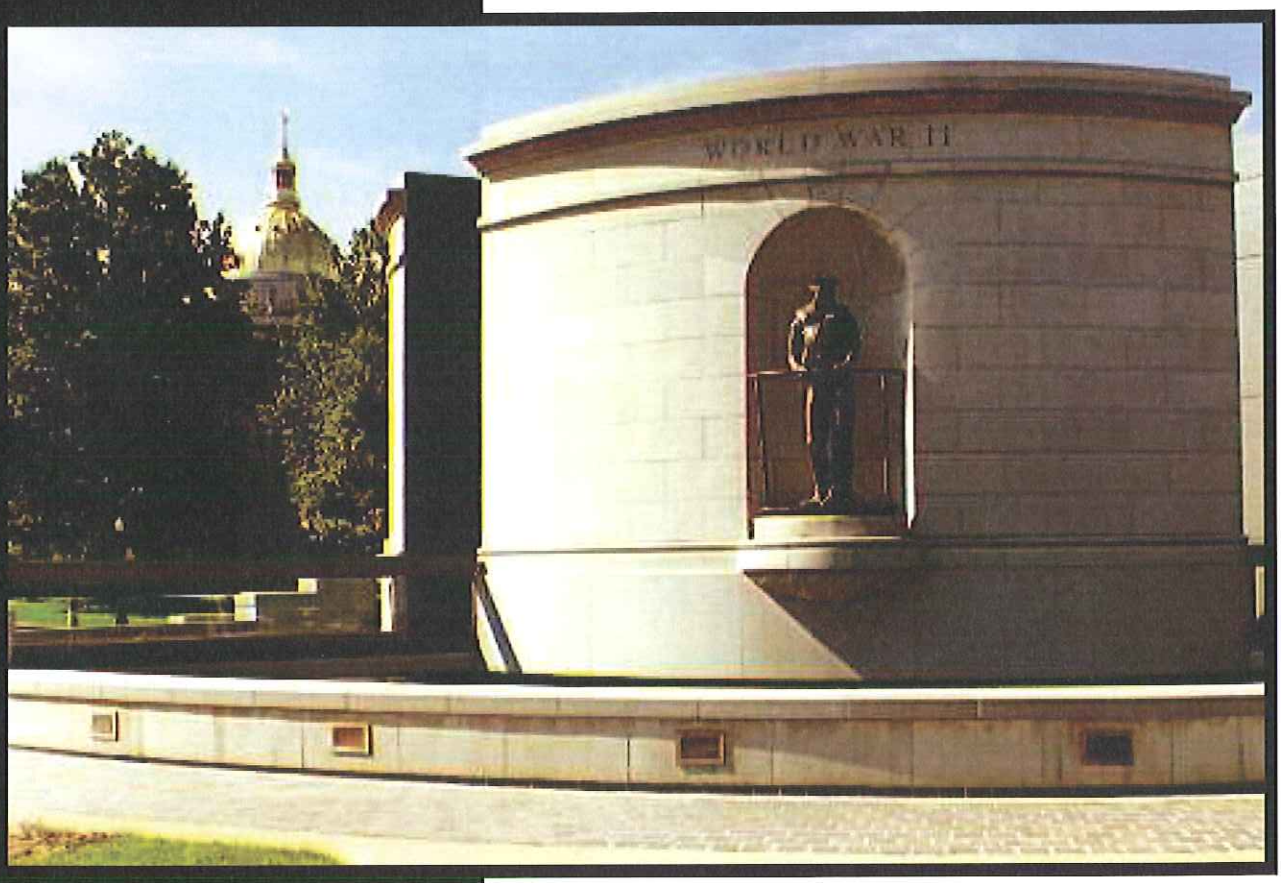
MILLS GROUP

ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Design of Veterans Memorial Renovations

December 20, 2011



Brock, Reed & Wade Building
206 High Street - Morgantown, WV 26505
(304) 296-1010
millsgrouponline.com

"Designing on the principles of the past and preserving for the future"

MILLS GROUP
ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

December 20, 2011

WV State Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

Re: Expression of Interest: Veteran's Memorial Renovations-GSD 126417

Dear Madam or Sir,

The Mills Group is pleased to submit this expression of interest to offer our services to evaluate the Veterans Memorial.

We at the Mills Group pride ourselves on our past experiences in historic preservation which have included local, state and national projects. The Mills Group has had the privilege of working on some of West Virginia's most significant cultural resources including the Civil War battle site at Cannon Hill in Rowlsburg, Duffield's Depot in Jefferson County, the Jamison House in North Wheeling, Sweet Springs in Monroe County, Independence Hall in Wheeling, and the Waitman T. Willey House in Morgantown.

On a national level Mr. Mills has the experience of working with team members David A. Kemnitzer and Seal Engineering on the stone survey at the Jefferson Memorial and Lincoln Memorial, waterproofing at the J. Edgar Hoover Building, plaza restoration at the Whitten Building-USDA Headquarters, roof restoration on the National Archives, and exterior rehabilitation of the Madison-Cosmos-Tayloe Complex.

Our team's experience in providing thorough existing conditions analysis with design solutions is second to none. We understand the issues related to waterproofing and moisture management whether it is on a pool structure or exterior masonry.

The Mills Group is also teaming with several talented firms whose services compliment our own. In addition to David Kemnitzer, and Seal Engineering, the Mills Group is teaming with CAS Engineering (CAS) who has a proven track

record in conducting structural engineering analyses on numerous historic structures throughout the state. Miller Engineering is a full service MEP firm whose expertise will assist in remedying the Memorial's plumbing and mechanical issues.

We have enclosed our resumes and sample project sheets to detail our experience working with historic structures. Together, the Mills Group, David Kemnitzer, Seal Engineering, CAS, and Miller Engineering possess the qualifications to successfully rehabilitate the Veterans Memorial allowing future generations of West Virginians to reflect on the sacrifices of our veterans.

The Veterans Memorial is a work of art and a symbol of West Virginia's heritage. We would be honored to assist in the restoration of this state treasure. Should you have any questions, please feel free to contact me at 304-296-1010 or email me at mmills@millsgrouponline.com. Thank you for this opportunity.

Sincerely,

Michael J. Mills, AIA
Principal

Firm Description

"Designing on the principles of the past and preserving for the future."

Since the Fall of 2005, the Mills Group has maintained a focus on the design of new structures which encompass the rich architectural character of the past, executed site plans that are respective of opportunities and constraints, implemented the sensitive preservation of historic buildings, and guided clients to the potential in existing structure renovations.

The firm is diligent in understanding each client's spatial needs, design goals, and budget. The design process is built on the foundation of research, data collection, client collaboration, and creative solutions. Client management is grounded in professional ethics and morals that demand open communication and follow through.

West Virginia abounds with unexpected architectural treasures. A goal of the practice is to embrace the architectural heritage of the region and to celebrate the best of the past, while promoting economic vitality.

The firm's services are provided to a wide range of clients within the private sector as well as public agencies at the local, state, and federal levels. The former includes architectural and engineering firms, professional and not-for-profit organizations, foundations, institutions, corporations, individual property owners, and developers. Public-sector clients include numerous agencies responsible for the administration and stewardship of architectural and cultural resources, as well as a variety of development-oriented agencies.

The firm is committed to a quality end product which is derived from experience, diligence, and collaboration.

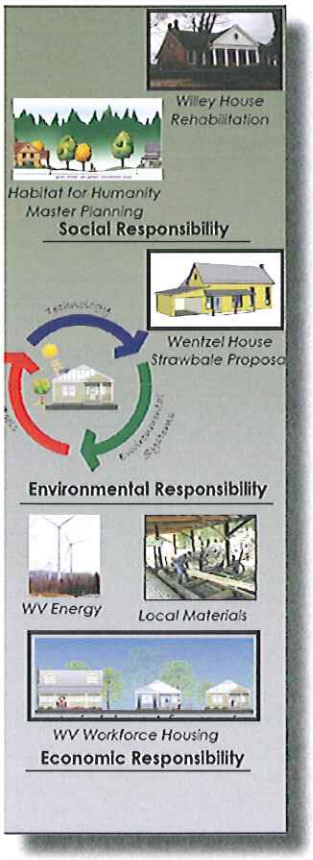
MILLS GROUP

Overview of Services

ARCHITECTURE

The Mills Group focuses on residential, commercial, public, and cultural facilities, with an emphasis on traditional design principles and vernacular design influences. The firm designs new structures, which reflect the rich architectural character of the past and use traditional architecture influence, but also specialize in the rehabilitation and adaptive reuse of existing structures, striving to emphasize their cultural, historical, and environmental contexts.

The in-house architectural design philosophy is built on the principles of the past, which leads to the use of precedents to accomplish client's objectives while putting forth the best solution for each specific project. Foremost, design solutions are developed based on a thorough understanding of the client's needs and a vision for translating goals into reality.



SUSTAINABLE DESIGN

The Mills Group strongly believes in the principles of "green" architecture and environmental design, considering the impact of any project on the surrounding environment, and creating solutions that minimize negative effects. Stressed is the importance of understanding the site and its surroundings, which allows design solutions to be developed that will most closely represent the project's essence and potential within the built environment. The firm is designing with a conscience toward sustainability by:

- Developing an understanding of the historical and cultural significance and context of each individual project.
- Utilizing "tangible history" to stress the importance of cultural heritage in all we say, do, think, and build.
- Utilizing appropriate technologies to maximize building performance and minimize environmental impact.
- Meshing environmental systems with the built environment to enhance the symbiotic relationship between building and nature.
- Developing design tools that utilize technology and environmental systems to create uniquely appropriate design solutions.
- Developing a model of architecture that helps to strengthen the economy of the area in which it exists.
- Utilizing construction materials that are harvested and manufactured from local sources.
- Pursuing projects that serve to bolster a healthy diverse economy

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The Mills Group approaches the planning process of greenfield and infill sites with the responsibility of being a "place maker". Clients entrust the firm with the task of creating the overarching plan that will foster a rich and engaging environment for people to live, work, and play.

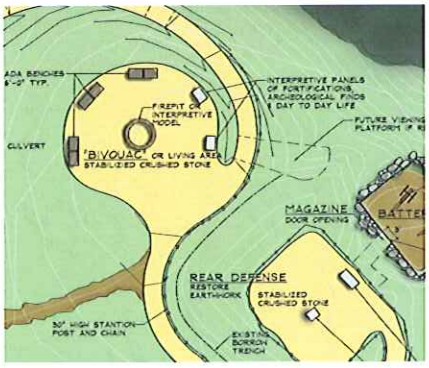
The planning and design approach relies on careful consideration of the complex interaction between functional, economic and social needs of our clients; the firm prides itself in doing extensive design due diligence to understanding the existing constraints and opportunities, the historic context, the solar orientation, as well as transportation and circulation issues.

Experience with both private developers and public agencies has provided the team with an understanding of the greenfield and infill design challenges from both perspectives. Good planning and urban design will significantly enhance the real value of any proposed site development, as well as facilitate compliance with zoning, infrastructure and environmental regulations. Urban design concepts are stressed that offer a mix of uses, promote a strong sense of community, present an appealing image, and are environmentally responsible.

PRESERVATION

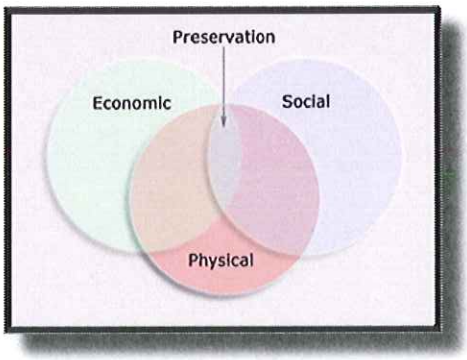
The Mills Group believes that sensitive and responsible preservation and restoration work must be responsive to the category of historical significance of the building. Each building provides a unique set of requirements and conditions; so too, each solution is unique. The firm's past experience and qualifications meet and exceed the Secretary of Interior's Standards for Historic Preservation set forth by NR36B, as well as those of the National Park Service.

To fully understand the built environment, it must first be comprehend, taking it beyond bricks and mortar, into a moment in time, a representation of not only the collective past, but the individual pasts. The key to thorough preservation is investigating cultural heritage, through which a balanced understanding can be achieved. It is the culmination of a project's physical character, social context, and economic parameters that shape preservation.



MILLS GROUP

It is the firm's belief that to achieve meaningful and positive preservation, exploring the past is necessary. Interpretation of the built environment requires awareness of how our many aspects of cultural heritage comes together to create a story. Cultural resources--those things that spiritually and physically are remnants of the past, shaping humanity into what it is--ultimately affect the way change is made. Most of all, however, it allows visionaries to see how and why to make that change.



Cultural Resource Management

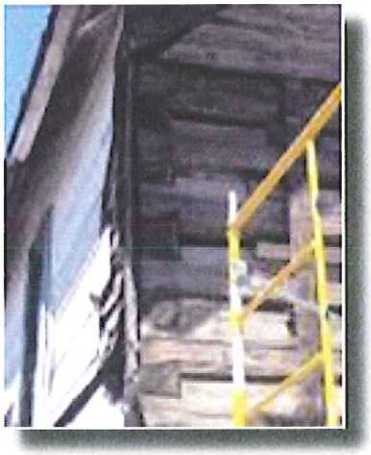
Within the firm's preservation services, specific experience in the field of Cultural Resource Management [CRM] and Interpretative Design is present. The approach taken on projects of any historical nature is to first and foremost, strive to achieve a balance of the overall "Preservation Objectives" with the client's individual requirements for the building's use. The rehabilitation tenets that the firm uses is aimed at maintaining historic character, while incorporating provisions for life safety and accessibility requirements, indoor air quality and energy conservation requirements, as well as all of the real-life demands on the building.

Cultural resources, such as buildings and cultural landscapes, are tangible history. In the interpretation and preservation of these artifacts, balance is achieved through not only the social and economic aspects, but the physical as well. Increased quality of life through a positive economic marketplace, creating awareness or providing a positive atmosphere where cultures can live, work, and play, is the firm's goal in any project.

DOCUMENTATION AND ASSESSMENT

The Mills Group has extensive experience documenting and assessing structures, an essential part of historic preservation projects. Historic sites and buildings are the keys to understanding the past. They are tangible history and as such play an important role in cultural heritage.

The Mills Group has a staff that includes individuals who are professional historians, that are fully qualified and have extensive past experience performing historical research to aid in the assessment and documentation of historic buildings and sites;



the documentation is then incorporated into the results of a comprehensive narrative, feasibility study or historic structures report. The assessment is often used to implement planning for the next phase of the project, to complete a National Register Nomination, or to produce plans for historic site interpretation.

FACILITY AND MAINTENANCE PLANNING

The Mills Group's staff has developed facility maintenance plans that prescribe the routine work that is necessary to sustain the character of the structure when given the historic materials within the environment, an aspect often overlooked. A majority of the deterioration caused in historic structures is many times due to the lack of a sensitive and educated maintenance staff or owner.

MUSEUM AND INTERPRETIVE EXPERIENCES

Mr. Mills has assisted clients in determining the physical and operational needs of a facility to accommodate an optimal visitor experience, sustain collections, and to support staff in their work environments.

Integration of site/land planners, museum planning, and design and production services has been completed with success by Mr. Mills. He approaches preservation and exhibition/ interpretive planning and development as dialog between the facility staff, the collection, and the targeted audience. The results of work lend themselves to being engaging for both the content and graphical presentation. The firm provides consulting services that include interpretation of historic sites, exhibit design, and facility design.

FIRM OWNERSHIP AND ORGANIZATION

The Mills Group is a limited liability company with sole ownership held by Michael J. Mills. The firm began in 2005 and has had one office location in the heart of downtown Morgantown, West Virginia since 2007. The Mills Group is in good standing with the West Virginia Secretary of State's Office.

Project Concept/Approach

The Mills Group

Project Process and Methodology....
As professional historic preservation and cultural resource consultants we have developed a methodology in our approach to projects that has achieved extremely positive results. Using this method as a guiding principle we feel we can bring valuable services to your project.

First and foremost, we strive to achieve a balance of the overall project objectives. The objectives are either predefined or formalized through a consensus process with the client and an assessment of the site conditions.

The methodology to achieve the project objectives as agreed upon by the client are summarized in the following bullets points:

- Research the site and its context
- Observe Existing Conditions
- Analyze and Identify Issues and Opportunities
- Develop Alternatives
- Make Recommendations and Creating a Solution
- Assemble Construction documents
- Provide assistance with bidding and execute construction observation

For the Mills Group, the ROADMAP, is a critical path to achieve the success of an existing structure project and especially for a structure that has exhibited failures in various components of its construction. To expound on the summary above, the outlined steps below are the detailed steps of the project:

1. Research and data collection. The approach to preservation projects starts with an understanding of the physical and cultural evolution of the monument through a detailed research effort. The research would include the review of written, photographs, and drawings. This process would involve a detailed recording of the information and documentation of the primary sources.

2. Observe existing conditions. The first step is to walk through/around the memorial and make a visual inspection of the surroundings. The assessment phase of any project is the time at which the site is evaluated in its rarest form of components. Any available construction drawings of the original site or site structures should be consulted, as well as any additions or modifications made over the years should be examined.

3. Analyze and identify issues and opportunities. Determine the project requirements and the programmatic elements for the current use. Understand the potential users/visitors impact on the site as a programmatic consideration. Other items that will have an impact on the site include the interpretive plan, artifacts, existing buildings, hours of operations, security requirements, common area requirements, utility infrastructure, and accommodations for ADA. Perform code and regulatory analysis. Confirm that the memorial meets all building codes and regulatory compliance.

4. Develop alternative design concepts. The team generates coordinated concept solutions that are directly responsive to the due diligence, existing conditions and the clients goals for the project. These concepts are created after a collaborative design process has occurred amongst our team and is the basis for a consensus process with the client.

5. Make Recommendations and Creating a Solution. Our team shall work with the client group to determine the realities of the project based upon the factors of cost, time, and quality of the design solutions. We will prepare options and facilitate the decision making process.

6. Assemble Construction documents. The team shall provide detailed construction drawings and supporting project specifications to allow for a competitive bidding process meeting all state procurement regulations.

7. Provide assistance with bidding and execute construction observation. The team shall execute the bidding process per state procurement regulation, respond to any RFIs, issue addenda as required, conduct project meetings, review payment applications, review all proposed change orders, and perform the necessary site visits.

The process outlined above is utilized on all of our projects involving an existing structure and we find that it is both effective as outlined and imperative to follow in order to achieve a project's success.

Quality, aesthetics and economy need not be mutually exclusive. We design facilities and provide consulting services on existing structures to function in the real world of competition and scarce resources, but at the same time we execute on facilities that are aesthetically pleasing and desired places to occupy.

We develop design solutions with the understanding that what are needed are durable and attractive facilities and systems within preset economic parameters. This means that as we design, we engage in a constant process of checking and balancing the first cost of the materials, equipment, and systems we specify against the life cycle cost of operation, maintenance and replacement. From almost any aspect, estimating and subsequent cost controls are critical to the success of this project. They are critical because the client and subsequent debt holders will rely on these estimates for financial and investment decisions.

The Mills Group's ability to register simplicity and economy from the most complex and extensive building programs is well recognized in the region; it also seeks to provide the highest level of service and accountability devoted to identifying and responding to client needs and objectives, incorporating their specific goals into the project execution, and expressing their collective identity through forms and spaces created specifically for them. It is this level of service and the willingness to collaborate with the client and user groups that distinguishes the Mills Group.

We will make the following commitments related to delivering quality design solution and implementing sound cost control on this contract:

- The Mills Group will provide the highest quality of service throughout our role as the Master Architect and for the duration of our entire contract.
- The Mills Group will develop a written Project Specific Quality Control Plan for this contract.
- The Mills Group will hold regularly scheduled quality team meetings.
- The Mills Group will conduct peer office review of design products.
- The Mills Group will use state-of-the-art technology to enhance design quality to the maximum extent possible.
- The Mills Group will conduct value engineering as required on its design, bal ancing cost savings versus quality and operational efficiency.
- The Mills Group commits to designing in a manner intended to minimize con struction costs as much as feasible while continuously maintaining the quality, durability and operational efficiency of the facilities.
- The Mills Group executes all projects with a comprehensive sustainable design approach.

Effective project delivery comes as a result of sound project planning followed up with solid and dependable project execution from technically commitment and dedicated project team. The Mills Group commits to bring our **ROADMAP** project approach and team to this contract.

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Seal Engineering, Inc., 3323 Duke Street, Alexandria, VA 22308

Firm Profile

Seal Engineering, Inc. is a civil/structural engineering firm specializing in the prevention of moisture migration through building envelopes. As a leader in the Washington, DC Metro area, the firm provides a full range of investigation, design, inspection and quality control services for a wide range of clients, including government agencies, universities, public school systems, A/E firms, property managers and condominium associations.

A small business enterprise established in 1980, Seal Engineering has a staff of three licensed professional engineers assisted by an experienced team of engineers, engineering technicians and administrative support. A licensed engineer heads every project team, working closely with the client and supervising all aspects of the work.

The firm has completed more than 4,000 projects in the area, and has extensive experience at a wide variety of facilities, including some of the most prestigious landmark buildings in Washington, DC. A partial listing of representative project locations includes: The Smithsonian Institution, The Old Post Office, The White House, The U.S. Supreme Court, The Pentagon, Bolling Air Force Base, The Russell Senate, Rayburn House & Hart Senate Office Buildings, The Department of Commerce, The Department of Agriculture, American University and Georgetown University.

