



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

## Solicitation

NUMBER

DEP16437

PAGE

1

ADDRESS CORRESPONDENCE TO ATTENTION OF:

TARA LYLE

304-558-2544

RFQ COPY

TYPE NAME/ADDRESS HERE

CTL Engineering of West Virginia, Inc.

733 Fairmont Road

Morgantown, WV 26501

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ENVIRONMENTAL PROTECTION

DEPARTMENT OF

OFFICE OF AML&R

601 57TH STREET SE

CHARLESTON, WV

25304

304-926-0499

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DATE PRINTED

12/11/2013

BID OPENING DATE:

01/14/2014

BID OPENING TIME

1:30PM

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER                                                                                                                                                                                                                                                                                                                                                                             | UNIT PRICE | AMOUNT |
|------|----------|-----|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------|
| 0001 | 1        | JB  |          | 906-29                                                                                                                                                                                                                                                                                                                                                                                  |            |        |
|      |          |     |          | MCALPIN PORTALS & DRAINAGE DESIGN                                                                                                                                                                                                                                                                                                                                                       |            |        |
|      |          |     |          | EXPRESSION OF INTEREST                                                                                                                                                                                                                                                                                                                                                                  |            |        |
|      |          |     |          | THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE MCALPIN PORTALS AND DRAINAGE PROJECT IN HARRISON COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. |            |        |
|      |          |     |          | ***** THIS IS THE END OF RFQ DEP16437 ***** TOTAL:                                                                                                                                                                                                                                                                                                                                      |            |        |
|      |          |     |          | 01/13/14 10:16:41AM<br>West Virginia Purchasing Division                                                                                                                                                                                                                                                                                                                                |            |        |

SIGNATURE

TELEPHONE

(304) 292-1135

DATE

1/10/2014

TITLE  
Director Business Development

FEIN

55-063-1834

ADDRESS CHANGES TO BE NOTED ABOVE

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



# **EXPRESSION OF INTEREST**

To provide

**Professional Engineering Design  
Services  
and  
Construction Monitoring Services  
for the**

**McAlpin Portals & Drainage  
Harrison County, West Virginia  
DEP16437**

**Prepared for the  
West Virginia Department  
of Environmental Protection  
Office of AML&R**

**CTL Engineering of West Virginia, Inc.**

**733 Fairmont Road  
Morgantown, WV 26501**

**510 C Street  
South Charleston, WV 25303**

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## *Statement of Qualifications to Provide Professional Engineering Services*

1. **INTRODUCTION**
2. **PROJECT MANAGEMENT PLAN**
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4. **CCQQ – ATTACHMENT “B”**
5. **RPEM – ATTACHMENT “C”**

January 10, 2014

**West Virginia Department of Environmental Protection**  
Office of Abandoned Mine Lands & Reclamation  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

**Re: RFQ #DEP 16437  
Expression of Interest  
Design Engineering Services Proposal  
McAlpin Portals & Drainage Project**

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 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 an AML 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 Abandoned 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 AML design projects. Our corporation and individual staff members have extensive experience relative to landslide stabilization design, portal seal design and drainage control structures. The McAlpin Portals & Drainage Project is similar in scope to more than 35 AML



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 the first name being the most prominent.

Royden L. Loucks  
Director Business Development



# *Project Management Plan*

Our approach to the **McAlpin Portals & Drainage Project** will be similar to other CTL AML 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 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 a major modification is 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. Survey control points;
  10. 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**

## **McAlpin Portals & Drainage**

### Project Scope of Work:

Provide clearing and grubbing plan of site

Design diversion channels, ditches and/or underdrains to transport drainage safely off-site

Design regrading plan for stabilization of slide zones and slide prone areas on site utilizing available on site material and (if required) borrowed soil.

Design site relevant mine seals and bat gates, if necessary.

Provide revegetation plan including soil cover for all areas disturbed during construction

Provide required data for clearing and grubbing, S&E Control Plans and NPDES Permit submittal by AML

# CTL Engineering of West Virginia, Inc.

*An Employee Owned Company*

**CTL Engineering of West Virginia, Inc.** (CTL of WV) is a full service consulting civil engineering, testing, inspection, and analytical services company. CTL Engineering of West Virginia, Inc. was formed in 1981 to service West Virginia, Maryland and Pennsylvania. CTL of WV is part of CTL Engineering, Inc. formerly known as Columbus Testing Laboratory, which was established in Columbus, Ohio in 1927 as an independent engineering testing laboratory serving the local community. During the early years, our expertise focused mainly on soils, foundation engineering, and construction testing and inspection services.

*The Engineering News-Record* ranked CTL Engineering, Inc. among top 500 architectural and engineering firms in the nation. CTL Engineering maintains a staff of over 200 employees, including registered engineers, architects, chemists, environmental scientists, geologists, hydrologists, wetland scientists and technicians.

CTL of WV 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, permit preparation and submittal, and interaction with architects, owners and all interested parties to the projects.

CTL of WV provides all necessary surveying services required of projects including boundary and ALTA surveys, topographic surveys, aerial survey control, GPS surveys, and site construction surveys to assure proper construction and compliance with specifications of the project.

CTL of WV has become an industry leader in geotechnical design and investigations. In the past 5 years, CTL of WV has provided over 1000 geotechnical investigations including drilling, sampling and design for both the public and private sectors. CTL of WV is regularly called upon to provide unique geotechnical engineering design services for projects throughout the United States and Canada.

CTL of WV provides environmental services for developments throughout West Virginia and Maryland. Environmental Services include Phase I and II ESAs, wetland delineation and mitigation plans, State and Federal 401 and 404 Permit submittals, Ms4 Phase II storm water permitting, soil and groundwater sampling, asbestos surveys and sampling, lead based paint testing, mold testing, UST removal oversight, hazardous material identification and remedial design and other environmental services as required

CTL of WV provides construction, material and concrete testing and observation services. CTL of WV has ten field technicians providing dedicated construction observation and compliance testing. CTL's in-house material laboratory provides the much needed prompt turn-around required for projects to be successful.

Additional services provided by CTL include Nondestructive Testing and Inspection, Forensic Science, Accident Re-Construction, Roofing Consulting, Product Testing, Laboratories, Analytical Chemistry and Metallurgy Services.





