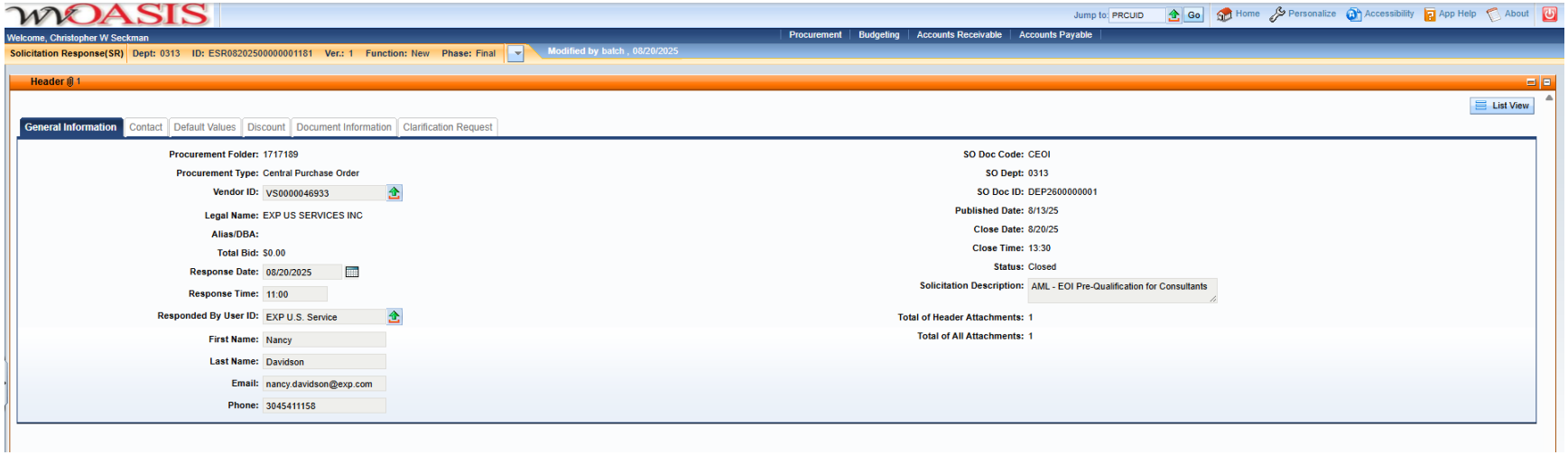
The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.


WVOASIS
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Welcome, Christopher W Seckman
Procurement
Budgeting
Accounts Receivable
Accounts Payable
Solicitation Response(SR) Dept: 0313 ID: ESR08202500000001181 Ver.: 1 Function: New Phase: Final
Modified by batch , 08/20/2025
Header @ 1
List View
General Information
Contact
Default Values
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Document Information
Clarification Request
Procurement Folder: 1717189
Procurement Type: Central Purchase Order
Vendor ID: VS0000046933
Legal Name: EXP US SERVICES INC
Alias/DBA:
Total Bid: $0.00
Response Date: 08/20/2025
Response Time: 11:00
Responded By User ID: EXP U.S. Service
First Name: Nancy
Last Name: Davidson
Email: nancy.davidson@exp.com
Phone: 3045411158
SO Doc Code: CEOI
SO Dept: 0313
SO Doc ID: DEP2600000001
Published Date: 8/13/25
Close Date: 8/20/25
Close Time: 13:30
Status: Closed
Solicitation Description: AML - EOI Pre-Qualification for Consultants
Total of Header Attachments: 1
Total of All Attachments: 1

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

State of West Virginia
Solicitation Response

Proc Folder:	1717189
Solicitation Description:	AML - EOI Pre-Qualification for Consultants
Proc Type:	Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2025-08-20 13:30	SR 0313 ESR08202500000001181	1

VENDOR

VS0000046933
EXP US SERVICES INC

Solicitation Number: CEOI 0313 DEP2600000001

Total Bid: 0 **Response Date:** 2025-08-20 **Response Time:** 11:00:03

Comments:

FOR INFORMATION CONTACT THE BUYER
Joseph (Josh) E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor
Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI Engineering Design Services				0.00

Comm Code	Manufacturer	Specification	Model #
81100000			

Commodity Line Comments: EXP Prequalification Submittal

Extended Description:

EOI Engineering Design Services

EXPRESSION OF INTEREST

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

PREQUALIFICATION FOR ABANDONED MINE LAND (AML) RECLAMATION PROJECTS

August 20, 2025

SUBMITTED BY

EXP
707 Virginia Street E, Suite 1000
Charleston, WV 25301

August 20, 2025

Joseph (Josh) E Hagler III
Contract Administration- Purchasing Division
West Virginia Department of Environmental Protection
Division of Lands Restoration, Office of Abandoned Mine Lands and Reclamation
DOH.consultantservices@wv.gov

RE: Expression of Interest (EOI)
Pre-Qualification for Architectural/Engineering Services
Abandoned Mine Lands

Dear Mr. Hagler:

The EXP Team is excited to submit this Expression of Interest (EOI) Pre-Qualification for Architectural/ Engineering Services. EXP is a leading provider of engineering services for infrastructure projects nationally in addition to hundreds of smaller scale, local context sensitive projects. EXP is committed to providing a blend of local, regional and national key staff with expertise to complete the engineering services exceeding the quality and schedule expectations.

Our local WV Staff are available and committed to dedicating technical and managerial resources to this project. We have selected our team members with the goal of providing turn-key services.

We thank you for your time reviewing our qualifications and look forward to your consideration.

Respectfully,

Manuch Amir, PE
Client Service Leader
EXP U.S. Services Inc.

PRIMARY POINT OF CONTACT

Manuch Amir, PE
Project Principal
Mobile: 407.616.4717

Manuch.Amir@exp.com

SECONDARY POINT OF CONTACT

Larry Clegg, PE, PMP
Project Manager
Mobile: 681.273.9565
Larry.Clegg@exp.com

TABLE OF CONTENTS

OUR HISTORY

Our heritage dates to 1906, when EXP's predecessor companies started its engineering infrastructure practice. Since then, we have grown to a full-service, multidisciplinary firm delivering projects and solutions to clients and communities around the world. Today, thousands of creative professionals across EXP work together to deliver extraordinary experiences year after year. Since its inception over 119 years ago, EXP's engineers, architects, and planners have consistently served as trusted consultants in the planning, design, and implementation of complex infrastructure projects throughout the world. EXP is the recipient of more than 200 awards in the past 10 years, including more than 50 for our infrastructure projects. EXP is composed of over 90 offices and 4,500 professionals worldwide.

OUR CULTURE:

At EXP, people make us who we are. Together, we leverage our differences, combine talents and share ambitions with each other, our clients, and the communities we serve. With diverse perspectives, voices and capabilities, we offer clients solutions to exceed expectations, and build a better, more sustainable world. We partner with numerous state DOT's and local jurisdictions for safety studies and designs that often are critical and time-sensitive components of the projects.

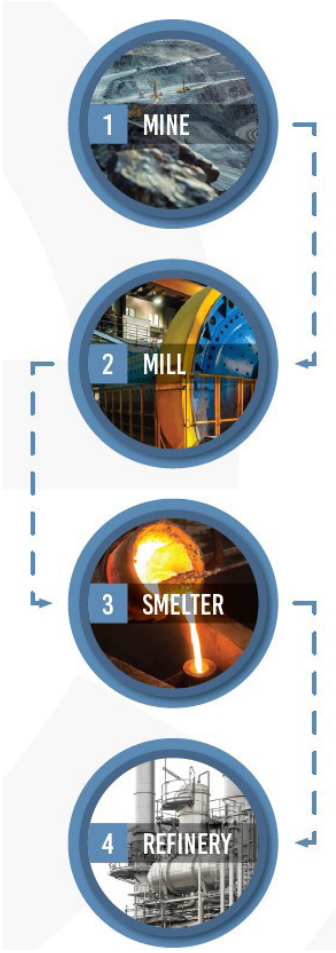
We are committed to providing a timely and reliable service to our clients. This global presence is balanced by the fact that our local staff have deep roots in West Virginia. We live and work here, and have an excellent grasp of the unique context, processes, regulations, and stakeholder needs. Our personnel include former WVDOH employees with a unique understanding of the policies, procedures and quality expectations. This background has enabled our team to launch into productivity efficiently and promptly, and mitigate technical, administrative, and stakeholder engagement challenges. We regularly partner with the state DOT's and other local jurisdictions which give us a sensitivity to the specific needs of a project.

OUR PROFESSIONAL QUALIFICATIONS INCLUDE THE FOLLOWING SERVICES:

- Feasibility / Impact Studies
- Prospecting / Logistics Support
- Mining Geotechnics
- Materials Engineering
- Hydrological Modeling
- Project Management
- Industrial Mechanics
- Process Engineering
- Site, Civil Engineering
- Pyrometallurgy
- Geological Investigation
- Mining Engineering
- Mine Reclamation
- Structural Engineering
- Air Quality
- Environmental Documentation / NEPA
- Environmental / NPDES Permitting
- USACE Consultation / Permitting
- Power Transmission & Distribution
- Electrical, Mechanical, Plumbing (MEP)
- Operations Optimization
- Cartography/ Spatial Analysis/ 3D Modeling
- Research and Development
- Permits & Authorizations
- Site Closure & Rehabilitation
- Floodplain Analysis
- Stormwater Management
- Stream / Channel Restoration

MINING + METALS

EXP Team have experience with various types of metals and minerals, including, but not limited to: Integrated, sustainable solutions across the mining industry At EXP, we bring customized solutions across the full life cycle of mining and mineral projects – from initial exploratory services and environmental studies, design and management of development projects, through site closure and rehabilitation. Over our more than 50 years of industry experience, our team has used innovation to deliver complex projects for the world's major mining and metallurgical facilities. We leverage our demonstrated record in interdisciplinary project execution with our extensive knowledge of base, precious, industrial and other minerals to develop sustainable, outcome-focused solutions. Combining the use of industry-leading technologies with an integrated, multidisciplinary approach we focus on enhanced efficiency and predictability, while addressing complex challenges in environmental management, regulatory, permitting and safety.



INDUSTRIAL + CHEMICAL

At EXP, we design and optimize sophisticated industrial processes aimed at facilitating commissioning and operation. EXP has extensive experience with chemical processes, from pilot plant research and development to mass production. We understand that efficient process technology leads to improved business performance. For each project, we work purposefully to balance performance, reliability and usability. We deliver smart, innovative technology solutions that are practical and cost-effective. We also bring specialist capabilities in simulation and analysis, plant optimization, process equipment efficiencies and thermal energy to plant.

MECHANICAL + ELECTRICAL + PLUMBING (MEP)

At EXP, we are a team of building solutions experts. We adapt to the fast pace of changing technology and code compliance. Whether you're building a new facility or renovating an existing one, our solutions address today's needs and incorporate flexibility for the future. We design efficient mechanical, electrical, plumbing and fire protection systems that provide comfortable, energy-efficient and healthy interior environments. We deliver seamless, integrated design across the building's entire lifecycle – from concept and planning, through design and construction, to commissioning and operations. Using a whole-building approach, we consider the impact of building functions on the owner, occupants and the environment. We integrate our sustainability services into all practices and continually work to meet and exceed environmental standards. As specialists in intelligent buildings, we design technology that enables buildings to better interact with occupants and provides essential security measures.

EARTH + ENVIRONMENT

Combining in-depth knowledge of the local context and industry's best practices along with modern technologies, our experts can deliver the solutions you need for any project, big or small. We take an active role in protecting our environment. Our team of engineers, scientists and specialists use an integrated approach to bring innovative, sustainable, functional strategies tailored to your project.

STORMWATER MANAGEMENT

Cost-effective stormwater management programs must meet water quantity and quality goals, be affordable, and comply with applicable stormwater and environmental regulations. Water quantity goals may include flood control, erosion protection, wetlands restoration and protection, and aquifer recharge. Water quality goals may include stormwater runoff treatment, receiving water quality (stream and lake standards), and sustainable Low Impact Development (LID) practices. EXP regularly works with communities to define Level of Service (LOS) or performance standards for stormwater system components and then tailors the program to achieve these goals in a defined implementation schedule based on priorities.

DATA + INFORMATION MANAGEMENT

An essential component of any stormwater program is the proper collection, evaluation, and management of data and model information. EXP uses a suite of tools, including GIS databases, to analyze, display, and manage spatial information. We have efficiently incorporated these tools with client-specific and commercial database management systems, along with hydrologic, hydraulic, groundwater, and water quality models, to support planning, permitting, design, and decision-making

MODELING + SYSTEM ANALYSIS

EXP utilizes the state of the art for stormwater management tools, including the RUNOFF hydrologic and EXTRAN hydraulic layers of the U.S. Environmental Protection Agency (EPA) Storm Water Management Model (SWMM); U.S. Army Corps of Engineers (USACE) Storage, Treatment, Overflow, Runoff Model (STORM and NetSTORM), In addition, EXP has considerable experience with other stormwater models, including quantity, quality, and integrated surface and groundwater tools.

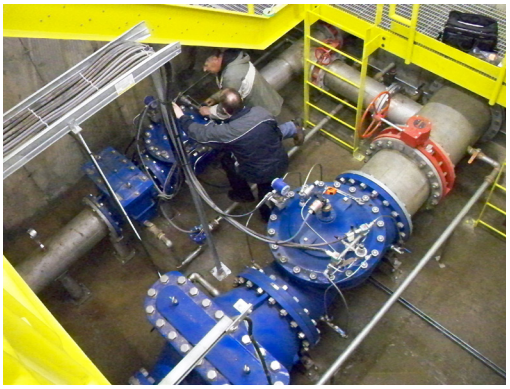
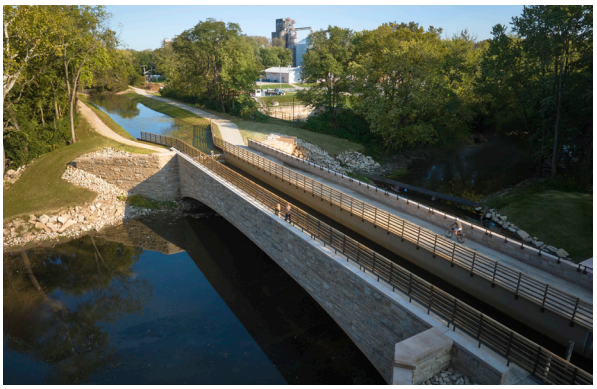
STORMWATER PERMITTING + REGULATORY ASSISTANCE

We apply the technical skills and experience gained from numerous water resources projects across the country in the areas of National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permitting, industrial NPDES stormwater permitting, combined sewer overflow (CSO) planning and permitting, stormwater financing, water quality studies and Total Maximum Daily Loads (TMDLs), and stormwater management and master planning. Our innovation and success in the permitting of more than 140 Phase I and II NPDES MS4s can be attributed to our comprehensive approach and our regulatory expertise. We have also conducted client seminars to inform and educate communities on the requirements of the program and cost-effective methods to meet them in concert with other ongoing programs.

ENVIRONMENTAL COORDINATION + PERMITTING

Environmental permitting is a significant component of all highway projects providing constraints to design, construction scheduling, and ultimately project cost. The EXP team has extensive environmental permitting experience. This experience include stormwater permitting; resource management permitting with Department of Environmental Protection; Dredge and Fill (Sections 404 and 10) permitting with U.S. Army Corps of Engineers; wildlife permitting with, U.S. Fish and




Wildlife Service, and U.S. National Marine Fisheries Service; and environmental permits and approvals from local jurisdictions. Other agencies that may be involved in projects are the U.S. Environmental Protection Agency, Division of Forestry, U.S. Coast Guard, National Park Service.

The EXP team has determined that the following tasks are critical to the successful completion of each transportation improvement project:

- EXP is responsible for all environmental coordination required to obtain permits and approvals.
- Identify and track the environmental permitting commitments made during project development, agency meetings, and public workshops and hearings. An environmental coordination and commitments checklist is prepared for the project.
- Provide early and frequent agency coordination to continue consensus building.
- Track and maintain communication between agency reviewers and conservation groups.
- Conduct pre-application meetings and site reviews with regulatory agencies for each project.
- Coordinate joint efforts between adjacent project teams when single source submittals are cost effective and expeditious (e.g. wildlife surveys and mitigation).
- Monitor environmental permitting status and production schedules.
- Provide QA/QC review for all agency submittals including permits and RAIs.
- Coordinate all mitigation efforts for impacts to wetlands and listed species. Assist in the identification of mitigation options identified and committed to during environmental study phase including the use of funding mechanisms established by the state legislature, the purchase of mitigation bank credits from a permitted bank, and the use of mitigation credits.
- Provide consistency and continuity to the environmental permitting effort for all projects.
- Serve as the coordination hub for all environmental permitting efforts with emphasis upon clear and timely communication between all stakeholders involved local jurisdictions, agency representatives, project teams, environmental groups and the public.

NEPA KNOWLEDGE + EXPERIENCE

EXP NEPA services encompass all infrastructure modes, as well as site development projects. Our multidisciplinary approach relies on context sensitive solutions (CSS), collaboration, and creativity to streamline processes and to showcase new ideas and technologies. Our technical staff address the full range of NEPA technical requirements and perform thorough natural resource assessments. In addition, EXP has completed multiple community impact assessments, environmental justice analyses, Section 4(f) evaluations, public and stakeholder outreach programs, and cultural and historic resources analyses, as well as projects containing agency coordination, modeling, and GIS elements.

EXP is composed of over ninety offices and 4,500 professionals worldwide. With multiple full-service offices located in the Mid-Atlantic region, in addition to the Charleston, WV office, EXP has the workforce, experience and resources necessary to complete the study and design for the subject project. The EXP team is experienced and qualified to provide the services requested under this contract, including project management and quality control. The EXP team will provide WVDOH with an exceptional pool of local, regional, and national experts completing the project assignment on time and within budget.

With the experience of EXP key staff who have led the design and management of numerous bridge and highway structure projects of all types and sizes across the Mid-Atlantic region, solutions for optimum span arrangements will be quickly selected. Factors will also include foundation requirements based on geotechnical testing and soils analysis to be provided by the geotechnical engineer.

The EXP Team will review the scope of work developed by the WV DEP to adequately prepare the cost proposal for services that will be provided. Prior to cost proposal preparation, a preliminary site visit will be performed to evaluate existing conditions that will allow the EXP design team to better address the scope, thus, leading to a more accurate estimate of the man-hours required to perform the services.

ORGANIZATION STRUCTURE

We have selected a blend of experienced key personnel with the technical, managerial, and communication skills required to perform each task assignment efficiently. An independent team not involved in daily project activities will validate conformity with standards, offer innovative and cost-saving solutions, and provide quality control to avoid schedule delays. The team is organized with multiple task managers under the direction of a centralized project manager. The task manager will remain with each task assignment throughout the project life cycle.

PROJECT MANAGEMENT STRUCTURE

EXP's project management structure includes three distinct elements.

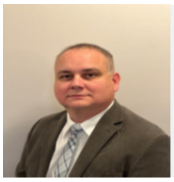
- **A Contract and Resource Manager:** will oversee all contracts, coordinate subconsultant contracts, and manage resources.
- **A Project Manager:** focused on coordinating project activities, including project tracking, reporting, and task scoping.
- **A Construction Oversight:** Daily Inspection with documentation for the duration of the Construction and through the warranty period until final release, Engineering Oversight and Support, review and approval of contractor provided as-builts, and Final Engineer's Certification Report of the project
- **A Mining Executive:** Aziz Sene

CONTRACT MANAGER
Manuch Amir, PE

EXP has assigned **Manuch Amir, PE**, as Contract and Resource Manager. Manuch has over 40 years of experience managing contracts and resources for efficient delivery of each task order on time, and within budget.

PROJECT MANAGER
Larry Clegg, PE, PMP

EXP proposes **Larry Clegg, PE, PMP** as Project Manager. Larry is a graduate of West Virginia University (WVU) with a Bachelor of Science degree in ***Mining Engineering*** with a unique understanding of the project's particular needs. ***Larry, as Engineer of Record (EOR), will sign and seal all plans and documents.***



CONSTRUCTION OVERSIGHT
Chris Collins, PE

We have assigned Chris Collins, PE, as Construction Oversight Manager. Chris has over 24 years of engineering, project development, construction management and maintenance experience in the transportation field. Chris began his career with the West Virginia Department of Highways, Division of Highways, working in partnership with local agencies and the Federal Highway Administration (FHWA) to advance transportation projects to construction. Prior to joining EXP, Chris served the WVDOH as Deputy District Engineer, Maintenance Engineer, Area Construction Engineer

MINING EXECUTIVE
Aziz Sene, P.Eng.

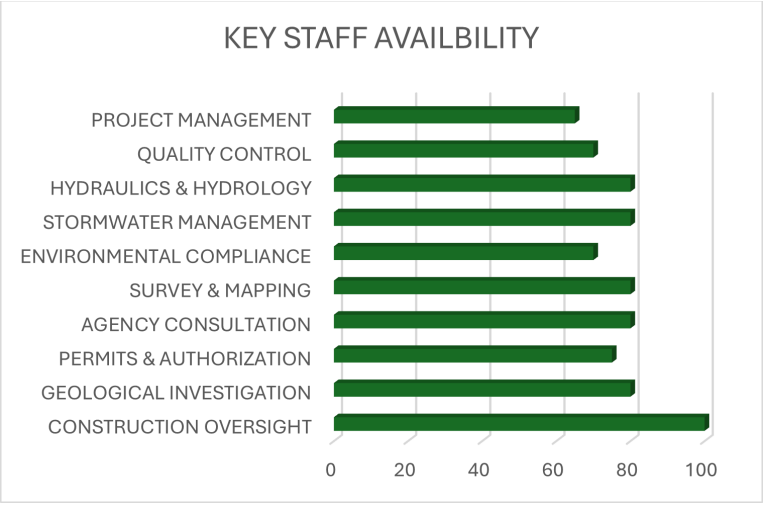
EXP proposes **Aziz Sene** as Mining executive. Aziz is currently EXP's Senior Vice President, Mining. He brings a combined 20+ years of managerial and technical experience and lead capabilities in Mining, Pulp and Paper, Renewable Energy, Dam Safety, Iron & Steel industries.

KEY STAFF AVAILABILITY

EXP has a dedicated team to conduct project management, quality control, survey & mapping, structural design, geological investigation, stormwater management, agency coordination, environmental permitting, drainage design, hydraulic studies, scour analysis, landscape or streetscape and utility investigations

PROJECT ORGANIZATION

Please see organizational chart below.



WV DEP
PROJECT MANAGER

EXP PRINCIPAL/CONTRACT MANAGER
Manuch Amir, PE

EXP PROJECT MANAGER
Larry Clegg, PE, PMP

CONSTRUCTION OVERSIGHT
Chris Collins, PE

QUALITY CONTROL
Manuch Amir, PE

PROJECT CONTROLS
Nancy Davidson

MINING EXECUTIVE
Aziz Sene, P.Eng.

MINING INFRASTRUCTURE
Jim Monaghan, P.Eng.

HYDROLOGY/STORMWATER
Mohammad Ibrahim, PhD, PE

R/W UTILITIES
Susan Hathaway

CIVIL
William Burmeister, P.Eng.
Richard Donnelly, P.Eng.

STRUCTURAL
Amir Arab, PhD, PE
Ashwini Kurikala, P.Eng.
Stephen Langille, P.Eng.

MECHANICAL
David Uremovich, P.Eng.
Peter Seto, P.Eng.

PROCESS
Eli Arbiv, P.Eng.
Stephen Daughney, P. Eng.

ELECTRICAL + INSTRUMENTATION
Ian Vesterback, P.Eng.
Brad Brewster, CET

HIGH VOLTAGE + GENERATION
Aziz Sene, P.Eng., ing.
Naivo Ravelomanantsoa, P.Eng.

CONSTRUCTION MANAGEMENT
Eli Arbiv, P.Eng.

GEOLOGICAL
Hamid Riahi, PE

SUBCONSULTANT SUPPORT TEAM

GEOTECHNICAL/DRILLING
TRIAD ENGINEERING
John Haynes, PE

SURVEY / REALTY WORK
GREENMAN-PEDERSON (GPI)
Daniel Endicott, PS

ENVIRONMENTAL
MARKOSKY ENGINEERING GROUP
Ben Stufft, PG

SUBCONSULTANT PARTNERS

TRIAD ENGINEERING | GEOTECHNICAL/DRILLING

GEOTECHNICAL TASK MANAGER

John Haynes, PE

John serves as the senior drilling manager for Triad's drilling operations and geotechnical services manager for the Scott Depot, WV office. He has over 35 years of performing drilling and geotechnical investigations on various infrastructure projects. As drilling manager, he manages all drilling and sampling activities conducted by the firm's regional offices. As the geotechnical department manager, John is responsible for overseeing project work performed by the geotechnical staff. John also serves as a senior geotechnical engineer. His role consists of geotechnical and slope design, implementation of the subsurface investigations, assignment of laboratory testing, approval of design drawings, development of technical specifications, and preparation of drilling and geotechnical engineering cost proposals and reports.

A multi-disciplinary engineering firm based in the Mid-Atlantic region specializing in geotechnical engineering, civil and utility engineering, surveying, construction materials engineering and testing and inspection, environmental consulting services, drilling, and other earth science-related disciplines. Triad was originally formed in 1975 as a geotechnical engineering firm, and our expertise in this discipline is superior. The combined education and professional experience of our staff provides our clients with cost-effective and practical solutions for the most difficult soil, rock and groundwater problems. Triad's clients include industrial and mining companies, governmental agencies, contractors, architects, engineers, developers, owners and commercial organizations. Geotechnical projects have included investigations for hospitals, churches, hotels, schools, shopping centers, communication towers, wind turbines, water and petroleum product storage tanks, coal and mineral processing facilities, landslides, bridges and highways, parks and recreation facilities, river docks and impoundments of all types. Since its founding, Triad has provided engineering consulting services on thousands of projects of varying size and complexity.

Triad employs over 160 professional, technical and administrative personnel in eight offices across five states. Triad's workforce includes environmental scientists, geologists, hydrologists, civil, geotechnical and mining engineers, landscape architects, chemists, surveyors, trained Computer-Aided Design (CADD) drafters, field and laboratory technicians, drillers, and support personnel. With over 50 yrs of service in West Virginia and surrounding states, both the number and complexity of our projects have grown. TRIAD'S clients include local government agencies, contractors, architects, engineers, attorneys, developers, commercial organizations, and mining and industrial corporations.

MARKOSKY ENGINEERING GROUP, INC | ENVIRONMENTAL

ENVIRONMENTAL TASK MANAGER

Ben Stufft, PG

Benjamin Stufft, PG, serves as Environmental Sciences Assistant Department Manager at Markosky. With over 16 years of experience in environmental science and hydrogeology across various disciplines, Ben brings essential and quality leadership skills to his role in the Environmental Sciences Department.

