

DEP 15212:

Thorpe Refuse Pile Design

11/30/2010

SUBMITTED TO: DEPARTMENT OF
ENVIRONMENTAL PROTECTION,
OFFICE OF THE AML&R

SUBMITTED BY: WILBUR SMITH ASSOCIATES

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WV PURCHASING
DIVISION

November 30, 2010



West Virginia Environmental Protection Department
Office of Abandoned Mine Lands and Reclamation
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305-0130
Attn: Chuck Bowman

Re: Thorpe Refuse Design, RFQ #15212

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 **Cherokee Complex Design** project in McDowell 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. Our project manager is **Mr. George J. (Joe) Crittenden**. Joe brings more than 34 years of civil and site design experience, including 10 years of experience with the AML programs. The staff in the Charleston, WV office will support Joe and is 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 **Novel Geo-Environmental (NGE)**. This firm is a local West Virginia firm that holds the same standard of excellence as WSA. NGE will supply the geotechnical 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

A handwritten signature in black ink, appearing to read "Wesley O. Stafford", is written over the company name.

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

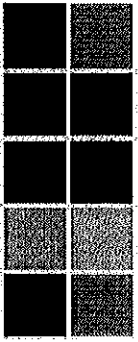
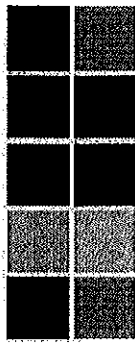


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Wilbur Smith Associates

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.*

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

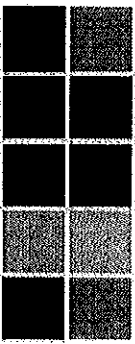
Geotechnical Investigation and Reports

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 & deep foundation design
- slope stability analyses
- earth retaining structures & 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, Novel Geo-Engineering, PLLC (NGE), to fully provide these services to DEP. NGE is a full-service geotechnical and environmental engineering firm with offices located in St. Albans, West Virginia, and Pittsburgh, Pennsylvania. Led by an experienced management team, NGE provides quality geotechnical services to a variety of clients in both the private and public industry and government sectors.

In business since 2002, NGE is one of the fastest growing engineering consulting firms in the country. See extended company overview at the end of this section.



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, & interchanges
- HOV and HOT lanes
- parkways and landscaping
- roadway widening, surfacing, and rehab
- grade separation structures, roadway, & 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
- 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 WVDOH 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



171 Montour Run Road
Moon Township, PA 15108
(412) 722-1970

650 MacCorkle Avenue West
St. Albans, WV 25177
(304) 201-5180



COMPANY OVERVIEW

NGE, LLC is a full-service environmental and geotechnical engineering firm with offices in Pittsburgh, Pennsylvania and St. Albans, West Virginia. Led by an experienced management team, NGE provides high quality consulting services to a variety of clients in both private industry and government sectors.

Established in 2002, NGE is one of the fastest growing engineering consulting firms in the country.

Who is NGE?

Our staff includes professional engineers, geologists, scientists, construction manager, and foreman with experience in a broad range of technical disciplines. Our management team averages over 20 years of experience per person.

Why NGE?

NGE has the necessary resources to fulfill the needs of clients in-house, yet small enough to provide the personal focus each client deserves. With smaller overhead than larger companies, NGE can provide exceptional services at lower cost.

NGE is a certified Disadvantaged Business Enterprise (DBE) in West Virginia, Pennsylvania, Ohio, Maryland, and New Jersey. NGE is also certified by the Small Business Administration as an 8(a) Small Disadvantaged Business.

Contacts:

Pennsylvania Office

Amy Veltri, President
171 Montour Run Road
Moon Township, PA 15108
(412) 722-1070 (ph)
(412) 722-1929 (fax)
aveltri@ngeconsulting.com

West Virginia Office

John Nottingham, Vice President
650 MacCorkle Avenue West
St. Albans, WV
(304) 201-5180 (ph)
(304) 201-5180 (fax)
jnottingham@ngeconsulting.com

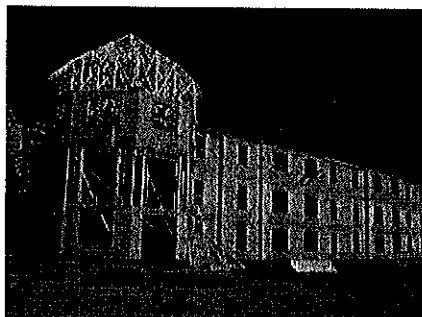
www.ngeconsulting.com



GEOTECHNICAL ENGINEERING

The professional staff of NGE has extensive experience in analyzing and evaluating the natural complexities and variabilities present in the subsurface. With in-house drilling and laboratory equipment, NGE has the tools to investigate soil, bedrock, and groundwater conditions and evaluate their effect on a given project. Whether it's foundation bearing capacity, site grading/slope configurations, or retaining wall design, NGE has the resources to obtain and analyze the subsurface data necessary for project completion. A sampling of the geotechnical services NGE provides includes the following:

- Foundation investigations:
 - Commercial, residential construction
 - WVDOH bridge and roadway
 - Airport geotechnical design
 - Public and private utilities (water storage tanks, wastewater treatment plants, communications towers, etc.)
- Landslide investigation/remediation: slope design, retaining wall design
- Forensic engineering/insurance investigation
- Mine subsidence investigations/ground stabilization
- Dam design/rehabilitation
- Pavement analysis and design
- Groundwater seepage analysis and design



DRILLING SERVICES

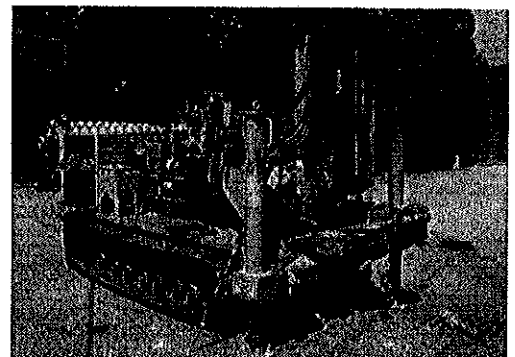
NGE is equipped with a variety drilling equipment to meet the needs of our clients even in the most demanding of environments. This includes:

- Mobile truck-mounted drill rig
- Acker Soil Scout track-mounted drill rig
- CME 45 track-mounted drill rig
- Portable tripod drill
- Dynamic Cone Penetrometer

All of our drill rigs are equipped with hollow stem augers and are capable of conducting Standard Penetration Testing (SPT). The track drills have wireline rock coring capabilities. Due to its compact size, the Acker Soil Scout is able to reach areas that are often inaccessible to larger drill rigs.

If an area is inaccessible to conventional drilling equipment (such as inside buildings) NGE can obtain subsurface information using portable equipment such as the tripod drill and dynamic cone penetrometer.

NGE also provides monitoring well installation services that meet the requirements of the State of West Virginia Certified Monitoring Well Driller Program.

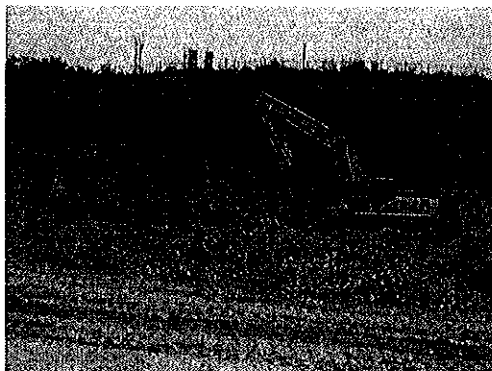




CONSTRUCTION MONITORING AND INSPECTION SERVICES

NGE offers inspection services to support a wide variety of construction projects, including highway, building, and airport. Our technicians are qualified and certified in a variety of services and will meet the specific needs of the client in an efficient and competent manner. NGE is also a West Virginia Certified DBE firm as well as Federal Disadvantaged Business (8(a)). NGE can provide and manage the following services:

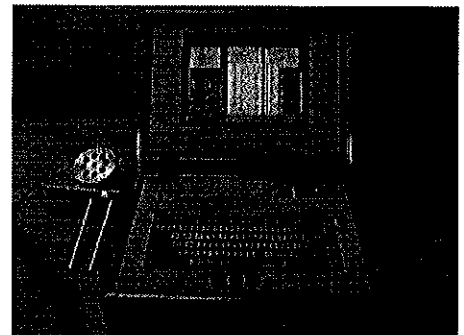
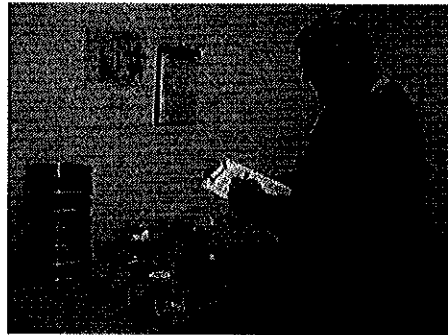
- Materials testing and analysis (concrete, asphalt, fill placement)
- Independent construction inspection
- Contractor submittal and shop drawing review
- Documentation and process verification
- Bidding assistance and analysis
- Cost estimating and cost control monitoring
- Design review
- Value engineering
- Project partnering
- Quality assurance monitoring



