Statement of Qualifications

West Virginia Department of Environmental Protection

Hopewell Church Refuse and AMD Design Project

DEP 16074

January 28, 2013

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

240 Scott Avenue, Suite 1
Morgantown, WV 26508

(304) 284-9222

www.hrg-inc.com

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HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

[BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.]

January 28, 2013

Frank Whittaker
Department of Administration
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

RE: Expression of Interest
West Virginia Department of Environmental Protection
DEP 16074 – Hopewell Church Refuse and AMD Design Project

Dear Mr. Whitaker:

Herbert, Rowland, & Grubic, Inc. (HRG) is pleased to submit for your consideration this proposal and "Expression of Interest" for the West Virginia Department of Environmental Protection (WVDEP), Office of Abandoned Mine Lands and Reclamation (AML&R) to provide engineering services for the Hopewell Church Refuse and AMD Design Project.

We have assembled a team of highly experienced personnel within the firm who have provided similar engineering services for numerous abandoned mine land reclamation and related projects over the years for a variety of clients including the West Virginia Department of Environmental Protection, the Pennsylvania Department of Environmental Protection, and the Ohio Department of Natural Resources. Our team is supplemented by two sub-consultants: *Geomechanics* from Elizabeth, PA, a leader in providing geotechnical engineering services for over 42 years for literally hundreds of projects involving abandoned mine lands and reclamation located throughout Appalachia; and *Freelance Technical Associates, Inc.* from Fairmont, WV, with experience in design, construction, and surveying of AMD facilities dating back to 1975.

We welcome the opportunity to present our credentials to you and look forward to the chance to discuss our approach and our capabilities with the selection committee. Please contact me at 304-284-9222 if you have any questions or if I can provide any clarifications regarding our proposal.

.

Sincerely,
HERBERT, ROWLAND, & GRUBIC, INC.

Samer

Samer H. Petro, P.E.
Office Manager/Senior Project Manager

240 Scott Avenue • Suite 1 • Morgantown, WV 26508
304.284.9222 [phone] • 304.284.9223 [fax]

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

[BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.]

CORPORATE OVERVIEW

50th Anniversary

Herbert, Rowland & Grubic, Inc. (HRG) is an engineering and related services firm. We serve the Mid-Atlantic and Mid-West states with a contingent of 227 engineers, surveyors, planners, finance professionals, project managers, right-of-way acquisition specialists, and program administrators and continue to be recognized annually as an *Engineering News-Record top 500* firm. HRG has been in business for 50 years building relationships and providing solutions to our clients. We have offices throughout Pennsylvania and West Virginia. The following is a brief summation that demonstrates HRG's unique qualifications to provide services to the West Virginia Department of Environmental Protection:

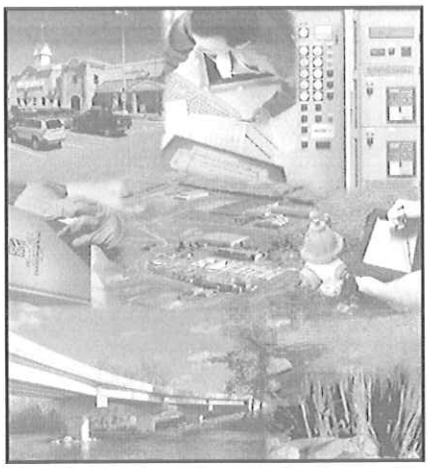
Responsiveness and Commitment:

Several of our proposed team of experienced professionals are West Virginia residents and are proud and eager to serve West Virginia and their community. This is an extension of the HRG culture where our staff is not focused solely on calculations and field data, but on people – our clients; the men, women, and children they serve; our employees; and the citizens of whom we share the local community. That's why we strive – before any plans are prepared – to get to know the needs of all stakeholders, so that we can design innovative solutions tailored to meet everyone's unique needs.

HRG's Morgantown, WV office is approximately 27 miles from Preston County, West Virginia, and is the location where Andrew Longenecker, our Project Manager, is based. With less than one hour of travel time, Andrew and the remainder of the Morgantown staff will be able to meet with WV DEP personnel whenever necessary to coordinate the details of any project or answer any questions you may have. In addition, our Cranberry Township and Harrisburg, PA office staff can easily respond and have an on-site presence within half working days' notice.

Full Service Capabilities and Experience:

We are a 227 employee full service firm offering expertise in the areas of transportation, environmental site assessments, civil and water resources, water and wastewater, site design, surveying, and GIS. This broad range of capabilities further enhances our ability to serve you by enabling us to handle every project need in-house from the initial project concept to project delivery.



Dedication to Quality Service:

It's especially desirable to hand over a project from start to finish to one firm when you know that firm possesses such strict standards for quality assurance and quality control as HRG does. In accordance with our quality control procedures, a project-specific QA/QC plan is developed for each undertaking that identifies project-specific communications procedures, schedule milestones, and checking milestones to be followed by all individuals. Our clients, including our higher education clients, can attest to the quality of our service.

RELATED DESIGN EXPERIENCE

Herbert, Rowland & Grubic, Inc.'s team of extremely experienced professionals, which includes several West Virginia registered professional engineers and surveyors, will work cohesively to meet and exceed your expectations. It is the experience and diverse background of our team members, working closely with our clients, that has ensured that our projects meet our clients' expectations and the needs of the communities that they serve. Made up of a diverse array of professional engineers, our team provides a "one-stop" resource that will provide you with **on-time quality services.** Our approach and methodology to provide all of the needed services, translates into a streamlined and seamless transition as projects progress from design to reality.

Environmental:

Our Knowledgeable staff of geologists and environmental professionals is the first resource to consider for providing environmental studies, site assessments, permit applications, remedial investigations, land recycling solutions, regulatory compliance management and litigation support.

While project specifications may vary, we consistently adhere to protocols established through the ASTM Standard Practice E 1527-05 guidance. We've conducted hundreds of site assessments on projects ranging from undeveloped land to industrial facilities that have a long history of hazardous material usage, handling, and storage.

In addition, many state or federally funded projects require a different range of investigation and documentation in compliance with the National Environmental Policy Act (NEPA). HRG's extensive experience with this process allows us to effectively prepare and coordinate these investigations. We offer a full range of services covering the preparation of Categorial Exclusion Evaluations, Environmental Assessments and Environmental Impact Statements as well as public involvement, social resources, noise studies, and agency coordination.

For remedial investigations, we possess extensive experience performing characterization studies of sites contaminated by hazardous substances and petroleum products. For site where regulated substances are discovered, HRG has managed soil and groundwater remediation projects ranging from minor contamination of soil by petroleum distillates to sites requiring recovery of nonaqueous liquids PCBs, and/or heavy metals impacting soils and groundwater. We employ remedial technologies only after careful consideration of cost benefit and technical reliability.

HRG is also experienced in developing and implementing approved plans for reuse of inactive industrial properties through state-run, voluntary cleanup programs, especially Pennsylvania's Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2).

Our compliance management expertise includes Waste Management & Minimization, Air Quality, Water Quality, Hazardous Materials, and OSHA/Worker Right-to-Know requirements. We conduct training, perform environmental compliance evaluations for internal auditing purposes, develop and implement environmental and safety management plans, support preparation and submittal of permit applications, notifications, reports and correspondence related to numerous aspects of environmental and safety management.

We complete Preparedness, Prevention and Contingency (PPC) Plans and Spill Prevention, Control and Countermeasure (SPCC) Plans to comply with applicable regulatory requirements, minimize the impact your operation may have on the environment in the event of a release and develop best management practices to prevent such accidental releases.

HRG staff has extensive experience in all aspects of wetland investigations, from identification & delineation to mitigation design, construction oversight, and long-term monitoring. Where impacts are unavoidable, HRG offers a full range of services to help you obtain water obstruction and encroachment permits from the Department of Environmental Protection and Section 404 Permits from the U.S. Army Corps of Engineers.

Our experience with natural resources also includes watershed assessments, stream and habitat assessments, in-stream macro invertebrate studies, stream restoration and stabilization design, threatened and endangered species coordination. We also integrate the latest GIS technologies to enhance our studies.

Water Resources:

HRG provides a wide array of waterways permitting and design services that are targeted at preserving our streams, rivers and watersheds. Our services help you comply with current state and federal regulations while ensuring that these water resources can be enjoyed by future generations.

Our comprehensive watershed management services include assessing water quality using techniques such as macro-invertebrate study, identifying sources of potential runoff and pollution, designing Best Management Practices (BMPs), engineering stream restoration and stabilization measures, and preparing watershed assessments and river conservation plans. We also assist with the management of watershed alliances and help watershed organizations apply for the funding they need.

When wetlands will be impacted by a project, we identify and delineate these wetlands, prepare design alternatives to minimize the impact, and prepare the required permit applications if impact is unavoidable. We also design mitigation

measures and complete construction and post-construction monitoring to ensure the continued survival of the aquatic life that inhabit these wetlands.

We also have extensive and relevant experience in the preparation of Phase I and Phase II Act 167 Watershed Stormwater Management Plans throughout Pennsylvania. This experience has given us an in-depth understanding of the requirements of the Department of Environmental Protection (DEP) will have for this state funded program, which significantly enhances our efficiency in completing the projects.

HRG's experienced staff possesses years of experience assisting counties and local governments in developing ordinances to address water quantity, water quality and channel protection standards. We have subsequently also helped countless clients comply with these regulations on their commercial, residential and industrial projects.

As recognized experts on National Pollutant Discharge Elimination System (NPDES) permitting, we have conducted numerous presentations on NPDES regulations to government and industry throughout the region. We are also a recognized expert in obtaining NPDES Phase II permits from the Department of Environmental Protection for post-construction stormwater management facilities.

In addition, HRG provides services such as Hydrologic and Hydraulic Analysis in support of many projects. We use HEC-HMC hydrologic modeling and HEC-RAS hydraulic modeling and structure design, scour analysis, dam breach analysis, floodplain analysis, and erosion and sedimentation control design to help you obtain water obstruction and encroachment permits from the Department of Environmental Protection and Section 404 Permits from the U.S. Army Corps of Engineers.

Transportation:

HRG's comprehensive array of traffic engineering services includes traffic impact studies, traffic signal design, congestion management studies and transportation planning. Our traffic studies, include an analysis of current and projected land use as well as thorough collection and analysis of existing traffic data. After identifying system requirements, we apply state-of-the-art software to design the most cost-effective traffic systems that maximize efficiency and promote safety.

Our transportation engineers have completed hundreds of roadway designs of verifying size and complexity – from interstate interchanges to bituminous overlays of local road. Our experience includes engineering services for dozens of large-scale improvement projects to enhance safety and increase capacity along major arterial roadways and interstates throughout the region.

Our engineers have completed more than 100 bridge replacements and rehabilitations. Our projects have ranged from locally sponsored, federally funded bridge replacements to state-owned, single- and multi-span structures traversing streams, highways and railroads. In addition, our Certified Bridge Safety Inspectors perform NBIS inspections to assess the physical integrity and structural adequacy of a wide variety of bridges.

Our staff provides comprehensive rail engineering services to private sector companies who rely on rail for transportation for their goods, public transportation agencies providing enhanced multi-model access, and railroad lines that transport freight for industry. We understand the fast-paced nature of your business and the dollars that depend on rapid response; therefore, we provide quick turnaround on all plans and deliverables to keep your project on track.

Surveying/GPS:

Dependable, accurate surveys are the foundation for successful planning, design and construction. At Herbert, Rowland & Grubic, Inc. (HRG) we use a wide range of state-of-the-art technologies to provide clients with the most accurate, up-to-date survey data and mapping.

Demanding project schedules and short turnaround times are not a problem with HRG's experienced surveyors and technology. We employ modern equipment such as Real Time Kinematic (RTK) Global Positioning System units to dramatically cut the time needed for data collection. These RTK units allow a single person to collect more information in a day than a two-person could in the same time period using conventional methods, providing greater efficiency and cost savings. In addition, GPS technology provides greater accuracy over large project areas.

Our land surveyors utilize total station equipment with electronic data collection in the field enabling us to directly transfer the data to a computerized drafting system. This decreases the time for plan preparation and reduces the opportunity for error. In addition, our surveyors are proficient in a wide array of conventional surveys, including boundary and topographical surveys, American Land Title Association (ALTA) land title surveys, route surveys, highway surveys, record surveys, and construction surveys.

Land Development:

Today, building commercial, residential and industrial developments is becoming more and more complex due to changing regulatory and environmental requirements. Developers and businesses need an engineering firm with technical expertise in a broad range of disciplines in order to expedite completion of their projects. Herbert, Rowland & Grubic, Inc. (HRG) is that firm. Our engineers combine their knowledge and expertise with proven project management skills to handle every aspect of the land development process. For our clients, this means an economical, functional, and aesthetically pleasing site design that is delivered on budget and on time, every time.

From site analysis and feasibility studies to construction administration, our multi-disciplinary staff of engineers, landscape architects, surveyors and environmental scientists provides complete concept-to-construction services. In addition to typical site design tasks, HRG offers a diverse accompaniment of capabilities in surveying, environmental studies, traffic analysis and roadway design, electrical engineering, and water and wastewater system design. Quality, innovative and cost-effective engineering, and water and wastewater system design.

HRG has Leadership in Energy and Environmental Design (LEED) accredited professionals on staff who plan and design sustainable, environmentally friendly spaces in which to live and work. Our capabilities include aesthetically pleasing streetscapes that become thriving town centers as well as greenways, recreational areas and Traditional Neighborhood Developments that encourage physical activity and interaction among neighbors. From master planning and feasibility analysis through innovative design of plantings and infrastructure for environmental enhancement of the site, HRG provides the full breadth of land development and landscape architecture services.

Our staff utilizes a wide variety of software and equipment to maximize our efficiency in completing each project. This includes advanced Global Positioning System (GPS) surveying techniques to provide highly accurate survey data in less time than conventional methods as well as a number of advanced CADD applications that enable us to deliver quality plans faster in order to meet your aggressive schedule. We also have online project collaboration software available to share project files, schedule meetings and assign tasks in a way that keeps everyone informed of project progress and keeps the project schedule and budget on track.

MANAGEMENT & STAFFING

The following is a brief overview of proposed key staff members who will be extensively involved in all WV DEP projects awarded to Herbert, Rowland & Grubic, Inc., including Hopewell Church Refuse & AMD Design (DEP 16074)

Andrew J. Longenecker is a Natural Resources Regional Service Group Manager with Herbert, Rowland & Grubic, Inc. (HRG), and will act as **Project Manager** for the WV DEP and your prime point of contact. Possessing more than ten years of experience in the environmental field, Mr. Longenecker is responsible for the management of projects involving collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, site work, reports, bog turtle habitat screening, natural gas well pad and pipeline development, Phase I Environmental Site Assessment research and reports, and coordination with PADEP, US Army Corps of Engineers and additional federal and state agencies.

James B. Gue is an Environmental Scientist with Herbert, Rowland & Grubic, Inc. His responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permit applications. He also provides assistance with the development of geographic information systems and computer-aided drafting. Mr. Gue brings over 30 years of experience with the Ohio Division of Natural Resources including a background in the Abandoned Mine Lands Program, through which he conducted extensive acid mine drainage investigations, mining and reclamation inspections to monitor compliance with State and Federal laws, recommended mitigation methods and designs for acid mine drainage mitigation projects via multiple passive treatment system methodologies, including aerobic and anaerobic wetlands; prepared Acid Mine Drainage Abatement and Treatment plans for environmentally devastated watersheds; coordinated start-ups and acted as liaison to public environmental restoration efforts at multiple impacted watersheds, among other various roles he played throughout his extensive career history.

Douglas E. Weikel, P.E. is the Director of Civil Services for Herbert, Rowland & Grubic, Inc. (HRG). Mr. Weikel has extensive experience in the preparation of studies, design, plans, and specifications for various municipal and civil engineering projects. His skills include municipal planning, construction management, contract administration, storm water design, and site design.

Samer H. Petro, P.E. is the Manager of the Morgantown office of Herbert, Rowland & Grubic, Inc. (HRG), he provides client contact, business development, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways; removal, replacement, and rehabilitation of existing structures, highways, and water and wastewater treatment facilities; and construction-phase services. Samer's experience and expertise also includes strengthening historic and existing structures using fiber reinforced polymer (FRP) composite materials and nondestructive testing methods for highway bridges and transportation related structures. He routinely coordinates each aspect of contract administration, construction phase services, including periodic field inspections from the award of contracts to project close-out.

Benjamin J. Savage, P.E. is a civil construction manager with Herbert, Rowland & Grubic, Inc. In this capacity he is responsible for overseeing a number of construction sites at one time and managing construction inspectors to insure conformance to requirements of contract documents for oil and gas construction projects including well pad sites, pipelines and roads. Mr. Savage has over 10 years of experience with the West Virginia Division of Highways during which time he monitored and reviewed all facets of consultant designed highway projects to ensure that WVDOH standards and specifications were adhered to and made certain the project was delivered in a timely and budget-conscious manner. Mr. Savage was also responsible for guiding the consultants through the design process in tasks such as setting the horizontal and vertical geometry, reviewing minor and major drainage, developing the Right of Way plans, reviewing the maintenance of traffic plans, putting together the contract set of plans that went to construction, applying for all necessary permits for project completion, coordinating with all utilities that may need relocated, as well as being able to solve any minor issues that may occur with contractors once the project was awarded and under construction.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 06/11/2012

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER JAMES B MURDOCH INSURANCE GROUP INC 4300 Carlisle Pike Camp Hill, PA 17011	**CONTACT NAME:** **PHONE (A/C, No, Ext):** (717)737-9900 **FAX (A/C, No):** **E-MAIL ADDRESS:**
INSURED Herbert Rowland & Grubic Inc 369 E Park Dr Harrisburg, PA 17111-2730	**INSURER(S) AFFORDING COVERAGE** / **NAIC #** INSURER A : ERIE INS EXCH 26271 INSURER B : ERIE INS CO of NY 26271 INSURER C : CNA (Schinnerer) 20443 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	**GENERAL LIABILITY** X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC			Q410150093	5/1/2012	5/1/2013	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1000000 $ 1000000 $ 5000 $ 1000000 $ 2000000 $ 2000000
A	**AUTOMOBILE LIABILITY** X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS			Q051502279	5/15/2012	5/15/2013	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1000000 $ $ $
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED 0 RETENTION $			Q290170004	5/1/2012	5/1/2013	EACH OCCURRENCE AGGREGATE	$ 10000000 $ 10000000
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** Y/N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N/A **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below			Q89-5100454	5/1/2012	5/1/2013	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 100000 $ 100000 $ 500000
C	Professional Liability			AEH 00-822-00-56	6/9/2012	6/9/2013	Per Claim Limit: $5,000,000 Aggregate Limit: $5,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Amanda Perstetta

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

Solicitation

NUMBER	PAGE
DEP16074	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER
304-558-2316

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

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

DATE PRINTED: 12/21/2012
BID OPENING DATE: 01/31/2013 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		

HOPEWELL CHURCH REFUSE & AMD DESIGN

EXPRESSION OF INTEREST

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 HOPEWELL CHURCH REFUSE & AMD PROJECT IN PRESTON COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

****** THIS IS THE END OF RFQ DEP16074 ****** TOTAL:

SIGNATURE	TELEPHONE	DATE
Shawn Peters	304.284.9222	01/28/13
TITLE: Office Manager	FEIN: 23-1609730	ADDRESS CHANGES TO BE NOTED ABOVE

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

RFQ No. DEP 16074

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Herbert, Rowland & Grubic, Inc.

Authorized Signature: [signature] Date: 01/25/2013

State of West Virginia

County of Mon, to-wit:

Taken, subscribed, and sworn to before me this 25th day of January, 2013.

My Commission expires Feb. 28, 2021.

AFFIX SEAL HERE

NOTARY PUBLIC [signature]

Official Seal
Notary Public, State of West Virginia
Joan L. Miller
WesBanco Bank
9 Commerce Drive
Westover WV 26501
My Commission Expires Feb. 28, 2021

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEP16074

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ] Addendum No. 1	[ ] Addendum No. 6
[ ] Addendum No. 2	[ ] Addendum No. 7
[ ] Addendum No. 3	[ ] Addendum No. 8
[ ] Addendum No. 4	[ ] Addendum No. 9
[ ] Addendum No. 5	[ ] Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Herbert J Rowland & Grubic, Inc.
Company

Authorized Signature

01/28/2013
Date

NO ADDENDUM ISSUED —

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

CERTIFICATION AND SIGNATURE PAGE

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

Herbert, Rowland, & Grubic, Inc
(Company)

Samer Petru
(Authorized Signature)

SAMER PETRU, P.E.
(Representative Name, Title)

304.284.9222
(Phone Number) (Fax Number)

01/28/2013
(Date)

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

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
Hopewell Chruch Refuse & AMD Design		23-1609730

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Herbert, Rowland & Grubic, Inc.	369 East Park Drive Harrisburg, PA 17111	Herbert Associates, Inc.

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE
(717)564-1121	1962	Individual Corporation Partnership Joint-Venture	YES NO

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
Herbert, Rowland & Grubic, Inc./Morgantown, WV/304.284.9222/Samer Petro, P.E./8

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Robert C. Grubic, P.E., President Albert T. Brulo, P.E., Senior VP/Chief Operations Officer Brian D. Emberg, P.E., Senior VP/Chief Technical Officer Bruce A. Yerger, P.E., Vice President/Chief Financial Officer Jason A. Fralick, P.E., Vice President, Central Region Andrew M. Kenworthy, P.E., Vice President, Eastern Region James M. Lopresti, P.E., Vice President, Western Region Russell F. McIntosh, Vice President	Christopher K. Bauer, P.E., PTOE, Director of Transportation Services, 717.564.1121 Edward A. Ellinger, P.E., Director of Water and Energy Services, 717.564.1121 Douglas E. Weikel, P.E., Director of Civil Services/Survey Services, 814.238.7117 Jamie B. Keener, AICP, Director of Land Development, Planning, and Federal Marketing Services, 717.564.1121 Paul E. Nachlas, P.G., Dir. of Environmental Services, 717.564.1121

9. PERSONNEL BY DISCIPLINE

44	ADMINISTRATIVE	0	ECOLOGISTS	6	LANDSCAPE ARCHITECTS	6	STRUCTURAL ENGINEERS
0	ARCHITECTS	0	ECONOMISTS	1	MECHANICAL ENGINEERS	22	**SURVEYORS**
0	**BIOLOGIST**	2	ELECTRICAL ENGINEERS	0	**MINING ENGINEERS**	16	TRAFFIC ENGINEERS
28	**CADD OPERATORS**	3	ENVIRONMENTALISTS	0	PHOTOGRAMMETRISTS	9	OTHER
0	CHEMICAL ENGINEERS	7	ESTIMATORS	1	PLANNERS: URBAN/REGIONAL		
20	**CIVIL ENGINEERS**	2	**GEOLOGISTS**	25	SANITARY ENGINEERS		
15	CONSTRUCTION INSPECTORS	0	HISTORIANS	0	SOILS ENGINEERS		
0	DESIGNERS	6	HYDROLOGISTS	0	SPECIFICATION WRITERS	217	TOTAL PERSONNELL
4	DRAFTSMEN						

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 3
***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 APPLICABLE

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
GEOMechanics, Inc. 600 Munir Drive, P.O. Box 386 Elizabeth, PA 15037-0386	Geo-Technical Services	X___Yes No
NAME AND ADDRESS: Freelance Technical Associates, Inc. 207 Fairmont Avenue Fairmont, WV 26554	SPECIALTY: Surveying Services	WORKED WITH BEFORE X___Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No

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

YES Description and Number of Projects: Members of HRG have completed AML projects in the past, although not in WV but in Ohio. These projects involved the preparation of construction drawings for strip mine highwall elimination, spoil bank stabilization, shaft closures sensitive to bat habitat issues, GOB fires, mine drainage, and investigation and mitigation for AMD.

NO

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

YES Description and Number of Projects: HRG uses data from soils laboratories in preparing studies and designs. HRG will be using an esteemed sub-consultant for geo-technical services on projects.

