



EXPRESSION OF INTEREST

To provide

**Professional
Design Services**

for the

Ed Gower

Highwall #2 Project

Upshur County

West Virginia

DEP16433

Prepared for the

**West Virginia Department
of Environmental Protection**

**Office of Abandoned Mine Lands and
Reclamation**

CTL Engineering of West Virginia, Inc.

1091 Chaplin Road

510 C Street

Morgantown, WV 26501

South Charleston, WV 25303

09/15/15 10:01:38

WV Purchasing Division

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September 11, 2015

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

Re: RFQ #DEP 16433
Expression of Interest
Design Engineering Services Proposal
Ed Gower Highwall #2

Gentlemen:

CTL Engineering of WV, Inc. is very pleased to present this proposal to provide design engineering and related services for the West Virginia Abandoned Mine Lands and Reclamation Program. With over 80 years in the business, we feel our firm can provide the professionals and facilities the State of West Virginia is looking for.

CTL has evolved into a recognized leader in the Abandoned Mine Lands Engineering Design and Investigation field. We offer the services necessary to provide a non-subcontract, quality product to support your program. Our capabilities include laboratory facilities, drilling rigs, surveying systems, design equipment, and a qualified staff. We have 12 Professional Engineers, five of which are registered in West Virginia and have direct Special Reclamation and AML Design Experience. Our in-house disciplines of professionals include: Civil & Mining Engineers, CAD Designers, Surveyors, Geologists, Hydrologists and Biologists. We are experienced in completing more than 50 projects annually that require aerial mapping, support surveying with GPS, and final contouring for design.

Our in-house ability reaches beyond simply being a reclamation design firm. We also have extensive contract administration and management experience with the procedures of the state of West Virginia. Our invoicing procedures and accounting software has been accepted, used, and audited by various state agencies.

CTL's primary staff has over 125 years of experience with mine reclamation engineering on both a national and international level. Our qualifications and facilities are unsurpassed when it comes to Mine Reclamation Design. With offices in Charleston and Morgantown, we can effectively respond to any AML Design tasks throughout West Virginia. In addition, we have six full time design teams available to complete design projects. Our corporation and individual staff members have extensive experience relative to mine and refuse reclamation, mine and refuse fire elimination, site stabilization design, portal seal design and drainage control structures. The Ed Gower Highwall #2 Project is similar in scope

to many of the reclamation design projects we have successfully completed. Attached to this proposal are numerous examples of similar projects successfully designed and completed.

We sincerely appreciate the opportunity to submit this proposal to you for consideration. Should you have any questions or need additional information, please contact our office.

Respectfully submitted,

CTL Engineering of West Virginia, Inc.

A handwritten signature in black ink, appearing to read "Royden L. Loucks". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Royden L. Loucks
Director Business Development





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

State of West Virginia
 Centralized Expression of Interest
 02 - Architect/Engr

Proc Folder: 114035

Doc Description: Expression of Interest Ed Gower HW #2 DEP16433

Proc Type: Central Contract - Fixed Amt

| Date Issued | Solicitation Closes | Solicitation No | Version |
|-------------|------------------------|-------------------------|---------|
| 2015-08-12 | 2015-09-15 13:30:00 | CEOI 0313 DEP1600000006 | 1 |

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:

CTL Engineering of West Virginia, Inc.
 1091 Chaplin Road
 Morgantown, WV 26501
 (304) 292-1135

FOR INFORMATION CONTACT THE BUYER

Beth Collins
 (304) 558-2157
 beth.a.collins@wv.gov

Signature X

FEIN # 55-063-1834

DATE 9/11/2015

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

| INVOICE TO | | SHIP TO | |
|---|--|--|--|
| ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV25304 US | | ENVIRONMENTAL PROTECTION OFFICE OF AML&R 601 57TH ST SE CHARLESTON WV 25304 US | |

| Line | Comm Ln Desc | Qty | Unit Issue |
|------|---------------------------------|-----|------------|
| 1 | EOI Engineering Design Services | | |

| Comm Code | Manufacturer | Specification | Model # |
|-----------|--------------|---------------|---------|
| 81100000 | | | |

Extended Description :

*Dates of Service are estimated for bidding purposes only.

| | | | |
|---------------|--------------------------------|---|------------------------------|
| DEP1600000006 | Document Phase Final | Document Description Expression of Interest Ed Gowe r HW #2 DEP16433 | Page 3 of 3 |
|---------------|--------------------------------|---|------------------------------|

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. Application is made for 2.5% vendor preference for the reason checked:

Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,

Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,

Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,

2. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

3. Application is made for 2.5% vendor preference for the reason checked:

Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

4. Application is made for 5% vendor preference for the reason checked:

Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,

5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,

6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:

Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.

Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: CTL Engineering of West Virginia, Inc.

Signed: _____

Date: September 11, 2015

Title: President

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: CTL Engineering of West Virginia, Inc.

Authorized Signature: _____ Date: Sept. 11, 2015

State of West Virginia

County of Monongalia, to-wit:

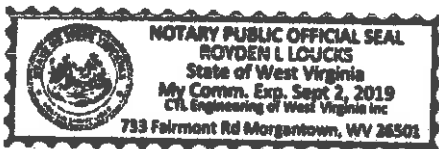
Taken, subscribed, and sworn to before me this 11 day of September, 2015.

My Commission expires September 2, 2019.

AFFIX SEAL HERE

NOTARY PUBLIC

Royden L. Loucks
Purchasing Affidavit (Revised 07/01/2012)



CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; 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.

CTL Engineering of West Virginia, Inc.

(Company)



Patrick E. Gallagher, President

(Authorized Signature) (Representative Name, Title)

(304) 292-1135 / (304) 296-9302 / September 11, 2015

(Phone Number) (Fax Number) (Date)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEP16433

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)

- | | |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> 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.

CTL Engineering of West Virginia, Inc.

Company



Authorized Signature

September 11, 2015

Date

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

Corporate Qualifications

CTL Engineering, Inc.

Experts in:

Transportation

Building Development

Manufacturing

Telecommunication

Energy

CTL takes "ownership" in the projects we are assigned. Our dedication to success has served as a catalyst for building long standing relationships with our clients. Our clients continue to use CTL for their engineering needs because they know we provide nothing short of the highest quality.

For more information on any of our products or services please visit us on the Web at www.ctleng.com



- **87 Years of Engineering Expertise**
- **Equipment and Personnel to Fully Man 8 Survey Crews**
- **9 Geotechnical Drilling Rigs**
- **Employee Owned Company**

CTL Engineering, Inc. is a full service consulting engineering, testing, inspection, and analytical services company. Established in 1927 and formerly known as Columbus Testing Laboratory, CTL focused mainly on soils, foundation engineering, and construction testing and special inspections. The successes, experience, equipment, and expertise gained in these areas led to a natural expansion into the metallurgical, non-destructive testing, mining, roofing, and environmental service industries. CTL Engineering, Inc. now has over 200 employees including registered professional engineers, geologists, environmental engineers/scientists, chemists, technicians, surveyors, and design staff. CTL Engineering is an employee owned

company that has the necessary personnel, experience, equipment, and qualifications to provide services in the following disciplines: Geotechnical Engineering, Environmental Services, Civil Site Design, Site Planning, Observation and Testing of Construction Materials and Processes, Mechanical and Metallurgical Analysis, Roofing Design and Inspection, and Structural Steel and Product Testing.

CTL Engineering, Inc. is headquartered in Columbus, Ohio. CTL also operates 10 branch offices throughout Ohio, West Virginia, and Indiana.



Corporate Qualifications

CTL Engineering of West Virginia, Inc.



Gateway Development Site: I-79 Exit 155

As part of CTL Engineering, Inc., CTL Engineering of West Virginia, Inc. was founded in 1981 giving us more than 30 years in the state. Our office locations in South Charleston and Morgantown enable CTL to easily provide our services for projects throughout the state as a whole. With approximately 50 employees distributed between our two West Virginia locations, we are well suited to handle projects of all sizes. Our West Virginia staff also includes 5 professional engineers and two professional surveyors.

CTL Engineering of West Virginia, Inc. provides total civil site design for development projects throughout West Virginia. These designs include site layouts, utility design and interconnections, stormwater management design, parking and roadway design, as well as permit preparation and submittal. CTL will work with the project architects, owners, and all involved parties to play our part in bringing your project to fruition.

Qualified Team

- **5 Professional Engineers with diverse backgrounds including geotechnical engineering, civil engineering, and environmental engineering**
- **Skilled surveying staff equipped with the most up-to-date equipment and GPS units**
- **Extensive experience working with Federal, State, and private entities**
- **30+ Years of working in West Virginia**
- **Working knowledge/understanding of the states geology & geography allowing us to provide custom solutions—we don't just pull plans from a book**

SERVICES AVAILABLE

Civil Site Design
Surveying/Mapping
Geotechnical Engineering
Construction Observation
Materials Testing
Site Layout
Project Management & Compliance

Client

Our clients are our livelihood, and therefore, we make it our personal objective to achieve 100% client satisfaction on every project regardless of size or scope.

Teamwork

Teamwork is a necessity. Not only from an interdepartmental perspective but also from an external perspective. It is imperative that we work together with architects, owners, and any other stakeholders when taking on a project.

Listen

In order to provide our clients with the most appropriate solutions to meet their needs, we LISTEN. By listening to our clients needs and asking the right questions we are able to clearly identify what is needed to take on a given project in the most efficient manner possible.

For more information on any of our products or services, please visit us on the Web at www.ctleng.com.



Analytical Chemistry

- Organics
- Metals
- Liquid and Solid Fuels
- Soil and Water
- Oils and Sludge
- Solid & Hazardous Wastes
- Construction Materials

Computer Technology

- Drafting Services
 - AutoCad
 - Digitizing
 - Microstation
- Software Development
 - Internet & Intranet
 - Application Software

Construction Administration

- ODOT LPA Projects
- County & Municipal Projects
- Daily On-Site Inspections
- Owner's Representative

Construction Services

- Floor Flatness
- Soils, Concrete, Asphalt, Masonry, Fireproofing, and Steel
- Earth and Concrete Dams
- Pavements for Streets and Airports
- Pre and Post Construction Inspection
- Embankments, Fill, and Cut

Environmental

- Phase I & II ESAs
- RCRA Closure & Site Remediation
- Asbestos/Lead/Mold Surveys
- Abatement Design/ Monitoring
- Wetlands Delineation, Permitting & Mitigation
- Endangered Species/ Ecological Surveys
- Stormwater Management
- Water Resource Engineering
- Underground Storage Tank Management per BUSTR
- Hydrogeologic Studies & Aquifer Characterization

Existing Structure Evaluation

- Delamination Determination
- Bridges/Buildings
- Sonic Velocity Testing
- Half Cell Potential Testing

Forensic Science

- Roofing Failures
- Building Failures
- Legal Testimony
- Product Liability

Forensic Investigations

- Landslide, Soil and Foundation Failures
- Accident Reconstruction

Geotechnical

- Site Selection
- Pavement Design (including CBR Study)
- Foundation Analysis & Design
- Embankment & Earth Dam Analysis
- Slope Stability Analysis
- Subsurface Exploration - Drilling Services

Ground Penetrating Radar

- Concrete Inspection & Evaluation
- Bridge Inspection
- Utility Detection and Mapping

Materials Testing

- Concrete
- Aggregates
- Soils and Rock
- Clay & Masonry Products
- Bituminous Materials
- Petrographic Studies
- Concrete & Asphalt Mix Designs

Metallurgy

- Metallography
- Failure Analysis
- Fracture Analysis
- Corrosion Studies
- Tensile and Hardness
- Application Recommendations

Mining Engineering

- Mine Plan Design
- Permit Preparation
- Refuse Disposal Design
- Mine Reclamation Design
- Environmental Monitoring
- Subsidence Investigation
- Drainage Control Structures

