

**RECEIVED**

October 7, 2008

2008 OCT -7 P 12: 26

Mr. Chuck Bowman, Buyer  
Purchasing Division  
P.O. Box 50130  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

PROCURING DIVISION  
STATE OF WV

Re: Coaldale/Bramwell Hill Waterline  
Design Services  
JN: 27584

Dear Mr. Bowman and Members of the Selection Committee:

We have received and reviewed your RFQ number DEP14381 for Design Services for the Coaldale/Bramwell Hill Waterline Project. The employee owners of Anderson & Associates, Inc. appreciate the opportunity to be considered for this project and are pleased to submit this proposal for your consideration.

We are ready to get started on this project and work with you. Please consider the following job specific highlights of our experience that make us a solid fit for this project:

- We have a solid understanding of the project purpose and associated project concerns and details from touring the project site.
- We have over 30 years of water system design experience, specification development, bidding procedures, permitting, easement acquisition assistance, surveying, construction administration and inspection.
- Our broad depth of qualified engineers will allow us to move quickly and efficiently to develop solid documents that minimize your involvement during the construction phase of the project.
- Our Beckley, West Virginia office staff is composed of native West Virginians, born and raised in the southern part of the state. We are fully aware of the urgent and ongoing efforts to provide safe, potable water to the residents of the area.
- Our engineers have been on site to evaluate the project area and a preliminary construction and related items cost estimate has already been prepared.
- We understand the possible delays associated with easement acquisition and our plan will include the determination of any needed easements in the early stages of the project. This plan will allow the obtaining of any necessary easements for the work immediately.

- We are ready to begin work immediately having a clear understanding of the project goals and timelines.
- We take pride in our track record of providing services beyond the design phase. Construction administration, along with daily construction inspection, monitoring and reporting, are vital aspects of a successful project. We encourage you to contact any of the past and current clients listed in the proposal.

We are pleased to present our qualifications to you and your staff for consideration. We look forward to the opportunity to expand on our qualifications in a more personal setting. Please don't hesitate to contact me if you have any questions concerning this proposal.

Sincerely,

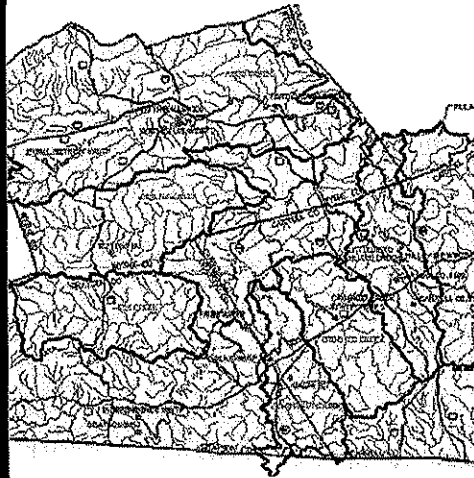
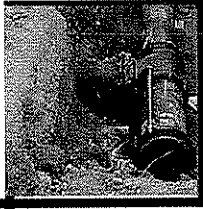
ANDERSON & ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "Joe M. Pack", with a stylized flourish at the end.

Joseph M. Pack, PE  
Project Manager

JMP/smc

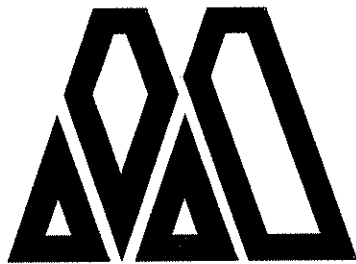
Enclosure



Proposal For  
Professional Engineering  
Services—  
Coaldale/Bramwell Hill  
Waterline Design

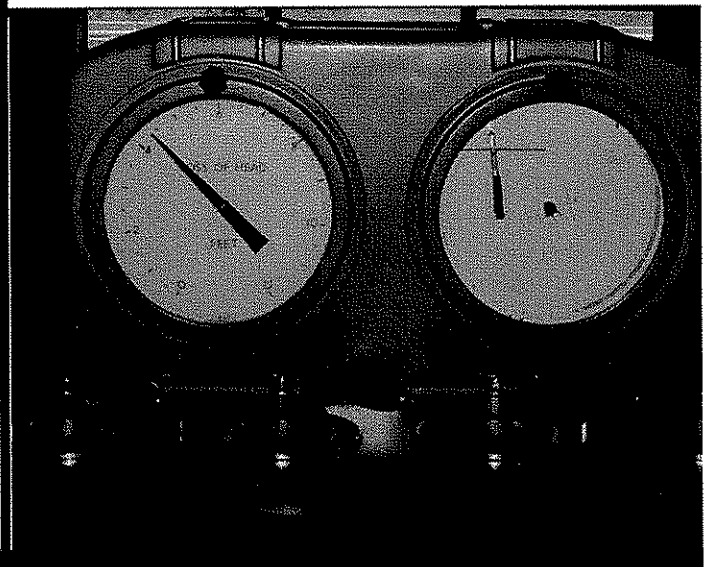
Submitted to:

Purchasing Division  
2019 Washington Street,  
East  
Charleston, WV 25305-  
0130



Anderson & Associates, Inc.

innovative. engineering. solutions.





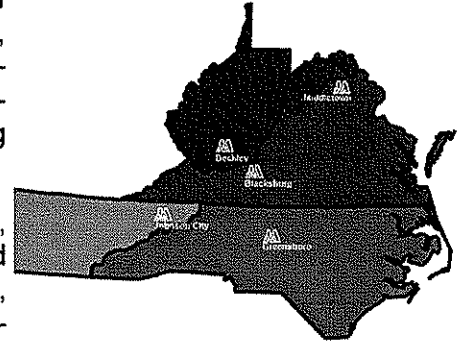
# Table of Contents

<b>I.</b>	<b>Firm Overview</b>	<b>1</b>
<b>II.</b>	<b>Management and Staffing Capabilities</b>	<b>2</b>
	A. Organizational Chart	
	B. Resumes	
<b>III.</b>	<b>Project Understanding</b>	<b>7</b>
<b>IV.</b>	<b>Project Approach</b>	<b>8</b>
<b>V.</b>	<b>Technical Capabilities</b>	<b>10</b>
<b>VI.</b>	<b>Workload &amp; Responsiveness</b>	<b>11</b>
<b>VII.</b>	<b>Recently Completed Projects</b>	<b>12</b>
<b>VIII.</b>	<b>References</b>	<b>19</b>
<b>IX.</b>	<b>Appendix A</b>	<b>20</b>



# I. Firm Overview

Anderson & Associates, Inc. is an employee-owned professional design services firm specializing in 'high tech - high touch' engineering. Founded in 1968, in Blacksburg, Virginia, A&A now has a total of five offices located in West Virginia, Virginia, North Carolina, and Tennessee. Core services include civil, environmental, and transportation engineering, surveying, planning and landscape architecture.