Markosky Engineering Group, Inc. (Markosky), The Markosky Engineering Group, Inc. offers a comprehensive range of services, including environmental compliance, archeology, architectural history, and civil engineering consulting. Markoski delivers results that streamline and expedite permitting, planning, and design processes for federal, state government, and private clients. Core competencies include:

ENVIRONMENTAL COMPLIANCE

- NEPA Documentation; Planning, Permitting, Design; Hazardous Waste Investigations Section 404/401 Permitting; Threatened & Endangered Species Asbestos & Lead Paint Investigations; Wetland & Stream Mitigation; Post Construction Stormwater Management; Erosion and Sedimentation Control; Environmental Monitoring.

Archeology

- SOI Qualified, 36 CFR Part 61; Archeological Investigations Archeological Data Recovery; Artifact Curation; Geomorphology Investigations; Archeological Monitoring Artifact and Specialized Analyses; Section 106/110 Coordination.

GPI

SURVEY TASK MANAGER

Danielle Endicot, PS

Danielle is an accomplished Land Surveyor and engineering technician with over 30 years of experience. She has an extensive background in engineering and surveying includes highway design, cadastral/boundary retracement, geodetic control surveys, photogrammetric control surveys, construction layout and inspection, hydrographic surveys.

GREENMAN-PEDERSON, INC. | SURVEY / REALTY WORK

With a staff of over 1,800 professionals, Greenman-Pedersen Inc. (GPI) is a leading engineering consulting firm that specializes in the innovative design and construction of infrastructure and building projects. GPI experts provide comprehensive engineering, design, planning, and construction inspection services to a wide variety of government agencies, municipalities, institutions, industries, corporations, private organizations, and developers.

GPI and its subsidiary, GPI Geospatial, Inc., jointly provide a comprehensive suite of geospatial solutions. GPI Geospatial, Inc., boasting over 47 years of experience, stands as a premier provider in the field.

GPI team specializes in precision mapping, imagery, LiDAR acquisition, and surveying services tailored for transportation, planning, design, construction, energy, and government sectors. Equipped with state-of-the-art aircraft and vehicles, GPI operates advanced imagery and LiDAR sensors to offer customized solutions from aerial, terrestrial, and mobile platforms. Leveraging GIS technology, GPI experts efficiently gather, assess, standardize, and optimize geospatial data to meet the diverse needs of our clients across various industries. Building trust is an essential strategy for the geospatial team. GPI finds new and innovative ways to assist clients by supplying them with meaningful data in a format that fits perfectly into their systems and processes.

Featured Services:

- 3D High-Definition Laser Scanning
- Aerial Mapping
- Emergency Response Imagery
- Mobile LiDAR
- Unmanned Aerial Systems (UAS)
- Aerial Photography
- Control Surveys
- GIS Applications
- Topographic & Boundary Surve
- Digital Orthophotography
- HD Video & Oblique Imagery
- Transmission Line Surveys
- Aerial LiDAR

PROJECT UNDERSTANDING

The Acquisitions and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting vendors to prequalify to provide proposals on Expression(s) of Interest(s) ("EOI") for the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) ("Agency"), from qualified firms to provide architectural/engineering services ("Vendors") pursuant to HB 3429. The WVDEP/AML Program is soliciting Consultant Firms to provide "full service" A/E planning, realty, design, and construction oversight.

PROJECT APPROACH

STAKEHOLDERS + COMMUNITY INVOLVEMENT

We are aware that a diverse group of stakeholders may be interested in the project's progress. We are prepared to meet with the project stakeholders, and interest groups in full coordination with WV DEP during the design process, to further enhance our understanding of critical issues. We will adjust our design to incorporate mitigation measures that best address stakeholder concerns.

COMMITMENT TO RESOURCES

We are committed to providing the best resources from our Charleston, WV and regional offices with all the work coordinated through our Charleston office, this will allow us to meet complexity and challenges of each assigned task order.

COMMITMENT TO QUALITY

The most important success factor in delivering each task order is our commitment to quality. To ensure quality, EXP will prepare a Quality Management Plan (QMP). The QMP consists of two parts: Design Quality Assurance and Design Quality Control. The development and implementation of the plan will be overseen by the Design Manager. The QMP is prepared to ensure consistency in reviews and quality of all work products including; plans, technical documents, and electronic delivery packages. The QMP will incorporate Procedures for preparing and checking all drawings, specifications, and other design submittals to ensure that they are independently checked by experienced staff prior to submission.

COMMITMENT TO COMMUNICATION

- **PARTNERSHIP**: We propose to begin a Program Alignment Process aimed at building a close working relationship between WV DEP and all stakeholders and permitting agencies. We will start with partnering sessions to meet with your project staff to understand the issues, concerns, constraints, and considerations involved in each task order. Equally important, we believe that getting to know each other will assist in developing a close working relationship which will expedite the program delivery.
- **ISSUE RESOLUTION**: We recommend that the partnering approach to implementation of the program be extended to address any concerns that cannot be addressed under normal circumstances. We would expect that most issues can be addressed by staff operating within their delegated levels of authority and responsibility. As a first step in the process, we will prepare complete documentation of the issue, the background and circumstances surrounding the issue, and steps taken to resolve the situation. We will then schedule a joint meeting with the WVDEP' s project manager, and any other entities involved in the issue. We will provide a briefing to the Project Manager and make every effort to reach a decision that is acceptable to all parties. It is anticipated that all parties will recognize the importance of making decisions that are in the long-term best interests of the project and reinforce the partnering approach that has been developed as a part of the early coordination and planning meetings on the project.
- **EARLY/ONGOING COORDINATION:** EXP communicates between team members by developing a communication plan at the onset of the project. Regular team meetings provide opportunities to address challenges that may affect the schedule, review progress quickly, and accelerate critical path items. Regularly scheduled client meetings allow for an open dialogue with all parties concerning unresolved issues impacting schedule and budget, with resolution options included. Regular meetings also keep all parties advised of schedule modifications in advance of a change. Monthly progress reports on crucial milestones are also provided, in which potential schedule impacts are highlighted.
- **PROJECT REPORTING AND TRACKING:** The project reporting and tracking system will assess and maintain project status information in a timely, independent, and accurate manner. This system provides current information on project progress, changes, and issues. This information

is used to identify trends, forecast performance, and proactively address challenges to eliminate significant surprises. At the monthly status meetings, our task managers will discuss the costs, schedules, quality issues, and other status items in detail so all parties involved are fully aware of any schedule-related issues and actions to mitigate any adverse impacts.

MINING APPROACH

Upon receiving an engineering request (ER) from the Department of Administration of the State of West Virginia, EXP will mobilize our team and review the scope to make sure that we have a clear understanding of the project scope of work and our role in delivering the overall scope on time and on budget. If required, we will also complete a site visit/investigation to better evaluate the required scope. EXP will also assess the safety risk and its resource availability prior to proceeding with the bid. If the decision is to proceed with a proposal submission, EXP's assigned Design Team Lead and its team (engineers, EITs, designers and estimating lead) will be in charge of completing and sending our proposal to the designated contact/project coordinator. EXP's typical Work Plan will be composed of the following sections, but not limited to:

1. Scope Statement
2. Exclusions and Clarifications
3. Deliverables and Schedule
4. Engineering Estimate Breakdown
5. EXP's Safety Plan and QA/QC Plan
6. EXP's Team Resumes
7. Engineering Services Agreement – Form of Contract

At the start of every awarded project on this Contract, a kick-off meeting will be held with the Department of Administration of the State of West Virginia team to review scope, schedule, budget and deliverables. Meeting minutes will be recorded and issued for comments and/or approval. In most cases, EXP team will also complete a site visit at this time to verify the scope and details of the project and collect additional information pertinent to the project.

EXP understands that having a well-defined scope and approach from the onset is the key to delivering a successful assignment. During the execution of the Engineering Services Contracts, EXP will use its tested Earned Value Management (EVM) techniques to monitor progress against the agreed-upon baselines for deliverables and schedules.

Weekly status reports will also be produced to provide management and stakeholders with accurate and relevant project status information. These samples can be fine-tuned and tailored to fit the requirements of the team. Weekly meetings will be held reviewing the project status as required. EXP's Design Team Leads will record and issue meeting minutes to all meeting participants.

Client

Vale Canada
Dave Timmermans
t: +1.705.682.8317
e: dave.timmermans@vale.com

Timeline

2022 - Ongoing

Services

- Geotechnical
- Process
- Civil
- Structural
- Mechanical
- Electrical
- Instrumentation
- High voltage

Project Team

- Project Manager: Aziz Sene

Overflow Engineering Services (MSA)

Canada-Wide

EXP has been selected by Vale as one of the primary consultants for the 2022 Overflow Engineering Services contract, which encompasses a master services agreement for a three-year term. Our mining team, led by Vice President of Mining Aziz Sene, will act as primary consultants at four operational sites that include Thompson, Manitoba; Long Harbour, Newfoundland; Sudbury, Ontario and Port Colborne, Ontario.

This is the first time Vale has issued Canada-wide agreements across the majority of its sites, structured with primary and secondary consultants. All engineering services performed by EXP for Vale sites are in-house, including the maintenance and design engineering services for dams, mines, smelters, filter plants, acid plants, nickel refineries, electrowinning facilities and water and wastewater facilities. EXP manages a large multidisciplinary team on numerous projects through a single point of contact / portfolio manager, who ensures consistency of delivery and execution, as well as quality, timeliness, and adherence to the budget.

It is important to note that all of our projects have been completed on time and on budget.

HIRA - PMR - CL2 Risk Elimination

Vale

Port Colborne, Ontario, Canada

Client

Vale Canada

Timeline

- FEL3 Completion: March 2023
- Detailed Engineering: Completed Sept 2024

Project Budget

- FEL3: $278,549.00
- Detailed Engineering: $698,309.75

Services

- Mechanical
- Process
- Structural
- Electrical
- Instrumentation
- Civil

Project Phase

- FEL3 Feasibility Study
- Detailed Engineering

In June 2020, risks were identified due to uncontrolled leaks of chlorine gas at the Vale's Port Colborne, Precious Metal Refinery. A FEL2 study was done, and two options were studied to mitigate the chlorine risk. From the two options studied, Vale has chosen Option 1 (substitution of the existing 18˚ Be Hydrochloric Acid / Chlorine (HCl / Cl2) with 18˚ Be Hydrochloric Acid / 50% Hydrogen Peroxide (HCl / H2O2) to proceed into an FEL-3 Study in October 2022. The FEL3 study was completed by EXP in March 2023.

In September 2023, Vale requested a detailed design based on the FEL3 study completed to deliver a detailed engineering package for Port Colborne HIRA-PMR-CL2 Risk Elimination in accordance with Vale Engineering Standards that are specifically approved for the location of the Work (Port Colborne Refinery).

Within the engineering phase, the civil scope included new heavy truck roadways with proper drainage, fencing, and security features. Structural designs covered foundations for new reagent storage areas, including tanks for Hydrogen Peroxide and Hydrochloric Acid, containment berms, access platforms, and splash protection. Mechanical and piping work involved designing new storage tanks, pump rooms, safety showers, and dedicated piping systems with appropriate materials, insulation, and safety features. Electrical and instrumentation designs included heat tracing, cable trays, grounding, load calculations, and instrumentation for the new chemical systems, along with updates to existing electrical drawings to reflect the new installations.

Power - CS3 Station Service Upgrade

Copper Cliff South Mine, Vale

Sudbury, Ontario, Canada

Client

Vale Canada

Timeline

Completion: October 2024

Project Budget

$31,503.16

Services

- Electrical
- Instrumentation

Project Phase

- Detailed Engineering

The 600VAC and 120/208VAC station service in the South Mine #3 Switching Station relay building requires upgrades. The recent HVAC installation has undersized the system. There is also a requirement to relocate the station service to accommodate the installation of a new DC charger and battery bank.

EXP facilitated the necessary upgrades and relocations within the South Mine #3 Switching Station relay building to meet current and future operational demands.

EXP's general scope of work included a site visit to assess field conditions, design basis and review meetings (kick-off and 85%), a Process Hazard Review (PHR), preparation of the Technical Description of Work (TDOW), inter-discipline coordination, and weekly progress meetings. In the electrical discipline, EXP updated the single line diagram and building general arrangements, created elevation drawings, assessed feeder sizes, developed a distribution panel schedule, and prepared specifications for transformers and distribution panels.

CCNM - Wastewater System Assessment

Copper Cliff North Mine, Vale

Sudbury, Ontario, Canada

Client

Vale Canada

Timeline

Completion: February 2025

Project Budget

$34,262.47

Services

- Mechanical
- Environmental
- Process

Project Phase

- Assessment

Vale anticipates an increase in staffing at CCNM over the coming years. The projected increase will also increase the generated sewage. This assessment was requested by Vale to determine if the existing infrastructure can accommodate projected additional demand or if upgrades are necessary to maintain operational efficiency and regulatory compliance.

EXP's assess the current sewage capacity at CCNM and compare it with Vale's projected future demand, while interfacing with the City of Greater Sudbury's sewage system. EXP identified any limitations in the existing system and, recommended upgrades to ensure the systems can manage the extra sewage load.

The assessment identified the current capacity and usage of the existing system, including facility loads and the capability of the city's sewage infrastructure to handle additional flow. It also evaluated permissible tie-in points with the city's system and compared the existing system's compatibility with future capacity and occupancy projections provided by Vale. Bottlenecks limiting the system's waste handling capacity were identified, and recommendations for upgrades were proposed to enhance overall performance.

69CR11 Substation Replacement

Creighton Mine, Vale

Sudbury, Ontario, Canada

Client

Vale Canada

Timeline

- FEL3 Completion: April 2023
- Detailed Engineering: on-going

Project Budget

- FEL3: $85,125.00
- Detailed Engineering: $363,888.70

Services

- Electrical
- Instrumentation
- Structural
- Civil

Project Phase

- FEL3 Feasibility Study
- Detailed Engineering

Subconsultant

- Eaton Industries

In July 2022, EXP was requested to complete a FEL3 study that outlines different options to provide a reliable power distribution system for the replacement of the existing Creighton mine #11 Substation with a new one adjacent to the return air fans.

The FEL3 study included replacing the current substation with a new one featuring a 69kV/4.16kV power transformer, 72kV SF6 circuit breakers, insulation switches, lightning arresters, a substation gantry, and an E-House equipped with switchgear, control panels, and backup systems. Additional work involved site excavation, grading, new grounding, fencing with access gates, site lighting, and provisions for transformer oil containment per FM Global standards. The new substation is designed to re-feed existing loads and accommodate future power demands.

In May 2024, EXP was requested by the client to provide detailed design and engineering. This stage of engineering included preparing permit application packages for the City of Sudbury and ESA approvals, as well as removal drawings for the existing Substation #11 and its components.

The design also covered relocations of power and communication cables, civil works such as site excavation, grading, drainage, and access roads, and structural foundations and steel supports for various substation elements. Electrical work involved extending 69kV pole lines, installing a new substation with a 69kV/4.16kV transformer, SF6 breakers, insulation switches, lightning arresters, and an E-House with full control and protection systems. Additional components included grounding, fencing, site lighting, a detailed grounding study, load calculations, and provisions for oil containment, ensuring the new substation could re-feed existing loads and support future growth.

Boiler NOx Compliance

Port Colborne, Vale

Port Colborne, Ontario, Canada

Client

Vale Canada

Timeline

- FEL2 Completion: August 2024
- FEL3 Completion: December 2024
- Detailed Engineering: on-going

Project Budget

- FEL2: $68,776.00
- FEL3: $105,193.93
- Detailed Engineering: $185,930.23

Services

- Mechanical/Process
- Structural
- Electrical
- Instrumentation

Project Phase

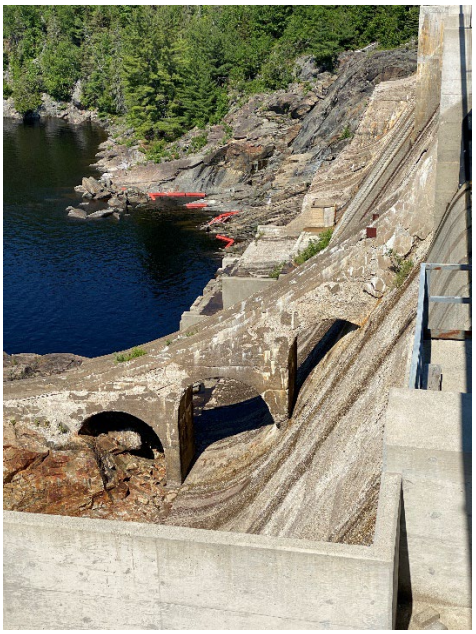
- FEL2 Feasibility Study
- FEL3 Feasibility Study
- Detailed Engineering

In 2016, the Federal government legislated Multi-Sector Air Pollutants Regulations (MSAPR) for boilers that exceeded the rated capacity of 10.5 GJ/h for NOx emissions. The Federal regulations applied to pre-existing boilers, transitional or modern boilers. Pre-existing boilers are boilers that were commissioned prior to the promulgation of the regulations.

The FEL2 study evaluated and provided an optimal solution for achieving regulatory compliance and reducing NOx emissions from the three boilers at the Port Colborne Refinery. EXP developed 3 options and evaluated them based on their effectiveness in achieving regulatory compliance, operational feasibility, and cost-effectiveness. FEL2 report was completed with cost estimates within +25%/-10% for each option, and conceptual design drawings were completed.

EXP completed the FEL3 study with assessment to the Regulatory Compliance and Penalties, Assessment of Ancillary Systems and Supplier Commitments, Boiler Specifications and Efficiency. A Boiler Procurement Package, Execution Plan, Constructability Review and Commissioning and Handover Plan were developed during this phase.

During Detailed Design phase, EXP provided a complete engineering package to support procurement, construction, and commissioning activities, ensuring compliance with regulatory requirements and operational needs for the replacement of the three existing boilers with three new 350 BHP low NOx emission boilers, as recommended in the FEL 3 study.



Client

Vale Canada

Timeline

Completion: December 2020

Project Budget

$100,000

Services

- Geotechnical
- Process
- Civil
- Structural
- Mechanical
- Electrical
- Instrumentation
- High voltage

Project Phase

- Assessment

Big Eddy Dam and Generating Station

Structural, Mechanical, Electrical Review and OMS Manual

Greater Sudbury, Ontario, CANADA

The current Operation, Maintenance, and Surveillance (OMS) Manual dated February 2011 was prepared after the completion of the Obermeyer gates and reviewed in 2016. Vale engaged EXP to produce an updated OMS manual which conforms to current Canadian Dam Association (CDA) Guidelines and the Lakes and Rivers Improvement Act (LRIA).

Scope of Work

Assessment Services

- Review existing construction/as-built documentation
- Identify/update guidelines Lakes and River Improvement Act
- Identify/update guidelines Canadian Dam Association
- Document current operating procedures
- Review manufacturer's operations/maintenance manuals

OMS Manual

- Write a clear, concise OMS manual which conforms to the above-mentioned criteria.
- The dam facility subcomponents which will be assessed in the proposed OMS manual are as follows:
    - Big Eddy Powerhouse inclusive of turbines and generators
    - Intake structures inclusive of gatehouse, three penstocks, trash rack, head gates
    - Blower house is inclusive of pumps, compressors and motors
    - Concrete gravity structure inclusive of East & West Bulkhead, East & West Obermeyer gates and East & West Bridgestone rubber dams
    - Electrical Substation inclusive of transformers and structures
- Develop a brief presentation which can be used as a training tool for facility operators and personnel.

Creighton East Berm & Ditch Detailed Design

Creighton Mine, Vale

Sudbury, Ontario, Canada

Client

Vale Canada

Timeline

- FEL3 Completion: May 2024
- Detailed Engineering: January 2025
- Post-IFC: on-going

Project Budget

- FEL3: $437,618.80
- Detailed Engineering: $253,276.32
- Post-IFC: $116,036.70

Services

- Civil/Dam/Tailings
- Structural

Project Phase

- FEL3 Feasibility
- Detailed Engineering
- Post-IFC

Subconsultants

- Cecchetto & Sons Ltd.
- Carman Construction
- R.G. Sutton Inspection Services Inc.
- William Day Construction Ltd.
- GeoPhysics GPR International

At Vale's Creighton Mine an FEL 2 Study has been undertaken in support of Vale's Water Quality Management Plan (WQMP), investigating the water quality around the perimeter of Vale property including the Creighton Mine Complex and Central Tailings Area (CTA). Several remedial options have been studied as part of the FEL 2 process, however there is one common requirement that they share which impacts the eastern portion of the Creighton Mine Complex. This option requires the conveyance of surface water back to the Central Tailings Area by way of No.3 Pumping Station where it will eventually be treated prior to being released to the environment.

EXP completed a FEL 3 stage and detailed engineering stage for this project, which included the design of a new concrete dam, concrete bentonite trench, emergency spillway, diversion ditch, and culverts. The scope also covered project specifications, cost estimates, execution planning, risk assessment, and constructability review. Geotechnical boreholes and test pits were completed to support design and assess site conditions. The dam was divided into two sections, one with a concrete dam and emergency spillway, and the other with a concrete bentonite trench—while the diversion ditch and culverts were designed to manage peak flows and integrate with the Central Area Water Management System. The final design ensured compliance with storm event requirements and site-specific topographic and geological conditions.

In 2025, EXP was requested to provide engineering support to the project moving forward to the construction phase.

Matt Processing No.2 & No.3 Roaster FEL2

Copper Cliff Smelter, Vale

Sudbury, ON, Canada

Client

Vale Canada

Timeline

Completion: December 2023

Project Budget

$140,000.00

Services

- Mechanical/Process
- Structural
- Electrical/Instrumentation

Project Phase

- FEL2 Feasibility Study

Subconsultant

- Jenike and Johanson Ltd. (J&J)

EXP completed a FEL2 study in collaboration with Jenike and Johnson Ltd. to evaluate the potential upgrade of Vale's No. 2 & 3 Roaster Feed System. The existing system, which discharges nickel sulphide filter cake from a disc filter into a surge bin and then feeds it into a disc pelletizer, was found to produce inconsistent feed rates and variable moisture content, negatively impacting fluidization and roaster performance. The study assessed current material properties and system behavior to support the design of an upgraded feed system that would reduce variability, improve roaster stability, and enhance tolerance to feed inconsistencies, including higher arsenic content.

As part of the FEL2 study, Jenike and Johnson Ltd. (J&J) conducted bulk solids testing to evaluate the flowability and handling characteristics of nickel sulphide filter cake under expected operating conditions. Tests were performed on samples at two moisture levels—normal and upset (~80% of saturation)—to simulate real process scenarios, as material strength typically peaks at this moisture level before excess water acts as a lubricant. Wall friction and cohesive strength were measured to assess both continuous flow and flow after rest periods (one day and four hours), with all testing conducted under controlled laboratory conditions. These results were used to inform the design of a reliable handling system tailored to the material's behavior.

SECTION 5 | ADDITIONAL DOCUMENTS

5.1 LOCATION OF OFFICE OR OFFICES FOR PERFORMING THE WORK

EXP will provide engineering services from our local office located in Charleston, WV. EXP's Charleston office is fully staffed with engineers, planners, and production staff and will be supported by our regional offices

5.2 SUBCONSULTANTS

- **TRIAD ENGINEERING** with office located in Scott Depot and Morgantown, WV will provide Geotechnical Services.
- **GREENMAN-PEDERSON, INC.,** with local office located in Charleston, WV will provide Survey, Mapping & Realty Work.
- **MARKOSKY ENGINEERING GROUP, INC.** (Markosky), with a local office in Charleston, WV will provide and Environmental Support and Compliance services.

5.3 SOFTWARE

SharePoint Project Management: EXP utilizes the SharePoint Project management software to serve as an internal page for our project team.

Engineering Software: EXP engineers utilize state-of-the-art engineering software for highway and bridge design projects. The list includes the following:

- Highway Capacity Software
- Synchro / SimTraffic/ VISSIM
- TransCAD/ GuideSIGN/ VISUAL
- CORSIM / VISUAL
- MicroStation
- OpenRoads Designer
- Open Bridge Designer
- OpenBridge Modeler
- STADD / CSI Bridge
- ArcGIS
- HEC-RAS Modeling
- Stormwater Management Model (SWMM)

5.4 COST ACCOUNTING INFORMATION SYSTEM

EXP maintains an updated Cost Accounting System and AASHTO Internal Control Questionnaire (ICQ) with the West Virginia Department of Transportation, Division of Highways, Auditing Division. The Cost Accounting Information system is maintained and is in effect such that it is capable of segregating and identifying accumulating costs for each job that is performed under cost-type contracts.

CERTIFICATE OF *Authorization*

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virginia as a professional engineer for the noted firm, hereby certifies

EXP U. S. SERVICES INC.
C03496-00

Engineer in Responsible Charge: RAJESEKHARAN S. NAIR - WV PE 010851

has complied with section §30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period of:

January 1, 2024 - December 31, 2025

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE, PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL, AND SIGNED BY THE PRESIDENT OF SAID BOARD.

BOARD PRESIDENT

State of West Virginia

Certificate

I, Kris Warner, Secretary of State of the State of West Virginia, hereby certify that

EXP U.S. SERVICES INC.

a corporation formed under the laws of Delaware filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on September 24, 2012.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID:8WV5N_SFWNG

Given under my hand and the Great Seal of the State of West Virginia on this day of

June 30, 2025

Secretary of State

Notice: A certificate issued electronically from the West Virginia Secretary of State's Web site is fully and immediately valid and effective. However, as an option, the issuance and validity of a certificate obtained electronically may be established by visiting the Certificate Validation Page of the Secretary of State's Web site, https://apps.wv.gov/sos/businessentitysearch/validate.aspx entering the validation ID displayed on the certificate, and following the instructions displayed. Confirming the issuance of a certificate is merely optional and is not necessary to the valid and effective issuance of a certificate.

