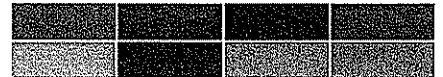


**WilburSmith**  
ASSOCIATES



*Expression of Interest*

**Greystone Mine Drainage Design**

**RFQ #DEP14801**

**November 4, 2009**

**West Virginia Department of Environmental Protection  
Office of Abandoned Mine Lands and Reclamation  
Charleston, WV**

RECEIVED

2009 NOV -3 A 10: 18

REGISTRATION DIVISION  
STATE OF WV



November 2, 2009

West Virginia Environmental Protection Department  
Office of Abandoned Mine Lands and Reclamation  
601 57th Street SE  
Charleston, WV 25304

Re: Greystone Mine Drainage Design, RFQ #DEP14801

Dear Evaluation Committee:

The attached *AML Consultant Confidential Qualification Questionnaire* and the *AML and Related Project Experience Matrix* are submitted in response to the above-referenced Expression of Interest for professional engineering design services and construction monitoring services at the **Greystone Mine Drainage** project in Monongalia County. We understand that the types of professional engineering services required by this contract will include civil, environmental, geotechnical, and hydrological services and have developed a team to cover all aspects of the project.

Founded in 1952, WSA is a prominent national consulting firm specializing in civil/transportation design, infrastructure improvements, and context-sensitive solutions in both urban and rural environments. The firm is routinely ranked among the top engineering firms in the nation by *Engineering News Record* and has cultivated an outstanding track record for delivering high-quality projects through skilled engineering and proficient project management. Our Charleston, WV office is led by professionals who have successfully completed numerous engineering projects throughout West Virginia. We have received frequent recognition for our outstanding work on these projects. The staff in the Charleston, WV office is also acutely aware of the need to provide economical engineering services while considering the impacts on communities and the environment.

We have chosen to collaborate on this project with **Triad Engineering, Inc.** This firm is a local West Virginia firm that holds the same standard of excellence as WSA. Triad will supply the geotechnical and surveying services for this project. This team can provide all the design services necessary to complete a project such as this in a timely and economical manner. Together, the specialized skills of WSA and its subconsultant partner will provide an exceptional combination of relevant experience and technical resources to successfully meet the DEP's needs.

If you have any questions regarding our submittal, contact me at 304-345-2339.

Respectfully submitted,

**WILBUR SMITH ASSOCIATES**

Wesley O. Stafford, PE, AICP  
West Virginia Division Manager



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

# Request for Quotation

RFQ NUMBER  
**DEP14801**

PAGE  
**1**

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

RFQ COPY

**TYPE NAME/ADDRESS HERE**

Wilbur Smith Associates  
 Geary Plaza, Suite 210  
 700 Washington Street, East  
 Charleston, WV 25301

SHIP TO

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/06/2009				

BID OPENING DATE: **11/04/2009**                      BID OPENING TIME **01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
<p><b>GREYSTONE MINE DRAINAGE DESIGN</b></p> <p><b>EXPRESSION OF INTEREST</b></p> <p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE GREYSTONE MINE DRAINAGE PROJECT IN MONONGALIA COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p> <p><b>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID AND IS TERMINATED WITHOUT FURTHER ORDER.</b></p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

NATURE <i>W. S. Associates</i>	TELEPHONE 304-345-2339	DATE November 3, 2009
TITLE Associate-In-Charge	FEIN 570405950	ADDRESS CHANGES TO BE NOTED ABOVE

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

**GENERAL TERMS & CONDITIONS  
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

---

**INSTRUCTIONS TO BIDDERS**

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130



Electronic copies of the above referenced documents Attachment "B" and Attachment "C" are available online for registered vendors at: <http://www.state.wv.us/admin/purchase/newbul.htm>.

1.4 **Inquiries:**

Additional information inquiries regarding this EOI must be submitted in writing to the State Buyer with the exception of questions regarding proposal submission, which may be oral. The deadline for written inquiries is identified in the Schedule of Events, Section 1.16. All inquiries of specification clarification must be addressed to:

Chuck Bowman, Buyer Supervisor  
 Purchasing Division  
 P.O. Box 50130  
 Charleston, WV 25305-0130  
 Fax: (304) 558-4115  
 Email: charles.a.bowmanjr@wv.gov

The firm, or anyone on the firm's behalf, is not permitted to make any contact whatsoever with any member of the evaluation committee. Violation may result in rejection of the EOI. The State Buyer named above is the sole contact for any and all inquiries after this EOI has been released.

1.5 **Vendor Registration:**

Firms participating in this process should complete and file a **Vendor Registration and Disclosure Statement** (Form WV-1) and remit the registration fee. Firm is not required to be a registered vendor in order to submit an EOI, but the **successful firm must register and pay the fee prior to the issuance of an actual contract.**

1.6 **Oral Statements and Commitments:**

Firm must clearly understand that any verbal representations made or assumed to be made during any oral discussions held between firm's representatives and any State personnel are **not binding**. Only the information issued in writing and added to the Expression of Interest specifications file by an official written addendum is binding.

1.7 **Economy of Preparation:**

EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements of the EOI. Emphasis should be placed on completeness and clarity of content. Example projects referred to in a firm's EOI's submittal should address projects that are similar in scope to that of the EOI. **Firms must complete the CQQ and RPEM as included in Section 4.2 of this EOI. (Proposals must be no more than 100 pages).**

1.8 **Labeling of the Sections:** The response sections should be labeled for ease of evaluation.

1.9 **Submission:**

1.9.1 State law requires that the original expression shall be submitted to the Purchasing Division. All copies to the Purchasing Division must be submitted **prior** to the date and time stipulated as the opening date. All expressions will be date and time stamped on the Purchasing Division official time clock to verify time and date of receipt.

1.9.2 Firms mailing expressions should allow sufficient time for mail delivery to ensure timely arrival. The Purchasing Division **CANNOT** waive or excuse late receipt of an expression which is delayed and late for any reason according West Virginia State Code §5A-3-11. Any EOI received after the bid opening time and date will be immediately disqualified in accordance with State law and the Legislative Rule 148-CSR-1.

**Submit:**

One original plus one convenience copy and one copy on CD to:

Purchasing Division  
2019 Washington Street, East  
P.O. Box 50130  
Charleston, WV 25305-0130

The outside of the envelope or package(s) should be clearly marked:

Buyer: CB-23  
Req #: DEP14801  
Opening Date: **11/04/2009**  
Opening Time: **1:30 PM**

1.10 **Rejection of Expressions:**

The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. However, the State reserves the right to accept or reject any or all expressions and to reserve the right to withdraw this Expression of Interest at any time and for any reason. Submission of, or receipt by the State of Expressions confers no rights upon the firm nor obligates the State in any manner.

1.11 **Incurring Costs:**

The State and any of its employees or officers shall not be held liable for any expenses incurred by any firm responding to this EOI for expenses to prepare, deliver, or to attend the short-list interviews.



**1.12 Addenda:**

If it becomes necessary to revise any part of this EOI, an official written addendum will be issued by the State to all potential firms of record.

**1.13 Independent Price Determination:**

A contract will not be considered for award if the negotiated price was not arrived at independently without collusion, consultation, communication, or agreement as to any matter relating to prices with any competitor.

**1.14 Price Quotations:** No "price" or "fee" quotation is requested or permitted in the response.**1.15 Public Record:****1.15.1 Submissions are Public Record.**

All documents submitted to the State Purchasing Division related to purchase orders/contracts are considered public records. All EOI's submitted by firms shall become public information and are available for inspection during normal official business hours in the Purchasing Division Records and Distribution center after the expressions have been opened.