LABORATORY TESTING SERVICES

NGE can provide laboratory geotechnical testing in accordance with ASTM standards under controlled conditions to further estimate the engineering properties of soil and rock materials. Typical laboratory soil testing includes :

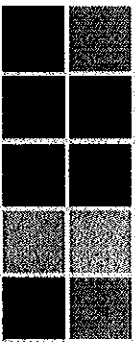
- Natural moisture content
- Atterberg liquid and plastic limits
- Standard, modified and 1 point Proctor
- Grain size distribution



CROSSHOLE SONIC LOGGING (CSL)

NGE provides Crosshole Sonic Logging (CSL) to test the integrity of drilled concrete shafts. CSL testing is a non-destructive method that checks the homogeneity and integrity of concrete in a deep foundation by sending ultrasonic pulses through the concrete from one probe to another. The test measures the propagation time and relative energy of the ultrasonic pulse between parallel access tubes (access tubes typically consist of 2 inch diameter steel tubes attached to the drilled shaft reinforcement cage). The pulse arrival, aka first arrival time or FAT, and the relative energy are affected by the concrete. Uniform concrete yields consistent arrival times with reasonable wave speed and energy. Non-uniformities such as zones of poor quality concrete, honeycombing, voids, and soil inclusions exhibit delayed arrival times with corresponding reduced signal energy.

NGE's broad range of experience in each of the previously listed services enables us to provide our clients with high quality geotechnical engineering, remediation and construction services while meeting budgets and deadlines.



Project Management and Design Team

WSA commits its team of professionals to the Department of Environmental Protection for this project. We anticipate that WSA staff can be fully and immediately dedicated to the project under this agreement, if chosen. *Key personnel include:*

George J. Crittenden *Project Manager*

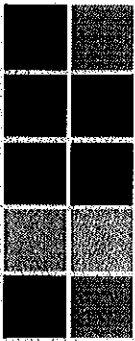
Joe brings more than 34 years of civil and site design experience, including 10 years of experience with the AML program. His specific project experience includes obtaining 404/401 permitting from the U.S. Army Corps of Engineers and NPDES Permits, as well as technical and design work on the Marrowbone Waterline Extension in Mingo County, the Ragland-Delbarton Water Supply project in Mingo County, and the Glen Fork / Sabine AML Feasibility and Waterline Extension Study in Wyoming County. He recently served as Project Manager and Technical Lead for the Terry Branch Portals and Refuse Project. His project responsibilities for this assignment will include:

- Formulating the Project Work Plan.
- Establishing the Project Schedule.
- Ensuring that all project milestones are met through the coordination and monitoring of the project schedule and budget for the entire project team.
- Conducting meetings with WV DEP to document decisions or open items (project issues) and to publish meeting minutes that document those decisions/open items.
- Identifying and monitoring all open items/project issues so that all key project information is acted upon/ responded to in a timely and professional manner.
- Participating with the team in site visits in order to assess existing conditions and to collect and verify all appropriate program needs and requirements.
- Confirming that all work is being performed in accordance with the project scope and guidelines.
- Coordinating and monitoring of project engineers/ architects to ensure consistency and quality of work via regular meetings.
- Communicating among all members of the project team to ensure the consistency and quality of work via regular meetings
- Communicating among members of the team to ensure the consistent application of project standards, schedules and date decisions

Wesley Stafford, PE, AICP *Project Director*

Wesley Stafford has more than 22 years of experience in highway planning and design. As a consultant he has been the project manager for numerous traffic engineering projects and environmental documents, including developing The West Virginia Statewide Multimodal Plan. His previous experience includes working as both a consultant and with the states of West Virginia and North Carolina. He led NCDOT Statewide Planning Branch's Small Urban Unit. The unit provided multimodal transportation planning expertise to municipalities across North Carolina and plans for the coordinated development of the transportation systems for counties, planning regions, and municipalities on a statewide basis. Mr. Stafford is the project manager for the West Virginia Multimodal Statewide Transportation Plan and has been instrumental in the Beckley Z-Way Design Study, and WWW Transportation Study. Mr. Stafford also worked with NCDOT staff to develop traffic forecast for planning and design branches of the department.

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Larry Clegg
QA/QC Manager

Larry Clegg began his career in 1987 as an engineering assistant. He joined WSA in 2000 in the Charleston, WV office as a highway design manager, where he focused on providing design services relating to all aspects of highway design. He now serves as a senior project manager, where his major duties include managing budgets, writing proposals, and attending proposal interviews. Larry's contributions to WSA involve a wide range of design projects from studies to final design and have typically included small realignments, interstate weigh station, rural expressways, and urban interstates. He has earned respect in his field, in part, by his strong relationships with clients, as well as his comfort level in all phases of highway design from conception to completion on just about every classification of facility. With significant experience in developing budgets, scopes, and schedules and matching to the firm's resources, Larry has learned to understand and meet the client's needs.

Wes Simpson, PE
Hydrology

Mr. Simpson has over 14 years of experience designing award winning bridge and structure projects. His bridge design experience includes developing plans for new and rehabilitated structures. His design experience ranges from a two-cell concrete box culvert, to 1400-foot-long curved bridge. His experience includes concrete, steel and timber bridges for hydraulic, overpass, and pedestrian structures. He has extensive experience conducting structural analysis, hydrology and hydraulic analysis, hydraulic permitting, and is fluent in numerous software packages, which apply to structural design.

William Carroll
Environmental Scientist

Will Carroll began his career in 1998 as an environmental scientist. He joined Wilbur Smith Associates' Knoxville, TN office in 2005 and has provided erosion control, wetland delineation, stream identification, endangered species surveys, groundwater monitoring, and Phase I and II environmental assessments for both public and private sector clients. He has assisted in permitting and coordination with municipal, state, and federal agencies, and is familiar with NEPA regulations.

Reason W. Martin
Engineering Designer

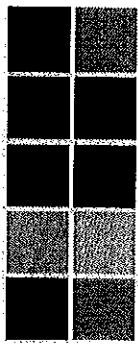
Mr. Martin is a civil engineering technology graduate from WVU Tech. He has 10 years of experience in surveying, design, drafting, and construction inspection in West Virginia and Virginia. His recent experience includes the U.S. 50 Traffic Operation and Safety Study in Mineral and Hampshire counties, U.S. 522 in Berkeley Springs, U.S. 220 Moorefield Junction Road in Hampshire County, and Route 2 Widening in Brooke County.

Jason B. Huddleston
Senior Engineering Technician

Mr. Huddleston is a 2001 graduate of WVU Tech and has eight years of experience as an engineering technician/designer. He has experience in roadway design, storm sewer design, structural drafting, and ditch design. In addition to his West Virginia work, Mr. Huddleston also has experience in Michigan, Arkansas, Virginia, Ohio, and Utah. Mr. Huddleston participated in the Gilliam Arch Bridge Replacement project in Mercer County along with other bridge projects in Virginia and Utah.