Nondestructive Testing & Inspection

- Level II Services
- Ultrasonic Inspections
- Liquid Penetrant Inspections
- Magnetic Particle Inspections

Pavement Management

- Budgeting
- Prioritization
- Deterioration Rates
- Condition Assessment
- Maintenance & Rehabilitation Strategies
- Network Needs & Long Range Goals

Product Testing

- Calibration
- Design Analysis
- Safety Evaluation
- Hydrostatic Testing
- Mechanical and Physical Property Testing
- Load and Strength Testing

Roofing Engineering & Building Envelope Services

- Infrared & Nuclear Testing
- Air/Water Infiltration
- Quality Control
- Roof Surveys Evaluation
- Design & Construction Administration

Roof Management Systems

- Budgeting
- Prioritization
- Deterioration Rates
- Condition Assessment
- Maintenance & Rehabilitation Strategies

Security & Safety Systems

- Design
- Construction
- Paging Systems
- Video Surveillance
- Intrusion Detection
- Card Access Control
- Audio Visual Solutions
- Digital Video Recording

Site/Civil Engineering

- Commercial Land Development
- Infrastructure Planning
- Residential/Community Planning

Surveying & Mapping

- Topographic Mapping Development
- Property Surveying & Boundary Determination
- Global Positioning System

Telecommunication Services

- Design
- Construction
- Existing Structure Analysis & Maintenance
- Lighting Systems
- Inventory & Warehousing

Welding & Quality Control

- QA/QC Programs
- Certified Welding Inspection
- Welding/Brazing Qualification
- Procedure Development

OFFICE LOCATIONS

2860 Fisher Road
Columbus, OH 43204
 Phone: (614) 276-8123
 Fax: (614) 276-6377

4343 Saguaro Trail
Indianapolis, IN 46268
 Phone: (317) 295-8650
 Fax: (317) 295-8395

3085 Interstate Parkway
Brunswick, OH 44212
 Phone: (330) 220-8900
 Fax: (330) 220-8944

3902 New Vision Drive
Fort Wayne, IN 46845
 Phone: (260) 482-4503
 Fax: (260) 482-2002

633 High Street
Minford, OH 45653
 Phone: (740) 820-8355
 Fax: (740) 820-5698

510 C Street
So. Charleston, WV 25303
 Phone: (304) 746-1140
 Fax: (304) 746-1143

102 Commerce Drive
Wapakoneta, OH 45895
 Phone: (419) 738-1447
 Fax: (419) 738-7670

1091 Chaplin Hill Road
Morgantown, WV 26501
 Phone: (304) 292-1135
 Fax: (304) 296-9302

2105 Schappelle Lane
Cincinnati, OH 45240
 Phone: (513) 722-8665
 Fax: (513) 834-6650

100 Central Plaza N
Canton, OH 44702
 Phone: (330) 994-1590

Sachina Engineering
 407 "B" Block
 SNS Arcade, Airport Road
Bangalore, India
 560017
 011-91-80-526-8615



▶ **CTL Engineering's in-house staff provides a full array of services, with support from our Site/Civil Department, including mapping and surveying services.**

Full Site Layout Design including:

- Topographical Mapping Development
- Global Positioning Systems (GPS) Services
- Aerial Mapping Layout & Control
- Construction Layout
- Wetlands Delineation / Flood Plain Determination & Certification
- Property Survey & Boundary Determination
- Micrometer Leveling



Services include:

- Commercial Land Development
- Residential / Community Planning
- Infrastructure Planning & Design
- Pavement Design and Management
- Conceptual Designs / Presentations
- Recreational Resort / Facility Planning
- Erosion & Sediment Control Design
- Storm Water Management Systems
- Preliminary Cost Estimates / Feasibility Analyses
- Oil & Gas Pad and Pipeline Layout, Design, Survey, & Permitting
- As-Built Surveys and Drawings
- Remediation Plans for AML & Emergency Programs
- Permitting for all Project Types
- Site Development, Utilities, and Appurences





▶ **CTL Engineering maintains a full service, in-house surveying and mapping team, which has extensive experience in performing most common surveying needs.**

CTL Engineering has the professional staff and the latest equipment to support eight (8) full survey crews. Our equipment includes a Global Positioning System and robotic surveying instruments which gives us an added dimension to our surveying and mapping capabilities.

We have performed surveying and mapping on many of our civil/site projects and have supplied construction stakeout and monitoring for many of our clients.

Professional Services:

- Property Surveying and Boundary Determination
- Topographic Mapping Development
- Aerial Mapping Layout and Control
- Gas Midstream Development and Construction Surveys
- Construction Layout
- Settlement Plate Monitoring
- Micrometer Leveling
- Flood Plain Determination and Certification
- Wetland Profiling

Project Synopsis

- Residential Subdivision Layout
- Commercial Development Layout
- Access Road and Parking Lot Layout
- Bridge Construction Layout and Monitoring
- Elevation Certificates (FEMA)
- Property Survey Projects
- Storm Water Surveillance Mapping
- Water Body Sounding Studies





▶ **CTL Engineering has experienced engineers, geologists, and mining technicians to provide the expertise to insure successful mining operations.**

We provide abandoned mine land reclamation design and project management, mine subsidence evaluations and remediation plans, hydraulic and hydrology studies, hydrogeologic evaluations, mine permitting, pre-blast surveys, pre/post-mining surveys, and coal reserve studies.

The CTL Mining Engineering Group coordinates with our drilling services and various testing departments to provide a full scope of services to the mining industry. Our laboratories are certified to perform the water and overburden analysis prescribed by federal regulatory programs.

CTL Engineering provides drainage control structure design to comply with the regulatory requirements for controlling and treating site damage. Exploration equipment and remote video camera monitoring are used by CTL Engineering to prepare accurate maps for reclamation, subsidence stabilization measures, and mine closures.

We have experienced mechanical and metallurgical engineers on staff to provide mine equipment evaluation and consultation services. CTL Engineering is a proven source for accurate and dependable technical information.

CTL Engineering Mining Services Include:

- Subsidence Investigations and Stabilization Designs
- Abandoned Mine Reclamation Design
- Permit Preparation
- Mine Design Plans
- Refuse Disposal Plans
- Environmental Monitoring
- Coal, Water, and Overburden Analysis
- Drainage Control Structure Design
- Failure Analysis
- Legal Testimony
- Passive Treatment System Design





Soil Permeability Testing

▶ **CTL Engineering's Geotechnical Department routinely performs subsurface investigations and soil and rock testing. We prepare engineering reports, make recommendations regarding foundation and construction techniques, and perform other geotechnical services, as dictated by a given project.**

Drilling Services:

CTL Engineering owns and operates its own fleet of drill rigs. Our rigs are capable of Hollow Stem Augering, Rotary Core drilling and Direct Push Sampling. CTL is able to perform in house energy transfer calibrations on all of its automatic drive hammers. In fact, CTL calibrates many of our competitors' drive hammers as well.

CTL has continuously owned and operated drilling equipment since the 1970's. We have the equipment and experience to perform just about any geotechnical or environmental drilling project you may have.

Analytical Laboratory:

Our soils laboratory has been accredited by AMRL since 1999. The lab has consolidometers, triaxial and direct shear apparatus, permeability devices, soil compaction, soils classification equipment, and other laboratory testing equipment. We routinely perform testing on undisturbed as well as remolded soil samples. We also provide strength and durability testing services on rock samples.

Geotechnical Services:

- Complete Subsurface Exploration Study
- Foundation Analysis
- Pile, Pier, and Caisson Analysis & Inspection
- Embankment & Earth Dam Analysis
- Slope Stability Analysis
- Settlement Analysis
- Pavement Design
- Rock & Mineral Testing
- Hydrogeologic Studies
- Field and Laboratory Testing of Soils/Rock
- Legal Testimony
- Dynamic Pile Testing

CTL Engineering routinely provides subsurface investigations on the following:

- Roads and Bridges
- Airport Terminals, Runways, and Taxiways
- Water/Wastewater Treatment Facilities
- Hospitals, Parking Garages, Higher Education, and PK-12 School Buildings
- Energy Facilities
- Telecommunication Towers
- Commercial, Retail, and Industrial Facilities



Drilling in Rough Terrain



Drilling on Flat Terrain



In-Situ Remediation



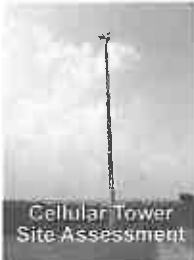
Underground Storage Tank Removal



Invasive Species Control



Friable Asbestos Pipe Insulation



Cellular Tower Site Assessment



Wetland/Stream Mitigation & Monitoring

CTL has been providing Environmental Services since 1987 and has successfully completed over 7,100 projects of varying complexities for a diversified clients.

Our clients includes Governmental agencies, Universities, Private Banks, Developers, Communication Tower, Pipeline and Oil & Gas Exploration Companies, etc. Our years of experience have made us aware of the regulatory and technical challenges our clients face when environmental issues arise.

Our clients have come to appreciate our ability to balance regulatory requirements while maintaining projects' feasibility and continuity. With multiple office locations and a knowledgeable staff of geologists, environmental scientists/engineers, wetland scientists, industrial hygienist, and certified HazMat professionals, we can provide a diverse range of environmental services to our local and regional clients. Whether our clients need a Phase I ESA or a full-scale remediation project, CTL Engineering's Environmental Department is the single source for your environmental needs.

Additional Environmental Related Services:

Real Estate Related Services

- Phase I and II ESA's
- Transaction Screenings
- FCC/NEPA Section 106 Reviews

Building Evaluation Services

- Asbestos Hazard Evaluations
- Asbestos Abatement Design/Monitoring
- Lead-Based Paint Surveys
- Indoor Air Quality Assessments
- Mold Testing and Remediation

Ecological Services

- Stream, Wetlands & Jurisdictional Waters of the U.S. - Assessment & Delineation
- 404/401 Wetland Permitting
- Wetland/Stream Mitigation and Monitoring
- Threatened & Endangered Species Habitat Research and Surveys

Underground Storage Tank Services

- UST Removal & Closure
- BUSTR Tiers 1, 2 & 3 Evaluations
- Remedial Investigations and Corrective Actions

Geophysical Surveys

- Ground Penetrating Radar (GPR) survey to detect utilities and orphan USTs.
- Resistivity Testing of soil for grounding system designs.

Hydrogeologic Services

- Soil Borings & Subsurface Evaluations
- Ground Water Investigations
- Monitoring Well Installation
- Soil & Ground Water Remediation
- Groundwater Mapping/ Modeling
- Storm Water Pollution Prevention Plans (SWPPP) Preparation, Design, and Inspections

Permitting/Compliance

- NPDES Permitting Support
- Solid-Waste Landfill Permitting
- Permit to Install/Operate (PTI & PTO)
- Compliance with Permit Conditions

Waste Management Services

- Hazardous & Non-Hazardous Waste Characterization and Disposal
- Spill/ Discharge Response Plans
- Effluent Sampling & Analysis
- RCRA Planning and Closure
- Spill Prevention Control & Countermeasure Plans (SPCC)

Transportation Related Services

- Environmental Screening
- CE Documentation Preparation
- BUSTR Site Assessment
- Ecological Investigations



▶ **CTL Engineering is a leader in providing analytical services to the construction industry.**

We maintain a staff of experienced personnel and accurate equipment to guarantee dependable results. We evaluate all types of construction materials. Additionally, CTL Engineering can prepare and test Portland cement and bituminous concrete mixes for optimization studies to insure the proper mix design for specific jobs.

CTL Engineering offers petrographic examination of construction materials. These specialized microscopic evaluations allow us to closely evaluate concrete quality and determine the causes and extent of failures in concrete, in addition to potential future performance.

In addition to the standard ASTM tests of strength, absorption, dimensions unit weights, etc., CTL Engineering provides several specialty tests on concrete block and brick, including the fire rating test, specified by the BOCA, and efflorescence testing required by many architectural firms.