Capabilities

- Low and steep sloped roofing
- Terrace, plaza deck and below-grade waterproofing
- Building facade, concrete, masonry, window and sealant restoration
- Parking garage and balcony restoration

The scope of these services include:

- Field investigations, analyses, estimates, recommendations, technical reports, replacement reserve studies, condition reports and failure analyses
- Preparation of designs, drawings, technical specifications & contract documents; assisting in advertising, awarding & managing contracts
- Comprehensive field inspection for contract compliance
- Nuclear moisture surveys, core sampling, testing and laboratory analysis of construction materials
- Structural and material failure analysis
- Review of designs, drawings and specifications prepared by others
- Expert witness concerning engineering properties, design, installation or serviceability of materials & systems

Professional Memberships and Specialized Training

- Licensed Professional Engineers in Virginia, Maryland, District of Columbia, and West Virginia.
- Member, American Society of Civil Engineers
- Member, American Society of Testing and Materials
- Member, Construction Specifications Institute
- Member, American Concrete Institute
- Member, International Concrete Repair Institute
- Member, Association for Preservation Technology
- Associate Member, National Roofing Contractors Association
- Member, Roof Consultants Institute
- Member, National Trust for Historic Preservation
- Certified Nuclear Moisture Meter Operators (All Engineers)

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE :	32. DATE
Richard P. Bowman	February 9, 2010

33. NAME AND TITLE

Richard P. Bowman, PE, Principal

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*:

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: **Seal Engineering, Inc.**

3. YEAR ESTABLISHED: 1980

4. DUNS NUMBER: 071220487

2b. STREET: **3323 Duke Street**

2c. CITY: **Alexandria**

2d. STATE: **VA**

2e. ZIP CODE: **22314**

5. OWNERSHIP

a. TYPE: Corporation

b. SMALL BUSINESS STATUS: Yes

6a. POINT OF CONTACT NAME AND TITLE: **David A. Fyffe, P.E., President**

7. NAME OF FIRM *(if block 2a is a branch office)*:

6a. TELEPHONE NUMBER: **703.823.6366**

6b. E-MAIL ADDRESS: **DaveF@seal-eng.com**

8a. FORMER FIRM NAME(S) *(if any)*: N/A

8b. YR. ESTABLISHED:

8c. DUNS NUMBER:

9. EMPOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	1	
12	Civil Engineer	5	
57	Structural Engineer	1	
58	Project Manager	1	
58	Project Associate	1	
06	Project Architect	1	
	Other Employees		
	Total	10	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
A06	Airports; Terminals and Hangers	1
A11	Auditoriums and Theaters	1
C10	Commercial Building (low rise)	2
D04	Design-Build – RFP preparation	1
E02	Educational Facilities	3
E06	Embassies and Chanceries	1
F02	Field Houses; Gyms; Stadiums	1
F05	Forensic Engineering	1
G01	Garages; Parking Decks	2
H06	High-Rise	2
H07	Parking Lots	1
H08	Historic Preservation	3
H09	Hospital and Medical Facilities	2
H10	Hotels; Motels	1
H11	Housing (Multifamily, Apartments, Condominiums)	3
I01	Industrial Buildings	2
I06	Drainage	1
L04	Libraries; Museums	1
R06	Rehabilitation (Buildings, Structures)	4
R12	Roofing	4
S09	Structural Design	1
T02	Inspection Services	3
T06	Tunnels and Subways	1
W01	Warehouse and Depots	3

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	3
b. Non-Federal Work	3
c. Total Work	4

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,000 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE: December 13, 2011

c. NAME AND TITLE: David A. Fyffe, P.E., President

CAS Structural Engineering, Inc.

Firm Profile

CAS Structural Engineering, Inc. – CAS Structural Engineering, Inc. is a West Virginia Certified Disadvantaged Business Enterprise structural engineering firm located in the Charleston, West Virginia area.

Providing structural engineering design and/or analysis on a variety of projects throughout the state of West Virginia, CAS Structural Engineering has experience in excess of 20 years on the following types of building and parking structures:

- Governmental Facilities (including Institutional and Educational Facilities)
- Industrial Facilities
- Commercial Facilities

Projects range from new design and construction, additions, renovation, adaptive reuse and historic preservation (including use of The Secretary of the Interior's Standards for Rehabilitation) to evaluation studies/reports and analysis.

CAS Structural Engineering utilizes AutoCAD for drawing production and Enercalc and RISA 2D and 3D engineering software programs for design and analysis. Structural systems designed and analyzed have included reinforced concrete, masonry, precast concrete, structural steel, light gauge steel and timber.

Carol A. Stevens, PE is the firm President and will be the individual responsible for, as well as reviewing, the structural engineering design work on this project. While CAS Structural Engineering, Inc. has only been in business for ten years, Carol has over 20 years of experience in the building structures field, working both here in West Virginia and in the York, Pennsylvania vicinity. Carol is also certified by the Structural Engineering Certification Board for experience in the field of structural engineering.

CAS Structural Engineering, Inc. maintains a professional liability insurance policy.

P.O. Box 469 Alum Creek, WV 25003-0469 (304) 756-2564 (voice) (304) 756-2565 (fax)
A West Virginia Certified DBE Consultant
Certified in the Practice of Structural Engineering

Miller Engineering Inc.
Professional Design Services
MEI

MILLER ENGINEERING, INC.

SUMMARY

Miller Engineering, Inc. (MEI) was formed to provide professional services to facility owners and operators, architects, and contractors throughout West Virginia and Pennsylvania. MEI provides services in mechanical, electrical, and plumbing design as well as project management. We utilize the abilities of designers, often on a contract basis, with many years experience in their area of expertise on a "best resource for the project approach". We also provide project management services at levels ranging from general oversight to complete project delivery through all phases of design and construction. Our personnel have worked in both the private and public sector and are familiar with many methods of project delivery from classic design/bid/build to full design/build with partnering.

MEI has developed the following philosophy to guide the performance of its services:

- Provide superlative design services to our clients in new construction, renovations, and daily operations.
- Perform work in a timely, accurate, and professional manner.
- Present multiple alternative and solutions whenever possible.
- Work with our clients to control first and life cycle costs.
- Be a technical "sounding board" for our clients in all situations.
- Strive to maintain professional competency through continuing education and training.

MEI utilizes a "practical application" approach to all projects throughout the design process. This approach emphasizes the best overall solution, meeting all the client's needs, instead of the best technical solution. We believe our small size provides a distinct advantage to our clients and affords us the freedom to team with the clients to achieve the overall best possible result.

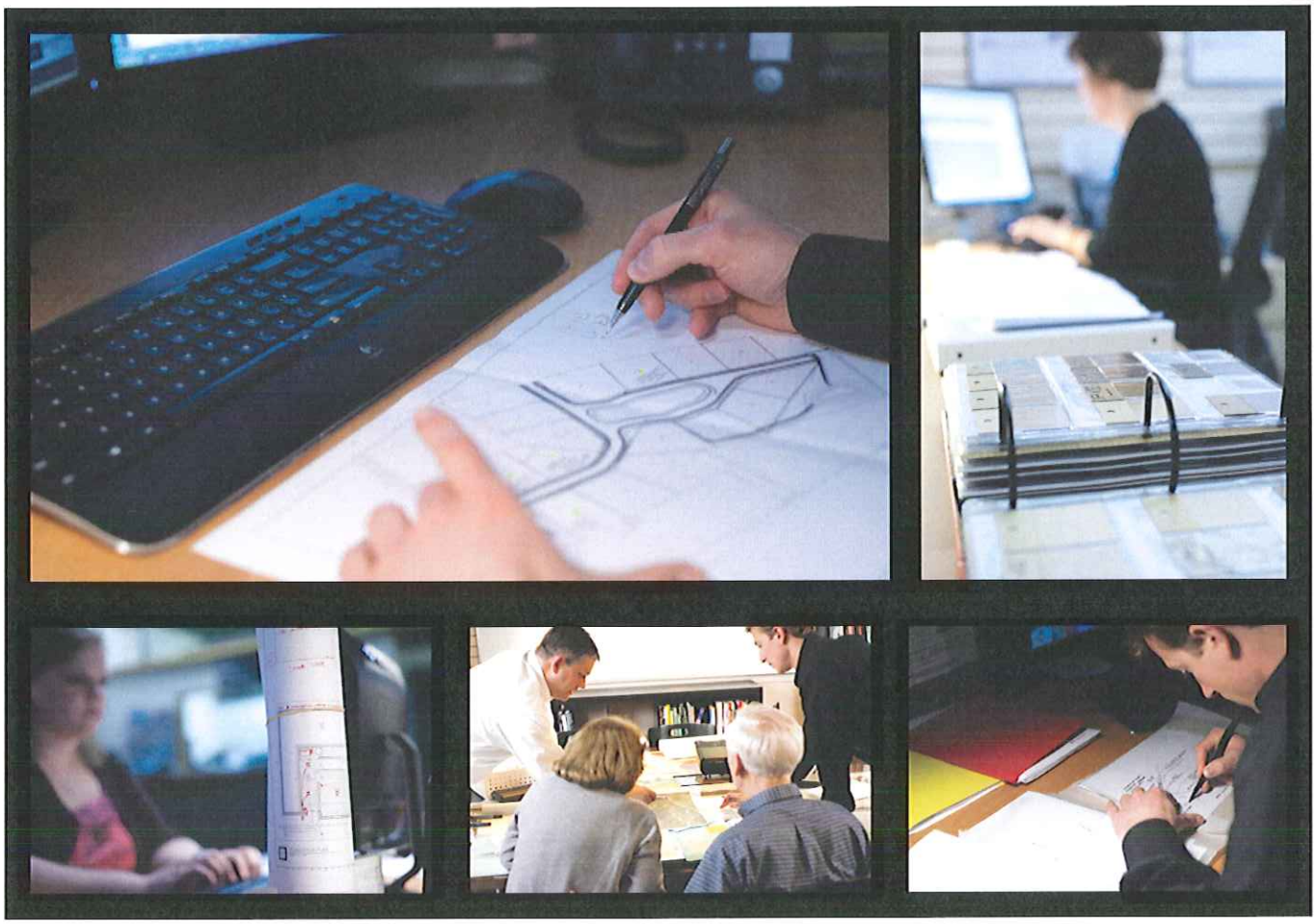
POOL RELATED PROJECT EXPERIENCE
(2007 to Present)

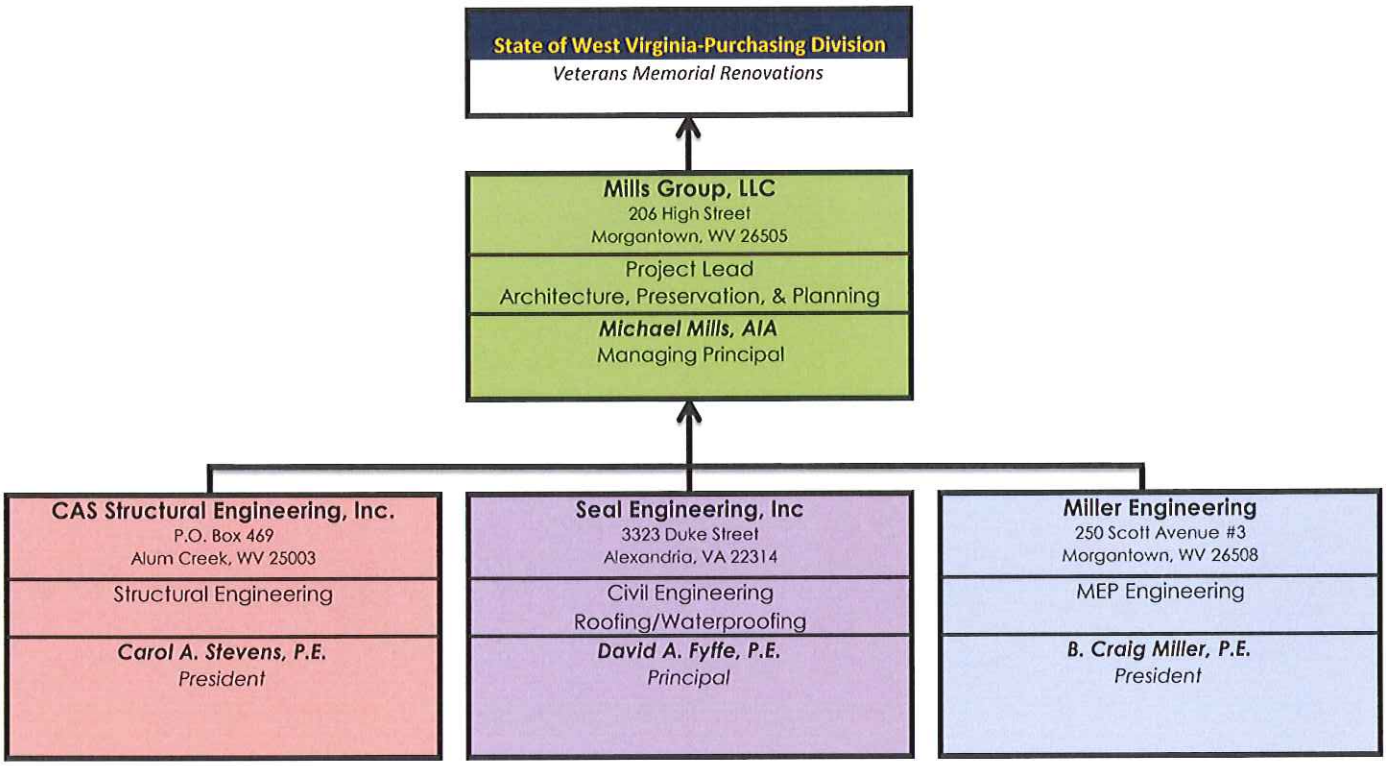
MILLER ENGINEERING, INC.

WVDNR - Twin Falls Lodge – Beckley, WV Scope: Design piping, filtration, and chemical feed for pre-manufactured pool as part of addition to Lodge Status: Completed
The Shack - Pool Repairs – Morgantown WV Scope: Investigate and evaluate leaks at pool as whether they were piping or structural. Design repair based on findings. Status: Complete
Alderson Broadus College – Pool Evaluation – Philippi, WV Scope: Evaluate existing indoor pool, filter equipment, and HVAC systems, make recommendations for repairs and replacement. Estimate costs for repair and replacement Status: On hold pending funding
Nicholas County – Pool Evaluation – Summersville, WV Scope: Evaluate existing outdoor pool, filter equipment, and structural concerns, make recommendations for repairs and replacement. Estimate costs for repair and replacement Status: Complete
Alpine Lakes - Pool Study – Terra Alta, WV Scope: Perform a study with schematic design to evaluate the construction of a new indoor, outdoor or split use pool at the Alpine Lakes Golf community Status: Complete
Tomlinson Run State Park – Pool Renovation – New Manchester, WV Scope: Design, competitively bid, and perform construction administration for a basin repair, liner, and filtrations system replacement/ upgrade at the Tomlinson Run State Park Status: Complete
City of Roncevert – Pool Evaluation – Roncevert, WV Scope: Evaluate existing outdoor pool, filter equipment, and structural concerns, make recommendations for repairs and replacement. Estimate costs for repair and replacement. Master plan the pool site Status: Complete, Construction on hold pending funding
VGB Repairs – BOPARC of Morgantown, WVU Pool Facilities, Oglebay Resort, Grafton Pool, Moorefield Pool, Camp Muffly Pool, The Shack Pool, New Martinsville Pool, Watoga Pool, Wheeling Pool, McMechen Pool, Hundred Pool Scope: Evaluate existing pool main drains for compliance with 2009 Federal regulations for anti entrapment/ anti evisceration suction covers Status: Completed
MercyHurst College – Pool Evaluation – Erie PA Scope: Perform Phase 1 Evaluation of existing indoor pool facility, including HVAC systems, and recommend course of action to bring facility to current standards. Estimate cost and provide written report. Status: Evaluation and Estimate complete, awaiting funding.

Firm Staffing: Who are we?

The firm currently has five technical staff members and an office manager/administrator. The complete resumes of the technical staff are included in this proposal and the organizational chart below shows the work flow processes of the office. The staff functions very much as a team with each staff member having a well rounded basis of knowledge about the profession, and each having a center of excellence that can provide value added service to the client. Please see the complete depth of experience and qualifications in the individual resumes within the appendix of this section.




State of West Virginia-Purchasing Division
Veterans Memorial Renovations
Mills Group, LLC
206 High Street
Morgantown, WV 26505
Project Lead
Architecture, Preservation, & Planning
Michael Mills, AIA
Managing Principal
CAS Structural Engineering, Inc.
P.O. Box 469
Alum Creek, WV 25003
Structural Engineering
Carol A. Stevens, P.E.
President
Seal Engineering, Inc
3323 Duke Street
Alexandria, VA 22314
Civil Engineering
Roofing/Waterproofing
David A. Fyffe, P.E.
Principal
Miller Engineering
250 Scott Avenue #3
Morgantown, WV 26508
MEP Engineering
B. Craig Miller, P.E.
President

MILLS GROUP

Michael J. Mills, AIA
Principal Architect

Education:
BS, BARCH/1993/
Rensselaer
Polytechnic Institute

Professional Registrations:
West Virginia
Virginia
Ohio

Mr. Mills leads all facets of the daily operations of the Mills Group. Mr. Mills has seventeen years of experience in historical preservation, architectural design, and planning. Through his extensive work with historic structures, he has a detailed working knowledge of the Secretary of the Interior's Standards for Historic Preservation Projects. His work includes interior and exterior preservation, window restoration, foundation waterproofing, roof repair, integration of MEP systems in a historic structure and the design of interpretive exhibits for historic structures. The other aspects of his work include historic design guidelines, contextual design of new structures, and the issues related the revitalization of main streets across the country.

Preservation Experience:

Metropolitan Theatre - *Morgantown, WV*
The Mills Group acted as associate architects on the step-by-step restoration. The project paired architects with multiple organizations to accomplish an array of tasks. The challenge was coordinating disparate entities to deal with technical, preservation, life safety and code issues in an operational performing arts facilities.

Willey Mansion Report - *Morgantown, WV*
The Mills Group was contracted by the Morgantown Historic Landmarks Commission to survey the home and compile a feasibility study to determine what steps were necessary to adaptively reuse the building. An intense assessment was performed on the building systems, the conditions of the exterior envelope and interior finishes. The report details upgrades and changes that is necessary for the reuse of the building.

Delmonte Hotel - *Elkins, WV*
The Mills Group acted as associate architects on the step-by-step restoration. The project paired architects with multiple organizations to accomplish an array of tasks. The challenge was coordinating disparate entities to deal with technical, preservation, life safety and code issues in an operational performing arts facilities.

Price House - *Kingwood, WV*
This project is working to restore a historic house on the edge of downtown. The house will be brought back to it's original character and possibly be used as business/retail space. The adjoining addition will be added onto again and transformed into student housing. A fire egress stair will connect it to the Beauty College.

Toll Gate House - *Wellsburg, WV*
An exterior restoration and structural stabilization. The original wood siding will be cleaned and repaired; the existing front stoop will be removed and replaced with a time appropriate stoop. Also the roof and windows will be replaced with time appropriate elements.

Kump House - *Elkins, WV*
The Kump House Trust and City of Elkins hired The Mills Group to execute a historical structures report and conceptual design for the re-use of the 1923 Neo-Classicial mansion as a mixed use educational facility. Great emphasis for sustainable practices were considered.

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Halliehurst - *Elkins, WV*
The Mills Group consulted with Davis & Elkins College on a historically based painting scheme for Halliehurst Hall, built in 1890 by Senator Stephen B. Elkins. The building has long been a center of social activity for both the college and the city of Elkins. Halliehurst was completely restored in the 1990s and is now a National Historic Landmark. The offices of the President, Advancement staff, Alumni, Communications, and Admissions are located in this magnificent example of Victorian architecture.

Highland Estate - *Clarksburg, WV*
A residential restoration project which is focused on the removal of the existing asphalt shingles and replacing them with the original style roofing. The original roof was a terra-cotta barrel tile that was removed at the end of its life. Also the flat roof over the front and back entry will be replaced with a fully adhered membrane system.

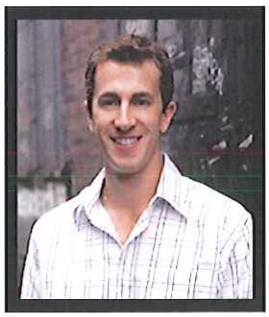
Camp Caesar - *Cowen, WV*
Stabilization of Council Circle, the only covered 4-H Council Circle in the state of West Virginia. Built in 1928 and relocated in 1961, this structure was in need of rehabilitation after heavy snowfall greatly affected the structure in the winter of 2009. Assisted Camp Caesar in a grant application for the funding to properly restore it to its glory.

WVSHPO 2011, 2010, 2009, 2008, 2007 Grant Monitoring - *Various locations, WV*
In 2006 the Mills Group began assisting the West Virginia State Historic Preservation Office by facilitating a necessary component of contract administration, closely observing and aiding every aspect of the work. Mills first inspects the site, then helps to lay out the scope of work and craft the requests for proposals as well as reviewing the proposals. During the construction phase, architects provide technical assistance and a final inspection. Since 2006, the Mills Group has provided this service at dozens of historic sites in the state of West Virginia.

