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October 17, 2017

Attn:

Brittany Ingraham

Department of Administration, Purchasing Division

2019 Washington Street East

Charleston, WV 25305-0130

10/17/17 11:50:10  
Purchasing Division

Subject:

A&E SVC'S for Zipline at Pipestem Resort

To Whom it May Concern:

I am pleased to submit the enclosed package for the above referenced project.

TERRADON proposes the following qualifications to provide engineering consulting services for the above referenced. The included package details TERRADON's qualifications, expertise, management and staffing capabilities, prior experience related to the proposed project, and required documentation for consideration.

TERRADON Corporation is a full services engineering firm with locations in Poca, WV, Lewisburg, WV and Fayetteville, WV. TERRADON has an experienced team of professionals experienced in Zip Line engineering services. Additionally, TERRADON plans to team with Horan Adventure Development to further strengthen its Zip-Design team.

TERRADON plans to lead this project under the management of William S. Thornton, PE, PS, and under Lead Engineering Services of Dave Horan from Horan Adventure Development. Both Thornton and Horan have a wealth of experience working on similar projects.

Upon your review of the enclosed, please do not hesitate to contact me at 304-755-8291 with any questions or concerns. I look forward to hearing from you soon.

Sincerely,

Ryan Wheeler  
TERRADON Corporation





**SUBMITTED BY:**  
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**SUBCONSULTANT:**  
Horan Adventure Development  
Dave Horan  
[dave@horandevelopment.com](mailto:dave@horandevelopment.com)  
203-444-9844

**PERSON OF CONTACT:**  
Ryan Wheeler  
Director of Business  
Development  
304-729-9176  
[Ryan.wheeler@terraddon.com](mailto:Ryan.wheeler@terraddon.com)

## STATEMENT OF QUALIFICATIONS

Parks A/E Services to Design a Zip Line at Pipestem  
Resort

Attn:  
Brittany Ingraham  
Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

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**FOUNDED:** 1989

**EMPLOYEES:** 65

**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  
Construction Administration  
Cultural Resources  
Archaeology

*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 its 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.





### **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.

### **CONSTRUCTION MONITORING, 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.

### **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.

### **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.

### **UTILITIES**

Since 1989, TERRADON has provided planning, design and construction administration for millions of dollars worth of environmental projects including wastewater, water, and storm water improvement projects. The company has designed more than one million feet of utility main—enough pipe to stretch from Charleston, WV to Charlotte, NC. Basic engineering services include planning, design, construction specifications, bid and contract documents, bidding phase, construction phase and post-construction phase engineering, administration and project management.

### Section 3: 3.1.a — Qualifications and Experience

Communication during Design with Owner – Project representatives from TERRADON and Horan Adventure Development will discuss the project goals and expectations with the WVDNR Project Manager to be able to develop a mutually agreed upon Scope of Work. This Scope of Work will be used to create the Fee Proposal and Project Schedule. During this time, periodic meeting will be scheduled to keep the Owner up to date on activities of the project and to ensure that the project remains on schedule and within Scope and Budget. These periodic status updates may be in person, by email or by telephone conference call and will be scheduled weekly, bi-weekly or monthly as per the Owners preference. This open communication allows the project team to freely share information and identify any problematic items early so that they may be dealt with promptly. This process allows the project to remain on schedule and on budget. We use this model of project communication on all major projects and it has proven to be successful.

Communication during Bidding Services with Owner – Project representatives from TERRADON and Horan Adventure Development familiar with the project details will be available to reply to any questions that arise during the bidding process. Questions from Contractors will be filtered thru the Purchasing Division/WVDNR to TERRADON who will promptly prepare an appropriate response after review by the design team of TERRADON and Horan Adventure Development.

Communication during Construction with Owner - Project representatives from TERRADON and Horan Adventure Development will oversee all construction activities on a full time basis. This will include shop drawing review, answering Contractor questions, daily observations and tracking progress for conformity and payments. Daily reports will be completed by all field personnel and distributed to the project team. Weekly reports summarizing the progress, milestones and pending items will be assembled and presented to the team. TERRADON regularly provides Construction Oversight services to a variety of clients (including the National Park Service) and is knowledgeable of procedures to ensure a successful project. A marked up set of construction plans will also be maintained during the construction phase to allow for a final set of As-Built plans.

### Project Approach

TERRADON and Horan Adventure Development both have a long history of completing projects on-time and within budget. There are many examples of successful projects throughout this Proposal that highlight the Team's experience in providing complete projects on schedule and on budget.