NO

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

YES Description and Number of Projects: HRG staff has experience addressing and resolving complex drainage issues related to roads, bridges, urban and rural development, site development for government and private clientele on hundreds of projects.

NO

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

YES Description and Number of Projects: HRG develops contour mapping from mass points and break lines derived from outside aerial photography and LiDAR.

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: HRG designs on all aspects of water, wastewater, treatment, conveyance, and collection projects for both private and municipal (government) clients, including hundreds of projects company-wide.

NO

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

YES Description and Number of Projects: HRG staff has experience investigating and recommending mitigation designs for acid mine drainage projects.

NO

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Petro, Samer H. Morgantown Office Manager/Contract Manager	0	10	0

Brief Explanation of Responsibilities
Provides client contact, business development, operations management, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways, and water and wastewater treatment facilities, and construction-phase services.

EDUCATION (Degree, Year, Specialization)
B.S., 1987, Civil Engineering
M.S., 1993, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Engineers Association of Bridge Construction & Design American Concrete Institute	P.E., 2003, West Virginia P.E., 2001, Ohio

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Weikel, Douglas E. Director of Civil Services	0	0	21

Brief Explanation of Responsibilities
Responsible for maintaining the general technical project standards, for executing the Quality Management Plan for Civil and Survey groups as well as developing company-wide strategy for those groups. In addition, provides client and project management for various projects involving stormwater management, wastewater conveyance and treatment, water resource design, and construction management.

EDUCATION (Degree, Year, Specialization)
B.S., 1988, Civil Engineering
B.S., 1995, Physics

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Pennsylvania State Associate of Township Supervisors	P.E., 1997, Pennsylvania

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Gue, James B. Environmental Scientist II	30	30	10

Brief Explanation of Responsibilities: Responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permits applications. As a former 30 year employee of the ODNR Abandoned Mine Lands Section, responsibilities included the planning, monitoring and developing of abandoned mine land reclamation projects. Public health and safety projects were related to strip mine highwall elimination and spoil bank stabilization; deep mine related projects involved shaft closures sensitive to bat habitat issues and GOB pile fires; Mine drainage contaminated water supply projects involved private well replacements and public water line installations; investigated and recommended mitigation designs for acid mine drainage projects.

EDUCATION (Degree, Year, Specialization)
B.S. from Kent State University, 1981, Natural Resource Conservation

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Warden, Richard W. Natural Resources Engineer	33	33	0

Brief Explanation of Responsibilities
30 years' experience in AML projects and various other projects to support Ohio DNR facilities. Experience also included geotechnical subsurface investigations and slope stability analysis.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) P.E., Ohio

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Tukel, Murat Environmental/Civil Engineer	4	12	0

Brief Explanation of Responsibilities
Responsible for developing, planning and designing mine reclamation projects, contract preparation and bidding, cost estimates, budgeting, contractor selection, and oversight of construction activities.

EDUCATION (Degree, Year, Specialization)
B.S., 1989, Environmental Engineering
M.S., 1991, Civil Engineering
M.B.A., 1998, Business

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	P.E., Ohio

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Swisher, David M. Water & Energy Regional Service Group Manager	0	0	11

Brief Explanation of Responsibilities
Responsible for managing environmental engineering projects including: planning, permitting, design, construction administration, financial analyses, and project financing of water and wastewater infrastructure projects.

EDUCATION (Degree, Year, Specialization)
B.S. from The Pennsylvania State University, 2001, Civil and Environmental Engineering
M.S. from The Pennsylvania State University, 2002, Environmental Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Water Works Association Construction Specifications Institute Pennsylvania Municipal Authority Association Pennsylvania Water Environmental Association Water Environment Federation	P.E., Pennsylvania

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Rusnak, John Civil Project Manager/Team Leader	0	0	20

Brief Explanation of Responsibilities
Responsible for overseeing staff in the development of design concepts, preparing preliminary and final design drawings, developing technical specifications and bid documentation, and attending meetings and preparing, reviewing and delivering budgets for municipal clients. Also, provides oversight during construction and monitors project costs.

EDUCATION (Degree, Year, Specialization)
B.S., 1989, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	P.E., 1995, Pennsylvania

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Longenecker, Andrew J. Natural Resource Regional Service Group Manager	0	13	0

Brief Explanation of Responsibilities
Responsible for the management of projects involving stream restoration, collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, threatened and endangered species investigations, natural gas well pad and pipeline development, Phase I Environmental Site Assessments, and US Army Corps of Engineers and state agency permits.

EDUCATION (Degree, Year, Specialization)
B.S., 1997, Wildlife and Fisheries Resources
M.S., 2000, Biological Services

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Society of Wetland Scientists	

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Varner, Roger B. Land Development Staff Professional	0	20	20

Brief Explanation of Responsibilities

Responsible for a variety of environmental engineering and permitting tasks and business development for oil and gas clients and land development clients. Such tasks include private and public water source investigation, sampling and analysis protocol, preparation of permit applications and plans for oil and gas well development sites, water management and planning studies for oil and gas well hydro-fracturing and production needs, and providing field investigation and inspection services for environmental projects. Mr. Varner has significant experience in water and wastewater facilities planning, federal, state, and regional permitting services, and preparation of regulatory reports and documents.

EDUCATION (Degree, Year, Specialization)

B.S., 1989, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Savage, Benjamin J. Civil Construction Manager	0	13	0

Brief Explanation of Responsibilities

Responsible for overseeing a number of construction sites at one time and managing construction inspectors to insure conformance to requirements of contract documents for oil and gas construction projects including well pad sites, pipelines, and roads.

EDUCATION (Degree, Year, Specialization)

B.S. from West Virginia University, 1997, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	P.E., 2003, West Virginia

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Stonebraker, Chad E. Land Development Senior CADD Technician	1	13	1

Brief Explanation of Responsibilities
Responsibilities include assisting the project manager in design, preparing Land Development plans, profiles, sections and details. Proficient with AutoCAD Civil3D 2011 and MicroStation software for base map and construction layout plan.

EDUCATION (Degree, Year, Specialization)
A.S.T., 2000, Computer Aided Drafting

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Cardosi, Andrew D. Transportation Regional Service Group Manager	0	11	0

Brief Explanation of Responsibilities
Responsible for preparation of contracts and proposals, including development of technical scopes of work; project budgeting and cost estimating; bid documents preparation; contract administration; scheduling and planning updates for municipal reviews of land development and subdivision plans; Highway Occupancy Permit plan reviews; roadway design in areas such as roadway geometry, pavement design and analysis, drainage design and management, maintenance and protection of traffic plans, right-of-way plans; utility coordination; and construction inspection.

EDUCATION (Degree, Year, Specialization)
B.S. from The Pennsylvania State University, 2001

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers American Society of Highway Engineers - Mid Allegheny	P.E., PA P.E., WV

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

HRG will be utilizing Freelance Technical Associates, Inc. for any and all related surveying and mapping services. The equipment they intend to use is as follows: Topcon Hiper SR GPS Survey System, One (1) Topcon TESLA Controller, Two (2)total stations, Two (2) GPS enabled, TDS Nomad data collectors with Bluetooth and Wi-Fi, Field surveying equipment

HRG will design work for WVDEP utilizing a secure network of computer aided design (CAD) equipment, software and trained personnel in the state of West Virginia. All computer systems are password protected, monitored by Symantec Endpoint protection, firewall, XWall filtering, and content policies to secure and protect against virus, adware, malware, spyware, and unauthorized intrusions.

Connected through a Windstream managed MPLS network our staff has the ability to share necessary plans among our locations or when remote access is required approved staff may access files and software via a secure virtual private network (VPN). Our staff utilizes some of today's latest technologies such as 24x7 email access, project planning & reports through Deltek Vision, and virtual desktops. In addition, approved staff utilizes tablet or smartphone technology for remote access to maintain communication with WVDEP. This will allow work designed for WVDEP to be prepared and updated at the office locations or accessed remotely anywhere internet is accessible that best meets the requirements and the scope of services for WVDEP.

Civil 3D, Trimble, and Microstation V8 software is utilized on 120 CAD stations throughout our locations. Additionally, equipment includes 10 large format (size E) plotters and 4 large Print/Copy/Scan T2300 Design Jets for black & white or color output. Plans are prepared by both dedicated CAD employees, engineering technicians, and licensed engineers in each of the firm's offices.

HRG, Inc. also utilizes top-of-the line survey equipment. Our survey work is accomplished with global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities.

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
2013 Township Wide Sewer Rehabilitation South Park, PA	South Park Township, PA 2675 Brownsville Road South Park, PA 15129	Design, Contract Administration, and Construction Observation	$250,000.00	0% (In Progress)
2013 Borough Wide Sewer Rehabilitation Bellevue Borough, PA	Bellevue Borough 537 Bayne Avenue Pittsburgh, PA 15202	Design, Contract Administration, and Construction Observation	$175,000.00	0% (In Progress)
Forebay Maintenance Sediment Removal Cranberry Township, PA	Sherwood Oaks 100 Norman Drive Cranberry Township, PA 16066	Design, Engineering Permit, Site Investigation, and Surveying	$11,000.00	5% (In Progress)
Pike Run Bridge #11 Replacement Washington Co., PA	Washington County Planning Commission 100 West Beau Street Washington, PA 15301	Surveying, H&H Studies, Categorical Exclusion Evaluation (CEE), Bridge Design, E&S Control Plan, Waterway Permits	$555,000.00	60% (In Progress)
Chartier's Bridge #61 Replacement Washington Co., PA	Washington County Planning Commission 100 West Beau Street Washington, PA 15301	Surveying, H&H Studies, Categorical Exclusion Evaluation (CEE), Bridge Design, E&S Control Plan, Waterway Permits	$375,000.00	40% (In Progress)

TOTAL NUMBER OF PROJECTS: 5

TOTAL ESTIMATED CONSTRUCTION COSTS: $1,366,000.00

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

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

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Upgrade Water Source and Distribution System Torrance, PA	PA-DAS c/o Torrance State Hospital 121 Longview Drive Derry Township Torrance, PA 15779	$620,000.00	2007	YES
West End Pond Renovation Venango County, PA	Clarion University Venango Campus 1801 West First Street Oil City, PA 16215	$900.000.00	2010	YES
Venango Campus Drainage Improvements Venango County, PA		$750,000.00	2012	YES
Township Wide Sanitary Sewer Rehabilitation Projects South Park, PA	South Park Township 2675 Brownsville Road South Park, PA 15129	(For Years 2008 through 2012) >$1,000,000.00	2008-2012	YES
Borough Sewer Repair Projects Bellevue Borough, PA	Bellevue Borough 537 Bayne Avenue Pittsburgh, PA 15202	(For Years 2008 through 2012) >$750,000.00	2008-2012	YES
County Act 167 Stormwater Management Plan Venango, PA	Venango County Planning Commission 1168 Liberty Street Franklin, PA 16323	>$150,000.00	2010	YES
County Act 167 Stormwater Management Plan Butler County, PA	Butler County Planning Commission Butler, PA	>$110,000.00	2010	YES
County Act 167 Stormwater Management Plan Washington County, PA	Washington County Planning Comission 100 West Beau Street Suite 701 Washington, PA 15301	>$138,000.00	2010	YES

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

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

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

20. The foregoing is a statement of facts.

Signature: Samer Petro Title: Office Manager Date: 01/28/2013

Printed Name: SAMER H. PETRO, P.E.

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	James Gue	Murat Turkel	Richard Warden	Andrew Longenecker	Andrew Cardosi	
Andy Myers Mine Subsidence (ST-Os-19)	P			X					X		X		X				X	P					
Applegrove Road Mine Stabilization (ST-Pl-23)	P			X					X		X		X				X	P					
Belden Phase II (CR-Rs-19)	P		X			X				X	X		X	X		X		P					
Bergholz East Highwall (JF-Rs-11)	P		X								X		X					P					
Dean Miller Highwall (TS-Sn-27)	P		X								X		X					P					
Dick Rose Highwall (CL-Md-20)	P		X								X		X					P					
Dobson Road (CL-Fn-06)	P										X		X					P					
Dover 3 (SM-Nc-02)	P			X							X						X	P					
Dusty Quinn Sinkhole (JF-Sp-11)	P				X				X		X		X				X	P					
Ellsworth Coal Refuse (MH-El-01)	P		X				X				X		X	X	X			P					
Harsha South (CR-Rs-11)	P		X				X				X		X	X				P					
Hayes Highwall (CL-Mi-03)	P		X								X		X					P					
Huff Run 32 Pits AMD (CR-Rs-15)	P		X				X				X		X	X				P					
J.B. Drift Entry/Subsidence (ST-Os-23)	P				X				X		X		X					P					
Lattavo (TS-Lw-07)	P		X				X			X	X		X	X				P					
Martin Subsidence (SM-Sp-04)	P				X		X		X		X		X					P					
Masury Mine Subsidence (TR-Bl-06)	P				X		X		X		X		X					P					
Mill Rock Road Highwall (CL-Un-11)	P		X								X		X	X				P					
Mineral Ridge (MH-Au-08)	P			X	X				X		X		X				X	P					
Mineral -Zoar Road AMD (TS-Sn-23)	P						X				X		X	X				P					
North Canton Sinkhole (ST-Pl-26)	P				X				X		X		X				X	P					
Richard Beaver HW (CL-Md-19)	P		X								X		X	X				P					
Salem Small Projects 2005 (UP-Sa-2005)	P				X		X		X		X		X				X	P					
Salem Small Projects 2006 (UP-Sa-2006)	P				X		X		X		X		X				X	P					
Senff Road Slope Repair (WN-Pt-05)	P		X			X					X		X				X	P					

Tapscott Maintenance (CR-Fx-06)	P				X		X		X		X		X				X	P					
Thomas Road Subsidence (SM-Tv-07)	P				X		X		X		X		X					P					
Toronto Mine Drain (JF-Ic-12)	P				X	X	X		X		X		X					P					
Turturice Highwall (CL-El-27)	P		X				X			X	X		X					P					
Weaver Mine Subsidence (ST-Pk-03)	P				X		X		X		X		X					P					
Applegate Road (CL-Wa-01)	P		X				X			X	X		X					P					
State RT. 165 (MH-Bv-03)	P		X				X			X	X		X					P					
Frost Highwall (Cl-Fr-02)	P		X				X			X	X		X					P					
Black Diamond Shafts (MH-Mi-01)	P				X				X		X		X				X	P					
Eastern Mine Shaft Reclamation (JF-St-06)	P				X				X		X		X				X	P					
Columbiana County Clay Portals (CL-Lp-01)	P				X				X		X		X				X	P					
East Liverpool Mine Opening (CL-Lp-02)	P				X				X		X		X				X	P					
Briar Road (CR-Rs-02)	P		X				X			X	X		X					P					
Parsons Mine Fire (JF-Sp-03)	P		X					X			X		X					P					
New Buffalo Shaft (MH-Bv-04)	P				X				X		X		X				X	P					
Roach Run Entries (JF-Rs-04)	P				X				X		X		X				X	P					
Palmyra Shafts (PT-Pm-02)	P				X				X		X		X				X	P					
Carlson Reclamation Project (CL-Un-02)	P		X				X			X	X		X				X	P					
Squaw Creek - Vienna Township Shafts (TR-Vn-01)	P				X				X		X		X				X	P					
Sheets Highwall (JF-Kn-15)	P		X				X			X	X		X				X	P					
East Fairfield Coal / Petersburg (MH-Sp-02)	P		X				X			X	X		X		X		X	P					
Sugarcreek Clay & Limestone (TS-Ab-01)	P		X				X			X	X		X				X	P					
Red Malcuitt Inc. (TS-Fn-01)	P		X				X			X	X		X				X	P					
Malvern West Reclamation (ST-Sn-01)	P		X				X			X	X		X				X	P					
Spanson Drive (TS-Ml-03)	P		X				X			X	X		X				X	P					
Kollar Shafts (ST-Bh-02)	P				X				X		X		X				X	P					
Mt. Vernon Ave (ST-Mk-01)	P		X				X			X	X		X				X	P					
Ellesmere Ave. IV (ST-Nc-09-E)	P			X							X		X				X	P					
Tuscarawas County Road 14 (TS-Xx-03)	P		X				X			X	X		X				X	P					
Kellog Reclamation (CL-Ws-02)	P			X							X		X				X	P					
Mineral Ridge Subsidence (TR-Wf-02)	P			X							X		X				X	P					

Knight Highwall (CL-Un-06)	P		X				X			X	X		X				X	P					
Diamond Shaft (PT-Pm-01)	P				X				X		X		X				X	P					
Hood Mine Drain (JF-Sf-05)	P				X	X			X		X		X				X	P					
Brookfield Shaft (TR-Bf-03)	P				X				X		X		X				X	P					
Cline Highwall (JR-Ic-01)	P																						
Woodworth Pits (MH-Bv-02)			X				X			X	X		X		X		X	P					
Tuscarawas County Road 16 (TS-Cl-01)	P		X				X			X	X		X				X	P					
Copeland Oaks Highwall (MH-Sm-02)	P		X				X			X	X		X				X	P					
Stiffler Shaft (TS-Fr-01)	P				X				X		X		X				X	P					
St. Joseph Coal II (ST-Bh-01-F)	P		X				X			X	X		X				X	P					
Tusco Subsidence (TS-Sn-01)	P			X							X		X				X	P					
Spade Subsidence (SM-Fn-01)	P			X							X		X				X	P					
Mary Mahoney Mine Shafts (ST-Lw-03)	P				X				X		X		X				X	P					
Mairoiello Highwall (ST-Sn-08)	P		X				X			X	X		X				X	P					
Ellesmere Ave IV (ST-Nc-07)	P			X							X		X				X	P					
Nesbitt III (ST-Nc-03-E)	P			X							X		X				X	P					
Nesbit II (ST-Nc-02-E)	P			X							X		X				X	P					
Trumbull County Shafts II (TR-Xx-02)	P				X				X		X		X				X	P					
Tuscarawas County Mine Seeps (TS-Xx-01)	P		X				X			X	X		X				X	P					
Camp Zimerman (TS-Cl-05)	P										X		X				X	P					
Zimmerman Highwall (JF-Kn-10)	P		X				X			X	X		X				X	P					
Lupe Ave Emergency (ST-Pl-12-E)	P			X							X		X				X	P					
McLaughlin Highwall (CR-Cn-01)	P		X				X			X	X		X				X	P					
Jobes Reclamation (TS-Sn-04)	P		X				X			X	X		X				X	P					
Eastern Ohio Water Supply (ST-Cn-16)	P					X					X	X	X					P					
State Route 800 (TS-Un-10)	P		X				X			X	X		X				X	P					
Finn Mine Shaft (WN-Cp-06)	P				X				X		X		X				X	P					
Kaufman Reclamation (TS-Go-15)	P			X		X											X	P					
Ault Water Supply II (TS-Wr-14)	P					X					X	X	X					P					
Birkenstock Mine (SM-Gr-07)	P			X							X		X				X	P					
Tice Highwall (JF-Kn-06)	P		X				X			X	X		X				X	P					

Columbiana County Shafts (CL-Sl-01)	P				X				X		X		X				X	P					
South Egypt Road (MH-Gr-01)	P			X							X		X				X	P					
Hollow Ridge Road (WN-Cp-11)	P			X							X		X				X	P					
Swift Road (CR-Br-04)	P		X				X				X		X				X	P					
Shenandoah Gob (TS-Go-08)	P		X			X	X				X		X	X				P					
Overhead Subsidence (ST-Cn-17)	P			X							X		X				X	P					
Osborne Subsidence (ST-Nc-14-E)	P			X							X		X				X	P					
Mast II (WN-Pt-02)	P				X				X		X		X					P					
Flemming (TS-Dv-02)	P		X			X	X				X		X	X			X	P					
Butler Subsidence (TS-Sn-15-E)	P			X							X		X				X	P					
Cable Highwall (JF-Ic-03)	P		X				X				X		X				X	P					
Snyder Mine Drainage (TS-Fr-04)	P				X	X			X		X		X				X	P					
North Canton Subsidence (ST-Pl-19-E)	P			X							X		X				X	P					
Woodworth (MH-Bv-13-E)	P		X				X				X		X		X		X	P					
Chapel Hill Church (SM-Sp-01)	P				X				X		X		X				X	P					
Mathey Water Well (TS-Sn-18)	P					X					X	X	X					P					
Hicks Subsidence (WN-Cp-07-E)	P			X							X		X					P					
Huff Run Reclamation (TS-Sn-13)	P		X				X				X		X					P					
Yellow Creek Blow Out (Jf-Sl-01)	P				X	X					X		X			X		P					
Forney (ST-Pl-16)	P			X							X		X				X	P					
Veley Long (TS-Sl-04)	P					X					X	X	X					P					
Cvetkovic (MH-Au-02)	P			X							X		X				X	P					
Drake Shaft (ST-Lw-01)	P				X				X		X		X				X	P					
Gorthey (TS-Sn-07)	P				X				X		X		X				X	P					
Barnhill Tipple (Ts-Go-03)	P		X				X				X		X		X			P					
Spiker Reclamation (ST-Sn-03)	P		X				X				X		X					P					
Jacob #3 (TR-Hb-01)	P				X				X		X		X				X	P					
South Massillon Mine (ST-Bh-04)	P				X						X		X				X	P					
Velleca Mine Seeps (TS-Wr-01)	P		X		X									X			X	P					
Kaufman II (TS-Go-25)	P			X		X						X					X	P					
Maurer (TS-Wr-04)	P		X				X				X		X				X	P					

Sponseller (ST-Sn-02)	P		X				X				X		X				X	P					
Rogers Highwall (CL-El-04)	P		X				X				X		X				X	P					
Shook Subsidence (MH-Au-01)	P			X							X		X				X	P					
Vienna Shafts (TR-Vn-01)	P				X				X		X		X				X	P					
Linden AMD (CR-Rs-04)	P		X			X								X		X		P					
Turnbull Subsidence (CL-Un-04)	P			X							X		X				X	P					
New Springfield Church (MH-Sp-09)	P		X				X				X		X				X	P					
Maple Highwall Phase 2 Reclamation	P		X								X	X					X		M				
Cherry Valley Coke Ovens Reclamation	P			X	X	X			X		X	X		X	X	X	X		M				
Hawkins Road Tipple Removal	P				X		X			X	X		X		X				M				
Wolfe Shaft Reclamation	P				X				X		X		X						M				
Oakview Drive Sobsidence	P			X					X		X		X				X		M				
Voorhees Highwall Reclamation	P		X								X	X							M				
Weaver Highwall Reclamation	P						X				X		X						M				
Quaker Raceway Portal Closure	P		X		X						X		X						M				
Viny Reclamation	P		X			X					X	X	X						M				
Gaither Highwall Reclamation	P		X			X					X	X							M				
Ferrebee Subsidence	P				X	X			X		X		X						M				
Mount Tabor Church Mine Drainage Remediation	P					X	X				X	X	X						M				
Brown Hill Road Subsidence	P					X			X		X		X						M				
Duladahn Mine Drainage Remediation	P					X					X	X	X				X		M				
Clinton Mine Opening Portal Closure	P				X						X	X	X						M				
SR165 Maintanenance	P						X		X		X		X						M				
Brier Ridge Burning Gob Pile - Jefferson County	P		X					X			X		X	X						P			
Wills Creek Tipple - Coshocton County	P		X	X		X					X		X	X	X	X	X			P			
Stratton Mine Opening - Jefferson County	P		X	X	X						X		X							P			
Patton Run Reclamation Project - Belmont County	P		X			X					X		X			X	X			P			
Kirkendall Highwall Emergency - Athens County	P		X	X	X	X					X		X							P			
Cassingham Emergency - Coshocton County	P		X	X		X					X		X							P			
Roush Highwall Emergency Project	P		X								X		X							P			
W/T Gravel Mine Openings	P		X	X							X		X							P			

Acree Landslide	P		X			X					X		X							P			
Cherry Hill Burning Gob - Guernsey County	P		X					X			X		X							P			
Lavender Gob Pile - Meigs County	P		X					X			X		X							P			
Ironman Enterprises - Coshocton County	P		X			X					X		X			X				P			
Hutt Coal Forfeitures - Coshocton County	P		X			X					X		X			X				P			
Pike Run Bridge #11 - Washington County, PA	P					X					X											M	
Chartier's Bridge #61 - Washington County, PA						X					X											M	

* List whether project experience is corporate or personnel based or both.
** Use this area to provide specific sections or pages if needed for reference.
*** List Primary Design personnel and their functional capacity for the projects listed.