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Department of Environmental Protection, Office of AML&R



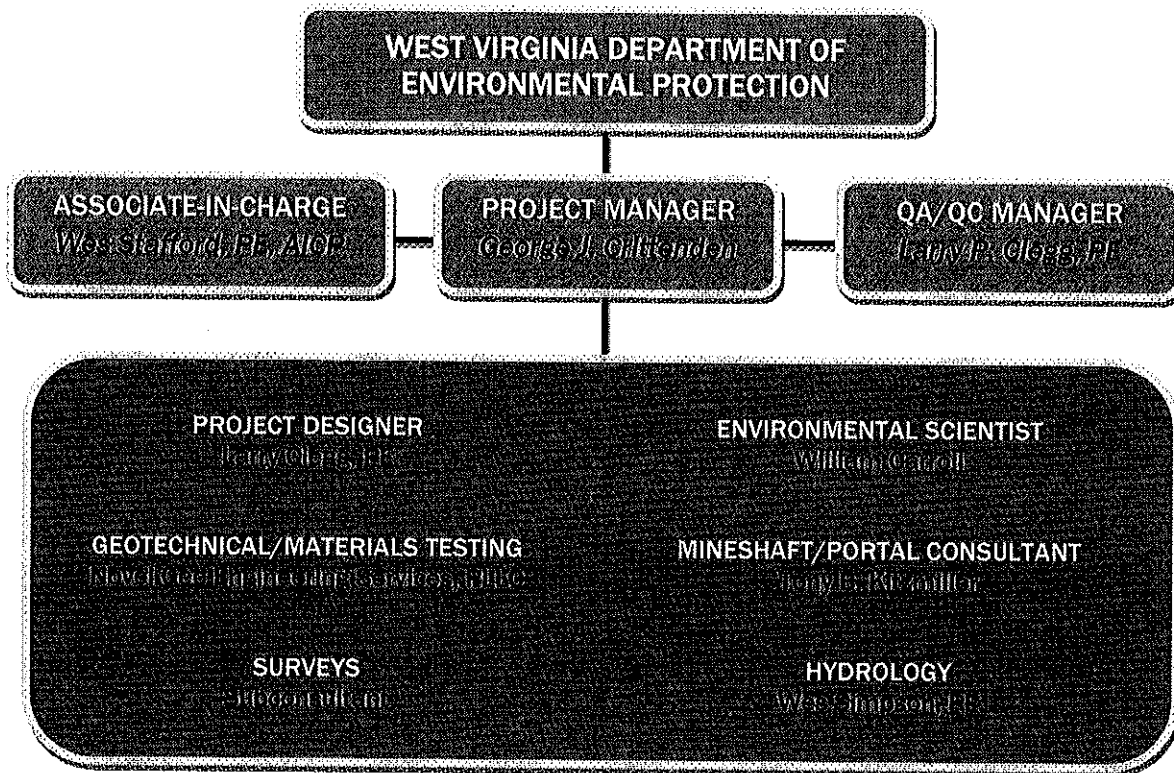
John E. Nottingham, P.E., P.S.
Geotechnical/Materials Testing

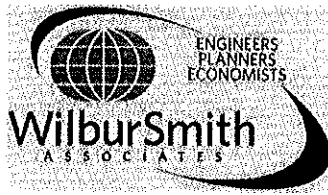
Mr. Nottingham has served as Principal Engineer for the West Virginia office of NGE since late 2002 after having managed Geotechnical Services at Triad Engineering. In this capacity, he has served as lead Geotechnical Engineer on a variety of government and commercial design and construction projects. His responsibilities on these projects include direction and coordination of all geotechnical engineering activities. Duties on these projects have included foundation investigation report production, foundation and retaining wall design, fill embankment and cut slope design, dam design and analysis, slope stability analysis, pavement design, design of drainage systems, supervision of subsurface drilling programs, field activity coordination, laboratory data computation and processing, performance of field work, client relations, and supervision of staff and project level geotechnical engineers.

Tony B. Kitzmiller
Mineshaft/Portal Engineer

Mr. Kitzmiller has over 37 years of experience in the design of water distribution systems, drainage systems, mine engineering, and civil engineering. He has experience with the supervision of design and construction for coal mining in Northern West Virginia, including water discharges, slurry, and refuse construction. He is intimately familiar with mining conditions and construction, including the design of bridges and roadways near mines. He has experience in managing and construction of methane drainage wells.

TEAM ORGANIZATION





George Joseph Crittenden *Project Manager*

Education

Murray State University 1976

Kentucky State University -
CE & Applied Mathematics
Course Study

Tennessee State University -
CE Course Study

Nashville Institute of
Technology

West Virginia Institute of
Technology - CE Course
Study

Years of Experience

Total Years: 34

WSA: 1

2010–Present

Wilbur Smith Associates
Charlestown, WV

Areas of Specialization

Project management, roadway
design, hydraulics, storm
sewers, roadway geometry,
construction inspection

Mr. Crittenden has 34 years of experience in providing project management, client coordination, project design, design studies, value engineering, construction inspection, and surveying for highways, airports, residential subdivisions, correctional facilities, government buildings, private developments, and abandoned mine land reclamation projects. The projects ranged from complex interchange design for the I-64 WV 193 interchange near Barboursville, I-79 FBI Access Road interchange near Clarksburg, and two I-264 interchange projects located in Louisville, Kentucky (I-64/I-264 and I-264/Southern Parkway). Mr. Crittenden has been involved in new highway design, roadway improvement projects, and bridge replacement projects in multiple locations within WV, TN, GA, SC, NJ, PA, and KY. Many of the projects required economical design of safety improvements while under traffic and were of a “fast track” nature

Project Experience

Terry Branch Portals and Refuse Remediation, WVDEP, Wyoming County, WV. Project Manager responsible for delineation of access road into site, demolition and disposal of fan and fan house, reclamation of refuse pile, design of four bat gate mine seals and six dry mine seals. Addressed on-site drainage concerns, and revegetated all areas disturbed by construction.

Water Line Feasibility Studies, West Virginia Department of Environmental Protection, Boone, Mercer, and Raleigh Counties, WV. Project Manager responsible for studies of the water supplies of three areas in southern West Virginia to verify if the areas have been affected by mining activities.

Glen Fork/Sabine Area Phase II Abandoned Mine Lands Water Feasibility Study and Water Line Extension, Wyoming County, WV. Senior Design Technician responsible for interviewing all residents about the quantity/quality of their water source and updating maps to show houses/businesses to support an AML&R grant request to OSM to extend or install water systems in these impacted areas.

Red Star Refuse and Coke Ovens, Fayette County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents for backfilling, soil covering and re-vegetation of over 60 abandoned coke ovens and three refuse piles.

Minden Mine Dump, Fayette County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents to install wet seals to permanently lower the water level in the mine workings, to establish positive drainage to a nearby stream, to excavate and regrade the refuse piles, and to provide soil cover and re-vegetate the refuse and all disturbed areas.

Little Slate Creek Refuse Pike, McDowell County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents to regrade the refuse pile to establish stable slopes and establish drainage to a nearby stream.

Scott Tipple, Barbour County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents to correct two areas impounding water and coal refuse.

Marrowbone Water Line Extension, Mingo County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents to extend a water line into the Marrowbone area where the groundwater was found to be contaminated by mining activities.

Delbarton Water Supply, Mingo County, WV. Senior Design Technician responsible for layout of survey work, layout of subsurface investigation, requesting and analyzing laboratory test results, and production of grading plans with details, project specifications and bid documents to extend a Ragland Public Service District water line to serve approximately 150 potential customers due to the degradation of their water supply by coal mines abandoned prior to August 3, 1977.

Section 404 Permit, Rowlesburg Railroad Truss S339-51-0.74, Preston County, WV. Temporary crossing of Saltlick Creek. Work included project narrative; hydraulic models of before, during, and after; determination of the ordinary high water elevation; determining excavation and embankment quantities (permanent and temporary) below OHW; determining drainage structure openings that would allow normal operation of Saltlick Creek. Produced location map, plan view, profiles, cross sections, and required quantities; and produced stream restoration drawings for the crossing removal.



Wesley O. Stafford, PE, AICP

Project Director

Director of Traffic Engineering and Transportation Planning

Education

Coursework toward a Masters Degree in Transportation Engineering, North Carolina State University, Raleigh, NC, 1993

BS, Civil Engineering, West Virginia University, Morgantown, WV, 1988

Coursework in Math and Computer Science, West Virginia State College, Charleston, WV, 1984

Registrations

Professional Engineer:
VA (40573) 2004
NC (19007) 1993
MD (30782) 2004
WV (0416061) 2004

Years of Experience

Total Years: 22
WSA: 7

2003 – Present
Wilbur Smith Associates
Charleston, WV

Professional Affiliations

American Institute of Certified Planners

Mr. Stafford has more than 22 years of experience in highway planning and design. As a consultant he has been the project manager for numerous traffic engineering project and environmental documents, including developing NEPA environmental documents from CEs to an EIS. His previous experience includes working as both a consultant and with the states of West Virginia and North Carolina. He led NCDOT Statewide Planning Branch's Small Urban Unit. The unit provided transportation planning expertise to municipalities across North Carolina and plans for the coordinated development of the road and highway systems for counties, planning regions, and municipalities on a statewide basis.

District 2 Bridge Replacements Design-Build, Logan, Mingo, and Wayne Counties, WV (ongoing) - Project director for a design-build project to replace six bridges in southern West Virginia. The bridge replacements varied in length from 34 to 186 feet. WSA provided comprehensive engineering services to address the bridge and associated roadway design. These design services also included drainage, bridge hydraulics and scour analysis, and environmental planning.