CTL Engineering also provides complete and thorough analysis of clay products.

CTL Engineering provides complete testing of the following:

Aggregates

- Component Analysis (sand, gravel, limestone) - Department of Transportation
- Filter Sand - Environmental Protection Agency (EPA)
- Railroad Ballast - American Railroad Engineering Association
- Rip-Rap - U.S. Soil Conservation Service

Soils

- Classification
- Compaction Parameters
- Permeability Tests

Concrete

- Mix Designs
- Mix Verification Tests to verify strength, air content, consistency, and yield of concrete
- Compression Tests
- Flexural and Split Tensile Strength Tests
- Modulus of Elasticity
- Creep Testing

Asphalts

- Mix Designs
- Nuclear Gauge Calibrations Extractions and Grading
- Core Testing and Density of Strength

Clay-brick, Pipe & Tile

- Compressive Strength
- Absorption
- Freeze-thaw
- Efflorescence
- Dimensional Analysis
- Acid Resistance

In addition to the standard tests that are required by specification, we perform specific tests on construction materials as dictated by the needs of the client.



▶ **CTL Engineering's Construction Administration Services include On-Site Daily Inspections**

Federal, State, and Locally funded Construction Projects require a high level of administration and quality control to meet the project's demands. The Counties and Municipalities, through ODOT's LPA Program, as well as private Owners, Developers, and Contractors have selected CTL Engineering for Construction Administration, knowing that we have the experienced staff to be accurate, dependable, and perform these services in a timely manner. Our experienced engineers, inspectors, and technicians are your partners in construction. We help in completing these projects successfully a meeting the specific project requirements.

CTL Engineering's qualified construction inspectors will observe and inspect your construction project and complete the necessary daily documentation required by the Federal, State, and Local funding agencies participating in the project.

CTL Engineering also provides in-house testing services such as concrete, asphalt, and sub-grade compaction, as well as daily on-site inspection services.

CTL Engineering provides the following Construction Administration Services:

- Conduct Pre-Construction Conference
- Project Team Coordination
- Field Reports & Construction Documents' Administration
- Field Engineering and Inspections
- Material Certification and Shop Drawing Reviews
- Progress Meetings and Schedule Tracking
- Payments and Reimbursements
- Change Order Reviews
- Prevailing Wage Compliance
- EEO/DBE Contract Requirements
- Project Closeout Activities

CTL Engineering's On-Site Inspector provides and/or participates in the following Daily On-Site Inspection Services:

- Pre-Construction Conference
- Prepare Field Inspection & Quantities Reports
- Prepare Construction Documentation & provide to Construction Administrator
- Field Engineering in conjunction with Construction Administrator
- Observe & verify materials being used for the project
- Observe, identify and notify Construction Administrator of deficiencies
- Provide Construction Administrator with monthly quantities for payment preparation
- Material Testing, i.e., compaction, concrete, asphalt, etc.

Project Management Plan

Our approach to the *Ed Gower Highwall #2 Project* will be similar to other CTL AML highwall remediation, drainage and site stabilization projects. The Project Management Plan we have developed for these sites are as follows:

- The project manager will be solely responsible for expedient and accurate completion of each phase of the individual projects performed under this contract. He will review the project sites and discuss the specific scope of work for the project with the project representative from the WVDEP. A cost proposal will be prepared, in accordance with contract unit rates, based upon an estimate of manpower, equipment, and laboratory needs.
- CTL will then mobilize a fully equipped survey crew to set survey control and map the project sites. Permanent control monuments will be established to ensure that the construction contractor can tie into the necessary baselines. The project manager will supervise the surveying tasks and provide budgetary control for this portion of the work.
- A geotechnical investigation shall be performed if deemed necessary to determine mine pools and perform slope stabilization analysis in order to optimize grading design and stabilize slide zones on site. This investigation shall be performed with a focus on safety to insure the safety of the local inhabitants and dwellings as well as the safety of the drilling and geotechnical personnel.
- Should field conditions dictate that additional work or major modifications are required, the project manager will contact the WVDEP representative immediately to confirm the changed conditions.
- Following completion of the surveying, field investigation, and any material sampling, the analytical design work will begin. The Project Manager and Engineer will review the project data, evaluate the feasible alternatives and prepare a preliminary set of construction documents. The documents will include at a minimum:
 1. A site map indicating existing conditions;
 2. A tax map overlay with the parcels identified that may be impacted by the proposed design;
 3. Proposed grading plans, including excavation, for stabilizing slide zones, including safely dewatering and excavation of any portal sites;

4. Design plans and details for optimum mine seals and bat gates relevant to the site;
 5. Provide Sedimentation and Erosion Control Plan
 6. Site Profiles;
 7. Cross Sections;
 8. Drainage systems and control structures, with details;
 9. Revegetation plans;
 10. Soil amendment plans;
 11. Survey control points;
 12. Miscellaneous Site details.
- CTL will also provide all necessary data for NPDES permits including S&E Control Plans as required for the site construction and if deemed necessary, perform environmental assessments.
 - In addition to preparation of the above-described drawings, a complete set of specifications will be prepared and outlined to describe in detail the scope and methods of work to be accomplished. An estimate of construction costs and the design calculations will also be submitted to the WVDEP for review and future reference.
 - Following the submission of the construction documents, a project design review meeting will be coordinated with the WVDEP, CTL, and appropriate individuals to review the proposed plans.
 - Recommendations for plan revisions will be discussed and implemented, as necessary, into the final design documents. Upon completion, all final documents, drawings, plans and specifications will be forwarded to the WVDEP for bidding purposes.
 - Construction observation will be provided during the construction phase of the projects
 - At the request of the WVDEP, CTL will provide construction observation personnel.

Our Project Manager and/or Engineer will coordinate the pre-bid and pre-construction conferences with the WVDEP to address any questions and supply the necessary survey control data. Periodic inspections may be conducted by our Project Manager, as deemed necessary by the WVDEP, to address specific problems that arise during construction. A report will be prepared by CTL following each of these meetings detailing the findings, conclusions, recommendations, and responses to pertinent questions.

Project Scope / Experience Reference

Ed Gower Highwall #2

DEP16433

Project Scope of Work

To provide drawings, specifications, and engineering design services and prepare construction documents for the following general design items:

1. Clearing and grubbing of site.
2. Design surface water ditches where appropriate to control runoff.
3. Design appropriate mine seals, and subsurface drains
4. Eliminate existing highwalls by backfilling and regrading with materials available onsite, or designated borrow area sites nearby.
5. Design new and upgrade existing access roads, and culverts.
6. Design or recommend off-site areas for disposal of unsuitable materials.
7. Condition, stabilize, and re-vegetate disturbed land.

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

AML & Relevant Project Experience *(2008 – 2015)*

HIGHWALLS

- Anderson Highwalls, WVDEP
- Peninsula Highwalls, WVDEP
- St. Clair Portals, WVDEP
- Collins Mining, ODNR
- Miller Mining, ODNR

OPEN PITS

- Shinn's Run Portals, WVDEP
- Jones Trucking, ODNR
- General Clay #1 & #2, ODNR

OPEN MINE SHAFTS

- Kennel Mine Closure, MDE, AMLD
- Frostburg North Closure, MDE, AMLD
- Zilman Closure, MDE, AMLD

REFUSE PILES

- Hopewell Church & AMD, WVDEP
- Ream Refuse Pile, WVDEP
- Williams Refuse Pile, Private
- Harrison Power Plant, Allegheny Power



MINE SUBSIDENCE

- Fairmont Subsidence, WV DEP
- Lower Consol Road MDE, AMLD
- Terra Haute Airport, IN AML
- Farmington UMC, WV DEP Emergency
- Morningside Baptist, WV DEP Emergency
- Eccles Subsidence, WV DEP
- McArthur Subsidence, WV DEP
- Mark Kempner, NJ Private
- WV BRIM
- OMSIUA

MINE DRAINAGE/STREAM RESTORATION

- Wolfden Stream Restoration, MDE, AMLD
- George's Creek Sealing Project, MDE, AMLD
- St. Clair Portals, WV DEP
- Aarons Run, MDE, AMLD
- Deckers Creek, WVDEP

LANDSLIDES

- Douglas Avenue Landslide, MDE, AMLD
- Schramm Landslide, MDE, AMLD
- Gordon Landslide, MDE, AMLD
- East Franklin Landslide, MDE, AMLD
- Cheat Neck Landslide, WV DEP
- McCourt Landslide, ODNR
- Caldonia Hill Slope Stability, MDE, AMLD

WATER SUPPLY REPLACEMENT

- Douglas Avenue Stormwater System Repair, MDE, AMLD
- Bald Knob & Potomac Hollow Water Investigations, MDE, AMLD
- Pee Wee Hill Supply Design, MDE, AMLD
- Pee Wee Will Water Feasibility Study, MDE, AMLD
- Fairview Water Feasibility, WV DEP
- Tioga Water Feasibility, WV DEP

MORGANTOWN (ANDERSON) PORTALS & HIGHWALLS DEP15609



MINE PORTALS, HIGHWALLS & FOREIGN MATERIALS

CTL Engineering Inc.

Monongalia County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**

Project Background

The site consisted of dangerous highwalls, seven or more open or partially open portals and a dangerous scrap yard with potentially dangerous materials.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following services and design:

- Geotechnical drilling for mine pools
- Surveying
- Clearing & Grubbing Plan
- Mine Seals
- Diversion & Drainage for total site
- Dewater , excavate and seal all portals
- Refuse Reclamation & Removal of all foreign material
- Revegetation Plan including soil cover
- Sedimentation & Erosion Control Plans



Client / Contact

WV DEP-AML&R

101 Cambridge Place

Bridgeport, WV 26501

Design Completion Date

2013

Estimated Construction Cost

\$350,000

HOPEWELL CHURCH REFUSE & AMD DEP 16074



MINE PORTALS, COAL REFUSE & MINE DRAINAGE

CTL Engineering Inc.

Preston County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**
- **Natural Stream Design**

Project Background

The site consisted of refuse, open portals and mine drainage with impounded water, collapsed mine portals. Foreign materials were present throughout site.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following services and design:

- **Geotechnical drilling for mine pools**
- **Surveying**
- **Clearing & Grubbing Plan**
- **Mine Seals**
- **Diversion & Drainage for total site**
- **Dewater , excavate and seal all portals**
- **Refuse Reclamation & Removal of all foreign material**
- **Revegetation Plan including soil cover**
- **Sedimentation & Erosion Control Plans**



Client / Contact
WV DEP-AML&R
101 Cambridge Place
Bridgeport, WV 26501
Design Completion Date
2014

SHINNS RUN PORTALS & AMD

***MINE PORTALS, COAL REFUSE,
HIGHWALLS & MINE DRAINAGE***



CTL Engineering Inc.

Shinnston, Harrison County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**
- **Natural Stream Design**

Project Background

The site consisted of multiple open and collapsed mine portals and highwalls. Requires access road to implement reclamation. Divert mine flow and stabilize streambanks on both sides of Shinns Run. Debris and foreign material on site to be disposed. Mine seals required on both sides of Shinns Run.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Provide clearing & grubbing plan
- Design for access road
- Design grading plan to excavate, dewater & mine seals for all portals on site
- Design plan for streambank stabilization
- Diversion channels, ditches, underdrains to carry water off site
- Conditioning and revegetation of all disturbed areas



Shinnston (Shinns Run) Portals & AMD Project
DEP15235
01/03/2011

Client / Contact

**WV DEP-AML&R
209 South Main Street
Philippi, WV 26416**

Design Completion Date

April 2012

Estimated Project Cost

\$ 59,000

REAM REFUSE PILE DEP15004

REFUSE PILE REMEDIATION & DRAINAGE

McDowell County, West Virginia



CTL Engineering Inc.