5.7 | DESIGNATED CONTACT FORM

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Name: Manuch Amir, PE Title: Client Service Leader

(Address) 707 Virginia Street, East, Suite 1000, Charleston, WV 25301

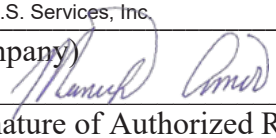
(Phone Number) / (Fax Number) 407-616-4717

(email address) Manuch.Amir@EXP.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wv*OASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

EXP U.S. Services, Inc.
(Company)



(Signature of Authorized Representative)

MANUCH AMIR, PE | CLIENT SERVICE LEADER | 08-20-2025
(Printed Name and Title of Authorized Representative) (Date)

P: 804.474.4500 | F: N/A
(Phone Number) (Fax Number)

Manuch.Amir@EXP.com
(Email Address)

Revised 8/24/2023

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

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)

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

EXP U.S. Services, Inc.
Company

Authorized Signature

08/08/2025
Date

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

Revised 8/24/2023

ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)

1. PLAN AND DRAWING DISTRIBUTION: All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.

2. PROJECT ADDENDA REQUIREMENTS: The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.

3. PRE-BID MEETING RESPONSIBILITIES: The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

4. AIA DOCUMENTS: All construction contracts that will be completed in conjunction with architectural services procured under Chapter 5G of the West Virginia Code will be governed by the attached AIA documents, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein. The terms and conditions of this document shall prevail over anything contained in the AIA Documents or the Supplementary Conditions.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Manuch Amir

(Address) 707 Virginia Street E, Suite 1000, Charleston, WV 23501

(Phone Number) / (Fax Number) 407.616.4717

(email address) manuch.amir@exp,com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wv*OASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

EXP U.S. Services Inc.
(Company)

(Signature of Authorized Representative)

Manuch Amir, PE | Client Service Leader
(Printed Name and Title of Authorized Representative) (Date)

404.616.4717
(Phone Number) (Fax Number)

manuch.amir@exp.com
(Email Address)

Revised 8/24/2023

OMB # 1029-0119
Expiration Date:
01/31/2028

ABANDONED MINE LANDS (AML) CONTRACTOR INFORMATION FORM

You must complete this form for your AML contracting officer to request an eligibility evaluation from the Office of Surface Mining Reclamation and Enforcement (OSMRE) to determine if you are eligible to receive an AML contract. This requirement can be found under OSMRE's regulations at 30 CFR 874.16. **NOTE:** This form must be signed and **dated within 30 days** of submission to be considered for a current bid.

Part A: General Information

Business Name:	**EXP U.S. Services Inc.**
Tax ID #:	**46-0523964**
Address:	**707 Virginia Street E, Suite 1000**
City, State, & Zip:	**Charleston, WV 25301**
Phone Number:	**804.474.4500**
Email Address:	**manuch.amir@exp.com**

Part B: Obtain an Organizational Family Tree (OFT) from the Applicant Violator System (AVS)

If you plan to certify the existing AVS information or submit updates under Part C, you must include an OFT. Instructions for downloading an OFT from the AVS can be found at: https://www.osmre.gov/sites/default/files/2022-02/OMB%201029-0119%20instructions.pdf. If you require assistance you may contact the AVS Office by phone at: 800-643-9748, or by email at: avshelp@osmre.gov.

Part C: Certifying and updating information in the AVS

Select one of the options, follow the instructions for the selected option, sign, and date below.

I, **Manuch Amir** , have express authority to certify that:
(Print Name)

☐ 1. Our business is listed in the AVS. The information is accurate, complete, and up to date. (If you select this option, you must attach an Entity OFT from the AVS to this form). Do not complete Part D.

☐ 2. Our business is in the AVS. The information needs to be updated. (If you select this option, you must attach an Entity OFT from the AVS to this form). Complete Part D to provide the missing or corrected information.

☒ 3. Our business is not listed in the AVS. The information needs to be added. Complete Part D to provide the information.

08/20/2025		**Client Service Leader**
Date	Signature	Title

OMB # 1029-0119
Expiration Date:
01/31/2028

Part D: OFT Information

Contractor's Business Name: EXP U.S. Services Inc.

If the current Entity OFT information for your business is incomplete in the AVS, or if there is no information in the AVS for your business, you must provide all of the following information as it applies to your business. Please include additional copies of this page if the space below is not sufficient to capture all information.

- Every officer (President, Vice President, Secretary, Treasurer, etc.);
- All Directors, Partners, and Members;
- All persons performing a function similar to a Director;
- Every person or business that owns 10% or more of the voting stock in your business;
- Any other person(s) who has the ability to determine the manner in which the AML reclamation project is being conducted.
- **Please list an end date for any person who is no longer with your business.**

Name: Please see next page
Address:
City, State, Zip:
Begin Date:
End Date:
% Ownership:
Position/Title:
Phone Number:

Name:
Address:
City, State, Zip:
Begin Date:
End Date:
% Ownership:
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Phone Number:

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Address:
City, State, Zip:
Begin Date:
End Date:
% Ownership:
Position/Title:
Phone Number:

PAPERWORK REDUCTION STATEMENT

The Paperwork Reduction Act of 1995 (44 U.S.C 3501) requires us to inform you that: Federal Agencies may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a current valid OMB control number. This information is necessary for all successful bidders prior to the distribution of AML funds, and is required to obtain a benefit.

Public reporting burden for this form is estimated to range from 15 minutes to one hour, with an average of 30 minutes per response, including time for reviewing instructions, gather and maintaining data, and completing and reviewing the form. You may direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Office of Surface Mining Reclamation and Enforcement, 1849 C Street, NW, Room 4559, Washington, DC 20240.

EXP ORGANIZATIONAL FAMILY TREE

EXP U.S. Services Inc. (EXP) is owned 100% by EXP Global, Inc.

NAME	ADDRESS	BEGIN DATE	END DATE	% OWNERSHIP	POSITION HELD	PHONE
EXP Global, Inc.		N/A	N/A	100%	Parent Company of EXP U.S. Services Inc.	
Ivan Dvorak	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	1981	N/A	< 10%	Chairman of the Board + Chief Executive Officer	312.616.0000
Mark Dvorak	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	1996	N/A	< 10%	President + Chief Operations Officer	312.616.0000
Deborah Walters	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	2016	N/A	< 10%	Chief Financial Officer + Treasurer	312.616.0000
Hae-Jin (Priscilla) Ahn	1595 Clark Blvd. Brampton, ON L6T 4V1	2007	N/A	< 10%	Secretary	905.793.9800
Timothy Neumann	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	1984	N/A	< 10%	Executive Vice President	312.616.0000
Anthony Caruso	400 North Tampa Street, Suite 1015 Tampa, 33602	2017	N/A	< 10%	Senior Vice President	813.425.8999
Byron Danley	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	1990	N/A	< 10%	Vice President	312.616.0000
William McGuire	2601 Westhall Lane Maitland, FL 32751	2003	N/A	< 10%	Vice President	407.660.0088
Rachael Sampson	2601 Westhall Lane Maitland, FL 32751	1998	N/A	< 10%	Principal	407.660.0088
Kathy Weise	205 N. Michigan Ave., Suite 3600 Chicago, IL 60601	2000	N/A	< 10%	Vice President	312.616.0000

SECTION 6 | KEY STAFF RESUMES

Please see the following pages for resumes of our key personnel:

- Manuch Amir, PE
- Larry Clegg, PE, PMP
- Chris Collins, PE
- Nancy Davidson
- Aziz Sene, P.Eng.
- Jim Monaghan, P.Eng.
- Susan Hathawaay
- William Burmeister, P.Eng.
- Richard Donnelly, P.Eng.
- Eli Arbiv, P.Eng.
- Ashwini Kurikala, P.Eng.
- Stephen Lanille, P.Eng.
- Ian Vesterback, P.Eng.
- Hamid Riahi, PE
- David Uremovich, P.Eng.
- Peter Seto, P.Eng.
- Naivo Ravelomanantsoa, P.Eng.

Manuch Amir, PE

QA/QC / Contract Manager

Manuch has over 40 years of planning, engineering, project development, and contract management experience, holding key positions in both public and private sectors. Manuch began his career with the West Virginia Department of Highways, Division of Highways (WVDOH) working in partnership with local agencies and the Federal Highway Administration (FHWA) to advance infrastructure projects from inception to construction. Since joining the private sector, he continues serving clients to provide solutions to today's challenges. Manuch serves EXP U.S. Services, Inc. (EXP) as Client Service Leader for the Mid-Atlantic Region. Manuch's role include coordinating with clients across the region, developing industry strategic alliance and partnership, managing resources, negotiating contracts, establishing and monitoring project budgets and staffing requirements, conducting quality control and project performance, participating in issue resolution workshops, and project audits.

Professional Registration

- Professional Engineer
  WV, VA, MD, DC, GA, KY, OH, FL

Education

- MS, Civil Engineering
  Marshall University

  BS, Civil Engineering
  WVU-TECH

SELECT PROJECT EXPERIENCE

West Virginia Department of Transportation, Division of Highways (WVDOH)
U.S. 522- Environmental Impact Statement (EIS) / Construction Plans
Manuch led the QA/QC components of this project which includes completing the Environmental Impact Statement (EIS) and Environmental Re-evaluation and related documents for a 19-mile section of U.S. 522 between the Virginia state line and Maryland state line in Morgan County, WV. The scope of services included the development of construction contact plans, right-of-way plans, and related documents. Project involved alignment study, major drainage design, permitting and resource agency coordination. Manuch coordinated with WVDOH to conduct public meetings and hearings, and managed client contracts.

West Virginia Department of Transportation, Division of Highways (WVDOH)
I-64 / St. Albans Interchange Environmental Assessment (EA)
Project Principal and QA/QC Manager for I-64 Environmental Assessment (EA), in cooperation with WVDOH, FHWA, Resource Agencies for the preparation of Environmental Assessment (EA) documents. This 3.79-mile stretch of interstate lies between two existing six lane sections of I-64 and includes a truss bridge over the Kanawha River. Manuch coordinated all project development activities, conducted public meetings, performed QA/QC and Contract Management.

Kentucky, Ohio, West Virginia Interstate Planning Commission (KYOVA)
Ohio River Bridge Feasibility Study- Cabell County, WV; Lawrence County, Ohio
Manuch served as Project Manager assisting KYOVA to refine the Scope of Services and develop a project milestone timeline to initiate Project Development Process. The purpose of this study was to evaluate the need and location for a crossing between Ohio SR 7 and WV SR 193 to accommodate traffic circulation in the tri-state area. Project major stakeholders included ODOT, WVDOH, Cabell County, WV, Laurance County, Ohio, FHWA and KYOVA and Resource Agencies. Manuch led a highly technical team evaluating the existing and future conditions for transportation network in the tri-state region to include cross-river mobility for the West Virginia-Ohio-Kentucky urbanized area. Project development included Public Involvement; Construction and Right-of-Way Cost Analysis; Environmental Impact, Traffic, and Alternative Analysis.

RESUME

Professional Registrations

- Professional Engineer (PE):
- WV #014216
- VA #402046214
- MD #51250
- FL #49751
- OH #88448

Education

- BS, Mining Engineering
  West Virginia University
- BS, Civil Engineering,
  University of South Florida

Larry P. Clegg, PE

Senior Engineer

Larry Clegg has over 38 years of experience designing and managing highway and transportation projects ranging in scope from sidewalks to large-scale highway projects. This experience includes design projects for interstate resurfacing, widening, and new construction; interstate weigh-in-motion stations; major arterial reconstruction and widening; and new highway design, preliminary engineering studies, and intersection improvements. He has been involved in all phases of highway design from conceptual engineering to final plans and has direct experience with the many aspects of highway design such as geometric layout, drainage including bridge hydraulics and scour analysis, utilities, environmental permitting, traffic engineering, and pavement design.

Select Project Experience

West Virginia Department of Transportation, Division of Highways
Northern Connector Design-Build
Project Role: Lead Roadway Engineer

The Northern Connector is a 1.5-mile design build project, which includes a 4-lane highway, a 2-lane connector roadway and a 225-foot long 4-lane bridge over Warm Springs Run. The project is located north of the Berkeley Springs Bypass Project and completes the bypass around Berkeley Springs, WV. The project consisted of developing the winning bid proposal in conjunction with A.L.L. Construction. The project services included Environmental Re-evaluation, Highway and Bridge Design, Retaining Wall Design, Survey, Right-of-Way, Utility Relocation, Hydraulics & Hydrology, Environmental Permitting, Stormwater Design and Permitting.

WVDOH -Mt. Vernon Road Sidewalk
Role: Project Manager and Senior Engineer

Mr. Clegg was responsible for developing a design report which analyzed alternatives for providing a sidewalk along a 1.75-mile-long suburban roadway. The study examined the benefits and costs of different concepts and locations to provide the most feasible concept for providing pedestrian access along the roadway. The construction of the sidewalk required the installation of curb and gutter and a closed stormwater system, which will aid in reducing the incidence of flooding along the roadway. The study then progressed to the design phase. This work included developing construction plans for the sidewalk, curbing and storm sewer along with permitting and utility coordination. Because of the tight right-of-way and intense development, the peak discharge stormwater requirements were met with an innovative in-ground detention system.

WVDOH- Various ADA Projects (2018-2019).
Project Role: Project Manager
Mr. Clegg was the project manager for ten design-build ADA curb ramp projects located around the state of West Virginia. The cities included in this work were Shepherdstown, Berkeley Springs, Beckley, Charleston, Peterstown, Union, Clendenin, Sophia, Marlinton, Franklin, Blacksville, Terra Alta and Morgantown. Over 750 PROWAG compliant ramps were designed in a timely manner so that the contractor was able to finish construction before the deadlines. To fast track these projects, ramps were completed in bundles based upon their proximity to allow the contractor to get started on the work early to meet the deadline. Mr. Clegg was responsible for coordination with the contractor and subconsultants as well as quality control and schedule management.

WVDOH - Tom Williams +3 Design-Build
Role: Project Manager / Lead Roadway Engineer
The Tom Williams +3 Design Build was a fast-track design-build bridge rehabilitation project on I-77 and I-64 within the downtown Charleston, WV Interchanges. The I-77 leg of the project included four bridges, located just north of I-64. Three of these bridges included deck replacements and superstructure repair. The fourth bridge was a bridge deck resurfacing. Project included the development of a Transportation Management Plan (TMP) to determine traffic impacts during construction. Through a traffic analysis on the adjacent roadways, the contractor was able to close the Westmoreland Interchange and build the bridges in two phases instead of three. This strategy allowed the contractor to easily meet the construction schedule, which only allowed 100 days of lane closures. Project included structure rehabilitation plans for five bridges along I-77 and I-64 system interchange, roadway plans, signing and pavement marking plans, temporary traffic control plans, transportation management plans, public involvement, traffic analysis, public involvement and NPDES Permitting. Working on an accelerated schedule, the Design-Build team maximized the use of advanced technologies to complete the work ahead of schedule.

WVDOH – US 522, Beckley Springs Bypass, Morgan County, WV
Role: Project Manager / Lead Roadway Engineer
Larry Clegg served as a Project Manager and Lead Roadway Engineer for development of construction and right of plans for US 522 in Morgan County, WV. Project phases included a Location Design Study and Environmental Impact Statement (EIS) for a 19-mile section of US 522 from Virginia State Line to MD State Line. Phase 2 of the Project development involved design of 3.1 miles section of a 4-lane highway on a new alignment and design of Relocated US 522 with WV Route 9 Interchange. Project components included roadway design, structures, retaining walls, box culverts, waterline and sanitary sewer relocation, lighting design, utility design, construction and right-of-way plans, hydraulics & hydrology, permitting, and PS&E documents. Project also included design of five (5) at-grade intersections, three (3) bridges, 2,500 linear feet of stream relocation, design of 28 sediment ponds/flood detention basins, and preparation of 157 legal description for right-of-way and easement tracks.

WVDOH – King Coal Highway, Mercer County, WV
Role: Project Manager / Lead Roadway Engineer
Larry Clegg served as a Project Manager and Lead Roadway Engineer for development of construction and right of plans for the King Coal highway project in Mercer County, WV. Project development included route and interchange location study, construction, and right of way plans for a section of the King Coal Highway extending from an interchange with WV 123 to the US 460/US 52 interchange. The scope of work included Complete survey location study for both interchanges, roadway design, bridge design, lighting design, utility design, comprehensive Maintenance of Traffic (MOT) plans, complete construction and ROW plans, hydraulics and hydrology, permitting, plans, specifications, and estimates (PS&E).

Professional Registration

- Professional Engineer
  WV, VA, MD, DC, KY, OH

Education

- BS, Civil Engineering,
  WVU-TECH, 2001

Training

- AASHTO National Transportation Management
- Primavera P6
- Construction Claims
- FEMA Natural Disaster Response
- Work Zone Traffic Control
- Environmental / Erosion & Sediment Control
- VDOT Cost Estimating

Chris Collins, PE

Construction Manager

Chris has over 24 years of engineering, project development, construction management and maintenance experience in the transportation field. Chris began his career with the West Virginia Department of Highways, Division of Highways (WVDOH), working in partnership with local agencies and the Federal Highway Administration (FHWA) to advance transportation projects to construction.

EXPERIENCE

EXP US. Services Inc. December 2024-Present
Construction Manager
From initial pre-construction activities to project close-out, Chris helps clients administer projects to stay on schedule and within budget. Chris leads a team of engineers, technicians, project managers, contract administrators and scheduling staff for the construction engineering and inspection of road and bridge projects.

WVDOT/ WVDOH- District Two, May 2001 to December 2024
Deputy District Engineer/ Maintenance Engineer/ Area Construction Engineer/ Construction Manager
Chris served WVDOH-District Two for 23 years as Deputy District Engineer/ Maintenance Engineer and Construction Engineer. In his role, Chris established and monitored budgets for Maintenance organizations; managed equipment shop, environmental, access permits, buildings and grounds, responded to citizen complaints; and oversight of the District Core Maintenance Program. As Construction Engineer, Chris administered large-scale State and Federally funded contracts; communicated with WVDOH Contract Administration Division and FHWA; provided oversight of FEMA declared natural disaster contracts; and ensured projects are constructed in accordance with contract documents including plans, specifications, and environmental permits; reviewed contractor CPM schedules; participated in monthly project update meetings; reviewed change order requests; participated in claim resolutions and negotiated settlements; reviewed and approved pay estimates to ensure prompt and accurate payment for work performed by contractor. Chris led and guided the construction inspection staff to achieve district contract goals for safety, quality, schedule, and budgeting for construction and maintenance contracts.

Nancy Davidson

Project Controls Analyst

As Project Controls Analyst, Nancy generates and summarizes weekly project reports for EXP's Mid-Atlantic Management Team for review, monitoring, and managing project funds. Prior to joining EXP, she spent over four decades at the West Virginia Department of Transportation, Division of Highways (WVDOH), where she held various progressive management roles including Transportation Division Manager, Administrative Services Assistant, Accounting Assistant, Audit Clerk, Data Job Controller, and Audit Clerk.

Education + Training

- MS, Information Management, Marshall University
- BS, Business Administration Management, West Virginia State College
- Associate degree in Applied Science, Business Administration Management, West Virginia State College
- Diploma in Business Computer Programming, West Virginia College of Technology

Years with EXP

- 1 Year

Years with Other Firms

- 43 Years, West Virginia Department of Transportation, Division of Highways (WVDOH)

Experience

EXP U.S Services Inc., Mid-Atlantic Sector

Role: Project Controls Analyst. **Dates:** September 2024 – Present. **Description:** Manage all RFI's and Project Submittals to ensure all team members have access to the same information, thus providing project information continuity and work with project team leads to ensure replies are returned within the set deadlines. Manage and process communication with project managers.

WVDOH, Engineering Division

Role: Transportation Division Manager II. **Dates:** April 1999 – September 2024. **Description:** Manage the Administrative Unit consisting of the Financial Section, Information Management Section, and the HR/Payroll Section.

WVDOH, Roadway Design Division

Role: Administrative Services Assistant III. **Dates:** September 1993 – April 1999. **Description:** Manage and supervise the Financial Unit. Unit functions included all payroll and personnel transactions, obtaining funding for the division's projects, processing consultant invoices, employee expense accounts, purchasing needed supplies and equipment, maintaining the division's main file room, and maintaining the division's inventory.

WVDOH, Roadway Design Division

Role: Audit Clerk. **Dates:** September 1987 – October 1993. **Description:** Audited and processed consultant invoices. Maintained invoice files. Generated computer master files and entered daily receipts. Purchased needed supplies and equipment. Audited and processed employee expense accounts. Typed various departmental forms. Maintained various form logs and files.

WVDOH, System Services and Procedures Division

Role: Data Job Controller. **Dates:** August 1985 – September 1987. **Description:** Submitted, obtained, reviewed, and distributed production jobs. Installed terminals, computers, printers, modems, and controllers statewide for a fully automated financial management system.

WVDOH, Finance Division

Role: Audit Clerk. **Dates:** July 1982 – August 1985. **Description:** Reviewed accounting data on authorization documents and assigned authorization numbers in accordance with department accounting manuals.

Aziz Sene, P.Eng., ing.

Senior Vice President, Mining

Professional Registrations

- P.Eng. – ON
- ing. – QC

Education + Training

- B.A.Sc., Electrical Engineering, Laval University

Affiliations + Memberships

- Member, Professional Engineers Ontario
- Member, Ordre des ingenieurs du Quebec

Languages Spoken

- English
- French
- Spanish

Aziz is currently EXP's Senior Vice President of Central Canada Mining. He brings a combined 20+ years of managerial and technical experience and lead capabilities in Mining, Pulp and Paper, Renewable Energy, Iron & Steel industries. He has strong leadership abilities with extensive knowledge in operations management, procurement, construction, project management and controls, and industrial, plant, maintenance, and design engineering.

Over the last five years, Aziz has grown and developed the mining division within EXP and expanded the team of professionals along with a strong portfolio of work. He spearheaded new policies, procedures, and standards that are catered to the mining industry and have ensured an impressive health and safety record. Currently, Aziz is responsible for leading and supervising EXP's mining engineering team's operations. His team consists of mining, pyro and hydrometallurgy, process, electrical & instrumentation, mechanical, civil, and structural engineering staff.

Project Experience

Mining

Vale, Overflow Engineering Services, Sudbury, ON

EXP was one of four consultants awarded (EXP being the largest engineering firm of the 4) Vale Canada's Overflow Engineering Contract in early 2019 for a 3-year term. The nature of this contract allowed Vale to sole-source engineering projects to their preferred external service providers for work that exceeds the capacity or expertise of its in-house engineering and supporting technical resources. EXP provides maintenance, capital project studies, and design engineering services for various projects at Vale's sites, including mines, mill, smelter, filter plant, acid plant, nickel refinery, electrowinning facility, water and wastewater facilities, and various office and support facilities. Vale's Sudbury operations are one of the largest integrated mining complexes in the world, which produce nickel, copper, cobalt, platinum, gold, and silver. Aziz is currently the portfolio manager for the overflow contract and is responsible for ensuring the provision of consistent quality service, as well as managing the overall project team.

Boart Longyear, Master Services Agreement, ON and AB

EXP is on the MSA for Boart Longyear's operations in Ontario and Alberta. This contract allowed Boart Longyear to sole-source engineering projects to preferred service providers. Boart Longyear specializes in mineral exploration and drilling services for the mining industry, spanning copper, gold, nickel, zinc, uranium, and other metals and minerals. EXP is providing wrap around engineering services, ranging from drawing modification to as built drawings to complete design projects, including the use of 2D drawings and 3D models.

Aziz Sene, P.Eng., ing. – *continued*

Vice President, Central Canada Mining

Vale, Copper Cliff Nickel Refinery – Electrowinning Heating & Ventilation Replacement, Sudbury, ON

Project Manager + Senior Electrical & Automation Engineer – The project involved the installation of new stainless-steel industrial heating and ventilation units (Direct and Indirect Gas Fired Units) and their integration with existing Burner Management Systems (BMS). Three (3) H&V units at the Electrowinning Building and two (2) H&V units on the roof of the Copper Cliff Nickel Refinery (CCNR) have reached the end of their life expectancy and needed to be replaced in order to meet Vale specifications and current TSSA Standards. EXP conducted detailed engineering (FEL4) for the complete replacement of the units and provided construction and commissioning support.

Vale, Garson Mine, Garson Ponds Construction Quality Assurance, Sudbury, ON

Project Manager, Construction Manager + Sr. Electrical & Automation Engineer – EXP's main goal of this project is to provide engineering support to the General Contractor to be awarded the execution work for the upgrades to Vale's Garson Mine Water Management System (GMWMS) which generally consists of the following:

- The raising of the Settling and Polishing Pond Dams.
- The completion of construction of an Emergency Spillway.
- The construction of a splash pad.
- The installation of a buried culvert c/w gates between the North Pond and the R1/R2 Pond.
- The installation of an emergency spillway over an existing berm.
- The construction of a berm south of the North Pond.
- The addition of pumps at the R1/R2 Pond.
- The installation of new sea container E-house.

Vale Garson Mine, Storage Ponds, Dams & Waste Water Treatment Upgrades – Phase 2, Sudbury, ON

Project Manager + Senior Electrical & Automation Engineer – EXP was the prime consultant on this project, where the scope of work consisted of investigations and field work, surveying services, geotechnical investigation, laboratory testing, wastewater/dewatering confirmation design sampling, detailed design including electrical & instrumentation, structural, civil and procurement documents for phase 2 engineering of the storage ponds, dam and water treatment plant upgrades at the Vale Garson Mine site. As part of the Garson Mine storage ponds and dam upgrades, a new sea container E-house will be installed to house a new QUANTUM remote I/O Rack, connected to the existing waste water treatment PLC via a new fiber network. The two (2) existing valves controlling the flow of WWTP discharge into the settling pond and R2 pond will be automated by using a new QUANTUM remote I/O Rack, connected to the existing water treatment PLC via a new fiber network.

Goldcorp, Cochenour Mine Dry & Parking Lot Expansion & Site Improvement, Red Lake, ON

Project Manager + Parking Lot Lighting Design – Goldcorp's Cochenour mine required an expansion to the mine dry and parking lot to aid with the anticipated increase in shift workers in the new year. EXP's scope of work included the design of the expansion of dry to accommodate increased female workforce with additional exterior lighting to be included (20-26 additional females, reduction of male side to 130); relocation of site huddle room to the dry building, so as workers leave the dry they walk directly into huddle room; enclosed walkway between dry, administration building and headframe including lighting and heating; expansion of current parking lot, with increased lighting and water management (70-80 spots); and reduction/relocation of vehicle routes to minimize traffic on site; reduction/relocation of pedestrian routes to minimize pedestrian traffic on site.

**Work performed at previous firm.*

Aziz Sene, P.Eng., ing. – *continued*

Vice President, Central Canada Mining

Vale, Wabageshik & Nairn Substations, Sudbury, ON

Project Manager + Senior Electrical Engineer for the 5kV GIS arrangement and platform redesign – Scope of work for the Wabageshik/Nairn substation included equipment specifications and the design of two new substations (69-2.4kV and 69-44kV), and a 5kV gas-insulated switchgear.

Vale, Coleman Substation Construction Support, Sudbury, ON

Project Manager + Construction Support – The scope of work included the design of one new 69-4.16kV Substation.

Vale, Copper Cliff #3 (CC3) Substation Replacement Feasibility (FEL3) Study, Sudbury, ON

Project Manager + Senior Electrical Engineer – CC3 Substation feasibility study included the demolition of existing 69-13.8kV substations CC3 and CC9 and the installation of one new substation to feed both loads.