Publications:
Vandalia Heritage Foundation's Preservation Resource Center Publications: *"An Introduction to Historic Preservation", "Researching your Historic Home", "What is Historic Preservation?", and "Preservation Bulletin #1: The Rehabilitation Process"*
"Convergence: Effective Preservation Through Collaboration/An Interdisciplinary Approach", Submitted to

APT Bulletin, Spring 2002.
"Commissary Sergeant's Quarters, Building 42", **Montgomery C. Meigs and the Buildings of the Nation's Capital.** Edited by William C. Dickinson, Dean A. Herrin and Donald A. Kennon, 2001, Ohio Press.

Ryan K. Hess, LEED AP
Director of Sustainable Design



Education:
West Virginia University:
2007/BA/ Civil & Environmental Engineering
2008/MA/ Business Administration

Carnegie Mellon University:
2009/ Master of Science, Architecture

Ryan is responsible for leading the office in the sustainable design market and serves as our expert on LEED AP projects. As such, Ryan pursues client opportunities, manages projects, and incorporates sustainable principles into all his designs. Ryan has also improved the efficiency of the office through in-house project management. Mr. Hess also volunteers his time lecturing to students interested in pursuing a career in architecture, mentors architectural interns as well as serves on various city redevelopment committees.

Planning:

Preston County Farm Masterplan-*Kingwood, WV*
A proposed long term vision of a growth masterplan for Preston County Commission facilities including: 911/OEM Building, 911 Storage Facility and Bunk House, Sheriff Storage Facility, and Burn Building for safe fire training in the near future and many other possibilities in the distant future to effectively allocate space planning.

Randolph Co. Housing Authority - *Elkins, WV*
Energy modeling analysis investigating orientation, shading, and glazing of single family detached homes on a greenfield development site. Also an analysis of solar and wind potential of the greenfield lots pre and post development to evaluate the effects it has on the site and the surrounding areas.

Commercial:

University Avenue Plaza - *Morgantown, WV*
Conceptual building design of mixed use facility for retail, light commercial, office, and residential uses. This new construction project celebrates rich architectural character and building methods of downtown Morgantown's past. Site planning maximizes road frontage and encourages pedestrian traffic, while still accommodating vehicle traffic demands.

188 Spruce Street - *Morgantown, WV*
Urban infill project serving as transition structure and facility between urban and residential neighborhoods, utilizing proximity to amenities such as services, public transportation, entertainment, and preserved green space. It will provide sub level on-site parking, along with first level retail/office space below multiple levels of residential living.

Public:

Preston County Sheriff's Facility - *Kingwood, WV*
A masterplan vision for grant applications focused on the concept of adaptive reuse. It is phased into six manageable chunks to allow for total rejuvenation of the town's central core. An existing historic sheriff's house and attached jail will be transformed into useable and practical space for their growing staff.

Monongalia County Fair Barn- *Morgantown, WV*
A conceptual design for a multipurpose livestock barn with adjacent exhibit hall, bathroom, shower, and storage facilities. Assistance provided to Monongalia County Fair Commission for project bidding and cost estimations as well. It will be a shared public facility serving events in seasonal use.

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Preservation:

Kump House - *Elkins, WV*
The Kump House Trust and City of Elkins hired The Mills Group to execute a historical structures report and conceptual design for the re-use of the 1923 Neo-Classicial mansion as a mixed use educational facility. Great emphasis for sustainable practices were considered.

Camp Caesar - *Cowen, WV*
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Past Experience:

Alpha Associates, Inc.

Engineering Intern
May - August 2005
May - August 2006

Sandra Scaffidi, MA

Preservation Associate & Historian

Education:
MA/2001 Public History- Colorado State University

BA/1998/History Binghamton University

Sandra has more than ten years of experience documenting historic propeties throughout the United States. She is well versed in working with Federal, state and local preservation laws and enjoys developing historic contexts and completing field surveys. Sandra also has authored National Register of Historic Places nominations and completed Historic Structures Reports. Additional preservation experience includes (but is not limited to):

Preservation Experience:

Historic/Architectural Documentation of the Highland Drive Veterans Administration Hospital, *Pittsburgh, Allegheny County, PA.* Documented and evaluated mid 20th century psychiatric hospital prior to demolition.

National Register of Historic Places Nomination for Capon Chapel, *Hampshire County, WV. (Active)* Completed background research and nomination form for NRHP listing of the historic property.

National Register of Historic Places Nomination for the Old Pine Church, *Hampshire, County, WV.* (Active)Completed background research and nomination form for NRHP listing of the historic property for Landmarks Commission.

Architectural Survey of Woodburn Historic District, Morgantown, West Virginia. Morgantown Historic Landmarks Commission. Identified, documented and evaluated approximately 400 structures within the Woodburn Historic District in Monongalia County. Responsibilities included historic research, architectural survey, preparation of approximately 400 West Virginia Historic Property Inventory survey forms, the composition of a brief historic context, a public presentation, and project management.

Historic Structures Report. Rogers House, *Morgantown, WV.* WVU Campus Ministry Center. Preservation Associate. Conducted an in-depth architectural study of the Rogers House, a 19th century structure listed in the NRHP. Responsibilities included architectural survey and documentation, historic research, photography, and the composition of a detailed narrative

WV SHPO Grant Monitor, *Charleston, WV.* Provided technical assistance and grant monitoring to 17 grant recipients throughout the state on behalf of the WV SHPO.

The Development of a Maintenance Manual, *Independence Hall, Wheeling, WV.* Created a Maintenance Manual for the care and preservation of a new mural placed inside the courtroom at the Custom House in Wheeling featuring the creation of the state of West Virginia.

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Master Plan of Duffield's Station, Duffield Station, WV. Interpreted historic documentation to develop a timeline of alterations to an early train station in Jefferson County, West Virginia.

Additional Project Experience:

Grey's Reef Light Station, Lake Michigan, MI. Architectural Historian. (TetraTech). Responsibilities included photographically documenting the removal of the antenna according to a Memorandum of Understanding between the Advisory Council on Historic Preservation and the US Coast Guard.

Historic Documentation of the Lodge at Cacapon Resort State Park, Morgan County, WV. Lead Architectural Historian (Practical Preservation). Responsibilities included researching the history of the lodge, documenting the structure on a WV Historic Property Identification Form, assessing the eligibility of the structure and the effect of the project on the resource.

Preserve America Oral History Podcast Project. Marion County, WV. (The City of Fairmont) Author. Responsibilities included creating a proposal addressing the need to capture the oral history of older Fairmont citizens and their memories of downtown. Created budget work plan, request for proposals and solicited qualified applicants. Successfully awarded $40,000 grant funding in 2008.

National Trust for Historic Preservation, Great American Main Street Award (GAMSA) Finalist*, Marion County, WV.* (Main Street Fairmont) Author. Responsibilities included assessing statistical data to illustrate revitalization trends in downtown Fairmont for the past 20 years. The application also included highlights from several activities which showcased Main Street Fairmont's volunteer efforts. Organization was granted finalist status and was in the top 5 of over 1,000 communities throughout the United States.

National Register Nomination. *Emporia, Virginia.* City of Emporia and the Virginia Division of Historic Resources (VDHR). Architectural Historian (KCI Technologies) Inventory, evaluation, and National Register nomination of approximately 100 resources located within two historic districts within the town of Emporia. Responsibilities include client contact, preparation of approximately 100 survey forms, historic context, public presentations, and project management.

Statewide Historic Bridge Survey. *Charleston, WV.* WV Division of Highways. Architectural Historian (KCI Technologies). Inventory and evaluation of approximately 3,000 bridges built prior to 1965 to update the WV Historic Bridge Survey. Responsibilities include preparation of historic context report.

Julie M. Frum

Project Manager

Education:
BA/1993 Interior Design- West Virginia University

Concentrating on interior design and architecture, furniture specification and project management. Ms. Frumhas fifteen years experience including a broad range of commercial experience, higher education, healthcare and corporate environments. Julie executes a leadership role to manage client relationships and coordinate with the Mills Group design and project management team.

Julie's current projects include conceptual design for Hancock County 911, construction management for FBI Fairmont, WV and interior design planning for Chestnut Hotel Morgantown, WV and development and master planning

Project Experience:

Hancock 911- Hancock County, WV The Hancock County 911 and Health Department hired the Mills Group to do an interior concept layout for their new building. During the planning process Julie worked with the managers from both the 911 center and the Health Department to develop an interior layout to fit their current needs and to allow for future growth. After an initial design was completed, Julie worked with the client to refine the design in order to come up with a final layout to fit the client's needs.

Preston County ADA Signage Package- Preston County, WV
The Preston County ADA signage package was developed so that the County buildings would be in compliance with the Americans with Disability Act. Julie worked with the commission to develop a package that could be put out for public bid. All offices needed to be denoted, and then way-finding directories needed to be created to help the public maneuver around the facilities. Finally, a product specification was created to complete the bid package.

Morgantown City History Museum- Morgantown, WV
The Morgantown City History Museum employed the Mills Group to develop an overall connective design element for their new location. This element was needed to define each specific time period in the history of the city of Morgantown. Julie worked with the design team at the Mills Group to create a sign with graphics that would connect the museums exhibits together. Once the design was completed, Julie finalized the job, but working to have the signs constructed and installed before the Grand opening of the museum.

Pi Kappa Alpha Site Feasibility Study- Morgantown, WV
Working with a team at the Mills Group, Julie helped to complete a site feasibility study for the Pi Kappa Alpha Faternity in Morgantown, WV. The goal was to establish the posible uses for the existing building and land that the facurnity currently occupies. Julie helped to plan out variour type of houses that could be built on the site, as well as a renovation of the existing house.

Gained experience with Franklin Interiors:

United Hosptial Center-New Facility-Bridgeport, WV
UHC, Clarksburg WV utalized Julie's project management expierence when they moved into their new facility in Bridgeport, WV. Julie worked with the hospital move management team, installation crews and the facility contractors to ensure that all furniture was installed for the opening of the hospital.

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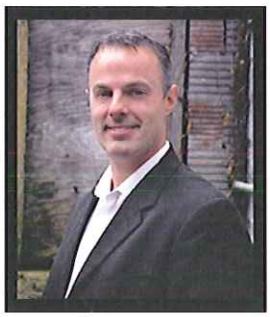
Fairmont State University - Masters in Business Classroom - Jaynes Hall
Fairmont, WV
The new Masters in Business classroom was developed to be a flexible classroom for the business department at Fairmont State University. The goal was to create a prototype for the program that could be duplicated and expanded for classrooms within the school of business. During the programming phase Julie worked with the Dean of the School and the FSU Facilities Department to renovate the space, specify flexible furniture and add new technology. Once all space planning and product specification was complete Julie scheduled and coordinated final product installation and punch list completion.

West Virginia University Wise Library- Morgantown, WV
Due to the growth on campus WVU Wise Library worked with Julie to create new spaces for students to study and collaborate on projects. While working on this project new multi- purpose and flexible study spaces were created by moving existing book stacks. Once the areas were opened up, Julie and her design team created two small study areas, one medium study area and one large open collaboration space. The furniture that was proposed and purchased was mobile and able to adapt for many types of uses.

R. Greg Eddy, AIA
Project Manager



Education:
MA/2004 /Architecture
Virginia Polytechnic Institute & State University

BA/2001/Architecture
Fairmont State University

R. Greg Eddy, of Morgantown, has joined Mills Group in the capacity of Project Manager with eight years of experience. Greg is a registered architect in the state of West Virginia and is NCARB certified. "Being from the Morgantown area, I welcome the opportunity to assist my community in its incredible growth and development," said Greg; this sentient is shown in his involvement in Main Street Morgantown. His project experience ranges from small residential to large commercial with a sensitivity to client focused design solutions. Greg is very excited for the opportunities offered by Mills Group and looks forward to contributing to the burgeoning Downtown Morgantown architecture firm.

Experience:

BFS Addition and Renovation – Morgantown,WV -
A design build project, the scope was to develop a set of documents which would demonstrate the intentions of updating and existing building and the creation of addition space to house a chain restaurant. Coordination between the general contractor, engineering consultants and a national chain restaurants design team were critical to the successful end deliverables.

Boy Scout Camp Mountaineer Pavilion Addition:
The Boy Scouts of America employed full services for design and documentation of two pavilions to serve shelter needs at their rifle and archery range. In addition to design and bidding we have been asked to provide administrative services to implement these structures. Through close client communications a sensitivity to natural site characteristics and budget were paramount to a successful bidding process. This project is currently under construction and has a completion date of late winter 2012.

Gained experience under the guidance of previous firms:

WVHEPC Headquarters Kanawha Valley Community and Technical College - South Charleston
A gift of an existing 100+sqft structure and the future leasing of a portion of this space to a growing community and technical college lead a very complicated program for this owner. Though interviews with the owner and the end user, a scope was developed which included a major renovation, an addition of 20+ sqft and a complete upgrade to all major support systems and non-structural systems. Currently under construction in Phase I of III, this project has a delivery date of end of 2012.

Allegheny Energy Headquarters - Fairmont WV
The scope was to develop new construction which would support 150+ employees and server as the main distribution portal for the Mid-Atlantic power grid. With deliverable as design build while being fast tracked, a team approach was taken. Given to task of interior public spaces, it was desired that a high corporate finish was desired. This was accomplished through material selections, color choices and interior partitions dynamics.

Fairfield Inn and Suites - Morgantown, WV
The scope was of new construction of a four story, ninety six sleeping unit bearing the marketed name of Fairfield Inn and Suites. Following guidance from the name brand, construction type, site placement and execution of any and all chosen amenities were within the deliverables.

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WV State Parks and Forest - Twin Falls Resort State Park
The scope was to transform Twin Falls Lodge into a contemporary facility with all the comforts of true southern West Virginia hospitality. An expansion and renovation of an existing lodge was the desired direction. Through client interactions, it was determined that a completely new architectural character was desired. This was accomplished by positioning the new structure on approach in a way to limit views of the existing structure and developing a country modern material palate.

Old Hemlock Residence - Bruceton Mills, WV
A scope of designing new construction which would serve both the needs of a caretaker's home and of education for the Old Hemlock Foundation. The residences conceptual and final designs were found through interactions with the end user to recreate positive experiences from which they would live and entertain. Through multiple interactions, a palate of materials and forms were composed which would support and provide balance with the natural surroundings. By capturing views of the foundations historical structure, Old Hemlock, and of the surrounding woodlands, a harmony was created between the new man made structure, the sites mature structures and nature.

Vidulich Residence - Morgantown, WV
The Scope of designing for new construction which would serve the needs of a family of four. Apparent to mind during the interactions with the end user were full accessible needs along with a close at hand empty nest. Working closely with the client to find a good balance between a commercially created plan, a difficult topography and the found necessities of plan, a successful structure was completed.

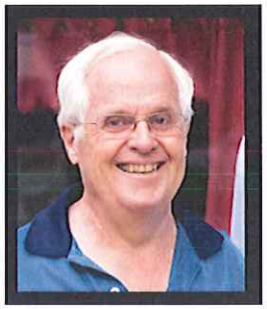
Teaching Experience:

Jan 2005 Fairmont State University
Adjunct Professor
Design Studio
Site Planning
Introduction to Revit Design Software

Community Involvement:

Member, St. Mary's Roman Catholic Church - Lecture
Art and Architecture Committee
Main Street Morgantown
Wes Mon Basketball League
Morgantown Baseball Association - Fall League Co-Coordinator

David A. Kemnitzer, AIA
Architect, Consultant



Education
Bachelor of Science in Architecture, 1965
University of Cincinnati, Cincinnati, Ohio

Alpha Tau Omega, Various Offices

Delta Phil Delta, Art Honorary Fraternity

Scarab Architectural Honorary Fraternity

David has over thirty-five years of experience in the field of architecture. David lead a National Preservation Practice working on national resources specializing in consultation for historic restoration, adaptive reuse and existing building projects for public and private clients in the United States and overseas.

Representative Projects:

Metropolitan Theater, Morgantown, WV, Architect for restoration of decorative finishes.

Marion County Courthouse, Fairmont, WV. Historic Preservation Consultant to Powe Jones, Architects, architect of record for restoration of the cast iron cornices and roof stabilization.

Cottrill's Opera House, Thomas, WV. Historic Preservation Architect for stabilization of the building. Consultant to Powe-Jones, Architect, architects of record.

Arlington National Cemetery, Master Plan (Consultant), Arlington, VA

Jefferson Building, Window restoration, Library of Congress, Washington, DC; Architect of the Capitol

Jefferson Memorial, Studies and Partial Restoration, Washington, DC

Lincoln Memorial, Studies, Washington, DC

Memorial Amphitheater, Restoration, Arlington National Cemetery, Arlington, VA

Million Dollar Bridge, Restoration, Fairmont, West Virginia - Consultant

National Archives Building, Roofing, Washington, DC

Old Executive Office Building, PDS and Exterior Restoration, Washington, DC

Pentagon, PDS and various projects, Arlington, VA

US Department of Agriculture South Building, Window Restoration, Washington, DC

Papers Presented

"Water Deterioration of Marble at the Memorial Amphitheater, Arlington National Cemetery", paper presented to the Association for Preservation Technology International Conference, Seattle, Washington, 1994

"Repair and Reuse of Historic Slate Roofing", paper presented to the Association for Preservation Technology, Chicago, Illinois, 1989

MILLS GROUP

SEAL ENGINEERING, INC.
3323 Duke Street, Alexandria, Virginia 22314
(703) 823-6366
fax (703) 823-2890

Resume

Name: **David A. Fyffe, P.E.**
Assignment: Principal/Project Manager
Education: Bachelor of Science, Civil Engineering, 1984
Clarkson University, Potsdam, New York

Registrations: 1992/Civil Engineering PE - DC #09864
1992/Civil Engineering PE - VA #024165
2005/Civil Engineering PE - MD #31665
2005/Civil Engineering PE – WV #16421

Experience: Mr. Fyffe is responsible for overall project management as well as conducting field investigations, preparing evaluation reports, cost estimates, design drawings, plans and specifications and performing contract compliance inspection services for roofing, waterproofing, structural, building envelope, restoration and concrete repair projects. Many of the repair and restoration projects completed involve historic structures, and as such, David and the rest of the firm have a keen understanding of Secretary of the Interior's Standard for the Treatment of Historic Properties. Prior to joining Seal, David was responsible for civil and structural engineering on several major development and rehabilitation projects. The following projects provide an overview of David's experience:

Corcoran Gallery of Art Roof and Skylight Replacement, Washington, DC – Project Manager for study and follow on design for flat and sloped roof replacements performed in traditional design-bid-build format in conjunction with design-build format for monumental skylight replacement. Project required coordination and collaboration between historic architect, mechanical consultant, structural engineer, construction manager, and skylight designer/supplier. Provided construction phase services consisting of shop drawing review, RFI responses and on-site inspection.

Camden Yards Warehouse and Camden Station Roof Replacement, Baltimore, Maryland – Project Manager for verification survey of prior condition assessment study and for follow on design for roof replacement on historic warehouse and station building. Aside from roofing, project involves interface with other consultants with respect to façade stabilization, foundation waterproofing repair and associated site work.

Rayburn House Office Building Roof Replacement, Washington, DC – Project Manager for roofing aspects of study and design for roofing system replacement. Study evaluated options for conventional roofing, vegetative roofing, Cool Roofing, and building integrated photovoltaic roofing. Final roof design package included Cool Roofing with Energy Star rated surface with option for installation of building integrated photovoltaic solar collection system. Provide Architect of the Capitol with construction phase services including shop drawing review, attendance at progress meetings, and on-call construction inspections.

East and West Wing Roofs, White House, Washington, DC - Served as Project Manager and Project Engineer for research of past roofing history, coordination of field investigations, design, preparation, and review of roof replacement and masonry chimney restoration design package. Project included design of a new wood roof support system for a flat locked and soldered lead coated copper roofing system, a hot-rubberized asphalt protected membrane assembly with precast concrete paver surfacing, concrete and masonry repairs, and gravel surfaced asphalt built-up roofing installations. Performed construction phase site inspections for Owner.

Cottrill's Opera House, Thomas, West Virginia – Project Manager for the investigation of existing roofing and site conditions of this1902 abandoned structure related to complete restoration and reoccupation of the building. Initial building stabilization work was completed prior to our involvement. Our efforts were focused on (1) completing stabilization to protect the building from the environment, and (2) designing long term repairs and replacements to serve the building in its fully occupied state. Roof replacement and site repairs to control water penetration into the structure have been completed.

Marion County Courthouse Structural Assessment, Fairmont, West Virginia – Served as Project Manager for the roofing and waterproofing component of the assessment. Work involved surveying of interior and exterior conditions related to flat roof systems, sloped metal roof systems and flashing, and cast iron façade and roofing elements. Provided follow on design services for implementation of roof repairs recommended by study associated with stabilization of perimeter cast iron cornice, and for roofing aspect associated with structurally reinforcing of the original clay tile arch roof deck.

Supreme Court Roof Repair, Washington, DC - Served as Project Manager for firm's role in preparing comprehensive study of existing conditions at the various conventional and historic roofing systems on the building. Result of study was a focused approach to address all roofing systems (repairs and replacements) in a phased manner to minimize impact on the occupied facility. Prepared design of recommended repairs and replacements. To date two phases have been completed, with final third phase scheduled.

Circuit Court Bell Tower Restoration, Fredericksburg, Virginia – Project Manager and Engineer for investigation, design and contract compliance inspection services for restoration of windows and stucco façade on this 1851 structure. Work involved closely coordinating restoration plans with City Historical Architect. Aside from inspecting work for compliance with drawings and specifications, prepared design for replacement of large deteriorated structural wood beams uncovered in the execution of the work. Worked closely with the restoration contractor to find acceptable source for replacement timbers.

