

ENDOR

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

DNRB11059

B04-558-2316

PAGE 1

ADDRESS CORRESPONDENCE TO ATTENTION OF FRANK WHITTAKER

01-a

RFQ COPY TYPE NAME/ADDRESS HERE Thrasher Engineering, Inc. 30 Columbia Blvd. Clarksburg, WV 26301

DIVISION OF NATURAL RESOURCES PARKS & RECREATION SECTION

324 4TH AVENUE SOUTH CHARLESTON, WV 25303-1228 304-558-3397

DATE PRINTED TERMS OF SALE SHIP VIA FOB: FREIGHT TERMS: 02/16/2011 BID OPENING DATE: <u>03/22</u> 2011 TIME OPENING CAT LINE QUANTITY UOP ITEM NUMBER UNITPRICE AMOUNT 0001 ٦S 906-00-00-001 1. ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL EXPRESSION OF INTEREST (EOI) THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF NATURAL RESOURCES, IS \$OLICITING EXPTRE\$SION\$ OF INTEREST FOR ARCHITECTURAL ånd engineering services for ski area improvements AT CANAAN VALLEY RESORT STATE PARK, TUCKER COUNTY, WV PER THE ATTACHED. ALL TECHNICAL QUESTIONS MUST BE SUBMITTED IN WRITING T Frank whittaker in the WV purchasing division via email AT FRANK.M.WHITTAKER@WV.GOV OR VIA FAX AT 304-558-4115. DEADLINE FOR ALL TECHNICAL QUESTIONS IS 03/02/2011 AT 4:00 PM. ALL TECHNICAL QUESTIONS WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE. EXHIBIT 10 DNRB11059 REQUISITION NO : ADDENDUM ACKNOWLEDGEMENT HEREBY ACKNOWLEDGE RECEIPT OF THE FOILOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND OR SPECIFICATION, ETC. SEE REVERSE SIDE FOR TERMS AND CONDITIONS SIGNATURE 04-624-4108 ADDRESS CHANGES TO BE NOTED ABOVE 89052544



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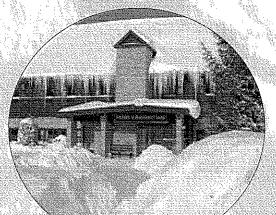
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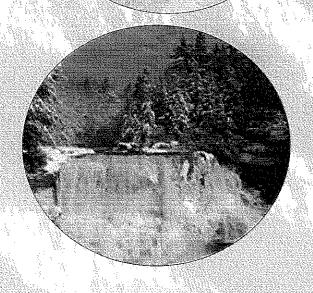


To the West Virginia Division of Natural Resources

Parks and Recreation Section



Canaan Valley Resort State Park
Ski Area and other Improvements
DNRB11059



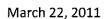
March 22, 2011



30 Columbia Boulevard Clarksburg, West Virginia 26301 304-624-4108 304-624-7831-Fax thrasher@thrashereng.com www.thrashereng.com

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West Virginia Division of Natural Resources Parks and Recreation Section c/o Mr. Frank Whittaker State of West Virginia Purchasing Division 2019 Washington Street, East Charleston, WV 25305

RE: Expression of Interest – RFQ # DNRB11059

Canaan Valley Resort State Park Ski Area and other Improvements

Dear Mr. Whittaker and Members of the Selection Committee:

Thrasher Engineering, Inc. (Thrasher) is pleased to submit our Expression of Interest (EOI) and our qualifications to the West Virginia Department of Natural Resources (DNR) to provide architectural/ engineering services for improvements to the Canaan Valley Resort State Park.

As demonstrated in this EOI, Thrasher Engineering has compiled a team of experienced personnel that possess not only the technical skills needed for this project, but also they possess the project management skills that will ensure the project is designed and completed within the time frame and budget parameters set by the DNR and funding sources. We greatly appreciate the opportunity to present our qualifications and look forward to becoming your partner on this endeavor.

In addition to our thorough understanding of your needs, the benefits we offer as the engineering firm selected for this project include:

- 1. Personnel: The engineering personnel Thrasher Engineering has assigned to this project are experienced in the study and design of water sources, water lines and the hydraulic systems needed for recreational area purposes. Additionally, our inhouse team includes our landscape architect/planner, survey crews and construction monitoring personnel. We have also added the services of ZMM, Stevens Engineering, John Higgins, and Moody and Associates, as sub-consultants. ZMM is a leading West Virginia architectural firm with WV DNR experience. Stevens Engineering brings specialization in ski and sled area design and equipment specification. Stevens Engineering has worked with the West Virginia DNR in a consulting role for numerous years. John Higgins specializes in design of shooting ranges. Moody and Associates is a leading firm in identification and drilling for water wells.
- 2. Experience with Canaan Valley and winter recreation facilities: Throughout our 28-year history, Thrasher has provided engineering and field services for numerous clients in Tucker and surrounding counties. Additionally, Thrasher has provided services to recreation facilities including Canaan Valley Resort, Timberline and Snowshoe Mountain Resort. Our team knows the terrain and the environmental conditions of the area which will be a benefit in moving the project forward.

3. Accurate Project Estimating: Once the DNR agrees on the final plans for the project, you will experience why our track record of accurately estimating construction costs is one of the strongest reasons we have repeat customers and long-term relationships with our clients. Through good design and careful estimating, we save clients time and money.

Along with these aspects of our abilities, our philosophy of utilizing a *teamwork approach* and single source management will be the key factor to a successful project. As the lead firm for the project, Thrasher will take the responsibility for getting the project completed to your satisfaction and meeting the budget and time requirements. I will supply a "one stop shop" for answers to your questions, problems or concerns.

At Thrasher Engineering, we listen to our clients and their needs, we work hand-in-hand with regulatory agencies to meet their criteria and we work closely with our subconsultants. Our success with this approach is shown in the repeat clientele and references included with the representative projects listed in this proposal.

We look forward to the opportunity of meeting with representatives of the DNR to discuss our approach to this exciting project. We understand your need for someone to successfully manage this project, to deliver it on time and on budget. We will deliver.

Sincerely, THRASHER ENGINEERING, INC.

Chad Piley

Chad Riley, PE

Principal-in-Charge / Project Manager

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EXECUTIVE SUMMARY



PROJECT UNDERSTANDING

The objectives of the Canaan Valley Resort State Park Ski Area and other Improvements project is to provide necessary professional architectural, engineering and related services to design and construct improvements to the ski area and other facilities which may include; increasing the potable water supply for the park, repairs to the ski area parking lots, construction of a shooting range, installation of a conveyor type surface lift to move customers from the base facility to the lower ski lift area, renovations or replacement of surface lift components, renovation and extension of the snow making systems and other related improvements.

Specifically, improvements to the facilities at Canaan Valley Resort State Park may include:

- Construction of a "Magic Carpet" type surface conveyor suitable to move skiers from the base facility to the lower ski lift area in the ski season and or to serve as a "Trutle Slide" in the summer.
- > Construction of a Wobble Clay shooting range.
- Construction of one additional Water Well in a different aquifer tan that in use at present.
- > Repairs to a gravel lot in the ski area and repaving another.
- > Necessary renovations to existing surface lifts and or relocation of one or more of these lifts.
- > Renovation expansion and repairs to the snow making capabilities of the facility, including new distribution lines and repairs to snow making ponds.
- > Specifications of new snowmaking guns.
- > Renovations or expansion of existing buildings intended to serve the ski area complex.
- > Construction of a new building to improve the service the park provides to the public near the existing location of C-Lift and the tubing area.
- > Phase 2 of an ongoing effort to improve the golf course drainage that will include replacement of sod over drainage lines installed previously.
- Repair or relocation of some ski tails in necessary to improve the facilities operation and safety.
- final engineering design and construction bidding documents;
- > Construction contract administration.

Based upon these parameters, Thrasher Engineering, Inc. (Thrasher) - West Virginia's leading engineering firm - has assembled a team whose personnel and expertise combine to provide the DNR with the right management and abilities to get the job done.

We offer the following summary of our team capabilities as they apply to the scope of services needed by the DNR for the Canaan Valley Resort Park Ski Area and other improvements project.

PRIOR EXPERIENCE WITH SIMILAR ASSIGNMENTS

SKIING / WINTER RECREATION AREAS

Various recreational areas have benefitted from Thrasher's expertise in engineering and architectural design and the support services necessary to bring projects to fruition. Our work at Chief Logan State Park, Canaan Valley State Park, Timberline Resort and Snowshoe Mountain Resort has ranged from civil engineering design for structural site development, utilities, sidewalks and roadways to landscape architecture, survey, and construction management and materials testing.

We have included ZMM on our team to serve as the project architect. ZMM is a West Virginia company that has a wealth of DNR state park and recreation design experience. To provide the highest level of professional expertise in ski area design, we have also teamed with Stevens Engineering of New London, New Hampshire. Rounding out our team is John Higgins a Wobble Clay shooting range specialist and Moody and Associates providing hydro-geologic services.

WATER SUPPLY AND DISTRIBUTION

Our 28 year history in water treatment and distribution projects throughout rural areas of West Virginia allows us to bring extensive "know how" in the location of water sources, supply pond construction / enlargement and water distribution lines. As an example, working with Moody and Associates, Thrasher was responsible for the identification and drilling for four (4) water well sources to serve Hazelton Federal Prison and the northeast section of Preston County. This project was in conjunction with a water treatment plant and distribution system project performed for the Preston County Economic Development Council.

Additionally, Thrasher's team brings experience in the hydraulic design for pump stations. The firm has completed over 60 water distribution projects since our formation, which have included the technical design for these stations. Most recently, and of significance to the Canaan Valley project, is our design and construction administration services for an upgrade to snowmaking water system at Snowshoe Mountain Resort.

MANAGEMENT AND STAFFING CAPABILITIES

As the leading civil engineering firm in West Virginia, Thrasher has the personnel resources to address numerous projects, both big and small, simultaneously. Our resources allow us to draw the right personnel for any project from more than 160 professionals, including Registered Professional Engineers, Registered Professional Surveyors, Environmental Engineers, Engineer Interns, Graduate Engineers, Landscape Architect, Project Designers, Engineer Technicians, CADD Operators, Construction Inspectors, Surveyors, and Office Support.

The staff that will be assigned to the Canaan Valley project includes Chad Riley, P.E. as Principal-in-Charge and Project Manager, Matt Fluharty, PE as Project Engineer, Tom Urquhart, PE, BCEE providing hydraulic studies, and Travis Adams to provide environmental assessment and permitting. Jim Christie, RLA will provide landscape architecture related design. Survey and construction monitoring staff if needed will be assigned under the direction of Aaron Denham. Woody Thrasher, PE – the firm President - and Ken Moran, PE, PS will provide Quality Assurance and Quality Control.

Sub-consultants on the team include architects ZMM; Moody and Associates to provide hydro-geological services; Stevens Engineering for design related to the "Magic Carpet" conveyor and other ski related design; and John Higgens who specializes in clay shooting ranges.

The approach to specific projects and tasks vary by the scope of services necessary; however, Thrasher's approach to management is one that sets us apart from other firms: we successfully practice single source management. Although the Thrasher team personnel chart shows various department heads and personnel from Thrasher representing specific disciplines and our sub-consultants, the DNR will have only two direct points of contact: the Chad Riley, the Principal-in-Charge / Project Manager and Ross Stevens of Stevens Engineering due to his specialized field and previously established relationship with the DNR. All requests and project communication will be filtered through these individuals. This policy also applies to any sub-consultants we may utilize.

ACCURACY IN ESTIMATING AND PREPARING PLANS AND SPECIFICATIONS / CONSTRUCTION DOCUMENTS

A project that is well designed is one in which the work to be done is clearly defined, allowing contractors to reduce their risk factor, resulting in a more competitive situation and lower bid prices. A well-designed project often has more bidders with a closer spread in bids than a poorly designed one. Accurately estimating construction costs is vitally important. A capable engineering firm provides good estimates, even though there may be several years between estimating and construction. Due to budget limitations for publicly funded projects, accurate estimating is a must to avoid exceeding the available allocated budget.