**1.15.2 Written Release of Information.**

All public information may be released with or without a Freedom of Information request, however, only a written request will be acted upon with duplication fees paid in advance. Duplication fees shall apply to all requests for copies of any document. Currently the fees are \$0.50/page, or a minimum of \$10.00 per request, whichever is greater.

**1.15.3 Risk of Disclosure.**

The only exemptions to disclosure of information are listed in West Virginia Code §29B-1-4. Primarily, only trade secrets as submitted by a firm are the only exemption to public disclosure. The submission of any information to the State by a firm puts the risk of disclosure on the firm. The submission of any information to the State by a vendor puts the risk of disclosure on the vendor. The State does not guarantee non-disclosure of any information to the public.

1.16 **Schedule of Events:**

Release of EOI..... 10/08/2009  
 EOI Opening Date..... 11/04/2009

1.17 **Mandatory Pre-bid Conference:** NA1.18 **Bond Requirements:** N/A1.19 **Purchasing Affidavit:**

West Virginia State Code §5A-3-10a (3) (d) requires that all firms submit an Affidavit regarding any debt owed to the State and licensing and confidentiality certifications. The Affidavit **must** be signed and submitted prior to award. It is preferred that the Affidavit be submitted with the EOI.

**PART 2****OPERATING ENVIRONMENT**2.1 **Location:****Directions to Greystone Mine Drainage:**

From I-68 take the Cheat Lake exit (exit 10). Turn left and travel 3/10 mile to Rt 879. Turn left at the BP station onto 879 South. Travel 4/10 mile to Sunset Beach Rd and turn right (Exxon on right). Proceed 5/10 mile along Sunset Beach road to the Greystone entrance on the left. Travel uphill along Greystone Drive for 3/10 mile to N. Greystone Drive. Turn right onto N. Greystone Drive and travel 8/10 mile through gate (at the gate N. Greystone Drive turns into East Lake Drive). From the Gate travel 3/10 mile along East Lake Drive to the Humphrey driveway on the right, 3961 East Lake Drive.

2.2 **Background:**

Firms are to be licensed Architectural/Engineering Firms (A/E) and should be familiar with, and have a successful track record of design of similar projects. The anticipated contract will be for "full-service" A/E design. Aspects of the design are to include, but not be limited to, Civil, Structural, Geological and Hydrological.

*The successful A/E will be responsible for **Design** of the following:*

The site consists of an area, in close proximity of the Greystone Housing Development that has been surfaced and deep mined. The water was field tested and showed a pH of 4.5 with the iron content > 10 mg/l. This mine drainage is causing numerous problems to the Linda J. Davis property and their neighbors. AMD is seeping from the highwall bench in the Pittsburg Coal Seam and causing hot spots in their lawns, driveways and has caused flooding during previous heavy rains. Linda Davis is concerned about AMD seeping out of the bank behind her house and damaging her yard and driveway. The previous landowner installed an underdrain 12 feet deep and ~ 100 feet long along the back of his yard to try and eliminate the AMD seeps prior to building his home. He stated that the underdrain did help but many seeps were still visible. The Davis' address is 3961 East Lake Drive, Morgantown, WV 26515; rented now to George Segal (304)777-2247.

Neighbors who also have property damage due to AMD seeps in their yards are: John Scotchell 3963 East Lake Drive (304) 594-0803; There is a small seep located in his backyard on the right side of the yard looking uphill.

James & Laura Cava 3959 East Lake Drive (304) 843-8437; There are several seeps in their back yard that they have tried to control by installing drains to carry the AMD off their property.

David & Judi Springgate 3957 East Lake Drive (304) 594-0557; There are two small seeps located in the backyard that have been unsuccessfully controlled with drains that the previous owners had installed.

Preliminary design documents will be due 90 days from the issuance of the Purchase Order.

### **PART 3                   PROCUREMENT SPECIFICATIONS**

#### **3.1   General Requirements:**

Firm must submit a completed CQQ (Attachment "B") and RPEM (Attachment "C") as per Section 4.2

#### **3.2   Project Description:**

##### **Scope of Work (Greystone Mine Drainage):**

Construct access road to site.

Construct underdrain between the highwall and houses to collect AMD seeping into the yards of the homes below the highwall.

Install conveyance pipe and manholes to carry water from the underdrain safely past the houses affected by AMD.

Install two (2) wet mine seals.

Condition and revegetate all disturbed areas.

### 3.3 Special Terms and Conditions:

3.3.1 *Bid and Performance Bonds:* N/A

3.3.2 *Insurance Requirements:* \$1,000,000 Professional Liability per Occurrence  
 \$2,000,000 Aggregate  
 \$1,000,000 Automobile Liability  
 \$1,000,000 Professional Liability  
 Workers Compensation Certificate Upon Award  
 West Virginia Statutory requirements including  
 West Virginia Code §23-4-2 (Mandolidis)  
 DEP14801 must be listed on Insurance Certificates

### 3.4 General Terms and Conditions:

By signing and submitting the EOI, the successful firm agrees to be bound by all the terms contained in Section Three (3) of this EOI.

#### 3.4.1 *Conflict of Interest:*

Firm affirms that it, its officers or members or employees presently have no interest and shall not acquire any interest, direct or indirect which would conflict or compromise in any manner or degree with the performance or its services hereunder. The firm further covenants that in the performance of the contract, the firm shall periodically inquire of its officers, members and employees concerning such interests. Any such interests discovered shall be promptly presented in detail to the Agency.

#### 3.4.2 *Prohibition Against Gratuities:*

Firm warrants that it has not employed any company or person other than a bona fide employee working solely for the firm or a company regularly employed as its marketing agent to solicit or secure the contract and that it has not paid or agreed to pay any company or person any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award of the contract. For breach or violation of this warranty, the State shall have the right to annul this contract without liability at its discretion, and/or to pursue any other remedies available under this contract or by law.

### 3.4.3 *Certifications Related to Lobbying:*

Firm certifies that no federal appropriated funds have been paid or will be paid, by or on behalf of the company or an employee thereof, to any person for purposes of influencing or attempting to influence an officer or employee of any Federal entity, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the firm shall complete and submit a disclosure form to report the lobbying.

Firm agrees that this language of certification shall be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this contract was made and entered into.

### 3.4.4 *Vendor Relationship:*

The relationship of the firm to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by the parties to this contract. The firm as an independent contractor is solely liable for the acts and omissions of its employees and agents.

Firm shall be responsible for selecting, supervising and compensating all individuals employed pursuant to the terms of this EOI and resulting contract. Neither the firm nor any employees or contractors of the firm shall be deemed to be employees of the State for any purposes whatsoever.

The Firm shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties,

fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension or other deferred compensation plans, including but not limited to Workers' Compensation and Social Security obligations, and licensing fees, etc. and the filing of all necessary documents, forms and returns pertinent to all of the foregoing.

The Firm shall hold harmless the State, and shall provide the State and Agency with a defense against all claims including but not limited to the foregoing payments, withholdings, contributions, taxes, social security taxes and employer income tax returns.

The firm shall not assign, convey, transfer or delegate any of its responsibilities and obligations under this contract to any person, corporation, partnership, association or entity without expressed written consent of the Agency.

