TERRADON CORPORATION

SUBMITTED BY:
TERRADON Corporation
P.O. Box
Nitro, WV 25143
304-755-8291

PERSON OF CONTACT:
Ryan Wheeler
Director of Business Development
ryan.wheeler@terradon.com
304-729-9176
www.terradon.com

STATEMENT OF QUALIFICATIONS

STF Buildings Camp Dawson EOI Design

TABLE OF CONTENTS



FOUNDED: 1989

EMPLOYEES: 50

LOCATIONS:
Poca, WV
Lewisburg, WV
Fayetteville, WV

SERVICES:
Land Planning & Design
Survey & Mapping
Environmental
Civil Engineering
Geotechnical Engineering
Water, Wastewater, & Storm Water
Transportation Engineering
Structural Engineering
Testing & Inspection
Construction Monitoring & Administration
Cultural Resources & Archaeology

SENIOR GROUP LEADERS:
Land Development—Greg Fox, ASLA, LEED AP
Civil Engineering—Will Thornton, PE, PS
Transportation Engineering—Joe Saunders, PE
Survey—Robert Thaw, PS
Environmental, Geotechnical Engineering, and Construction Inspection & Materials Testing—Sam Wilkes, MS, PWS, LRS

Certified WBENC Women's Business Enterprise

CERTIFIED Women Business Enterprise
National Women Business Owners Corporation

TERRADON is the largest woman-owned engineering firm in West Virginia. TERRADON is a certified Women's Business Enterprise as defined by the Women's Business Enterprise National Council and the National Women Business Owners Corporation.

TERRADON CORPORATE OVERVIEW

TERRADON Corporation offers a multi-faceted approach to design engineering and consulting services. For more than 27 years TERRADON staff has provided a wealth of engineering solutions blanketing West Virginia and surrounding states with successful projects. The company built its reputation on expert personnel and quality, time-sensitive service. Those same founding principles hold true today.

The second-generation, family-owned business has built a strong reputation by providing flexible, cost effective design solutions and maintaining the highest level of customer service. The firm has been recognized through numerous awards from professional organizations and agencies including the American Society of Civil Engineers, State Highway Departments, the Department of Environmental Protection and the American Institute of Architects.

TERRADON's success is relative to the relationships with it's clients. TERRADON strives to provide intimate and knowledgeable design choices that directly represent the client and their wishes. TERRADON's diverse team of professionals work together on projects to offer a wide range of in-house services in house to keep project centrally focused.

TERRADON's projects are funded by various private and public agencies. The company maintains in-house grant writing staff and support to assist clients with funding opportunities. The TERRADON team is made up of professionally registered engineers, landscape architects, and surveyors as well as a competitive team of highly certified inspectors and environmental specialists.

TERRADON's corporate culture promotes innovation and progressive thinking. Project leaders strive to sustain customers through a wide-range of engineering offerings. TERRADON employees understand the purpose behind their services and work to cultivate lasting relationships with clients through honest, hard work.



SERVICES INCLUDE

- Site Civil Engineering
- Master Planning
- Site Feasibility Studies
- Schematic Design
- Layout Plans
- Grading Plans
- Utilities Design
- Preliminary Designs
- Storm Water Management Plans
- Erosion Control Plans
- Planting Plans
- Presentation Drawing
- Renderings
- Graphic Design
- Construction Observation
- Bidding
- Phase I ESA
- Phase II ESA
- Construction Review
- Permitting Oversight
- QA/QC
- Survey
- Building Renovations & Additions Design
- Geotechnical Engineering
- Archaeological
- Cost Estimating
- Project Management
- Site Assessments
- Construction Inspection

TERRADON maintains LEED accredited professionals on staff.

TERRADON's Land Planning and Development department offers creative and innovative site design plans that have been brought to life throughout the region. Land Planning and Development engineers, landscape architects and CAD designers work closely with other TERRADON departments to deliver the most efficient design for each project.

TERRADON's Land Development department works with public and private entities and has remained a strong presence in the commercial, educational and, parks and recreational development sectors.

The Land Planning and Development group is focused on retaining lasting relationships with it's customers and prides itself on repeat clientele and referrals.

The Land Planning and Development department provides all services in-house from schematic design through construction drawings.

TERRADON maintains LEED accredited professionals in the Land Planning and Development department who remain on the forefront of sustainable design initiatives that aid clients in reducing significant energy costs on projects. TERRADON's Land Development department has more than 25 years experience working on industrial, commercial, parks and recreational, and other projects.

TERRADON has performed engineering and landscape design services for various monuments and plazas throughout the state. TERRADON has ample experience incorporating thematic design elements to achieve honorable memorial and monument plaza sites.

TERRADON has also worked on various renovation and addition projects ranging in sizes from small commercial gas stations, to large industrial sites. TERRADON has specialty staff that have worked on building renovation and additions comparable in size to the proposed project.



TRANSPORTATION ENGINEERING

TERRADON's Roadway and Bridge Design group is one of the most respected in the region. The department is well-known for its structural design capabilities and expert knowledge in bridge erection planning. Whether the job requires project planning, preliminary engineering studies or detailed roadway design, TERRADON maintains the resources needed to successfully complete transportation projects. Success on each project is achieved by using advanced technology to produce innovative, pragmatic design. TERRADON engineers are among leading professionals experienced in an array of transportation and quality & assurance measuring services.

TERRADON's certified staff is trained to work under unique and changing task orders and to maintain quality work to clientele that creates a maintained respected relationship between TERRADON and it's client.

TERRADON provides a diverse staff of professionals capable of providing project planning and preliminary engineering services, as well as final roadway and bridge designs (plans, specifications, and estimates). The firm's transportation engineers and technicians apply the latest technology to innovative, award-winning projects. TERRADON's transportation staff has a wide range of experience that includes preparing maintenance of traffic plans, signing and pavement marking plans, utility coordination, drainage design, and right-of-way plans.

> TERRADON is prequalified to provide engineering design services for the West Virginia Department of Transportation (WVDOT) through a Statewide Engineering Consulting Contract and for Design-Build services.

TERRADON's Transportation sector has enjoyed a long-standing relationship with several states' Departments of Transportation including the WVDOT. TERRADON has performed successful engineering design for the agency for more than 20 years. The group is led by an experienced transportation engineer and includes veteran staff with demonstrated experience.

TERRADON routinely works on transportation projects, including survey, right-of-way, utilities, and specification design and review with WVDOT personnel. Additionally, TERRADON has been recognized for outstanding engineering work on several occasions with engineering excellence nominations and awards.

SERVICES INCLUDE

- Structural Engineering
- Bridge Design
- Roadway Planning & Review
- Structural Planning & Review
- Roadway Design
- Maintenance of Traffic
- Traffic Analysis
- Right of Way Plans
- Grading Studies
- Survey
- Materials Testing
- Construction Inspection
- Materials Certification



CONSTRUCTION MONITORING AND TESTING & INSPECTION

TERRADON offers materials testing and construction monitoring services to document compliance with project design specifications and regulatory requirements. The firm provides construction monitoring for utility, highway, and commercial construction projects. TERRADON also provides laboratory and field testing of construction materials. Testing and inspection services are provided at the time of construction to ensure projects are built in accordance to specifications. TERRADON engineers and technicians are West Virginia Department of Highways certified in Portland Cement concrete, Hot-Mixed Asphalt, and Compaction and Aggregates. Other certifications are held on staff.

SURVEY

TERRADON has a long history of providing design and construction survey services for numerous land design and development projects. Efficient and accurate results are ensured by prioritizing the use of modern technology, including state of the art GPS and robotic total stations, with the latest design software. TERRADON maintains full-time Professional Surveyors on staff. The firm services projects through the use of in-house field survey crews who are backed by corporate staff members, including an experienced team of CAD designers.

ENVIRONMENTAL

Constantly changing federal and state environmental requirements are difficult to track and can have a serious impact on projects. TERRADON offers an experienced environmental services team to manage issues in a complex environment. Staff is well-versed on environmental permitting processes and regulations as well as site assessment and reporting in order to avoid project delays.

GEOTECHNICAL

Additionally, TERRADON offers some of the most experienced staff in the region for local geotechnical expertise. This team of experts brings a distinctive, specialized understanding of the difficult soil and groundwater conditions found in the Ohio Valley and Appalachian Regions of the United States.

WVDOT-DOH

TERRADON has enjoyed a long-standing relationship with several states' Departments of Transportation including the WVDOT. TERRADON is prequalified to provide engineering design services for the West Virginia Department of Transportation (WVDOT) through a Statewide Engineering Consulting Contract and for Design-Build services. TERRADON Corporation maintains a long-standing relationship with the WVDOT and has performed successful engineering design for the agency for more than 20 years. TERRADON has been the recipient of various Engineering Excellence Awards for past WVDOT projects.

TERRADON STAFFING PLAN

TERRADON plans to staff this project primarily in-house using service professionals from it's Poca, WV office, Fayetteville office, and Lewisburg office. Experienced site selection personnel, surveying professionals, and environmental specialists will work together, both on site and in office, to service this projects needs. TERRADON's staffing plan is broken down in the organization chart that follows this page.

TERRADON offers a professional and experienced staff of professional engineers, professional surveyors, certified inspectors, registered landscape architects, environmental professionals, and project designers. TERRADON's engineering staff offers licenses in over five states. Additionally, TERRADON's inspectors offer a wide variety of certifications and trainings including multiple levels of certification issued by the WVDOT Technician Certification Board. TERRADON's diversely talented staff offers clients a more knowledgeable and experienced project workforce.

KEY PERSONNEL

WV REGISTERED LANSCAPE ARCHITECTS:

- Greg Fox, ASLA, LEED AP
- Pete Williams, ASLA

SENIOR SITE PLAN DESIGNERS:

- Shawn Gray, ASLA
- Matt Glaspey, ASLA
- Bill Gerencir
- Earl Oldham

WV REGISTERED PROFESSIONAL SURVEYORS:

- Robert Thaw, PS
- Dave Brown, PS
- Brian Bakanas, PS

ENVIRONMENTAL PROFESSIONALS:

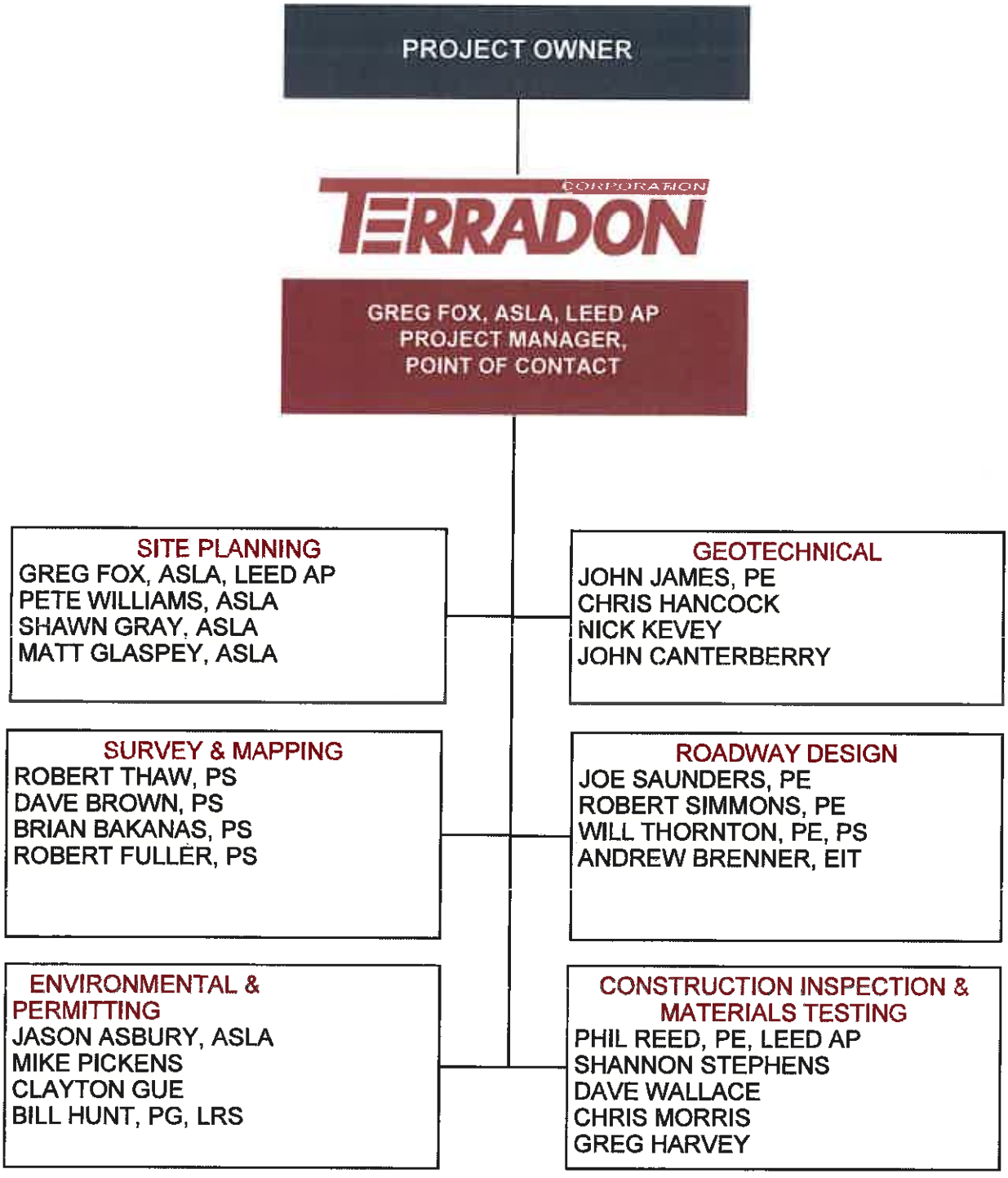
- Bill Hunt, PG, LRS
- Jason Asbury, ASLA
- Mike Pickens
- Clayton Gue

