



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

## Header

List View

## General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 133553

SO Doc Code: CEOI

Procurement Type: Central Contract - Fixed Amt

SO Dept: 0310

Vendor ID: 000000206513

SO Doc ID: DNR1600000010

Legal Name: TERRADON CORPORATION

Published Date: 10/27/15

Alias/DBA:

Close Date: 12/1/15

Total Bid: \$0.00

Close Time: 13:30

Response Date: 11/24/2015

Status: Closed

Response Time: 12:17

Solicitation Description: Addendum;Greenbrier State Forest  
AE Serv/water system improv

Total of Header Attachments: 0

Total of All Attachments: 0



Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Architectural engineering				

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :	Water System Improvements at Greenbrier State Forest.
------------------------	-------------------------------------------------------



Purchasing Division  
2019 Washington Street East  
Post Office Box 50130  
Charleston, WV 25305-0130

State of West Virginia  
Centralized Expression of Interest  
02 — Architect/Engr

Proc Folder: 133553

Doc Description: Addendum;Greenbrier State Forest AE Serv/water system improv

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-10-27	2015-12-01 13:30:00	CEOI 0310 DNR1600000010	2

#### BID RECEIVING LOCATION

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

#### VENDOR

Vendor Name, Address and Telephone Number:

TERRADON Corporation, Inc.

409 Jacobson Drive

Poca, WV 25159

304-755-8291

#### FOR INFORMATION CONTACT THE BUYER

Guy Nisbet

(304) 558-2596

guy.l.nisbet@wv.gov

Signature X

FEIN #

55-0687626

DATE

11/18/15

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:****Addendum**

Addendum No. 01 issued to publish and distribute to the vendor community the attached information.

\*\*\*\*\*

**Expression of Interest**

The West Virginia Purchasing Division for the Agency, The West Virginia Division of Natural Resources (WVDNR) is soliciting CEOI responses from qualified firms to provide a contract to provide engineering services necessary for the preparation of plans and specifications and to obtain necessary health department and environmental permits for the construction of repairs to the water system at Greenbrier State Forest per the specifications and terms & conditions as attached.

INVOICE TO	SHIP TO
DIVISION OF NATURAL RESOURCES PARKS & RECREATION-PEM SECTION 324 4TH AVE SOUTH CHARLESTON WV25305 US	SUPERINTENDENT DIVISION OF NATURAL RESOURCES GREENBRIER STATE FOREST HC30, BOX 154 CALDWELL WV 24925-9709 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Architectural engineering		

Comm Code	Manufacturer	Specification	Model #
81101508			

**Extended Description :**

Water System Improvements at Greenbrier State Forest.

<b>DNR1600000010</b>	<b>Document Phase</b> Final	<b>Document Description</b> Addendum;Greenbrier State Fore st AE Serv/water system improv	<b>Page 3</b> <b>of 3</b>
----------------------	--------------------------------	-------------------------------------------------------------------------------------------------	------------------------------

#### ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions



STATE OF WEST VIRGINIA  
Purchasing Division

## PURCHASING AFFIDAVIT

**MANDATE:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: TERRADON Corporation, Inc.

Authorized Signature: Thomas G. Kitzredge Date: 10/22/15

State of West Virginia  
Putnam

County of \_\_\_\_\_, to-wit:

Taken, subscribed, and sworn to before me this 22nd day of October, 2015.

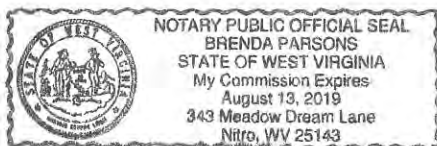
My Commission expires August 13, 2019.

**AFFIX SEAL HERE**

**NOTARY PUBLIC**

Brenda Parsons

Purchasing Affidavit (Revised 08/01/2015)



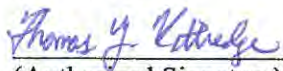


### CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

TERRADON Corporation, Inc.

\_\_\_\_\_  
(Company)

 Thomas Y. Kittredge, President  
\_\_\_\_\_  
(Authorized Signature) (Representative Name, Title)

304-755-8291 304-755-2636 10/22/15  
\_\_\_\_\_  
(Phone Number) (Fax Number) (Date)

# State of West Virginia

## VENDOR PREFERENCE CERTIFICATE

Certification and application\* is hereby made for Preference in accordance with **West Virginia Code**, §5A-3-37. (Does not apply to construction contracts). **West Virginia Code**, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

**1. Application is made for 2.5% vendor preference for the reason checked:**

- \_\_\_\_ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,  
 \_\_\_\_ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or**,  
 \_\_\_\_ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or**,

**2. Application is made for 2.5% vendor preference for the reason checked:**

- \_\_\_\_ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

**3. Application is made for 2.5% vendor preference for the reason checked:**

- \_\_\_\_ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or**,

**4. Application is made for 5% vendor preference for the reason checked:**

- ☒ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or**,

**5. Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

- \_\_\_\_ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or**,

**6. Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

- \_\_\_\_ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

**7. Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**

- \_\_\_\_ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

**Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.**

Bidder: TERRADON

Signed: Thomas J. Kithridge

Date: 10/22/15

Title: President



ADDENDUM ACKNOWLEDGEMENT FORM  
SOLICITATION NO.:

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:  
(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

TERRADON Corporation, Inc.  
Company

Thomas G. Kithedge  
Authorized Signature

11/12/15  
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

Engineering . Planning . Surveying . Environmental . Inspection

STATEMENT OF QUALIFICATIONS FOR:

*Expression of Interest  
Greenbrier State Forest  
Water System Repairs*

*Submitted:  
December 1, 2015*



Corporate Office  
409 Jacobson Dr.  
Poca, WV 25159  
304-755-8291

Lewisburg, WV  
425 North Jefferson St.  
Lewisburg, WV 24901  
304-645-4636

Jackson County, WV  
101 North Court Street  
Ripley WV, 25271  
304-532-4909

Fayette County, WV  
P.O. Box 307  
Charlton Heights, WV 25040  
304-541-7655

ALL LOCATIONS Fax: 304.755.2636  
[www.terraddon.com](http://www.terraddon.com)

## 1) Qualifications/Corporate Overview

### CORPORATE OVERVIEW

TERRADON Corporation offers a multi-faceted approach to design engineering and consulting services. For more than 25 years TERRADON staff has provided a wealth of engineering solutions blanketing the Ohio Valley and the Appalachian Region with successful projects. The company built its reputation on expert personnel and quality, time-sensitive service. Those same founding principles hold true today.

Staff includes engineers, landscape architects, surveyors, planners, environmental scientists, designers, technicians and LEED Accredited Professionals.

The company maintains approximately 50 leading-edge staff in four locations: Nitro/Poca, WV; Lewisburg, WV; Charlton Heights, WV; and Ripley, WV. TERRADON'S departments work cohesively to provide turn-key solutions that strive to exceed client expectations.

### ABOUT TERRADON

The family-owned business has built a strong reputation by providing flexible, cost effective design solutions and maintaining the highest level of customer service. TERRADON is particularly suited to design engineering within the mountainous areas of the Ohio Valley and Appalachian Regions. The firm has been recognized through numerous awards from professional organizations and agencies including the several State Divisions of Highways, Departments of Environmental Protection and the American Institute of Architects state chapters.

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.

### SERVICE OFFERINGS

- Land Planning and Site Design
- Civil Engineering
- Environmental
- Geotechnical Engineering
- Surveying and Mapping
- Water/Wastewater
- Transportation Engineering
- Structural Engineering





## 1) Qualifications/Corporate Overview

### Water, Wastewater, Stormwater

Since 1989, TERRADON has provided planning, design and construction administration for millions of dollars worth of civil engineering projects including wastewater improvement projects. Project experience is varied in both size and scope, ranging from small on-site systems to meet the requirements of schools and single-user site office buildings, to upgrades of major municipal facilities involving both new construction and the renovation of existing facilities. Key staff have more than 100 years of combined experience and have designed wastewater systems for both private clients and municipalities.



#### Water

- Utility Planning and Layout
- Water Treatment, Storage and Distribution Design
- System Modeling
- Drinking Water Backflow Prevention and Testing Programs
- Operation and Maintenance Manuals
- Source Water Protection Plans
- Asset Management Planning
- Permitting
- Funding Assistance

#### Wastewater

- Utility Planning and Layout
- Wastewater Treatment, Flow Equalization, Collection and Pumping
- Decentralized Sewer System Planning and Design/On-Site Wastewater System Design
- Sewer System Infiltration and Inflow (I/I) and Sewer System Evaluation Surveys (SSES)
- Sewer System Rehab Design
- Operation and Maintenance Manuals
- Industrial Waste Treatment
- Sanitary Sewer Overflow (SSO) Abatement
- Asset Management Planning
- Combined Sewer Overflow (CSO) Compliance
- Hydraulic Modeling
- Mixing Zone Studies
- Permitting
- Effective Utility Management Consulting
- Funding Assistance
- 

#### Stormwater

- Planning and Layout
- Stormwater Management Design
- Erosion and Sediment Control Plans
- MS4 Plans
- Stormwater Protection Plans
- Best Management Practices Design
- Permitting
- Funding Assistance



## 1) Qualifications/Corporate Overview

### TERRADON Land Development Services Overview



Land Development covers a broad swath of TERRADON's service offerings and sees a large percentage of its annual revenue from repeat clients or referrals. The group is composed mainly of Landscape Architects and CAD designers who frequently team with every other department within the company.