**3.4.5 Indemnification:**

The firm agrees to indemnify, defend and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person or firm performing or supplying services, materials or supplies in connection with the performance of the contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the firm, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use or disposition of any data used under the contract in a manner not authorized by the contract, or by Federal or State statutes or regulations; (3) Any failure of the firm, its officers, employees or subcontractors to observe State and Federal laws, including but not limited to labor and wage laws.

**3.4.6 Contract Provisions:**

After the most qualified firm is identified, and fee negotiations are concluded, a formal contract document will be executed between the State and the firm. The order of precedence is the contract, the EOI and the firm's response to the EOI.

**3.4.7 Governing Law:**

This contract shall be governed by the laws of the State of West Virginia. The firm further agrees to comply with the Civil Rights Act of 1964 and all other applicable laws (Federal, State or Local Government) regulations.

**3.4.8 Compliance with Laws and Regulations:**

The firm shall procure all necessary permits and licenses to comply with all applicable laws, Federal, State or municipal, along with all regulations, and ordinances of any regulating body.

The firm shall pay any applicable sales, use, or personal property taxes arising out of this contract and the transactions contemplated thereby. Any other taxes levied upon this contract, the transaction, or the equipment, or services delivered pursuant here to shall be borne by the contractor. It is clearly understood that the State of West Virginia is exempt from any taxes regarding performance of the scope of work of this contract.

**3.4.9 Subcontracts/Joint Ventures:**

The State will consider the firm to be the sole point of contact with regard to all contractual matters. The firm may, with the prior written consent of the State, enter into written subcontracts for performance of work under this contract; however, the firm is totally responsible for payment of all subcontractors.

**3.4.10 Term of Contract:**

This contract will be effective (date set upon award) and shall extend until the scope of work is complete or for one (1) consecutive twelve (12) month period. The contract may be renewed upon mutual consent for two (2) consecutive years one (1) year periods or until such reasonable time as may be necessary to obtain a new contract or to complete work.

**3.4.11 Non-Appropriation of Funds:**

If the Agency is not allotted funds in any succeeding fiscal year for the continued use of the service covered by this contract by the West Virginia Legislature, the Agency may terminate the contract at the end of the affected current fiscal period without further charge or penalty. The Agency shall give the firm written notice of such non-allocation of funds as soon as possible after the Agency receives notice. No penalty shall accrue to the Agency in the event this provision is exercised.

**3.4.12 Contract Termination:**

The State may terminate any contract resulting from this EOI immediately at any time the firm fails to carry out its responsibilities or to make substantial progress under the terms of this EOI and resulting contract. The State shall provide the firm with advance notice of performance conditions, which are endangering the contract's continuation. If after such notice the firm fails to remedy the conditions contained in the notice, within the time contained in the notice, the State shall issue the firm an order to cease and desist all work immediately.

The State shall be obligated only for services rendered and accepted prior to the date of the notice of termination. The contract may also be terminated upon mutual agreement of the parties with thirty (30) days prior notice.

#### 3.4.13 *Changes:*

If changes to the original contract become necessary, a formal contract change order will be required. Prior to any work being performed, the change must be negotiated and approved by the State, the Agency and the firm. An approved contract change order is defined as one approved by the Purchasing Division and approved as to form by the West Virginia Attorney General's Office prior to the effective date of such amendment. **NO CHANGE SHALL BE IMPLEMENTED BY THE FIRM UNTIL THE FIRM RECEIVES AN APPROVED WRITTEN CHANGE ORDER.**

#### 3.4.14 *Invoices, Progress Payments, & Retainage:*

The Firm shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled "Invoice To" pursuant to the terms of the contract. Progress payments may be made at the option of the Agency based on percentage of work completed if so defined in the final contract. Any provision for progress payments must also include language for a minimum 10% retainage until the final deliverable is accepted.

If progress payments are permitted, firm is required to identify points in the work plan at which compensation would be appropriate. Progress reports must be submitted to Agency with the invoice detailing progress completed or any deliverables identified. Payment will be made only upon approval of acceptable progress or deliverables as documented in the firm's report. Invoices may not be submitted more than once monthly and State law forbids payment of invoices prior to receipt of services.

*The firm will invoice for completed work on an approved WVDEP form.*

#### 3.4.15 *Liquidated Damages:*

According to West Virginia State Code §5A-3-4(8), firm agrees that liquidated damages shall be imposed at the rate of N/A per workday, for failure to provide deliverables at the agreed upon date identified in the final contract. This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue to any other additional remedy to which the State or Agency may have legal cause for action including further damages against the firm.

#### 3.4.16 *Record Retention (Access & Confidentiality):*

Firm shall comply with all applicable Federal and State of West Virginia rules and regulations, and requirements governing the maintenance of documentation to verify any cost of services or commodities rendered under this contract by the



firm. The firm shall maintain such records a minimum of five (5) years and make available all records to Agency personnel at firm's location during normal business hours upon written request by Agency within 10 days after receipt of the request.

Firm shall have access to private and confidential data maintained by Agency to the extent required for firm to carry out the duties and responsibilities defined in this contract. Firm agrees to maintain confidentiality and security of the data made available and shall indemnify and hold harmless the State and Agency against any and all claims brought by any party attributed to actions of breach of confidentiality by the firm, subcontractors, or individuals permitted access by the firm.

#### **PART 4                      EVALUATION & AWARD**

##### **4.1    Evaluation and Award Process:**

- a)    Expressions of Interest will be evaluated and awarded in accordance with **§5G-1-3 "Contracts for architectural and engineering services; selection process where total project costs are estimated to cost two hundred fifty thousand dollars or more."**

"In the procurement of architectural and engineering services for projects estimated to cost two hundred and fifty thousand dollars or more the director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project. All such jobs shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of article three [§59-3-1et seq.]. A committee comprised of three to five representatives of the agency initiating the request shall evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service. Interviews with each firm selected shall be conducted and the committee shall conduct discussions regarding anticipated concepts and the proposed methods of approach to the assignment. The committee shall then rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm for architectural or engineering services or both. Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined

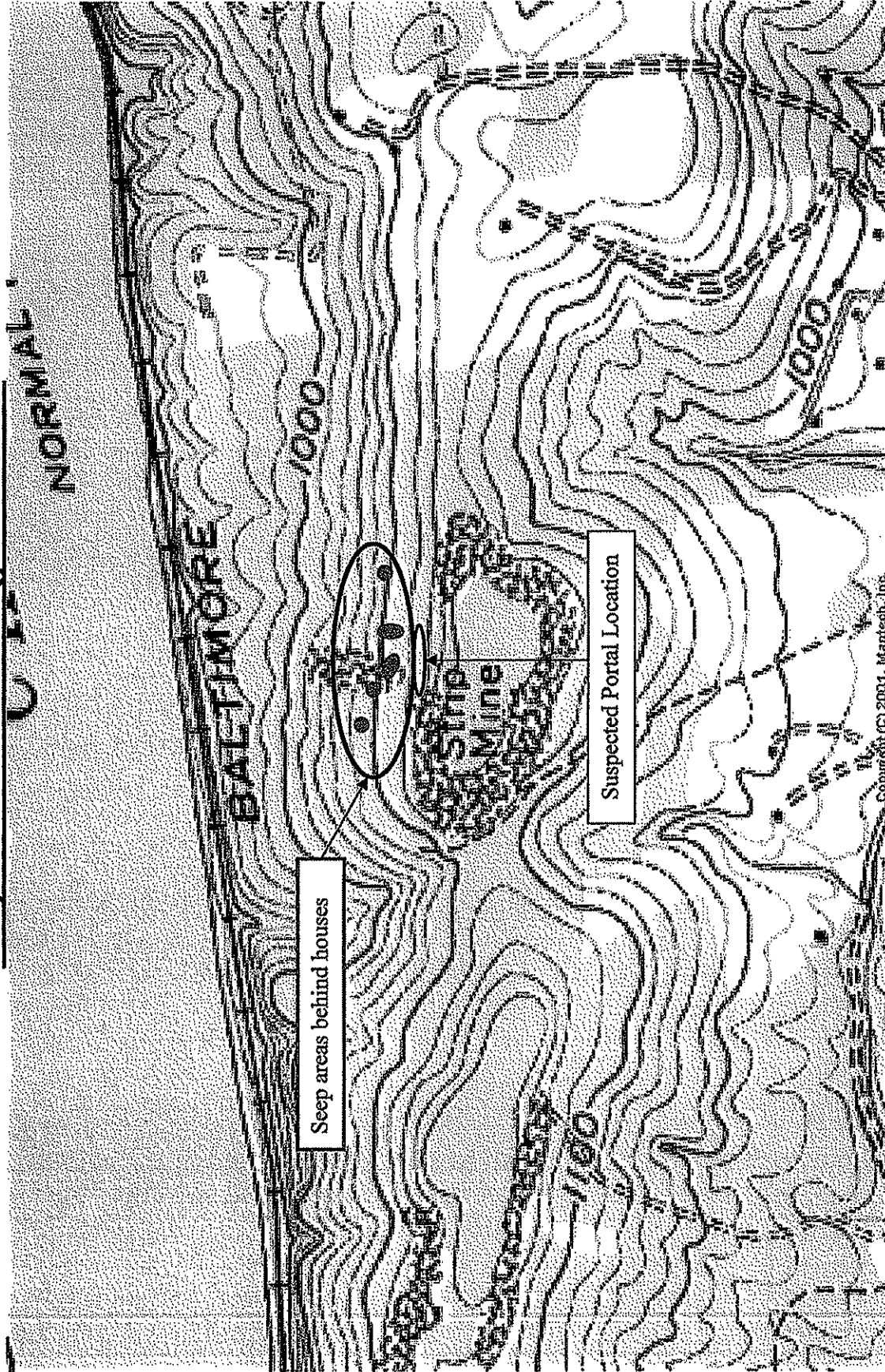
to be fair and reasonable, price negotiations with the firm of second choice shall commence. Failing accord with the second most qualified professional firm, the committee shall undertake price negotiations with the third most qualified professional firm. Should the agency be unable to negotiate a satisfactory contract with any of the selected professional firms, it shall select additional professional firms in order of their competence and qualifications and it shall continue negotiations in accordance with this section until an agreement is reached.”

- b) The evaluation criteria and assigned point values are as follows:
- A. WV Registered Professional Engineers (Civil or Mining)  
In the Primary Office: 20 points
  - B. Reclamation Engineering design experience of the Primary Office's WVRPE as it relates to the specific project problem Areas: 25 points
  - C. Available WV-AML Design Teams within the Primary office (A Design team should consist of one Project Engineer (Civil or Mining), one CAD person and availability of other support personnel a required by the particular project): 20 points
  - D. The Oral Interview (See Section 4.3 of this EOI): 35 points
- 4.2 (a) AML Consultant Qualification Questionnaire (CQQ) must be completed to be eligible (See Attachment "B").
- (b) AML and Related Project Experience Matrix (RPEM) must also be completed to be eligible (See Attachment "C").
- 4.3 Interviews as stated in 4.1 "Evaluation and Award Process" will be conducted with the three firms selected as the most qualified by the WVDEP Selection Committee. The Committee will schedule the interviews.

The format for the interviews will be a 15-30 minute PowerPoint presentation consisting, at a minimum, of the following:

- Corporate/personnel experience as it relates to the project or projects
- Proposed project management plan
- Key personnel available for the proposed work
- Proposed subcontractors (mapping, geotechnical, etc.)
- Product quality control
- Project cost control

