

Camp Dawson EOI Underground Utilities Design

Solicitation No: ADJ1900000006
Opening Date: August 29, 2018
Opening Time: 1:30 pm



Prepared for:

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WV Department of Administration
Purchasing Division
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WV PURCHASING
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Section I

Project Understanding and Approach



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Project Understanding and Approach

We understand that the project scope will include design and development of construction documents to place all Camp Dawson utilities underground to include such infrastructure as electric, data, and storm water. It is further understood that this design shall be structured in such a manner that the construction of the underground utilities will be in phases. We expect that the following services will be utilized:

- Civil Design
- Survey Services
- Geotechnical Engineering
- Drilling of Borings
- Materials Testing
- Environmental Services, if deemed necessary



It is expected that the consultant is responsible for researching, locating, and documenting existing underground and above ground utilities. Construction bid documents are expected to be submitted at identified intervals throughout the duration of the project.

Triad has assembled a dedicated team of professionals for this project whose number one goal is client satisfaction. The Triad team will listen to your needs, will design your project, and will deliver on time and within budget. Following is a general project breakdown regarding anticipated phases and tasks for this project.

PHASE I – INITIAL PLANNING AND SURVEYING

Initial Project Planning Meeting

At the onset of the project, Triad will meet with your identified stakeholders who will be part of the project team. At this time, we will discuss your goals and criteria for the project. The discussion will include design team review and approval process as well as any anticipated concerns that may arise during the project.

Surveying

Triad will research existing utilities locations and conduct field operations to collect data sufficient to derive a topographic site map which includes planimetric features within the limits of the survey. Planimetric features will include buildings, structures, above and below ground utilities, limited to visible markings and appurtenances, and other improvements within the limits of the survey.

PHASE 2 – PRELIMINARY DESIGN AND PERMITTING SERVICES

Task 1 – Geotechnical Engineering Investigation

Prior to commencing with design, a geotechnical investigation will be performed to determine subsurface conditions within the area for infrastructure placement. The geotechnical investigation will consist of both field and laboratory investigations to determine the engineering properties of the underlying soil/rock in order to provide proper design and site development parameters and recommendations.

Task 2 – Site Planning (Preliminary Site Plans)

Upon completion of the survey and geotechnical investigation, Triad will create preliminary site plans to meet the project requirements in accordance with applicable regulations and to optimize the goals of the project. These will be submitted for further review and comment and will become the basis for final design drawings.

Task 3 – Environmental Services

If environmental concerns arise through the survey, geotechnical investigations, and/or discussions with the stakeholders, Triad will assess these environmental concerns and design a plan to ensure environmental protection of the area(s). Prior to any site disturbance, Triad will incorporate any Environmental concerns in accordance with the requirement of the National Environmental Policy Act (NEPA).

Task 4 – Permitting

Upon completion of the preliminary plans, any permit applications which are deemed necessary will be submitted to pertinent review agencies for their approval to perform construction.

Task 5 - Meetings and Approval Process

Once the preliminary design drawing and permit application submittals have been completed, Triad will attend team meetings to discuss the preliminary design and to obtain direction on proceeding with the final design.

PHASE 3 – FINAL CONSTRUCTION PLANS

Task 1- Final Project Design

Upon the completion of previous reviews and resolution of comments, Triad will finalize the design for this infrastructure project.

Task 2 - Final Construction Drawings and Project Specifications

Once reviews and acceptance of the final engineering design is attained, Triad will prepare bid documents for the project. Currently it is anticipate this will consist of the following:

- Title Sheet
- General Notes
- Existing Conditions
- Grading and Drainage Plans
- Utility Plans and Profile Details
- Construction Specifications
- Bid Forms

PHASE 4 – Bid Evaluations

Triad will provide engineering support in the evaluation of construction bids and will assist you in selecting the best responsible bid.

PHASE 5 – CONSTRUCTION PHASE SERVICES

Triad will provide administration services for the construction phase of the project. We will review shop drawings and perform inspection of construction activities to ensure compliance with plans and specifications. Triad has in-house capabilities for compaction testing, concrete testing, and asphalt paving testing. Triad will perform a final inspection and prepare for you a punch list.



Section II

Company Background



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COMPANY BACKGROUND

Triad Engineering, Inc. is a multi-disciplinary engineering firm based in the Mid-Atlantic region specializing in the areas of geotechnical engineering, civil and utility engineering, surveying, construction materials engineering and testing and inspection, environmental consulting services, drilling, and other earth science related disciplines. Since its founding in Morgantown, West Virginia in 1975, Triad has provided engineering consulting services on thousands of projects of varying size and complexity. Triad is 100% employee-owned, with every employee taking part in Triad's ESOP from field support staff to senior managers.

“Triad is small enough to be responsive to the needs of our customers and large enough to remain at the forefront of scientific solutions”
-Brad Reynolds, CEO

Triad currently maintains approximately 175 technically sound employees located in seven offices across five states. Our work force includes environmental scientists, geologists, hydrologists, civil, geotechnical and mining engineers, landscape architects, chemists, surveyors, trained Computer-Aided Design (CADD) draftsmen, field and laboratory technicians, drillers, and support personnel. We pride ourselves on a very low turnover rate, which adds to continuity and enhances the level of productivity and experience afforded by Triad.