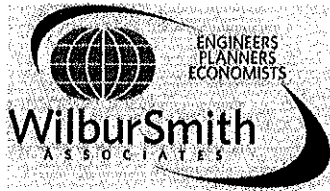
Beckley Z-Way Design Study, Raleigh County, WV (2008) - The West Virginia Department of Transportation/Division of Highways selected WSA for the preparation of a design study for development of a highway facility by combining new and existing facilities for approximately 10.3 miles from Shade Springs to the interchange at Tamarack and ending at Van Kirk Drive in Raleigh County, West Virginia. The project includes a comparative analysis of the proposed Beckley Z-Way and the East Beckley Bypass as well as other potential alternative using QRSII travel demand software. A design study is being completed to compare impacts and cost of each alternative.

Wood-Washington-Wirt (WWW) Multimodal Long-Range Transportation Plan, Parkersburg, WV (2004) - The plan was developed to respond to the Metropolitan Planning Requirements identified in the Intermodal Surface Transportation Efficiency (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21). Conducted travel demand modeling using QRSII and developed recommendations for highway improvements through the design year.

Ohio River Bridge Study, Steubenville, OH (2002) - Developed a matrix to compare various proposed bridge locations using a variety of criteria that measured mobility, environmental impacts, safety, cost effectiveness, and regional economic growth.

West Virginia Statewide Multimodal Plan (2009) - Project manager for transportation plan that will identify and recommend policies, strategies, and projects to address multimodal transportation needs through a 25-year planning horizon.

Mercer County Multimodal Transportation Plan, Mercer County, WV - Conducted travel demand modeling using QRSII and developed recommendations for highway improvements through the 2025 design year.



Larry P. Clegg, PE
QA/QC Manager

Education

BS, Civil Engineering,
University of South Florida,
Tampa Bay, Florida, 1987

BS, Mining Engineering, West
Virginia University,
Morgantown, West Virginia,
1981

Registrations

Professional Engineer:
West Virginia, 1999 (#14216)
Florida, 1991 (#44646)
Arkansas, 2003 (#11467)

Years of Experience

Total Years: 24
WSA: 9

2000 – present
Wilbur Smith Associates
Charlestown, West Virginia

Areas of Specialization

Project management, roadway
design, drainage design,
bridge hydraulics and scour
analysis, pavement design.

Mr. Clegg has over 24 years experience designing and managing highway and transportation projects ranging in scope from sidewalks to large scale highway projects. This experience includes design projects for interstate resurfacing, widening, and new construction, interstate weigh-in-motion stations, major arterial reconstruction and widening, and new highway design, preliminary engineering studies and intersection improvements. He has been involved in all phases of highway design from conceptual engineering to final plans, and has direct experience with the many aspects of highway design such as geometric layout, drainage including bridge hydraulics and scour analysis, utilities, environmental permitting, traffic engineering, and pavement design.

I-95 Express Toll Lanes, Baltimore County, Maryland - Lead highway reviewer for the I-895 Segment of the I-95 Express Toll Lanes Project as part of the General Engineering Consultant Services for the Maryland Transportation Authority. Also provided reviews for the I-695, and MD 43 segments. The project consisted of widening existing I-95 to add managed lanes and the reconstruction of three major interchanges to accommodate the toll way.

Gilliam Arch Bridge Replacement, Mercer County, West Virginia - Project manager for bridge replacement project, including realignment of roadway approaches. The project included horizontal and vertical alignment study and design, along with bridge hydraulic studies and scour analysis.

I-69 Connector, Drew & Lincoln Counties, Arkansas - Project manager for an Interstate Highway design project in southeastern Arkansas. Project consists of five miles of highway design, 15 miles of drainage design including bridge hydraulic studies, and four bridges.

King Coal Highway, Mercer County, West Virginia - Project manager for a 3.2-mile expressway north of Bluefield, WV. Project consists of roadway, drainage, structure, and right of way design for the expressway. Project includes a half cloverleaf interchange and four bridges.

US 50 Traffic Operation, and Safety Study, Mineral and Hampshire Counties, West Virginia - Project manager for a 45-mile safety improvement study in the eastern panhandle of West Virginia. The study consisted of assessments of traffic, and highway geometry conditions, and provided recommendations for the remediation of potential traffic and safety issues.

Nitro, St. Albans Bridge Location Study, Kanawha County, West Virginia - Roadway design engineer for the location study for the replacement of the 60-year old Henderson Bridge replacement. Responsibilities included vertical and horizontal alignments using a range of design speeds for three potential bridge locations within the Nitro-St. Albans area.

US 220, Moorefield Junction Road, Hampshire County, West Virginia - Project manager and design engineer for approximately 3500-foot-long alignment improvement project. Project included an alignment study to develop the most feasible configuration to improve deficient sight distance. Services provided include Roadway Plans, Drainage Design, and Signing and Marking Plans.



Education

BS, Civil Engineering, West Virginia University, Morgantown, WV, 1993

Registrations

Professional Engineer:
WV (013934) 1994
DE (11404) 1995

Years of Experience

Total Years: 15
WSA: 2

2007–Present
Wilbur Smith Associates
Charleston, WV

Areas of Specialization

Bridge and structure design, bridge hydraulics, rehabilitation, and inspection; overpasses; pedestrian structures

Wesley D. Simpson, PE *Hydrology*

Mr. Simpson has over 15 years of experience designing award winning bridge and structure projects. His bridge design experience includes developing plans for new and rehabilitated structures. His design experience ranges from a two-cell concrete box culvert, to 1400-foot-long curved bridge. His experience includes concrete, steel and timber bridges for hydraulic, overpass, and pedestrian structures. He has extensive experience conducting structural analysis, hydrology and hydraulic analysis, hydraulic permitting, and is fluent in numerous software packages, which apply to structural design.

Moatsville Bridge, Barbour County, WV - Developed bridge plans for 344-foot three-span steel plate girder bridge over the Tygart Valley River.

Sundowner Bridge, Wood County, WV - Developed bridge plans for 56-foot single-span spread box beam bridge over Neal Run.

Patrick Street Bridge, Kanawha County, WV - Field inspected and analyzed structural members in approaches and trusses for bridge rehabilitation plans. This project received the Silver Engineering Excellence Award from the WV ACEC in 2004.

Stony River Bridge, Grant County, WV - Developed bridge plans for a 1400-foot curved twin structures using steel plate girders. This bridge received the West Virginia Division of Highways Engineering Excellence Award in the large bridge category in 2004.

Mount Storm Railroad Bridge, Grant County, WV - Coordinated with Palmer Engineering in the development of bridge plans for four-span, 620-foot post-tensioned concrete twin bridges. These bridges utilized spliced AASHTO I-girders and integral abutments.

Mount Storm Interchange Bridge, Grant County, WV - Developed bridge plans for 260-foot, three-span, steel I-girder overpass bridge. This bridge received the West Virginia Division of Highways Engineering Excellence Award in the small bridge category in 2003.

Curtin Bridge, Nicholas County, WV - Developed bridge plans for three-span, tangent bridge changing to a curved alignment utilizing steel I-girders. The total length of the bridge is 550 feet.

Zion Church Bridge, Mingo County, WV - Developed bridge plans for two-span, curved, rolled beam bridge. This bridge has a very complicated geometry with skewed substructure units and a concentric horizontal curve.

Railroad Overpass Bridge, Logan County, WV - Developed bridge plans for 260-foot, three span, steel I-girder railroad overpass bridge for Arch Coal Company in the Mt. Laurel coal facility.

Seng Camp Creek Bridge, Logan County, WV - Developed bridge plans for 74-foot single span rolled beam bridge over Seng Camp Creek for Arch Coal

Company's Mt. Laurel coal facility.

Clothier Bridge, Logan County, WV - Designed bridge substructure units for 87-foot single-span prestressed AASHTO I-girder bridge. Bridge is temporary structure to be used in hauling a dragline for Arch Coal Company.

Coal-Mac Bridge, Logan County, WV - Developed bridge superstructure plans for 30-foot single-span rolled beam bridge for Coal Mac, Inc.

North Lowney Bridge, Mingo County, WV - Developed bridge plans for a two-span curved continuous steel rolled beam bridge to replace existing one lane bridge.

Simpson Creek Bridge, Harrison County, WV - Developed bridge plans for AASHTO Prestressed Concrete I-Girders, Modified Type IV, to improve alignment and give access to the Meadowbrook new four-lane roadway.

Board Camp Bridge, Mingo County, WV - Developed bridge plans for a two-span adjacent concrete box-beam with a six-inch concrete deck to replace existing one-lane bridge.

Queens Arch Bridge, Upshur County, WV - Developed bridge plans for spread box beam structure to replace existing one-lane concrete arch.

Little Buffalo Creek Bridge, Putnam County, WV - Developed bridge plans for ConSpan three-sided structure, on stem walls, to replace dilapidated existing structure.

31st Street Bridge, Kanawha County, WV - Worked in conjunction with Dunn Engineering to develop bridge plans for an integral prestressed concrete box beam bridge to replace existing bridge.