Attachment "C"

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

SAMER H. PETRO, P.E.

Office Manager/Senior Project Manager

As Manager of the Morgantown office of Herbert, Rowland & Grubic, Inc. (HRG), Samer provides client contact, business development, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways; removal, replacement, and rehabilitation of existing structures, highways, and water and wastewater treatment facilities; and construction-phase services. Samer's experience and expertise also includes strengthening historic and existing structures using fiber reinforced polymer (FRP) composite materials and nondestructive testing methods for highway bridges and transportation related structures. He routinely coordinates each aspect of contract administration, construction phase services, including periodic field inspections from the award of contracts to project close-out.

EDUCATION:
B.S., Civil Engineering, West Virginia University, 1987

M.S., Civil Engineering, West Virginia University, 1993

LICENSE(S):
Professional Engineer, WV
Professional Engineer, OH

RELATED EXPERIENCE

Prior to joining HRG in 2012, Mr. Petro served as the WV Operations Manager and Senior Project Manager for Gannett Fleming, Inc. in Morgantown, WV. In this role, Mr. Petro was involved in various capacities for the following selected projects:

- Headsville Bridge Replacement, Mineral County, WV, West Virginia Department of Transportation, Division of Highways
- Dolls Run Bridge Replacement, Monongalia County, WV, West Virginia Department of Transportation, Division of Highways
- Morgantown Personal Rapid Transit (MPRT) Facilities Master Plan, Morgantown, WV, West Virginia University
- SR 28 over Yutes Run Bridge, Pennsylvania Department of Transportation, District 11
- SR 19 Morrisville Bridge, Pennsylvania Department of Transportation, District 12
- Purple Line over Anacostia River Bridge, Maryland Transit Administration (MTA)
- Automated Train Guideway, Phoenix, AZ, City of Phoenix Sky Harbor International Airport
- North Shore Connector, Pittsburgh, PA, Port Authority of Allegheny County
- 19th Avenue Bridge, City of Phoenix, AZ
- 16th Street Bridge, City of Phoenix, AZ
- Thunderbird Road over Cave Creek, City of Phoenix, AZ
- Washington Street Pedestrian Bridge, Phoenix, AZ, City of Phoenix Sky Harbor International Airport
- King's Covered Bridge, Pennsylvania Department of Transportation, District 09
- Water Treatment Plant Expansion, New Bethlehem, PA, Redbank Valley Municipal Authority
- Wastewater Treatment Plant Expansion, Grove City, PA, Borough of Grove City

- Evansdale Campus Bridge - Garage, Morgantown, WV, West Virginia University

Prior to joining Gannett Fleming in 2004, Mr. Petro worked with the College of Engineering and Mineral Resources with West Virginia University in Morgantown, WV, as a research structural engineer. His responsibilities included a wide variety of bridge design, rehabilitation, and structural investigation using nondestructive intelligent devices, involving steel, concrete, engineered wood, and fiber reinforced polymer (FRP) composite materials for the following projects:

- Wood Bridge, Barbour County, WV, West Virginia Department of Transportation, District 7
- Railroad Bridge, Moorefield, WV, West Virginia Department of Transportation, State Rail Authority

Mr. Petro's experience also includes several years with DMJM/Harris (Presently AECOM) in Morgantown, WV as a Project Bridge Engineer. During this time his responsibilities included structural design activities for the following projects:

- Elkins Bypass, Elkins, WV, West Virginia Department of Transportation
- Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV, West Virginia Department of Transportation
- Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV, West Virginia Department of Transportation

PUBLICATION(S) AND PAPER(S)

Petro S.H., "First-class upgrade: Series of bridges in Phoenix Strengthened Successfully." Roads & Bridges Magazine, May 2010.

Petro S.H., Peaslee M.T., Leech T.G., "Strengthening a Concrete Slab Bridge Using CFRP Composites." ISEC-5, The Fifth International Structural Engineering and Construction Conference, Las Vegas, Nevada, 2009 (accepted for publication and presentation).

Petro et al. "Integral Abutments and Jointless Bridges (IAJB) 2004 Survey Summary". FHWA Conference: Integral Abutments and Jointless Bridges (IAJB), Baltimore, Maryland, 2005.

Petro et al. "Saving Covered Bridges with Glass Fiber Reinforced Polymers," APT Bulletin, The Journal of the Association for Preservation Technology, 2004.

Petro et al. "Nondestructive Evaluation Methods for Highway Bridges", WVDOH, Charleston, WV 1995.

PROFESSIONAL MEMBERSHIP(S)

American Concrete Institute (ACI): Member of ACI 440 Committee
American Society of Civil Engineers (ASCE)
Association for Bridge Construction and Design (ABCD)

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

DOUGLAS E. WEIKEL, P.E.

Director of Civil Services

Mr. Weikel is Director of Civil Services for Herbert, Rowland & Grubic, Inc. (HRG). Mr. Weikel has extensive experience in the preparation of studies, design, plans, and specifications for various municipal and civil engineering projects. His skills include municipal planning, construction management, contract administration, storm water design, and site design.

EDUCATION:
B.S., Physics, East Stroudsburg University, 1995

B.S., Civil Engineering, The Pennsylvania State University, 1988

LICENSE(S):
Professional Engineer, PA

CERTIFICATION(S):

Countywide Act 167 Stormwater Management Plans - Role: Project Manager. Responsible for directing and managing the stormwater management projects with the County staff, technical analysis and writing, as well as leading many public meetings to solicit input and educate stakeholders regarding new stormwater regulations. Projects entailed the development of a Stormwater Management Plan for all watersheds within each County that included a detailed technical analysis of selected watersheds using HEC-GeoHMS, HEC-HMS, and HEC-RAS with a methodology to account for volume control guidance in future conditions. From the Plans, stormwater management criteria and standards were developed as well as a Model Ordinance to address water quality, volume, and rate computational methodology; groundwater recharge requirements; stream bank erosion standards; and overbank and extreme event standards. The Model Ordinances included a small project application to address incremental increases of impervious area as well as for ease of implementation. The Plans also identified existing problem areas and potential solutions to them. The following details the Counties plans were developed as well as the watersheds where detailed analysis was performed:

- Erie County, PA - French Creek and Lake Erie Tributaries (also began an Integrated Water Resources Plan)
- Crawford County, PA - French Creek and Oil Creek,
- Jefferson County, PA - Northfork Redbank and Sandy Lick Creeks,
- McKean County, PA - Allegheny River, Potato and Tunugwant Creek,
- Warren County, PA - Conewango Creek,
- Butler County, PA - Connoquenessing and Buffalo Creeks,
- Washington County, PA - Chartiers Creek
- Venango County, PA – several subwatersheds throughout the county
- Mifflin County, PA - Juniata River and Jacks Creek,
- Potter County, PA - Oswayo Creek and Genesee River,
- Clarion County, PA

MUNICIPAL ENGINEERING

Centre Regional Metropolitan Planning Organization, Centre County, PA – Role: Member of Technical Committee. Responsible for overseeing transportation projects within the Centre Region including US Route 322, US Route 220, and US Route 26 (I-99) major construction projects. Member of several subcommittees Responsible for Transportation Enhancement Projects and Small Roadway Projects.

Benner Township, Centre County, PA – Role: Township Engineer. Responsible

for conducting various engineering services for the Township including reviewing land development plans, assisting in the development of ordinances, design of pedestrian bridges, preparation of PA DEP/USCOE Joint Permits, liaison with PennDOT, designing road reconstruction projects, stormwater management projects, sinkhole abatement, and providing general consulting.

Mifflinburg Borough, Union County, PA – Role: Borough Engineer. Responsible for completing various services including:

- Market and Fifth Street Reconstruction Project - Design of roadway reconstruction that included waterline, sewer line, and storm sewer replacement/upgrades
- Fourth Street Stormwater - Design of stormwater system reconstruction within PennDOT roadway
- Cherry Street Reconstruction - Design of roadway reconstruction that includes waterline, sewer line, storm sewer replacement/upgrades, and intersection and access improvements
- Haney Park Complex Improvements - Design of recreational park improvements
- Bulk Storage Building - Construction administration for a new salt storage building
- Downtown Improvement Project - Assisted the Borough in obtaining Transportation Enhancement funding
- Designed project involving the reconstruction of the sidewalks through the Business District, widening SR 45, and courtyard improvements.
- Maple Street Water & Sewer Improvements – Design and construction management of 1150 lf of new waterline and 400 lf of new sewer lines.
- 10th Street Slip Lining – Design of 1000 lf of sanitary sewer slip lining.
- Community Park Parking Lot Reconstruction – Design of stormwater system improvement system and parking lot/entrance road reconstruction.
- 308 Market Street Parking Lot – Design of parking facility.
- Market Street Reconstruction Project – Design of total roadway reconstruction.
- Safe Routes to School Project - Assisted the Borough in obtaining PennDOT funding. Designed project involving the construction of the sidewalks through residential areas to two schools.
- Site design that included a joint DEP-ACOE permit for expansion of WWTP facility within the floodway of Buffalo Run.

Bradford Township, Clearfield County, PA - Role: Project Manager. Responsible for completing various services including:

- Water Obstruction and Encroachment Permit for the Lake Street stream culvert replacement
- Water Obstruction and Encroachment Permit for the metal arch span over Millstone Run
- Shiloh Road water distribution system design and construction documents
- Annual small flow treatment facility review and report

Milesburg Borough, Centre County, PA – Role: Borough Engineer. Responsible for completing stormwater study of a flood-prone area recommending several innovative methods to solve runoff problems, design bridge abutment protection, and curb and sideway replacement project.

Thompson's Run Stream Diversion, Borough of Berwick and Salem Township, PA – Role: Project Manager. Responsible for design. Project entailed design services for an 8.5-foot diameter storm sewer to divert a stream which flowed through the sanitary sewer 4,000 feet to the Susquehanna River. Project included sewer and gas line design, water line relocation, and preparation and securing of all required permits including DEP/USCOE Joint Permit.

Ferguson Township, Centre County, PA – Role: Project Manager. Responsible for modeling stormwater runoff of Pine Hall drainage area, designed stormwater management system that included detention ponds, infiltration pond, piping, swales, and sinkhole overflow relief.

Smithfield Township, Huntingdon County, PA – Role: Township Engineer. Responsible for conducting plan reviews, road reconstruction projects, stormwater management projects, and general consulting.

Lewisburg Borough, Union County, PA – Role: Project Manager. Responsible for designing of street reconstruction projects which included storm sewer study and construction.

Unionville Water System, Unionville Borough, PA – Role: Project Manager. Responsible for consulting services and liaison for the Borough's reservoir lining project to alleviate existing leakage causing capacity problems and development of a new supply well.

Rowe Road Stormwater Improvements, Union County, PA – Role: Project Manager. Responsible for the hydrologic and hydraulic study a subwatershed of the West Branch of the Susquehanna River as well as the design of improvements. Project entailed a subwatershed that drains 120 acres with undeveloped agricultural lands in the upper reaches and residential areas in the lower reaches. The drainage channel was severely modified over the past decades through development with many culverts and bridges which were all analyzed. The channel modifications resulted in flooding, erosion and maintenance problems. The constructed project included several hundred feet of storm sewer to upgrade existing facilities and over ½ mile of channel improvements to provide relief of a flood prone area.

Miller Pedestrian Bridge, Union County, PA - Role: Project Engineer. Responsible for completion of a hydrologic and hydraulic study of Turtle Creek to install a pedestrian bridge. The project entailed an 8.3 square mile watershed modeled using HEC-HMS.

Memorial Field Drainage Study, State College Borough, PA - Role: Project Manager. Responsible for completing a study of a drainage area that included over 50 urban acres that drain to a sinkhole located at a high school football field. Project entailed the documentation actual performance of the drainage system and sinkhole during a one year period and conceptual solutions to alleviate flooding during rainfall events.

Bertin Heights Drainage Improvements, Lycoming County, PA - Role: Project Manager. Responsible for completing a hydrologic and hydraulic study of an 85 acre drainage area on a mountain side that frequently flooded a neighborhood and designs a new drainage system. Also responsible for development of construction documents and regulatory permits. Resulting project entailed approximately 2,000' of drainage facilities to provide relief of a flood prone area.

Industrial Park Road, Mifflin County, PA - Role: Project Manager. Responsible for design of roadway and drainage improvements to an existing industrial complex. Roadway improvements include intersection improvements, complete roadway re-construction with the addition of a center turning lane. Stormwater improvements include a new drainage and conveyance system.

Ambleside Park, Patton Township, Centre County, PA - Role: Project Manager. Responsible for completing a master plan for a neighborhood recreational park. Also completed the design that included an integrated stormwater management plan following DEP's BMP Manual using Rain Gardens and infiltration trenches. Project entailed the construction of a neighborhood park including access and parking facilities, pavilion, playground equipment and passive recreation.

Lower Swatara Recreational Facility, Dauphin County, PA - Role: Project engineer. Responsible for completing a stormwater management design for a recreational park. The design that included an integrated stormwater management plan following DEP's BMP Manual using Rain Gardens and infiltration trenches.

SCI-Rockview, Centre County, PA - Role: Project Manager. Responsible for assisting the facility to comply with NPDES Phase II Services for MS4s. Created plan of action and organized/managed all measurable goals of the six minimum control measures to meet NPDES permit compliance. Tasks included public education, public involvement, illicit discharge, detection and elimination, site and post construction runoff controls, and good housekeeping measures.

Hemlock Road Culvert Project, Fox Township, Elk County, PA- Role: Project Manager. Responsible for the design and permitting of replacement of the existing culverts crossing Hemlock Road as well as stream restoration downstream of the culverts.

Fox Township, Elk County, PA - Role: Design Engineer. Responsible for the design and permitting of stormwater management. Project entailed design of drainage systems through several neighborhoods in the township.

Petersburg Borough, Huntingdon County, PA – Role: Project Manager. Responsible for developing a stormwater management plan. Project entailed analysis and recommendations for storm sewer replacements and prioritization of projects for existing storm sewer system for the Borough of Petersburg.

SITE DESIGN

Kinzua Bridge State Park Visitors Center, McKean County, PA – Role: Project Manager. Preliminary design is complete. Responsible for stormwater management, site layout, Erosion & Sedimentation Control plans, NPDES permits, water storage and supply, sanitary sewer and treatment plant. Project entails a DCNR State Park project following Low Impact Development principles for a new Visitor Center, new Maintenance Facility, new potable water system and new sanitary sewer system. Project is targeting LEED-Silver designation.

Regional Digester Facility for Cove Area Regional Digester, Blair County, PA – Role: Design Engineer. Responsible for the site design and permitting of a manure treatment facility. Project entailed arrangement of facilities, site grading, roadway design and stormwater management systems.

Susquehanna Water Plant, West Hempfield Township, PA - Role: Project Engineer. Responsible for stormwater management and e/s design and permitting for water treatment plant modifications including membrane technology expansion.

Conestoga Water Plant, City of Lancaster, PA – Role: Project Engineer. Responsible for stormwater management and e/s design and permitting for water treatment plant modifications including membrane technology expansion.

Tressler Lutheran Services – Role: Design Engineer. Responsible for site design and construction including grading, stormwater management, utilities and municipal approval of the following:

- Ohesson Manor, Mifflin County, PA - Phase two of a cottage-style elderly housing development
- Locust Grove Cottages, Juniata County, PA - Conceptual master plan of a cottage-style elderly housing development and design of the first phases
- Buffalo Valley, Lewisburg, PA - Cottage-style elderly housing development including a community center
- Rhodesmere, Lewisburg, PA - Expansion of assisted care living facility

AT&T Wireless - Role: Project Manager. Responsible for 25 individual cellular telephone facilities throughout Pennsylvania. Projects entailed municipal approval process, site plans, Environmental Impact Statements, and NEPA requirements.

Mid-Centre County Authority, Boggs Township, PA – Role: Project Engineer. Responsible for the site design for wastewater treatment plant expansion.

RESIDENTIAL SUBDIVISIONS

Bradford Heights, Clearfield County, PA – Role: Project Manager. Responsible for design of a 130-lot residential development. Project included design of roadways, stormwater management system, sanitary sewers, a sewage treatment plant, a waterline extension, and related appurtenances.

Mountaintop Subdivision, Kidder Township, PA – Role: Project Manager. Responsible for design of vacation-type community in the Pocono Mountains. Project entailed survey, low impact design stormwater management system, on-lot sewage disposal design, and obtaining required permits and approvals.

WASTEWATER COLLECTION AND TREATMENT

University Area Joint Authority, State College, PA – Role: Project Manager. Responsible for projects including the following:

- Beneficial Reuse Wetlands – planning and design for the extension and permitting of the reclaimed wastewater transmission and distribution to a created stream augmentation and constructed wetland.
- Beneficial Reuse Project - Design engineer for portions of the 3.0 MGD expansion of the wastewater treatment plant. Responsibilities include site improvements, septage receiving station, main raw sewage pumping station, RAS/WAS pump station, chemical additions, tertiary filtration system improvements, drain pump stations, two constructed wetlands, and composting and solids dewatering improvements
- Microfiltration Project, Phase 1 - Design of a building and site improvements for microfiltration and reverse osmosis pilot testing
- Constructed Wetlands Pilot Testing - Design of a two cell constructed wetlands to be used as a pilot test of full-scale design features
- Pine Grove Mills Sewer Extension - Fast-track design of a 15,400-foot sewer extension including pump station and award-winning building
- Sycamore Lane Sewer Replacement - Design of sanitary sewer replacement with two stream crossings
- Western Inner Loop Sewer Relocation - Design of sanitary sewer relocation for PennDOT highway project
- Sewer Extension Reviews - Responsible for compliance reviews of many sewer extensions to the Authority's system
- Houserville I/I Study - Responsible for data acquisition and analysis for a 36-inch RCP sewer interceptor

Spring-Benner-Walker Joint Authority, Centre County, PA – Role: Project Manager. Responsible for design of several sewer extension projects including:

- Mingoville - 26,000 linear feet of gravity sewer; 10,000 linear feet of force main; two submersible pump stations; two suction lift pump stations which include site, building, and chlorination facilities; and a metering pit
- Spring Creek - Design of sewer extension project that includes 31,000 linear feet of gravity sewer and three stream crossings of Spring Creek
- Dawson Avenue Sewer Extension - Design of sewer extension to eliminate a pumping station
- Greens Valley Sewer Extension - Design of 15,000 linear feet of sanitary sewer extension

Milton Municipal Authority, Northumberland County, PA – Role: Project Manager. Responsible for projects including the following:

- Front Street Pump Station - Design of a rehabilitation that includes pump replacement, new comminutor, addition of second floor on existing building, and HVAC rehabilitation
- Cameron Avenue Pump Station - Design of replacement of pump station building
- Sludge Dewatering - Design of new belt filter press (BFP) dewatering system. BFP was determined through extensive pilot testing and based on life-cycle cost
- Equalization - Analyzed flow equalization for industrial loading on the wastewater treatment plant
- DAP/Urea Feed System - Design of a chemical feed system
- Conducted Phase I Environmental Site Assessment of three former railroad tracts located in an industrial area

Hemlock Municipal Sewer Cooperative, Columbia County, PA – Role: Project Manager. Responsible for projects including the following:

- Provided engineering for permit hydraulic re-rate permit of the wastewater treatment plant
- Provided consultation during intermunicipal agreement negotiations
- Design of a solid dewatering building including new sludge feed pump, centrifuge, and disposal system

- Developed Rules and Regulations for the Cooperative
- Performed permit requirements for wetland relocation

Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager. Responsible for projects including the following:

- Design fine screen facility including site improvements within the prison grounds
- Designed chlorination feed water system that reuses plant effluent
- Design coarse bubble aeration for equalization basin
- Designed building expansion of generator enclosure and completed several other plant performance enhancing projects
- Produced a sewer extension feasibility study for the three villages in the Township
- Provide on-going operational consultation

The Pennsylvania State University, University Park, PA – Role: Project Manager. Responsible for design of sanitary sewer replacement for the Nittany Lion Inn, sanitary sewer replacement along Burrowes Road, waterline replacement along Shortlidge Road, and waterline replacement along Bigler Road.

Berwick Area Joint Sewer Authority, Columbia County, PA – Role: Project Manager. Responsible for projects including the following:

- Design of an automatic shut-off for chlorinating system
- Developed initial CSO abatement study
- Developed Risk Management Plan for wastewater treatment plant
- Developed Capital Improvement Plan for wastewater treatment plant
- Wastewater Treatment Plant Improvement Project - Design of new Headwork's screen, new raw water pumps, new stop gates and weirs, and new sludge holding tanks to 3.66 MGD plant

Hawley Area Authority, Pike County, PA – Role: Project Manager. Responsible for the following:

- Annual facilities inspection and Engineers Report
- Biosolids treatment facility that included reed bed expansion

Nippenose Township, Lycoming County, PA - Role: Project Manager. Responsible for the following:

- Development of Act 537 Sewage Facilities Plan for the Antes Fort Area
- Design of the sanitary sewer collection system for the Antes Fort Area
- Design and permitting of the new wastewater treatment plant and pump stations

Mifflinburg Borough, Union County, PA – Role: Project Manager. Responsible for completing an evaluation of biosolids management in preparation for the installation of dewatering equipment. Evaluation included centrifuge, belt filter press, and screw press technology.

CONSTRUCTION

Stage 6 Additions and Modifications - Beneficial Reuse for University Area Joint Authority, Centre County, PA - Role: Project Manager. Responsible for resident engineer for expansion of existing wastewater treatment facility to a total 9.0 MGD wastewater treatment and reuse. Project costs were in excess of $55 million. Conventional facility design included screening and degritting, primary settling, biological nutrient removal, secondary clarification, monomedia granular filtration, and ultraviolet disinfection. Solids handling design included rapid sludge blending, centrifugation, and

composting. Advanced treatment included microfiltration, reverse osmosis, corrosion control and pH adjustment, ultraviolet disinfection, and on-site generation of sodium hypochlorite for residual disinfectant.

Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager. Responsible for performing construction administration and resident project representative services for an upgrade to a water treatment facility that included new backwash pumps, finish water pumps, replacement of control valves, concrete tank rehabilitation, new soda ash feed system with storage silo and pneumatic feed system, and other miscellaneous items.

Stroudsburg Municipal Authority, Monroe County, PA – Role: Project Manager. Responsible for performing construction administration for new 0.385 MGD wastewater treatment plant construction, new bridge, roadway, and a mechanical screening operation at the Houtzdale SCI.

Borough of Milton, Northumberland County, PA – Role: Resident Engineer. Responsible for construction of pump station and force main to serve industrial park and for several roadway reconstruction projects including cold recycling.

Wastewater Treatment Plant Upgrade for Borough of Berwick Municipal Authority, Columbia County, PA – Role: Resident Project Engineer. Responsible for $3.5 million upgrade which included new settling facilities, new aeration system, and modernization of existing equipment.

The Pennsylvania State University, State College, PA – Role: Project Manager. Responsible for providing construction administration for Event Parking Project adjacent to Beaver Stadium.

Spring-Benner-Walker Joint Authority, Centre County, PA – Role: Resident Engineer. Responsible for EPA grant project to the construction of the chlorine addition to the Rockview Flow Management Facility.

RELATED EXPERIENCE

From 1991 to 1994, Mr. Weikel was a project engineer for a consulting firm in Berwick, PA. His responsibilities included survey, design, contract document preparation, construction management, and client liaison.