## *AML & Relevant Project Experience* *(2008 – 2013)*

### **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**

- 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 & Potomas Hollow Water Invsetigations, 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**

# SHINN'S RUN PORTALS DEP 15235

## ***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**

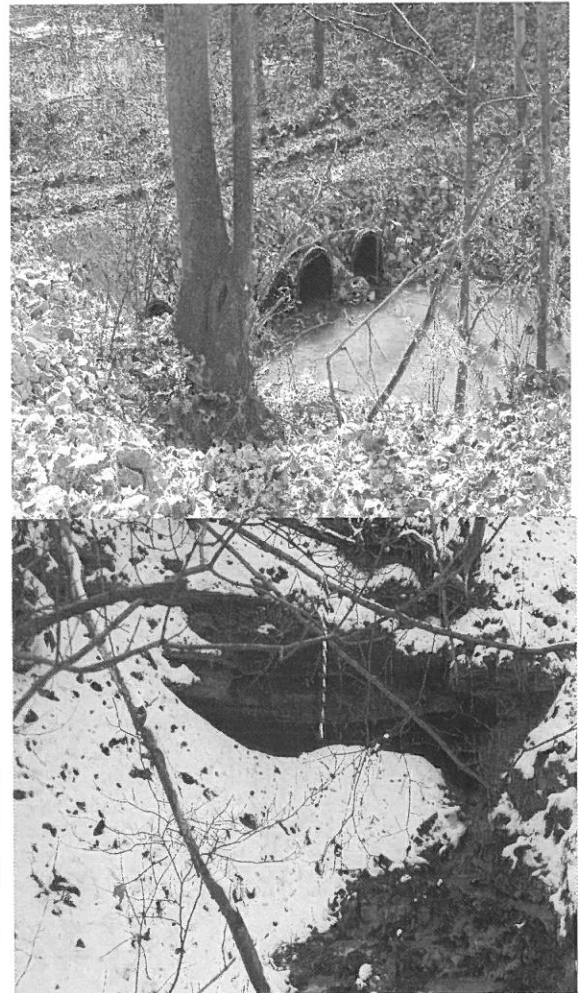
### Project Background

The site consisted of open portals and mine drainage with impounded water, collapsed mine portals and highwalls. Refuse and 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 and foundation recommendations
- Surveying
- Clearing & Grubbing Plan
- Access Road
- Diversion & Drainage for total site
- Dewater , excavate and seal all portals
- Stream Bank Stabilization
- 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

**2012**

### Estimated Project Cost

**\$1,500,000**



# 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 57<sup>th</sup> Street  
Charleston, WV 25304**

### **Design Completion Date**

**March 2010**

### **Estimated Project Cost**

**\$1,500,000**

# MARYLAND DEEP MINE CLOSURES

## DEEP MINE SEALS / BAT GATES & SITE RECLAMATION



**CTL Engineering Inc.**

### **Allegany & Garrett Counties, Maryland**

#### **CTL Professional Services**

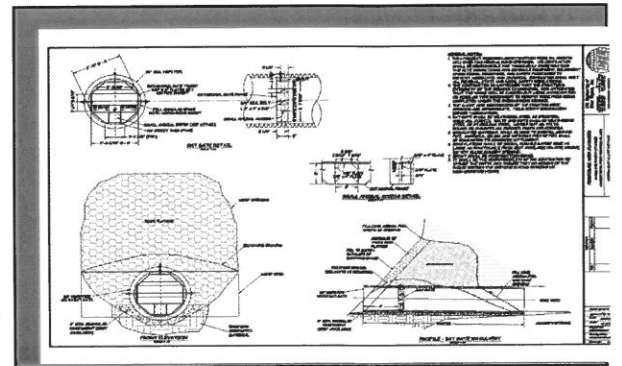
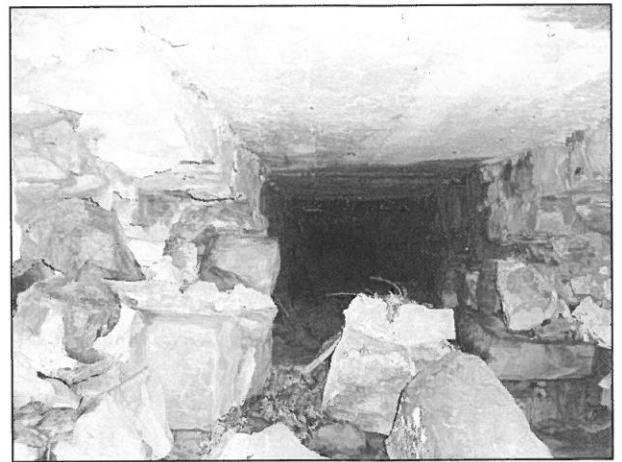
- **Surveying**
- **Geotechnical**
- **Civil Site Design**
- **Construction Documents**

#### **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**

# **PENINSULA HIGHWALL #1 & #2**

## **DEP 14233**

### ***HIGHWALL & SUBSIDENCE RECLAMATION – MINE SEALS***



**CTL Engineering Inc.**

## **Morgantown, Monongalia County, West Virginia**

#### **CTL Professional Services**

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

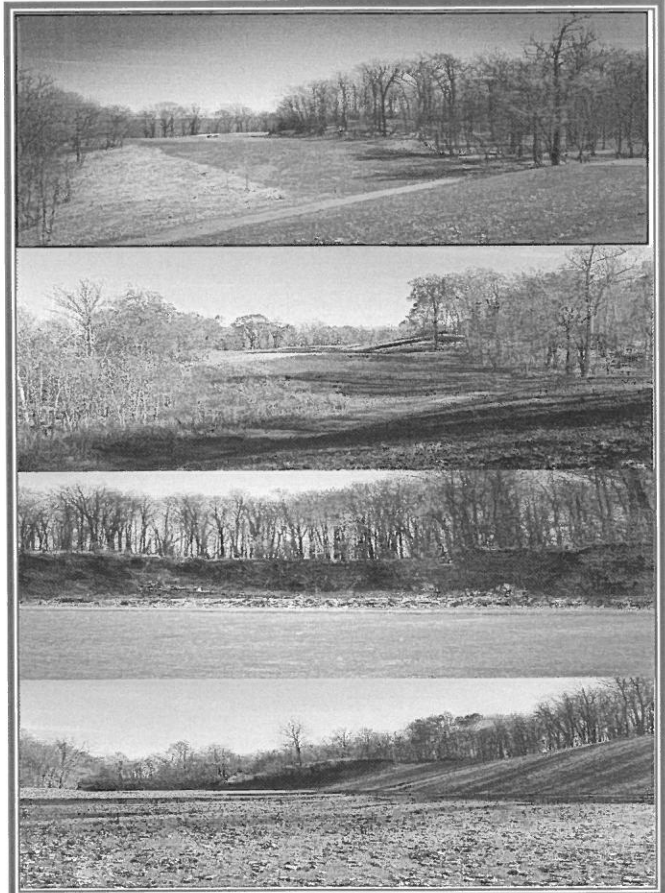
#### **Project Background**

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 57<sup>th</sup> Street**

**Charleston, WV 25304**

#### **Design Completion Date**

**November 2009**

#### **Estimated Construction Cost**

**\$219,000**



# **CHEAT NECK (LENHART)**

## **LANDSLIDE DEP14233**

### ***LANDSLIDE, MINE PORTALS & MINE DRAINAGE***



**CTL Engineering Inc.**

**Morgantown, Monongalia County West Virginia**

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#### **CTL Professional Services**