With over **42 years of service** in West Virginia and surrounding states, both the number and complexity of our projects have grown. Our clients include federal, state and local governmental agencies, contractors, architects, engineers, attorneys, developers, commercial organizations, and mining and industrial corporations.

Facilities and equipment available to support our staff have continued to evolve through the years to adapt to the changing needs of the market. We have developed a fleet of drill rigs and support vehicles to meet the needs of our field operations. Well-equipped material testing laboratories are maintained to provide support for our geotechnical engineering and construction monitoring projects.

Each office maintains networks to support CADD functions, hydrogeologic evaluations, water balance modeling, roadway design, storm water management and surface water drainage, design, stability analyses, risk assessment, survey data reduction, and mapping. These broad, in-house capabilities give Triad better control over project schedule, quality and cost, thereby minimizing problems that can occur during the various contract phases.





Triad Office Locations

Scott Depot

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

Morgantown

1097 Chaplin Rd.
Morgantown, WV 26501
304-296-2562 Phone

Northern Virginia

46040 Center Oak Plaza
Suite 180
Sterling, VA 20166
703-729-3456 Phone

Athens

1005 East State Street
Suite 10
Athens, OH 45701
740-249-4304 Phone

Winchester

200 Aviation Drive
Winchester, VA 22604
540-667-9300 Phone

Hagerstown

1075-D Sherman Avenue
Hagerstown, MD 21740
301-797-6400 Phone

Pittsburgh

201 Penn Center Boulevard
Suite 400
Pittsburgh, PA 15235
412-257-1325 Phone

Section III

Key Personnel



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KEY PERSONNEL – Resumes to be found in Appendix A

Professional Title Phone Number	Firm	Professional Experience Summary
<p>Bill Ernstes, PLA Land Development Services Manager 304-296-2562</p>	Triad	<p>Site analysis, land and infrastructure design, permitting, utilities, stormwater management and storm drain design / best management practices, erosion and sediment controls, high-end graphic presentations, construction document preparation and administration, project management, client coordination, quality control and quality assurance. Landscape Architect: WV ██████ Experience: 23 years Education: BS Landscape Architecture</p>
<p>Ben Campbell PE Senior Engineer 304-296-2562</p>	Triad	<p>Geotechnical investigations and evaluation of exploration results, foundation recommendations and reporting, laboratory testing, field inspections, and special inspections. Professional Engineer: WV ██████ Experience: 11 years Education: MS Engineering, BS Civil Engineering Technology</p>
<p>Danny Lipscomb, PE Geotechnical Engineering Services Manager 304-755-0721</p>	Triad	<p>Subsurface exploration and geotechnical engineering reporting and recommendations for bearing capacity, earthwork operations, earthen dam embankments, slope stability, flexible and rigid pavement design, lateral earth pressures, sinkhole remediation, geophysics, and rock excavation. Professional Engineer: WV ██████ Experience: 15 years Education: BS Civil Engineering</p>
<p>David Graham, PS Survey Services Manager 304-296-2562</p>	Triad	<p>Survey services for bridge and road projects consisting of single span, multi-span, and walking bridges. Determination of highway rights of ways, field stake out and roadway construction stakeout. Professional Surveyor: WV ██████ Experience: 40 years Education: Woodson School of Surveying</p>
<p>John Haynes, PE Drilling Services Manager 304-755-0721</p>	Triad	<p>Design and implementation of the subsurface investigations, assignment of laboratory testing, approval of design drawings, development of technical specifications, and preparation of drilling and geotechnical engineering cost proposals and reports. Professional Engineer: WV ██████ Experience: 26 years Education: BS Civil and Mechanical Engineering</p>
<p>Danny Blake, CET Laboratory Services Manager 304-296-2562</p>	Triad	<p>Testing services and oversight for geotechnical engineering and construction projects involving soils, aggregates, concrete and asphalt. Education: BA Bldg. Construction Technology Experience: 26 years</p>
<p>Heather Metz, LRS Environmental Services Manager 304-755-0721</p>	Triad	<p>Technical quality and management control of Environmental projects and performs a variety of tasks for sites in the West Virginia Voluntary Remediation Program (VRP). Licensed Remediation Specialist: WV ██████ Experience: 15 years Education: BS Environmental Sciences</p>