CERTIFIED INSPECTORS:

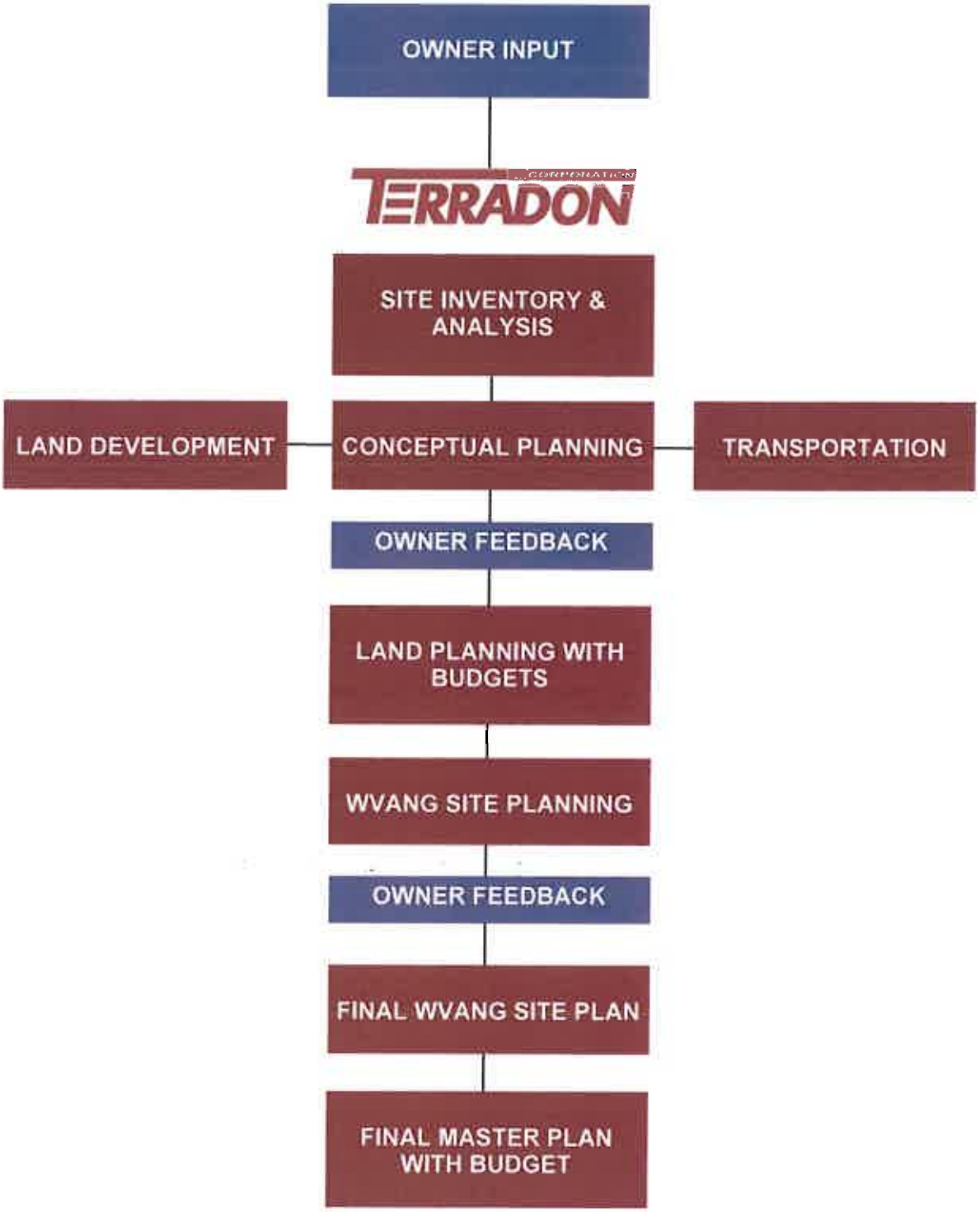
- Phil Reed, PE, LEED AP, Level V
- Shannon Stephens, Level III
- Dave Wallace, Level III
- Chris Morris, Level III
- Greg Harvey, Level III
- Mike Ward, Level III
- Joseph Farren, Jr., Level I
- Corey Payne
- Adam Underwood

WV REGISTERED PROFESSIONAL ENGINEERS:

- Will Thornton, PE, PS
- Joe Saunders, PE
- Robert Simmons, PE
- Jim Nagy, PE
- John James, PE
- Mike Pyles, PE
- Ashley Lioi, PE
- Phil Reed, PE, LEED AP
- Kristen McClung, PE


PROJECT OWNER
TERRADON CORPORATION
GREG FOX, ASLA, LEED AP
PROJECT MANAGER,
POINT OF CONTACT
SITE PLANNING
GREG FOX, ASLA, LEED AP
PETE WILLIAMS, ASLA
SHAWN GRAY, ASLA
MATT GLASPEY, ASLA
GEOTECHNICAL
JOHN JAMES, PE
CHRIS HANCOCK
NICK KEVEY
JOHN CANTERBERRY
SURVEY & MAPPING
ROBERT THAW, PS
DAVE BROWN, PS
BRIAN BAKANAS, PS
ROBERT FULLER, PS
ROADWAY DESIGN
JOE SAUNDERS, PE
ROBERT SIMMONS, PE
WILL THORNTON, PE, PS
ANDREW BRENNER, EIT
ENVIRONMENTAL & PERMITTING
JASON ASBURY, ASLA
MIKE PICKENS
CLAYTON GUE
BILL HUNT, PG, LRS
CONSTRUCTION INSPECTION & MATERIALS TESTING
PHIL REED, PE, LEED AP
SHANNON STEPHENS
DAVE WALLACE
CHRIS MORRIS
GREG HARVEY

PROJECT APPROACH



TERRADON CORPORATION




BECHTEL SUMMITT RESERVE—MASTER PLANNING
FAYETTE COUNTY, WV

The Summit is a 10,600+ acre outdoor adventure center owned by the Boy Scouts of America. TERRADON performed site selection and site evaluation services. Additionally, the firm provided geotechnical investigations, design, survey, planning, and infrastructure design and inspection. Working under tight specifications and time restrictions, TERRADON spearheaded the delivery of the world class facility.

TERRADON worked with project owners to find the most feasible and economically beneficial site for the boy scout adventure site. TERRADON provided site prioritization and analysis to help project owners see the beneficial exponents to developing the outdoor adventure park in the mountains of West Virginia. The final design site was selected from scouring multi-acreage sites in different counties with specific elements considered including site feasibility, site readiness, budgeting exponents, and economic development.

TERRADON designed 64 miles of underground utilities at the Summit. The design plans implemented a water distribution system that included 18 miles of piping and two precast concrete water tanks with Solar Blue mixers to help with water stratification. The water systems on site service 130 bath houses and restrooms on the site. TERRADON designed wastewater services on site utilizing Orenco tanks. The wastewater system was used due to the sites remote location making it more feasible than conventional gravity sewer lines. The project was comprised of almost 93,000 feet of sewer pipe, 125 large Orenco septic tanks, and 23 septic tank effluent pumping stations to convey the wastewater to an on-site sewage treatment facility. The sewer system collects wastewater through a variable grade sewer system, while the septic tanks provide primary treatment of the waste water.

SERVICES PROVIDED

Site Selection & Analysis
Site Prioritization
Master Planning
Site Development Plans
Preliminary Design
Final Design
Roadway Design
Utilities
Environmental
Geotechnical
Materials Testing
Construction Review
Construction Inspection
Survey
Construction Management
Quality Assurance Management
RFP Development
Permitting Oversight
QA/QC

PROJECT CONTACT

Rob Ridgeway, Director
304-469-1089

PROJECT MANAGER

Greg Fox
304-729-9155

US ROUTE 35 VALUE ENGINEERING
PUTNAM COUNTY, WV

TERRADON completed a value engineering design of Ramp 1 at the WV 34/US 35 interchange. The project consisted of a new alignment and reduced the total required excavation by 800,000 cubic yards. New drainage design and pavement design details were also completed for the contract plans.

TERRADON served as a Prime Consultant for Value Engineering Services and provided Quality Control and Quality Assurance Services for US Route 35, Putnam County. TERRADON provided Quality Control Testing and Inspection on 1.6 miles of four-lane highway construction and the relocation of existing county routes affected by this new construction. The major items of work entailed clearing activities, erosion and sediment control, excavation of 2.6 million cubic yards of soil and rock, storm drainage, more than 2000 linear feet of 120- inch corrugated metal pipe, and 200 lineal feet of reinforced concrete box culverts. Additionally, the project entailed a 289-foot long cast-in-place concrete floating box underpass, the crushing of 25,000 cubic yards of onsite rock, and 87,000 tons of asphalt paving.

SERVICES PROVIDED

PROJECT CONTACT
Debra Boyd
Chief Financial Officer
304-734-2040 x1307

PROJECT TIMEFRAME
2008

PROJECT COST
$47M total contacts

CHARLES POINTE CROSSING DESIGN STUDY
BRIDGEPORT, WV

TERRADON provided services to Interstate Development in response to an RFP by Genesis Partners. The project included conceptual master planning, layout and preliminary grading, utility studies, and construction cost analysis for Interstate to develop the Southeast quadrant of the Charles Pointe property.

TERRADON experience working with various developers created an understanding of site preparation and infrastructure in regard to a financially viable project. TERRADON looked at minimizing site costs through grading efficiencies, maximizing square foot density, providing accessibility and maximizing visibility. The Interstate team was successful in winning the development phase of the project, however a downtown in the economy shelved the project's investment prior to construction.

SERVICES PROVIDED
Master Planning
Conceptual Master Plan
Layout & Grading
Utility Studies
Construction Cost Analysis

PROJECT CONTACT
Interstate Development
Brandon Doerner
304-549-5865

CHARLES POINTE VALUE ENGINEERING DESIGN STUDY
BRIDGEPORT, WV

Additionally, TERRADON's experience at Charles Pointe includes the review and evaluation of a site layout and grading design developed by another consultant for a plan on the Charles Pointe Crossing property. TERRADON studied the development costs per acre and the returns on investment per acre and provided a creative, effective redesign to the contractor bidding the proposal. In this grading study, TERRADON was able to develop a scheme where to maximize density and visibility and minimize earthwork costs. TERRADON provided value engineering for the project to make the return on investment feasible, however the decision to move a critical piece of the project (the baseball stadium) to Morgantown halted progression on the project.

