; pier design and analysis; prepared design study reports; type, size and location reports and final plans on many of our Division of Highways projects.					
EDUCATION (Degree, Year, Special	lization)				
B.S. Civil Engineering/1999					
MEMBERSHIP IN PROFESSIONAL ORGAN	NIZATIONS	REGISTRATION (Type, Year, St	ate)		

		<u>/</u>			
<ol> <li>PERSONAL HISTORY STATEMENT data but keep to essentials</li> </ol>		RESPONSIBLE FOR AML PROJECT DE	ESIGN (Furnish complete		
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE			
J. Todd Garnes	YEARS OF AML DESIGN EXPERIENCE: 5	YEARS OF AML RELATED DESIGN EXPERIENCE: 5	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:		
Brief Explanation of Responsibi	lities				
Mr. Garnes experience surveying and providing CADD Design for mine reclamation projects and waterline and sewer extrusions. He has provided construction inspection services for landsides and subsidence projects in Ohio. Mr. Garnes has performed numerous water feasibility studies, which involved interviews, water sampling and analysis, mapping, mine research, and development of final reports.					
EDUCATION (Degree, Year, Specia A.S. Architectural Design/ 1999 A.S. Computer Aided Drafting an	d Design/ 1999				
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS REGISTRATION (Type, Year, State)					
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES I	RESPONSIBLE FOR AML PROJECT DE	ESIGN (Furnish complete data		
	YEARS OF EXPERIENCE				
NAME & TITLE (Last, First, Middle Int.)					
	YEARS OF AML DESIGN EXPERIENCE:		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:		
Int.) Thomas Rayburn, P.S.		YEARS OF AML RELATED DESIGN			
Int.)	lities ine mapping and surveying, for mine drainage and water supply hich include precision pressur y analysis and hydrology calcu and land management as well as electronic total stations and collects data and develops GIS	YEARS OF AML RELATED DESIGN EXPERIENCE:  31  rmulated short term and long regree and computer are quality surveys and computer are reclamation and environmental dor GPS (Satellite) equipments for utility mapping.	range mining plans for all surface mines, designed mine er simulation of ventilation halysis for mining al permits.		
Thomas Rayburn, P.S.  Brief Explanation of Responsibi Mr. Rayburn has experience in m types of coal mining, designed ventilation plans and systems wisystems.  He has performed slope stability applications, work with leases by utilizing "state of the art" surveys for aerial mapping and	lities ine mapping and surveying, for mine drainage and water supply hich include precision pressur y analysis and hydrology calcu and land management as well as electronic total stations and collects data and develops GIS surveying and mapping for larg	YEARS OF AML RELATED DESIGN EXPERIENCE:  31  rmulated short term and long regree and computer are quality surveys and computer are reclamation and environmental dor GPS (Satellite) equipments for utility mapping.	range mining plans for all surface mines, designed mine er simulation of ventilation halysis for mining al permits.		
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12 DED CONTAI HT CHODY CHAMPAGNIN	OF PRINCIPLE AND AGGOSTIC		
13. PERSONAL HISTORY STATEMENT data but keep to essentials	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Scott LeRose, P.E.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibi Mr. LeRose is experienced in de Drilling Operations; Groundwate Specific major highway design a of new four lane highway; US 52 interchanges; design of 2 mile Corridor H from Grant/Hardy Cou	eveloping major highway and ri or Sampling/Monitoring; UST Re ond right of way plan developm (I-73), a 3.5 mile design and section of Appalachian Corrid	moval/Replacement and Mine Pe ent projects include: Meadow . ROW plans for a new four lan	rmitting/Reclamation. brook Road, a 2 mile design e highway with two major
While working on these projects relocation, MOT, signing and pa seeding, pollution control quan development of ROW plans, inclu	vement stripping. He has per tities, and other items assoc	formed quantity calculations iated with roadway plans. He	for payement drainage
EDUCATION (Degree, Year, Specia	lization)		
B.S. Civil Engineering/1997			
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St	ate)
		Professional Engineer WV	
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete data
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Ray Tilley, P.E.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
		5	31
Brief Explanation of Responsibi Mr. Tilley has over 30 years ex Mr. Tilley is a certified Water projects over his career. His EDUCATION (Degree, Year, Specia B.S. Civil Engineering/WV Tech	perience in water and wastewa Plant Operator. Mr. Tilley current duties include managi lization)	has successfully completed nung both water and wastewater	merous waterline design
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, Sta	ate)
		Professional Engineer WV	

A Company of the Comp			
13. PERSONAL HISTORY STATEMENT data but keep to essentials		RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
James Eric Gwinn, E.I.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 11
Brief Explanation of Responsibi	lities		
Mr. Gwinn has experience in con requirements. He has worked on Plateau Regional Water Project. Mr. Gwinn has designed approach EDUCATION (Degree, Year, Specia	the Cabell County Water Proj He has performed calculatio slabs, decks and extensive d	ect and the raw water intake ns on various AML project.	structure for the Fayette
B.S. Civil Engineering/1998/ We	st Virginia Institute of Tech	nology	
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St.	ate)
13. PERSONAL HISTORY STATEMENT	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete data
but keep to essentials)			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
NAME & TITLE (Last, First, Middle	YEARS OF AML DESIGN EXPERIENCE:		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 12
NAME & TITLE (Last, First, Middle Int.)	2	YEARS OF AML RELATED DESIGN EXPERIENCE:	DESIGN EXPERIENCE:
NAME & TITLE (Last, First, Middle Int.)  Brian D. Morton, P.E.	2 lities ine extension projects in Put	YEARS OF AML RELATED DESIGN EXPERIENCE: 2 nam and Kanawha County. He a	DESIGN EXPERIENCE: 12
NAME & TITLE (Last, First, Middle Int.)  Brian D. Morton, P.E.  Brief Explanation of Responsibi  Mr. Morton has worked on waterl	lities ine extension projects in Put nvolving the West Virginia Di and pavement marking plans a uctures and highway construct	YEARS OF AML RELATED DESIGN EXPERIENCE:  2  nam and Kanawha County. He a vision of Highways.  nd performed hydrologic and h ion. Also prepared site deve	DESIGN EXPERIENCE: 12  lso has completed numerous  ydraulic calculations for lopment plans,
NAME & TITLE (Last, First, Middle Int.)  Brian D. Morton, P.E.  Brief Explanation of Responsibi  Mr. Morton has worked on waterl waterline relocation projects in the morton has prepared signing culverts and other drainage str	lities ine extension projects in Put nvolving the West Virginia Di and pavement marking plans a uctures and highway construct and has performed constructio	YEARS OF AML RELATED DESIGN EXPERIENCE:  2  nam and Kanawha County. He a vision of Highways.  nd performed hydrologic and h ion. Also prepared site deve	DESIGN EXPERIENCE: 12  lso has completed numerous  ydraulic calculations for lopment plans,
NAME & TITLE (Last, First, Middle Int.)  Brian D. Morton, P.E.  Brief Explanation of Responsibi  Mr. Morton has worked on waterl waterline relocation projects in the morton has prepared signing culverts and other drainage str specifications, bid documents,	lities ine extension projects in Put nvolving the West Virginia Di and pavement marking plans a uctures and highway construct and has performed constructio	YEARS OF AML RELATED DESIGN EXPERIENCE:  2  nam and Kanawha County. He a vision of Highways.  nd performed hydrologic and h ion. Also prepared site deve	DESIGN EXPERIENCE: 12  lso has completed numerous  ydraulic calculations for lopment plans,
NAME & TITLE (Last, First, Middle Int.)  Brian D. Morton, P.E.  Brief Explanation of Responsibi  Mr. Morton has worked on waterl waterline relocation projects in the morton has prepared signing culverts and other drainage strespecifications, bid documents, EDUCATION (Degree, Year, Special)	lities ine extension projects in Put nvolving the West Virginia Di and pavement marking plans a uctures and highway construct and has performed constructio lization)	YEARS OF AML RELATED DESIGN EXPERIENCE:  2  nam and Kanawha County. He a vision of Highways.  nd performed hydrologic and h ion. Also prepared site deve	DESIGN EXPERIENCE: 12  lso has completed numerous  ydraulic calculations for lopment plans, ojects.

	OF PRINCIPALS AND ASSOCIATE	ESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish compl
data but keep to essentials			
NAME & TITLE (Last, First, Middle (nt.)	YEARS OF EXPERIENCE		
Carney, Joseph T. P.E.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 36
Brief Explanation of Responsibi	lities		
Mr. Carney has extensive experi and contract administration. H storm sewer, drainage studies, EDUCATION (Degree, Year, Specia	e has worked on a variety of roadway, bridge design, hydro	Civil Engineering projects in	cluding grading, earthwork,
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St	ate)
		Professional Engineer, 1976,	WV
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT D	<b>ESIGN</b> (Furnish complete data
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
Workman, Gary A., CADD Senior Technician	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE: 23	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibi Mr. Workman is responsible for WVDEP/AML projects while employ EDUCATION (Degree, Year, Specia	CADD design on AML projects, ed at Ackenheil, and has work		
rechnical School/1987/CADD	220201		
MEMBERSHIP IN PROFESSIONAL ORGA	NIZATIONS	REGISTRATION (Type, Year, St. WVDOH certifications compact	