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

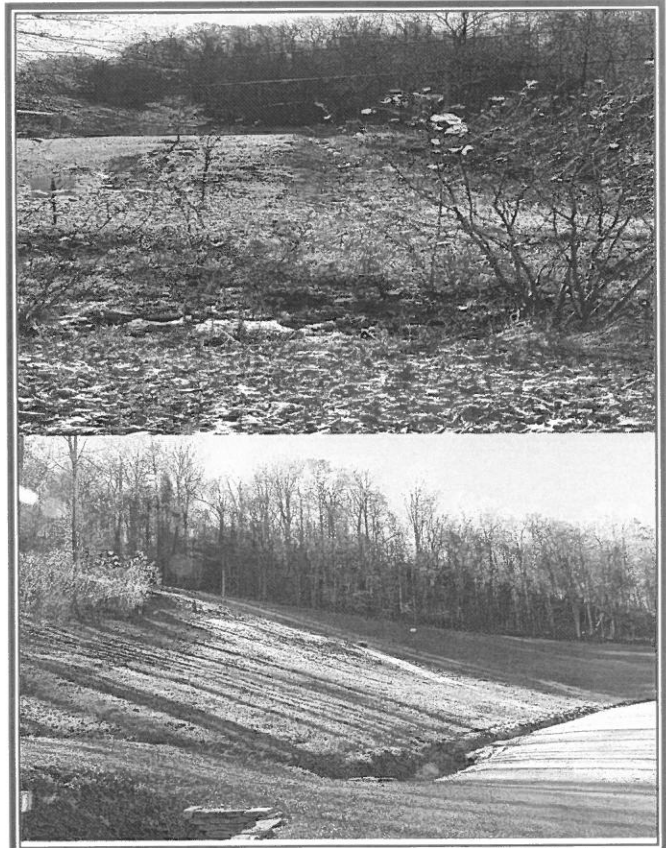
#### **Project Background**

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 57<sup>th</sup> Street  
Charleston, WV 25304**

#### **Design Completion Date**

**June 2009**

#### **Estimated Construction Cost**

**\$175,000**

# ***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**



www.ctleng.com

# Professional Services

## 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 Monitoring

- Floor Flatness
- Soils, Concrete, Asphalt, Masonry, Fireproofing, and Steel
- Earth and Concrete Dams
- Pavement 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 Tests

## Forensic Science

- Roofing Failures
- Building Failures

- Legal Testimony
- Product Liability

## 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 & Mapping

## Materials Testing

- Concrete
- Aggregates
- Soils and Rock
- Clay and 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 Investigations
- Drainage Control Structures

## Nondestructive Testing & Inspection

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

## 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 System

- 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 and Maintenance
- Lighting Systems
- Inventory and Warehousing

## 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 Dr.  
**Wapakoneta, OH 45895**  
Phone: (419) 738-1447  
Fax: (419) 738-7670

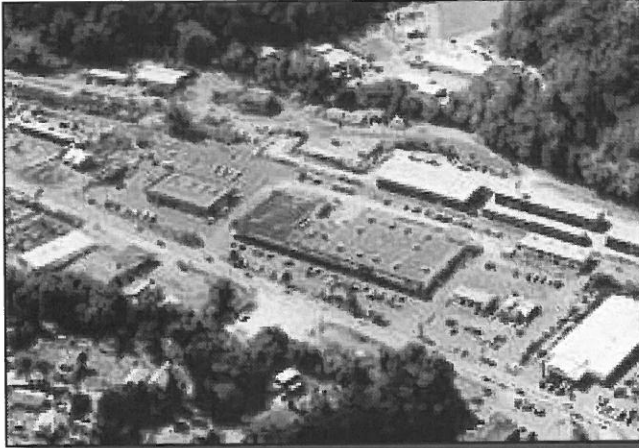
733 Fairmont Road  
**Morgantown, WV 26501**  
Phone: (304) 292-1135  
Fax: (304) 296-9302

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

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

## Welding & Quality Control

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



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

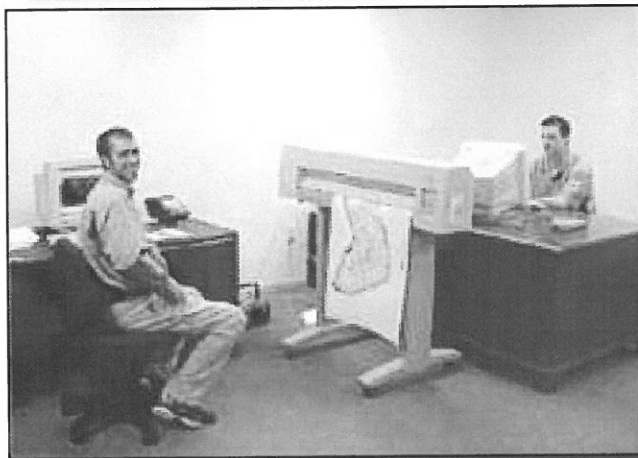
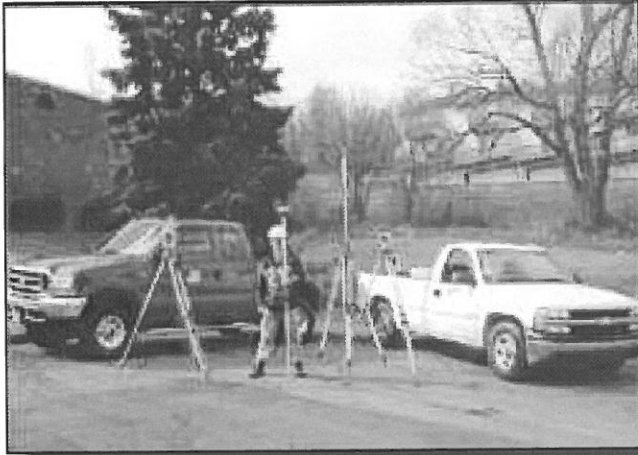
**From a Raw Piece of Property --  
CTL Engineering Provides Full Site Layout Design.**

- Topographic 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





CTL Engineering maintains a full service, in-house survey 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 (3) full survey crews, including a Global Positioning System (GPS), 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
- Global Positioning System (GPS)
- Construction Layout
- Settlement Plate Monitoring
- Micrometer Leveling
- Flood Plain Determination and Certification
- Wetland Delineations

## 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'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 and 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

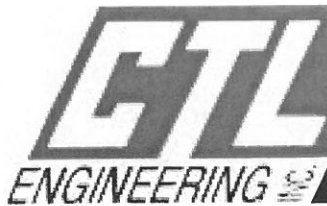


*Drilling in Rugged Terrain*



*Drilling on Flat Terrain*





# Mining Engineering Services



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 and 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.

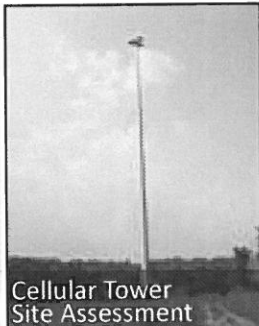
## CTL Engineering Mining Services Include:

- 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





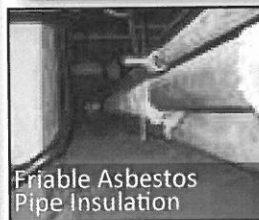
In-Situ Remediation



Cellular Tower Site Assessment



Underground Storage Tank Removal



Friable Asbestos Pipe Insulation



CTL has been providing Environmental Services since 1987 and has successfully completed over 7,100 projects of varying complexities for diversified clients, e.g., Governmental agencies, Universities, Private Banks, Developers, Communication Tower, Pipe-line 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's Environmental Department is the single source for your environmental needs.