Section IV

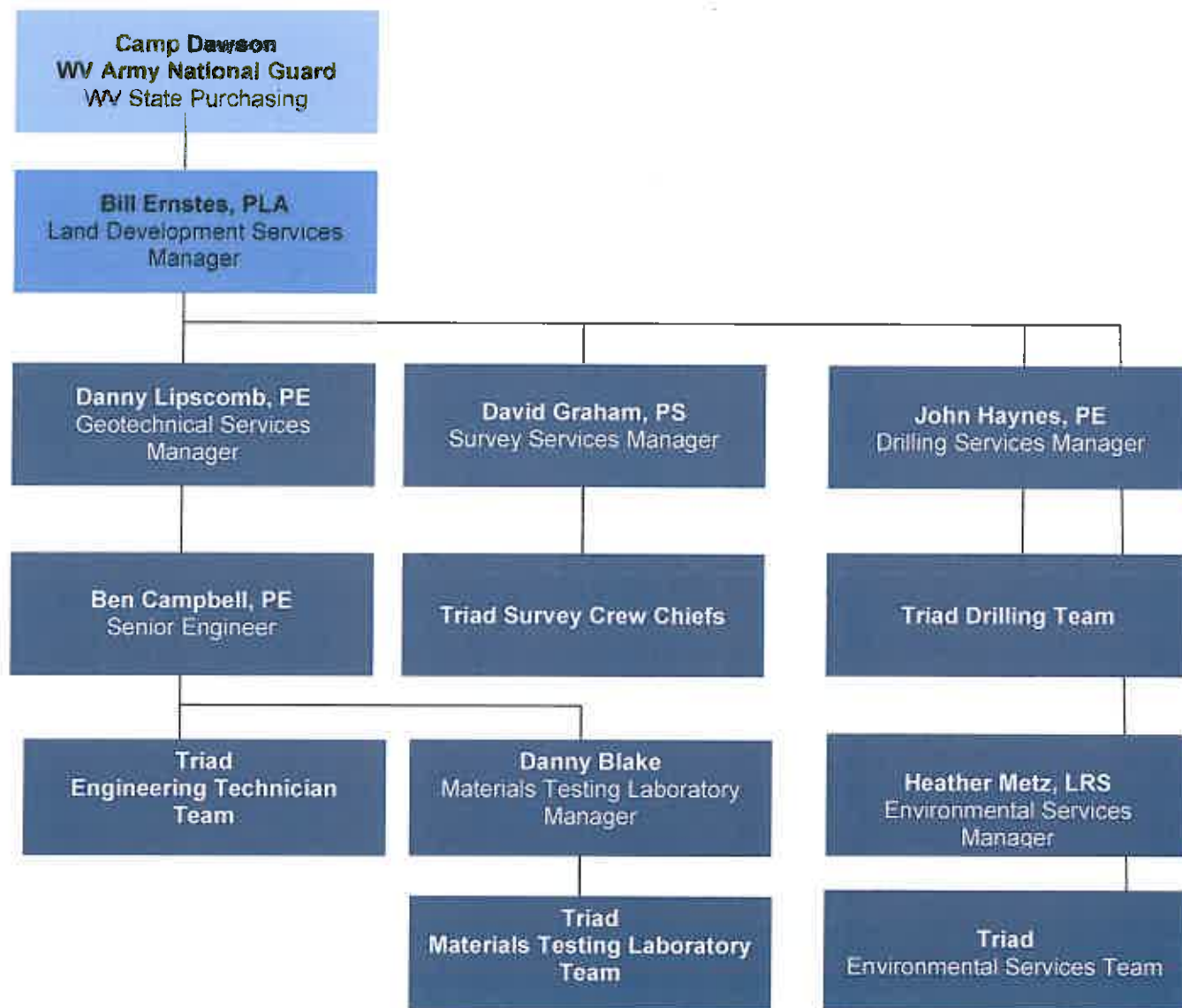
Management and Staffing Capabilities

MANAGEMENT AND STAFFING

Personnel

All of the professionals who will provide services for this project are registered / licensed with their specific WV state licensing organizations and are in good standing. Each engineering technician and survey crew member will hold the appropriate certifications in their field.

Project Organizational Chart



Professional Liability Insurance

Triad Engineering, Inc. carries Errors and Omissions Professional Liability Insurance through Architects and Engineers Insurance Company of Winchester, Virginia.

Experience and Expertise

All of the information under the *Related Prior Experience* tab in Appendix B will clearly show that Triad has extensive experience in similar utility design projects. We are confident that the Triad team assembled for this project will show the expertise necessary to complete this utility design project.

Capacity to Perform Project Scope

Triad provides a full range of in-house services including designing, surveying, drilling and testing, construction monitoring and environmental services. Our company maintains a staff of approximately 170 technically sound employees. Our footprint stretches across seven offices in five states where, should the need arise, we can call upon those resources at any time.

Section V

References

REFERENCES:

WV High Tech Foundation (WVHTF)

Mr. James L. Estep
President and Chief Executive Officer
304.333.6814
jestep@wvhtf.org

Beitzel Corporation

Mr. Durrell Orendorf
Senior Project Manager
12072 Bittering Road
Grantsville, MD 21536
durrellorendorf@beitzelcorp.com

WV Department of Environmental Protection

Mr. Paul Benedum
DLR – Landfill Closure Assistance Program
paul.l.benedum@wv.gov

“TRIAD Engineering has been a partner with us in developing the I-79 Technology Park for the last few years. We are constructing extremely advanced infrastructure to support programs... It is paramount that we have world-class engineering support at all levels. TRIAD Engineering provides just that for critical components of the park's infrastructure. The TRIAD staff is of the highest caliber and their work products are exemplary. We work with TRIAD because we only want the best of the best on our team.”