13. PER AL HISTORY STATEMENT data out keep to essentials	OF PRINCIPALS AND ASSOCIATE	ESPONSIBLE FOR AML PROJECT I	ESIGN (Furnish compl			
NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE					
Mayes, Jason M.	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:			
Brief Explanation of Responsibi	lities					
Provides CADD Design for site d Nearly ten years experience in	WV DOT design with a prior fi	er extensions, and layout on rm.	AML Projects. Mr. Mayes has			
EDUCATION (Degree, Year, Specia	lization)					
B.S. Industrial Technology 1997 WVU Tech A.S. Drafting and Design 1996 WVU Tech						
MEMBERSHIP IN PROFESSIONAL ORGA	ate)					
13. PERSONAL HISTORY STATEMENT but keep to essentials)	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT D	ESIGN (Furnish complete data			
13. PERSONAL HISTORY STATEMENT but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)	OF PRINCIPALS AND ASSOCIATES	RESPONSIBLE FOR AML PROJECT DE YEARS OF EXPERIENCE	ESIGN (Furnish complete data			
but keep to essentials)  NAME & TITLE (Last, First, Middle	OF PRINCIPALS AND ASSOCIATES YEARS OF AML DESIGN EXPERIENCE:		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN	YEARS OF DOMESTIC WATERLINE			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)  Scott A. Pratt  Brief Explanation of Responsibi  Mr. Pratt has extensive experie samples, and obtaining water le experienced in mine map research	YEARS OF AML DESIGN EXPERIENCE:  13  lities  nce as a Field Geologist, per vels. He has also performed m h, specification writing, and	YEARS OF EXPERIENCE  YEARS OF AML RELATED DESIGN EXPERIENCE:  13  forming test boring over-sigh any geotechnical soil tests i	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  t, logging soil and core n the laboratory. He is also			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)  Scott A. Pratt  Brief Explanation of Responsibi  Mr. Pratt has extensive experie samples, and obtaining water le	YEARS OF AML DESIGN EXPERIENCE:  13  lities  nce as a Field Geologist, per vels. He has also performed m h, specification writing, and	YEARS OF EXPERIENCE  YEARS OF AML RELATED DESIGN EXPERIENCE:  13  forming test boring over-sigh any geotechnical soil tests i	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  t, logging soil and core n the laboratory. He is also			
NAME & TITLE (Last, First, Middle Int.)  Scott A. Pratt  Brief Explanation of Responsibi  Mr. Pratt has extensive experie samples, and obtaining water le experienced in mine map researc EDUCATION (Degree, Year, Specia B.S. Geology, 1999, Marshall Un	YEARS OF AML DESIGN EXPERIENCE:  13  lities  nce as a Field Geologist, per vels. He has also performed m h, specification writing, and lization) iversity	YEARS OF EXPERIENCE  YEARS OF AML RELATED DESIGN EXPERIENCE:  13  forming test boring over-sigh any geotechnical soil tests i	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  t, logging soil and core n the laboratory. He is also			
but keep to essentials)  NAME & TITLE (Last, First, Middle Int.)  Scott A. Pratt  Brief Explanation of Responsibi  Mr. Pratt has extensive experie samples, and obtaining water le experienced in mine map research EDUCATION (Degree, Year, Specia	YEARS OF AML DESIGN EXPERIENCE:  13  lities  nce as a Field Geologist, per vels. He has also performed m h, specification writing, and lization) iversity	YEARS OF EXPERIENCE  YEARS OF AML RELATED DESIGN EXPERIENCE:  13  forming test boring over-sigh any geotechnical soil tests i	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:  t, logging soil and core n the laboratory. He is also ns for AML projects.			

14. PROVEDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AT DES 1 SERVICES
Various computer hardware and software including: Microstation, InRoads, AutoCAD, ELRSoil, Microsoft Office applications,  Haested, Water CADD, Culvert Master, Flow Master
Various surveying equipment:
Instruments - Topcon Total Station (6), Trimble Robotic DR200+ (2)
GPS Equipment - Trimble 5700 Receiver (6), Trimble TSCe Controller/Handheld (5)
*all equipment lists have various misc. survey equipment to go along (poles, tape measures, data collectors, etc.)
Riegl LMS - 360 3D Laser Scanner - surface imaging system based upon accurate distance measurement by means of electro-optical range measurement and a two axis scanning mechanism.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	RESPONSIBILITY COST		PERCENT COMPLETE	
Abney Refuse Piles Raleigh County	efuse Piles   WVDEP/AML&R   Surveying, Mapping		\$885,575	98	
Milam Ridge Refuse Wyoming County	WVDEP/AML&R	Surveying, Mapping and Design	\$595,000	90	
West Columbia B Mason County	WVDEP/AML&R	Surveying, Mapping and Design	\$1,365,9950	90	
Cartright Branch Logan County	WVDEP/AML&R	Surveying, Mapping and Design	\$242,550	100	
Marsh Fork Water Extension	Logan County PSD 41 Armory Rd. Logan, WV 25601	Design and Construction Management	\$2.9 M	10	
Big Ugly Creek Waterline Extension	Logan County PSD 41 Armory Rd. Logan, WV 25601	Design and Construction Management	\$11 M	20	
Phase III-A Sanitary Sewer Extension	Logan County PSD 41 Armory Rd. Logan, WV 25601	Design and Construction Management	\$ 9 M	10	

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Danese Waterline Extension	Danese Public Service District	Design and Construction Management	\$6.0 M	85
Lower Mud River Waterline Extension	Lincoln County PSD 240 Lower Coal River Rd. Alum Creek, WV 25003	Design and Construction Management	\$ 7.9 M	65
McDowell PSD Jolo Phase II Water McDowell County	McDowell Public Service District	Design and Construction Management	\$4.0 M	85
Dille/Widen Water Extension Clay County	Birch River PSD	Design and Construction Management	\$4.0 M	85
Dutch Ridge/Sanderson Water Extension, Kanawha County	Kanawha County RDA	Design and Construction Management	\$2.5 M	85
Lavalette PSD Nestlowe Water Phase 2	Lavalette PSD 5308 Route 152 Lavalette, WV 25535	Design and Construction Management	\$4.7 M	98%
Iaeger Regional Sewer Project	McDowell County PSD HC 31 Box 436J Welch, WV	Design and Construction Management	\$5 M	40

ES ON WHICH YOUR FI	RM IS SERVING AS A ST	JB-CONSULTANT TO OTH	ERS	
NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
			ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
	:			
	NATURE OF FIRMS	NATURE OF FIRMS NAME AND ADDRESS	NATURE OF FIRMS NAME AND ADDRESS ESTIMATED	RESPONSIBILITY OF OWNER COMPLETION DATE

 $\bigcirc$ 

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Thorpe Refuse Pile McDowell County	WVDEP-AML Oak Hill, WV Mark Proctor	\$744,240	2011	Yes
Shinnston-Lumberport Subsidence Harrison County, WV	WVDEP-AML Philippi, WV Timothy LeMasters	\$442,000	2011	Yes
Corridor H Davis-Bismark X347-H-64.85 00 Tucker County	WV Dept. of Transportation Engineering Division Charleston, WV 25301 Attn: Gregory Bailey	\$9.0 M	2008	No
WVDEP-Emergency East Bank (Willis) Mine Blowout	WVDEP-AML 601 57 <sup>th</sup> Street Charleston, WV 25304	\$0.8 M	2009	Yes
Newtown (Kinder) Portals Mingo County	WVDEP-AML 601 57 <sup>th</sup> Street Charleston, WV 25304 Roger Earle	\$490,410	2010	Yes
Keaton Branch Complex Raleigh County	WVDEP-AML Oak Hill, WV Mark Proctor	\$527,250	2010	Yes
Gilmer B Sites 3-8 Gilmer County	WVDEP-AML&R 601 57 <sup>th</sup> Street Charleston, WV 25304	\$675,000	2009	Yes
Upshur County Industrial Park Upshur County	Upshur County EDA	\$4.0 M	2009	Yes

18. PLETED WORK W	VITHIN LAST 5 YEARS ON WHI CH YOUR FIRM WAS RESPONSI	CH YOUR FI. HAS BEEN A SUB-COI	NSULTANT	TO OTHER FIRMS	(INDICA PHASE
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
Appalachian Corridor D Blennerhassett Island Bridge X354-D-0.00	Sub to Michael Baker, Jr., Inc. Post Design Services	\$7,500,000	2008	Yes	Michael Baker, Jr., Inc.
Appalachian Corridor H Section 6 X316-H-100.40	Inc. Surveying, ROW questionnaires, Hydraulic Studies	\$950,000	2008	Yes	Michael Baker, Jr., Inc.
Appalachian Corridor H Section 3 Davis to Bismark	Sub to Modjeski & Masters Survey, Geotech & ROW Plans	\$9,000,000	2008	No	Modjeski & Masters
Robinson Creek Bridge S303-85-27.81 Boone County	Sub to EDG Roadway, Surveying, Structures, Hydraulic Studies, ROW Plans	\$1,000,000	2008	Yes	EDG
Holley Grove Bridge Kanawha County	Sub to Triton Construction Plans for Bridge, Hydraulics, Post Design	\$500,000	2010	Yes	Triton Construction
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. E. L. Robinson Engineering Co. is <u>committed</u> to the WVDEP/AML program to provide professional design, surveying and mapping and construction monitoring services in a timely and cost-efficient manner. Our business plan relies heavily on the work offered by the WVDEP/AML program.					
20. The foregoing is Signature: Ruchn Printed Name: Richard	I W. Walls	Title: PROJECT MANAG	GER	Date: January 10, 20	13



Project: Glen Rogers Emergency

Wyoming County, WV

Year: 2012

Client: WVDEP-AML

Charleston, WV

**Description:** Performed survey, drilling, and design for shaft seals.

Project: Abney Refuse Pile

Raleigh County, WV

Year: 2011-2013 Client: WVDEP-AML

Oak Hill, WV

**Description:** Field surveying and mapping, subsurface investigation, design

work for refuse regarding, mine seals, and drainage.

Project: Cartright Branch Refuse Pile

Logan County, WV

Year: 2011-2013 Client: WVDEP-AML

Charleston, WV

**Description:** Performed survey, drilling, design for refuse regrading and mine

drainage control.

Project: Thorpe Refuse Pile

McDowell County, WV

Year: 2011-2012 Client: WVDEP-AML

Oak Hill, WV

**Description:** Performed survey, drilling, design for refuse and spoil regrading

and mine drainage control.

Project: Shinnston-Lumberport Subsidence

Harrison County, WV

Year: 2010-2012 Client: WVDEP-AML Philippi, WV

**Description:** Performed site survey, drilling and prepared subsidence

abatement design.



Project: Newtown (Kinder) Portals Design

Mingo County, WV

Year: 2010-2012 Client: WVDEP-AML

Charleston, WV

**Description:** Performed site survey, and prepared design for portals

reclamation and drainage abatement design.

