CTL Engineering Of West Virginia, Inc.
733 Fairmont Road, Morgantown, West Virginia 26501
Phone: 304/292-1135 • Fax: 304/296-9302
e-mail: ctlwv@ctleng.com

AN EMPLOYEE OWNED COMPANY

Consulting Engineers • Testing • Inspection Services • Analytical Laboratories

Established 1927

May 5, 2009

RECEIVED
2009 MAY -6 A 10:21
PURCHASING DIVISION
STATE OF WV

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

Re: RFQ #DEP 14622
Expression of Interest
Design Engineering Services Proposal
Pines Country Club (Ponds) Subsidence Design 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 design experience relative to dams, impoundments, irrigation ponds and stormwater structures. We have collectively designed more than 30 dams of this size or larger.

Additionally, we are extremely familiar with the Pines Country Club Subsidence Design Project. Not only is it similar in scope to more than 50 AML design projects we have successfully completed but several of our staff are members of this club and have first hand knowledge of the conditions and concerns with this project. Attached to this proposal are numerous examples of subsidence reclamation, dam and drainage control projects in West Virginia, including several projects that were nominated and chosen as National AML Reclamation Award winners!

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.

Royden L. Loucks
Director Business Development

CTL ENGINEERING

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

Request for Quotation

RFQ NUMBER	PAGE
DEP14622	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN
304-558-2157

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
CTL Engineering of West Virginia, Inc.
733 Fairmont Road
Morgantown, WV 26501

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
04/02/2009				

BID OPENING DATE: 05/07/2009 BID OPENING TIME 01:30PM

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

PINES COUNTRY CLUB (PONDS) SUBS. 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 PINES COUNTRY CLUB (PONDS) SUBS. PROJECT IN MONONGALIA COUNTY, WV, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID AND IS TERMINATED WITHOUT FURTHER ORDER.

****** THIS IS THE END OF RFQ DEP14622 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
	(304) 292-1135	May 6, 2009

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
Dir. Business Dev.	55-063-1834	

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

RFQ No. DEP14622

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

029

VENDOR OWING A DEBT TO THE STATE:
West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:
If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code***. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the ***West Virginia Code*** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the ***West Virginia Code*** may take place before their work on the public improvement is begun.

ANTITRUST:
In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:
Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:
The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

Under penalty of law for false swearing (***West Virginia Code*** §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

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

Authorized Signature: _____ Date: May 5, 2009

Project Management Plan

Our approach to the **Pines Country Club Subsidence Project** will be similar to other CTL impoundment and dam design projects, but unique in landowner needs and expectations. The Project Management Plan we have developed for this site is as follows:

- The initial and critical geotechnical investigation will be performed to:
    1. Find and nominate suitable impermeable fill material for construction of the new impoundment; and
    2. Define a suitable location for the new impoundment in order to insure a stable foundation, evaluate any potential of the abutments for piping, and eliminate any mine subsidence issues with the new impoundment.
- The impoundment design will comply with the WV Dam Design Criteria. The impoundment will likely be either a Hazard Class 1 or Hazard Class 2 structure. Hydrology is an important part of the design to assure the Water Budget Criteria of the owner, estimated at 240,000 gallons per day usage during irrigation. The most critical analyses for the impoundment design will include:
    1. Seepage analysis,
    2. Flood routing, and
    3. Stability analysis.
- Reclamation of the existing impoundment will be integrated with the design of water features and drainage systems to meet the aesthetic needs and requirements of the landowner.
- The design of the irrigation system will be coordinated with the course superintendent and system design engineers to provide minimum capacities and infrastructure layout that will be compatible with the current irrigation system.
- 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 site 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 site. 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.

- Simultaneous to the surveying, the geotechnical investigation will be performed as stated above. 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 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. Access road layout and design;
  4. Specific borrow areas for core material for new impoundment;
  5. Proposed grading plans;
  6. Site Profiles;
  7. Cross Sections;
  8. Water features and drainage system and control structures, with details;
  9. Survey control points;
  10. Irrigation system plan and details and integration points with existing system; and
  11. Miscellaneous Site details.

- 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

Pines Country Club (Ponds) Subsidence

Project Mission:

The design of an impoundment to be constructed on the Pines Country Club property and the development of Plans for remedial measures needed to eliminate an existing impoundment on the Pines Country Club property. The new impoundment shall be designed to provide water retention for irrigation purposes for the golf course. A reclamation plan shall be provided for the construction activities required to eliminate the potential failure posed by the existing impoundment being located directly over abandoned mine workings. The design and layout of a hydraulic system to tie into the irrigation system for the golf course.

Project Scope of Work:

Construct an impounding structure for water storage for the golf course.

Eliminate the impounding potential of the existing structure by removing the dam and then regrade and reclaim the site.

Re-establish the irrigation system to function from the newly constructed dam.

Reclaim all disturbed areas from construction activities and revegetate the disturbed areas.

CTL Engineering Inc.

An Employee Owned Company

CTL Engineering, Inc. (CTL Engineering) is a full service consulting engineering, testing, inspection, and analytical services company. CTL Engineering, formerly known as Columbus Testing Laboratory, was established 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.

***Business First Journal* regularly lists CTL Engineering, Inc. as one of the top engineering firms in Central Ohio in terms of employees and revenues generated. *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.**

Today, CTL Engineering regularly performs services throughout all of West Virginia and in a majority of Mid-Atlantic and Midwestern states.

YEARS of SERVICE

CTL Engineering Inc. has been in business since 1927 and has been providing quality consulting engineering services for over 80 years. CTL Engineering of West Virginia will be celebrating it's 28th anniversary this year.

CTL Engineering Inc. provides ***consulting engineering services, testing and inspection services and offers a full-services analytical laboratory in-house.*** CTL also provides Geotechnical Engineering, Environmental Engineering Civil Engineering, Mining Engineering, Construction Inspection and Testing, Nondestructive Testing and Inspection, Forensic Science, Accident Re-Construction, Roofing Consulting, Product Testing, Laboratories, Analytical Chemistry, Materials Testing, and Metallurgy Services.

FOR MORE INFORMATION CONTACT US:

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(304) 746-1443 Fax

www.ctleng.com

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.

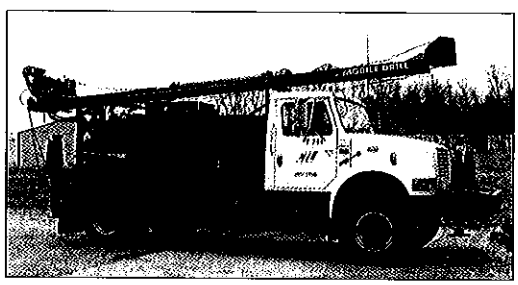
Firm's Equipment

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, triaxal and direct shear apparata, 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 2008. 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.

CTL ENGINEERING

Professional Services

Established 1927

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

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

Construction Monitoring
- Floor Flatness
- Single and Multi-Story Structures
- 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
- Asbestos Survey
- Site Remediation
- Permit Preparation
- Wetlands Mitigation
- Wetlands Permitting
- Wellhead Protection
- Wetlands Delineation
- Abatement Monitoring
- Site Abandonment and Closure Planning
- Site/Facility Assessment
- Hydrogeologic Studies and Aquifer Characterization
- Underground Storage Tank Management

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

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

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

Mining Engineering
- Mine Plan Design
- Permit Preparation
- Refuse Disposal Design
- Mine Reclamation Design
- Environmental Monitoring
- Subsidence Investigations
- Drainage Control Structures

Nondestructive Testing & Inspection
- X-ray
- Level III Services
- Magnetic Particle Inspection
- Ultrasonic Inspections
- Liquid Penetrant Inspection

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

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

Roofing Engineering Services
- Seminars Design Maintenance
- Laboratory Testing
- Moisture – Infrared & Nuclear
- Quality Control/ Roof Inspection
- Management Programs
- Roof Surveys Evaluation
- Design & Construction Administration (Plans and Specifications)

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

Site/Civil Engineering
- Commercial Land Development
- Infrastructure Planning
- Residential/Community Planning

Surveying & Mapping
- Topographic mapping development
- Property surveying & boundary determination
- Global Positioning System

Welding & Quality Control
- QA/QC Programs
- Certified Welding Inspection
- Welding and Brazing Qualification
- Procedure Development

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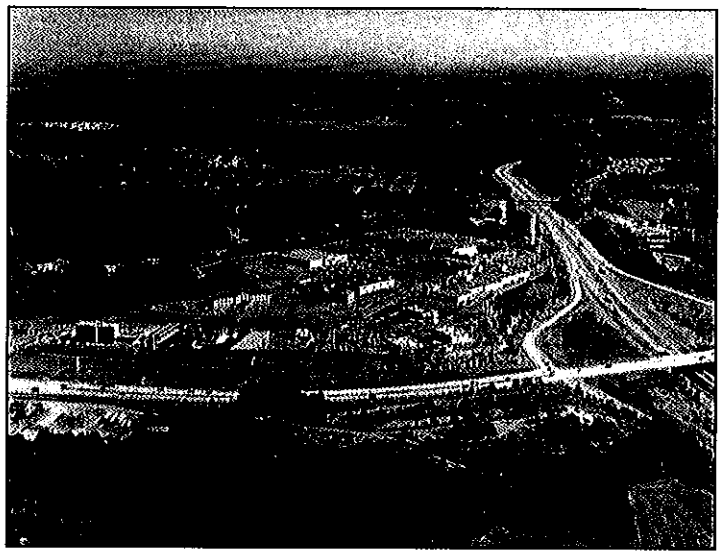
Bangalore, India 560017
011-91-80-526-8615

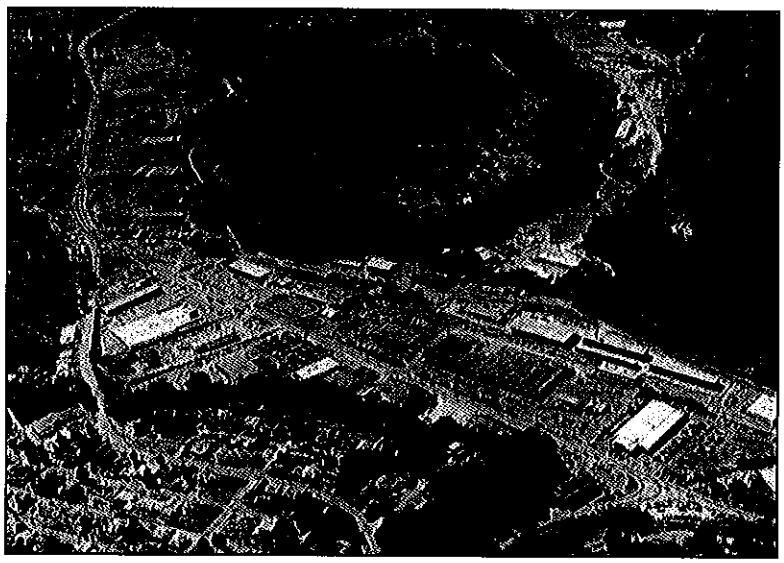
CTL ENGINEERING

Site/Civil Engineering

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
- Stormwater Management Systems
- Preliminary Cost Estimates / Feasibility Analyses





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

Geotechnical Engineering

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

Drilling Services

CTL Engineering owns and operates its own fleet of drill rigs, the largest of which has a capacity to drill and take samples up to 300 feet deep. Our rigs are equipped with large diameter soil and rock core samplers, *in-situ* pressure meters and cone penetrometers. These rotary drilling rigs conduct standard split spoon sampling. Our drill rigs have pumps, wireline and standard coring equipment for proper and efficient execution of subsurface investigations. We can perform pressure meter tests and vane shear tests in the field, in addition to conducting and/or monitoring of well pumps tests.