TERRADON's Land Development department collaborates with public and private entities and has a strong presence in the recreation, public/civil, educational and commercial development sectors. TERRADON is recognized as a leader in providing site design and land planning services. The firm's professional engineers work closely with the client from the project's initial phase through a schematic design, construction documents and project delivery. TERRADON's Landscape Development Group remains on the forefront of sustainable design, providing LEED Accredited Professionals to clients. Projects utilizing sustainable design best practices aid clients in significantly reducing energy costs on projects.

TERRADON's Land Development Group works in a variety of markets including: Parks/Recreation, Commercial/Industrial, Civic/Public, K-12 Education, Higher Education and Medical.

Projects include: Master planning, recreational planning, funding agencies assistance, economic development planning, surveying, engineering, architecture, historical preservation construction administration and inspection.

### LAND DEVELOPMENT SERVICES

- Master Planning
- Presentation Drawings/Renderings
- Site Feasibility Studies
- Schematic Design
- Layout Plans
- Grading Plans
- Stormwater Management Plans
- Erosion Control Plans
- Planting Plans
- Construction Observation



## 1) Qualifications/Corporate Overview

### TERRADON Materials Testing and Construction Monitoring Overview



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. Engineers and technicians at TERRADON are West Virginia Department of Highways certified in Portland Cement Concrete, Hot-mixed Asphalt, Compaction and Aggregates.

### SERVICES INCLUDE

#### Materials Testing & Inspection

- Slump of Portland Cement Concrete (AASHTO-T119)
- Air Content of Freshly Mixed Concrete (AASHTO-T196 and T152)
- Unit Weight and Yield (AASHTO-T121)
- Making and Curing of Concrete Test Specimens (AASHTO-T23)
- Compressive Strength of Concrete Specimens (AASHTO-T22)
- Fine and Course Aggregate Gradations (AASHTO-T11 and T27)
- Specific Gravity of Aggregates (AASHTO-T84 and T85)
- Atterberg Limits (AASHTO-T89 and T90)
- Moisture Content of Soil (ASTM-D2216)
- Nuclear Compaction Testing of Soil, Stone, and Hot Mixed Asphalt
- Preparation of Certification Forms and Construction Reports
- Welder Certification

#### Specialty Testing and Inspection

- Floor Flatness Testing
- Fireproofing
- Masonary Testing
- Structural Steel Inspection
  - Certified Welding Inspection
  - Dye Penetrant Testing
  - Bolt Testing
- Project Safety Monitoring
- FAA Eastern Regional Laboratories List

#### Construction Monitoring

- Document compliance with project design specifications
- Ensures compliance with regulatory requirements
- OSHA 10-Hour and 30-Hour Construction Safety & Health Certified





## 2) Qualifications of Personnel Directly Involved in the Project

### William S. Thornton, PE, PS

#### Project Manager

For this project, William S. Thornton, PE, PS, will serve as Project Manager. Thornton is an experienced project manager and design engineer for civil/transportation engineering design projects. He joined TERRADON in January 2014. Thornton has more than 15 years of experience with other consulting engineering firms in West Virginia, 5 years with the WVDOH as a Project Manager in the Consultant Review Section of the Engineering Division, and three years with a construction firm performing major concrete paving projects in West Virginia, Pennsylvania, and Ohio. Thornton also spent three summers with the WVDOT, Division of Highways, Right of Way Section, during college.

The major design tasks in which Thornton has been involved include: 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 including streets, drainage, sidewalks, buildings, and traffic along with other safety improvements.

#### Relevant Project Experience

- **Valley Park Wave Pool Liner – Putnam County Parks and Recreation, Putnam County Commission**  
Construction plans and specifications were developed to install a liner over the deteriorating existing marcite concrete finish. Construction is expected to be complete by opening day 2016.
- **I-77 North Camden Interchange to Staunton Avenue Interchange-Wood County, WV.** Design included replacement and widening of an interstate bridge over the Little Kanawha River and the replacement and widening of the bridge over Staunton Avenue. The roadway work included widening of I-77 to eight lanes from Camden Avenue to Staunton Avenue.
- **Corridor H Section 7—Forman to Moorefield, Grant County, WV.** Design and management included five miles of new mainline four-lane highway, several side road connectors, truck brake check area, truck escape ramp, and a wetland overlook area including over 8million cubic yards of earthwork.
- **I-79 Bridgeport to Meadowbrook- Harrison County, WV.** Included the widening of I-79 from two lanes North Bound and South Bound to four lanes North Bound and South Bound from Bridgeport to Meadowbrook Road including two sets of bridges.
- **Corridor H Davis to Bismark, Section 01 - Tucker County, WV.** Included design and management for upgrade of approximately two miles of WV 93 between Davis and Bismarck to a four-lane highway.
- **U.S. 52 Kermit Bypass-Mingo County, WV.** Included design and management of four miles of a new alignment four-lane expansion of U.S. 52 near Kermit, West Virginia. Design included over 10 million cubic yards of earthwork, two interchanges, and a stream relocation.
- **U.S. 19 Corridor L Upgrade near Muddelty in Nicholas County, WV.** Design and management of approximately four miles of the expansion of U.S. 19 from 2 lanes to 4 lanes in Nicholas County. This fast track project was completed in nine months.
- **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 and WV 15 Intersection Upgrade.



#### Education

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

#### Work Experience

TERRADON Corporation  
2014

City Engineer, City of  
Montgomery

City Engineer, City of Smithers

#### Registrations

Professional Engineer in WV, OH, VA

Professional Surveyor in WV

*\*Indicates project performed while working for another firm.*

## 2) Qualifications of Personnel Directly Involved in the Project

### Kristen Stinson McClung, PE, MBA Civil Engineer

Kristen Stinson McClung serves as a Civil Engineer for TERRADON Corporation and is based in the Lewisburg, WV office. She brings more than 17 years of engineering practice to public and private sector clients. From conception through acceptance of projects, Stinson McClung offers experience in civil, environmental, land development, streetscapes, survey, permitting, water, wastewater, paving, storm drainage, transportation and erosion-sedimentation control.

#### Relevant Project Experience

- **Valley Park Wave Pool Liner – Putnam County Parks and Recreation, Putnam County Commission**  
Construction plans and specifications were developed to install a liner over the deteriorating existing marcite concrete finish. Construction is expected to be complete by opening day 2016.
- **Betchel Summit Reserve As-Built Drawings** - As project manager for the as-built portion of this landmark project, responsible with TERRADON's survey team for capturing all the as-built data for the large amount of underground utilities installed during the construction phase of this historic project.
- **Eastwood Elementary School Additions & Renovations, Morgantown, WV** - Responsible for the Hydrology Study and Storm Water Detention design associated with this project.
- **John Marshall High School Additions & Renovations, Glen Dale, WV** - Responsible for the Hydrology Study and Storm Water Retention design associated with this project.
- **Beaver Coal Property, Beckley, WV** - Worked in conjunction with TERRADON's landscape architecture department to develop the preliminary storm water drainage and hydrology associated with the early Preliminary Planning stages of this project.
- **Rainelle Medical Center, Rainelle, WV** - Responsible for the Hydrology Study and Storm Water Detention design associated with this project.
- **Access Ohio Office Building: Columbus, OH** - Responsible for the Hydrology Study and Storm Water Detention design associated with this project.
- **Veterans Administration Parking Deck, Beckley, WV** - Responsible for designing the MS4 storm water requirements associated with this project, which includes first flush requirements associated with storm water runoff.
- **Cedar Creek Elementary School, Glenville, WV** - Responsible for the Hydrology Study and Storm Water Detention design associated with this project.
- **Fairmont Federal Credit Union, Fairmont, WV** - Responsible for designing the MS4 storm water requirements associated with this project, which includes first flush requirements associated with storm water runoff.
- **Deepwater Flyash Landfill, Dixie, WV** - Responsible for designing the new stormwater collection system to replace the failed system, which had created a large sink hole within the wasted flyash.
- **West Virginia School of Osteopathic Medicine New Entrance Road, Lewisburg, WV** - Responsible for the civil-site design associated with the O-school's proposed new entrance road off WV State Route 219. The proposed entrance road will bisect an existing greenspace and provide visibility to the front of the school from 219. Design responsibilities included site grading, storm water drainage design, permitting of the project through the WVDOH, and the production of construction drawings.
- **The Greenbrier - Tennis Stadium, White Sulphur Springs, WV** - Served as the project manager for this project, a 2500 seat outdoor tennis stadium and the historic Greenbrier Resort. Responsibilities included site grading to accommodate the bowl stadium, which required over 30,000 cy of fill material. McClung also sized and designed the storm water drainage system, sanitary sewer system, and water distribution system for the project.