## Other 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

### 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

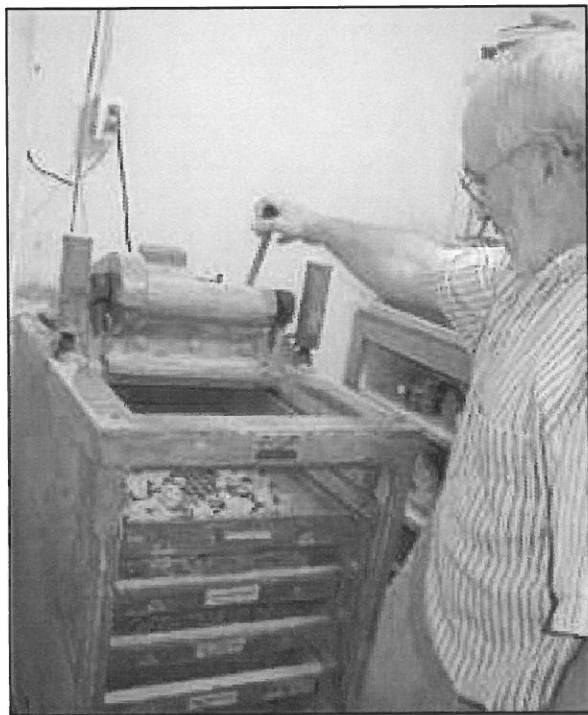
- Hazardous & Non-Hazardous Waste Characterization and Disposal
- Spill/ Discharge Response Plans
- Effluent Sampling & Analysis
- RCRA Planning and Closure
- Spill Prevention Control & Countermeasure Plans (SPCC)

### Geophysical Surveys

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

### 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.

**We provide complete testing of the following:**

#### **Aggregates**

- Component Analysis (sand, gravel, lime stone) – 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**

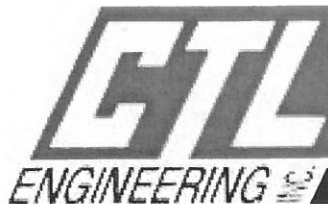
- Mix Designs
- Nuclear Gauge Calibrations Extraction and Grading
- Core Testing for Density and Strength

#### **Clay-brick, Pipe & Tile**

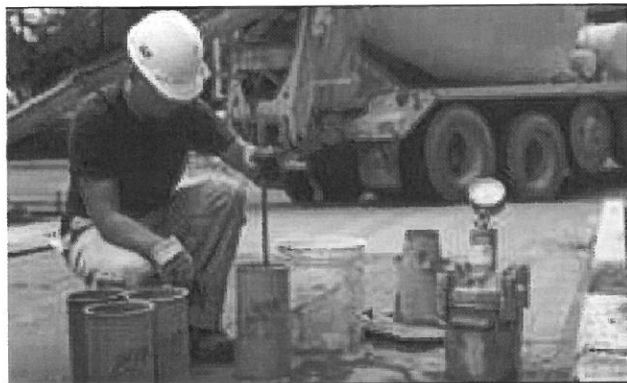
- Compressive Strength
- Absorption
- Freeze-thaw
- Efflorescence
- Dimensional Analysis
- Acid resistance

**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 customer.**





# Construction Services: Structural Tests and Special Inspections



CTL has a solid working knowledge of the Ohio Building Code with respect to Chapter 17, Structural Tests and Special Inspections. We routinely perform these services on many building construction projects. We also communicate regularly with key officials of the Division of Industrial Compliance, Board of Building Standards and Bureau of Building Code Compliance regarding the specific implementation and enforcement requirements of the Code.

A project's construction phase requires reliable testing and inspection services. Building owners, architects, engineers, and contractors choose CTL Engineering for this work, knowing that we are accurate, dependable, and perform our services in a timely manner.

CTL Engineering examines existing structures to evaluate potential problems. Failed structures are analyzed to determine the cause and extent of damage. We evaluate structural integrity during initial construction and at regular intervals after completion. CTL Engineering routinely evaluates metal and concrete pipes.

We perform audio/video surveys, sonic velocity testing, x-ray examinations, half-cell potential, and other destructive and nondestructive tests.

## CTL Engineering provides testing and inspection of the following:

- Sitework
- Foundations
- Air Barrier Testing
- Reinforced Concrete
- Structural Steel
- Masonry
- Sprayed-on Fire Proofing
- Roofing Systems
- Single & Multi-Story Building Structures
- Bituminous & Portland Cement Concrete Paving
- Highway and Airport Pavements
- Parking Garages & Bridges
- Water & Wastewater Treatment Facilities & Associated Piping Systems

## CTL Engineering's technicians maintain the following certifications and/or training:

- ACI (American Concrete Institute) Level I
- NICET Certification, Level I, II, III or IV
- Hazardous Materials Certification
- Confined Space Entry Training
- Radiation Safety Training
- WVDOT, ODOT, and NCDOT Certification





## *Firm's Equipment*

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### Geotechnical Equipment

CTL Engineering Inc.'s subsurface exploration equipment is adaptable for use of barges or all terrain vehicles (ATV's). CTL can mobilize special equipment or a fleet of drilling rigs to a particular project requiring multiple units. CTL Engineering owns and operates ten (10) drill rigs with a capacity of drilling to a depth of 300 feet. Other equipment includes large diameter soil and rock core sampling equipment, in-situ pressure meters and cone penetrometers.

CTL's drill rigs are rotary drilling rigs equipped to conduct standard split-spoon sampling with the use of hollow-stem augering, casing advancer or mud rotary. The rigs are also equipped with Moyno pumps, wire-line or standard coring equipment for proper and efficient execution of a subsurface investigation program

For field and laboratory materials analysis, CTL is equipped to conduct pressure meter tests, vane shear tests and cone penetrometers tests in the field. The laboratory is equipped with consolidometers, triaxial and direct shear apparatus, permeability devices and normal soils classification equipment.



*CTL owns and operates a fleet of ten (10) drill rigs*



*CTL's ATV can drill in rough terrain*

### Chemistry Laboratory

The chemistry laboratory at CTL is equipped with Atomic Absorption equipment, spectrophotometers and gas chromatography equipment. CTL has the capability of and regularly performs both non-hazardous and hazardous waste tests.



CTL has established a quality control/ quality assurance plan, which is based on The American Council of Independent Laboratory Standards. CTL carries professional liability insurance coverage with a limit of \$1,000,00 per occurrence and aggregate.

### **Computer Resources**

Operating efficiency may mean the difference between successful project completion and job overruns. At CTL Engineering, Inc., we effectively utilize computer software programs to assist in project and account management, resource allocation, data transfer, and preparation of plans and specifications. CTL's use of innovative technology sets us apart from the competition.

### **CADD Capabilities**

Project designs and specifications are produced in our Computer Aided Drafting and Design (CADD) section using all releases of ACADD, including Release 2013. AutoCAD allows the user to interact with a wide variety of support software to modify project designs or perform different modeling functions. In addition, many public documents or plans are available in digitized form allowing CTL to directly download surveyed land plots or utility drawings. Successful use of CADD-based documents and/or plans has dramatically increased CTL's project efficiency and performance.