Project: Gordon "C" Refuse Pile

Boone County, WV

Year: 2010-2012 Client: WVDEP-AML

Oak Hill, WV

**Description:** Field surveying and mapping, subsurface investigation, design

work for mine seals, drainage, and refuse reclamation.

Project: Keaton Branch Complex

Raleigh County, WV

Year: 2010-2011
Client: WVDEP-AML

Oak Hill, WV

**Description:** Performed survey, drilling, design for refuse regrading and mine

drainage control.

Project: Dunloup Creek Complex

Raleigh County, WV

Year: 2009-2011
Client: WVDEP-AML
Oak Hill, WV

**Description:** Performed survey, drilling, design for refuse and spoil regrading

and mine drainage control.

Project: Brownton (McCord) Landslide

Barbour County, WV

Year: 2009-2011 Client: WVDEP-AML

Philippi, WV

**Description:** Performed site survey, drilling and prepared landslide abatement

design.



Project: Keystone (Avery) Landslide and Portal

McDowell County, WV

Year: 2009-2011 Client: WVDEP-AML

Charleston, WV

**Description:** Performed site survey and prepared landslide abatement design,

portals reclamation, and drainage control.

Project: Dan's Branch (Pennington) Landslide Emergency

Mingo County, WV

Year: 2011

Client: WVDEP-AML

Charleston, WV

**Description:** Field surveying and mapping, subsurface investigation, design

work for landslide reclamation.

Project: East Bank (Willis) Mine Blowout

Kanawha County, WV

Year: 2009

Client: WVDEP-AML

Charleston, WV

**Description:** Field surveying and mapping, design work for mine seal and

drainage control.

Project: Island Creek #18 Mine Complex

Logan County, WV

Year: 2009-2011 Client: WVDEP-AML

Oak Hill, WV

**Description:** Field surveying and mapping, subsurface investigation, design

work for mine seals, drainage, and refuse reclamation.

Project: Jacob's Fork Complex

Boone County, WV

Year: 2008-2009 Client: WVDEP-AML

Client: WVDEP-AML Charleston, WV

**Description:** Field surveying and mapping, subsurface investigation, design

work for mine seals, drainage, and reclamation.



Project: Rhodell Refuse & Portals

Wyoming County, WV

Year: 2008

Client: WVDEP-AML

Charleston, WV

**Description:** Performed survey, drilling, design for refuse and spoil regarding

and mine drainage control.

Project: Gilmer B Site 3.8

Gilmer County, WV Year: 2008

Client: WVDEP-AML

Charleston, WV

**Description:** Performed survey, drilling, design for refuse and spoil regarding

and mine drainage control.

Project: Gouge Landslide Emergency

Year: Scott Town, OH
Year: September 2007

Client: ODNR-AML

1855 Fountain Square Columbus, OH

**Description:** Performed site survey, drilling and prepared landslide abatement

design.

Project: Brown Landslide Emergency

Rayland, OH

Year: August 2007 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed site survey and prepared landslide abatement design.

Project: Rodgers Subsidence Emergency

Wellston, OH

Year: January 2007 Client: ODNR-AML

1855 Fountain Square

Columbus, OH



Project: McAdams Subsidence Emergency

Stark County, OH

Year: April 2006 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed investigation and prepared report of findings.

Project: Athens Rt. 13 Refuse Fire Emergency

Athens County, OH

Year: March 2006 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed site survey, prepared abatement design and monitored

on site construction for fire extinguishment.

Project: Toney Fork Landslide Emergency

Boone County, WV

Year: February 2006 Client: WVDEP-AML

Charleston, WV

**Description:** Performed site survey, drilling and prepared plans and

specifications to stabilize an emergency landslide area.

Project: Cox Refuse Fire Emergency

Gallia County, OH

Year: December 2005 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed abatement design for fire extinguishment.

Project: Lavender Refuse Fire Emergency

Meigs County, OH November 2005

Year: November 20 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed abatement plan and monitored construction.



Project: Goetz Subsidence Emergency

Columbiana County, OH

Year: November 2005 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed investigation and prepared report of findings.

Project: Adkins Landslide Emergency

Gallia County, OH

Year: December 2005
Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed surveying, drilling, landslide abatement and

construction monitoring.

Project: North Matewan (Sipple Drainage)

Mingo County, WV

Year: February 2005 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design for drainage project

abatement.

Project: Phalen Landslide Emergency

Martins Ferry, OH

Year: January 2005 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed site surveying and landslide abatement design.

Project: Baisden Subsidence Emergency

Jackson, OH

Year: January 2005 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed drilling to develop subsidence abatement solutions.



Project:

Parsons Landslide Emergency

New Philadelphia, OH

Year:

December 2004

Client:

ODNR-AML

1855 Fountain Square

Columbus, OH

Description:

Performed site review and report concerning landslides relation

to mining and potential solutions.

Project:

Treadway Landslide Emergency

Rayland, OH

Year:

October 2004 ODNR-AML

Client:

1855 Fountain Square

Columbus, OH

Description:

Performed site surveying, drilling and landslide abatement

design.

Project:

Big Creek "C" Refuse

Logan County, WV

Year:

July 2004

Client:

WVDEP-AML

Description:

Performed surveying and drilling for design.

Project:

Imboden Landslide Emergency

Rutland, OH

Year:

June 2004

Client:

ODNR-AML

1855 Fountain Square

Columbus, OH

Description:

Performed drilling and surveying to develop landslide abatement

solutions and cost estimates.

Project:

**Titus Road Landslide Emergency** 

Rutland, OH

Year:

June 2004

Client:

ODNR-AML

1855 Fountain Square

Columbus, OH

Description:

Performed surveying, drilling and prepared plans and

specifications to stabilize and emergency landslide area.



Project: Jefferson County Road 26 Landslide Emergency

Winterville, OH

Year: Client: May 2004 ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed surveying, drilling and prepared plans and

specifications to stabilize and emergency landslide area.

Project: Charleston Romeo Landslide

Kanawha County, WV

Year: May 2004 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide abatement.

Project: Roush Landslide Emergency

Pomeroy, OH

Year: March 2004 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Prepared plans and specifications to stabilize an emergency

landslide area.

Project: Lewis Landslide Emergency

Pomeroy, OH

Year: March 2004 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Performed surveying, drilling, prepared plans and specifications

to stabilize an emergency landslide area, and provided

construction monitoring.

Project: Moran Subsidence

Clinton, OH

Year: January 2004 Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Prepared plans and specifications to stabilize an emergency

subsidence area.



Year:

# Abandoned Mine Land Reclamation Experience

Project: Ron Bobar Subsidence

Flushing, OH January 2004

Client: ODNR-AML

1855 Fountain Square

Columbus, OH

**Description:** Investigation and report of an emergency subsidence area.

Project: Gooney Otter Refuse

Wyoming County, WV

Year: January 2004 Client: WVDEP-AML

**Description:** Performed surveying, drilling and site design for refuse

regarding project.

Project: Chapmanville (Gorby) Mine Blowout

Logan County, WV Year: December 2003

Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide regrading

and retaining wall design.

Project: Tuppers Creek (Layne) Landslide

Kanawha County, WV

Year: July 2003 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide abatement.

Project: Maidsville (Tennant) Landslide

Monongalia County, WV

Year: February 2003
Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide abatement.



# Abandoned Mine Land Reclamation Experience

Project: Whittington Hill (Walker Landslide)

Kanawha County, WV

Year: June 2002 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design for an emergency

landslide.

Project: Minden Refuse Pile Reclamation Project

Fayette County, WV

Year: September 2001 Client: WVDEP-AML

**Description:** Performed surveying and design for emergency project to

upgrade drainage control.

Project: Jeffrey Mine Complex Reclamation Project

Boone County, WV

Year: July 2001 Client: WVDEP-AML

**Description:** Performed surveying and design regrading refuse.

Project: Hot Coal Reclamation Project

Raleign County, WV

Year: October 2000 Client: WVDEP-AML

Charleston, WV

**Description:** Performed surveying and design for regrading refuse.

Project: Bull Run #27

Preston County, WV

Year: October 2000 Client: WVDEP-AML

**Description:** Performed surveying and design for regrading refuse.

Project: Rich Fork (Thaxton) Landslide

Kanawha County, WV

Year: July 2003 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide abatement.



# Abandoned Mine Land Reclamation Experience

Project: Maidsville (Tennant) Landslide

Monongalia County, WV

Year: February 2003
Client: WVDEP-AML

**Description:** Performed surveying, drilling and design of landslide abatement.

Project: Whittington Hill (Walker Landslide)

Kanawha County, WV

Year: June 2002 Client: WVDEP-AML

**Description:** Performed surveying, drilling and design for an emergency

landslide.

Project: Minden Refuse Pile Reclamation Project

Fayette County, WV

Year: September 2001 Client: WVDEP-AML

**Description:** Performed surveying and design for emergency project to

upgrade drainage control.

Project: Jeffrey Mine Complex Reclamation Project

Boone County, WV

Year: July 2001 Client: WVDEP-AML

**Description:** Performed surveying and design regrading refuse.

Project: Hot Coal Reclamation Project

Raleign County, WV

Year: October 2000 Client: WVDEP-AML

Charleston, WV

**Description:** Performed surveying and design for regrading refuse.

Project: Bull Run #27

Preston County, WV

Year: October 2000 Client: WVDEP-AML

**Description:** Performed surveying and design for regrading refuse.



# Alexandoned Mine Land Reclamation Experience

Project: Riffe Branch Impoundment

Fayette County, WV

Year: June 2000 Client: WVDEP-AML

**Description:** Performed surveying and design for regrading refuse and

drainage control.

Project: Ven's Run Landslide

Harrison County, WV

Year: September 1999 Client: WVDEP-AML

**Description:** Performed surveying and design for regraded landslide area.

Project: Fickey Run

Preston County, WV

Year: September 1999 Client: WVDEP-AML

**Description:** Performed surveying and design for refuse and spoil regrading

and drainage control.