Thrasher offers proven proficiency in project construction estimating vs. contractor's bid. *An average of nearly 90% of infrastructure projects estimated since 2005 received contractors' bids below or within 10% of our engineers estimate.*

CONSTRUCTION DOCUMENTATION AND BIDDING SERVICES

Thrasher's Project Engineers thoroughly review preliminary plans to ensure accuracy and constructability. Based upon that review, we prepare the necessary bidding and contracting documents. A well-designed project has more bidders with a closer spread in bids than a poorly designed project. Thrasher Engineering has earned a reputation among funding agencies and contractors for well-designed projects resulting in more bidders and costs that meet funding allocations. During the past two years, Thrasher Engineering's public utility projects have averaged six (6) bidders per contract; more recent projects have experienced up to 18 bidders which is a very price competitive arena with positive results for our clients. To promote your projects to potential bidders, Thrasher Engineering includes project information in the "Out to Bid" section of its Web site www.thrashereng.com. The site is updated with new plan-holders daily.

PARTICIPATION IN EVALUATING OF BIDS RECEIVED

It's not enough to receive multiple bids that are competitive. Each bid has to be thoroughly reviewed and determined to meet bidding requirements. Our staff will be on hand to assist in the process of evaluating the bids during the bid opening and will also assist in making sure the selected contractor is aware of their responsibilities. Your Principal-In-Charge and Project Manager, Chad Riley, P.E., and his

team have decades of combined experience in making sure this phase of the process is done to the desire of the client and to meet the requirements of all funding agencies.

CONCLUSION

Thrasher Engineering's philosophy of "Successful Projects, Repeat Clientele" is founded on the principle of client satisfaction and repeat business. We do what it takes to assure satisfaction and to ensure project success, and want to work with the West Virginia Department of Natural Resources to provide the necessary enhancements to your infrastructure.

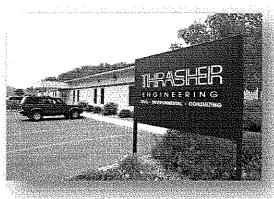
FIRM OVERVIEW



HISTORY

Founded in 1983, Thrasher Engineering, a West Virginia owned and operated full-service company has provided engineering design and construction services for infrastructure throughout the State of West Virginia for more than 25 years.

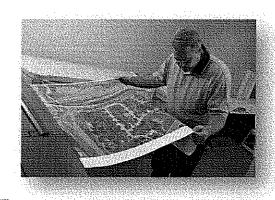
H. Wood "Woody" Thrasher and his father, the late Henry A. Thrasher, both graduates of West Virginia University's College of Engineering and Mineral Sciences, formed Thrasher Engineering in 1983 to provide civil engineering services focused on publicly funded work throughout the State of West Virginia. Since that inception, Woody Thrasher has grown Thrasher Engineering, Inc. into West Virginia's largest privately-owned engineering firm and formed Resource Engineering Group, the State's most qualified corporation of affiliated companies offering civil and environmental engineering, architecture, survey, construction management, inspection and materials testing services.



Throughout our history, Thrasher Engineering has provided site development planning and engineering design services for many successful building projects, working with numerous architectural firms and contractors. Based on that success, in 2004, we added architectural design to the scope of services we provide in-house.

LOCATIONS

Thrasher Engineering is based in *Clarksburg, West Virginia* with branch offices in *Charleston* and *Beckley West Virginia* along with *Oakland, Maryland*. The Oakland office was opened in early 2004 to serve customers in the eastern portion of West Virginia and the western portion of Maryland, while our Charleston and Beckley offices are able to effectively meet the needs of our southern West Virginia clients, well into Virginia.



SERVICES

Designing Practical Solutions With Exceptional Service

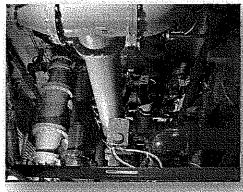
From engineering to architecture to construction monitoring and materials testing, the mission of Thrasher Engineering, Inc. is to provide innovative solutions to our clients' challenges and offer every client the highest level of service possible while adhering to principled business practices. Since 1983, that has meant a hands-on approach to each and every project. Whether it is a multi-million dollar engineering or architectural project, or a site survey for a private individual – we utilize our talent and expertise, resulting in our ongoing track record of success.

With multi-discipline capabilities, Thrasher Engineering covers all of the professional services needed to deliver successful projects to both public and private clientele. The firm's roots were planted in civil engineering and consulting services for public utility projects. Over the years, our success in that area allowed us to branch out, expanding our services to meet both the needs of our clients and the growing need for more responsive and effective solutions. Based on that success, in 2004, we added architectural design to the scope of services we provide in-house.

Disciplines practiced and areas of service include:

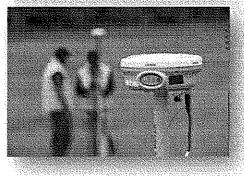
□ Civil Engineering

- Water Treatment & Distribution
- Wastewater Collection & Treatment
- Land & Site Development
- Roadways / Bridges /Streetscapes
- o Airports
- o Storm Water Systems
- □ Architecture
- □ Land Planning And Landscape Architecture
- □ Parks & Recreation
- □ Survey
- □ Construction Monitoring
- □ Materials Testing
- □ Environmental Services
- □ Pipeline Inspection
- ☐ GIS Mapping And Software Development









UTILITIES EXPERIENCE – THRASHER ENGINEERING



PRESTON COUNTY EDA / PRESTON COUNTY PSD #4 - WATER WELLS / TREATMENT AND DISTRIBUTION

Client/Contact:
Preston County EDA
330 East Main Street, Ste 100
Kingwood, WV 26537
304-329-2299

Project Location:
Preston County, West Virginia

Funding:
US EDA Grant
WVIJDC Grant
Federal Bureau of Prisons

Bid Information: \$6,237,635

Total Project Cost: \$7,190,000

Project Status: Completed

This project consisted of preliminary engineering, survey, design and construction management to provide water service to the U.S. Federal Prison located near Hazelton, WV.

The identification of additional water wells was an integral part of the project. Working with Moody and Associates, Thrasher identified three wells, two for daily use, depending upon need and a third back-up well.

Contract 1, Glade Run Water Treatment Plant.

Design and construction management of:

A 700 GPM water treatment plant, including 3 new water supply wells, Backwash holding and decant system,

Flocculation,

Clarification and filtration system along with necessary structures.

Contract 2, Water Line Extension.

Included the design and construction management of over 11 Miles of water line.

Contract 3, Elevated Water Storage Tank.

Design and construction management for a 1 Million Gallon water storage tank to serve the Federal Prison.

Contract 4, Storage Tanks: Design and Construction Management of four (4) water storage tanks including two (2) 100,000 gallon and two (2) 150,000 gallon water storage tanks.

SNOWSHOE MOUNTAIN RESORT - WATER SUPPLY / TREATMENT UPGRADE

Snowshoe Mountain Resort currently utilizes the same source of water to both service the businesses and residences of the resort area and for snowmaking purposes. Thrasher Engineering recently completed the engineering design to separate the water treatment intake lines from those for the snow making system. The design called for the installation of three (3) 500 gpm pumps to a llow for adjustments of needed flow based upon high occupancy vs. low occupancy occurrences at the resort.

Separation of the intakes also allows the snow making department to now utilize Snow-Max in their snow making efforts.

WATOGA STATE PARK – WATER AND WASTEWATER IMPROVEMENTS

Thrasher Engineering provided design and construction oversight services of various water and sewer improvements to the Watoga State Park systems.

Sanitary Sewer Projects:

Scope	of	services	inc	lud	ed:
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- ☐ Installation of a new force main to service the park,
- ☐ Installation of a new Island Lick gravity sewer system servicing nine (9) cabins,
- Demolition of the Bush Place Wastewater Treatment Plant and landscaping,
- Removal of the existing Riverside Pump Station and installation of a new grinder pump station to service two (2) cabins in Riverside Campground, and
- Retrofitting existing manholes with watertight lids in the Pine Run portion of the park.

Water Projects:

Scope of services include replacement of water distribution system lines, installation of iron and manganese removal filtration systems and cleaning of existing water reservoirs at the Island Lick, Pine Run and Bush Place locations of the park. Also included in this project was painting of the 10,000 gallon water tank servicing Riverside Campground.

LOST RIVER STATE PARK

Construction of a new wastewater collection system in Lost River State Park. Construction consisted of:

- ☐ 8750 LF of 4",6" and 8" gravity collection;
- 32 manholes,
- 28 clean-outs,
- Street repair,
- Erosion and sediment control, and
- Other numerous miscellaneous appurtenances.

This project also included:

- ☐ The construction of an underground electrical system,
- ☐ The installation of 6,400 LF of 7,200 volt cable-in-conduit, and
- ☐ 3450 LF of 12/240 volt cable in conduit.

Additionally, this project included the removal of approximately 49 poles and 12, 400 LF of overhead electrical lines.

CANAAN VALLEY STATE PARK

Canaan Valley State Park is located in an environmentally sensitive area in West Virginia. To accommodate an increase in skiers to the area, the base lodge was expanded. This expansion required the management of additional wastewater during peak operations.

Thrasher Engineering provided design, construction management and inspection services for this project. The project included the review of discharge monitoring reports and water consumption records for the previous five years, and the evaluation of treatment and water-reuse alternatives. Additionally, Thrasher Engineering recommended and designed a **13,000 gallon flow equalization basin** to attenuate peak hydraulic loadings and provided uniform organic loadings. Construction of this project has been completed.

ADDITIONAL WATER DISTRIBUTION – WATER SOURCE/TREATMENT/DISTRIBUTION CLIENTS

Hamrick Public Service District	304-478-2898
Hardy County Public Service District	<i>304-530-3047</i>
Gilmer County Public Service District	<i>304-462-4272</i>
Chestnut Ridge Public Service District	304-497-4935
Greater Harrison Public Service District	304-745-3134
Mingo County Public Service District	304-235-2244
Hodgesville Public Service District	304-472-1904
Green Spring Valley Public Service District	304-492-5842
Lewis County Economic Development Authority	304-269-4993
Clinton Water Association	304-292-3088
City of Mannington, WV	<i>304-986-2700</i>
City of Bridgeport, WV	304-842-8200
City of Parsons, WV	304-478-2311
Town of Terra Alta, WV	<i>304-789-6211</i>
Town of Elizabeth, WV	304-275-3400
Town of Worthington, WV	<i>304-287-2238</i>
City of Weirton, WV	304-797-8544
City of Kingwood, WV	304-329-1225

SITE DEVELOPMENT EXPERIENCE - THRASHER

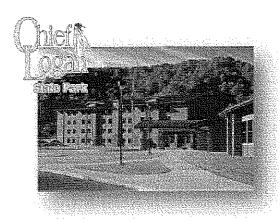


CHIEF LOGAN STATE PARK - LOGAN COUNTY, WV

Thrasher Engineering provided all civil engineering services for the development of a Conference Center for Chief Logan State Park in Logan County, West Virginia. The scope of services included:

Site Engineering:

Mass grading, drainage, site sections, sediment and erosion control, detailing as required, specification for the site preparation plans.



Utility Design:

Location, detailing as required and specification on site for all utilities including the placement and detailing of a package wastewater treatment plant.

Roadway Design:

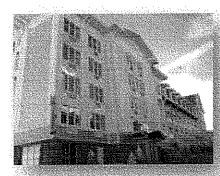
Alignment, profiling, sections, grading, drainage, pavement design, detailing as required specification for the access road and any parking or vehicular travel areas

SNOWSHOE MOUNTAIN RESORT – POCAHONTAS COUNTY, WV EXPEDITION CENTER AND SENECA CONDOMINIUMS

Thrasher Engineering provided site development engineering along with associated field services for the construction of two (2) condominium buildings at Snowshoe. Each of the structures is located in what is referred to as the "North Village" of the mountain resort. Services provided by Thrasher Engineering included:

- □ Ground Survey
- Utilities Mapping for the North Village
- Coordination of Geo-technical services
- Design of All Site Utilities
- □ Storm Water Drainage Plans
- ☐ Health Department and Department of Environmental Protection Permitting
- Consultant Services During Construction
- □ Value Engineering Services

All designs took future extensions of N orth Village i nto consideration. Thrasher Engineering was a n i ntegral p art o f t he design build team to adjust the project scope to meet the proposed budget.



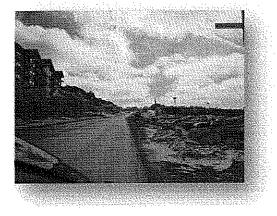


SOUTH VILLAGE PARKING LOT EXPANSION:

- □ Design (Grading Plan, Erosion and Sediment Control, Storm Water, Parking Space Layout)
- ☐ Final Design Completed
- Permitting in final stages.