Analytical Laboratory

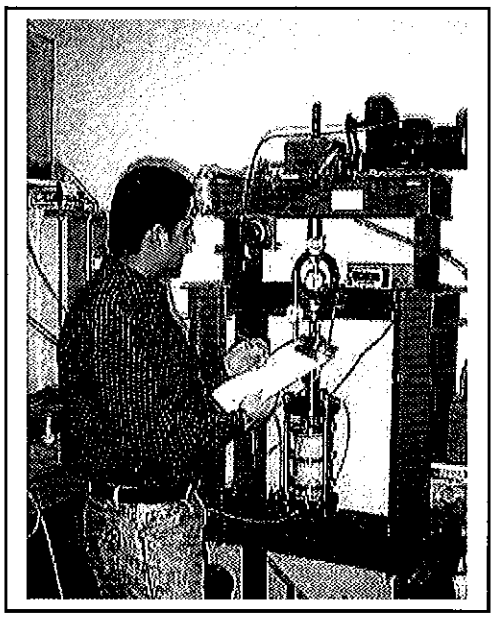
Our Soils Laboratory has consolidometers, triaxial and direct sheer apparata, state-of-the-art permeability devices and normal soils classification equipment.

CTL Engineering provides a detailed analysis of the surface and subsurface composition and chemistry of the soils at the proposed site. For existing structures, we provide a foundation analysis. We also provide services for foundations under construction.

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

Service Listing

- **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**
- **Legal Testimony**



Soils engineers conduct soils tests in CTL's analytical laboratory

www.ctleng.com

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, 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.

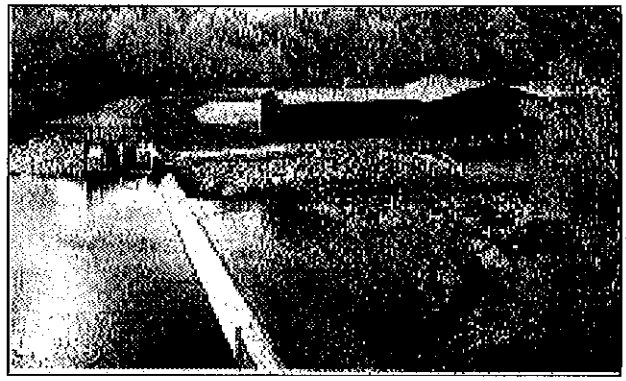
CTL Engineering provides drainage control structure design to comply with the regulatory requirements for controlling and treating site damage. Exploration equipment and remote video camera monitoring are used by CTL Engineering to prepare accurate maps for reclamation, subsidence stabilization measures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

CTL Engineering has 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 Mining Services Include:

- Subsidence Investigations
- Abandoned Mine Reclamation Design
- Permit Preparation
- Mine Design Plan
- Refuse Disposal Facility
- Environmental Monitoring
- Coal, Water and Overburden Analysis
- Drainage Control Structure Design
- Failure Analysis
- Legal Testimony
- Acid Mine Drainage

Taylor Creek Impoundment, West Virginia
Reclamation of a 120-acre burning refuse pile and dewatering and abandonment of a 24-acre coal-related impoundment.



Blackwater River, Water Improvement Project, Davis, West Virginia

Jamison Burning Refuse Reclamation Project

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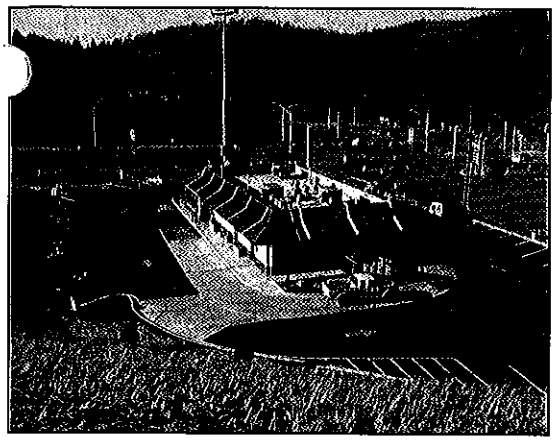
Surveying & Mapping



CTL Engineering, Inc. provided surveying services for this McDonalds site in Star City, West Virginia

CTL Engineering, Inc. maintains a full service, in-house survey and mapping team which has extensive experience in performing most common surveying needs and some not so common.

CTL has the professional staff and the latest equipment to support three (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
- Stormwater Surveillance Mapping
- Water body Sounding Studies

Geographical Information Systems

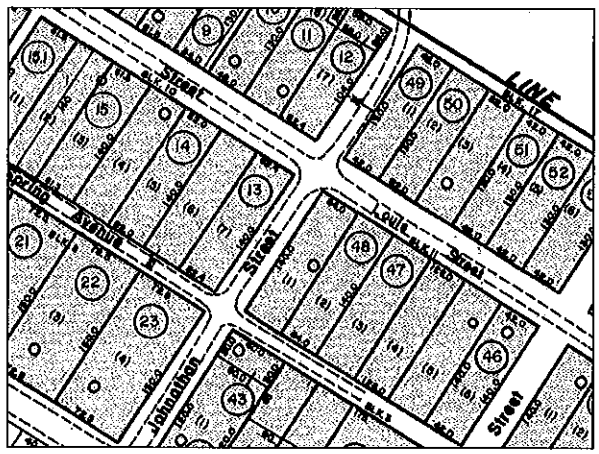
Too often sanitary and water utilities discover that paper maps and drawings are seriously outdated, incomplete, or even nonexistent. The problem is usually related to turn over of employees or engineers. The beginning of a utility database begins with GIS mapping of the infrastructure. Detailed base mapping can be created by scanning existing maps, importing CAD drawings, working from aerial photos, and surveying the location of infrastructure and utilities.

CTL Engineering offers these services:

- **Global Positioning Systems (GPS) Field Inventory**
- **Geodatabase Design**
- **Data Creation Services**
- **GIS/IT Integration**

GIS Technology can benefit these industries:

- **Infrastructure**
- **Water, Wastewater**
- **Storm Water**
- **Oil and Gas**
- **Mining**
- **Wetlands**
- **Electric utility**
- **Transportation**
- **Land/Urban Planning**
- **Strategic Planning**
- **Public Safety**
- **Emergency Management**
- **Forestry**
- **Facilities Management**
- **Forensics**



Every sector of a municipality can benefit from GIS mapping. CTL creates a phased mapping program that will reduce staff time, improve decision making, eliminate redundant data collection, improve record keeping and allow better asset management. CTL uses the latest version of ArcMap which allows importing of all current data formats to build a comprehensive database for the future. This database can be maintained and developed to enhance emergency response when public water/wastewater service is an issue. Also, planning and funding of new projects can be effectively prioritized.

CTL's GIS professionals use recent aerial photography and existing utility maps for base maps in order to direct surveying activities. We also add location specific supporting information from a variety of sources. Over time, CTL can create precise mapping which will allow your municipality to plan accordingly for the challenges and changes you will face.

Supporting Services

- **Surveying/ Mapping**
- **Civil/ Site Design**
- **Environmental**
- **Geotechnical**
- **Construction Management**
- **Materials Testing**
- **Analytical Laboratory**

Materials Testing

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 can prepare and test Portland cement and bituminous concrete mixes for optimization studies to insure the proper mix design for specific jobs.

We provide complete testing of the following:

Aggregates

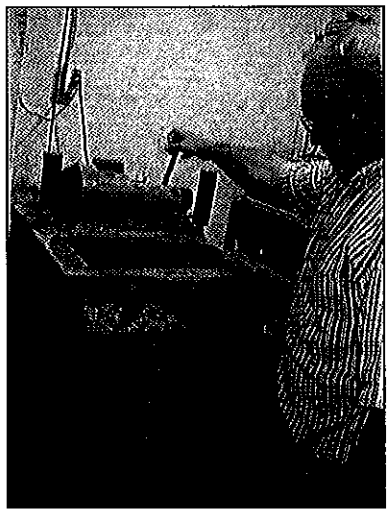
- Component Analysis (sand, gravel, limestone) – Department of Transportation
- Filter Sand – Environmental Protection Agency (EPA)
- Railroad Ballast – American Railroad Engineering Association
- Rip-Rap – U.S. Soil Conservation Service

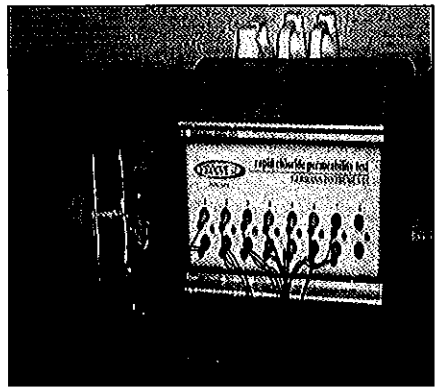
Soils

- Classification
- Compaction Parameters
- Permeability Tests

Concrete

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





Rapid Chloride Permeameter

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.

Asphalts

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

You can be assured of complete quality testing for all of your construction mixes.

