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Header 1

List View

General Information [Contact](#) [Default Values](#) [Discount](#) [Document Information](#) [Clarification Request](#)

Procurement Folder: 1165807

Procurement Type: Central Contract - Fixed Amt

Vendor ID: 000000208495

Legal Name: ZDS LIMITED LIABILITY COMPANY

Alias/DBA:

Total Bid: \$0.00

Response Date: 02/13/2023

Response Time: 16:48

Responded By User ID: Zachwieja

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Last Name: Headley

Email: lauren.headley@zdsdesign.c

Phone: 304-755-0075

SO Doc Code: CEOI

SO Dept: 0211

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Status: Closed

Solicitation Description: Campus Chill Water Loop / Plant Evaluation and Enhancements

Total of Header Attachments: 1

Total of All Attachments: 1



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

State of West Virginia
Solicitation Response

Proc Folder: 1165807
Solicitation Description: Campus Chill Water Loop / Plant Evaluation and Enhancements
Proc Type: Central Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2023-02-14 13:30	SR 0211 ESR02132300000003745	1

VENDOR
000000208495
ZDS LIMITED LIABILITY COMPANY

Solicitation Number: CEOI 0211 GSD2300000007
Total Bid: 0
Response Date: 2023-02-13
Response Time: 16:48:47
Comments:

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor Signature X	FEIN#	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Campus Chill Water Loop / Plant Evaluation				0.00

Comm Code	Manufacturer	Specification	Model #
81101508			

Commodity Line Comments:

Extended Description:

Campus Chill Water Loop / Plant Evaluation



Expression of Interest to Provide Professional A/E Services

WV State Capitol Campus Chill Water Loop/Plant Evaluation & Enhancements

**February 14, 2023
CEOI 0211 GSD2300000007**

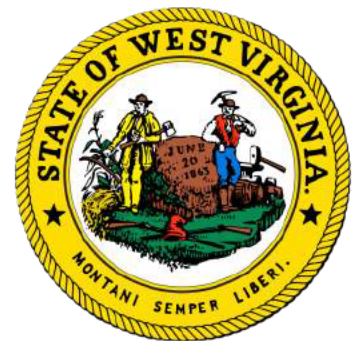


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SECTION I.

**Executive Summary Letter
Project Goals & Objectives**



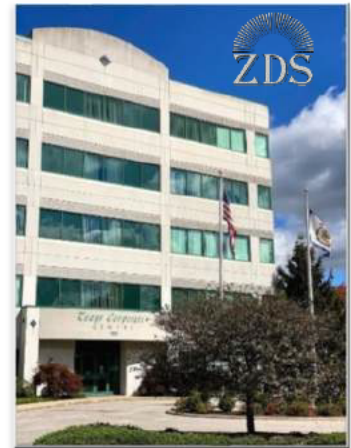
February 14, 2023



WV Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305-0130

Please accept our Expression of Interest to provide Professional Architectural/Engineering Services for the **WV Capitol Campus Chill Water Loop/Plant Evaluation and Enhancements**.

ZDS Design/Consulting Services was founded in 1994 and is in Scott Depot, WV only minutes from the project. The project will be assigned to **ZDS'** principal-in-charge of planning/design who will follow the project from inception through Construction Administration and has full authority to execute a binding contract on behalf of **ZDS**:



Todd A. Zachwieja, PE, CEM, LEED AP – Principal, CEO

ZDS Design/Consulting Services

135 Corporate Center Drive, Suite 532, Scott Depot, WV 25560

Office: 304-755-0075; Mobile: 304-545-4550

Todd.Zachwieja@ZDSDesign.com; www.ZDSDesign.com

The **ZDS** Team will provide comprehensive professional services for the proposed **WV Capitol Campus Chill Water Loop/Plant Evaluation and Enhancements**. We have had numerous successful projects including many on the Capitol complex grounds for the State of West Virginia, WV DHHR facilities including William R. Sharpe, Jr. Hospital, WVA^{Ar}NG, WVU, Ohio University, Marshall University, Washington & Lee University, University of Charleston, cities, and counties throughout the state and regionally.

The **ZDS** staff brings unique strengths to the Project due to our familiarity with the buildings and systems within the Capitol complex. We have extensive knowledge and understanding of the existing underground chilled water systems and are familiar with many of the individual buildings' HVAC systems currently reliant on the chilled water distribution system.

ZDS has designed and coordinated upgrades for many projects of all types, sizes, budgets, and schedules. We have been successful on renovation projects through dialogue and proper planning with the Owners and Contractors for phasing the work successfully and minimizing the impact on the daily activities of the occupants.

We will communicate closely with the appropriate personnel in the General Services Division to ensure that our approach to the Project will address their needs and concerns. Realizing the similarity of our mission, and the desire to serve West Virginia clients, we will be honored to work with you.

ZDS has previously teamed with several Architectural firms and will utilize their services as necessary for the **WV Capitol Campus Chill Water Loop/Plant Evaluation and Enhancements**. If hazardous materials are suspected or discovered, we will work with the Owner for the assessment and resolution of any suspected issues as we have done on previous projects.



For surveying and underground investigative services, we have selected **Triad Engineering** as a member of our proposed team. Triad has provided engineering consulting services on thousands of projects varying in size and complexity. With over 42 years of service in West Virginia and surrounding states; clients include federal, state, and local governmental agencies, contractors, architects, engineers, attorneys, developers, commercial organizers, and mining industrial corporations.



Any necessary structural engineering services will be provided by Carol Stevens, PE, F. ASCE, and President of **CAS Structural Engineering, Inc.** located in Alum Creek, WV. Carol has extensive experience working with the State of West Virginia including many projects within the Capitol Complex.

Project Goals, Objectives & Approach

GOAL/OBJECTIVE 2.1. General: The successful firm must provide full-service architectural, electrical, and other engineering evaluation, design, and construction administration services to assess and upgrade the campus chilled water delivery system. Within their proposals, firms should indicate their Qualifications, Experience, and Past Performance in chilled water plant assessments and upgrades, explaining how they would contribute to the general project goal of a completely designed and executed project.

2.1.1. To evaluate water delivery to buildings to determine actual requirements which may be managed by a valving, piping, or controls system for efficient delivery. Identify redundant or obsolete pumping or piping conditions and possible strategies to improve the delivery process.

2.1.2. To establish normal plant operating parameters as to temperature, rate of flow, and pressure required to deliver water efficiently across campus. Review parameters for the implementation of "free cooling" process and load shed demand parameters; submit an action plan with recommendations for improvements.