Federal Trade Commission Roof and Entry Waterproofing Replacement, Washington, DC - Project Manager for the investigation of existing conditions, analysis to determine recommended repair and replacements, and preparation of design, drawings, technical specifications, and cost estimates. Scope of services included preparation of survey, report, and design for roofing and on-structure entry waterproofing replacement. Provided on-call construction phase inspection services.

U.S. Dept. of Agriculture, Washington, DC - Served as Principal-In-Charge for two open-ended A/E multiple-delivery contracts (as subconsultant), and presently providing on-call roofing and waterproofing inspection services through third term contract. Completed projects include Flat Roofing System Survey and Comprehensive Condition Report for entire complex; design and full-time inspection of roof replacement at the Jefferson Auditorium and Television Studio; Court 4 Library roof replacement design (two projects); Wing 3 Slate Roof and Built-in Gutter replacement design; Sub-Central Plant roof replacement design and construction inspection services; Court 1, 2 and 3 waterproofing repair design and construction inspection services; courtyard entrance ramp waterproofing system replacement design and construction inspection services; and design of repairs to stop roof leaks at the Cotton Annex and South Agriculture Buildings. Currently managing full time inspection services for construction phase of most recent design work for replacement of Court 2 and 3 waterproofing replacement, Cafeteria Terrace Waterproofing Replacement and East and West Bridge Roof Replacements.

PROFESSIONAL ACTIVITIES/MEMBERSHIPS

Member, American Society of Civil Engineers
Member, American Concrete Institute
Member, Construction Specifications Institute
Member, National Trust for Historic Places
Associate Member, National Roofing Contractors Association

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
David A. Fyffe, P.E.	Roofing / Waterproofing Consultant	27	20

15. FIRM NAME AND LOCATION *(City and State)*

Seal Engineering, Inc., Alexandria, VA

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Bachelor of Science / 1984 / Civil Engineering / Clarkson University	Professional Engineer, Civil District of Columbia, Commonwealth of Virginia West Virginia and Maryland

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Fyffe is familiar with a wide variety of building envelope systems and components, and has worked on over 500 projects for federal, state and local clients in the Washington, DC Metro area. Many of the projects executed by Mr. Fyffe have been on occupied structures of historic importance, a factor that was carefully considered in the repair and replacement design programs implemented. He is responsible for creating and reviewing evaluation reports, cost estimates, design drawings, plans, specifications, bid packages, contract documents, and observation reports. In addition, he serves as a personnel manager for the firm, overseeing the allocation of resources to ensure the company has the capacity to meet its contract commitments.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Roof Replacement, Corcoran Gallery of Art Washington, DC	ongoing	ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant: Project Manager for investigation, design and construction phase for roof replacement. Working closely with Historic Preservation Architect, Owner, Skylight System Replacement Designer and Construction Manager to design long term solutions to perennial problem areas while responding to both the historic fabric of the building and the Owner's need for maximum occupancy. Also prepared contract document package for immediate roof maintenance & repairs and continuing to provide construction phase services.

b.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Architect of the Capitol Term Contract under A/E Prime Firm Washington, DC	ongoing	ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant: Project Manager for survey, report and design for roof repair and partial replacement at Hart Senate Office Building ($1M); Survey, Condition Report and Programming for Roofing Replacement at the Supreme Court ($7M); and Roofing System Fall Protection System Design at the Supreme Court ($300K).

c.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
American University Term Contract Washington, DC	ongoing	ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant: Project Manager for surveys, reports, designs and/or inspections for over forty projects since 1990. Recently completed projects include architectural drawing design review for roofing and waterproofing systems, and construction phase inspection services for same at the newly constructed Katzen Arts Center $500k for roof and waterproofing systems). Other pertinent projects include investigation, design, bidding and construction phase inspection services for Centennial Hall Terrace Waterproofing Replacement ($300k), Hurst Hall Foundation Waterproofing Repair ($20k) and Roof Replacement ($160k), Sports Center Complex Roof Replacement ($500k), and multiple dormitory roof replacement and façade repair projects.

d.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
USDA Headquarters Complex Roof Replacements Washington, DC	2008	2008

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant: Project Manager for roof replacement project ongoing since 2003. Scope of work includes roofing repairs and replacements at the Whitten Building, the South Building, the Yates Building, the Cotton Annex and the George Washington Center.
Part 1 - survey & investigation of existing conditions and preparation of a detailed report including prioritized recommendations and cost estimates. Part 2 – inspection and testing of projects under construction.

e.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
Rayburn House Office Building Roof Replacement Washington, DC	2003	2003

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

SEAL ENGINEERING, INC.
3323 Duke Street, Alexandria, Virginia 22314
(703) 823-6366
fax (703) 823-2890

Name: **David J. DiQuollo, P.E.**

Assignment: Principal/Project Manager
Yrs with Firm: 24

Education: Bachelor of Science, Civil Engineering, 1987
Virginia Polytechnic Institute, Blacksburg, Virginia

Registrations: 1992/Civil Engineering PE - VA #022871

Mr. DiQuollo is familiar with a wide variety of building envelope systems and components, and has conducted field investigations on over 800 projects for Federal Government agencies, state and local government agencies, school systems, universities, commercial owners, churches and condominium associations. He is responsible for managing, reviewing and preparing evaluation reports, cost estimates, design drawings, plans and specifications, with a particular emphasis on programmed maintenance, repair and replacement. He also serves as a quality control principal and oversees functions of project managers and engineers.

Department of Defense, Washington, DC
Project Manager for: Survey, report, design and inspection of emergency roof repairs between Corridors 3 and 6 following September 11, 2001 terrorist attack at the Pentagon ($4.5 million+); design of waterproofing replacement at Pentagon Mall Terrace ($750k); survey, report and design-build RFP documents for 5 year roof repair IDIQ contract ($3+ million/ year); survey and report of waterproofing system on Pentagon Athletic Center. In late 1980s, building-wide survey, report, design and inspection of roof maintenance, repairs and replacement at the Pentagon, including repairs and partial replacement of 110 flat roof sections and 400,000+ square feet of slate roofing ($7+ million); in 1990s, survey, design and inspection of roof replacement at the Navy Annex (FOB #2).

General Services Administration, National Capital Region, Washington, DC
Project Manager for: Six open-ended historic preservation contracts. Completed projects include: roof replacement design and inspection at the GSA National Capitol Region Headquarters Building ($2+ million); leak investigation and report, and roof replacement design for the Archives I 13th Tier roof ($300k+); survey and design for roof and exterior plaza waterproofing replacement at the J. Edgar Hoover Building ($4+ million); survey and report of the Winder Building roof; survey, report, design and inspection of the roof replacement at Jackson Place ($300k+); survey, report and design for roof replacement at FOB 10A ($3+ million); survey, report and design-build RFP documents for roofing, skylight and façade repairs at the Old Post Office ($1.5+ million). Currently completing design for façade repairs at the Sidney Yates Building, and starting design for courtyard waterproofing replacement at the J. Edgar Hoover Building.

Georgetown University, Washington, DC
Project Manager for: Surveys, reports, designs and/or inspections for over twenty projects since 1990. Recently completed projects include survey, report, design and inspection of historic slate roof restoration at the Med-Dent Building ($1.2 million); survey, report, design and inspection of roofing systems on the Nevils Building ($250k); survey, report, design and inspection of historic slate roof restoration at the Dahlgren Chapel ($150k); design and inspection of the waterproofing replacement at the Preclinical Science Podium ($1.7 million); and survey and report of the roofing systems on the Harris Building.

Architect of the Capitol, Washington, DC
Project Manager for: Survey, report and 60% design for plaza waterproofing replacement at Legislative Garage; survey, report and design for terrace waterproofing replacement at the Russell Senate Office Building ($350k); surveys and reports for leaks into Old Senate Subway Tunnel, leaks into Capitol Terminal of the Rayburn Subway Tunnel, leaks into Madison Building, and leaks into House Office Buildings.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
David J. DiQuollo, P.E.	Roofing / Waterproofing Consultant	24	24

15. FIRM NAME AND LOCATION *(City and State)*

Seal Engineering, Inc., Alexandria, VA

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Bachelor of Science / 1987 / Civil Engineering / Virginia Tech	Professional Engineer, Civil Commonwealth of Virginia

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. DiQuollo is familiar with a wide variety of building envelope systems and components, and has conducted field investigations on over 500 projects for federal, state and local government agencies, school systems, universities, commercial owners, churches and condominium associations. He serves as a quality control principal and oversees functions of project managers and engineers. He is responsible for managing, reviewing and preparing evaluation reports, cost estimates, design drawings, plans and specifications, with a particular emphasis on programmed maintenance, repair and replacement.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: National Air and Space Museum Terrace Waterproofing, Smithsonian Institution, Washington, DC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ongoing; CONSTRUCTION *(if applicable)*: ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant: Project Manager for investigation, design and construction phase services to assist A/E prime firm in resolving water infiltration problems at the museum in three areas of the basement, two areas on the second floor and three areas on the third floor. Construction budget for this project is $1.5 million.

b.

(1) TITLE AND LOCATION *(City and State)*: General Services Administration, National Capitol Region, Term Contract under A/E Prime Firm, Washington, DC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ongoing; CONSTRUCTION *(if applicable)*: ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Primary contact with Prime A/E's for six open-ended historic preservation contracts. Completed projects include: roof replacement design and inspection at the GSA National Capitol Region Headquarters Building; leak investigation and report, and roof replacement design for the Archives I 13th Tier roof; survey and design for roof and exterior plaza waterproofing replacement at the J. Edgar Hoover Building; survey and report of the Winder Building roof; survey, report, design and inspection of the roof replacement at Jackson Place; survey, report and design for roof replacement at FOB 10A; survey, report and design-build RFP documents for roofing, skylight and façade repairs at the Old Post Office; survey, report and design for roof and façade repairs at the Sidney Yates Building; survey, report and design for courtyard waterproofing replacement at the J. Edgar Hoover Building; and report, design and construction phase services for the roof replacement at the HOLC Building.

c.

(1) TITLE AND LOCATION *(City and State)*: Georgetown University, Washington, DC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ongoing; CONSTRUCTION *(if applicable)*: ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Roofing/Waterproofing Consultant for surveys, reports, designs and/or inspections for over twenty projects since 1990. Recently completed projects include survey, report, design and inspection of historic slate roof restoration at the Med-Dent Building; survey, report, design and inspection of roofing systems on the Nevils Building; survey, report, design and inspection of historic slate roof restoration at the Dahlgren Chapel; design and inspection of the waterproofing replacement at the Preclinical Science Podium; survey and report of the roofing systems on the Harris Building; design of the waterproofing replacement at the Leavey Center Podium; and design and inspection of the roof replacement at the Basic Science Building.

d.

(1) TITLE AND LOCATION *(City and State)*: Architect of the Capitol Term Contract under A/E Prime Firm, Washington, DC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ongoing; CONSTRUCTION *(if applicable)*: ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Survey, report and design for plaza waterproofing replacement at Legislative Garage; survey, report and design for terrace waterproofing replacement at the Russell Senate Office Building; surveys and reports for leaks into Old Senate Subway Tunnel, leaks into Capitol Terminal of the Rayburn Subway Tunnel, leaks into Madison Building, and leaks into House Office Buildings.

e.

(1) TITLE AND LOCATION *(City and State)*: Department of Defense Term Contract under A/E Prime Firm, Washington, DC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: ongoing; CONSTRUCTION *(if applicable)*: ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — √ Check if project performed with current firm

Survey, report, design and inspection of emergency roof repairs between Corridors 3 and 6 following September 11, 2001 terrorist attack at the Pentagon; design of waterproofing replacement at Pentagon Mall Terrace; survey, report and design-build RFP documents for 5 year roof repair IDIQ contract; survey and report of waterproofing system on Pentagon Athletic Center. Currently on construction management team overseeing 5-year term roof maintenance and repair contract.

CAS Structural Engineering, Inc.

Carol A. Stevens, P.E., F.ASCE
Structural Engineer

EDUCATION
West Virginia University, BSCE, 1984
Chi Epsilon National Civil Engineering Honorary
The Pennsylvania State University, ME Eng Sci, 1989

PROFESSIONAL REGISTRATION

P.E.	1990	Pennsylvania
P.E.	1991	West Virginia
P.E.	1994	Maryland
P.E.	2008	Ohio
P.E.	2010	Kentucky

BACKGROUND SUMMARY

2001 – Present	President, Structural Engineer CAS Structural Engineering, Inc.
1999 – 2001	Structural Engineer Clingenpeel/McBrayer & Assoc, Inc.
1996 – 1999	Transportation Department Manager Structural Engineer Chapman Technical Group, Inc.
1995 – 1996	Structural Engineer Alpha Associates, Inc.
1988 – 1995	Structural Department Manager Structural Engineer NuTec Design Associates, Inc.
1982 – 1988	Engineer AAI Corporation, Inc.

PROFESSIONAL ASSOCIATIONS
American Society of Civil Engineers
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and Environmental Engineering Advisory Committee Chair
West Virginia University Institute of Technology Department of Civil Engineering Advisory Committee

CIVIC INVOLVEMENT
ASCE Christmas in April Project
Engineer's Week Speaker

EXPERIENCE
West Virginia, Collett House Structural Repairs: Structural renovations of 1770's log and framed structure to stabilize foundation and make repairs to log wall and floor. Building is on the National Register of Historic Places.

West Virginia, Job's Temple: Structural repairs to 1860's log structure. Building is on the National Register of Historic Places.

West Virginia, First Presbyterian Church Restoration: Structural renovations of steel in lantern level and terra cotta cornice, overview of repairs to limestone and terra cotta façade of 1920's structure.

West Virginia, Hawks Nest State Park Lodge: Repairs to spandrel beams at roof level and analysis of structural cracks in stairtower.

West Virginia, State Capitol Complex, Governor's Mansion: Structural analysis and design in addition to evaluation report for modifications and renovations to several areas of mansion. Building is on the National Register of Historic Places and was constructed in the 1920's.

West Virginia, State Capitol Complex, Holly Grove Mansion: Structural evaluation report for preliminary condition assessment of building structure. Building is on the National Register of Historic Places and was constructed in 1815.

West Virginia, Twin Falls Resort State Park Addition: Structural design for new addition to existing facility.

West Virginia, State Capitol Complex, Main Capitol Building Parapet: Exploratory investigation of limestone/brick parapet/balustrade of Main Capitol Building to determine cause of movement/cracking/ leaks. Construction contract for repairs has been completed. Building is on the National Register of Historic Places and was constructed in the 1920's and 1930's.

West Virginia, Twin Falls Resort State Park: Structural evaluation of existing recreation building.

West Virginia, Pipestem Resort State Park: Structural evaluation of existing recreation building.

P.O. Box 469 Alum Creek, WV 25003-0469 (304) 756-2564 (voice) (304) 756-2565 (fax)
A West Virginia Certified DBE Consultant
Certified in the Practice of Structural Engineering

West Virginia, State Capitol Complex, Main Capitol Building Dome: Exploratory investigation of structural steel components of Lantern Level of dome and development of contract documents for repairs. Building is on the National Register of Historic Places and was constructed in the 1930's. Received a NYAIA Merit Award for Design Excellence.

West Virginia, Historic Putnam-Houser House (Parkersburg): Designed system for stabilization and upgrades to floor framing of building that was constructed in the 1700's.

West Virginia, Upshur County Courthouse: Developed construction documents for structural repairs to main entrance, dome and monumental sandstone columns of 1899 structure. Work was recently completed and received a WVAIA Honor Award for Design Excellence.

Ohio, Mahoning County Courthouse: Completed preliminary structural observation report of exterior façade conditions to recommended phased repairs for terra cotta and granite façade. Building is on the National Register of Historic Places and was constructed in the early 1900's.

West Virginia, State Capitol Complex, Building 5: Structural design and analysis for support of new boilers and other mechanical equipment to be placed in mechanical penthouse.

West Virginia, State Capitol Complex, Building 7: Investigation and development of Construction Documents for new elevators.

West Virginia, State Capitol Complex, Building 3: Structural design and construction administration of repairs to limestone canopy. Building is eligible to be placed on National Register of Historic Places and was constructed in the 1950's.

West Virginia, State of West Virginia Office Building #21, Fairmont, WV: Preliminary structural observation report for condition assessment of building structure.

West Virginia, Hampshire County Courthouse: Structural design for new elevator for existing historic building.

PREVIOUS EXPERIENCE

West Virginia, State Capitol Building, North Portico Steps: Designed structural system to replace deteriorated reinforced concrete slab at landing on north side of Capitol steps. Building is on the National Register of Historic Places and was constructed in the 1930's.

West Virginia, Beech Fork State Park Pool, Bathhouse and Cabins: Designed structure for new bathhouse, swimming pool and cabins.

West Virginia, Moncove Lake State Park Pool: Designed structure for new swimming pool.

West Virginia, Upshur County Courthouse Annex: Performed structural evaluation and design for repairs to existing multi-story Annex addition.

West Virginia, Farrell Law Building: Performed analysis of existing deteriorated structural sidewalk over parking area. Recommended repair solutions for reinforced concrete and aged terra cotta façade of 1920's building.

West Virginia, Canaan Valley Resort and Conference Center: Structural feasibility study to upgrade lodging units.

West Virginia, West Virginia University Masterplan: Investigated structural floor load capacity of several university buildings as a consultant to a large national architectural firm for masterplan.

West Virginia, Morgantown High School Additions: Designed steel framing and foundations for science classroom, cafeteria and gymnasium additions to existing education complex.

West Virginia, Grafton High School Addition: Designed steel framing and foundations for new science classroom addition to existing high school.

Pennsylvania, York County Government Center: Structural analysis and design of 1898 former department store converted to county government offices. Interior renovations included adding floor framing at mezzanine level, analyzing and redesigning deficient floor framing, and adding new elevators. Exterior renovations included complete façade rework to recreate original appearance.

Pennsylvania, Metropolitan Edison Company, Headquarters: Structural design for new 80,000 SF two-story office addition to existing complex.

Pennsylvania, Defense Distribution Region East: Structural engineering and design for a 33,000 SF Hazardous Materials Storage Warehouse.

Maryland, U.S. Army Corps of Engineers, Baltimore District, Administration Building: Seismic design of new 10,000 SF masonry building.

Miller Engineering Inc.
Professional Design Services
MEI

B. Craig Miller PE

President
Miller Engineering, Inc

Responsibilities include:
Engineer in Responsible Charge of all projects.
Design, Project Management, Construction Administration of Mechanical, Electrical, Plumbing systems for new construction and renovation projects.
Managing all aspects of projects from evaluation and initial identification of project opportunities, developing concept, schematic and construction design, bidding, submittal review and project management as required to deliver project with specific objectives in a given time frame.

CASTO TECHNICAL SERVICES
Charleston, West Virginia

Existing Building Services Staff Engineer
Nov 2002 – September 2003
Duties include:
Completion of HVAC performance contracting and "turn key" retrofit projects.
Managing all aspects of projects from evaluation and initial identification of project opportunities, developing concept, schematic and construction design, managing project team and subcontractors to deliver project with specific objectives in a given time frame.
Responsible for administration, implementation, and management of performance contract based and "turn key" mechanical, electrical projects.

UNIONTOWN HOSPITAL ENGINEERING DEPARTMENT
Uniontown, Pennsylvania
Supervisor of Engineering and Clinical Engineering

Feb. 2001 – Oct 2002
Work included:
Supervising Engineering personnel in the day-to-day operation of Hospital's physical facilities including: mechanical, electrical, plumbing, and structural troubleshooting.
Managing the Clinical Engineering technician in the repair and maintenance of patient-critical support and monitoring equipment.
Managing small alteration and construction projects
Managing the facility's preventative maintenance program.
Re-commissioning HVAC systems and controls.
Managing the personnel safety, and "cross training" program.
Keeping the hospital code compliant with such codes as: NFPA, NEC, ADA, BOCA, JCAHO.

West Virginia University Physical Plant
Morgantown, West Virginia

Staff Engineer
Nov. 1995 - Feb2001
Work included:
Assisting in-house maintenance personnel in troubleshooting mechanical, electrical, plumbing, and structural operations problems.
Assisting in-house personnel in maintenance of the University's facilities.
Managing the University Energy Efficiency Program
Scoping, budget estimating, designing, preparation of project documents including drawings and specifications, bidding, and overall project management of alteration, maintenance, and repair projects in support of the University function as a major research institution (project list attached).
Managing projects which have been designed by outside A/E firms
Infrastructure planning for both alterations and capital construction projects
Reviewing designs by outside A/E firms for compliance codes such as: NFPA, NEC, ADA, BOCA, ALAC, as well as the University's construction standards and constructability.