The project team will make a site visit to Pipestem State Park in order to investigate all the possibilities for a Canopy Tour that would encompass all the needs of the resort. With the use of GPS, different areas will be located and recorded in order to map the options for general topographical characteristics of key regions in the park. Tree species will be chosen according to appropriate size, structure and health. The species encountered and apt for platform construction will be, Poplar, White Oak, Red Oak, White Pine, Sycamore, and Sugar Maple. In order to accommodate important features and infrastructure of a proposed zip route the following criteria will be used:

- Proximity to the main installations and accesses.
- Ability to use the tram as a transport system.
- Design in accordance to ease of logistics.
- Use of the best available trees.
- Design with a variety of elements for course diversity.
- Gradual increment in zip line lengths.

- Maximize use of scenic spots, historical spots and natural attractions:

Rock samples will need to be taken for identification of rock type and further studies must be made by TERRADON's Geotechnical Engineer.

TERRADON and Horan Adventure Development uses Association for Challenge Course Technology (ACCT) Standards which comply with US and world standards for cable systems for recreational use construction and operations. Therefore all of our systems are built with the best available materials and under the strictest safety measures. We use a minimum of 5:1 safety factor on all our elements. We excel in the use of standards and aim to reach even higher standards than necessary. We are actively involved and make up part of the committee in charge of standards writing for canopy/zip line tours in ACCT. All of the equipment used is certified and exceeds the norms with redundant systems and procedures.





## BECHTEL SUMMITT RESERVE HIGH ADVENTURE 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.

The facility features multiple zip courses including five parallel zip lines over a combined 3,000 feet long. The zips reach speeds up to 50 MPH. The Summit is home to the "Big Zip" which is one of the longest zip line courses in all of North America. Total the site is home to 77 zip lines including 12 canopy tours, 6 challenge courses and 2 big zip rides.

TERRADON, working with an adventure design specialist provided the site design and ancillary engineering services for these projects including survey, construction management, geotechnical, environmental, and site design services. TERRADON completed all work for this large scale project on time and on budget. Objectives and goals were set prior to start and TERRADON worked with the owner to ensure project delivery was implemented in a fit manner.

## 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



## GRAVITY NEW RIVER GORGE ZIP LINES ANSTED, WV

Project Manager, Will Thornton, previously the owner of Balance Consulting was selected to oversee the soil investigation during the recent expansion at the Gravity New River Gorge Zipline facility near Ansted, WV.

An additional 3000 foot zip line was being added to the facility and foundations needed to be designed. Thornton worked with the Owner, Neil Redman, and Zipline designer, Dave Horan, of Horan Adventure Development, to sample and classify the soil in the area of the proposed foundations.

This team was also asked to inspect the installation and verify the load testing during installation of screw anchors at some of the other tower tie down areas.

## SERVICES PROVIDED

Foundation Soil  
Inspections

Anchor Installation  
Inspection

## PROJECT CONTACT

Neil Redman  
304-658-5005



**KALAHARI RESORT 72 ELEMENT ADVENTURE PARK  
POCONOS MTNS, PA**

**Horan Adventure Development completed the design and engineering services for the 72 element adventure park as part of the "Gorilla Cove" attraction at the Kalahari Resort in the Pocono Mountains in Pennsylvania.**

The adventure park features a 65' tower with four zip-lines, each equip to run at the same time. It is the only zip course of its kind in the area. Additionally, the adventure park features a challenging ropes course in the Pocono tree tops that are designed from platforms at various levels with bridges and different obstacles for users to maneuver from tree to tree.

Horan Adventure Development communicated effectively with the owner to complete the project. Designers and qualified personnel completed the project and met all objectives.

## SERVICES PROVIDED

## Adventure Design Engineering



## **MOUNTAIN CREEK RESORT ZIP ZONE VERNON TOWNSHIP, NJ**

Horan Adventure Development completed the design and engineering services for the 96 element adventure park at the Mountain Creek Ski Resort in New Jersey.

The series of zip lines range from 200 feet to 1,500 feet in length and suspend from tree tops and some over a mountain top lake. The adventure park is hidden away 1040 feet on top of the resort and is equip to service guests through winter and summer seasons.

Horan Adventure Development communicated effectively with the owner to complete the project. Designers and qualified personnel completed the project and met all objectives.

## **SERVICES PROVIDED**

Adventure Design  
Engineering

EXPERIENCE





## ZIPZONES OUTDOOR ADVENTURES COLUMBUS, OH

Horan Adventure Development completed the design and engineering services for the 72 element adventure park at the ZipZones Outdoor Adventures in Columbus, OH.