CTL Professional Services

- Surveying
- Geotechnical
- Civil Site Design
- Construction Documents

Project Background

Project includes two refuse piles, one about 25 acres, brick building, concrete foundations, retaining walls, and coke ovens. One pile needed to be stabilized to keep from eroding into the creek.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Design grading plan for all refuse areas.
- Design drainage control channels, ditches and underdrains to carry water safely off site
- Provide plan to demolish and dispose of hazardous equipment and facilities.
- Provide plan for reclamation and revegetation of all disturbed areas



Client / Contact

WV DEP-AML&R
601 57th Street
Charleston, WV 25304

Design Completion Date

On-Going 2011

Estimated Construction Cost

\$400,000

PENINSULA HIGHWALL #1 & #2

DEP 14233



CTL Engineering Inc.

HIGHWALL & SUBSIDENCE RECLAMATION – MINE SEALS

Morgantown, Monongalia County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**

Project Background

This site contained 1,800 LF of vertical to sloughed highwalls 15 to 25 feet high, 7 partially of totally collapsed mine portals, 1 open mine portal, subsidence depressions behind the portals and water present at or flowing from the portals.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Access road into the site
- Wet seal 2 portals
- Regrade face of 2 portals
- Riprap channel and additional channel to carry water off site
- Backfill of highwalls and subsidence areas
- Restoration of golf path asphalt
- Conditioning and revegetation of all disturbed areas



Client / Contact

**WV DEP-AML&R
601 57th Street
Charleston, WV 25304**

Design Completion Date

November 2009

Estimated Construction Cost

\$219,000

ST. CLAIR PORTALS DEP 14233



MINE PORTALS, COAL REFUSE, HIGHWALLS & MINE DRAINAGE CTL Engineering Inc.

Morgantown, Monongalia County, West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**
- **Natural Stream Design**

Project Background

The site consisted of coal refuse, acid mine drainage with impounded water, collapsed mine portals and highwalls. 17 portals were found along the highwall bench. Three impoundments of approximately 70,000 sq.ft. had water flowing at 300 gpm with a pH value of 3.1 and iron >10 mg/l. A 35' to 45' high refuse pile was in the middle of the site as well as scattered refuse throughout the site.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Excavation and wet seal of at least 17 mine portals
- Dewater three impoundments
- 2000 LF of stream reconstruction
- Regrade and cover of coal refuse and spoil areas on mine bench
- Drainage control channels to carry water off site
- Backfill of highwalls using spoil material to original contour
- Conditioning and revegetation of all disturbed areas



Client / Contact

**WV DEP-AML&R
601 57th Street
Charleston, WV 25304**

Design Completion Date

March 2010

Estimated Project Cost

\$1,500,000

CHEAT NECK (LENHART) LANDSLIDE DEP14233

LANDSLIDE, MINE PORTALS & MINE DRAINAGE



CTL Engineering Inc.

Morgantown, Monongalia County West Virginia

CTL Professional Services

- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**

Project Background

Drainage from two collapsed deep mine portals located behind the Lenhart residence created a small landslide. The slide measured about 50' wide and 80' long and the toe was within 20' of the residence and 10' of the LP gas tank.

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- **Regrade and or removal of the slipping material**
- **Excavation, dewatering and wet seal of each deep mine portal**
- **Drainage control channels to carry water off site**
- **Conditioning and revegetation of all disturbed areas**



Client / Contact

**WV DEP-AML&R
601 57th Street
Charleston, WV 25304**

Design Completion Date

June 2009

Estimated Construction Cost

\$175,000

MARYLAND DEEP MINE CLOSURES

DEEP MINE SEALS / BAT GATES & SITE RECLAMATION



CTL Engineering Inc.

Allegany & Garrett Counties, Maryland

CTL Professional Services

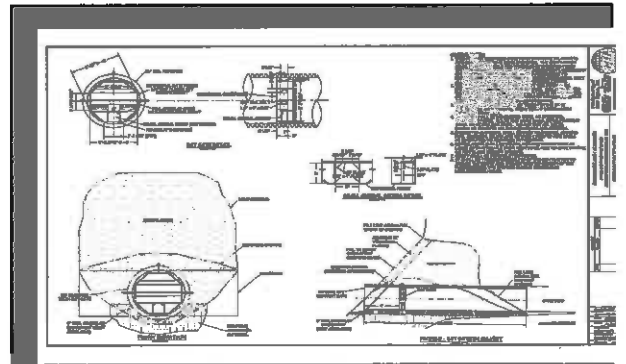
- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following:

Develop detailed engineering design plans and construction plans including; Cost Estimates, Bid Documents, Project Drawings, Maps, Plans & Specifications for the reclamation construction of multiple Mine Mouth Closures.

Design and Plans to include dry and wet mine seals, bat gates, regrading, drainage structures and site reclamation.



Client / Contact
MDE- AML Division
106 South Water Street
Frostburg, MD 21532
Design Completion Date
June 2010

AARON'S RUN AMD PROJECT

ACID MINE DRAINAGE TREATMENT SYSTEM



CTL Engineering Inc.

Location: Garrett County, Maryland

CTL Professional Services

**Site Review & Reconnaissance
Surveying & Mapping
Civil Site Design
Permitting including USACOE, MDE Wetland,
MDE S&E
Construction Specifications**

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Multiple AMD Treatment Systems
- 2 SAP Cells
- Slurry Doser
- Settling Ponds
- Natural Wetlands
- Full Site Grading Plans & Drainage Controls
- Access Road & Highway Rated Bridge
- All State & Federal Permitting
- Construction Specifications and Drawings



Client / Contact

**MDE AML Program
160 South Water Street
Frostburg, MD 21532**

Design Completion Date

October 2009

**Estimated Construction Cost
\$ 450,000**

LANDSLIDE STABILIZATION



CTL Engineering Inc.

**Location: Yellow Creek Twp., Columbiana County,
Ohio**

CTL Professional Services

**Site Review & Reconnaissance
Surveying & Mapping
Geotechnical Evaluation
Slope Stability
Civil Site Design
Construction Specifications**

Project Scope

CTL Engineering of West Virginia, Inc. was retained to provide the following design:

- Remediate existing landslide area by regarding slopes
- Toe Key Design
- Provide positive drainage from the site
- Provide multiple bonding benches
- Underdrain for site
- Temporary erosion and sedimentation control



Client / Contact

**ODNR - FORFEITURE
2050 East Wheeling Ave.
Cambridge, OH 43725**

Design Completion Date

November 2008

Estimated Construction Cost

\$ 101,700

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

| | | |
|--|---------------------------------------|---------------------|
| PROJECT NAME Ed Gower HW#2, Upshur County, WV, DEP16433 | DATE (DAY, MONTH, YEAR) 09/11/2015 | FEIN 55-063-1834 |
|--|---------------------------------------|---------------------|

| | | |
|--|---|--|
| 1. FIRM NAME CTL Engineering of West Virginia, Inc. | 2. HOME OFFICE BUSINESS ADDRESS 2860 Fisher Road Columbus, OH 43204 | 3. FORMER FIRM NAME Columbus Testing Laboratories |
|--|---|--|

| | | | |
|---|--|--|---|
| 4. HOME OFFICE TELEPHONE (614)276-8123 | 5. ESTABLISHED (YEAR) CTL-1927 CTL-WV 1983 | 6. TYPE OWNERSHIP Individual <u>Corporation</u> Partnership Joint-Venture | 6a. WV REGISTERED DBE (Disadvantaged Business Enterprise) YES NO |
|---|--|--|---|

6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
 1091 Chaplin Road, Morgantown, WV 26501/ 304-292-1135/ Patrick E. Gallagher, President / Morgantown - 9

| | |
|--|--|
| 7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Patrick E. Gallagher, President CK Satyapriya, VP/Sec. | 8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Ali Jamshidi, Treasurer (614) 276-8123 |
|--|--|

9. PERSONNEL BY DISCIPLINE

| | | | |
|---------------------------|---------------------------|----------------------------|-------------------------|
| 5 ADMINISTRATIVE | - ECOLOGISTS | - LANDSCAPE ARCHITECTS | 1 STRUCTURAL ENGINEERS |
| - ARCHITECTS | - ECONOMISTS | - MECHANICAL ENGINEERS | 10 SURVEYORS/RODMEN |
| 1 BIOLOGIST | - ELECTRICAL ENGINEERS | - MINING ENGINEERS | - TRAFFIC ENGINEERS |
| 7 CADD DESIGNERS | 3 ENVIRONMENTALISTS | - PHOTOGRAMMETRISTS | <u>X</u> OTHER, |
| - CHEMICAL ENGINEERS | - ESTIMATORS | - PLANNERS: URBAN/REGIONAL | 3 Geotechnical Drillers |
| 4 CIVIL ENGINEERS | 3 GEOLOGISTS/GEOTECH ENG. | 1 SANITARY ENGINEERS | |
| 9 CONSTRUCTION INSPECTORS | - HISTORIANS | 1 SOILS ENGINEERS | |
| - DESIGNERS | - HYDROLOGISTS | - SPECIFICATION WRITERS | |
| - DRAFTSMEN | | | |

47 TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 4
 *RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

The TOTAL PERSONNEL number is for CTL Engineering of West Virginia, Inc.

TOTAL PERSONNEL for CTL Engineering, Inc. is 225, which includes CTL Engineering of West Virginia.

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

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Confidential Qualification Questionnaire" for each if copy is not on file with AML.

| | | |
|-------------------|------------|---|
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |
| NAME AND ADDRESS: | SPECIALTY: | WORKED WITH BEFORE <input type="checkbox"/> Yes <input type="checkbox"/> No |

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

YES Description and Number of Projects: CTL Engineering has completed more than 800 AML related projects nationally and internationally. See attached "AML Past Project Experience" for some specific examples.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: Our in-house laboratories perform all ASTM mechanical, organic and in-organic analyses for soils. Our labs are certified by WVDOH, OEPA and US Corps of Engineers.

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: Each of our site design and AML projects require hydrology & hydraulic evaluations. We estimate that annually, we complete more than 100 projects requiring hydrology design.

NO

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

YES Description and Number of Projects:

NO However, we annually complete more than 25 projects requiring aerial photography & mapping. While we sub-contract the aerial photography, in-house we provide GPS, surveying and develop the contouring as needed.

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: We have completed numerous waterline design projects and our in-house staff has more than 25 years of combined experience with aquifer degradation.

NO

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

YES Description and Number of Projects: CTL has developed more than 20 active and passive treatment systems for AMD. More than 50 of our AML Design projects required some form of AMD evaluation and design.

NO

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

| NAME & TITLE (Last, First, Middle Int.) | YEARS OF EXPERIENCE | | |
|---|---------------------------------|---|--|
| | YEARS OF AML DESIGN EXPERIENCE: | YEARS OF AML RELATED DESIGN EXPERIENCE: | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: |
| Gallagher, Patrick E., PE President, Project Manager | 36 | 36 | 29 |

Brief Explanation of Responsibilities
 President of CTL Engineering of WV, Inc.; responsible for the overall administration of the Morgantown, WV office along with the management of the individual engineering projects. His administration and management responsibilities include marketing, proposal preparation, client contact, supervision of design personnel, scheduling, budget control, and report preparation. Projects successfully completed by Mr. Gallagher include: Geotechnical Investigations, Foundation Design Investigations, Dam Stability Analyses, Mine Subsidence Evaluations, Mineral Reserve Studies, Landslide Investigations, Mine Reclamation Designs, Failure Investigations, and Mining Permits.