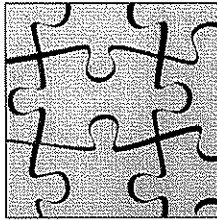
The firm specializes in the planning, design, and construction administration of public and private works. Institutional, municipal, state, industrial, and recreational projects encompass areas such as master planning, utilities, water, wastewater, stormwater, transportation, and site development. From utilizing the Global Positioning System to expedite surveys, to capitalizing on the network to offer distance education, A&A provides a broad spectrum of services.

At A&A, 'high tech' means leveraging new technologies to improve results for clients. Automation allows increased workloads, more cost-effective solutions, and quick, efficient turnaround on projects. Networking enables engineers and professionals to communicate instantly with each other, and with clients, from any location. The company's use of technology has even increased the range of services available. Non-traditional services include Geographic Information Systems, Information Technology Services, digital site simulations, database development, web site hosting and design, and more. The combination of traditional and non-traditional services leads to innovative, long-term, total solutions for clients and their futures.

A&A's consistent focus on improving responsiveness to clients reflects the 'high touch' element of the company. We start by investing in human engineering, fostering not only technical skills, but the total development of the individual. A determined effort is made to recruit top-notch people, assist them in personal and professional development, and allow them to be directly responsive to clients rather than to internal management. All full-time employees are also eligible to become owners through an Employee Stock Ownership Plan (ESOP). Your work will be performed by employee-owners who have a high stake in your satisfaction and are particularly concerned about upholding the firm's well-earned reputation. With our strong staff and years of building good relationships within the communities where we work, clients appreciate the benefits of cooperative, dedicated performance.

What is the bottom line? As every employee-owner at A&A knows, the success of the company depends upon the success of its clients. They are dedicated to using all the 'high tech' tools available to leverage their own personal 'high-touch' abilities, ensuring that all A&A clients continue to be prosperous. A&A clients can count on quality performance that exceeds their expectations.

## II. Management & Staffing Capabilities

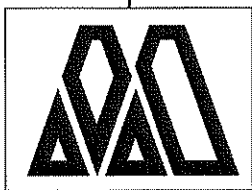
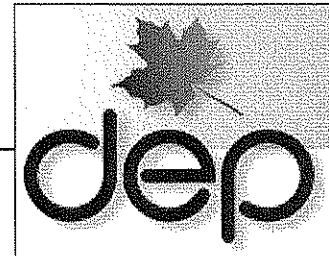


### A. Organizational Chart

The following organizational chart represents how the Project Team and personnel will be organized for this contract. These team members have been selected not only because they have extensive experience in providing these services that will be needed by the DEP, but also because they have teamed up numerous times to provide similar services under similar contracts to similar clients.



T. Lance Morgan, PE  
Officer-in-Charge



110 Employee Owners  
of Anderson &  
Associates



Joseph M. Pack, PE  
Project Manager



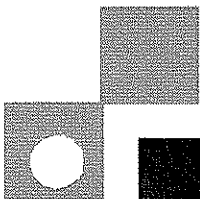
Richard Koger  
Project Engineer



Michelle Shannon  
Design Technician

### B. Resumes

The resumes of the Key Project Team Members are on the following pages.



# T. Lance Morgan, PE

Officer-In-Charge

Since joining Anderson & Associates, Mr. Morgan has gained extensive experience in water and wastewater design. He has worked in the field on surveying and inspection for waterline and wastewater projects, and he has put together technical documentation for specifications and funding applications. Mr. Morgan also has lab experience performing concrete and soils testing. His experience is highlighted below:

**Education:**

BS/1999/Bluefield  
State College/Civil En-  
gineering  
Technology

**Registration:**

Professional Engineer/  
VA/2005

Professional Engineer/  
WV/2005

**Years of Experience:**

With A&A since 1999

**Professional Mem-  
berships:**

American Society of  
Civil Engineers

National Society of  
Professional Engi-  
neers

West Virginia Rural  
Water Association

Chairman of the Cool  
Ridge-Flat Top PSD

Virginia Society of Pro-  
fessional Engineers

**Water Distribution Improvements**, Town of Bluefield, VA. Hydraulic analysis, design, and construction administration of major improvements to consolidate several pressure zones into a single zone. This included 2300 ft of new 12" main, 4000 ft of new 6" main, and a new 1 mil gal ground storage tank. Also included replacement of 6000 feet of old 4" to 8" water main. Project Manager.

**Ivanhoe/Rakestown Water Project**, Wythe County, VA. Preliminary Engineering Report to support CDBG funding application, design, and construction administration for water system improvements in the Ivanhoe/Rakestown community. Project design included a new booster station, a 100,000 gallon storage tank, 22,000 L.F. of new water main, betterment of service to 71 existing customers, and extension of service to 24 new customers. Project Engineer.

**Leak Detection Analysis and Preliminary Engineering Report**, Town of Saltville, VA. Worked with the Virginia Department of Health and the Virginia Rural Water Association to complete a leak detection analysis and system wide PER to assist the Town of Saltville in improving the accountability of their water system. Duties included an update of their water model, a tank draw down, field leak detection, and a review of their billing and maintenance records. Improvement suggestions were developed into Phases for the Town in a long term effort to improve accountability and reduce costs. VDH Planning Grant funding. Project Manager/OIC

**Leak Detection Analysis and Preliminary Engineering Report**, Town of Pocahontas, VA. Conducting a field analysis and tank draw down report to help the Town of Pocahontas find and repair water leaks within the water system. Work also included an audit of the Town's billing and meter reading procedures, mapping updates, and system maintenance evaluation. VDH Planning Grant funding. Project Manager/OIC

**Water Source Analysis**, Town of Saltville, VA. Worked with the Town of Saltville, Virginia to help identify an alternate source of water for the Town. Included in the study are a water loss audit, hydraulic model, and updates to the Town mapping. Funding was provided through a planning grant through MRPDC (Mount Rogers Planning District) and VDH. Project Manager.