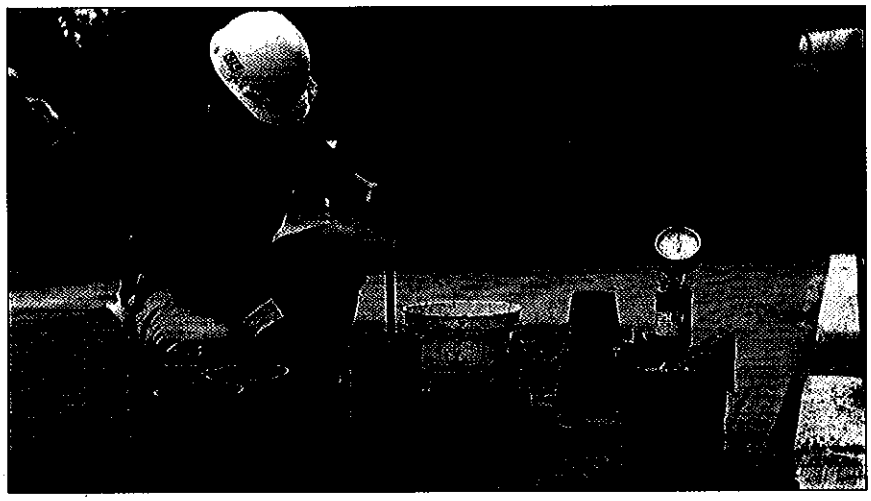
Clay-brick, Pipe & Tile

CTL Engineering provides complete and thorough analysis of clay products. Some of the more common tests include:

- 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 Monitoring



A project's construction phase requires quality control inspections and reliable testing. Building owners, architects, engineers, and contractors choose CTL Engineering for field inspections, knowing that we are accurate, dependable, and perform our services in a timely manner. Our experienced engineers and inspectors are your partners in construction. We help provide a finished quality product.

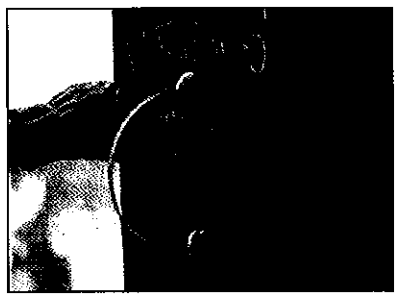
CTL Engineering provides inspections of the following:

- **Earthwork, including Embankment & Foundations**
- **Reinforced Concrete**
- **Floor Flatness**
- **Roofing Systems**
- **Structural Steel**
- **Masonry**
- **Sprayed-on Fire Proofing Installation**
- **Bituminous & Portland Cement Concrete Paving**
- **Single & Multi-Story Building Structures**
- **Pavement for Airport Runways, etc.**
- **Parking Garages & Bridges**
- **Water & Wastewater Treatment Facilities & Associated Piping Systems**
- **Highways**

We perform quality control testing of the above materials and structures, in addition to destructive and nondestructive testing of finished pavements and structures.

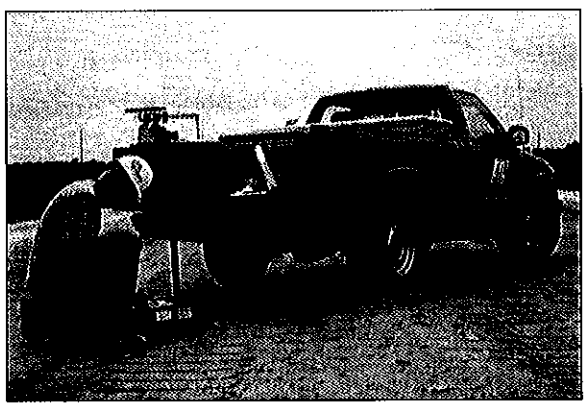
CTL Engineering examines existing structures to evaluate potential problems. Failed structures are analyzed to determine the cause and extent of damage. We evaluate structural integrity during initial construction and at regular intervals after completion. Our work includes steel reinforced concrete structures. 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'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**

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

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
Pines Country Club (Ponds) Subsidence Design, Monongalia County, WV	06, May, 2009	**55-063-1834**

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

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

6. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
733 Fairmont Road, Morgantown, WV 26501, 304-292-1135, Patrick E. Gallagher, President / Morgantown – 12

7. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER – OTHER PRINCIPALS
Patrick E. Gallagher, President CK Satyapriya, CEO	**Gerald Oreste, Secretary (614) 276-8123**

9. PERSONNEL BY DISCIPLINE

4 ADMINISTRATIVE	– ECOLOGISTS	1 LANDSCAPE ARCHITECTS	– STRUCTURAL ENGINEERS
1 ARCHITECTS	– ECONOMISTS	– MECHANICAL ENGINEERS	3 SURVEYORS
1 BIOLOGIST	– ELECTRICAL ENGINEERS	2 MINING ENGINEERS	3 TRAFFIC ENGINEERS
4 CADD OPERATORS	3 ENVIRONMENTALISTS	– PHOTOGRAMMETRISTS	X OTHER,
– CHEMICAL ENGINEERS	– ESTIMATORS	– PLANNERS: URBAN/REGIONAL	3 Geotechnical Drillers
6 CIVIL ENGINEERS	3 GEOLOGISTS	2 SANITARY ENGINEERS	– Roofing
12 CONSTRUCTION INSPECTORS	– HISTORIANS	3 SOILS ENGINEERS	– Metallurgical
5 DESIGNERS	2 HYDROLOGISTS	2 SPECIFICATION WRITERS	12 Engineering Technicians
2 DRAFTSMEN			

47 TOTAL PERSONNEL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 2
***RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.**

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

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____ Yes _____ No

12. A. Is your firm 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 laboratory performs all ASTM mechanical, organic and in-organic analyses for soils. Our lab is 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 50 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 50 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		
Gallagher, Patrick E. **President, Project Manager**	YEARS OF AML DESIGN EXPERIENCE: **32**	YEARS OF AML RELATED DESIGN EXPERIENCE: **32**	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: **25**

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 Society of Mining Engineers of A.I.M.E. Triangle Fraternity of Engineers, Architects and Scientists International Society of Soil Mechanics and Foundation Engineers American Institute of Professional Geologists	Registered Professional Engineer; 1983-West Virginia, 1984-Ohio, 1983-Maryland, 1993-Pennsylvania, 2006-Wyoming, 2006-North Carolina Certified Professional Geological Scientist - 1984 Professional Surveyor, 1995-West Virginia

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

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

Brief Explanation of Responsibilities

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 Level II Drilling Inspector, 1999, PennDOT

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE
Darrah, Timothy A. **Civil Site Dept. Mgr., Project Manager**	**13**	15	13

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.

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:
Gowarty Jr., James P. **Manager Construction Services**	**10**	10	**16**

Brief Explanation of Responsibilities

Mr. Gowarty is Construction Services Manager at CTL of WV. He is responsible for supervising field and laboratory technicians. Also he is responsible for report writing for field and laboratory testing, project management, estimating, and client contact.

EDUCATION (Degree, Year, Specialization)

B.S., 1990 Civil Engineering Technology

A.S., 1990 Mechanical 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:
Huffman, Jeffrey T. **Branch Manager/Geotechnical Manager**			

Brief Explanation of ResponsibilitiesMr. Huffman has 18 years experience in Geotechnical Engineering. Branch manager for Charleston office of CTL of WV. Relevant experience includes Project Engineering involving construction of numerous earth and roller-compacted concrete (RCC) Dams. Directed strength testing of in-situ soil and rock, borrow materials and RCC. Involved in full geotechnical design and drawing and specification preparation. Additionally serves as adjunct professor of Civil Engineering at Marshall University. Teaching cources on Soil Mechanics, Soil Testing Laboratory and Foundation Design.

EDUCATION (Degree, Year, Specialization)
M.S., 1990, Civil Engineering, Geotechnical
B.S., 1988, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Registered Professional Engineer: 1994, PA; 2005, WV; 2007, OH; 2007, KY; 2007, NCEES

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:
Moore, David **Project Manager/Project Engineer**	0	0	16

Brief Explanation of Responsibilities Thirty years experience in design and construction. He has designed and constructed numerous dams, ponds, irrigation lakes, stormwater management ponds, sediment and erosion control ponds. He has designed ponds and lakes for residential, commercial, and industrial projects as well as solf courses combining water features, irrigation, stormwater management and water quality unto aesthetically pleasing amenities.

EDUCATION (Degree, Year, Specialization)
M.S, 1983, Civil Engineering Civil Design
B.S., 1978, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ASCE, AIA, Home Builders Assoc., SAME	Registered Professional Engineer: MD #15100; NV # 19250; WY #11010; CO #22495; Alberta CA #98121; WV Pending

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:
Hovatter Jr, Richard G **Project Manager/Project Engineer**	**4**	**4**	**0**

Brief Explanation of Responsibilities

Mr. Novatter is responsible for Natural Stream Restoration & Channel Design, Reclamation Design, Drawing Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Benthic Studies, Electroshock Fish Studies, Valley Fill Footprinting, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes Hydrologic TR-20, TR-55, HEC-RAS,Sura CADD, Excel, Harstad Methods, Word, AutoCADD Land, Quarttro, Access.

EDUCATION (Degree, Year, Specialization)

B.S., 2002 Civil -Engineering Technology, FE

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) Certified Engineering Intern - 2002 ROSGEN Level 1&2 Certified - 2007 HEC-RAS Certification - 2005

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Darrah, Timothy A. **Civil Site Dept. Mgr., Project Manager**	**11**	**13**	**11**

Brief Explanation of Responsibilities

Mr. Darrah is presently responsible for scheduling, invoicing and client contacts for all surveying projects including topographic, property and construction layout. Mr. Darrah also serves as Project Engineer on various types of civil engineering projects including commercial and residential development and reclamation design projects. Office work includes drafting, writing of property descriptions, hydrology calculations, quantity calculations, and various other forms of surveying and engineering related duties. Mr. Darrah is also proficient computer software including, AutoCad, Civilsoft and various other forms of engineering software.

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:
Gring, Todd **Survey Party Chief**	**4**		10

Brief Explanation of Responsibilities

Mr. Gring is a Survey Party Chief, performing surveying and civil site design for both commercial and residential developments. His duties include ALTA surveys, topographic surveys, boundary surveys, mining surveys, route surveys, flood plain surveys and control surveying. He has extensive experience in drafting and design, legal descriptions, quantity calculations, scheduling, invoicing, word processing, plotting, data reduction, survey software, plat calculations, coordinate geometry, site design, sub-divisions and permitting.

EDUCATION (Degree, Year, Specialization)

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		
Stanley, Joseph F. **GPS Surveyor / CAD Designer**	YEARS OF AML DESIGN EXPERIENCE: **3**	YEARS OF AML RELATED DESIGN EXPERIENCE: 3	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 3

Brief Explanation of Responsibilities

Mr. Stanley is a Staff Engineer/CAD Designer / GPS Surveyor in the Morgantown, WV office. His responsibilities include all GPS Surveys, planning and design of civil site design projects involving land planning and development aspects. He is familiar with various engineering software programs including AutoCad 14 and AutoCad Architectural Desktop 2007 which provide support for the planning and design projects.

EDUCATION (Degree, Year, Specialization)

A.S., 2000 Drafting & Design

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

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

OFFICE EQUIPMENT

3 HP Color Plotters
HP Color Scanner
Duplicating equipment, copiers, blueprinting, laser printers, etc.
Facsimile Machine
VCR/Video Recording Equipment

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 2007.