SNOWSHOE DRIVE WIDENING PROJECT

- □ Survey
- □ Design
- □ Storm Water Drainage
- □ Erosion and Sediment Control





LOCATION: 222 Lee Street, West Charleston, WV

CONTACT: Phone 304.342.0159 Fax 304.345.8144 ww.zmm.com ZMM was founded in 1959 in Charleston, West Virginia by Ray Zando, Ken Martin, and Monty Milstead. Since the inception of the firm, ZMM has been dedicated to providing an integrated approach to building design for our clients. ZMM delivers this integrated approach by providing all building related design services, including architecture, engineering (civil, structural, mechanical, and electrical), interior design, and construction administration from our office in Charleston. Our integrated design approach makes ZMM unique among architectural firms in West Virginia, and helps to ensure the quality of our design solutions by providing more thoroughly coordinated construction documents.



Over the last decade, ZMM has become a leader in sustainable or 'green' design in West Virginia. In addition to participating in sustainable design and construction seminars throughout the State (Beckley, Fayette County, Morgantown, Charleston, and Parkersburg), ZMM designed one of the first sustainable educational facilities in West Virginia (Lincoln County High School). ZMM's unique design approach has proven invaluable on projects that employ sustainable design principles, which often require a more integrated approach to building design.

As ZMM enters our second half-century providing professional design services in West Virginia, we remain committed to the ideal of providing high quality, client focused, design solutions that meet budget and schedule requirements. This commitment to quality has been recognized through both State and National design awards, as well as through the long-term client relationships



ZMM

LOCATION: Camp Dawson, West Virginia

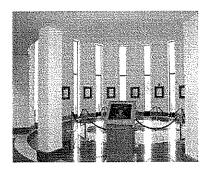
SIZE: 148,066 SF

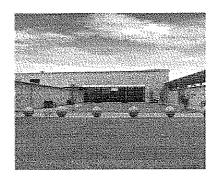
COMPLETION: 2002

COST: \$21 Million

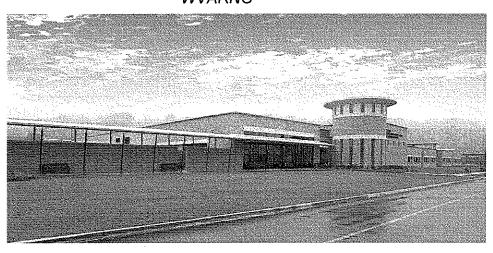
CONTACT: MG Melvin L. Burch WVARNG 1703 Coonskin Drive Charleston, WV 25311

304.561.6450





Robert C. Byrd - Regional Training Institute WVARNG



The Robert C. Byrd Regional Training Institute at Camp Dawson is a new 148,000 SF facility designed to provide training, dormitory, dining, and recreational facilities for the West Virginia Army National Guard. The facility, which includes 183 private dormitory rooms in addition to a wide range of training spaces is designed to accommodate a variety of both military and civilian training functions.

In addition to the housing and educational components, the facility also includes dining and recreational functions, including: a full-service dining hall; a snack-bar; a fitness center; an auditorium; as well as multiple group "break-out" or study rooms.

The design employs a large cylindrical mass that marks the main entry where guests can coordinate both their housing and educational needs. The housing wing is joined to the recreational and educational components with a large gathering/transitional space that often serves as an informal meeting area. Due to the success of the project, and growing use of the facilities, ZMM is currently assisting the West Virginia Army National Guard with training and dormitory expansions.



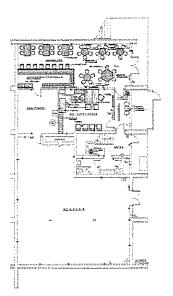


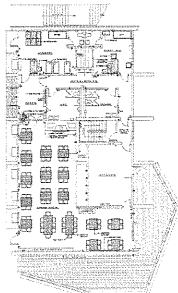
Canaan Valley State Park, State Park Lodge

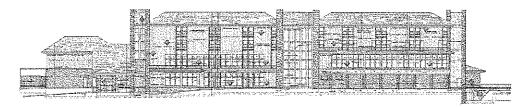
WV Department of Natural Resources

LOCATION: Davis, West Virginia

COMPLETION: Un-Built Project







In 1968 ZMM was selected to provide design services for a variety of facilities at Canaan Valley State Park. Many of the facilities remain actively utilized. A description of the various components can be found below.

An original design for a four-story lodge and convention facility containing 60 guest rooms, dining, and kitchen facilities, a conference facility seating 300, an indoor pool and support space, was not constructed. Funding restraints required the construction of a lodge of reduced scope.

The original design concept utilized masonry bearing walls and a precast floor system with exterior materials of stone and wood to reflect the natural environment and concept of the park. Each guest room was designed to contain two double beds, bath, and toilets facilities.

Other Facilities

- New Park Cabins
- Golf Club House
- Ski Base Facility
- · Park Headquarters Building

These one and two-story buildings were designed to withstand the harsh winter climate of Canaan Valley and are of wood frame and stone masonry construction. Exposed laminated wood beams are used in selected areas for aesthetic and structural purposes. Native materials, both for interior and exterior applications, have been used to help the buildings blend in with their surroundings.

Each building has its own, energy efficient, heating and cooling system, which on concert with the well insulated walls and roof keep overall energy costs to a minimum. The buildings were, each, situated on their respective sites to create a minimum of site disruption.



Blackwater Falls State Park

WV Department of Natural Resources

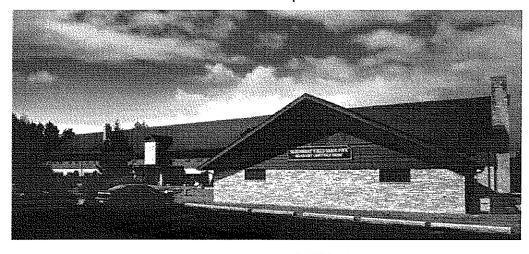
LOCATION: Davis, West Virginia

COMPLETION: 1998

COST: \$2,600,000

SIZE: 10,400 SF Addition

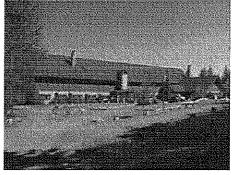
CONTACT: Robert Gilligan Park Superintendent P.O. Drawer 490 Davis, WV 26260 304.259.5216

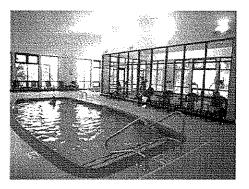


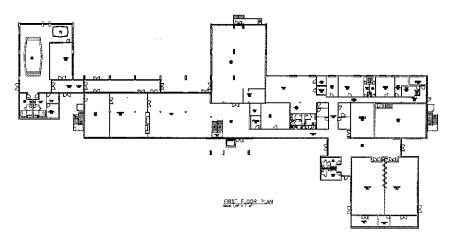
ZMM completed an addition and renovation to the historic Blackwater Falls State Park lodge building. This project included a 5,400 SF conference center addition providing a large 3,000 SF dividable conference room, entrance, lobby, toilets, and storage facilities.

Existing building roof lines and materials were used for the building addition to the original lodge design.

A 5,000 SF spa addition was added to the North Western end of the building provide a swimming pool, large Jacuzzi and a glass walled exercise area with locker rooms/showers. Interior office areas were also renovated with upgrades to mechanical, electrical, and fire alarm









Additional West Virginia State Park Experience

WV Department of Natural Resources

Lodge / Convention Center

Beech Fork State Park (Un-Built)

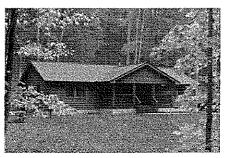
Miscellaneous Services:

Pipestem State Park Hawks Nest State Park

Twin Falls State Park

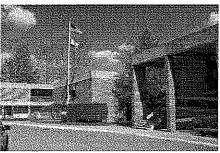
Lodge and Convention Facility Expansion Master Plan

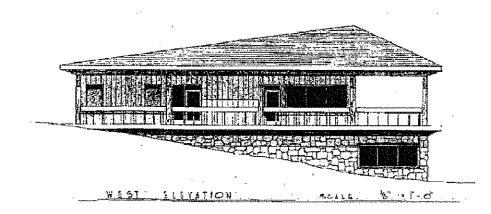
- 25,000 SF Increasing Room Capacity from 20 to 50 Rooms
- The Expansion Increases the Dining, Kitchen, and Meeting Space for up to 200 People

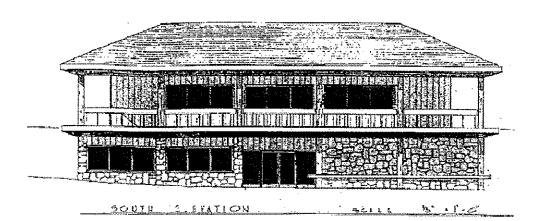














Cacapon Resort State Park

WV Department of Natural Resources

LOCATION: Berkeley Springs, West Virginia

SIZE:

7,600 SF New 8,100 SF Renovated

COMPLETION: 1998

COST: \$3,200,000

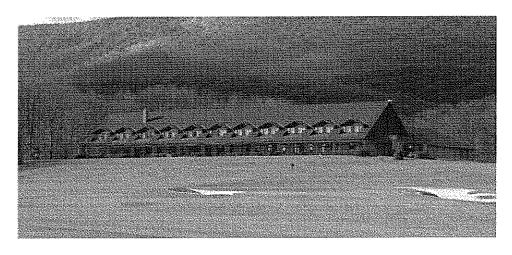
CONTACT:

Tom Ambrose
Assistant Superintendent
818 Cacapon Lodge Drive
Berkeley Springs, WV
25411
304.258.1022





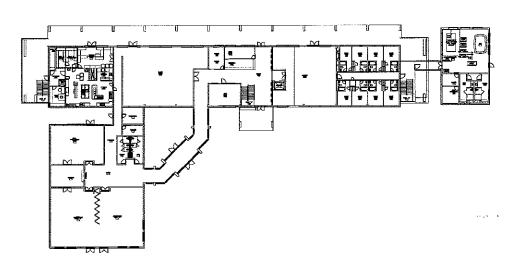




In 1998 ZMM completed an addition and renovation project to Cacapon State Park Lodge Building. This project included a new 7,600 SF conference center, providing a large 3,000 SF dividable conference room, a smaller 1,000SF conference room with connecting entrance lobby, toilets and storage facilities.

The existing kitchen facility was enlarged and renovated to provide banquet capabilities. An elevator was added to improve access to upstairs bedrooms and downstairs multi-use areas. The downstairs multi-use and meeting area were renovated along with the reception and office area.

Bid documents were prepared for a 2,500 SF health spa addition to the lodge building, but this portion of the project was not constructed. Other ZMM projects completed at Cacapon State Park include life safety compliance renovations to the WPA Old Inn building and a 4 bedroom cabin that is ADA accessible.



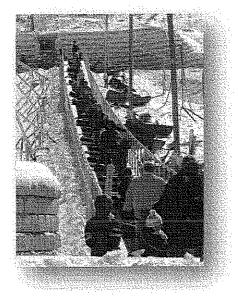
FIRM OVERVIEW – STEVENS ENGINEERING – SKI SERVICES SUB-CONSULTANT



Stevens Engineering is recognized throughout North America for responsive planning and engineering design. With nearly 30 years of service to its clients, Stevens Engineering is an accomplished source for passenger ropeway engineering, planning and design of lift and trail systems, snow tubing park design and mountain surveying.

Lift relocation engineering and the design of upgrades and modifications to existing lift installations are technical specialties at the core of the firms' capabilities. Stevens Engineering frequently assists lift manufacturers with the design of new installations, major lift upgrades and lift profile surveying. Ski area clients often seek out the technical expertise and the knowledge of governing standards and regulations Stevens Engineering has to offer for assistance in preparing comprehensive and result oriented bid specifications for future lift purchases and for expert witness representation.

Stevens Engineering has designed many facilities that are similar to the proposed improvements for Canaan Valley. They have designed a variety of sites that utilize conveyors as a means of transporting foot passengers and or skiers from one location to another. Some of these projects include: Mount



Cranmore Resort in New Hampshire, Stone Mountain Park in Georgia, Ober Gatlinburg Snow Tubing in Tennessee and Snow Park Niagara in New York. We are also experienced in working on projects at State, Federal and Municipal Parks including: Franconia Notch State Park in New Hampshire, Adirondack Park in New York, Laurel Mountain State Park in Pennsylvania, Green Mountain National Forrest in Vermont and Oglebay Family Park in West Virginia.