**East Hungry Mother Water Project**, Smyth County, VA. A&A is currently working on the East Hungry Mother water project, which is an extension of the Smyth County Water systems affecting four residential areas including: Arden Lane, East Hungry Mother Drive, Red Stone Road, and Vance Drive. The project consists of installing approximately 30,000 ft of water lines and related appurtenances to provide public water service to areas that do not have adequate service, and improve service to areas that have experienced deterioration from old water lines. Project Manager.



# Joseph M. Pack, PE

Project Manager

Mr. Pack has over 10 years of experience working on engineering projects throughout West Virginia. He is experienced with water and sewer design, site design, and structural design, offering extensive knowledge of West Virginia regulations and funding agencies. His experience is highlighted below:

**Education:**

BS/1995/Bluefield  
State College  
Civil Engineering

**Registration:**

Professional Engineer/  
2006/WV

Professional Engineer/  
2002/VA

**Years of Experience:**

With A&A Since: 2005  
With other firms: 10  
years

**Water Extension Project**, Route 39/Twenty mile Creek, Gauley River PSD, Swiss, WV – Project consisted of the addition of 220 customers, approximately 80,000 lf of waterline, 2 water storage tanks (80,000 gallons and 110,000 gallons, respectively), 2 pump stations, and 1 existing pump station renovation to the existing system. Responsible for all aspects of project, from design, preparation of plans and specifications, permitting, bidding and construction management. Project Engineer.

**Water Extension Project**, Jerry's Fork to Town of Summerville, Gauley River PSD, Swiss, WV – PER and funding applications for project consisting of 580 customers, 110,000 lf of waterline, 200,000 gallon water storage tank, and 2 pressure reducing stations. Proposed Funding: RD, SCBG, DWTRF.

Project Engineer.

**Cowen Industrial Park Project**, Cowen, WV – Project consisted of the installation of approximately 10,000 lf of waterline, an 80,000 gallon water storage tank, 8,000 lf of gravity sewer line, and the renovation of an existing wastewater pump station. Responsible for guiding project through the bidding process and construction management. Funding: S.A.C. grant. Project Engineer.

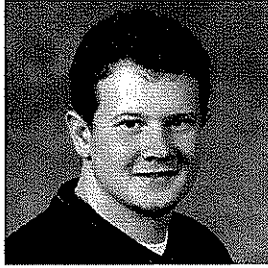
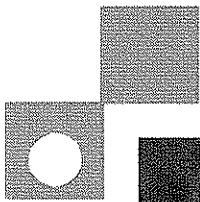
**Kilsyth Sewer Extension and Treatment Plant Upgrade**, Mount Hope, WV. – Project consisted of the addition of 40 customers, approximately 40,000 lf of gravity line, and the upgrade of the existing wastewater treatment plant. Responsible for all aspects of project, including design, preparation of plans and specifications, and permitting. Project Engineer.

**Bland Artesian 3300 PER**, Bland County, VA. The project consists of investigation of a potential water source involving the installation of approximately 100,000 ft of water lines and related appurtenances to provide public water service to areas that do not currently have adequate service, and to provide an alternative source to existing customers in the county. Project Manager.

**Bland Wastewater PER**, Bland County, VA. The project consists of installing approximately 40,000 ft of wastewater collection lines with all related appurtenances, along with the construction of a 0.4 MGD SBR wastewater treatment facility to provide public wastewater service to areas that do not have adequate service, and eliminate the current method of failing individual septic systems. Project Manager

**Fox Valley Road Water Project**, Smyth County, VA. The project consists of installing approximately 17,000 ft of water lines and related appurtenances to extend public water service to areas that do not have access to public water service. Project Manager





# Richard Koger

## Project Engineer

Mr. Koger has a broad range of experience in both the survey and engineering fields. He has performed boundary and topographic surveys, as well as inspections for land development and construction projects. His experience is highlighted below:

**Education:**

BS/2003/Bluefield  
State  
Civil Engineering

**Years of Experience:**

With A&A since: 2004  
With other firms: 4  
Years

**Turn-Key Asset Maintenance Services**, Statewide, VA. A&A performed inventory and inspection (100% baseline) of 5500 +/- tenth-mile segments of Virginia's Interstate system, including Interstates 81, 581, 64, 85, 295, and 288 for Virginia Tech. Surveyor.

**Axum and Longleaf Waterline Extension**, Smyth County, VA. Design of two waterline extensions to serve the residents of Axum Lane and Longleaf Lane in Smyth County. Services included preparation of base mapping, survey of the project alignment, and the development of plans and specifications for review and approval by the Virginia Department of Health and the Virginia Department of Transportation. This waterline extension connected 15 new homes to the county water system. Project Engineer.

**Copper Beech Offsite Utilities Survey**, City of Radford, VA. Survey for offsite utility design to increase water system reliability and pressures in the City of Radford. This project included approximately 1,100 feet of 8" line, 600 feet of 6" line, and a PRV to re-designate pressure levels in the City. Surveyor.

**Site Development, River Pointe**, Pulaski County, VA. Preliminary Design for 130 acre site with 120 single family and 110 townhomes at Herons Landing in Pulaski County for private developer. Includes preliminary water and sewer, storm drainage, layout and roadway design. Surveyor.

**VDOT Interstate Inventory Collection and Assessment**, Virginia Tech, Blacksburg, VA. Collect and perform assessment of asset items along Interstate system for Virginia Tech to do a statistical analysis on the data collected. Surveyor.

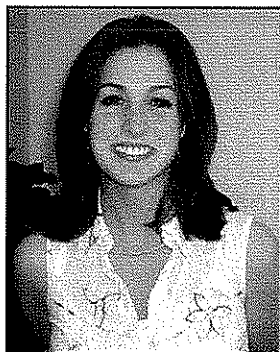
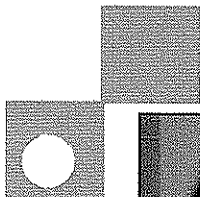
**Sanitary Sewer Study**, Town of Rural Retreat, VA. Perform inventory survey of Rural Retreat's existing sanitary sewer system - approximately 350 manholes located with size, type and invert information. Surveyor.

**Construction Staking**, Virginia Tech, Blacksburg, VA. Construction staking for new lane stadium expansion on west sideline. Surveyor.

**Site Development**, New Castle, VA. Feasibility study for development of 21 acre tract in New Castle, VA. Performed a topographic survey of 21 acres near New Castle along route 694 for private developer looking for 5' contours to aid in determining drainfield sites. Surveyor.

**Boundary Survey**, Woodstock, VA. Performed a boundary survey of Etna site in Woodstock for private client. Surveyor.

**Boundary Survey**, Marlville Water Co., Narrows, VA. 140-acre boundary survey comprised of multiple parcels of Marlville Subdivision in Narrows, VA. Surveyor.