EDUCATION (Degree, Year, Specialization)

B.S., 1975, Civil Engineering
 B.S., 1975, Equivalent, Geology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers
 Society of Mining Engineers of A.I.M.E.
 Triangle Fraternity of Engineers, Architects and Scientists
 International Society of Soil Mechanics and Foundation Engineers
 American Institute of Professional Geologists

REGISTRATION (Type, Year, State)

Registered Professional Engineer; 1983-West Virginia, 1984-Ohio, 1983-Maryland, 1993-Pennsylvania, 2006-Wyoming, 2006-North Carolina
 Certified Professional Geological Scientist - 1984
 Professional Surveyor, 1995-West Virginia

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

| NAME & TITLE (Last, First, Middle Int.) | YEARS OF EXPERIENCE | | |
|--|---------------------------------|---|--|
| | YEARS OF AML DESIGN EXPERIENCE: | YEARS OF AML RELATED DESIGN EXPERIENCE: | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: |
| Selfridge, Carl G. Department Head, Geotechnical Services | 4 | 4 | |

Brief Explanation of Responsibilities
 Department Head Geotechnical Engineering. Responsible for subsurface investigations, geotechnical reporting, foundation analysis & recommendations, program development for investigative and laboratory analysis. Selfridge has been responsible for 8 landslide evaluations and remediation projects in the past 5 years.

EDUCATION (Degree, Year, Specialization)

Graduate Studies, 1996-1999, Civil Engineering (Geotechnical)
 B.S., 1996, Civil Engineering, Geotechnical and Structural
 A.S., 1994, Engineering Science
 A.A.S., 1991, Mechanical Technology - Design & Drafting

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Fellow of the American Society of Civil Engineers, The GEO-Institute, Timber Framers Guild, Construction Institute (ASCE)

REGISTRATION (Type, Year, State)

Engineering Intern (EI), 1996, New York
 Level II Drilling Inspector, 1999, PennDOT

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: |
| Darrah, Timothy A. Civil Site Dept. Mgr., Project Manager | 21 | 21 | 21 |

Brief Explanation of Responsibilities
 Mr. Darrah is presently responsible for Management and Design for various types of civil engineering projects including reclamation design, commercial and residential development projects. He is also responsible for scheduling, invoicing and client contacts for all surveying projects including topographic, property and construction layout. Mr. Darrah's duties include drafting, writing of property descriptions, hydrology calculations, quantity calculations and various other forms of surveying and civil engineering related duties. He is also proficient in computer software including AutoCAD, Civilsoft, HEC-1, HEC-RAS and various other engineering software. He has been the Project Manager for all of the WV, MD and OH AML&R projects for the past 10 years

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

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: |
| Stanley, Joseph Project/ Staff Engineer | 7 | 7 | 3 |

Brief Explanation of Responsibilities
 Mr. Stanley is responsible for Reclamation Design, Drafting, Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Valley Fill Footprinting, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes Hydrologic TR-20, TR-55, Excel, Harstad Methods, Word, AutoCADD Land, Quarttro, Access. He has been involved in the design of most of CTL's AML&R Projects for the past 5 years.

EDUCATION (Degree, Year, Specialization)
 A.S., 2001 Civil -Engineering Technology Drafting & Design

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.) Foreman, Gregory P.E. | YEARS OF EXPERIENCE | | |
| | YEARS OF AML DESIGN EXPERIENCE: 4 | YEARS OF AML RELATED DESIGN EXPERIENCE: 18 | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 18 |
| Brief Explanation of Responsibilities Mr. Foreman serves as Project Manager and Design Engineer for various civil site design projects including reclamation, water supply, sanitary design for public and private projects. Design services provided include site grading, potable water, sanitary sewer, storm sewer, pedestrian walkways, vehicular thoroughfares, preparation of permits, project specifications, plans and engineering calculations. | | | |
| EDUCATION (Degree, Year, Specialization) A.S., Fairmont State, 1989, Drafting & Design A.S., Fairmont State, 1989, Mechanical B.S., Fairmont, 1989, Civil Engineering Technology | | | |
| MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS | | REGISTRATION (Type, Year, State) Registered Professional Engineer, 1999, WV (no. 014165) | |

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.) Waltz, Charles P.E. | YEARS OF EXPERIENCE | | |
| | YEARS OF AML DESIGN EXPERIENCE: 9 | YEARS OF AML RELATED DESIGN EXPERIENCE: 13 | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0 |
| Brief Explanation of Responsibilities Project Engineer / Staff Engineer providing engineering services for a variety of projects including, site development, geotechnical subsurface investigations and foundation recommendations and road construction. | | | |
| EDUCATION (Degree, Year, Specialization) B.A., Fairmont State, Business Administration B.S., Fairmont State, Civil Engineering Graduate Studies, West Virginia University, Geotechnical Engineering | | | |
| MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS | | REGISTRATION (Type, Year, State) Registered Professional Engineer, WV (no.17626), VA (no. 37038) | |

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

OFFICE EQUIPMENT

3 HP Color Plotters
HP Color Scanner
Duplicating equipment, copiers, blueprinting, laser printers, etc.
Facsimile Machine

DESIGN SOFTWARE

Windows XP & 2000 based operating systems
Microsoft Office 2000 & 2002 is used for word processing, spreadsheet creation, data processing, and presentation creation. Alternative software including Corel Suite is available, if necessary Project designs and specifications are produced in our Computer Aided Drafting and Design (CADD) section using all versions of AutoCAD including Release 2013.

Hydrogeologic Studies

MODFLO
MODPATH
SURFER
CAPZONE
GWPATH
SKUGIS
PHREEQCI
WATEQ4F
Groundwater for Windows

Civil Engineering Software

Civil 3D 2013 (AutoCADD) - 13 Seats
Profiling
Civilsoft
TR-20 & TR-55
SEDCAD
HEC 1 & 2
HEC-RAS
Arc GIS
ArcPAD
Carson Software

Geotechnical

GINT
STABL6
SHAFT
WSPRO
Various Bridge, Pavement, Pile and Foundation Software

SURVEY EQUIPMENT

- Trimble GPS Systems - 3-R8 Receivers & 1- R10 Receiver
- 6 Total Stations (1- Robotic)
- NAK Micrometer Level System & Direct Levels
- 4X4 Vehicles, including ATV for off-road use
- 2-Way Radios

SUBSURFACE INVESTIGATION EQUIPMENT

- 3 - CME 75 Drilling Rigs, 4-Wheel Drive Truck Mounted
- 2 - CME 75 HD Drilling Rigs, 2-Wheel Drive Truck Mounted
- 1 - CME 55 HD Drilling Rig, All-Terrain Mounted
- 1 - CME 45 Drill Rig, 2-Wheel Drive Truck Mounted
- 1 - CME 45 Drill Rig, 2-Wheel Drive Skid Mounted
- 1 Simco 4000 Track Rig
- 4-Wheel Drive Support Vehicles
- Portable barges for water borne drilling (including supply boats w/outboard motors)
- In-situ permeability apparatus
- Single or double ring field infiltrometers for hydraulic conductivity testing
- Down hole temperature gauges
- Color Borehole Camera with 300 foot range
- Ground Penetrating Radar Undisturbed Shelby tube sampling devices
- Standard penetration testing equipment (1", 2", 3" split spoons)
- Settlement probes
- Tripod portable drilling equipment for interior drilling with 7 feet of clearance
- CBR equipment
- Hand Augers
- Solid flight augers - 4" O.D.
- Hollow stem augers - 33", 43", 63" 83" I.D.
- Rotary drilling capability up to 12" O.D.
- Hydro Punch - In-situ groundwater monitoring
- Conventional and wireline coring capabilities - (1", 2", 3", & 4")
- Soil-gas survey equipment
- Pump testing equipment
- Decontamination Equipment - Steam cleaners, drums, generators, etc.
- Electronic Data Loggers
- Field Sampling equipment for soil, water and groundwater
- Nuclear Densometer - Soil Compaction
- PID, FID, CGI and various field monitoring equipment
- Groundwater and Soil Remediation Equipment
- Mobile activated carbon system
- Air and chemical stripping of soils and water

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

| PROJECT NAME, TYPE AND LOCATION | NAME AND ADDRESS OF OWNER | NATURE OF YOUR FIRM'S RESPONSIBILITY | ESTIMATED CONSTRUCTION COST | PERCENT COMPLETE |
|---|--|---|--|---|
| Open Contract to provide engineering design services throughout the State of Ohio (2 year contract 2014-2015)) | OH Department of Natural Resources AML Emergency Program 1855 Fountain Square Court, 2nd Floor Columbus, Ohio 43224 | Reclamation Design, geotechnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations | \$75,000 /year Fees | |
| Open Contract to provide engineering support and design services throughout the State of Maryland. (5 year contract- 2015)) | MD Department of Environment-AML 160 S. Water St. Frostburg, MD 21532 | Reclamation Design, geotechnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations | \$500,000 Fees \$15,000,000+ Const. | 65% |
| Hopewell Church Refuse & Drainage (DEP16074) Preston County, WV | WVDEP - AML 601 57 th Street SE Charleston, WV 25304 | Draining mine portal remediation design, mine seals, drainage systems, grading design, specifications | | Design - Preliminary Review complete. Submittal Dec. 2013 |
| | | | | |
| TOTAL NUMBER OF PROJECTS: 4 | TOTAL ESTIMATED CONSTRUCTION COSTS: +\$10,000,000 | | | |

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SYSTEM CONSULTANT TO OTHERS
(AML Projects)

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


| 17. COMPLETE WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS DESIGNATED ENGINEER OF RECORD (AML Projects) | | | | |
|---|--|-----------------------------|-------------|-------------|
| PROJECT NAME, TYPE AND LOCATION | NAME AND ADDRESS OF OWNER | ESTIMATED CONSTRUCTION COST | YEAR CONST. | (YES OR NO) |
| Hopewell Church Refuse & Drainage (DEP16074), Preston County, WV | WVDEP - AML 601 57 th Street SE Charleston, WV 25304 | | | |
| Peninsula Highwalls, AML Project, Monongalia County, WV | WVDEP- AML 601 57 th Street SE Charleston, WV 25304 | \$244,000 | 2009 | YES |
| St. Clair Portals, AML Project, Monongalia County, WV | WVDEP- AML 601 57 th Street SE Charleston, WV 25304 | \$1,462,000 | 2009 | YES |
| Shinn's Run Portals & AMD, AML Project, Harrison County, WV | WVDEP- AML 601 57 th Street SE Charleston, WV 25304 | \$1,887,000 | 2012 | YES |
| Pee Wee Hill Water Supply, MD AML Project, Garrett County, MD | MD Department of Environment 160 S. Water St. Frostburg, MD 21532 | \$650,000 | 2011 | YES |
| Anderson Highwalls, AML Project, Monongalia County, WV | WVDEP- AML 601 57 th Street SE Charleston, WV 25304 | \$1,200,000 | 2013 | YES |
| Terra Haute Airport, IN AMLD, Subsidence Grouting | Indiana Abandoned Mine Land Division Indianapolis, IN | \$6,500,000 | 2010 | YES |
| Schramm, Gordon & East Franklin (MD) Landslides | MD Department of Environment-AMLD 160 S. Water St. Frostburg, MD 21532 | \$1,500,000 | 2013 | On-going |

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) (AML Projects)

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

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. For the past 25 years, CTL has successfully designed more than 200 AML projects. We have worked nationally and internationally on a variety of AML problem sites. We have developed unique solutions that have been applied to site development, AMD Treatment, Mine Subsidence Abatement, Mine Fires and Highwall Elimination. Routinely, CTL is involved with highwall and refuse pile stabilization and extinguishment.

20. The foregoing is a statement of facts.

Signature: 
 Printed Name: Patrick E. Gallagher, P.E.

Title: President

Date: 09/11/2015

NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.