2.1.3. To evaluate the condition of the (buried) distribution piping main loop system utilizing suitable test methods including, but not limited to, field inspection (random uncovering of pipe), NDI (non-destructive inspections by dye or electrical resistance testing), or other methods by a third party. A report will be provided to the owner detailing conditions and suggested remediation of negative conditions found.

2.1.4. To determine and identify additional Central Plant efficiency enhancements ie: piping configurations, valve strategy, power supply redundancy, and hardening of the facility against commercial power interruption.

ZDS RESPONSE: ZDS' principals and personnel have worked on many campuses' chilled water distribution systems including the WVU downtown campus chiller interconnect project, Ohio University's Athens Campus and Chillicothe Campus chilled water systems, Washington & Lee University central chiller plant renovations and campus chilled water distribution system renovations, WV Wesleyan College, Concord University, many hospitals and extensions of the WV Capitol Campus chilled water systems to serve buildings on campus. Our approach to chilled water systems incorporates energy-efficient solutions that we also commission for optimal operation. We have an excellent understanding of GSD's facilities including previous renovations to Buildings #1, #3, #5, #6, #7, #8, #9, and recent work on Building #4 renovations. We are excellent in evaluating hydronic systems with clients from Harvard University, General Motors, and many others using ZDS to help improve efficiency and operations. We have worked in 25 states, but our corporate headquarters are minutes away from the WV Capitol Complex.

We were instrumental in assisting GSD in evaluating the campus steam distribution system which had many of the same goals as this project. We applied a multi-phased approach in obtaining the existing conditions of the areas of concern, used 3D scanning to obtain "built" conditions, and determined testing methods that were applied and identified the deficiencies that needed addressing. This approach also involved Permapipe systems for the underground distribution which have different testing techniques from other underground piping systems. We can identify modifications to improve the operations of the chilled water plant while recognizing that an emergency generator is available to help manage peak electrical power requirements. We have successfully incorporated "free cooling" in previous projects and have the expertise to determine its application for this project.

We have experience with central chilled water systems ranging from small systems up to 14,000 tons. We have access to NDT testing experts whom we can engage to assist in determining potential issues in the existing piping system. We also suggest pressure testing segments of the piping system as deemed necessary to locate potential issues in the distribution piping. The chilled water piping is standard weight steel for 12" and larger and schedule 40 steel for 10" and smaller underground. Since the underground pipe is Permapipe, accessing the underground pipe requires consideration of how to preserve the manufacturer's recommended installation practices for the longevity of the systems.

We have commissioning experience which involves hands-on operating verification of the system and would evaluate available data from the Campus' BAS system to assist in refining the operating sequences. The double-ended power company service for the WV Capitol Complex offers benefits to minimize potential downtime from a power outage. The recently installed emergency generator system also provides backup power/load-shedding capability. We can also incorporate other protections in equipment to potentially avoid power supply issues while using the BAS system to assist in monitoring incoming power.

GOAL/OBJECTIVE 2.2. Phased Construction Approach: The intent is for the successful firm to design and administer a phased construction project, to accommodate use during the renovations. The Agency prefers a firm that has experience in projects facing this challenge and would like to understand how interested firms would address the issue. Within their proposals, interested firms should indicate how their Qualifications, Experience, and Past Performance and the Project Approach and Methodology would apply to undertaking a project in which phasing must occur to accommodate operations with minimal impact on occupants.

ZDS RESPONSE: ZDS successfully worked with GSD to complete renovation work for the heating systems which included an aggressive schedule with the heating plant operation restored in October when needed for the heating season startup. This is a direct demonstration of our experience. ZDS has extensive experience in the Capitol Campus' chilled water systems including central plant systems and understands the timing of when the steps need to occur to keep the system operational and minimize downtime. That knowledge and experience will translate into a well-thought-out solution to meet the goals. This project requires prompt planning, close coordination with GSD staff, and encouragement to gain the interest of local reputable contractors to bid while working cooperatively with all the stakeholders during the construction to meet these goals. Our experienced staff and prompt decisions and action during construction keep the project moving forward. Our offices are located only minutes from the Capitol which allows for rapid responses to any potential construction challenge. The extensive field investigation and our intimate knowledge of the existing heating systems will be invaluable for assisting GSD in a successful project.

ZDS has proven extensive experience with phased construction that was incorporated into the design and bidding documents for many projects. William R. Sharpe, Jr. Hospital is an example where the occupants (patients and staff) needed to continue to use the hospital while the facility was renovated. It involved all the facility's HVAC systems that needed to be maintained. Our construction documents included the design for the entire facility with areas identified in phasing blocks. The hospital remained occupied and operational throughout the approximate 3-year process of providing all new piping, equipment, and ductwork systems. Our Construction Administration services included coordination and working closely with the Contractors and the Owner throughout the multiple phases of the construction period. Refer to Section III for additional examples of Project Experience.

The underground piping and building connections for this Project will likely require multiple phases that will occur over a multi-year period with extensive work occurring during unoccupied shutdowns. Priorities will be established to develop a viable phasing approach while maintaining chilled water service to the campus. The design/bidding documents will be prepared to include the overall distribution systems with selected components to be performed in segments with a phased approach.

We work with our clients to arrive at a phased approach to minimize disruption to the occupants as we have previously renovated entire hospitals where patient care is extremely important and must be maintained. While this takes longer for the construction process the importance of protecting the occupants was the priority and the extended construction periods were acceptable trade-offs. We have incorporated rental equipment when deemed necessary and have planned the construction activities in strategic segments as determined to fit our client's needs. Please call our references on phasing William R. Sharpe, Jr. Hospital, and its success in meeting the client's needs. Our previous projects with the GSD were also successful in phasing the construction to minimize issues with the occupants.

GOAL/OBJECTIVE 2.3. Design Standards and Criteria: The successful firm will be expected to prepare specifications and design documents that comply with all applicable statutes, codes, and directives and that will provide requirements addressing the agency's performance needs and requirements imposed by insurance carriers on commercial projects. Within their proposals, interested firms should indicate how their Project Approach and Methodology will consider all these factors and others to provide a thorough, phase design.

ZDS RESPONSE: We will analyze and compile the information to develop options for potential solutions and to help identify the impact on other infrastructure within the facilities. Options will be presented to the Agency for discussion and to determine the most viable approach prior to beginning the design process. Our designs incorporate Client specific standards and our extensive work in West Virginia, particularly the State Government, gives us an understanding of the codes, standards, and typical insurance requirements. We have extensive experience with compiling and developing specifications manuals, including AIA documents, that incorporate applicable statutes and regulations.