Project: Bull Run #35
Year: July 1999
Client: WVDEP-AML

**Description:** Performed surveying and design for refuse and spoil regrading.

Project: Securro Mine Drainage Site 1 & 2

Fairmont, WV

Year: July 1998 Client: WVDEP-AML

**Description:** Performed surveying and design for mine drainage system.

Project: Brown's Creek #10 Reclamation Project

Year: 1997

Client: WVDEP-AML

**Description:** Performed surveying and design for refuse regrading and

mine seal installation.



# Soil Analysis Geotechnical Experience

#### **US-52 Kermit By-Pass**

Solicited Bids from core boring contractors and performed core borings for highway and bridges for a planned four-lane highway in Mingo County West Virginia.

Designed cuts performed slope stability analysis and settlement analysis for several major fill areas, designed foundations for a total of six bridges.

#### Meadowbrook Road

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a planned four-lane highway in Harrison County West Virginia.

Designed cuts performed slope stability analysis and settlement analysis for several major fill areas, designed foundations for a bridge spanning the West Fork River.

#### US 60 Coal River Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge, which spans the Coal River in Kanawha County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the existing fill slopes.

#### US 60 CSX-Overpass Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge that spans mainline tracks of the CSX Railroad in Kanawha County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the existing fill slopes.

#### Indian Creek Bridge Boone County West Virginia

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge that spans the Coal River in Boone County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill slopes.

#### Camp Creek Bridge - Lavalette

Layout and directed core boring operations using WVDOH forces for a replacement bridge on US 152 in Wayne County West Virginia. Prepared Geotechnical report with recommended foundation alternatives.



# Soil Analysis Geotechnical Experience

#### **Jackson Bridge**

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge that spans Middle Island Creek in Tyler County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill slopes.

#### Tallman Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge that spans Middle Island Creek in Tyler County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill slopes.

#### Corridor H-Section 7 (Foreman to Moorefield)

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a planned four-lane highway in Hardy County West Virginia.

Designed cuts performed slope stability analysis and settlement analysis for several major fill areas, designed foundations for a bridge spanning the South Branch of Potomac River.

#### Corridor H-Section 12 Section 01(Davis to Bismarck)

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a planned four-lane highway in Tucker/Grant Counties West Virginia.

#### Corridor H-Section 12 Section 03 (Davis to Bismarck)

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a planned four-lane highway in Tucker/Grant County West Virginia.

Designed cuts performed slope stability analysis and settlement analysis for several major fill areas, designed foundations for a bridge spanning the West Fork River.

#### I-79 Lodgeville Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge and road-widening project. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill slopes.



# Soil Analysis Seotechnical Experience

#### I-79 Simpson Creek Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge and road-widening project. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill.

#### I-79 Meadowbrook Road Over Pass

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge and road-widening project. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill.

#### Ripley Town Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge that spans Mill Creek in Jackson County West Virginia. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill slopes.

#### Ripley Route 21 Road Widening

Performed slope stability analysis of a landslide area and designed a method to stabilize the area so the existing roadway could be widened. Developed Plans and specifications, which were included in the bid, package for the road-widening project.

#### I-64 Cross Roads Overpass Bridge

Solicited Bids from core boring contractors and performed core borings for highway and bridge for a replacement for a bridge and road-widening project. Prepared geotechnical report with recommended foundations and performed slope stability analysis of the proposed fill.

#### I-79 Left Hand Fork Bridge

Reviewed existing core boring data, and performed slope stability analysis on the existing bridge abutment that had moved. Reviewed data from slope inclinometers and design pile lagging and rock buttress to stabilize the embankment.



# Hydrology and Hydraulics

Project:

Blennerhassett Island Bridge Over Ohio River

Year:

1999-2003

Client:

Michael Baker Jr., Inc.

5088 Washington Street, West

Charleston, WV 25313

Contact:

Pi Amin, P.E.

Vice President Michael Baker Jr, Inc. (Southwest Region)

304-769-0821

Description:

Prepared an analysis of the hydraulic impact of the proposed bridge on the Ohio River flow, and prepared an appropriate hydraulic report. The analysis utilized HEC-RAS and as a part of the hydraulic report, a scour analysis was performed. E. L. Robinson Engineering Co. developed a computer model of the Ohio River using hydrographic survey mapping provided by our survey group.

Two – Dimensional Hydraulic was also developed to model complex flows for various bridge configurations and to provide more accurate predictions of hydraulic behavior anticipated in the area. The 2-D and 3-D models allow derivation of design details and design analyses and provide more accurate simulations of scour hole geometry.

Project:

**US 52 Mainline Bridge** 

KY 40 Bridge/Kermit Bypass over Marrowbone Creek

Year:

2000

Client:

West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact:

James Sothen, P.E., Director, Engineering Division

304-558-0501

**Description:** 

Prepared an analysis of the hydraulic impact of the Kermit Bypass Project over Marrowbone Creek and a partial relocation of the creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-D HEC-RAS program.



# Hydrology and Hydraulics

Project: Bridge No. 2922.1 NB & SB

I-79 Over Left Hand Creek & US 119

Year: 2000

Client: West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact: James Sothen, P.E., Director, Engineering Division

304-558-0501

**Description:** Prepared an analysis of the hydraulic impact of the placement of a

retaining wall for slope protection of the Left Hand Fork Bridge over Left Hand Creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-D HEC-RAS

program.

ELR also prepared Section 404 permitting documents outlining the effects a temporary cofferdam, which would be used during the construction phase, would have on the outlying areas upstream of the

projects.

Project: Bridge No. 2448.1 – Simpson Creek Bridge

I-79 Over Simpson Creek

Year: 2000

Client: West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact: James Sothen, P.E., Director, Engineering Division

304-558-0501

**Description:** Prepared an analysis of the hydraulic impact of the widening of the

Simpson Creek Bridge over Simpson Creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-

D HEC-RAS program.

ELR also prepared Section 404 permitting documents outlining the effects temporary cofferdams, which would be used during the construction phase, would have on the outlying areas upstream of

the projects.



# Hydrology and Hydraulics

Project:

Bridge No. 10059 - Ripley Town Bridge

US 33 Over Mill Creek

Year:

1999

Client:

West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact:

James Sothen, P.E., Director, Engineering Division

304-558-0501

Description:

Prepared an analysis of the hydraulic impact of the replacement Ripley Town Bridge over Mill Creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-D HEC-RAS program. ELR also prepared Section 404 permitting documents outlining the effects temporary causeways, which would be used during the construction phase, would have on the outlying areas upstream of the projects.

Project:

Bridge No. 4732 – Jackson Bridge

WV 18 Over Point Pleasant Creek

Year:

1999

Client:

West Virginia Department of Transportation

Division of Highways

Office of the District Engineer, District 6

903 3rd Street

Moundsville, WV 26041

Contact:

Daniel W. Sikora, P.E., District Engineer

304-843-4008

Description:

Prepared an analysis of the hydraulic impact of the replacement Jackson Bridge over Point Pleasant Creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-

D HEC-RAS program.



# Hydrology and Hydraulics

Project:

Bridge No. 4636 - Indian Creek Bridge

CR 3/25 Over Big Coal River

Year:

1999

Client:

West Virginia Department of Transportation

Division of Highways

Office of the District Engineer, District 1

1334 Smith Street Charleston, WV 25301

Contact:

John W. Dawson, P.E., District Engineer

304-558-3001

**Description:** 

Prepared an analysis of the hydraulic impact of the Indian Creek Replacement Bridge over the Big Coal River and prepared the appropriate hydraulic and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the

USACE 1-D HEC-2 program and the FHWA WSPRO program.

Project:

Bridge No. 4769 – Tallman Bridge

CR 24 Over Middle Island Creek

Year:

1999

Client:

West Virginia Department of Transportation

Division of Highways

Office of the District Engineer, District 6

904 3<sup>rd</sup> Street

Moundsville, WV 26041

Client:

Daniel W. Sikora, P.E., District Engineer

304-843-4008

Description:

Prepared an analysis of the hydraulic impact of the replacement Tallman Bridge over Middle Island Creek and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-D HEC-RAS

program.



# Hydrology and Hydraulics

Project: Bridge No. 10058 – Meadowbrook Road Bridge

CR 24 Over West Fork River

Year: 1999

Client: West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact: James Sothen, P.E., Director, Engineering Division

304-558-0501

**Description:** Prepared an analysis of the hydraulic impact of the new Meadowbrook

Road Bridge over the West Fork River and prepared the appropriate hydraulics and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process and the Harrison County Flood Insurance Study model of the West Fork River was also used. Computer modeling was prepared

using the USACE 1-D HEC-RAS program.

Prepared Section 404 permitting documents outlining the effects temporary sheet piling, which would be used during the construction

phase, would have on the outlying areas upstream of the projects.

Project: Bridge No. 4426 – Lower Gassaway Bridge

WV 4 Over Elk River

Year: 1999

Client: West Virginia Department of Transportation

Division of Highways

Building 5

1900 Kanawha Blvd. East Charleston, WV 25305

Contact: James Sothen, P.E., Director, Engineering Division

304-558-0501

**Description:** Prepared an analysis of the hydraulic impact of the Lower Gassaway

Replacement Bridge over the Elk River and prepared the appropriate hydraulic and scour reports. E. L. Robinson Engineering's survey unit developed the cross sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-

D HEC-2 program and the FHWA WSPRO program.



# Hydrology and Hydraulics

Project:

Bridge No. 4574 - Camp Creek Bridge

WV 52 Over Camp Creek

Year:

1998

Client:

West Virginia Department of Transportation

Division of Highways

Office of the District Engineer, District 2

P.O. Box 880

Huntington, WV 25712

Contact:

J. Wilson Braley, P.E., District Engineer

304-528-5625

Description:

Prepared analyses of the hydraulic impact of the Camp Creek Bridge over Camp Creek and prepared the appropriate hydraulic and scour reports. E. L. Robinson Engineering's survey unit developed the cross

sections and mapping that were utilized in the analysis process. Computer modeling was prepared using the USACE 1-D HEC-2

program and the FHWA WSPRO program.