For many years Stevens Engineering has worked for the State of West Virginia Department of Natural Resources as a passenger ropeway consultant for its ski lifts and aerial tramways at Canaan Valley, Hawks Nest and Pipestem Resort State Parks.



SELECTED CLIENTS FOR THE MOUNTAIN RESORT INDUSTRY

Squaw Valley - CA CNL Lifestyles, LLC - FLA Arrowhead Ski Area - NH Mount Isenglass Snow Park - NH Attitash - NH Cannon Mtn. - NH Crotched Mountain, Francistown, NH Dartmouth Skiway, NH Gunstock, NH Willis of New Hampshire Kaser North America - Grantham, NH Mount Cranmore - North Conway, NH Mount Sunapee State Park, NH Star Lifts, Sunapee, NH State of NH - Dept. of Parks and Recreation Proctor Academy, NH Rowell Hill - NH Moose Mountain - NH Ragged Mountain - NII Whaleback - Lebanon, NH **Bretton Woods - NH** Waterville Valley - Waterville Valley, NH King Ridge - New London, NH Snow Hill at Eastman - NH Sno-engineering, Inc. - Littleton, NH Poma of America - West Lebanon, NH Ragged Mountain, NH Tenney Mountain - New Hampshire Mountain Creek - NJ Hidden Valley - NJ Ober Gatlinberg, TN Burke Mtn. - VT Round Top, VT Bolton Valley, VI Stratton Mountain - VT Mount Snow - VT Smugglers Resort - VT Haystack, VT Mount Mansfield Resort - Stowe, VT Round Top, VT Sugarbush Resort - Warren, VT Mad River Glen - Fayston, VI Magic Mountain, VT Jay Peak Resort - Jay, VI Middlebury Snow Bowl - Middlebury, VT Bear Creek - VI

Wachusett Mountain - Princeton, MA

Otis Ridge - MA

Ski Bradford - MA

Nashoba Valley - MA Amesbury Sports Park - Amesbury, MA Blue Hills Ski Area - Canton, MA Conservation Tourism, LTD - MA Aon-Reed Stenhouse - ON Searchmont - ON Horseshoe Valley - ON Craigleith Ski Club - ON Cassels Brock & Blackwell - ON Dale Intermediaries Ltd. - Toronto, ON Hidden Valley Highlands Ski Club - ON Hughes, Amys - Toronto, ON Zurich Canada - Toronto, ON Snow Valley - Barrie, ON Berthoud Pass, CO Breckenridge, CO Howelson Hill, CO Jenlynn International, Inc. - Boulder, CO Stadeli USA - Boulder, CO Doppelmayr USA - Golden, CO Poma of America - CO Ski Snowstar - Ill Sun Valley Company - Idaho Mt. Crescent - Iowa Sleepy Hollow Sports Park - Iowa Norway Mountain - MI Ski Brule - MI Mt. Rohemia, MI Porcupine Mountain - MI U.S. Gypsum, MI Whiteface - Olympic Regional Development Authority - Wilmington, NY Catamount - NY Mount Peter, NY Gore Mountain - NY Partek Enterprises, Inc. - Pine Island, NY USMA, West Point - NY Big Tupper - NY Snow Park Niagara - NY Scotch Valley, NY Hunt Hollow, NY Ski Windham - NY Royal Mtn. - NY Belleayre Ski Center - NY Whitetail Ski Company - Mercersberg, PA Laurel Mountain State Park - PA Boyce Park Ski Area - Pittsburg, PA Willowbrock - PA

Ski Big Bear - PA

stevens-engineering.com

CONSULTANT OVERVIEW- JOHN HIGGINS - SHOOTING RANGE

John Higgins brings more than 32 years experience in starting, designing and building outdoor recreational facilities in the United States and abroad to include Blackberry Farm, Max McGraw Wildlife Foundation, The Greenbrier and numerous private facilities. Additionally, John is a Level III instructor with the National Sporting Clays Association and has coached several students to World Champion.

Prior to his move to the USA, John was a managing partner at Yeaveley Estate in Derbyshire, England. There he was a Managing Partner and event planner for the company. While at Yeaveley, John was also responsible for the planning and execution of outdoor leisure events for the guests of the prominent British hotel chain, Trust House Forte. Presently, John is the owner of the British American Sporting Club in Crawfordville, Georgia.

John's unique approach to leisure activities focuses on providing his clients with an outstanding experience as opposed to just an activity. His professional success is a direct result to his commitment to understanding the needs, wants and desires of his clients and then creating an experience that will fill those needs.

FIRM OVERVIEW- MOODY AND ASSOCIATES HYDROGEOLOGY SUB-CONSULTANT



Moody and Associates is dedicated to providing hydro-geologic services of exceptional quality in a practical and efficient manner. Moody and Associates, Incorporated is a privately owned corporation located in Meadville, Pennsylvania. The company was founded in 1891 and incorporated in 1954.

Ground Water Supply Services

Moody's staff of hydro-geologists, drillers and pump technicians can provide the complete range of services required for the development and maintenance of industrial, commercial or municipal ground water supply wells.

The services available range from hydro-geologic evaluation and well site selection through well drilling and construction to pump system installation. Existing supply wells are also evaluated and rehabilitated. Experience gained of thousands of projects enables Moody to provide an effective solution to your ground water supply problems.

Moody has been developing ground water supplies since 1891. The following services are currently offered:

Ground Water Supply Consulting Services

- Ground Water Feasibility Studies
- Ground Water Resource Evaluations
- Development of Ground Water Supplies
- Aquifer Analysis / Pumping Test Analysis
- > Water Well Site Location Selection
- > Fracture Trace Mapping
- Wellhead Protection Studies
- > Water Supply Permitting (State and Federal)
- Expert Witness Testimony

Ground Water Supply Contracting Services

- Test Well Drilling to Locate Water Producing Aquifers
- Production Well Drilling / Installation (4 to 30 inch diameter)
- Pumping Tests / Packer Tests
- Well Cleaning / Redevelopment featuring AirBurst® Technology
- Downhole TV Camera Inspection of Wells, Screens and Boreholes
- Well and Pump Performance Testing / Troubleshooting

PROJECT MANAGEMENT AND STAFFING WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES PARKS AND RECREATION SECTION 30 H. WOOD THRASHER, PE CHAD RILEY, PE **PRESIDENT** PRINCIPAL-IN-CHARGE/ # # KENNETH P. MORAN, PE, PS PROJECT MANAGER VICE-PRESIDENT QUALITY ASSURANCE / **QUALITY CONTROL** MATTHEW FLUHARTY, PE ZMM PROJECT ENGINEER PROJECT ARCHITECT, MEP WATER SOURCE / WATER DISTRIBUTION ADAM KRASON, AIA, NCARB, LEED AP BOB DOEFFINGER, PE DAVE FERGUSON, AIA, REFP THOMAS URQUHART, PE, BCEE CONSULTING ENGINEERING HYDRAULICS/ PUMP SYSTEM STEVENS ENGINEERING ROSS STEVENS, PE **PROJECT MANAGER** TRAVIS ADAMS CONVEYOR, LIFT AND TOW SYSTEMS DESIGN TECHNICIAN / **ENVIRONMENTAL SCIENTIST** JIM CHRISTIE, RLA JOHN HIGGINS **CLAY SHOOTING RANGE SPECIALIST** SITE PLANNING / LANDSCAPE ARCHITECT AARON DENHAM MOODY AND ASSOCIATES PARTNER **HYRODGEOLOGY - WATER WELLS** GENERAL MANAGER SURVEY AND CONSTRUCTION MONITORING SERVICES

WOOD THRASHER, P.E. -/ PRESIDENT

QUALIFICATIONS SUMI	MΑ	٠R١	Y
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Mr. Thrasher formed Thrasher Engineering in 1983 and serves as Principal-In-Charge on all projects executed by Thrasher Engineering. Mr. Thrasher has extensive experience in all aspects of the engineering process, with emphasis on management and administration of multi-million dollar projects including funding and regulatory issues. Mr. Thrasher forms and supervises multi-project design teams and conducts client needs assessments. He formed Resource Engineering Group in 2005 and serves as Chief Executive Officer of the corporation.

EDUC	ATION
	B.S., Civil Engineering, 1977 – West Virginia University
CERTI	FICATIONS
	Registered Professional Engineer (PE), State of West Virginia #09478
	Registered Professional Engineer (PE), Commonwealth of Pennsylvania #PE038314R
_	Registered Professional Engineer (PE), State of Ohio #64350
	Registered Professional Engineer (PE), State of Maryland #27262
REPRI	ESENTATIVE PROJECT EXPERIENCE
SANIT	ARY SEWER PROJECTS
	City of Clarksburg, I&I, WWTP Upgrades, Colonial Village Line Replacement
	City of Bridgeport, Lift Station Improvements, WWTP Upgrades
	City of Worthington, Construction of New Collection and Treatment
	City of Mannington, Replacement of Collection System, Construction of New Treatment Facility
WATE	R PROJECTS
· 👊	Hardy County EDA /Hardy County PSD Phased County Wide Water System
	City of Bridgeport, Replacement of Water Distribution System
	Town of Terra Alta, Replacement of Water Distribution System
	Hammond PSD, Water System Extension
	Preston County PSD, Phase II, III, III-A Water System Extension
	Short Line PSD Water System Extension

KENNETH P. MORAN, P.E., P.S – VICE PRESIDENT / / CHIEF ENGINEER

QUALIFICATIONS S	UMMARY
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Mr. Moran joined Thrasher Engineering in 1991 and currently serves as Vice President and Chief Operations Officer and Chief Engineer. Mr. Moran is responsible for management feasibility studies and design of public utility and site development projects for local state, federal and private clients. Additionally, Mr. Moran has extensive experience in all aspects of engineering and with funding and regulatory agencies in conjunction with projects.

EDUC	ATION
' •	B.S., Civil Engineering Technology, 1983 – Fairmont State University
CERTI	FICATIONS
' o	Registered Professional Engineer (PE), State of West Virginia #11309
	Registered Professional Engineer (PE), Commonwealth of Virginia#0102021855
	Registered Professional Engineer (PE), State of Ohio #64412
	Professional Land Surveyor (PS), State of West Virginia#1333
REPRE	SENTATIVE PROJECT EXPERIENCE
۰ ۰	City of Belmont, Sanitary Sewer Project — Project Manager and Project Engineer. Mr. Moran was involved in the Wastewater Treatment Plant Expansion and inflow filtration improvements. Mr. Moran negotiated with the West Virginia Department of Environmental Protection for the removal of the sludge blanket for French Creek. Improvements for the Plant included designs for new clarifiers, sludge thickening, sludge processing and the relocation of the outfall to the Ohio River.
	Scott's Run PSD, Sanitary Sewer, Collection System Extensions – Project Manager. Mr. Moran was involved in the extension projects for new gravity sewer collection systems in the areas of Osage, Cassville, Wade's Run, Chaplin Hill of Monongalia County. Project removed the existing Wastewater Treatment Facility in the area of New Hill. The project negotiations with the Morgantown Utility Board for the wastewater treatment, operation and maintenance and system boundary.
0	Canaan Valley Public Service District Waste Water Treatment System – Principal-In-Charge and Project Manager. This project entailed analyzing the Canaan Valley area for implementation of a public sanitary sewer system. There were multiple tasks involved with this project from working with the Environmental Protection Agency and the West Virginia Department of Environmental Protection with regards to the TMDL on the Blackwater River. The project solution provided a managed stream point discharge solution for the Valley. First project entailed design of a membrane biological reactor (MBR) wastewater treatment plant facility and wastewater transmission system.
	Brooke County PSD, Sanitary Sewer Project – Principle in Charge and Chief Engineer. The project entailed planning and design, new sanitary sewer collection systems in and around Wellsburg and Follansbee. The project negotiations with the West Virginia Department of Environmental Protection and various municipalities to determine the sanitary sewer treatment provider.
	Preston County PSD #4 — Principal-In-Charge / Project Manager / Project Engineer. Mr. Moran managed and designed a water treatment facility 700 GPM and U.S. Filter mixed media pressure filter

technology. The project also included well development for a raw water source, 16" multi-mile