SERVICES PROVIDED
Master Planning
Conceptual Master Plan
Layout & Grading
Construction Cost Analysis

PROJECT CONTACT
Kanawha Stone Company
Dave Lawman
304-755-8271

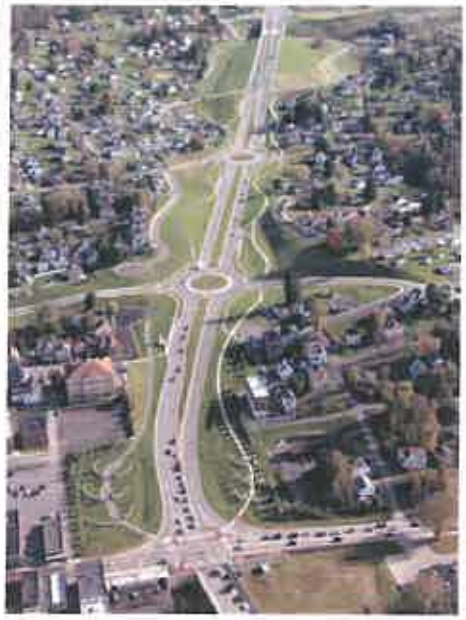
COMMERCIAL-RETAIL SITE DEVELOPMENT
UNIVERSITY TOWN CENTER, MORGANTOWN, WV

TERRADON provided design engineering services for University Town Centre and an adjoining development in Morgantown, WV. The project included a 130-acre retail development located adjacent to the State City exit in Morgantown. TERRADON provided Value engineering for Interstate Development, and the value engineering consisted of minimizing the cost for the expansion of five out parcels on that facility. The initial design of three outparcels on nine acres increased to five outparcels on fifteen acres without increasing the earthwork budget.

TERRADON's redesign and value engineering for this project added a commercial value of approximately $5 million to this site with no increase in development costs, which gained the developer an approximate 80 percent return on its investment.

SERVICES PROVIDED
Land Surveying
Master Planning
Layout Plans
Schematic Design
Environmental
Geotechnical Services
Grading Plans

PROJECT CONTACT
Consol Energy
Richard Perin
412-759-7292



FAIRMONT CONNECTOR VALUE ENGINEERING
MARION COUNTY, WV

TERRADON provided design engineering that resulted in an estimated $2 million savings to the WVDOT on the Fairmont Connector project in Marion County, WV. TERRADON's transportation engineers redesigned various areas of the project to streamline construction and ultimately reduce costs.

Design included the replacement of MSE retaining walls with fill slopes designed in place. Realignments were completed for a bike path/walking path. The State Street Extension and all subsequent lighting plans and signing and pavement markings were revised. In addition, the MSE wall at a proposed bridge was also revised.

PROJECT TIMEFRAME
2009

PROJECT COST
$29.7m total contracts

COMMERCIAL-RETAIL SITE DEVELOPMENT
CHARLESTON/SOUTH CHARLESTON, WV

TERRADON provided site civil engineering for several areas of the South Charleston area Southridge Center, including the Business Park located in the southeastern corner of the property. TERRADON provided: Master Site Planning, Layout and Grading, Utility Design, Materials Testing and Construction Monitoring.

TERRADON provided master planning and site civil design services for the South Ridge Professional Office Park in South Charleston, WV. Master planning included multiple buildings for professional, commercial and retail establishments along with parking areas and shared outdoor spaces

One key asset of value engineering that TERRADON provided in this development was to manipulate on site cut and fill to provide a balanced site using the minimum possible volume of earthwork. The plan also considered vehicular visibility from US 119 from understanding that commercial property goes up as visibility from traffic corridors increases.

SERVICES PROVIDED
Land Surveying
Master Planning
Layout Plans
Schematic Design
Environmental
Geotechnical Services
Grading Plans

PROJECT CONTACT
Ridgeline Development

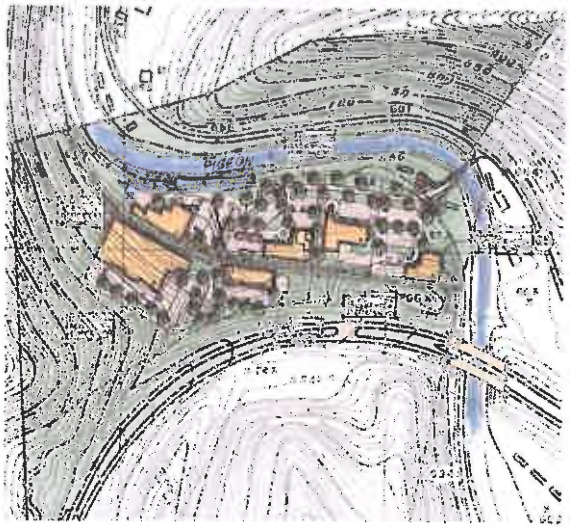
ADVANTAGE VALLEY BUSINESS PARK
TEAYS VALLEY, WV

TERRADON provided Land Planning and Site Design Engineering for the Advantage Valley intra-metro business park along I-64 in Teay's Valley, WV.

TERRADON created the schematic master plan and land development site engineering plan for the project.

I-64—ROUTE 35 MASTER PLAN
CHARLESTON, WV

TERRADON provided master plan design for a mixed-use commercial/ industrial site located at the I-64 and Route 35 Interchange near Charleston, WV.



LENORE COMMERCE PARK
MINGO COUNTY, WV

TERRADON completed engineering and landscape design services. Designs were engineered for a multi-use facility that included a commercial warehouse and equipped for light manufacturing.

TERRADON services included Civil Engineering, Land Development, Full Construction Documents, Layout, Grading and Landscaping.

FOUNTAIN PLACE PLAZA
LOGAN, WV

TERRADON provided master plan preparation and design for a major expansion of the Fountain Place Retail Complex in Logan, WV. Expansion plans included the development of a business/office park.

JACKSON CROSSING BUSINESS PARK
RIPLEY, WV

TERRADON Corporation was retained to provide a Land Use Analysis Plan for multi-use light industrial development to include a business & office park. The site consists of approximately 250+ acres of space for light industrial manufacturing. Additional space for retail and business distribution were also identified. The site is located off of the I-77 Exit at Ripley, West Virginia.

WV DEPARTMENT OF ADMINISTRATION STATE BUILDING
FAIRMONT, WV

TERRADON Corporation, as a subconsultant, is the Site/Civil consultant to the architect and also provided Environmental, Geotechnical and Survey services to West Virginia Department of Administration for the State Office Building located in Fairmont, West Virginia. TERRADON's Environmental team provided phase 1 and phase 2 Environmental site assessments (ESA) for the site. Phase 2 ESA consisted of soil and ground water sampling and pesticide wipe sampling. The team also conducted asbestos survey and lead-paint survey. For the project, TERRADON prepared quantities for bid documents and provided over sight for demolition and abandonment. TERRADON's Geotechnical experts conducted investigation of existing filled basements and foundation investigation and design of the Fairmont building site.

CABELL COUNTY BUS GARAGE
LESAGE, WV

TERRADON Corporation, as a subconsultant, provided site civil design services for this major renovation project, which houses approximately 85 of Cabell County Schools' 120 buses and modernized its transportation operations by offering better access to eastern and central schools in the county. The new facility includes storage space for the large fleet of buses, service and maintenance equipment and wash bays that meet new EPA standards. TERRADON services included Civil Engineering, Land Development, Full Construction Documents, Layout, Grading, and Landscaping.

JEFFERSON COUNTY BUS GARAGE
KEARNEYSVILLE, WV

TERRADON Corporation, as a subconsultant, provided site civil design services for the Jefferson County Bus Garage. When construction begins, this facility will provide parking for more than 200 buses and more than 200 cars. A fueling island, wash bay and new facility building also comprise the location. TERRADON services included Civil Engineering, Land Development, Full Construction Documents, Layout, Grading, and Landscaping.

SOCIAL SECURITY ADMINISTRATION BUILDING
LOGAN, WV

TERRADON, as a subconsultant, provided site civil engineering design for the Social Security Administration Building in Logan, WV. TERRADON services included:
Design and Boundary Survey
Full Site Engineering Drawings
Layout
Grading
Drainage and Erosion Control

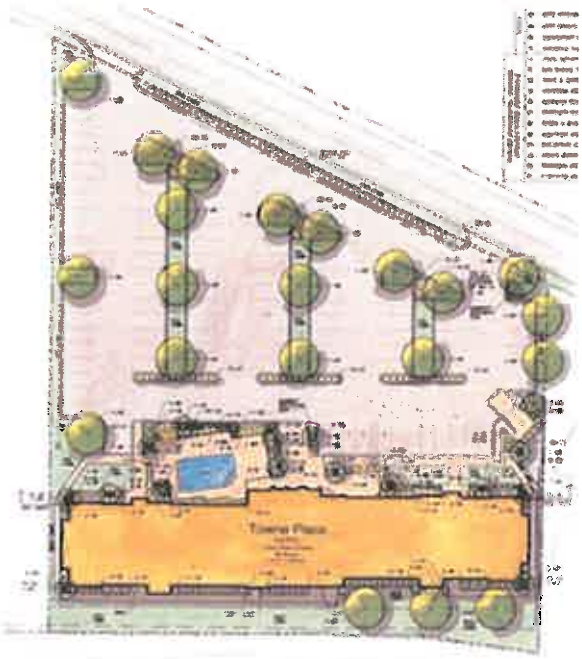
COMMERCIAL-RETAIL SITE DEVELOPMENT
RETAIL VENUES ACROSS WV

In addition to providing Large Scale Commercial Site Development services, TERRADON has a plethora of Smaller Scale/Stand Alone Site Development for developers of establishments including:

Wal-Mart
Home Depot
Lowe's
Target
Olive Garden
Panera Bread
Red Lobster
Cheddars
Cracker Barrel
Smokey Bones
Chuck E Cheese
Quaker Steak & Lube
Fifth Third Bank
Huntington Banks
Pioneer Federal Credit Union
Fairmont Federal Credit Union
MVB Financial Group
BB&T
United Bank
Sheetz
Exxon
Chevron One Stop
Go-Mart
Marathon
Movie Cinemas
Athletic Facilities

SERVICES PROVIDED

Land Surveying
Master Planning
Layout Plans
Schematic Design
Environmental
Geotechnical Services
Grading Plans



COMMERCIAL SITE DEVELOPMENT
HOTELS ACROSS WV

TERRADON has performed site development services for various hotel sites across West Virginia including:

Courtyard by Marriott, Downtown Charleston, WV
Mardi Gras Hotel & Casino
Towne Place Suites
Hampton Inn (Multiple Sites)
Fairfield Inn (Multiple Sites)

SERVICES PROVIDED

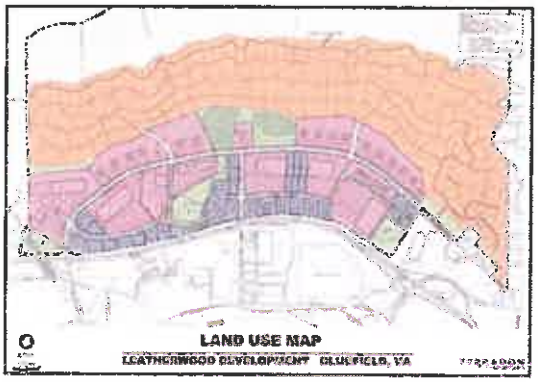
Land Surveying
Master Planning
Layout Plans
Schematic Design
Environmental
Geotechnical Services
Grading Plans

RESIDENTIAL DEVELOPMENT DESIGN EXPERIENCE

- JACKSON CROSSING
- FIRST WARD SCHOOL RECLAMATION HOUSING
- WILLOWBROOK MARKET DEVELOPMENT
- GLADE RUN LUTHERAN SERVICES
- BRIAR PATCH GOLF COURSE & RESIDENTIAL COMMUNITY
- PRICKETT'S FORT DEVELOPMENT
- GREENBRIER COMMONS
- THE WOODLANDS
- SHAWNEE POINT
- INDO-AMERICAN VILLAGE
- DEER CREEK CONDOMINIUMS
- LEATHERWOOD DEVELOPMENT
- CHARLESTON REPLACEMENT HOUSING
- QUARRY CREEK
- MARSHALL UNIVERSITY RESIDENCE HALLS & CORRIDORS
- WEST VIRGINIA STATE UNIVERSITY STUDENT HOUSING, EDUCATION & STORAGE FACILITY & PARKING DESIGN
- SUMMIT BECHTEL FAMILY NATIONAL SCOUTING RESERVE
- VOLCANO ISLAND RESORT

Deer Creek Condominiums

Jackson Crossing



ADVANCED TECHNOLOGY CENTERS—MASTER PLANNING KANAWHA COUNTY & FAIRMONT, WV

TERRADON issued site evaluation studies and site engineering phases of two Advanced Technology Center projects in the Cabell, Putnam, and Kanawha County region and in the Harrison, Marion and Mon County region. The intent of the site selection process was to identify multiple suitable site candidates where the Advanced Technology Centers could be located.