**Project Location Map**  
**Greystone Mine Drainage WV-5869**

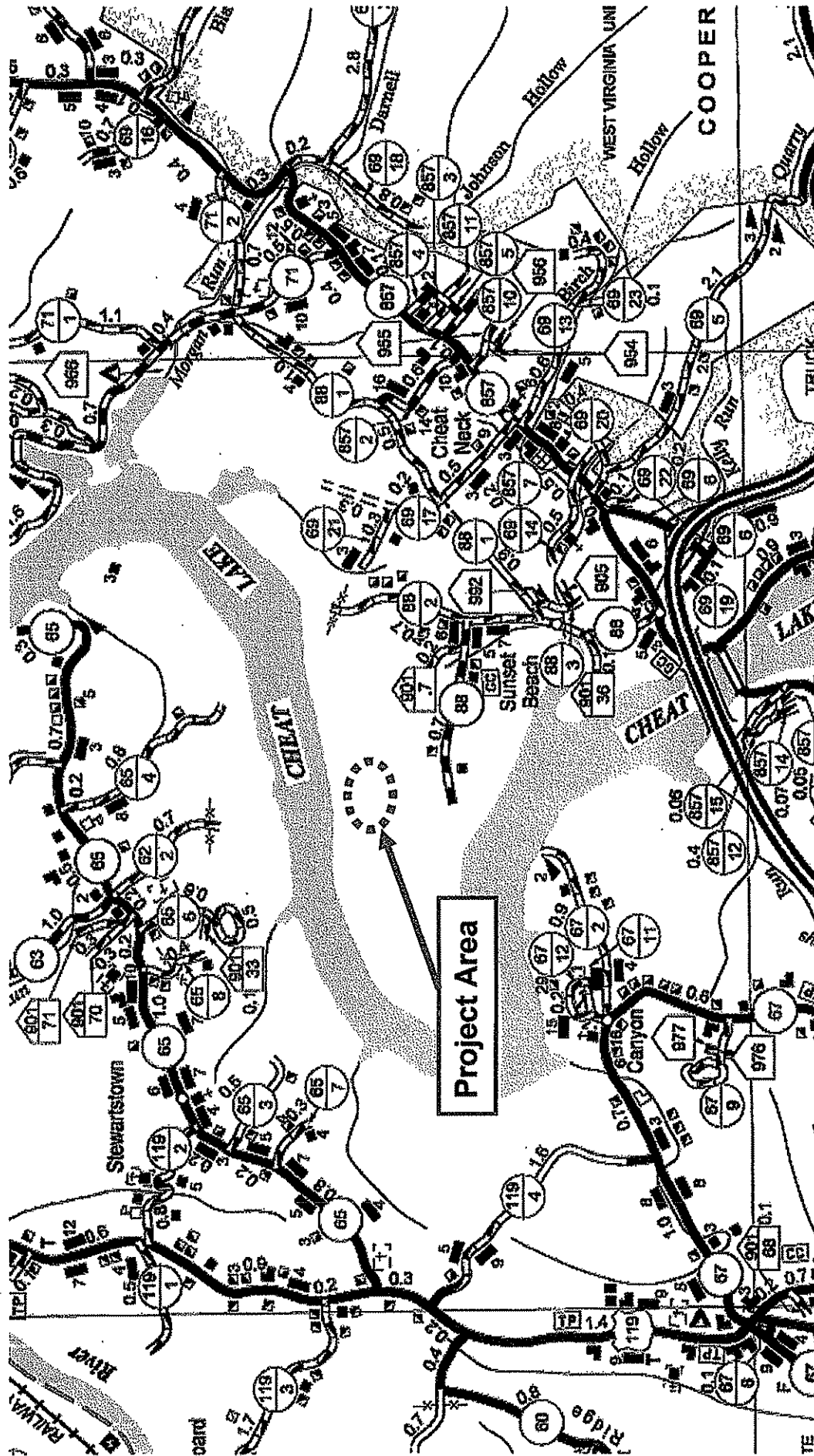


**Lake Lynn Quad**  
**Latitude: 39° 41' 33"**

**Monongalia County**  
**Longitude: 79° 51' 55"**

**Scale: 1 inch = 650 Feet**

**Project Location – County Highway Map**  
**Greystone Mine Drainage; WV-5869**



Lake Lynn Quad

Monongalia County

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

PROJECT NAME		DATE (DAY, MONTH, YEAR)		FEIN	
1. FIRM NAME		2. HOME OFFICE BUSINESS ADDRESS		3. FORMER FIRM NAME	
4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP Individual Corporation Partnership Joint-Venture		6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES NO	
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE					
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM					
8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS					
9. PERSONNEL BY DISCIPLINE					
— ADMINISTRATIVE	— ECOLOGISTS	— LANDSCAPE ARCHITECTS	— MECHANICAL ENGINEERS	— STRUCTURAL ENGINEERS	
— ARCHITECTS	— ECONOMISTS	— ELECTRICAL ENGINEERS	— ENVIRONMENTALISTS	— SURVEYORS	
— BIOLOGIST	— ESTIMATORS	— GEOLOGISTS	— HISTORIANS	— TRAFFIC ENGINEERS	
— CADD OPERATORS	— CHEMICAL ENGINEERS	— CIVIL ENGINEERS	— CONSTRUCTION INSPECTORS	— OTHER	
— DESIGNERS	— DRAFTSMEN	— WRITERS	— TOTAL PERSONNEL		
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: _____					
*RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.					
10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? <input type="checkbox"/> YES <input type="checkbox"/> NO					

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____

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

YES Description and Number of Projects: \_\_\_\_\_

NO

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

YES Description and Number of Projects: \_\_\_\_\_

NO

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

YES Description and Number of Projects: \_\_\_\_\_

NO

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

YES Description and Number of Projects: \_\_\_\_\_

NO

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

YES Description and Number of Projects: \_\_\_\_\_

NO

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

YES Description and Number of Projects: \_\_\_\_\_

NO



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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities		
EDUCATION (Degree, Year, Specialization)		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		
REGISTRATION (Type, Year, State)		

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities		
EDUCATION (Degree, Year, Specialization)		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		
REGISTRATION (Type, Year, State)		

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS REGISTRATION (Type, Year, State)			

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF EXPERIENCE YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS REGISTRATION (Type, Year, State)			



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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE

TOTAL NUMBER OF PROJECTS:

TOTAL ESTIMATED CONSTRUCTION COSTS: \$

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY



COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH

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

20. The foregoing is a statement of facts.

Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_  
 Printed Name: \_\_\_\_\_





STATE OF WEST VIRGINIA  
Purchasing Division

## PURCHASING AFFIDAVIT

### VENDOR OWING A DEBT TO THE STATE:

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

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

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

### ANTITRUST:

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

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


### LICENSING:

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

### CONFIDENTIALITY:

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

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

Vendor's Name: Wilbur Smith Associates  
 Authorized Signature:  Date: November 2, 2009

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

PROJECT NAME <b>Greystone Mine Drainage Design, RFQ #DEP14801</b>		DATE (DAY, MONTH, YEAR) <b>November 3, 2009</b>	FEIN <b>57-0405950</b>
1. FIRM NAME <b>Wilbur Smith Associates</b>		3. FORMER FIRM NAME <b>Wilbur Smith and Associates</b>	
2. HOME OFFICE TELEPHONE <b>Columbia, SC Tel: 803-758-4500/Fax: 803-251-2064 Charleston, WV Tel: 304-345-2339/Fax: 304-345-2343</b>	2. ESTABLISHED (YEAR) <b>1952</b>	6. TYPE OWNERSHIP <b>Individual Corporation Partnership Joint-Venture</b>	
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE <b>700 Washington St., E., # 210, Charleston, WV 25301 / (304) 345-2339 Charleston, WV / Wesley O. Stafford, PE, AICP / 9 personnel (WV office)</b>			

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM  
**M. Stevenson Smith, PE, Chairman/Chief Executive Officer  
Jerry Stump, PE, FACEC, Chief Operating Officer - U.S. Operations**

8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS  
**Terry S. Grubb PE, Regional Vice President  
865-963-4329**

9. PERSONNEL BY DISCIPLINE

<u>180</u> ADMINISTRATIVE	<u>5</u> LANDSCAPE ARCHITECTS	<u>42</u> STRUCTURAL ENGINEERS
<u>23</u> ARCHITECTS	<u>15</u> MECHANICAL ENGINEERS	<u>15</u> SURVEYORS
<u>58</u> CADD OPERATORS	<u>15</u> MINING ENGINEERS	<u>10</u> TRAFFIC ENGINEERS
<u>193</u> CHEMICAL ENGINEERS	<u>4</u> PHOTOGRAMMETRISTS	<u>167</u> TRANSPORTATION ENGINEERS
<u>169</u> CIVIL ENGINEERS	<u>50</u> PLANNERS: URBAN/REGIONAL	<u>13</u> AIRPORT PLANNERS
<u>38</u> DRAFTSMEN	<u>*</u> ESTIMATORS	<u>19</u> GRAPHIC DESIGNERS
<u>1</u> CONSTRUCTION INSPECTORS	<u>2</u> GEOLOGISTS	<u>3</u> GIS PERSONNEL
<u>38</u> DESIGNERS, HIGHWAY	<u>13</u> HISTORIANS	<u>3</u> MASS TRANSIT SPECIALISTS
<u>1</u> ENGINEERING TECHNICIANS	<u>3</u> HYDROLOGISTS	<u>277</u> OTHER
	<u>1300</u> TOTAL PERSONNEL	

\* Performed by personnel of each Discipline.

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 5

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

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?  YES  NO Not a joint venture

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

<p>NAME AND ADDRESS:  <b>Triad Engineering, Inc.</b>          4980 Teays Valley Road          Scott Depot, WV 25560  <i>Triad's forms are on file with WVDEP</i></p>	<p>SPECIALTY:          Geotechnical engineering and survey</p>	<p>WORKED WITH BEFORE  <input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>

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

**YES** Description and Number of Projects: **Members of our project team have worked on numerous WVDEP AMP Projects while working for other firms.**

**NO**

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

**YES** Description and Number of Projects: **Hundreds of projects firmwide; We use data obtained from soils laboratories in preparing studies and designs. WSA has geotechnical engineers as part of staffing component. We will be using subconsultant for geotechnical services on small projects only.**

**NO**

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

**YES** Description and Number of Projects: **Hundreds of projects firmwide; Our personnel have experience addressing drainage issues on our nation's roadways and on urban and rural development projects, as well as site development projects and other infrastructure and municipal services.**

**NO**

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

**YES** Description and Number of Projects: \_\_\_\_\_

**NO**

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

**YES** Description and Number of Projects: **Hundreds of projects firmwide; WSA's water resources consults on all aspects of water, wastewater, and sewer engineering. Over the past 25 years, WSA has provided comprehensive water, wastewater, stormwater, and utility design and planning on projects which have entailed working closely with municipalities, water and sewer districts, and other public entities in evaluating existing systems and developing sound recommendations and engineering designs.**