West Virginia University Physical Plant
Morgantown, West Virginia

Interim Manager of Alterations, Engineering, & Energy Unit
November 1997 – March 2000
Duties included all duties of Staff Engineer's Position listed above and additionally:
Managing day to day operation of the Engineering Unit and it's integration with other Physical Plant units, other University departments, and outside entities such as contractors and the public
Integrating the Engineering Unit with the Capital Construction Unit in the design review of all Capital projects
Supervision and tasking of Staff Engineers, Alterations Project Managers, Project Inspector, Landscape Designer, Elevator Contract Manager, Drafting Technician, Secretary/Receptionist, Student Interns
Prioritization of Unit's work responsibilities in such a manner as to deliver projects on-time, within budget
Review of all the unit's design and contract work prior to release for procurement of services

Board of Parks and Recreation Commissioners (BOPARC)
Morgantown, West Virginia

Caretaker – Krepps Park
May 1990 – November 1995
Work included:
Managing aquatics facilities operations
Performing maintenance and repair work to park system facilities

Design and construction of facilities upgrades to park system facilities

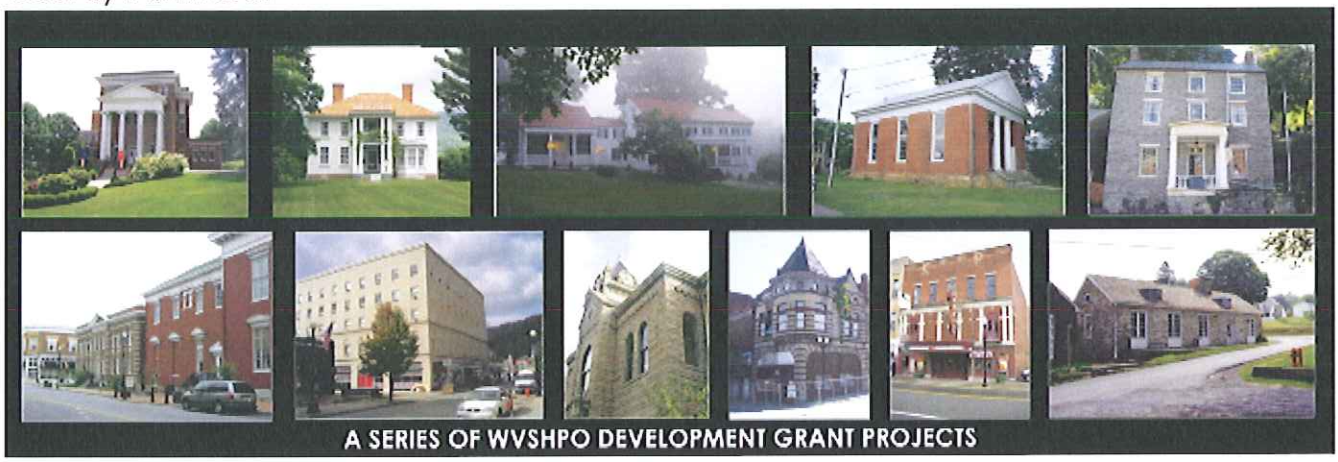
University of Charleston Physical Plant
Charleston, West Virginia

Electrician / HVAC Mechanic
October1983 – August 1988
Work included:
Work as systems mechanic performing maintenance, repair, and construction to mechanical, Electrical, and Plumbing systems throughout the University facilities.

Project Experience

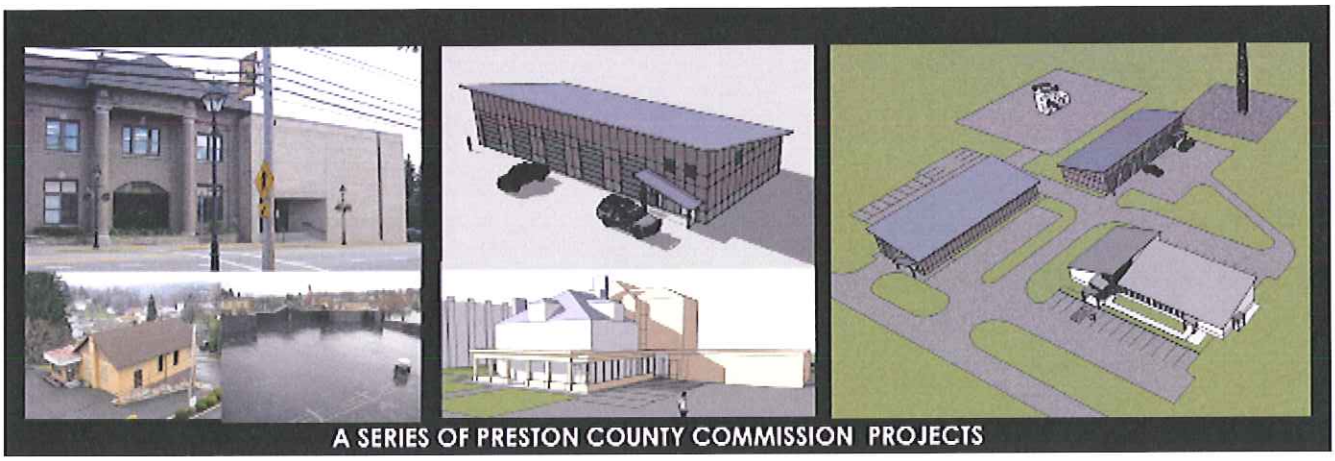
Since 2006 the Mills Group has been awarded an annually competed contract with the West Virginia State Historic Preservation Office to provide technical assistance and grant monitoring for a range of projects ranging in construction value from $5,000-$350,000. The scope of the grant projects range from masonry and window restoration to roof and exterior millwork rehabilitation. The clients range from the homeowner with no construction background to facility maintenance directors with forty years of experience.
This contract is managed and executed by the firm's managing principal, Michael Mills, because of his desire to interact with the range of clients across the state with a variety of project needs. Such a contract is a challenge because of the multiple variables, yet is a joy to aid in the execution of small projects that form the basis of the State's cultural resources.

Since the summer of 2007, the Mills Group has been the architect of choice for the Preston County Commission. The first project was the renovation of a historic structure that once housed the Kingwood City Hall and Fire Company into the County Commission's Public Meeting room and secure storage for the County's voting machines. The second project was the replacement of an EPDM roof on the Commission's Office/ Administration building. The third project was the development of construction documents for a 7,000 sq. ft. 911 Call Center and Office of Emergency Management with a full consultant team and site development; the follow up project was the full master plan of the 220 acre County Farm. Soon after, the firm designed a storage building as an annex to the 911/OEM facility. In the summer of 2009, the firm was hired to complete a master plan for the Preston County Sheriff's Facility that involved programmatic and existing condition assessments along with site planning and the development of a phased conceptual plan. The execution of this master plan led to the successful funding of the first phase of the master plan; the firm's consulting for the construction documents of this phase is pending. The most recent project for the Commission is the design of a storage facility and site design for a fire fighter's burn building on the County Farm site.


A SERIES OF WVSHPO DEVELOPMENT GRANT PROJECTS

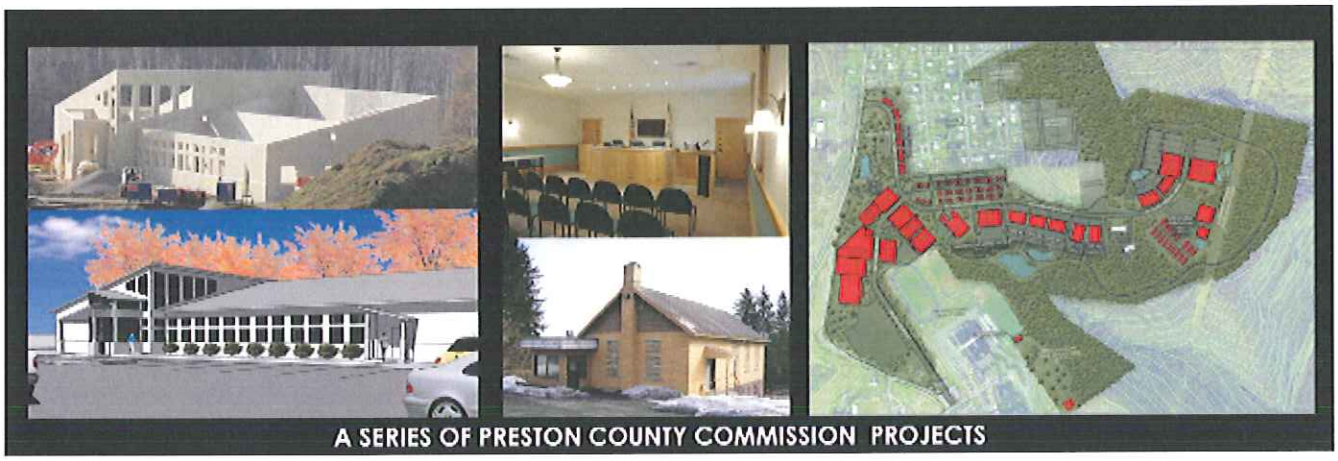
MILLS GROUP

Experience



A SERIES OF PRESTON COUNTY COMMISSION PROJECTS

The aforementioned projects are just examples showing how the firm has sprung from its beginnings less than five years ago with a full range of projects; 60-70% of the firm's revenues come from repeat clients. The importance of term contracts and repeat clients was ingrained as a foundation of a professional practice in Mr. Mills' past experience with two of the nation's leading architecture and engineering firms. As an owner, Mr. Mills has experience as a consultant that has delivered and followed through on project scopes with professionalism and competency
Experience as an owner:



A SERIES OF PRESTON COUNTY COMMISSION PROJECTS

The Mills Group is currently under contract to the West Virginia Division of Culture and History to monitor the 2007, 2008 and 2009, 2010 and 2011 grants; this work has resulted is measurable success. While at the Vandalia Heritage Foundation, Mr. Mills personally administered the architectural review for a Neighborhood Enhancement Grant program which followed strict federal guidelines including the Sectary of the Interior's Standards.

MILLS GROUP

SEAL ENGINEERING, INC.
3323 Duke Street, Alexandria, Virginia 22314
(703) 823-6366
fax (703) 823-2890

CAPABILITIES AND EXPERIENCE

CAPABILITIES - Seal Engineering, Inc. is a civil-structural engineering firm dedicated to providing professional engineering services in the following areas:

- Low and steep sloped roofing.
- Terrace, plaza deck and below-grade waterproofing.
- Building facade, concrete, masonry, window and sealant restoration.
- Parking garage and balcony restoration.
- Site improvements and utilities.

The scope of these services includes:

- Field investigations, analyses, estimates, recommendations, technical reports and replacement reserve studies -- condition reports and failure analyses.
- Preparation of designs, drawings, technical specifications and contract documents (bid packages), and assisting owners and property managers in advertising, awarding and managing contracts.
- Comprehensive field inspection for contract compliance.
- Nuclear moisture surveys, core sampling, testing and laboratory analysis of some construction materials.
- Structural and material failure analysis.
- Review of designs, drawings and specifications prepared by others.
- Expert witness services in cases concerning the engineering properties, design, installation and serviceability of materials and systems.

PROFESSIONAL QUALIFICATIONS - Established in 1980, Seal Engineering's professional staff consists exclusively of civil engineers and structural engineers. Professional engineers are registered to practice in Virginia, Maryland, the District of Columbia, and West Virginia. All engineers are trained, experienced and licensed to operate laboratory and nondestructive materials testing equipment.

SPECIALIZED EXPERIENCE - Since 1980, we have completed well over 4,000 investigation and design projects. The enclosed resumes lists a few of the interesting projects where we have had the opportunity to provide our professional services.

We pride ourselves on careful and thorough investigations and reports. Our recommendations and designs emphasize maintenance and repair whenever possible to maximize the service life of the building envelope. We recommend replacement only when it is clearly the most practical and economical alternative. Also, our engineering services have proven successful in the bidding process, where our sound, clear and practical designs and bid packages have obtained truly competitive bids.

For special assistance beyond our capabilities, we work closely with several architectural and engineering firms, materials consultants and testing laboratories.

QUALITY CONTROL/ASSURANCE - Our rigorous internal quality control/ assurance program ensures coordinated and technically accurate reports, plans, designs, specifications and construction cost estimates. Work performed by our engineering designers and consultants is carefully reviewed by our Quality Control Principal.

COMPUTER AIDED DESIGN - Our network computer system enables us to efficiently and accurately prepare reports, specifications, structural and statistical analysis, proposal cost break-outs, construction cost estimates and replacement reserve schedules. Each engineer has internet access and e-mail, allowing easy exchange of electronic files and messages with other team members. All design drawings are produced with AutoCad computer aided design and drafting (CADD).

PROFESSIONAL MEMBERSHIPS AND SPECIALIZED TRAINING

- Licensed Professional Engineers in Virginia, Maryland, District of Columbia, and West Virginia.
- Member, American Society of Civil Engineers.
- Member, American Society of Testing and Materials.
- Member, Construction Specifications Institute.
- Member, American Concrete Institute.
- Member, International Concrete Repair Institute.
- Member, Association for Preservation Technology.
- Associate Member, National Roofing Contractors Association.
- Member, Roof Consultants Institute.
- Certified Nuclear Moisture Meter Operators (All Engineers).

MILLS GROUP

ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Met Theatre Restoration

Location: Morgantown WV
Client: City of Morgantown
Services: Construction Documents
Construction Value: $3,000,000 (estimated)

The Mills Group acted as associate architects to David Kemnitzer, AIA of Shepherdstown on the step-by-step rehabilitation of Morgantown's historic Metropolitan Theatre. The project paired architects with multiple organizations to accomplish an array of tasks. The challenge was coordinating disparate entities to deal with technical, preservation, life safety and code issues in an operational performing arts facilities.

Completed tasks to date include a donor board and a marquee. The architects partnered with Wagner Sign Company to research the building's original 1923 marquee and custom-build the piece. Also, new doors have been installed; plaster restoration and back stage renovations have been undertaken during the summer and fall of 2009. This portion of the project required extensive historic due diligence. Architects and restorers paid much attention to remaining plaster details as well as researched historic photos and investigated the historic plaster's makeup. A historically appropriate paint scheme has been added in summer 2010 and truly brings the theater back to it's original splendor and glory.

The completed project will present a rejuvenated venue for Morgantown's cultural events.

After extensive historic research, plans were developed to return the Theatre to its original, beautiful, prominence. Every surface has been primed and painted to its original paint color.

Mills Group
Brock, Reed & Wade Building
206 High Street - Morgantown, WV 26505
(304) 296-1010

Visit us at millsgrouponline.com

"Designing on the principles of the past and preserving for the future"

MILLS GROUP

ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

2010 WVSHPO Grant Monitor

Location: Various Locations, WV
Client: WV Division of Culture & History
Services: Grant Monitoring & Technical
Construction Value: NA

Since 2006 the Mills Group has been awarded an annually competed contract with the West Virginia State Historic Preservation Office to provide technical assistance and grant monitoring for a range of projects ranging in construction value from $5000-$350,000. The scope of the grant projects range from masonry and window restoration to roof and exterior millwork rehabilitation. The clients range from the homeowner with no construction background to facility maintenance directors with forty years of experience.

The awarded properties include:

- Pearl S. Buck Birthplace- Hillsboro, WV
- North House Museum- Lewisburg, WV
- Hancock Co, Museum- New Cumberland, WV
- Lewis County Health Dept.- Weston, WV
- First Ward School- Elkins, WV
- Riverside School- Elkins, WV
- 826 Benoni Ave.- Fairmont, WV
- Fort Hill Farm- Burlington, WV
- Morton Mansion- Webster Springs, WV
- Kump House- Elkins, WV

Mills Group
Brock, Reed & Wade Building
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(304) 296-1010

Visit us at millsgrouponline.com

"Designing on the principles of the past and preserving for the future"

MILLS GROUP

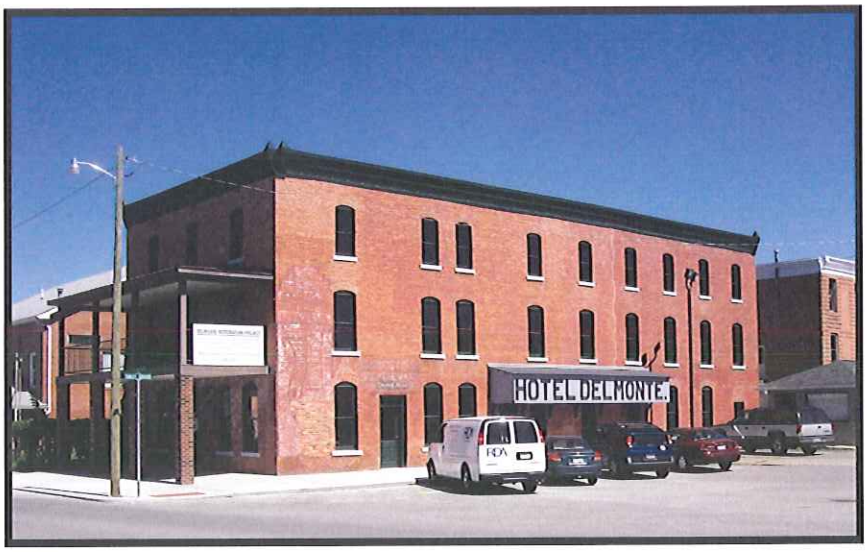
ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Delmonte Hotel

Location: Elkins, WV
Client: Randolph County Housing Authority
Services: Historic Documentation RestorationDocumentation
Construction Value: $200,000

Mills Group
Brock, Reed & Wade Building
206 High Street - Morgantown, WV 26505
(304) 296-1010

Visit us at millsgrouponline.com



The Mills Group was contracted by Mountain Partners in Community Development to survey the Delmonte Hotel on Railroad Ave. in Elkins for the concept design and adaptive reuse of the structure. Built in 1899, and modified in 1906, The Delmonte was central to Elkins' railroad industry. Rail workers, passengers, and locals could all be found in the first floor restaurant.

When Mountain Partners purchased the building in 1998, it had suffered from years of neglect making it unsafe and at risk to major deterioration. The building assessment and redevelopment concept plan utilized the first floor of the building as a restaurant and the upper levels as office space.

Retaining the Delmonte's historical integrity was a key motivator in this design. The sensitive use of space and architectural elements such as door hardware and wood windows and moldings maintained its sense of place in history while it was adapted to a modern use.

The firm has executed construction documents for the buildings current owner, the Randolph County Housing Authority. The scope involved the complete exterior restoration, including masonry, wood windows, exterior doors, millwork, and ADA access.

On the exterior, all of the original wood windows were completely restored to working order, the entire exterior was cleaned and repointed, and all of the trim work was cleaned and painted, retaining the Delmonte's rich historical integrity.

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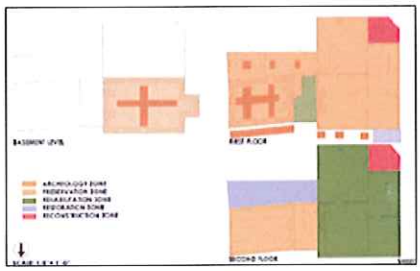
ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Webb Blessing House

Location: Charles Town WV
Client: Jefferson County Landmarks Comm.
Services: Historic Structures Report
Construction Value: NA



The Mills Group surveyed and assessed this neglected mid-19th century Charles Town home to develop a historic structures report and feasibility study that identified the historic components of the house and documented the progression of change over time. This historic landmark was built by one of the freedmen to house his family in a community that ended up being at the center of the secession crisis and the subsequent Civil War.

The Mills Group's plan also detailed the steps to be taken to first stabilize, then restore, and finally utilize the structure as a house museum that will relay a part of the community's rich history and cultural heritage.

This structure originated in the 18th Century and our report uncovered the cultural resources for the property, determined the phases, periods of construction and provided the Owner with a reuse master plan.

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ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Wellsburg Tollgate House

Location: Wellsburg, WV
Client: Brooke County Commission
Services: Rehabilitation and Stabalization

Mills Group was pleased to assist the Brook County Commission in the restoration of the Wellsburg Tollgate House, the last remaining extant tollhouse on the Washington and Wellsburg Turnpike. The structure was clad in asbestos shingles with its original materials hidden by years of alterations. Mills Group was hired to return the building to it's circa 1840 appearance.

Mills Group began by documenting the structure with existing condition drawings and collected a comprehensive understanding of the building's history and development over time. Once the building was documented, the 20th century materials were removed and the Mills Group developed a plan to restore the original materials and supplement in-kind where restoration work was impossible. The construction scope focused on the stabilization of the building's foundation and exterior structure, restoration of the exterior millwork and trim, installation of a compatible roof assembly, and the reconstruction of a period addition to the building. The full building restoration shall involve subsequent phases focused on additional exterior detailing, interior rehabilitation, and interpretation. The Mills Group also conducted construction administration and ensured that the building was ADA accessible while complimenting the original historic character of the building.

The Wellsburg Tollgate House is a great example of how different groups can work together to preserve a community's history.

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ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

2011 WVSHPO Grant Monitor

Location: Various Locations, WV
Client: WV Division of Culture & History
Services: Grant Monitoring & Technical Assistance
Construction Value: NA

Since 2006, the Mills Group has been awarded an annually competitive contract with the West Virginia State Historic Preservation Office to provide technical assistance and grant monitoring for a range of projects ranging in construction value from $5,000-$350,000. The scope of the grant projects range from masonry and window restoration to roof and exterior millwork rehabilitation. The clients range from the homeowner with no construction background to facility maintenance directors with forty years of experience.