#### 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 Commission,  
Level II Certified Design  
Professional

## 2) Qualifications of Personnel Directly Involved in the Project

### 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.

#### Relevant 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 19 additional schools.
- **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.
- **Putnam County Water Main Extensions**  
Worked on design and layout of approximately 63,000 feet of water main and a booster pumping station for the Putnam County Commission/WVAW. Responsible for bidding, contract award, and project management.
- **Manila Ridge Water Main Extension Project**  
Worked on design and layout of approximately 38,000 feet of water main for the Putnam County Commission/WVAW. Project has not received funding yet. However, will be responsible for bidding, contract award, and project management.



#### Education

B.S. Civil Engineering  
West Virginia University

#### Work Experience

TERRADON Corporation  
2007-Present

WV American Water  
1991-2007

AWW SC  
1984-1991

WV DNR  
1982-1984

VTN, Inc. Consulting  
Engineers  
1978-1982

J.H. Milam Consulting  
Engineers  
1977-1978

WV DNR  
1976-1977

WV Department of  
Highways  
1975-1976

#### Registration

Professional Engineer: WV

## 2) Qualifications of Personnel Directly Involved in the Project

### Philip Reed, PE

Senior Civil Engineer

Philip Reed serves as a Senior Civil Engineer 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. He has created numerous residential subdivision designs with roadways and drainage.

#### Relevant Project Experience

- **Sporting Club, Creekside Apartments**  
Responsible for surface drainage remediation and rehab for the Sporting Club, Creekside Apartments, White Sulphur Springs, WV.
- **West Virginia School of Osteopathic Medicine**  
Evaluated the stormwater system and designed a sink hole underground injection system for the WVSOM in Lewisburg, WV.
- **Greenbrier Valley Medical Center**  
Evaluated the stormwater system and designed a sink hole underground injection system for the medical center in Ronceverte, WV.
- **City of Alderson**  
Evaluated drainage issues and made remediation recommendations for the City of Alderson, WV.
- **Triana Energy Fresh Water Impoundment**  
Responsible for site design, construction certification, and bi-weekly inspections for 15 acre-feet freshwater impoundment in Northern, WV. Responsible for oversight of construction monitoring inspectors, reporting and permit compliance.
- **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.
- **Gordy Oil**  
Provided survey and design for 5 natural gas pads and support for freshwater impoundments.
- **HAM Landfill**  
Designed and oversaw construction of municipal waste disposal cells. Performed environmental permitting for landfill construction. Responsible for Geotechnical investigation and study for landfill expansion. Provided construction certification and inspection for clay-lined asbestos cells and composite lined municipal solid waste cells.
- **Environmental Permitting**  
Managed environmental permitting of rock quarries (RBS Inc., ALTA Sand Quarry, and Muddy Creek Mountain Stone) to include air pollution control permits and water quality permits. Study includes traffic data collection, traffic analysis, safety analysis, intersection stopping and sight distance studies, geometric review, traffic modeling, environmental reviews, alternatives development and public involvement for a 3 mile corridor. The preliminary engineering phase will analyze widening the roadway section and bridge over Alum creek to 5 lanes, as well as development of needed turn lanes at the Africa Road intersection on all approaches. Complete street concepts such as a multi-use trail will also be considered. This study will investigate multiple alignment alternatives in order to react to a proposed reconfiguration of the E. Powell road intersection by other agencies. Once a preferred alternative is established our team will begin the detailed design phase.



#### Education

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

#### Affiliations

2005 – Present  
TERRADON Corporation

1999 – 2005  
Engineering & Testing 2000, Inc.

1991 – 1997  
Brackenrich & Associates, Inc.

1990 – 1991  
Cornerstone Land Surveying

1988 – 1990  
Norfolk Southern Railway

#### Affiliations

Professional Engineer: West Virginia, Virginia

American Concrete Institute

#### Certifications

WVDOH Certified Portland Cement Concrete Technician

WVDOH Certified Compaction Technician



## 2) Qualifications of Personnel Directly Involved in the Project

### Mike Pyles, PE Civil Engineer

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

#### Relevant 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.
- **Greenbrier River Bridge, Hinton, WV\*** – Design Engineer for a scour analysis of the piers and abutments on an existing bridge for a WVDOH project.
- **Forks of Cacapon Bridge, Forks of Cacapon, WV\*** – Design Engineer for a scour analysis of the piers and abutments on a replacement bridge for a WVDOH project.

*\*These projects were completed by Mike Pyles, PE while working for another consultant.*



#### Education

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

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

M.S. Engineering,  
Marshall University

#### Work Experience

TERRADON Corporation  
2009-Present

HNTB Consulting Engineers  
1997-2009

Kelley Gidley Blair & Wolfe, Inc.,  
Consulting Engineers  
1986-1997

WV Department of  
Natural Resources  
1978-1986

WV Department of Highways  
1973-1978

#### Registrations

Professional Engineer,  
West Virginia

## 2) Qualifications of Personnel Directly Involved in the Project

### Jennifer W. Casey, PE

Civil Engineer

Jennifer W. Casey, PE has more than 20 years of bridge design and related experience, some of which was acquired while an employee of WVDOT. She has been responsible for the complete design of both state- and federally-funded bridge projects which involve the completion of hydraulic studies, superstructure design, substructure design, and contract plan preparation.

#### Relevant Project Experience

- **Ravenswood City Pool Renovation, Ravenswood, WV**
  - Oversaw all aspects of four Phases of the project from funding applications, testing, overseeing the city forces, writing specs, administering the bid, and overseeing the construction. Phases included installation of a vinyl liner system, new slide systems, conversion of entry areas, ADA compliance, “kiddie” areas with water fountain play areas and an upgrade of the poolhouse and picnic shelter area.
- **Municipal Engineering Services – Provided engineering services such as preliminary and final design, construction inspection and management, assistance with funding applications, development of construction cost estimates, and utility coordination. Representative clients include:**
  - Alpine Theatre Restoration Chairman, Subcommittee of Main Street Ripley; Ripley, WV
  - City of Ravenswood Downtown Beautification; Ravenswood, WV
  - Jackson County Commission; Ripley, WV
  - Main Street Ripley; Ripley, WV
  - Greenbrier Resort; White Sulphur Springs, WV
- **Bridge Design and Rehabilitation – Project engineer responsible for management, design, review, and coordination of different areas and phases of bridge projects. The types of bridges include steel plate girders, both straight and horizontally curved, prestressed concrete I-beams, and timber bridges. The bridges range in length from 150 to 2,300 feet. Substructure design includes conventional, semi-integral and integral abutments, mechanically stabilized earth retaining walls, as well as single and multicolumn piers. Representative projects include:**
  - Corridor H – Bismark to Forman; Grant County, WV
  - Cotton Hill Bridge; West Virginia Route 16, Fayette County, WV
  - Earling Bridge; West Virginia Route 10, Logan County, WV
  - East River Bridge; Interstate 77, Mercer County, WV
  - Elkins Bypass – U.S. Route 219 to Canfield; Randolph County, WV
  - Man Bridge; West Virginia Route 10, Logan County, WV
  - Mercury Boulevard Interchange; Hampton, VA
  - Millville Quarry Access Bridge; West Virginia Route 9, Jefferson County, WV
  - Milton Covered Bridge Historic Restoration; Pumpkin Festival Grounds, Cabell County, WV
  - Moorefield Interchange Bridge; Hardy County, WV
  - Rita Bridge; West Virginia Route 10, Logan County, WV
  - Spring Valley Bridge; Wayne County, WV
  - Three Forks Creek Bridge; Tyler County, WV
  - Trace Fork Pony Truss Bridge Replacement; Route 32, Lincoln County, WV
  - West 19th Street Overpass Bridge; Interstate 64, Cabell County, WV

#### Education

B.S. Civil Engineering  
West Virginia University

#### Work Experience

2015 - Present  
TERRADON Corporation

2001 -2015  
FOX Engineering

1997-2001  
Site Blauvelt Engineers

1994-2001  
WVDOT

#### Registrations

Professional Engineer:  
WV (REDACTED), OH (REDACTED), SC  
(REDACTED), IN (REDACTED), MD  
(REDACTED)  
Licensed Engineering Contractor  
#WV041041

#### Certifications

Safety Inspection of In-Service  
Bridges – NHI Course 130055A

#### Memberships, Affiliations

ACEC  
ACEC/WV  
AISC  
ASCE  
AEI  
NSPE

## 2) Qualifications of Personnel Directly Involved in the Project

### John James, PE Geotechnical Engineer

Mr. James is a Senior Geotechnical Engineer for various transportation, environmental, and mining projects. Mr. James specializes in innovative and cost-saving concepts for his projects.