### **Geotechnical Software**

CTL's Geotechnical Department utilizes a wide array of computer models to analyze deep foundation design, pavement design, slope stability, hydraulics, and flood hazard evaluation. Our experienced engineers use the following software to develop solutions:

- AASHTO** - Rigid and Flexible Pavement Design
- APILE** - Calculation of Load-Settlement
- COYLE** - Analysis of Axially Loaded Piles
- DSS** - Dimension Solution Software
- ELSYM5** - Elastic Layered System Pavement Design and Analysis
- GINT** - Boring Logs & Lab Testing
- HY8** - Culvert Analysis
- HY9** - Bridge Scour Analysis
- HWY** - Asphalt Institute Pavement Design
- LPILE** - Analysis of Laterally Loaded Piles
- NEWNEG** - Analysis of Piles Subjected to Negative Skin Friction
- RETWALL** - Design of Cantilever and Gravity Retaining Walls
- SCHMERT** - Analysis of Shallow Foundations in Sand
- SHAFT** - Analysis of Drilled Shafts (Caissons)
- STABL6** - Slope Stability Analysis
- WEAP** - Pile Driving Analysis
- WSPRO** - Water-surface Profile Computation Model

### Civil Engineering Software

Eagle Point Watershed Modeling & Water Surface  
Profiling  
DCA Civil Engineering Design Software  
Civilsoft  
Groundwater for Windows  
TR-55  
Swamp  
HEC 1 and 2  
Survey 3.0

### Hydrogeologic Studies

The backbone of many hydrogeologic studies is the determination of ground water properties, flow direction, and effects of local ground water pumping or injection. CTL is experienced in utilizing a wide variety of computer models to predict various properties of ground water and ground water flow to include:

**MODFLOW** - USGS Finite element ground water model  
**MODPATH** - USGS Particle tracker package for MODFLOW  
**SURFER** - Data contouring package  
**CAPZONE** - Semi-analytical ground water mode  
**GWPATH** - Flowpath tracker for ground water models  
**SLUGIX** - Slug test analysis software  
**WHPA** - Wellhead Protection area delineation

### Remediation Models

CTL uses the latest in remediation technologies and computer models when preparing conceptual and full-scale remediation system designs. Today's programs allow our engineers to calculate engineering parameters (e.g., stripper efficiency, total dynamic head, air emissions, etc.) in minutes instead of several hours. This allows us to evaluate multiple technology applications operating at varying parameters. Some of the models CTL uses include:

**ShallowTray** - low profile aerator evaluation program  
**Stat** - low profile aerator design  
**HyperVentilate** - soil vapor extraction emission model  
**SoilVent** - soil vapor extraction design model  
Gast Blower Selection Program

## Telemetry

CTL employees are experienced with a variety of remote data acquisition devices. These systems allow us to interface with the remediation systems and remotely operate, collect data, and troubleshoot potential operating problems. Auto dialers alert employees in the event of an emergency. Remote monitoring of the system minimizes system down time and ultimately saves the project money. CTL employees are experienced with:

Telmax II  
RealFlex  
SiteLink  
SiteWindows

## Accounting Software

CTL uses Wind2 accounting software for all of the services we provide. The project manager first constructs a budget from the information developed in the site-specific proposal. Critical pathways of construction are identified and individual tasks developed for implementing the proposed work. A project number is assigned and costs tracked to each phase, task, or subtask of the project. Monthly billing review reports are provided to the managers to control and assess the progress of the project.

## General

CTL Engineering Inc. utilizes:

**Windows** based operating systems

**Microsoft Office 2007** is used for word processing, spreadsheets creation, data processing, and presentation creation.

Alternative software including Corel Suite is available, if necessary.

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**AML CONSULTANT CONFIDENTIAL QUALIFICATION QUESTIONNAIRE**

**"Attachment"**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |                                                                               |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PROJECT NAME<br>McAlpin Portals & Drainage, Harrison County, WV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                            | DATE (DAY, MONTH, YEAR)<br>14/01/2014                                                                                                                                                                             |                                                                                                                                                                          | FEIN<br>55-063-1834                                                           |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| 1. FIRM NAME<br>CTL Engineering of West Virginia, Inc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                            | 2. HOME OFFICE BUSINESS ADDRESS<br>2860 Fisher Road<br>Columbus, OH 43204                                                                                                                                         |                                                                                                                                                                          | 3. FORMER FIRM NAME<br>Columbus Testing Laboratories                          |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| 4. HOME OFFICE TELEPHONE<br><br>(614) 276-8123                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5. ESTABLISHED (YEAR)<br><br>CTL-1927      CTL-WV 1983                                                                                                                     | 6. TYPE OWNERSHIP<br>Individual <u>Corporation</u><br>Partnership      Joint-Venture                                                                                                                              |                                                                                                                                                                          | 6a. WV REGISTERED DBE<br>(Disadvantaged Business Enterprise)<br>YES <u>NO</u> |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| 6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE<br>733 Fairmont Road, Morgantown, WV 26501/ 304-292-1135/ Patrick E. Gallagher, President / Morgantown - 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |                                                                               |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| 7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM<br>Patrick E. Gallagher, President<br>CK Satyapriya, VP/Sec.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                            |                                                                                                                                                                                                                   | 8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS<br>Ali Jamshidi, Treasurer (614) 276-8123                                                                         |                                                                               |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| 9. PERSONNEL BY DISCIPLINE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |                                                                               |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| <table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> <u>5</u> ADMINISTRATIVE<br/> - ARCHITECTS<br/> <u>1</u> BIOLOGIST<br/> <u>7</u> CADD DESIGNERS<br/> - CHEMICAL ENGINEERS<br/> <u>4</u> CIVIL ENGINEERS<br/> <u>9</u> CONSTRUCTION INSPECTORS<br/> - DESIGNERS<br/> - DRAFTSMEN </td> <td style="width:25%; vertical-align: top;"> - ECOLOGISTS<br/> - ECONOMISTS<br/> - ELECTRICAL ENGINEERS<br/> <u>3</u> ENVIRONMENTALISTS<br/> - ESTIMATORS<br/> <u>3</u> GEOLOGISTS/GEOTECH ENG.<br/> - HISTORIANS<br/> - HYDROLOGISTS </td> <td style="width:25%; vertical-align: top;"> - LANDSCAPE ARCHITECTS<br/> - MECHANICAL ENGINEERS<br/> - MINING ENGINEERS<br/> - PHOTOGRAMMETRISTS<br/> - PLANNERS: URBAN/REGIONAL<br/> <u>1</u> SANITARY ENGINEERS<br/> <u>1</u> SOILS ENGINEERS<br/> - SPECIFICATION WRITERS </td> <td style="width:25%; vertical-align: top;"> <u>1</u> STRUCTURAL ENGINEERS<br/> <u>10</u> SURVEYORS/RODMEN<br/> - TRAFFIC ENGINEERS<br/> <u>X</u> OTHER,<br/> <u>3</u> Geotechnical Drillers<br/> <br/> <u>47</u> TOTAL PERSONNEL </td> </tr> </table> |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |                                                                               |  | <u>5</u> ADMINISTRATIVE<br>- ARCHITECTS<br><u>1</u> BIOLOGIST<br><u>7</u> CADD DESIGNERS<br>- CHEMICAL ENGINEERS<br><u>4</u> CIVIL ENGINEERS<br><u>9</u> CONSTRUCTION INSPECTORS<br>- DESIGNERS<br>- DRAFTSMEN | - ECOLOGISTS<br>- ECONOMISTS<br>- ELECTRICAL ENGINEERS<br><u>3</u> ENVIRONMENTALISTS<br>- ESTIMATORS<br><u>3</u> GEOLOGISTS/GEOTECH ENG.<br>- HISTORIANS<br>- HYDROLOGISTS | - LANDSCAPE ARCHITECTS<br>- MECHANICAL ENGINEERS<br>- MINING ENGINEERS<br>- PHOTOGRAMMETRISTS<br>- PLANNERS: URBAN/REGIONAL<br><u>1</u> SANITARY ENGINEERS<br><u>1</u> SOILS ENGINEERS<br>- SPECIFICATION WRITERS | <u>1</u> STRUCTURAL ENGINEERS<br><u>10</u> SURVEYORS/RODMEN<br>- TRAFFIC ENGINEERS<br><u>X</u> OTHER,<br><u>3</u> Geotechnical Drillers<br><br><u>47</u> TOTAL PERSONNEL |
| <u>5</u> ADMINISTRATIVE<br>- ARCHITECTS<br><u>1</u> BIOLOGIST<br><u>7</u> CADD DESIGNERS<br>- CHEMICAL ENGINEERS<br><u>4</u> CIVIL ENGINEERS<br><u>9</u> CONSTRUCTION INSPECTORS<br>- DESIGNERS<br>- DRAFTSMEN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | - ECOLOGISTS<br>- ECONOMISTS<br>- ELECTRICAL ENGINEERS<br><u>3</u> ENVIRONMENTALISTS<br>- ESTIMATORS<br><u>3</u> GEOLOGISTS/GEOTECH ENG.<br>- HISTORIANS<br>- HYDROLOGISTS | - LANDSCAPE ARCHITECTS<br>- MECHANICAL ENGINEERS<br>- MINING ENGINEERS<br>- PHOTOGRAMMETRISTS<br>- PLANNERS: URBAN/REGIONAL<br><u>1</u> SANITARY ENGINEERS<br><u>1</u> SOILS ENGINEERS<br>- SPECIFICATION WRITERS | <u>1</u> STRUCTURAL ENGINEERS<br><u>10</u> SURVEYORS/RODMEN<br>- TRAFFIC ENGINEERS<br><u>X</u> OTHER,<br><u>3</u> Geotechnical Drillers<br><br><u>47</u> TOTAL PERSONNEL |                                                                               |  |                                                                                                                                                                                                                |                                                                                                                                                                            |                                                                                                                                                                                                                   |                                                                                                                                                                          |
| TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>4</u><br>*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? <input type="checkbox"/> YES <input type="checkbox"/> 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.