The Advanced Technology Centers were considered the main component of these projects. However, the sites were also evaluated on the opportunity they could provide for the possible future expansion of a Community and Technical College. The most suitable sites were selected out of the expansive pool of possible sites within the area. The candidate sites that were chosen were studied in detail and an intensive inventory and analysis phase was conducted to determine the most appropriate site location for the projects.

The inventory process consisted of gathering necessary information needed to evaluate each site based on a list of established criteria developed for this site selection process including visibility, site readiness, site size, and more. The list of possible sites was narrowed down to the ten best sites with the most potential for development.

TERRADON used prior knowledge of similar site selections to determine the criteria to develop for these site selections. The criteria database was compiled for each site by using various resources and implementing individual site visits with intensive data gathering.

SERVICES PROVIDED

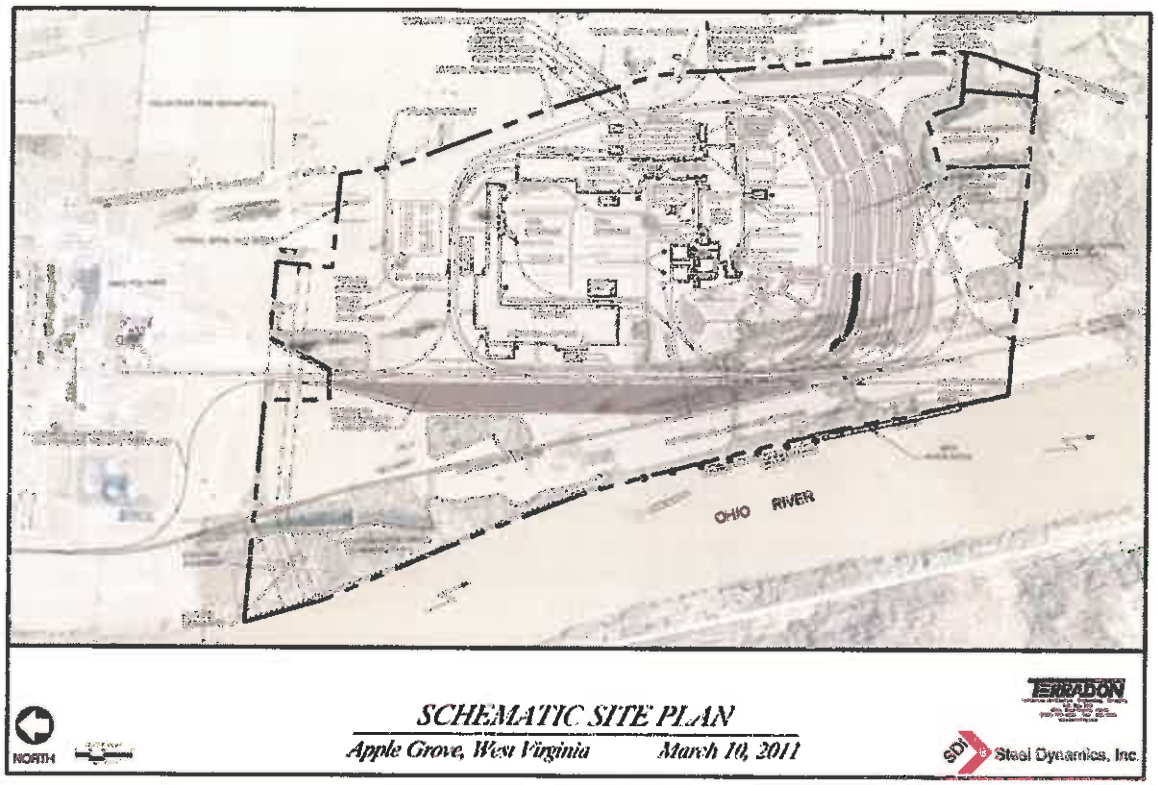
Site Selection & Analysis
Site Prioritization
Master Planning
Site Development Plans
Survey
Quality Assurance
Management
Environmental Site Assessments
Soils Testing
Survey
Site Inventory
Site Renderings

PROJECT CONTACT

Rich Donovan, Senior Director of Facilities, WVHEPC
304-558-0281

PROJECT MANAGER

Greg Fox
304-729-9155



INDUSTRIAL SUPER SITE—MASTER PLANNING
MASON COUNTY, WV

TERRADON was approached by the West Virginia Development office to provide site selection and evaluation services of a large industrial site for a prospective large scale industrial tenant in Cabell and Mason counties.

To select and prioritize possible site options, TERRADON worked with WVEDO, Mason County Development Authority, and AEP to visit and review potential sites across the two counties. TERRADON evaluated multiple sites before ultimately suggesting a selected 550 acre site that had an additional 800 acre adjacent lot available for additional development.

TERRADON services expanded from site selection and prioritization to survey, site planning, and design work for the prospective site tenant.

SERVICES PROVIDED
Site Selection & Analysis
Site Prioritization
Master Planning
Site Development Plans
Survey
Quality Assurance Management
Environmental Site Assessments
Soils Testing
Survey
Site Inventory
Site Renderings

PROJECT CONTACT
Dick Jennings, WVEDO
304-558-0449

PROJECT MANAGER
Greg Fox
304-729-9155

WATERLOO BRIDGE

TERRADON was contracted by the WVDOT-DOH to develop contract plans for a new replacement bridge for the severely deteriorated and closed bridge. The replacement bridge was designed to be constructed in the same location as the original structure. The original bridge was a two-span structure consisting of a pony truss main span over Thirteen Mile Creek, and a multi-beam approach span. The project was located in Mason County, WV. The total length of the replacement bridge was 165.5 feet. Since the existing bridge had been previously closed due to its dilapidated condition, no MOT was required. However, because the bridge is on the main thorough fare for many residents in the area, expedited construction was necessary. To help deliver the project on a compressed schedule, TERRADON fast-tracked the design to a 6-month schedule. The replacement bridge consisted of three girder lines with web depths of 56", a travel way of fifteen feet, slightly improved site distance, and new approach roadways on both ends of the bridge. The replacement alternative removed both existing abutments and an existing pier. The abutments were replaced with new structures just behind the existing abutments, and the pier was eliminated, which offered some improvements for stream hydraulics. Abutment one was an integral abutment, and abutment two was a semi-integral abutment.

HAMMER STRAIT BRIDGE

TERRADON was contracted by the WVDOT-DOH to develop contract plans for this bridge on a statewide engineering agreement. TERRADON, in this design capacity, functioned as an extension of the DOH in-house design section. The replacement bridge plans were developed to have the bridge replaced on the same alignment using staged construction, removing and replacing one lane width at a time. The DOH prepared the MOT and roadway plans, and the plans created by TERRADON were an insert into the plans created by the DOH. The project was located in Pendleton County. The replacement bridge was 120 feet from centerline of bearings to centerline of bearings. Both abutments were placed behind the existing abutments. Both abutments were integral abutments. TERRADON was provided a hydraulic model for the bridge. Upon reviewing the hydraulics, we discovered an error with the provided flow rates. Hydrology and hydraulics were added to our project scope, and we corrected the hydrology. The hydraulics for the bridge were extremely complicated because of the presence of two converging streams immediately up stream of the bridge. This was included in our hydraulics, and was taken into consideration in our scour protection for the bridge. Because of the converging streams, vortices were expected in front of the abutments, which greatly increased the scour potential. This was captured in the design of the replacement bridge, minimizing future maintenance for the stream banks near the structure. The DOH requested, and TERRADON delivered, the plans on an expedited schedule.

VICKERS BRIDGE

TERRADON acted as a subcontractor for the rehabilitation of this major structure in Kanawha County and Fayette County, WV. The project contract plans will be developed using a two-step process. The first step is to perform a detailed inspection and analysis of the existing bridge to determine areas of deficiencies, and after the deficiencies are identified, a scope of work will be created to correct the deficiencies, and design plans will be created with details for the repairs. In the initial phase, TERRADON performed traffic counts, assisted the prime contractor with detailed inspections of existing structures, developed preliminary repair details for areas of deterioration, performed analysis of several of bridge spans, and developed preliminary details for repairs of deficient members. After additional scoping, TERRADON will develop the final plans for repairs for assigned spans.

US 19 WIDENING

TERRADON engineers provided services to widen a four-lane corridor to a six-lane corridor along two frontage roads in Nicholas County, WV. The project included geometric design, drainage, maintenance of traffic, and signing and pavement marking plans. The project also included the widening of one existing bridge and the design of a new bridge on one of the frontage roads. Right-Of-Way Services included Courthouse Research, Deed Research, ROW Questionnaires, Verification Surveys, Alignment Locations, and Legal Descriptions.

MILL CREEK BRIDGE

TERRADON was contracted by the WVDOT-DOH to develop contract plans for the replacement bridge over Mill Creek and County Route 5/9. The bridge carries Interstate 77, and is located in Jackson County, WV. The existing bridge is approximately 285' in length, and is comprised of three continuous spans and one simple span. The intent of the design is to salvage the sub structures and to do a full super structure replacement. The project scope included performing deck cores to determine if the existing bridge deck was suitable for half width construction in order to perform phased construction. At the project location, phased construction is necessary because each structure carries not only two thru-lanes of traffic, but also exit and entrance ramp traffic for the interstate. If cross overs were implemented, serious traffic disruptions would occur to the citizens of Ripley. This was a focal point during the project interview, and it was clear that phased construction would be needed. In addition to the deck cores that were taken and tested for compressive strength, core samples from all sub-structure units were taken and tested for compressive strength, chloride ion content, and petrographic analysis.

The replacement superstructure will eliminate the simple span and utilize continuous beam action in all spans. Replacement steel will be either rolled beams or built up plate girders, based on economy. Only steal superstructure replacement options were considered, as vertical clearance on the county route could not be reduced. By using a steel superstructure, vertical clearances will be slightly improved over the existing conditions. The stream is an environmentally sensitive stream containing muscles, and as such, no roadway or construction run off is permitted to enter Mill Creek. Therefore, deck drainage had to have a plumbing system to ensure no water was discharged directly into the stream, and the contract plans had to include special provisions to prevent the contractor from discharging any construction water into the stream. The deck was suitable for maintaining phased construction, and an elaborate MOT scheme was developed for the phased construction sequencing, maintaining ramp access at all times during construction. Initially, new abutments were to be constructed behind the existing abutments, but during design, it was determined that the existing stub abutments should be salvaged and converted to semi-integral for additional project cost savings. During the design phases, TERRADON saved the department several thousand dollars by self-performing the coring operations. In the initial planning, TERRADON was going to sub this work out, but it was determined that by self-performing, and ensuring that work was performed simultaneously with the drilling contractor, TERRADON could use less substantial inspection equipment than initially proposed, while at the same time ensuring this work was performed under the same MOT scheme as that of the drillers, which eliminated additional costs for additional MOT. The DOH requested, and TERRADON delivered, this project on an expedited schedule.