-James L. Estep, President and CEO / High Technology Foundation

Appendix A

Resumes



EDUCATION

West Virginia University
BS, Landscape Architecture

PROFESSIONAL EXPERIENCE

23 Years

REGISTRATIONS & LICENSES

Registered Landscape
Architect:

- [REDACTED] Pennsylvania
- [REDACTED] Virginia
- [REDACTED] West Virginia
- [REDACTED] Maryland

SKILLS

- Walkability Studies
- Feasibility Studies
- Site Inventory and Analysis Improvements
- Conceptual Design and Development Plans
- Utilities Design
- Roadway Infrastructure

HIGHLIGHTS OF EXPERIENCE

Mr. Ernstes manages Triad's Northwestern Regional Civil Engineering & Land Development department. He provides professional services in the areas of site inventory and analysis, planning, landscape architecture, and permitting. His responsibilities include project management, client project coordination, design production, quality control and quality assurance. Mr. Ernstes' experience includes land and infrastructure development, permitting, utilities, stormwater management and storm drain design / best management practices, and erosion and sediment controls

RELEVANT PROJECT EXPERIENCE

I-79 Technology Park, Fairmont, WV

As Project Manager, Mr. Ernstes was responsible for the development of a Master Plan and detailed Retail / Commercial Plan for the expansion of the Park on behalf of the WV High-Tech Consortium (WVHTC) Foundation. Several areas of this campus are well-established and home to government agencies, utility providers and consulting firms, while many others remain in the planning and construction phases. New and planned developments include hotels, restaurants, office and industrial facilities, and the North Central WV Advanced Technology Center (ATC).

The Crossings, Morgantown, WV

As Project Designer, Mr. Ernstes was responsible for the site civil design transition of a 15.1 acre hillside farm into a 180,000 square foot, four-story senior living facility. Included in the project was site selection to best locate the structure away from abandoned strip mines and wetlands, and to create stormwater management best practice features which included moving 100,000 cubic yards of earth.

Greystone, Morgantown, WV

As Project Designer, Mr. Ernstes developed Roadway Improvement Plans for approximately 1 ½ miles of roadway within the Greystone housing development. Plans incorporated resurfacing of existing pavement along with spot base repairs and driveway restoration. Included in the project were construction and bid documents and conformed to methods and procedures as established by WVDOH.

Aaron Woods, Wheeling, WV

As Project Designer, Mr. Ernstes developed a Roadway Improvement Plan for repairs and improvements to the roadway infrastructure of this housing development. Plans incorporated milling and paving and related drainage improvements of the development. Included in the project were construction and bid documents which conformed to methods and procedures as established by WVDOH.

Cornerstone Commerce Park, Monongalia County, WV

As Project Manager, Mr. Ernstes was responsible for the development of approximately 221 acres of mixed-use commercial and industrial park properties along the Grafton Road exit off Interstate 79, just south of Morgantown. Project services have included Master Planning for nine commercial and 17 industrial parcels and pad site development including grading concepts, costs estimates, and the preparation of construction plans and documents.



EDUCATION

Marshall University
MS, Engineering

Fairmont State University
*BS, Civil Engineering
Technology*

Potomac State College
AA, Civil Engineering

PROFESSIONAL EXPERIENCE

11 Years

REGISTRATIONS & LICENSES

Professional Engineer

- West Virginia
- Pennsylvania

SKILLS

- Project Management
- Soils Classification
- Construction Materials
Engineering & Testing

PROFESSIONAL AFFILIATIONS

- ASHE
- ASCE
- NSPE
- SAME Pittsburgh

HIGHLIGHTS OF EXPERIENCE

Mr. Campbell has over 11 years of engineering experience, with more than six years as a QC / Construction Services Manager. He is responsible to Triad's Geotechnical Engineering Services projects and supports the Construction Field and Laboratory Services projects. Mr. Campbell performs geotechnical investigations, assessments, and evaluation of exploration results, foundation recommendations and reporting, laboratory testing, field inspections, and special inspections.

RELEVANT PROJECT EXPERIENCE / GEOTECHNICAL

Eclipse Resources Posey RUMA, Quaker City, OH

As project engineer, Mr. Campbell provided an evaluation and geotechnical exploration of local roads scheduled for a road use maintenance agreement. Included in the project was an assessment of current conditions, improvement needs, and FDR design recommendations.

Elm Grove Bridge, WVDOH District 6, Wheeling, WV

Responsible for overseeing state testing services for the latex modified concrete overlay of Elm Grove Bridge on I-470. Services included concrete testing and inspection including compressive strength and rapid chloride permeability.

CONSOL Midstream Green Hills Slide, Morris Township, PA

As project engineer, Mr. Campbell provided geotechnical exploration for landslide repairs of an approximate 300 cubic yard slip along trunk line right of way. Mr. Campbell's responsibilities included supervision of the field exploration program, drilling inspection, logging of boring locations, and initial slide repair recommendations.

Preparation Plant Expansion, Wana, WV

As project engineer, Mr. Campbell provided a geotechnical exploration for the expansion of an existing preparation plant. Mr. Campbell's responsibilities included providing baseline foundation and site preparation recommendations. Project challenges included undocumented fill, pyritic materials, and moisture sensitivity of site soils.

ATI Latrobe Plant Building Extension, Latrobe, PA

Mr. Campbell completed a geotechnical exploration for building additions to an existing flat rolled production group specialty steel manufacturing facility primarily for the Electric Arc Furnace. As project engineer, Mr. Campbell was responsible for supervision of the field exploration program, drilling inspection, logging of boring locations, and initial foundation recommendations.

Rice Battle Phrog, Whitely Township, PA

As project engineer, Mr. Campbell provided a geotechnical exploration and initial earthwork recommendations for this well pad site. Project challenges included fill slope stability, site location in close proximity to landslide susceptible materials, vehicular traffic loads, and moisture susceptibility of site soils.

Tonkin Cell Site, Doddridge County, WV

As project engineer, Mr. Campbell provided geotechnical exploration and initial foundation recommendations for this 320' tall, 3 leg lattice steel tower. Challenges included structural loadings and uplift relative to the bearing strata.