Vale, Copper Cliff Nickel Refinery, Granulation Rotary Dryer Replacement, Sudbury, ON

Project Manager + Senior Electrical & Automation Lead – Detailed design and installation of a new rotary dryer retrofit existing burner blower and upgrade existing Burner Management System (BMS).

Vale, Big Eddy Hydro Generating Station Control Upgrade, Sudbury, ON

Project Manager + Senior Electrical & Automation Lead – The Big Eddy powerhouse is composed of two (2) 11.6 MVA GEC ALSTOM Turbine-Generator units coupled each with a 10.75 MW turbine, and one (1) 8.42 MVA GENERAL ELECTRIC CANADA generator coupled with a 7500HP MORRIS turbine. The project involves the installation of a new control room complete with new Schneider Quantum Hot Standby PLC system, Protection and Control (P&C) panels with General Electric UR family protection relays, marshalling wall rack, desktop PC for HMI, and an ABB Remote Terminal Unit (RTU) to replace the existing control room and dated technology/equipment. This project also includes the replacement of the existing Rubber Dam Schneider Modicon Momentum PLC.

Vale, Flash Furnace No.2 Automatic Accretion Removal System (JV with Lewis Australia), Sudbury, ON

Project Manager + Design Team Leader – The project included the design, manufacturing, testing, installation and commissioning of an automated system on #2 flash furnace that operates online and minimizes/eliminates the need for furnace shutdowns to clean the water-cooled quench transition inlet. Responsibilities include the design of the following detailed engineering package: instrument air connection to the robot, DCS communication, electrical power distribution, water connection; the design of the robot cell guarding for safe operation, including guarding to protect personnel from the robot cell and guarding to protect the robot cell from forklift traffic.

Vale, Copper Cliff Smelter #3 Bag House Automation, Sudbury, ON

Senior Electrical + Automation Engineer – Scope of work included the installation of #3 Bag House, complete with associated equipment in the casting, cooling and crushing building. The project involved adding a sequential start and sequential stop for the #3 Bag House and related equipment (make-up air unit, slurry system, discharge screw, feed screw, compressed air and bag house fan, etc.); modification of the electrical design of the #3 Bag House and related equipment to be compliant with Vale engineering standards; basic PLC programming and E3 Plus configuration for the motors, as per Vale engineering standards; PLC programming and HMI programming for the sequential start and stop, targeting one-button operation of the bag house and related equipment.

Glencore, Sudbury Integrated Nickel Operations, ID Fans 011 & 012 Variable Frequency Drives, Sudbury, ON

Project Manager, Design Team Leader + Senior Electrical & Automation Lead – The project included the replacement of the two existing medium voltage 4160 V ID fan motors to two new 600 V, 900 Hp Toshiba motors and the installation of two new 600 V, 900 HP GX7 Toshiba VFD and associated controls.

**Work performed at previous firm.*

Jim Monaghan, P.Eng.

Senior Mining Engineer

Professional Registrations

- P.Eng. – ON

Education + Training

- B.Eng. (Mining), Laurentian University
- Mining Technologist, Haileybury School of Mines

Affiliations + Memberships

- Member, Professional Engineers Ontario

Jim has worked in the mining industry for over 30 years, primarily at operating mines throughout Canada. He began his career with a mining contractor and worked on a number of mine developments in Canada and abroad as a Project Engineer and Superintendent. Jim spent several years in Northern Ontario both in the Sudbury and Timmins regions at Xstrata Nickel, Falconbridge Ltd (now Glencore), Placer Dome and Kinross Gold, working in a variety of engineering and supervisory roles. His primary experience is underground mine design, planning and economics of underground narrow vein and bulk operations. Jim also has experience in open pit mining. Over the years, he has performed trade-off studies, produced operating and capital budgets, Life of Mine plans, optimization and productivity studies.

Project Experience

***Torex Gold Resources, Toronto, ON**

Mining consultant, working on a contract with Torex Gold Resources in Toronto as Lead Mining Engineer and Qualified Person for a Preliminary Economic Assessment.

***North American Palladium, Lac des Iles Mines**

Chief mining engineer providing technical services to a 5000 tonne/day underground mine. The Mine was transitioning from longhole open stoping to sub level shrinkage stoping. Oversaw the mine design, planning, geology and annual budget.

***AMC Mining Consultants (Canada) Ltd., Toronto, ON**

Mining manager and principal mining engineer responsible for leading mining studies and NI 43-101 technical reports. He also carried out operational and technical reviews, due diligence and mineral reserve audits for base metal and gold mines. AMC is a consultancy specializing in the mining industry and servicing clients globally.

***Xstrata Nickel, Thayer Lindsley Mine and Fraser Mine**

Chief mine engineer who coordinated and delivered all engineering services to the mines. He provided strategy and leadership to the engineering team to achieve safety, environmental, cost and production goals. Jim produced the annual site budget, life of mine and business plans. Implemented plans and technology to increase mine productivity. Oversaw the mine design, scoping, pre-feasibility and feasibility studies.

Jim Monaghan, P.Eng. – *continued*

Senior Mining Engineer

***Xstrata Nickel, Fraser Morgan Project**

Chief mine engineer for the Fraser Morgan Project. He oversaw all aspects of mine design, engineering and planning including management of engineering consultants.

***Falconbridge Limited**

Senior engineer who developed and implemented planning and scheduling processes for the mines, as well as producing standards and procedures. Jim held a key role in implementing project management techniques and software to mine operations and projects. He developed and directed the auditing of mine design processes and standards.

***Placer Dome (CLA) Limited**

The Porcupine Joint Venture was a 15,000 tpd gold operation, including 11,000 tpd open pit and two underground operations, narrow vein and bulk mining. Jim, as chief mine engineer, provided leadership and direction to a technical staff located at three mines. Supervised mine design and long-term planning, working closely with the mine department to produce operating and capital budgets. He also coordinated the activities of external engineering consultants and held a key role in producing the strategic business plan for the mines. He led and participated in feasibility studies.

***Kinross Gold Corporation**

The Hoyle Pond gold mine produced 1200 tpd. As chief mine engineer, Jim supervised a staff of engineers and mine technicians. He supervised all engineering functions at the mine, including underground and surface construction. His main focus was mine optimization, long term planning, cost control, operating, capital budgeting and conducting mining studies.

***Kinross Gold Corporation**

Planned and scheduled short and long term underground development and production. Duties included the design, sequencing and cost evaluation of stopes, including conventional and mechanized cut & fill, post pillar, shrinkage/modified shrinkage and blasthole stopes. Designed open, timbered, Alimak and raisebore raises for services and ventilation. Jim analyzed the stability of mine openings using empirical and analytical methods. Designed the ground control system for the mine and established an extraction sequence for mining blocks. He also selected fans and equipment for the main and auxiliary ventilation systems, and modeled the mine ventilation system using simulation software. Jim supervised the underground surveying and mine planning and implemented a paste backfill system at the mine. Played a key role in expanding the mine from 500 tpd to 1500 tpd.

***J.S. Redpath Limited, RAM Raising and McIntosh Engineering**

Over a ten-year period, Jim worked on mine development, construction and shaft sinking projects in Canada, USA, Indonesia, Papua New Guinea, Ireland, and Australia. He held various positions during that time, including Underground Miner, Underground Construction Miner, and Senior Project Engineer, Project Superintendent and Project Manager.

**Work performed at previous firm.*

RESUME

Education

- BS, Landscape Architecture
  West Virginia University

Susan E. Hathaway

Senior Designer

Ms. Hathaway has over 39 years of experience in producing highway signing and traffic signal renovation plans, pavement marking, temporary traffic control plans and right-of-way plans. Her experience on WVDOH projects includes bridge design-builds and design-bid-builds, as well as signing and signaling projects throughout the state. She also has provided traffic and transportation planning for other regional DOTs. Ms. Hathaway's expertise enables us to plan and complete projects safely and provide the traveling public with efficient and safe roadways. Ms. Hathaway has recently added ADA & PROWAG compliant curb ramp design to her list of capabilities.

Select Project Experience

West Virginia Department of Transportation, Division of Highways
I-81 Signing & Marking Plans (2024)
Project Role: Technical Leader

Ms. Hathaway served as the Project Technical lead and the point of contact, coordinating all communication, scheduling, and product completion for the client. She was also lead designer on this project which consisted of renovation of all roadway signing of the 26 miles of I-81 from the Virginia state line to the Maryland state line through the Eastern Panhandle of WV. This project involved the study, design, and preparation of construction contract plans and related documents for renovation of all regulatory, warning, and guide signs on Interstate 81 (North Bound and South Bound). This sign renovation project also included all interchange lead-in signing within the project limits. The interchanges included multiple roundabouts and other complicated signalized intersections. This project required that all existing signs be tested for retroreflectivity in the field by following WVDOH Sign Retroreflectivity Testing Guidelines.

WVDOH -Mt. Vernon Road Sidewalk (2023-2024)
Project Role: Signing/Marking/Right-of-Way Plans

Ms. Hathaway was responsible for the signing and pavement marking plans for this project, which included adding a sidewalk to 1.75 miles of suburban roadway. She was also responsible for right-of-way plans which affected approximately 75 property owners.

WVDOH -Northern Connector +1- Design-Build (2022-2024)
Project Role: Signing/Marking/Right-of-Way Plans

Ms. Hathaway was responsible for both the signing/pavement marking and right-of-way plans for this 2.25-mile-long design-build project which completes the US 522 Bypass near Berkeley Springs, WV.

WVDOH- US 522, Berkeley Springs Bypass (2021)
Project Role: Signing/Marking Plans
Susan designed the signing and pavement marking plans for the 3.1 mile section of a 4-lane highway on a new alignment and an interchange with the Bypass and WV Route 9. The signing and pavement markings included a roundabout on the southern end of the project at the intersection of the Bypass and existing US 522. Interim signage was provided to control traffic until the second phase of the Bypass was completed north of this project.

WVDOH- Various ADA Projects (2019-2022)
Project Role: Lead Designer
In addition to the two projects listed below, Ms. Hathaway was the lead designer for eight design-build ADA curb ramp projects around the state of West Virginia including Shepherdstown, Berkeley Springs, Clendenin, Sophia, Marlinton, Franklin, Blacksville, Terra Alta, Morgantown, Weston, and Sissonville. Over 350 PROWAG compliant ramps were designed in a timely manner so that the contractor could finish construction before the deadline.

WVDOH- Mabscott-Skelton Rd +2 ADA, Beckley, WV (2018)
Project Role: Lead Designer
Ms. Hathaway was the lead designer for a design-build project to bring 300 curb ramp locations along WV 16, WV 210 & WV 41 through Beckley and Sophia, WV up to compliance with the PROWAG standards. This fast-track project was completed promptly to allow the contractor to finish construction before the deadline.

WVDOH-CHARLESTON ADA BUNDLE (2018)
Project Role: Lead Designer
Ms. Hathaway was the lead designer for a design-build project to bring 105 curb ramp locations along US 60 through Charleston WV up to compliance with the PROWAG standards. This fast-track project was completed promptly to allow the contractor to finish construction before the deadline.

WVDOH Standard Details, Volume II Update, Traffic Engineering Division (2018)
Project Role: Lead Designer
Ms. Hathaway served as the point of contact, coordinating all communication, scheduling, and product completion for the update of the Standard Details Volume II which includes all the details for signing, traffic signals, roadway lighting, pavement markings, and ITS work for the WVDOT. The project updated the 1994 version of the details to the 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals.

WVDOH- Dingess Street Bridge (2018)
Project Role: Signing & Pavement Markings and Right-of- Way Plans
Ms. Hathaway was responsible for signing and pavement marking plans and the Right-of-Way plans for replacing a 330-foot-long bridge on WV 10 over the Guyandotte River in downtown Logan, WV.

WVDOH- Kenney B. Hamrick Sr. Memorial Bridge (2018)
Project Role: Traffic Signals Signing & Pavement Markings and Right-of- Way Plans
Ms. Hathaway was responsible for signing, traffic signal and pavement marking plans and the Right-of-Way plans for replacing a 121-foot-long bridge on WV 20 over the Elk River in downtown Webster Springs, WV.

WVDOH- Clarksburg Expressway Sign Renovation (2015)
Ms. Hathaway served as the point of contact, coordinating all communication, scheduling, and product completion for the client. She was also lead designer on this project which consisted of renovation of all roadway signing of a 5-mile section of US 50 through Clarksburg, WV. This project was the first in the state to use retroreflective testing to determine the disposition of the existing signs.

William Burmeister, P.Eng., PE, PMP, GISP, CFM

Director, Water Resources

William is a highly skilled Licensed Professional Engineer with over 20 years of experience in applying geospatial technologies to a diverse range of water resources projects. His expertise spans municipal engineering, FEMA modeling and mapping, transportation drainage, stormwater management, and mine water management.

William excels in building and leading distributed, multi-disciplinary teams, demonstrating exceptional communication skills and making critical decisions during pivotal project events. His adaptability and leadership capabilities enable him to work independently, motivate team members, and identify opportunities to advance organizational goals.

Project Experience

Crowe Valley Conservation Authority, FHIMP Flood Mapping, Marmora, ON
EXP developed a project for the Crowe Valley Conservation Authority (CVCA) to receive funding from the Federal Government under the Flood Hazard Identification and Mapping Program (FHIMP). The project consisted of two studies that were comprised of a 1,930km^2 catchment and 167km of stream. The project entailed the development of hydrology (HEC-HMS), hydraulics (HEC-RAS), and 88 new flood map panels. The study was based on federally collected LiDAR data mapped using GIS techniques. The HEC-RAS model will be the basis of further 2D study to determine reverse flow of water into Chandos Lake under certain conditions.

Metrolinx/IO, Eglinton Crosstown West Extension (ECWE) GTA, ON
Drainage QC Lead. EXP is the design lead as part of the DBF team for the Eglinton Crosstown West Extension (ECWE). The ECWE project involves the necessary twin bored tunnels and associated structures and shafts required for the new subway extension along Eglinton Ave W. The extension will span a total of 9.2km and include six new stops and a terminal at Renforth and Mississauga. The 6.2km tunnel design also includes a launch shaft, maintenance shaft, extraction shaft, eight headwalls for four stations, four headwalls for two Emergency Exit Buildings (EEBs), nine cross passages, and Eglinton Ave. W road realignment at Scarlett Portal. As the Drainage QC lead, William is reviewing all surface water hydrology and hydraulics for compliance will all regulations and Project Agreement (PA) requirements.

City of Cambridge, IP Park Business Subdivision, Cambridge, ON
A multi-phase prestigious industrial subdivision development that commenced in 2018. The project scope was to take the greenfield site through to full development. Work on this project includes participating in the design and coordination of initial studies and assessments, preliminary design, stormwater management, detailed design, plan of subdivision, site plan, approvals by Region, City, and Conservation Authority.

Professional Registrations

- P.Eng. – ON
- PE – TX
- PE – FL
- PE – MN

Education + Training

- B.Sc., Civil Engineering, University of Texas, San Antonio, 1996
- M.Sc., Geographic Information Systems (GIS), University of Redlands, 2003

Affiliations + Memberships

- Member, Professional Engineers Ontario (PEO)
- Member, Association of State Floodplain Managers (US)
- Member, GIS Certification Institute (GISP)
- Member, Project Management Institute (PMP)

Languages Spoken

- English

William Burmeister, P.Eng., PE, PMP, GISP, CFM - *continued*

Director, Water Resources

Metrolinx/IO, Hurontario Street Light Rapid Transit (HuLRT), GTA, ON
Drainage QC Lead. The LRT will run along Hurontario Street in Mississauga and Brampton and be fully integrated with municipal transit systems. The project includes 18km of a new rapid transit system and add 19 surface stops, which will connect the new network to GO Transit's Milton and Lakeshore West rail lines, Mississauga MiWay, Brampton Transit, and Mississauga Transitway Bus Rapid Transit. As the drainage QC lead, William is reviewing all surface water hydrology and hydraulics for compliance will all regulations and Project Agreement (PA) requirements.

***Lakehead Region Conservation Authority (LRCA), McIntyre Watershed Flood line Update, Thunder Bay, ON**
Hydraulic Modeler/Engineer for an update to the flood line maps for the McIntyre Watershed, and an update to the hydrologic and hydraulic models for the project area. Duties included teaching a small team of junior engineers how to develop RAS models from LiDAR data for approximately 46 km of stream.

***Waaban Crossing, City of Kingston, ON**
Drainage lead for the construction of a new 1.2km bridge crossing of the Great Cataraqui River from Gore Road to John Counter Boulevard. The project required the development of a PC-SWMM model for drainage, MTO bridge drainage calculations, and the design of OGS units and a dry pond. Project permitting required the development of two (2) SWM reports and ECA applications.

***MTO/IO, 401 Expansion Project (Trafalgar Road to RR25), Milton, ON**
Drainage Lead. The Highway 401 Project involves the widening and reconstruction of approximately 18 km of Highway 401 in the western Greater Toronto Area (GTA), from east of the Credit River in Mississauga to west of Regional Road 25 in Milton. William led the design of all drainage associated with this segment, including: five (5) crossing structures, two detention ponds and a highway storm sewer system.

***MTO, Northwestern Ontario Highway Culvert Assessments, Northwestern, ON**
Surface Water Lead responsible for completing the hydrologic and hydraulic modeling (SWMHYMO, Northern Ontario Hydrology Method, and Culvert Master) capacity of structural culverts along Highway 71, 11, 17, and 61.

***Gordie Howe International Bridge Pursuit, Confidential Client, ON**
Drainage Lead. This pursuit is a $3B effort to construct a crossing between the United States and Canada in Windsor. As the drainage lead for the Canadian Point of Entry, William developed a PCSWMM model as the basis for all hydrologic and hydraulic and stormwater modelling.

***MTO, Harvie Road - Big Bay Point Road, Barrie, ON**
Surface Water Lead. This MTO project required the design and construction of a future Highway 400 bridge crossing and interchange at Harvie Road and Big Bay Point within the City of Barrie. As the Surface Water Lead, Mr. Burmeister oversaw the development of, and the QAQC, for the Stormwater Management Plan that addressed all drainage structures and facilities within the study area with a key focus on a culvert crossing of the Highway 400. All drainage structures impacted by the interchange were analyzed and designed to meet the required design criteria including both municipal and highway storm sewers, conveyance features and stormwater management facilities.

**Work performed at previous firm.*

Richard Donnelly, MASc., P.Eng.

Dam Engineering & Water Resources Expert

Professional Registrations

- P.Eng. – ON

Affiliations + Memberships

- Member, Professional Engineers Ontario

Select Awards

- Canadian Dam Association lifetime membership award, 2024
- Inge Anderson award for contributions to the dam safety industry, Canadian Dam Association, 2021
- RR Dodokin award for contributions to the waterpower industry, Ontario Waterpower Association, 2019
- Medal for Excellence in Engineering, Professional Engineers of Ontario, 2013

Languages Spoken

- English

Select Publications

- More than 100 technical papers on dams, waterpower, construction techniques, dam safety and risk informed dam safety decision making. Revived several awards for these papers including the USSD inaugural best paper award.
- ICOLD bulletin on guidance to dam owners on dam safety.
- CDA bulletin on Failure Modes Analysis

Richard is a consultant with over 40 years of experience in dam design, underground structures, construction management, dam safety and risk informed decision making. He has completed over 400 dam safety and independent engineers' assessments for dams up to 237 m in height including RCC Dams, CFRDs, arch dams, gravity dams, buttress dams. Amberson dams, cement bentonite core dams, rockfill dams and embankment dams of all types. Richard has been awarded lifetime membership to the Canadian Dam Association and is the recipient of many other awards.

Richard has also worked in 17 countries leading design studies and serving as Construction Manager for the implementation of more than twenty varied large heavy civil projects and numerous smaller projects.

Project Experience

Large Dam Experience

- Melon (99 m), Assessment of cause of cracking – Geotechnical Expert, Turkey
- Polavaram (45 m), Assessment of cofferdam leakage, ground improvement techniques, design review and construction advice – Panel of Experts, India
- Chivor (237 m), Condition and dam safety assessment – Panel of Experts, Colombia
- Ituango (235 m), Condition and dam safety assessment. PFMEA – Team Leader and Dam Expert, Colombia
- Sogomoso (190 m), Condition and dam safety assessment, PFMEA – Team Leader and Dam Expert, Colombia
- Meil 1 (188 m), Condition and dam safety assessment, PFMEA – Team Leader and Dam Expert, Colombia
- San Carlos (70 m), Condition and dam safety assessment, PFMEA – Team Leader and Dam Expert, Colombia
- Jauguas (68 m), Condition and dam safety assessment, PFMEA – Team Leader and Dam Expert, Colombia
- Terzahghi (55 m), Condition and dam safety assessment – Team Leader and Dam Expert, Canada
- La Joie (87 m), Condition and dam safety assessment – Team Leader and Dam Expert, Canada

Richard Donnelly, MASc., P.Eng. - *continued*

Dam Engineering & Water Resources Expert

- Keyask GS (up to 35 m), Design and construction supervision (22 km of dams and dykes), Geotechnical Consultant and Panel of Experts, Canada
- Shikwamkwa (35 m), Condition and safety assessment, Design and construction supervision – Geotechnical Consultant, Canada
- Kulekahni (115 m), Risk informed assessment (PFMA), Team Leader and Dam Safety Expert, Nepal
- Various, Development of a risk screening tool to evaluate almost 6000 dams, Panel of Experts, India
- Kiira (30 m), Condition and dam safety assessment, PFMEA, Design and construction supervision, Team Leader and Dam Safety Expert, Uganda
- Sao Joao (21 m), Remediation design and instrumentation review – Senior Geotechnical Consultant, Brazil
- Confidential (221 m), Independent engineers' assessment, Team Leader and Dam Expert
- Muskrat Falls (30 m), Dam safety assessment – Dam Safety Auditor, Canada
- Waba Dam (18 m), Condition and dam safety assessment, Design and construction supervision – Team Leader and Dam Safety Expert, Canada
- Bishops Falls (25 m), Investigations, design and construction supervision – Geotechnical Designs and Construction Manager, Canada
- Kenogame (25 m), Investigations, design and construction supervision – Senior Geotechnical Consult and Constructability Expert, Canada
- Nalubaale (25 m), Uganda, Condition and dam safety assessment, PFMEA – Team Leader and Dam Safety Expert, Uganda
- Chamera (226 m), Construction supervision – Site Resident Geotechnical Engineer, India
- Hosler (35 m), Determination of foundation interface shear strength parameters – Geotechnical Consulting Engineer, USA
- Wanapum (42 m), Determination of foundation interface shear strength parameters – Geotechnical Consulting Engineer, USA
- Kafue Gorge Lower (140 m), Design review – Team Leader and Geotechnical Expert, China
- Upper Samon Development (20-30 m), Construction supervision and quality assurance – Resident Geotechnical Engineer, Canada
- Conawapa (35 m), Design – Lead Geotechnical Engineer, Canada

**Work performed at previous firm.*

Eli Arbiv

Senior Mechanical/Process Engineer

Professional Registrations

- P.Eng. – ON

Education + Training

- M.Sc. Eng., Environmental Engineering
- B.Sc. Chemical Engineering

Affiliations + Memberships

- Member, Professional Engineers Ontario

Eli Arbiv is a process engineer specializing in energy supply projects, water and wastewater treatment, with over 35 years of experience in process design, project management and plant operations mainly in Boilers and water areas. The diversified engineering experience ranging in scope from production, plant operation and water management. Highly experienced with boilers, gas supply systems, wastewater treatment processes and industrial water treatment (cooling and BFW treatment). Through the years I was involved with many energy projects including boilers sizing and installation, LPG storage tanks and Evaporators and Safety systems according to the NFPA and OSHA codes. This experience was gained through working on a wide variety of projects in municipal and industrial applications.

Project Experience

Cameco, Port Hope Conversion Facility - UO2 production, Port Hope, ON
Detailed design of UO2 liquid management to prevent discharge of contaminated effluent to the ground water. Scope of work included: water balance, PFD and P&ID's preparation, Fire water calculation, Pumps and Tank sizing and all process documentation such as line list, instrument list and piping list.

Cameco, Port Hope Conversion Facility- UF6 Production, Port Hope, ON

Involvement with two environmental projects regarding minimizing water consumption while increasing UF6 production. The first stage was to conduct a water balance on the process and determine the water consumption because of increasing UF6 production. The second phase was to establish a treatment method which will minimize the amount of UF6 waste to the environment (preventing ground water contamination.

Lithium Americas, Sulfuric Acid Plant Design, Thacker Pass, NV, USA

EXP was retained to design a Sulfuric acid plant for a Lithium Mining project. The utilities scope of work included: Boilers, Natural gas supply system, raw water treatment for cooling water and for boiler feed water and scrubber makeup water. WTP (Water treatment plant) included filtration and RO purification system. The gas system included a 3,000-gallon supply tank, piping, instrumentation, valves, electric vaporizer and fire protection system. The gas system was sized based on NFPA codes.

**Work performed at previous firm*

Ashwini Kurikala, P.Eng.

Senior Structural Engineer/Project Manger

Ashwini is a Senior Structural Engineer with extensive experience in the field of heavy industrial, residential, commercial, mining sectors involving steel, concrete, masonry, and wood structures. Ashwini is familiar with collaborating with clients and contractors to meet or exceed design, quality, timeline, and budget expectations.

Ashwini has demonstrated ability to complete multiphase projects, from plan development to oversight of costs, schedules, quality, information, team management and contracts. She is familiar with NBCC and OBC standards, design aids and regulatory requirements. She has demonstrated skills in various design software such as ETABS, SAP 2000, Risa 3D, AutoCAD etc.

Professional Registrations

- P.Eng. – ON, MB

Education + Training

- M.Eng., Civil and Environmental Engineering, Western University, London, ON. 2015
- B.Eng., Civil Engineering, Indian JNTU, India, 2013

Affiliations + Memberships

- Member, Professional Engineers Ontario
- Member,
  Engineers Geoscientists Manitoba

Project Experience

Bunge Canada Boiler and Generator Project, Hamilton, ON

Led the engineering to design the foundations for boilers and generators and revised the existing building structure to suit the requirements for new facility.

Co-ordinating with multiple disciplines during the entire design and construction phase.

Vale Asset Integrity inspections, Port Colborne, ON

Performed inspection at Vale, Port Colborne plant for structural integrity, strength, and serviceability.

The village of university gates, Waterloo, ON

Designed 10- story long term care facility at university gates, waterloo, Ontario.

Co-ordinated with precast slab suppliers and Delta beam suppliers during the entire design phase of the project. Worked along with multiple drafters to deliver the project on a timely manner.

Stelco Projects, Hamilton, ON

Performed structural assessment of existing structures at Stelco Steel Plant, Hamilton, ON for various additions and expansions to the plant.

Bunge Projects, Hamilton, ON

Managed various projects in the Bunge, food production plant located in Hamilton, ON. Projects include modifying or expanding existing structure to accommodate the requirements of the client.

Stephen Langille, P.Eng.