Borough of Berwick, Columbia County, PA – Role: Project Manager. Responsible for conducting various engineering services for the Borough, including plan reviews and the following projects:

Preparation of an Act 537 Plan for a wastewater treatment plant retrofit and rehabilitation
Euclid Alley Reconstruction - Design of a 15-foot alley reconstruction as part of a downtown revitalization project
Bower's Lane Bridge - Design of a low cost bridge to replace an existing 25-foot span structure
Many street reconstruction, and stormwater and sewer extension projects

Nescopeck Borough, Luzerne County, PA – Role: Project Manager. Responsible for completing various engineering services for the Borough including review of plans, SEO services, and yearly street reconstruction projects.

Conyngham Borough, Luzerne County, PA – Role: Project Manager. Responsible for various engineering services for the Borough to review plans and yearly street reconstruction projects.

Ber Vaughn Swimming Pool, Briar Creek Borough, PA – Role: Project Manager. Responsible for design and reconstruction of a 50-meter pool, a 60-foot intermediate pool, and a circular splash pool. Project entailed reconstruction including structural repairs, filtration line replacement, and filtration system replacement.

THF Realty, Inc., Hazel Township, PA – Role: Project Manager. Responsible for site design for a Wal-Mart Supercenter and outparcel shops abutting an airport and an existing shopping mall. Project entailed design of stormwater management, site layout, Erosion and Sedimentation Control plans, NPDES permits, and utilities.

Monro Muffler/Brake, Town of Bloomsburg, PA – Role: Project Manager. Responsible for completing site design of small commercial development, including municipal approvals, stormwater management, and highway occupancy.

Hardee's Restaurant, Town of Bloomsburg, PA – Role: Project Manager. Responsible for completing site design including municipal waivers/approval, traffic design, lot layout, stormwater management, and highway occupancy.

Community Center Phases I-IV, Hazel Township, PA – Role: Project Manager. Responsible for design of 70-plus acres of commercial development including stormwater management, Erosion and Sedimentation Control plan, site layout, and utility design.

Old Hospital Apartments, Berwick Borough, PA – Role: Project Manager. Responsible for site design for a conversion of an historic hospital to an apartment complex.

From 1989 to 1990, Mr. Weikel was a project supervisor with Ryan Homes, Inc. in Fairfax, VA. His responsibilities were construction management, cost control, scheduling, and site development.

Residential Subdivisions, Fairfax and Loudon Counties, VA – Role: Construction Manager. Responsible for the following communities:

Virginia Run Subdivision - 2,500 to 3,000 square-foot, upscale, single-family dwellings in an exclusive setting
Heritage Woods - Seventy-five upscale townhouses
Manorgate Singles and Towns - Approximately 50 single-family homes including all site work. Involved in development of prototype models
Herndon Woods - "In-fill" development involving coordination of all utilities, permits, and approvals
Woodland Village - Construction management for approximately 40 townhomes built in a large planned residential development

Prior to 1989, he served as an engineering intern with the Pennsylvania Department of Transportation in Montoursville, PA. His duties included development of CAD, roadway design, and construction inspection.

Interstate 80/Route 54 Interchange, Montour County, PA – Role: Project Manager. Responsible for project inspection for $3.25 million project which included five bridge redeckings and approximately 25 miles of roadway reconstruction.

TRAINING

- Best Management Practices Manual Training, Pennsylvania Department of Environmental Protection, 2007
- Construction Outreach 10-hour Safety Consulting Services, Eichelbergers, Inc., 2006
- Pennsylvania Stormwater Management Symposium, Villanova University, 2009
- Project Managers Bootcamp, PSMJ Resources, 2006

PRESENTATION(S) AND LECTURE(S)

Newlin, B.D. and Weikel, D.E., "Hydrologic Modeling and County-wide Act 167." Pennsylvania Stormwater Management Symposium, Villanova, Pennsylvania, Oct. 14, 2009.

Weikel, Douglas E., "Why We Do What We Do: Obstacles to Stormwater Engineering Innovation." Innovative Stormwater Management Seminar, Bucknell University, Jan. 11, 2008.

Weikel, Douglas E., "What Do We Do Now? (Municipal Stormwater Ordinances)" - Symposium on Stormwater Management, Sullivan County Conservation District, February 7, 2008.

Weikel, Douglas E., "Stormwater Best Management Practices and Maintenance Responsibilities" Symposium on Stormwater Management, Sullivan County Conservation District, February 7, 2008.

Weikel, Douglas E., "Integrated Water Resource Planning, Enhancing an Act 167 Plan" PA DEP training to other consultants on stormwater management requirements, Erie County Conservation District, December 11, 2008.

Weikel, Douglas E., "Green Infrastructure (Sustainable Water Resources)" Presented and panel participant at Greening the Post-Industrial City: Innovative Reuse of Philadelphia's Idle Lands, Drexel University, April 24, 2009.

PROFESSIONAL MEMBERSHIP(S)

Pennsylvania State Association of Township Supervisors

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

JAMES B. GUE
Environmental Scientist II

Mr. Gue is an Environmental Scientist with Herbert, Rowland & Grubic, Inc. (HRG). His responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permit applications. He also provides assistance with the development of geographic information systems and computer-aided drafting.

Various Well Pads, for Carrizo Oil & Gas, Inc., Various Locations throughout PA - Role: Environmental Scientist II. Projects entailed initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and Ohio Biodiversity clearances. Projects involved numerous wells in Trumbull County, Ohio and Mercer County, Pennsylvania.

Various Well Pads, for Chevron Appalachia, LLC., Various Locations throughout PA & WV - Role: Environmental Scientist II. Projects entailed responsibility for initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and obtaining Ohio Biodiversity clearances. Projects involved numerous wells in Marshall and Wetzel Counties in West Virginia.

Various Well Pads, for Chesapeake Energy Corporation, Various Locations throughout Northeast and Easter OH - Role: Environmental Scientist II. Projects included responsibility for initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and obtaining Ohio Biodiversity clearances. Projects involved numerous wells location in the Appalachian foothills and Ohio Valley area.

RELATED EXPERIENCE

From 1982 to 2011, Mr. Gue was employed by the Ohio Department of Natural Resources, Division of Mineral Resources Management in Columbus Ohio.

From 2008 to 2011 Mr. Gue served as an Environmental Specialist 3 for the ODNR Abandoned Mine Lands Program. His responsibilities included: performing environmental research, investigation and oversight of program activities while overseeing lower-level environmental specialists; coordinating staff activities pertaining to major complex abandoned mine land reclamation projects; reviewing and ensuring technical completion of documents, letters, permits and plans prepared by lower-level environmental specialists and support staff; coordinating schedules for program projects and staff; and providing training to new staff and continuously updated training for existing staff.

EDUCATION:
B.S., Natural Resource Conservation, Kent State University, 1981

Studies, Groundwater Hydrology, Wright State University, 1997

CERTIFICATION(S):
ACOE Wetlands Identification and Delineation Certification, Community College of Allegheny College

Eastern United States Wetlands Awareness, Identification and Delineation Certificate, US Department of the Interior

First Aide, CPR, Blood borne Pathogens & AED, Safety Consulting Services

Training Emergency Action Planning, Safety Consulting Services

Training Hand & Power Tools, Safety Consulting Services

Training Hazard Identification, Safety Consulting Services

Training Incident Reporting and Investigation, Safety Consulting Services

Wetlands Awareness, U.S. Department of the Interior

Wetlands Identification & Delineation, Community College of Allegheny County

During this time period Mr. Gue duties also included: reporting regional program activity progress and recommending improvements to supervisors; providing field-related program information to assist in budget preparations; assisting in the development and implementation program policy, rules and procedures; providing coordination and communication among programs, divisions, districts and other governmental agencies; providing media for the general public that require total accountability, immediate response and accessibility; providing assistance to private citizens, industry representatives and governmental agencies relative to environmental findings and analyses; preparing research papers relative to acid mine drainage research and construction projects; developing educational materials, newsletters and environmental programs; and providing testimony for court and administrative hearings.

From 1986 to 2008, Mr. Gue was an Environmental Specialist 2 for the ODNR Abandoned Mine Lands Program. In this position his responsibilities included: planning, monitoring, reviewing and assisting in the comprehensive development of projects related to abandoned mine land reclamation projects; investigating eligibility of mine related public complaints; utilizing GPS and GIS technologies including ARCGIS and ARCMAP in compilation of a state-wide abandoned mineland inventory; conducting and preparing environmental assessment and categorical exclusion applications including wetlands identifications and delineations, endangered species assessments and archaeological site reviews; and submitting and revising environmental assessment approvals as coordinated with the Federal and State EPAs, Army Corps of Engineers Buffalo and Huntinton districts, Department of the Interior's Office of Surface Mining and the US Fish and Wildlife Service. Mr. Gue also coordinated and submitted applications for Army Corp of Engineers 404 and State of Ohio EPA 401 water quality permits, ensured compliance with Army Corp of Engineers nationwide 27 water quality permits, prepared and submitted State of Ohio EPA approvable storm water permits, devised storm water permit inspection reporting methods, and conducted storm water permit compliance inspections and submitted pertinent reports.

Also during this time period, Mr. Gue was responsible for: conducting extensive acid mine drainage investigations and recommending mitigation methods and designs for acid mine drainage mitigation projects via multiple passive treatment system methodologies, including aerobic and anaerobic wetlands; preparing Acid Mine Drainage Abatement and Treatment plans for environmentally devastated watersheds; coordinating start-ups and acted as liaison to public environmental restoration efforts at multiple impacted watersheds; assisting public health and safety project designs and developing best-fit site layouts; preparing grant requests and reports for state and federal EPA funding; maintaining databases for all aspects of work; and overseeing project contracts, construction inspection, tracked construction costs, approved contractor payment estimates and submitted related reports.

From 1982 to 1986 Mr. Gue was a Reclamation Specialist 1. He job duties consisted of conducting mining and reclamation inspections to monitor compliance with State and Federal laws, assisting in State permit application reviews and revisions, conducting investigations of violations, preparing comments regarding state policy and program requirements, and preparing technical reports and maintaining files.

TRAINING

- Acid Forming Materials 1, Department of the Interior, Office of Surface Mining
- Acid Forming Materials 2, Department of the Interior, Office of Surface Mining
- AMD Treat for Acid Mine Drainage Treatment Estimation, Department of the Interior, Office of Surface Mining
- Analysis of Aquifer Characteristics with AQTESOLV, Department of the Interior, Office of Surface Mining
- ArcGIS for Mining and Reclamation, Department of the Interior, Office of Surface Mining
- ArcPad Software and Use of Attribute Fields for the Abandoned Mines Inventories, ODNR, GIS Section
- ArcView for Mining and Reclamation, Department of the Interior, Office of Surface Mining
- Completing the Ohio Historic Inventory, State of Ohio Historic Preservation Office
- CPR Safety Training, Safety Consulting Services
- Designing Gates and Closures for Endangered Bat Hibernaculum, Department of the Interior, Office of Surface Mining
- Engineering Principles for Program Personnel, Department of the Interior, Office of Surface Mining
- Evaluation of Deep Mine Bat Hibernaculum, US Fish and Wildlife Service

- Field Identification of Potential Roost Trees Used by Indiana Bats, US Fish and Wildlife Service
- Geology and Geochemistry of Acid Forming Materials, Department of the Interior, Office of Surface Mining
- Ground Water Monitoring Well Installation and Groundwater Sampling, Nielsen Environment Field School
- Groundwater Modeling and Analysis with Groundwater Vistas, Department of the Interior, Office of Surface Mining
- Identification and Preservation of Threatened and Endangered Bat Habitat, ODNR, Division of Wildlife and Bat Conservation International
- Identification, Mapping, and Inventory of Ohio Soils, ODNR Division of Soil and Water
- Introduction to Grant Writing, Crossroads Resource Conservation and Development
- NEPA Procedures, Department of the Interior, Office of Surface Mining
- Ohio EPA General Construction Stormwater Permit Workshop, Ohio Environmental Protection Agency
- ORAM Training, Ohio Environmental Protection Agency
- Passive Treatment Theory and Application, Department of the Interior, Office of Surface Mining
- Physical and Chemical Properties of Soil, Department of the Interior, Office of Surface Mining
- Project Management, Department of the Interior, Office of Surface Mining
- TerraSync Software for the Timble GeoExplorer, Herbert, Rowland & Grubic, Inc.
- Trimble GeoExplorer GPS for Positioning and Geolocation, Herbert, Rowland & Grubic, Inc.
- Trimble Juno GPS for Location and Inventory of Abandoned Mines, ODNR, GIS Section
- Water Quality Analysis Using Aquachem, Department of the Interior, Office of Surface Mining
- Wetland Botany Training, Institute of Botanical Training
- Wetlands Awareness Course, United States of the Interior, National Technical Training Program
- Wildlife Habitat Enhancement, Wildlife Habitat Council

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RICHARD W. WARDEN, P.E.
NATURAL RESOURCES ENGINEER

RELATED EXPERIENCE

From February 2011 to December 2012, Mr. Tukel worked with The Ohio State University, through Ohio DNR on a pilot project to develop a group using CCB's. He was responsible for coordinating with contractors to devise a technique to deliver the grout, which was successfully performed on September 28, 2012. This grout was to be placed into this "simulated" angur hole in order to demonstrate the following activities of using highway mining equipment during remaining operations.

From March 2007 to June 2010, Mr. Warden was requested to handle tasks related to the OSMRE 733 action on a part-time basis. He was responsible for development the majority of the bond computing spreadsheet for Ohio that is currently being used to set bond rates on active coal mining permits. Mr. Warden was the lead technical liaison and trainer between DMRM, the coal industry, and OSMRE, regarding the current bond calculations. He was also the lead engineer reporting to Ohio's Reclamation Forfeiture Fund Advisory Board during its development of a solvency report to the Governor of Ohio.

Between 1996 and 2006 Mr. Warden was requested to resolve conflicts between DMRM and contractors, deal with landowners regarding problems that were not mining related, work with media inquiries and to train DMRM staff.

In 1995, Mr. Warden was announced as the sole engineer for Ohio's AML Emergency Program. He was involved in all engineering tasks for emergency program projects, including portions of field investigations, personal design efforts, consultant selection, review of consultant work, contracting, and construction oversight. He was also responsible for tracking budgetary issues such as consultant invoicing, available balances, and coordination with OSMRE. These projects involved determining if complaints were mining related and usually required investigations of structures and their foundations. These projects included mine drainage issues; landslides; subsidence's; open shafts and portals; mine gas; burning gob; refuse piles; and coal piles.

From 1992 to 1995 Mr. Warden, during a reorganization of DMRM, became responsible for review of Coal Regulatory permit applications and ARP's. Some of those applications including blasting, AOC information, and underground mining design and subsidence control plans. He was also more involved with resolving regulatory issues between Ohio DNR, OSMRE, and coal company officials.

From 1986 to 1992 Mr. Warden worked with the Division of Mineral Resources Management (DMRM), through the Ohio DNR. He was primarily responsible for supervising in-house design staff working under SMCRA for abandoned mine lands (AML) and forfeiture projects. This involved a maximum staff of 13 individuals comprised of engineers, design technicians, survey personnel and other support staff. He performed oversight as well as personal designs and construction inspections, along with typical budgetary analysis and HR related

LICENSE(S):
Professional Engineer, OH

tasks for his position. Designs often included slope stability computations for landslide repairs and verifying Approximate Original Contour (AOC) for forfeiture projects.

From 1984 to 1986 Mr. Warden worked with the Office of Chief Engineer with the Ohio DNR. He was responsible for civil engineering tasks related to various projects to support Ohio DNR facilities. These projects included roadways, water supply systems, dam rehabilitation, public dock facilities and infrastructure for state operated buildings.

From 1979 to 1984 Mr. Warden worked with the Division of Water, Dam Safety Program through the Ohio DNR. He was responsible for evaluation of dams for structural, geotechnical and hydraulic and hydrologic adequacy.

TRAINING

Erosion and Sedimentation Control, American Society of Civil Engineers
Water Surface Profiling and Floodplain Analysis Seminar, American Society of Civil Engineers
Expert Witness Training, OSMRE NTTP
Underground Mining Technology, OSMRE NTTP
AML Design Workshop: Subsidence, OSMRE NTTP
SEDCAD 4, OSMRE TIPS
Instructor Training Course, OSMRE NTTP
Fed Projects & Historic Preservation Law, OSMRE NTTP
AML Design Workshop: Subsidence, OSMRE NTTP

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MURAT TUKEL, P.E.

ENVIRONMENTAL/CIVIL PROJECT MANAGER

RELATED EXPERIENCE

From 2008 to 2012 Mr. Tukel was a Natural Resources Engineer III with the Ohio Department of Natural Resources, Abandoned Mine Program in Salem Ohio. In this capacity he acted in a professional engineer capacity overseeing personnel (2 engineers and 1 construction specialist) in Abandoned Mine Land, Public Health, & Safety program. He was responsible for developing, planning and designing mine reclamation projects, contract preparation and bidding, cost estimates, budgeting, contractor selection, and oversight of construction activities.

From 2000 to 2008 Mr. Tukel was an Environmental Supervisor with the Ohio Environmental Protection Agency, Division of Solid and Infection Waste Management in Twinsburg, Ohio. He was responsible for supervision of technical staff in administration of environmental (solid and infectious waste) laws and regulations. He served an active role in administration of rule, policy, and law changes. He was also responsible for various interviewing, hiring, mentoring, coaching, training, and performance evaluations of technical staff. He also provided technical assistance in interpretation of Ohio solid and infectious waste laws. Mr. Tukel was in direct contact with various consultants, other government entities, and regulated community. He was also responsible for various report generation and project tracking, purchasing, budgeting, strategic planning tasks, along with preparing reports for litigation and providing testimony.

From 1996 to 2000 Mr. Tukel was an Environmental Engineer with the Ohio Environmental Protection Agency, Division of Solid and Infection Waste Management in Twinsburg, Ohio. He was responsible for permit to install (PTI) reviews for solid waste disposal landfills, composting, and incinerator facilities. He was also responsible for detailed plans for landfill design, leachate and gas collection and management systems. He was also responsible for closure plans and slope stability studies. He also provided active participation in various rule-creation processes. He provided extensive knowledge on Ohio's Solid Waste regulations and provided technical assistance to public and regulation communities and represented the State of Ohio in various public meetings.

From 1991 to 1996 Mr. Tukel was an environmental specialist with the Ohio Environmental Protection Agency, Division of Hazardous Waste Mangement in Twinsburg, Ohio. He was responsible for permit to install (PTI) reviews for hazardouse waste treatment, storage, and disposal (TSD) facilities. He was also responsible for closure plans, corrective action plans, and risk assessments. Mr. Tukel also conducted RCRA generator and TSD facility inspections, along with related correspondence and enforcement actions. He provided technical assistance to legal staff and regulated community, along with providing hazardous waste sampling and handling and education presentations to professional groups and organizations.

EDUCATION:

M.B.A., Business Administration, Cleveland State University

M.S., Civil Engineering, Cleveland State University

B.S., Environmental Engineering, Cleveland State University

LICENSE(S):

Professional Engineer, OH

MURAT TUKEL, P.E.

From 1989 to 1991 Mr. Tukel was a research assistant with Cleveland State University, Civil Engineering Department in Cleveland, Ohio. During this time he was responsible for software development in Subsurface Contaminant Transport Modeling, along with design and simulations in other software.

In 1988 Mr. Tukel was an environmental engineer/summer intern with the Turkish Petroleum Refineries Association in Izmit, Turkey. His responsibilities included performing inspections at the wastewater treatment plant, monitoring plant efficiency, sampling collection and field testing, and compiling data and prepared reports and computerizing the office's manual bookkeeping task.

In 1987 Mr. Tukel was a project design engineer/summer intern with the SU-YAPI engineering and consulting company in Ankara, Turkey. He was responsible for the evaluation of rehabilitation of Izmir Metropolitan area wastewater collection and treatment system and engineering design of its expansion, along with written documentation and proposal preparation for bids.

TRAINING

AML Design Workshops on Dangerous Openings, Dangerous Highwalls, Subsidence, Drilling and Grouting
AutoCAD coursework on 3D Map Raster Design for Underground and Surface Mine Mapping, Carlson Mining Site Design, and SedCAD
Various Engineering application workshops on Environmental Geophysics, Drilling, Trenching and Excavating, Contract Management, and Risk Management

MEMBERSHIPS

Member, Beta Gamma Sigma, Honorary Society
Executive Director, Turkish American Scientists and Scholar Association (2006-2007)
Vice President, Turkish-American Society of Northern Ohio (2000-2004)

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Engineering & Related Services

DAVID M. SWISHER, P.E.

Water & Energy Regional Service Group Manager

Mr. Swisher is a regional service group manager with Herbert, Rowland & Grubic, Inc. (HRG) responsible for managing environmental engineering projects including: planning, permitting, design, construction administration, financial analyses, and project financing of water and wastewater infrastructure projects.

EDUCATION:
M.S., Environmental Engineering, The Pennsylvania State University, 2002

B.S., Civil and Environmental Engineering, The Pennsylvania State University, 2001

LICENSE(S):
Professional Engineer, PA

CERTIFICATION(S):
Construction Document Technologist

Water System Operator, PADEP

Water Treatment Plant Operator, Class B

WASTEWATER FACILITIES PLANNING

Act 537 Plan for Woodward Township, Clearfield County, PA – Role: Project Manager. Responsible for the completion of a multi-municipal Act 537 Sewage Facilities Plan. Project entailed a review of on-lot sewage needs in two municipalities including a variety of structural alternatives. The Act 537 Plan Update recommended the construction of a sanitary sewer extension to serve approximately 250 EDUs to alleviate public health problems associated with malfunctioning on-lot disposal systems.

Act 537 Plan for Centre Region, Centre County, PA – Role: Assistant Project Manager. Responsible for assisting in the update of a multi-municipal Act 537 Sewage Facilities Plan. Project entailed a review of on-lot sewage needs in six municipalities including a variety of decentralized and non-discharge alternatives. Act 537 Plan Update also included a dynamic model of the major components of the Sanitary Sewer System, with peak instantaneous flow modeling to beyond 20 MGD.

Act 537 Plan for Spring Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP) and extension of public sewers in the Sunnyside and Greens Valley Areas.

Act 537 Plan for Benner Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP) and extension of public sewers in the Buffalo Run Road Area.

Act 537 Plan for Walker Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP), public sewer system, and a 0.02 MGD package wastewater treatment plant.

Act 537 Plan for Nippenose Township, Lycoming County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed construction of a public sewer system and a 0.07 MGD package wastewater treatment plant in the Antes Fort Area.

Act 537 Plan for Morris Township, Clearfield and Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of a multi-municipality Act 537 Plan to serve the Villages of Munson, Casanova, and

Pardee. Project entailed evaluation of over 20 different structural alternatives, including remote treatment facilities and alternative collection technologies such as vacuum sewers.

Minor Act 537 Plan for Potter Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of a Minor Act 537 Sewage Facilities Plan. Project entailed use of a Component 3m Sewage Facilities Planning Module for extension of public sewer system to serve approximately 70 EDUs.

WASTEWATER COLLECTION AND TREATMENT

Whiteside Sanitary Sewer Extension for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager and Design Engineer. Responsible for the preliminary design, permitting and preparation of funding applications. Project entailed the extension of sanitary sewer service to serve approximately 250 EDUs. Construction included approximately 40,000 linear feet of gravity sewer, 2,400 linear feet of low pressure sewer, 2, 400 linear feet of forcemain and two sewage pumping stations.

Wastewater Treatment Plant Headworks Upgrades for Fox Township Sewer Authority, Elk County, PA – Role: Design Engineer. Responsible for the design, permitting and generation of contract documents. Project entailed construction of a new headworks facilities at an existing 0.4 MGD WWTP. The new headworks facility included a mechanically cleaned in-channel spiral screening system designed for a peak flow rate of 1.4 MGD.

Wastewater Treatment Plant Upgrades for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager and Design Engineer. Responsible for the design, permitting and generation of contract documents. Project entailed the design and installation of a mechanically cleaned in-channel spiral screening system designed for a peak flow rate of 1.4 MGD at an existing 0.56 MGD WWTP. The project also included the design of a new coagulant feed storage facility to enhance solids and phosphorus removal in the treatment process.