James' project experience includes: roads; highways and bridges; earth and rockfill dams; numerous foundation investigations; studies and designs for landfills and environmental facilities; surface and ground water studies and remediation; foundation investigations and designs ranging in size from houses to major industrial complexes; storm drainage facilities; airport facilities; landslide analysis and correction; and forensic engineering.

#### Relevant Project Experience

- **WVDOT City Beer Bridge, Wood County, WV**  
TERRADON conducted a field exploration for the proposed overpass replacement on I-77 located in Wood County, West Virginia. A total of thirteen (13) structure borings at the proposed bridge and one pavement boring were required by the WVDOT, and TERRADON performed drilling for the fourteen borings, delivered samples to MCS&T and provided GINT logs.
- **WVDOT Charleston Interstate Roadway Lighting Renovation project in Charleston, West Virginia**  
The purpose of this investigation was to provide foundation recommendations for the design and construction of self-supporting light towers ranging in height from 60 to 150-feet. This investigation included a geotechnical drilling program, laboratory testing, and engineering evaluation. This subsurface exploration consisted of a total of forty four (44) structure borings drilled at the approximate locations of the proposed Light Tower Locations as indicated on the WVDOT Plans for Construction prepared by another consultant.
- **WVDOT US 35—Slope Stability Design of Waste Pit Areas**
- **WVDOT Corridor H—Slope Stability Design of Waste Pit Areas and Cut/Fill Slope Value Engineering**
- Geotechnical investigations and reporting on highway/roadway projects including open-ended statewide geotechnical contract, Route 35 Design/Build, Sedalia Arch Bridge, and Sleeth's Run Bridge.
- Chatham Lake Dam—Dam Design and Analysis.
- Dawson Dam—Dam Design and Analysis.
- Horton Dam—Seismic Analysis and Monitoring.
- Weston Water Supply Dam—Seepage Analysis & Corrective Design.
- Lake Chaweva Dam—Dam Reconstruction Design.
- Geotechnical investigation and design of numerous water and wastewater treatment plants, including Charleston Wastewater Treatment Plant, North Beckley Wastewater Treatment Plant, and Buckhannon Water & Wastewater Treatment Plant.
- Design and upgrade of water supply dams including Upper & Lower Dog Run water supply dams, Salem, West Virginia; Key Dam, Bluefield, West Virginia; Chatham Lake Dam (irrigation supply), Shady Springs, West Virginia. Involvement with geotechnical aspects included interaction with process and structural aspects and structural design of many components.



#### Education

B.S., Civil Engineering,  
West Virginia University 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

US Geological Survey  
(Part-time College Intern)

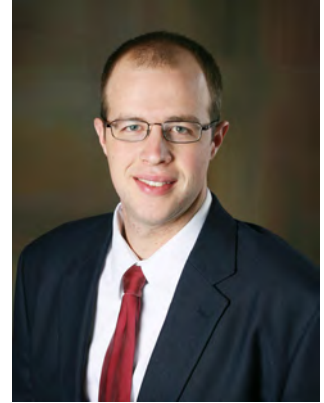
## 2) Qualifications of Personnel Directly Involved in the Project

### Lawrence E. "Lee" Hale, PE

Civil Engineer

Lee Hale serves as a junior Project Engineer for TERRADON civil projects. Hale has provided design support on some of TERRADON's largest and most recent projects. Working under the direction of senior leadership, Hale has provided design engineering for The Summit Bechtel Reserve, a 12,000-acre site with decentralized sewer and more than 100 miles of utilities.

Additionally, Hale has provided value engineering services for highway projects including design for the construction of multiple twin bridges on 1-77 near Tupper's Creek, WV. He is currently pursuing a Master of Science in Engineering with an emphasis in Environmental Engineering from Marshall University.



#### Relevant Project Experience

- **The Summit Bechtel Family Reserve**  
Tasks performed included water distribution system design, wastewater collection and pumping design, storm-water management design, WVDEP environmental permitting, wetland mitigation design, AutoCAD Civil 3D design team management, initial utilities start up disinfection plan, and field inspection of utility installation.
- **Brown and Brown Law Firm**  
Tasks performed included field sampling and report writing for Phase II Environmental Site Assessment.
- **Goodwin & Goodwin, Attorneys at Law**  
Tasks performed included several Phase I Environmental Site Assessments.
- **T-Shirt International**  
Tasks performed included wastewater discharge sampling and permitting.
- **Matheny Motors**  
Task performed included Phase II Environmental Site Assessment monitor well installation and ground water sampling.
- **Catfish-Man-of-the-Woods Bridge, Cabell County, WV**  
Served as a design engineer for the design on the replacement of the bridge. Tasks included assisting with the layout of the new bridge and roadway alignment, design of cantilever wing walls, drilled shaft foundations, semi-integral abutments, reinforced elastomeric bearings, spread prestressed box beams, concrete deck reinforcement, distribution factor calculations, and drafting.
- **6th Avenue Pump Station Design, Montgomery, WV**  
Tasks performed included site layout, new pressure and gravity sewer line design, pump design, back-up pump design (Dri-prime system), drafting, and the redesign of existing infrastructure.
- **Portsmouth Bypass, Portsmouth, OH**  
Served as Design Engineer for two bridges 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, prestressed bulb "T" beams, and a 35' tall cap and column pier.
- **City of Montgomery Wastewater Treatment Plant Improvements**  
Design of overhead crane and pulley system for pump repair and installations.
- **Corridor H Drainage Design**  
Drainage Design for four-lane highway, including culvert and inlet sizing, flow calculations.
- **Putnam County Commission**  
Field Survey and Public Outreach for utility extension projects.

#### Education

B.S., Civil Engineering,  
West Virginia University  
Institute of Technology, 2010

Pursuing a M.S.E.,  
Environmental Engineering,  
Marshall University

#### Work Experience

TERRADON Corporation  
May 2009—Present

#### Registrations

Professional Engineer: WV

#### Affiliations

ASCE Charleston Branch  
2014 President



## 2) Qualifications of Personnel Directly Involved in the Project

### Greg Fox, ASLA, LEED AP Landscape Architect

Greg Fox will serve as a Landscape Architect and Site Designer. He oversees TERRADON's Land Development Sector. Fox has been responsible for hundreds of notable commercial, educational and recreational site development projects during his 25-year career. During his time as Vice President of Land Development, 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.



#### Relevant Project Experience

- **The Bechtel Summit National Scouting Reserve** - Provide Site Design for the 10,600+ acre site in Fayette County, WV. Responsible for site grading, construction drawings, NPDES design and coordination for all project subconsultants for NPDES permitting with WVDEP.
- **Greater Greenbrier Sports Complex** - Provided Master Planning and Grading Design Services for the Greater Greenbrier Sports Complex located north of Lewisburg, WV. Five phases include: Master Planning, Grading Study, Full Construction Documents, Utility Layout, Road Design, Erosion and Sediment Control.
- **Glade Run/ Zelenople, PA** - Conducted a master facility plan for a 300+ acre development for Glade Run Lutheran Services This project involved a mixed use development which included an equestrian trail, senior housing, single family residential, office, and retail.
- **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 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.
- **Fairmont Riverfront Park Master Plan** - The City of Fairmont and the Fairmont Renaissance Corporation intend to develop new recreation opportunities and at the same time enhance economic development opportunities for the community. The main goal of the planning process was to develop a plan that will allow for the comprehensive development and implementation of new elements to the riverfront. The elements planned will include rehabilitation of an existing park and new recreation, commercial, and residential opportunities.  
This plan was designed so that the core elements of the plan will entertain people of all age groups, help with the revitalization of the surrounding neighborhood, and stimulate the entire downtown area of Fairmont.

#### Education

B.S. Landscape Architecture  
West Virginia University  
B.A. Geography & Planning  
West Virginia University

#### Work Experience

2000-Present  
TERRADON Corporation

1996-2000  
Martin Boal Anthony &  
Johnson Architects

1993-1996  
Site Design

1989-1993  
EG&G Inc

1988-1989  
PSC Engineers

## 2) Qualifications of Personnel Directly Involved in the Project

### Shawn Gray, ASLA

Site Designer and 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**  
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.
- **Scott-Teays, Sheetz**  
Provided site design services for Sheetz Service Centers at Scott Depot 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.
- **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.
- **Westmoreland Trail System Master Planning**  
Provided site design services for a trail connector designed on the top of an earthen flood levy to move through urban areas.
- **Harveytown Park & Connector Master Planning**  
Provided 3-Phase Master Planning for a heavily used section of trail.
- **Southridge Center Master Site Planning**  
Provided master planning and site civil engineering for several areas of Southridge Center in South Charleston, WV.