GOAL/OBJECTIVE 2.4. Technology and Energy Conservation: The successful firm will be expected to research and incorporate the latest technological advancements in chiller plant operations and energy efficiency into its overall design and limitations of the facility. Within their proposals, interested firms should demonstrate their experience in working with chilled water systems and energy efficiency technology by highlighting design work they have completed in which the latest technology was installed, which goals of the projects were to enhance energy efficiency, and in which reductions in usage were achieved.

ZDS RESPONSE: ZDS' principals are "Legend in Energy" recipients from the Association of Energy Engineers, and we have LEED AP as part of our proposed team. We have received awards for our energy-efficient design with many projects being Energy Star Certified. We have the first "Net Zero" 911 facility in operation in West Virginia which required an integrated design using geothermal, solar, and many max tech approaches into the design. ZDS has worked with many performance contractors where the results realized, and sometimes exceeded, the project goals.

The ZDS team members have been involved in numerous LEED Certified, Silver, and Gold projects (or applying LEED principles) including Harvard University's Arnold Arboretum Weld Hill Research – LEED Gold, UC Davis Veterinary Medicine's Gladys Valley Hall, and WVANG Aircraft Maintenance and Fuel Systems Hangars and Shops – LEED Silver.

Our staff has been active in ASHRAE including serving as President of the WV ASHRAE Chapter, where we received the 1st place Technology Award from ASHRAE's Region VII, ASHRAE's Presidential Award of Excellence and Region VII's ASHRAE Community Sustainability Award. The College Planning and Management Magazine featured ZDS and our work at Ohio University for the performance contracting programs that have saved millions of dollars in energy and operating costs. Many ZDS-designed projects also qualify for EAct which requires buildings to use over 50% less energy than buildings designed using ASHRAE 90.1 in accordance with the 2005 Energy Tax Act. ZDS also received recognition by qualifying for the first ASHRAE bEQ certified building in West Virginia and encompassing ASHRAE Region VII which includes 11 states.

GOAL/OBJECTIVE 2.5. Quality Control Program: It is the intent of the Agency that the successful firm provides a written Quality Control Program that systematically demonstrates the proper means and methods of care for existing installed equipment. Within their proposals, interested firms should demonstrate experience with preparing and implementing such Quality Control Programs, and should indicate how their project Approach and methodology would integrate this important aspect of work. The Agency remains responsible for maintaining all of the chilled water system equipment.

ZDS RESPONSE: We utilize quality control on every project to maintain schedules and stay within budget restraints. Utilizing peer review of the design process we involve various members of our design team as an important step in the process. These actions coupled with our cost management and cost estimating resources will result in a better project for the Client. Our Commissioning experience gives us insight into the importance of the proper care of existing installed equipment. We take care in our design efforts so that proposed renovations will address potential impacts on the existing equipment.

The Team utilizes Building Information Modeling (BIM) software as the foundation for tracking and managing the design process; design team members are experienced, proficient, and believe in the value of BIM. ZDS leverages BIM software to increase the level of communication between all team members and facilitate a higher level of coordination throughout each deliverable phase of the design process. We believe this is the key to providing an accurate and reliable project to the Owner with fewer errors and conflicts. We offer SCAN-TO-BIM service which is an excellent collaboration tool allowing for built conditions to be documented using 3D scanning of the facility and has proven to lower contractor bids on previous projects. We can demonstrate this technology during an interview which will show how this service can benefit the GSD on this Project.


The Team utilizes digital technology for receiving, tracking, managing, and submitting documents during the construction administration process. All construction administration documents are received and logged by our personnel and distributed to the Project Manager and applicable team members. The Project Manager, being most familiar with the project, will oversee and participate in all construction administration duties, both office and field. The ZDS Team creates and delivers quality projects by implementing these Quality Control Program strategies including peer review by multiple design professionals and the principal-in-charge:

- Establish and maintain a working project schedule and budget.
- Periodic electronic print and review of project progression.
- Peer review document checking at end of each project milestone using our in-house checklist.
- Create a working list of products meeting and/or exceeding the agency and Owner's requirements.
- Design meeting(s) with the Authority Having Jurisdiction.
- BIM model review for quality and performance.
- BIM interference tests at each project milestone.

Our Team will strive to prove we are the best choice to provide professional engineering planning and design services for the **WV Capitol Campus Chill Water Loop/Plant Evaluation and Enhancements**. Our goal is the Client's satisfaction and knowing that we have addressed their individual needs and distinct requirements and we make every effort to involve the Client throughout the entire process beginning with identifying the needs and then planning for a long-term solution that is beneficial to the Client.

ZDS has an excellent track record of completing successful projects on time and within budget guidelines. We are ready and willing to start immediately on your project and are confident that our specialties will provide you with the best expertise to provide economical solutions for your facility. We look forward to discussing our qualifications. If there are any questions, please do not hesitate to call.

Sincerely,



Todd A. Zachwieja, P.E., CEM, LEED AP
Principal, Chief Executive Officer

SECTION II.

Firm Overviews



ABOUT **ZDS** DESIGN/CONSULTING SERVICES

In 1983, Todd A. Zachwieja founded ZECO Consultants. In 1994 **ZDS** Limited Liability Company was incorporated in West Virginia using dba **ZDS** Design/Consulting Services, and was founded to provide design and consulting services.

Each new project is assigned to a principal in charge who will follow the project from inception through commissioning. **ZDS** assigns the production staff according to the nature of the project and the work force necessary to meet the schedule. The principal in charge of that project determines if consultants are needed and coordinates all areas. After bidding, a principal of **ZDS** coordinates visits to the job site regularly, all the way through the post-warranty inspection. **ZDS** believes in the team approach when providing engineering design and consulting services. We start with our client as the number one member on our team. We listen to the needs and concerns of our client and that becomes the basis for our design.

COMPANY LEGAL NAME

ZDS Limited Liability; Company dba **ZDS** Design/Consulting Services

LOCATION OF INCORPORATION West Virginia

FOUNDERS

Todd A. Zachwieja, P.E., C.E.O.

Lori L. Zachwieja, C.P.A., C.F.O.

Daniel H. Kim, Ph.D.

FIRM LOCATION

135 Corporate Center Drive, Suite 532
Scott Depot, WV 25560

EMPLOYEES

ZDS currently employs design professionals covering all aspects of our services.