Hydrogeologic Studies
MODFLO
MODPATH
SURFER
CAPZONE
GWPATH
SKUGIS
PHREEQCI
WATEQ4F
Groundwater for Windows

Civil Engineering Software
CADD 2007
Autodesk Land Desktop 2006/07
Profiling
Civilsoft
TR-20 & TR-55
SEDCAD
HEC 1 & 2
Survey 3.0
HEC-RAS
Arc GIS
ArcPAD
Civil 3D

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

SURVEY EQUIPMENT

- Lica 500 Global Positioning System (GPS)
- 6 Total Stations
- NAK Micrometer Level System & Direct Levels
- 4X4 Vehicles
- 2-Way Radios

SUBSURFACE INVESTIGATION EQUIPMENT

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

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Peninsula Highwalls, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Highwall Stabilization design, mine seals, drainage systems, grading design and specifications.	$ 244,000	Design 80%
St. Clair Portals, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Draining mine portal remediation design, mine seals, drainage systems, grading design, specifications	$ 1,300,000	Design 60%
Aarons Run Treatment, AML Project, Allegany County, MD	MDE, MBOM	Design of total AMD treatment System including active and passive systems, regrading, bridge and road access, specifications.	$ 800,000	Design 95%
Eccles Subsidence, AML Project, Raleigh County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Investigation and Design for Subsidence remediation including pond depletion due to subsidence	$ 100,000	Design 100%
Cheat Neck Landslide, AML Project, Monongalia County, WV	WVDEP- AML 601 57th Street SE Charleston, WV 25304	Remiation design for slide area, mine seals, drainage systems, grading and specifications.	$ 179,000	Design 95%
Open Contract to provide engineering design services throughout the State of Ohio	OH Department of Natural Resources AML Bond Forfeiture Program 1855 Fountain Square Court, 2nd Floor Columbus, Ohio 43224	Reclamation Design, geotechnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations	$75,000 /year Fees	N/A

Open Contract to provide engir ing design services throughout the State of Maryland	MD Department of Environment 160 S. Water St. Frostburg, MD 21532	Reclamation Design, geo hnical drilling, mine subsidence, slope stability analysis and design, pressure grout stabilization design, risk assessment, acid mine drainage, burning refuse extinguishment and earthwork calculations	$100,000 Fees $1,000,000+ Const.	80%
Farmington Storm Water Design	WV Conservation Agency Monongahela District 201 Scott Avenue Morgantown, WV 26508	Storm water design for Buffalo Creek and Town of Farmington	$2,000,000	Design 50%
TOTAL NUMBER OF PROJECTS: 8		TOTAL ESTIMATED CONSTRUCTION COSTS: $6,000,000		

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

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
Harrison Power Station Flyash, Disposal Area, Construction Monitoring, Shinnston, WV	Surveying, Construction Observation and Testing, Flyash Disposal	APS P.O. Box 600 Haywood, WV 26366	On-going	$ 5,000,000.00	$100,000.00
National Engineering, various projects	Subsurface investigations and Geotechnical Drilling for various projects	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	On-going	$ 20,000,000.00	$150,000.00 /year
Open-Contract, Professional Engineering Services, various locations throughout WVU campus	Subsurface investigations, geotechnical drilling, surveying & civil site design, construction observation & testing	West Virginia University Planning, Design & Construction P.O. Box 6572 Morgantown, WV 26506	On-going	Open	
WV Blue Cross / Blue Shield Headquarters Parkersburg, WV	Civil Site Design, utilities, storm water, foundation, grading, coordination	Oxford Development Pittsburgh, PA	2008	$8,000,000	$100,000
Wyoming AML Subsidence	Test Project using Dynamic Compaction to reduce cost and speed remediation process	Wyoming DEQ AML Division 122 West 25th St Cheyenne, WY	Dec 2007	$250,000	$50,000

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Mon-View Development 400 acre Commercial development, Granville, WV	Mon View LLC c/o Consol 4000 Brownsville Road South Park, PA 15129	$ 25,000,000	2005	Yes
University Town Centre, Commerical Development Granville, WV	Interstate Development 2137 Volunteer Parkway Bristol, TN 37625	$70,000,000	2005	Yes
Russell Joki, AML Design, Washington, PA	PADEP P.O. Box 8476 Harrisburg, PA 17105	$600,000	2006	Not to this date
Suncrest Executive Office Civil Site Design Morgantown	Glenmark Limited Holding, L.L.C 1445 Stewartstown Rd Morgantown, WV 26505	$16,000,000	2004	Yes

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
Various Contract Drilling	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	$50,000.00	1997-2002	Yes	National Engineering
Monongah Bridge, Surveying and Construction Observation, Marion Co, WV	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	$10,000.00	2002-2003	No	MEC Construction
4 covered bridges Simpson, Fletcher, Walkersville, Hokes Mill; Structural Supports, Surveying and Construction Observation; Harrison County, Lewis County, Greenbrier County	WVDOH 1900 Kanawha Boulevard Charleston, WV 25305	$30,000.00	2002-2003	No	Allegheny Restoration

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: _____ Title: President

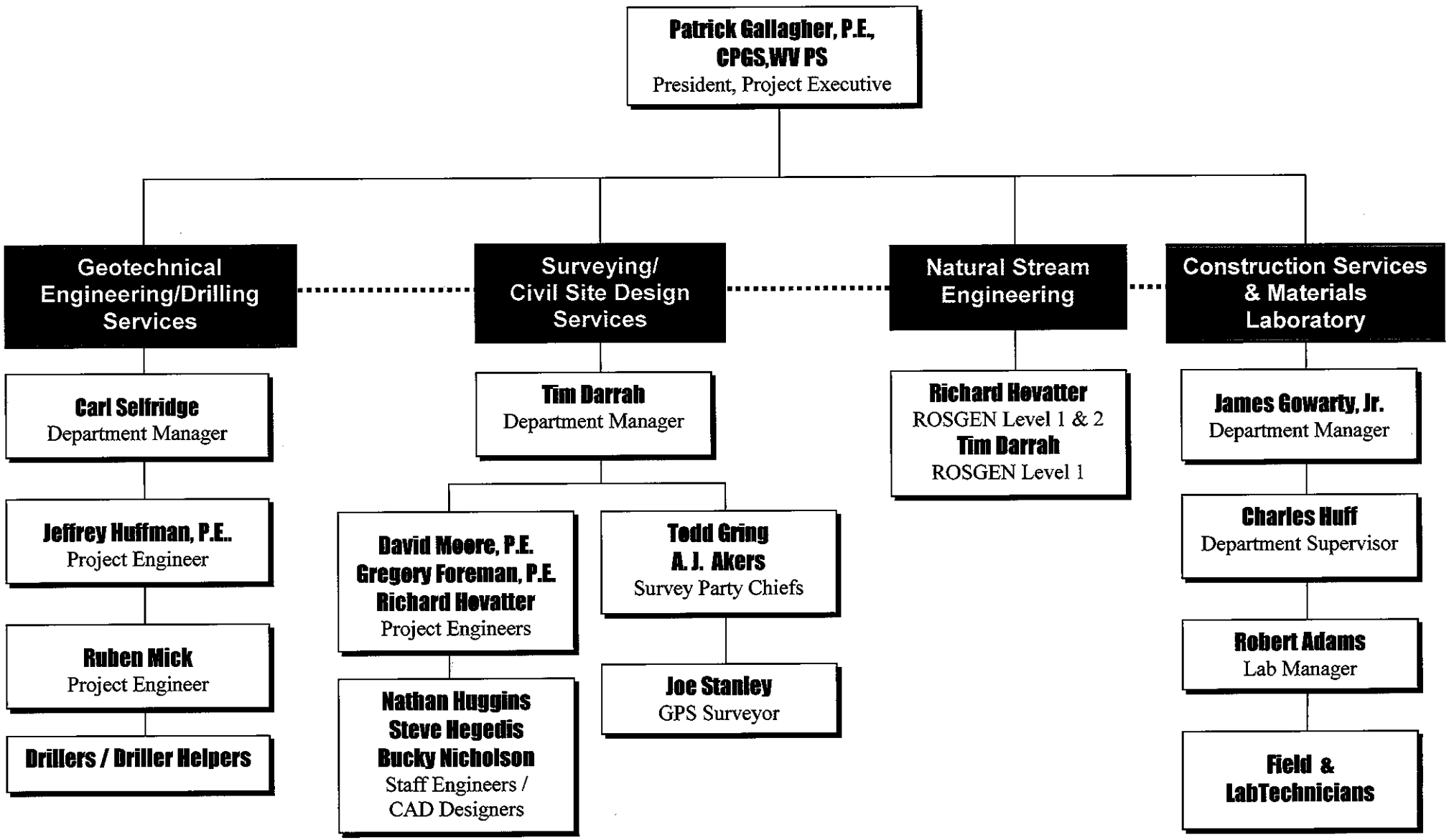
Printed Name: Patrick E. Gallagher, P.E.

Date: May 06, 2009

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 E. GALLAGHER, P.E., C.P.G.S. *President*

Expertise

Mr. Gallagher serves as President of CTL Engineering of West Virginia, Inc. 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.

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 the deep mine permit program and overall engineering/geologic support to the Maryland Bureau of Mines Program.

Education

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

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

Professional Registration / Certifications

Registered Professional Engineer, Ohio, # 48459; Maryland, # 13256; West Virginia, # 9297; Pennsylvania, # PG-044930-R; Wyoming, # 11033; North Carolina, #0 32503; Kentucky, # 24988

Certified Professional Geological Scientist, # 6575

Professional Surveyor, WV

26 Years Experience with CTL Engineering, Inc.

32 Years of Direct Mine Reclamation Design Experience

Experience

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

Abandoned Mine Lands and Reclamation Projects
Project manager overseeing the design of various abandoned mine lands and reclamation projects for the West Virginia Department of Environmental Protection. These projects include coal refuse pile stabilization, burning refuse extinguishment and stabilization, acid mine drainage abatement plans, storm water management plans, mine permits, slope stability analysis and hydraulic analysis.

American Bituminous Power Partners, LLP
Project manager for services involving permitting and environmental issues. Conducted on-going inspections and certifications of the impounding refuse facilities and all drainage/sediment control structures for all permitted facilities.

Ohio Valley Plaza, St. Clairsville, Ohio
Project manager for the engineering design services for the dynamic compactions of surface mine spoil for this project. This site was in need of major overhaul; no building could take place without the deep dynamic compaction activities, which made this site fit for construction, while reducing site development costs.