EDUCATION

Fairmont State College, WV
BS, Civil Engineering

PROFESSIONAL EXPERIENCE

15 Years

REGISTRATIONS & LICENSES

- Registered Professional Engineer, WV, VA
o WV: [REDACTED]

SKILLS

- Geotechnical Evaluations
- Energy Sector
- Environmental Assessments
- Permitting
- Construction Materials Testing and Inspections
- Dam Inspections

HIGHLIGHTS OF EXPERIENCE

Mr. Lipscomb is Geotechnical Engineering Services Manager for Triad's regional offices. He develops and manages subsurface exploration projects and develops geotechnical engineering reports providing recommendations based on field observations and laboratory results for bearing capacity, earthwork operations, earthen dam embankments, slope stability, flexible and rigid pavement design, lateral earth pressures, sinkhole remediation, geophysics (electrical resistivity and ground penetrating radar), and rock excavation. Projects have included freshwater dams, shopping centers, roadway/bridges, buildings, retaining walls, residential communities, water storage tanks, waste water treatment facilities, and structures for coal mining facilities. Duties included assignment of laboratory testing, visual inspection of soil/rock specimens, geophysics, and earthen embankment evaluation.

RELEVANT PROJECT EXPERIENCE

East Beckley Bypass-Rural Acres Drive to Stanaford Road, Raleigh County, West Virginia

As a Geotechnical Engineer, Mr. Lipscomb participated in all geotechnical aspects of the project including developing a boring layout based on the project cross-sections provided by the client. Work included supervision of field inspectors during the subsurface investigation. Mr. Lipscomb participated in the design of cut and fills slopes, performed settlement calculations for embankment fills, estimated shrink/swell factors for excavated materials, and tabulated probable sources of select embankment. He provided foundation recommendations and bearing capacity computations for bridge abutments and piers.

East Beckley Bypass-Stanaford Road to Industrial Drive, Raleigh County, West Virginia

As a Geotechnical Engineer, Mr. Lipscomb participated in all geotechnical aspects of the project including developing a boring layout based on the project cross-sections provided by the client. Work included supervision of field inspectors during the subsurface investigation. Mr. Lipscomb participated in the design of cut and fills slopes, performed settlement calculations for embankment fills, estimated shrink/swell factors for excavated materials, and tabulated probable sources of select embankment. He provided foundation recommendations and bearing capacity computations for bridge abutments and piers.

Yon Peraldo Memorial Bridge, Mercer County, West Virginia

As a Project Manager and Geotechnical Engineer, Mr. Lipscomb participated in geotechnical aspects of the project including developing a boring layout based on the project cross-sections provided by the client. Work included supervision of field inspectors during the subsurface investigation. He participated in providing recommendations and design parameters for alternate deep foundation types along with foundation recommendations and bearing capacity computations for bridge abutments and piers.

Hen Lawson Bridge, West Virginia

As a Geotechnical Engineer, Mr. Lipscomb participated in all geotechnical aspects of the thru truss bridge project including developing a boring layout based on the project cross-sections provided by the client. Work included supervision of field inspectors during the subsurface investigation. Mr. Lipscomb participated in providing recommendations and design parameters for alternate deep foundation types and providing foundation recommendations and bearing capacity computations for each of the bridge abutments and piers.



EDUCATION

Woodsan School of Surveying

PROFESSIONAL EXPERIENCE

40 Years

CERTIFICATIONS

- OSHA Certificate
- CADD Certificate

REGISTRATIONS & LICENSES

- Professional Surveyor – West Virginia

SKILLS

- FEMA Flood Surveys
- ALTA / NSPS Land Title Surveys
- Boundary
- Subdivision
- Construction Stake Out
- As-Build
- Bridge & Highways
- Industrial

PROFESSIONAL AFFILIATIONS

WV Association of Professional Surveyors

HIGHLIGHTS OF EXPERIENCE

Mr. Graham brings over 40 years of diverse surveying and construction management experience to the Triad team. He is responsible for all survey services provided in our northwest region. Mr. Graham has provided survey services to municipalities, residential, commercial and industrial developments and construction groups. His background includes experience as a Professional Surveyor, Field Engineer, Consultant, Construction Supervision, and Project Management.

RELEVANT PROJECT EXPERIENCE

Bridge and Highway Surveys

Mr. Graham managed all phases of survey for over 14 bridges throughout West Virginia for the WVDOH and the U.S. Fish and Wildlife department. Bridge and road projects consisted of single span, multi-span, and walking bridges. Highway rights of ways were determined and field staked as well as stakeout for roadway construction.

- North River Mills Bridge and road way, Slanesville, WV
- Camp Buckeye Bridge, Alvon, WV
- Swago Creek Bridge, Marlinton, WV
- Little Kanawha Bridge, Charleston, WV
- King Coal Highway, Abingdon, VA

Heavy Industrial Surveys

Mr. Graham managed all phases of survey as chief of field engineers for several heavy industrial projects throughout the United States. Project responsibilities included coordination of multiple survey crews, data computations, quality control and review of data.