Wastewater Treatment Plant Upgrades for Borough of Mifflinburg, Union County, PA – Role: Design Engineer. Responsible for design, permitting and generation of contract documents. Project entailed construction of a new headworks facilities at an existing 1.2 MGD WWTP. The new headworks facilities included a series of fine screens to provide pretreatment for the membrane bioreactor process, a vortex grit removal system, influent flow metering, screenings handling equipment and raw wastewater pumping designed for a peak flow rate of 9.0 MGD.

Reclaimed Wastewater Booster Station for the University Area Joint Authority, Centre County, PA – Role: Water Systems Engineer. Responsible for design, permitting and generation of contract documents. Project entailed services for a 3.60 MGD reclaimed wastewater booster station to provide irrigation water to the Centre Hills Country Club. Design included hydraulic modeling of the reclaimed wastewater transmission main, surge analysis of the proposed pumping system, and continuous water quality monitoring.

Wastewater Treatment Plant Upgrades for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Design Engineer. Responsible for design, permitting and generation of contract documents. Project entailed various upgrades to the wastewater treatment plant. The upgrades included an equalization basin bypass; automated soda ash feed system, new fine-bubble diffusers for the aeration basins, a chlorine induction system, and associated SCADA improvements.

Wastewater Treatment Plant Upgrades for Mid-Cameron Authority, Cameron County, PA – Role: Design Engineer. Responsible for preliminary design and permitting of upgrades for the expansion of existing wastewater treatment facilities to a total of 1.0 MGD as well as CSO facilities. Upgrades included a new headworks building with screening and grit removal, raw wastewater pumping facilities, combined sewer overflow pumping facilities, two sequencing batch reactors for biological treatment, dewatering facilities with a 1.2-meter belt filter press, and ultraviolet disinfection. The facility was designed to handle a peak flow of 3.7 MGD. CSO flows in excess of 3.7 MGD receive primary treatment and discharge to an artificial wetlands system.

Wastewater Treatment Plant Re-rate for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Design Engineer. Responsible for the preparation of a NPDES and Water Quality Management Part II Permit. Project entailed re-rating of existing facilities from 0.385 MGD to 0.560 MGD. This re-rate included an analysis of the influent pumping station, equalization basin, aeration units, aerobic digesters, and chlorination facilities. A hydraulic profile and mass balance were also prepared for the treatment plant.

Wastewater Treatment Plant Re-rate for Hemlock Municipal Sewer Cooperative, Columbia County, PA – Role: Design Engineer. Responsible for preparation of a NPDES and Water Quality Management Part II Permit. Project entailed organic rerating of the existing facilities. This re-rate included an analysis of the clarifiers, aeration units and aerobic digesters. A mass balance was also prepared for the treatment plant.

10th Street Sanitary Sewer Repair for Borough of Mifflinburg, Union County, PA – Role: Design Engineer. Responsible for the rehabilitation of 1,000 lineal feet of sanitary sewer through cured-in-place piping and manhole lining.

WATER RESOURCES PLANNING AND SOURCE DEVELOPMENT

Water System Improvements Feasibility Study for the Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for the completion of a Water Feasibility Study. Project entailed evaluation of the existing water distribution system facilities and to make recommendations on any identified deficiencies. The Study involved the creation of a hydraulic water model of the existing system to identify the source of recurring low water pressures and lack of fire protection. The Study included several alternatives for upgrading the water system, and ultimately recommended the construction of approximately 15,000 linear feet of waterline and a water booster station to provide looping and redundancy within the system.

Water Supply Well Development for the Haines Woodward Municipal Authority, Haines Township, Centre County, PA – Role: Project Manager. Responsible for design and permitting. Project entailed design services for a new drinking water supply well. The water supply well was developed with a safe yield of 45 gpm and included the design of flow metering/control devices and modifications to the existing chlorination facilities.

Fairfield Township Water Feasibility Study for the Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a Water Feasibility Study. Project entailed development of a public water system to serve existing businesses and residences. The Study included an evaluation of waterline alignment alternatives, projected water demands and fire protection needs, finished water storage requirements, potential storage tank locations, water pressure projections and interconnections with neighboring public water systems.

Water Treatment System Feasibility Study for the Evans City Borough, Butler County, PA – Role: Water Systems Engineer. Responsible for the completion of a Water Feasibility Study. Project entailed an evaluation of the existing 0.60 MGD conventional filtration treatment process, and recommended upgrades to the facility to decrease operational costs, replace aging equipment and comply with existing and future regulations.

Membrane Filtration Feasibility Study, COPT Development and Construction Services, Harford County, MD – Role: Water Systems Engineer. Responsible for the completion of a Water Feasibility Study. Project entailed a comprehensive system evaluation for a 6.7 MGD brackish water membrane treatment facility combining microfiltration and reverse osmosis. Study reviewed source water quality for the Chesapeake Bay, water system demands and regional water demand, process train construction and operational costs, and waste disposal options. Total project costs predicted to be in excess of $37 million.

Water Treatment System Feasibility Study for the Slippery Rock Municipal Authority, Butler County, PA – Role: Water Systems Engineer. Responsible for the completion of a Water Feasibility Study. Project entailed an evaluation of the existing 1.2 MGD lime softening treatment process, and recommended upgrades to the facility to decrease operational costs, replace aging equipment and comply with future regulations.

Well PW#2 Improvements for Borough of Mifflinburg, Union County, PA – Role: Water Systems Engineer. Responsible for permitting and design. Project entailed design services for a 0.55 MGD potable groundwater supply well and associated SCADA improvements.

Water System Feasibility Study for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for the preparation of a Feasibility Study to evaluate the creation of a regional water system. Project entailed the evaluation of various waterline alignment alternatives and an evaluation of various finished water storage alternatives. The study recommended the construction of 20,000 linear feet of waterline, the development of a new water supply well, and the construction of a 300,000-gallon elevated storage tank.

Water Supply Feasibility Study for Rebersburg Water Company, Centre County, PA – Role: Water Systems Engineer. Responsible for the preparation of a Feasibility Study. Project entailed evaluation of the existing water distribution system and four water sources that had failed SWIP Testing. Study evaluated possible replacement of water sources and feasibility of the construction of water filtration facilities. The study recommended the construction of a microfiltration water treatment facility and a new finished water storage tank.

Water Allocation Permit for United Water Pennsylvania, Dauphin County, PA – Role: Water Systems Engineer. Responsible for the completion of a Water Allocation Permit. Project entailed the completion of a water allocation permit application for the Harrisburg Region of United Water Pennsylvania that services 15 municipalities and an average daily demand of 11.0 MGD. Service area includes three sources and two treatment facilities.

WATER SYSTEM MODELING

System-Wide Model for Williamsport Municipal Water Authority, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a hydraulic water model for the entire Authority water system. The existing water distribution system consisted of seven different pressure zones, six water booster stations, nine water storage tanks and over 200 miles of distribution piping. Project entailed completion of hydraulic model, including a detailed analysis of the existing system and recommendations to improve fire flows and pressures within the system to support future development.

Newberry Water System Modeling for Williamsport Municipal Water Authority, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a hydraulic model of an existing water distribution system. Project entailed completion of hydraulic model of the existing Newberry system, including a detailed analysis of the existing system and recommendations to improve fire flows and pressures within the system to support proposed industrial development.

Regional Water System Modeling for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model of a proposed water distribution system. Project entailed completion of hydraulic model including detailed planning for future expansion of the proposed water system, analysis of anticipated pressure districts, evaluation of optimum placement of storage facilities, and analysis of anticipated fire protection.

Water System Modeling for L.R. Kimball & Associates, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a hydraulic model of an existing water distribution system. Project entailed completion of hydraulic model of a portion of the Williamsport Municipal Water Authority water system, including a detailed analysis of the existing system and recommendations to improve fire flows and pressures within the system to support the development of a new National Guard facility.

Loyalsock Water System Modeling for Williamsport Municipal Water Authority, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a hydraulic model of an existing water distribution system. Project entailed completion of hydraulic model of the high-pressure Loyalsock system, including a detailed analysis of the existing system and recommendations to improve fire flows and pressures within the system to support proposed commercial development.

Water System Modeling for Rebersburg Water Company, Centre County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of an existing water distribution system consisting of approximately 20,000 linear feet of waterline. Field verification and calibration was completed along with detailed planning for system reliability, proposed storage sites, pressure districts, and fire flows.

Water System Modeling for Bradford Township, Clearfield County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of a proposed water extension to serve approximately 70 residences. The model included a capacity and pressure analysis to determine the optimum location and size of new finished water storage facilities.

Water System Modeling for Warwick Township Municipal Authority, Lancaster County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of an existing water distribution system. Hydraulic model included detailed planning for future expansion of the existing water system, analysis of future service pressures, and recommendations on future system upgrades, and analysis of flows available for fire protection.

Water System Modeling for Carlisle Barracks and Army War College, Cumberland County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of an existing water distribution system consisting of approximately 38,000 linear feet of waterline. The hydraulic analysis included modeling of pressure districts, fire flows, and a future interconnection with an adjacent community water system.

Water System Modeling for University Area Joint Authority, Centre County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of the beneficial reuse transmission main, which included modeling of pressure districts and fire flows.

Transient Analysis for City of Lancaster, Lancaster County, PA – Role: Water Systems Engineer. Responsible for the completion of a hydraulic model. Project entailed modeling of a 42-inch steel forcemain to predict transients that may develop within the pipeline at flows up to 40 MGD. Transient modeling software was utilized to model sudden changes in flow that could result in damaging pressure changes and velocity waves within the piping system.

WATER TREATMENT

Membrane Filtration Pilot Test for The Pennsylvania State University, Centre County, PA – Role: Water Systems Engineer. Responsible for the design, construction, and operation of a pilot test facility utilizing numerous water treatment technologies. Project entailed a 2-month pilot test utilizing two (2) low pressure ultrafiltration systems, two (2) low pressure submerged ultrafiltration systems, one (1) conventional filtration system (including coagulation, flocculation, sedimentation and sand filtration), two (2) reverse osmosis systems, a powdered activated carbon feed system, and four (4) granular activated carbon columns.

Membrane Filtration Facility for Miles Township Water Authority East, Centre County, PA – Role: Project Manager. Responsible for the design, permitting, generation of contract documents and construction administration of 0.10 MGD direct filtration membrane water treatment facility. Project entailed process design services for membrane filtration, pH adjustment, corrosion control, on-site mixed oxidant gas generation for disinfection, and clarification for backwash reclamation.

Membrane Filtration Pilot Test for Millville Borough Water Authority, Columbia County, PA – Role: Water Systems Engineer. Responsible for the design, construction, and operation of a pilot testing facility. Project entailed a 2-month pilot test utilizing direct membrane filtration water treatment processes.

Water Filtration Facility Improvement for City of Lancaster, Lancaster County, PA – Role: Water Systems Engineer. Responsible for assisting in the preliminary design. Project entailed improvements to the existing clearwells at the City of Lancaster's two water filtration facilities. The improvements involved retrofitting the existing clearwells with a baffling system to achieve increased disinfection contact time.

Chlorination System for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Water Systems Engineer. Responsible for the design, permitting, generation of contract documents and construction administration. Project entailed design services for a well house and disinfection facilities for a 0.10 MGD potable groundwater system. Disinfection facilities included an on-site generation sodium hypochlorite system.

Membrane Filtration Pilot Test for Rebersburg Water Company, Centre County, PA – Role: Water Systems Engineer. Responsible for the design, construction, and operation of a pilot testing facility. Project entailed a 2-month pilot test utilizing direct membrane filtration water treatment processes.

Membrane Filtration Pilot Test for Borough of Duncannon, Perry County, PA – Role: Water Systems Engineer. Responsible for assisting in the design, construction, and operation of a pilot testing facility. Project entailed design services for a pilot testing facility utilizing direct filtration membrane water treatment processes. Process design included potassium permanganate oxidation for iron, manganese, and color removal, coagulation and flocculation for enhanced total organic carbon removal, and direct filtration utilizing hollow-fiber microfiltration.

Water Treatment Operations for Aaronsburg Water Pipes, Inc., Centre County, PA – Role: Water Systems Engineer. Responsible for backwashing of filters, water quality sampling and testing, and generating monthly operational reports. Project entailed service operations for a 0.072 MGD diatomaceous earth water filtration facility.

WATER DISTRIBUTION AND STORAGE

Lycoming Mall Interconnection for the Lycoming County Water and Sewer Authority, Lycoming County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 1,000 linear feet of 12-inch waterline, a 2.2 MGD water booster station, and associated system improvements.

Grey Fox Plaza Waterline & Storage Tank for Lycoming County Water and Sewer Authority, Lycoming County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 16,000 linear feet of 8-inch and 12-inch waterline, a 200,000-gallon welded steel elevated storage tank, and associated system improvements.

Whiskey Run Waterline Extension for Suburban Lock Haven Water Authority, Clinton County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 17,500 linear feet of 6-inch waterline, a 76,000 gallon per day water booster station, and associated system improvements.

MBI Waterline Design for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 11,000 linear feet of 10-inch and 12-inch waterline, a 100,000 gallon per day water booster station with disinfection facilities, and associated site improvements to interconnect with a neighboring water system.

Draketown Road Waterline Extension for Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 11,000 linear feet of 16-inch waterline, a 2.2 MGD water booster station, and associated system improvements.

Water Meter Procurement for Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for the generation of procurement documents. Project entailed the evaluation of several radio-read meter systems, and the procurement of 2,480 water meters with radio transmitter units and associated equipment.

Waterline Design for Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of

approximately 5,000 linear feet of 8-inch and 12-inch waterline and appurtenances to serve new development in Lamar Township.

Water Storage System for the Haines Woodward Municipal Authority, Haines Township, Centre County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of a new 53,000-gallon ground level water storage tank and associated site improvements.

Water Storage and Pumping System for Poe Valley State Park, Penn Township, Centre County, PA – Role: Water Systems Engineer. Responsible for design, permitting and generation of contract documents. Project entailed construction of a potable water system for the State Park. The potable water system included a well pump, a liquid chlorine disinfection system, a 10,000-gallon concrete finished water storage tank, a 72,000 gpd water booster facility and approximately 2,000 linear feet of water distribution mains.

Water Storage and Pumping System for Krislund Camp, Miles Township, Centre County, PA – Role: Project Manager. Responsible for design. Project entailed design of a potable water system and included a new well source, a liquid chlorine disinfection system, a 14,000-gallon finished water storage tank, and a 108,000 gpd water booster facility.

Water Storage Tank Rehabilitation for Central Clinton County Water Filtration Authority, Clinton County, PA – Role: Water Systems Engineer. Project entailed investigation and rehabilitation of two existing 1.0 million gallon prestressed, post-tensioned concrete finished water storage tanks. Rehabilitation consisted of replacement of grout and structural steel system for post-tensioning support.

Phase 1 Water Storage Tank for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed construction of a 316,000-gallon ground level bolted stainless steel water storage tank and associated appurtenances.

Water Storage Tank for Miles Township Water Authority East, Centre County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed construction of a 210,000-gallon ground level glass lined bolted steel water storage tank and associated appurtenances.

Water Storage Tank Cover for Mifflinburg Borough, Union County, PA – Role: Water Systems Engineer. Responsible for design, permitting and generation of contract documents. Project entailed design of a 65-foot diameter aluminum dome to replace existing geotextile and steel system on a 500,000-gallon finished water storage tank.

Water Reservoir Cover for Mifflinburg Borough, Union County, PA – Role: Water Systems Engineer. Responsible for design, permitting and generation of contract documents. Project entailed design of a precast concrete cover to replace existing wooden system for a primary spring source.

Phase 1 Waterline Design for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 21,000 linear feet of 8-inch and 12-inch waterline and appurtenances. The waterline construction included several stream crossings and a 460 foot bore under Interstate 180.

DAVID M. SWISHER, P.E.

RELATED EXPERIENCE

From May 2001 to January 2003, Mr. Swisher was a research assistant with the Pennsylvania State University, State College, PA. Duties included collecting and analyzing data for a porous pavement project with respect to water quality analysis and runoff/infiltration rates, and studying the effects of coagulation prior to membrane filtration as related to flux and transmembrane pressure characteristics.

From May 2000 to August 2001, Mr. Swisher served an environmental engineer intern with Herbert, Rowland, & Grubic, Inc. in State College, PA. Responsibilities included assisting in a microfiltration pilot study for potable water, assisting in the preparation of several Act 537 Plans, which included work with on-lot systems, inflow and infiltration investigations, and cost estimates; preparing a water system feasibility report that included an evaluation of existing systems and alternatives for the water extension areas; and performing sanitary sewer plan reviews for various land development projects.

From May 1998 to August 1999, Mr. Swisher served a civil engineering internship with the PA DEP, Northcentral Regional Office, Williamsport, PA. He performed inspections on Category 3 dams and assisted in wetland delineations.

PROFESSIONAL MEMBERSHIP(S)

American Water Works Association
Construction Specifications Institute
Pennsylvania Municipal Authority Association
Pennsylvania Water Environment Association
Water Environment Federation

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

JOHN RUSNAK, P.E.

Civil Service Group Project Manager / Team Leader

Mr. Rusnak is a civil regional service group project manager and team leader with Herbert, Rowland & Grubic, Inc. (HRG). Mr. Rusnak is responsible for overseeing staff in the development of design concepts, preparing preliminary and final design drawings, developing technical specifications and bid documentation, and attending meetings and preparing, reviewing and delivering budgets for municipal clients. Mr. Rusnak also provides oversight during construction and monitors project costs.

EDUCATION:
B.S., Civil Engineering, The Pennsylvania State University, 1989

LICENSE(S):
Professional Engineer, PA

CERTIFICATION(S):

Certified Construction Documents Technologist, CDT

CURRENT MUNICIPAL EXPERIENCE

South Park Township, Allegheny County, PA – Role: Project Manager. Responsible for providing design oversight and project administration on sanitary and storm sewer projects within the Township as well as acting as municipal representative for Corrective Action and Consent Order-related efforts. Projects include those related to CDBG Sewer Rehabilitation, NPDES Phase II MS4 Permits; and all Township-wide Sanitary Sewer Rehabilitation Projects.

Middlesex Township, Butler County, PA – Role: Township Engineer. Responsible for providing design and bid phase services and construction administration for Township projects. Also reviews plans related to land development and subdivision within the Township. Attends Municipal Supervisor and Planning Commission meetings. Acts as liaison between PennDOT municipal services and Township staff. Projects include Township Road Rehabilitation and Repair Projects.

Borough of Slippery Rock, Butler County, PA – Role: Borough Engineer. Responsible for attending Municipal Council meetings, providing design oversight and construction and project administration for Borough-related projects, and reviewing land development plans.

COUNTY STORMWATER MANAGEMENT PLANS (ACT 167)

Act 167 Plan, Phase I and Phase II, Washington County, PA – Role: Project Manager. Responsible for compiling and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan. Project entailed the facilitation of public outreach meetings with PA DEP and Washington County Planning Commission to gather public endorsement and provide education on the Act 167 Plan and process under Phase I. Acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance.

Act 167 Plan, Phase I and II, Butler County, PA – Role: Project Manager. Responsible for drafting and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan, including facilitation of public outreach meetings with PA DEP and Butler County Planning Commission. Project entailed gathering public endorsements and providing education on the

Act 167 Plan and process under Phase I. Also acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance. Conducted a Stormwater Management Ordinance Implementation Workshop for the County Planning Commission.

Act 167 Plan, Phase II, Venango County, PA – Role: Project Manager. Responsible for drafting and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan, including facilitation of public outreach meetings with PA DEP and Venango County Planning Commission. Project entailed gathering public endorsements and providing education on the Act 167 Plan and process. Also acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance.

PRIOR AND MISCELLANEOUS PROJECT EXPERIENCE

Greenville Borough, Mercer County, PA – Role: Borough Engineer. Was responsible for attending municipal council meetings and providing design oversight and project administration of Borough-related projects, including the federally funded and PennDOT administered Main Street Enhancement (Streetscape) projects (Phases I and II) and Elm Street Project.

Slippery Rock Municipal Authority, Butler County, PA – Role: Project Manager. Responsible for providing design oversight and project administration on sewer and water construction projects. Projects include the Kiester Road Force Main Replacement Project, the 2002 Waterline Replacement Project, the 2003 and 2004 Trickling Filter Improvement Projects, Standby Power Generator and Portable Sewage Pump Procurement, and 2005 Water Well Construction Project.

Borough of Ambridge Municipal Authority, Borough of Ambridge, Beaver County, PA – Role: Civil Engineer. Responsible for providing design oversight and project administration. Project entailed services for the Belt Filter Press Room Ventilation Upgrade, 2003 Sanitary Sewer System Minor Repair Project, and the Park Road Sanitary Sewer and Force Main Project.

Western Kelly Boulevard 2002 Stormwater Study and 2006 Study Update, Slippery Rock Borough, Butler County, PA – Role: Civil Engineer. Responsible for performing stormwater analysis. Project entailed analysis of a 52-acre area within Borough limits. Made recommendations and provided construction costs estimates addressing adequacy of existing facilities to handle current and future rainfall events.

Upgrade Water Source and Distribution System, Pennsylvania Department of General Services (DGS)/Torrance State Hospital, Blairsville, PA – Role: Project Manager. Responsible for providing design, oversight, project management and administration for the construction of a 600 GPM water booster pump station and distribution system improvements. Project entailed updating the raw water chemical feed system at the water treatment plant.

West End Pond Renovation Project, Venango College Campus of Clarion University, Oil City, PA – Role: Project Manager. Responsible for taking concept designs through permitting, final design and construction. Project entailed applying for permits and providing design and construction phase oversight, project management and administration for renovation of a 2.5 acre pond on the Clarion University of Pennsylvania, Venango County Branch Campus, as well as addressing accessibility issues associated with pond and campus property.

Drainage System Improvements, Venango College Campus of Clarion University, Oil City, PA – Role: Project Manager. Project included three distinct parts; exterior waterproofing and drainage improvements with sidewalk and accessibility improvements for Montgomery Hall, campus wide stormwater drainage improvements and reconstruction of the main campus access driveway. Responsible for design through construction phases of the work.

West End Pond Annual Dam Inspection, Venango College Campus of Clarion University, Oil City, PA – Role: Project Manager. Responsible for inspecting a medium hazard dam in accordance with Pennsylvania Department of Environmental Resources Dam Inspection guidelines.

Sherwood Oaks Annual Dam Inspection, Cranberry Township, Butler County, PA – Role: Project Manager. Responsible for inspecting the low hazard dam in accordance with Pennsylvania Department of Environmental Resources Dam Inspection guidelines.

West Hill Industrial Park Expansion for Armstrong County Industrial Development Authority, Kittanning, Armstrong County, PA – Role: Civil Engineer. Responsible for performing site infrastructure design, E&S control plans, and permit application Project entailed work for a 175-acre industrial park expansion project.

Conrail Occupancy Permits for Wastewater Treatment Facility and Water Transmission Main Installation for Beaver Falls Municipal Authority, City of Beaver Falls, Beaver County, PA – Role: Civil Engineer. Responsible for preparing permit application and coordinating associated fieldwork for utility line installation within Conrail right-of-way.

Beaver County Corporation for Economic Development, Bridgewater Borough, Beaver County, PA – Role: Project Manager. Responsible for preparing and coordinating concept design for trail and walkway project connecting Beaver Borough and Bridgewater Borough Waterfront Park. Attended meetings and coordinated permit applications.

AT&T Wireless, City of Pittsburgh, Allegheny County, PA – Role: Civil Engineer. Responsible for performing site development services for 11 remote tower locations in western Pennsylvania, West Virginia, and Ohio. Project entailed the coordination of field data collection, final plan development, land development plan submission, and represented client at municipal meetings.