Newpointe Center, Clarksburg, West Virginia
Project Manager for geotechnical engineering, materials testing, and observation services and surveying services for this project. CTL is currently performing materials testing and observation for Phase II of this development.

Ohio Department of Natural Resources (ODNR)
Project manager overseeing mine subsidence investigations throughout the state of Ohio. These projects include hydrology/hydraulic evaluations, floodplain designs, wetland delineations, slope stability designs, surface and deep mine permitting, refuse pile analysis/certification, earthwork calculations, storm water management design, pressure grout abatement, and numerous emergency projects under the ODNR-AML Emergency Program.

Professional Affiliations

American Society of Civil Engineers

Society of Mining Engineers, of A.I.M.E.

Triangle Fraternity of Engineers, Architects, and Scientists

International Society for Soil Mechanics and Foundation Engineers

American Institute of Professional Geologists

Publications
"Mine Subsidence Stabilization In Steeply Dipping Seams In The Canadian Rockies. A Project Overview" Presented by Patrick E. Gallagher at the 19th Annual Conference of the Association of Abandoned Mine Land Programs Canaan Valley, WV August 17-20 1997

"Dynamic Compaction of Surface Mine Spoils to Limit Settlements Within Commercial Developments", Presented Patrick E. Gallagher and C. K Satyapriya, Constructing and Controlling Compaction of Earth Fills, ASTM Seattle, Washington July 1-3 1999

CARL G. SELFRIDGE

Geotechnical Engineer

EDUCATION:

Rensselaer Polytechnic Institute; Troy, NY

- **Graduate Studies, Civil Engineering** (Geotechnical), 1996-1999
- **B.S., Civil Engineering** (Geotechnical & Structural), 1996

Adirondack Community College; Queensbury, NY

- **A.S., Engineering Science**, 1994
- **A.A.S., Mechanical Technology - Design & Drafting**, 1991

REGISTRATIONS:

Engineer Intern (EI): New York, 1996

CERTIFICATIONS & TRAINING:

Pennsylvania Dept of Transportation Level II Drilling Inspector, 1999

EXPERIENCE

CTL Engineering of WV, Inc., Morgantown, WV (2007)

Responsibilities:

Mr. Selfridge has been employed by CTL Engineering for nearly one (1) year. Annually manages 100+ various geotechnical projects; including transportation, commercial development, public schools, an d a variety of public and private clients. Directs all aspects of the geotechnical engineering for CTL WV. This includes the management of field drilling activities, field classification of soil, 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.

Gannett Fleming, Inc., Morgantown, WV (2000-2006)
Valley Forge, PA (1999-2000)

Projects:

US Route 35 Little Fivemile Creek to Coast Guard Station, Mason County, WV, *R. D. Zande / West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for the site reconnaissance, core boring program bid documents, geotechnical site investigation program, laboratory testing program

Dolls Run Bridge Replacement, Monongalia County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for the site reconnaissance, geotechnical site investigation program, core boring bid documents, laboratory testing program, geotechnical analysis and prepared recommendations, prepared Geotechnical Engineering Report.

King's Covered Bridge Rehabilitation, Somerset County, PA, *Simone Jaffe Collins (SJC) / Pennsylvania Department of Transportation, District 9-0.* Engineer responsible for the inspection and documentation of the current conditions and details of historic wood timber covered bridge. Evaluated and modified the existing stone and mortar abutments and wingwalls.

WV 705 Connector Alternative Study, Monongalia County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for performing site reconnaissance of the project area and evaluated the existing site conditions as they may pertain to the design of different proposed alternatives.

King Coal Highway (US Route 52) with WV Route 65 Relocation, Mingo County, WV, *Nicewonder Contracting, Inc. / West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geologic reconnaissance, geotechnical site investigation program, site mining issues, cut slope analysis and design, very large embankment fills analysis and design, and other geotechnical design and analysis. Special issues:

- Preformed onsite inspection and monitoring and control of Dynamic Compaction Test Program to compare the reaction of different valley fill types. Prepared the Geotechnical Engineers Recommendation Report.

- Mine spoil fire site analysis and recommendations.

S.R. 0040, Section 06M, Youghiogheny Bridge Replacement over the Youghiogheny Reservoir, Fayette and Somerset Counties, PA, *WAGMAN, Inc. / Pennsylvania Department of Transportation, District 12-0.* Geotechnical Engineer responsible for conducting on-site geotechnical investigation and analyses of subsurface information for a proposed alternate replacement bridge structure over the Youghiogheny Reservoir.

S.R. 885, Section A03, Boulevard of the Allies Bridge Replacement over Forbes Avenue, Pittsburgh, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for conducting on-site geotechnical investigation and performed analyses of the subsurface investigation information for use in the design and analysis of two replacement bridge structures, new roadways and six retaining walls.

Osage Mine Complex Reclamation, Monongalia County, WV, *West Virginia Department of Environmental Protection.* Geotechnical Engineer responsible for assisting with preliminary field and office site reconnaissance for the preparation of construction plans and specifications for the reclamation of five abandoned mining sites under the Abandoned Mine Lands and Reclamation Program.

Martins Ferry Water System Improvement Project, Belmont County, OH, *City of Martins Ferry.* Geotechnical Engineer responsible for the geotechnical site investigation, subsurface investigation program, mine subsidence investigation, cut-and-fill slope stability review and analysis, embankment settlement analysis, and geotechnical design and analysis.

Thompson Run Road Bridge No. 2, Allegheny County, PA, *Allegheny County.* Geotechnical Engineer responsible for conducting the inspection of the subsurface investigation program.

S.R. 0028, Galleria Mall Interchange, Allegheny County, PA, *Mills Corporation.* Geotechnical Engineer responsible for conducting on-site inspection and analyses of a subsurface investigation for a new interchange on S.R. 0028. Reviewed and prepared quantities for the drainage structures and E&S control.

Ambridge-Aliquippa Bridge Replacement, Beaver County, PA, *Pennsylvania Department of Transportation, District 11-0.*

Midway Sewerage Treatment Plant, Washington County, PA, *Midway Sewerage Authority.* Geotechnical Engineer responsible for drilling inspection, subsurface analyses, and foundation analyses for the design and construction of a proposed sewerage treatment plant at an alternate site

King Coal Highway, Mingo County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geotechnical site investigation, boring layout, drilling program, mine subsidence investigation, cut-and-fill slope stability review and analysis, embankment settlement analysis, and geotechnical design and analysis.

Sharon Heights Connector, Mingo County, WV, *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for geotechnical site investigation, boring layout, drilling program, mine subsidence investigation, slope stability.

Southern Beltway, Findlay Connector, PA Route 60 to U.S. Route 22, Allegheny and Washington Counties, PA, *Pennsylvania Turnpike Commission.* Geotechnical Engineer responsible for reviewing boring logs and profiles, along with the proposed designed alignment geotechnical cross sections, plan views, and profiles for correctness and completeness.

Stage II Light Rail Transit System, Pittsburgh, PA, *Port Authority of Allegheny County.* Geotechnical Quality Control Inspector on the Construction Management Team assisting in monitoring geotechnical field activities of tieback anchor installations and load testing in soldier pile and lagging walls.

Source Water Assessment and Protection (SWAP) Program, Beckley District, WV, *West Virginia Department of Health & Human Resources, Bureau for Public Health.* Engineer responsible for performing wellhead delineation and assisting in preparing reports for 44 public water systems.

S.R. 2040, Curry Hollow Road Realignment, Allegheny County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for conducting on-site inspection and analyses of the subsurface investigation for the proposed widening and realignment of approximately one mile of a four-lane roadway, including the replacement of a deteriorated bridge

S.R. 3016, Section B02, Green Garden Road Bridge Replacement and Green Garden Road Realignment, Beaver County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for slope stability analyses of embankment fill slopes and retaining walls, and for a settlement analysis of embankment fill into wetlands, as part of a roadway alignment and bridge replacement project.

S.R. 3088, Section A01, Hookstown Grade Road Bridge, Allegheny County, PA, *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer assisting with the technical preparation of a final geotechnical engineering report (GER) of a ten-meter-long single-span adjacent box beam bridge to replace a deteriorated single-span bridge.

Structural Stabilization and Rehabilitation Grouting Program, United States Postal Service Eastpointe Facility, Clarksburg, WV, *United States Postal Service (USPS)/Advanced Construction Techniques, Ltd. (ACT).* Resident Quality Control Engineer responsible for inspecting and monitoring on-site construction activities for a single-story structure used as a mail transfer facility and post office

Sinkhole Remediation, Bridgeport Wastewater Treatment Plant, Bridgeport, PA, *Borough of Bridgeport.* Geotechnical Engineer responsible for inspecting the drilling and installation of four new groundwater monitoring wells, and for assisting with the investigation of the causes of sinkhole formation at a wastewater treatment plant.

Rensselaer Polytechnic Institute, Troy, NY (1997-1998)

Prepared and demonstrated common geotechnical tests. Graded assignments, assisted students, and managed the grades

Smith Dairy Farm, Gansevoort, NY (1986-1997)

Maintained and operated farm machinery and equipment. Assisted with the daily operations of the dairy farm

Finch, Pruyn and Co., Inc., Glens Falls, NY (1989-1996)

Safety-inspection during paper machine rebuilds and maintenance work, bleach plant lab technician and performed various other technical and non-technical duties in various department in the mill.

PUBLICATIONS

Evaluation of Frost Penetration Using a Two Parameter Measurement System., J.D. Quiroz, T.F. Zimmie, C.G. Selfridge. Presented at the International Symposium on High Altitude and Sensitive Ecological Environmental Geotechnology, China. August 1999.

King's Covered Bridge Restoration., S.H. Petro, E.L. Kemp, C.G. Selfridge, C.E. Stonebraker, Gannett Fleming, Inc., Morgantown, WV, and W. Collins, Simone Collins, Berwyn, PA., International Bridge Conference 2006 (IBC-06-65)

COMPUTER SOFTWARE:

HEC-1, HEC-RAS, Haestad's FlowMaster and CulvertMaster, MathCad, MS Word, Excel, AutoCAD, Microstation, Slope/W, SEEP/W, GRLWEAP, L-PILE, COM624P, Logdraft, STABLE, PA-STABLE, Maple, FORTRAN, C

PROFESSIONAL AFFILIATIONS

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

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 engineer 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
Fairmont State College, Fairmont, West Virginia, 1988

Certifications

West Virginia Dept. of Highways Compaction Technician

West Virginia Department of Highways Concrete Technician

17 Years Experience with CTL Engineering, Inc.

Experience

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

Chaplin Hill Business Park, Morgantown, West Virginia
Project Manager responsible for conceptual layout and initial site design for the Monongalia County Economic Development Authority.