# Michelle Shannon

## Design Technician

Ms. Shannon has gained valuable knowledge during her time as a design technician at Anderson & Associates of Virginia. She has a thorough knowledge of AutoCAD & Land Desktop Development which she has utilized on various projects including waterline extension projects & land development projects.

**Education:**

BS/2008/West  
Virginia University  
Institute of  
Technology/Civil  
Engineering

**Years of****Experience:**

With A&A since 2007

**Bland Artesian 3300 PER**, Bland County, VA. The project consists of investigation of a potential water source involving the installation of approximately 100,000 ft of water lines and related appurtenances to provide public water service to areas that do not currently have adequate service, and to provide an alternative source to existing customers in the county. Design Technician.

**Bland Wastewater PER**, Bland County, VA. The project consists of installing approximately 40,000 ft of wastewater collection lines with all related appurtenances, along with the construction of a 0.4 MGD SBR wastewater treatment facility to provide public wastewater service to areas that do not have adequate service, and eliminate the current method of failing individual septic systems. Design Technician.

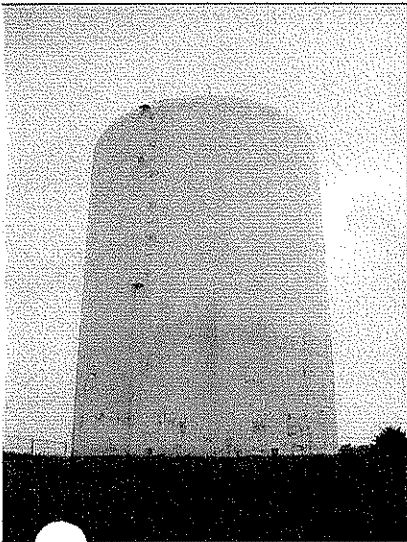
**Fox Valley Road Water Project**, Smyth County, VA. The project consists of installing approximately 17,000 ft of water lines and related appurtenances to extend public water service to areas that do not have access to public water service. Design Technician.

**Water Distribution Improvements**, Town of Bluefield, VA. Hydraulic analysis, design, and construction administration of major improvements to consolidate several pressure zones into a single zone. This included 2300 ft of new 12" main, 4000 ft of new 6" main, and a new 1 mil gal ground storage tank. Also included replacement of 6000 feet of old 4" to 8" water main. Design Technician.

**East Hungry Mother Water Project**, Smyth County, VA. A&A is currently working on the East Hungry Mother water project, which is an extension of the Smyth County Water systems affecting four residential areas including: Arden Lane, East Hungry Mother Drive, Red Stone Road, and Vance Drive. The project consists of installing approximately 30,000 ft of water lines and related appurtenances to provide public water service to areas that do not have adequate service, and improve service to areas that have experienced deterioration from old water lines. Design Technician.

# III. Project Understanding

The West Virginia Department of Environmental Protection is soliciting expressions of interest for professional engineering design services and construction monitoring services at the Coaldale/Bramwell Hill Waterline Extension Project in Mercer County, West Virginia. The project involves extending existing water service, currently provided by the Bluewell Public Service District, to residents located in the Coaldale Mountain and Bramwell Hill areas, currently with no public water service.

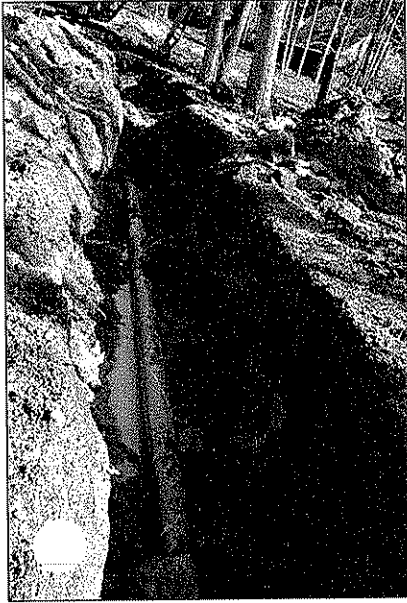


The project will involve the installation of approximately 35,000 linear feet of waterline of various size, one (1) booster station, a 75,000 gallon tank, service connections, fire hydrants, meter assemblies and all appropriate appurtenances to serve the 58 residents located in the project area.

Our engineers have had the opportunity to evaluate the project area first hand and are fully aware of the field conditions present which are normally experienced in southern West Virginia. These conditions pose additional issues which must be addressed during the design phase of the project. Possible locations for the proposed waterline, booster station and tank are limited due to narrow roadways, adjacent high walls associated with the roadway construction and steep terrain. Having designed many construction projects similar to the proposed project, the employee owners of Anderson & Associates have the necessary experience to undertake the project with a foresight focused on the final project.

# IV. Project Approach

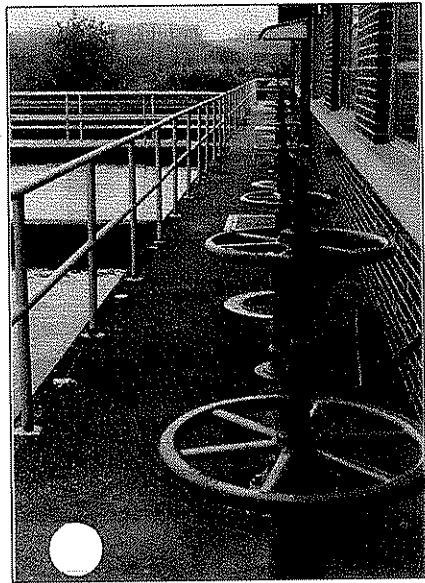
Based on our above understanding of the project, Anderson & Associates will work with the Department of Environmental Protection to provide complete bid-ready construction plans and specifications for the proposed project. Our approach leading to the successful completion of this project will be as follows:



- ◆ **Project Planning** – Our first task typically involves a project planning “kick off” meeting with appropriate personnel from each entity involved in the project to determine any specific issues that could effect the project outcome. This meeting will allow for potential project issues to be addressed, therefore minimizing any stumbling blocks which may arise during the design process.
- ◆ **Mapping/Surveying** – In order to obtain necessary mapping required for the design phase, we will coordinate a combination of aerial photography and field surveying, as applicable. Aerial photography will be utilized as a general means of locating the proposed waterline, booster station, tank, etc. Following, a detailed field survey will be conducted in order to provide greater detail of the project area. The gathered data will be integrated into mapping programs for the design of the project.
- ◆ **Easements/WVDOH Right of Way** – A priority during the initial stages of the design phase of the project is the focus on locating the proposed waterline within WVDOH Right of Way whenever possible. This limits the number of private landowner easements required for the project, as easement acquisition is, without question, the most time sensitive portion of any construction project. Any landowner negotiation needs to take place as soon as possible during the design phase to prevent any possible delays.
- ◆ **Geotechnical Investigations** – A geotechnical investigation will be necessary for the construction of a water storage tank. We have worked with Ackenheil Engineers Geologists, in this capacity, in the past and are fully aware of the need for field investigations to occur during the early stages of a design project.
- ◆ **Final Design Plans & Specifications** – We will design approximately 35,000 linear feet of waterline of various sizes, with all associated appurtenances, as previously stated, necessary for the project’s completion and submit bid-ready final design plans and specifications, along with a detailed construction and related services cost estimate. The design will incorporate aerial mapping, field surveying, design calculations and notes, hydraulic analysis of the project, etc., which all will undergo a detailed in-house quality control & assurance review conducted by a licensed professional engineer at Anderson & Associates not directly associated with the day-to-day design of the project.

## IV. Project Approach

- ◆ **Permits** – Anderson & Associates will apply for all necessary and applicable permits from governing jurisdictions concurrent with the final design review phase of the project.
- ◆ **Construction Administration & Inspection** – An Anderson & Associates resident project representative will be present during all work hours in order to provide detailed construction inspection including the preparation of daily inspection reports detailing the construction process. The Project Manager assigned to the project will perform the construction administration in order to provide a consistent project presence from the beginning design stages to the final closeout of the project.



# V. Technical Capabilities

Anderson & Associates, Inc. maintains the leading edge in technology to support our planning and design services.

A&A's (CAD) drafting and GIS solutions are accomplished by use of the latest AutoCAD, AutoCAD Map, and AutoDesk's Desktop Development suites.

## **Hydraulics & Hydrology Software:**

HEC HMS  
HEC-RAS  
HydroCAD  
HydroFlow Express

## **Survey Software:**

Microstation V8  
GEOPAK  
DGN CONFORM

## **Roadway Design Software:**

Microstation V8  
GEOPAK  
AutoTurn

## **Traffic Software:**

Synchro & Sim Traffic  
HCS+  
CORSIM  
Trip Generation  
SIDRA Intersection

## **Other Software:**

AutoCAD 2008  
Microsoft Office

Our specific experience for this work is water line design and understanding the permitting, bidding, and construction phases of a project. Each of these areas have a significant impact on how the plans and specifications are developed. We have design numerous water line projects from conception through final certification and we specialize in hydraulic and system efficiency evaluation. The WWA staff will be performing the modeling for this project but understand the technical aspects and long term ramifications of operation and maintenance is a key part of providing a quality product.

# VI. Workload & Responsiveness

## A. Workload

Based on our experience, Anderson & Associates, Inc. understands the need to provide quick turn around for each project assignment. Our ability to respond is based on our firm's location, knowledge of administrative procedures, overall organization and depth of experience.

Anderson & Associates has available staff to meet the project needs and is not contractually (or otherwise) over committed for work in the coming fiscal year.

## B. Responsiveness

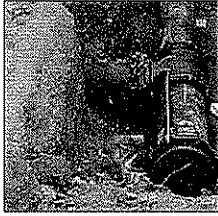
As an employee-owned company, we realize survival and prosperity requires us to provide you with quality service and to "be there" for you. Team members from our Beckley, WV office will serve for the Coaldale/Bramwell Hill Waterline Design project, allowing for close proximity and responsiveness to the project site. Our staff is able to reach the project site within 45 minutes from our Beckley office. Additionally, two members of the proposed design team reside in Mercer County and have the ability to be on site in a matter of minutes.

Our key personnel will be readily available to react to any needs which may arise throughout the duration of this project. Our staff is accustomed to meeting deadlines and expediting design. We will respond promptly to your questions whether they arise during the design, review, or construction phase of any project.

At Anderson & Associates, we understand project schedules and deadlines are important for reasons ranging from funding/budget issues to construction seasons and accountability.



## VII. Recently Completed Projects



On the following pages, you will find details of representative projects completed for clients of similar size and with a similar scope as this DEP project. These clients can adequately comment on the quality of work, timeliness, diligence, and our ability to meet budgets. Please feel free to contact any of these client references at your convenience.



# Saltville Leak Detection Analysis

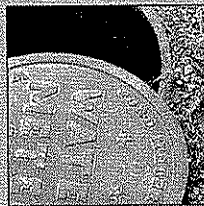
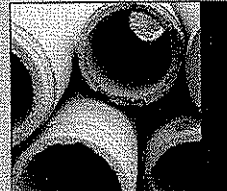
Town of Saltville, Virginia

**Firm's Responsibility:**  
Preliminary Engineering Report

**Owner:**  
Town of Saltville  
P.O. Box 730  
Saltville, VA 24370  
Mr. Steve Johnson  
276-496-5342

**Completion Date:**  
2006

**Project Fees:**  
\$25,000



Anderson & Associates worked with the Virginia Department of Health and the Virginia Rural Water Association to complete a leak detection analysis and system wide PER to assist the Town of Saltville in improving the accountability of their water system. Duties included an update of their water model, a tank draw down, field leak detection, and a review of their billing and maintenance records. Improvement suggestions were developed into Phases for the Town in a long term effort to improve accountability and reduce costs.

Funding was through VDH Planning Grant.

# Red Stone, Arden, & Vance Water Design

Smyth County, Virginia

**Firm's Responsibility:**

Planning, Design, Contract  
Administration, Inspection

**Owner:**

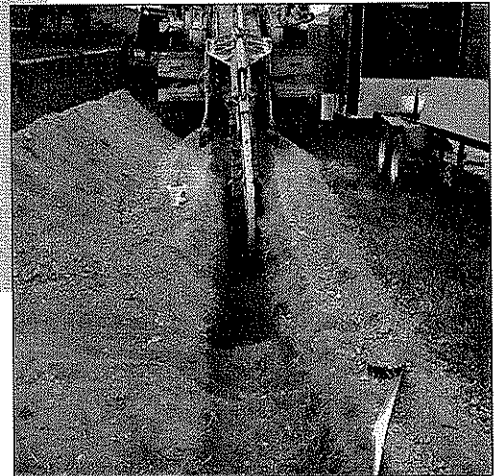
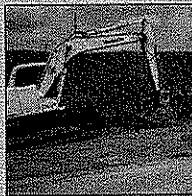
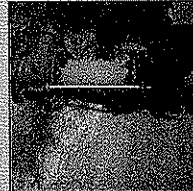
Smyth County  
121 Bagley Circle, Suite 100  
Marion, VA 24354  
Mr. Scott Simpson, PE  
276-783-3298

**Completion Date:**

December 2007

**Project Fees:**

\$350,000



The Red Stone, Arden & Vance Water Design was an extension of the Smyth County Water systems affecting four residential areas within the County including Arden Lane, East Hungry Mother Drive, Red Stone Road, and Vance Drive. The project consisted of installing approximately 25,000 feet of water lines and related appurtenances to provide public water service to areas that did not have adequate service, and improve service to areas that have experienced deterioration from old water lines.