[illegible]



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<br>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                                                                                                                                                                                                                           | REGISTRATION (Type, Year, State)                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| American Society of Civil Engineers<br>Society of Mining Engineers of A.I.M.E.<br>Triangle Fraternity of Engineers, Architects and Scientists<br>International Society of Soil Mechanics and Foundation Engineers<br>American Institute of Professional Geologists | Registered Professional Engineer; 1983-West Virginia, 1984-Ohio, 1983-Maryland, 1993-Pennsylvania, 2006-Wyoming, 2006-North Carolina<br>Certified Professional Geological Scientist - 1984<br>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.<br>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                                                                                  | REGISTRATION (Type, Year, State)                                                      |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Fellow of the American Society of Civil Engineers, The GEO-Institute, Timber Framers Guild, Construction Institute (ASCE) | Engineering Intern (EI), 1996, New York<br>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 |
| <b>Darrah, Timothy A.</b><br>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: |
| <b>Stanley, Joseph</b><br>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 <b>RESPONSIBLE FOR AML PROJECT DESIGN</b> (Furnish complete data but keep to essentials)                                                                                                                                                                                                                                                                                                         |                                             |                                                                                             |                                                      |
| NAME & TITLE (Last, First, Middle Int.)<br><b>Foreman, Gregory P.E.</b>                                                                                                                                                                                                                                                                                                                                                                                      | YEARS OF EXPERIENCE                         |                                                                                             |                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                              | YEARS OF AML DESIGN EXPERIENCE:<br><b>4</b> | YEARS OF AML RELATED DESIGN EXPERIENCE:<br>18                                               | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:<br>18 |
| Brief Explanation of Responsibilities<br>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)<br><br>A.S, Fairmont State, 1989, Drafting & Design<br>A.S., Fairmont State, 1989, Mechanical<br>B.S., Fairmont, 1989, Civil Engineering Technology                                                                                                                                                                                                                                                                 |                                             |                                                                                             |                                                      |
| MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS                                                                                                                                                                                                                                                                                                                                                                                                                     |                                             | REGISTRATION (Type, Year, State)<br>Registered Professional Engineer, 1999, WV (no. 014165) |                                                      |

|                                                                                                                                                                                                                                                               |                                             |                                                                                                     |                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| 13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES <b>RESPONSIBLE FOR AML PROJECT DESIGN</b> (Furnish complete data but keep to essentials)                                                                                                          |                                             |                                                                                                     |                                                     |
| NAME & TITLE (Last, First, Middle Int.)<br><b>Waltz, Charles P.E.</b>                                                                                                                                                                                         | YEARS OF EXPERIENCE                         |                                                                                                     |                                                     |
|                                                                                                                                                                                                                                                               | YEARS OF AML DESIGN EXPERIENCE:<br><b>9</b> | YEARS OF AML RELATED DESIGN EXPERIENCE:<br>13                                                       | YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:<br>0 |
| Brief Explanation of Responsibilities<br>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)<br><br>B.A., Fairmont State, Business Administration<br>B.S., Fairmont State, Civil Engineering<br>Graduate Studies, West Virginia University, Geotechnical Engineering                                              |                                             |                                                                                                     |                                                     |
| MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS                                                                                                                                                                                                                      |                                             | REGISTRATION (Type, Year, State)<br>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

- 2 - 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 shelly 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<br>AML Emergency Program<br>1855 Fountain Square Court, 2nd Floor<br>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<br>160 S. Water St.<br>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<br>\$15,000,000+ Const. | 65%                                                          |
| Hopewell Church Refuse & Drainage (DEP16074), Preston County, WV                                                            | WVDEP - AML<br>601 57 <sup>th</sup> Street SE<br>Charleston, WV 25304                                                        | Draining mine portal remediation design, mine seals, drainage systems, grading design, specifications                                                                                                                               |                                        | Design - Preliminary Review complete.<br>Submittal Dec. 2013 |
|                                                                                                                             |                                                                                                                              |                                                                                                                                                                                                                                     |                                        |                                                              |
| TOTAL NUMBER OF PROJECTS: 4                                                                                                 | TOTAL ESTIMATED CONSTRUCTION COSTS:<br>+\$10,000,000                                                                         |                                                                                                                                                                                                                                     |                                        |                                                              |