Midelburg Island Bridge, Logan County, WV - Developed bridge plans for a three-span continuous integral steel-rolled beam bridge to replace existing steel girder bridge.

Above Eden Bridge, Upshur County, WV - Developed bridge plans for structural glued-laminated timber bridge, Type E, to replace existing steel girder bridge.

WV Route 16 over Stewart Run, Ritchie County, WV - Developed a two-cell concrete box culvert plans for the improved alignment and relocation of Route 16.

Keller Run Bridge, Mineral County, WV - Developed bridge plans for structural glued-laminated timber bridge, Type D, to replace existing steel girder bridge.

Mullens Bridge, Wyoming County, WV - Developed bridge plans for prestressed concrete box beam to replace existing pony truss.

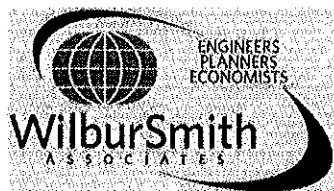
Old Mill Bridge, Brooke County, WV - Developed bridge plans for a three-span continuous steel-rolled beam bridge to improve alignment and replace

existing pony truss.

Phillips Falls Bridge, Barbour County, WV - Developed bridge plans for stressed timber deck, Type B and prestressed concrete box beam to replace existing pony truss. Box beam was the alternative chosen.

Slonaker Road, Morgan County, WV - Developed bridge plans for structural glued-laminated timber bridge, Type D, to replace existing low water crossing.

Summers County High School Access, Summers County, WV - Developed bridge plans for prestressed concrete box beam bridge to widen existing structure.

**Education**

BS Plant and Soil Sciences
University of Tennessee, TN
2003

Registrations

Certified Professional in
Erosion and Sediment Control:
National

Years of Experience

With WSA: 5.5
Total: 9.5

Areas of Specialization

Erosion Prevention and
Pollution Control;
Environmental Analysis and
Wetland Delineation; and
Permitting and Agency
Coordination

William (Will) Carroll, Jr.

Environmental Scientist/Construction Inspector

Will Carroll began his career in 1998 as an environmental scientist. He joined Wilbur Smith Associates' Knoxville, TN office in 2005 and has provided erosion control, wetland delineation, stream identification, endangered species surveys, groundwater monitoring, and Phase I and II environmental assessments for both public and private sector clients. He has assisted in permitting and coordination with municipal, state, and federal agencies, and is familiar with NEPA regulations.

Will has contributed to a variety of important WSA projects. He was the environmental liaison for TDOT and WSA's environmental inspector conducting and documenting on-site, twice weekly erosion control inspections for Phase I construction of the SmartFIX 40 project in Knoxville, TN. This project was particularly challenging because of the numerous contractors and subconsultants involved, the volume of work required due to the complexity of construction, the aggressive schedule, and the high visibility and impact. Will considers it his most rewarding project experience, however, because WSA and the other team members were able to successfully meet all of these challenges, a feat that has been praised in local media and has garnered national attention as well. Will also participated in a project which identified roosting trees for the endangered Indianan bat for a highway project in West Virginia.

Before joining WSA, Will worked as an environmental scientist and inspector on government, commercial, and industrial contracts for an environmental consulting firm. He was involved in erosion and sediment control, wetland delineation, tidal stream dredging, and coastal oversight projects. He collected data and inventoried sites for industrial and commercial uses. He participated in several groundwater monitoring, installation, and injection efforts, often under the supervision or observation of state regulators and EPA officials. Will performed and assisted with more than 20 Phase I and II environmental assessments for clients including the US National Parks Service, the Army Corps of Engineers, and various industrial and commercial clients. He assisted in the preparation of SWPPPs, SPCCs, Phase I assessments, and quarterly EPA environmental updates for large industrial clients. In one of his most rewarding projects he was involved with public relations for the City of Niota, TN during installation of a five-mile city water line, and registered more than 1,000 lower income families to receive free installation of water through a public housing grant. Will also worked during and after college for a private consultant providing soil mapping, soil testing, soil analysis, wetland delineation, wetland mitigation, stream enhancements, and soil and plant taxonomy. During his time there he learned to prepare reports, perform presentations, and interact effectively with agency regulators.

Will has made significant contributions to WSA as one of a limited number of environmental scientists. Because he can provide assistance with biological, ecological, historic, and cultural environmental issues and permitting, he has had the opportunity to work on project teams in several states in the South and Midwest. Will tries to communicate effectively with clients about the solutions to the environmental concerns associated with their projects. He is active in the community, participating in river cleanup efforts with the Ft. Loudon watershed group and other local organizations.

WSA WORK EXPERIENCE

Garland Road Roadway and Bridge Replacement Design

Project Location: TN US; Client: Blount County Highway Department

Services provided for this project include environmental clearance, permit preparation, survey, geotechnical, design, hydraulics analysis, right-of-way acquisition, and CEI services.

New U.S. 321 Erosion Prevention and Sediment Control

Project Location: TN US; Client:

Under contract with TDOT, WSA performed erosion prevention and sediment control services for the old State Route 35 (now U.S. 321). Though there were only two lanes with no shoulder at the time, it is now a four-lane, divided roadway. Will served as erosion control inspector, and conducted and documented twice weekly on-site inspections.

TDOT SmartFIX40 Construction Engineering and Inspection Contracts I and II

Project Location: Knoxville, TN US; Client: Tennessee Department of Transportation

This project provided construction phase services for I-40 through Knoxville, including roadway and bridge inspection, erosion control, site materials testing, records maintenance, traffic control, utility inspection, and public involvement. As erosion control inspector, Will conducted and documented on-site inspections for erosion and sediment control twice per week.

May Town Center Planning and Bells Bend Bridge Preliminary Study

Project Location: Franklin, TN US; Client: Bells Landing Partners, LLC

This project included a preliminary bridge and interchange location study, a traffic impact study, and an interchange modification study to evaluate proposed interchange improvements. The project also included an extensive public involvement effort. Will conducted the stream identification assessment, including both field work and documentation, to describe the hydrology for the potential commercial development.

I-70 Supplement Environmental Impact Statement Phase II

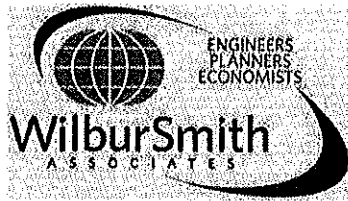
Project Location: MO US; Client:

This environmental impact statement involved interchange justification and preliminary engineering for capacity improvements to 35 miles of freeway. Will performed an environmental impact assessment, including both field work and documentation for wetland delineation and stream identification.

East Beckley Bypass Environmental Assessment

Project Location: East Beckley, WV US; Client: West Virginia Department of Transportation

WSA provided services including wetland/stream mitigation and threatened and endangered species surveys for and environmental assessment for the proposed transportation improvements near East Beckley. Will assessed the project for potential roosting trees for an endangered species, the Indianan bat. The survey area covered two miles of proposed roadway.



Education

BS, Civil Engineering
Technology, West Virginia
Institute of Technology,
Montgomery, WV, 1998

AS, Civil Engineering
Technology, West Virginia
Institute of Technology,
Montgomery, WV, 1996

Years of Experience

Total Years: 10
WSA: 10

2000 – Present
Wilbur Smith Associates
Charleston, WV

Areas of Specialization

Surveying, design, drafting,
GIS, data collection,
construction inspection,
VDOT ITS potential work
assignments; general support,
Work Zone Safety Program,
MUTCD/Signing

Technical Training

Surveying and Mapping
Certificate, Raleigh County
Technical Center, WV, 1994

Reason W. Martin Engineering Designer Associate Engineering Technician

Mr. Martin is a civil engineering technology graduate from WVU Tech. He has 10 years of experience in surveying, design, drafting, and construction inspection in West Virginia and Virginia.

District 2 Bridge Replacements Design-Build, Logan, Mingo, and Wayne Counties (2009 design; Ongoing construction) - Technician for a design-build project to replace six bridges in southern West Virginia. The bridge replacements varied in length from 34- to 184-feet. WSA provided comprehensive engineering services to address the bridge and associated roadway design. These design services also included drainage, bridge hydraulics and scour analysis, and maintenance of traffic. Additionally, the scope of services included obtaining NPDES, U.S. Army Corps of Engineers Nationwide, and WVDDHR Health Department permits for the bridge construction and associated utility relocations.

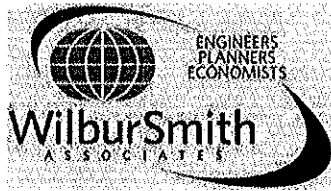
U.S. 522 Berkeley Springs, WV (2005) - Technician/designer for construction plans for four miles of 4-lane expressway in Morgan County. The project involved alignment studies, interchange configuration study, major drainage design, and development of a complete set of plans for construction.