Lock & Dam Rehabilitation Project in Point Marion, Pennsylvania
Responsible for all Second Order, Class I Surveying for this $45 million Corps of Engineers project.

West Virginia Department of Environmental Protection, Division of Abandoned Mined Lands and Reclamation
Performed the survey and design on abandoned mined lands on numerous projects for this state agency.

Glenmark Centre, Morgantown, West Virginia
Project manager responsible for civil site design and ALTA surveys at this facility for the following Glenmark businesses including: Lowes Home Improvement Warehouse, Outback Steakhouse, Wendy's, Bob Evans, Holiday Inn Express, and Ruby Tuesday's.

Sterling Ridge Student Apartments, Morgantown, West Virginia
Project Manager for the civil site design for this student-housing complex. CTL also provided surveying design and inspection services.

Harrison Power Station for a $900 Million SO_2 Removal Project in Shinnston, West Virginia
Survey crew chief responsible for construction stakeout and surveying.

Adelphia Cable Company, Various Locales
Project manager responsible for WVDOH and Railroad Crossings permits.

Monongalia County Board of Education
Project surveyor responsible for various surveying services for new school development and additions to existing schools.

Guardian Food Corporation, Various Locales, WV, PA, OH
Project manager that provided ALTA surveys for 34 Hardees Restaurants throughout Ohio, Pennsylvania and West Virginia.

West Virginia University Hospital, Morgantown, West Virginia
Project manager responsible for the design and permitting of a 500 foot turning lane in conjunction with the WVDOH.

EA Morgantown, LLC, Morgantown, West Virginia
Project manager responsible for the civil site design of a 900 bedroom student housing complex. Submitted permits to the WVDOH for a turning lane and entrances. Prepared sediment and erosion permits for the WVDEP. Also, prepared stream crossing permits and performed a 100 year Flood Study.

Suncrest Executive Plaza, Morgantown, West Virginia
Project manager responsible for the civil site design of this project. Duties included the preparation of storm water detention plans, grading, pavement, turning lane and permits for the WVDOH, and sediment and erosion permits.

Aerial Photography, Various Locales
Project manager in charge of establishing GPS control for the aerial mapping of numerous projects throughout West Virginia.

JAMES P. GOWARTY, JR. *Construction Services Manager*

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 Audits and radiation safety officer and branch safety officer. In addition, Mr. Gowarty is the Construction Materials Testing Supervisor, providing concrete, compaction, and aggregate testing and has over six years of experience with Nuclear Gauge Operation.

Education

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

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

Professional Registrations/ Certifications

West Virginia Department of Highways Certified Compaction Technician

West Virginia Department of Highways Certified Bituminous Concrete Technician

State of Maryland Certified Water Sampler

WVDOT Aggregate Sampler

NICET Level III Asphalt & Concrete

NICET Level II Soils

Certified Dipfloor Profiler Operator

16 Years of Experience with CTL Engineering, Inc.

Experience

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

Warrior Run Company, Generation Plant, Geotechnical Studies
Cumberland, Maryland
CTL Engineering performed Construction Observation and Structural Steel Inspection Services for this project.

WVU Student Recreation Facility; Project Manager/Engineer overseeing performed for the construction of the $34 M dollar recreational facility located on WVU campus.

Beckley Federal Courthouse, Beckley, WV
Project Manager responsible for performing and overseeing all construction materials and testing inspection services to include compaction, concrete, structural steel, pre-pour inspections and fireproofing during the construction of this project.

Fayette Energy Facility, Masontown, PA
Project Manager responsible for performing and overseeing the concrete, soils, aggregates, asphalt and bolted connections for the project site. CTL has provided specialty-testing including: soil resistivity testing, and Windsor Pin testing.

Harrison Power Station, Haywood, West Virginia
CTL Engineering performed numerous types of testing for this facility including: Concrete and compaction testing and compaction testing for the CO2 liner system at this facility. This project boasted $100 million dollars in construction costs and CTL Engineering was responsible for over $80,000 worth of testing and various consulting engineering services.

Allegheny Power Systems (open-ended contract for transmission distribution and power station projects)
Project Manager responsible for construction testing and observation, material testing, structural steel and surveying for various projects under this contract.

American Electric Power, John Amos Power Plant, Nitro, West Virginia
Project inspector providing inspection and testing for coal silo relining project at the power station. Mr. Gowarty also witnessed sandblasting, gunnite applications and workmanship for the project.

Grant Town Power Plant, Marion County, West Virginia
Senior Civil Engineer for the construction observation and materials testing and inspection for this facility.

Glenmark Centre, Morgantown, West Virginia
Project Manager responsible for construction testing and inspection services for this 10 + acre site. Other services provided were storm water management, "ALTA" surveys, construction stake-out and observation and sanitary treatment facilities.

Newpointe Center, Clarksburg, West Virginia
Project Manager providing construction testing and inspection services for this project. CTL also provided surveying and civil site design, geotechnical engineering, dynamic compaction, and observation services for the installation of sanitary, water and storm sewer pipe for this project.

Cheat Lake Waste Water Treatment Plant Expansion, Morgantown, West Virginia
Project Manager responsible for providing oversight of the construction inspection services for this project. The project included increasing the capacity from 250,000 gallons/day to 750,000 gallons/day.

Chaplin Hill Sewer and Water System Expansion, Morgantown, West Virginia
Project Manager responsible for overseeing construction testing and inspection services for the line expansion and construction methods for this project.

WVU Wise Library; Project Manager/Engineer overseeing construction testing and inspection services for the construction of a new six (6) story library, which included the design of an extensive tie-back/soldier pile wall system.

WVU Life Sciences Building; Project Manager/Engineer providing overseeing construction testing and inspection services being performed of the Life Sciences Building.

Suncrest Junior High School Construction Project, Morgantown, West Virginia
Project engineer responsible for daily excavation work.

National Airport, Washington D.C.
Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

CDC, Morgantown, West Virginia
Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

Kroger, St. Clairsville, Ohio
Project engineer dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

The Greene County State Correctional Institution, Waynesburg, Pennsylvania
Project engineer for dipstick floor profile testing for the layout of floor test sections and testing of random traffic floors.

Federal Highway Administration, Raleigh, North Carolina
Laboratory technician who preformed on-site testing of bituminous materials and aggregates for extraction, specific gravity, rice theoretical, stability and flow, gradation, aggregate angularity, material sampling, marshall and gyratory specimens at project locations.

Federal Highway Administration, Gainesville, Florida
Laboratory technician who preformed on-site testing of bituminous materials and aggregates for extraction, specific gravity, rice theoretical, stability and flow, gradation, aggregate angularity, material sampling, marshall and gyratory specimens at project locations.

DAVID E. MOORE, P.E. **Civil Department Manager**

Expertise & Work History

2009 – Present, Civil Department Manager, CTL Engineering, S. Charleston WV
1999 – 2009, Owner/Manager, Alliance Consulting Engineers & Surveyors, Arvada/Longmont, Colorado
1991 – 1999, Vice President, Jehn Engineering, Arvada, Colorado
1986 – 1991, Associate, Kidde Consultants, Baltimore, Maryland
1983 – 1986, Vice President, Haese Corporation, Boulder, Colorado
1981 – 1983, Research Assistant, University Of Colorado, Boulder, Colorado
1976 – 1981 Civil Engineer, Fluor-Daniel Inc., Irvine, California

Mr. Moore has thirty years experience in design and construction in the fields of planning, civil engineering, structural engineering, general contracting, expert testimony, land development, surveying, landscape architecture, project and business management.

During his thirty years of experience he has designed and constructed numerous dams, ponds, irrigation lakes, storm water management ponds, sediment and erosion control ponds. He has designed ponds and lakes for residential, commercial, and industrial projects as well as golf courses combining water features, irrigation, storm water management and water quality into aesthetically pleasing amenities.

Education

B.S., Civil Engineering
West Virginia University Institute of Technology, Montgomery WV 1974-1978

M.S., Civil Engineering
Colorado University, Boulder CO 1981-1983

Professional Registration

Registered Professional Engineer, Maryland, # 15100; Nevada, # 19250; West Virginia; Wyoming, # 11010; Colorado # 22495; Alberta Canada # 98121

Listing of Mr. Moore's relevant project experience includes:

Storm Water Retention and Detention Ponds

Mr. Moore has prepared construction documents for hundreds of ponds facilitating the storm water management requirements for development of residential, commercial, industrial and municipal projects involving hydrology, hydraulic and drainage calculations.

Church Ditch Raw Water Irrigation Ponds and Pump Station

Mr. Moore designed the Church Ditch Raw Water Irrigation Ponds and Pump Station for the City of Arvada. This project took water from the Church Ditch, removed the sediment, stored the water and then pumped the water to a public drinking water reservoir.

Westwoods Ranch Golf Course

Mr. Moore performed the design and construction administration on a 27 hole golf course encompassing ten ponds and lakes for golf course water features, irrigation, storm water management, flood plain management, and water quality.

Bath County Pumped Storage Project

Mr. Moore was project civil/construction engineer on the 1.3 billion dollar Bath County Pumped Storage project for Virginia Electric and Power Company (VEPCO) and in Bath County, Virginia. This project involved two earthen dams of which one was the tallest earth fill dam in the world at that time, design and construction of the powerhouse, tunnels and related appurtenances.

Water Resources and Drainage Projects

Mr. Moore designed and performed construction administration on water resources and drainage projects for developers, builders, and municipalities, ditch companies and water districts. Practically every project requires a drainage report and plan encompassing storm water management, flood studies, Letters of Map Revisions (LOMAR's or CLOMAR's) or storm drain design. Several notable projects include the Ralston Creek/Croke Canal overpass, Church Ditch flow limiter, Farmers Highline Canal realignment, and various flood studies on creeks and rivers.

Utility Projects and Pump Stations

Preparation of utility reports and design and construction of water and sewer transmission lines, holding ponds, buildings and pump station facilities for raw water, potable water and sewer for developers, utility districts and municipalities. Projects include the regional sewer pump station for the Clear View project in Johnstown, CO; the raw water reservoirs and pump station for the City of Arvada Church Ditch takeout project in Arvada, CO.

Professional Affiliations

American Society of Civil Engineers

American Institute of Architects

DAVID E. MOORE, P.E. **Civil Department Manager**

Home Builders Association

Society of American Military Engineers

Publications

Published "Union and Non Union Construction in Colorado" in 1984 a Master's Thesis commissioned by the Associated General Contractor's of Colorado.

JEFFREY T. HUFFMAN, P.E.

Branch Manager &
Geotechnical Dept. Manager

Expertise & Work History

1 Years Experience with CTL Engineering of WV, Inc.

17 Years Experience with other Engineering Consultants.

Liaison
Mr. Huffman serves as Brach Manager and Geotechnical Department Manager of CTL Engineering of West Virginia, Inc.'s Charleston office. Mr. Huffman currently directs all aspects of design and inspection for a staff of 13 professionals. His administration and management responsibilities include marketing, proposal preparation, scheduling, budget control and supervision of office personnel.