**NO**

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

**YES** Description and Number of Projects: \_\_\_\_\_

**NO**

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

<p><b>NAME &amp; TITLE (Last, First, Middle Int.)</b>  <b>Williams, Ron</b>  <b>PE, PS, SR/WA</b>  <b>Senior Right-of-Way and Utility Engineer</b></p>	<p><b>YEARS OF AML DESIGN EXPERIENCE:</b>  <b>3</b></p>	<p><b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b>  <b>3</b></p>	<p><b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b>  <b>6</b></p>
<p>Brief Explanation of Responsibilities                  Mr. Williams will be responsible for complete operation and management of an engineering office. He has more than 50 years of right-of-way, engineering, and surveying experience. His work has included design of water treatment distribution lines, wastewater collection and treatment, reclamation of abandoned mine lands for the WVDEP, and highway design for WVDOH.</p>			

<p><b>EDUCATION (Degree, Year, Specialization)</b>  <b>MS, 1977, Civil Engineering</b>  <b>BS, 1959, Civil Engineering</b></p>	<p><b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>                  Senior Member, International Right of Way Association; Fellow, American Society of Engineers; Member, National Society of Civil Engineers; Member, National Society of Professional Surveyors; Member, West Virginia Association of Land Surveyors; Past Chairman, Transportation Research Board, National Academy of Science</p>	<p><b>REGISTRATION (Type, Year, State)</b>                  Professional Engineer: 1963 WV; 1993 VA; 1959 PA                  Professional Land Surveyor: 1963 WV; 1961 PA</p>
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**13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)**

<p><b>NAME &amp; TITLE (Last, First, Middle Int.)</b>  <b>Clegg, Larry, P.</b>  <b>PE, Senior Project Manager</b></p>	<p><b>YEARS OF AML DESIGN EXPERIENCE:</b>  <b>0</b></p>	<p><b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b>  <b>22</b></p>	<p><b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b>  <b>2</b></p>
<p>Brief Explanation of Responsibilities                  Mr. Clegg, as senior project manager, is responsible for the execution of the project. These responsibilities include managing the budget, project schedule, and design staff, as well as overseeing the design. Mr. Clegg's experience includes working on many types of civil engineering projects such as grading, water, wastewater, roadway, drainage, hydraulics, and stormwater management.</p>			

<p><b>EDUCATION (Degree, Year, Specialization)</b>  <b>BSEM, 1981, Mining Engineering</b>  <b>BSCE, 1987, Civil Engineering</b></p>			
<p><b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>                  Professional Engineer, 1999 WV; 1991 FL; 2003 AR; 2009 VA</p>			

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

NAME & TITLE (Last, First, Middle Int.) <b>Morrison, Donald, E.</b> <b>CET, Project Manager</b>	YEARS OF AML DESIGN EXPERIENCE: 0-1	YEARS OF AML RELATED DESIGN EXPERIENCE: 0-1	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 34
	YEARS OF EXPERIENCE		

Brief Explanation of Responsibilities  
 Mr. Morrison will assist in water supply, collection, and transport designs. His experience includes design and construction management of water and wastewater systems, sewer rehabilitation, storm drain systems, and street and roadway projects. Mr. Morrison has additional experience preparing water and wastewater studies including user charge recommendations, system evaluations, contract administration, and construction inspection.

EDUCATION (Degree, Year, Specialization)  
 Engineering Technician, Institute for the Certification of Engineering Technicians, 1974, Civil Engineering Design

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 American Water Works Association, National Society of Professional Engineers, America Society of Highway Engineers, Columbus Engineers Club, Ohio Environmental Council, Ohio Alliance for the Environment

REGISTRATION (Type, Year, State)  
 Certified Engineering Technician

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

NAME & TITLE (Last, First, Middle Int.) <b>Stewart, David W.</b> <b>Senior Project Manager</b>	YEARS OF AML DESIGN EXPERIENCE: 0-1	YEARS OF AML RELATED DESIGN EXPERIENCE: 0-1	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 33
	YEARS OF EXPERIENCE		

Brief Explanation of Responsibilities  
 Mr. Stewart is an expert in water and wastewater treatment systems including chemical, biological, and physical processes. Mr. Stewart will provide hydraulic and treatment design for any AMD active or passive treatment systems.

EDUCATION (Degree, Year, Specialization)  
 BS, 1976, Civil Engineering and Environmental Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 American Water Works Association, Water Environment Federation, Ohio Water Environment Association

REGISTRATION (Type, Year, State)  
 Professional Engineer: 1982 MD and VA; 1994 OH  
 Class III Wastewater Treatment Operator 2006

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

<b>NAME &amp; TITLE (Last, First, Middle Int.)</b> <b>Simpson, Wesley, D.</b> <b>PE, Project Manager</b>	<b>YEARS OF AML DESIGN EXPERIENCE:</b> <b>0</b>	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> <b>15</b>	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> <b>0</b>
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Brief Explanation of Responsibilities  
**Mr. Simpson, as project manager, is responsible for the execution of the project. These responsibilities include managing the budget, project schedule, and design staff as well as overseeing the design. Mr. Simpson's experience includes working on many types of civil engineering projects such as bridges, retaining walls, roadway, drainage, and hydraulics.**

**EDUCATION (Degree, Year, Specialization)**  
**BSCE, 1993, Civil Engineering**

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**  
**REGISTRATION (Type, Year, State)**  
**Professional Engineer: 1998 WV and DE**

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

<b>NAME &amp; TITLE (Last, First, Middle Int.)</b> <b>Shamblin, Cynthia, L.</b> <b>PE, Senior Project Manager</b>	<b>YEARS OF AML DESIGN EXPERIENCE:</b> <b>0</b>	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> <b>25</b>	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> <b>0</b>
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Brief Explanation of Responsibilities  
**Mrs. Shamblin, as senior project manager, is responsible for the execution of the project. These responsibilities include managing the budget, project schedule, and design staff, as well as overseeing the design. Mrs. Shamblin's experience includes working on many types of civil engineering projects such as bridges, retaining walls, culverts, and hydraulics.**

**EDUCATION (Degree, Year, Specialization)**  
**MSCE, 1989, Civil Engineering**  
**BSCE, 1984, Civil Engineering**

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**  
**National Council of Examiners for Engineering and Surveying**  
**National Society of Professional Engineers**  
**REGISTRATION (Type, Year, State)**  
**Professional Engineer: 1991 WV and NC; 2007 VA; 2009 DC**

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

NAME & TITLE (Last, First, Middle Int.) <b>Martin, Reason, W.</b> <b>CADD Technician III</b>	YEARS OF AML DESIGN EXPERIENCE: <b>0-1</b>	YEARS OF AML RELATED DESIGN EXPERIENCE: <b>0-1</b>	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: <b>2</b>
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Brief Explanation of Responsibilities

**Mr. Martin will participate in various stages of waterline design and relocation done for various projects. He has nine years of experience in surveying, design, drafting, and construction inspection in West Virginia and Virginia.**

EDUCATION (Degree, Year, Specialization)  
**BS, Engineering Technology/Civil Emphasis, 1998**  
**AS, Civil Engineering Technology, 1997**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)