Horan Adventure Development was responsible for the addition of the 72 element adventure course to compliment a large canopy zip tour at the park in the tree tops of Camp Mary Orton. The project was conscious of environmentally friendly and conservative methods to adhere to the owners philosophy to protect and conserve through building techniques that minimize destruction to the natural settings.

Horan Adventure Development communicated effectively with the owner to complete the project. Designers and qualified personnel completed the project and met all objectives.

## SERVICES PROVIDED

Adventure Design  
Engineering



## GRAND VUE PARK MOUNDSVILLE, WV

TERRADON Corporation was selected as the lead engineer and site designer for Grand Vue Park in Moundsville, WV. Over the duration of the project, TERRADON was responsible for, initial site design, site planning, survey and mapping, utility design, construction inspection and other ancillary engineering services.

The project included the addition of the Grand Vue Aerial Adventure Park. The park provides a variety of aerial courses including a Canopy Tour of 8 dual zip lines ranging in distance from 310 to 2,100 feet throughout the Moundsville treetops.

## SERVICES PROVIDED

- Surveying
- Site Selection
- Master Planning
- Site Design
- Environmental Clearance
- Utility Design
- Detail Design



### VALLEY PARK PUTNAM COUNTY, WV

TERRADON Corporation provided Master Planning and site design services for the expanding Valley Park in Hurricane, Putnam County, WV. This work is part of a nearly \$2 million expansion, which was completed in 2013 and adds an additional 6 acres to the park.

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.

### SERVICES PROVIDED

Preliminary Design  
Final Design  
Construction Review  
Construction Inspection  
Survey  
Quality Assurance  
Management  
RFP Development  
Permitting Oversight  
QA/QC



## SHAWNEE PARK KANAWHA COUNTY, WV

TERRADON Corporation will provide design services for the proposed Shawnee Park Multi-Sport Complex beginning this year.

The park will be used for a travel tournament destination for soccer, lacrosse, baseball and softball and include six artificial turf soccer/lacrosse fields and four artificial turf collegiate size baseball fields across the 100 acre location in Dunbar, WV. The park will also include a parking lot to accommodate more than 600 spaces, restrooms and concessions located in a center location, and detailed landscaping.

TERRADON has provided preliminary design and grading plans for the project and will provide a final design, construction review, construction inspection services, survey and mapping, geotechnical engineering, quality assurance services, and construction documentation and reporting services.

## SERVICES PROVIDED

- Preliminary Design
- Final Design
- Construction Review
- Construction Inspection
- Survey
- Quality Assurance
- Management
- RFP Development
- Permitting Oversight
- QA/QC





*Preliminary Drawing Provided by Virginia Tech Community Design Assistance Center. TERRADON Corporation has been awarded full design contracts for this newly started project.*

## GREENBRIER COUNTY SPORTS COMPLEX GREENBRIER COUNTY, WV

TERRADON Corporation was recently selected as the lead engineer and site designer for the new Greenbrier County Sports Complex in Greenbrier County, WV. TERRADON will perform over the duration of the project, initial site design, site planning, survey and mapping, utility design, construction inspection and other ancillary engineering services.

The site is roughly 40 acres of property which were donated to the county for development of a multi-use sporting complex to include baseball and softball fields, soccer fields, tennis courts, playgrounds, an amphitheater and walking and joggings trails that connect to the bordering Greenbrier River.

## SERVICES PROVIDED

- Surveying
- Site Selection
- Master Planning
- Site Design
- Environmental Clearance
- Utility Design
- Detail Design

## REFERENCES

Neil Redman  
Gravity New River Gorge Ziplines  
304-658-5005

Rob Ridgeway, Director  
The Summit Bechtel Reserve  
304-469-1089

Ben Salango  
Kanawha County  
Commission  
304-342-0512



PROJECT OWNER



Will Thornton, PE, PS  
Project Manager/ Point of Contact



Dave Horan  
Lead Designer

**SITE DESIGN**

Greg Fox, ASLA, LEED AP  
Pete Williams, ASLA  
Matt Giaspey  
Shawn Gray  
Tyler Hanna

**GEOTECHNICAL**

John James, PE  
Chris Hancock  
John Canterbury  
Nick Kevey

**SURVEY & MAPPING**

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

**CULTURAL RESOURCES**

Andrew Weidman, MA, RPA  
Clayton Gue  
Mike Pickens

**ENVIRONMENTAL & PERMITTING**

Jason Asbury, ASLA, CESSWI  
Bill Hunt, PG, LRS  
Andrew Robinson, PG  
Clayton Gue  
Mike Pickens