AML and RELATED PROJECT EXPERIENCE MATRIX (2009 - 2015)

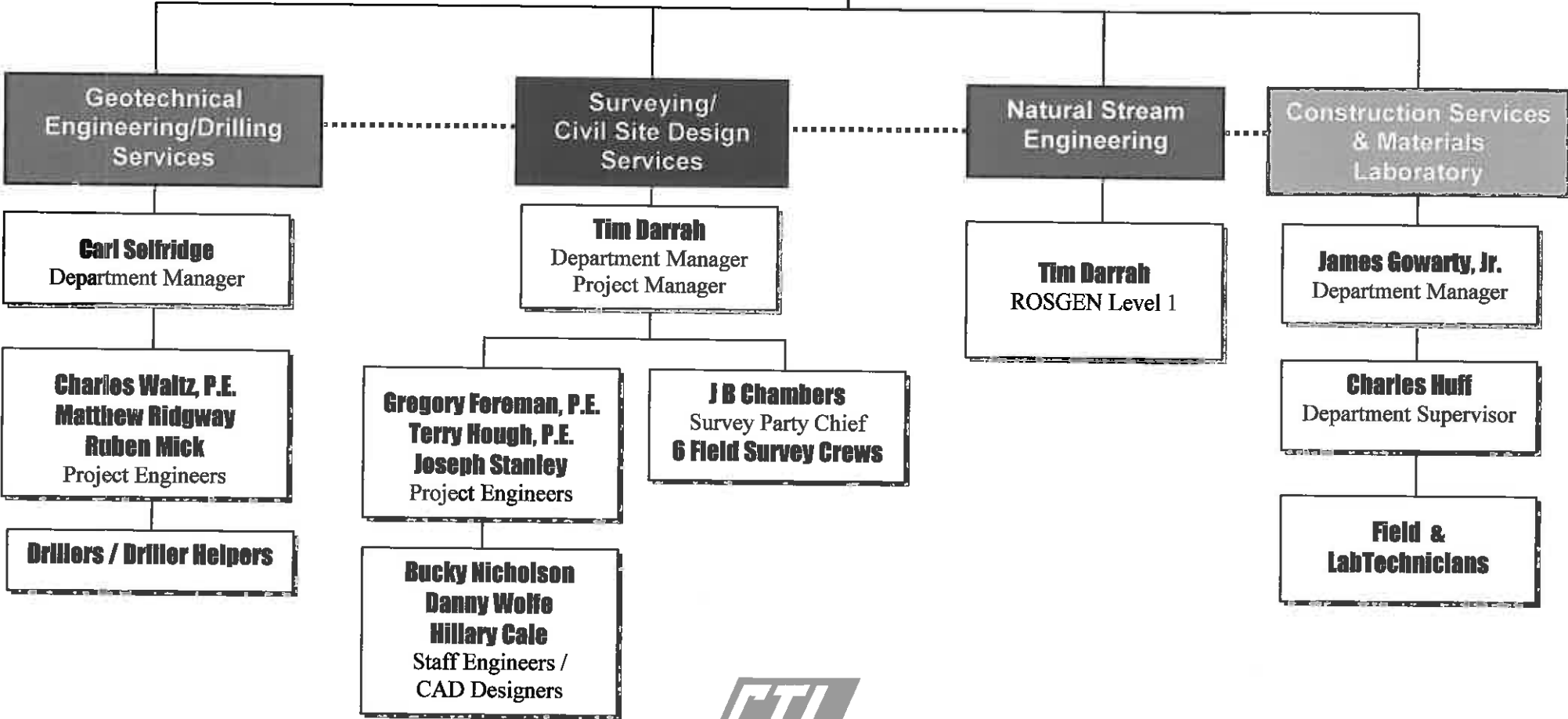
| PROJECT | Exp. Base O-Corp Professional | Additional Info Provided in Section (9) | PROJECT EXPERIENCE REQUIREMENTS | | | | | | | | | | | | | | | | | PRIMARY STAFF | | | | | | |
|--|-------------------------------------|---|------------------------------------|---------------------------------|----------------------|------------------------------------|---------------------|-----------------------------|-------------------------------------|--------------------------|------------------------|--|------------------------------------|-----------------|------------------------------|--------------------|------------------------|-----------------------|------------|-----------------------|----------------|-----------------|---------------------|------------|----------|---|
| | | | Abandoned Surface Mine Reclamation | Abandoned Deep Mine Reclamation | Portal/Shaft Closure | Hydrologic/Hydraulic Design/Level. | Remining Evaluation | Mine Refuse/ Fire Abatement | Subsidence Investigation Mitigation | Hazardous Waste Disposal | Project Specifications | Water Quality Evaluation/Mitigation/ Replacement | Construction Inspection/Management | Water Treatment | Equipment/ Structure Removal | Stream Restoration | Geotechnical/Stability | PATRICK GALLAGHER, PE | TIM DARRAH | GREGORY FOREMAN, P.E. | JOSEPH STANLEY | CARL SELFDRIDGE | CHARLES WALTZ, P.E. | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | Mitigation | Capacity | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WOLFEN STREAM RESTORATION (MD AML '15) | C | | | | X | | | | | X | X | | | X | | | | | | MP | P | | | | | |
| UPPER GEORGES CREEK STREAM SEALING (MD AML '16) | C | | | | X | | | | | X | X | | | | | | | | | MP | P | | | | | |
| AARONS RUN ROAD LANDSLIDE, EVAL AND DESIGN (MD AML '14) | C | | | | X | | | | | X | | | X | | | | | | | X | MP | P | | | | |
| HOPEWELL CHURCH REFUSE & AMD (MV AML '13) | C | Profile | | | X | | | | | X | | | | | | | | | | MP | MP | P | | | | |
| MORGANTOWN ANDERSON HIGHWALLS (MV AML '12) | C | Profile | | | X | | | | | X | | | | | | | | | | MP | MP | P | | | | |
| SCHRAHM - BORDON - EAST FRANKLIN LANDSLIDES (MD AML '12) | C | | X | X | | | | | | X | | | | | | | | | | X | MP | MP | P | P | P | P |
| DOUGLAS AVENUE STORMWATER SYSTEM (MD AML '12) | C | | | | | | X | | | | | | | | | | | | | MP | MP | MP | | | | |
| FARMONT SUBSIDENCE (MV AML '12) | C | Profile | | X | | | | | X | | | | | | | | | | | X | MP | MP | P | P | P | P |
| DOUGLAS AVENUE LANDSLIDE (MD AML '12) | C | | | X | | | | | X | | | | | | | | | | | X | MP | MP | P | P | P | P |
| LOWER CONZOL ROAD SUBSIDENCE (MD AML '11) | C | | X | X | | | | | X | | | | | | | | | | | X | MP | MP | P | P | P | P |
| BALD KNOB WATER SUPPLY STUDY (MD AML '12) | C | | | | | | | | | X | | | | | | | | | | MP | MP | P | | | | |
| SHIMMUS RUN PORTALS (MV AML '11) | C | Profile | | X | X | | | | | | | | | | | | | | | X | MP | MP | P | P | P | P |
| BEAM REFUSE PILE (MV AML '10) | C | | X | | | | | | X | | | | | | | | | | | MP | MP | MP | | | | |
| PEE WEE HILL WATER SUPPLY (MD AML '10) | C | | | | | | | | | X | | | | | | | | | | MP | MP | MP | | | | |
| TERESA HAUTE AIRPORT (IN AML '10) | C | Profile | | X | X | | | | X | | | | | | | | | | | X | MP | MP | | | | P |
| KENNEL MINE CLOSURE (MD AML '10) | C | Profile | X | X | X | | | | | X | | | | | | | | | | MP | MP | MP | | | | P |
| FROSTBURG NORTH CLOSURE (MD AML '10) | C | Profile | X | X | X | | | | | X | | | | | | | | | | MP | MP | MP | | | | P |
| PEE WEE HILL WATER FEASIBILITY (MD AML '10) | C | | | | | | | | | X | | | | | | | | | | MP | MP | MP | | | | P |
| WILLIAMS REFUSE PILE #2 (Private AML '09) | C | | X | | | | | X | | X | X | | | | | | | | | MP | MP | MP | | | | P |
| PENINSULA HIGHWALLS (MV AML '09) | C | Profile | X | X | | | | X | | X | | | | | | | | | | X | MP | MP | | | | P |
| ST. CLAIR PORTALS (MV AML '09) | C | Profile | X | X | X | | | X | | X | | | | | | | | | | X | MP | MP | P | P | P | P |
| CHEAT NECK LANDSLIDE (MV AML '09) | C | | | | X | | | | | X | | | | | | | | | | X | MP | MP | P | P | P | P |
| FARMINGTON URG (MV DEP EMER. '09) | C | | | | | | | X | | X | | | | | | | | | | MP | MP | | | | | P |
| MORNINGSIDE BAPTIST (MV DEP EMER. '09) | C | | | | | | | X | | X | | | | | | | | | | MP | MP | | | | | P |
| COLLINS MINING (ODNR FOR. '09) | C | | X | | | | | | | X | | | | | | | | | | MP | MP | | | | | P |
| FARVIEW WATER FEASIBILITY(MV AML '09) | C | | | | | | | | | X | | | | | | | | | | MP | MP | P | | | | |
| AARONS RUN (MD AML '09) | C | | X | | | | | | | X | | | | | | | | | | X | MP | MP | P | | | |
| WEST VIRGINIA BRIM (2005 - 2012) 42 Projects | C | | | | | | | | | X | | | | | | | | | | X | MP | MP | | | | P |
| ONSISUA (2006 - 2010) 47 Projects | C | | | | | | | | | X | | | | | | | | | | X | MP | MP | | | | P |

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



CTL Engineering of West Virginia, Inc.
*PROJECT ORGANIZATION CHART
 & KEY PERSONNEL*

**Patrick Gallagher, P.E.,
 CPGS, WV PS**
 President, Project Executive



Expertise:

Mr. Gallagher serves as President of CTL Engineering of West Virginia, Inc. Projects successfully completed under Mr. Gallagher's direction include: Civil Site Design, Foundation Design, Storm Water Management, Waste Water Design, Roadway design, Parking Lot Design, Geotechnical Investigations & Design, Site Stability Analyses, Mine Subsidence Evaluations, Failure Investigations and Environmental Investigations and Permitting.

Prior to joining CTL Engineering, Mr. Gallagher was the chief of the Abandoned Mine Reclamation Program for the State of Maryland, Department of Natural Resources, and Bureau of Mines. In addition, he was also responsible for overall engineering/geologic support to the Maryland Bureau of Mines Program.

Education:

B.S., Civil Engineering, 1975
Virginia Polytechnic Institute and State University, Blacksburg, Virginia
B.S., Geology, 1975
Virginia Polytechnic Institute and State University, Blacksburg, Virginia

Professional Registration / Certifications:

- Registered Professional Engineer
 - Ohio, [REDACTED] Maryland, [REDACTED] West Virginia, [REDACTED] Pennsylvania, [REDACTED] Wyoming, [REDACTED]; North Carolina, [REDACTED] Kentucky, [REDACTED]
- Certified Professional Geological Scientist, [REDACTED]
- Professional Surveyor, WV
- Adjunct Professor – Civil Engineering – Fairmont State College 2001 – Present

Career Experience:

CTL Engineering, Inc.- 30 years
Other – 7 years

Relevant Project Experience:

Mine Related

Project: Morgantown Anderson Highwalls
AML Reclamation Design
Monongalia County, West Virginia

Role: Project Executive
Project Year: 2012

Project: Schramm – Gordon – East Franklin Landslides
AML Reclamation
Allegany & Garrett Counties, Maryland

Role: Project Executive
Project Year: 2012

Project: Douglas Avenue Stormwater System
Geotechnical/Hydrologic
Allegany County, Maryland

Role: Project Executive
Project Year: 2012



PATRICK E. GALLAGHER, P.E., C.P.G.S.