U.S. 220 Moorefield Junction Road, Hampshire County, WV (2002) - Technician/designer for the development of roadway plans for 3,500-foot-long alignment improvement project. Project involved an alignment study to develop the most feasible configuration to improve deficient sight distance. Services included providing roadway plans, drainage design, and signing and marking plans.

Rt. 2 Widening, Brooke County, WV (2003) - Field inspector for the construction of road widening project. Project included providing daily inspection reports and verifying quantities for pay items.

I-70 Sign Renovation, Ohio County, WV (2009) - A member of the inventory team for the 15-mile-long sign renovation project that extends from the Ohio River to the Pennsylvania state line. The inventory included locating and documenting every sign along I-70 including the downtown Wheeling interchanges. Additionally roadside features such as light poles and power drops were located to facilitate the development of the signing plans. This inventory included the use of a GPS system and custom GIS database to provide an electronic archive with digital photographs. Responsible for developing inventory and sign renovation plans, including sign design using GuidSIGN software.

U.S. 50 Traffic Operation and Safety Study, Mineral and Hampshire Counties, WV - Technician for the development of a 45-mile safety improvement study in the eastern panhandle of West Virginia. Project involved assessments of traffic and highway geometry conditions to provide remediation of potential traffic and safety issues.



Jason B. Huddleston
Senior Engineering Technician
Senior Engineering Technician

Education

AS, Engineering Technology,
West Virginia Institute of
Technology, Montgomery,
WV 2001

Years of Experience

Total Years: 8
WSA: 8

2002 – Present
Wilbur Smith Associates
Charleston, WV

Areas of Specialization

Drafting, roadway design,
storm sewer design, ditch
design

Technical Training

MicroStation J, MicroStation
V8, InRoads 8.05, GEOPAK
2004

Mr. Huddleston is a 2001 graduate of WVU Tech and has eight years of experience as an engineering technician/designer. He has experience in roadway design, storm sewer design, structural drafting, and ditch design. In addition to his West Virginia work, Mr. Huddleston also has experience in Michigan, Arkansas, Virginia, Ohio, and Utah.

District 2 Bridge Replacements Design-Build, Logan, Mingo, and Wayne Counties (2009 design; Ongoing construction) - Technician for a design-build to replace six bridges in southern West Virginia. The bridge replacements varied in length from 34 to 184 feet. WSA provided comprehensive engineering services to address the bridge and associated roadway design. These design services also included drainage, bridge hydraulics, and scour analysis. The bridge configurations included steel plate girders, adjacent and spread concrete box beams, and rolled steel beams. The bridge design services included analyzing options to provide the most economical configuration tailored to the contractor's strengths.

Gilliam Arch Bridge Replacement, Mercer County, WV (2005 design; 2006 construction) - Technician/ designer for bridge replacement project in Mercer County.

U.S. 52 King Coal Highway, Bluefield, WV (2005 design; Ongoing construction) - Technician/designer for the design development of four miles of divided expressway in southern West Virginia. Project involved alignment studies, interchange configuration study, major drainage design, and development of complete set of plans for construction.

U.S. 522 Berkeley Springs, WV (2005) - Technician/designer for development of construction contact plans for a 4-mile, 4-lane expressway in Morgan County. Project involved alignment studies, interchange configuration study, major drainage design, and development of complete set of plans for construction. Two interchanges were required.

Lynnhaven Parkway, Virginia Beach, VA (2009) - Technician for bridge widening project for Lynnhaven Interchange improvements for a VDOT project.

West Valley Light Rail Transit Project, UT - Technician for UTA Rail over Roper Yard Railroad bridge construction plans.

U.S. 31 Freeway and Interchange Construction, Benton Harbor, MI - Technician/designer for development of drainage design plans for four miles of U.S. 31 4-lane divided freeway and the reconstruction and widening of 3.5 miles of existing I-94 in Michigan.

U.S. 50 Appalachian Corridor D Highway, Parkersburg, WV - Technician for the development of construction plans for 3.5 miles of 4-lane expressway in Wood County.

John E. Nottingham, P.E., P.S.



Mr. Nottingham has served as Principal Engineer for the West Virginia office of NGE since late 2002 after having managed Geotechnical Services at Triad Engineering. In this capacity, he has served as lead Geotechnical Engineer on a variety of government and commercial design and construction projects. His responsibilities on these projects include direction and coordination of all geotechnical engineering activities. Duties on these projects have included foundation investigation report production, foundation and retaining wall design, fill embankment and cut slope design, dam design and analysis, slope stability analysis, pavement design, design of drainage systems, supervision of subsurface drilling programs, field activity coordination, laboratory data computation and processing, performance of field work, client relations, and supervision of staff and project level geotechnical engineers.

Fields of Competence

- Highway & Airport Geotechnical Design
- Foundation Investigations
- Pavement Analysis and Design
- Landslide Analysis & Remedial Design
- Ground Water and Seepage Analysis & Design
- Retaining Wall Design
- Mine Subsidence Investigations
- Forensic & Insurance Investigations
- Construction Monitoring
- Personnel Management
- Project Management (schedule and budget)
- Project Estimating

Education

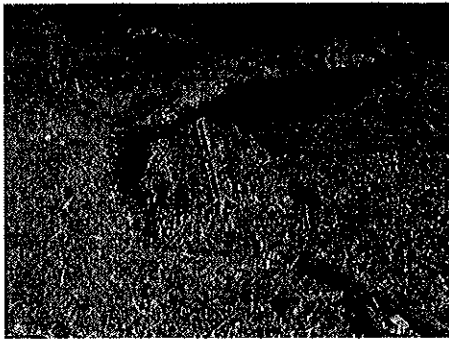
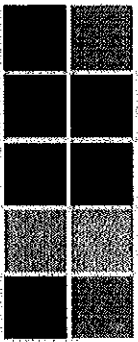
- B.S., Civil Engineering, West Virginia University - 1987
- M.S., Civil Engineering, West Virginia University - 1995

Registration/Certifications

- Registered Professional Engineer in West Virginia. Registration No. 12357 (since 1994)
- Registered Professional Surveyor in West Virginia. Registration No. 1495 (since 1995)

Employment History

- November 2002 – Present
Branch Manager, Vice President, Principal Engineer, NGE, LLC
- 1997 – November 2002
Geotechnical Services Manager, Triad Engineering, Inc.
- 1996 – November 2002
Senior Engineer, Triad Engineering, Inc.
- 1993 – 1996
Project Engineer, Triad Engineering, Inc.
- 1988 – 1993
Staff Engineer, Triad Engineering, Inc.



Reston Section 24 Regional Pond
Fairfax County DPWES Stormwater Planning Division
Town of Reston, Fairfax County, Virginia

WSA, as part of our on-call stormwater planning contract with Fairfax County DPWES, is designing retrofit improvements to an existing regional SWM facility in Reston. The project was initiated to provide water quality measures to an aging SWM pond originally designed for volume control only. Since the pond has no viable current access, an access road study of two alternatives has been performed and the findings presented by WSA to the Reston board members and citizens. Positive feedback from the HOA as to their alternative preference was received by WSA and will be incorporated into the final access road design plan preparation.

The pond retrofit design will not only have positive water quality impacts but will likely consolidate the principal and emergency spillway into a combined spillway with a new barrel installation through the dam structure. The existing emergency spillway has been eroded and compromised due to a monumental storm event coinciding with virtual total blockage of the principal spillway. Since the emergency spillway is an undesirable fill material embankment, a combined spillway is the prudent solution, as the outfall barrel pipe was rusting and in need of removal anyway. The designed riser structure will be modelled using PondPack using Fairfax County PFM standards for stormwater detention. An open cut embankment and restoration design will be prepared as part of the final design. Erosion and sediment control plans with access road and pond improvements sequencing will be prepared.

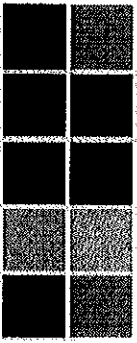
WSA structural engineering personnel will design a maintenance truck capable bridge on the access road at a stream crossing in the Resource Protection Area (RPA). A floodplain analysis will be performed to ensure upstream flood level increases are limited in accordance with FEMA and county regulations. A Water Quality Impact Assessment (WQIA) may be needed for this project for construction within the RPA.

Guernsey County General Water Plan
Guernsey County Commissioners, Cambridge, OH

A water distribution study was performed by Wilbur Smith Associates for the eastern portion of Guernsey County. The area was studied to determine the best locations for extending new waterlines to eastern Guernsey County, a computer water model was constructed, and 12 proposed projects were recommended with estimated project costs for each.