RELATED EXPERIENCE

From 1993 to April 2002, Mr. Rusnak was a municipal engineering representative with Michael Baker, Jr., Inc. in Beaver, PA. His duties included engineering design and oversight of staff; project and financial management; construction monitoring; grant, loan, and permit application and administration; land development and subdivision plan review; ordinance drafting and review; resident compliant resolution; preparation of project bid documents and technical specifications; and meeting attendance. Clients/projects managed during this time period include: Borough Engineer, Borough of Baden; Township Engineer, Rochester Township; Township Engineer, New Sewickley Township; and Authority Engineer, New Sewickley Township Municipal Authority.

From 1989 to 1993, Mr. Rusnak was a project engineer with Unit-Tec Consulting Engineers, Inc. in State College, PA. He was responsible for various municipal-related projects, specifically water storage and distribution, groundwater remediation, and road rehabilitation and reconstruction projects. He performed state-funded grant and loan application work related to municipal projects.

During the summers of 1987 and 1988 while attending Penn State University, Mr. Rusnak was a summer intern with Universal Technical, Inc. in State College, PA, serving as the construction inspector on various sewerage and water distribution system upgrade projects.

During the summer of 1986 while attending Penn State University, Mr. Rusnak was a summer intern with Mid-Atlantic Engineering, Inc. in Scranton, PA, serving as concrete, asphalt, and construction materials testing technician.

TRAINING

- Municipal Engineers Fall Education Seminar, PSATS
- Project Management for Engineers, PMI Registered Education Provider

JOHN RUSNAK, P.E.

COMMUNITY SERVICE

Mr. Rusnak served as a board member and past President for the Glen Eden Homes Association (GEHA) located in Cranberry Township, Butler County, PA. Under his direction, the board was responsible for overseeing budget, maintenance, and day-to-day operations of the 400 residential unit association.

PROFESSIONAL MEMBERSHIP(S)

American Society of Civil Engineers

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

ANDREW J. LONGENECKER
Environmental Project Manager

Mr. Longenecker is an Environmental Project Manager with Herbert, Rowland & Grubic, Inc. (HRG). Possessing more than ten years of experience in the environmental field, Mr. Longenecker is responsible for the management of projects involving collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, site work, reports, bog turtle habitat screening, natural gas well pad and pipeline development, Phase I Environmental Site Assessment research and reports, and coordination with PADEP, US Army Corps of Engineers and additional federal and state agencies.

EDUCATION:
M.S., Biological Sciences, Marshall University, 2000

B.S., Wildlife and Fisheries Resources, West Virginia University, 1997

CERTIFICATION(S):
OSHA 40-Hour HAZWOPER
Qualified Bog Turtle Surveyor

PROJECT EXPERIENCE

Chesapeake Energy Corporation, Ohio – Role: Project Manager. Responsible for day-to-day management of the survey and design of natural gas well pads and access roads throughout Chesapeake's Utica Shale play. Project entailed site selection, environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

Exco Resources, Inc., Penn Township, Lycoming County, PA – Role: Environmental Scientist. Responsible for identification and delineation of regulated waters within proposed natural gas well pad and access road sites. Project entailed environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

Stone Energy, West Virginia – Role: Environmental Scientist. Responsible for day-to-day management of HRG's environmental services related to this client's design and build of natural gas well pads and access roads throughout its Marcellus Shale play. Project entailed site selection, environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

RELATED EXPERIENCE

From September 2006 to May 2012, Mr. Longenecker was employed with Liberty Environmental, Inc. as a Project Manager and Pennsylvania Qualified Bog Turtle Surveyor. He was responsible for the day-to-day management of the Natural Resources Group with specific oversight of all wetland/ecological investigations, permitting, and site selection pertaining to the Marcellus and Utica shale formations, commercial and residential developments, and roadway design. Additional duties included wetland field delineations, regulated waters impact permitting, Phase I, II, and III Bog Turtle Surveys, Phase I ESAs, threatened/endangered/rare species investigations, habitat restoration plans, and groundwater sampling.

From September 2005 to September 2006, Mr. Longenecker was employed with Aqua-Terra Environmental Ltd. as a Biologist. In this role, he gained experience in Phase I Bog Turtle Habitat Surveys, radio telemetry studies, wetland identification and delineation, herpetological salvage, permitting, threatened/endangered/rare species investigations, habitat restoration plans, benthic macro-invertebrates surveys, and evaluation of aquatic ecosystems.

ANDREW J. LONGENECKER

From February 2002 to September 2005, Mr. Longenecker was employed with Skelly and Loy, Inc. as a Wildlife Biologist and an Environmental Scientist. He gained experience in wetland identification and delineation, study and evaluation of aquatic ecosystems, stream and river classification, threatened/endangered/rare species investigations, and environmental permitting and documentation. He assisted with biological assessments for benthic macro-invertebrates and fish, ambient water quality evaluations, and physical habitat evaluations. Mr. Longenecker participated in field surveys and radio telemetry studies for bog turtles, as well as numerous other amphibians and reptiles associated with wetlands, vernal pools, and waterways. He also served as a field team leader that applied the principles of fluvial geomorphology to natural stream channel design projects. He routinely participated in site evaluation, stream type classification, regional curve development, restoration plan design, permitting, and construction management. He assessed watersheds, wrote comprehensive watershed plans, assisted in Phase II bog turtle surveys, and analyzed spatial data using ArcView GIS.

From June 2000 to February 2002, Mr. Longenecker was employed with Berks County Conservancy as a Natural Resource Specialist. In this position, he assessed watersheds and wrote comprehensive watershed plans, performed ecological surveys and sampling, conducted stream rehabilitation projects, monitored water quality, sampled benthic macro-invertebrates, delineated wetlands, analyzed spatial data using GIS, performed bog turtle radio telemetry and bog turtle habitat assessment and protection, composed grant proposals, ran education programs, and conducted habitat workshops.

TRAINING

- OSHA 8-Hour HAZWOPER Refresher
- Wetlands Construction Design, Rutgers New Jersey Agricultural Experimental Station (NJAES) Office of Continuing Professional Education
- River Morphology and Applications, Wildland Hydrology, Inc.
- Applied Fluvial Geomorphology, Wildland Hydrology, Inc.
- AV Streams Workshop, Penn State University
- Natural Stream Design Workshop, Villanova University
- ArcView – GIS, Penn State University

PROFESSIONAL MEMBERSHIP(S)

Society of Wetland Scientists

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

ROGER B. VARNER, E.I.T.

Land Development Staff Professional

Mr. Varner is a staff professional with Herbert, Rowland & Grubic, Inc. (HRG) responsible for a variety of environmental engineering and permitting tasks and business development for oil and gas clients and land development clients. Such tasks include private and public water source investigation, sampling and analysis protocol, preparation of permit applications and plans for oil and gas well development sites, water management and planning studies for oil and gas well hydro-fracturing and production needs, and providing field investigation and inspection services for environmental projects. Mr. Varner has significant experience in water and wastewater facilities planning, federal, state, and regional permitting services, and preparation of regulatory reports and documents.

EDUCATION:
B.S., Petroleum and Natural Gas Engineering, The Pennsylvania State University, 1987

B.A., Physics, Edinboro University, 1985

Studies, Civil and Environmental Engineering, University of Pittsburgh, 1994

LICENSE(S):
Engineer-in-Training, PA

OIL AND GAS MANAGEMENT

AB Resources, LLC/Chevron Appalachia, LLC, Marshall County, WV - Role: Staff Professional. Responsible for preparation of oil and gas well pad permit applications, highway occupancy permit applications, access road design, quality control, site investigations and coordination of source water sampling and analysis.

Mountaineer Keystone, Preston County, WV - Role: Staff Professional. Responsible for preparation of water management plans for oil and gas well pads, water allocation analysis, permit application preparation, quality control, site investigations and coordination of source water sampling and analysis.

Chesapeake Energy Corporation, Various Counties, OH - Role: Staff Professional. Provide regulatory interpretation for permitting and arrange and attend meetings with Ohio Department of Natural Resources on oil and gas related projects.

Carrizo Oil & Gas, Inc., Mercer County, PA & Trumbull County, OH - Role: Staff Professional. Responsible for preparation of oil and gas well pad permit applications, landowner notification and coordination, quality control, site investigations and coordination of source water sampling and analysis.

Somerset Regional Water Resources, Somerset & Wyoming Counties, PA - Role: Project Manager. Responsible for providing permitting services, site plan layout design and process flow schematics for two centralized industrial wastewater treatment facilities to treat brines, produced waters and spent fracing fluids from oil and gas well operations. Project entailed the preparation of a PPC Plan for spill contingency and emergency preparedness.

CNX Gas Company Greenhill Production Area, Greene County, PA - Role: Project Manager. Responsible for providing permitting services, site plan layout design for impoundments, process flow schematics and design engineers report for a centralized industrial wastewater treatment facility for natural gas well produced waters at CNX's Greenhill Production Area.

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POTABLE WATER SYSTEMS

Sewer and Water Authority Community Water System, Clintonville Borough, Venango County, PA - Role: Project Manager. Responsible for providing engineering consultation services for a potable groundwater source, treatment, storage and distribution system including annual evaluation reports on system conditions and operational and maintenance activities.

Additional Compliance Reporting, Various Locations, PA - Role: Staff Professional. Provide consulting services and report preparations for Annual Public Water Supply Reports, Consent Order Progress Reports, PA Act 220 (Ch110) Registration Applications, Consumer Confidence Reports, Emergency Response plans, Long Term 2 (LT2) Surface Water Compliance Reports and Public Notification Program Updates.

Bucholz Mobile Home Park, Venango County, PA - Role: Staff Professional. Responsible for providing permitting and design services for a community water system. Design services included disinfection, iron and manganese removal, pH adjustment, filtration and storage, and flow monitoring for an existing groundwater and distribution system.

PERMITTING SERVICES

NPDES Renewal Permit Application Preparation, Municipal Authority of the Borough of Edinboro, Erie County, PA - Role: Staff Professional. Responsible for permitting services and coordination of sampling and Bioassay Toxicity Testing for the Municipal Authority's Wastewater Treatment Facility and storm water discharges.

NPDES Renewal Permit Application Preparation, Borough of Ambridge Municipal Authority, Beaver County, PA - Role: Staff Professional. Responsible for permitting services for the treated effluent and the plant area stormwater runoff. Project entailed the coordination of NPDES sampling and analysis and Bioassay Toxicity Testing for the wastewater treatment facility.

Wastewater Treatment Regionalization Project, Saxonburg Area Authority; Middlesex, Jefferson & Penn Townships, Butler County, PA - Role: Staff Professional. Responsible for assisting in the design of new gravity collector sewers including field layout. Project entailed preparing permit applications for sanitary sewer stream and wetland crossings, temporary roadway stream crossings, NPDES Permit Application for Storm Water Discharges from Construction Activities, quantity takeoffs for construction specifications and bid tabulation.

Spruce Run, Jacks Run, and David E. Williams Sanitary Sewer Repair and Reconstruction, Bellevue Borough and Kennedy Township, Allegheny County, PA - Role: Staff Professional. Responsible for preparation of emergency environmental stream encroachment permit applications for approval to repair and replace damaged sanitary sewer interceptors and manholes from the flooding of Hurricane Ivan. Project entailed preparing plans and drawings, color photographs and bidding documents for these projects.

Sewage Pump Station Improvements Project, Pittsburgh Water & Sewer Authority, Allegheny County, PA - Role: Assistant Project Manager. Responsible for assisting in preparation of permit design application forms, drawings, environmental assessment and coordination for sewage pump station improvements at four pump stations for the Pittsburgh Water & Sewer Authority in the City of Pittsburgh, Pennsylvania.

Wastewater Treatment Plant Expansion Project, Municipal Authority of the Borough of Edinboro, Erie County, PA - Role: Staff Professional. Responsible for assisting in the design, permit application preparation and coordination for the expansion of the wastewater treatment facilities to accept additional sewage flows from neighboring Washington Township. Project correspondence with PA DEP, Erie County Health Department and the Erie County Conservation District. Attended project meetings with the PA DEP.

NPDES Phase II MS4 Permits and Annual Report Preparation - Role: Staff Professional. Reviewed client's municipal separate storm sewer (MS4) permits and provided comments and recommendations on implementation of the MS4 program and preparation of the annual reports for the following municipalities:

- South Park Township, Allegheny County, PA
- Summit Township, Erie County, PA
- Bellevue Borough, Allegheny County, PA

Additional Municipal NPDES Permit Application Services - Role: Assistant Project Manager. Provided permit renewal services, including preparation of all PA DEP forms, Act 14 notification letters, wastewater facilities process flow schematic and site plans, coordination of all applicable analytical sampling and analysis for the treated effluent discharge and documentation on industrial users for the following authorities:

- Evans City Borough Water & Sewer Authority, Butler County, PA
- New Eagle Borough Municipal Sewer Authority, Washington County, PA
- Fairchance Georges Joint Municipal Sewage Authority, Fayette County, PA

WASTEWATER FACILITIES PLANNING

Act 537 Sewage Facilities Plan Reviews & Recommendations, Jackson Township, Butler County, PA - Role: Staff Professional. Responsible for providing adequacy review of several Component 3 & Component 3S Planning Modules for residential subdivisions and commercial developments in Jackson Township. Project entailed preparing review letters and provided recommendations to meet township ordinances and state regulations.

Imperial Point Act 537 Sewage Facilities Planning, Girard Township, Erie County, PA - Role: Staff Professional. Responsible for preparing a Component 3M Sewage Facilities Planning Module as required abandoning existing wastewater treatment facilities and planning connection to other public sewers in Girard Borough, Erie County. Project entailed preparing documents corresponding with Township, Borough, and state officials and preparing plan development maps.

Act 537 Sewage Facilities Planning, Community Alliance Church, Butler County, PA - Role: Staff Professional. Responsible for preparing a Component 3 Sewage Facilities Planning Module Package as required for a church building expansion project. Project entailed preparing plans for a grinder pump low pressure system to be installed to convey sewage to the Butler Area Sewer Authority. Prepared documents, corresponded with township, sewer authority, and state officials and prepared plan development maps.

Act 537 Sewage Facilities Planning, Harvest Baptist Church, Allegheny County, PA - Role: Staff Professional. Responsible for preparing a Component 3 Sewage Facilities Planning Module Package as required for a new church building project. Project entailed preparing planning documents, project description and alternative analysis, corresponded with townships, sewer authorities, county health department and state officials and prepared plan development maps.

Act 537 Sewage Facilities Planning, Ringgold Elementary School South, Washington County, PA - Role: Staff Professional. Responsible for the preparation of a Component 3 Sewage Facilities Planning Module Package as required for an elementary school consolidation building project. Project entailed preparing plan documents, project description and alternative analysis, corresponded with townships, sewer authorities, and state officials and prepared plan development maps.

Act 537 Sewage Facilities Plan Update Revision, Shenango Township Municipal Authority, Mercer County, PA - Role: Staff Professional. Responsible for assisting in the preparation of an Act 537 Sewage Facilities Plan Update Revision for existing needs identified in four study areas for failing on-lot sewage disposal systems in Shenango Township. Project entailed preparing planning documents, exhibits, evaluation of existing sewage collection, conveyance and treatment systems, development, and evaluation and selection of feasible alternatives, cost estimation, development of site layout plans, and fieldwork.

Act 537 Sewage Facilities Plan Update Revision, Slippery Rock Municipal Authority, Butler County, PA - Role: Staff Professional. Responsible for assisting in the preparation of an Act 537 Sewage Facilities Plan Update Revision for the Authority Service Area consisting of sanitary collection sewers, pumping stations, interceptors and the wastewater treatment plant. Project entailed preparing plan documents, exhibits, evaluation of existing sewage collection, conveyance & treatment systems, development, evaluation and selection of feasible alternatives for upgrading the wastewater treatment plant, institutional evaluation, cost estimation, environmental report preparation, development of site layout plans, fieldwork and preliminary and final recommendations to the client.

WASTEWATER SYSTEMS DESIGN

Desdemona Avenue Sewer Separation Design Project, Pittsburgh Water & Sewer Authority, Allegheny County, PA - Role: Assistant Project Manager. Responsible for assisting in providing design services, field investigations, PA One Call, project manual preparation and design drawing review, construction site visits and project meetings for the installation of a separate sanitary sewer line and conversion of the combined sewer to a storm sewer to serve 20 homes.

Sanitary Sewer System Repair Project Phase 2, Borough of Ambridge Municipal Authority Beaver County, PA - Role: Assistant Project Manager. Responsible for providing design services, performed field investigations and performed engineering services to repair and replace several segments of sanitary sewer in Ambridge Borough in an effort to reduce infiltration and inflow. Design included trenchless technology for sewer lining, manhole replacement and repair, storm water separation, sewer replacement and utility coordination.

Schlegel Plan of Lots Sanitary Sewer Design for Tri-Hammer Associates, L.P., Butler County, PA - Role: Staff Professional. Responsible for providing design services, performed field investigations, PA One Call and performed engineering & permitting services for the installation of a sanitary sewer line extension to serve five lots. Also coordinated communications between the sewer authority, the township, the contractor, and the client.

Septage Receiving Station Project, Slippery Rock Municipal Authority, Butler County, PA - Role: Staff Professional. Responsible for preparing site layout drawings, calculations, design permit application forms and engineering report, assisted in the preparation of the contract specifications and reviewed submittals for the Septage Receiving Station to be procured for installation at the wastewater facilities.

Sanitary Sewer Grinder Pump System and Force Main, Community Alliance Church Building Expansion, Butler County, PA - Role: Staff Professional. Responsible for providing design services, utility coordination, calculations, site layout for pump station and force main and performed engineering services for a grinder pump system and force main to convey sewage and connect to the Butler Area Sewer Authority. Coordinated communications and approvals between the sewer authority, the township, the PA DEP and the client.

WASTE & WASTEWATER SYSTEMS EVALUATIONS AND REHABILITATIONS

Water Treatment Plant Feasibility Study, Evans City Borough, Butler County, PA - Role: Staff Professional. Responsible for assisting in the preparation of a feasibility study per consent order by the PA DEP for improvements to the performance of the water treatment plant or by recommending potable water through bulk water service. Prepared a request for proposal (RFP) package for companies to bid for bulk water service to the distribution system, reviewed the RFP bids, made recommendation to the client, and assisted in writing the feasibility study including preparing cost estimates for submittal to PA DEP.

Sanitary Sewer Rehabilitation, Township of South Park, Allegheny County, PA - Role: Staff Professional. Responsible for preparing contract documents and permit preparation services to reline and rehabilitate sanitary sewers using trenchless technology in order to reduce infiltration/inflow according to the Township's Corrective Action Plan.

Wastewater Effluent Disinfection Alternative Study, Village of Wintersville, Jefferson County, OH - Role: Staff Professional. Responsible for preparing an Effluent Disinfection Alternative Study with recommendations on replacing the existing and aging gas chlorination system for the wastewater treatment plan. Project entailed the consideration of on-site sodium hypochlorite generation, off-site batch delivery of liquid chlorine, ultraviolet disinfection and tablet chlorine disinfection, considering economic, safety, ease of operation and disruption of treatment.

Consent Order & Agreement Tasks for Combined and Separate Sanitary Sewer System Evaluation, Separation and Rehabilitation, Bellevue Borough and Stowe and Kennedy Townships, Allegheny County, PA - Role: Staff Professional. Responsible for coordination of project tasks, prepared project design drawings, specifications and bidding documents, prepared necessary permit applications, attended regional basin meetings and compliance meetings and prepared semi-annual progress reports associated with combined and separate sewer systems in an overall effort to reduce sewer overflows and basement backups. Project entailed closed circuit sewer line televising and cleaning, manhole surveys, GIS mapping, sewer point repairs, dye testing, flow monitoring, and operations and maintenance plans and feasibility studies.

Municipal Smoke and Dye Testing Program, Borough of Ambridge Municipal Authority, Beaver County, PA - Role: Staff Professional. Responsible for developing a comprehensive municipal smoke and dye testing program. Project entailed specifying and sizing equipment, obtaining project costs, designing the equipment trailer, and preparing the necessary forms for field reports, notification letters, miscellaneous survey information and photo sheets. In addition, prepared maps and weekly assignment packets for the municipal inspection crew, and recorded and developed photo sheets and summary reports from finished weekly assignment reports. Administered the smoke and dye testing for resale properties.

Municipal Ordinance Review and Update, East Lampeter Township, Lancaster County, PA - Role: Staff Professional. Responsible for reviewing and providing revisions for the Township's ordinance that governs the municipal industrial pretreatment program. Project entailed meeting the current compliance requirements with the City of Lancaster and state and federal regulations. Corresponded with the Township and provided revised ordinance documents for their review.

ENVIRONMENTAL ENGINEERING

Laboratory Accreditation Program Preparation, Borough of New Eagle Municipal Authority, Washington County, PA - Role: Project Manager. Responsible for assisting the wastewater treatment plant supervisor in preparing a Laboratory Accreditation Program for the on-site laboratory to meet requirements of the state's laboratory accreditation regulations. Project entailed an adult of the laboratory and recommended changes to meet the new regulations. Prepared the Quality Manual, the Standard Operating Procedures Manual, laboratory bench top forms and prepared and submitted the Laboratory Accreditation Application for approval and renewal.

CONTRACT ADMINISTRATION SERVICES

Sewage Lagoon Slude Dewatering Project, Bloomfield Township Municipal Authority, Crawford County, PA - Role: Staff Professional. Responsible for preparing bidding and construction documents to remove and dewater municipal slude from two sewage lagoons as part of a Corrective Action Plan prepared by HRG. Project entailed reviewing pay applications, slude removal rates, analysis and manifests as well as processing change orders and assisting in completion and closure of the Corrective Action Plan and the project.

Water Treatment System Upgrade for Torrance State Hospital, Pennsylvania Department of General Services, Harrisburg, Dauphin County, PA - Role: Staff Professional. Responsible for assisting in contract administration during the construction period. Project entailed preparing submittal logs, reviewing shop drawing and submittals, reviewing operations and maintenance manuals and ensuring documents complied with the Department of General Services requirements.

Fairchance-Georges Joint Municipal Sewage Authority, Fayette County, PA - Role: Project Manager. Responsible for performing construction phase services for the Route 119 Sanitary Sewer Extension Project to connect 34 homes into the Authority's system. Project entailed conducting job conferences, reviewing shop drawings and construction schedules, reviewing contractor claims, preparing change orders, reviewing pay applications, reviewing completed work and conducting inspections and preparing closure documents.

RELATED EXPERIENCE

From July 1990 to January 2004, Mr. Varner was an environmental project engineer with USFilter Operating Services in Pittsburgh, Pennsylvania. He prepared NPDES discharge and construction permit applications for wastewater treatment facilities, as well as various reports and studies required by regulatory agencies. Examples of reports include Chapter 94 Reports; Social & Economic Justification Reports; and Preparedness, Prevention, and Contingency Plans. Mr. Varner was also involved in the design of several wastewater treatment plant upgrades including flow equalization, filtration, aerobic digestion, and dechlorination. He has experience in stormwater, NPDES compliance, and groundwater monitoring well sampling procedures following EPA protocol. Other responsibilities included overseeing sampling and analysis procedures for numerous wastewater facilities and notifying clients of any potential compliance problems. Mr. Varner conducted a thorough review of all discharge monitoring reports that were prepared for submission to the regulatory agencies. Mr. Varner acted as regulatory specialist and liaison for the client and maintains current knowledge of federal, state, and local regulations that affect water and wastewater management facilities.

Mr. Varner worked on the following projects while employed by USFilter Operating Services:

Non-Transit, Non-Community Consecutive Water System, Pittsburgh International Airport, Allegheny County Airport Authority, Allegheny County, PA - Responsible for developing the sampling plans for coliform bacteria, residual disinfection monitoring, lead and copper, and microbial disinfectant byproducts monitoring. Prepared monthly monitoring reports and alerted client of potential problems. Also developed the Emergency Response Plan, the Operation and Maintenance Plan, and the Cross Connection Control Plan. Project entailed compliance monitoring and consulting services for the potable water system at Pittsburgh International Airport.