The awarded properties include:

- 6 South Front Street- Wheeling, WV
- Albert Heck Mansion- Spencer, WV
- Carnegie Hall- Lewisburg, WV
- Elmhurst- Wheeling, WV
- Entler-Weltzheimer House- Shepherdstown, WV
- Hotel McCreery- Hinton, WV
- Humbolt Yokum House- Beverly, WV
- Kump House- Elkins, WV
- Marshy Dell- Gerrardstown, WV
- Marion County Courthouse- Fairmont, WV
- Masonic Temple- Fairmont, WV
- New Deal Homestead Museum- Arthurdale, WV
- Old Opera House Theater- Charlestown, WV
- Pearl S. Buck Museum-Hillsboro, WV
- Scottish Rite Building- Wheeling, WV
- Shaw Hall-West Liberty, WV
- Town's Inn- Harper's Ferry, WV

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ARCHITECTURE ▪ PLANNING ▪ PRESERVATION

Veterans Administration Hospital

Location: Pittsburgh, PA
Client: Tetra Tech
Services: Historic Structures Survey
Construction Value: N/A

In accordance with Section 106 of the National Historic Preservation Act of 1966, Tetra Tech, NUS hired the Mills Group to document and evaluate the historic eligibility of 20 structures on the Highland Drive Veterans Administration Hospital Campus. The campus was designed in 1953 by Alfred Hopkins and Associates and the Pittsburgh architectural firm of Prack and Prack.

The Historic Structures Inventory included an architectural survey, photodocumentation of existing resources, historic research, and a recommendation of eligibility. This documentation will be placed on a Pennsylvania Historical and Museum Commission's Pennsylvania Historic Resource Survey Form (PHRS). In addition, the Mills Group developed a Recommendation of Eligibility Report to be reviewed and commented on by the Pennsylvania State Historic Preservation Office.

It was the Mills' Group's opinion that this resource is recommended eligible under Criterion A for its association with the development of mental health hospitals for Veterans.

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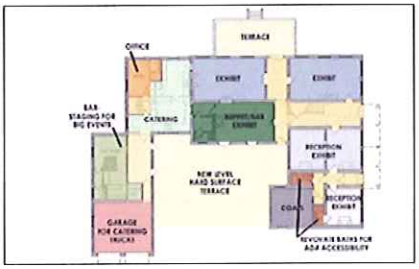
Waitman Willey Mansion Study

Location: Morgantown, WV
Client: City of Morgantown
Services: Historic Documentation
Master Plan
Construction Value: NA



The Mills Group was contracted by the Morgantown Historic Landmarks Commission to survey the home of the late Waitman T. Willey, US Senator from Virginia and West Virginia. The Chancery Hill Mansion, built around 1840 served as the Senator's home until his death in 1900.

The Landmarks Commission needed a feasibility study for the building's adaptive reuse. An intense assessment was performed on the building systems, the conditions of the exterior envelope, and interior finishes. The report detailed economically viable necessary upgrades and changes for the reuse of the building that still respected its historic fabric. The project also considered the adjoining commercial lot for the potential of new construction.

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F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

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20. EXAMPLE PROJECT KEY NUMBER:

21. TITLE AND LOCATION (*City and State):* Corcoran Gallery of Art, Washington, DC

22a. YEAR COMPLETED - PROFESSIONAL SERVICES: ongoing

22b. YEAR COMPLETED - CONSTRUCTION *(If applicable):* ongoing

23a. PROJECT OWNER'S INFORMATION - PROJECT OWNER: Corcoran Gallery of Art, Washington, DC

23b. PROJECT OWNER'S INFORMATION - POINT OF CONTACT NAME: Steve Brown

23c. PROJECT OWNER'S INFORMATION - POINT OF CONTACT TELEPHONE NUMBER: (202) 639-1764

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost):*

The Corcoran Gallery of Art consists of two connected buildings constructed in 1895 and 1926. Designs for an extensive signature addition, including renovation of the original buildings, were developed in 2003. The Addition project was halted and in 2006 a new project team was hired to develop a program for restoration of the roofing systems. The team, including historic preservationists, mechanical engineers, structural engineers, and roofing specialists (Seal Engineering), analyzed the existing conditions and presented the Owner with options for the repair and restoration of the existing systems. In addition to looking at the materials and systems, the study included analysis of the construction process and phasing for each alternative to allow the project to proceed while the building was occupied and in full operation.

Final Working Drawings prepared by the team included replacement of the skylight system (a design-build effort due to schedule), replacement of all flat roofing systems, replacement of all copper roofing systems (batten seam, flat seam and standing seam), upgrading and repair of structural supports, and modification of mechanical systems. Seal, being responsible for all roofing work, worked closely with other team members, including the design-build skylight contractor, to ensure seamless integration of roof replacements with adjacent detailing (structural repair, skylight installation, mechanical installations, and interface between roofing systems). Phase 1 of construction, encompassing the 1895 building, is approximately 75 percent complete; Seal has been providing ongoing construction phase services.

25. FIRMS FROM SECTION INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
Seal Engineering, Inc.	Alexandria, VA	Roofing/Waterproofing Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

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20. EXAMPLE PROJECT KEY NUMBER:

21. TITLE AND LOCATION (*City and State*): HOLC Building, Washington, DC

22a. YEAR COMPLETED - PROFESSIONAL SERVICES: 2007

22b. YEAR COMPLETED - CONSTRUCTION (*If applicable*): 2009

23a. PROJECT OWNER'S INFORMATION - PROJECT OWNER: GSA/NCR

23b. PROJECT OWNER'S INFORMATION - POINT OF CONTACT NAME: David Faught

23c. PROJECT OWNER'S INFORMATION - POINT OF CONTACT TELEPHONE NUMBER: (202) 260-4055

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (*Include scope, size, and cost*):

Seal Engineering, Inc. prepared a comprehensive field survey and assessment of the flat and sloped metal roofing systems, the built-up roofing system and the built-in gutters on this historic federal office building. Working closely with the rest of the project team (A/E prime firm, mechanical & electrical engineers and historic consultant) we prepared design drawings and technical specifications for the replacement of the standing seam copper roof, the flat-lock-and-seam copper roof and the built-up roof, as well as repairs to the existing gutters and replacement of drains and traps. After the project was awarded and construction begun, Seal continued to support the project through post-design services, including reviewing submittals and shop drawings, making site visits to ensure contract compliance, and attending progress meetings.

25. FIRMS FROM SECTION INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (*City and State*)	(3) ROLE
Seal Engineering, Inc.	Alexandria, VA	Roofing/Waterproofing Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

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20. EXAMPLE PROJECT KEY NUMBER:

21. TITLE AND LOCATION (*City and State):* National Air & Space Museum, Smithsonian Institution, Washington, DC

22a. YEAR COMPLETED - PROFESSIONAL SERVICES: 2011

22b. YEAR COMPLETED - CONSTRUCTION *(If applicable):* 2011

23a. PROJECT OWNER'S INFORMATION - PROJECT OWNER: Smithsonian Institution

23b. PROJECT OWNER'S INFORMATION - POINT OF CONTACT NAME: Stefan Grgurevich

23c. PROJECT OWNER'S INFORMATION - POINT OF CONTACT TELEPHONE NUMBER: (202) 633-6230

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost):*

Seal Engineering, Inc. is providing investigation, design and construction phase services to assist the A/E prime firm in resolving water infiltration problems at the museum in three areas of the basement, two areas on the second floor and three areas on the third floor. The estimated construction budget for this project is $1.5 million. Thus far the project has entailed investigation of leaks into the parking garage and galleries through the plaza, planters, steps, building facade, roof terraces and roofs. Seal has prepared a study indicating the leak sources & recommending repairs, prepared designs for leak repairs, and is currently providing construction-phase services.

25. FIRMS FROM SECTION INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
Seal Engineering, Inc.	Alexandria, VA	Roofing/Waterproofing Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

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20. EXAMPLE PROJECT KEY NUMBER:

21. TITLE AND LOCATION *(City and State):* USDA Complex, Washington, DC

22a. YEAR COMPLETED - PROFESSIONAL SERVICES: ongoing since 2003

22b. YEAR COMPLETED - CONSTRUCTION *(If applicable):* N/A

23a. PROJECT OWNER'S INFORMATION - PROJECT OWNER: GSA/NCR

23b. PROJECT OWNER'S INFORMATION - POINT OF CONTACT NAME: Doreen LaRoche

23c. PROJECT OWNER'S INFORMATION - POINT OF CONTACT TELEPHONE NUMBER: (202) 497-0068

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost):*

Seal Engineering, Inc. has been providing services to the U. S. Department of Agriculture under a variety of contracts for over 20 years. In addition to working with the term service contractor to find leak sources and prepare focused scopes of work to implement repairs, we have designed roof replacements throughout the complex as part of modernization projects and as stand alone projects. In 1998 we completed a comprehensive study identifying flat roofing system needs at the complex over the next 20 years. Roofing assemblies included in the recently completed $2.2 million replacement program designed by Seal were based on the recommendations of the 1998 study. The project included surveys of existing conditions, research of past projects modifying the roof systems, preparation of detailed plans, section drawings and technical specifications for the replacements. Critical elements of the design included recycling existing materials for reuse, provisions for future conversion of the replacement roofs to vegetative roof assemblies, and consideration of the construction impact on the occupied buildings.

Roofing systems included 37,000 SF of reinforced hot-applied rubberized asphalt roofing membrane covered with root barrier, insulation, filter fabric and gravel ballast; and 10,000 SF of cold-applied 2-ply modified bitumen roofing membrane with "cool" light colored cap sheet. Thermal insulation was designed to provide minimum R-20 values for the roof assemblies to meet energy conservation codes.

25. FIRMS FROM SECTION INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
Seal Engineering, Inc.	Alexandria, VA	Roofing/Waterproofing Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

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20. EXAMPLE PROJECT KEY NUMBER:

21. TITLE AND LOCATION *(City and State):* Botanic Garden Conservatory Façade, Washington, DC

22a. YEAR COMPLETED - PROFESSIONAL SERVICES: ongoing

22b. YEAR COMPLETED - CONSTRUCTION *(If applicable):* N/A

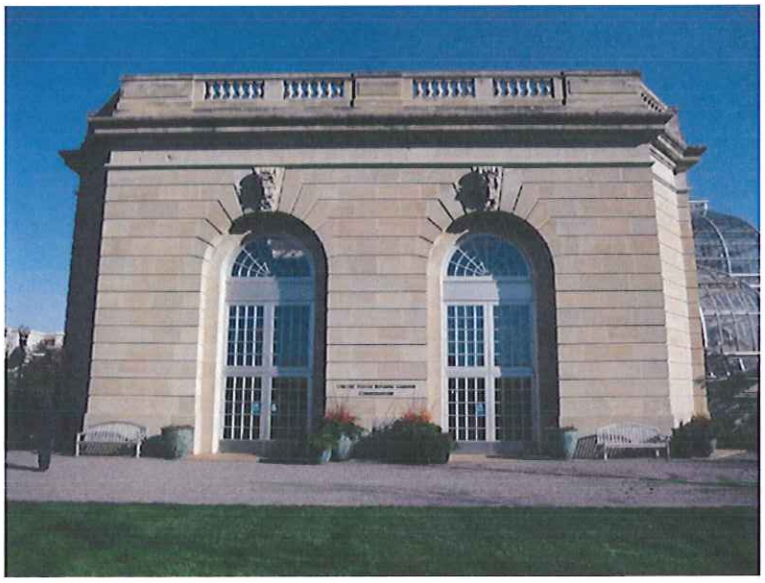
23a. PROJECT OWNER'S INFORMATION - PROJECT OWNER: Architect of the Capitol

23b. PROJECT OWNER'S INFORMATION - POINT OF CONTACT NAME: Marty Shore

23c. PROJECT OWNER'S INFORMATION - POINT OF CONTACT TELEPHONE NUMBER: (202) 226-6193

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost):*

Seal Engineering, Inc., was asked to survey cracking observed on the façade of this 1931 limestone Beau Arts building located on the National Mall to verify findings of an earlier survey report and then to provide construction documents to implement the recommended repairs. During study phase, it was determined that while the general concept of the previous study remains valid, conditions were identified which will require a more invasive repair program than originally anticipated by the Owner. Seal is currently working on developing construction documents for façade repairs, parapet wall removal and reconstruction, and roof replacement.

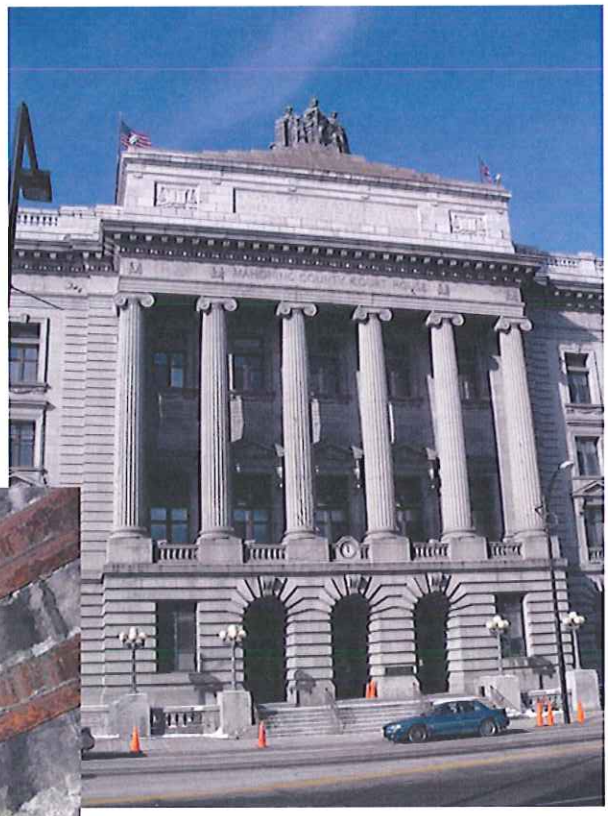


FIRMS FROM SECTION INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
Seal Engineering, Inc.	Alexandria, VA	Roofing/Waterproofing Consultant

EXTERIOR FAÇADE AND ROOF STRUCTURE INVESTIGATION
MAHONING COUNTY COURTHOUSE

Youngstown, Ohio



This preliminary investigation project was recently completed and involved an exploratory investigation of the parapet and balustrade, statue support structure and façade elements in an effort to determine the level of deterioration and scope of repairs to the granite, terra cotta, brick masonry and structural steel structure. The probe phase of the contract is beginning in order to quantify the amount of repairs.

The steel beams directly below the statues are severely deteriorated and will need to be replaced.

There is evidence of structural steel deterioration of the roof beams.

CAS Structural Engineering, Inc.

The investigation involved limited close observation of the façade elements, documenting the findings, and developing a preliminary budget estimate for repairs.

The current phase involved removing façade components to determine the extent of deterioration below and preparing a more detailed report of findings and construction cost estimate. Future work will include preparation of Construction Documents for repairs to the 99 year old building.

CAS
Structural Engineering, Inc.

UPSHUR COUNTY COURTHOUSE
STONE COLUMN RESTORATION

Buckhannon, West Virginia

The structural sandstone columns were coated with a cementitious coating that helped to deteriorate the natural stone by trapping moisture within the stone.

After the coating was removed, additional areas of the columns and bases required extensive repairs.

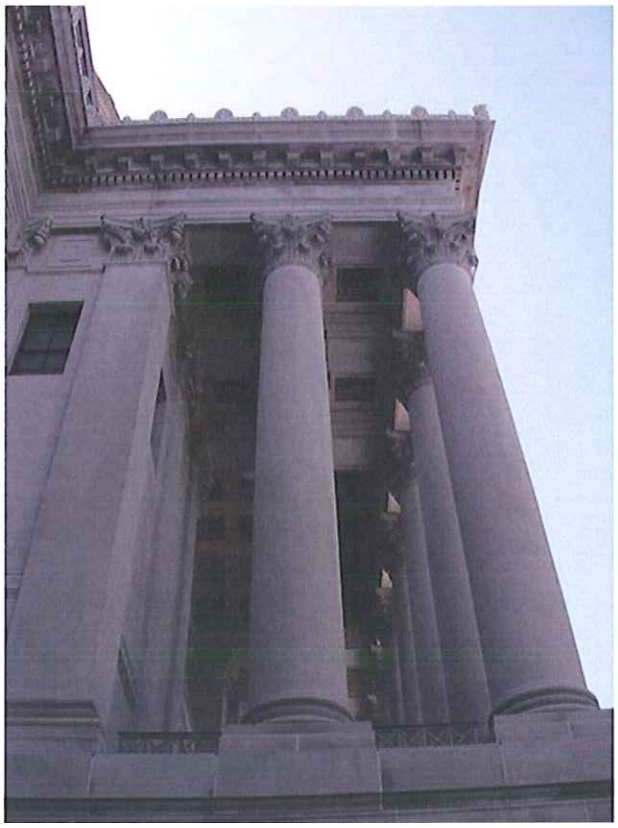
The repairs included pinning the columns across cracks, building up architectural elements with Cathedral Stone Jahn Repair Mortars, and also included pinning new stone to the original host stone.

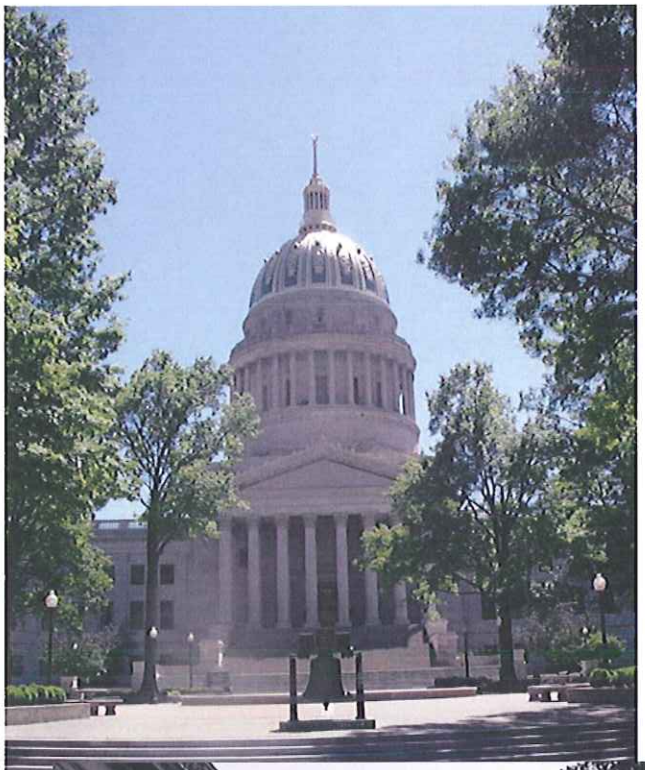
AIA West Virginia Honor Award 2008

CAS Structural Engineering, Inc.

EXTERIOR FAÇADE RESTORATION
MAIN CAPITOL BUILDING

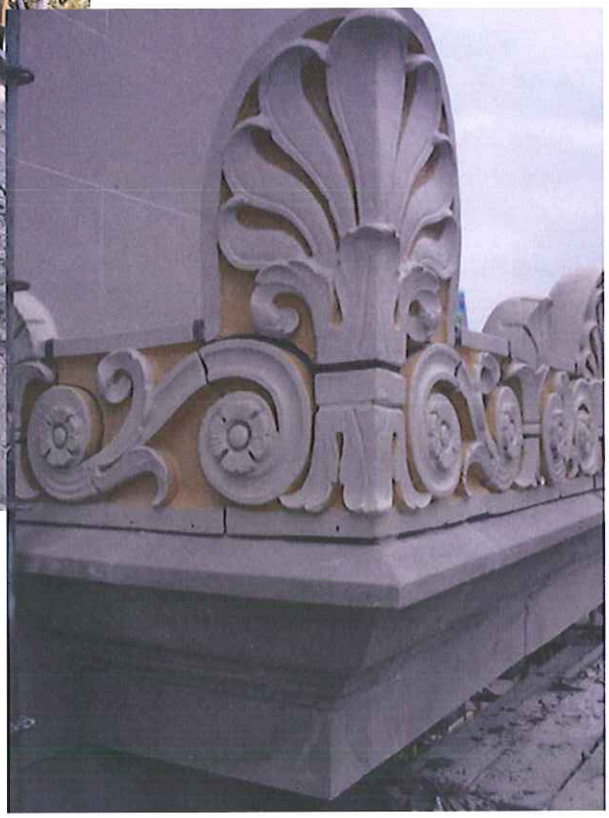
Charleston, West Virginia



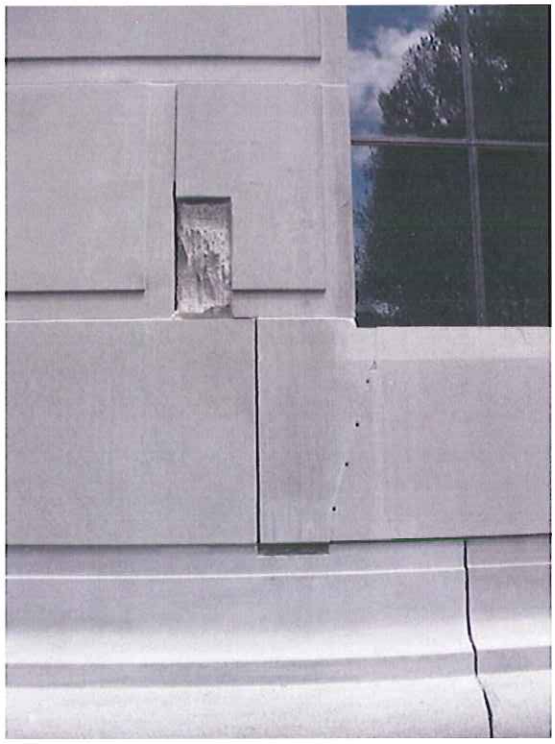


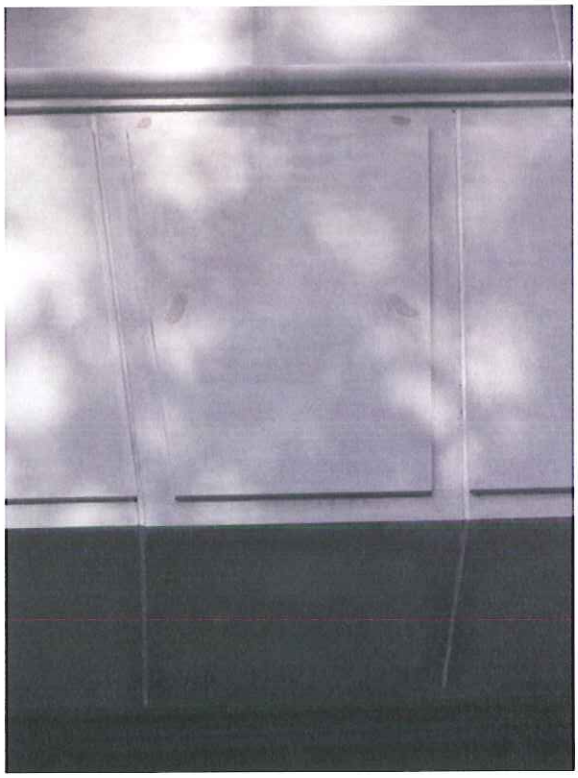
Exterior façade restoration included cleaning, pointing, and repairs to the limestone and terra cotta components, windows and doors.