Water Resources: The Guernsey County Waterline project was considered Phase I of the northeastern waterline design for Eastern Guernsey. Wilbur Smith Associates installed 30,000 feet of 12-inch PVC SDR-14 waterline. The waterline design included a 350 foot casing bore underneath Interstate 70, and 600 feet of directional bore through Old Washington. WSA also provided construction observation services. This project required close coordination with the EPA to allow automatic air release valves due to changes in elevations. This project also included the demolition of an existing 100,000 gallon standpipe and erection of a new 500,000 gallon elevated storage tank.

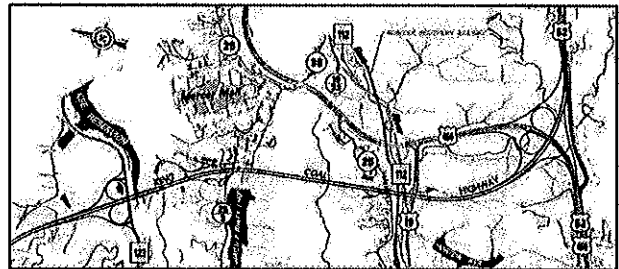


Water and Wastewater: The purpose of the Eastern Guernsey County Water Distribution Study was to develop a possible program of improvements, which was economical, environmentally sound, and easily implemented and manageable. Portions of central and eastern Guernsey County are served with an existing water distribution system installed as early as 1973. Wilbur Smith Associates developed a water distribution model of the existing system. This model is a working electronic AutoCadd/WaterCadd file; the existing water distribution model provided the basis for this study. This study investigated the feasibility of providing potable water service along a selected route, from the Village of Center along SR 22 to SR 800 in Harrison County, then along SR 800 to the Village of Freeport, Ohio, a distance of approximately 23 miles. A cost effective analysis determined that existing residences along connecting side roads could be served at the rate of 10 service connections per mile. These side routes comprise an additional distance of approximately 32 miles. This study also addressed the possibility of providing potable water to Salt Fork State Park.

King Coal Highway
WV DOT, Mercer County WV

Wilbur Smith Associates was retained by the WVDOH in 1999 to prepare a route and interchange location study, construction contract plans, and right of way plans for a section of the King Coal Highway. This section begins at interchange at WV 123 to and extends to the interchange at the existing U.S. 460/U.S. 52 intersection. The location study analyzed various configurations for the two interchanges and three alternative mainline alignments. The location study was completed in 2000, and the right-of-way plans were completed in 2002.

This project was planned and designed through challenging terrain, resulting in highway cuts as deep as 340 feet, fills as high as 170 feet, culverts with up to 150 feet of cover, and bridges with piers as tall as 120 feet. The project required approximately 12 million cubic yards of excavation. The total estimated construction cost for the project is \$71 million. The project included the following tasks:



- location study for both interchanges and the mainline
- design of 3.2 miles of mainline
- design of two interchanges (one partial cloverleaf interchange and one fully directional, excepting one movement, interchange)
- design of four dual bridges spans
- design of lighting for the U.S. 52/U.S. 460 interchange
- design of 2,500 feet of relocated waterlines and relocated sanitary sewers
- design of 15,900 feet of storm sewers and culverts, including a 1,000-foot long twin 60-inch structural plate pipe culvert
- preparation of comprehensive maintenance of traffic plans
- preparation of plans for nine sediment/flood detention basins
- preparation of right-of-way plans
- preparation of 42 legal descriptions for right of way and easement tracts
- preparation of USCOE Section 404 permit application and data, State Health Department permit application, and a WVDEP Underground Injection permit application for highway drainage discharging to a sinkhole
- shop drawing review services during the construction period



Sanitary Sewer Extension Phase I & II
Belle Center/Logan County, OH

Belle Center is in north central Logan County, OH located about 70 miles northwest of the City of Columbus. Wilbur Smith Associates was selected to provide complete preliminary and final design services as well as bidding and construction services for the wastewater treatment and wastewater collection system. The project is also co-sponsored by the Board of Logan County Commissioners. The county will provide wastewater treatment (via a 5-mile force main connection) through the Indian Lake Water Pollution Control Facility.



Technically, the system will utilize a network of 177 grinder pumps stationed at strategic locations throughout the village and one lift station. The layout of the collection system will take advantage of alley rights-of-way in order to minimize adverse impacts on the main streets and the many mature trees in the village. The cost of the project is estimated at \$3.5 million. The project is being funded with local as well as the Ohio EPA grant and loan assistance program, the Ohio Public Work's Commission, and the U.S. Corp of Engineers. Design and construction activities took place over a 20-month period.

Baltimore Storm Water Infrastructure Inventory
Village of Baltimore, Baltimore, OH

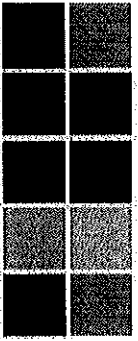
In the summer of 2007, Wilbur Smith Associates was selected to prepare an inventory of the existing storm water infrastructure in the Village of Baltimore, Ohio. Baltimore is an old Ohio Erie Canal town established in 1825, and is now a merger of three closed communities: the towns of Basil, New Market, and Rome City.

The storm drainage system throughout the village was very old, and in many areas the locations of existing inlets and pipes was unknown because many were located on private property with no recorded easements. WSA's charge was to locate all storm structures, and pipes in the village. The first task was to collect and review old maps and records. These were found in the village hall, local library, county offices, and the office of the Ohio Canal Lands. After these were collected and reviewed, the firm met with some of the older residents of the village to gain their knowledge. Flyers were sent out to all residents in an effort to gain ingress and egress onto private property to locate storm infrastructure.

The next step was to perform a field investigation to locate existing structures and pipes. Fairfield County had recent aerial photography developed for their GIS system. This eliminated the need for new aerial mapping.

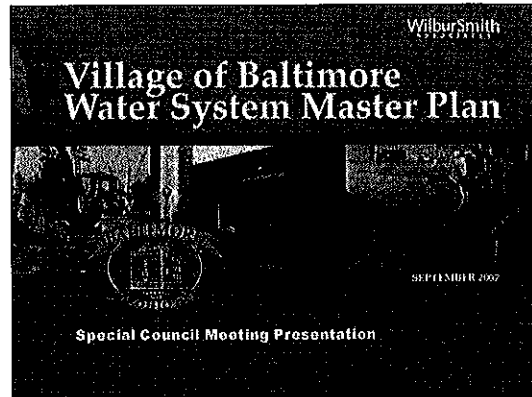
The village provided the use of their jet-vac truck with an operator when needed, again making this inventory more cost effective. Splitting the village into tributary areas, WSA's two-man team then began to locate structures. Each structure or change in pipe direction was located using GPS coordinates adjusted to state plane on the same datum as the county's aerial mapping. Data collected for each structure was entered into the aerial mapping database in separate layers. With this information plotted, a storm water inventory map was created.

The next step was to run elevations on all inverts, and to collect data on all new storm lines installed. Keeping this system current allows for it to serve as a living document, and a great tool for the Village of Baltimore's utility department.



Baltimore Water System Master Plan
Village of Baltimore, Baltimore, OH

The Village of Baltimore is experiencing increased activity in residential development due to urban sprawl, and is anticipating significant growth within the next 25 years. In preparation for this growth, the Village of Baltimore contracted with Wilbur Smith Associates to prepare a comprehensive water system master plan to assess the existing system and determine what improvements and additions are needed in the Village of Baltimore water system in order to promote growth and improve existing service.



In order to address and plan for the anticipated growth and prioritize improvements within the existing system, the Village of Baltimore requested that WSA prepare this long range master plan for the water treatment plant, water source, and distribution system. This master plan evaluated the existing system and planned future area improvements based on several criteria including water supply capacity requirements, growth projections, system reliability, fire flow availability, and cost. Recommendations of improvements will be prioritized and arranged into the year 2010, 2015, 2020, and 2030 planned improvements.

The current customer base and service area is expected to grow rapidly in the upcoming years in and around the Village of Baltimore. In addition, it is estimated that more than half of the existing distribution system is more than 40 years old, with the original system being over 70 years old. In addition, many pipes in the existing system are in poor condition, and their size is insufficient to provide fire protection or adequate domestic service in some areas.

3 / Relevant Experience



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
 DEP15212

PAGE
 1

ADDRESS OF RESPONDENCE 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

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
11/03/2010				

BID OPENING DATE: 11/30/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB	906-29			
THORPE REFUSE PILE DESIGN						
EXPRESSION OF INTEREST						
<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 THORPE REFUSE PILE PROJECT IN MCDOWELL COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p>						
<p>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.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Mary [Signature]</i>	TELEPHONE 304.345.2339	DATE 11/30/10
TITLE Associate-In-Charge	FBIN 57-0405950	ADDRESS CHANGES TO BE NOTED ABOVE

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

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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.