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

<u>Field of Engineering</u>	<u>Software Used by WSA</u>	<u>Field of Engineering</u>	<u>Software Used by WSA</u>
<b>Roadway and Other</b>	<ul style="list-style-type: none"> <li>• AutoCad</li> <li>• AutoTurn</li> <li>• Eagle Point</li> </ul>	<b>Hydrology and Hydraulics</b>	<ul style="list-style-type: none"> <li>• FlowMaster</li> <li>• PondPack</li> <li>• Ensoft Hydro</li> <li>• XP-SWMM</li> <li>• HY-8</li> <li>• TR-20 and TR-55</li> <li>• HEC-1 and HEC-2</li> </ul>
<b>Structures</b>	<ul style="list-style-type: none"> <li>• STRAAD III</li> <li>• RC Pier</li> <li>• STRUDL</li> <li>• CONSPAN</li> </ul>	<b>Traffic</b>	<ul style="list-style-type: none"> <li>• Merlin Dash</li> <li>• Synchro 5 and 6</li> <li>• Passer II-94,</li> <li>• Transyt 7F</li> <li>• Signal 94, TSIS (CORSIM)</li> </ul>
	<ul style="list-style-type: none"> <li>• MicroStation</li> <li>• GEOPAK</li> <li>• Microsoft Projects and SureTRAK</li> </ul>		<ul style="list-style-type: none"> <li>• HEC-6,</li> <li>• HEC-22</li> <li>• HEC-RAS and HEC GeoRAS</li> <li>• HEC-12</li> <li>• HEC-HMS</li> <li>• Culvert Master</li> </ul>
	<ul style="list-style-type: none"> <li>• DESCUS I</li> <li>• PC Column</li> <li>• COM624</li> <li>• SPW911</li> </ul>		<ul style="list-style-type: none"> <li>• SIDRA, VISSIM</li> <li>• Highway Capacity Software (HCS)</li> <li>• NETSIM, MinUTP</li> </ul>

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD (Partial Listing of Projects)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
King Coal Highway Highway and Bridge Design Mercer County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$ 98,000,000	99%	King Coal Highway Highway and Bridge Design Mercer County, WV
Charles Town By-Pass Sign Renovation Plans Jefferson County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$500,000	45%	Charles Town By-Pass Sign Renovation Plans Jefferson County
I-70 Sign Renovation, Ohio County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$2,000,000	75%	I-70 Sign Renovation, Ohio County
District 2 Design/Build	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$5,700,000	80%	District 2 Design/Build
Beckley Z-Way Raleigh County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$45,000,000	30%	Beckley Z-Way Raleigh County
Pennsylvania Avenue Signals Kanawha County	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$500,000	75%	Pennsylvania Avenue Signals Kanawha County
Statewide Transportation Plan Various Counties	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	N/A	30%	Statewide Transportation Plan Various Counties
TOTAL NUMBER OF PROJECTS: 7			TOTAL ESTIMATED CONSTRUCTION COSTS: \$ 151,700,000 (Construction Cost)	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS (Partial Listing of Projects)

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
	Freeway Corridor Studies	Sub to: HNTB For: Texas DOT 125 E. 11 <sup>th</sup> Street Austin, TX 78701	2014	N/A	\$595,395 (Fee)
I-4 CEI Services Florida	Construction Engineering and Inspection for Expressway	Sub to: Parson Brinkerhoff For: Florida DOT 605 Suwanee St Tallahassee, FL 32399	2008	N/A	\$492,314 (Fee)

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (Partial Listing of Projects)					
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)	
West Virginia Route 9 Environmental Impact Statement Berkeley County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$162,000,000	2000	Yes	
US 522 Highway & Bridge Design Morgan County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$50,000,000	2006	No	
US 470 Sign Renovation Contract Plans Ohio County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$750,000	2007	Yes	
Greenbrier St. Sign Renovation Contract Plans Kanawha County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$500,000	2005	Yes	
WV 2 Highway Design Wetzel/Marshall County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$22,000,000	2007	No	
WV 10 CEI, Logan County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$10,000,000	2002	Yes	
WV 2 CEI, Brooke County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$21,000,000	2002	Yes	
WV 14 CEI, Wood County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$10,000,000	2004	Yes	
I-81 Sign Renovation Berkeley County, WV	WVDOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$1,500,000	2005	Yes	

Signification Manual Revisions & Updates, Charleston WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	N/A	2005	N/A
Gilliam Arch Bridge Replacement Highway and Bridge Design Mercer County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$1,300,000	2005	Yes
Reedy Creek Hydraulic Study Roane County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$ 19.3 (WSA Fee)	1999	No
West Virginia Turnpike Toll Revenue & Rate Reclassification	WV PED 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$41,700 (WSA Fee)	1999	N/A
US 119 Rock Creek Intersection Traffic Safety and Improvement Study Boone County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$69,000 (WSA Fee)	2001	N/A
US 522 EIS Morgan County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$351,000 (WSA Fee)	2002	N/A
East Beckley Bypass EA Raleigh County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$464,000 (WSA Fee)	2002	N/A
US 50 Traffic Operations and Safety Study Mineral/ Hampshire Counties, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$185,000	2003	N/A
WV 9 EIS Morgan/Berkeley/Jefferson Counties, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$509,000 Stop Work Order at 50% Complete	2002	N/A
Ohio SR 7 Traffic Operations & Safety Study Washington County, DOH	ODOT WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$250,000 (WSA FEE)	2000	N/A

Parlourburg-Marietta MPO Long Range Multimodal Transportation Plan, Wood County, WV & Washington County OH	WWW Interstate Planning Commission 531 Market St Parkersburg, WV 26101	\$267,000	2004	
US 220 Relocation Hampshire County, WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$668,000 (WSA Fee)	2004	No
I-81 Sign Renovation Berkeley Co. WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	\$195,000 (WSA Fee)	2003	No
I-15 Managed Lanes Value Pricing Demonstration San Diego, CA	San Diego Association of Governments 401 B Street, Suite 800 San Diego, CA 92101	\$777,571	2002	Yes
Grissom Parkway Myrtle Beach, SC	City of Myrtle Beach PO Box 2468 Myrtle Beach, SC 29578	\$678,976	2002	Yes
James White Parkway Design Knoxville KY	Tennessee Dept of Transportation 505 Deadrick Street Nashville, TN 37243	N/A	2000	Yes
I-95 Ailee-Elmont Interchange Hanover County, VA	Commonwealth of Virginia Structure and Bridge Division 1401 E. Broad Street Richmond, VA 23219	\$2,735,809	2001	Yes

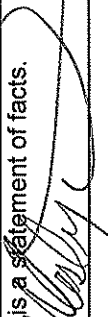
**18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE) (Partial Listing of Projects)**

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
Data is not currently available. WSA has served as a subconsultant to numerous firms on large and small projects worldwide.					

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.