CORRIDOR H VALUE ENGINEERING

CORRIDOR H SECTION 3—TERRADON designed Value Engineering plans for this section of Corridor H in Tucker County, WV. The original design of Corridor H Section 3 had a bifurcated median; TERRADON changed the median width to match that of the adjoining sections, providing a consistent typical median width for the project. In addition, horizontal alignment and vertical alignment were adjusted to improve earthwork balance with cost savings of approximately $300,000 obtained by revising the alignments. Active coal mining operations were being performed after the contractor began road building activities. As a result, the existing ground changed significantly between the original construction plans and the actual conditions. The Value Engineered plans used the revised ground surface to create more accurate plans and earthwork volumes. The existing ground had been changed by as much as 70' in elevation; therefore, side road alignments were adjusted to match the revised horizontal and vertical alignments.

CORRIDOR H SECTION 5— TERRADON designed Value Engineering plans for this section of Corridor H in Tucker County, WV. Vertical alignment was modified to improve the earthwork balance, and cost savings of approximately $700,000 were obtained by revising the alignments. Existing utility crossings and impacts had to be addressed in the re-design, and side road alignments were adjusted to match the revised vertical alignments. Changes to the profile resulted in revised drainage areas and culvert designs, further improving the cost of the alignment. Acid bearing material was encountered in the project limits. The original alignment was below the acid bearing material, but the raised profile placed a significant portion of the alignment above the acid bearing material, which resulted in a more environmentally friendly project.

Appendix A:

Resumes

GREG FOX, ASLA, LEED AP

VP LAND DEVELOPMENT

Greg Fox oversees TERRADON's Land Development Sector. Fox has been responsible for hundreds of notable commercial, educational and recreational site development projects during his 28 year career. During his time as Land Development Department Head, TERRADON has earned Engineering Excellence Awards from the West Virginia Association of Consulting Engineers, numerous Merit Awards from the American Society of Landscape Architects, and the Gold Award from the American Council of Engineering Companies. Fox has performed a number of site selection and analysis services on projects over the last 28 years. Fox is responsible

EDUCATION

B.A. Landscape Architecture
West Virginia University

B.A. Geography & Planning
West Virginia University

WORK EXPERIENCE

TERRADON Corporation
2000-Present

Martin Boal Anthony & Johnson Architects
1996-2000

Site Design
1993-1996

EG&G Inc.
1989-1993

PSC Engineers
1988-1989

REGISTRATIONS & CERTIFICATIONS

Registered Professional Landscape Architect: WV

LEED Accredited Professional

RELEVANT PROJECT EXPERIENCE

The Bechtel Summit National Scouting Reserve
Provide Site Selection and Design for the 10,600+ acre site in Fayette County, WV. Responsible for site prioritization and selection criteria, feasibility studies, cost analysis, site grading, construction drawings, NPDES design and coordination for all project sub-consultants for NPDES permitting with WVDEP.

Advanced Technology Centers
Provided site design services for two West Virginia Higher Education Policy commission Advanced Technology Centers located in Fairmont, WV and South Charleston, WV. Responsibilities included site identification, prioritization, evaluation, ranking matrix's, site record data, feasibility studies, and final site suggestions. Additionally provided grading, erosion and sediment control and utility design.

Steel Dynamics
TERRADON was approached by the West Virginia Development office to provide site selection and evaluation services of a large industrial site for a prospective large scale industrial tenant in Cabell and Mason counties. To select and prioritize possible site options, TERRADON worked with WVEDO, Mason County Development Authority, and AEP to visit and review potential sites across the two counties. TERRADON evaluated multiple sites before ultimately suggesting a selected 550 acre site that had an additional 800 acre adjacent lot available for additional development. TERRADON services expanded from site selection and prioritization to survey, site planning, and design work for the prospective site tenant.

K-12 Educational Facilities
Responsible for Master Planning, Site Layout and Design, Schematic Renderings, Parcel Identification, Feasibility and Cost Analysis, and construction drawings for hundreds of k-12 educational facilities throughout West Virginia. Additionally, Fox has provided site selection services on new school projects or relocation of school facilities throughout West Virginia. Projects include new construction as well as renovations and additions.

Marshall University
Responsible for Site Design, Utility Design, Grading and Drainage for Applied Sciences Building, Student Housing, Wellness Center and Parking Garage. Provided ADA compliancy on campus buildings and site design for existing soccer field.

Greenbrier Valley Medical Center
Responsible for master planning through site/civil construction documents for the Greenbrier Valley Medical Center in Lewisburg, WV.

Tazewell Community Hospital
Responsible for master planning through site/civil construction documents for the East Addition of the Tazewell Community Hospital in Tazewell, Virginia.

TERRADON

MATT GLASPEY, ASLA

GIS TECHNICIAN/CADD

Serving as a GIS Technician and CADD Designer, Matt Glaspey is an integral part of the TERRADON design team. He offers nearly a decade of project design experience. He is responsible for developing site plans, grading plans, landscape plans, utility plans, site detailing and specifications. Prior to joining TERRADON, Glaspey was part of a design team that completed more than 40 educational site design projects in Pennsylvania, Maryland and Virginia. Glaspey is a member of the American Society of Landscape Architects.

EDUCATION

B.S. Landscape Architecture
West Virginia University

WORK EXPERIENCE

2011—Present
TERRADON Corporation

2003-2011
Hayes Large Architects

PROJECT EXPERIENCE

Advanced Technology Centers
Provided site selection, site design, and CAD drawings for two West Virginia Higher Education Policy Commission Advanced Technology Centers located in Fairmont, WV and South Charleston, WV respectively. Projects included CAD drawings, site layout and design, utility design, permitting, hardscapes and landscape architecture.

Boy Scout Service Center
Provided site selection, construction documentation and project coordination for the design/build project. Responsibilities included CAD drawings, site layout and design, permitting, utility design, hardscapes and landscape architecture.

New Glenville Elementary School Elementary School
Provided construction documentation for a new Elementary School for the Gilmer County Board of Education. Glaspey's role in the project included CAD drawings, site layout and design, utility design, hard-scapes, and landscape architecture. TERRADON provided: Survey and Mapping, Site Planning, Grading and Layout, Utility Design, Construction Drawings and Landscape Architecture. This project is LEED Silver Targeted and was funded in part by the West Virginia School Building Authority.

Dickenson County Judicial Building, VA
Provided construction documentation and project coordination for the design/build project. Responsibilities included CAD drawings, site layout and design, permitting, utility design, hardscapes and landscape architecture.

Ronald McDonald House
Provided construction documentation and project coordination for the design/build project. Responsibilities included CAD drawings, site layout and design, permitting, utility design, hardscapes and landscape architecture.

Hampton Inn - Kinetic Park
Provided construction documentation and specifications for a new hotel at the Kinetic Park commercial development in Huntington, WV. The project included site layout and design, utility design, permitting, hardscapes and planting design.

Courtyard by Marriott - Charleston
Provided construction documentation and specifications for a new hotel in downtown Charleston, WV. The project included permitting, site layout and design, utility design, hardscapes and planting design.

Berkeley County Board of Education
Provided layout, site design, and CAD drawings for various K-12 improvements. Projects consisted of site layout, grading, utility layout, profiles, hardscapes, and landscape architecture.

Marshall University Applied Science Building
Provided construction documentation and specifications for the project in Huntington, WV. Responsibilities included site layout and design, utility design, grading, hardscapes, permitting and landscape architecture.

TERRADON

SHAWN GRAY, ASLA

SITE DESIGNER & LAND PLANNER

Shawn Gray is an experienced Site Designer and Land Planner who serves as an integral part of the TERRADON design team. He offers experience on many of TERRADON's highest profile projects, focusing on large scale site development and parks and recreation projects. Gray also provides site design and landscape architecture services for K-12 and Higher Education projects. He is responsible for developing site, grading, landscape and utility plans, site detailing and erosion sediment control plans and permitting.

EDUCATION

B.A. Landscape Architecture
West Virginia University

WORK EXPERIENCE

TERRADON Corporation
2005-Present

RELEVANT PROJECT EXPERIENCE

Bible Center Church Master Plan – Charleston, WV
Project consisted of the layout of a soccer field, youth soccer fields, track, softball field, cross country/walking trail, a new sanctuary, chapel, pre k-8 school/gym, ministry village, new parking, independent living facilities, and assisted living facilities. Project also consisted of site grading and utility study and a budget estimate.

Ohio Valley University – Vienna, WV
Project consisted of designing a sports complex for the university. New amenities included a track and field events, soccer field, baseball field, new softball field, tennis courts, parking, basketball arena with amenities, and an outdoor sports hall of fame. Project also consisted of site grading and a budget estimate.

Cabin Creek Health Systems – Sissonville, WV
New medical/dental office building. Services included site layout, grading, drainage, utility, erosion and sediment control, details, and landscape. Site also included retaining wall layout and design, underground stormwater design, creek bank stabilization.

Greater Greenbrier Sports Complex Master Plan
Currently providing 5-Phased, Master Planning and Grading Design Services for the Greater Greenbrier Sports Complex located north of Lewisburg, WV.

Valley Park Master Planning & Expansion
Served as a Site Designer for the expanding Valley Park in Hurricane, WV. The project included planning for athletic fields, multiple parking lots, access roads and greenspace, but also incorporated a walking trail that ties into existing park trails. The plan was produced in coordination with the WVDOT to determine roadway/walkway ingress/egress and designed in accordance with local, state and federal regulations.

Volcano Island Master Planning
Provided land planning and design engineering, utility location and mapping services for the properties. The master planning provided vision for Volcano Island Water Park, allowing the City of Fairmont efficient and value-based use of the former environmentally concerned site.

Sheetz, WV
Provided site design services for Sheetz Service Centers at Scott Depot, Cross Lanes and Green Acres, WV. The projects consisted of site layout and design, utility design, hardscapes and landscape architecture.

Pioneer Federal Credit Union
Provided site design services for Pioneer Federal Credit Union in Hurricane, WV.

The Bechtel Summit National Scouting Reserve
Provided Initial Site Selection/Conceptual modeling designs, site planning/grading and Erosion and Sediment Control services for the 12,000+ acre site in Fayette County, WV.

TERRADON

JASON ASBURY, ASLA GEO-ENVIRONMENTAL PROJECT MANAGER

Jason Asbury is a Geo-Environmental Project Manager who serves as an Environmental Agency Coordinator at TERRADON Corporation. Acting as regulatory liaison/coordinator, Asbury provides critical project support for specialized permitting and erosion and sediment control planning, as well as conducting field work for wetland assessment/ delineation projects and Section 404/401 permitting. Asbury is also responsible for scheduling and coordinating field service teams for Construction QA/QC services. Asbury also provides site grading, landscape and utility plans, site detailing and erosion sediment control plans and permitting for energy, commercial, and educational projects.

EDUCATION

B.S. Landscape Architecture
West Virginia University

WORK EXPERIENCE

TERRADON Corporation
2010-Present

Robert Gabriel & Associates
2009-2010

R.G.S. Associates, Inc.
2004-2009

CERTIFICATIONS

38 Hour USACE Wetland Delineation Training

30 Hour OSHA Construction Safety & Health Certification

40 Hour OSHA HAZWOPER Certification

OSHA Confined Space Entry Trained

OPEC SafeLandUSA

PROJECT EXPERIENCE

The Bechtel Summit National Scouting Reserve
Served as Regulatory Coordinator for a 10,600+- acre recreational development in Fayette County, WV, acting as the primary contact with the WVDEP on behalf of all contractors and consultants, for more than 50 site permits. Task included NDPES design and permitting, including erosion and sediment control, for multiple contractors/consultants with the WVDEP. Also coordinated monthly site inspections with representatives from the WVDEP and numerous on-site contractor representatives. The project included 550,000 tons of aggregate, 600 acres of grading activities, 28 miles of drainage swales, 14 miles of new road construction, 4 earthen dams, and more than 60 miles of new utility installation.

Above Ground Storage Tank Inspections (WVSB 373 Compliance)
Served as Regulatory Coordinator and Project Manager for Approximately 1,800 Above Ground Storage Tank Inspection across the State of West Virginia. Task included inspections of AST's, certification of tanks, submitting certifications to WVDEP for compliance. Inspections of the AST's included a visual inspection to determine if the tank was structurally sound and fit for service. Inspection and certification of secondary containment was also conducted to determine if proper spill prevention, control, and countermeasures were in place.