Projects successfully completed under Mr. Huffman's direction include: Foundation Design, Roadway & Parking Area Design, Geotechnical Investigations & Design, Slope Stability Analyses, and Failure Investigations. Mr. Huffman has 18 years experience in Geotechnical Engineering and has served as Senior Geotechnical Engineer, Technical Director of Laboratory Services and Technical Superintendent with other Engineering Consultants.

Mr. Huffman currently serves as Adjunct Professor of Civil Engineering at Marshall University teaching courses in Soil Mechanics, Soil Testing Laboratory and Foundation Design.

Education

M. S. Civil Engineering (Geotechnical)
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, 1990

B.S. Civil Engineering
Virginia Polytechnic Institute and State University (Virginia Tech), Blacksburg, Virginia, 1988

Professional Registration / Certifications

Registered Professional Engineer: Pennsylvania, 1994, No. PE45671E; West Virginia, 2005, No. 016403; Ohio, 2007, No. 72131; Kentucky, 2007, No. 25185; North Carolina, 2008, No. 034520; NCEES Registered, 2007, No. 30346.

Listing of Mr. Huffman's experience includes:

Project Permitting, Susquehanna County, PA – Cabot Oil & Gas Company.
Project Manager for permitting aspects of a 50+ gas well play and collection line system.

Expert Witness Testimony – Private Clients & Insurance Companies.
Expert testimony for binding and non-binding arbitration cases concerning building foundation and slope failures.

Geotechnical Design Recommendations – Ohio Department of Transportation, West Virginia Department of Highway, Pennsylvania Department of Transportation .
Project Manager for geotechnical engineering phases of transportation projects including bridge structures, roadways, embankment fills and soil & rock cut slopes.

Commercial Structures in North Carolina, Ohio, Virginia, and West Virginia.
Project Manager or Project Engineer for numerous commercial structures; including multi-story buildings and large scale warehouses. Directed subsurface explorations, provided geotechnical recommendations and prepared geotechnical reports.

Dams – Water Supply and Flood Control.
Project Engineer involved construction of numerous earth and roller-compacted concrete (RCC) Dams. Directed strength testing of in-situ soil & rock, borrow materials and RCC. Functioned as Assistant Resident Engineer during construction. Assisted in the geotechnical design, drawing and specification preparation. Involved the design of storm water detention ponds over Karst topography.

Research & Development on Polypropylene Fiber Reinforcement of Soils.
Technical Director over research and development activities including development of design methodologies, installation techniques, field and laboratory testing methodologies, and manufacturing methods.

Adjunct Professor of Civil Engineering at Marshall University, Huntington, West Virginia.
Professor teaching courses on Soil Mechanics, Soil Testing Laboratory and Foundation Design.

Professional Affiliations

American Society of Civil Engineers

American Council of Engineering Companies

International Society for Soil Mechanics and Foundation Engineers

Society of American Military Engineers

RICHARD G. HOVATTER, JR.

Staff Engineer

Expertise

Mr. Hovatter is responsible for topography, Construction layout, Reclamation Design, Natural Stream Restoration and Channel Design, Drafting Hydrology, Quantity Calculations, Stability Analysis, Residential Development, Benthic Studies, Electroshock Fish Studies, Valley Fill Foot Printing, Surveying, Subsidence Surveys, Pre-Blast Surveys, Acid Base Accounts, Groundwater Inventory. PC Software includes Surv CADD, Excel, Haestad Methods, Word, AutoCAD Land, Quattro, Access, Hydraulic and Hydrological calculations for channel design utilizing TR-55, HEC-RAS, and TR-20 software.

Education

B.S., Civil Engineering Technology
Fairmont State College, Fairmont, West Virginia, 2002

Professional Registrations/ Certifications

Certified Engineer Intern
ROSGEN – Level 1 & Level 2 Natural Stream Design
HEC-RAS Certification

4 Years with CTL Engineering Inc.

Experience

ODNR – Emergency Program
Staff Engineer responsible for evaluation and design for 14 ODNR Emergency Projects, 1 ODNR AML Project and 2 ODNR Reclamation Projects.

Avery Church, Morgantown, West Virginia
Responsible for the design of sediment and erosion structures and storm water collection structures, including ditches, ponds and outlet controls. Prepared the watershed delineation and storm water runoff calculations along with sediment and erosion control methods.

EA Morgantown, LLC, Morgantown, West Virginia
Utilized HEC-RAS to calculate the flood plain elevation of the project site.

Pineview Place, Morgantown, West Virginia
Performed the watershed delineation and storm water calculations. Also prepared the design of an underground storm water storage unit.

Merkel Landslide, Rayland, Ohio
Prepared designs for a diversion ditch, sediment and erosion control and highwall minimization, including the regrade of a slip area. Performed a watershed analysis and storm water runoff calculations for the project site.

Chaplin Hill Business Park, Morgantown, West Virginia
Prepared the design of a storm water collection structure, including a pond. Performed the watershed analysis and storm water runoff calculations.

Craig Edmond Housing Development, Reedsville, West Virginia
Prepared the design of a storm water collection structure, including a pond, outlet sizing, and placement. Performed the watershed analysis and storm water runoff calculations.

Spruce Hollow, Maryland
Utilized HEC-RAS software to calculate floodplain elevations.

Blue Sky Realty, Morgantown, West Virginia
Utilized HEC-RAS software to calculate floodplain elevations.

RUBEN R. MICK, JR. *Project Engineer*

Expertise

As a Project Engineer, Mr. Mick's responsibilities include structural evaluations, new construction inspections, mine subsidence investigations, technical reports and letter writing.

Education

B.S., Engineering Technology
Fairmont State College, Fairmont, West Virginia, 1975

Professional Registrations / Certifications

Fundamentals of Supervision, Management Development Institute, Consolidation Coal Company, 1994

Impoundment Inspector, Consolidation Coal Company, 1993

Ergonomics Committee, Consolidation Coal Company, 1995

Experience

27 Years of Experience, 5 years with CTL Engineering, Inc.

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

WVDOH, Williamstown Welcome Center, Parkersburg, WV
Project Inspector responsible for construction observation services for the construction of a new Williamstown Welcome Center.

Cheat Lake Waste Water Treatment Plant Expansion, Morgantown, WV
Project Inspector responsible for quality assurance for inspections on concrete, reinforcement and contractor daily observation. Expansion included increasing the capacity from 250,000 gallons/day to 750,000 gallons/day.

Chaplin Hill Sewer and Water System Expansion, Morgantown, WV
Project Inspector responsible for quality assurance for corrosion protection, utility trenching, line expansion and construction methods.

Mining
Submitted numerous proposals for turn-key installation of various material handling projects to various coal and aggregate industries including Eastern Associated Coal Corporation, Consol, Inc., Cyprus Resources Corporation, Massey Coal Company, Anker Energy, Kentucky Stone Company and Vulcan Materials Company which included projects ranging from $10 K up to a $12 M, 1050 TPH preparation plant facility for Coastal Coal Company of Kingwood, WV.

Performed portal/bathhouse, warehouse and office modifications for the Oakdale Portal of Robinson Run Mine, Miracle Run Portal of Loveridge Mine, Osage main office and installation of the $1.2 M Koontown Portal/Bathhouse/Warehouse facility for Blacksville No. 2 Mine of Consolidation Coal Company accommodating 400 people on a 3 shift basis.

Performed rehabilitations and new installations of overhead catenary systems for surface main haulage and supply tracks at the Robinson run, Arkright and Humphrey Supply Yards.

Performed design layout and installation of numerous oil/fuel surface containment structures to replace existing in-ground tank installations to comply with environmental regulations.

Supervision of conventional and bleeder shaft sinking including installation of associated vane axial and centrifical ventilation fans and motor houses for various mines throughout the Northern WV region.

Structural and concrete rehabilitation of existing preparation plant facilities and their associated conveyor systems.

Performed general arrangement design layout of miscellaneous projects including new buildings, additions, renovations, parking lots, fencing systems, water treatment facilities and track haulage overhead catenary systems.

Fabrication and painting inspection of structure and platework.

Performed rehabilitation and new installation of mooring cells along the Monongahela River for the Arkright and Humphrey Barge Loading Facilities.

Corporate Specialized Experience

- ***CTL has designed 4 projects that have received national Awards for excellence in AML Reclamation***

Project Synopsis

- ***Burning Refuse Piles***
- ***Impounding Refuse Embankments***
- ***Mine Fire Extinguishment***
- ***Landslides***
- ***Mine Subsidence Stabilization***
- ***Stream Quality Enhancement***
- ***Highway Relocation Co-Op Agreements***
- ***Public Water Distribution Systems***

Relative to Abandoned Mine Land Reclamation and Geotechnical Engineering, CTL Engineering is a leader! During recent corporate history (i.e., the past 20 years), we have conducted more than 1,500 Mine Subsidence Investigations, designed more than 150 Mine Reclamation projects, performed over 5,000 Subsurface Investigations, and completed 200 Civil Engineering site designs. Our Mine Reclamation Engineering Department completed numerous projects under contracts with the West Virginia Division of Environmental Protection, Maryland Bureau of Mines, Ohio Department of Natural Resources, Pennsylvania Department of Environmental Protection, US Soil Conservation Service (VA Ramp), US Office of Surface Mining, US Bureau of Mines, and US Forest Service.

Attached to this section are a few selected pictorial examples of various completed projects that CTL has designed and have been or are being constructed. Also attached is a detailed listing of design projects this office has successfully completed during the past 18 years. Finally, a schedule of project abstracts of selected AML assignments is enclosed which describes the project, identifies the location, lists the owner, telephone number and owner's address, and the scope of services provided.

CTL Engineering's history is unsurpassed in the realm of Geotechnical/Mine Reclamation Engineering. As evidenced by our project listing and resumes' of staff individuals, many other projects have been accomplished that are similar in scope to this contract but too numerous to list within this text. We would be pleased to supplement any other information that may be required.