# Aerial Photography and Contour Mapping Experience

E.L. Robinson Engineering Co. has worked with various clients to develop contour mapping of sites and areas that otherwise could not be determined. With the use of aerial photography and state of the art technology, E.L. Robinson Engineering Co. has developed maps from photographs for numerous projects including but not limited to:

- City of Beckley
- City of Charleston
- Corridor D
- Corridor H
- Cross Lanes Connector
- Eldora
- Frazier's Bottom
- Glenwood
- Hatfield Cemetery
- I-70 Washington Avenue (Wheeling, WV)
- I-64 Glade Creek
- Jackson Mill
- King Coal
- KY 40 Connector
- Logan Run
- New River Parkway
- Ohio River Crossing
- Pinegrove
- Parkersburg
- Powell Creek
- Prince
- PSI-Baker/Ft. Henry Bridges
- Racetrack
- White Sulphur Springs
- Veterans Park



# Aerial Photography and contour Mapping Experience

E.L. Robinson Engineering Co. has completed the preliminary mapping, within the past five years, for West Virginia Department of Environmental Protection for the projects listed below:

#### 2003-Present

All ELR AML Projects WV and OH

#### 2002

Community of Preston Rhodell Refuse Portals Vivian Refuse Maintenance Glen Rogers Waterline Sundial (Hatfield) Refuse Pile Jacob Fork Complex Thomas (NE) Subsidence

#### 2001

Bartley Mine Dump
Beckley Soccer Complex
Holden Portals/Structures
Jeffrey Complex
Minden Refuse Drainage
Roach Branch Refuse
Sauls Run Strip
Stonecoal Creek Complex
Waterline Photography
Weaver Portals/Mine Drain

#### 2000

Micajah Refuse Pile
McAlphin Eroding Dump
Flemington Portals/Drainage
Minden "C" Refuse Pile
National Mine Complex
Linger Clogged Stream
Hotcoal Mine Dump
Layton Mine Drainage
Quintain Development

#### 1999

Bull Run #27
8<sup>th</sup> Street-Warwood Avenue
Mabie Highwall
Coal Branch
Matoaka Subsidence
Elkins Coal
Springton Refuse
Veins Run

#### 1998

Bull Run #35 Fickey Run

#### 1997

Browns Creek Marrowbone Matewan Pigeon Creek



### Edward L. Robinson, P.E., P.S. President

#### Education

M.S. Civil Engineering University of West Virginia, (COGS), 1981

B.S. Civil Engineering West Virginia Institute of Technology, 1969

#### Registrations

Registered Professional Engineer in West Virginia, Kentucky, Ohio, Pennsylvania, North Carolina, South Carolina, Virginia, Georgia, Maryland and Colorado.

Registered Professional Surveyor in West Virginia.

#### **Professional Memberships**

- · American Society of Civil Engineers
- National Society of Professional Engineers

#### **Professional Experience**

Mr. Robinson founded E. L. Robinson Engineering Co. in 1978 with four employees. Initially the firm provided land surveying and land development services.

Under his leadership, E. L. Robinson has entered the new millennium as a multidisciplined professional services firm that



utilizes the latest technology in the design of highways, bridges, structures, environmental, civil, and geotechnical projects as well as global position satellite surveying, right-ofway, construction inspection and architectural services.

The firm now employs more than 90 engineers, architects, surveyors and support personnel and has been converted to an employee owned company through an Employee Stock Ownership Plan (ESOP).

#### Representative Projects

Engineering Review of the following projects:

- US Route 52 Kermit Bypass: This project consisted of 2.5 miles of four-lane divided highway, 3,000 LF of four-lane access road design, two 4-ramp intersections, one set of twin structures, one single bridge, and 2,900 LF of stream relocation, all of which resulted in 10 million cubic yards of excavation and an estimated total construction cost of \$88 million.
- Corridor H Davis to Bismark: This project consisted of 1.75 miles of four-lane divided highway, one bridge, two at-





grade intersections, and a 6' x 6' concrete box culvert. This project has an estimated total construction cost of \$9 million.

- Corridor H Foreman to Moorefield:
   This project consisted of 5 miles of four-lane divided highway, almost 3 miles of access road design, a truck escape ramp, one set of twin structures, one single bridge, a box culvert, and naturalized stream design. This project resulted in 10 million cubic yards of excavation and an estimated construction cost of \$75 million.
- CAMC 33<sup>rd</sup> Street Relocation: Engineering design and construction management for the relocation of 33<sup>rd</sup> street and site development for a five story clinical teaching facility in Charleston, WV.

#### Offices Held

- Current Member of West Virginia University Board of Governors
- Current Chairman of WVUIT Advisory Board
- President of West Virginia Council of Engineering Companies
- Chairman Transportation Committee
   WV Association of Consulting Engineers
- State Director of West Virginia Society of Professional Engineers
- President of West Virginia Society of Professional Engineers

- Assistant Treasurer of the American Society of Civil Engineers
- National Director of the ASCE representing WV, NC, SC and VA
- President of West Virginia Section of ASCE

#### **Honors** Awarded

- Honorary PhD, Doctor of Science West Virginia Institute of Technology 2002
- Engineering Entrepreneur of the Year Ernst & Young, 2001
- National Entrepreneur of the Year Finalist - Ernst & Young, 2001
- Engineer of the Year American Society of Civil Engineers, 1998
- Engineer of the Year West Virginia Society of Professional Engineers, 1997
- Alumnus of the Year West Virginia University Institute of Technology, 1992





#### Richard W. Watts

Project Manager/Geologist

#### **Education**

B.S.in Geology, Marshall University, 1977M.S.in Geography, Marshall University, 1994

#### Professional Registrations

Registered Professional Geologist, Kentucky, 1993, No.159Certified Professional Geologist, Virginia, 1992, No.856

#### Professional Memberships

Geological Society of America Association of Engineering Geologists

#### **Teaching Experience**

Instructor, 1998 - Marshall University Engineering Geology Program - Soil and Rock Mechanics

#### Professional Experience

Mr. Watts has more than 31 years of experience in providing consulting services as a senior geologist. He has also served as project manager on numerous projects.

Mr. Watts is primarily an engineering geologist whose range of project experience has encompassed numerous projects concerning geologic investigation, rock and soils engineering, landslides, land reclamation, forensic damage investigations, hydrogeology and the coal industry.



He has performed hundreds of slope stability analyses for landslides and other projects involving the design of stable slopes. In addition, he has performed several studies involving landslide prediction to aid clients in land use and safety planning. Projects involving rock slope stability have included the analysis of the stability of high rock cuts for surface mining operations and highways.

Geotechnical experience has included numerous projects involving soils, foundations, landfills and damage studies. These projects have encompassed such areas as pile driving, caisson installation, earth fill placement, subsurface exploration, site reconnaissance, grout and concrete placement and quality control.

#### AML and Coal Industry Projects:

Work on more than 100 Abandoned Mine Land Reclamation projects, including:

- Mine subsidence, refuse piles and draining mine portals.
- · Coal seam mineability studies.
- Coal refuse embankment and slurry pond design.
- Coal permitting, exploration and drill log correlations.
- Roof and floor studies and pillar strength evaluations.





### Timothy B. Cart, P.E., P.S. Project Engineer

#### Education

B.S. Civil Engineering
West Virginia University, 1981

#### Registrations

Registered Professional Engineer in West Virginia and Ohio

Registered Professional Surveyor in West Virginia

#### **Professional Memberships**

· American Society of Civil Engineers

#### Professional Experience

Mr. Cart has over 25 years of experience in providing consulting engineering services. Clients served have included Industrial, Public and Private Institutions and State and Federal Agencies.

Mr. Cart has served as Project Engineer on numerous geotechnical investigations over the years. These projects have included highways, bridges, industrial sites and private development.

He has designed numerous waterline extensions and sewer collection systems. These extensions have included providing service to many residential as well as industrial customers. The sewer collection systems have included design of systems to collect sewage from residential and industrial sites. Mr. Cart served as a project



engineer on several major waste water treatment plant upgrades for industrial clients in the Kanawha Valley. He has designed several plants to serve industrial as well.

Mr. Cart has performed over 100 Abandoned Mine Land Reclamations projects throughout Appalachia. These projects have been mainly in Ohio, West Virginia and Eastern Kentucky. These projects have involved draining flooded mine workings, support of ground experiencing or subject to Mine subsidence and the stabilization of landslides.

Mr. Cart has designed numerous retention and retaining ponds for sites. These designs have involved the determination of storm runoff and design of structures to safely retain and pass the required storm peak flows.

His experience includes permitting activities for projects which have included:

- Railroad Occupancy Permits for Utilities
- NPDES Permits for Industrial and Public Wastewater Facilities
- Highway Permits for Utility Occupancy and Access Road Tie Ins
- Health Department Permits for Water and Sewer Projects





- US Corps of Engineers Permits -Nationwide and Individual
- West Virginia Public Lands Permits

Mr. Cart has recently been involved in the design of a 100 acre Industrial Site and 8 acre Industrial/Commercial Site in Mingo County. These projects are currently under construction and are located near Appalachian US 119 Corridor G.





### John R. Kelly, III Engineer Intern

#### Education

B.S. Civil Engineering West Virginia University, 1998

#### Computer Skills

AutoCAD, Microstation, COM624-P, Inroads, Hec-Ras, and ELRSoil

#### **Professional Memberships**

· American Society of Civil Engineers

#### **Professional Experience**

Mr. Kelly has performed layout and inspection of core drilling operations for bridges and roadway projects. He has also designed numerous mine reclamation projects as well as assisted in completion of water feasibility studies.

Mr. Kelly has performed construction inspections of waste water treatment facilities and has experience with roadway design, design of foundations, and retaining walls.