CLIENTS & EXPERIENCE

- ◆ Charleston Area Medical Center
- ◆ Charleston National Bank/Chase
- ◆ Coal Heritage Discovery Center
- ◆ Concord University Nick J. Rahall II Technology Ctr.
- ◆ District 2 Headquarters' Building HVAC Renovations
- ◆ General Motors North America Operations
- ◆ Harvard University Arboretum
- ◆ Hopemont Hospital, WVDHHR
- ◆ IMC Data Center
- ◆ Jackie Withrow Hospital, WVDHHR
- ◆ Kanawha County Commission Courthouse & Judicial Annex
- ◆ Kanawha County Metro 911
- ◆ Laidley Towers
- ◆ Marshall University Harris Hall & Smith Hall
- ◆ Meadowbrook & Burnsville Rest Areas, WVDOT
- ◆ Mercer County Courthouse
- ◆ Pendleton County Courthouse & Annex
- ◆ Pocahontas County Community Center
- ◆ Robinson Grand Performing Arts Theatre
- ◆ Redmond House, WVDOT
- ◆ St. Patrick Church Renovations
- ◆ Tyler County Commission Courthouse
- ◆ Tucker County Courthouse
- ◆ University of Charleston Innovation Center
- ◆ Veterans Administration
- ◆ Webster County Development Authority
- ◆ White Sulphur Springs Welcome Center
- ◆ William R. Sharpe, Jr. Hospital, WVDHHR
- ◆ World Trade Center, MD
- ◆ WV Air National Guard
- ◆ WV Army National Guard
- ◆ WV Children's Home, WVDHHR
- ◆ WV Dept. of Education - State wide PreK-12 Schools
- ◆ WV Division of Energy
- ◆ WV Dept. of Transportation
- ◆ WV Dept. of Health & Human Resources
- ◆ WV Division of Culture and History Renovations
- ◆ WV Division of Protective Services
- ◆ WV General Services Division
- ◆ WV Higher Education Policy Commission
- ◆ WV Parkways Authority HVAC Renovations
- ◆ WVU Stewart Hall & Wise Library
- ◆ WVU Tech (Montgomery Campus) Engineer Bldg.
- ◆ WVU Davis Hall
- ◆ Yeager Airport

ZDS provides comprehensive design services. We have experience and specialties in indoor air quality, energy management and commissioning, along with traditional mechanical and electrical design experience dating back as far as 1958. We offer a complete package. **ZDS** works with all levels of the client's staff: the building owner, budget supervisor, operating and maintenance staff and others impacted by the project. We recognize that the maintenance and operating staff live with the design long after the project's completion. We listen to and work with those who will continue to operate and maintain the equipment. We find that proper communication benefits the client throughout the design process and beyond.

The **ZDS** design team provides a total system evaluation for cost-effective selection, installation, and ease of maintenance for both new systems and retrofit of in-place systems. Design begins with our client. Our staff meets with our client to review their concerns, budgets and schedules. The **ZDS** design team reviews the entire picture, and ends with "A Total Design."

The **ZDS** staff has the expertise with codes and standards. We have extensive experience in conducting engineering code surveys of existing facilities. Our staff has excellent working relationships with the West Virginia Fire Marshal's Office, West Virginia Department of Education and the West Virginia School Building Authority. In addition to comprehensive Engineering services from an experienced design team, another major consideration in the selection of your engineer and design staff should be their track record.

ZDS' organization has an unbeatable, long running, and well-known track record for meeting our clients' needs, on time and within budget, with outstanding quality. **ZDS** views these characteristics as the foundation of Quality. We look forward to the opportunity to discuss our ideas with you and assist you by providing solutions for your needs with a full range of services from Planning to Commissioning.

INDOOR AIR QUALITY SERVICES

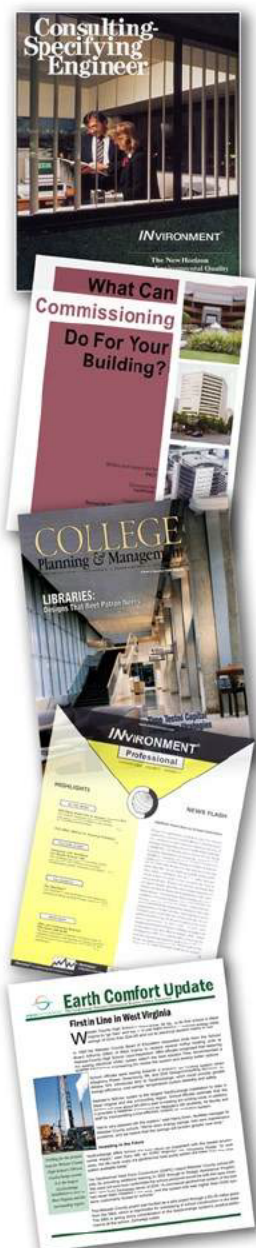
ZDS provides consulting engineering services for the indoor air quality (IAQ) environment. These services include: strategic planning for renovation and new construction projects; technical research and writing; specialized applications software development; corporate and professional training programs; publications support and fulfillment; and site-specific engineering and scientific consultation. Todd Zachwieja, **ZDS** Principal, is contributing editor for the following IAQ publications:

- Technical Review Panel for the publication of the *INvironment™ Handbook of Building Management and Indoor Air Quality*, by Chelsea Group and published for Powers Educational Services
- Technical Review Panel for the quarterly publication of the *INvironment™ Newsletter*, by Chelsea Group for Powers Educational Services
- *Ventilation for a Quality Dining Experience: A Technical Bulletin for Restaurant Owners and Managers*, released in January 1993
- *The New Horizon: Indoor Environmental Quality*, published as a supplement to an issue of *Consulting-Specifying Engineer* magazine, a trade magazine distributed to roughly 50,000 engineers
- Editorial Advisory Board member reviewing the articles of the monthly publication *INvironment™ Professional*
- Editorial Advisory Board member of *POWER PRESCRIPTIONS™ Indoor Air Quality Publication* by Electric Power Research Institute

ZDS provides Indoor Air Quality (IAQ) services for major corporations, government organizations and property owners to resolve their specific facility problems:

- Resolve “sick building syndrome”
- Identify solutions to building-related illnesses due to extensive biological contamination
- Develop solutions for HVAC systems, temperature controls, equipment, operating and maintenance practices for indoor air quality
- Commission new and renovated facilities to minimize or eliminate IAQ issues before problems arise
- Develop and establish master plans as well as conduct training seminars for IAQ of schools and commercial buildings

As one of the nation’s leaders in Indoor Air Quality (IAQ), **ZDS** provides sophisticated technical expertise that enables our client to be proactive in solving and preventing indoor environmental problems.