West Virginia American Water Above Ground Storage Tank Inspections
Served as Regulatory Coordinator and Project Manager for Approximately 33 Above Ground Storage Tank Inspection across the State of West Virginia. Task included coordination and review of inspections of AST's, certification of tanks, submitting certifications to WVDEP for compliance. Inspections of the AST's included a visual inspection to determine if the tank was structurally sound and fit for service. Inspection and certification of secondary containment was also conducted to determine if proper spill prevention, control, and countermeasures were in place.

Tanyard Station Commercial Development
Served as Project Manager and Regulatory Coordinator for a 50 Acre mixed use commercial development located in Barboursville, WV acting as the primary contact with the WVDEP, US Army Corps of Engineers, US Fish and Wildlife, as well as the Village of Barboursville. The Tanyard Station project was a collaborative design effort between TERRADON and SITE Incorporated from Knoxville Tennessee. The site design included removing 956 linear feet of Tanyard Branch a Perennial Stream and re-routing the existing stream through a new 6'x8' concrete box culvert. Task included, conducting field assessments to determine quality of existing Tanyard Branch, preparation of sediment and erosion control plans and obtaining NPDES Permit Approval from West Virginia Department of Environmental Protection, and coordination with appropriate agencies.

TERRADON

PETER J. WILLIAMS, ASLA

LANDSCAPE ARCHITECT

"Pete" Williams is a graduate of West Virginia University with a Bachelor of Science in Landscape Architecture. His responsibilities include landscape architectural design, grading and storm water drainage design, the design of pedestrian circulation systems and related amenities, roadway design, site planning, and quality control. Mr. Williams is registered as a professional Landscape Architect in West Virginia with more than 16 years of experience at TERRADON and more than 27 years of overall experience.

EDUCATION

B.S. Landscape Architecture
West Virginia University

WORK EXPERIENCE

TERRADON Corporation
2000-Present

Chapman Technical Group
1992-2000

AFFILIATIONS

American Society of Landscape Architects

West Virginia Chapter of American Society of Landscape Architects

RELEVANT PROJECT EXPERIENCE

Fire Stations, Medical, First Responder, Public Facilities—Master Planning & Site Design Services
Yeager Airport Fire/Crash/Rescue Station, Fairmont Public Safety Building & Fire Safety Station, South Charleston Fire Station, Greenbrier Valley Medical Center, A New Marshall County Public Safety Annex, Putnam County Courthouse, A new West Virginia State Police Facility at Sharon Steel, A new Stonerise Care Facility at Thomas Hospital

Advanced Technology Centers
Provided site design services for two West Virginia Higher Education Policy commission Advanced Technology Centers located in Fairmont, WV and South Charleston, WV. Responsibilities included site identification, prioritization, evaluation, ranking matrix's, site record data, feasibility studies, and final site suggestions. Additionally provided grading, erosion and sediment control and utility design.

Higher Education— Master Planning & Site Design Services
Marshall University Student Recreation Center, Marshall University Student Housing, Fairmont State Inner Campus Design

Grand Vue Park
Created a Master Plan for the expansion of the Marshall County, WV park. The Master Plan was followed by a Phase I design and construction drawing package that included four "tree house"-style cabins and a high adventure park to complement the park's existing zip lines. High adventure features include a 30' high aerial obstacle course, a 28' high rock climbing wall, a 60' gravity swing, a rappelling wall, a 43 ft mega jump and a giant trampoline.

YMCA of Kanawha Valley
Provided master planning services and prepared construction documents for the development of a baseball field and large multi-purpose field along with a walking trail system for the existing YMCA facility.

Trace Fork Soccer Complex & Ice Arena
Provided master planning and site design services as well as prepared construction documents for the development of six carrying sized soccer fields, an indoor ice arena, and associated roadway and parking to serve the large facility.

Harveytown Park
Provided master planning and site design services and provided construction documents for the development of a new neighborhood park with walking trails, children's play areas, basketball courts, picnic shelters, a restroom facility and parking.

Ohio Valley University – Vienna, WV
Project consisted of designing a sports complex for the university. New amenities included a track and field events, soccer field, baseball field, new softball field, tennis courts, parking, basketball arena with amenities, and an outdoor sports hall of fame. Project also consisted of site grading and a budget estimate.

EDUCATION

A.S. Survey Technology, West Virginia Institute of Technology

B.S. Surveying, West Virginia Institute of Technology

WORK EXPERIENCE

TERRADON Corporation
1994-Present

Bowman Land Surveying
1992-1994

Dunn Engineers
1990-1992

Kelley Gidley Blair & Wolfe
1988-1990

Pierson & Whitman Architects and Engineers
1984-1986

REGISTRATIONS

Professional Surveyor: WV

ROBERT THAW, PS

VP SURVEY

With more than 30 years of experience in a wide range of surveying projects, Robert Thaw serves as head of TERRADON's Survey and Mapping department. He organizes and supervises survey crews, reviews project plans, and creates base mapping for various projects including noise barriers, interchanges, connectors, bypasses, sidewalks, bike paths, and bridges. Thaw oversees all TERRADON survey activities, including: preparation of Right-Of-Way plans; the development of GPS static networks for aerial mapping in the design of roadways; identification of existing utilities and property lines; base image development and control placement for construction projects; and drafting of legal descriptions for ROW parcels.

PROJECT EXPERIENCE

The Summit Bechtel Reserve, Glen Jean, WV
Thaw delivered more than 14,000 acres of LiDAR, which was flown during full summer canopy. TERRADON provided the horizontal and vertical control utilizing GNSS receives, and least square static network adjustment. A subsequent control network, utilizing GNSS receivers and least square network adjustment was established by TERRADON for construction staking. Concrete monuments, and aluminum disks were used for the control points. The entire 14,000 acres was mapped at 2' contour interval, will accuracy's better than 1' contour specifications.

City of Huntington Marina, Huntington, WV
Thaw provided services which included: aerial photogrammetry control, aerial photography, LiDAR, engineering design survey, data computation, CADD, digital terrain modeling, boundary survey, civil information model (CIM), and hydrographic surveys. Utilizing VRS and GNSS, TERRADON provided the photo control to develop base mapping for the City of Huntington Marina. After receiving the aerial mapping, TERRADON performed field edits to confirm critical areas with the LEICA TS 15 P-1, and VRs GNSS.

FMC Lagoon Decommission, Nitro, WV
Working with a team member Tuck Mapping Solution, TERRADON has been involved with the AC&S Inc. site for approximately 10 years. Originally involved with developing photogrammetric mapping for the 61 acre site industrial site, TERRADON has provided topographic surveys; storm water system investigation utilizing robotic video and closed space entry; as-built surveys of processing facilities; boundary surveys, boundary subdivision; and utility easements. Most recently TERRADON was responsible for developing a plan to survey the toxic sludge in one of the on-site lagoons. TERRADON coordinated with the project's environmental scientist and client, to agree on a sludge density to survey.

Laurel Fork Campground Bridge
TERRADON provided surveying and design engineering on a USDA Forest Service project in Randolph County, West Virginia. Surveyors led by Thaw provided Right-Of-Way services, including courthouse research, construction easements, and location of alignments. Additionally, provided topographic mapping, project control for construction, hydraulic cross sections, and stream profiles.

Grade Road
Thaw oversaw Right-Of-Way services for the new construction of two lanes adjacent to an existing two-lane roadway. Right-Of-Way services included Right-Of-Way Plans, legal descriptions, and questionnaires for take parcels.

TERRADON

EDUCATION
B.S. Civil Engineering, West Virginia Institute of Technology

WORK EXPERIENCE
TERRADON Corporation
2014-Present

Balance Consulting
2009-2014

WV DOH
2009-2014

Stantec
2007-2009

DLZ
2004-2007

EL Robinson
1999-2004

REGISTRATION
Professional Engineer: WV, OH, VA

Professional Surveyor: WV

CERTIFICATIONS
WVDOH Portland Cement Concrete Technician

WVDOT Asphalt

TERRADON

WILLIAM S. THORNTON, PE, PS

VP CIVIL ENGINEERING

Thornton is an experienced project manager and design engineer for civil engineering design projects. Thornton has more than 15 years of experience with consulting engineering in West Virginia, and three years with a construction firm performing major concrete paving projects in West Virginia, Pennsylvania and Ohio. Thornton also provided consultant review for the WVDOT, Division of Highways.

The major design projects with which he has been involved included roadway design, drainage design, site design, mine land reclamation, permitting, property surveys, airport design, Right-of-Way Services, maintenance of traffic and construction administration and oversight. He provides analysis and design on the construction and rehabilitation of a variety of infrastructure utilities (water, wastewater and storm water), including streets, drainage, sidewalks, buildings, and traffic and other safety improvements.

PROJECT EXPERIENCE

Ravenswood Downtown Revitalization 2010, Ravenswood Development Authority, Ravenswood, WV.
Management of the bidding, construction administration, inspection and material testing for the sidewalk rebuilding, lighting and ADA improvement project. Took over project after design was completed by another consultant. When the project bids came in over original estimate, we helped secure additional funding from WVDOH.

Vickers Bridge, Montgomery, WV.
Serves as the Project Manager for the rehabilitation services of Vickers Bridge in Montgomery, WV. Responsible for communication between owner and contractor, design oversight, reporting, and construction documents.

WVDOH Master (On-Call) Engineering Services.
Managed various highway, bridge, and related engineering services at locations throughout the state including: Lavalette to Huntington Road Widening, Spencer Center Turn Lane, Church Street in Ripley Center Turn Lane, WV 14, WV 15 Intersection Upgrade.

I-79 Morgantown Interchange, 2013.
Design study for a new Interchange on I-79 in Morgantown. This fast track project included the preparation of an Environmental Assessment as well as developing alignments for a new interchange on I-79.

US 220 Passing Lane, 2012.
Construction plans for the addition of a passing lane on US 220. Typical services included project scheduling and tracking, plan review for adherence to AASHTO and DOH standards and ensuring the project stays with in scope.

Bartley Branch Bridge, 2012.
Construction plans for the extension of new roadway alignment to allow the removal of a structure.

Hartland Bridge, 2012.
Construction plans for the replacement of existing bridge over the Elk River and approach roadway.

Fourth Street Bridge, 2013.
Design Study and Construction plans to replace the existing Fourth Street bridge with a new structure and roadway at Third Street in Fairmont. This project included coordination with City of Fairmont officials as well as the local public.

WVA Manufacturing Raw Material Retaining Wall
Management during the design of a new retaining wall at the Raw Material Railroad loadout at the WVA Manufacturing Alloy, WV site. The proposed wall will be approximately 450 linear feet and range rom 3 to 10 feet tall.

KRISTEN MCCLUNG, PE, MBA

SENIOR CIVIL ENGINEER

Kristen Stinson McClung serves as a Civil-Site Engineer for TERRADON Corporation and is based in the Lewisburg, WV office. She brings nearly 20 years of engineering practice to public and private sector clients. From conception through acceptance of projects, McClung offers experience in civil, environmental, land development, streetscapes, survey, permitting, water, wastewater, paving, storm drainage, transportation and erosion-sedimentation control.

EDUCATION

M.B.A., University of Georgia

M.S. Civil Engineering, Auburn University

B.C.E. Civil Engineering, Auburn University

WORK EXPERIENCE

2010-Present
TERRADON Corporation

2009—2010
Preston Testing & Engineering

2002-2008
Stantec Consulting Services

1999-2002
Carter and Sloope

1997-1999
Thomas & Hutton Engineering

REGISTRATIONS

Professional Engineer: WV, GA, AL

NCEES Council Record

CERTIFICATIONS

Georgia Soil & Water Conservation

RELEVANT PROJECT EXPERIENCE

Tanyard Station Sanitary Sewer Design, Village of Barboursville, WV
McClung performed the Sanitary Sewer for this new commercial, out-door shopping mall. She performed the sanitary sewer calculations for the sizing of the trunk line through the development; for the new sewer pump station within the development for that area of the development that was too low for the primary gravity system; and for the new pumps associated with the Village's existing Pump Station #4. As part of the proposed development, the existing forcemain for Pump Station #4 had to be re-routed into the development's new sanitary sewer trunk line, resulting a new pump curve for the existing station.