CAS Structural Engineering, Inc.



Portions of the limestone cornice were damaged to the point that they fell when work was being conducted and had to be pinned back in place.





Other repairs included various spall repairs, pinning and epoxy injection of larger cracks and lifting and pinning keystones over windows.

CAS Structural Engineering, Inc.

PROJECT: BERKELEY SPRINGS BATHHOUSE
OWNER: WEST VIRGINIA DNR, BATH, WV

Miller Engineering Inc.
Professional Design Services
MEI

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$1.1M

MEP Budget:
$660K

Facility Area:
9,000 ft²

Services Provided:
Mechanical, Electrical, Plumbing

Project Status:
Design Documents 40% Complete

Project Completion Date:
March 2007

The Bathhouse Renovation includes replacement of all MEP system within the facility. A new boiler, steam fired hot water tanks, and all associated piping are being replaced. Currently, MEI is performing detailed modeling and calculations to determine the viability of heat recovery from the 78.4 spring utilizing a water source heat pump/ chiller to decrease operating utility costs. The hot water demand is huge and is split into two systems, domestic and Roman Bath water. The cast iron radiator heating system is being replaced by a full VAV HVAC system w/ terminal reheat, and spot radiant heating over the clients tubs and massage tables. These systems will provide proper ventilation and dehumidification, which has never existed in the facility.

Photo Courtesy of ALPHA Associates

PROJECT DESCRIPTION:

The Berkeley Springs Bathhouse, built in 1929, is a historic structure located in the Berkeley Spring State Park in the Town of Bath, West Virginia. The approximately 1000 gallon per minute flow of 78.4 degree mineral laden water is used by the spa located in the bathhouse. The water is heated and clients soak in either tubs or large Roman baths prior to other spa activities. The Project is a renovation of the facility with a total MEP replacement. The goal of the MEP system design is reliable, cost effective, and energy efficient systems that enhance the client experience and protect the historic facility.

REFERENCE:
Don Smith, WV Department of Natural Resources
1200 Harrison Ave., Suite 222
Elkins, WV 26241
304-637-0300

DIVISION OF MOTOR VEHICLES—BUILDING 3
CAPITOL COMPLEX

Charleston, West Virginia

The limestone at the canopy was deteriorated to the point that pieces were loose and ready to fall. The project included an investigation to determine the support conditions for the stone.

During the investigation, it was determined that the support structure was not as shown on the original construction documents.

The repair of this element was completed in 2002.

CAS Structural Engineering, Inc.

PROJECT: WVU CAPITAL COMPLEX ELEVATORS
OWNER: STATE OF WEST VIRGINIA, MORGANTOWN, WV

Miller Engineering Inc.
Professional Design Services
MEI

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$3.5M (All Phases)

MEP Budget:
$550K (all Phases)

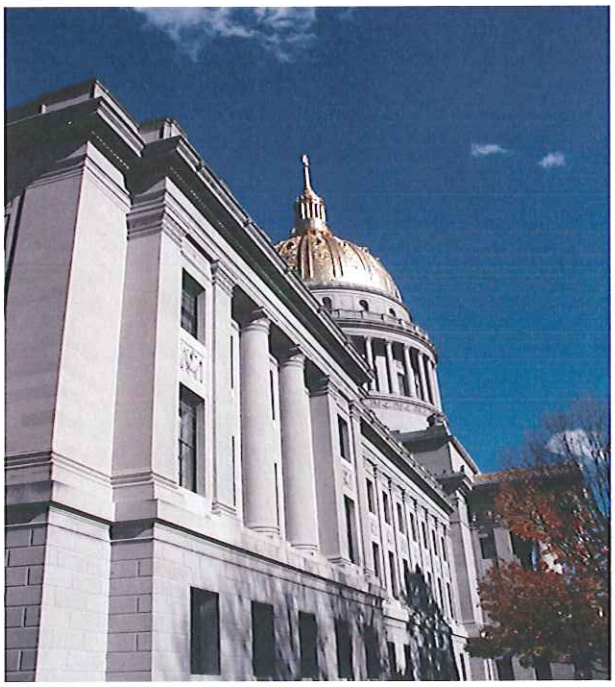
Facility Area:
Limited by nature of project

Services Provided:
Mechanical, Electrical, Plumbing, Fire Protection

Project Status:
Design Documents for Phase I 100%Complete

Project Completion Date:
March 2007 (Phase I)

Providing detailed evaluation MEP systems in multiple buildings throughout the State Capital Complex. Design, prepare bid documents, and provide construction administration for systems associated with the repair or replacement of the elevators. All systems are being brought to current codes and standards including Fire Alarm and Fire Suppression.



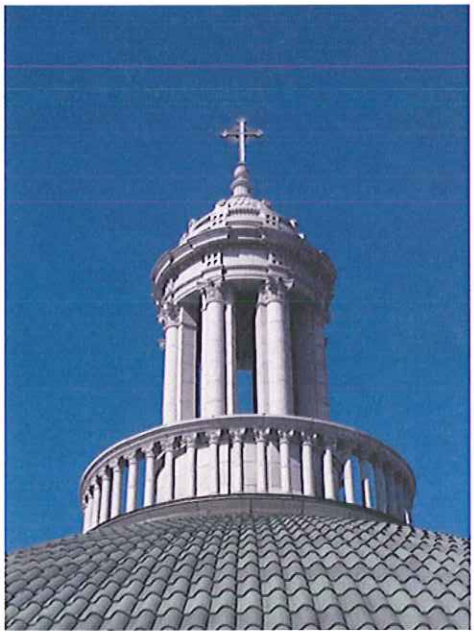
PROJECT DESCRIPTION:

Teamed project with CAS Structural Engineering, RAK Consultants, and Chapman Technical Group to address obsolete elevator equipment and replace elevator system in multiple buildings in the WV Capital Complex. The project is being phase implemented by priority based in initial evaluations of systems for safety, availability of parts, maintainability and Owner needs. Some systems have been condemned by the Department of Labor with mechanical and structural concerns requiring complete replacement. Some rope systems are being replaced with hydraulic system to alleviate structural concerns.

REFERENCE:
Dennis Stewart, West Virginia General Services Division
Building 1, Room MB14
Charleston, West Virginia 25305
304-558-4590

FIRST PRESBYTERIAN CHURCH
EXTERIOR FACADE RESTORATION

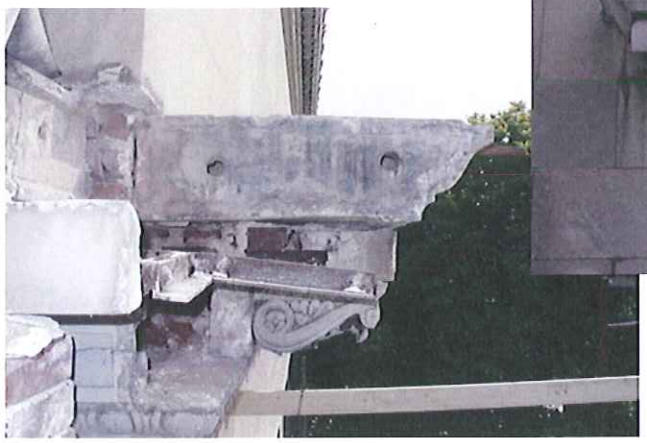
Charleston, West Virginia



The terra cotta and limestone exterior of this 1910's building was in need of being restored to prevent continued damage to the exterior and interior of the building. The structural steel in the lantern level was replaced with stainless steel members and wind bracing was added.

The terra cotta balustrade was re-built after the iron components were found to be deteriorated.

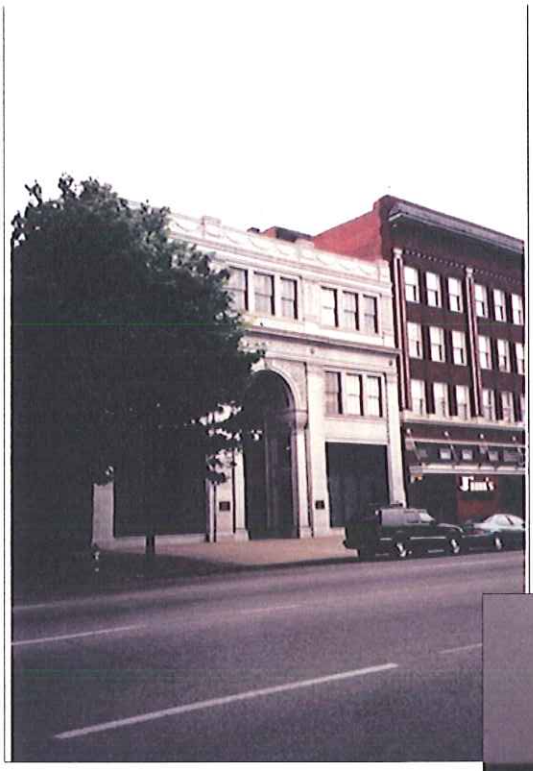
The corners of the terra cotta cornice exhibited significant deterioration of the mortar joints and rotation of the units. It was found that the supporting steel members were not adequate for the load that was being supported. They were also replaced with stainless steel components.



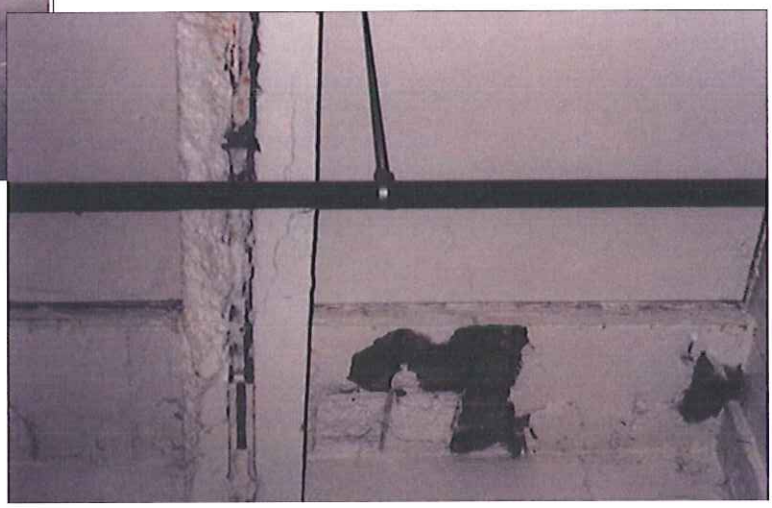
CAS Structural Engineering, Inc.

FARRELL LAW BUILDING

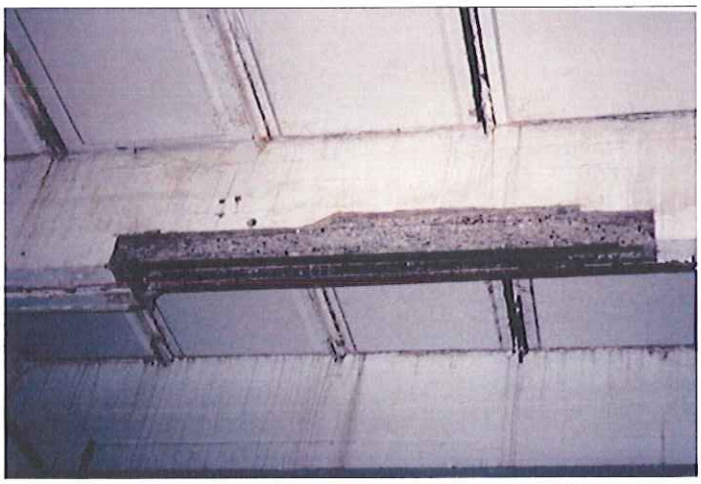
Huntington, West Virginia



Sidewalk in front of this building in downtown Huntington is a structural concrete beam and slab system. Years of de-icing salts, street-scaping projects and maintenance issues have led to severe deterioration of the beams.

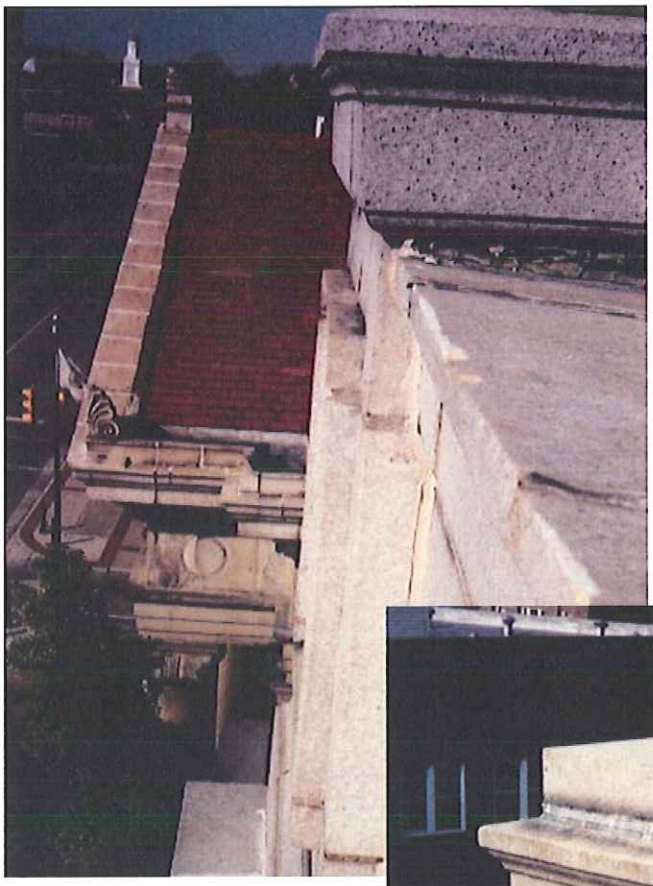


Concrete beams and slab areas have deteriorated to the point that reinforcing steel is exposed. A previous building owner painted the deteriorated areas.



Upon completion of a study/report, a contractor was hired to make repairs to the structural elements. Here the deteriorated concrete has been removed. The reinforcing steel will be cleaned, a primer applied and ce-

CAS Structural Engineering, Inc.



Over the years, many different sealants were used in an attempt to stop a leak in the front wall. Many of the sealants were not compatible with each other.

During construction, these sealants were removed, new sealants compatible with the materials involved were installed, and lead cap was installed at the top joints in the stone.

Cracked terra cotta components over the head of the window were pinned together before additional freeze-thaw cycles caused pieces to fall to the ground.

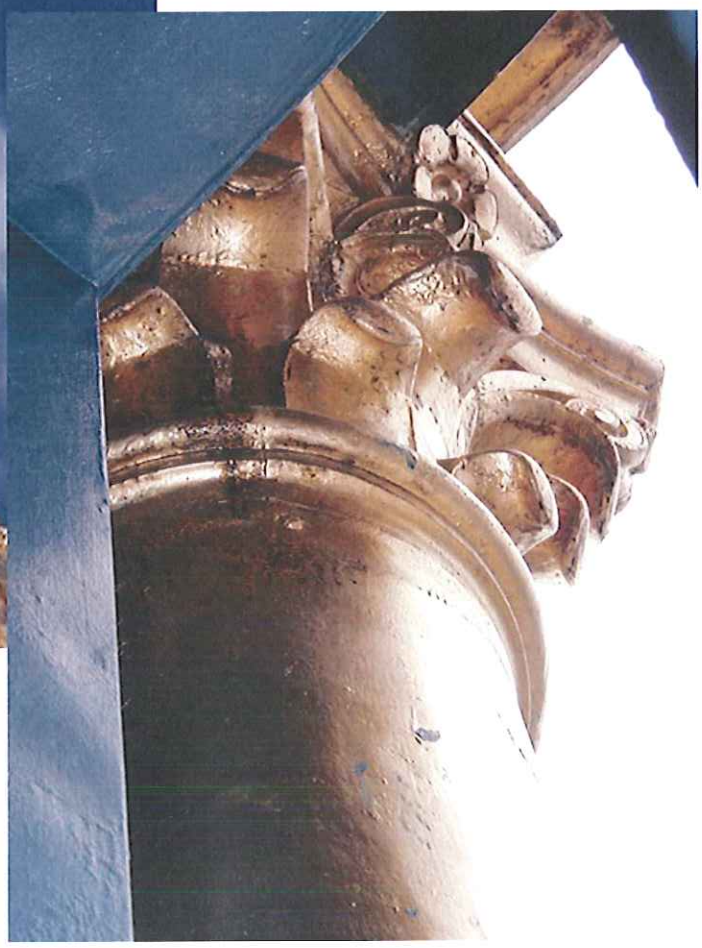
CAS Structural Engineering, Inc.

Deterioration of the steel shelf angle led to movement in the brick façade. Concrete beam members also exhibited some distress. During the construction, the areas of concrete that were cracked and spalled were removed and a structural cementitious material was installed. Several courses of brick were removed, cleaned and re-installed after lintels and the shelf angle were replaced.

STRUCTURAL INVESTIGATION
MAIN CAPITOL BUILDING DOME

Charleston, West Virginia

The structural steel in the lantern level shows evidence of deterioration. Project included probing to determine extent of deterioration and preparation of plans and specifications for repairs.

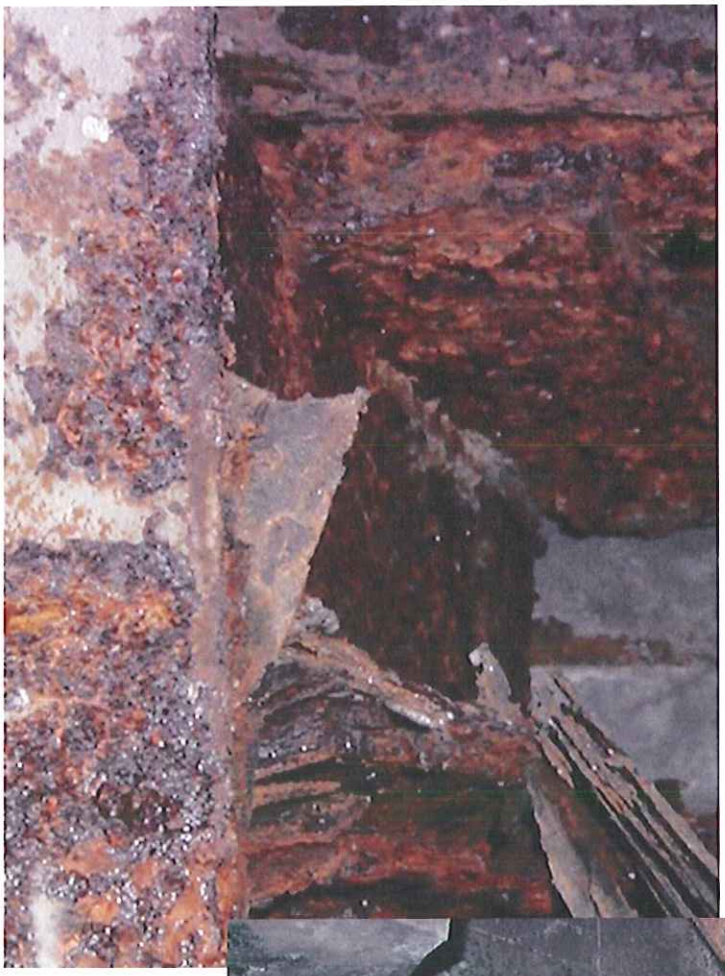


The structural steel after being repaired and the regilding complete.

CAS Structural Engineering, Inc.

Removal of decorative column wrap indicated that back-up structure was severely deteriorated.

CAS Structural Engineering, Inc.