	transmission system, two 700 GPM booster pump stations and a million gallon elevated storage tank. The project was done in conjunction with the system to provide service to the FBOP.
	Greater Harrison County PSD, Sanitary Sewer Project —Project Manager and Project Engineer. This project included Wastewater Collection System Extensions in the areas of Lost Creek, Good Hope and Mount Clare. We were involved in the upgrade of the existing West Milford Wastewater Treatment Facility from 300,000 gpd to 600,000 gpd. The improvements included a new pre system upgrade of the aeration system and disinfection systems.
	Preston County Sewer PSD WWTP- Project Manager- Project included design of a 0.5 MGD expandable sequential batch reactor (SBR) wastewater treatment plant to the Hazelton FBOP and surrounding area.
	Huttonsville PSD, WWTP, Sanitary Sewer, Collection System, Extensions - Project Manager. The inflow filtration improvement project removed and replaced the gravity collection systems in the areas of Valley Bin, Daley and East Daly in Randolph County. The project included upgrading the District's existing Wastewater Treatment Facility. The improvements included head works facility, aeration system, filtering system improvements and disinfection system improvements.
	Pea Ridge PSD, WWTP, Sanitary Sewer, Collection System, Extensions – Project Manager. This project included extensions in the existing system, inflow infiltration collection system improvements, upgrades of two (2) Wastewater Treatment Facilities, and abandonment of an existing lagoon system, which was converted to wetlands.
	City of Bridgeport, Sanitary Sewer Lift Station Improvements, WWTP Upgrades – Project Engineer, Project Manager and Principal in Charge. Mr. Moran has managed multiple projects for the City of Bridgeport for more than 18 years. He has designed multiple pumps station and collection system for the City of Bridgeport. He also designed the City's 2.5 million gpd Wastewater Treatment Facility and has worked with the City of Bridgeport to establish their GIS and Long Term Control Plan solutions.
	City of Clarksburg, WWTP Upgrades, Inflow and Sanitary Sewer System Improvements, Colonial Village Line Replacement – Project Engineer, Project Manager and Principal in Charge. Mr. Moran has managed multiple projects for the City of Clarksburg for more than 18 years. He has designed multiple pump stations and collection system for the City. Mr. Moran also worked on various pump station systems and collection systems throughout the City of Clarksburg and as Engineer in Charge management upgrades of their existing Wastewater Treatment Facility. This facility was a 6 million to 8 million gpd facility. Mr. Moran worked with the City to establish their GIS and Long Term Control Plan solutions.
	Hundred-Littleton PSD, New Sanitary Sewer Collection and Treatment System Water System — Project Manager, Project Engineer and Principal in Charge. Mr. Moran was involved in the Sanitary Sewer Collection System project in and around the Town of Hundred. This was a 50,000 gpd Wastewater Treatment Facility. As Principle in Charge, Mr. Moran was involved with multiple tank replacements and water line replacements throughout the district.
u	City of Kingwood - Project Engineer and Principal in Charge. Over the last 15 years Mr. Moran was involved in multiple water projects and sanitary sewer projects for the City of Kingwood. He also worked on various sewer pump station systems, sewer collection systems throughout the City of Kingwood sanitary sewer and water system. As Principal in Charge, he was involved with the upgrades of their existing Wastewater Treatment Facility.

CHAD RILEY, PE, PARTNER / PRINCIPAL-IN-CHARGE / PROJECT MANAGER

QUALIFICATIONS SUMMARY

Mr. Riley joined Thrasher Engineering in 1996 and became a partner in the firm in 2004. His past experience with the firm has included survey and construction management / inspection responsibilities; he now holds the responsibility of Site Development Manager and lead engineer for site development projects. The focus of these projects is for the development of industrial and business parks, multi-use developments and long-term, multi-phase infrastructure improvement and building projects. He has extensive experience in working with both Federal and State funding agencies, including the US Department of Commerce, Economic Development Authority and the State of West Virginia Development Office.

Mr. Riley is currently, or has served, as Project Manager for numerous economic development projects throughout the State of West Virginia. In this capacity, he holds ultimate responsibility for client communication, engineering design, funding issues, construction document preparation, bidding, and construction management.

EDUCA	TION
	Fairmont State University – Bachelor Of Science – Civil Engineering Technology
CERTIE	UCATIONS
•	CATIONS
	Registered Professional Engineer, State of West Virginia
	Registered Professional Engineer, State of Maryland
	WVDOH Certified Concrete Technician / Certified Compaction Technician
REPRE	SENTATIVE PROJECT EXPERIENCE
	WHITE OAKS BUSINESS PARK
	FAIRMONT STATE UNIVERSITY: 10-YEAR INFRASTRUCTURE IMPROVEMENTS PROJECT:
	 Utilities, Roadways, Sidewalks, Storm Drainage, Utility Relocation
	o Parking Garage
	Falcon Center (Student Activity Center)
	Bryant Place Dormitory
	RALEIGH COUNTY MEMORIAL AIRPORT INDUSTRIAL PARK
	McDOWELL COUNTY PRISON
	PINECREST BUSINESS AND TECHNOLOGY PARK –RALEIGH COUNTY, WV
	WOLF CREEK PARK "LIVE, WORK AND PLAY" COMMUNITY – FAYETTE COUNTY, WV
	CHARLES POINTE DEVELOPMENT – BRIDGEPORT, WV
	 Mass Grading, Roadways, Sidewalks, Utilities
	Conference Center
	WOOD PRODUCTS INDUSTRIAL PARK – MINGO COUNTY, WV
	PUTNAM COUNTY INDUSTRIAL PARK
	BELINGTON INDUSTRIAL PARK – BARBOUR COUNTY, WV
	FEDERAL BUREAU OF PRISONS
	Glenville Correctional Institute – Gilmer County, WV
	o Canaan U.S. Penitentiary / Federal Prison Camp
П	II S DEPARTMENT DE VETERANS AFFAIRS – WEST VIRGINIA NATIONAL CEMETERY EXPANSION

MATTHEW FLUHARTY, P.E. – PROJECT MANAGER

QUALI	FICA	TIONS	SUMMA	4RY
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Mr. Fluharty joined Thrasher Engineering in 2000 and serves as Project Manager for Water and Wastewater Projects. Mr. Fluharty is responsible for the development of public water and wastewater system feasibility studies and subsequent design work for private, state and federally funded projects. Additionally, Mr. Fluharty oversees project acquisition, project funding applications, engineering design and construction management on public utilities projects. Specialties Include:

Specia	ties Include:
	Funding Applications: Developing preliminary engineering reports and determining the best source of public/private funding scenarios to suit the applicant.
	Utility Design: Primary force on water projects including distribution system replacements and extensions including pump stations, storage facilities, raw water intakes, ground water acquisition and evaluations. Other duties include existing water treatment plant additions/retrofitting. Sanitary sewer extension designs including pump stations and force mains.
	Construction Management: Overseeing construction projects from the preconstruction conference to the final inspection. Duties involve reviewing contractor pay requisitions, change orders, attending monthly progress meetings, and managing the project budget.
EDUC.	
	B.S. Civil Engineering, 2000 – West Virginia University
	Registered Professional Engineer – State of Maryland #33491 Registered Professional Engineer – State of Pennsylvania #PE076002
	WVDOH Certified Compaction Technician
	WVDOH Certified Concrete Inspector/Technician
	WVDOH Aggregate Sampling Inspector
	Basic Safety – Compaction Gauge, 2000
<u>1</u> WATE	R SYSTEM PROJECTS
	City of Kingwood (2009-2010): Project Manager for Phase II water distribution improvement project. Project involves the replacement of 11,000 LF existing water lines and making improvement to the existing water treatment plant. Total project cost of \$3,100,000.
ū	Masontown Water Works (2009-2010): Project Manager for AML water line extension project involving 15 miles of water line to extend to 90 new customers. Project extends water service to Bull Run, North Union, and Ridge Road. Project also involves adding additional 250,000 gallon water storage tank. Total project cost of \$2,985,000.
	Town of Tunnelton (2009-2010): Project Manager for AML water lines extension project

involves 10 miles of water line extension to approximately 60 new customers in the areas of

Blazer Road, Buckeye, and Kanetown. Total project cost of \$1,600,000.

u	Town of Tunnelton (2008-2009): Project Manager for water distribution extension to Rowlesburg where Tunnelton will purchase all of their water from Rowlesburg. Project involves 5 miles of water line, two (2) 150 GPM booster pump stations, a 70,000 gallon water storage tank, a solenoid operated control valve station, and a satellite telemetering system. Total project cost of \$1,825,000.
	City of Kingwood (2009): Project Manager for Phase I water distribution improvement project. Project involves the replacement of an existing water storage tank with a new 1,200,000 gallon water storage tank, Total project cost of \$1,135,000.
	Short Line PSD (2008-2009): Project Manager for water tank replacement project. This project involves the replacement of an existing water tank with a new 300,000 gallon water storage tank. Total project cost of \$600,000/
	Short Line PSD (2008): Project Manager for the cleaning and repainting of two (2) existing 100,000 gallon welded steel water storage tanks. Total project cost of \$125,000.
	Gilmer County PSD - ST RT5 (2008): Project Manager for a water distribution extension involving 19 miles of water line to serve 115 new customers. Project extends water service along ST RT 5, Rosedale Road, Gluck Run, Joes Run, and Dusk camp Run. Total project cost of \$2,884,200.
	City of Kingwood – Whetsell Settlement (2007): Project Manager for a water distribution extension involving 3 miles of water line to serve 40 new customers. Project provided water service to the Whetsell Settlement area located along the Cheat River. Total project cost of \$575,000.
	Masontown Water Works (2007): Project Manager for a water distribution extension involving 3 miles of 8" water line to connect Masontown system to Morgantown Utility Board system. Project involved a 200 GPM booster pump station, a solenoid operated control valve station, and a four-unit telemetering system. Project connected the two systems along Snake Hill Road. Total project cost of \$1,451,000.
	Lewis County EDA – Southern Lewis County (2006-2007:)Project Manager for a water distribution extension involving approximately 42 miles of water line to serve 400 new customers. Project involved two (2) new 100,000 gallon glass-lined bolted steel water tanks and a 200 GPM booster pump station. Project provided water service along Georgetown Road to US RT 119 and served the communities of Walkersville, Ireland, Duffy, and Vandalia. Total project cost of \$6,879,000.
	Raleigh County PSD – Clear Creek Project (2005): Project Engineer for a water distribution extension involving approximately 20 miles of water line to serve 310 new customers. Project involved two (2) new glass-lined bolted water tanks a 75,000 gallon and a 150,000 gallon, a 150 GPM water booster pump station, a solenoid operated control valve station, pressure reducing valve station, and a four-unit telemetering system. Project extended water service to the areas of Spruce Mountain along Rt. 1 to the communities of Clear Creek, Workman's Creek, McDowell, Toney Fork, Buffalo Fork, Artie, and White Oak. Total project cost of \$1,000,000.

Raleigh County PSD – Montcoal Project (2005): Project Engineer for a water distribution extension involving approximately 6 miles of water line to serve 125 new customers. Project extended water service from Montcoal north along Route 3 to Jarrolds Valley. Total project cost of \$1,000,000. ☐ Gilmer County PSD (2004-2005): Project Engineer for a water distribution extension involving approximately 23 miles of water line to serve 150 new customers. Project involved a 150 GPM booster pump station, two (2) 50,000 gallon water storage tanks, and a two-unit telemetering system. This project served the areas along RT33 to Normantown and Stumptown in Gilmer County. Total project cost of \$3,400,000 ☐ Lewis County EDA – Freemansburg (2003): Project Engineer for a water distribution extension involving approximately 30 miles of water line to serve 300 new customers. Project involved a new 100,000 gallon welded steel water tank and a 100 GPM package water booster pump station. The areas served were Freemansburg, McCann Run, Kliens Run, Jennings Run, Aberdeen, Middle Run, and Herdman Run. Total project cost of \$3,600,000. Hodgesville PSD (2003): Project Engineer for a water distribution extension involving approximately 30 miles of water line to serve 250 new customers. Project involved a new 240,000 gallon welded steel water tank and a 250 GPM package water booster pump station.

The areas served were to the north of Buckhannon, WV. Total project cost of \$3,500,000.

THOMAS E. URQUHART, P.E., DEE – CONSULTING ENGINEER

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Mr. Urquhart joined Thrasher Engineering in 1996 and serves as Consultant for the firm. Mr. Urquhart is experienced in civil engineering of public utilities including design and construction of water storage tanks, new and replacement water and sanitary sewer lines, pump stations and water treatment and wastewater treatment plants. Mr. Urquhart previously served as General Manager/Engineering for the Morgantown (WV) Utility Board.