#### Education

B.S. Landscape Architecture  
West Virginia University

#### Work Experience

TERRADON Corporation  
2005-Present

#### Organizations

American Society of  
Landscape Architects



## 2) Qualifications of Personnel Directly Involved in the Project

### Robert Thaw, PS Survey and Mapping

With more than 22 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.

Thaw has been directly responsible for survey and mapping services, including Right-Of-Way, on a number of notable transportation projects including:

- **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.
- **Sedalia Arch Bridge**  
Thaw oversaw survey services for the replacement of an existing concrete arch bridge with a 72' single span bridge. The bridge consisted of adjacent concrete prestressed box beams with a cast-in-place concrete deck. Survey services consisted of a topographic survey, ROW plans, construction control, and legal description creation. Roadway design consisted of new bridge approaches and a designed detour. Drainage, maintenance of traffic, and right-of-way plans were included in the scope of work.
- **Sleeth's Run Bridge**  
Thaw provided Right-Of-Way services during the design for the replacement of an existing truss bridge in Lewis County, WV. The project included the design of a new 200' structure and approaches. Survey services consisted of a topographic survey, ROW plans, construction control, and legal description creation.
- **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.
- **St. Mary's Bypass**  
Working for the WVDOT, Thaw led transportation survey services for the relocation of WV 16 in Pleasants County, from Pleasants County Route 18 to WV 2 in Saint Mary's, West Virginia for approximately two miles of highway. The project included topographic mapping, survey control mapping, right-of-way and utility cost estimates, and inventories.



#### Education

A.S., Survey Technology, 1981,  
West Virginia University Institute  
of Technology

B.S., Surveying, 1985,  
West Virginia University Institute  
of Technology

#### Work Experience

TERRADON Corporation  
1994-Present

Bowman Land Surveying  
1992-1994

Dunn Engineers  
1990-1992

Kelley Gidley Blair and Wolf  
1988-1990

Pierson & Whitman  
Architects and Engineers  
1984-1986

#### Registration

Professional Surveyor,  
West Virginia

## 2) Qualifications of Personnel Directly Involved in the Project

### Dave Brown, PS

#### Surveying/Right of Way

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. Mr. Brown is responsible for conducting and supervising ALTA/ACSM surveys, boundary surveys, GPS surveys, control surveys, topographical surveys, highway right of way projects, and detailed site/utility surveys for various geotechnical, environmental, and civil projects.

#### Relevant Project Experience

Mr. Brown's responsibilities include survey project management, GPS networks, control surveys, 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.

- WVDOT Corridor L Right of Way Project-Summersville, WV
- The Summit Bechtel Reserve- Glen Jean, WV
- Black Diamond Subdivision(1656 Acres)-Craig County, VA
- John Amos Plant Industrial Landfill Bill's Creek, Putnam County, WV
- Beech Ridge Wind Tower Project-Greenbrier County, WV
- Allegheny Energy Pleasants County Power Station ALTA Survey, St. Mary's, WV
- The Woodlands Subdivision- Summersville, WV
- Liberty Square Boundary/Topographic, Teays Valley, WV
- Utility Survey- Winfield, WV

#### Education

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

#### Work Experience

1999 to Present  
TERRADON Corporation

1997 - 1999  
Trans-Ash

1997 - 1997  
Summit Engineering

1996 - 1997  
USGS

#### Registrations

Professional Surveyor  
West Virginia

### Brian P. Bakanas, PS

#### Survey Crew Manager

Mr. Bakanas' responsibilities include survey crew manager, boundary solution, courthouse research, survey data reduction, and construction stakeout data preparation.

#### Relevant Project Experience

- **U.S. Route 9 Upgrade** - Right of Way monumentation, courthouse research, R/W Questionnaire.
- **Ford Electronics Facility** - Construction - Dublin Twp, Pennsylvania. Stakeout for site grades, roads, storm and sanitary sewers, and detention basins.
- **Rorer Pharmaceutical Plant** - Collegeville, Pennsylvania, Stakeout horizontal and vertical control, and column lines.
- **Chief Logan State Park Dam Project** - Logan, West Virginia. Stakeout dam, riser, road and parking lots, and clearing limits. Electronic data collection of road, dam, and borrow area sections. Analysis and plotting of field data.
- **Hansford AML Reclamation** - Surface Mines - West Virginia. Electronic data collection of sections on slide and reclamation of slide.
- **Smithers, West Virginia** - Appalachian Mining Permits, Topographic and G.P.S. survey of roads, ponds, and gas well locations
- **Monsanto Armour Creek Site, Nitro, WV** - Site Assessment - Horizontal/Vertical S/O and location of monitoring wells at landfill. Topographic survey for drainage assessment.

#### Education

A.S. Land Surveying  
Glennville State College

#### Work Experience

1995 - Present  
TERRADON Corporation

1991-1994  
Dunn Engineers, Inc.

1988-1991  
Czop/Spector, Inc

1986-1988  
V & I Associates

#### Registrations

Professional Surveyor  
West Virginia, Pennsylvania

## 2) Qualifications of Personnel Directly Involved in the Project

### William L. Gerencir Senior CAD Designer

Gerencir has nearly 21 years of experience in the engineering related field, including 20 years of CAD design expertise for a broad scope of projects. He has been with TERRADON for most of those years where he has been responsible for design, drafting, quantity estimates, and site design, and is also capable of managing a project and corresponding CAD files.

#### Relevant Project Experience

- **US 19 Widening, Summersville, Nicholas County, West Virginia** - Project consisted of widening a four-lane corridor to six lanes, along with two frontage roads. Geometric design, drainage, maintenance of traffic, and signing and marking plans were all a part of this project.
- **Sedalia Arch Bridge, Doddridge County, West Virginia** - Approaches and detour for the replacement of a 72'-0" bridge. Project included roadway design, drainage, maintenance of traffic, and right of way plans.
- **St. Mary's Bypass, Pleasants County, West Virginia** - Roadway design study for the WVDOT that consisted of evaluating alternates for the bypass and connection of WV 16 to the Ohio River bridge crossing. Project consisted of plans and a design study report that was delivered to the WVDOT.
- **WV 73 Turning Lanes, Logan County, West Virginia** - Plans for the turning lanes for the Fountain Place Development near Logan. Plans consisted of typical sections, roadway plan sheets, cross-sections, and maintenance of traffic plan sheets.
- **Monongahela River Bridge and Approaches, Marion County, WV** - TERRADON provided the design of twin bridges and approaches, totaling 1500', near Rivesville, WV. Project consisted of a design study where three alternate alignments were studied and a design study report was completed for the WVDOT.

#### Education

A.S. Civil Surveying  
Engineering Technology  
West Virginia University  
Institute of Technology  
Emphasis on Surveying

#### Work Experience

1993 - Present  
TERRADON Corporation

1992-1993  
ERM-Midwest, Inc.

1990-1992  
The H.C. Nutting Company

### Earl Oldham Survey/Senior CAD Designer

Oldham has more than 20 years of technical experience as a CAD Designer for highway, site design, water and sewer, and survey projects. At TERRADON, he assists with topographical, boundary, as-built, and site designs.

#### Relevant Project Experience

- Design and drafting for water and sewer systems, site design, and highway design.
- Water and sewer system experience includes survey control for aerial mapping and topographical survey for mapping; layout and calculations of systems and final plans for water systems, wastewater collection systems and plants; and inspection for construction of systems and water tanks.
- Site design and highway experience includes survey control for aerial mapping and topographical survey for mapping; layout, grading, and earthwork calculations for site plans; and 3-D renderings and fly-by presentations.

#### Work Experience

2001-Present  
TERRADON Corporation

1997-2001  
HMB

1996-1997  
Dunn Engineering

1992-1996  
Woolpert

1991-1992  
Ghosh Engineering

1989-1991  
Esmer Associates

### 3) Staffing Plan

TERRADON Corporation maintains approximately 48 full-time personnel to service a variety of client needs and projects throughout West Virginia and surrounding states. Key personnel listed in this prospectus are supported by engineers, surveyors, designers, and administrative personnel who are experienced, capable, and available to perform Bridge Design Services for the WVDOT. Project Management best practices are in place to accommodate varying workflow. TERRADON maintains sufficient staff to manage projects the company pursues, and includes measures to provide additional work hours and resources to complete tasks on time and within budget.

TERRADON currently provides on-call engineering and planning services to the WVDOT and has not been tardy in responding or performing any task orders.

#### In-House Resources

TERRADON maintains 7 West Virginia Registered Professional Engineers located in its Primary Charleston-area office, 1 in its Charlton Heights office, 2 in its Ripley office and 2 in its Lewisburg office.