Consultant

Professional Registrations

- P.Eng. – ON

Education + Training

- BASc., Civil Engineering, Queens University, 1987

Affiliations + Memberships

- Member, Professional Engineers Ontario
- Member, Professional Engineers and Geoscientists Newfoundland & Labrador
- Member, Professional Engineers and Geoscientists of Province of Manitoba

Languages Spoken

- English

Stephen has over 30 years of engineering project management and management experience in the mining industry. He has successfully managed numerous large-scale multidisciplinary engineering projects in underground mining, milling and refining. Focusing on cost, scope, schedule, constructability and operability to ensure a successful project for all parties involved. A Structural Engineer by training, Stephen is also proficient at heavy mechanical systems design and troubleshooting.

Project Experience

Vale Canada Limited, Creighton Mine Phase 4 FEL 3

Stephen was the Project Manager for this multi-discipline study to deepen Creighton Mine from 8200 Level to 8590 Level. This project had four key elements, reviewing mining method, ventilation requirements, one/waste transportation and infrastructure requirements.

The mining method review involved determining the most cost-affective mining method for extracting one from the various one bodies on each level. The review was required due to the high seismicity and smaller than typical one body sizes within the study area.

The ventilation portion of the project determined the ventilation requirements for the study area and the life of mine requirements. Overall mine ventilation air flow was determined, preliminary deign and costing of new ventilation fan stations was complete, and a preliminary mine cooling system was designed and completed.

The one/waste transportation portion of the study investigated the most efficient method of moving one and waste rock from the study levels and in the life of the mine scenario. Various sizes of LHDs trucks and storage areas were studied and numerous transportation scenarios investigated before selecting the optimum combination of the three variables.

The infrastructure portion of the project involved preliminary design and costing of all required infrastructure on each level. Infrastructure included in the study included dewatering systems, micro seismic systems, refuge stations etc.

Rubicon Minerals, 2500 TPD Gold Mill

Acting as Project Manager and Structural Engineering Lead, Steve oversaw and coordinated all engineering disciplines for the PEA level study and detailed design of the gold mill. The green field project involved conveying ore from the headframe to the mill, a grinding circuit thickening, a CIL and Elution circuits and refining. Also included within the mill was a paste backfill

Stephen Langille, P.Eng. - *continued*

Consultant

plant. Three dimensional drawings were used extensively throughout the project to reduce interference in the field during construction.

Vale, Thompson Mill Optimization, Thompson, MB

Stephen was the Principal Engineer in charge of overseeing the study to determine options to increase the mills through put to its name plate capacity. The study reviewed all conveying milling, pumping separating and floatation circuits within the mill to determine bottle necks or operational issues. The team met with operators and maintenance personnel to determine any operational and maintenance issues. As well, all equipment capacity information was gathered to allow the team to accurately evaluate capacity issues. The final report recommended several relatively small operational equipment changes.

Vale, Refinery Modernization, Thompson, MB

Stephen was the Project Manager and Lead Structural Engineer for the infrastructure portion of this project. The project involved designing new and upgrading existing infrastructure to allow automated processing of plated nickel from the electrotwinning tanks to stripping. In addition, the existing refiner was designed to facilitate automated processing and storage of anodes and cathode before and after the electrotwinning process. Within the refinery, numerous structural, mechanical and electrical upgrades were designed to accommodate new automated cranes and transfer vehicles.

FNX (KGHM), Levack Mine Infrastructure

Acting as Project Manager and Lead Structural Engineer, Stephen oversaw the design of structural and mechanical infrastructure for the re-activated mine. Work included designing repairs to and recertifying the headframe and main shaft. Design of a new crusher within the existing crusher station excavation. Design of a new process water distribution system. Design of a multi-level mine dewatering system, and design of surface ventilation fan foundations.

Falconbridge LTD (Glencore), Strathcona Rationalization Project

As part of a larger team responsible for the amalgamation of the Strathcona Mine and Fraser Mine site, Stephen reported to the Project Manager and was responsible for the mechanical and structural modifications to the hoisting plants, fill system, pumping system and material handling system. For each of the areas, he developed the project execution plans and managed scope, schedule, budget and resources. AS this was a brownfield installation, he also managed the relationship with operations to co-ordinate and minimize as it pertained to his scope of work.

**Work performed at previous firm.*

Ian Vesterback, P.Eng.

Director of Engineering, Mining

Electrical Engineer

Ian is a professional engineer with over 21 years experience and proven success managing interdisciplinary projects and engineering teams. Hands-on approach to team management that celebrates employee success and provides ongoing feedback for improvement.

Extensive experience developing and implementing policies, practices, and procedures to optimize employee productivity. Broad experience in engineering design including high, medium, and low voltage distribution design and power system analysis using DESS and ETAP power system modelling and analysis software.

Professional Registrations

- P. Eng. – ON

Education + Training

- Bachelor of Engineering Science – Electrical, University of Western Ontario
- Queen's Leadership Program – School of Business, Queen's University

Affiliations + Memberships

- Member, Professional Engineers Ontario

Languages Spoken

- English

EXP Experience

Mining - VALE

17673-01 Creighton Diversity Dry Detailed Design – Lead Electrical Engineer. Completed the electrical detailed design of sanitary lift stations, pipe heat tracing systems, HVAC, lighting, and fire detection systems in the new female and gender neutral drys at Creighton Mine.

17670-01 Coleman Diversity Dry Detailed Design – Lead Electrical Engineer. Completed the electrical detailed design of the HVAC, lighting, and fire detection systems in the new female and gender neutral drys at Coleman Mine.

18044-01 Smelter #1 Powerhouse Fiber Replacement – Project Manager and Lead Electrical Engineer. Completed detailed design of the re-routing of fiber optic cable to the new Smelter Utility Building.

18050-01 CCNM FEL 2 Study Trailer Upgrades – Project Manager and Lead Electrical Engineer. Completed electrical portion of feasibility study for a new training centre located at the 114 Ore Body and Copper Cliff North Mine.

17761-01 Two Safety Showers in CV WGCP – Project Manager and Lead Electrical Engineer, performed heat trace design of emergency shower piping systems and as-built piping drawings.

17739-01 Clarabelle – Install Duty Stand-by Gland Water Pump – Project Manager and Lead Electrical Engineer, performed electrical detailed design of new gland water pump at Copper Cliff Water Treatment Plant.

17724-01 Copper Cliff North Mine 2200L Return Air Fan Switchroom Rebuild – Project Manager and Lead Electrical Engineer, performed electrical detailed design of new electrical switchroom and air flow monitoring system for both Fresh Air Fans and Return Air Fans on 2200L.

17723-01 Copper Cliff North Mine 2200L Pump Switchroom Rebuild – Project Manager and Lead Electrical Engineer, performed electrical detailed design of new electrical switchroom to consolidate two switchrooms.

Ian Vesterback, P.Eng. - *continued*

Director of Engineering, Mining

17372-01 Clarabelle Mill & Hill Station Open Office Concept – Electrical detailed design.

17435-01 Big Eddy OMS Manual – Generation Station - Writing electrical portion of the Operation, Maintenance, and Surveillance Manual.

17475-01 NAOC Parking Lot Options Study – Electrical study to add lighting and cameras to a new parking lot.

17507-01 Copper Storage Tent Electrics Exposed to Dust/Water – Clarabelle Mill – Design Team Lead – Assessment of the electrical rack.

17544-01 EW Emergency Generator – FEL 3 – Electrowinning Building - Design Team Lead – FEL3 study to replace the existing emergency back-up generator

17545-01 Garson – 440L McConnell Secondary Sump – Garson Ore Body - Electrical detailed design.

17568-01 Creighton Dry Conversion – Electrical detailed design of the conversion of the men's dry to women.

17603-01 Clarabelle – Add CO_2 Monitor at Nolin Wastewater Treatment Plant – Design Team Lead – Electrical detailed design of the addition of two CO_2 monitors.

17365-01 CCNR HIRA Action Items – Electrical /Instrumentation Design – Camera system design, Minor Leak Protection (MLP) blower system automation, added warning light and horn to the Pellet Decomposer Crane, TBRC #1 RPM measurement.

Implications/Assessment for an Extension of Docking Systems, Replacement of Docks, Installation of New Docking System Off a Breakwall, Gore Bay, ON – Gore Bay Marina, Electrical design of power distribution to dock slips.

Small Craft Basin Improvement Project, Billings, ON – Waterfront Design, Electrical design of power distribution to dock slips.

***North Bay Hydro Distribution Limited – North Bay, ON**
Distribution Engineer

- Manage capital substation projects. Responsible for planning project scope, hiring of engineering consulting firms + contractors, and contract management. Oversee and monitor construction progress, ensure schedule + budget adherence, and resolve issues found on site.
- Manage capital distribution projects. Engineer both overhead and underground electrical distribution rebuild capital projects, as well as create and monitor budgets. Resolve issues as required through site visits and coordination with Consulting Engineers. Civil portion of Airport Refurbishment completed on time and on budget. Successful stakeholder engagement on some difficult issues.

Hamid Riahi, PE

Geotechnical Engineering Manager

Professional Registrations

- Professional Engineer (VA)
- Professional Engineer (MD)
- Professional Engineer (DE)

Education + Training

- Masters of Science, Geotechnical, University of West Virginia College of Graduate Studies, 1987
- Bachelor of Science, Civil Engineering, West Virginia Institute of Techology, 1984

Affiliations + Memberships

- ACEC
- SAME
- DBIA

Select Publications

- Rock Tunneling at Washington Dulles International Airport, Tunnel Business Magazine, April 2004
- Construction of Aircraft Maintenance Hangers on Soft Ground at Quantico Marine Corps Base, Pile Driver Magazine, April 2009
- Riahi & Allen Bowers, Case Study: Selection of an Appropriate Design Residual Strength for a Heavy Over consolidated Clay, 2016

Hamid Riahi has over 41 years of experience managing projects involving all facets of Geotechnical Engineering. This experience includes work on waterfront, buildings, highways, transits, tunnels, government and private projects, industrial and commercial projects, pipelines, communication towers, wastewater and water treatment plants, refineries, above and underground storage reservoirs, and elevated water storage tanks.

Project Experience

Transit, Transportation Tunnels and Aviation

Purple Line Light Rail, Preliminary Engineering, Montgomery and Prince George's County, MD

Technical Reviewer of preliminary geotechnical engineering analyses and preliminary recommendations during the project pursuit for various retaining walls, culverts, pavements, bridges, SWM structures (including swales, ponds, micro-bioretention structures, subsurface sand filters, and underground vaults), buildings and a tunnel. Reviewed the planned and estimated geotechnical investigations and infiltration testing for exploration program for final design phase.

Dulles Corridor Metrorail and Maintenance (Silver Line) Yard, Dulles, VA

Officer-in-Charge for providing necessary geotechnical expertise to the Program Management team to ensure that the completed designs by the design-build teams were fully in compliance with the requirements of the contract, which included Washington Metropolitan Area Transit Authority's (WMATA) design criteria and standards as well as the criteria of the other projects participants such as Virginia Department of Transportation (VDOT), Fairfax County and other stakeholders. This **$5.2B** project consisted of constructing a 23-mile extension of the existing Metrorail. System, 5 new stations (Phase 1), six new stations (Phase 2), several flyover bridges, and relocation and construction of 21 different utility lines. The Metrorail consists of below-grade, at grade and elevated tracks. In Phase 1, the below-grade tracks were constructed using a combination of cut-and-cover, new Austrian Tunneling Method and tunnel boring machines. Responsibilities included review and approval of geotechnical engineering designs for temporary and permanent support of excavation systems (SOE), deep foundations and associated load test programs, temporary and permanent cut slopes.

Dulles International Airport, Automated People Mover (APM), Tunnel Systems and Vehicle Maintenance Facility, Chantilly, VA

Project Manager for detailed geotechnical investigations, evaluation of ground conditions and development of geotechnical design recommendations for approximately 13 miles of tunnel network with estimated construction cost of $1.4B. The tunnel network included domestic

Hamid Riahi, PE - *continued*

Geotechnical Engineering Manager

APM (DAPM) and international APM (IAPM) systems, a tug tunnel, a baggage tunnel, a utility tunnel, and an extension to the pedestrian walk back tunnel. All underground systems were designed to support an aircraft loading of 1.5M pounds gross weight on the operation surface above. The tunnels were constructed by a combination of cut-and-cover and two different tunneling methods. For mined tunnel sections, the new Austrian Tunneling Method (NATM), and Tunnel Boring Machines (TBM). The field exploration program consisted of drilling/coring, sampling, and logging up to 172 test borings to depths ranging from 30 to 105-ft below grade and installing up to 30 piezometers. In addition, angle borings and oriented core borings were performed as part of the test boring program. In situ testing was performed which consisted of pressure meter and packer testing. Laboratory rock testing was performed on several hundreds of rock samples. In-situ and laboratory testing, and field instrumentation programs were presented in a site-wide Geotechnical Data Report (GDR). Following the GDR, ground conditions and a coherent set of design geotechnical recommendations pertaining to cut-and cover tunnel complex were provided in series of Geotechnical Design Memoranda (GDMs). Two Geotechnical Baseline Reports (GBR) were prepared for the project. During the construction-phase project responsibilities included reviewing and approving Contractor submittals including excavation support design. Made periodic visits to the site to observe the Contractor's excavation support installation and monitoring procedures.

Dulles International Airport Taxiway F Tunnel Boxes, Fairfax and Loudon County, VA

Project Manager for the geotechnical design and construction aspects of the new Taxiway F Tunnel Boxes. The new Taxiway F crosses the alignment of the future Domestic Automated People Mover tunnel corridor and the East Tug tunnel. To avoid future tunneling beneath an operational taxiway, approximately 333-ft long sections of the proposed tunnels were being constructed by the cut-and-cover method before the taxiway was constructed. Project responsibilities include review of calculation for excavation stability, rock bearing pressures, lateral earth and rock pressures; design memoranda and specifications. During the construction-phase project responsibilities included reviewing and approving Contractor submittals including excavation support design. Made periodic visits to the site to observe the Contractor's excavation support installation and monitoring procedures.

Dulles Air Traffic Control Tower Ductbanks and Associated Utilities, Chantilly, VA

Project Manager for the geotechnical investigation of the proposed Air Traffic Control tower (ATCT), duct banks and utilities. The proposed ATCT consisted of a pre-cast concrete structure. It was approximately 300-ft high to the cab level; and the cab was two stories tall. The ATCT had a square shape in plan with chamfered corners; with each side measuring approximately 32 ft.

**Work performed at previous firm.*

David Uremovich, P.Eng.

Northern Ontario Director of Mining Operations

David has over 18 years of industrial experience in design, projects, maintenance and operations in the mining industry. He has been extensively involved with one of Canada's largest mining companies for most of his career and supported the day-to-day projects with the crews in the mines.

David's responsibilities have included: conducting engineering evaluations such as inspections, failure analyses, failure loss profiles, developed equipment maintenance strategies, and developed a schedule for reoccurring engineering maintenance strategies of structures and equipment. He is a mentor to his team and works with them to develop their design engineering and project management skills. David's knowledge and expertise in the mining industry make him a valuable resource for every project he's involved in.

Professional Registrations

- P.Eng. – ON

Education + Training

- M.Eng., Mechanical, Concordia University, Montreal, 2004
- B.Eng., Mechanical, Lakehead University, Thunder Bay, 2002
- Diploma, Engineering Technology, Mechanical, Lakehead University, Thunder Bay, 2000

Affiliations + Memberships

- Member, Professional Engineers Ontario

Select Project Awards

- Copper Cliff Nickel Refinery Granulation Arm Ladle Disconnect Device, Vale North Atlantic Kaizen Competition, 2020

Languages Spoken

- English

Select Publications

- D.Uremovich, F.Islam, M. Medraj, Thermodynamic Modeling of the Ni-Ca System, Science and Technology of Advanced Materials, 7(2006), 119-126.

Project Experience

Mining

Vale, CCNR Granulation Arm Ladle Disconnect Device, Sudbury, ON
Led Design and Engineering to conceptualize a custom mechanized device to remotely disconnect services to a ladle. Provided Engineering support to construction to ensure successful implementation and operation. This project won a Vale North Atlantic Division Kaizen competition with 4000 entries worldwide.

Vale, CCNR #2 PGST Repairs and Improvements, Sudbury, ON
Provided detailed design for mechanical repairs and improvements to a API 650 process tank. Provided temperature monitoring system to the tank.

Vale, NAOC/Butler Building Grading and Ditching, Sudbury, ON
Project Manager from FEL level study to Construction. Project included FEL study on parking lot options and water handling. Tendering, awarded, project coordination, construction coordination.

Vale, Frood Mine, Process Water Line System, Sudbury, ON
Design and Engineering for the installation of process water line to Frood Mine. Included custom design of Borehole piping, PRV station, and water distribution underground. Provided Engineering support during construction phase.

David Uremovich, P.Eng. - *continued*

Northern Ontario Director of Mining Operations

Employment History

EXP Services Inc. – Northern Ontario Director of Mining Operations
Employment: Aug 2021 – Present

Vale Canada Ltd. – Maintenance Engineer – Totten Mine
Employment: Jan 2021 – Aug 2021

Vale Canada Ltd. – Maintenance Planner – Smelter – Combustion Department
Employment: May 2018 – Jun 2019

Vale Canada Ltd. – Senior Design Engineer/Design Engineer/EIT – Central Engineering Department
Employment: Various Periods from 2004 – 2020

Vale Canada Ltd. – Facilities Maintenance Supervisor – Engineering Building – Central Engineering Dept.
Employment: Feb 2011 – May 2018

Vale Canada Ltd. – Train Conductor – Transportation Department
Employment: Aug 2009 – Aug 2010

Bowater Pulp & Paper Products – Mechanical Maintenance Assistant – Newsprint Maintenance Department
Employment: Summer Internships – 2000 + 2001

Cascades Fine Papers – Mechanical Maintenance Assistant
Employment: Jun 2002 – Sep 2002

**Work performed at previous firm.*

Peter Seto, P.Eng.

Senior Mechanical Engineer

Affiliations + Memberships

- P.Eng. - ON

Education + Training

- BSc. Mechanical Engineering, University of Waterloo, 1993
- Certificate, Computer Aided Design, Concordia University, 2002

Affiliations + Memberships

- Member, Professional Engineers Ontario

Peter has more than 25 years of expertise as a senior engineer in Mechanical Design and Project Management, focusing on Heavy Industries, particularly in the Mining and Mineral Sector. His experience encompasses projects related to mine dewatering systems, underground maintenance shops, flotation circuits, acid plants, tailings areas, water treatment facilities, and electrowinning/electroextraction plants.

Project Experience

Vale, Potable Water Tank Replacement, Lively, ON

Study Lead for the FEL 2 study and the subsequent FEL 3 study to replace the existing 250,000 US gallons Potable Water Tank near Creighton Mine. Duties included developing the FEL Studies, conceptual layout designs, cost estimates, preliminary project schedule, expenditure forecasts, and managing a third-party Geotechnical Team

Vale, #1 Reactor Tire/Gear/HPU Replacement, Copper Cliff, ON

Project Engineer for the first-ever replacement of the idle tire, bull gear, and hydraulic power units on the #1 IPC Reactor at the Vale Copper Cliff Nickel Refinery. Duties consisted of performing bid reviews, construction project hazard reviews (PHR), project scheduling, cold and hot commissioning of the #1 Reactor, and developing maintenance plans & training manuals for the plant personnel.

Vale, Slag Seepage Control Project – Intermediate Solution, Sudbury, ON

Mechanical Engineer for the design of a 3km collection ditch system with three automated lift stations (nine pumps total) to manage runoff from existing slag piles. Also, led a small, multidisciplinary team throughout this brownfield project.

Vale, EW Sulfuric Acid Tank Inspection Project – Copper Cliff, ON

Mechanical Engineer for the inspection inside a Sulfuric Acid Tank (8’ OD x 43’ LG) located at the Electrowinning (EW) Plant.

QuadraFNX (now part of KGHM), FECUNIS Pumping Station, Levack, ON

Mechanical Engineer as part of a team to convert a small warehouse into a pumphouse with two pumps that will transfer water to FECUNIS Lake to Strathcona Mill.

Vale, Ni/Co Carbonate Tank Replacement, Copper Cliff, ON

Mechanical Engineer for organizing and monitoring the replacement of a 17’ OD x 30’ LG carbon steel tank with a brand new one.

Naivo Ravelomanantsoa, P.Eng., Ph.D.

Electrical Engineer

Naivo is an electrical engineer, with a Ph.D. in engineering, specializing in medium and high-voltage electrical networks. He has extensive experience in national and international transmission and distribution substations. Naivo participates in site monitoring and the preparation of design documents for electrical substation construction projects. He performs the required electrical studies and simulations: coordination of protections, arc flash, power flow, network stability and grounding study.

Affiliations & Memberships

- OIQ (Ordre des ingénieurs du Québec), No. 131434

Education

- Ph.D. in Engineering, University of Quebec at Chicoutimi, Saguenay (UQAC, Canada, 2013
- B.Ing., University of Quebec at Chicoutimi (UQAC), Saguenay, Canada, 2003

Complementary Training

- WHMIS 2015 for Workers, ASP Construction, 2022
- Network stability studies using DIgSILENT PowerFactory, Germany, 2019
- Simulation and Analysis of Power System Transients Using EMTP-RV, Canada, 2012
- ASP Construction Certification, Canada, 2003

Project Experience

ABB Hitachi Energy • Chateauguay 765-735 kV Substation – Asynchronous back-to-back interconnection with New York Power Authority (NYPA) network, Canada

Lead engineer – Power Systems Apparatus for the replacement in their entirety of the current Group Converters (GCs), which have reached the end of their useful life, with two new 1500 MW GCs of the “Voltage Source Converter (VSC)” type, in back-to-back configuration. Activities performed: Responsible for the detailed construction design of the electrical part of the Substation, coordination and correspondence with the Project manager and the members of the team, quality assurance verification and responsible for the planning and execution of works.

West African Power Exchange System (WAPP), Mali 225 kV Electrical Interconnection Project, Guinea, Mali

Expert in Network Design and Stability for the construction of a 225 kV transmission line of approx. 714 km length, extension of the 225/33 kV Sanankoroba source substation, construction of new 225/30 kV substations at Siguri, Fomi, Kankan, Kérouané, Beyla and extension of the N'Zérékoré substation, construction of MV lines to connect the new substations to the existing MV distribution networks. Activities performed: Review of the existing interconnection network studies and the network stability study, review of the specifications and configuration of compensation equipment such as SVC, capacitor, reactance, etc., update these studies according to the characteristics of the equipment installed or to be installed, verification of system behaviour through simulations in normal (N) and degraded (N-1) operating conditions, preparation of the preliminary report on the operation and maintenance strategy, training and transfer of knowledge to PMU staff.

Rural electrification Agency (REA), ERT III Grid Extension Projects for Lot 1, Uganda

Distribution System Design Expert for EIA, design, RAP, bidding documents and works supervision for the construction of 6 single 33/11 kV medium-voltage lines with a total length of 627 km. Activities performed: Review of existing design, preparation of detailed design and specifications for tender documents and assistance during the tender period.

APPENDIX | EXP CQQ

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

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
AML - EOI Pre-Qualification for Consultants	**20 August 2025**	**46-0523964**

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
EXP U.S. Services Inc.	**[Local] WV Office** **[HQ] 205 N. Michigan Ave., Ste. 3600 Chicago, IL 60601**	

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
[L] 681.273.9565 | [HQ] 312.616.0000	**1906**	Individual (Corporation) Partnership Joint-Venture	YES (NO)

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE

PLEASE SEE EXHIBIT A

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
PLEASE SEE EXHIBIT B	**PLEASE SEE EXHIBIT B**

9. PERSONNEL BY DISCIPLINE **PLEASE SEE EXHIBIT C FOR ADDITIONAL STAFF NUMBERS BY DISCIPLINE**

— ADMINISTRATIVE	— ECOLOGISTS	— LANDSCAPE ARCHITECTS	— STRUCTURAL ENGINEERS
— ARCHITECTS	— ECONOMISTS	— MECHANICAL ENGINEERS	— **SURVEYORS**
— **BIOLOGIST**	— ELECTRICAL ENGINEERS	1 **MINING ENGINEERS**	— TRAFFIC ENGINEERS
16 **CADD OPERATORS**	— ENVIRONMENTALISTS	— PHOTOGRAMMETRISTS	— OTHER
— CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL	
18 **CIVIL ENGINEERS**	— **GEOLOGISTS**	— SANITARY ENGINEERS	
— CONSTRUCTION INSPECTORS	— HISTORIANS	— SOILS ENGINEERS	
— DESIGNERS	— HYDROLOGISTS	— SPECIFICATION WRITERS	— TOTAL PERSONNELL
— DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 4 WV Office

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

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? ☐ YES (☐ NO)

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
Triad Engineering, Inc. 10541 Teays Valley Road Scott Depot, WV 25560	**Geotechnical Engineering; Drilling**	X Yes _____ No
NAME AND ADDRESS: **Markosky Engineering Group, Inc.** 3689 Route 711 Ligonier, PA 15658	SPECIALTY: **Environmental Compliance**	WORKED WITH BEFORE _____ Yes X No
NAME AND ADDRESS: **Greenman-Pederson, Inc.** 58 Mission Way, Suite 201 Scott Depot, WV 25560	SPECIALTY: **Survey; Realty Work**	WORKED WITH BEFORE _____ Yes X 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. Is your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

(YES) Description and Number of Projects: **Vale Canada - Overflow Engineering Services (MSA)**

NO

B. Is your firm experienced in Soil Analysis?

(YES) Description and Number of Projects: **MTA Rockaway Line Resiliency + Rehabilitation**

NO

C. Is your firm experienced in hydrology and hydraulics?

(YES) Description and Number of Projects: **Vale Canada | Creighton Mine East Berm + Ditch Detailed Design**

NO

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

(YES) Description and Number of Projects: **Vale Canada | Algoma East Rail Line**

University District Brownfield Development UAV/Drone Services

NO

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

(YES) Description and Number of Projects: **Copper Cliff North Mine | CCNM - Wastewater System Assessment**

NO

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

(YES) Description and Number of Projects:

Victoria Advanced Exploration Project Peer Review; Tailings Dam Raise Design Specifications; Restoration of Eustis Mine Remediations

NO

G. Is your firm experienced in construction oversight?

(YES) Description and Number of Projects:

VDOT | I-62 I-464 Interchange Improvements | Geotechnical Monitoring + Instrumentation during construction

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:
Manuch Amir, PE Contract Manager + Resource Manager	**0**	**0**	**0**

Brief Explanation of Responsibilities

EXP has assigned Manuch Amir, PE, as Contract and Resource Manager. Manuch has over 40 years of experience managing contracts and resources for efficient delivery of each task order on time, and within budget.