# Lucky Lane Water/Sewer PER

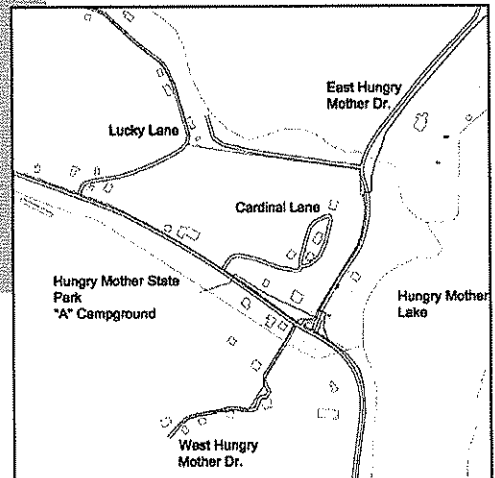
Smyth County, Virginia

**Firm's Responsibility:**  
Preliminary Engineering Report

**Owner:**  
Smyth County  
121 Bagley Circle, Suite 100  
Marion, VA 24354  
Mr. Scott Simpson  
276-783-3298

**Completion Date:**  
May 2007

**Total Fee:**  
\$28,000



Anderson & Associates, Inc. was contracted by Smyth County for a Preliminary Engineering Report (PER) to study the existing water and sewer system and consider options for expanding services into the residential area near the entrance of Hungry Mother Park. The study examined operating pressures, available fire flows, storage capacity of the system, topography, resident surveys and surrounding utilities.

Some problems included a waterline that was small and limited in its capacity, failing septic systems, and questionable water quality. The residents have asked the Smyth County Board of Supervisors for assistance in supplying a clean, reliable water source as well as dependable sewage collection and treatment along this corridor.

Multiple options were evaluated to determine the most feasible alternative for supplying the potential customers with safe, potable water along with adequate means for wastewater management. It was determined that the best improvement for water would be to construct a 6-inch watermain to serve potable water to the resident along Lucky Lane. The line would be constructed with a connection to the 6-inch line along East Hungry Mother Drive and follow along the driveway marked as "Lot 2 entrance" in the Hungry Mother State Park. From there the line would follow along Lucky Lane. The project would provide new water service to 18 existing residences.

This would serve the residents along Lucky Lane that are not currently being serviced with public water at this time. Since the existing system being connected to be a recently installed line, no improvements will be necessary. The project would provide new water service to 18 existing residences.

# Smyth County Water Study

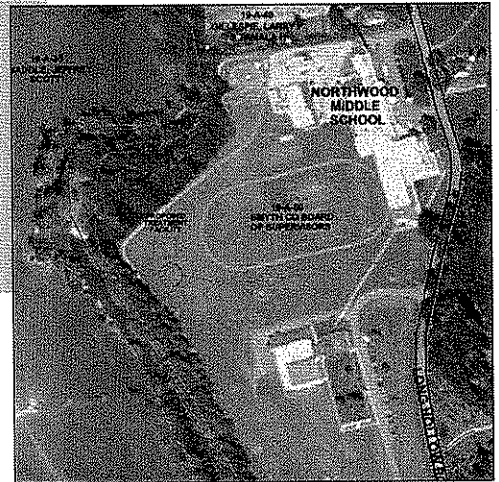
Smyth County, Virginia

**Firm's Responsibility:**  
Preliminary Engineering Report

**Owner:**  
Smyth County  
121 Bagley Circle  
Suite 100  
Marion, VA 24354  
Mr. Scott Simpson, P.E.  
276-783-3298

**Completion Date:**  
2008

**Project Fees:**  
\$50,000



The study consisted of an update to county waterline mapping and analysis of the hydraulic model system wide to evaluate current conditions being experienced by the county. The distribution system was reviewed to provide recommendations on potential renovations and extensions. A potential water source was analyzed in order to determine if the source met current regulated standards and could possibly be developed into a source for a water treatment facility.



# Water System Improvements

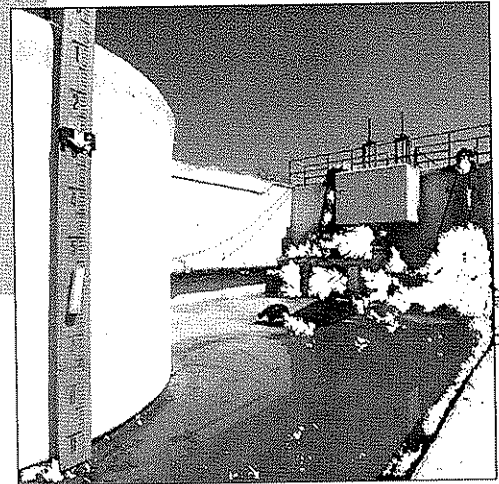
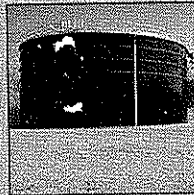
Town of Bluefield, Virginia

**Firm's Responsibility:**  
PER & Design

**Owner:**  
Town of Bluefield  
1121 Virginia Avenue  
P.O. Box 1026  
Bluefield, VA 24605  
Mr. Todd Day  
276-322-4622

**Completion Date:**  
2006

**Project Fees:**  
\$2,987,400



The Town of Bluefield retained Anderson & Associates, Inc. to prepare a Preliminary Engineering Report (PER) and ER for Water System Improvements that would improve and expand water service within the community. While primarily an improvement to the existing alignment, the proposed action will allow service to areas that are at elevations too high to be served by the existing system. The Town will also provide "gravity" water service to some areas presently served by booster pumps. The planned tank will provide storage for fire flows and increased system reliability.