EDUCA	ATION
· •	M.S. Civil Engineering – West Virginia University
	B.S. Civil Engineering – West Virginia University
CERTII	FICATIONS
	Registered Professional Engineer (PE) – State of West Virginia #05262
	Registered Professional Engineer (PE) – State of Pennsylvania #PE014449E
	Registered Professional Engineer (PE) – State of Ohio #64320
	Registered Professional Engineer (PE) – State of Maryland #30289
	Certified Master Modeler by Heastad Methods for Water Systems, 2002
REPRE	SENTATIVE PROJECT EXPERIENCE
	Pocahontas County PSD Hydraulic Modeling for County-Wide Water System
	City of Bridgeport/Charles Pointe, Used Computer Hydraulic Model to design wastewater pumps at four locations pumping into common force main
	City of Weston, Used Computer Hydraulic Model to design wastewater pumps at four locations pumping into common force main
	Mingo County PSD, Used Existing Computer Hydraulic Model used to design extension out of Ragland
O	Timberline Four Seasons Resort, Complete Computer Hydraulic Model prepared to evaluate existing water system and design improvements for projected growth
٠	City of Milton, Complete Computer Hydraulic Model prepared leading to elimination of troublesome booster station, solving pressure problems in two sections of town, design of two major extensions to the water system and providing alternatives for getting fire flows to a new school and assisted living facility
	City of Parsons Design of Improvements to Water Filters
	Town of Rowlesburg, Used Computer Model of Water System to Design of High Service Pumps

Improvements to Provide Fire Protection
City of Weirton, Complete Hydraulic Model and Study for New Tank, Pump Station, and Elevated Tank
City of Tunnelton, Used Computer Hydraulic Model to design connection to Taylor County PSD water system
Raleigh County Airport Industrial Park, Used Computer Hydraulic Model to design water system to provide maximum fire flows from Beckley water system
Sun Valley PSD, Complete Computer Hydraulic Model prepared to design system improvements, including providing water to the City of Salem
Various Subdivisions in Hardy and Berkeley County; Computer Hydraulic Model and Analysis Reports
Greater Harrison County PSD, Existing Computer Hydraulic Model used to design improvements to provide more water to Lost Creek area
Glenville Prison, Water System Design, Computer Hydraulic Model
Canaan Prison, Water System Design, Computer Hydraulic Model
McDowell Prison, Water System Design, Computer Hydraulic Model
River Road PSD, Used existing Computer Hydraulic Model to answer question about their systems ability to serve proposed housing subdivisions
Craigsville PSD, Complete Computer Hydraulic Model prepared to examine several alternatives for constructing new water plant and feeding water from Summersville

TRAVIS ADAMS — PROJECT ENGINEER / ENVIRONMENTAL SCIENTIST

QUALIFICATIONS SUMMARY

Mr. Adams joined Thrasher Engineering in 2000 and serves as Project Engineer and Environmental Scientist from TEI's Clarksburg Office, Mr. Adams is responsible for engineering design and construction management of sanitary sewer collection system and extension projects, wastewater treatment projects, and water distribution, storage and treatment projects. He also provides direction to Engineering Technicians on his staff. A graduate of West Virginia University's Davis College of Agriculture, Forestry and Consumer Sciences, Mr. Adams is also responsible for environmental assessments and permitting assistance. He has extensive knowledge of reclamation of disturbed land, soil erosion control, treatment of acid mine drainage, and small community on-site wastewater treatment and disposal systems.

EDUC	ATION
	Bachelor of Science, Agricultural- Environmental Sciences – West Virginia University, 1998
REGIS	TRATIONS
	WVDOH Certified Aggregate Sampling
	WVDOH Portland Concrete Testing/Inspector
	WVDOH Soil Compaction Inspector
AFFILI	ATIONS
	West Virginia Association of Professional Soil Scientists

REPRESENTATIVE PROJECT EXPERIENCE

- □ Brooke County Public Service District; Sanitary Sewer Extension Project: Project duties included the design and layout of the proposed sanitary sewer collection system. Major system components included in the design of a large diameter gravity sewer interceptor pipeline and seven (7) sanitary sewer pump stations including all associated pumps and control systems. This project also required the design of a state-of-the-art pump station odor control system located in close proximity to Brooke County High School. Mr. Adams was also responsible for all environmental permitting issues associated with obtaining approvals from the governing regulatory agencies.
- Scotts Run Public Service District; Phase I Sanitary Sewer Collection System Monongalia County, WV: Major project duties included the design and layout of a large sanitary sewer collection system. Major system components included a gravity sewer collection system that required the construction of multiple horizontal directional bores and the construction of four (4) sanitary sewer pump stations with associated pumps, controls, and large diameter force main which connected to the Morgantown Utility Board's sanitary sewer collection system for treatment at the City of Morgantown's Star City wastewater treatment plant. Mr. Adams also performed all construction management duties required for a successful system installation. In addition, Mr. Adams was responsible for all environmental permitting and securing all required approvals from the governing regulatory agencies for project construction. This

project provided sanitary sewer service to approximately 700 residential and commercial customers outside of the City of Morgantown area.

- Lewis County EDA; Walkersville Community Sanitary Sewer Collection and Wastewater Treatment System: Project duties included the design and layout of a small community sanitary sewer collection and wastewater treatment system. Major system components included a conventional gravity sewer collection system, four (4) sanitary sewer effluent pump stations which were designed with a septic tank effluent pump system to allow all solids to settle out in the septic tank and allow for the pumping of septic tank effluent only. This type of effluent pumping system was designed to allow for the installation of a package recirculating sand filter wastewater treatment plant designed to treat sewer effluent only. This type of system was desirable for this small community application due to low operation and maintenance costs resulting in lower proposed sewer rates for this small 25 customer community.
- ☐ City of Kingwood, Preston County, WV: Sanitary sewer collection system extensions, existing pump station improvements, and upgrades to the existing wastewater treatment plant. Project duties included layout and design of the proposed Route 7 North extension, design of the existing pump station improvements, and coordination with additional project staff for the proposed upgrades to the existing WWTP. Major system components included collection system extensions, pump station replacement and upgrades, and construction of a new head works facility including screening and grit removal at the existing WWTP. Mr. Adams was also responsible for coordination with city officials for identifying the project scope, obtaining all necessary permits approvals from the governing regulatory agencies and additional environmental permitting issues.
- □ Thousand Acres Lakeside Golf Community; Sanitary sewer collection and water distribution extensions, Garrett County, MD: Project duties included working with the resort development team for layout and design of the sanitary sewer collection and water distribution system extensions. In, addition Mr. Adams was involved with coordination and approval with Garrett County Public utilities staff to ensure proper design and layout of the proposed systems. Mr. Adams was also responsible for all environmental permitting requirements with the governing agencies which were quite an involved process due to the projects close proximity to Deep Creek Lake.
- ☐ The Meadows Subdivision; Sanitary sewer collection and water distribution systems,
 Monongalia County, WV. Project duties included coordination with developers for design and
 layout of the sanitary sewer collection and water distribution systems. Major system
 components included a conventional gravity sewer collection system and a water distribution
 system with a constant rate booster pump station to provide water service to the customers
 located at a high elevation within the development. Mr. Adams was also responsible for
 obtaining all the required permit approvals for the construction of the system. In addition,
 coordination between the developers and the local water and sewage providers was essential
 to the success of the project.

AARON W. DENHAM – PARTNER / GENERAL MANAGER MATERIALS TESTING AND INSPECTION

QUALIFICATIONS SUMMARY

Mr. Denham joined Thrasher Engineering in 2000 and serves as Manager of all Construction Inspection and Materials Testing projects for the firm. Mr. Denham is responsible for all construction inspection for water, sewer, site development, and WVDOH projects, and the daily activities of the materials testing department for highway, airport, site development, structural and public utilities projects.

EDUCATION

☐ B.S. Civil Engineering Technology, 1999 – Fairmont State University

CERTIFICATIONS

Fairmont State University Level V Certification – Transportation Engineering Technologist – Engineering
Specialization
WVDOH Compaction Inspector
WVDOH Concrete Inspector/Technician
WVDOH Aggregate Sampling Inspector
WVDOH Aggregate Technician/Inspector
WVDOH Bituminous Inspector/Technician
WVDOH Radiation Safety
Troxler Basic Safety – Nuclear Compaction Gauge

AFFILIATIONS

☐ ASHE – American Society of Highway Engineers

REPRESENTATIVE PROJECT EXPERIENCE

- □ WV National Cemetery Expansion Grafton, WV [Project Representative]: Performed inspection on the daily activities of the general contractor and all sub-contractors pertaining to the new construction of fifteen (15) acres of future burial sites, and one (1) mile of roads. Inspected a twenty (20) foot high and 1,200 foot long segmental retaining wall, installation of concrete crypts, cut and fill of the four (4) future burial sites. Additional duties included submittals, pay estimates, and as-builts. Construction began and ended in 2002.
- □ Fairmont State University (Parking Garage, Bryant Place Dormitory, Campus Renovations, Engineering Building Addition, and Falcon Center) [Materials Testing Technician]: Responsibilities included materials testing and inspection of all material used in the construction all the renovations and new construction for Fairmont State University. Performed compaction testing, with nuclear gauge, on soils, stone, and asphalt, tested concrete for air content, slump, temperature, and compressive strength of cylinders, mortar cubes and grout prisms; rebar inspection, and fireproofing testing which included density and thickness. (Robert Kelley, KC Craddock, Steve Harman, and Steve Wright)
- □ West Virginia Division of Highways Appalachian Corridor H 0.57 miles North of CR 1 & CR 3/3 I/S to 1.6 miles West of CR 3 in Grant County [Project Manager]: Responsible for completing fee proposal for construction inspection, quality assurance, and surveying. Building a construction inspection team, which meets WVDOH qualifications, and assigning them to the project as requested by the WVDOH. Weekly on-site visits to the project to oversee the inspection duties, and interaction with WVDOH

	construction engineer. Review of all invoices for submittal to WVDOH. Construction cost was \$54.8 million, and construction began in August 2008 and completion is September 2010. (Will Kump, Bill
	Swaim, Steve Haynes, Shawn Jack, Steve Wright, and Steve Harman)
	Jackson County Airport Taxiway Widening [Materials Testing Technician]: Performed materials testing
_	on fill material used for the taxiway widening. Duties included laboratory testing of soil material for
	compaction curve and classification, on-site compaction testing of soil fill by nuclear gauge method and
	sand cone method, and tested concrete for air content, slump, temperature, and compressive strength
	of cylinders. Construction duration was from 2002 to 2003. (Robert Kelley)
	Walgreens - Grafton, WV and Oakland, MD [Project Manager]: Responsibilities including reviewing
_	asphalt and concrete mix designs. Coordinating with contractor on assigning field technicians and any
	special testing. Reviewing field technician's daily reports, field testing reports, and all laboratory
	testing results before being submitted to owner. Construction for the Grafton Walgreens was from
	2008 to 2009, Oakland Walgreens was from October 2008 to November 2009. (KC Craddock, Andy
	Kincell, Matt Watson, Michael Sanders, Jared Woofter)
	Blanchette Rockefeller Neuroscience Institute – Morgantown, WV [Project Manager] Responsibilities
	including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field
	technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and
	all laboratory testing results before being submitted to owner. Construction began May 2006 and
	completed September 2007. Construction cost was \$35 million. (KC Craddock and Michael Sanders)
	Bio Medical Research Facility – Morgantown, WV [Project Manager]: Responsibilities including
	reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field
	technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and
	all laboratory testing results before being submitted to owner. Construction began July 2006 and
	completed October 2007. Construction cost was \$30 million. (KC Craddock and Michael Sanders)
	Mon General Hospital Hazel Ruby McQuain Tower – Morgantown, WV [Project Manager]:
	Responsibilities including reviewing asphalt and concrete mix designs. Coordinating with contractor on
	assigning field technicians and any special testing. Reviewing field technician's daily reports, field
	testing reports, and all laboratory testing results before being submitted to owner. Construction began
	September 2006 and completed August 2008. Construction cost was \$90 million. (KC Craddock)
	West Virginia University Cancer Center - Morgantown, WV [Project Manager]: Responsibilities
_	including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field
	technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and
	all laboratory testing results before being submitted to owner. Construction began March 2007 and
	completed May 2008. Construction cost was \$18 million. (KC Craddock)
	West Virginia University Alumni Center – Morgantown, WV [Project Manager]: Responsibilities
_	including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field
	technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and
	all laboratory testing results before being submitted to owner. Construction began September 2007
	and completed July 2008. Construction cost was \$20 million. (KC Craddock)
	,
	Health Science Learning Center – Morgantown, WV [Project Manager]: Responsibilities including
	reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field
	technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and
	all laboratory testing results before being submitted to owner. Construction began May 2005 and
	completed May 2006. Construction cost was \$12 million. (KC Craddock, Steve Wright and Robert Kelley)
	nency/