#### Representative Projects

Mr. Kelly has designed cut slopes for large scale roadway projects such as:

- · Kermit Bypass, Mingo County, WV
- Meadowbrook Road, Harrison County, WV
- US-35, Mason County, WV
- Corridor H, Section 7, Hardy County,





### James T. Rayburn, P.S. Chief Surveyor

#### Education

A.S. Mechanical Engineering, West Virginia Institute of Technology, 1970

#### Registrations

Registered Professional Surveyor in West Virginia

#### **Professional Memberships**

American Congress on Surveying and Mapping

The American Association for Geodetic Surveying (AAGS)

Member Organization of ACSM.

Cartography and Geographic Information Society (CaGIS)

Geographic and Land Information Society (GLIS)

National Society of Professional Surveyors (NSPS)

West Virginia Association of Land Surveyors, Inc.



#### Professional Experience

Mr. Rayburn currently serves as Manager of Surveying for E.L. Robinson Engineering (ELR) and has more than 30 years of Design Surveying and Construction Surveying experience. The responsibilities include management of surveying and control for various design projects, including highways, buildings, and bridges. In addition, Mr. Rayburn manages and performs work consisting of courthouse research for property ownership resolution for the above mentioned project types. This includes preparation of property resolution maps, deed descriptions for property acquisitions required for project plan preparation. Mr. Rayburn has experience in Geodetic Control Surveys, 3D Laser Scanning, Photogrammetric Control, Topographic Surveys, Cemetery Surveys, Boundary Surveys, Construction Stakeout, Subdivision Surveys, along with Hydrographic surveys of river and lake bottoms. A few of the more notable surveying projects performed by ELR under the supervision of Mr. Rayburn, has been the Blennerhassett Bridge Project, 11 continuous miles of Corridor H design surveys, GPS Control for the West Virginia Statewide Mapping and Addressing Board Project, 3D Laser Scan and mapping of the





CAMC Parking Garage partial collapse, and 3D Laser Scanning of I64/I77 Retaining Wall for Monitoring.

#### Representative Projects

#### **Design Surveys**

- Corridor H (WVDOT) Hardy County, WV: Lead Surveyor for Design Surveys, Right of Way Staking, etc. for approximately 11 miles of Corridor H in Hardy County, WV. This was for Sections 6 & 7 of Corridor H, both Sections of which are now under construction. Estimated construction cost of \$150 million dollars.
- WV Route 10 (WVDOT) Logan to Man WV, Logan County, WV: Lead Surveyor for Design Surveys for a section approximately five miles in length from Man, WV, to Rita, WV, including the Man Bridge. Also provided control surveying for the entire project length of approximately 12 miles. The approximate five miles section of roadway is now under construction at an estimated cost of \$51 million dollars.
- Blennerhassett Bridge, Corridor D (WVDOT), Wood County, WV: Lead Surveyor for Design Surveys for this landmark Bridge Project which is now under construction at an estimated cost of \$120 million dollars.
- James Ramsey Bridge (WVDOT) Potomac River, Shepardstown, WV: Lead Surveyor for Design Surveys for this Bridge Project which is now completed at an estimated cost \$15.5 million dollars. This project involved working in an environmentally historic area, which adjoined a National Park.
- US Route 35 (WVDOT) Mason County, WV: Lead Surveyor for Design Surveys for two Design Sections each approximately 2.5

miles in length from Lower Five Mile Road to Upper Nine Mile Road. Also provided control surveying for the entire US 35 design project length of approximately 22 miles.

- 164/US 35 (WVDOT) 164 to US 34 Crooked Creek, Putnam County, WV: Lead Surveyor for Design Surveys, Right of Way Staking, etc. for approximately four miles of US 35 including Interstate 64 Ramps and Flyovers in Putnam County, WV. This included the 164 Bridges and Flyovers, which is now under construction.
- ATB-Parrish Road (ODOT) Ashtabula County,
   Ohio: Project Design Surveyor for rail grade
   separation project. Project involved roadway
   realignment, 900' new bridge, new waterline, storm
   and sanitary sewers. Project is currently under
   construction. Estimated construction cost: \$8.6
   million.
- PIC-23-3.21 and Various (ODOT) Pickaway
   County, Ohio: Project Design Surveyor for ODOT
   Project PIC-23-3.21 and Various. Project involves
   deck replacements along 11 miles of US 23 in
   Pickaway County. Project includes large diameter
   culvert liner, interchange upgrade that includes
   mainline profile correction, ramp reconstruction,
   and addition of barrier wall and storm drainage.
   Project is currently under design (90%). Project
   scheduled for construction in 2007. Estimated
   construction cost: \$12 million.
- ATB-90-22.06 (ODOT) Ashtabula County, Ohio:
   Project Design Surveyor for Interstate Reconstruction Project. Project includes total pavement replacement, bridge widening, and contra crossover maintenance of traffic, culvert replacements and storm sewer rehabilitation and sign replacements. Project is currently under design (50%) and scheduled for construction in 2011. Estimated construction cost: \$36 million.





#### **Construction Surveys**

- Corridor D (WVDOT) Wood County, WV: Lead Surveyor for Highway/Bridge Construction Monitoring surveys for the following segments of Corridor D and related relocation projects:
  - Godbey Athletic Field Relocation Construction
  - Godbey Colt Field and Soccer Field Construction
  - West WV 47-East WV 47 Highway/Bridge Construction
  - East Buckeye-West Little Kanawha River Highway/Bridge Construction
- Interstate I-79 Widening and Median
  Barrier (WVDOT) Harrison County, WV:
  Lead Surveyor for construction layout surveys
  for the widening of I-79 from the
  Meadowbrook Exit, north to the Jerry Dove
  Exit approximately three miles in length, as a
  subcontractor to the prime contractor.
- CAMC 33<sup>rd</sup> Street Relocation and Building Expansion, Charleston, WV: Lead Surveyor for construction layout surveys for 33<sup>rd</sup> Street relocation along with ancillary items including sidewalks, drainage and utilities. Also layout surveys for building expansion project.
- Saturn Dealership, Hurricane, WV: Lead Surveyor for Saturn Dealership site development and access roads at Hurricane Interchange of Interstate 64.
- Arch Coal WV Mining Operations: Lead Surveyor as a subcontractor to Arch Coal operations for Valley Fill Construction (Up to 27 million cubic yard fills), mine haul road layout, drill line staking, and dragline pit layout.





### Randall L. Lackey, P.E.

Project Engineer

#### Education

B.S. Civil Engineering
West Virginia University Institute of
Technology, 1999

#### Registrations

Registered Professional Engineer in West Virginia, Ohio and Kentucky

#### **Professional Memberships**

- · American Society of Civil Engineers
- · Society of American Military Engineers

#### Computer Skills

C++, AutoCAD, MathCAD, Microstation, MS Excel, MS Word, MS Project, MSPowerPoint, Windows, MDX, MERLIN, BRASS Systems, SIMON, HEC-RAS, RC Pier, and HY8

#### Professional Experience

Prior to joining E.L. Robinson Engineering Co., Mr. Lackey worked with the WV Division of Highways as an Engineering Co-op Technician. As part of his co-op experiences, he performed calculations for steel, flowrate and roadway. He performed roadway and guardrail design and construction inspection for bridge and roadway projects.



#### Representative Projects

Mr. Lackey has been intricately involved in the hydraulic design process of the Blennerhassett Island Bridge Project, which will connect West Virginia to Ohio as well as span the Ohio River and Blennerhassett Island. Included in this project are the following: Preparation of flood plain analysis for existing, temporary, and various post construction conditions, scour analysis using FHWA approved publications, analyzing the affects that debris flow will have on the bridge as well as Blennerhassett Island, and studying the potential for lateral channel migration and understanding the affects the migration would have on the design on the bridge substructure.

Mr. Lackey has also been involved with the hydraulic design process of the Corridor H South Branch of the Potomac River Bridge. Included in this project are the following: Preparation of flood plain analysis for existing, temporary, and various post construction conditions, scour analysis using FHWA approved publications, analyzing the affects that debris flow will have on the bridge, studying the affects the proposed conditions





will have on the Town of Moorefield, WV flood level, and studying the potential for lateral channel migration and understanding the affects the migration would have on the design on the bridge substructure.

Mr. Lackey has also performed hydraulics and scour computations for Ripley Town Bridge, Jackson Bridge, Beaver Creek Bridge, Walnut Bottom Bridge, Tallman Bridge, Meadowbrook Road Bridge, Simpson Creek Bridge, Kermit Bypass Bridges and culverts, Left Hand Fork Bridge, and Corridor H Bridges over Walnut Bottom Run and an unnamed tributary.

Mr. Lackey has prepared Section 404 permitting analysis and paperwork for Ripley Town Bridge, Simpson Creek Bridge, Meadowbrook Road Bridge, and the Left Hand Fork Bridge. Along with this work, Mr. Lackey has prepared CLOMR analysis and documentation for Horseshoe Village Subdivision and for The Ohio State University Medical Center's two proposed bridges that connect the University with OH SR 314 over the Olentangy River.

Mr. Lackey has performed calculations for deck drainage, performed girder design and analysis, pier design and analysis, prepared design study reports, type, size and location reports and final plans on many of E.L. Robinson's Division of Highways projects.





### Mark Allen McGettigan, PE, Project Manager

#### Education

M.S.E. Engineering Management/Environmental Engineering,

Marshall University December 2007

B.S. Civil Engineering Technology, Fairmont State College, 1999

#### Registrations

Registered Professional Engineer in West Virginia

#### **Professional Memberships**

· American Society of Civil Engineers

#### Professional Experience

Successfully worked on and managed numerous Phase I and II ground water quality investigations and feasibility studies for the West Virginia Department of Environmental Protection.

Mr. McGettigan has taken several large water and wastewater projects from the initial development phase through the construction phase. This includes writing preliminary engineering report, developing funding scenarios, designing the developing system, the plans and specifications, developing the bid documents/overseeing the bid process and managing the construction inspection.



Developed specifications and managed construction inspection for land development and utility construction projects.

#### Representative Projects

Mr. McGettigan has been the design engineer on the following projects:

- Lavalette Public Service District's U.S. Route 52 Waterline Extension Project.
- Lavalette Public Service District's Crockett and Millers Fork Waterline Extension Project.
- Lavalette Public Service District's State Route 37 Waterline Extension Project.
- Crum Public Service District's Mill Creek Waterline Extension Project.