President

Project: Fairmont Subsidence
AML Reclamation / Geotechnical
Fairmont, Marion County, West Virginia

Role: Project Executive

Project Year: 2012

Project: Ottawa State Route 2 Mine Subsidence
Geotechnical/ Grouting Plan
Ottawa County, Ohio

Role: Project Executive

Project Year: 2005, 2010, 2012

Project: Douglas Avenue Landslide
AML Reclamation/Geotechnical/Hydrologic
Maryland

Role: Project Executive

Project Year: 2012

Project: Lower Consol Road Subsidence
AML Reclamation/Subsurface Mine Investigation/Geotechnical
Maryland

Role: Project Executive

Project Year: 2011

Project: Bald Knob Water Supply Study
Hydrologic
Maryland

Role: Project Executive

Project Year: 2011

Project: Shinn's Run Portals
AML Reclamation/Portal Closure/Geotechnical
Shinnston, Harrison County, West Virginia

Role: Project Executive

Project Year: 2011

Project: Terra Haute Airport
AML Reclamation/Hazardous Waste Disposal/Geotechnical
Indiana

Role: Project Executive

Project Year: 2010

Project: Peninsula Highwalls
AML Reclamation/Hydrology/Geotechnical
West Virginia

Role: Project Executive

Project Year: 2009



Transportation

Project: Emerson Avenue
Slope Stabilization Investigation & Design
Wood County, West Virginia

Role: Project Executive
Project Year: 2010

Project: I-81 Martinsburg to Marlowe Interchange
Design Build
Martinsburg, Jefferson County, West Virginia

Role: Project Manager
Project Year: 2011

Project: Morgantown Municipal Airport
Geotechnical Services
Morgantown, Monongalia County, West Virginia

Role: Project Executive
Project Year: 2007

Primary & Secondary Education

Project: New University High School
Various Services
Morgantown, Monongalia County, West Virginia

Role: Project Executive
Project Year: 2006 - 2008

Project: South Jefferson High School
Various Services
Charles Town, Jefferson County, West Virginia

Role: Project Executive
Project Year: 2006

Project: Morgantown High School Stadium Renovation
Various Services
Morgantown, Monongalia County, West Virginia

Role: Project Executive
Project Year: 2011

Project: Huff Consolidated School
Geotechnical Services
Wyoming County, West Virginia

Role: Project Executive
Project Year: 2012

Expertise

Mr. Darrah is presently responsible for department management for civil site design and surveying projects including topographic, property and construction layout. Mr. Darrah also serves as project manager on various types of civil engineering projects including residential and commercial developments, and reclamation design projects. Office work includes site designs, hydrology calculations, quantity calculations, and various other forms of engineering related duties.

Education

B.S. Civil Engineering Technology, 1988
Fairmont State College, Fairmont, West Virginia

Professional Experience

24 Years Experience with CTL Engineering, Inc.

Project Experience

A partial listing of Mr. Darrah's relevant project experience includes:

Mine Related

Project: Morgantown (Anderson) Portals and Highwall
AML Reclamation Design
Monongalia County, West Virginia

Role: Project Manager

Project Year: 2012

Project: Hopewell Church Refuse & AMD
AML Reclamation
Preston County, West Virginia

Role: Project Manager

Project Year: 2013

Project: Fairmont (Jackson Addition) Subsidence Project
AML Reclamation/Subsidence Investigation/Geotechnical
Fairmont, Marion County, West Virginia

Role: Project Manager

Project Year: 2012

Project: Shins Run Portals & AMD
AML Reclamation/Geotechnical
Shinnston, Harrison County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Ream Refuse Piles
AML Reclamation/Mine Refuse & Fire Abatement
McDowell County, West Virginia

Role: Project Manager

Project Year: 2010



TIMOTHY A. DARRAH

Civil Site and Survey Department Manager

Project: Cheat Neck (Lenhart) Landslide
Hydrologic Evaluation/Geotechnical
Monongalia County, West Virginia

Role: Project Manager

Project Year: 2008

Project: St. Clair Portals
AML Reclamation/Various Services
Monongalia County, West Virginia

Role: Project Manager

Project Year: 2008

Project: Morning Star Baptist Church Subsidence
Subsidence Investigation/Mitigation
Marion County, West Virginia

Role: Timothy Darrah

Project Year: 2009

Project: Farmington United Methodist Church
Subsidence Investigation/Mitigation
Farmington, Marion County, West Virginia

Role: Civil Site and Surveying Services Manager

Project Year: 2009

Project: Eccles & MacArthur Subsidence
Subsidence Investigation/Mitigation
Beckley, Raleigh County, West Virginia

Role: Project Manager

Project Year: 2008

Project: Oakland PSD
Feasibility Study
Hancock County, West Virginia

Role: Civil Site and Surveying Services Manager

Project Year: 2011

Project: Peninsula Highwalls
AML Reclamation/Hydrology/Geotechnical
Monongalia County, West Virginia

Role: Project Manager

Project Year: 2008



JOSEPH STANLEY

Staff Engineer

Expertise

Mr. Stanley is a Staff Engineer/CAD Designer in the Morgantown, WV office. His responsibilities include assisting in the planning and design of civil site design projects involving land planning and development aspects. He is familiar with various engineering software programs including AutoCad 2004 and AutoCad Land Desktop 2004, which provide support for the planning and design projects.

Education

A.S., Drafting and Design
Fairmont State College; Fairmont, West Virginia, 2001

Professional Registrations/ Certifications

Advanced GPS Training Course

Career Experience

14 Years with CTL Engineering Inc.

Relevant Project Experience:

Mine Related

Project: Fairmont Subsidence
AML Reclamation / Geotechnical
Fairmont, Marion County, West Virginia

Role: Project Engineer

Project Year: 2012

Project: Morgantown Anderson Highwalls
AML Reclamation Design
Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2012

Project: Shinns Run Portals
AML Reclamation/Portal Closure/Geotechnical

Role: Project Engineer

Project Year: 2011

Project: Hopewell Church Refuse & AMD
Various Services
Preston County, West Virginia

Role: Project Engineer

Project Year: 2013

Project: Eccles and MacArthur Subsidence
Geotechnical
Beckley, Raleigh County, West Virginia

Role: Project Engineer



JOSEPH STANLEY

Staff Engineer

Project Year: 2008

Project: Farmington United Methodist Church
Various Services
Farmington, Marion County, West Virginia

Role: Project Engineer

Project Year: 2009

Project: Peninsula Highwalls
AML Reclamation/Hydrology/Geotechnical
Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2008

Project: Cheat Neck landslide
Various Services
Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2008

Transportation

Project: Dorsey Knob Road Improvements
Surveying Services
Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2006

Project: County Road 5/5 Relocation
Surveying/Mapping
Logan, Logan County, West Virginia

Role: Project Engineer

Project Year: 2005

Project: Morgantown Airport Alternative Access Road
Geotechnical/Surveying/Mapping
Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2008

Project: Osage Bridge
Various Services
Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2006

Education

Project: West Virginia University Child Care Center
Surveying/Mapping



JOSEPH STANLEY

Staff Engineer

Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2008

Project: University High School Football Stadium Survey
Surveying

Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2009

Power Plants

Project: Harrison Power Station Phase V Step I

Various Services

Haywood, Harrison County, West Virginia

Role: Project Engineer

Project Year: 2012

Project: Overland Conveyor Permitting

Permitting

Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2008

Project: Harrison Power Station CCB Landfill Phase V Step III

Various Services

Haywood, Harrison County, West Virginia

Role: Project Engineer

Project Year: 2013

Project: Pleasants Power Station

Construction Services/Surveying

Pleasants County, West Virginia

Role: Project Engineer

Project Year: 2009

Building Development

Project: Commercial Development

Various Services

Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2010

Project: University Park

Site/Civil

Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2013



EXPERTISE:

Mr. Foreman serves as Project Manager and Design Engineer for a multitude of civil site design projects for municipal, commercial and private developers. Design services provided include site grading, potable water, sanitary sewer, storm sewer, pedestrian walkways, vehicular thoroughfares, preparation of permits, project specifications, plans and engineering calculations.

EDUCATION:

B.S., Civil Engineering Technology, 1989
Fairmont State College, Fairmont, West Virginia

A.S., Mechanical Engineering, 1989
Fairmont State College, Fairmont, West Virginia

A.S., Drafting and Design, 1989
Fairmont State College, Fairmont, West Virginia

PROFESSIONAL REGISTRATION / CERTIFICATIONS:

- Registered Professional Engineer: West Virginia, 1999, N [REDACTED]

PROFESSIONAL AFFILIATIONS:

- American Society of Civil Engineers
- The GEO-Institute
- Timber Framers Guild
- Construction Institute (ASCE)

CAREER EXPERIENCE:

- CTL Experience – 8 years
- Other Engineering – 20 years

Project Experience

A partial listing of Mr. Foreman's relevant project experience includes:

Mine Related

Project: Fairview Feasibility Studies
AML-Feasibility Studies
Fairview, Marion County, West Virginia

Role: Project Manager

Project Year: 2009

Project: Craigsville/Tioga Water Well Study
Hydrologic Studies
Nicholas County, West Virginia

Role: Project Engineer

Project Year: 2008



Gregory L. Foreman, P.E.

Project Manager – Water Systems

Project: Feasibility Study for Oakland PSD
AML-Feasibility Studies
Hancock County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Morgantown (Anderson) Portals and Highwall
AML Reclamation Design
Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2012

Water/Wastewater Treatment Plants and Water Tanks

Project: Palisades Place
Sewage Collection, Treatment & Disposal/Various Other Services
Morgantown, West Virginia

Role: Project Manager

Project Year: 2006

Project: Fairmont Water Treatment Plant
Various Services
Fairmont, Marion County, West Virginia

Role: Project Engineer

Project Year: 2009

Building Development

Project: West Minister Apartments – Phase II
Civil Site Design/Permitting/Geotechnical/Environmental/Surveying
Martinsburg, Jefferson County, West Virginia

Role: Project Manager

Project Year: 2012

Project: University Place
Geotechnical/Surveying/Civil Site/Environmental
Morgantown, West Virginia

Role: Project Engineer

Project Year: 2012

Project: Canterbury Housing Development
Various Services
Fairmont, Marion County, West Virginia

Role: Project Manager

Project Year: 2006

Project: Hornbeck Road Development
Surveying/Stormwater/Testing/Permitting
Morgantown, Monongalia County, West Virginia

Role: Project Engineer

Project Year: 2005



Gregory L. Foreman, P.E.

Project Manager – Water Systems

Project: Premier Chevrolet
Site Layout/Design
Morgantown, Monongalia County, West Virginia
Role: Project Engineer
Project Year: 2012

Project: Mountain State Blue Cross Blue Shield
Civil Site Design
Parkersburg, Wood County, West Virginia
Role: Project Engineer
Project Year: 2007

Other

Project: Bridgeport Burger King
Evaluations
Bridgeport, Harrison County, West Virginia
Role: Project Engineer
Project Year: 2013

Project: Preston County High School Evaluation
Sewage Plant Evaluation/Wetland Delineation
Preston County, West Virginia
Role: Project Manager
Project Year: 2012

Project: Industrial Avenue Streetscape
Various Services
Morgantown, Monongalia County, West Virginia
Role: Project Engineer
Project Year: 2008

Project: Dorsey's Knob
Road Improvements
Morgantown, Monongalia County, West Virginia
Role: Project Engineer
Project Year: 2006

Project: Boyers Avenue
Demolition Plan
Morgantown, Monongalia County, West Virginia
Role: Project Manager
Project Year: 2013

CARL G. SELFRIDGE
Manager

Geotechnical & Drilling Services

Expertise

Annually manages 100+ various geotechnical projects including; education, transportation, commercial development and a variety of public and private clients. Mr. Selfridge is responsible for directing all aspects of the Geotechnical Engineering Department for CTL Engineering of West Virginia, Inc. This includes the management of field drilling activities, field classification of soil and rock, field and laboratory safety procedures, the assignment of a laboratory testing program, and performing geotechnical evaluations. Engineering evaluations include foundation recommendations, settlement analysis, slope stability analysis, earth pressure coefficients and report preparation.