Design Permitting Services, Pittsburgh International Airport & Allegheny County Airport, Allegheny County Airport Authority, Allegheny County, PA - Responsible for preparing industrial wastewater and stormwater runoff NPDES permit applications for these facilities: Regional Aircraft Rescue and Firefighting (ARFF) Fire Training Facility, Landfill Leachate Treatment Facility, stormwater treatment, and several storm water and deicing fluid runoff outfalls.

On-Call Environmental Services, Allegheny County Airport Authority, Allegheny County, PA - Responsible for providing consulting services for an on-call environmental services contract. Such services included on-call soil, water and wastewater investigative monitoring, environmental incident reports, deicing runoff monitoring studies and various environmental reports for airport activities.

The Abraxas Foundation (Blue Jay Village) Wastewater Treatment System Planning and Design, The Design Alliance, Forest County, PA - Responsible for preparing Act 537 Sewage Facilities Planning Modules for the expansion of a private juvenile detention center and boarding school. Prepared a Social & Economic Justification Study to accompany the planning modules because of a discharge to high quality waters of the Commonwealth of Pennsylvania. Project entailed the preparation of an NPDES Part I application and a Design Part II permit application along with design drawings and specifications.

Septage Treatment Facility Closure Plan for Hapchuk, Inc., Washington County, PA - Responsible for preparing a Closure Plan and Post-Closure Groundwater Monitoring Plan for a septage lagoon treatment facility. Project entailed development of sequence of closure, E&S controls, development of closure documents and drawings, and soil and groundwater monitoring.

From May 1988 to July 1990, Mr. Varner was a sanitary engineer with the PA DEP in Norristown, Pennsylvania. His responsibilities included review of NPDES and Part II Design Permit Applications for industrial and municipal wastewater facilities. NPDES Permit review involved the development of water quality and/or technology based effluent limits, establishment of permit conditions, and preparation of final permit documents. Mr. Varner also reviewed Toxic Reduction Evaluation Reports for various industrial facilities. The Part II Design Permit Application Review included interdepartmental coordination, technical review to meet the standards of PA DEP's Domestic Wastewater Facilities Manual and Industrial Wastewater Manual and regulations, and preparation of final permit documents.

TRAINING

- Disinfection By-Products Rule for Small Systems Course, PA DEP
- Non-Domestic Wastewater Forum
- Oil & Gas Management Industry Training Workshop, PA DEP
- OSHA - Construction Outreach Safety, Safety Consulting Services
- Process and Product Application Seminar, Aqua-Aerobic Systems, Inc.
- Pump Maintenance & Troubleshooting, The Gorman Rupp Company

PROFESSIONAL MEMBERSHIP(S)

Pennsylvania Rural Water Association
Pennsylvania Water Environmental Association
Western Pennsylvania Water Pollution Control Association

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

BENJAMIN J. SAVAGE, P.E.
Civil Construction Manager

Mr. Savage is a civil construction manager with Herbert, Rowland & Grubic, Inc. (HRG). In this capacity he is responsible for overseeing a number of construction sites at one time and managing construction inspectors to insure conformance to requirements of contract documents for oil and gas construction projects including well pad sites, pipelines and roads.

EDUCATION:
B.S., Civil Engineering, West Virginia University, 1997

LICENSE(S):
Registered Civil Engineer, WV

PROJECT EXPERIENCE

Natural Gas Well Pad Construction, for Stone Energy Corporation, various sites in Wetzel County, West Virginia- Role: Construction Manager. Responsible for the construction oversight from initial ground breaking to erosion and sedimentation plan implementation to completed project of the in-house designed well pads and access roads for Stone Energy Corporation

County Road 38/1 Improvements, for Stone Energy Corporation, Wetzel County, West Virginia - Role: Construction Manager. Responsible for the construction oversight of in-house designed plans which included the widening of approximately ½ mile of County Road within District 6 of the WVDOH to allow for safe two-way traffic.

RELATED EXPERIENCE

From May 2011 to June 2012, Mr. Savage acted as the construction management representative with Balance Consulting, Inc., in Charlton Heights, WV. In this capacity he managed the rehabilitation/construction of the Historic Nuttallburg Mine Complex in Fayetteville, WV. His responsibilities also included daily on the job inspections to monitor compliance with contractual plans and to confer with supervisory personnel, owners, contractors, and design professionals to discuss and resolve unforeseen construction problems while remaining within budget and on time.

From July 2005 to January 2011, Mr. Savage acted as the consultant review engineer for West Virginia Division of Highways in Charleston, WV. In this capacity, he monitored and reviewed all facets of consultant designed highway projects to ensure that WVDOH standards and specifications were adhered to and made certain the project was delivered in a timely and budget-conscious manner. Mr. Savage was also responsible for guiding the consultants through the design process in tasks such as setting the horizontal and vertical geometry, reviewing minor and major drainage, developing the Right of Way plans, reviewing the maintenance of traffic plans, putting together the contract set of plans that went to construction, applying for all necessary permits for project completion, coordinating with all utilities that may need relocated, as well as being able to solve any minor issues that may occur with contractors once the project was awarded and under construction.

From July 1998 to July 2005, Mr. Savage acted as a highway design engineer for the West Virginia Division of Highways in Charleston, WV. In this capacity, he designed the roadway portions of several projects throughout the state of West Virginia. Much of his responsibilities were performed throughout the design process such as setting the horizontal and vertical geometry, developing the Right of Way plans which included

plotting deeds, putting together the contract set of plants for construction, applying for all permits necessary, coordinating with any and all utilities that may need to be relocated, preparing an engineering cost estimate, and being available to solve minor issues for contractors once the project was awarded and under construction.

TRAINING

- Field Safety I (10-Hour OSHA), Eichelbergers, Inc.
- Field Safety II (CPR/First Aid), Eichelbergers, Inc.

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

CHAD E. STONEBRAKER

Senior Land Development CADD Technician

Mr. Stonebraker is a Senior Land Development CADD Technician with Herbert, Rowland & Grubic, Inc. (HRG). His responsibilities include assisting the project manager in design, preparing Land Development plans, profiles, sections and details. He is proficient with AutoCAD Civil3D 2011 and Microstation software for base map and construction layout plan preparation. Prior to joining HRG, Mr. Stonebraker worked as a Senior CADD Technician designer for 12 years.

PROJECT EXPERIENCE

Natural Gas Well Pad Development, Marshall County, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Marshall, Preston and Wetzel Counties, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Wetzel County, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Preston and Taylor Counties, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Chesapeake Energy Corporation – Role: CADD Technician. Responsible for assisting in the design and plans preparation for several new natural gas well pads using Civil 3D software.

Habitat for Humanity – Role: CADD Technician. Responsible for preparing a subdivision plat and sidewalk layout.

EDUCATION:
A.S.T., Computer Aided Drafting, Pittsburgh Technical Institute, 2000

LICENSE(S):

CERTIFICATION(S):
Basic First Aid, Safety Consulting Services

Blood borne Pathogens, Eichelbergers, Inc.

Emergency Action Planning, Hand and Power Tools, Hazard Identification, Incident Reporting & Investigation, Eichelbergers, Inc.

Graphic Communication, Preston Vocational Center

CHAD STONEBRAKER

RELATED EXPERIENCE

From 2000 to 2011, Mr. Stonebraker was a Senior Technician employed by Gannett Fleming. His responsibilities included site, bridge, and municipal and highway design.

From 1999 to 2000, Mr. Stonebraker was a CADD Technical employed by Hanlon Electric Company. Using AutoCAD 2000 Mr. Stonebraker was responsible for revising drawings.

From 1992 to 1994, Mr. Stonebraker was a Seaman Apprentice with the United States Navy.

TRAINING

Safety Training, Safety Consulting Services

PUBLICATION(S) AND PAPER(S)

"How to Hack DTMs with InRoads" BE Magazine Volume 5, Issue 3

PRESENTATION(S) AND LECTURE(S)

Presented at the Bentley Conference, 2007, Baltimore, MD

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

ANDREW D. CARDOSI, P.E.

Transportation Regional Service Group Manager

Mr. Cardosi is a service group manager with Herbert, Rowland & Grubic, Inc. (HRG). In this capacity, he is responsible for providing technical guidance and supervision. He is primarily responsible for preparation of contracts and proposals, including development of technical scopes of work; project budgeting and cost estimating; bid documents preparation; contract administration; scheduling and planning updates for municipal and transportation projects; municipal reviews of land development and subdivision plans; Highway Occupancy Permit plan reviews; roadway design in areas such as roadway geometry, pavement design and analysis, drainage design and management, maintenance and protection of traffic plans, right-of-way plans; utility coordination; and construction inspection.

EDUCATION:
B.S., Civil Engineering, The Pennsylvania State University, 2001

LICENSE(S):
Professional Engineer, PA
Professional Engineer, WV

CERTIFICATION(S):
Certified Wetland Delineator, Richard Chinn Environmental Training, Inc./Army Corps of Engineers

TRANSPORTATION

Roadway Assessment and Capital Improvement Program, for Summit Township, Erie County, PA – Role: Project Manager. Project entailed: evaluation of 29 roads totaling approximately 35 miles; evaluation and sight distance measurements of 70 study intersections; identification of existing roadway/intersection substandard features; independent weighting system for each type of improvement project; and prioritization of improvements. Based on the Roadway Assessment, the Capital Improvement Program was undertaken to develop a program of improvements that would mitigate the substandard features and safety issues identified. Planning level cost estimates were calculated for each project by developing conceptual designs of the proposed roadway or intersection improvements. This weighting system will prioritize future improvement projects for the Township in planning and budgeting for their roadway program.

County Road 3 & County Road 5 Intersection, for Stone Energy Corporation, Wetzel County, WV - Role: Project Manager. Project entailed the widening of two County Roads under WVDOH District 6 jurisdiction to allow for safe truck turning accessibility. The plans were completed following the West Virginia Department of Transportation, Division of Highways procedures and format. In order to complete the widening, retaining walls were constructed and temporary easements were acquired.

Brussel Road Improvements, for Rex Energy Corporation, Carroll County, OH - Role: Project Manager. Project entailed the improvements to a County Road in conjunction with a Roadway Users Maintenance Agreement (RUMA). The improvements to Brussel Road were based on the additional truck traffic which result when construction and operational activities ensue at nearby oil well sites. Pavement designs in accordance with AASHTO standards were completed for a full depth pavement reconstruction and an overlay of existing pavement to obtain the required structural support for the proposed truck loading. The plans were completed following Ohio Department of Transportation procedures and format.

Township Road Weight Limit Studies, for Slippery Rock Township, Lawrence County, PA - Role: Project Manager. Responsible for the completion of weight limit studies performed for 40 Township roads, totaling 49 miles. Project entailed a traffic engineering study that was performed in accordance with PennDOT Publication 212, Section 212.117 Weight, Size, and Load Restrictions and PennDOT Publication 221 – Posting & Bonding Procedures for Municipal Highways to determine if weight limit postings can be established for the Township roads. Weight restriction recommendations in letter format were prepared for each of the 40 Township roads.

County Road 38/1 Improvements, for Stone Energy Corporation, Wetzel County, WV - Role: Project Manager. Project included the re-design and widening of approximately ½ mile of County Road under WVDOH District 6 jurisdiction to allow for safe two-way traffic. The plans were completed following the West Virginia Department of Transportation, Division of Highways procedures and format, which included construction plans, cross sections, drainage design, traffic control plans, and erosion and sediment pollution control plans.

Graham Bridge Replacement, for Cranberry Township, Butler County, PA - Role: Project Manager. Responsible for Quality Control for roadway/drainage design to plan production, which included construction plans, right-of-way plans, traffic control plans, and erosion and sediment pollution control plans. Project entailed the replacement of a two-lane single span bridge over Brush Creek on-alignment with approximately 500-feet of approach roadway reconstruction including superelevation and sidewalk. The project was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 10-0.

Beatty Road Bridge Replacement, for Westmoreland County, PA - Role: Project Manager. Responsible for Quality Control for roadway/drainage design to plan production, which included construction plans, right-of-way plans, traffic control plans, and erosion and sediment pollution control plans. Project entailed the replacement of a two-lane single span bridge along C.R. 6490 (Beatty County Road) on-alignment, based on the urban area system 3R design criteria. The project was completed following the PennDOT Design-Build Bridge process due to Federal funding sources and was administered by PennDOT District 12-0.

Horse Creek Road Alternative Analysis, Cranberry Township, Venango County, PA - Role: Project Manager. Responsible for the evaluation of potential safety improvements for a Township Road with an extensive crash history. Project entailed preparation of an Alternative Analysis Report that evaluated three different alternatives and compared their impacts with respect to maintenance and protection of traffic, environmental/drainage, right-of-way, utility relocations, and project costs.

2011 Freedom Road (State Route 3020) Improvement Project, Cranberry Township, Butler County, PA - Role: Project Manager. Responsible for the widening of Freedom Road (State Route 3020) to accommodate new opposing left turn-lanes, the widening of Haldeman Drive for a right turn-lane, the construction of a new traffic signal, and revisions to an existing traffic signal. Project entailed preparation of plans for maintenance and protection of traffic, environmental/drainage, right-of-way, utility relocations, and design exceptions. PennDOT project format was followed due to funding. The design was completed in six months.

PA 86 over Ashery Run, R.L. Johnson Construction Corporation, Crawford County, PA - Role: Project Manager. Responsible for the replacement of a Design/Build Culvert Structure. The project was completed following the PennDOT Design Build and was administered by PennDOT District 1-0. Project entailed completion of Final Design under direct contract with the Contractor.

Mill Street Bridge Replacement, North East Township, Erie County, PA - Role: Project Manager. Responsible for the replacement of a two-lane single span bridge over 16-Mile Creek. The project was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 1-0. Project entailed field surveying, hydrologic and hydraulic study, application for a joint permit, utility coordination, approximately 800 feet of roadway realignment and reconstruction, bridge design, detour plan, and right-of-way plans.

Herbert Campus Highway Occupancy Permit, Franklin Park Borough, Allegheny County, PA - Role: Project Manager. Responsible for the design of a private drive accessing State Route 4042 (Wexford-Bayne Road) and improvements to both State Route 4042 (Wexford-Bayne Road) and State Route 4049 (Nicholson Road), to accommodate the new development. Project entailed obtaining a Highway Occupancy Permit, and preparing roadway plans and cross sections.

State Route 3022 (Rochester Road) and Graham Park Intersection, Cranberry Township, Butler County, PA - Role: Project Manager. Responsible for the design for a Highway Occupancy Permit and Traffic Signal Permit to widen State Route 3022 for a left turn lane, widen Graham Park Drive for a right turn lane and signalization. Project entailed the construction plans and a traffic signal warrant analysis.

Bankson Road Bridge Replacement, Cornplanter Township, Venango County, PA - Role: Project Manager. Responsible for the replacement of a one-lane single span bridge over Cherry Run. The project was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 1-0. Project entailed field surveying, hydrologic and hydraulic study, application for a GP-11 permit, approximately 400 feet of super elevated roadway reconstruction, bridge design, detour plan, and right-of-way plans.

Knapp Road Bridge Replacement, Spring Creek Township, Warren County, PA - Role: Project Manager. Responsible for the replacement of a two-lane single span bridge over Spring Creek. The project was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 1-0. Project entailed field surveying, wetland delineation and mitigation, hydrologic and hydraulic study, application for a joint permit, utility coordination, approximately 800 feet of roadway realignment and reconstruction, bridge design, detour plan, and right-of-way plans.

Waitz Road Bridge Replacement, Cornplanter Township, Venango County, PA - Role: Project Manager. Responsible for the replacement of a two-lane single span bridge over Cherrytree Run. The project was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 1-0. Project entailed field surveying, hydrologic and hydraulic study, application for a joint permit, utility coordination, approximately 600 feet of roadway reconstruction, bridge design, detour plan, and right-of-way plans.

Township Road Weight Limit Studies, Cranberry Township, Venango County, PA - Role: Project Manager. Responsible for the completion of weight limit studies performed for 30 Township roads. Project entailed a traffic engineering study that was performed in accordance with PennDOT Publication 212, Section 212.117 Weight, Size, and Load Restrictions and PennDOT Publication 221 – Posting & Bonding Procedures for Municipal Highways to determine if weight limit postings can be established for the Township roads. Weight restriction recommendations in letter format were prepared for each of the 30 Township roads.

Franklin and Peters Intersection Improvement, Cranberry Township, Butler County, PA - Role: Project Manager. Responsible for the widening of Franklin Road (State Route 3021) to accommodate new turn-lanes, the widening of Peters Road for a right turn-lane, and the construction of a new traffic signal. Project entailed preparation of plans for maintenance and protection of traffic, environmental/drainage, right-of-way, utility relocations, and design exceptions. PennDOT project format was followed due to funding. The design was completed in six months.

Township Road Weight Limit Studies, Forward Township, Allegheny County, PA - Role: Project Manager. Responsible for the completion of weight limit studies performed for 21 Township roads. Project entailed a traffic engineering study that was performed in accordance with PennDOT Publication 212, Section 212.117 Weight, Size, and Load Restrictions and PennDOT Publication 221 – Posting and Bonding Procedures for Municipal Highways to determine if weight limit postings can be established for the Township roads. Weight restriction recommendations in letter format were prepared for each of the 21 Township roads.

Gloskey Road Culvert, Girard Township, Erie County, PA - Role: Project Manager. Responsible for obtaining a GP-11 Permit issued by PA DEP Northwest office. Project entailed the replacement of the existing culvert with a new 36-foot long CON/SPAN concrete bridge structure with a poured bottom, headwalls, and wingwalls.

St. John Specialty Care Center Highway Occupancy Permit, Adams Township/Mars Borough, Butler County, PA - Role: Project Manager. Responsible for the design of a private local road assessing State Route 3019 (Pittsburgh Street) and State Route 228, to accommodate the new development. Project entailed obtaining a Highway Occupancy Permit, and preparing roadway plans and cross sections.

Eagle Street Improvement Project, Greenville Borough, Mercer County, PA - Role: Project Manager. Responsible for the design and construction administration of the project which was funded through a Community and Economic Development (DCED) grant from the Elm Street Residential Reinvestment Grant Program. Project entailed repair of existing storm sewer catch basins, spot replacement of concrete curb gutter, and design of curb ramps compliant with the American with Disabilities Act (ADA) and ADA Accessibility Guidelines (ADAAG).

2009 GP-11 Permits, Waterford Township, Erie County, PA - Role: Project Manager. Responsible for obtaining three GP-11 Permits issued by PA DEP, Northwest office. Project entailed the replacement of the existing culverts as part of the Township's participation in the Dirt and Gravel Roads program.

Northwest Connector, Cranberry Township, Butler County, PA - Role: Project Manager: Responsible for the design to extend Heights Drive approximately 2,500 feet to State Route 19. Project entailed the completion of highway construction plans, right-of-way plans, E&S control plans, and pavement marking and signing plans.

Bebout Road and Valleybrook Road Intersection, Peters Township, Washington County, PA - Role: Project Manager. Responsible for the intersection improvement project. Project entails traffic signal design, roadway re-alignment and widening, traffic control plans, Categorical Exclusion Evaluation, and mitigation for the adjacent Arrowhead Trail Pedestrian Bridge parking lot relocation.

McFann Bridge Replacement, Butler County, PA - Role: Project Manager. Responsible for the design of the replacement of McFann Bridge over Glade Run. Project entailed field surveying, wetland delineation, hydrologic and hydraulic study, application for a joint permit, Butler County Conservation District approval, utility coordination, approximately 600 feet of roadway reconstruction, bridge design, detour plan, and right-of-way plans. Due to the funding source, PennDOT design procedures were followed and the contract was administered by PennDOT District 10-0 personnel.

Springfield Road Culvert, Girard Township, Erie County, PA - Role: Project Manager. Responsible for obtaining a GP-11 Permit issued by PA DEP, Northwest office to replace the existing culvert with either a new 48-foot long CON/SPAN concrete bridge structure having a 16- foot span and an 11-foot under clearance with a poured bottom, headwalls and wingwalls. Project entailed an installation of fish baffles in the CON/SPAN and the construction of stepped gabions at the downstream end to allow for passage of steelhead trout through the new structure.

Intersection Analysis, Cranberry Township, Butler County, PA - Role: Project Manager. Responsible for the evaluation of two existing intersections of Township roads with state roads: Franklin Road and State Route 3021 and Glen Eden Road, Powell Road and Freshcorn Road. Project entailed preparation of an Alternative Analysis Report for each intersection that evaluated three different alternatives and compared their impacts with respect to maintenance and protection of traffic, environmental/drainage, right-of-way, utility relocations, and project costs.

Greenville Streetscape Phase 2, Greenville Borough, Mercer County, PA - Role: Project Manager. Responsible for the construction administration of the PennDOT ECMS Construction Contract for Phase 2 of the Main Street "streetscape improvements" on behalf of the Borough. Project entailed monitoring the project budget, construction and quantities, shop drawing review, interpreting contract language and coordinating work between various contractors, inspectors and PennDOT.

State Street Bridge Replacement, City of Erie, Erie County, PA - Role: Project Manager. Responsible for the replacement of a four-lane single span bridge over the Canal Basin adjacent to Lake Erie. Project entailed the completion of the bridge which was completed following the PennDOT Bridge Design process due to Federal funding sources and was administered by PennDOT District 1-0.

Mosside Boulevard (State Route 48) and MacBeth Drive Intersection Improvements, Municipality of Monroeville, Allegheny County, PA - Role: Project Manager. Responsible for coordination of the design to obtain a Highway Occupancy Permit; creation of traffic signal plans, roadway plans and cross sections; creation of bid documents and construction services. Project entailed the widening of Mosside Boulevard (State Route 48) to accommodate new turn-lanes, the widening of Municipal road for turn-lanes, and the construction of a new traffic signal.

State Route 97 Highway Occupancy Permit for Presque Isle Downs, Inc., Summit Township, Erie County, PA - Role: Quality Assurance. Responsible for the implementation of the Transportation Service Group's Quality Management Plan, including a constructability review of a 130 page plan set for the roadway improvements associated with the proposed horse racetrack and gaming center. Project entailed the widening to accommodate additional turning and through lanes on Perry Highway (State Route 0097), Interstate 90 and Robison Road, as well as two site driveways and multiple traffic signals.

Mon-Fayette Expressway - Section 53A for Pennsylvania Turnpike Commission, Allegheny County, PA - Role: Transportation Engineer. Responsible for utility engineering aspects. Project entailed the coordination of field locating utilizing GPS, creation of and constant refreshing of utility index plan, coordination with utility companies and procurement of relocation estimates and plans for Section 53A of the proposed Mon-Fayette Expressway from State Route 51 to Camp Hollow Road.

State Route 3020 (Freedom Road) Improvements, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of a mile of widening through the commercial area of Freedom Road. Project entailed adding an additional through lane in each direction and multiple auxiliary lanes along Freedom Road; an additional northbound left turn lane was created on State Route 19. Four traffic signals were completely redesigned, including ADA accessible pedestrian facilities. The project included preparation of right-of-way plans, obtaining an E&S permit, and preparation of construction plans in PennDOT format.

State Route 3022 (Rochester Road) and State Route 0019 Intersection Improvements, Cranberry Township, Butler County, PA - Role: Transportation Engineer. Responsible for assisting in the design of the widening of Rochester Road (State Route 3022) and the State Route 19 intersection. Project entailed adding additional lanes to Rochester Road and a second northbound State Route 19 right turn lane. In order to accomplish this, two bridges (one on State Route 19 and one on Rochester Road) needed to be widened. This involved obtaining a Joint Permit Application and preparing right-of-way plans and construction plans in PennDOT format. In addition to the roadway and bridge improvements, an entirely new traffic signal was designed. The project required approximately 0.30 acres of right-of-way acquisition.

Rochester Road (State Route 3022) and Powell Road Intersection Improvements, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of intersection improvements and alternative analysis. Project entailed obtaining a Highway Occupancy Permit, the widening of State Route 3022 to include two new turn-lanes and the widening of a Township road for turn-lanes, creation of traffic signal plans, roadway plans and cross sections, and the creation of bid documents and construction services.