**CONSTRUCTION INSPECTION & MATERIALS TESTING**

Shannon Stephens  
Chris Morris  
Dave Wallace  
Lee Smith  
Corey Payne



## Appendix A: Resumes



## **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.

### **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  
Pavement Technician

### **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.

**WVDOH Master (On-Call) Engineering Services.**

Managed various highway, bridge, and related engineering services at locations throughout the state including: Lavallette 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 within 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 from 3 to 10 feet tall.

**TERRADON**



**DAVID J. HORAN**  
**OWNER, LEAD DESIGNER**

## **EDUCATION**

1994-1998 Johnson State College BA, Business Management

## **QUALIFICATIONS**

- Effective project manager: planning and executing projects from conception through operation
- Installed over 35 miles of zip lines on the biggest tours in the country
- Heavy equipment operator; excavator, skid steer, man-lift, rough terrain fork lift, bucket truck
- Big cable specialist: majority of zip lines are 3/4 inch and 7/8 inch galvanized wire rope
- Developed industry leading improvements in zip line braking systems and installation methods
- One hundred hours as lead rigger and radio control during helicopter cable pulls and lifts
- Experienced challenge course, adventure park, climbing wall, tree house builder

## **EXPERIENCE**

### **Horan Adventure Development**

*May 2016 to Present*

*Owner, Project Manager*

Consulting, Inspections, Construction and Training with a focus on turnkey adventure parks, providing high throughput, easy to run aerial adventures.

#### **Featured Jobs:**

- Kalahari Resort, Poconos: 72 element adventure park and 65' tower with four zips
- Mtn Creek Resort: 96 Element adventure park at ski resort
- ZipZone Adventures: 72 element adventure park to compliment canopy tour

### **Outdoor Venture Group**

*Director of Special Projects, Business Development*

Responsible for designing and project managing any construction project that wasn't an aerial forest ropes course

#### **Featured Jobs:**

- TreeVentures 1,000 foot long dual racing zips
- Smokin' Joe's tubing hill zips

### **Adventure Construction LLC**

*August 2009 to October 2012*

*Owner, Project Manager*

Construction management and consultation services. Lead builder/ technical consultant for commercial zip line tours • Provided layout and design service for zip line tours, created successful complimentary business, ArborPlay, to build custom, tree-based play structures. Build and train others to build in accordance with the standards set forth by the Association of Challenge Course Technology, manufacturers guidelines, Adventure Construction's policies and engineers specifications.

#### **Featured Jobs:**

- Private use 4,502 foot long zip line in central California
- Adventures on the Gorge "Adrena-Line", 3,100 long dual zip lines
- Zip n Time Zip Line Tour in Helen, GA with 5 spans, 1 of which was 2,200 feet long

### **Canopy Tours, Inc.**

*January 2010 to December 2010*

*Lead Builder*

- New York Zip line Sky rider tour
- North America's largest zip line tour
- Six side-by-side zip lines totaling 2.4 miles
- Limited access work on rough terrain • New York Zip line Mid-Mountain tour
- Six tree-based canopy zip lines, three bridges and a rappelling station—Catalina Island Zip line tour
- Five zip lines in challenging terrain, longest is 1,100 feet

**Experiential Resources, Inc.**

*May 2006 to July 2009*

*Project manager/ Lead Builder*

- **Kapalua Adventures**
- Largest zip line tour in Hawaii
- Eight side-by-side zip lines
- Climbing tower and challenge course
- One of a kind, two-span, uphill zip line to transport guests to start of course
- Piihola Ranch Zip lines
- Six side-by-side zip lines, longest over 3,000 feet—Adventure tower
- Suspension bridges
- Tree house deck
- Flyin' Hawaiian Zip lines
- Eight zip lines over two miles
- Two lines over 2,000 feet and the longest in Hawaii, 3,250 feet—Built without road access using minimally invasive methods



## **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 EXPERI- ENCE**

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.

#### **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.

#### **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 six "tree house"- style lodges 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.

#### **Greater Huntington Parks and Recreation District**

Responsible for trail design of a connector from Harveytown Park to Ritter Park in Huntington, WV. TERRADON provided a 3-Phase Master Planning approach for a section of trail that is predicted to be heavily used by the Huntington Community. Also responsible for the Master Planning of a unique trail system for the Greater Huntington Parks and Recreation District. The project design called for the connection of the Ceredo-Kenova area to Huntington. The trail system was designed to use the top of an earthen flood levy to move through urban areas. Design included alignments, typical sections and E&S Control.