**Please see the narrative provided at the end of the submittal**

20. The foregoing is a statement of facts.

Signature: 

Printed Name: Wesley O. Stafford, PE, AICP

Title: Associate-in-Charge

Date: November 2, 2009

## PROFESSIONAL QUALIFICATIONS

WSA is an international consulting firm providing services in the fields of engineering, architecture, planning, and economics. The firm is multidisciplinary and has a diversified practice with its major concentration of services in the analysis and planning of transportation systems, the design of transportation facilities, and planning and design of community and industrial infrastructure systems and facilities. Established in 1952, the firm has completed more than 30,000 projects including work in 50 states as well as projects in more than 117 countries throughout the world. WSA has provided comprehensive engineering and inspection services for a broad range of transportation facilities, including highways, bridges and other structures, parking, and interchanges in the United States and around the world. *For additional general information about Wilbur Smith Associates, please refer to our web site at [www.WilburSmith.com](http://www.WilburSmith.com).*

### WSA's professional services include:

#### Water Resources

WSA's water resources division originated as a supplement to highway design, addressing drainage issues on our nation's roadways. Later, these methods were applied to urban and rural development projects. As the company expanded its capabilities, new opportunities surfaced. Since then, the water resources group has evolved into a full service division, supporting not only highway design, but urban and rural planning, site development and other infrastructure and municipal services. Water resources services include:

- hydrology and hydraulics
- hydrodynamic modeling
- drainage and waterline design
- detention ponds/lakes
- stormwater master plans
- stormwater utility development
- FEMA flood studies
- flood control strategies
- watershed modeling
- bridge scour studies
- river mechanics and modeling
- stream restoration
- pump stations

#### Geotechnical Investigation and Reports

WSA has integrated geotechnical engineering, pavement design, and foundation/site-related construction services into the design of our highway and bridge structures, commercial buildings, power plants, dams, ports, airports, and industrial facilities. Our geotechnical engineering services include:

- subsurface investigations
- shallow and deep foundation design
- slope stability analyses
- earth retaining structures and reinforced slopes
- rock slope engineering
- seismic hazard analysis
- ground improvement
- earth dam engineering
- seepage and dewatering analysis
- pavement design and management systems

**WSA will be teaming with a subconsultant, Triad Engineering, to fully provide these services to DEP.** Triad has provided project inspection, survey, material testing, laboratory testing, drilling, and sampling, as well as full geotechnical design for projects for more than 25 years. The firm's clients have included WVDEP, WVDOT, highway/bridge design firms, contractors, and every county in West Virginia. In addition to WVDEP projects, Triad has performed numerous large-scale surveys for other state agencies and private entities. Triad's staff of more than 250 includes individuals with degrees in the scientific and technical areas of civil, geotechnical, environmental, mining engineering, and geology and hydrogeology.

#### Environmental Engineering

WSA has provided our clients and the community with environmental planning and National Environmental Policy Act services for over 30 years. This includes over 250 completed projects in more than 36 states. Our environmental capabilities address all transportation modes including, aviation, rail, transit, roadways, bridges,



and ports, in addition to site development projects. Our firm is unique because we have in-house technical staff to address the full range of NEPA technical disciplines. This multi-discipline approach provides a culture that encourages creativity and non-traditional methods, thus bringing new ideas and streamlining processes to our clients. In addition to NEPA documentation and a variety of wetland, endangered species, and other natural resource assessments, our experience includes:

- noise and air quality modeling
- hazardous materials surveys
- community impact assessments
- environmental justice analysis
- public and stakeholder involvement
- agency coordination letters
- geographic information services

#### Engineering (Highway Design)

Since WSA's first roadway design project in the late 1950s, we have continued to grow our roadway and highway design division to offer a full-spectrum of services to our clients. With over 21 design offices in the United States, some of our related services include:

- design of rural and urban streets, arterials, expressways, intersections, and interchanges
- HOV and HOT lanes
- parkways and landscaping
- roadway widening, surfacing, and rehabilitation
- grade separation structures, roadway, and railroad
- roadway hydrology and hydraulics
- route surveying

WSA has successfully completed numerous roadway design projects that have included road section and turn lane widening, curb and sidewalk repairs, intersection improvements, new sidewalk and trail design, bus shelters and other pedestrian access features. These services have also been provided on a larger scale to include planning and final construction design of a major corridor. For these projects, WSA has generated base plans from surveys, feasibility studies, utility coordination and relocation designs, environmental studies and permitting, right of way plans, traffic data collection, analysis, and projections, and concept, preliminary and final construction plans, among other tasks.

#### Engineering (Bridge Design)

WSA continues to be a leader in contemporary bridge technology. Our work falls into nearly every category of bridge configuration and contemporary structural materials, and every type of highway structure including overhead signs, mast lights, tension poles, pedestrian bridges, and pedestrian and traffic tunnels and culverts. From feasibility studies, inspections and investigations to new and rehabilitative design and contract documents, WSA is a leader in bridge technology.

- pioneered the design of embedded "integral" post-tensioned caps in structural steel bridges — a first in the U.S.
- employed state-of-the-practice non-linear, structural seismic analysis techniques — a forerunner to industry standards
- developed the FHWA inspection manual for fracture-critical bridge members — providing instruction for more than 10 years
- 35 years of bridge research for FHWA and the National Academy of Sciences — used in technology transfer worldwide
- extensive experience in bridge hydraulics
- experience ranging from the simplest, single-span bridge to analysis and design of complex structures

#### Cultural Resources

WSA offers a full scope of archaeological services from Phase I survey to Phase III mitigation and cultural historic surveys and National Register evaluations including resource management. We have a staff of professional archaeologists, architectural historians as well as access to surveyors, computer mapping specialists with expertise in CAD and GIS software and techniques, and graphic artists. WSA has provided cultural resources services on numerous department of transportation projects in Kentucky, Michigan, Tennessee, South Carolina, and West Virginia. Previously, WSA has held the Statewide Cultural Resources contract with WVDOH and has been able to supply archaeological and cultural historic services on a couple of projects.

Throughout its history, WSA has performed a significant number of archaeological and cultural historic projects. Our experience conducting archaeological investigations varies from small scale prehistoric sites to large scale historic farmsteads and industrial complexes. Cultural historic studies performed by WSA include the Statewide Historic Bridge Survey, in which over 300 structures were identified and evaluated. Other recent transportation cultural historic survey projects include the proposed I-66 corridor, in which over 400 structures were surveyed, and KY 52, which contained over 350 evaluated structures.

#### **Natural Resources**

As a part of our environmental engineering and planning services, WSA provides services related to natural resource assessment, including wetland/ stream mitigation, pre-construction notification, threatened and endangered species surveys, neotropical and migratory bird habitat and stream buffer variance applications. Additionally, our personnel have experience in the preparation of natural resource reports in support of Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements for transportation projects.

#### **Right-of-Way Services**

WSA's right-of-way practice serves as an integral part to the success of our projects. Our professionals are equipped to support public and private sector clients nationwide in planning, negotiations, and relocations. We offer extensive knowledge in permitting and real estate law and possess above-average communication and people skills in order to minimize condemnation rates. Our creative solutions are a precursor to your success and guaranteed to help you achieve your goals. WSA's Charleston office has provided the following right-of-way services to WVDOT under past statewide agreements for right-of-way functions:

- review of right-of-way invoices (procurement by the Department by option, deed, or an agreement)
- review of condemnation packages for invoicing
- property management
- preparation of property descriptions
- plan review
- project oversight
- right-of-way stakeouts

#### **Construction Inspection**

WSA provides top-notch construction engineering and inspection services to assist project owners in executing construction projects in an efficient and cost effective manner. Construction quality is assured through WSA's well-managed program in inspection, materials sampling, and testing is evidenced through the following available CEI client services:

- pre-bid conferences
- bid openings
- contractor evaluations
- bid tabulations
- contract/award recommendations
- DBE compliance
- preconstruction conferences
- overall contract administration
- detailed resident inspection
- QA testing
- contractor pay requests
- claim assessment and change orders
- contractor labor compliance
- quality calculations and measurements
- schedule and budget coordination
- construction site safety
- work zone traffic control
- pre- and final inspection
- project closeout

WSA engages the most project-specific, appropriately skilled and capable personnel by staffing its initiatives with well-qualified, experienced professionals familiar with the client's vision, intent, and established methods and procedures. This working principle, accompanied by a demanding quality assurance focus, ensures WSA's responsiveness to a quality design project.