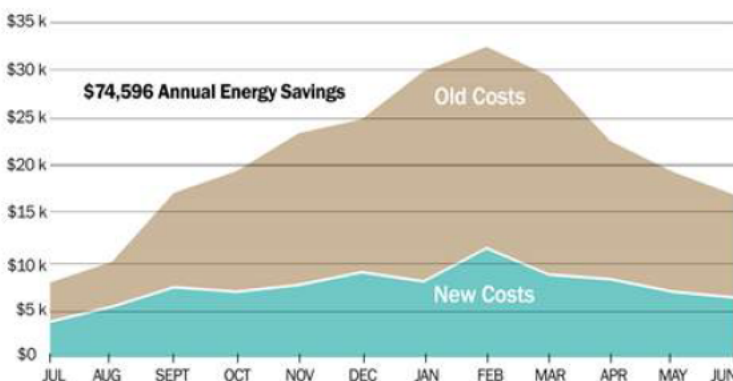


At **ZDS**, our engineering staff integrates energy efficiency into each project design to provide you, our client, with the added value that you expect and deserve. The

ZDS team approach represents a tremendous amount of experience in designing energy efficient facilities. **ZDS** offers a comprehensive range of energy management services including:

- Providing detailed analysis of facilities
- Recommending sound and proven energy saving solutions
- Implementing energy management improvements
- Determining, quantifying and assisting in securing available Utility and Government grants

The **ZDS** team members take pride in the quality of their projects and have been responsible for designing and implementing numerous energy management programs. These programs are providing significant energy improvements and include optimizing, central utility plant equipment, control systems, air handling systems, lighting systems, and other energy consuming equipment.



Recent projects include:

- Interconnecting boilers and chiller plant systems
- Designing Geothermal HVAC systems
- Optimizing HVAC equipment and operating sequences, including upgrades to variable speed operation
- Installing Direct Digital Control (DDC) Energy Management Systems
- Replacing inefficient lighting equipment with energy efficient systems
- Modifying air handling equipment from 100% outside air to return air operation
- Implementing heat recovery units into HVAC equipment
- Improving laundry, kitchen and other process application efficiencies



In addition to the energy management projects outlined above, the **ZDS** team members have extensive experience in identifying and implementing energy efficient operating and maintenance measures. These are typically low cost or no cost measures that include:

- Inspecting, calibrating temperature controls and adjusting outdoor air dampers
- Commissioning economizer cycle operation
- Testing steam traps and pressure relief equipment operation
- Enabling heating and cooling equipment only when required

ABOVE: ZDS designed and implemented the region's first and largest commercial geothermal system saving Webster County High School over \$74,596 in energy savings.



The **ZDS** team is trained and experienced in advising you of program options to incorporate energy efficiency and operational savings features into the design of your new construction and renovation projects. At **ZDS**, we view our role as helping you to define your own energy efficiency needs and goals through identifying energy savings options and providing supporting financial information. We then help you fit your energy efficiency needs and goals into a workable budget and schedule, and then design a program to fill those needs.

Sustainable “Green Building” design, including LEED certification, recognizes the importance of commissioning. The design and construction industry have had start-up problems when a facility is occupied and construction deficiencies were not discovered until the contractor’s traditional one-year warranty period expired. The mechanical and electrical systems have continued to become more complex with sophisticated control systems and equipment, and a mountainous amount of changing technology. If not properly addressed, building owners could face numerous operational problems from “Sick Building Syndrome,” excessive energy costs, and uncomfortable indoor environments.

Commissioning is the missing link between design and implementation. Prior to joining **ZDS**, Todd Zachwieja established commissioning services for one of the nation’s largest energy service companies. He is also a LEED Accredited Professional. Many utility companies and building owners now require commissioning for new or renovated facilities in order to maximize the use of their investments in their facilities and to obtain LEED certification.

ZDS offers commissioning services for their clients, including meeting LEED enhanced commissioning requirements. These services include strategic planning and operations assistance for renovation and new construction projects. Commissioning services consist of construction document review, equipment performance testing, documentation of design criteria, value engineering, operational fine tuning, coordination of professional operations training programs and site-specific engineering consultation. Our project team has the unique experience of in-depth design knowledge and hands-on operations knowledge that fills in the gap between traditional design services and the building owner’s operational needs.

The commissioning process now required by ASHRAE 90.1 Energy Code and offers the following benefits:

- Improved comfort, serviceability and owner understanding of systems and design intent
- Added technical support for the owner and being proactive in preventing new problems
- Reduced maintenance and decreased expenses related to operating deficiencies
- Early identification and resolution of system discrepancies while designers and contractors are still under contract and on the job
- Verification of system performance while meeting financial restraints

The National Conference on Building Commissioning invited Todd Zachwieja to speak and he jointly presented a paper with the Director of Maintenance of Charleston Area Medical Center’s Memorial Division. The Tampa, Florida Conference involved experts nationwide.

Since 1958, the **ZDS** design staff has provided millions of dollars of engineering design services on a variety of project types. The **ZDS** design team will provide comprehensive services utilizing experienced staff through planning, cost estimating, engineering, coordination of bidding, regular site visitation during construction and specifications for equipment.



You, our client, will greatly benefit from a single point of responsibility for every need your project may have.

Company Overview



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 30 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, repairs 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 every project. Carol has over 30 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.

PO Box 469 • Alum Creek, WV 25003-0469 **PHONE** 304-756-2564 **FAX** 304-756-2565 **WEB** www.casstruceng.com

PROVIDING STRUCTURAL ENGINEERING SOLUTIONS FOR YESTERDAY, TODAY AND TOMORROW
COMMERCIAL, GOVERNMENTAL AND INDUSTRIAL STRUCTURAL DESIGN, ANALYSIS AND RESTORATION
A WEST VIRGINIA CERTIFIED DBE CONSULTANT • CERTIFIED IN THE PRACTICE OF STRUCTURAL ENGINEERING

WV VA KY OH MD PA

COMPANY BACKGROUND

Triad Engineering, Inc. is a multi-disciplinary engineering firm based in the Mid-Atlantic region specializing in the areas of geotechnical engineering, civil and utility engineering, surveying, construction materials engineering and testing and inspection, environmental consulting services, drilling, and other earth science related disciplines. Since its founding in Morgantown, West Virginia in 1975, Triad has provided engineering consulting services on thousands of projects of varying size and complexity. Triad is 100% employee-owned, with every employee taking part in Triad's ESOP from field support staff to senior managers.

“Triad is small enough to be responsive to the needs of our customers and large enough to remain at the forefront of scientific solutions”

-Brad Reynolds, CEO

Triad currently employs approximately 175 professional, technical and administrative personnel in eight offices across five states. Our work force includes environmental scientists, geologists, hydrologists, civil, geotechnical and mining engineers, landscape architects, chemists, surveyors, trained Computer-Aided Design (CADD) draftsmen, field and laboratory technicians, drillers, and support personnel. We pride ourselves on a very low turnover rate, which adds to continuity and enhances the level of productivity and experience afforded by Triad.