Schoenbaum Tennis Court Asphalt & Storm Drainage Repairs, Charleston, WV
McClung designed a new storm drainage underdrain system for the existing tennis courts. The courts were experiencing weeping from beneath the courts of trapped storm water runoff/ground water. As the existing courts were nearing the end the existing asphalt surface course's useful life, the Parks and Recreation Department decided that this was the appropriate time to install the needed underdrain system and re-surface the course, as the new underdrain system would require the demolition of the existing asphalt surface course. McClung, also developed the Contract Documents and Construction Specifications in coordination with the City of Charleston for the public bidding of this project.

The Greenbrier Sporting Club Driveway Drainage Projects, White Sulphur Springs, WV
McClung was brought in to evaluate various private homes' driveways which were experiencing surface water runoff ponding issues from incorrectly graded driveways and non-functioning/undersized storm drainage systems. McClung developed new driveway grading plans and new stormdrainage collection and conveyance systems to alleviate the stormwater runoff ponding.

Tru-Hotel by Hilton, Lewisburg, WV
McClung prepared the Site Drainage Plan for this proposed hotel within a new commercial development. Design responsibilities included the Site Layout and Parking Plan, the Site Grading Plan, and the Storm Drainage Plan. McClung also prepared the Site Design Package required by the City of Lewisburg's Planning Commission for review and approval by the City.

The Crossing – Cameron Martin Properties, Village of Barboursville, WV
McClung design the new stormwater culvert beneath the proposed entrance drive for this new commercial development. In addition, McClung performed the Pre-Development and Post Development Stormwater Runoff Calculations for this project for use by other Design Team members.

TERRADON

JOHN JAMES, PE

LEAD GEOTECHNICAL ENGINEER

John James is a Senior Geotechnical Engineer for various dam, landslide, foundation investigation/design, transportation, environmental, site selection, and mining projects. He has over 48 years of experience practicing engineering in WV and surrounding states. James specializes in innovative and cost-saving concepts for his projects. Coupled with his hands on common sense approach to projects, he works with many of the accepted geotechnical and other engineering software applications for latest technical solutions.

He has performed geotechnical design on many major and minor highway projects, including: cut slope design, fill slope design, stability and settlement analysis, and foundation recommendations and design for many bridges, retaining walls, and high mast light towers. He has also worked as a geotechnical reviewer for several Coalfield Expressway Projects for the West Virginia Department of Transportation, Division of Highways. Major projects include: Corridor G from Chapmanville to Logan, and design-build portions of Rt. 35, Corridor H and the Coalfields Expressway.

James' project experience includes: foundation investigations and designs ranging in size from small projects to major industrial complexes; studies and designs for landfills and other environmental facilities; studies and designs for earth, earth/rockfill and concrete dams; all types of retaining wall designs, including conventional concrete walls, MSE walls, sheet piling, and H Pile and lagging, all with or without various anchoring systems; landslide analysis and remediation; roads; highways and bridges; surface and groundwater studies; storm drainage facilities; airport facilities; and forensic engineering.

Relevant Project Experience

Rt. 35 Design Build, Putnam and Mason Counties, WV, 2015.
WVDOT. Geotechnical Engineer. Provided geotechnical design services that included fill slope stability analysis and cut slope and bench design for a 16-mile section of a four-lane highway on US Route 35 in Putnam and Mason Counties, WV.

Corridor H Design Build, Randolph County, WV, 2015.
WVDOT. Geotechnical Engineer. Provided geotechnical design services that included fill stability analysis and cut slope design for an eight-mile section of four-lane highway for Corridor H in Randolph County, WV.

Corridor H, 2014.
J.F. Allen Company. Geotechnical Engineer. Provided geotechnical design services that included fill stability analysis and cut slope design for a six-mile section of Corridor H.

Thomas Bedford Pugh Bridge, WV, 2014.
Geotechnical Engineer. Provided L Pile analysis for the bridge.

Coalfields Expressway Design Build, Mingo County, WV, 2013-2014.
Kanawha Stone Company. Geotechnical Engineer. Provided geotechnical design including fill stability analysis for two critical 250' to 300' high sections of a five-mile, four-lane highway project in Wyoming County, WV.

District 1 Office (Foundation Investigation), Kanawha County, WV, 2011.
WVDOT. Geotechnical Engineer. Provided geotechnical foundation recommendations for office building project in District 1, including seismic analysis.

EDUCATION

B.A. Civil Engineering
West Virginia Institute of Technology

WORK EXPERIENCE

TERRADON Corporation
2004-Present

James Engineering
1983-2004

Triad Engineering
1978-1983

James Engineering
1973-1978

Ackenherl & Associates
1968-1973

REGISTRATION

Professional Engineer: WV

TERRADON

JOE SAUNDERS, PE

VP TRANSPORTATION

Joe Saunders is a Professional Engineer, licensed in West Virginia, Ohio, Virginia, North Carolina, Kentucky and Nevada. Saunders offers a wealth of experience through projects performed for the West Virginia Department of Transportation and Ohio Department of Transportation and the related to engineering design and plan development for structures and roadways.

As Lead Designer for Transportation at TERRADON Corporation, Saunders is responsible for the development of construction plans for transportation, including bridge replacements and rehabilitations, roadway and highway design, right-of-way plans, and ancillary design. Additional responsibilities include preliminary design and reports, construction plans and specifications, construction estimates, contracts and bidding review, and construction engineering.

Saunders directs the highway design team at hydrology and hydraulic calculations. Saunders also works with the highway design team to schedule manpower and capacity for design projects and provides daily coordination of project tasks with clients/owners. With 18 years of experience as a designer and almost a decade of additional experience in highway and bridge construction, Saunders is experienced with all critical elements required of this contract.

Saunders has provided Project Management and design experience on numerous highway and bridge projects in Ohio, West Virginia, Indiana, Pennsylvania, and North Carolina, including recognized projects such as:

- **Hammer Strait Bridge Replacement, Pendleton County, WV**
- **Value Engineering for MLK Bridge Replacement, Mercer County, WV**
- **Catfish Man of the Woods Bridge, Cabell County, WV**
- **Corridor H PPP, Kerns US 119 Connector, Randolph and Tucker Counties, WV**
- **U.S. Route 35 PPP, Lead Designer, US 35, WV 869 TO MASON CO 40, Putnam County, WV**
- **Coalfields Expressway Design-Build, Mullens - E of Co 12/1, Wyoming County, WV**
- **Coalfields Expressway P3/Design-Build, Mullins - E of Co 12/1 to W. Helen, Raleigh and Wyoming Counties, WV**
- **U.S. Route 35 Design and Construction Plans, Mason County, WV**
- **U.S. Route 35, Review of Shop Drawings, Mason County, WV**
- **Duhring Arch Bridge Study, Design, and Preparation of Replacement Plans, Mercer County, WV**
- **Corridor H, Davis to Bismarck, Tucker County, WV**
- **Corridor H, East of County Route 3 to Forman, Grant County, WV**
- **Star City Bridge Replacement, Monongalia County, WV**
- **US460 Over I-77, Mercer County, WV**
- **I-77/Williamstown-Marietta Bridge over Ohio River, Wood County, WV**
- **Slate Bridge Replacement, Wood County, WV**
- **I-81 Design Build, Berkeley Co, WV**
- **Construction Engineering for Heeter Construction's USACE Bluestone Dam Rehabilitation Project, WV**

EDUCATION

B.S. Civil Engineering, West Virginia Institute of Technology

WORK EXPERIENCE

TERRADON Corporation 2012-Present

ms consultants 2003-2012

Buchart Horn 1998-2003

Laborers Union 1990-1998

REGISTRATION

Professional Engineer: WV, OH, VA, NC, KY, NV

TERRADON

DAVE BROWN, PS

SURVEY MANAGER

Since joining TERRADON in 1999, Dave Brown has been involved in highway design/right of way projects and many surveying projects in West Virginia and surrounding states. Brown's responsibilities include survey project management, GPS networks, control surveys, subdivision design, development of highway Right-of-Way Plans, boundary solutions, reports, courthouse research, drafting, construction staking, survey data reduction, and preparation of surveying cost estimates and proposals.

EDUCATION

B.S. Engineering Technology/Surveying, West Virginia Institute of Technology

WORK EXPERIENCE

1999-Present
TERRADON Corporation

1997-1999
Trans Ash

1997
Summit Engineering

1996-1997
USGS

PROFESSIONAL QUALIFICATIONS

Registered Professional Surveyor: WV, TN

RELEVENT PROJECT EXPERIENCE

Harris Riverfront Park
Prepared a detailed topographic and existing utility survey of the 50 + acre site, including a 25 acre hydrographic survey of the Ohio River –utlizing GPS and sonar equipment to map the river bottom for design of a new marina. Existing underground utilities were located and surveyed to avoid conflict during construction and aid in design.

Yeager Airport
Conducted an ALTA/NSPS survey for the 19 acre General Aviation portion of Yeager Airport, which involved creation of a new surveyed boundary line for the leasehold area. The title commitment involved over 130 Schedule B2 items, which were examined and reconciled as to their affect on the subject property.

WV Turnpike Bridges
Prepared detailed surveys of two bridges on I-77 Turnpike, which including x,y,z locations of existing bridge girders, pier caps, abutments, bridge decks and topographic survey of the area surrounding the bridge, along with underground utility location. Surfaces were delivered for the bottoms of the girders, tops of pier caps and abutments and decks to allow for design of the bridge deck replacements.

The Summit Bechtel Family National Scouting Reserve (SBR) - Glen Jean, WV
Assisted in incorporating design drawings from multiple sources and as-built features into an overall GIS for the project. This work consisted of organizing drawings in different phases (preliminary, final, as-built) from the various engineering and architectural firms working on the project to keep a current plan of the site at all times during construction. Provided construction staking, volume calculations for various aspects of the project. Collected as-built information, including x,y,z, locations of all underground utilities installed on the Summit Bechtel Reserve, which was incorporated into GIS. This information was collected by conventional survey method and by real-time GPS, utilizing the WVDOH VRS network. This information is invaluable for future development and conflict avoidance during construction. Additionally, supervised a 14.5-mile boundary survey of a portion of the SBR property boundary line.

WVDOH Corridor L Right of Way Project-Summersville, WV
Performed a GPS static network and placed aerial mapping target control for aerial mapping for the project in Nicholas County, WV. Performed boundary ties, hydraulic cross sections, mapped existing underground and above ground utilities, and established reference points for the project.

Black Diamond Ranch Subdivision(1656 Acres)-Craig County, VA
Performed a GPS static network and placed aerial mapping target control for aerial mapping for the 1700 acre residential subdivision project in Craig County, VA, which included roadway and utility design and construction layout.

TERRADON CORPORATION

ROBERT SIMMONS III, PE

SENIOR ENGINEER

Robert Simmons serves as a Project Engineer at TERRADON Corporation. He offers a background in structural, highway, geotechnical, and hydraulic design, as well as material testing and inspection. He has provided services on a number of projects throughout West Virginia, Virginia, Kentucky, and Ohio.

EDUCATION

B.S. Civil Engineering, West Virginia Institute of Technology

WORK EXPERIENCE

TERRADON Corporation 2011-Present

Chapman Technical Group 2009-2011

HC Nutting 2007-2009

REGISTRATION

Professional Engineer: WV

RELEVANT PROJECT EXPERIENCE

Bluestone Dam Phase IV, Summers County, WV.
Simmons was a Senior Design Engineer for the Bluestone Dam Phase IV Construction team. Designs have included structural cantilevered steel framing anchored to the sloped downstream face of the dam that is able to support not only the drilling operations for anchor installation, but also a 150 ton crane. The cantilevered platform extends 32' from the face of the dam, with support spacing in excess of 15'. The design required not only that each main support member was able to accommodate the full weight of the 150 ton crane and supply vehicles, but also required a detailed examination of fatigue prone members for the design service life of the project. An additional design concern was that all members below high water level had to be designed to support full loadings, along with force effects from water and debris collisions.