Phase I includes:

- Design and Construction of a 1 million gallon Hickory Hills water storage tank
- Approximately 365 LF of 6-inch water main
- 13,060 LF of 12-inch water main
- Water Treatment Plant upgrades

Phase 2 includes:

- Design and Construction of a 1 million gallon Industrial Park water storage tank
- Approximately 2,250 LF of water main
- A new raw water intake
- Solids handling for the plant

# East Hungry Mother Water Project

Smyth County, Virginia

## Firm's Responsibility:

Planning, Design, Bidding & Construction  
Administration

## Owner:

Smyth County  
121 Bagley Circle, Suite 100  
Marion, VA 24354  
Mr. Scott Simpson, PE  
276-783-3298

## Completion Date:

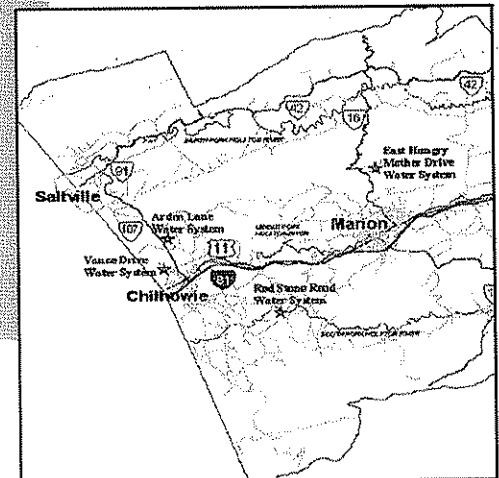
2007

## Project Fees:

\$346,000

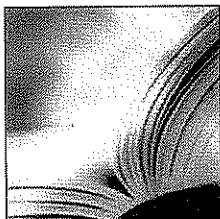
## Project Cost:

\$1,100,000



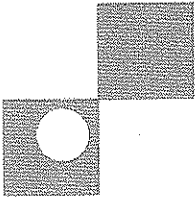
The East Hungry Mother Water Project was an extension of the Smyth County Water systems affecting four residential areas within the County including Arden Lane, East Hungry Mother Drive, Red Stone Road, and Vance Drive. The project consisted of installing approximately 25,000 feet of water lines and related appurtenances to provide public water service to areas that did not have adequate service, and improve service to areas that have experienced deterioration from old water lines.

## VIII. References



The listed clients can adequately comment on the quality of work, timeliness, diligence, and our ability to meet budget. We strongly encourage you to contact these clients and ask any additional questions regarding the services that A&A offers.

Locality	Contact	Phone/Fax/Email
Town of Saltville, VA P.O. Box 730 Saltville, VA 24370	Mr. Steve Johnson Town Manager	276.496.5342 276.496.4814 (fax) <a href="mailto:town-hall@saltville.org">town-hall@saltville.org</a>
County of Smyth, VA 121 Bagley Circle Suite 100 Marion, VA 24354	Mr. Scott Simpson, P.E. County Engineer	276.783.3298 x207 276.783.9314 (fax) <a href="mailto:ssimpson@smythcounty.org">ssimpson@smythcounty.org</a>
Town of Pocahontas VA P.O. Box 128 Pocahontas, VA 24635	Mr. Greg Jones Clerk/Treasurer	276.945.9522 276.945.9904 (fax) <a href="mailto:pocahontasva@comcast.net">pocahontasva@comcast.net</a>
Mount Rogers Planning District Commission 1021 Terrace Drive Marion, VA 24354	Mr. Brian Martin Public Administration Specialist	276.183.5103 <a href="mailto:bmartin@mrpdc.org">bmartin@mrpdc.org</a>



# IX. Appendix A

West Virginia Department of Environmental Protection  
AML Consultant Confidential Qualification Questionnaire



## WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

## AML CONSULTANT CONTRACTUAL QUALIFICATION QUESTIONNAIRE

Attache "B"

PROJECT NAME Coaldale/Bramwell Hill Waterline Design		DATE (DAY, MONTH, YEAR) 7/10/2008		FEIN 54-1035891	
1. FIRM NAME Anderson & Associates of Virginia, INC		2. HOME OFFICE BUSINESS ADDRESS 100 Ardmore Street Blacksburg, VA 24060		3. FORMER FIRM NAME N/A	
4. HOME OFFICE TELEPHONE 540-552-5592		5. ESTABLISHED (YEAR) 1968		6. TYPE OWNERSHIP Corporation	
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE 93 Virginia St. Beckley, WV 25801; 304-461-0020; T. Lance Morgan, PE; 5					
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Ken Anderson, CEO		8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS R.A. "Chip" Worley, President, 540-552-5592 Gary S. Crouch, Senior Vice President, 540-552-5592 Mary Ann S. Bonadeo, Vice President of Operations, 540-552-5592 James R. Billups, Regional Vice President, 336-931-0910 Trevor Kimzey, Vice President, Land Development, 540-552-5592 Bill Bushman, Vice President, Transportation, 540-552-5592 Stevie Steele, Associate Vice President, Municipal Engineering, 540-552-5592 Zeke Ratcliffe, Associate Vice President, Administration, 540-552-5592 Catherine Van Noy, Vice President, Business Development, 540-552-5592 Dale Lehnig, Regional Manager, Middletown, 540-869-2501 Lance Morgan, Regional Manager, Beckley, 304-461-0020			

## 9. PERSONNEL BY DISCIPLINE

18 ADMINISTRATIVE	—	2 LANDSCAPE ARCHITECTS	—	STRUCTURAL ENGINEERS
— ARCHITECTS	—	1 MECHANICAL ENGINEERS	19 SURVEYORS	
— BIOLOGIST	—	— MINING ENGINEERS	2 TRAFFIC ENGINEERS	
19 CADD OPERATORS	2	— PHOTOGRAMMETRISTS	— OTHER	
— CHEMICAL ENGINEERS	—	— PLANNERS: URBAN/REGIONAL		
44 CIVIL ENGINEERS	—	1 SANITARY ENGINEERS		
1 CONSTRUCTION INSPECTORS	—	— SOILS ENGINEERS		
— DESIGNERS	2	— SPECIFICATION	115 TOTAL PERSONNEL	
— DRAFTSMEN		WRITERS		

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 2

\*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

Questi "aire".

[illegible]

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

YES Description and Number of Projects: Anderson & Associates has performed more than a dozen AML Mine Reclamation Engineering projects in Virginia.