PROJECT Experience    PROJECT Experience   Project   Pro	AML and RELATED PRO	JECT EXPERI	ENCE MATR	XIX							Attach	ment "	C"	-			20 50	1 7	100	70 1	2137				
PROJECT   Companies   Compan		To I WE															77.7	HUN		Prim	ary Sta	aff Par	ticipa	ition	
PROJECT   Continue								PROJ	ECT EX	PERIEN	ICE		,			-			100	Big.					
Shodel Refuse & Portals		Basis Corporate-C Personal-P	Information in Section	Surface	Abandoned Deep Mine	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Robinson, P.	o.	Richard W. Watts, P.G.	a.	John Kelly. E.I.	Scott A. Pratt, Geologist	Gary A. Workman, CADD
Glimer DE Silves 2-80	Phodell Refuse & Portale																								
Monte   March   Marc																_									
Samp Free Waterline	Momsvale/Cameo/Big Horse				^	^	^					_ ^	×				X	X							-
Package   Pack	Camp Creek Waterline	С	YES																						=
Registed Valuerine Feasibility   C   YES	Lick Creek Waterline	С	0.000																-						
Elecch Creek and Sen II	Ragland Waterline Feasibility	С	YES										199						0.000						$\vdash$
Dinges Valertime Feablity   C   YES	Beech Creek and Ben II	С	YES										-							_			- 8		
Sharon Heights Waterline   C   YES	Dingess Waterline Feasibility	С	YES										11 80							-		-			
Amhestdale Water Feasibility   C   YES	Sharon Heights Waterline	С	YES										×									10.			
Mercer County Commission		С	YES										×						1.000	В		D	D	_	-
Dances PSD Waterline																								$\overline{}$	$\neg$
Nubbin Ridge/Camp Creek													X										_		$\neg$
Waterline Feasibility Study		С	YES										X						М	Р		Р	Р		
Feasibility Study	Waterline Feasibility Study	С	YES										x						М	Р		Р			
Mountain Waterline Feasibility   C   YES	Feasibility Study	С	YES										×						М	Р		Р	Р		
Feasibility Study	Mountain Waterline Feasibility Study	С	YES										×						М	Р		Р	Р		
Waterline Feasibility Study	Feasibility Study	С	YES										x						М	Р		Р			
Feasibility Study	Waterline Feasibility Study	С	YES										×						М	Р		Р	Р		
Bull Run #35	Feasibility Study												×						М	Р		Р	Р		
Secure Mine Drainage																									
Fickey Run				X				X					X		X	X	X	X							
Ven's Run         C         YES         X         X         X         X         X         M         P         P           Bull Run #27         C         YES         X         X         X         X         X         X         X         X         M         P         P         P           Bull Run #27         C         YES         X         X         X         X         X         X         M         P         P         P         P           Riffe Branch         C         YES         X         X         X         X         X         M         P <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>~</td><td></td><td></td><td></td><td></td><td>- V</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								~					- V												
Bull Run #27					^	^				_			X	_	X		Х	-						$\rightarrow$	_
Riffe Branch         C         YES         X         X         X         X         X         M         P         P         P           Hot Coal         C         YES         X         X         X         X         X         M         P					Х	X		X					Y		y		y				$\rightarrow$	- P		-	
Hot Coal	Riffe Branch												^		_^							P		-	_
Minden Refuse Pile		С	YES		X		X															P			-
Pigeon Creek Waterline         C         YES         X         X         X         X         X         X         X         M         P         P         P           Red Jacket, Matewan, Newtown Waterline         C         YES         X         X         X         X         M         P         P         P           Marrowbone Waterline         C         YES         X<												X												$\rightarrow$	
Red Jacket, Matewan,         C         YES         X         X         X         X         M         P         P         P           Marrowbone Waterline         C         YES         X         X         X         X         X         X         X         X         X         P         P         P         P					X	X		X										X		_		Р	Р		
Newtown Waterline         C         YES         X         X         X         X         M         P         P         P           Marrowbone Waterline         C         YES         X         X         X         X         X         X         M         P         P         P			YES				X					X	X	X					M	Р			Р		
	Newtown Waterline		20110000				2000																		
Mount Zion Waterline C YES X X X M P P P P	Marrowbone Waterline Mount Zion Waterline	C	YES				X					X	X	Х											

AML and RELATED PRO	JECT EXPERI	ENCE MATR	RIX			-11	Serve V			Attach	ment "	C"				2,00			-15	4-				
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PROJECT	Experience Basis Corporate-C Personal-P	Additional Information in Section	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Ed Robinson, P.E.	Tim Cart, P.E.	Richard W. Watts, P.G.	Mark McGettigan, P.E.	John Kelly. E.I.	Scott A. Pratt, Geologist	Gary A. Workman, CADD
Coopers Rock, Pisgah, and	С	YES		,		×					×	×	0					М	Р		P	Р		
Laurel Run Waterline Davis Water Tank	C	YES				X					X	X						M	P		P	P		$\vdash$
Whittington Hill (Walker)Slide	c	YES		×	×	×				-	×						×	M	P		JE0	-		$\dashv$
Maidsville Landslide	C	YES	X		^-						X	-			-		×	M	P		Р	P		
Rich Fork Landslide	c	YES	x	X							X						X	M	P		P	P		-
Tupppers Creek Landslide	Č	YES	X	X							x	1				_	Ŷ	M	P		P	P	-	$\dashv$
Glen Rogers Waterline	С	YES				X					X	X						M	P		P	P		$\neg$
Gooney Otter Refuse	С	YES	X	X	X	X	X				X						X	М	Р		Р	Р		$\neg$
Chapmanville Mine Blowout	С	YES																М	Р		Р	Р		
Charleston Romeo Landslide	С	YES		X	Х	X					Х						X	M	Р		Р	Р		
Big Creek C Refuse	С	YES		X					_			-					X	М	Р		Р	P	$\overline{}$	-
North Matewan Sipple Moran Subsidence	C	YES YES	_	X	X	X		_	×		X				_		X	M	P		P	P		-
Lewis Landslide	č	YES		x		×			_^		x		×		_		X	M	P		P	P	$\rightarrow$	$\overline{}$
Roush Landslide	Č	YES		X		X					X		X				- x	M	P		P	P		$\vdash$
Jefferson 26 Landslide	С	YES		X		X					X						X	М	P	77	P	P		$\neg$
Titus Road Landslide	С	YES	Х	X		X					X						×	M	Р		Р	P		$\neg$
Imboden Landslide	С	YES	X	X													X	М	Р		Р	Р		
Baisden Subsidence	С	YES		X					X									М	Р		Р	Р		
Parsons Landslide	С	YES		X													X	М	Р		Р	Р		
Treadway Landslide	С	YES YES	Х	X		X					X						X	М	Р		P	Р		-
Phalen Landslide Adkins Landslide	C	YES	×	X		X					X				_		X	М	Р	-	Р	Р	$\rightarrow$	-
Goetz Subsidence	C	YES	^	Ŷ		_ ^		_	X		X	-	_		_	_	X	M	Р		Р	P	$\rightarrow$	
Lavender Refuse Fire	Č	YES	_	X				X			×	-	×					M	_			P	$\rightarrow$	$\overline{}$
Cox Refus Fire	C	YES		X				X			X		X					M				P		$\neg$
Toney Fork Landslide	С	YES		X		X					X							M	Р		Р	P		$\neg$
Athens Rt. 13 Refuse Fire	С	YES		Х				X			Х		X					М				Р		
McAdams Subsidenc Ermer	С	YES		Х					Х		Х							М				Р		
Rodgers Subsidence	С	YES		X					X		X		X					М				Р		
Brown Landslide Town Run	C	YES NO		X		X					X	-						М	Р	,	Р	Р	$\Box$	-
Witcher Creek	P	NO NO				-			-			X		-					-					
Pond Gap, Hitop & Spangler	P	NO		-								X			-		_			-		$\vdash$	-	$\overline{}$
Elk City	P	NO										x									.0			
Little Fork Refuse Pile	Р			X		Х	Х	Х								Х	х		Р					
OSM-Tackett Fork	Р		X	X	X	X											Х		Р	Ρ				
OSM-Ironton	Р			X		X											X		Р					
OSM-Williamson LS	P			X	-	X							X	-			X		Р	P		$\vdash$		-
OSM-Ray Landslide OSM-Spence Landslide	P			X		~	-										×	_	P	ρ				-
OSM-Ratliff Landslide	P			X		X	_	-	_	_	-	-		-	-		X		P	P		$\vdash$		$\boldsymbol{H}$
OSM-Pigeon Roost LS	P			x		x			-								×		P	P			-	-
OSM-Oak Hill Subsidence	P			X	X	X			X		X						x		P	P				
OSM-Little Prater Creek	Р			X		X									7 - 7				P	Р				$\neg$
OSM-Hamilton II Landslide	Р			X		X											X		Р	Р				
Tuppers Creek B	Р		Х	Х	X	Х											X		Р	Р				