Catfish Man of the Woods Bridge, Cabell County, WV.
Simmons was a Senior Design Engineer for the design of the replacement of the Catfish-Man-of-the-Woods-Bridge. Tasks included assisting with the layout of the new bridge and roadway alignment, design of cantilever wing walls with up to 18 foot heights, drilled shaft foundations, semi-integral abutments, reinforced elastomeric bearings, spread pre-stressed box beams, and reinforced concrete deck. He also provided technical assistance to junior staff.

Portsmouth Bypass Design/Build, Scioto County, OH.
Simmons was a Senior Design Engineer for the design of two bridge for the proposed Portsmouth Bypass Design Build project. Tasks included assisting with the layout of new bridges, driven pile foundations, integral abutments, reinforced and un-reinforced elastomeric bearings, pre-stressed bulb "T" beams, and a 35' tall cap and column pier. He also provided technical assistance to junior staff.

Noise Wall Design, Montgomery County, OH.
Simmons was a Design Engineer assisting in the design of the drilled shaft foundations, FAA aeronautical clearance requirements, and plan review of the free standing noise wall located adjacent to I-75 near Dayton, OH.

Value Engineering for Sections 3 and 5 of Corridor "H", Tucker County, WV.
Simmons aided in the design of roadway drainage, super elevations, and vertical geometry. He also provided assistance with plan and cross section review and quantities.

MIKE PYLES, PE

SENIOR PROJECT ENGINEER

Mike Pyles is a Senior Project Engineer for various civil and environmental engineering projects with emphasis on transportation, water, and sewer projects. Pyles is responsible for engineering studies, design, contract documents, engineering analysis, computer modeling, regulatory compliance, and permitting with emphasis on public water and sewer systems.

EDUCATION

A.S. Mining Engineering Technology
West Virginia Institute of Technology

B.S. Civil Engineering
West Virginia Institute of Technology

M.S. Engineering, Marshall University

WORK EXPERIENCE

TERRADON Corporation
2009-Present

HTNB Consulting Engineers
1997-2009

Kelley Gidley, Blair & Wolfe Consulting Engineers
1986-1997

WV DNR
1978-1986

WV DOH
1973-1978

REGISTRATION

Professional Engineer: WV

RELATED PROJECT EXPERIENCE

Fairmont Gateway Connector, Fairmont, WV
Design Engineer for the storm water system on a WVDOH project for the relocation and upgrade of WV 273 to a four-lane divided highway and a new interchange with I-79.

Corridor H – Davis to Bismarck Section 3, Tucker County, WV
Design Engineer for the revised storm water ditch design on a WVDOH project for Corridor H – Davis to Bismarck Section 3.

Corridor H—Davis to Bismarck Section 5, Tucker County, WV
Design Engineer for the revised storm water ditch design on a WVDOH project for Corridor H – Davis to Bismarck Section 5.

Huntington Mall Road, Cabell County, WV
Design Engineer for the storm water system and culverts on a WVDOH project for the upgrade of US Rt. 60, Mall Road, and Ring Road, and the new road crossing over I-64 from US Rt. 60 to Ring Road to better accommodate Mall traffic.

Culloden I/C, Cabell & Putnam Counties, WV
Design Engineer of the storm water system on a WVDOH project for the I-64 interchange and modifications of Route 60/21.

North Mineral Wells Relocated WV 14, Mineral Wells, WV
Design
Engineer for the storm water system and culverts on a WVDOH four lane divided highway project for the relocation and upgrade of approximately 1.5 miles of WV 14.

Pleasant Valley I/C to WV Route 310 I/C, Marion County, Fairmont, WV
Design Engineer for the storm water system on a WVDOH project for the widening of approximately 1.5 miles of I-79 from a 4-lane road to an 8-lane road.

Harsh Sugar Camp Bridge, WV
Design Engineer for a scour analysis of the piers and abutments on a replacement bridge for a WVDOH project.

Fort Seybert Bridge, WV
Design Engineer for a scour analysis of the piers and abutments on a replacement bridge for a WVDOH project.

US Route 35 Relocation, near Buffalo, WV
Design Engineer for a scour analysis of the piers and abutments on three new bridges for a WVDOH project. Design Engineer for the storm water system and culverts on a WVDOH four lane divided highway project for the relocation and upgrade of approximately 3 miles of US 35 to a four-lane divided highway.

New River Bridge, Hinton, WV
Design Engineer for a scour analysis of the piers and abutments on an existing bridge for a WVDOH project.

TERRADON

ANDREW BRENNER, EI

ENGINEERING DESIGNER

EDUCATION
B.S. Civil Engineering, West Virginia University Institute of Technology

WORK EXPERIENCE
2014—Present
TERRADON Corporation

PROFESSIONAL REGISTRATIONS
Engineering Intern: WV

CERTIFICATIONS
OSHA 10 HR

Andrew Brenner serves as a engineering designer at TERRADON Corporation while training (certified engineering intern) for his professional engineering license. He offers a background in bridge inspecting, steel design, and bridge design. Brenner has provided services on various projects throughout West Virginia.

PROJECT EXPERIENCE

Earl Vickers Montgomery Bridge—Montgomery, WV
Brenner was the lead structural inspector of fracture critical and fatigue prone details. All areas inspected were documented using photographs and notes as required. Load ratings and distributed and concentrated loads were also calculated for the stringers and girders in order for inputs to be put into programs.

Clendenin Flood Relief—Clendenin, WV
Brenner assisted with the design of retaining walls for slip critical areas. Additionally, Brenner was responsible for the design, drafting and calculations for one of two bridge projects in the Clendenin area.

Pike Fork Bridge—Center Point, WV
Brenner was responsible for finding live load distribution factors and distribution loads for MDX models. Additionally, Brenner set up MDX models for different girder alternatives to find a design that had good ratings.

Mill Creek Bridge—Ripley, WV
Brenner calculated roadway quantities and assisted with the preliminary and final field review reports.

Bluestone Dam— Hinton, WV
Brenner provides design assistance for the various elements of the drill rig platform. He has designed anchors and plates to make sure they could handle applied loading. Structural steel designs have been performed in accordance with AASHTO LRFD Bridge and United States Army Corp. of Engineers EM-385, as required by project specifications.

Waterloo— Mason, WV
Served as a designer for integral and semi-integral abutments, abutment and wing wall reinforcing, girder splice design, bearing pads, shear studs, plate girder elevation details, approach slab and sleeper slab reinforcing details. To be completed early 2016.

Corridor H— Tucker, WV
Brenner provided assistance during the bidding phase for five major bridges with steel superstructures ranging in length from 650' to 1700', with an overall width of 82'. In the 1700' long structure there were maximum continuous span lengths of 275'.

New River Gorge Bridge— Fayette, WV
Brenner assisted in the structural inspection of fracture critical and fatigue prone details. All areas inspected were documented using photographs and notes, as required.

Various Bridges, WV
Brenner assisted in checking for delamination's in the deck superstructure as well as checking piers/abutments for spider cracking and fatigue problems. Structural inspections were taken for all areas inspected, documented with photographs and notes as required.

American Water—Cross Lanes, WV
Brenner was responsible for setting up AutoCAD drawings and pipe connection details. Brenner acted as contact with Miss Utility and each company that had underground piping or conduit in the project scope of work.

Bridgeport Retirement Home—Bridgeport, WV
Brenner was responsible for the structural inspection of the project site. All areas inspected were documented using photographs and detailed notes as required.

TERRADON

JOHN CANTERBERRY

PROJECT DESIGNER

EDUCATION
B.S. Civil Engineering Technology,

WORK EXPERIENCE
2016—Present
TERRADON Corporation

CERTIFICATIONS
OSHA 10 HR

HAZWOPER 40 HR

John G. Canterberry is experienced in layout and design for civil and transportation engineering projects. Canterberry is skilled in civil and transportation surveying, including surveying and observations of transportation structures. Canterberry has experience with welding processes and previously held certifications in SMAW and GMAW welding processes.

PROJECT EXPERIENCE

I-77 Mill Creek Bridge—Ripley, WV
Canterberry performed field reconnaissance for Geotechnical Exploration and concrete coring's. Canterberry used Bentley software to check the design of existing piers and MDX software to design plate girders and rolled beams used for bridges. Additionally, Canterberry performed geotechnical rock bearing strength calculations for bridge substructures.

Clendenin Flood Relief Bridge, Porters Creek—Clay County, WV
Canterberry performed geotechnical rock bearing strength calculations for the bridge superstructure and autocad drawings for the bridge and layout design.

Clendenin Flood Relief Bridge (Site 2)—Clay County, WV
Canterberry performed pile and logging retaining wall designs and layout for Queens Road in Clay County, WV.

Seneca Medical Warehouse—Millwood, WV
Canterberry performed QA/QC observations of the placement of concrete, rebar, solid and anchor bolts at the project site. He also tested concrete before placement and testing of soil for footings and floor slab.

Charleston Civic Center—Charleston, WV
Canterberry performed QA/QC observations of concrete placement, rebar placement, and the placement of anchor bolts and main sewer lines at the Civic Center. He was also responsible for concrete testing before placement and observed welding procedure on the main sewer line.

WVDOH, Survey—Statewide, WV
Canterberry performed proper set up of Topcon Total Stations and Base and Rover GPS units to survey transportation structures, surrounding landmarks and cross section views.

I-77 Surface Drive & Edens Fork Overpass— Charleston, Sissonville, WV
Canterberry performed QA/QC observations on the placement of concrete rebar, studs on girders, stay-in-place forms and elastomeric bearings. He also observed welding procedures for gusset plates on bridge girders. Additionally, Canterberry observed the heat-straightening process for bend girders.

Tom Grishaber Builders— Charleston, WV
Canterberry worked to renovate residential homes in Charleston and surrounding areas. He took part in demolition, framing, plumbing, installing household utilities, roofing and siding installation of homes throughout Charleston.

TERRADON

Appendix B:

Certificates of Authorization

CERTIFICATE OF *Authorization*

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

The West Virginia State Board of Registration for Professional Engineers having verified the person in responsible charge is registered in West Virginia as a professional engineer for the noted firm, hereby certifies

TERRADON CORPORATION
C00901-00

Engineer in Responsible Charge: ASHLEY L LIOI - WV PE 020507

has complied with section §30-13-17 of the West Virginia Code governing the issuance of a Certificate of Authorization. The Board hereby notifies you of its certification with issuance of this Certification of Authorization for the period of:

January 1, 2015 - December 31, 2017

providing for the practice of engineering services in the State of West Virginia.

IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE, PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA UNDER ITS SEAL AND SIGNED BY THE PRESIDENT OF SAID BOARD.

BOARD PRESIDENT

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS

Certificate of Authorization

ISSUED TO:

Terradon Corporation

Lewisburg, West Virginia

Certificate of Authorization # 17-5629

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with West Virginia Code § 30-13A-20
The person or organization identified on this certificate is licensed to conduct professional surveying and mapping services
in the State of West Virginia for the period

January 1, 2017 through December 31, 2017

This certificate is not transferrable and must be displayed at the office location for which issued.

In witness whereof I have put my hand, this 21st day of December, 2016

R. MICHAEL SHEPP, P.S. Chairman

JAMES T. RAYBURN, P.S., Member

NELSON B. DOUGLASS, P.E.,P.S., Secretary

SEFTON R. STEWART, P.S., Member

PAUL W. HILL, Public Member

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS

Certificate of Authorization

ISSUED TO:

Terradon Corporation

Poca, West Virginia

Certificate of Authorization # 17-5430

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with West Virginia Code § 30-13A-20
The person or organization identified on this certificate is licensed to conduct professional surveying and mapping services
in the State of West Virginia for the period

January 1, 2017 through December 31, 2017

This certificate is not transferrable and must be displayed at the office location for which issued.

In witness whereof I have put my hand, this 12th day of December, 2016

R. MICHAEL SHEPP, P.S. Chairman

JAMES T. RAYBURN, P.S., Member

NELSON B. DOUGLASS, P.E.,P.S., Secretary

SEFTON R. STEWART, P.S., Member

PAUL W. HILL, Public Member