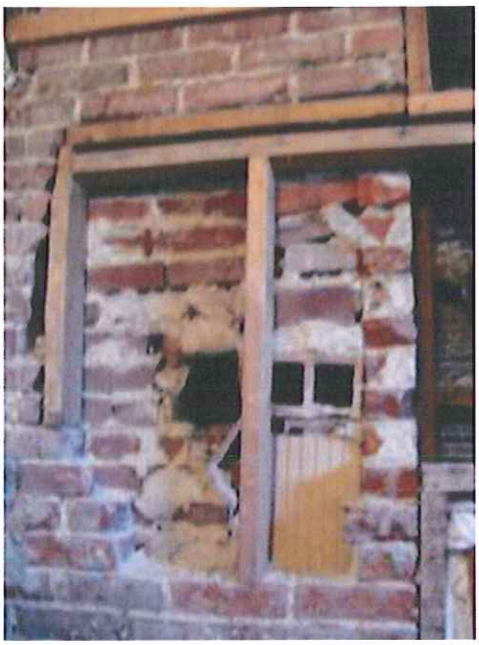
Deterioration of steel supporting sheet metal exhibited such deterioration that portions of the steel have disintegrated. Main wind bracing in Lantern Level (not shown here) also severely deteriorated.

WEST VIRGINIA GOVERNOR'S MANSION RENOVATIONS

Charleston, West Virginia

Renovations of this red brick Georgian Colonial 1920's structure was completed in several phases, some by staff of the General Services Division at the State of West Virginia and the remainder by a general contractor.

During the renovations, a number of deficiencies were discovered, some of which had been covered by prior construction and some as a result of prior construction.



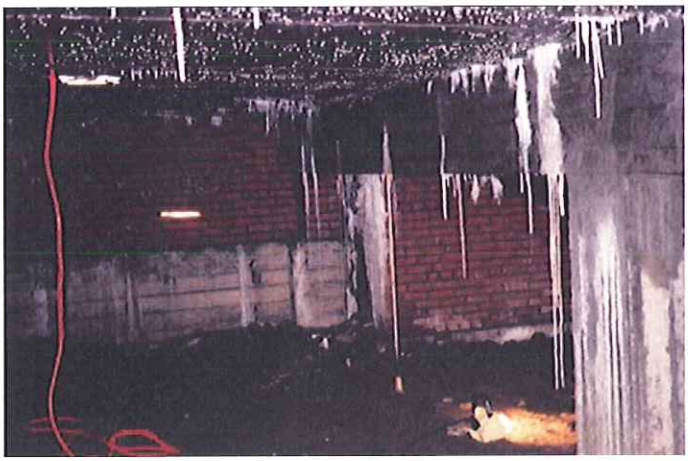
The structural repairs were made with masonry, wood framing and steel as required to support the loadings that were anticipated.

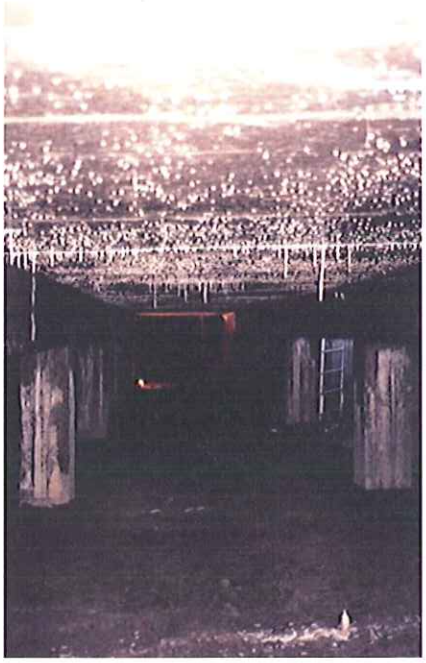
CAS Structural Engineering, Inc.

NORTH PORTICO STEPS—MAIN CAPITOL BUILDING
CAPITOL COMPLEX

Charleston, West Virginia

This project consisted of developing a method to repair or replace the deteriorated reinforced concrete stair landing on the north side of the Main Capitol Building. The area was enclosed, without ventilation, since its original construction in the 1930's.





The deteriorated concrete was removed, galvanized metal deck was put in place and a new reinforced concrete slab was poured.

This project was completed while working for a previous employer.

Additional work included epoxy injection of brick masonry, removal and re-laying of brick at the cheek walls and cutting an opening in the brick and granite to install a grill to provide ventilation to the space.

Schedule was a factor due to the Governor's Inauguration that was due to take place in a relatively close time period.

CAS Structural Engineering, Inc.

LEWIS COUNTY COURTHOUSE INVESTIGATION AND REPAIRS

Weston, West Virginia

This 1887 courthouse is constructed of brick masonry walls with heavy sandstone foundations and wood roof structure. This project involved several phases, including an assessment phase to detail the repair needs for the facility and a construction cost estimate for these repair items.

The bell tower and cupola framing need structural repairs, some of which were completed during the roofing repair phase of this project. Additional structural roof framing repairs have been identified but the design documents have not been developed at this time.

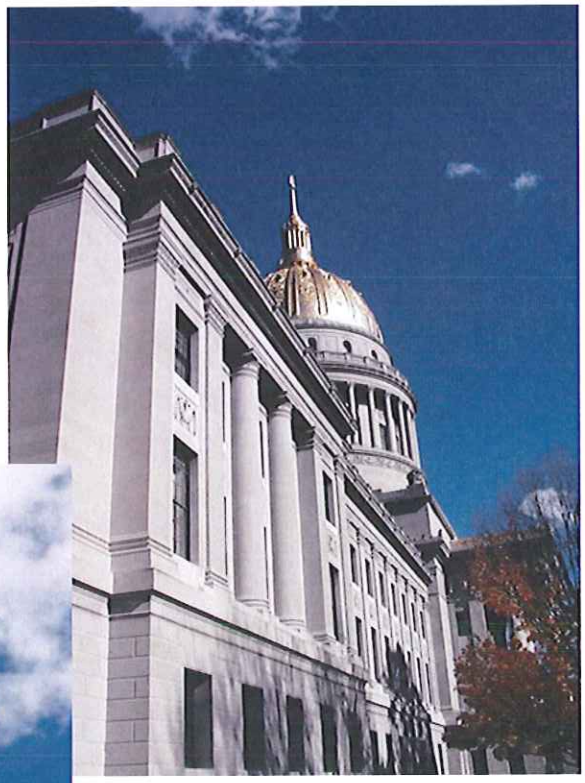
The roof repair work was completed in the fall of 2011. Structural repairs within the bell tower were completed at that time.

CAS Structural Engineering, Inc.

PARAPET/BALUSTRADE INVESTIGATION
MAIN CAPITOL BUILDING

Charleston, West Virginia

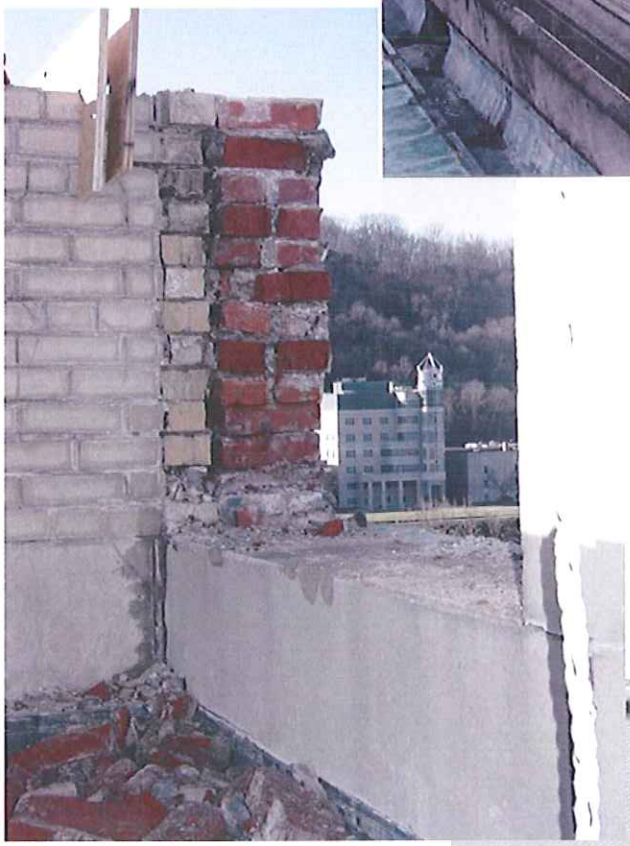
This project was recently completed and involved an exploratory investigation of the Main Capitol Building parapet and balustrade in an effort to determine the source of movement in the limestone panels. In addition, the leaking that is currently occurring in the upper floor ceilings was addressed.



There are a number of locations around the parapet where limestone panels or joints exhibit cracks and significant movement.

There is evidence of minor efflorescence within the ceiling space as well.

CAS Structural Engineering, Inc.



The exploratory investigation involved removing limestone and brick at several locations, documenting the findings, and developing a budget estimate for repairs to the parapet.

CAS
Structural Engineering, Inc.

PROJECT: MET THEATER AIR CONDITIONING
OWNER: CITY OF MORGANTOWN, MORGANTOWN, WV

Miller Engineering Inc.
Professional Design Services
MEI

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$325K

MEP Budget:
$325K

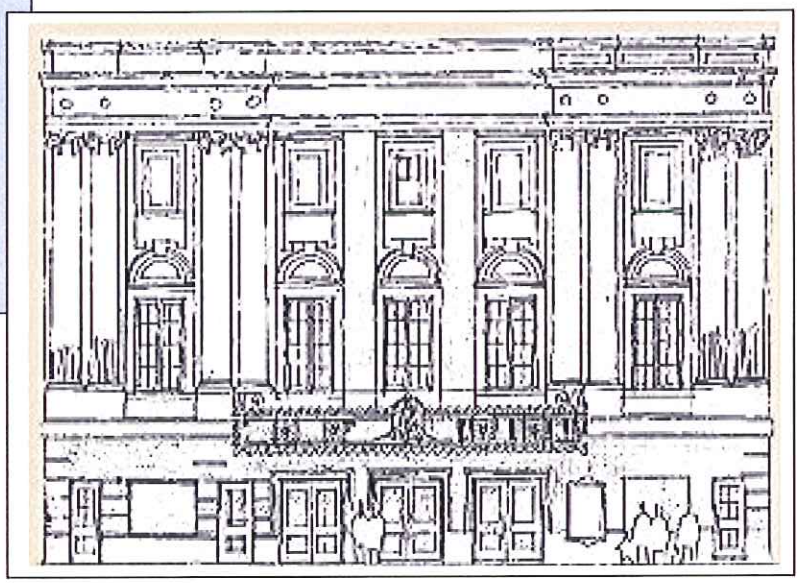
Facility Area:
15,400 ft²

Services Provided:
PRIME CONSULTANT
Mechanical, Electrical, Plumbing

Project Status:
Under Construction

Project Completion Date:
May 2006

The Metropolitan (Met) Theater had an HVAC system upgrade several years ago during which the contractor worked until the budget was expended and then stopped. No project record drawings were created. MEI performed detailed field investigations to determine and document the extent of the previous installation. Project drawings were then created to complete the installation of air system components, add a new air-cooled chiller, and retrofit the existing air systems to provide air conditioning while protecting the historic nature of the Theater.



PROJECT DESCRIPTION:

The Met Theater is a historical structure which is currently being brought to life by the City of Morgantown and a concerned group of citizens. Air conditioning is required to use the facility year-around and protect its unique plaster work. The historical nature of the structure requires innovative solutions to complete the previous installation. New, independent HVAC calculations and computer modeling of the building systems were done to verify the original installation and implement the necessary changes to meet current codes and standards. The scope includes completion of the air distribution system, retrofit of air handling systems with cooling coils, completion of hot water reheat systems, and completely new control systems for the theater utilizing CO_2 demand based ventilation and multiple operational modes for increased energy savings.

REFERENCE:
Ralph LaRue, BOPARC of Morgantown
Marilla Center
Morgantown, West Virginia 26505 304-296-8356

PROJECT: CACAPON LODGE ADDITION POOL
OWNER: WEST VIRGINIA DEPARTMENT of NATURAL RESOURCES

MILLER ENGINEERING, INC.

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$400,000K (est.)

MEP Budget:
$400,000K (est.)

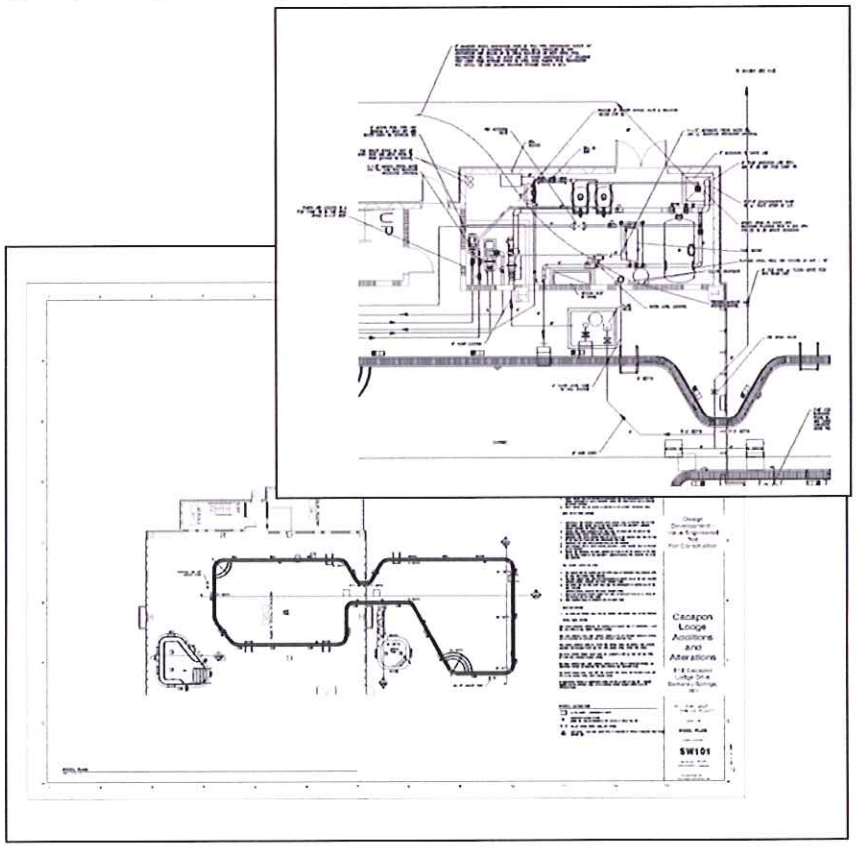
Facility Area:
2,500ft²

Services Provided:
Pool Systems

Project Status:
Construction Documents

Project Completion Date:
May 2012 (est)

The Project includes the design of a marcite finish, concrete pool with stainless steel gutters and sand filtrations systems. The pool will have three components, a main pool with an indoor and outdoor section connected by a "swim under" wall, a hot tub or spa with integral seating, and an upflow "spring pool" for small groups of guest to gather and socialize.



PROJECT DESCRIPTION:

The pool will incorporate know, durable technology for its construction and operating systems. High rate fiberglass sand filters, commercial pumps, and combination supply tube gutters will provide circulation and filtration of the pool water. The chemical disinfections will utilize sodium hypochlorite and muratic acid for disinfection. In the spa, this will be supplemented with Ultra Violet disinfection to ensure a more pleasant spa experience. The pools are heated and the exterior portion of the pool may be closed off and covered during winter months to save energy for safety reasons.

REFERENCE:
Brad Leslie PE, WV Department of Natural Resources
324 Fourth Ave, South Charleston, WV 25303
304-558-2764

PROJECT: GREENBRIER S. P. POOL FILTRATION
OWNER: WEST VIRGINIA DEPARTMENT of NATURAL RESOURCES

MILLER ENGINEERING, INC.

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$100,000K (est.)

MEP Budget:
$100,000K (est.)

Facility Area:
500ft²

Services Provided:
Pool Filtration Systems

Project Status:
Construction

Project Completion Date:
May 2011

The Project includes the replacement of the existing filtration and heating systems serving the pool. The filtration and heating systems were sized and configure not just for the existing pool but also to accommodate a larger pool renovation in the future.

PROJECT DESCRIPTION:

The pool will incorporate know, durable technology for its construction and operating systems. High rate fiberglass sand filters provide circulation and filtration of the pool water. The chemical disinfections will utilize sodium hypochlorite and muratic acid for disinfection.

REFERENCE:
Brad Leslie PE, WV Department of Natural Resources
324 Fourth Ave, South Charleston, WV 25303
304-558-2764

PROJECT: MOOREFIELD CITY POOL REPAIR
OWNER: MOOREFIELD PARKS & REC, MOOREFIELD, W

MILLER ENGINEERING, INC.

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$125K

MEP Budget:
$125K

Facility Area:
8,000ft²

Services Provided:
Mechanical, Electrical, Plumbing, Pool Systems

Project Status:
Completed

Project Completion Date:
May 2005

The Project included design of new piping to replace the broken piping around the pool. The design included upgrading the electrical service and completely re-configuring the filter house to accommodate new and re-used equipment. The existing high rate sand filtration system serving the pool was re-piped and re-configured, along with new pumps to increase the flow rate to meet current standards.

PROJECT DESCRIPTION:

The stainless walled pool basin was in good condition however the water supply piping was undersized and broken due to freezing. The leaks resulted in a 3 - 5 inch leak per day and very poor water quality. The Owner was often forced to close the diving well due to no visibility through the cloudy water. Water chemistry was unbalanced due to poor circulation and the use of gas chlorine – a safety hazard. The wading pool and the main pool shared a common filtration system which resulted in improper flow to both. The pools were separated and the wading pool received a new, dedicated filtration system. The pool piping was re-designed to prevent freezing by all piping being configured to be drained at the end of the season. Chemical feed systems were added to both pools utilizing bulk liquid chlorine and muriatic acid for disinfection. The Owner reports the community is thrilled with their pool and attendance has increased "significantly".

REFERENCE:
Bob Clarke
Director of Parks & Rec
Moorefield, West Virginia
304-530-2420

PROJECT: WVU JACKSONS MILL POOL REPL.
OWNER: WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV

MILLER ENGINEERING, INC.

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$720K

MEP Budget:
$260K

Facility Area:
12,800 ft²

Services Provided:
Mechanical, Electrical, Plumbing, Pool Systems

Project Status:
Completed

Project Completion Date:
March 2004

The Project included design of new piping, gutter, and surge tank systems for the new 155,000 gallon pool basin. The design had to incorporate an existing a five year old high rate sand filtration system. The existing chemical feed system was updated and reused, both at significant cost savings to the Owner. The new pool lighting had to be aesthetically pleasing and accommodate both swimming and deck activities.

PROJECT DESCRIPTION:

The previous Jackson's Mill pool had exceeded its operational life and was loosing 10 – 12 inches of treated water per day. MEI and Alpha Associates designed a replacement which met the operational requirements of the state 4 H camp and it's unique pool use. The pool has a unique ratio of wading to diving square footage as the Owner wanted the pool to have a large 4' deep area for camper activities. This presented challenges for the MEP systems to insure that the entire body of water would be re-circulated without the use of in floor piping and inlets, which can be subject to freeze-bursting of piping. The combination supply tube/ gutter perimeter system installed resolved the issue and has resulted in an exceptional facility.

REFERENCE:
Bob Merow, WVU Facilities Management, PDC
979 Rawley Lane
Morgantown, West Virginia 26506
304-293-2875

PROJECT: GRAFTON CITY POOL REPAIRS & WADING POOL REPLACEMENT
OWNER: CITY OF GRAFTON, GRAFTON, WV

MILLER ENGINEERING, INC.

MEP TECHNICAL HIGHLIGHTS:

Total Project Budget:
$70K

MEP Budget:
$70K

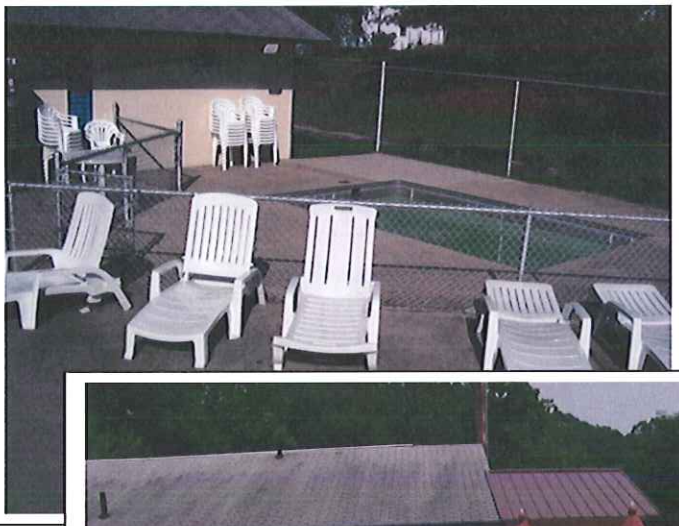
Facility Area:
4500ft²

Services Provided:
Mechanical, Plumbing, Pool Systems

Project Status:
Completed

Project Completion Date:
May 2007

The Project included a complete re-design of the filter room equipment serving the existing main pool. The wading or "baby" pool was in poor condition, un-liked by the public, and suffering form chemistry problems due to poor circulation.



BEFORE

AFTER

PROJECT DESCRIPTION:

MEI worked with the Owner to upgrade the filtration system and install a chemical feed system on the main swimming pool. MEI designed a new wading pool which is zero grade entry, incorporates a water-spray feature, and increases the play area of the pool. The baby pool includes a castle with an interactive water fall which keeps with the overall "castle" theme of the park in which the pool is located. A new wading pool filtration system and chemical feed system are located in a pump-house addition. MEI provided plans and construction guidance to permit the city to construct the new pool and associated pump-house using city workers, at a substantial savings to the city.

REFERENCE:
Busty Webber
Director of Public Works
Grafton, West Virginia
304-265-1234