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					_		PROJ	ECT EX	PERIEN	ICE									,		M-Mngn	nt		
PROJECT	Experience Basis Corporate-C Personal-P	Additional Information in Section	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Ed Robinson, P.E.	Tim Cart, P.E.	Richard W. Watts, P.G.	Mark McGettigan, P.E.	John Kelly, E.I.	Scott A. Pratt, Geologist	Gary A. Workman, CADD
Big Sandy Refuse	Р	0000		X		X											×		Р	Р				$\overline{}$
Leslie (Nelson) Swiss Drennan	P	2002	X	Х	×	X	X				X	X	Х							Р			•	Р
Minden C	P	2002 2002	X	X	X	X	-					X								P				Р
Weston	P	2002	^	_ ^	^	X	X	-		X	X	×			X					Р		_		Р
Parkette	P	2002				<u> </u>			×			X					X	-		P		$\overline{}$		Р
East Dupont Avenue Landslide	Р	2003		X	X	X			_^_		X	^					X	-	_	P			#*%.***	P P
Skin Creek Phase II	Р	2003	Х			X					X				X	X	x	<del>                                     </del>		P				P
Witcher Creek	Р	2001		Х	X	X					X		X		^	^	x	-		P				P
Crane Creek	Р	2004	Х		X	X	Х				X	X				X	X		_	P	-		Mr.	P
Yoursco	Р	2004	X	X	X							X								Р			_	D
Carswell	Р	2004	X			X	X				X		X		X	X	×			P			P	P
Craigmoor	Р	2004				X					Х		X				X			P			P	P
Downey Pierpont	Р	2006			_				X								X			P			Р	Р
Ames (Clare) Landslide Lorado	P P	2007		X							X						X			Р			P	Р
Madeline Refuse	P	1995 1995	X	X	X	X					X	X			X		X			Р				Р
Rocklick	Р	1995	x	X	x	- x	Х			X	X		_		X	X	X			Р				Р
Wahoo	Р	1996	x	_ ^	^	x	×	X		-	X				×		X	_		P			_	Р
Meadowbrook	Р	1996	X	X	Х	X	x	_^		_	x	X			X		X	_	_	P P		$\vdash$		P P
Jumping Branch	Р	1996										X			_^		_^		_	P		-		P
Beard's Fork	Р	1997	X	X	X	X	Х	Х		X	X				X					P				P
Turkey Wallow	Р	1997	X	X	X	Х	X	X			X				-/-		×			P				P
Otsego	Р	1997	X	X	X	Х	Х				X				X		X			P				P
Miller	Р	1997	X	X	X	X					X	X								Р				P
Whitby	Р	1998	X	X	X	X					X	X		X	X	X	X			P				Р
Barker Gauley River Road	P	1999	X	X	X	X					X	X								Р			P	Р
Skin Creek	P	1999 2000	-	~								X								Р				Ρ
Jolo	P	2000	X	X	×	X	×				X	X			X	X	X			Р				Р
Tioga	P	2001		-		-		_				X				-				P				Р
Turkey Gap	P	2001	X	X	X	X					X	_^			×	Х				P				P
Big Sandy	Р	1987	X			X		Х			x				X	^	-	$\vdash$		P				-
Marfrance	Р	1988	X	X	X	X					X	X			~					P		-		$\dashv$
New Hill Ballpark	Р	1988	X	X	Х	Х	Х				X	X								P		$\rightarrow$	_	-
Jones Run	Р	1988	X	X	Х	X			X		X	X			Х		Х		P	P				$\neg$
Chapmanville Landslide	Р	1989		X	Х	X					X						X			Р				P
Wharncliff Landslide	P	1989		X	X	X					X						X			Р				Р
Joyce Sturm Marianna Refuse	P	1990	· ·	X	X	X					X	X		X						Р				Р
Cedar Grove	P	1991 1991	X	· ·	~	X	X				X	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					X			Р				Р
Eskdale	P	1991		X	X	X					X	X		X	,,,		X	_		Р			_	Р
Hodgesville	P	1991	X	×	×	X					X	- V		×	X		V	_		P		$\rightarrow$		Р
Newsome Branch	Р	1992	X	×	x	x	X				X	X		Х	X		X	_		P		$\rightarrow$	_	P
Morrison	P	1992	-,,	X	x	x	- ^				×	X			^	_	X	_		P		$\rightarrow$		P
Snake Island	Р	1993	X			X	Х	х			x	^			×	×					_	$\rightarrow$		
Orchard Branch	Р	1994	X	Х	X	X	X				X	X		X	^	^	X			P		-	-	P
Beckley Layne	Р	1994		Х	X	X					X	X		-1			x			P		-	_	P -
Quinwood Booth	Р	1994		Х	Х	X			Х		X	X							_	P		-	_	P
Little Fork	Р	1983	X	X	X	X	X	X			X					X	X			P		_	_	$\neg$

AML and RELATED PRO	JECT EXPERI	ENCE MATR	RIX	15			-1.	-7-11	A TATE	Attach	ment "	C"	7.00		77			0.7						
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PROJECT	Experience Basis Corporate-C Personal-P	Additional Information in Section	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Ed Robinson, P.E.	Tim Cart, P.E.	Richard W. Watts, P.G.	Mark McGettigan, P.E.	John Kelly. E.I.	Scott A. Pratt, Geologist	Gary A. Workman, CADD
Elkridge Refuse	P	1984	X	X	X	X	X	X			X				×		×			Р				
Lando Mines West Varney	P	1984 1984	Х	X	X	X					X						X			Р				
Bethel Portals	P	1984	-	X	X	X		-		-	X	×					X	_		P P		-		
Mammoth Landslide	P	1985		_^	^	x					X	^		X	X		X		1.	P		$\vdash$	_	
Cheyenne	P	1985	X			X					X	×		x	X		Ŷ			P				
Mudlick A Landslide	Р	1985	Х		X	X					X	X		- /		X	X		_	Р				
Nelson Landslide	Р	1985	Х	Х							X						X			Р				
Mudlick B Refuse	Р	1985	X	X	X	X	X				X				X	X	X			Р				
Bluff Mountain	P	1985	X	X	X	X	X				X	X			X	X	X			Ρ				
Montgomery Drainage Mayoros Drainage	P	1986 1986		X	X	X					X	×		X			Х			P				
Ridgeview A & B	P	1987	X	x	×	X	×	×			X	X		X	X		X	_		P				-
Tupper Valley	P	1987	×	x	x	x	^	_^			X	x		Ŷ			X	-	100	P		-	_	-
Airport Bottom	Р	1987		X	X	X					X	X		_^			_^	$\vdash$	Р	-				_
Manilla Creek	Р	1987	Х	X	Х	X	Х				X	X		X	×		×		P	Р			_	
McAlpin	Р	2009									X						X		P	Р		P	Р	Р
Robey	Р	2009	X	X	X	X					X						X		F	Р				Р
Katy Lick Clear Fork	P C	2009	Х			X					X						X		Р	Р				Р
Coal Mountain	C	2009 2009		_								X						М	1	Р				P
Naugatuck/East Kermit	Č	2009		_					_		-	X								D. D.				P
Prenter	P	2008										x		_		_		IVI		P		P		P
Hanover	Р	2009										X								P	_		-7	P
Lower Dempsey	Р	2009		X	X	X					X						×		P	Р				P
Island Creek #18	С	2009		X	X	Х					X	Х			Х		X		Р	Р		P	P	Р
Brownton Landslide	С	2009		X	X	X					X	X					Х			Р		P	P	Р
East Bank Emergency	С	2009																		Р				Р
Dunloup Creek Otsego/Pierpoint/Maben	C	2010 2010	Х	X	X	X					X	X			X	X	X			P				Р
Barkers Ridge/Basin	C	2010	-									X								P P				P P
Herndon/Covel/Garwood	Č	2010										<del> </del> x						_		P				P
Bud/Alpoca/Mill Branch	С	2010										x								P				P
Keystone (Avery)	С	2010																		P				P
Keystone (Emergency)	С	2010																	Р	P		P	9	Р
Cane Branch	С	2010										X							Р	Р				
Spy Rock/Edmond/ Flanagan	С	0040										×								L.				
Mountain Wilderness PSD	С	2010 2010																	Р	Р			P	
Gordon C	C	2010		X	X	X					~	X		_					7	P			P	$\mathbf{H}$
Keaton Branch	č	2010		x	x	X					X						X	$\vdash$		P D			9	
Verner Grimmett Burning		2010									_^						^		-					
Refuse	С	2010						×			×								Р			P		
Shinnston-Lumberport	С	2011							X		X									Р		P	5	
Newtown-Kinder	С	2011		X	Х	Х					Х			11			X			Р		P	>	
Dan's Branch Emergency	С	2011		X	Х	Х					X						X		Р			Р		
Cartright Branch	С	2011		X	X	X					Х						Х		,	Р			2	
Thorpe Refuse Pile Glen Rogers Emergency	C	2011 2012		X	X	Х					X						Х			Р		P		
Abney Refuse Piles	C	2012		X	X	~					X								Р	_		Р	_	
Acres Reluse Files		2012	I	^	^	×					X	1 1		I			X		P	P		P	-	- 1

AML and RELATED PR	ROJECT EXPER	IENCE MATR	RIX					591		Attach	ment "	C"														
				PROJECT EXPERIENCE														Primary Staff Participation  M-Mngmt								
PROJECT	Experience Basis Corporate-C Personal-P	Additional Information in Section	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrological/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Ed Robinson, P.E.	Tim Cart, P.E.	Richard W. Watts, P.G.	Mark McGettigan, P.E.	John Kelly. E.I.	Scott A. Pratt, Geologist	Gary A. Workman, CADD		
Milam Ridge Refuse	С	2012		Х	Х	X					X						X		Р	Р		P	P	_		
West Columbia "B"	C	2012		Х	X	X					X	1					X	_	D	D	_	D	0	+		

### **CERTIFICATION AND SIGNATURE PAGE**

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

E.L. Robinson E (Company)	ingineering Co.
(Company)	
Richard W.	Walls
(Authorized Signature)	
Richard W. Watts, (Representative Name, Title)	Project Manager
304-776-7473	304-776-6426
(Phone Number)	(Fax Number)
1-20-13	
(Date)	

RFQ No. DEP 16030

### STATE OF WEST VIRGINIA Purchasing Division

### **PURCHASING AFFIDAVIT**

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

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

#### **DEFINITIONS:**

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:
Vendor's Name: E.L. Robinson Engineering Co.
Authorized Signature: Reiband W. Walls Date: 1-22-/3
State of West Virginia
Taken, subscribed, and sworn to before me this 22 day of
Taken, subscribed, and sworn to before me this to day of
My Commission expires October 5 . 2016.
APPIX SPAT HERE OFFICIAL SEAL NOTARY PUBLIC STATE OF WEST VIRGINIA Brian D. Morton
E.L. Robinson 5088 Washington Street, West Charleston, WV 25313 My Commission Expires Oct. 5, 2016