#### **Palatine Park Master Planning**

Provided master Planning Services for the City of Fairmont for the redevelopment of Palatine Park on the east side of the Monongahela River adjacent to downtown Fairmont, WV. The Master Plan featured new parking areas, walking trails, a vista overlook, a picnic gazebo and retail space.

#### **Putnam County Parks Master Planning**

Provided Master Planning and site civil design services for the expanding Valley Park in Hurricane, Putnam County, WV. This work is part of a nearly \$2 million expansion, which was completed in 2013 and adds an additional 6 acres to the park. The plan was designed in accordance with local, state and federal regulations.

**TERRADON**



## KRISTEN MCCLUNG, PE, MBA

## PROJECT MANAGER

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.

### 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.

### 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 Sloop

1997-1999  
Thomas & Hutton Engineering

### REGISTRATIONS

Professional Engineer: WV, GA, AL

NCEES Council Record

### CERTIFICATIONS

Georgia Soil & Water Conservation

**TERRADON**

## **EDUCATION**

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

## **WORK EXPERIENCE**

**TERRADON**  
Corporation  
2005-Present

Engineering &  
Testing, 2000, inc.  
1999-2005

Cornerstone Land  
Surveying  
1990-1991

Norfolk Southern  
Railway  
1988-1990

## **REGISTRATIONS**

Professional  
Engineer:  
WV, VA  
NCEES Council  
Record

## **CERTIFICATIONS**

WVDOH Certified  
Portland Cement  
Concrete  
Technician  
WVDOH Certified  
Compaction  
Technician

## **PHILIP REED, PE, LEED AP**

## **SENIOR CIVIL ENGINEER**

Philip Reed serves as TERRADON'S Lewisburg, WV Office Director and provides services to clients for Quality Control, Materials Testing and Engineering Design. Reed provides technical direction on a variety of civil engineering markets including commercial and industrial developments, housing, energy and infrastructure. Reed is responsible for engineering analysis and modeling, design, regulatory compliance and permitting, in addition to quality control and assurance. Reed has worked on a number of park projects that include facility and utility design and construction. Reed is a LEED Accredited Professional.

## **PROJECT EXPERIENCE**

### **Summit Bechtel Reserve**

Provided Engineering Support for a 10,600-acre+ site development in Fayette County, WV. Oversaw site layout, grading, and survey support for one of the largest infrastructure projects in West Virginia. Oversaw all QC services and provided project direction of 20 inspectors and technicians during installation of more than 100 miles of utilities and nearly 50 miles of roadway construction. Additional inspection and monitoring activities included vertical construction of three buildings and an iconic wingtip pedestrian bridge.

### **Valley Park Master Planning & Expansion**

Professional Engineering services and design review 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.

### **New River Gorge National River – Historic Nuttallburg Town Site Fayette County, WV**

Stabilize Historic Mine Structures– Fayette County, WV. Construction Management Representative responsible for construction drawing and specification reviews, developing project cost estimates, coordinating and negotiating with Contractor, ensuring compliance with the construction drawings and specifications, keeping daily reports, coordination with the design engineer, contractor and National Park Service and verifying quantities and pay estimates.

### **City of Montgomery Waste Water System Improvements Montgomery WV**

Resident Project Representative Services during the construction phase of the 3 Construction Contracts of upgrades to the Montgomery Sanitary Sewer Plant which included the construction of a 2-story building and the installation of a belt press system, storm and sanitary line construction and pump station upgrades.

### **City of Charleston Waste Water Project Charleston, WV**

Resident Project Representative on \$200+ Million sanitary sewer project, responsible for daily quantities, inspection, testing, interface between owner and contractor, change orders. Interpretation of drawings and specifications and assisted surveyor with reestablishing property corners.



#### **EDUCATION**

B.S. Landscape  
Architecture  
West Virginia  
University

#### **WORK EXPERIENCE**

2011—Present  
TERRADON  
Corporation

2003-2011  
Hayes Large  
Architects

#### **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.

#### **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, hardscapes, 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.



#### **EDUCATION**

B.A. Landscape  
Architecture  
West Virginia  
University

#### **WORK EXPERIENCE**

TERRADON  
Corporation  
2005-Present

#### **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.

#### **RELEVANT PROJECT EXPERIENCE**

##### **Greater Greenbrier Sports Complex Master Plan**

Provided 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.