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUBCONSULTANT 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 |
|                                 |                                |                           |                           |                             |                           |
|                                 |                                |                           |                           |                             |                           |
|                                 |                                |                           |                           |                             |                           |
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|                                 |                                |                           |                           |                             |                           |

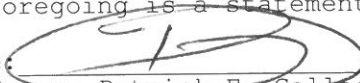
| 17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (AML Projects) |                                                                              |                             |      |                         |
|----------------------------------------------------------------------------------------------------------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

| 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: 01/10/2014

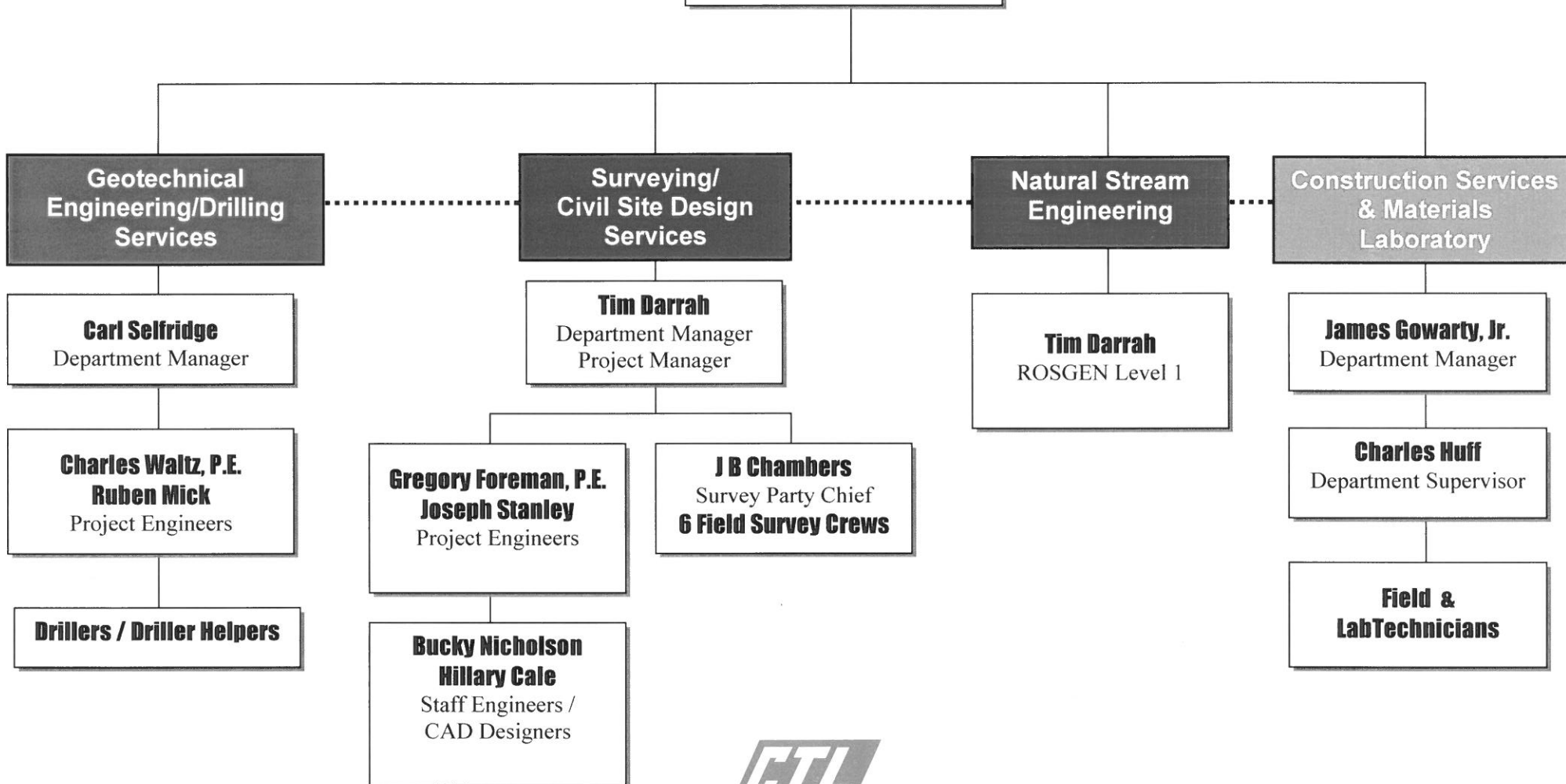
NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.



# 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, #48459; Maryland, #13256; West Virginia, #9297; Pennsylvania, #PE-044930-R; Wyoming, #11033; North Carolina, #032503; Kentucky, #24988
- Certified Professional Geological Scientist, #6575
- 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: (Project Profiles Provided)***

**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



**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:** Shinns 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

# TIMOTHY A. DARRAH

*Civil Site and Survey Department Manager*

## ***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: (Project Profile Provided)*

## **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: (Project Profile Provided)*

### **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

**Project Year:** 2008

*Staff Engineer*

**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, No. 014165

***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: (Project Profile Provided)*

**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: (Project Profile Provided)*

**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

# CHARLES T. WALTZ, P.E.

## *Geotechnical Project Manager*

### ***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, # 17626; Virginia, # 37038

### ***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

RFQ No. DEP16437

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.

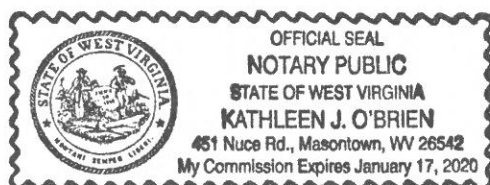
**DEFINITIONS:**

**"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 exceeds 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: [Signature] Date: 01/10/2014State of West VirginiaCounty of Monongalia, to-wit:Taken, subscribed, and sworn to before me this 10th day of January, 2014.My Commission expires 1/17, 2020**AFFIX SEAL HERE****NOTARY PUBLIC***Kathleen J O'Brien*  
Purchasing Affidavit (Revised 07/01/2012)

**CERTIFICATION AND SIGNATURE PAGE**

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

CTL Engineering of West Virginia, Inc.

(Company)



(Authorized Signature)

Patrick E. Gallagher, President

(Representative Name, Title)

(304) 292-1135

(Phone Number)

(304) 296-9302

(Fax Number)

01/10/2014

(Date)