With over 42 years of service in West Virginia and surrounding states, both the number and complexity of

our projects have grown. Our clients include federal, state and local governmental agencies, contractors, architects, engineers, attorneys, developers, commercial organizations, and mining and industrial corporations.

Facilities and equipment available to support our staff have continued to evolve through the years to adapt to the changing needs of the market. We

have developed a fleet of drill rigs and support vehicles to meet the needs of our field operations. Well-equipped material testing laboratories are maintained to provide support for our geotechnical engineering and construction monitoring projects.

Each office maintains networks to support CADD functions, hydrogeologic evaluations, water balance modeling, roadway design, storm water management and surface water drainage, design, stability analyses, risk assessment, survey data reduction, and mapping. These broad, in-house capabilities give Triad better control over project schedule, quality and cost, thereby minimizing problems that can occur during the various contract phases.



SECTION III.

Description of Project Experience

Additional Project Experience Brochures



University of Charleston

The Russell and Martha Wehrle Innovation Center



ZDS evaluated the University of Charleston's existing Eddie King Gym and adjacent Gorman Hall Mechanical and Electrical systems' infrastructure while using 3D scanning to capture "built conditions". The evaluation findings and recommendations were presented to UC prior to beginning the design phase of the proposed Project for decisions on phasing the project since the needs exceeded available funds. The Project consisted of major renovations to the Gym to meet NCAA competition requirements, interconnection/reconnection of MEP systems impacting the Gorman Hall facility, and a 30,000 SF addition to the front of the facility that is known as the Russell and Martha Wehrle Innovation Center. The facility consists of classrooms, offices, flexible meeting areas, and a large two-story Innovation Center space. Mechanical work included **new chiller and boiler plants with pumps, accessories, and distribution piping** as well as air handling units, DDC Controls, new domestic and fire protection water services, new gas service, domestic water heating equipment, extensive plumbing fixtures/showers/lockers. Electrical work included new electrical service from the campus 12.5 kv distribution loop, switchgear, distribution, and branch panel boards, and new, energy-efficient LED lighting systems.

Gary Boyd, Director of Facilities
University of Charleston (304) 357-4871

**Construction
Cost:**
\$17,000,000



Design/Consulting Services



Washington & Lee University, Lexington

District Cooling Chiller Plant Renovations



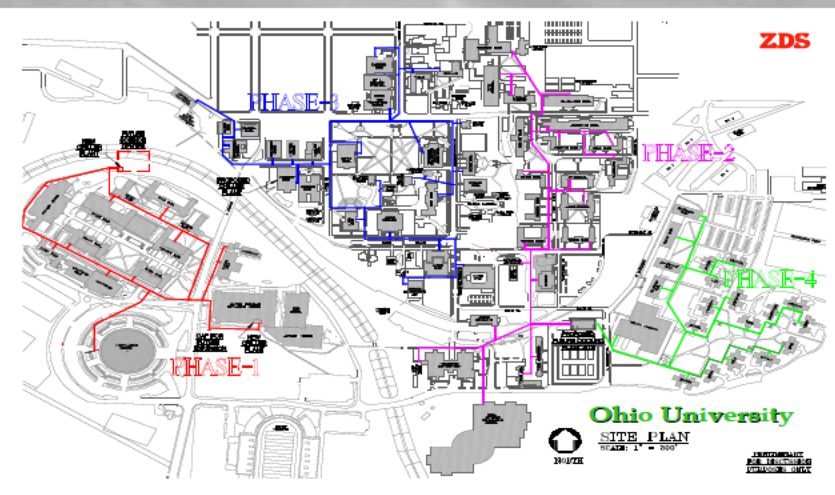
Project involved master planning for the Campus Chilled Water Systems and the design, supervision, preparation of construction documents, specifications, construction administration, and commissioning of a 3,100-ton chiller plant and distribution system with variable water volume (VWV) pumping for energy and operation systems. The **chiller project has received national recognition for pioneering series VWV pumping and for using a combination mixer-air separator in the main chiller plant piping system.** Other projects include Commerce School mechanical system analysis for Indoor Air Quality and the Natatorium mechanical system analysis for Indoor Air Quality.

Construction Costs: \$2,100,000; **Estimated Annual Energy Savings of \$283,000**

Contact: Mr. Bill Elswick, former Director of Facilities Planning
(304) 542-8877; BillElswick@suddenlink.net

Ohio University, Athens

General & Auxiliary Services Performance Contracting and Campus District Cooling



Engineering planning, mechanical and electrical design, consulting for establishing a comprehensive Performance Contracting program & Master Planning **for District Cooling System covering the entire campus.** The projects also include on-campus student housing.

Construction Costs:

\$25,000,000; **Savings over \$2,500,000 annually**

Contact:

Dr. Sherwood Wilson, V.P. for Administrative Services for Virginia Polytechnic Institute of Blacksburg, VA. Former Associate V.P. for Administration, Ohio University, Athens, Ohio; (540-231-4416) for 2001 and earlier.

Mr. Bill Elswick, former Director of Facilities Planning
(304) 542-8877; BillElswick@suddenlink.net



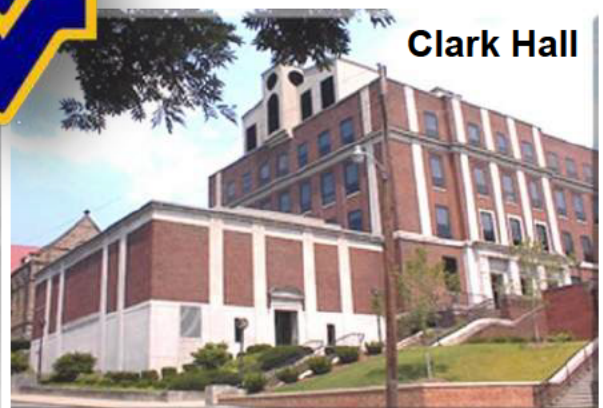
Design/Consulting Services

West Virginia University

Chiller Loop, White Hall Additions & Renovations



ZDS designed a system allowing West Virginia University to optimize its operation of the campus chilled water system.



Engineering planning, mechanical and electrical design, bidding, and construction administration services for multiple projects involving 12 separate buildings at the Morgantown Campus and one at WV Tech Campus.

The downtown campus chilled water loop including White Hall involved interconnecting multiple chilled water plants and installation of a new 750-ton electric drive centrifugal chiller with provisions for a future 1000-ton electric centrifugal chiller.