- Bath County Pumped Storage Project A 6 unit Hydro-Electric Power Plant, Bath County, VA
- Jenkinsville Nuclear Power Plant, Jenkinsville, SC
- Evanston Gas Sweetner Plant, Evanston, WY
- Shale Oil Development Mine, Parachute, CO
- Amistad Hydro-Electric Power Plant, Del Rio, TX



EDUCATION

West Virginia Institute of
 Technology
BS. Mechanical Engineering
BS. Civil Engineering

PROFESSIONAL EXPERIENCE

26 Years

CERTIFICATIONS

- Certified Monitoring Well
 Installer [REDACTED]

REGISTRATIONS & LICENSES

- Registered Professional
 Engineer (WV, MD)
 o WV [REDACTED]

SKILLS

- Managing Multiple Drill Crews
- Organizing drills, crews, and
 supplies for drilling projects
- Design of Subsurface
 Explorations
- Approval of Design Drawings
- Proposals
- Drilling Inspection
- Geotechnical Analysis &
 Reporting
- Geotechnical Engineering and
 Drilling Cost Estimating and Bid
 Preparation

HIGHLIGHTS OF EXPERIENCE

Mr. Haynes serves as the Senior Drilling Manager for Triad's drilling operations where he manages all drilling and sampling activities conducted by the firm's regional offices. Duties include design and implementation of the subsurface investigations, assignment of laboratory testing, approval of design drawings, development of technical specifications, and preparation of drilling and geotechnical engineering cost proposals and reports.

RELEVANT PROJECT EXPERIENCE

Statewide Geotechnical Drilling IDIQ, Various Locations, WV

This project consists of an as-needed, on-call 1 to 2 year contract for providing geotechnical drilling to the West Virginia Division of Highways. Triad has maintained this contract since 1998 and Mr. Haynes has managed the contract since 2012. Recent projects have included water borings (off shore drilling) for the I-64 Nitro, St. Albans, Bridge and borings for several bridge replacements in various locations in Berkeley and Hampshire Counties, WV.

Corridor H Drilling-Kerens to Parsons, Sections 2 and 1B, Tucker & Randolph Counties, WV

The project consists of the geotechnical drilling for a 3.69 mile and 5.62 mile section of a 4 lane Expressway which extends from Interstate 79 near Weston, WV east to the Virginia state line near Wardensville, WV. Mr. Haynes was the project manager for this project which consisted of 166 and 272 Borings for a total drilling footage of 10,616 and 15,757 feet. Steep terrain and strict environmental requirements contributed to obstacle based solutions for these two projects,

Appalachian Corridor "H", Tucker and Grant County, WV

As a Staff Geotechnical Engineer, Mr. Haynes worked closely with the field inspectors during the subsurface investigation phase by helping make decisions concerning boring locations, depths, and subsurface descriptions. He entered boring logs, assigned laboratory testing, and prepared geological stick bar borings to be placed on the project cross sections. Mr. Haynes designed cut and fill slopes, performed slope stability analysis on critical embankment fills, estimated shrink/swell factors for excavated materials, and tabulated probable sources of select embankment. Information was compiled into a final geotechnical roadway report. Bridge reports provided foundation recommendations and bearing capacity computations for each of the bridge abutments and piers.

Coalfields Expressway, Sophia, WV

As a Project Geotechnical Engineer, Mr. Haynes developed a boring layout based on the project cross-sections provided by the client. He worked with field inspectors during the subsurface investigation to design cut and fill slopes, perform settlement calculations for embankment fills, estimate shrink/swell factors for excavated materials, and tabulate probable sources of select embankment. After the original subsurface investigation and geotechnical report was completed, WVDOT decided to extend the project 800 ft. in an attempt to balance borrow and waste. Mr. Haynes then developed a recall boring list in order to continue the project.



EDUCATION

Gerrett County Community
College
AS, Building Construction
Technology

PROFESSIONAL EXPERIENCE

35 Years

CERTIFICATIONS

WVDOH:

- Aggregate Technician
- Portland Cement
Concrete Inspector

APNGA:

- HAZMAT Refresher,
Portable Nuclear
Gauges

West Virginia:

- Certified Hazardous
Materials Manager

NICET:

- Level II Construction
Materials Testing: Soil &
Concrete
- Level III Geotechnical
Laboratory Testing

ASCET:

- Soil, Concrete & Asphalt
Technician

SKILLS

- Field & Laboratory
Testing & Monitoring
- Geotechnical
Engineering and
Construction Testing

HIGHLIGHTS OF EXPERIENCE

Mr. Blake has over 32 years of diversified experience performing and providing QA/AC construction monitoring and inspection and materials testing services for Triad Engineering. He has been a technician and supervisor for over 25 years gaining comprehensive project experience in all phases of construction and earthwork including infrastructure, highway, bridge, and building development. Mr. Blake has extensive experience in field work including monitoring and performance of compaction testing, steel inspections, concrete testing and verification of work completion according to plans and specifications. Currently, Mr. Blake leads Triad's regional materials testing laboratory providing testing services and oversight for geotechnical engineering and construction projects involving soils, aggregates, concrete and asphalt.