Education

A.A.S., Mechanical Technology - Design & Drafting, 1991
Adirondack Community College; Queensbury, NY

A.S., Engineering Science, 1994
Adirondack Community College; Queensbury, NY

B.S., Civil Engineering (Geotechnical & Structural), 1996
Rensselaer Polytechnic Institute; Troy, NY

Graduate Studies, Civil Engineering (Geotechnical), 1996-1999
Rensselaer Polytechnic Institute; Troy, NY

Registrations / Certifications

- Engineer Intern (EI): New York, 1996
- Pennsylvania Dept of Transportation Level II Drilling Inspector, 1999

Career Experience

CTL Experience – 5 years
Other Engineering – 8 years

Project Experience

A partial listing of Mr. Selfridge's relevant project experience includes:

Mine & Landfill Related

Project: Eccles & MacArthur Subsidence
Subsidence Investigation/Mitigation
Beckley, Raleigh County, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2008



CARL G. SELFRIDGE
Manager

Geotechnical & Drilling Services

Project: Shinns Run Portals & AMD
AML Reclamation/Geotechnical
Harrison County, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2011

Project: Tunnel Ridge Slurry Cell A
Piezometer Installations - Geotechnical
Ohio County, West Virginia
Role: Project Manager
Project Year: 2011

Project: Pine Creek / Omar Landfill
Geotechnical
Logan County, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2007

Project: Marion County Land Fill
Geotechnical
Marion County, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2007

Project: Wheeling Landfill
Geotechnical
Wheeling, Ohio County West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2007

Project: Mingo County Landfill
Geotechnical
Mingo County, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2007

Project: South Charleston Landfill
Geotechnical
South Charleston, West Virginia
Role: Geotechnical & Drilling Services Manager
Project Year: 2007

Project: Buzzard Pond Dam
Geotechnical
Marshall County, West Virginia
Role: Project Manager
Project Year: 2011



Transportation

Project: Benedum Airport Lighting Towers
Geotechnical
Bridgeport, Harrison County, West Virginia

Role: Project Manager

Project Year: 2012

Project: I-81 Martinsburg to Marlowe Interchange
Design Build
Martinsburg, Jefferson County, West Virginia

Role: Project Engineer

Project Year: 2011

Project: Hughes Creek Landslide
Geotechnical
Kanawha County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Dick Henderson Bridge
Geotechnical
Kanawha County, West Virginia

Role: Geotechnical & Drilling Services Manager

Project Year: 2010

Project: Morgantown Airport Alternative Access Road
Geotechnical
Morgantown, Monongalia County, West Virginia

Role: Geotechnical & Drilling Services Manager

Project Year: 2008

Project: Leon Bridge
Geotechnical
Mason County, West Virginia

Role: Project Manager

Project Year: 2009

Project: Morgantown Rest Area
Geotechnical Evaluation
Morgantown, Monongalia County, West Virginia

Role: Geotechnical & Drilling Services Manager

Project Year: 2008

Project: Veterans Memorial Bridge
Geotechnical
Hancock, West Virginia

Role: Geotechnical & Drilling Services Manager

Project Year: 2008

Expertise:

Mr. Waltz serves as a Project Manager in the Geotechnical Engineering Services Department of CTL Engineering of West Virginia, Inc. Waltz also serves as Project Manager/Engineer for all of the WV BRIM Projects.

Prior to joining CTL, Mr. Waltz was with Triad Engineering where he was Staff Engineer/Project Engineer and provided engineering services to a variety of projects, including site development, geotechnical subsurface investigations, and road construction. The majority of these projects were performed in West Virginia where concerns for mine subsidence and slope stability were routinely investigated.

Education:

B.A., Business Administration
Fairmont State University

B.S., Engineering
Fairmont State University

Graduate Studies, Geotechnical Engineering
West Virginia University

Professional Registration / Certifications:

Registered Professional Engineer
▪ West Virginia, [REDACTED] Virginia, [REDACTED]

CTL Experience:

3 Years

Project Experience

A partial listing of Mr. Waltz's relevant project experience includes:

Subsidence Related

Project: Windsor Heights Subsidence Claim
Geotechnical
Windsor Heights, Brooke County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Shinnston Subsidence Claim
Geotechnical
Shinnston, Harrison County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Metz Subsidence Claim
Geotechnical
Metz, Marion County, West Virginia

Role: Project Manager

Project Year: 2013



Project: Bruceton Mills Subsidence Claim
Geotechnical
Bruceton Mills, Preston County, West Virginia
Role: Project Manager
Project Year: 2013

Project: Monongah Subsidence Claim
Geotechnical
Monongah, Marion County, West Virginia
Role: Project Manager
Project Year: 2013

Project: Eccles Subsidence Claim
Geotechnical
Eccles, Raleigh County, West Virginia
Role: Project Manager
Project Year: 2013

Project: Fairmont Subsidence Claim
Geotechnical
Fairmont, Marion County, West Virginia
Role: Project Manager
Project Year: 2012

Project: Whitehall Subsidence Claim
Geotechnical
Whitehall, Marion County, West Virginia
Role: Project Manager
Project Year: 2012

Transportation

Project: I-81 Martinsburg to Marlowe Interchange
Design Build
Martinsburg, Jefferson County, West Virginia
Role: Project Engineer
Project Year: 2011

Project: Benedum Airport Lighting Towers
Geotechnical
Bridgeport, Harrison County, West Virginia
Role: Project Engineer
Project Year: 2012

Education

Project: Lumberport Middle School
Geotechnical
Shinnston, Harrison County, West Virginia

Role: Project Manager

Project Year: 2013

Project: Huff Consolidated School
Geotechnical
Wyoming County, West Virginia

Role: Project Engineer

Project Year: 2012

Project: Alderson-Broaddus College New Dormitory Buildings
Geotechnical Evaluation
Philippi, Barbour County, West Virginia

Role: Project Engineer

Project Year: 2012

Project: East Preston School
Geotechnical
Terra Alta, Preston County, West Virginia

Role: Project Engineer

Project Year: 2011

Project: Davis & Elkins College Hermanson Welcome Center
Geotechnical
Elkins, Randolph County, West Virginia

Role: Project Engineer

Project Year: 2013

Project: Central Preston Middle School
Geotechnical/Construction Services
Kingwood, Preston County, West Virginia

Role: Project Engineer

Project Year: 2011

Expertise:

As the Construction Services Manager for CTL Engineering of West Virginia Inc., Mr. Gowarty is responsible for supervising field and laboratory technicians. He is also responsible for report writing for field and laboratory testing, project management, client contact, estimating, proposals and invoicing for Construction Services Department. Mr. Gowarty's experience also includes surveying, pre-mining and pre-blast surveys, field supervision of drilling crews, Phase I Environmental Site Assessments and radiation safety officer and corporate safety officer. In addition, Mr. Gowarty is the Construction Materials Testing Supervisor, providing concrete, compaction, and aggregate testing and has over twenty (20) years of experience with Nuclear Gauge Operation.

Mr. Gowarty has been CTL's Corporate Safety Officer since Fall 2008.

Mr. Gowarty is CTL's USNRC Safety Officer.

Education:

B.S., Civil Engineering Technology, 1990
Fairmont State College; Fairmont, West Virginia

A.S., Mechanical Engineering Technology, 1990
Fairmont State College; Fairmont, West Virginia

Professional Registrations/ Certifications:

Safety

Radiation Safety Training, CPN Corporation
Radiation Safety Officer Training, Troxler Electronics
Principals of Fire Protection, Fairmont State University
Certified Forklift Trainer, Brickstreet Insurance
Drug Free Workplace Employee Trainer, Working Partners
Drug Free Workplace Supervisor Trainer, Working Partners

Other

West Virginia DOT Certified Compaction Technician
West Virginia DOT Certified Bituminous Concrete Technician
West Virginia DOT Certified Portland Cement Concrete Technician
West Virginia DOT Certified Aggregate Sampler
NICET Level III Asphalt & Concrete
NICET Level II Soils
Certified Dipfloor Profiler Operator, Face Company

Career Experience:

CTL Experience – 24 years

Project Experience

A partial listing of Mr. Gowarty's relevant project experience includes:

Energy

Project: Harrison Power Station CCB Landfill Phase V Step III
Construction Services
Haywood, Harrison County, West Virginia

Role: Project Manager

Project Year: 2010

Project: Leer Mine Complex
Construction Services
Grafton, Taylor County, West Virginia

Role: Project Manager

Project Year: 2013

Project: Tunnel Ridge Coal
Construction Services
Wellsburg, Ohio County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Refuse Testing
Testing Services
Wellsburg, Ohio County, West Virginia

Role: Project Manager

Project Year: 2011

Project: Kammer – Mitchell Run Dam Raising Project
Construction Services
Marshall County, West Virginia

Role: Project Manager

Project Year: 2008

Building Development

Project: University Place – Morgantown, West Virginia
Construction Services/Surveying/Geotechnical/Environmental/Site Civil
Morgantown, Monongalia County, West Virginia

Role: Project Manager

Project Year: 2013

JAMES P. GOWARTY, JR.

Construction Services Manager

Project: Downtown Panera Bread
Various Services
Morgantown, Monongalia County, West Virginia
Role: Project Manager
Project Year: 2013

Project: Hazelton Federal Corrections Institution
Various Services
Hazelton, Preston County, West Virginia
Role: Project Manager
Project Year: 2010

Project: U.S. Department of Energy Facility
Geotechnical/Construction Services/Surveying
Morgantown, Monongalia County, West Virginia
Role: Project Manager
Project Year: 2008

Primary/Secondary Schools

Project: Central Preston Middle School
Various Services
Kingwood, Preston County, West Virginia
Role: Project Manager
Project Year: 2012

Project: East Preston School
Geotechnical/ Construction Services
Terra Alta, Preston County, West Virginia
Role: Project Manager
Project Year: 2012

Project: Bruceton Mills School
Various Services
Bruceton Mills, Preston County, West Virginia
Role: Project Manager
Project Year: 2013

Project: New University High School
Construction Services/Geotechnical/Grout Plan Development
Morgantown, West Virginia
Role: Construction Services Manager
Project Year: 2006 - 2008



Higher Education

Project: West Virginia University Health Sciences Center Animal Facility Annex
Surveying/Geotechnical/Construction Services
Morgantown, West Virginia

Role: Project Manager

Project Year: 2012

Project: West Virginia University AERB
Construction Services
Morgantown, Monongalia County, West Virginia

Role: Project Manager

Project Year: 2013

Project: Alderson-Broadus College New Football Field
Surveying/Materials Testing
Philippi, Barbour County, West Virginia

Role: Construction Services Manager

Project Year: 2011

Transportation

Project: I-81 Martinsburg to Marlowe Interchange
Design Build
Martinsburg, Jefferson County, West Virginia

Role: Construction Services Manager

Project Year: 2011

Project: Mileground Roundabout
Construction Services
Morgantown, Monongalia County, West Virginia

Role: Project Manager

Project Year: 2013

Project: Fairmont Airport
Various Services
Fairmont, Marion County, West Virginia

Role: Project Manager

Project Year: 2012

Project: Benedum Airport
Geotechnical/Construction Services
Bridgeport, Harrison County, West Virginia

Role: Project Manager

Project Year: 2011

JAMES P. GOWARTY, JR.

Construction Services Manager

Project: Jackson County Airport
Construction Services
Ravenswood, Jackson County, West Virginia
Role: Construction Services Manager
Project Year: 2009

Hospitals

Project: Ambulatory Care Center
Geotechnical/Construction Services
Morgantown, Monongalia County, West Virginia
Role: Project Manager
Project Year: 2013

Project: New Preston Memorial Hospital
Various Services
Kingwood, Preston County, West Virginia
Role: Project Manager
Project Year: 2013

Project: Mon General Hospital Roadway
Materials Testing
Morgantown, Monongalia County, West Virginia
Role: Project Manager
Project Year: 2011

Municipal Infrastructure

Project: Water Treatment Plant Corrective Action Design
Geotechnical/Construction Services
Fairmont, Marion County, West Virginia
Role: Construction Services Manager
Project Year: 2009

Project: Water Treatment Facility Expansion
Various Services
Morgantown, Monongalia County, West Virginia
Role: Construction Services Manager
Project Year: 2007