Ruby Memorial Hospital NE Addition – Morgantown, WV [Project Manager]: Responsibilities including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and all laboratory testing results before being submitted to owner. Construction began January 2004 and completed May 2005. Construction cost was \$70 million. (KC Craddock, Steve Wright and Robert Kelley) Mountaineer Challenge Academy – Camp Dawson, WV [Project Manager]: Responsibilities including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and all laboratory testing results before being submitted to owner. Construction began September 2007 and completed January 2010. (KC Craddock, Steve Wright, Michael Sanders, Jared Woofter and Robert Rubenstein Center for Youth – Davis, WV [Project Manager]: Responsibilities including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and all laboratory testing results before being submitted to owner. (Jared Woofter) ☐ Glenville State College Dormitory –Glenville, WV [Project Manager]: Responsibilities including reviewing asphalt and concrete mix designs. Coordinating with contractor on assigning field technicians and any special testing. Reviewing field technician's daily reports, field testing reports, and all laboratory testing results before being submitted to owner. Construction began October 2009 and completed May 2011. Construction cost was \$100 million. (Patrick Shaver)

JAMES CHRISTIE, RLA - LANDSCAPE ARCHITECT/PLANNER

Mr. Christie joined Thrasher Engineering in February of 2010, bringing with him over thirteen years of high end landscape design/build experience and eleven years of Landscape Architecture, nine of which were as Partner/Owner or Associate. Throughout his career, he has successfully coordinated projects from conceptual design through construction management in the US and abroad. His business related abilities include excelling in presentations to Design Review Boards, homeowners and developers.

present	tations to Design Review Boards, homeowners and developers.
EDUCA	<u>TION</u>
	Bachelor of Science in Landscape Architecture, West Virginia University, Morgantown, West
	Virginia, 1998
PROFES	SSIONAL ASSOCIATIONS AND AWARDS
	Registered Landscape Architects in Colorado (RLA)
	Xeriscape Grand Award – Betty Ford Alpine Garden, Vail, Colorado, 2004
	Xeriscape Grand Award – Private Estate, Eagle County, Colorado, 2004
	Water Feature Merit Award – Betty Ford Alpine Garden, Vail, Colorado,
<u>FEATUI</u>	RED PLANNING PROJECT EXPERIENCE
	La Estancia de Cafayate - Argentina Ventana Mar - Costa Rica
	The Himalayan Ski Village - India
	RED DESIGN/BUILD PROJECTS EXPERIENCE
	BETTY FORD ALPINE GARDENS - Vail, Colorado 1998-2002 Landscape Architect, Project
	Manager: Designed a specialized \$1 mil Alpine Rock Garden and Xeric Garden. Completed
	color rendering, site plan, grading plan to comply with ADA requirements, construction
	documents and on-site construction management for the Alpine Rock Garden (Dedicated -
	summer 2000) and the Children's Garden (Designed by EDAW).
	- Merit Award: 2003 for Water Feature, Associated Landscape Contractors of Colorado
	- Grand Award: 2004 for Xeriscape, Associated Landscape Contractors of Colorado
	MONTROSE BOTANICAL GARDENS – Montrose, Colorado 1999-2004 Landscape Architect:
	Created a master plan and color rendering for the Montrose Botanical Society to use as a marketing
	tool to raise funds to complete the gardens. Successfully designed xeric garden, meditation garden,
	children's garden and water features. The garden is currently one quarter finished and has created a
	source of pride for the community.
	PRIVATE RESIDENCE - Diamond 'S' Ranch, Eagle County, Colorado Landscape
	Architect/Project Manager: Envisioned and broadened owner concept of landscape potential.
	This \$1.6 mil, 100 acre project included Master Plan, grading plan, fire mitigation plan,
	construction details, planting plan, re-vegetation plans, multiple hot tub and swim-ex plans,
	project management and owners contact. Successfully implemented all designs to create an
	award winning fire wise property.
	- Grand Award: 2004 for Xeriscape, Associated Landscape Contractors of Colorado
	FRANK LLOYD WRIGHT'S FALLINGWATER - Mill Run, Pennsylvania Landscape Architect Interns
	Chosen as the Landscape Architect intern to live on-site at the famous property. Designed site plans for
	trails and signage, master plan for guest house site, planting plan and implementation of plan.
	Implemented a plant/ soil mapping and testing of the grounds for future uses.



Role Architect

Professional Registrations
Registered Architect (WV, OH, KY)
LEED Accredited Professional
NCARB (55,984)
Construction Specifications Institute (CSI)

Construction Documents Technician (CDT)

Mr. Krason has served in the capacity of Architect and Project Manager for a variety of projects at ZMM. This experience includes Military, Educational (K-I2 and Higher Education), Office, Justice (Courthouses, Correctional, Justice Centers), and Multi-Unit Residential projects. Mr. Krason's responsibilities include programming, design, documentation, coordination of the architectural and engineering team, as well as construction administration. Mr. Krason began his career in 1998, working on a variety of educational, commercial office, and correctional projects throughout Ohio, West Virginia, and North Carolina.

Mr. Krason has been an advocate of sustainable design in West Virginia, participating in a variety of sustainable design seminars throughout the State, and serving on the West Virginia School Building Authority Green Schools Sub-Committee. Recently, Mr. Krason helped coordinate the "Making the Business Case for Sustainability" conference at the University of Charleston that included speakers from Armstrong Industries, American Electric Power, CB Richard Ellis, and Interface Raise. Mr. Krason also assisted Habitat for Humanity Kanawha and Putnam County develop a commercial recycling program to fill a void in the sustainable design infrastructure in West Virginia. Mr. Krason has noted that, "I became a LEED Accredited Professional because I believe that good design has value, and the ability to impact our daily lives. Sustainable design showcases the value of design through demonstrated improvements in the performance of the students and employees who occupy our buildings."

In addition to his design and project management responsibilities, Mr. Krason serves on the Board of Directors and is responsible

Education

Bachelor of Architecture; The Catholic University of America; 1998

Bachelor of Civil Engineering; The Catholic University of America; 1997

Employment History

2007 - Present, Vice President, ZMM

2007 - Present, Board of Directors, ZMM

2003 - Present, Architect, Project Manager, ZMM

1998-2003, Architect, Project Manager, Charleston Area Architectural Firm

Civic Affiliations

- American Institute of Architects, Member
- Habitat for Humanity Kanawha & Putnam County, Board of Directors 2011
- WV Qualification Based Selections Council, President-Elect, 2011
- Leadership WV 2010
- Charleston Rotary
- West Side Main Street, Board of Directors 2008-2010
- City of Charleston Land Trust 2008 -2010
- West Side Elementary School LSIC, Volunteer

for business development at ZMM.

Project Experience

Joint Interagency Training and Education Center (JITEC): Mr. Krason was responsible for the preliminary programming, and participated in the schematic design of the 180,000 SF addition to the Regional Training Institute at Camp Dawson. Mr. Krason was also responsible for managing the production effort for the billeting (hotel) expansion, which increased the total billeting capacity at the JITEC to 600 rooms. The project is aiming for LEED Silver Certification.

Construction and Facilities Management Office Expansion (CFMO Expansion), West Virginia Army National Guard: Mr. Krason was responsible for the programming, architectural design, and project management of the office expansion. The project included the renovation and addition to an existing pre-engineered metal building. The design, which was honored with a 2008 AIA Merit Award, focused the client's resources on a new entry and corridor that separated the existing office space from the addition.

Bridgemont Community and Technical College Davis Hall Renovation: Mr. Krason let an architectural and engineering investigation into the condition of Davis Hall to help Bridgemont Community and Technical College to develop a scope for the current renovation project, as well as a plan to undertake deferred maintenance at the facility. The project scope included remedying several life safety deficiencies, as well as improvements to the building envelope.

Judge Black Courthouse Annex, Wood County Commission: Mr. Krason was responsible for the programming and design of the adaptive reuse of a former commercial space and movie theaters into a modern courthouse annex. The Judge Black Annex included two independent circulation paths – a secure entry and lobby for access to the Family Court and Prosecuting Attorney, and public access to the Assessor and Sheriff's Tax Department. The facility also houses several large public meeting rooms.

The Boulevard at 2412: Mr. Krason was responsible for the design of the proposed Kanawha Boulevard Condominium project. The sixty unit project, located in the East End Historic District, included a design that increased in height as it stepped back from the Kanawha River, providing the opportunity for a series of outdoor living areas, while also respecting the massing of the adjacent residences in the Historic District. Mr. Krason also assisted with developing marketing materials for the project.

State Office Building #5, 10th Floor Renovation, State of West Virginia Office of Technology: Mr. Krason led an architectural and engineering team that completed a detailed assessment of State Office Buildings 5, 6, & 7. Once the assessment was complete, ZMM had the opportunity to implement the proposed improvements on the 10th Floor of State Office Building #5 for the Office of Technology. The improvements, aiming for LEED-CI Certification, re-oriented the layout by drawing all private offices into the building core, providing access to daylight and views for all employees. The design also utilized acoustical ceiling clouds and bulkheads to maximize the acoustical performance, while also increasing the volume of the space.

New Kanawha County Elementary School: Mr. Krason is currently participating on a design team that is developing the new Kanawha County Elementary School on Charleston's West Side. The school is being designed as a 21st Century Learning Environment, with a focus on integrating technology into the delivery of the curriculum. Instructional areas will be located off of an open 'exploratorium' that is being designed to function like a children's museum, providing a variety of learning opportunities, and flexible educational

spaces. The school will also visibly integrate sustainable design principles to serve as a teaching tool for the students. Mr. Krason is currently working with students from Watts and Robbins Elementary Schools in Kanawha County, assisting them in an effort to actively participate in the design process.

Awards and Acknowledgements:

AIA Merit Award (2008): West Virginia Army National Guard Construction and Facilities Management Office Expansion

Organizer: Making the Business Case for Sustainability Conference, University of Charleston (2010)

Speaker: West Virginia Sustainability Summit, Discover the Real West Virginia Foundation (2010)

Speaker: Sustainable Schools West Virginia Summit, WVU (2009)

Article: The West Side Needs Structural Help, Charleston Daily Mail, January 2005

Article: Memorial to Vertical Towers: A Critical Review, West Virginia Executive, Summer 2004

Henry Adams Fund Certificate of Merit, Excellence in the Study of Architecture, AIA (1998)

Nathan C. Wyeth Award, Excellence in Design, D.C. Chapter of the AIA (1997)





Role Mechanical Engineering Management

Professional Registrations

Professional Engineer (WV, VA, PA, OH, TN, KY, NY, NH, ME, NC, SC, FL)

In addition to corporate management, Mr. Doeffinger is in charge of the engineering disciplines. It is his responsibility to ensure that the mechanical and electrical engineering components of ZMM's design are coordinated and integrated into the final product.

After graduate school in Architectural Engineering, Mr. Doeffinger joined ZMM. He has 35 years design experience in mechanical and electrical systems for buildings. He has a broad range of engineering experience in education, industrial and manufacturing facilities, large retail, correctional and jails, office buildings, and military facilities.

Mr. Doeffinger is responsible for new design and retrofit of chilled water systems for all building types including large regional shopping malls. He is involved daily with the firm's selection of appropriate systems for all building types and performs life cycle cost analysis and energy studies.

Mr. Doeffinger is a member of the American Society of Heating, Ventilation and Air-Conditioning Engineers. He is the current national Chairman of the Technical Committee on Heating and Air-Conditioning Load Calculation. He is involved in writing the National Standard on the Method of Calculation, which will shape the nature of the future building energy use for the nation.