##### **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.

##### **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.

##### **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.



## **PETER J. WILLIAMS, ASLA**

## **LANDSCAPE ARCHITECT**

### **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

"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.

### **RELEVANT PROJECT EXPERIENCE**

#### **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.

#### **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.

#### **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.

#### **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

#### **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

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

Certified Erosion  
Sediment Storm  
Water Inspector

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

## JASON ASBURY, ASLA, CESSWI

VP FIELD SERVICES

Jason Asbury is the Vice President of Field Services, overseeing the daily operations, and coordination of the field/construction inspection staff at TERRADON. Asbury also acts as a regulatory liaison/coordinator, providing 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.

### 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 NDPS 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**



## **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.

### **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

### **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, with 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**



## **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.

### **RELEVANT 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—utilizing 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.

#### **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.

#### **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.

#### **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.

### **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



## **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



## **JIM NAGY, PE**

## **SENIOR ENGINEER**

As a Senior Engineer at TERRADON, Jim Nagy's primary focus is on designing civil engineering projects for public and private development projects throughout West Virginia. Nagy specializes in the design of water distribution systems as well as sewage collection systems. Nagy offers decades of hands-on experience and has previously provided design engineering services for schools, commercial developments, residential developments, public utilities and more. He earned a B.S. in Civil Engineering from West Virginia University and is a Professional Engineer in the State of West Virginia.

### **EDUCATION**

B.A. Civil Engineering  
West Virginia  
University

### **WORK EXPERIENCE**

TERRADON  
Corporation  
2007-Present

WV American Water  
1991-2007

AWW SC  
1984-1991

WV DNR  
1982-1984  
1976-1977

VTN, Inc. Consulting  
Engineers  
1978-1982

J.H. Milan  
Consulting  
Engineers  
1977-1978

WV Department of  
Highways  
1975-1976

### **REGISTRATION**

Professional  
Engineer: WV

### **PROJECT EXPERIENCE**

**School Projects** - Responsible for layout, design, and permitting of water and sewer lines for numerous school projects in WV. Projects entailed coordination with PSDs, municipal water and sewer departments, State and Federal regulatory agencies for design of facilities. Schools include: Blue Ridge Community and Technical College, Blue Ridge K-12, Burnsville Elementary, Flatwoods Elementary, Davis Elementary, Sutton Elementary, Little Birch Elementary, Frametown Elementary, Buffalo High School, Clay-Battelle High School, Confidence Elementary, Jefferson Elementary, East Hardy High School, Eastwood Elementary, Flinn Elementary, Geary Elementary, Gilbert High School, Greenbrier West high School, Hampshire High School, Harpers Ferry High School and 20 additional schools.

**SPCC Planning** - updated SPCCs for All Crane & Equipment Rental and Spirit Services, Inc.

**Commercial Developments** - Responsible for layout, design, and permitting of water and sewer lines for numerous commercial developments in WV. Projects entailed coordination with PSDs, municipal water and sewer departments, State and Federal regulatory agencies for design of facilities. Developments include: Fairmont Federal Credit Union, Allegheny Energy Union (Fairmont), First Ward (Clendenin) Apartments, Milton Crossing, Tri-State Hotel and multiple convenience store sites throughout WV.

**Charleston Replacement Housing** - Utility design, primarily water, sewer and stormwater, and coordination of overall site activities with the project developer for multi-unit housing development. Each phase entailed the design and layout of several hundred feet of water, sewer and stormwater line, including multiple connections with the utility providers, i.e., the Charleston Sanitary Board and West Virginia American Water, and applicable permit applications. Also responsible for construction monitoring and provision of as-built drawings as required by the respective utility providers.

**Cathcart – Devonshire Development, Scott Depot, WV** - Designed sanitary sewer and water distribution system to serve more than 900 housing units in this private development.

**Washington Woods Subdivision, Ravenswood, WV** - Designed more than 9,000 feet of water and sewer line and a 500 gpm fire pump water booster station to serve a 150 lot subdivision.

**Sawmill Village, Snowshoe, WV**

Designed approximately 2,800 feet of 8" water line and sanitary facilities to serve the Sawmill Village development project in Snowshoe, WV.

**Cabell County Water Main Extension Project**

Worked on design and layout of approximately 46,000 feet of water main for the Salt Rock PSD/WVAW. Responsible for bidding, contract award, and project management.

**TERRADON**



## **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

### **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.