Elk Park Road Bridge Replacement, Girard Township, Erie County, PA - Role: Transportation Engineer. Responsible for assisting in the design of the replacement of a single span steel pony truss bridge with a multi-span structure over Elk Creek. Project entailed surveying, hydrologic and hydraulic studies, waterway permits, geotechnical engineering, E&S plan and permit, right-of-way plans, traffic control plans, pavement design, roadway plans, structure plans, utility coordination, specifications, and estimates.

Pigeon Creek Bridge No. 2 Replacement, City of Monongahela, Washington County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of the replacement structure for the existing single span steel truss bridge. Project entailed a survey, corridor location study, obtaining stream encroachment permit, wetland identification and delineation report, a Level II Categorical Exclusion Evaluation, highway and structure plans, and construction services. This project was federally funded and administered by PennDOT District 12-0.

Chartier's Bridge #61 Replacement, City of Washington, Washington County, PA - Role: Transportation Engineer. Responsible for assisting in the design of the replacement structure for the existing single span steel beam bridge. Project entailed structure plans, the hydrologic and hydraulic analysis necessary to obtain a Joint Permit Application, wetland delineation, completion of a Categorical Exclusion Evaluation, survey, roadway plans, right-of-way plans, E&S control plans, and construction phase services. The project was a local bridge project with plans completed in PennDOT format and reviewed by PennDOT District 12-0.

Pike Run #11 Bridge Replacement, Daisytown Borough, Washington County, PA - Role: Project Transportation Engineer. Responsible for assisting in the design of the replacement structure for an existing open grate steel beam bridge. Project entailed hydrologic and hydraulic analysis necessary to obtain a joint permit, wetland delineation, completion of a Categorical Exclusion Evaluation, roadway plans, and construction phase services. The project was completed in PennDOT format and subject to a review by PennDOT District 12-0.

Rosebaugh Bridge Replacement, Butler County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of the replacement of Rosebaugh Bridge over Glade Run. Project entailed field surveying, wetland delineation, hydrologic and hydraulic study, application for a joint permit, Butler County Conservation District approval, utility coordination, approximately 1,000 feet of roadway reconstruction, bridge design, detour plan, and right-of-way plans. Due to the funding source, PennDOT design procedures (in metric units) were followed and the contract was administered by PennDOT District 10-0 personnel.

Ehrman Road Extension, Cranberry Township, Butler County, PA - Role: Transportation Engineer. Responsible for the design to extend Ehrman Road approximately 2,200 feet to Garvin Road. Project entailed construction plans, right-of-way plans, E&S control plans, and pavement marking and signing plans. The alignment was selected with input from the adjoining property owners to minimize their impacts and approximately 1,500 feet of Ehrman Road was designed with a sitting wall and landscaping to soften the roads impact to nearby residential dwellings.

Garvin Road Improvement Project, Cranberry Township, Butler County, PA - Role Transportation Engineering Technician. Responsible for the design of the vertical realignment and widening of Garvin Road to construct a properly sized culvert. Project entailed approximately 1,400 feet of roadway work, eliminating steep grades and the narrowing of the road over the existing culvert. The new culvert required a stream enclosure permit.

State Route 3020 and T-937 (Freedom Road and Thorn Hill Road) Intersection, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for the design for a Highway Occupancy Permit and Traffic Signal Permit to widen State Route 3020 for opposing left turn lanes, an exclusive right turn lane, and signalization. Project entailed the construction and right-of-way plans, deed description, and plats completed to aid in property acquisition.

Heritage Creek Highway Occupancy Permit, Adams Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for the design of a Highway Occupancy Permit and Traffic Signal Permit at the State Route 228 and State Route 3017 intersection. Project entailed addition of a traffic signal; exclusive left and right turn lanes to the site were added along State Route 228 and State Route 3017 was relocated for approximately 1,600 feet on an entirely new horizontal and vertical alignment and designed in a manner consistent with the Township's requirements to create parallel roads.

Philipsburg, Route 322-C08, PennDOT District 2-0, Centre County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of the realignment of a state highway, including cross-sections and roadway quantities.

Philipsburg, Route 322-C09, PennDOT District 2-0, Centre County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the design of a temporary roadway to maintain traffic during construction. Project entailed horizontal and vertical alignment, super-elevation, and preparation of the maintenance and protection of traffic plans.

Tomlinson Road Improvements, Butler Auto Auction, Jackson Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for the design of the realignment, widening, and reconstruction of 500 feet of roadway. Project entailed horizontal and vertical alignments, highway and construction plans, and a Highway Occupancy Permit.

St. Kilian Parish Center Highway Occupancy Permit, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for the design of the widening of State Route 3021 (Franklin Road) to accommodate a driveway for the new church and school development. Project entailed obtaining a Highway Occupancy Permit, preparing roadway plans, right-of-way plan, and cross sections.

Irongate Highway Occupancy Permit, North Fayette Township, Allegheny County, PA - Role: Transportation Engineering Technician. Responsible for the design of the widening of State Route 0978 (Bateman Road) to accommodate a driveway for the new development. Project entailed obtaining a Highway Occupancy Permit, preparing roadway plans, and cross sections.

Warrendale-Bakerstown Road, Township of Pine, Allegheny County, PA - Role: Transportation Engineering Technician. Responsible for the design of the realignment and widening of 1100 feet of roadway and additional right turn lane. Project entailed the preparation of all highway and construction plans.

MUNICIPAL ENGINEERING

Reviews and provides comments on the site development plan packages submitted as part of the land development process for the following municipalities:

- Cranberry Township, Butler County, PA
- Jackson Township, Butler County, PA
- Greenville Borough, Mercer County, PA
- Pine Township, Allegheny County, PA
- Middlesex Township, Butler County, PA
- Girard Township, Erie County, PA

Greenville Main Street Enhancement, Greenville Borough, Mercer County, PA - Role: Transportation Engineer. Responsible for assisting in the construction administration of the PennDOT ECMS Construction Contract for the Main Street "streetscape improvements" on behalf of the Borough. Project entailed monitoring construction and quantities, shop drawing review, interpreting contract language and coordinating work between various contractors, inspectors and PennDOT.

Fairplain Road Reconstruction Project for County of Erie Department of Planning, Girard Township, Erie County, PA - Role: Project Manager. Responsible for preliminary planning, project design, preparation of the construction plans and bid documents, and construction administration. Project entailed approximately one mile of asphalt overlay, shoulder stabilization, cross pipe replacement and a highway-rail grade crossing enhancement along Fairplain Road funded by Erie County through the Community Development Block Grant Program.

Housing Demolitions Projects, Jackson Township, Butler County, PA - Role: Project Manager. Responsible for construction administration, coordination between the contractor and all affected utilities, negotiating change others, interpreting contract language, coordination between the contractor and the Township regarding property status, review and recommendation of payment applications, and daily photo documentation. Project entailed the demolition of approximately 30 flood damaged residential structures which were purchased by the Township through a Pennsylvania Emergency Management Agency grant.

Graham Park Value Engineering, Cranberry Township, Butler County, PA - Role: Transportation Engineer. Responsible for providing a Value Engineering evaluation of the final design plans, details and estimate for the 160-acre multi-purpose recreation complex with an effort to create cost reductions through use of alternative materials, better utilization of materials, or sequence improvements that increase productivity and the identification and elimination of unnecessary cost. Project entailed approximately $2 Million in reductions was made to the original $8 Million cost estimate.

Springfield Road Culvert Replacement, Girard Township, Erie County, PA - Role: Project Manager. Responsible for preliminary planning, project design, GP-11 Permit acquisition, preparation of the construction plans and bid documents, and construction administration. Project entailed the removal of a failing culvert (12' x 16' steel pipe arch) and replacement of a more sufficient culvert (12'-6' x 19'-6' aluminum metal plate pipe arch) funded by Erie County through the Community Development Block Grant Program.

2007 Road Resurfacing Project, Jackson Township, Butler County, PA - Role: Project Manager. Responsible for preliminary planning, project design, preparation of the construction plans and bid documents, construction administration, and inspection coordination. Project entailed roadway improvements to multiple rural Township roadways including asphalt overlay, wedge curb installation, sub-base repair, base drains and other roadway drainage work.

North Creek Road and Williams Road Rehabilitation, Girard Township, Erie County, PA - Role: Transportation Engineering Technician. Responsible for the design of the rehabilitation of Girard Township roads including resurfacing, stabilizing shoulders, and rebuilding a portion of North Creek Road to lower it beneath a railroad crossing to increase vertical clearance. Project entailed obtaining the first GP-11 Permit issued by PA DEP, Northwest office to repair half of a culvert that was comprised of two small pipes connected to a 20-foot concrete arch. A concrete headwall was designed to replace a railroad tie wall that deteriorated and was allowing the roadway to collapse.

LAND DEVELOPMENT

Cranberry Highlands Golf Course, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the site design of the golf course clubhouse and parking lot. Project entailed storm sewer and drainage, grading, parking areas, coordination of utilities, landscaping, and preparation of construction plans.

Graham Park Site Development, Cranberry Township, Butler County, PA - Role: Transportation Engineer. Responsible for assisting in the site design, construction drawings and federal permits for the development of a 160-acre multi-purpose recreation complex. Project entailed site grading storm sewer layout and design, stormwater management analysis, E&S control/NPDES design, Joint Permit Application, HEC-RAS Stream Analysis, and contract documents.

Public Works Facility, Cranberry Township, Butler County, PA - Role: Transportation Engineering Technician. Responsible for assisting in the site design for a 40,000 square-foot public works garage. Project entailed storm sewer and drainage, grading, parking areas, coordination of utilities, landscaping, and preparation of construction plans.

Parking Lots Reconfiguration, Borough of Bellevue, Allegheny County, PA - Role: Transportation Engineering Technician. Responsible for creating plans to improve three Borough-owned parking facilities. Project entailed removing duplicate accesses to aid in control and flow within the lots; parking spaces were designed to standard dimensions, and ADA requirements met, and landscaping, street trees, amenities, and architectural luminaries added.

RELATED EXPERIENCE

During the summers of 1998 to 2000, Mr. Cardosi was an intern in the Engineering Department of Cranberry Township, PA. He assisted in projects involving road reconstruction, road resurfacing, and stormwater management. He also conducted traffic counts and studies and performed on-site bond release inspections.

ANDREW D. CARDOSI, P.E.

TRAINING

- Army Corps of Engineers Wetland Delineation & Management Training, Richard Chinn Environmental Training, Inc./Army Corps of Engineers
- E&S Pollution Control Workshop, Allegheny County Conservation District
- Mock Mediation, STA Cleveland Ohio
- National Historic Preservation Act: Principles and Practice, SRI Foundation
- NEPA and Transportation Decision Making Process, National Highway Institute & Federal Highway Administration
- PennDOT Open Plan / Welcome Home, PennDOT
- Project Management Bootcamp, PSMJ Resources, Inc.
- Project Management for Engineers, The Project Management Institute
- Section 4(f) Workshop, Federal Highway Administration
- Transportation Engineer and Safety Training, The Pennsylvania State University, PennDOT, the Mid-Atlantic Universities Transportation Center, and the Pennsylvania Local Roads Program (LTAP)

PROFESSIONAL MEMBERSHIP(S)

American Society of Civil Engineers
American Society of Highway Engineers - Mid Allegheny

GeoMechanics, inc.
Consulting Engineers/Scientists
Elizabeth, Pennsylvania

Jahangir J. Kabir, Ph.D., P.E.

Project Manager

Education:
Ph.D. (1988), Geotechnical Engineering, Iowa State University, Ames, IA
M.S. (1983), Geotechnical Engineering, Michigan Technological University, Houghton, MI
B.S. (1977), Civil Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Professional Affiliations:
Professional Engineer, PA, 1990
Professional Engineer, WV, 2010
Professional Engineer, OH, 2011

Summary of Experience:
Dr. Kabir is Senior Geotechnical Engineer/Project Manager responsible for all technical aspects of project design.

Detailed Project Experience:

- 1990 to present, Project Engineer/Project Manager with GeoMechanics, Inc. Responsible for performing geotechnical analyses, preparation of reports, and the development of testing and analytical methods suitable to special projects.

- Served as project manager or supervising principal for subsurface explorations and geotechnical engineering investigations for over 10 sections of Interstate and Limited Access Freeways and the Light Rail Transit System (LRT) – Stage II and the North Shore Connector for the Port Authority of Allegheny County, PA. Specific aspects of design involved cut and fill slopes, temporary and permanent retaining structures, reclamation of abandoned surface mining, design of stabilization for weak ground and abandoned deep mines, pavement design, foundation support for bridges and drainage structures, underground parking garages, railroad stations and instrumentation for performance monitoring.

- Served as principal geotechnical engineer on several high-rise structures such as the 26-story 3 PNC Plaza and 40-story 4 PNC Plaza with three (3) levels of underground garages in Pittsburgh, PA. Special geotechnical issues involved design of deep foundations subjected to high downward and uplift forces, support of excavations extending below ground water table, underpinning of foundations of adjacent buildings and special ground improvement techniques.

- Responsible for geotechnical investigation and supervision during the construction phase of large shopping centers. Geotechnical considerations involved foundations support systems or variable foundation bearing medium, deep cuts and high fill embankments, earth retainage systems such as MSE malls, soil-nail walls, soldier beam-lagging walls, pavement design, blasting requirements and instrumentation programs.

- 1988 to 1990, Geotechnical Engineer for M.A. Iqbal Consulting Engineers, Reading, PA. Assignments included, but not limited to, subsurface soil investigation; design, analysis and selection of foundations; preparation of soils and foundation reports, and earthwork specification for one airport, one storage facility consisting of six silos, one water treatment plant and three shopping centers. Involved in slope stability, liner design, preparation of specification for a landfill in Cumberland, Pennsylvania.

- Developed instrumentation programs and supervised installation and monitoring of various types of instruments. These include inclinometers, piezometers, settlement rods, plates and remote sensors, bonded strain gages, etc. and provided data about embankment cut sloes and retaining structures behavior and performance.

M. Andrew Lafferty, P.E.

GeoMechanics, inc.
Consulting Engineers/Scientists
Elizabeth, Pennsylvania

Project Engineer

Education:
M.S. in Civil Engineering, University of Pittsburgh (2003)
B.S. in Civil Engineering, Penn State University (1997)

Active Professional Registrations:
Pennsylvania -- Civil Engineering (2007)

Experience:
15 Years with GeoMechanics, Inc.

Detailed Project Experience:

- Served as Project Engineer and/or Project Manager for geotechnical engineering studies involving analysis and design along with preparation of formal reports for commercial and residential developments, state prison additions, school additions, retaining structures and industrial foundations.
- Prepared geotechnical engineering reports, recommendations and specifications for highway, bridge, landslide, retaining wall, reinforced soil slope and commercial projects.
- Performed geotechnical engineering design for cut and fill slopes and structure foundations, including abandoned mine land reclamation and stabilization of abandoned deep mines, for major highway projects.
- Prepared specifications and construction drawings including special geotechnical treatments for highway projects.
- Prepared specifications and construction drawings for mine stabilization grouting programs and compaction grouting programs.
- Supervised subsurface boring contract during geotechnical engineering design phases for new highway projects including drilling and laboratory testing programs.
- Performed geotechnical analyses such as slope stability, settlement, bearing capacity, resilient modulus determination, pavement design, retaining wall design, reinforced soil slope design, pile design and caisson design.
- Performed evaluation of bearing capacity and settlement for a variety of deep foundation systems to include drilled shafts (caissons), H-piles, pipe and auger cast-in-place piles.
- Performed geotechnical analyses using computer software, such as DigiPro (inclinometer data), DARWin (pavement), STEDWin (slope stability), FHWA RSS (reinforced soil slope), SPILE (pile capacity), LPILE (lateral pile capacity and deflection) and GRLWEAP (pile driveability).
- Performed and coordinated site sampling and preparation of soil and rock samples for acid base accounting test program to be used in the determination of acid forming potential of exchange material. Performed alkaline quantity and application rate analysis for the treatment of potential acid forming material to be used in highway embankments.
- Supervised and coordinated field inspection personnel for phases of geotechnical construction.
- Performed data collection and reduction for monitoring instruments such as settlement monuments, pile load tests, vertical inclinometers and vibratory wire gauges.
- Performed and coordinated site sampling and preparation of soil and rock samples for laboratory testing programs.
- Served as resident geotechnical engineering technician on earthmoving projects that include housing developments, commercial buildings and several story office buildings. Work included in-situ testing of soil using Nuclear Densimeter and one-point proctor tests; concrete testing such as slump, air entrapment and preparation of testing cylinders; foundation inspection for strip footings, augercast piles and caissons; and instrument monitoring and data reduction for vertical inclinometers, settlement monitoring instruments and pile load tests.

GeoMechanics, inc.
Consulting Engineers/Scientists
Elizabeth, Pennsylvania

Walter M. Lorence, P.E.

Vice President / Senior Geotechnical Engineer

Education:
B.S.C.E., 1970, Carnegie-Mellon University
Post-Graduate Credits in Geotechnical Engineering, Carnegie-Mellon
University and University of Pittsburgh
Continuing Education Courses:
Current Practices in Pile Design and Installation
Rapid Excavation and Tunneling
Management of Uncontrolled Hazardous Waste Sites
Geotextiles and Geomembranes in Construction
Rock Mechanics in Civil and Mining Engineering

Professional Affiliations:
American Society of Highway Engineers
American Society of Testing and Materials
Society for Mining, Metallurgy, and Exploration, Inc.

Project Assignment:
Mr. Lorence is Senior Project Manager responsible for all phases of project development and is Technical Director of the AMRL-accredited laboratory of GeoMechanics, Inc.

Professional Registration:
Professional Engineer, Pennsylvania (1974)

Detailed Project Experience:

Mr. Lorence has 42 years of geotechnical engineering experience on projects located throughout the United States and in Asia. As a Principal of GeoMechanics, Inc., he is responsible for all phases of project development, beginning with client contact/proposal preparation and ending with design/ report submission and construction certification. He has served a Project Manager/Principle Investigator for projects involving all forms of intrusive (borings, test pits, DMT, penetrometer, pressuremeter, vane shear) and remote sensing (seismic refraction, electrical resistivity, VLF electromagnetic induction, electromagnetic conductivity) exploration techniques.

Mr. Lorence is Technical Director of the AMRL-accredited laboratory of GeoMechanics, Inc. and, as such, is knowledgeable about the various testing methods employed as well as the interpretation and application of the test results. Using the subsurface exploration and laboratory testing data, he has performed detailed geotechnical engineering analyses and has developed discrete recommendations for design and construction of earth and rockfill dams; Interstate and Class 1 highways; building and structure foundations; municipal, residual and hazardous waste disposal facilities; retaining walls and excavation supports; seepage and ground water control/ manipulation; and so on.

Mr. Lorence is also the Radiological Safety Officer of GeoMechanics, Inc.

Specific examples of project-related experience of Mr. Lorence are as follows:

- ***PA Turnpike Open-End Contracts*** - Mr. Lorence is currently serving and has recently served as Contract Manager for three (3) separate systemwide open-end contracts for geotechnical engineering services with the Pennsylvania Turnpike Commission. He is/was responsible for coordination with the PTC's geotechnical manager, preparation of Technical and Price Proposals for the individual Work Orders, assignment of technical and support staff, tracking progress, technical review of in-house work products and preparation of monthly invoices and progress reports.

- ***Phase 3, 4 and 5 Student Housing and Vulcan Parking Garage, California University of PA*** - Mr. Lorence served as Project Manager for all geotechnical aspects of design and construction of Residence Halls A through F and the Vulcan Parking Garage at the California University of Pennsylvania in California, Pennsylvania. Design services included directing detailed subsurface and mining investigation and laboratory testing programs; conducting bearing capacity, settlement, slope stability, mine subsidence prediction and heaving (mineralogical expansion) analyses; preparing recommendations for the type and depth of building foundations, allowable soil/rock pressures, type and extent of subsurface stabilization/ improvement; and preparing specifications for deep mine stabilization and for treatment of pyritic materials exposed at building subgrade. Construction services included supervision of monitoring and testing personnel for deep mine stabilization, treatment of pyritic materials, site grading and building foundation installation.

- ***Consol Energy Center and Parking Garage*** - Mr. Lorence recently served as Project Manager and Principal Investigator for geotechnical issues during the design and construction of this new multi-use arena that is the home of the Pittsburgh Penguins and the associated parking garage in the City of Pittsburgh, Pennsylvania. Spread footings bearing on competent bedrock were selected for the north portions of both structures. However, historic fill and building rubble to moderate depths and weak subcropping bedrock (claystone) were present under the south building areas; and high capacity (up to 1,400-ton service load) caissons socketed into bedrock were used to support the column loads.

Stringent differential settlement tolerances would normally have dictated the use of a structurally-supported floor slab for the ice surface. However, rammed aggregate piers were used to improve the load-carrying and settlement characteristics of the subsurface materials, including the historic fill and building rubble; and conventional slab-on-grade construction was used at a substantial cost savings.

- ***PNC Park*** - Mr. Lorence was Project Manager and Principal Investigator for geotechnical issues during the initial feasibility study, final design and during construction of this new baseball facility in the City of Pittsburgh, PA. Rubble fill and demolition wastes to moderate depths and weak subcropping bedrock (claystone) were primary considerations in selection of the appropriate type and depth of foundations for the park. High capacity (115-ton service load) augercast piles embedded 15 feet into dense fluvioglacial sand and gravel were ultimately selected for support of ballpark foundations, and their capacity was verified by a series of pile load tests. The presence of a 10-foot diameter deteriorated combination sewer at shallow depths presented a unique challenge during construction. Mr. Lorence was responsible for the analysis and design of a timber matting system to protect the sewer during staging of the large erection cranes.

- ***Ford City Bridge*** - Mr. Lorence was Project Manager for the geotechnical engineering design and for consultation during construction of a 3-span bridge carrying State Route 128 over the Allegheny River in Ford City, PA. The 2 river pier foundations were designed as spread footings bearing on top of a 9-meter thick tremie concrete seal placed to bedrock. Problems were experienced during excavation and placement of the tremie seal at Pier 1. Confirmation drilling encountered up to 1 meter of river sediment between the tremie seal bottom and bedrock and a large zone within the tremie concrete where segregation had occurred, most likely due to loss of the tremie seal during concrete placement. High capacity pin piles (mini piles) socketed into bedrock were ultimately selected to bypass the tremie seal and to transfer the bridge foundation loads to the underlying competent sandstone bedrock. Mr. Lorence was responsible for consultation with PennDOT and the Contractor in selection of the method of rehabilitation, geotechnical review of the remedial design, supervision and monitoring of 2 pile load tests to confirm pile design capacity, and observation/documentation of production pile installation. The pile load tests were performed to 2.5 times the original design load. The Contractor was then permitted to modify the pin pile design to accommodate a safety factor of 2 applied to the maximum test load.

- ***Alum Run Dam*** - Mr. Lorence served as the Construction Manager and Engineer-of-Record during construction of Alum Run Dam, a 350' high slurry impounding dam in Eastern Ohio. His responsibilities included coordination with the Owner and the USACOE-appointed Board of Consultants, planning of the separate construction stages, preparation of plans and specifications for bidding of the various construction stages, design of modifications necessitated by field conditions and varying mine production rates, construction observation/documentation and construction certification. Mining operations were terminated prematurely, and construction was topped off at a height of 180 feet. The dam and reservoir were abandoned by reservoir filling, controlled embankment breaching and stream channel reconstruction.

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Lorence, W.M., Rudenko, D. and Ackerman, H.D., "Seismic Refraction Technique Applied to Highway Design in a Strip-Mined Area of Southwestern Pennsylvania", 42nd Annual Highway Geology Symposium, Albany, New York, 1991.

Lorence, W.M. and Alvi, J.M., "Anchored Earth Embankment Flood Protection and River Erosion", U.S. – Pakistan Binational Symposium on Mechanics of Alluvial Channels, Lahore, Pakistan, 1985.