DEFINITIONS:

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

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

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

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.

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Wilbur Smith Associates

Authorized Signature: [Signature] Date: 11/30/10

State of West Virginia

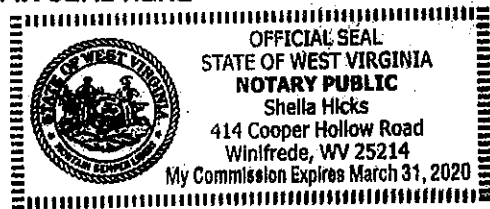
County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 30 day of November, 2010.

My Commission expires March 31, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC [Signature]



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

PROJECT NAME: Thorpe Refuse Pile Design, DEP#15212
 DATE (DAY, MONTH, YEAR): November 30, 2010
 FEIN: 57-0405950

1. FIRM NAME: Wilbur Smith Associates
 2. HOME OFFICE BUSINESS ADDRESS: Post Office Box 92 700, Columbia, SC 29202
 Washington St., E., # 210, Charleston, WV 25301

1. HOME OFFICE TELEPHONE: Columbia, SC
 Tel: 803-758-4500/Fax: 803-251-2064
 Charleston, WV
 Tel: 304-345-2339/Fax: 304-345-2343
 2. ESTABLISHED (YEAR): 1952
 6. TYPE OWNERSHIP: Individual Partnership Joint-Venture
 Corporation
 6a. WV REGISTERED DBE (Disadvantaged Business Enterprise): YES NO

3. FORMER FIRM NAME: Wilbur Smith and Associates
 7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
 700 Washington St., E., # 210, Charleston, WV 25301 / (304) 345-2339 Charleston, WV / Wesley O. Stafford, PE, AICP / 9 personnel (WV office)

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM: 8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
 M. Stevenson Smith, PE, Chairman/Chief Executive Officer
 Terry S. Grubb PE, Regional Vice President
 Jerry Stump, PE, FACEC, Chief Operating Officer - U.S. Operations
 865-963-4329

9. PERSONNEL BY DISCIPLINE

180 ADMINISTRATIVE	ECOLOGISTS	5 LANDSCAPE ARCHITECTS	42 STRUCTURAL ENGINEERS
ARCHITECTS	ECONOMISTS	MECHANICAL ENGINEERS	15 SURVEYORS
58 CADD OPERATORS	23 ELECTRICAL ENGINEERS	MINING ENGINEERS	10 TRAFFIC ENGINEERS
CHEMICAL ENGINEERS	15 ENVIRONMENTALISTS	PHOTOGRAMMETRISTS	167 TRANSPORTATION ENGINEERS
193 CIVIL ENGINEERS	4 ESTIMATORS	50 PLANNERS: URBAN/REGIONAL	AIRPORT PLANNERS
DRAFTSMEN	2 GEOLOGISTS	SANITARY ENGINEERS	13 GRAPHIC DESIGNERS
169 CONSTRUCTION INSPECTORS	13 HISTORIANS	SOILS ENGINEERS	19 GIS PERSONNEL
38 DESIGNERS, HIGHWAY ENGINEERING TECHNICIANS	3 HYDROLOGISTS	* SPECIFICATION WRITERS	3 MASS TRANSIT SPECIALISTS
1		* Performed by personnel of each Discipline.	277 OTHER
			1300 TOTAL PERSONNEL

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

Question#

<p>NAME AND ADDRESS: Novel Geo-Environmental, PLLC (NGE) 806 B Street St. Albans, WV 25177 <i>NGE's forms are on file with WVDEP</i></p>	<p>SPECIALTY: Geotechnical engineering</p>	<p>WORKED WITH BEFORE ___X___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE ___ ___ Yes ___ ___ 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)

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

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

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.) Crittenden, George J. Project Designer	YEARS OF AML DESIGN EXPERIENCE: 9	YEARS OF AML RELATED DESIGN EXPERIENCE: 10	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 5
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Brief Explanation of Responsibilities

Mr. Crittenden has 34 years of experience in providing design, technical services, and surveying for mine land reclamation projects, water and wastewater lines, airports, residential subdivisions, and highways. His experience includes extending a water line into the marrowbone area; producing designs and plans to extend a Ragland Public Service District water line to approximately 150 customers; Senior Design Technician responsible for mitigating problems in two impoundments containing water and coal refuse at Scott Tipple; and Senior Design Technician responsible for design and contract documents for grading, installation of bar gate seals, dry seals and establish positive drainage, refuse pile regarding, and soil cover and seeding at Minden Mine Dump. Project Manager for Terry Branch Portals.

EDUCATION (Degree, Year, Specialization)
 Drainage Workshop, WVDOT/2005
 PSMJ Marketing Workshop/2005
 PSMJ Project Manager's Boot Camp/2004
 Sediment Control Design, WVDOT/2004
 Right of Way Plan Development/2001, 2002 and 2003
 Development of Signing, Marking and Maintenance of Traffic Plans, WVDOT/2001

Flood and Erosion Control, Maccaferri, Inc./2001
 Advanced HEC-RAS KSPE Training/2000
 CAD Productivity & InXpress Workshop/1996
 FHWA Drainage Design Workshop/1979

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)
 National Institute for Certification in Engineering Technologies (NICET), 1993

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.) Clegg, Larry, P. PE, Senior Project Manager	YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 24	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 2
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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.

EDUCATION (Degree, Year, Specialization)
 BSEM, 1981, Mining Engineering
 BSCE, 1987, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)
 Professional Engineer, 1999 WV; 1991 FL; 2003 AR; 2009 VA

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

<p>NAME & TITLE (Last, First, Middle Int.) Williams, Ron PE, PS, SR/WA Senior Right-of-Way and Utility Engineer</p>		<p>YEARS OF AML DESIGN EXPERIENCE: 3</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 3</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 6</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>EDUCATION (Degree, Year, Specialization) MS, 1977, Civil Engineering BS, 1959, Civil Engineering</p>				
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS 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>REGISTRATION (Type, Year, State) Professional Engineer: 1963 WV; 1993 VA; 1959 PA Professional Land Surveyor: 1963 WV; 1961 PA</p>				

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

<p>NAME & TITLE (Last, First, Middle Int.) Shamblin, Cynthia, L. PE, Senior Project Manager</p>		<p>YEARS OF AML DESIGN EXPERIENCE: 0</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 25</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>
<p>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.</p>				
<p>EDUCATION (Degree, Year, Specialization) MSCE, 1989, Civil Engineering BSCCE, 1984, Civil Engineering</p>				
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS National Council of Examiners for Engineering and Surveying National Society of Professional Engineers</p>				
<p>REGISTRATION (Type, Year, State) Professional Engineer: 1991 WV and NC; 2007 VA; 2009 DC</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.) Simpson, Wesley, D. PE, Project Manager		YEARS OF AML DESIGN EXPERIENCE: 0	YEARS OF AML RELATED DESIGN EXPERIENCE: 15	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
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)

NAME & TITLE (Last, First, Middle Int.) Martin, Reason, W. CADD Technician III		YEARS OF AML DESIGN EXPERIENCE: 0-1	YEARS OF AML RELATED DESIGN EXPERIENCE: 0-1	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 2
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)

<p>NAME & TITLE (Last, First, Middle Int.) Kitzmilller, Tony B. Mineshaft/Portal Engineer</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 38</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 38</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>
<p>Brief Explanation of Responsibilities Mr. Kitzmilller has over 37 years of experience in the design of water distribution systems, drainage systems, mine engineering, and civil engineering. He has experience with the supervision of design and construction for coal mining in Northern West Virginia, including water discharges, slurry, and refuse construction. He is intimately familiar with mining conditions and construction, including the design of bridges and roadways near mines. He has experience in managing and construction of methane drainage wells.</p>			
<p>EDUCATION (Degree, Year, Specialization) BSCCE, Civil Engineering</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS REGISTRATION (Type, Year, State)</p>			

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

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

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

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)	

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM V		THE DESIGNATED ENGINEER OF RECORD (Partial Listing o			jects)
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 Wezel/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	

Sign Fabrication Manual Revisions Updates, Charleston WV	WV DOT 1900 Kanawha Blvd. East Charleston, WV 25305-0430	N/A	2005	
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

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

18. CC ETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PAGE 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: Wesley O. Stafford

Printed Name: Wesley O. Stafford, PE, AICP

Title: Associate-in-Charge

Date: November 30, 2010



WilburSmith
ASSOCIATES