AML & Relevant Project Experience

WATER IMPOUNDMENTS

- Taylor Creek Impoundment, WVDEP
- CONSOL Impoundment Certifications
- Amigo Smokeless Impoundment, WVDEP
- The Woods, Impoundment Design
- Cypress Emerald Slurry Dam, Cypress Coal
- Enoch Township Impoundment, ODNR
- Pauline Mine, ODNR
- Marsh Hill, MD Bureau of Mines

MINE SUBSIDENCE

- Thomas/Euclid Avenue, WVDEP
- Morgantown Airport, WVDEP
- Cambridge Walmart, Fletcher Bright
- Rock Hill Schools, Rock Hill School District
- Rt. 936 Stabilization, MD Bureau of Mines
- Northern West Virginia Community College, WV Board of Regents
- Ellesmere Avenue, ODNR
- Clarksburg Glenwood Hills, WVDEP
- Midlothian, MD Bureau of Mines

REFUSE PILES

- Ocean Gob Pile, MD Bureau of Mines
- Alderson Branch, WVDEP
- Edna Refuse Piles, WVDEP
- American Bituminous Power Partners, ABPP

- Jane Lew Tipple, WVDEP
- Harrison Power Plant, Allegheny Power
- North Fork Refuse Pile, WVDEP
- Austen Highwall Refuse Pile & Portals, WVDEP
- Bull Run Restoration, ODNR

MINE FIRES/REFUSE FIRES

- National Mine Fire, MD Bureau of Mines
- Frontz/Folly Mine Fire, ODNR
- Blue Pennant, WVDEP
- Blue Bell Mine, ODNR
- Red Hollow Burning Refuse, WVDEP
- Jamison Burning Refuse, WVDEP

MINE DRAINAGE/STREAM RESTORATION

- Deckers Creek, WVDEP
- Whiskey Run, ODNR
- Oceola Mills, Penn Mining Corp
- Georges Creek, MD Bureau of Mines
- Bell Mine Drain, ODNR
- Majestic Mine, ODNR
- Blackwater River/Beaver Creek Treatment Project
- Aaron's Run, MD Bureau of Mines

WATER SUPPLY REPLACEMENT

- Moundsville Water Plant, WVDEP
- Rohr Road, WVDEP
- Peel Tree, WVDEP
- Woodworth Road, ODNR

- Water Well Impact Study, PADEP
- New Straitsville Water Tank, Town of New Straitsville, Ohio

LANDSLIDES

- Chickwan Landslide, ODNR
- Rt. 1 Landslide, ODNR
- Kitzmiller Landslide, MD Bureau of Mines
- Barton Landslide, Office of Surface Mining
- Westernport Landslide, MD Bureau of Mines
- Ohio Avenue, WVDEP
- Fink Refuse Pile Landslide, Office of Surface Mining
- Robinson Run Landslide, WVDEP

OPEN MINE SHAFTS

- Witch Hazel Mine Shaft, ODNR
- Everettville Portals, WVDEP
- Kempton Mine Shaft, MD Bureau of Mines
- Wellston Mine Shaft, ODNR
- Piney Creek, WVDEP
- Degrava Mine Shaft, ODNR

HIGHWALLS

- Camp Run Highwall, WVDEP
- Germano Highwall, ODNR
- Midlothian Highwall, MD Bureau of Mines
- Austen Highwall, WVDEP
- Sovern Run, WVDEP
- Ridgeland Highwall, ODNR

OPEN PITS

- Sugar Grove, #1, #2, & #3, WVDEP
- Baldwin, Pickens & Lick Run, ODNR
- Miller Road, MD Bureau of Mines
- Rumley Highwall, ODNR
- Tunnelton Gob, WVDEP
- Matthew Run, MD Bureau of Mines

SPECIAL PROJECTS/ENVIRONMENTAL ISSUES

- I-70 Subsidence, ODOT
- Glade Run Remediation, Allegheny Development
- Lafayette Road H-Pile Wall, ODNR
- Banff/Canmore Commercial Development, Norwest Calgary
- Blackwater River/Beaver Creek Treatment Project, WVDEP
- Dynamic Compaction of Mine Spoil, THF Realty
- Jane Lew Tipple, WVDEP
- Slab Fork Mine Dump, WVDEP
- Dickerson Slurry Pond, DTE

PROJECT EXPERIENCE PROFILE

Project:
Wintercamp
Pond – Wetland
Delineation and Mitigation

Owner:
The Woods Resort

Location:
Hedgesville, Berkeley Co., WV

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided impoundment design and wetland delineation with on-site mitigation for the Wintercamp development project. This project entailed the on-site mitigation of 3 acres of wetland along the golf course. The impoundment is 30 feet high and is just under one-acre in area. The creation of this wetland was to provide habitat for local wildlife in accordance with the WVDEP 401 Water Quality Permit and the Army Corps of Engineers 404 Individual Permit.

CTL ENGINEERING INC

PROJECT EXPERIENCE PROFILE

Project: West Woods Ranch Golf Course

Owner: City of Arvada, CO

Location: Arvada , CO

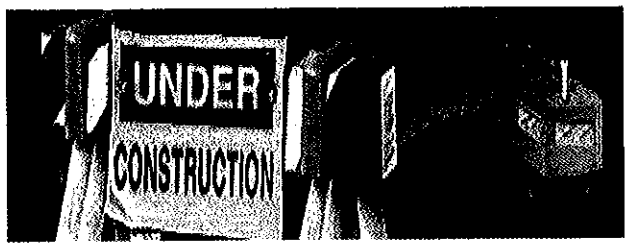
Mr. Moore performed the design and construction administration on a 27 hole golf course encompassing ten ponds and lakes for golf course water features, irrigation, stormwater management, flood plain management and water quality. This project was a joint venture between public and private funds for the construction of a public golf course including over 400 private sector homes

PROJECT EXPERIENCE PROFILE

Project:
Glade Lakes Resort Complex

Owner:
Glade Lakes, Inc.

Location:
Bruceton Mills, West Virginia



CTL Engineering of WV, Inc. provided many services for the development of this project involving the design of an earthen dam structure and associated appurtenances including surveying, civil site design and materials testing and inspection. One of the support services involved the delineation of the largest wetland complex registered in the state of West Virginia.

This service was performed in cooperation with the US Army Corp of Engineers, Pittsburgh, PA district office. The delineation and mitigation plans encompassed over 50 acres of prime wetland habitat. This project also incorporated a channel relocation design to facilitate the proposed development.

Client:
Mr. David Yoder
Glade Lakes, Inc.
304-599-0829

Project Completion:
On-going

Project Costs:
$60,000

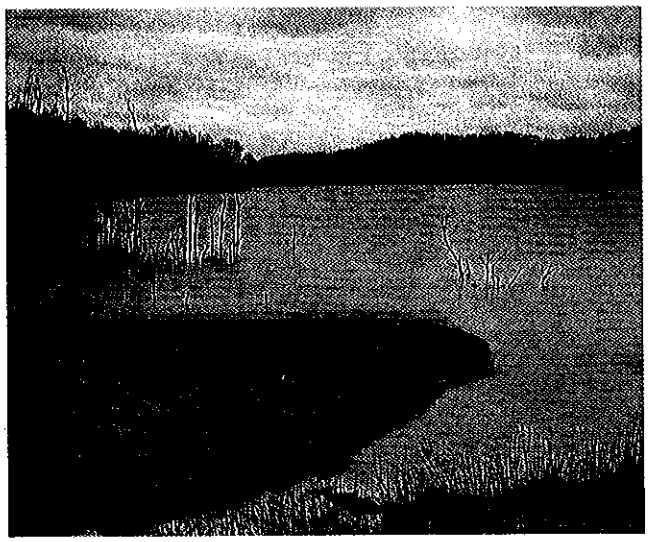
PROJECT EXPERIENCE PROFILE

Project:
Impoundment Stability Certifications

Owner:
CONSOL Energy, Inc.

Location:
Northern West Virginia

CTL Project Manager:
Ruben Mick



PROJECT FEATURES

CTL Engineering of West Virginia, Inc. has been providing quarterly and annual pond and impoundment stability certifications in addition to performing stability analysis as required for CONSOL Energy, Inc. since 2007 at their Consolidation Coal Company, Island Creek Coal Company and Laurel Run Mining Company locations.

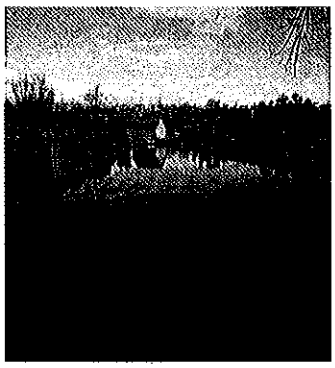
CTL is currently inspecting and certifying per the requirements of the WVDEP and M.S.H.A. approximately 100 various size aeration ponds, sediment ponds and major impoundments ranging in storage capacity up to 1,000 acre-feet in the Northern West Virginia Region.

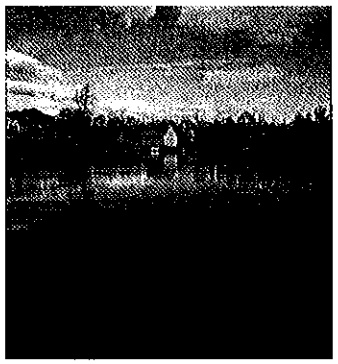
PROJECT EXPERIENCE PROFILE

Project: Church Ditch Raw Water Pump Station

Owner: City of Arvada, CO

Location: Arvada, CO





The Church Ditch Raw Water Pump Station project was designed for the City of Arvaa to extract water from the Church Ditch and pump to the Arvada Reservoir. This project entailed the design and construction of an outtake structure, sediment pond, storage lake, pump station and a 4000 lf 24 inch force main with an outlet structure into the reservoir. Mr. Moore was the Principal Engineer for this project.

PROJECT EXPERIENCE PROFILE

Project:
Taylor Creek Impoundment

Client:
West Virginia Department
of Environmental
Protection
Allen Wood (304) 465-1911

Location:
Clay County, West Virginia

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation and extinguishment of a 120-acre burning refuse pile. This project also included the subsurface investigation of burning material to depths of approximately 110 feet, and the design and reconstruction of approximately 3,400 feet of Taylor Creek. Several areas of slope instability required stabilization. Additionally, an existing 24-acre coal related impoundment had to be evaluated, dewatered and the area stabilized.

This project was the 1999 West Virginia Mining and Reclamation Association Award Winner, the 2003 Appalachian Regional Award Winner and the National Abandoned Mine Land Reclamation Award Winner.

CTL ENGINEERING INC

PROJECT EXPERIENCE PROFILE

Project:
Amigo Smokless Impoundment

Client:
West Virginia Department of
Environmental Protection
Dean Stiltner PM

Location:
Wyoming County, West Virginia

PROJECT FEATURES

CTL Engineering of West Virginia, Inc. provided Engineering Design Services and construction documents necessary for the reclamation of a 300' high slurry impoundment. The site had the potential to impound over 200' head of water and was threatening down-stream structures.

CTL provided the following services: field reconnaissance and subsurface investigation; baseline surveying; soil and water analyses; hydrology and hydraulic calculations including a hydrogeologic mine study; and preparation of specifications and construction plans.

CTL ENGINEERING