Construction Costs: \$4,410,000 Total MEP Project Cost

Estimated Annual Savings between \$200,000 and \$300,000

Contact:

Mr. Gary Boyd, former Mechanical Operations Manager
(304) 826-0096; garyboyd@ucwv.edu



State of West Virginia Capitol Complex

Charleston, WV



Project Cost: \$26,500,000

Size: 1,900,000 ft² covering 9 buildings

Client Reference:

Mark Lynch, Mgr. Facility Operations; mark.w.lynch@wv.gov

Builder Reference: Constellation Energy; Chuck Moeller
(previously with Johnson Controls; (724) 584-3331)



**HVAC Renovations, Fire Protection, Electrical
Renovations, Consultant for Performance Contracting**

Numerous design and renovation projects for the WV State Capitol Complex including engineering planning, design, supervision, preparation of construction documents, specifications, construction administration, and commissioning of HVAC systems, sprinkler systems, plumbing systems, electrical power, lighting, fire alarm, security, technology and communications for many facilities on the WV Capitol Complex: **WV Division of Protective Services:** Engineering master planning & design for specific life safety issues involving homeland security, fire alarm, sprinklers, emergency power, CCTV, intercom, mass notification and "giant voice" system for all State facilities on the Capitol Complex under a 10-year open-end contract. **WV Division of Culture and History Library** renovations addressing long-term HVAC and IAQ problems including fire alarm and fire protection upgrades completed in 2011. Renovations conserved energy without sacrificing comfort or indoor air quality. **District Heating System:** As a consultant to Johnson Controls under a Performance Contracting program to provide master planning and design for the district heating system for the **WV Capitol Complex**. The project included the Master Planning, IAQ evaluation, energy analysis, code analysis and Mechanical design involving more than 1,900,000 ft² of facilities including the Capitol Building, Building's #3, #4, #5, #6, #7, Holley Grove, Governor's Mansion and the Culture Center.

Master planning & design for central heating plant, DDC controls, Air Handling Unit replacements and retrofits, operating and maintenance, training, heat recovery, fuel conversion, VFD's, variable water volume pumping, steam/heating hot water & chiller optimization.



***The Capitol Complex renovations are estimated to save
nearly \$2,000,000 annually over the costs of
operating the old systems.***



Design/Consulting Services

William R. Sharpe, Jr. Hospital

Weston, WV



Size: 219,754 ft² plus 33,000 ft² Addition
219,754 ft² Renovation plus 33,000 ft² New Construction

Prime for Engineering Master Planning, HVAC Renovations, Lighting Upgrades, Emergency Generator, Fire Protection, Electrical Renovations, Roof Replacement, Commissioning, and 3D Scanning. Consultant for all MEP engineering through IKM, Inc. for the addition.

ZDS provided Engineering planning, design and Commissioning services for renovations to the existing hospital and a new patient wing addition. The central plant included **two (2) new water-cooled chillers with cooling tower, one (1) air-cooled chiller, and associated VAV pumps and piping**; a central domestic hot water system; a 1.8 Megawatt bi-fuel emergency generator system; three (3) 10.5 million BTU heating hot water boilers with low NOx burners to meet DEP emission requirements, and associated VAV pumps and piping. Other work throughout the hospital included integrated DDC controls for central monitoring, troubleshooting and control including demand control ventilation and outside air measuring/monitoring. Lighting systems were upgraded to LED and controlled to minimize energy usage. The Project required careful planning for phasing to minimize disruptions for the safety and care of the patients and staff.

"The ZDS staff are great planners and designers! They help us make the best decisions for the long term. We would recommend them to anyone!"
former Executive Director of Operations



Renovations resulted in a 48% reduction in lighting and 28.8% reduction in energy for HVAC renovations over ASHRAE 90.1-2001 standards qualifying the project for EPA Act.

Construction Costs:

Phase I HVAC Cost \$1,403,000
ARRA Funded Lighting Upgrade Costs \$618,700
Comprehensive Renovation Cost \$30,000,000
Addition Project Cost \$13,500,000



Robinson Grand Performing Arts Center

Clarksburg, WV

Project Cost: \$17,000,000, **Size:** 45,000 ft²

Client Reference:

WYK Associates, James Swiger, President; (304) 624-6326, james@wykassociates.com

Study/Evaluation, HVAC Renovations, Fire Protection, Electrical Renovations, Emergency Generator, Lighting Upgrades, 3D Scanning

High-performance sustainable HVAC/Electrical/Plumbing/FP upgrades. Condensing heating hot boilers water system with variable water volume pumping. Quiet HVAC system meeting stringent acoustical performance requirements for Performing Art. 3D-Scan-to-BIM of the existing facility was invaluable to developing the comprehensive existing conditions. Built in 1913, this beautiful award-winning historic theatre has come back to life!



Renovations resulted in a 50.8% reduction in energy over ASHRAE 90.1-2007 standards qualifying the project for EPAct.



Kanawha County Courthouse & Judicial Building

Charleston, WV



ZDS assisted in identifying a phased approach to addressing and defining Indoor Environmental Quality (IEQ) issues and modifications for the Kanawha County Courthouse.

Total Judicial Bldg. Project Costs: \$13,807,000

Team Project Cost: \$6,737,000

Annex Project Size: Renovations 95,400 ft² plus 23,000 ft² addition

The Kanawha County Commission hired **ZDS** to provide HVAC/Roof Replacement engineering planning, design, bidding, and construction administration services for the renovation of the 95,400 ft² Judicial Building and a 23,000 ft² addition using the ground floor of the parking garage connected to the Judicial Building. The facility includes circuit courtrooms, jury deliberation, attorney conferencing, witnessing, court clerical staff, public research, adult probation, prosecuting, maintenance, voter registration, court administration, and all public areas. The addition included a new entrance, security checkpoint, and lobby to accommodate a building expansion for Juvenile Probation and Family Court. Replacing the roof of the original building is being done concurrently with HVAC renovations for a coordinated effort.