EDUCATION (Degree, Year, Specialization)

- **M.S., 1992, Civil Engineering, Marshall University**
- **B.S., 1980, Civil Engineering, West Virginia University Institute of Technology**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	• **Professional Engineer: WV [1993]; VA [2013]; MD [2013]; DC [2014]; GA [1995]; KY [2000]; OH [1993]; FL [1995]**

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:
Aziz Sene, P.Eng., Ing. Senior Vice President, Mining	**0**	**0**	**0**

Brief Explanation of Responsibilities

Aziz is currently EXP's Senior Vice President, Mining. He brings a combined 20+ years of managerial and technical experience and lead capabilities in Mining, Pulp and Paper, Renewable Energy, Dam Safety, Iron & Steel industries. He has strong leadership abilities with extensive knowledge in operations management, procurement, construction, project management and controls, and industrial, plant, maintenance, and design engineering. Currently, Aziz is responsible for leading and supervising EXP's mining engineering team's operations. His team consists of mining, pyro and hydrometallurgy, process, electrical & instrumentation, mechanical, civil, and structural engineering staff.

EDUCATION (Degree, Year, Specialization)

- **B.A.Sc., Year, Electrical Engineering, Laval University**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
• **Member, Professional Engineers Ontario**	• **Professional Engineer: Ontario [2011]**

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:
David Uremovich, P.Eng. Northern Ontario Director of Mining Operations	**10**	**10**	**2**

Brief Explanation of Responsibilities

David has over 18 years of industrial experience in design, projects, maintenance and operations in the mining industry. He has been extensively involved with one of Canada's largest mining companies for most of his career and supported the day-to-day projects with the crews in the mines.

EDUCATION (Degree, Year, Specialization)

- **M.Eng., 2004, Mechanical, Concordia University, Montreal**
- **B.Eng., 2002, Mechanical, Lakeland University, Thunder Bay**
- **Diploma, 2000, Engineering Technology, Mechanical, Lakeland University, Thunder Bay**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
• **Member, Professional Engineers Ontario**	• **Professional Engineer: Ontario [2007]**

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:
Ian Vesterback, P.Eng. Director of Engineering, Mining	**0**	**0**	**0**

Brief Explanation of Responsibilities

Ian is a professional engineer with over 21 years experience and proven success managing interdisciplinary projects and engineering teams. He has broad experience in engineering design including high, medium, and low voltage distribution design and power system analysis using DESS and ETAP power system modelling and analysis software.

EDUCATION (Degree, Year, Specialization)

- **B.Eng., Year, Engineering Science Electrical, University of Western Ontario**
- **Queen's Leadership Program, Year, School of Business, Queen's University**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
• **Member, Professional Engineers Ontario**	• **Professional Engineer: Ontario [1999]**

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:
Jim Monaghan, P.Eng. Senior Mining Engineer	**0**	**0**	**0**

Brief Explanation of Responsibilities

Jim has worked in the mining industry for over 30 years, primarily at operating mines throughout Canada. He began his career with a mining contractor and worked on a number of mine developments in Canada and abroad as a Project Engineer and Superintendent. His primary experience is underground mine design, planning and economics of underground narrow vein and bulk operations. Jim also has experience in open pit mining. Over the years, he has performed trade-off studies, produced operating and capital budgets, Life of Mine plans, optimization and productivity studies.

EDUCATION (Degree, Year, Specialization)

- **B.Eng., Mining, Laurentian University**
- **Mining Technologist, Haileybury, School of Mines**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
• **Member, Professional Engineers Ontario**	• **Professional Engineer: Ontario**

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:
Richard Donnelly, MASc., P.Eng. Dam Engineering & Water Resources Expert	**0**	**0**	**0**

Brief Explanation of Responsibilities

Richard is a consultant with over 40 years of experience in dam design, underground structures, construction management, dam safety and risk informed decision making. He has completed over 400 dam safety and independent engineers' assessments for dams up to 237 m in height including RCC Dams, CFRDs, arch dams, gravity dams, buttress dams. Amberson dams, cement bentonite core dams, rockfill dams and embankment dams of all types. Richard has been awarded lifetime membership to the Canadian Dam Association and is the recipient of many other awards.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
• **Member, Professional Engineers Ontario**	• **Professional Engineer: Ontario [1982]**

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

- **Highway Capacity Software**
- **Synchro / SimTraffic/ VISSIM**
- **TransCAD/ GuideSIGN/ VISUAL**
- **CORSIM / VISUAL**
- **MicroStation**
- **OpenRoads Designer**
- **Open Bridge Designer**
- **OpenBridge Modeler**
- **STADD / CSI Bridge**
- **ArcGIS**
- **HEC-RAS Modeling**
- **Stormwater Management Model (SWMM)**

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
Rockaway Line Resiliency + Rehabilitation **Location**: New York, NY **Type:** Design-Build; Transit	**Metropolitan Transit Authority (MTA)** 2 Broadway New York, NY 10004	**Architecture, Mechanical, Civil, Structural, Traction Power + Electrical, Drainage, Signal/Systems, Utilities**	**$392,000,000**	**65%**
City-Wide Open-End Bridge Design Contract **Location**: Washington, DC **Type:** Task Order	**District Department of Transportation** 250 M Street SE Washington, DC 20003	**Structural, Bridge Design + Inspection, Program Management**	**$50,000,000**	**70%**
DC Power Line Undergrounding **Location**: Washington, DC **Type:** Transportation + Utilities	**District Department of Transportation** 250 M Street SE Washington, DC 20003	**Utility Design, Project Administration**	**$150,000,000**	**85%**

TOTAL NUMBER OF PROJECTS: **3**

TOTAL ESTIMATED CONSTRUCTION COSTS: $ **592,000,000**

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 **$351,000,000**	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
I-64 I-464 Interchange Improvements **Location**: Hampton Road, VA **Type:** Transportation	**Bridge, Drainage, Utilities, Pavement Design, Public Outreach**	**Virginia Department of Transportation** 4975 Alliance Drive Fairfax, VA 22030	**2027**	**$100,000,000**	**$35,000,000**
Crystal City Station East Entrance **Location**: Arlington, VA **Type:** Transit	**MEP, Fire Protection, Safety + Security, System Integration**	**Washington Metropolitan Area Transit Authority** 300 7th Street SW Washington, DC	**2026**	**$90,000,000**	**$55,000,000**
George Washington Memorial Parkway **Location**: Washington, DC **Type:** Transportation	**Independent Design Quality Assurance Management**	**National Park Service** 1849 C St NW Washington, DC	**2026**	**$161,000,000**	**$161,000,000**

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)
CTA Phase 3 FEL3 – R-Area Drainage Dams 2 to 24 **Location**: Sudbury, Ontario **Type:** Mining - FEL3 Study	**Vale Canada** 2060 Flavelle Blvd. Mississauga, ON L5K 1Z9	**$719,000 CAD**	**2024**	**No**
Garson Storage Ponds + Dam Upgrades **Location**: Sudsbury, Canada **Type:** Mining - Detailed Design	**Vale Canada** 2060 Flavelle Blvd. Mississauga, ON L5K 1Z9	**$412,000 CAD**	**2024**	**No**
Crean Hill Mine Waste-Water Treatment Systems Upgrades IFC + PIFC **Location**: Sudbury, Canada **Type:** Mining - Detailed Design + Post IFC	**Vale Canada** 2060 Flavelle Blvd. Mississauga, ON L5K 1Z9	**$761,000 CAD**	**2021**	**No**
Overflow Engineering Services (MSA) **Location**: Canada-wide, ON **Type:** Mining - Detailed Design/FEL1/FEL2/FEL3/ PFIC	**Vale Canada** 2060 Flavelle Blvd. Mississauga, ON L5K 1Z9	**$Varies**	**On-going**	**No**
Meatbird Recreation Area Rehab Detailed Design + Post IFC **Location**:Sudbury, Canada **Type:** Mining - Detailed Design + Post IFC	**Vale Canada** 2060 Flavelle Blvd. Mississauga, ON L5K 1Z9	**$718,000 CAD**	**2022**	**No**
Transform I-66 Outside the Beltway **Location**: VA **Type:** Transportation	**Virginia Department of Transportation** 4975 Alliance Drive Fairfax, VA 22030	**$75,000,000**	**2022**	**Yes**

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS CONSTRUCTION OVERSIGHT ON PROJECTS				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
I-64 I-464 Interchange Improvements **Location**: Hampton Road, VA **Type:** Transportation - Geotechnical Monitoring + Instrumentation during Construction	**Virginia Department of Transportation** 4975 Alliance Drive Fairfax, VA 22030	**$35,000,000**	**2027**	**Yes**
Transform I-66 Outside the Beltway **Location**: VA **Type:** Transportation - Engineer + Inspection Post-Construction	**Virginia Department of Transportation** 4975 Alliance Drive Fairfax, VA 22030	**$75,000,000**	**2022**	**Yes**

19. 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
Red Purple Modernization **Location**: Chicago, IL **Type:** Transit	**Chicago Transit Authority** 567 W Lake Street Chicago, IL 60661	**$1,000,000,000**	**2025**	**YES**	**Stantec**

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

Please see appendix materials

21. The foregoing is a statement of facts.

Signature: _____ Title: **Vice President** Date: **August 20, 2025**

Printed Name: **Amir Arab, PhD, PE, DBIA**

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	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/Nitigation/ Replacement	Construction Inspection/Management	Water Treatment	Active/Passive Water Treatment Systems	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	David Uremovich	Ian Vesterback	Aziz Sene	Rena Liu	Jim Monaghan	
Surface Sink Hole Ethier Pit	C			X	X				X				X			X		X	M			P	P	
Crean Hill Mine Waste Water Treatment System	C		X			X				X	X	X	X	X	X	X	X	X	M	P	M	P		
Tailings Closure Inactive Sites - FETA	C			X						X			X					X	M					
Garson Mine Waste Water Treatment System	C					X				X	X	X	X	X	X	X	X	X	M	P	M	P		
McEwen Mine Black Fox Mill Stock West Portal	C					X					X		X					X	M		M			
Gertrude Pit Level Monitoring	C		X			X			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 "B"

ATTACHMENT A | PRIMARY AML DESIGN OFFICE

ADDRESS | TELEPHONE | PERSON-IN-CHARGE | NO. OF PERSONNEL IN EACH OFFICE

AML DESIGN OFFICE LOCATIONS

STATE/PROVINCE	ADDRESS	PHONE	PERSON-IN-CHARGE	# PERSONNEL
Florida	2000 East Broward Boulevard, Suite 1000 Fort Lauderdale, FL 33301	954.820.4751	Aziz Sene	10
Ontario	885 Regent Street Sudbury, Ontario P3E 5M4	705.674.9681	David Uremovich	35

LOCAL OFFICE LOCATIONS

STATE	ADDRESS	PHONE	PERSON-IN-CHARGE	# PERSONNEL
West Virginia	707 Virginia Street, E., Suite 1000 Charleston, WV 25301	(407) 616-4717	Manuch Amir	7
District of Columbia	1140 3rd Street Northeast, Suite 335 Washington, DC 20002	(202) 567.5614	Amir Arab	26
Maryland	502 Washington Avenue, Suite 501 Towson, MD 21204	(410) 427.7474	Amir Arab	8
Virginia	15049 Conference Center Dr., Suite 450 Chantilly, VA 20151	N/A	John Samis	12
Virginia	3901 Westerre Parkway, Suite 210 Richmond, VA 23233	(804) 474.4500	Timothy Neumann	6
Virginia	4114 Legato Road, Suite 830 Fairfax, VA 22033		Amir Arab	30

ATTACHMENT B | NAMES OF PRINCIPALS OR MEMBERS OF THE FIRM

OWNERSHIP + OFFICERS/DIRECTORS

EXP U.S. Services Inc. (EXP) is owned 100% by EXP Global, Inc.

DIRECTORS
Ivan Dvorak
Timothy Neumann
Mark Dvorak

OFFICERS	POSITION HELD
Ivan Dvorak	Chairman of the Board + Chief Executive Officer
Mark Dvorak	President + Chief Operations Officer
Deborah Walters	Chief Financial Officer + Treasurer
Hae-Jin (Priscilla) Ahn	Secretary
Timothy Neumann	Executive Vice President
Anthony Caruso	Senior Vice President
Byron Danley	Vice President
William McGuire	Vice President
Rachael Sampson	Principal
Kathy Weise	Vice President

ATTACHMENT C

PERSONNEL BY DISCIPLINE

DISCIPLINE	NO. OF EMPLOYEES
Architect	111
Civil Engineer	354
Construction Inspector	142
Electrical Engineer	268
Environmental Engineer	41
Environmental Scientist	113
Fire Protection Engineer	17
Geographic Information System Specialist	18
Industrial Engineer	52
Mechanical Engineer	334
Planner: Urban/Regional	43
Project Manager	212
Remote Sensing Specialist	22
Structural Engineer	320
Technician/Analyst	1183
Transportation Engineer	158
Water Resources Engineer	58
Lighting + Technology Designer	42
Community Outreach/Public Involvement Specialist	20
Sustainability + Commissioning Specialist/Engineer	36
Other	685
TOTAL	**4339**

***THE NUMBER OF EMPLOYEES ARE REPRESENTATIVE OF ALL SUBSIDIARIES OF EXP GLOBAL, INC. WHICH INCLUDES EXP U.S. SERVICES INC.**


exp.
MINING + METALS
understand • innovate • partner • deliver

MINING + METALS

Integrated, sustainable solutions across the mining industry

At EXP, we bring customized solutions across the full life cycle of mining and mineral projects – from initial exploratory services and environmental studies, design and management of development projects, through site closure and rehabilitation. Over our more than 50 years of industry experience, our team has used innovation to deliver complex projects for the world's major mining and metallurgical facilities.

We leverage our demonstrated record in interdisciplinary project execution with our extensive knowledge of base, precious, industrial and other minerals to develop sustainable, outcome-focused solutions. Combining use of industry-leading technologies with an integrated, multidisciplinary approach we focus on enhanced efficiency and predictability, while addressing complex challenges in environmental management, regulatory, permitting and safety.

MINES | MILLS | REFINERIES | DAMS | SMELTERS

KEY SERVICES

- Impact studies
- Feasibility studies
- Prospecting/logistics support
- Mining geotechnics
- Materials engineering
- Hydrogeological modeling
- Project management
- Industrial mechanics
- Process engineering
- Civil engineering
- Metallurgy
- Pyrometallurgy
- Hydrometallurgy
- Material Handling
- Buildings (structure, mechanics and electricity)
- Air quality
- Power transmission and distribution
- Operations optimization
- Cartography/spatial analysis/3D modeling
- Research and development
- Workers health and safety programs
- Permits and authorizations
- Site closure and rehabilitation

We have experience with various types of metals and minerals, including, but not limited to:

28 $3d^8 4s^2$ Ni Nickel 58.693

NICKEL

29 $3d^{10} 4s^1$ Cu Copper 63.546

COPPER

27 $3d^7 4s^2$ Co Cobalt 58.933

COBALT

78 $4f^{14} 5d^9 6s^1$ Pt Platinum 195.08

PLATINUM GROUP METALS

79 $4f^{14} 5d^{10} 6s^1$ Au Gold 196.967

GOLD

47 $4d^{10} 5s^1$ Ag Silver 107.868

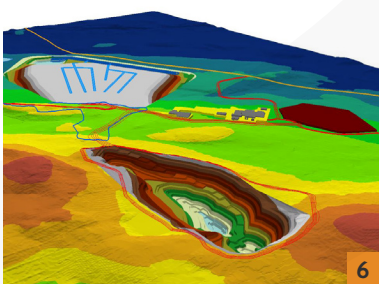
SILVER

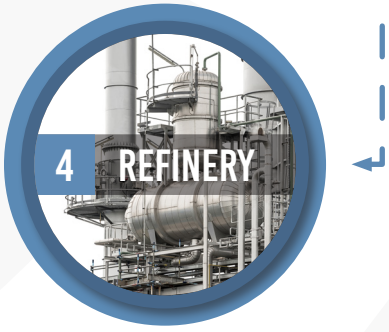
40 $4d^2 5s^2$ Zr Zirconium 91.224

ZIRCONIUM


3


4


6



KEY PROJECTS

1. **Vale Canada Limited • Overflow Engineering Services | Various locations across Canada: Sudbury, ON; Port Colborne, ON; Thompson, MB; Long Harbour, NL**
   Electrical, instrumentation, civil, structural and process engineering services for all Vale sites.

2. **Goldcorp • Eleonore Mine | James Bay, Opinaca Reservoir, QC, Canada**
   Review of mining activities through onsite inspections and management of approvals and operational improvements to ensure compliance.

3. **Agnico-Eagle • LaRonde Mine | Abitibi-Témiscamingue, QC, Canada**
   Multidisciplinary services for 3.1 km deep gold mine, including design of unique resin injection system.

4. **Detour Gold Corp • Detour Lake Mine | Cochrane, ON, Canada**
   Implementation of mud and surface water management infrastructure, including 3D modeling.

5. **Semafo • Samira Hill Mine | Tillabéri, Niger, Africa**
   Piezocone drilling program inside a tailing site, a preliminary step toward enlarging a dike using the upstream method.

6. **Neotec Lithium • Lithium Mine | Lac Moblan, QC, Canada**
   Geotechnical and hydrogeological studies of mine walls, hydrogeological modeling, design of the tailing site (filtered tailings, dry stack), alternatives analysis and 3D cartography.

7. **ArcelorMittal • Port Facility | Port-Cartier, QC, Canada**
   Reduction and recycling of red water from iron ore handling.

8. **Vale Canada Limited • Garson Mine | Garson, ON, Canada**
   Upgrading of storage pond dams and wastewater treatment station.

9. **Vale Canada Limited • Water Dams Overflow | Sudbury, ON, Canada**
   Civil, structural, dam engineering, mechanical, electrical and instrumentation, power generation and distribution.

10. **Stornoway Diamonds Corp • Renard Mine | Monts Otish, QC, Canada**
    Landscape architecture, development and urban planning, including creation of a 3D animation to present the project to stakeholders.

11. **Alamos Gold • Young-Davidson Solid Cyanide Mixing System | Matachewan, ON, Canada**
    Multidisciplinary feasibility study for the implementation of a solid cyanide dissolution facility.

exp.

Delivering innovative engineering and consultancy services for all stages of the mining and metallurgical life cycle

Research + value discovery

- Geological surveys and assessments
- Environmental management, applications for authorizations and permits

Feasibility, investigation + social acceptance

- Technical and economic feasibility studies, cost evaluations
- Borrow pit research
- Support for preliminary projects and compilation of files for approval and financing
- Environmental impact studies and environmental risk assessment
- Applications for authorizations and permits
- Relationships with stakeholders
- 3D modeling (site, plant, mine galleries, etc.)

Industrial design + construction

- Traditional project management, turnkey, design-build, construction management and PPP
- Mechanics (industrial), electricity, foundation and structure
- Design of above- and below-ground lifting equipment
- Road, airport, train and marine infrastructure
- Automation, instrumentation, controls and artificial intelligence
- Design and management plans for waste and tailings storage systems
- Hydrogeology and rock mechanics

Operations + infrastructure

- Management and environmental monitoring of mining operations, waste and hazardous materials
- Management of water and power systems, treatment of industrial effluents
- Air quality and atmospheric emission control, environmental monitoring, noise and dust sampling
- Internal and external environmental reports
- Rock mechanics and securing rock faces
- Optimizing procedures

End of first life cycle

- Restoration work (plans and specifications, project management, eco-engineering, etc.)
- Phase I, II and III environmental site assessments
- Securing mining operations, designing mine closure slabs
- Modeling of the geochemical behavior of tailings and passive treatment of mining effluents

ABOUT US

With a mission to **understand**, **innovate**, **partner** and **deliver**, EXP provides engineering, architecture, design and consulting services to the world's built and natural environments.

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TRIAD ENGINEERING

- ATTACHMENT A
- ATTACHMENT B
- CERTIFICATIONS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNIARE ATTACHMENT "A"

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
AML-EOI Prequalification for Consultants	**14, August, 2025**	**55-0592364**

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME (IF APPLICABLE)
Triad Engineering, Inc.	**10541 Teays Valley Road Scott Depot, WV 25560**	**NA**

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OF OWNERSHIP	6a. WV REGISTERED DBE (DISADVANTAGED BUSINESS ENTERPRISE)
304-755-0721	**1975**	[ ] Individual [X] Corporation [ ] Partnership [ ] Joint-Venture	Yes [ ] No [X]

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL IN EACH OFFICE

10541 Teays Valley Road
Scott Depot, WV 25560
304-755-0721

T. Anders Bush/CAO & Acting SW Regional Manager

56	**Scott Depot, WV**
37	**Morgantown, WV**
41	**Hagerstown, MD**
34	**Winchester, VA**
13	**Satellite Offices**

(Portsmouth, OH, New Stanton, PA, Mechanicsburg, PA, Frederick, MD, Sterling, VA)

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8A. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Brad Reynolds, PE, CEO 301-797-6400	**T. Anders Bush, CAO/VP 304-755-0721**

9. KEY PERSONNEL (Check mark key personnel below that you have on staff and will work on project)

[X] ADMINISTRATION	[X] ECOLOGISTS	[X] LANDSCAPE ARCHITECTS	[X] MECHNICAL E STRUCTURUAL ENGINEERS
[X] ARCHITECTS	[ ] ECONOMISTS	[X] MECHNICAL ENGINEERS	[X] SURVEYORS
[ ] BILOLOGOSITS	[X] ELECTRICAL ENGINEERS	[X] MINING ENGINEERS	[ ] TRAFFIC ENGINEERS
[X] CADD OPERATORS	[X] ENVIRONMENTALISTS	[ ] PHOGRAMMETRISTS	[ ] OTHER
[ ] CHEMICAL ENGINEERS	[X] ESTIMATORS	[X] PLANNERS: URBAN/REGIONAL	
[X] CIVL ENGINEERS	[X] GEOLOGISTS	[ ] SANITARY ENGINEERS	200 TOTAL PERSONNEL
[X] CONSTRUCTION INSPECTORS	[X] HISTORIANS	[X] SOILS ENGINEERS	
[X] DESIGNERS	[ ] HYDROLOGISTS	[ ] SPECIFICATION WRTIERS	
[X] DRAFTSMEN	[X] LABORER		

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERINGS IN PRIMARY OFFICE: _____

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

10a. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? Yes [X] No [ ]

NA

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML CONSULTANT QUALIFICATION QUESTIIONNAIRE".

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE?
NA		☐ 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 Is your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

[X] **YES** Description and Number of Projects:

Yes, Triad is experienced in Abandoned Mine Lands Remedation/Mine Reclamation Engineering. Triad has provided drilling, geotechnical, and surveying services for several different WVDEP AML projects. Those projects include the 2023 S3 Constract which consolidated 14 projects in Fayette and Greenbrier County. More detail about these projects is included in Section 16.

Triad has also worked with the WVDEP by providing drilling services under an open ended contract in Northern and Southern counties. The purpose of these geotechnical investations were to assist in the reclamation of construction projects. Services provided for these projects in various counties included soil borings, soil borings with standard penetration tests/split spooon sampling, Shelby tube sampling, rock borings, rock core borings, installation of casing, installation of piezometers, and conducting various other tests. Tests included Atterberg limits testing, sieve analysis, hydrometer analysis, unconfined compression, in-place density, standard Proctor compaction, temperature probe readings, float sink analysis, and various content analysis. Reports on the data collected from the field and laboatory activities were also provided.

12b. Is your firm experienced in Soil Analysis?

[X] **YES** Description and Number of Projects:

Triad was originally formed in 1975 as a geotechnical engineering firm, and our expertise in this discipline is superior. The combined education and professional experience of our staff provides our clients with cost-effective and practical solutions for the most difficult soil, rock and groundwater problems. Our clients include industrial and mining companies, governmental agencies, contractors, architects, engineers, developers, owners and commercial organizations. Geotechnical projects have included investigations for hospitals, churches, hotels, schools, shopping centers, communication towers, wind turbines, water and petroleum product storage tanks, coal and mineral processing facilities, landslides, bridges and highways, parks and recreation facilities, river docks and impoundments of all types.

Triad had over 70 projects in the year of 2024 that included soil analysis. Examples for some of those projects are included in Sections 15-19.

[ ] **NO**

12c. Is your firm experienced in hydrology and hydraulics?

[X] **YES** Description and Number of Projects:

Yes, Triad is experienced in hydrology and hydraulics. Triad has a team of professional personnel which provides civil engineering design services in a variety of markets including land planning, site development of residential subdivisions, commercial development, education (K-secondary), healthcare facilities, water/wastewater, landfills, reservoirs, and many other facets of land development. We can combine many other inhouse services, from surveying to construction inspection and testing, to provide a complete project from start to finish. Our goal is to design a cost-effective project that incorporates good engineering science, meets the local, state and federal regulations while exceeding our clients' expectations.

Triad provides drainage studies, flood plain analysis, stream restoration, reservoir rehabiliation/construction, LEED site design and consulting and certificiation processsing, and water conservation design. Triad has projects referencing this experience in Sections 15 & 19.

[ ] **NO**

12d. Does yout firm produce its own Aerial Photogprahy and Develop Contour Mapping?

[X] **YES** Description and Number of Projects:

Triad subcontracts for aerial photography. We have an established working relationship with an experienced company who provides the aerial photography. Triad also does develop contour mapping.

Triad's surveying professionals utilize an array of state-of-the-art geospatial technologies and software engines to process field data in an efficient manner that results in a high quality deliverable for our clients. All our survey work documents are completed and certified in accordance with applicable local, state and national standards. We frequently work with and for architects, other engineers, owners, developers, general contractors and other industry professionals.

We provide transportation corridor mapping, design level base mapping and topographic and planimetric survey mapping.

[ ] **NO**

12e. Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)

[X] **YES** Description and Number of Projects:

Yes, Triad has experience designing domestic waterline systems in WV.

Triad provides planning, design and construction administration for potable water systems ranging in size from relatively small line extensions to county-wide utility programs. Our dedicated staff of professional engineers and designers provide personal attention and put our client's interests first. They are knowledgeable in all federal and state regulations related to potable water systems, and their experience and expertise in working with funding agencies is unmatched.

Our staff members have designed numerous water distribution systems and water treatment plants for a wide variety of clients. We offer assistance and guidance in resolving problems while delivering high quality and innovative solutions through sustainable design. We can provide a turn-key project or serve in a limited role depending on the client's needs. Our background includes design of new facilities of varying magnitude, as well as system expansion and cost-effective rehabilitation of existing systems. We can provide operation and maintenance assistance as well as troubleshooting systems.

Consistent sources and quantities of potable water are crucial for the health of the population. You can depend on Triad's assistance in the development of a reliable potable water system to meet the needs of your community and its businesses.

[ ] **NO**

12f. Is your firm expereinced in Acid Mine Drainage Evaluation and Abatement Design?

