

# Camp Dawson EOI Road Paving Design

**Solicitation No: ADJ1900000009**  
**Opening Date: August 30, 2018**  
**Opening Time: 1:30 pm**

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WV PURCHASING  
DIVISION



## Prepared for:

Bid Clerk  
WV Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130  
Stephanie.L.Gale@wv.gov  
Fax: 304-558-4115

## Prepared By:

Triad Engineering Inc.  
1097 Chaplin Road  
Morgantown, WV 26501  
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Fax: 304-296-8739



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TRIAD ENGINEERING, INC.

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TRIAD Listens, Designs & Delivers

August 30, 2018

WV Department of Administration  
Purchasing Division  
Ms. Stephanie Gale, Senior Buyer  
2019 Washington Street East  
Charleston, WV 25305-0130

RE: **Expression of Interest**  
**Camp Dawson Road Paving Design**  
**CEOI: ADJ1900000009**  
**TRIAD Proposal No. 01-18-0341**

Dear Ms. Gale:

Triad Engineering, Inc. (Triad) is pleased to submit this Expression of Interest in response to your solicitation for professional engineering design services to develop construction documents to provide for Camp Dawson Road Paving Design.

As a longstanding West Virginia Civil Engineering firm with over 43 years of experience, you can be assured that we will work closely with you, the state of West Virginia, Camp Dawson, and other identified stakeholders to ensure that your interests and needs are met most effectively and efficiently. Triad has provided design and paving services for numerous projects throughout the state inclusive of business development parks, housing developments, state and local roads.

We are confident that the attached documentation will illustrate how we will work with you to develop the best solutions to create a successful project for you. We look forward to meeting with you to discuss our capabilities and qualification in more detail.

Very truly yours,

**TRIAD ENGINEERING, INC.**

**William Ernstes, PLA**  
**Land Development Services Manager**  
**wernstes@triadeng.com**  
**304-296-2562**



TRIAD ENGINEERING, INC.

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# Section I

## Project Understanding and Approach

## Project Understanding and Approach

We understand that the project scope will include design and development of construction documents for the renovation of approximately 5,000 linear feet of existing improved roads at Camp Dawson in Preston County. The design shall include changes to comply with current state codes and will include all earthwork investigations, drainage requirements, and asphalt pavement design to accommodate the intended vehicle usage and to support the West Virginia Army National Guard Command. Services expected to be utilized shall be:



- Geotechnical Engineering
- Drill Borings
- Laboratory Materials Testing
- Survey Services
- Civil Design

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 road data sufficient to derive a topographic site map with included planimetric features within the limits of the survey. Planimetric features will include buildings, structures, above and below ground utilities, and other improvements within the limits of survey.



## PHASE 2 – PRELIMINARY DESIGN AND PERMITTING SERVICES

### *Task 1 – Site Planning (Preliminary Site Plans)*

Upon completion of the initial phase, 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 2 – Geotechnical Engineering Investigation*

Prior to commencing with design, a geotechnical investigation will be performed to determine subsurface conditions within the area of the required paving project. 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 3 – 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 4 - 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 paving 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 anticipated this will consist of the following:

- Title Sheet
- General Notes
- Existing Conditions
- Grading and Drainage Plans
- Construction Details
- 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





## 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

Complete resumes as they relate to this project are found in Appendix A.

Professional Title Phone Number	Firm	Professional Experience Summary
<p><b>Bill Ernstes, PLA</b>                      Land Development Services Manager                      304-296-2562</p>	<p>Triad</p>	<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.  <b>Landscape Architect: WV [REDACTED]</b>      <b>Experience: 23 years</b>  <b>Education: BS Landscape Architecture</b></p>
<p><b>Ben Campbell PE</b>                      Senior Engineer                      304-296-2562</p>	<p>Triad</p>	<p>Geotechnical investigations and evaluation of exploration results, foundation recommendations and reporting, laboratory testing, field inspections, and special inspections.  <b>Professional Engineer: WV [REDACTED]</b>      <b>Experience: 11 years</b>  <b>Education: MS Engineering, BS Civil Engineering Technology</b></p>
<p><b>Danny Lipscomb, PE</b>                      Geotechnical Engineering Services Manager                      304-755-0721</p>	<p>Triad</p>	<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.  <b>Professional Engineer: WV [REDACTED]</b>      <b>Experience: 15 years</b>  <b>Education: BS Civil Engineering</b></p>
<p><b>David Graham, PS</b>                      Survey Services Manager                      304-296-2562</p>	<p>Triad</p>	<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.  <b>Professional Surveyor: WV [REDACTED]</b>      <b>Experience: 40 years</b>  <b>Education: Woodson School of Surveying</b></p>
<p><b>John Haynes, PE</b>                      Drilling Services Manager                      304-755-0721</p>	<p>Triad</p>	<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.  <b>Professional Engineer: WV [REDACTED]</b>      <b>Experience: 26 years</b>  <b>Education: BS Civil and Mechanical Engineering</b></p>
<p><b>Danny Blake, CET</b>                      Laboratory Services Manager                      304-296-2562</p>	<p>Triad</p>	<p>Testing services and oversight for geotechnical engineering and construction projects involving soils, aggregates, concrete and asphalt.  <b>Education: BA Bldg. Construction Technology</b>      <b>Experience: 26 years</b></p>