#### Registered Professional Engineers are:

- Joe Saunders, PE (Transportation, Structural, and Hydraulics)
- Will Thornton, PE, PS (Roadway, Right of Way, Maintenance of Traffic)
- Jim Nagy, PE (Utilities)
- John James, PE (Geotechnical, Transportation)
- Mike Pyles, PE (Hydraulics, Transportation)
- Robert Simmons, PE (Transportation, Structural)
- Ashley Lioi, PE (Civil)
- Phil Reed, PE, LEED Ap (Roadway, Maintenance of Traffic, Drainage)
- Kristen Stinson-McClung, PE (Hydraulics/Hydrology and Erosion/Sediment Control)
- Lee Hale, PE (Civil)
- Jennifer Casey, PE (Civil)
- V. Grant Martin, PE (Transportation)

Additionally, TERRADON maintains in-house staff for ancillary engineering-related tasks. Primary personnel and their specialties include:

- Robert Thaw, PS (Right-Of-Way, Survey, and Mapping)
- Brian Bakanas, PS (Right-Of-Way, Survey, and Mapping)
- Dave Brown, PS (Right-of-Way, Survey, and Mapping)
- Bill Hunt, PG, LRS (Environmental Planning)
- Sam Wilkes, PWS (Environmental Planning)
- Greg Fox, ASLA, LEED Ap (Grading and Site Design)
- Jason Asbury, ASLA (Permitting Specialist)

TERRADON maintains the following design support staff:

- Earl Oldham (Survey/Designer)
- Bill Gerencir (Designer)
- Mark Clutter (Designer)
- Additional Designers and Support Staff

### 3) Staffing Plan

TERRADON Corporation maintains sufficient full-time staff in order to complete quality projects in an efficient and timely manner. The company maintains staffing protocols in order to supplement staff should project demands increase. At present time, TERRADON has adequate staff in-house to manage and complete project tasks in relation to this contract.

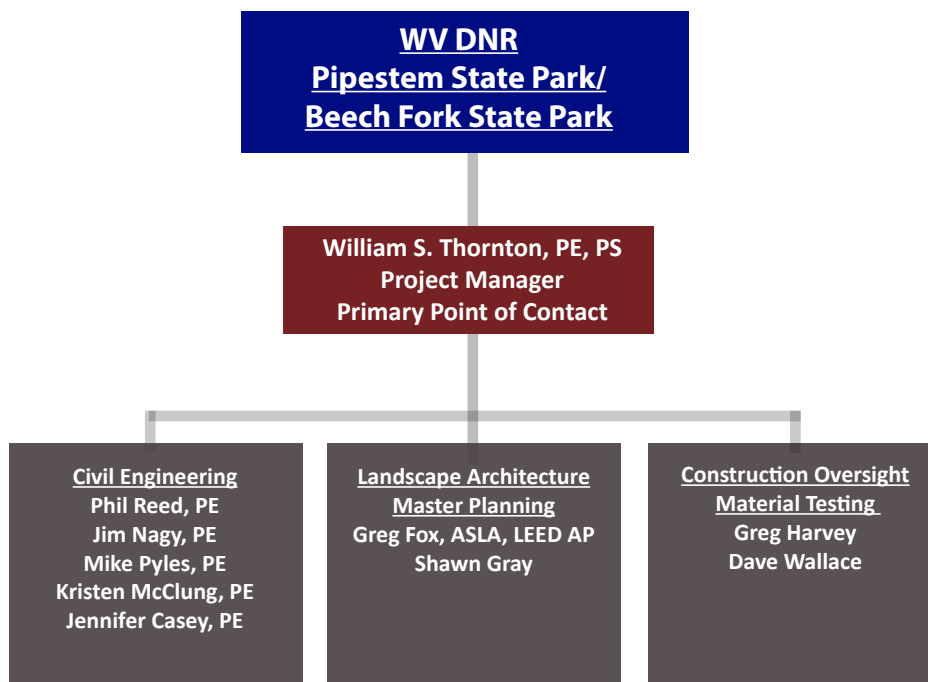
TERRADON engineers have numerous resources within the company to draw on, such as surveying, geotechnical engineering, environmental engineering, landscape architecture, materials testing, and construction monitoring. This allows the project manager to control all phases of the design process, from initial site reconnaissance through construction.

### Key Personnel and Estimated Current Availability

<u>Name</u>	<u>Project Role</u>	<u>Percent Availability 40/Hr Work Week</u>
William S. Thornton, PE, PS	Project Manager Primary Point of Contact	60
Phil Reed, PE	Project Engineer	60
Lee Hale, PE	Project Engineer	60
Kristen Stinson-McClung, PE	Project Engineer	70
Mike Pyles, PE	Project Engineer	70
John James, PE	Project Engineer	60
Jennnifer Casey, PE	Project Engineer	60
Bill Gerencir	Senior CAD Designer	60
Robert Thaw	Surveyor	50
Dave Brown	Surveyor	60
Brian Bakanas	Surveyor	60
Earl Oldham	Survey/Senior CAD Designer	60

### Proposed Roles/Organizational Chart

The following organizational chart lists key personnel and their roles in this project:





## 4) Past Projects

# Summit Bechtel National Scout Reserve Master Plan

From 2008 to July 2013, TERRADON provided a variety of services for the development of the Summit Bechtel National Scout Reserve near Mt. Hope, Fayette County, WV. In fact, TERRADON worked on the initial site selection and presentations to the Boy Scouts of America, which landed this massive project in Mt. Hope.

The Summit is a 10,600+ acre outdoor adventure center near Mt. Hope, WV next to the New River Gorge National Park. The world-class facility serves as a venue for the Boy Scouts of America's fourth High Adventure Base, the permanent home to the National Jamboree, a summer camp and National Center for Scouting Excellence leadership center - all on the same contiguous property.

Services for the 10,600+ Acre site included:

- Initial Site Selection/Conceptual Designs
- Site Planning/Grading
- Erosion and Sediment Control
- AML
- Survey/Mapping
- All Environmental Permitting
- Geotechnical Engineering
- Materials Testing and Construction Monitoring
- Utility Design
- 60+ miles of underground utilities
- 550,000 tons of aggregate produced by on-site rock crushing 600 acres of clearing, grubbing and rough grade operations
- 3 million cubic yards of excavation
- 600 acres of fine grading and revegetation
- 28 miles of drainage swales, including erosion and sediment control
- 14 miles of new roads (grade and drain)
- 4 earthen dams
- 80,000 seat lawn amphitheater
- On site sanitary sewer system

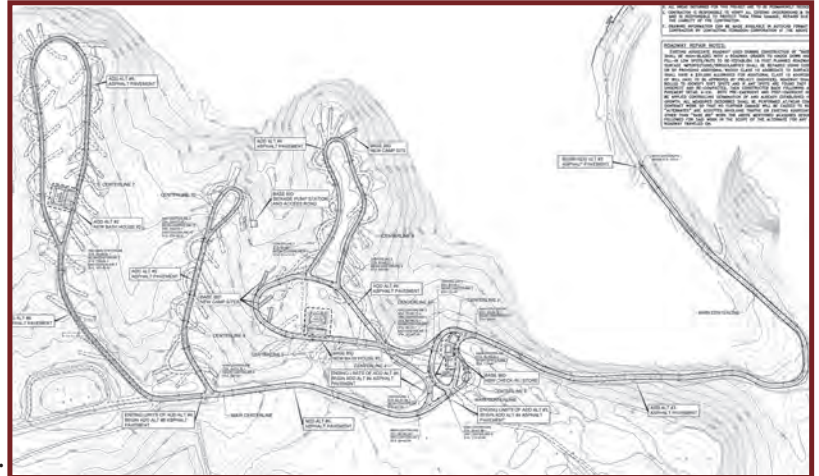




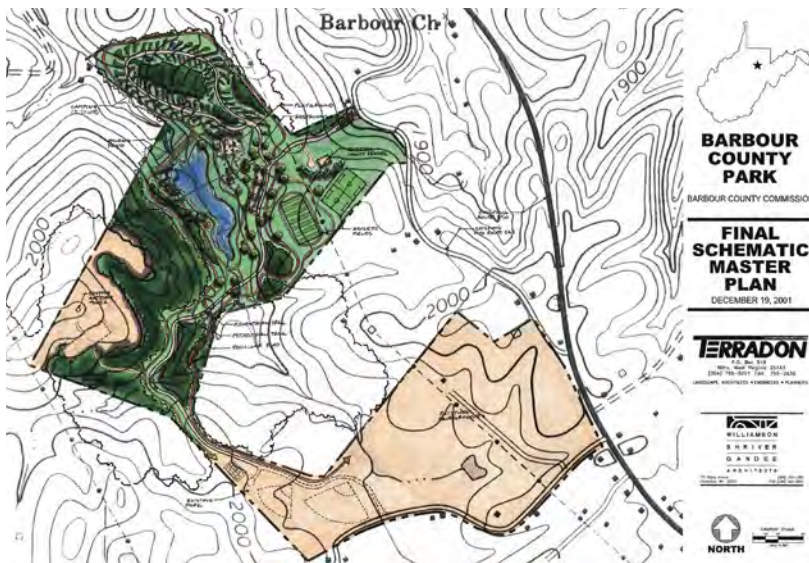
## 4) Past Projects

### Little Beaver State Park Design

TERRADON was responsible for the design of a campground expansion that doubled the number of existing full-service RV spaces, a new bathhouse and a trail system to the bathhouse. TERRADON was also responsible for preparation of plans and specifications for a septic tank effluent gravity (STEG) system at the park. DNR Parks and Recreation had started the project using force account method of construction, but was unable to complete the project. Terradon designed the project to utilize materials already purchased and delivered to the site. The project consisted of septic tanks, one (1) grinder sewage pumping station, and small diameter gravity sewer (SDGS) with connection to the local PSD for treatment.