Education

Master of Science Architectural Engineering; Pennsylvania State University; 1976

Bachelor of Science Mechanical Engineering; West Virginia University; 1973

Employment History

2010 - Present, President, ZMM

1976 - 2010, Vice President and Engineering Principal, ZMM

Civic Affiliations

- ASHRAE Member of the Technical Committee Load Calculations Data and Procedures for 15 years, serving as chairman. Presently Chairman of the Research Subcommittee
- Advisory Board for the Department of Electrical Engineering Technology, Bridgemont Community and Technical College
- City of Pt. Pleasant, WV 2nd Ward Councilman for 20 years

Project Experience

Joint Interagency Training and Education Center (JITEC): Mr. Doeffinger was responsible for the mechanical engineering design of the 600 room billeting expansion to the Regional Training Institute at Camp Dawson. The project is aiming for LEED Silver Certification. The project is served by a 4 - pipe hot and chilled water system with an energy recovery ventilation system.

The Plaza at King of Prussia: One of the largest retail centers in the east. Mr. Doeffinger has performed engineering services for the past 20 years. The project consists of a 5,000 -ton chilled water plant and 1,500,000 cfm variable volume system for tenants and constant volume air system for common areas and an engineered smoke control system. The most recent project is a 2011, 100,000 square foot expansion of tenant spaces, a renovation of the food court, and a 1,250-ton chiller addition to the central chilled water plant.

NGK Oxygen Sensor and Spark Plug Plant: Mr. Doeffinger was in charge of engineering design of the 250,000 SF NGK facility. The most recent 130,000 SF expansion moved NGK's spark plug production for the west coast to West Virginia. For both the oxygen sensor plant and spark plug plant Mr. Doeffinger designed a cycle water system for the manufacturing equipment.

The Boulevard at 2412: Mr. Doeffinger was on the design team for the proposed Kanawha Boulevard Condominium project. The sixty unit project, located in the East End Historic District, included a design that increased in height as it stepped back from the Kanawha River, providing the opportunity for a series of outdoor living areas, while also respecting the massing of the adjacent residences in the Historic District. Mr. Krason also assisted with developing marketing materials for the project.



Role Architect

Professional Registrations Registered Architect (WV, OH)

Recognized Educational Facility Professional (REFP)

Mr. Ferguson has served in the capacity of Architect, Project Manager, and Principal in Charge for a variety of projects at ZMM. This experience includes Educational (PK-12, Vocational and Higher Education), Retail, Corporate Office, Industrial, Military, Medical Office Facilities, General Healthcare Hospital and Psychiatric Hospital Projects. Mr. Ferguson's responsibilities include programming, design, documentation, architectural/engineering coordination and construction administration.

Mr. Ferguson began his career at ZMM in 1984 working on a variety of retail, educational and military projects throughout West Virginia, Pennsylvania, Ohio, Virginia, Maryland, New York, North Carolina, South Carolina, Florida, and Washington DC. In 1996 Mr. Ferguson expanded his expertise into the Healthcare and Industrial and Corporate Office facilities and since then has led the effort at ZMM in Educational Design. Mr. Ferguson is a Recognized Educational Facility Professional (REFP) and has been involved in planning, designing and the construction of over 90 educational facilities in West Virginia. As the architect for the first "green" school building in West Virginia Mr. Ferguson has been an advocate for sustainable design and was involved starting the first US Green Building Chapter in West Virginia.

Mr. Ferguson has also participated in developing West Virginia Department of Education's Policy 6200 Handbook on Planning School Facilities and the West Virginia School Building Authority's Handbook of Quality and Performance Standards.

In addition to Mr. Ferguson's project management responsibilities, as a principal of the firm he has corporate administrative duties and serves on the Board of Directors.

Education

Bachelor of Science; Industrial Technology/Architectural Design; West Virginia State University; 1979

Employment History

2007 - Present, Vice President, Secretary/Treasurer, ZMM

2002 - 2007, Vice President, ZMM

2001 - Present, Board of Directors, ZMM

1996 - Present, Architect, Project Manager, ZMM

1984 - 1996, Designer. ZMM

Civic Affiliations

- West Virginia Chapter, American Institute of Architects, Board Director
- American Institute of Architects, Member
- Member, Council of Educational Facility Planners International (CEFPI)
- Recognized Educational Facility Professional (REFP) by the CEFPI
- Professional Member, US Green Building Council
- High School Mentoring/Job Shadowing Program for 6 County School Systems
- WV AIA IDP Program Mentor/Advisor

Project Experience

Southside Elementary and Huntington Middle School: Mr. Ferguson led the programming and design effort on this 156,000 sq. ft. facility. This project encompasses all phases of construction; demolition, major renovation and new construction. The original historic 26,000 sq. ft. three story school building was preserved and the remaining less than adequate facility was strategically removed to accommodate the new addition. The existing facility was completely renovated and brought up to new construction standards to blend with the new addition. The project consisted of two distinct school facilities existing on the same piece of property. The new construction blends seamlessly with the older historic structure.

Lincoln County Comprehensive High School: Mr. Ferguson was responsible for the programming and design effort for this one-of-a-kind facility. This 800 student, 217,000 sq. ft. school was a ground breaking facility for the county, West Virginia School Building Authority and the WV Department of Education. This facility was the first school in West Virginia to incorporate "green" design principals. The school was the first school east of the Mississippi River to encompass a fully comprehensive High School, Vocational School, Health Clinic (open 12 months a year), and Community College within one building. This facility is also the proud recipient of the 2007 WV AIA Honor Award.

Cabell County Bond Program: Mr. Ferguson assisted Cabell County in developing budgets, project scopes and passing the largest bond program in West Virginia. This encompassed four projects and with additional funding from the West Virginia School Building Authority exceeded \$72 million dollars. As Principal, Mr. Ferguson led the programming and design effort on all four facilities.

Huntington East Middle School: Mr. Ferguson is currently responsible for the programming, design, and project management for the new 800 student, 94,000 sq. ft. facility. This is projected to be the first LEED Silver Middle School in West Virginia and encompasses the latest in technology and distance learning within the classroom. The building will be used as a teaching tool along with large interactive monitors throughout the building. Students will be able to learn how the building operates through hands on learning and monitoring the building systems.

Highland Hospital: Mr. Ferguson was responsible for the programming and design effort for this 90,000 sq. ft. Psychiatric Hospital. The design of this facility creates a new lobby space that connects the existing hospital to the new 4 story structure. The new facility replaces older antiquated spaces within the existing facility and adds new patient rooms to allow the hospital the expansion of patient care. The implementation of water recycling for the laundry facility and other "green" components were used as energy saving methods that have a long term impact on the hospital operation.

Hacker Valley PK-8 School: Mr. Ferguson was responsible for the programming and design effort for this facility. This 65 student, 31,000 sq. ft. school was a ground breaking facility for the county, West Virginia School Building Authority and the WV Department of Education. The project didn't fit within any standard guidelines or protocol for a new school. Mr. Ferguson was instrumental in developing new guidelines for schools of this size and grade level configurations. The design of this facility is also the recipient of the 2010 WV AIA Honor Award.

Awards and Acknowledgements:

2010 WV AlA Honor Award Hacker Valley PK-8 School, Webster County Schools, Hacker Valley, WV 2007 WV AlA Honor Award Lincoln County High School, Lincoln County Schools, Hamlin, WV.

2004 Education Design Showcase "Project of Distinction", School Planning & Management Magazine. St Albans High School, St Albans West Virginia, Kanawha County Schools.

2004 Impact on Learning Awards, "Effective Transformation", School Planning & Management Magazine/CEFPI. St Albans High School, St Albans West Virginia, Kanawha County Schools.

<u>2004 Published American School & University Magazine's Architectural Portfolio</u>, St Albans High School, St Albans West Virginia, Kanawha County Schools.

<u>May 2005 Article</u>, Building Blueprints, Science Classroom/Laboratory. *School Planning & Management Magazine*

<u>March 2006 Article</u>, Construction Progress, Lincoln County Comprehensive High School, Lincoln County. West Virginia Construction News Magazine, West Virginia Contractor's Association



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PROFESSIONAL PROFILE

Ross A. Stevens, P.E., President, STEVENS ENGINEERING 215 Sargent Road P.O. Box 1945 New London, NH 03257

SPECIALIZED PROFESSIONAL COMPETENCE

Passenger Ropeways:

Aerial Ropeways

Surface Lifts

Conveyors

Snow Tubing Parks:

Civil Engineering: Structural Engineering: Relocation Engineering, Upgrades, Modifications, Due Diligence Surveys, Dynamic Testing,

Maintenance Consulting, Accident Investigation, Profile Surveying, Construction Engineering

Planning, Engineering Design, Analysis, Inspection,

Planning & Engineering Design, Terrain Dynamics Evaluation

Site Planning, Engineering Design, Surveying, Permitting

Engineering Design, Analysis, Inspection

PROFESSIONAL BACKGROUND

Registered Professional Engineer and Qualified Tramway Engineer in: Maine, Maryland

New Hampshire, Vermont, Connecticut, Massachusetts,

New York, Pennsylvania, Michigan, Utah,

Wisconsin, New Jersey, Colorado, Idaho, Iowa, Tennessee,

West Virginia, Wisconsin, Ontario, New Brunswick

Bachelor of Science Degree in Civil Engineering University of Massachusetts, Amherst - 1974 Entered Profession in 1974

AFFILIATIONS

NATIONAL TRAMWAY STANDARDS BOARD - Member from 2000 - 2006

AMERICAN NATIONAL STANDARDS INSTITUTE - ASC B77 Accredited Standards Committee - American National Standard for Passenger Tramways, Committee Member

OITAF-NACS - International Organization for Transportation by Rope, North American Continental Section, Member

NSAA - National Ski Areas Association, Member

OSRA - Ontario Ski Resorts Association, TSSA/OSRA Technical Advisory Committee

SENH - Structural Engineers of New Hampshire, Member

State of New Hampshire, Governor's Office of Emergency Management - ACT-20 Post-Earthquake Building Safety Evaluation Engineer

steveng@tds.net www.stevens-engineering.com

John Higgins

308 Broad Street NE Crawfordville, GA 30631 912-656-1589

john@sportinggeorgia.com

Professional Experience:

2009-2010

- Opened the John Higgins Shooting School USA at the British American Sporting Club
- Continued with John Higgins Inc.

2000 - 2008

- John Higgins Inc.
- Shooting instruction worldwide
- National & international course design consultancy
- Special events
- International in the field instruction
- International strategic planning & development consultancy for recreation based facilities
- International wing shooting development
- Recreation planning & design services

1998-2000

- The Ford Plantation (Richmond Hill, GA)
- Director of Outdoor Pursuits
- Supervised the management & design of sporting clays, equestrian & hunting programs for the community

1995-1998

- Brays Island Plantation Colony (Sheldon, SC)
- Gun club manager
- Supervised in the design & construction of sporting clays course

1991-1995

- National Sporting Clays Association (San Antonio, TX)
- Chief Instructor & Assistant Director
- Created & implemented the NSCA certification program Levels 1-3
- Course designs for state, regional & world championships
- Range consultant throughout the USA
- Assisted in the creation of the official NSCA Referee Program

1985 - 1991

- Yeaveley Shooting School (Ashbourne, UK)
- Working partner
- Shooting instruction
- Corporate events
- Field instruction
- Created packages for major hotels & resorts

Completed Projects:

- National Gun Club, San Antonio, TX
- The Greenbrier Resort Gun Club, White Sulphur Springs, WV
- Max McGraw Wildlife Foundation Clays Range, Elgin, IL
- The Fork Farm, Norwood, NC
- Brays Island Plantation, Sheldon, SC
- The Ford Plantation, Richmond Hill, GA
- Barnsley Gardens, Adairsville, GA
- West Branch Anglers Club, Deposit, NY
- Rancho Caracol, Mexico
- Blackberry Farm (Smokey Mountain Gun Club), Walland, TN
- · Managua Gun Club, Nicaragua
- Yeaveley Shooting School, UK
- Terra Chula, Valdosta, GA
- Kickapoo Farm, Thomasville, GA
- Mackay Point Plantation, Sheldon, SC
- Summer Duck Farm, Ellerbee, NC
- Black Dog Farm, Columbus, OH
- Mad River Sportsmans Club, Bellefountain, OH
- Telegraph Cypress Sporting Clays, Punta Gorda, FL
- Lucky Clays Farm, Norwood, NC
- Budd Farms, Winston-Salem, NC
- Blue Moon Sporting Clays, Hondo, TX

References:

Keith Reeves Gun Club Manager Blackberry Farm Hotel, Walland, TN 770-324-7409

Jim Thomas Gun Club Manager The Greenbrier Resort, White Sulphur Springs, WV 888-326-9062

David Judah Gun Club Manager The Homestead Resort, Hot Springs, VA 540-839-1766