# Section IV

## Management and Staffing Capabilities

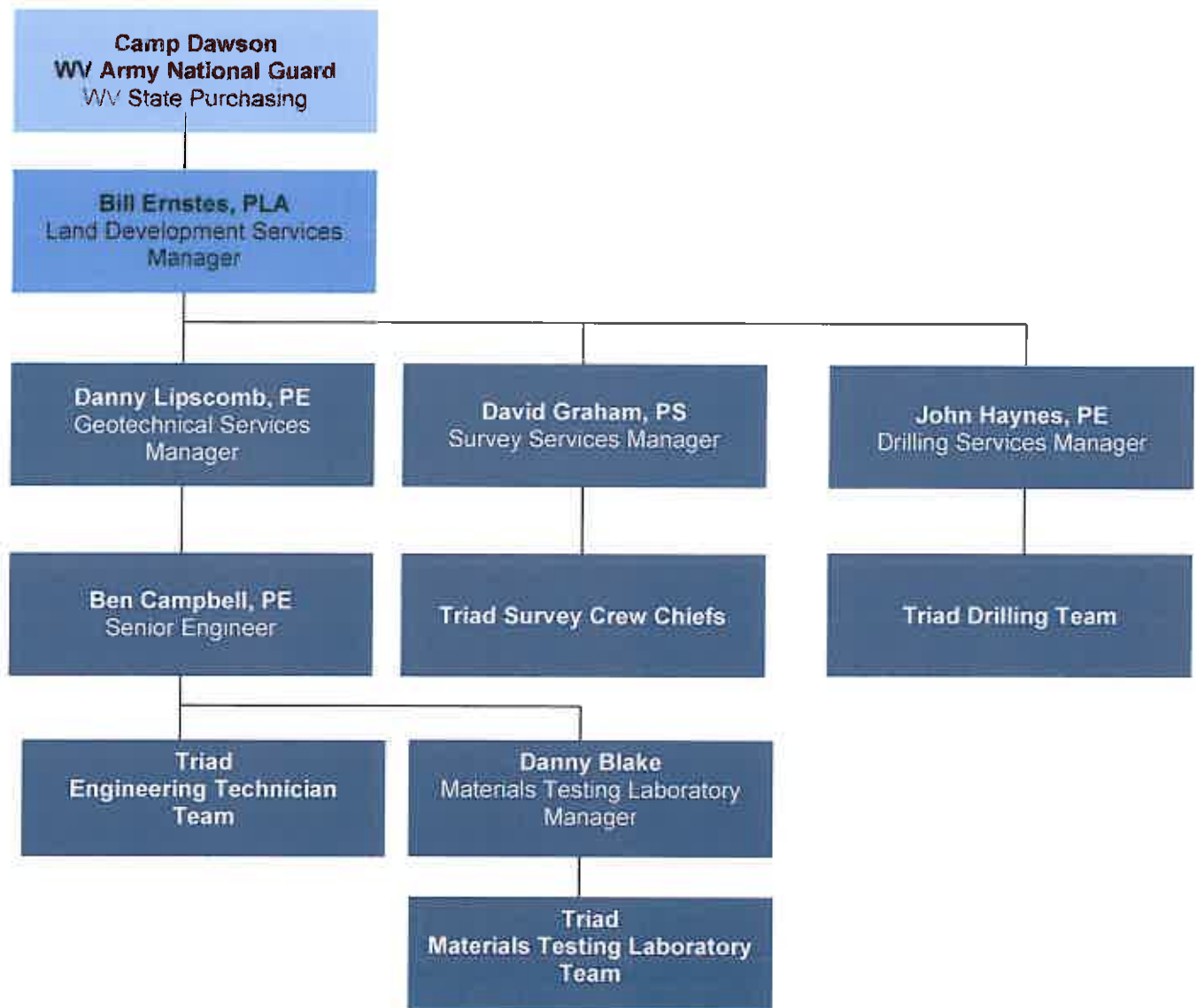


## MANAGEMENT AND STAFFING

### *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 as it relates to roadway design and development.

### *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 roadway design projects. After examining the materials provided, we are confident that you will find the Triad team assembled for this project will show the expertise necessary to complete this particular 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.

# Appendix A

## Resumes

## REFERENCES:

### **WV High Tech Foundation (WVHTF)**

Mr. James L. Estep  
President and Chief Executive Officer  
304.333.6814  
[jestep@wvhtf.org](mailto:jestep@wvhtf.org)

### **Beitzel Corporation**

Mr. Durrell Orendorf  
Senior Project Manager  
12072 Bittinger Road  
Grantsville, MD 21536  
[durrellorendorf@beitzelcorp.com](mailto:durrellorendorf@beitzelcorp.com)

### **WV Department of Environmental Protection**

Mr. Paul Benedum  
DLR – Landfill Closure Assistance Program  
[paul.l.benedum@wv.gov](mailto: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*



**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
  - 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**

Woodson 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)  
◦ 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/QC 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.



# Appendix B

## Related Project Experience

**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**

USACE  
 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.

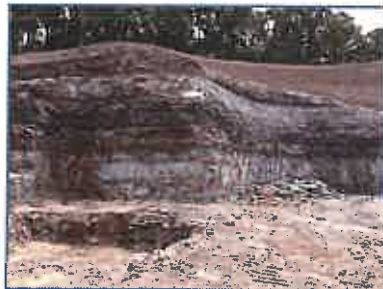
## OBSTACLES

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.