### Barbour County Park - Master Planning



As a subconsultant, TERRADON created a Final Schematic Master Plan for Barbour County Park.

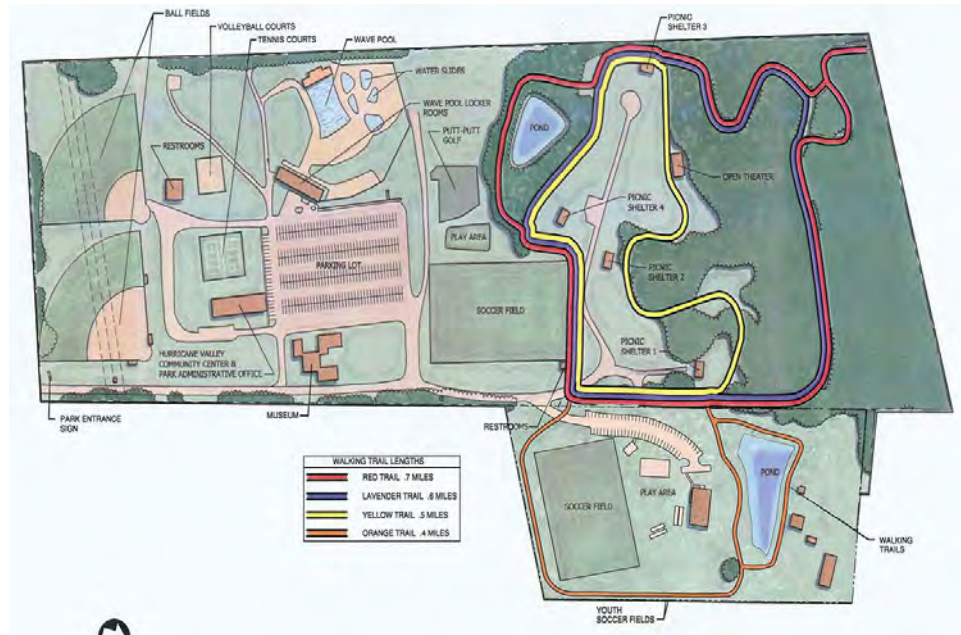
Relevant Project Tasks Included:

- Survey and Mapping
- Land Planning
- Utility Design
- Grading and Drainage Design
- Access Road Design
- Construction Drawings

#### 4) Past Projects

## Putnam County Parks and Recreation Board - Valley Park Trails Map

TERRADON Corporation developed a detailed trail map and additional graphics for a walking trail system in Valley Park.



## Jonathan Larck Reservoir Park Master Plan

TERRADON Corporation was responsible for creating a Master Plan for the Jonathan Larck Reservoir Park for the Putnam County Parks and Recreation Commission. Elements included an access drive to the park area, picnic shelters, playground areas, restroom facilities, trail systems and fishing and boating opportunities.





#### 4) Past Projects



### Putnam County Parks and Recreation - Wave Pool Liner

TERRADON Corporation is currently providing civil engineering design services for the Putnam County Parks and Recreation department of the Putnam County Commission for a replacement liner for the “Waves of Fun” wave pool in Hurricane, WV. Construction plans and specifications were developed to install a liner over the deteriorating existing marcite concrete finish. Construction is expected to be complete by opening day 2016.

### Putnam County Commission - Master Planning & Valley Park Expansion

TERRADON Corporation 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 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.







## 4) Past Projects

# Volcano Island & Water Park Master Planning

TERRADON Corporation has provided a variety of engineering services for a growing community on the East Side of Fairmont, WV to help spur economic development. The former Coke Works Site in Fairmont, WV consisted of approximate 100 acres of land. Previously listed on the EPA priority list of superfund sites, the site concluded remediation efforts in 2008. TERRADON Corporation then began providing land planning and design services to the City.

Combined with surrounding areas totaling approximately 350 acres, TERRADON 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.

### Relevant Project Tasks Included:

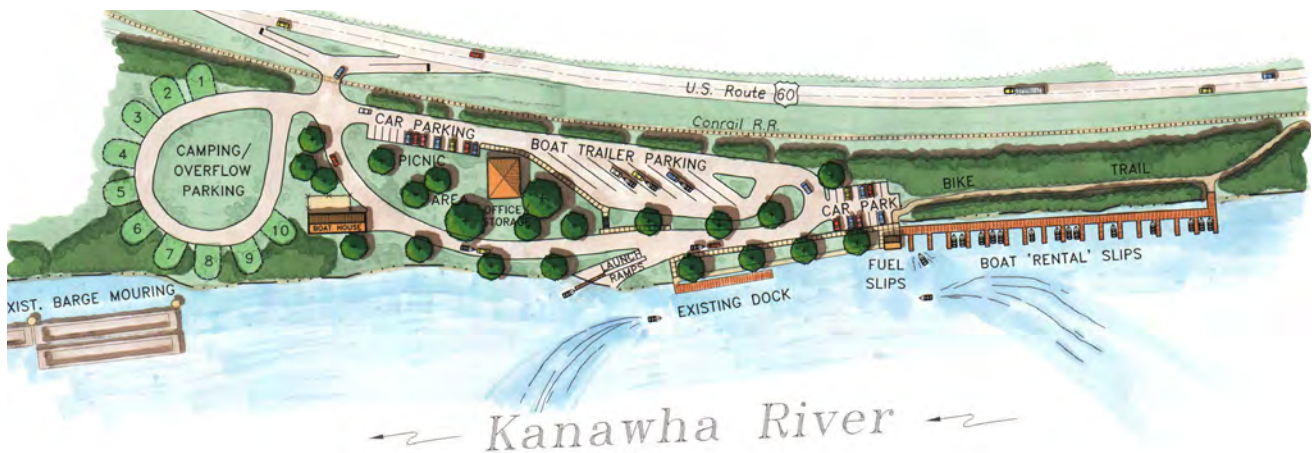
- Survey and Mapping
- Land Planning
- Utility Design
- Grading and Drainage Design
- Access Road Design
- Construction Drawings



#### 4) Past Projects

## West Virginia University Institute of Technology Marina Study Master Plan

TERRADON Corporation was responsible for the design of a Tech Marina Study as part of a recreational master plan study for the West Virginia University Institute of Technology Extreme Sport Committee. The study contained plans for renovation of an existing dock, fuel slips, boat rental slip expansion, a boat trailer parking lot, vehicle parking, camping sites and overflow parking an a bicycle trail along the Kanawha River.



## Nitro Boat Launch Master Plan

TERRADON Corporation was responsible for the design of schematic plans for the Nitro Boat Launch in Nitro, WV. The master plan contained boat docks, an access road and parking lot to provide the local community with a recreational outlet to the Kanawha River.



NITRO BOAT LAUNCH  
SCHEMATIC PLAN

**TERRADON**  
P.O. Box 519  
Nitro, West Virginia 25143  
(304) 755-8291 FAX 755-2836  
LANDSCAPE ARCHITECTS • ENGINEERS • PLANNERS



## 4) Past Projects

# Greater Greenbrier Sports Complex Master Plan

TERRADON provided Master Planning and Grading Design Services beginning in June 2013 for the Greater Greenbrier Sports Complex located north of Lewisburg, WV.

The work was divided into five phases, and includes:

- Master Planning
- Grading Study
- Full Construction Documents
- Utility Layout
- Road Design
- Erosion and Sediment Control.