[ ] **YES** Description and Number of Projects:

[X] **NO**

12g. Is your firm experienced in construction oversight?

[X] **YES** Description and Number of Projects:

Triad is experienced in construction oversight. Quality Assurance/Quality Control (QA/QC) construction monitoring services have been core specialties since Triad was founded in 1975. We maintain a staff of experienced construction inspectors and technicians who are certified by ACI, WVDOH, VDOT, MARTCP and numerous other local, state and/or nationally recognized organizations. Our growth has been the result of staff dedication, client satisfaction and significant repeat business from clients, many of whom have been with us for 25+ years. Triad will provide efficient, cost-effective services focused on safety and the construction quality your project deserves. Constuction observation and quality control testing has remained one of the main services lines that Triad has provided in our 50 years of service. More informaton is provided for these specific projects in Section 18.

[ ] **NO**

13a. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Hooper, Dave, W., Principle Engineer, PE**
Years & Type of Experience:	**36**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Mr. David Hooper brings more than 30 years of geotechnical engineering and project management experience to Triad Engineering, Inc., where he leads engineering project operations in North Central West Virginia and Western Pennsylvania, along with Energy projects for all of Triad's Regional operations. Mr. Hooper's specialties include geotechnical engineering assessments and design for transportation, public works, energy, and other public and private projects, project and client management, and personnel leadership to ensure contractual, schedule, and budgetary requirements are maintained. In addition, he supports multiple regions for project scheduling, staff mentoring, quality assurance, management of projects, and staff personnel to ensure contractual, schedule, and budgetary requirements. His recent experience includes geotechnical engineering and construction observation and material testing projects for operations in West Virginia, Pennsylvania, and Eastern Ohio. He has experience with WVDOH, PennDOT, Pennsylvania Turnpike Commission, MSHA, WVDEP, WV Conservation Districts, and various local government agencies and counties.	
EDUCATION (Degree, Year, Specialization)	
B.S., Civil Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State) **American Society of Civil Engineers**	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	
PE: MD, NY, OH, PA, WV	
13b. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Haynes, John J., Geotechnical & Drilling Practice Leader, PE**
Years & Type of Experience:	**35**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Mr. Haynes serves as the Senior Drilling Manager for Triad's drilling operations where he manages all drilling and sampling activities conducted by the firm's regional offices. Mr. Haynes previously served as a Project Geotechnical Engineer. Mr. Haynes' duties include design and implementation of the subsurface investigations, assignment of laboratory testing, approval of design drawings, development of technical specifications, and preparation of drilling and geotechnical engineering cost proposals and reports.	
EDUCATION (Degree, Year, Specialization)	
B.S., Civil Engineering & BS, Mechanical Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	
PE: WV, MD, IN, TN, KY, OH, NC	

13c. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Stawovy, Jeremi J., Project Engineer**
Years & Type of Experience:	**17**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Over thirteen years of experience in civil and site development projects, emphasizing geotechnical engineering and construction. Responsibilities have included geotechnical evaluations, including management of subsurface explorations, construction monitoring, settlement analysis, slope stability modeling, seepage analysis, foundation analysis, landslide repairs, well pads, horizontal directional drill construction, roadway improvements/repairs, and commercial/residential construction. Mr. Stawovy has extensive experience working for various public and private sector clients ranging from small-scale construction to large government projects.	
EDUCATION (Degree, Year, Specialization)	
B.S., Civil Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	

13d. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Kirk, Loyd, PS, CFS, Survey Practice Leader**
Years & Type of Experience:	**23**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Mr. Kirk is currently the Survey Practice Leader for the Scott Depot office of Triad. In this capacity, he is responsible for the supervision of the survey crews, overseeing the field work through drafting to the finished product delivered to the client, meeting with clients, and performing field work on large and complex projects. Mr. Kirk is experienced in construction layout, boundary and road work surveying, photogrammetric and topographic surveying. He has supervised and/or performed survey work on various types of work including surface mine surveying for coal mine facilities, site surveys and construction layout for landfill facilities, site surveys and right of way plans for WVDOH and NCDOT highway projects, and site surveys and construction layout for site development projects. Mr. Kirk has been involved in survey projects in several states including West Virginia, Kentucky, Ohio, Virginia, South Carolina and North Carolina. In his capacity, he is responsible for schedules, project budgets, and the overall coordination of all survey projects. He works with all levels of engineering staff, the overall project team, and the project owner to produce a quality work product which satisfies all project requirements.	
EDUCATION (Degree, Year, Specialization)	
A.S., Mining	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)	
West Virginia Society of Proessional Surveyors, NC Society of Professional Surveyors, & National Society of Proessional Surveyors	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	
PS: WV & NC; CFS: NC; OSHA 10	

13e. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Spiewak, Tyler, Survey Supervisor**
Years & Type of Experience:	**6**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	

Brief Explanation of Responsibilities

Mr. Spiewak is a Survey Supervisor for the Scott Depot office of Triad. In this capacity, he is responsible for field coordination of construction projects, quality assurance of survey practices in the field, collection and drafting of survey data, project and client coordination, revision of construction plans, and drafting completed field work. He works with all levels of engineering, construction staff and project owners. Mr. Spiewak is experienced in construction layout, boundary; both metes and bounds and PLSS (public land survey system), road work surveying, photogrammetric control and topographic surveying. He has supervised and/or performed survey work on various types of projects to include military construction projects with NATO partner nations, hydrographic impact surveys at iron ore mines, state sponsored large scale solar farms, site surveys and construction layout for hospitals and airports, construction layout for MNDOT highway projects, and site surveys and construction layout for land development projects. Mr. Spiewak has been involved in projects in several states including West Virginia, Ohio, Kentucky, Georgia, Tennessee, California, Minnesota, Wisconsin, Illinois and Indiana.

EDUCATION (Degree, Year, Specialization)

B.S., 2023, Science

MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)

PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)

13f. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Bell, Douglas, A., Survey Practice Leader**
Years & Type of Experience:	**8**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	

Brief Explanation of Responsibilities

Mr. Bell is the Survey Practice Leader for Triad's Morgantown office. In this capacity, he is responsible for the supervision of the survey crews, overseeing the field work through drafting to the finished product delivered to the client, meeting with clients, and performing field work on large and complex projects. Mr. Bell is experienced in construction layout, boundary and road work surveying, photogrammetric and topographic surveying. He has supervised and/or performed survey work on various types of projects, including surface and underground mine surveying for coal mine facilities, construction layout for residential and commercial projects, boundary surveys for residential, commercial, and public entities. In his capacity, he is responsible for schedules, project budgets, and the overall coordination of all survey projects. He works with all levels of engineering staff, the overall project team, and the project owner to produce a quality work product which satisfies all project requirements.

EDUCATION (Degree, Year, Specialization)

A.S., Forestry and Land Surveying Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)

WV Society of Professional Surveyors, PA Society of Professional Surveyors & National Society of Professional Surveyors

PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)

PS: WV PLS: PA

13g. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Criniti, James, "Bo", Civil Design Engineer, PE**
Years & Type of Experience:	**17**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Mr. Criniti is currently a Senior Engineer and is responsible for civil and surveying projects. He has participated in the design and management of numerous projects. These projects have included retail/commercial site preparation, airports, parking lots, buildings, retaining walls, foundations, sanitary structures, as well as boundary and topographic and photogrammetric surveys. Duties have included hydrologic and hydraulic analysis and design, erosion and sediment control plans, storm water management, field surveying, preparation of construction and as-built drawings, project specifications and preparation of various permit applications. Mr. Criniti also performs construction management, construction inspection, quality control testing, shop drawing review, project management, contract administration, and report preparation. He performs engineering calculations, studies, plans, reports and data analysis. Mr. Criniti assists in coordinating construction projects including conducting pre-bid, pre-construction and progress meetings, schedule review and pay request review and approval. He also assists in conducting interim and final inspections of construction projects to determine compliance with applicable laws, regulations, and specifications.	
EDUCATION (Degree, Year, Specialization)	
B.S., Civil Engineering	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	
PE: WV	
13h. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Hope, John, B., Field Services Manager**
Years & Type of Experience:	**35**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	
Brief Explanation of Responsibilities	
Mr. Hope is currently the Field Services Manager for the Scott Depot office of Triad. In this capacity he oversees the field staff, by handling calls from technicians on technical matters, staffing and scheduling and serving as the branch Radiation Safety Officer. Mr. Hope also keeps all records of inspections and calibrations. He assigns new jobs and lab work and writes Quality Control (QC) plans. Mr. Hope's duties include the completion and/or review and submission of required field reports for clients and owners.	
EDUCATION (Degree, Year, Specialization)	
WV State College	
MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)	
PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)	
WVDOH Certified Tech Training, Troxler 8 Hour Nuke Safety & Operation, Troxler Radiation Safety Officer Training, 40 Hour OSHA Training, MSHA Impoundment Inspector Training, USACOE-Contractor QC Training, WVDOT/DOH Potland Cement Inspector, ACI-Grade I Field & Lab Tech, MSHA Above Ground Hazard Trained, PCI Level I and II, etc.	

13i. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**McCabe, Jason, T., Project Manager**
Years & Type of Experience:	**17**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	

Brief Explanation of Responsibilities

Mr. McCabe has over 20 years of experience, specializes in the management and completion of environmental assessments, including Phase I and II ESAs; soil, groundwater, and waste characterization; site remediation; waste management planning; hazardous materials assessments; field operations oversight and documentation; construction monitoring; NEPA environmental assessments, and geophysical investigations. Additionally, Mr. McCabe's experience with NEPA-focused EAs includes federally funded transportation, housing, healthcare, and economic development/ redevelopment projects. Through his work with federal and private clientele in more than a dozen states, Mr. McCabe has an intimate familiarity with the operations, regulations, and special need for projects of all shapes and sizes, turning site specific challenges into project highlights.

EDUCATION (Degree, Year, Specialization)

B.S., Geology & Graduate Certificate, Geotechnics

MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)

PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)

PennDOT Certified Drill Inspector, USACE Construction Quality Management Certification, HAZWOPER 40-Hour/8-Hour Refresher

13k. PERSONAL HISTORY STATEMENT OF PRINCIPLES AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials).	
NAME & TITLE (Last, First, MI):	**Metz, Heather, A., Environmental Services Manager**
Years & Type of Experience:	**22**
Years of AML Related Design Experience:	
Years of Domestic Waterline Design Experience:	

Brief Explanation of Responsibilities

Triad SW Environmental Services Manager & Senior Environmental Scientist; has assisted WVDEP & USEPA at numerous WV SEMS sites; has performed regulatory file reviews, negotiated ROE agreements, field operations management, multi-media sampling, data analysis, HRS site scoring, and report generation; as LRS, has performed a variety of tasks for sites in the WV UECA, VRP and Brownfields programs (including preparation of VRP applications, agreements, sampling and analysis plans, extensive site characterization activities, risk evaluation, remedial actions, and report preparation).

EDUCATION (Degree, Year, Specialization)

B.S., 2001 - Environmental Science

MEMBERSHIP IN PROFESSIONAL ORGANIZATION(S) & REGISTRATION STATUS (Type, Year, State)

Air and Waste Management Association (AWMA)-Board Member and Treasurer
Society of American Military Engineers (SAME)

PROFESSIONAL LICENSE(S) (Type, State, Expiration Date)

WV Licensed Remedation Specialist (LRS), WV Monitoring Well Driller, HAZWOPER, OSHA 8 Supervisor

14. Provide a list of software and equipment available in the primary office which will be used to complete AML Design Services.
Each office maintains robust network infrastructure to support a wide range of technical functions, including CADD operations, hydrogeologic evaluations, water balance modeling, roadway design, stormwater management and surface water drainage. Triad also provides engineering design, stability analyses, risk assessment, survey data reduction, and mapping. These comprehensive, in-house, capabilities provide Triad with greater control over project schedules, quality, and costs—minimizing potential issues throughout all phases of a contract. Over the course of 50 years in business, Triad has evolved with equipment/technology and has managed to keep up to date with the latest equipment and software that is available to meet the needs of clients in every line of service. It is Triad's vision to meet the clients needs on every targeted project and to ensure prompt service, open communication, and high quality work.

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED FIRM OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
WV Board of Risk Management Charleston, WV	WV BRIM	To conduct surface and subsurface investigations for the purpose of determining if structures have been damaged by mine subsidence.	NA	NA
Artistic Cleaners Huntingon, WV	City of Huntington Huntinton, WV	Waste disposal, water quality evaluation and mitigation headings	NA	90%
U.S. Route 58 Vesta Design Build Project	VDOT Koerner Lane Purcellville, VA	Geotechnical drilling, boring inspection, logging, infiltration testing, and laboratory testing.	NA	80%
Flint Pigments-MU WV VRP Huntinton, WV	Marshall University Huntington, WV	Environmental Services - WV VRP-site characterization & remediation activities.	NA	95%
NOAA Area B Data Center, Fairmont, WV (Technology)	West Virginia High Technology Foundation, 1000 Galliher Dr., Fairmont, WV 26554	Civil Design	NA	10%

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
South Fence Stormwater Repairs, Morgantown, WV (Technology)	SI Group, 1000 Industrial Park Rd., Morgantown, WV 26501	Civil Design	NA	20%
Sheetz Remodel #182, Bridgeport, WV (Commercial)	Sheetz, Inc., 5700 6th Ave., Altoona, PA 16602	Civil Design	NA	30%
Exxon Bulk Terminal Hungtinton, WV	Intersection 215, LLC Huntington, WV	Waste disposal, water quality evaluation, mitigation	NA	5%
WVDOH District 1 Shopping Area Nitro, WV	WVDOH Charleston, WV	Waste Disposal, water quality evaluation	NA	75%
Service Wire Project Culloden, WV	ARCO Construction	Civil site design, including hydrological calculations, stormwater design, permitting, surveying, geotechnical investigation, drilling, construction layout, construction quality testing	NA	75%
TOTAL NUMBER OF PROJECTS: 10			NA	

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

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRM'S RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				Entire Project	Your Firm's Responsibility
Clifftop Strip Complex Winona, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included 14 borings, installation of 3 standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Clifftop (Road Fork) Drainage Clifftop, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included 2 borings, installation of 2 standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Crosier Road Portals Rainelle, Greenbrier County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included 5 borings, installation of 5 standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Lookout (Moore) Subsidence Clifftop, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included boring, installation of 1 standpipe piezometer, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Fayette Station Slide & Drainage Kaymoore, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included 4 borings, installation of 4 standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Keeney Creek Mines Winona, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included 5 borings, installation of 5 standpipe piezometer, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA

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

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRM'S RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				Entire Project	Your Firm's Responsibility
Royal Coal #5 Loadout Fayetteville, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included two (2) borings, installation of two (2) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Nuttallburg, South Bench Edmond, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included seven (7) borings, installation of seven (7) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Floyd Creek Highwalls & Drainage Clifftop, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included three (3) borings, installation of three (3) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
County Route 82 Portals Winona, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included four (4) borings, installation of two (2) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Winona Complex Winona, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included twenty-two (22) borings, installation of five (5) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Winona East Highwall & Drainage Winona, Fayette County, WV	Geotechnical and drilling exploration, and topographical survey in support of project design. The geotechnical and drilling exploration included eight (8) borings, installation of eight (8) standpipe piezometers, and a geotechnical report summarizing the findings. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA

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

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRM'S RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				Entire Project	Your Firm's Responsibility
Buffalo Creek Complex Thayer, Fayette County, WV	Topographical survey in support of project design. The topographic survey included the collection of field data: elevations, location of natural and man-made features, spot elevations, and providing CAD drawings.	WVDEP 601 57th Street SE Charleston, WV 25304	NA	NA	NA
Marion 10 South 1 Airshaft, Metz, WV	Construction Materials Testing & Inspection Services	Marion County Coal 3Q 2025 Resources, Inc., Jonny Cake Rd., Metz, WV 26585	2025	NA	NA
Westerman Bridge Replacement Thornton, WV	Geotechnical Investigation	Core Natural Resources, Inc., 275 Technology Drive Suite 101, Canonsburg, PA 15317	2025	NA	NA
2025 Quarterly Survey Services Philippi, WV	Survey Services	21550 Barbour County Hwy., Philippi, WV 26416	2025	NA	NA
Bovard Refuse Design, Bovard, PA	Environmental Services	Westmoreland Conservation District, 216 Donohoe Rd., Greensburg, PA 15601	2025	NA	NA

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED? (YES OR NO?
East Beckley Bypass Beckley, WV	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA		NA
Crawley Creek Road County Road Slide 3 Logan County, WV	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA		NA
US 52-Maher Slide Mingo County, WV	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA		NA
US 52-Stonecoal Slide Wayne County, WV	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA		NA
WV 37-Twelve Pole Creek Slide Wayne County, WV	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA		NA
8-acre Parcel Property Wood County, WV (Land Development)	Resource Consultants and Developers, Inc. 100 Star Ave., Parkersburg, WV 26101	NA	2022	Yes

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED? (YES OR NO?
WVU Parking Lots - Parking Area 1, Monongalia County, WV (Higher Ed)	West Virginia University Facilities Management 975 Rawley Ln., Morgantown, WV 26506	NA	2022	Yes
ADA Ramps, Holland Ave., Monongalia County, WV (Road, Highway, Bridge)	WVDOH Building 5 1900 Kanawha Blvd. E. Charleston, WV 25305	NA	2022	Yes
WVU Coliseum Addition, Monongalia County, WV (Higher Ed, Athletics)	WVU Department of Intercollegiate Athletics PO Box 0877, Morgantown, WV 26507	NA	2024	Yes
Flint Pigments-Tract A Huntington, WV (Waste disposal, Mitigation)	Huntington WV 0422, LLC Huntington, WV	NA	2025	NA
Poplar Fork Multifamily (Civil site design, stormwater/hydrology, permitting, surveying)	Meeks Realty Hurricane, WV	NA	2024	NA
South Bend Telecom Building (Civil site design, stormwater/hydrology)	American Electric Power (Indiana - Michigan Power) South Bend, IN	NA	2024	NA

18. COMPLETED WITH WITHIN THE LAST 5 YEARS ON WHICH YOUR FIRM HAS CONTSRUCTION OVERSIGHT ON PROJECTS

PROJECT NAME, TYPE AND LOCATION	NAME/TELEPHONE COMPANY CONTACT	ESTIMATED CONSTRUCTION COST	YEAR COMPLETED	CONSTRUCTED? (YES OR NO?
Galloway Shaft Taylor County, WV	Arhc Coal, Inc. Mark Spencer 304.457.1895	NA		Yes
Marion County Coal Resources Marion County, WV	Marion County Coul Resources Keith Vilsec 304.534.4735	NA		Yes
Meigs Mine Ponds Pomeroy, OH	Derek Chapman Meigs County, OH MCIWV	NA		Yes
Morgantown Municipal Airport Runway 18-36 Extension, Morgantown, WV (Airport)	Morgantown Municipal Airport, 100 Hart Field Rd., Morgantown, WV 26505	NA	2020	Yes
SLH Well Pad & AST PAD, Bridgeport, WV (Energy)	Arsenal Resources, 6031 Wallace Rd Extension Suite 200, Wexford, PA 15090	NA	2025	Yes

PROJECT NAME, TYPE AND LOCATION	NAME/TELEPHONE COMPANY CONTACT	ESTIMATED CONSTRUCTION COST	YEAR COMPLETED	CONSTRUCTED? (YES OR NO?
WDTN-28 (Energy)	CNX Resources, 1000 Consol Energy Drive, Canonsburg, PA 15317	NA	2025	Yes
Southern Alleghenies Biogas, Davidsville, WV (Energy)	Southern Alleghenies Biogas, LLC, 251 Valley View Dr, Davidsville, PA 15928	NA	2025	Yes

19. COMPLETED WORK WITHIN THE 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 COMPLETED	CONSTRUCTED? (YES OR NO?	FIRM ASSOCIATED WITH
Campbell's Creek Piezometer Installation	WVDEP 601 57th Street Charlesotn, WV 25304	NA	2025	NA	Alliance Consulting, Inc.
Lorgan Airport Underground Mine Fire Logan, WV	WVDEP 601 57th Street Charlesotn, WV 25304	NA	2024	NA	Alliance Consulting ,Inc.
AML Contract 6 Drilling Project	WVDEP 601 57th Street Charlesotn, WV 25304	NA	2024	NA	Civil Tech
Camden Wilson AML Drilling Project, Lewis County, WV (AML)	WVDEP Office of AML and Reclamation, 601 57th St. SE, Charleston, WV 25304	$20K (Drilling Services)	2020	Yes	E.L. Robinson Engineering, Inc.
FBI Clarksburg Office Building, Clarksburg, WV (Government)	Federal Bureau of Investigations, 1000 Custer Hollow Rd., Clarksburg, WV 26306	$40 K (Survey Services)	2020	Yes	Desbuild, Inc.
National Oceanic and Atmospheric Assn., AWHIPS Antennae, Fairmont, WV (Tech)	WV High Technology Foundation, 1000 Galliher Dr., Fairmont, WV 26554	$25K (Geotechnical Services)	2022	YES	March-Westin Co., Inc.

Signature:

Title: Controller/Treasurer

Printed Name: Tom Chandler

Date: 8/14/2025

AML and RELATED PROEJCT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp P=Personnel *	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.	Remaining Evaluation	Mine/Rufuse Fire Abatement	Subsidence Investigatio Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation , Replacement	Construction Inspection / Management	Water Treatment	Active / Passive Water Treatment Systems	Equipment/ Structure Removal	Stream Restoration	Geotechnical/Stability	Dave Hooper, PE	John Haynes, PE	Jeremi Stawovy	Lloyd Kirk, PS	Tyler Spiewak	James "Bo" Criniti, PE	John "JoBe" Hope	Heather Metz, LRS
Clifftop Strip Complex	C	See Project Profile	X		X	X				X							X	X	PM	P	P	P	P			
Clifftop (Road Fork) Drainage	C	See Project Profile	X		X	X				X							X	X	PM	P	P	P	P			
Crosier Road Portals	C	See Project Profile	X		X	X				X								X	PM	P	P	P	P			
Lookout (Moore) Subsidence	C	See Project Profile	X		X	X												X	PM	P	P	P	P			
Fayette Station Slide and Drainage	C	See Project Profile	X		X	X												X	PM	P	P	P	P			
Keeney Creek Mines	C	See Project Profile	X		X	X				X								X	PM	P	P	P	P			
Royal Coal #5 Loadout	C	See Project Profile	X			X												X	PM	P	P	P	P			
Nuttalllburg South Bench	C	See Project Profile	X		X	X												X	PM	P	P	P	P			
Floyd Creek Highwalls & Drainage	C	See Project Profile	X		X	X			X									X	PM	P	P	P	P			
County Route 82 Portals	C	See Project Profile	X		X	X				X								X	PM	P	P	P	P			
Winona Complex	C	See Project Profile	X		X	X				X						X		X	PM	P	P	P	P			
Winona East Highwall & Drainage	C	See Project Profile	X		X	X			X	X						X		X	PM	P	P	P	P			
Buffalo Creek Complex	C	See Project Profile	X			X				X						X			PM	P	P	P	P			
Artistic Cleaners	C	See Project Profile								X		X														P
Flint Pigments	C	See Project Profile								X		X														P
WVDEP Drilling for Northern Counties	C		X	X	X			X	X		X						X			P						
WVDEP Drilling for Southern Counties	C		X	X	X			X	X		X						X			P						
Service Wire Facility Expansion	C					X												X	P	P		P		P	P	
Poplar Fork Mutlfamily (aka Cottage Cout)	C					X																P		P		
South Bend Telecom Building	C					X																		P		
Winter Portals AML Suveying	C				X																	P				
Meigs County Mine Closure	C				X																				P	
Quinwood Coal Refuse	C							X												P						

* 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.

CERTIFICATE OF
Authorization

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virginia as a professional engineer for the noted firm, hereby certifies

TRIAD ENGINEERING, INC.
C00516-00

Engineer in Responsible Charge: BRADLEY A. REYNOLDS - WV PE 014842

has complied with section §30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period of:

January 1, 2024 - December 31, 2025

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE, PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL, AND SIGNED BY THE PRESIDENT OF SAID BOARD.

Scott E. Thomas Jr.

BOARD PRESIDENT

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS

Certificate of Authorization

Triad Engineering, Inc.

Scott Depot, WV

CERTIFICATE OF AUTHORIZATION # 25-5438

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with W.Va. Code §30-13A-20
The person or organization identified on this certificate is licensed to conduct professional surveying and mapping services in the State of West Virginia for the period

January 1, 2025 through December 31, 2025

This certificate is not transferable and must be displayed at the office location for which issued.

In witness whereof, I have put my hand, this 05 day of March 25

2025

Sefton R. Stewart, P.S., Chairman
Lantz G. Rankin, P.S., Member

James T. Rayburn, P.S., Secretary
Gary Facemyer, P.E, P.S., Member

Douglas C. McElwee, Esq. — Public Member

GREENMAN-PEDERSEN, INC.

- ATTACHMENT A
- ATTACHMENT B
- CERTIFICATIONS

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

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
AML-EOI Pre-Qualification for Consultants	**August 15, 2025**	**11-2537074**

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Greenman-Pedersen, Inc.	**58 Mission Way, Suite 201 Scott Depot, WV 25560**	**N/A**

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
(304) 507-8101	**1966**	Individual **CORPORATION** Partnership Joint-Venture	YES **NO**

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
58 Mission Way, Suite 201, Scott Depot, WV 25560 / (304) 507-8101 / James Simpson, PE

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Michael Buoncore, Director Steven Greenman, Director Patrick Kenneally, President Douglass Robb, Secretary Robert Hough, Treasurer	James (JD) Simpson, Executive Vice President, (304) 881-5225 John (Joey) Gallagher, Vice President (614) 395-4896

9. PERSONNEL BY DISCIPLINE

115 ADMINISTRATIVE	— ECOLOGISTS	13 LANDSCAPE ARCHITECTS	141 STRUCTURAL ENGINEERS
1 ARCHITECTS	— ECONOMISTS	54 MECHANICAL ENGINEERS	114 SURVEYORS
— BIOLOGIST	39 ELECTRICAL ENGINEERS	— MINING ENGINEERS	112 TRAFFIC ENGINEERS
50 CADD OPERATORS	28 ENVIRONMENTALISTS	27 PHOTOGRAMMETRISTS	13 GIS SPECIALISTS
— CHEMICAL ENGINEERS	0 ESTIMATORS	10 PLANNERS:	81 COATINGS ENG/INSPECTORS
203 CIVIL ENGINEERS	— GEOLOGISTS	URBAN/REGIONAL	34 DIVERS
429 CONSTRUCTION INSPECTORS	— HISTORIANS	1 SANITARY ENGINEERS	10 FIRE PROTECTION ENGINEER
— DESIGNERS	1 HYDROLOGISTS	— SOILS ENGINEERS	305 OTHER
— DRAFTSMEN		— SPECIFICATION WRITERS	

1781 TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 7
***RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.**

Total personnel number for Greenman-Pedersen, Inc., West Virginia operations is 51.