**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: DEP16437**

**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

01/10/2014  
 Date

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

| AML and RELATED PROJECT EXPERIENCE MATRIX (2008 - 2013)     |                                          |                                                           |                                       |                                    |                      |                                      |                     |                                |                                        |                          |                        |                                                        |                                       |                 |                                 |                    |                        |                                                                            |            |                       |                |              |                     |
|-------------------------------------------------------------|------------------------------------------|-----------------------------------------------------------|---------------------------------------|------------------------------------|----------------------|--------------------------------------|---------------------|--------------------------------|----------------------------------------|--------------------------|------------------------|--------------------------------------------------------|---------------------------------------|-----------------|---------------------------------|--------------------|------------------------|----------------------------------------------------------------------------|------------|-----------------------|----------------|--------------|---------------------|
| PROJECT                                                     | Exp. Basis<br>C=Corp.<br>P=Personal<br>* | Additional<br>Info<br>Provided<br>in Section<br>(s)<br>** | PROJECT EXPERIENCE REQUIREMENTS       |                                    |                      |                                      |                     |                                |                                        |                          |                        |                                                        |                                       |                 |                                 |                    |                        | PRIMARY STAFF<br>PARTICIPATION/CAPACITY<br>*** M=Management P=Professional |            |                       |                |              |                     |
|                                                             |                                          |                                                           | Abandoned Surface Mine<br>Reclamation | Abandoned Deep Mine<br>Reclamation | Portal/Shaft Closure | Hydrologic/Hydraulic<br>Design/Eval. | Remining Evaluation | Mine Refuse/ Fire<br>Abatement | Subsidence Investigation<br>Mitigation | Hazardous Waste Disposal | Project Specifications | Water Quality<br>Evaluation/Mitigation/<br>Replacement | Construction<br>Inspection/Management | Water Treatment | Equipment/<br>Structure Removal | Stream Restoration | Geotechnical/Stability | PATRICK GALLAGHER, PE                                                      | TIM DARRAH | GREGORY FOREMAN, P.E. | JOSEPH STANLEY | CARL SELFRIE | CHARLES WALTZ, P.E. |
| HOPEWELL CHURCH REFUSE & AMD (WV AML '13)                   | C                                        | Profile                                                   |                                       | X                                  | X                    | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                | P            |                     |
| MORGANTOWN ANDERSON HIGHWALLS (WV AML '12)                  | C                                        | Profile                                                   |                                       | X                                  | X                    | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                | P            |                     |
| SCHRAMM - GORDON -EAST FRANKLIN LANDSLIDES (MD AML '12)     | C                                        |                                                           | X                                     | X                                  |                      |                                      |                     |                                |                                        | X                        |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              | P            |                     |
| DOUGLAS AVENUE STORMWATER SYSTEM (MD AML '12)               | C                                        |                                                           |                                       |                                    |                      | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     |                                                                            | MP         |                       | P              |              |                     |
| FAIRMONT SUBSIDENCE (WV AML '12)                            | C                                        |                                                           |                                       | X                                  |                      |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              | P            |                     |
| DOUGLAS AVENUE LANDSLIDE (MD AML '12)                       | C                                        |                                                           |                                       | X                                  |                      | X                                    |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              | P            |                     |
| LOWER CONSOL ROAD SUBSIDENCE (MD AML '11)                   | C                                        |                                                           | X                                     | X                                  |                      |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              | P            |                     |
| BALD KNOB WATER SUPPLY STUDY (MD AML '12)                   | C                                        |                                                           |                                       |                                    |                      | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         | P          |                       |                |              |                     |
| SHINNS RUN PORTALS (WV AML '11)                             | C                                        | Profile                                                   |                                       | X                                  | X                    |                                      |                     |                                |                                        |                          |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              |              |                     |
| REAM REFUSE PILE (WV AML '10)                               | C                                        |                                                           | X                                     |                                    |                      |                                      |                     | X                              |                                        |                          |                        |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| PEE WEE HILL WATER SUPPLY (MD AML '10)                      | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     |                                                                            | MP         |                       |                |              |                     |
| TERRA HAUTE AIRPORT (IN AML '10)                            | C                                        |                                                           |                                       | X                                  | X                    |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              |              |                     |
| KENNEL MINE CLOSURE (MD AML '10)                            | C                                        | Profile                                                   | X                                     | X                                  | X                    |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| FROSTBURG NORTH CLOSURE (MD AML '10)                        | C                                        | Profile                                                   | X                                     | X                                  | X                    |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| PEE WEE HILL WATER FEASIBILITY (MD AML '10)                 | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     |                                                                            | MP         |                       | P              |              |                     |
| WILLIAMS REFUSE PILE #2 (Private AML '09)                   | C                                        |                                                           | X                                     |                                    |                      | X                                    | X                   |                                |                                        | X                        | X                      | X                                                      | X                                     |                 |                                 | X                  |                        |                                                                            |            | MP                    |                |              |                     |
| PENINSULA HIGHWALLS (WV AML '09)                            | C                                        | Profile                                                   | X                                     | X                                  |                      | X                                    |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              |              |                     |
| ST. CLAIR PORTALS (WV AML '09)                              | C                                        | Profile                                                   | X                                     | X                                  | X                    | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 | X                               | X                  | MP                     | MP                                                                         |            | P                     | P              |              |                     |
| CHEAT NECK LANDSLIDE (WV AML '09)                           | C                                        | Profile                                                   |                                       |                                    | X                    | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              |              |                     |
| FARMINGTON UMC (WV DEP EMER. '09)                           | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            |                       | P              |              |                     |
| MORNINGSIDE BAPTIST (WV DEP EMER. '09)                      | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            |                       | P              |              |                     |
| COLLINS MINING (ODNR FOR. '09)                              | C                                        |                                                           | X                                     |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| FAIRVIEW WATER FEASIBILITY(WV AML '09)                      | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         | P          |                       |                |              |                     |
| AARON'S RUN (MD AML '09)                                    | C                                        |                                                           | X                                     |                                    |                      | X                                    |                     |                                |                                        |                          | X                      | X                                                      |                                       | X               |                                 | X                  | MP                     | MP                                                                         |            | P                     |                |              |                     |
| ECCLES SUBSIDENCE (WV AML '08)                              | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              |              |                     |
| McARTHUR SUBSIDENCE (WV AML '08)                            | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              |              |                     |
| TIOGA WATER FEASIBILITY (WV AML '08)                        | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         | P          |                       |                |              |                     |
| McCOURT LANDSLIDE(ODNR FOR. '08)                            | C                                        | Profile                                                   | X                                     |                                    |                      | X                                    |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            | P                     | P              |              |                     |
| JONES TRUCKING (ODNR FOR. '08)                              | C                                        |                                                           | X                                     |                                    |                      |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| MILLER MINING (ODNR FOR. '08)                               | C                                        |                                                           |                                       |                                    |                      | X                                    |                     |                                |                                        |                          | X                      | X                                                      |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| ZILMAN CLOSURE (MD AML '08)                                 | C                                        |                                                           |                                       | X                                  | X                    |                                      |                     |                                |                                        |                          | X                      |                                                        |                                       |                 |                                 |                    | MP                     | MP                                                                         |            | P                     |                |              |                     |
| CALDONIA HILL SLOPE STABILITY (MD AML '08)                  | C                                        |                                                           | X                                     |                                    |                      |                                      |                     |                                |                                        |                          |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       |                |              |                     |
| WEST VIRGINIA BRIM (2005 - 2012) 42 Projects                | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              | P            |                     |
| OMSIUA (2005 - 2010) 47 Projects                            | C                                        |                                                           |                                       |                                    |                      |                                      |                     |                                | X                                      |                          |                        |                                                        |                                       |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              | P            |                     |
| (2005 - 2008) 20 Additional AML Projects for WV, MD, OH, PA | C                                        |                                                           | X                                     | X                                  | X                    |                                      |                     |                                | X                                      |                          | X                      | X                                                      | X                                     |                 |                                 | X                  | MP                     | MP                                                                         |            |                       | P              | P            |                     |

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