RELEVANT PROJECT EXPERIENCE

West Virginia Department of Highways (WVDOH), Various Locations

As a former WVDOH Inspector, Mr. Blake has provided construction monitoring and inspections, field materials testing, and/or laboratory testing services for WVDOH projects for over 30 years. As Triad's Laboratory Services Manager, Mr. Blake conducts laboratory testing for QC projects and for the firm's geotechnical engineering services. Some of his recent projects include, but are not limited to:

- Hartman Run Road Bridge, Monongalia County
- Evansville Road, Barbour County
- Kasson Dent Road, Harrison County
- Rt. 250 Mannington, Marion County
- West Farmington Road, Marion County
- River Road Slide, Monongalia County
- Monongalia County / I-79 Welcome Center

West Virginia University, Morgantown, WV

Mr. Blake has provided services for WVU projects for over 30 years. Some of his recent projects include, but are not limited to:

- Mountaineer Field (Construction, Expansion, Upgrades to Field and Facilities)
- Basketball Practice Facility (Construction)
- Downtown Residence Hall (Construction)
- Evansdale Greenhouse (Construction)
- Women's Soccer Practice Facility (Construction)
- Nursery School / Day Care Facility (Construction)
- Brooks and White Halls (Renovations)
- Mountaineer Station (Construction)

West Virginia Statewide Agreement, Districts 1 and 4

Served as Laboratory Manager and Senior Engineering Technician for a statewide contract with the WVDOH, for which we provided construction monitoring, inspections, field and laboratory testing, and data entry on an as-needed, per project basis. Triad was awarded the Department of Highways Engineering Excellence Award in the category of Construction Inspection for the years 2002, 2004 and 2007.



EDUCATION

Marshall University, WV
BS, Environmental Science

PROFESSIONAL EXPERIENCE

15 Years

REGISTRATIONS & LICENSES

- Licensed Remediation Specialist, No. [REDACTED] West Virginia
- Monitoring Well Driller Certification, No. [REDACTED] West Virginia
- OSHA HAZWOPER 40 Hour Training/8 Hour Update (current)
- OSHA 8 Hour Supervisor Certification

SKILLS

- Due Diligence
- CERCLA
- Hazard Ranking System (HRS)
- Environmental Assessments
- Permitting

HIGHLIGHTS OF EXPERIENCE

Ms. Metz is an Environmental Services Manager and Senior Environmental Scientist. She is responsible for the personnel management of the Environmental Services Group as well as the technical quality and management control of all Environmental projects. Ms. Metz is a Licensed Remediation Specialist (LRS) and performs a variety of tasks for sites in the West Virginia Voluntary Remediation Program (VRP).

RELEVANT PROJECT EXPERIENCE

West Virginia Brownfields Assistance Center, Huntington, WV

As Program Manager, implemented the WVDEP Statewide Petroleum Brownfield Assessment grant program. Tasks include acting as liaison between the Brownfields Assistance Center, WVDEP and the USEPA, conducting Phase I ESAs, preparing site assessment work plans, conducting Phase II ESAs, preparing reports, monitoring budgets, and managing field activities.

West Virginia Department of Environmental Protection, Charleston, WV

As Program Manager, implemented the WVDEP Statewide Hazardous Brownfield Assessment Grant program. Tasks included preparing site assessment work plans, acting as liaison between WVDEP and USEPA, conducting Phase I ESAs, conducting Phase II ESA, preparing reports, reporting status to WVDEP and USEPA, monitoring budgets, managing field activities, and managing community outreach.

Fayette County Commission, Fayetteville, WV

As Project Manager, implemented the County-Wide Hazardous Brownfields Assessment Grant program. Performed oversight for Phase I ESAs and asbestos inspections at 50 properties located throughout the County. Negotiated right of access agreements, monitored budgets and managed field activities.

West Virginia Division of Highways, Multiple Locations, WV

As Program Manager and LRS, responsible for field activities and report preparation for WVDOH properties in the LUST, WV VRP, and UECA programs of WVDEP. Site characterization tasks have included subsurface investigations to determine the extent of contamination, multi-media sampling, groundwater monitoring well and recovery well installation. Prepares and/or provides oversight during data evaluation, prepares remedial action work plans and final reports. Responsible for project personnel selection, overall project and technical quality, budget and schedule management.

West Virginia Department of Environmental Protection, Multiple Locations, WV

As Program Manager, responsible for performing various assessment tasks at USEPA Superfund sites in West Virginia. Tasks have included performing Preliminary Assessments, Site Inspections, Combined Preliminary Assessment/Site Inspections, Expanded Site Inspection, and Site Inspection Reassessments under CERCLA. Specific tasks have included performing regulatory file reviews, site reconnaissance's, Hazard Ranking System (HRS) site scoring using USEPA software, USEPA Contract Laboratory Program (CLP) data management using USEPA software, providing electronic laboratory data deliverables for the WVDEP in EQUIS® data management format, Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP) generation, field sampling, and report preparation. These tanks have been performed at over 50 Superfund sites throughout West Virginia.

Appendix B

Related Project Experience



◆ TRIAD Listens, Designs & Delivers™

www.triadeng.com

CLIENT:

West Virginia High
Technology Foundation
1000 Technology Drive
Suite 1000
Fairmont, WV 26554

CONTACT:

Mr. Jim Estep
ajestep@wvhtf.org
304.333.6814

PROJECT TYPE:

Commercial

YEAR COMPLETED:

On-going – estimated
completion of current
phase 2019

TRIAD SERVICES:

Civil Design
Survey
Geotechnical
Engineering
Construction Monitoring
Laboratory Testing
Drilling
Environmental Services
Permitting
Underground Utilities

REGULATORY /

**PERMITTING
USAGE**
NEPA EA
WVDOH
WVDEP
WV NPDES

OVERVIEW

The I-79 Technology Park is a +/- 400 acre research park and development located on a site with a collapsed coal mine. In 2007 Triad was contracted to provide a geotechnical investigation, including underground utility design and foundation recommendations for the ISR Corporation building. The 263,000 sf