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
NAME AND ADDRESS: **N/A**	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No

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

YES Our survey crew chief JB Chambers has worked on multiple AML projects over his 30-year career. Most recently he has been working for CTL on projects in Monongalia & Barbour County.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects:_____

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Our firm employees non-professional engineers with experience and training and hydrology and hydraulics in the last seven years we have done several dozen highway projects related to small bridges and roadway warnings that require a hydraulic analysis and a hydrology study.

NO

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

YES GPI is the parent company of GPI Geospatial through GPI Geospatial we have capabilities for large scale arrow photography projects, using high-fidelity imagery, and LiDAR. We own our own equipment, including aircraft and unmanned aircraft as well as mobile units of ladder with experience in this type of mapping in recent mobile LiDAR projects, as well as multiple division of highways mapping.

NO

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

YES Description and Number of Projects:_____

NO

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

YES Description and Number of Projects:_____

NO

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Endicott, Danielle, Director of Survey	**N/A**	**<1**	**N/A**

Brief Explanation of Responsibilities

Ms. Endicott is an accomplished Land Surveyor and engineering technician with over 30 years of experience. Starting as a rodman and draftsman, while working through college and graduated with an associate degree in civil/Surveying Engineering Technology from West Virginia Institute of Technology. She received her first professional surveyors license in 1998 and has an extensive background in engineering and surveying includes highway design, cadastral/boundary retracement, geodetic control surveys, photogrammetric control surveys, construction layout and inspection, hydrographic surveys.

Her experience also includes providing Quality Assurance and Quality Control of construction plans before and during construction. Initial site visits to assess the conditions of the project including but not limited to degradation of bridge abutments, deck, piers and structural beams, condition of embankments and investigation of drainage systems. Estimate cost for labor, equipment and material for projects based on initial site visits. Create scope of work of data acquisition. Compile data into design files such as base mapping and existing surface files used for design of new construction. Drafting construction plans that represent design of new or rehabilitated structures and follow up with quality assurance and control during construction.

Extensive experience in the use of various surveying and civil engineering software packages such as Trimble Business Center, Autodesk Civil 3D, Microstation, Inroads, Power Inroads, OpenRoads Designer and Esri ArcGIS.

EDUCATION (Degree, Year, Specialization)

A.S., 1991, Civil/Surveying Engineering Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
West Virginia Society of Professional Surveyors	Professional Land Surveyor, West Virginia, 1983

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

Survey Equipment

1 Trimble X7 - Total Station/Scanner
5 Trimble TSC7 - Data Collector
9 Trimble Traverse – Kit Prism
4 Trimble TDL450H - External Radio
1 Trimble T10 Tablet - Data Collector
2 Trimble SX-12 - Total Station/Scanner
1 Trimble SX-10 - Total Station/Scanner
1 Trimble S9 0.5" DR HP Total Station -Total Station/Scanner
2 Trimble Optical Power Kit - Multi Battery Adapter
4 Trimble lunch Pale - Battery
4 Trimble Dini Level - Digital Level
6 Trimble GNSS R12i - GNSS
2 Trimble GNSS R12 - GNSS
1 Schonstedt GA-92XT - Metal Detector
1 Schonstedt GA-52CX - Metal Detector
1 Schonstedt - ADL35-2 - Magnetic Locator
2 Schonstedt - Magnetic Locator
1 Mifi Box - Netgear
1 DJI Drone - Mavic 3 ENT - FAA: FA39AR39FW
1 SkydioX10-69ux - Drone - FAA: FA3YCLEFK7
1 SkydioX10 – Controller

Various On- and Off-Road Vehicles

12 Various Dodge Ram 1500 4x4 Trucks
6 GMC Terrain SUVs
1 Silverado 1500 Truck
1 Ford Explorer SUV
2 Kawasaki ATV Can-Am SSR Defenders
2 Honda ATVs
2 Kawasaki Sure-Trac Trailers

Various Hardware and Software Including:

AirData
Autodesk AEC Collection
Bentley E365
Bitdefender - Endpoint Security with MDR
Bitdefender - XDR Identitiy Sensor
Bluebeam
CivilGEO HECRAS 1D
Drone Deploy
ESRI AGOL Credits
ESRI ArcGIS 3D Analyst Desktop Concurrent
ESRI ArcGIS Desktop Advanced Concurrent
ESRI ArcGIS Desktop Basic Concurrent
ESRI ArcGIS Spatial Analyst Desktop Concurrent
HydroCAD 90 and 200-Nodes
InfoTech
InRoads
Lumion
MDX Curved & Straight
Microsoft M365 E5
MicroSurvey StarNET
Microstation
MIDASoft MIDASoft - Midas Civil w 1 CGM +1 GSD & Design+
OnStation
Oracle Primavera P6 Professional Project Management
PDQ
Pix4Dmapper
PTC MathCAD
Skydio 3D Scan
Skydio Enterprise License
SlashNext - Enterprise Plus
TopoDOT
Transoft - AutoTURN Pro USL
Transoft GuideSIGN Team
Trimble Business Center
Trimble Centerpoint RTX
Veeam

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
WVDOH Walnut Street Bridge, Survey, Monongalia	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Surveying Services	60,259.00	100%
Miller Residence Survey Stake Out for Ad, Survey	Rich Gannon Construction, Inc. - 3 Dogwood Lane, Huntington, WV 25701	Surveying Services	10,000.00	90%
Morgantown Util Bd NSR Monitoring Plan, Survey	Morgantown Utility Board- 278 Green Bag Road, Morgantown, WV 26501	Surveying Services	47,703.00	50%
Sam Miller Boundary Survey	Matt Miller - 1316 12th Street, Huntington, WV 25701	Surveying Services	1,800.00	80%
Matt and Carol Miller Survey, Huntington	Matt Miller - 1316 12th Street, Huntington, WV 25701	Surveying Services	4,800.00	100%
CNE - Poured Walls Stakeout, Survey	CNE Poured Wall, Inc. - 300 4th Ave, Gallipolis, Ohio 45631	Surveying Services	3,912.00	ON CALL
East Huntington Cable Stay Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	537,400.00	100%
WVDOH Terradon-Feagans Garage Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	123,217.00	30%
WVDOH Contract Administration Assistance, Inspection, Charleston, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	354,954.00	ON CALL
Carter Br./Brooks St. IC, Inspection	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	5,677,389.00	0%
2023-2024 WVDOH Coatings Inspection, Statewide	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	$3,285,232.00	ON CALL
2023-2024 WVDOH Statewide Construction Inspection Contract	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	6,249,790.55	ON CALL
Gimlet Hollow OP & James River Rd OP CEI Inspection	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	3,933,248.11	ON CALL
Rand Draining Project, Inspection	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	1,677,531.04	20%

NOTE: THIS LIST IS A REPRESENTATION OF PROJECTS FROM OUR WEST VIRGINIA OFFICE, NOT FIRMWIDE

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
D1 Materials Testing Assistance, Inspection	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Inspection Services	415,042.00	ON CALL
Corridor H - Parsons to Davis, Highway	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Highway Design Services	40,961,229.00	50%
Flegal Dam & Reservoir Trail Bridges, Design	City of Morgantown, West Virginia, 389 Spruce Street. Morgantown WV, 26505	Bridge Design Services	168,713.00	100%
Mash Fork Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	455,511.00	95%
Wiant Hollow Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	618,222.00	100%
Rick Howard Sanders Memorial Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	555,694.00	60%
WVDOH, William C Brown Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	753,305.00	95%
WVDOH, Hardy Co 23/12 - VA State line, H, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Design Services	732,873.00	100%
North Valley Drive Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	515,998.00	95%
Junior Avenue Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	342,970.00	95%
Upper Kanawha Valley Bridge Bundle, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	3,182,937.00	90%
Management Support - Technical Support, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Design Services	750,000.00	ON CALL
WVDOH Camp Creek Bridge, Design, Mercer County	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	691,009.00	95%
WVDOH, WV 9 Ridge Road Roundabout, Berk, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Roadway Design Services	1,645,048.00	15%

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
WVDOH Cpl Thomas Bennett Memorial Bridge, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	1,349,432.00	ON CALL
Tyler Creek Slab, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Design Services	760,257.00	45%
US Army SPC-4 Tommy Joe Belcher Memorial, Design	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	755,841.00	15%
I-77 Belle Ramp over Piedmont & RR, Bridge, Charleston, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	712,013.00	100%
Williamstown Marietta Interstate Bridge, Bridge, Williamstown, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	1,266,209.00	ON CALL
WVDOH - Mash Fork Bridge Post Design, Bridge, Mercer County, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	66,223.00	0%
WVDOH - Camp Creek Bridge Post Design, Bridge, Mercer County, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	Bridge Design Services	33,929.00	0%

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
WVDEP- 2023 AML Contract N3, Survey, Morgantown, WV	Survey Services	West Virginia Department of Environmental Protection - 601 57th Street SE, Charleston, WV 25304	12/5/2025	Not Known	875,006.00
Hackers Creek Bridge, Bridge, Morgantown, WV	Bridge Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	3/31/2028	Not Known	68,915.02
WVDOH, New Creek Bridge,Bridge, Mineral Co., New Creek, WV	Bridge Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	6/27/2025	Not Known	122,028.00
WVDOH Pepsi Cola Bridge, sub to TRC, Design, Princeton, WV	Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	6/30/2025	Not Known	62,433.00
WVDOH Wickham Avenue Bridge, Design, Princeton, WV	Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	12/31/2027	Not Known	123,171.00
WVDOH Claysville Bridge, Design, Claysville, WV	Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	2/28/2025	Not Known	69,374.00
WVDOH, Prickett Creek W-Beam Bridge, Design, Meadowdale, WV	Design Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	12/31/2026	Not Known	33,242.00
WVDOH Northern Connector +1 CMI, Inspection, Beckeley,WV	Inspection Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	3/28/2025	Not Known	200,000.00
Bristol Bridge EB & WB, Inspection, Bristol, WV	Inspection Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	4/30/2025	Not Known	1,351,971.30
Mountain View to Gilbert CI Services, Inspection, Gilbert, WV	Inspection Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	6/27/2025	Not Known	1,063,105.00
Butchers Run Truss, Survey, Morgantown, WV	Survey Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	12/31/2026	Not Known	46,573.56
WVDOH Deep Valley Bridge Replacement, Survey, Morgantown, WV	Survey Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	12/30/2025	Not Known	51,008.00
I-81 Welcome Centers, Survey, Morgantown, WV	Survey Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	8/1/2025	Not Known	162,282.00
WVDOH Winner Circle Bridge, Survey, Hurricane, WV	Survey Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	2/4/2026	Not Known	77,662.00
HRG - Weirton Site Survey, Survey, Weirton, WV	Survey Services	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	8/25/2025	Not Known	50,228.00

NOTE: THIS LIST IS A REPRESENTATION OF PROJECTS FROM OUR WEST VIRGINIA OFFICE, NOT FIRMWIDE

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)
West Virginia US 35 Design-Build QAM, Inspection, Henderson, WV	West Virginia Department of Transportation 5707 MacCorkle Ave SE, Charleston, WV 25304	10,604,700.19	2021	N/A
Robert C. Byrd Bridge - District 2, Inspection, Huntington, WV	West Virginia Department of Transportation 5707 MacCorkle Ave SE, Charleston, WV 25304	749,847.00	2023	N/A
Nutter Boundary Survey, Survey, Coalton, WV	Danny Nutter - 820 Willow Lane, Harrisburg, WV 27075	1,850.00	2025	N/A
Sandy Creek Church Boundary Survey, Survey, Bruceton Mills, WV	Sandy Creek Congregational Church - 21 Shady Grove Road, Bruceton Mills, WV 26525	2,500.00	2025	N/A
CNE - Poured Walls Stakeout, Survey Services, Point Pleasant, WV	CNE Poured Wall, Inc. - 300 4th Ave., Gallipolis, OH 45631	3,912.00	2025	N/A

NOTE: THIS LIST IS A REPRESENTATION OF PROJECTS FROM OUR WEST VIRGINIA OFFICE, NOT FIRMWIDE

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
Morgantown Industrial Park Access Road, Morgantown, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	181,656.00	2024	N/A	HNTB Corporation
Flat Rock Slab Surveys, Survey, Gladesville, WV	West Virginia Department of Transportation - 5707 MacCorkle Ave SE, Charleston, WV 25304	38,703.00	2025	N/A	TRC Engineers, Inc.

NOTE: THIS LIST IS A REPRESENTATION OF PROJECTS FROM OUR WEST VIRGINIA OFFICE, NOT FIRMWIDE

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.

GPI stands ready to support the WVDEP Abandoned mine lands program with over fifty (50) staff members in West Virginia. Our survey crews are equipped with the latest technology and equipment in the hands of experienced staff with over 150 years of combined experience. Mr. Chambers has experience related to AML projects in identifying portals, mining ruins and works.

20. The foregoing is a statement of facts.

Signature:_____ Title: Executive Vice President

Date: 8/15/2025

Printed Name: James D. Simpson, P.E.

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	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	Active/Passive Water Treatment Systems	Eq;uipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Danielle Endicott, PS						
WVDEP 2023 AML Contract	C		x			x			x		x		x				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 "B"

State of West Virginia

Certificate

I, Mac Warner, Secretary of State of the State of West Virginia, hereby certify that

GREENMAN-PEDERSEN, INC.

a corporation formed under the laws of New York filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on September 26, 2000.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID:6WV0F_W43MF

Given under my hand and the Great Seal of the State of West Virginia on this day of

October 01, 2024

Mac Warner

Secretary of State

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS

Certificate of Authorization

Greenman-Pedersen, Inc.

Babylon, NY

CERTIFICATE OF AUTHORIZATION # 25-5830

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with W.Va. Code §30-13A-20
The person or organization identified on this certificate is licensed to conduct professional surveying and mapping services in the State of West Virginia for the period

January 1, 2025 through December 31, 2025

This certificate is not transferable and must be displayed at the office location for which issued.

In witness whereof, I have put my hand, this 19 day of March 25

2025

Sefton R. Stewart, P.S., Chairman
Lantz G. Rankin, P.S., Member

James T. Rayburn, P.S., Secretary
Gary Facemyer, P.E, P.S., Member

Douglas C. McElwee, Esq. — Public Member

MARKOSKY ENGINEERING GROUP, INC.

- ATTACHMENT A
- ATTACHMENT B
- CERTIFICATIONS

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

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
AML-EOI Pre-Qualification for Consultants	August 20, 2025	25-1844227

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
The Markosky Engineering Group, Inc.	3689 Route 711, Ligonier, PA 15658	N/A

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
724-238-4138	1999	Individual [Corporation] Partnership Joint-Venture	YES [NO]

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE

3689 Route 711, Ligonier, PA 15658 / 724-238-4138 / Ben Stufft, PG / 3 Design Personnel

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Mark A. Markosky, CEO; Matthew Walerysiak, COO; Jeremiah Fritz, CFO	

9. PERSONNEL BY DISCIPLINE

22	ADMINISTRATIVE	—	ECOLOGISTS	—	LANDSCAPE ARCHITECTS	4	STRUCTURAL ENGINEERS
—	ARCHITECTS	—	ECONOMISTS	—	MECHANICAL ENGINEERS	—	**SURVEYORS**
2	**BIOLOGIST**	—	ELECTRICAL ENGINEERS	—	**MINING ENGINEERS**	1	TRAFFIC ENGINEERS
2	**CADD OPERATORS**	8	ENVIRONMENTALISTS	—	PHOTOGRAMMETRISTS	31	OTHER
—	CHEMICAL ENGINEERS	—	ESTIMATORS	1	PLANNERS: URBAN/REGIONAL		
13	**CIVIL ENGINEERS**	1	**GEOLOGISTS**	—	SANITARY ENGINEERS		
14	CONSTRUCTION INSPECTORS	3	HISTORIANS	—	SOILS ENGINEERS		
20	DESIGNERS	—	HYDROLOGISTS	—	SPECIFICATION WRITERS	122	TOTAL PERSONNELL
—	DRAFTSMEN						

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 12

***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 N/A

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
N/A		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No
		_____ Yes _____ No

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

YES Description and Number of Projects: Passive treatment system design/construction oversight, wetland and stream mitigation design/permitting, hydrogeologic evaluations, aquifer testing for hydraulic properties/geochemical analysis, overburden test hole drilling, acid-base accounting, and special handling plan development for over 25 projects.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: _____

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: Over 100 hydrology and hydraulics reports for infrastructure projects including: bridge/culvert replacements fill slope encroachments, oil/gas facilities, stream and wetland mitigation projects, stormwater and AMD treatment basin routing and analysis, passive AMD treatment design.

NO

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

YES Description and Number of Projects: _____

NO

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

YES Description and Number of Projects: Development of drilling schedules for the installation of piezometer nests/monitoring well networks to characterize hydraulic and geochemical properties, calculation of mine pool volumes/recharge rates, interpretation of historic mine and published geologic mapping, water supply impact evaluations, and aquifer testing.

NO

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

YES Description and Number of Projects: Design of passive treatment systems including aerobic wetlands, vertical flow ponds, anoxic limestone drains, and manganese oxidation beds, including site layout, pollutant loading, and cost analysis of these systems. Utilization of AMDtreat to analyze system costs, including system operation, maintenance and life cycles.

NO

G. Is your firm experienced in construction oversight?

YES Description and Number of Projects:
Transportation inspection services throughout the Commonwealth of Pennsylvania. We have provided Construction Inspection services to PennDOT, PA Turnpike Commission, and other public, private and municipal clients. Environmental monitoring services during and after construction for erosion and sedimentation controls and BMPs.

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:
Stufft, Benjamin, PG Environmental Science Assistant Department Manager	6	15	0

Brief Explanation of Responsibilities

Manage the permitting and design of surface/underground mines (coal & non-coal), AML reclamation sites, bridge/culvert replacements, roadway improvements, oil and gas transmission lines, as well as the permitting and design for community and non-community water supply projects. Provide environmental services, including wetland delineation field investigations, report preparation, waterway permit applications, surface coal mine permit applications, and coal mining activity permit applications for the Pennsylvania Department of Environmental Protection (PA DEP) and U.S. Army Corps of Engineers (USACE). Preparation of National Environmental Policy Act (NEPA) documents, categorical exclusion evaluations (CEE), Section 4(f)/6(f) evaluations, and technical report writing.

EDUCATION (Degree, Year, Specialization)

B.S. Geology, Indiana University of Pennsylvania, 2009

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
National Groundwater Association	PG-005270, 2016, 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:
Reynolds, Madison Senior Environmental Scientist	0	3	0

Brief Explanation of Responsibilities

Responsible for conducting all manner of threatened and endangered species surveys, terrestrial and aquatic surveys, including freshwater mussel surveys, terrestrial habitat evaluations, stream surveys, macroinvertebrate sampling, and wetland delineation field investigations. Preparation of technical reports, National Environmental Policy Act (NEPA) documents, categorical exclusion evaluations (CEE), Pennsylvania Department of Environmental Protection (PA DEP) and U.S. Army Corps of Engineers (USACE) permit applications.

EDUCATION (Degree, Year, Specialization)

M.S. Wildlife Biology and Conservation, University of Alaska Fairbanks, 2019
B.S. Animal Science, Cornell University, 2011

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:
Geisel, Jacob Environmental Scientist	0	3	0

Brief Explanation of Responsibilities

Responsible for conducting all manner of environmental services, including wetland delineation field investigations. terrestrial habitat surveys, threatened and endangered species surveys, habitat management design and implementation, and invasive species management. Preparation of National Environmental Policy Act (NEPA) documents, categorical exclusion evaluations (CEE), Pennsylvania Department of Environmental Protection (PA DEP) and U.S. Army Corps of Engineers (USACE) permit applications.

EDUCATION (Degree, Year, Specialization)

B.S. Biology, Indiana State University, 2016

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:
Pasko, Jaynie Environmental Scientist	0	2	0

Brief Explanation of Responsibilities

Responsible for conducting all manner of environmental services, including wetland delineation field investigations. stream identification and classification surveys, terrestrial habitat surveys, and water sample collection. Preparation of National Environmental Policy Act (NEPA) documents, categorical exclusion evaluations (CEE), Pennsylvania Department of Environmental Protection (PA DEP) and U.S. Army Corps of Engineers (USACE) permit applications.

EDUCATION (Degree, Year, Specialization)

B.S. Biology, Ecology, Conservation & Environmental Biology, Indiana State University, 2023

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

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

Ecobot Cedar CT8X2 Tablet/Trimble DA2 GNSS Receiver, Trimble GeoXH 6000, AutoCAD, AMDTreat, HecRAS, HydroCAD, Solonist water level meter (300 ft), Horiba U-52 multi-meter, Hach DR900 multi parameter portable colorimeter, Hach FH950 portable velocity meter

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
WVDOH Davis Lick Culvert No. 1 (Culvert design / Randolph County, WV)	WV Division of Highways 1900 Kanawha Blvd, East Charleston WV 25305	Engineering design	Unknown	89% (Markosky tasks)
WVDOH Hazy Creek LWC (Culvert design / Raleigh County, WV)	WV Division of Highways 1900 Kanawha Blvd, East Charleston WV 25305	Engineering design	Unknown	22% (Markosky tasks)
WVDOH So Side CSX Ramp (Culvert design / Kanawha County, WV)	WV Division of Highways 1900 Kanawha Blvd, East Charleston WV 25305	Engineering design	Unknown	40% (Markosky tasks)
WVDOH US250 Interchange (Culvert design / Ohio County, WV)	WV Division of Highways 1900 Kanawha Blvd, East Charleston WV 25305	Engineering design	Unknown	8% (Markosky tasks)

TOTAL NUMBER OF PROJECTS:	TOTAL ESTIMATED CONSTRUCTION COSTS: $
48	greater than $100M

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
WVDEP 2023 AML Contract N3 Monongalia & Preston Counties, WV	Environmental resource studies, NEPA documentation, and permitting	West Virginia Department of Environmental Protection	December 2026	$8.5M	$926K
I-80 Sections A22 &A23 Mercer County, PA	Environmental resource studies, E&S design, H&H, and traffic counts	PennDOT District 1-0	October 2026	$15M	$449K
I-80 Strattanville Reconstruction Clarion County, PA	Environmental resource studies, E&S design, H&H, and traffic counts	PennDOT District 10-0	August 2027	$15M	$279K
PA 403 Hooversville AMD Somerset County, PA	Hydrogeologic evaluation and documentation	PennDOT District 9-0	December 2025	$5M	$21K
Mon-Fayette Expressway PA51 to I376 4-lane Expressway Allegheny County, PA	Environmental management and permitting	Pennsylvania Turnpike Commission	In progress	$2B	$5.2M

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)
D-2315 Wheeling Valley AML Reclamation Harrison County, OH	Ohio Department of Natural Resources 2207 Reiser Ave. S.E. New Philadelphia, OH 44663	$10,000,000	2024	No
Coder Bridge Bridge Replacement Jefferson County, PA	PennDOT District 10-0 2550 Oakland Ave. Indiana, PA 15701	$3,000,000	2023	Yes
Eastwood Lane Bridge Bridge Replacement Boone County, WV	West Virgina Department of Highways 1340 Smith Street Charleston, WV 25301	$1,500,000	2022	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS CONSTRUCTION OVERSIGHT ON PROJECTS				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Laurel Valley Transportation Improvement Roadway and Bridge Westmoreland County, PA	PennDOT District 12-0 825 N. Gallatin Ave. Uniontown, PA 15401	$7,000,000	2024	Y
US 6219 Improvement Improvement Roadway and Bridge Somerset County, PA	PennDOT District 9-0 1620 N. Juniata St. Hollidaysburg, PA 16648	$19,000,000	2021	Y
Environmental Assistance Mainline West Roadway and Bridge Allegheny County, PA	Pennsylvania Turnpike Commission 2200 N. Center Ave. New Stanton, PA 15672	$3,000,000	2022	Y
GRP 111-22-7135-1 (SR 19 A81) Pedestrian Walkway and Structure Allegheny County, PA	PennDOT District 11-0 45 Thomas Run Rd. Bridgeville, PA 15017	$5,000,000	2023	Y
SR 837 A43 Roadway Allegheny County, PA	PennDOT District 11-0 45 Thomas Run Rd. Bridgeville, PA 15017	$7,000,000	2025	Y

19. 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
PA 36 Mill Run Bridge Bridge Replacement Blair County, PA	PennDOT District 9-0 1620 N. Juniata St. Hollidaysburg, PA 16648	$146K (Markosky portion)	2024	Y	SAI Consulting Engineers
Margaret Road Intersection Intersection Improvement Armstrong County, PA	PennDOT District 10-0 2550 Oakland Ave. Indiana, PA 15701	$368K (Markosky portion)	2024	Y	SAI Consulting Engineers
I-80 Mercer County Roadway Mercer County, PA	PennDOT District 1-0 255 Elm St. Oil City, PA 16301	$250K (Markosky portion)	2022	N	Whitman, Requardt & Associates
I-80 North Fork Bridges Bridge Replacements Jefferson County, PA	PennDOT District 10-0 2550 Oakland Ave. Indiana, PA 15701	$296K (Markosky portion)	2024	N	Michael Baker International

20. 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.

21. The foregoing is a statement of facts.

Signature: David A Cutlip

Printed Name: David A. Cutlip

Title: Vice President Environmental Services

Date: 8/15/2025

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personnel *	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/Nitigation/ Replacement	Construction Inspection/Management	Water Treatment	Active/Passive Water Treatment Systems	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Benjamin Stufft, PG	Amanda Brown, PE	Madison Reynolds	Jacob Geisel	Jaynie Pasko	
D-2315 Wheeling Valley	C	Y	X									X							M		P	P		
Coffelt Reclamation	C	Y	X									X							M		P	P		
Jug Run Clogged Stream Lands	C	Y	X	X	X							X							M		P	P	P	
Motz Highwall Reclamation	C	Y	X									X							M		P	P	P	
SR 691 AMD Reclamation	C	Y	X	X	X							X							M		P	P	P	
WVDEP 2023 AML Contract N3	C	Y	X	X	X					X		X							M		P	P	P	
Mon-Fayette Expressway	C					X					X		X				X		P	P				
PA 403 AMD Slide Repair	C											X							P					

* 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 "B"

CERTIFICATE OF Authorization

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virginia as a professional engineer for the noted firm, hereby certifies

THE MARKOSKY ENGINEERING GROUP, INC.
C04725-00

Engineer in Responsible Charge: MARK A. MARKOSKY - WV PE 020219

has complied with section §30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period of:

January 1, 2024 - December 31, 2025

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE, PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL, AND SIGNED BY THE PRESIDENT OF SAID BOARD.

Scott E. Thomas Jr.

BOARD PRESIDENT