## 4) Past Projects

### Designed Water System Extensions

PROJECT	FUNDING	COUNTY	20" MAIN	16" MAIN	12" MAIN	8" MAIN	6" MAIN	2" MAIN	BOOSTER	TANK	GALLONS
CENTURY/VOLGA EXTENSION - AML	AML	BARBOUR				17776	54223	7415			
RT 34 SOUTH / PUTNAM EXTENSION	PCC/WVAW	PUTNAM			28900						
CABELL COUNTY EXTENSIONS	SRPSD/WVAW	CABELL				68568	24293	11610			
RT 60 WEST EXTENSION	SRPSD/WVAW	CABELL		51110							
LENS CREEK BOOSTER	WVAW	KANAWHA							1		
LONDON TANK	WVAW	KANAWHA								1	500,000
RT 34 SOUTH / HAMLIN EXTENSION	PCC/WVAW	LINCOLN			36750	916		820			
MELISSA ROAD RELOCATION	WVDOH	CABELL			12722	770					
KANAWHA COUNTY EXTENSIONS	KCRDA/WVAW	KANAWHA			1351	16310	3702	3783	1	1	150,000
PUTNAM COUNTY EXTENSIONS	PCC/WVAW	PUTNAM				5650	2372				
POND GAP EXTENSION - AML	AML	KANAWHA				4200	38000	1250	1	1	100,000
ROBY ROAD BRIDGE WATER RELOCATION	WVDOH	CABELL	835								
AVIS BRIDGE WATER RELOCATION	WVDOH	SUMMERS			400						
TOWN RUN - AML	AML	LEWIS				6500	800	1600			
WITCHER CREEK - AML	AML	KANAWHA			4040	15350		1890			
GARRISON AVE. BOOSTER	WVAW	KANAWHA							1		
HAL GREER BLVD. RELOCATION	WVDOH	CABELL		4000	125	500	125	475			
LEFT FORK UNION RIDGE EXTENSION	SCBG/SRPSD	CABELL				36500	8500	7000			
KANAWHA CO 2003 EXTENSIONS	SCBG/KCRDA	KANAWHA				24500	19000	10500			
LINCOLN CO. 911 CENTER EXTENSION	LCC	LINCOLN				2765	35	25			
GLEN JEAN ARMORY EXTENSION	WVARG	FAYETTE				2200					
UPPER FRAME PHASE I EXTENSION	SCBG/KCRDA	KANAWHA				58000	7000	6000	1	1	150,000
PENNSYLVANIA AVE. REINFORCEMENT	WVAW	KANAWHA	1250								
BELLE AVE. / DUPONT REINFORCEMENT	WVAW	KANAWHA	1810	20							
ROBINSON CREEK RELOCATION	WVDOH	BOONE				860		180			
MARTHA BRIDGE RELOCATION	WVDOH	CABELL					1800				
ELK TWO MILE RELOCATION	WVDOH	KANAWHA			620			205			
BELLPOINT BRIDGE RELOCATION	WVDOH	SUMMERS			1110						
HICKORY RIDGE TANK	SRPSD	CABELL								1	139,000
YATES CROSSING RELOCATION	WVDOH	CABELL				975		85			
FORT LEE REINFORCEMENT	VAW	Hopewell, VA			3740	3765	130	160			
ROCK BRANCH RELOCATION	WVDOH	PUTNAM					670				
PINCH TANK	WVAW	KANAWHA								1	750,000
DOW WATER RELOCATION	WVAW	KANAWHA	3500	508							
OAK HILL WATER MAIN REINFORCEMENT	WVAW	FAYETTE			1770	1695					
LINCOLN CO. HIGH SCHOOL EXTENSION	WVAW	LINCOLN			2060	1530					
ELK RIVER 16" REINFORCEMENT	WVAW	KANAWHA		9950	500	120					
LOCHGELLY ROAD RELOCATION	WVDOH	FAYETTE			1650	1100	500				
HERBERT HOOVER HIGH SCHOOL EXTENSION	WVAW	KANAWHA			2500	250					
MT. ZION EXTENSION	WVAW	SUMMERS				2260	90	580	1		
SEGAR HILL EXTENSION	WVAW	WAYNE				11500		750			
RT 60 REINFORCEMENT	WVAW	CABELL		9500		200					
POCATALICO BOOSTER	WVAW	KANAWHA							1		
BACK FORK ELK RIVER EXTENSION	SCBG/WCC	WEBSTER				10950	2945	2110			
3RD AVENUE REINFORCEMENT	WVAW	CABELL		5300		450	100	100			
ELK RIVER 12" REINFORCEMENT	WVAW	KANAWHA			11500						
KELLYS CREEK RELOCATION	WVDOH	KANAWHA				105		260			
CHESAPEAKE RELOCATION	WVDOH	KANAWHA				890		115			
PEYTONA ESTATES	WVAW	BOONE					1040	4155	1		
WEST HAMLIN REINFORCEMENT	SRPSD	LINCOLN			1670						
QUEEN SHOALS BOOSTER	WVAW	CLAY							1		
ASHFORD BRIDGE RELOCATION	WVDOH	BOONE					731				
ELEANORE EXTENSION	WVAW	PUTNAM					3650				
BALL OIL EXTENSION	WVAW	FAYETTE				775					
UPPER FRAME PHASE II EXTENSION	SCBG/KCRDA	KANAWHA				35600	23730	10700			
CABELL CO 2006 EXTENSIONS	SCBG/SRPSD	CABELL				19276	53574	15652			
NEW HOPE TANK	WVAW	MERCER								1	1,000,000
HOPEWELL REINFORCEMENT	WVAW	Hopewell, VA			2465						
SEVENMILE CREEK RELOCATION	WVDOH	CABELL				150					
RABEL MOUNTAIN EXTENSION	WVAW	KANAWHA			14300						
UPPER FISHERS BRANCH / GUTHRIE	CORP/KCRDA	KANAWHA			2800	8700	7000	1750	1		
GUTHRIE TANK	EPA/KCRDA	KANAWHA								1	200,000
GLENDENIN EXTENSION	WVAW	KANAWHA			15000	3350	700	500			
PUTNAM CO 2007 EXTENSIONS	PCC/WVAW	PUTNAM				24000	33000	6310			
RT 2 REINFORCEMENT	WVAW	CABELL			5500						
FORT LEE REINFORCEMENT	VAW	Hopewell, VA			3550		220				
SISSONVILLE DRIVE RELOCATION	WVAW	KANAWHA			7500		550				
CATHCART DEVELOPMENT	PRIVATE	PUTNAM			3639	7654					
WASHINGTON WOODS SUBDIVISION	PRIVATE	JACKSON				620	3119	2912	1		
FAIRMONT WATER PARK	PRIVATE	MARION			3600	345					
WV TURNPIKE COMMISSION EXTENSION	WVTC	MERCER				6600					
OAK HILL MAIN STREET REINFORCEMENT	WVAW	FAYETTE			2300						
SAWMILL VILLAGE / SNOWSHOE	PRIVATE	POCAHONTAS				2800					
ARBUCKLE CREEK	WVAW	FAYETTE				6580	255				
DERRICKS CREEK EXTENSION	CORP/KCRDA	KANAWHA				27700	450	1200			
JANE LEW EXTENSION	WVAW	LEWIS				13175	60				
KANAWHA CO 2009 EXTENSIONS	SCBG/KCRDA	KANAWHA				12000	39000	11000			
DUTCH RIDGE PHASE II EXTENSION	KCRDA/WVAW	KANAWHA					40000	23300	1	1	20,000
DIANA	ARC/WVAW	WEBSTER				49000	2270	2970		1	100,000
MANILLA RIDGE EXTENSION	SCBG/PCC	PUTNAM				29240	3275	4350			
LEATHERWOOD / REAMER HILL EXTENSION	KCRDA/WVAW	KANAWHA				19600	48560	11720			
SUMMIT BECHTEL RESERVE	PRIVATE	FAYETTE		9617	17542	10347	18942	17590		2	8,000,000
AIR NATIONAL GUARD	PRIVATE	KANAWHA		10530	860	1000	370				
		TOTALS	7395	100535	190464	575667	444881	170922	12	12	11,109,000
			20" MAIN	16" MAIN	12" MAIN	8" MAIN	6" MAIN	2" MAIN	BOOSTER	TANK	GALLONS

1,489,864	282.2
TOTAL LF	MILES



## 5) Project Approach

- During the project kick off meeting with personnel from the WVDNR and Greenbrier State Forest, TERRADON will determine the expectations of the Owner in regards to scope of project and budget requirements.
- We will then thoroughly review all available existing construction plans to become familiar with the facility.
- TERRADON will also visit the site and perform an in depth inspection of the existing facilities to quantify and prioritize repair items or determine total replacement.
- Once the scope of work is determined, TERRADON will develop construction plans and project specifications.
- TERRADON will present and review the construction plans with the stakeholders.
- TERRADON will have qualified and knowledgeable personnel available during the bidding process to assist with questions, attend pre-bid meetings and assist with analyzing received bids.
- TERRADON will provide Contract Administration services during construction to ensure the project is built to satisfaction of the WVDNR.
- TERRADON will be available during all phases of the project for formal and informal meetings. Most phone conversations will be followed up with an email confirming the topics discussed and action items.