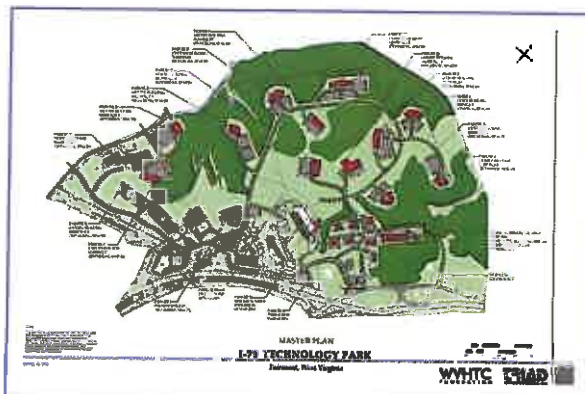


metal-skinned facility is comprised of reinforced concrete which was grouted with fly ash to stabilize the building footprint.

Over the years, Triad has continued to provide services for the West Virginia High Technology Foundation (WVHTF). The civil department prepared a Master Plan for the Commercial Retail phase of the project which incorporated 2004 master planning features along with results from Triad's Survey Mapping Services.

In 2016, Triad prepared a Preliminary Road and Utility Plan for a collector roadway and utilities originating at NASA Boulevard.

2018 brings new expansions to the project by extending the existing road infrastructure into an undeveloped phase. This expansion will make industrial sized building pads available to federal anchors. The scope of the work is to include engineering services, earthwork, storm drainage construction, erosion and sediment control, paving and extension of underground utilities. This phase of the project will include construction of approximately 1,545 linear feet of roadway, installation of water and sewer lines, and underground electric duct bank to serve three future building pads. At the completion of this phase, approximately 7,944 linear feet of roadway along with associated utilities will be constructed.



CLIENT:

Smith/Packett Med-
Com, LLC
4423 Pheasant Ridge
Road
Suite 301
Roanoke, VA 24014

CONTACT:

Ms. Aubury Holmes
aholmes@smithpackett
.com
540.774.7762

PROJECT TYPE:

Healthcare

YEAR COMPLETED:

Under Construction –
estimated completion
Fall / Winter 2018

TRIAD SERVICES:

Civil Design
Geotechnical
Engineering
Environmental Services
Materials Testing
Drilling
Special Inspections
Laboratory Testing
Survey
Underground Utilities

REGULATORY /

PERMITTING

USACOE
WVDOH
WVDEP
NPDES

OVERVIEW

The site of a previous 15.5 acre hillside farm has become the home of a 180,000 square foot, four-story senior living facility hosting independent living, assisted living, and memory care. Triad's Civil, Survey, Geotechnical, Environmental, and Construction Materials Testing professionals have helped make this project a reality.

OBSTACLES

During mapping, a portion of the property was identified as an old strip mine along with wetlands. These



features required consideration in the footprint placement and design of the property. Additionally, nearly 100,000 cubic yards of earth were moved for this project during some of the wettest months of the year.

SOLUTIONS



Due to site challenges, there was limited area for development for this project. Triad's civil designers worked with project architects to locate the building to avoid wetlands and create proper stormwater best management features along with the other site elements.

To maximize the use of the property, site cuts and fill walls were utilized. Triad's geotechnical engineers provided designs for both a geogrid reinforced dry masonry block wall and a larger block wall along with foundation and earthwork recommendations.

In addition to providing a standard Phase I Environmental Site Assessment (ESA) for the lenders, Triad's Environmental team worked to delineate the Wetlands / Waterway and obtain Department of Environmental Protection (DEP) approval for the site and a National Pollutant Discharge Elimination System (NPDES) for the storm water discharge. Wetland coordination involved submitting to the US Army Corp of Engineers. Service areas all relied on the accuracy of Triad's ALTA / ACSM Land Title, Topographic, and Construction Stake-Out Surveys.



CLIENT:

Sora, LLC

CONTACT:

Michael Sodomick
276 Walnut Street
Morgantown, WV
26505

PROJECT TYPE:

MIXED-USE COMMERCIAL
AND INDUSTRIAL PARK

YEAR COMPLETED:

On-going

TRIAD SERVICES:

Civil Design
Master Planning
Survey
Drainage Analysis
Sanitary Sewer Design
Utilities Design
Wetland Delineation
Geotechnical
Engineering
Roadway Design

REGULATORY

PERMITTING:

WVDEP
NPDES

OVERVIEW

For the past decade, Triad has, (and continues to) support the design and development of approximately 221 acres of mixed-use commercial and industrial park properties along the Goshen Road outside of Morgantown, West Virginia.

Cornerstone Commerce Park has involved conceptual design and master planning for nine commercial and 17 industrial parcels.

Inclusive in the plans were pad site developments including roadway design, layout, grading plans, and utility plans, erosion and sediment control plans, and cost estimates.

Permit applications were prepared and submitted.

Preparation of construction and bidding documents incorporating key infrastructure items such as roadway, utility, stormwater management, siting buildings, parking facilities, and open space were developed.

Preliminary subsurface investigations were performed to characterize the property for development.

Survey services have included boundary surveys, pad, roadway, and drainfield stakeout, and borrow pit field run topographic survey.

Inclusive of this project was wetland delineation.