B. Is your firm experienced in Soil Analysis?

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: Every project involving waterline extension, booster stations, tanks, etc. undergoes a thorough hydraulic analysis performed by our engineers. We utilize Watergems V8 for AUTOCAD for the Analysis.

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

NO

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

YES Description and Number of Projects: See Section 15 for relevant experience.

NO

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

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.) Joseph M. Pack, PE Project Manager		YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 1  YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 7
Brief Explanation of Responsibilities Mr. Pack has over 13 years of experience working on engineering projects throughout Virginia and West Virginia. His expertise has been with transportation system design, water and sewer design, site design, and structural design, offering extensive knowledge of West Virginia regulations. Mr. Pack has been Project Manager on many successful waterline extension projects and has a thorough knowledge of all project aspects from preliminary design through construction administration and inspection.			
EDUCATION (Degree, Year, Specialization) BS/1995/Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  REGISTRATION (Type, Year, State) Professional Engineer/ 2006/WV Professional Engineer/ 2002/VA			
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.) T. Lance Morgan, PE Regional Manager		YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 1  YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 10
Brief Explanation of Responsibilities As regional manager of Anderson & Associates of Virginia's Beckley office, Mr. Morgan oversees the engineering design of all projects undertaken by this office. His extensive knowledge of water & wastewater design allows him to perform top level quality assurance & quality control of every project A&A's Beckley office designs.			
EDUCATION (Degree, Year, Specialization) BS/1999/ Civil Engineering Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineers National Society of Professional Engineers West Virginia Rural Water Association Chairman of the Cool Ridge-Flat Top PSD			

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data; keep to essentials)			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE 8	
Richard Koger Project Engineer	YEARS OF AML DESIGN EXPERIENCE: N/A	YEARS OF AML RELATED DESIGN EXPERIENCE: N/A	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 5
Brief Explanation of Responsibilities			
Mr. Koger has a broad range of experience in both the survey and engineering fields. He has performed boundary and topographic surveys, as well as inspections for land development and construction projects. He has a thorough knowledge of AUTOCAD & other design programs which are utilized during the design of waterline extension projects. Mr. Koger has successfully integrated his construction inspection experience into his role of project engineering, assuring his designs reflect real world conditions in the construction field.			
EDUCATION (Degree, Year, Specialization) BS/2003/Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) N/A	
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 1	
Michelle Shannon Design Technician	YEARS OF AML DESIGN EXPERIENCE: N/A	YEARS OF AML RELATED DESIGN EXPERIENCE: N/A	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 1
Brief Explanation of Responsibilities			
Ms. Shannon has gained valuable knowledge during her time as a design technician at Anderson & Associates of Virginia. Ms. Shannon has a thorough knowledge of AUTOCAD & Land Desktop Development which she has utilized on various projects including waterline extension projects & land development projects.			
EDUCATION (Degree, Year, Specialization) BS/2008(fall)/Civil Engineering			
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

Software:

Autocad 2008

Civil 3D Design 2008

Hydraflow Express 2006

Watergems Version 8

Microsoft Excel

Autodesk Land Desktop 2006

Microsoft Word

Equipment:

(6) Dell Computers (Various makes & models)

(1) HP Laserjet 5100

(1) Tektronix Phaser 780

(1) HP Designjet 1050

(1) HP Designjet 650

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
Upper Guyandotte Amigo-Devils Fork Wastewater Project Wastewater Amigo, WV	Upper Guyandotte Watershed Association PO Box 171 Mullens, WV 25882	Consulting, Design	\$1,150,000	
Lucky Lane Water and Wastewater Improvements Smyth County, VA	Smyth County, VA 121 Bagley Circle, Suite 100 Marion, VA 24354	PER, Design, Inspection, CA	\$1,300,000	
Saltville Leak Detection PER Saltville, VA	Town of Saltville VA P.O. Box 730 Saltville, VA 24370	Assembly of PER & recommendation of line replacement	\$5,000,000	
Groseclose Sewer Project Smyth County, VA	Smyth County, VA 121 Bagley Circle, Suite 100 Marion, VA 24354	Planning & funding, CA Inspection	\$3,900,000	
Bland County Wastewater PER Bland County, VA	County of Bland VA P.O. Box 510 Bland, VA 24315	Wastewater PER, Funding Assistance	\$9,000,000	
Clearwell Replacement Project Pocahontas, VA	Town of Pocahontas VA P.O. Box 128 Pocahontas, VA - 24635	Planning, design, CA, Inspection	\$300,000	
Fox Valley Road Waterline Extension Smyth County, VA	Smyth County, VA 121 Bagley Circle, Suite 100 Marion, VA 24354	Design, construction admin & inspection	\$1,500,000	
TOTAL NUMBER OF PROJECTS: 53 (West Virginia office only)			TOTAL ESTIMATED CONSTRUCTION COSTS: \$22,150,000	





17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD		THE DESIGNATED ENGINEER OF RECORD		
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Bluefield Water System Improvements Bluefield, VA	Town of Bluefield VA P.O. Box 1026 Bluefield, VA 24605-4026	\$2,987,400	2006	YES
East Hungry Mother Water Project Smyth County, VA	Smyth County 121 Bagley Circle, Suite 100 Marion, VA 24354	\$1,100,000	2007	YES
Red Stone, Arden & Vance Water Design Smyth County, VA	Smyth County 121 Bagley Circle, Suite 100 Marion, VA 24354	\$350,000	2007	YES
Bland Artesian 3300 PER Bland County, VA	County of Bland VA P.O. Box 510 Bland, VA 24315	\$25,000	2007	NO
Henrytown Road Waterline Replacement Saltville, VA	Town of Saltville P.O. Box 730 Saltville, VA 24370	\$210,000	2008	YES
Saltville Leak Detection Analysis Saltville, VA	Town of Saltville P.O. Box 730 Saltville, VA 24370	\$25,000	2006	
Smyth County Water Study Smyth County, VA	Smyth County 121 Bagley Circle Suite 100 Marion, VA 24354	\$50,000	2008	NO

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

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

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.

Although Anderson & Associates' Beckley, West Virginia office is designated at the primary office for this project, there are 115 employee owners of Anderson & Associates prepared to contribute their vast experience and knowledge to this project. In addition to the experience listed in this proposal, A&A offers services in the fields of surveying, mine reclamation, GIS Mapping, environmental engineering among others.

20. The foregoing is a statement of facts.

Signature: Thomas L. Morgan

Printed Name: THOMAS L. MORGAN

Title: REGIONAL MANAGER

Date: 10-7-2008