"No one else could identify the MEP problems even though many had tried. Yet, ZDS provided an excellent evaluation while working well with our Judges and staff for a very successful project. We use them for all our challenging work."
- Kanawha County Commissioner



COMMISSIONING PROJECTS



The Prince Jonah Kūhiō Kalanianaʻole (PJKK)
Federal Building and
United States Courthouse
Honolulu, Hawaii



130th Airlift Wing at Yeager Airport, Phase I,
and Phase II: Aircraft Maintenance Fuel
Systems Hangars and Shops
Awarded a **LEED Silver Certification** for
each of the two phases

"ZDS's commissioning services were invaluable in helping us understand our facility and ensure the systems were installed as intended and optimized for long-term operating benefits. We would recommend them again!" - **Captain Harry Netzer, WVANG Project Manager**



Harvard University
Arnold Arboretum Weld Hill
Research and Administration Building
LEED Gold Certified

- CAMC General Division, Memorial Division & Women & Children's Hospital
- General Motors (GM) of North America
- Maryland – Calvert County Indoor Aquatic Center
- Montgomery County Departments of Correction and Police
- Roane General Hospital, WV
- Ohio University – Chillicothe Campus, Stevenson Library and Bennett Hall
- Santa Ana Federal Building Renovations
- University of California, Davis School of Veterinary Medicine Instructional Facility
- Washington & Lee University
- William R. Sharpe Jr. Hospital
- WV Museum of Culture and Natural History
- WV State Capitol Complex
- WVU—Downtown Campus
- United Hospital Center



Engineering for State & Local Government Facilities

ZDS engineering project experience includes facilities registered as official Historic Buildings



Jackie Withrow State Hospital

WVDHHR hired ZDS to engineer the upgrades for three historic hospital facilities in three separate locations. ZDS successfully completed the projects while meeting the requirements of the State Historic Preservation Office (SHPO).

Hopemont State Hospital



Mildred Mitchell-Bateman State Hospital

Renovations included HVAC, fire safety, energy efficient lighting, plumbing, indoor air quality and electrical power engineering.



Design/Consulting Services

Engineering for State & Local Government Facilities



Governor's Mansion

Engineering planning and design for central heating plant, DDC controls, Air Handling Unit replacements and retrofits, operating and maintenance, training, heat recovery, fuel conversion, VFD's, variable water volume pumping, steam/heating hot water and chiller optimization.

Renovations included HVAC, fire safety, lighting, plumbing, indoor air quality and electrical power engineering.



Building #3



State Capitol



LEED Certified Candidate



Design/Consulting Services

Engineering for State & Local Government Facilities

Welcome Center and Rest Area



ZDS engineered the prototype for several Welcome Centers and Rest Areas.

ZDS provided engineering planning, design, bidding and construction admin services for M/E, Plumbing and Fire Protection.

ZDS also evaluated the existing courthouse's potential power needs and incorporated those in the new Judicial Annex's electrical systems while providing emergency power.

Mercer County Annex



Division of Culture and History

A 228,500 ft² Facility



Emergency Power Generator

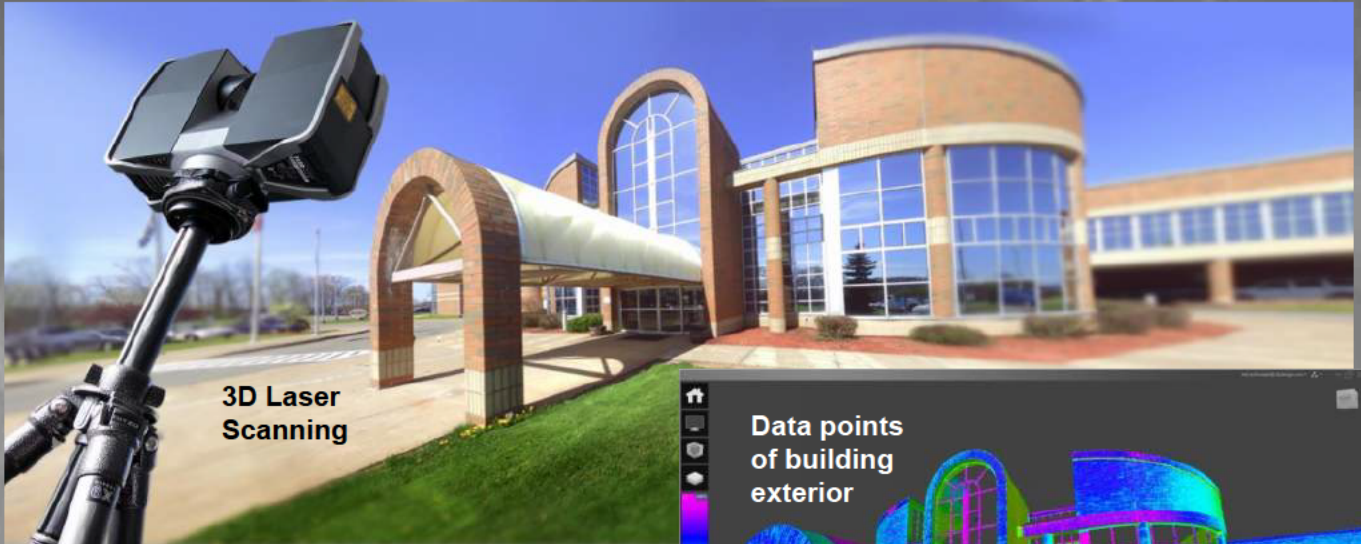
Renovations save the Museum nearly \$153,000 in annual energy costs while preserving the State's priceless collection with proper HVAC, humidification, lighting, electrical and power generator systems.



Design/Consulting Services

BIM - 3D Digital Imaging

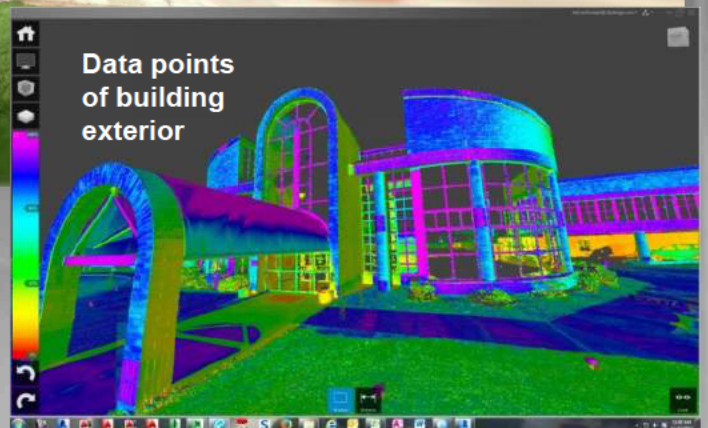
Our 3D Laser Scanning Services helped William R. Sharpe, Jr. Hospital document existing conditions and integrate their 50-bed addition.



Why 3D Laser Scanning is better:

3D laser scans reveal significant differences between existing conditions and the original drawings.

3D laser scans also provide superior details by capturing data that is more comprehensive and precise than conventional methods.



“With the 3D laser scanning service, ZDS saved us countless hours communicating to all project team members, even to those who work or live far away.

Also, we now have an accurate record of the existing conditions that DHHR can easily access now and into the future.”

former Chief Operations Officer



Web Share:

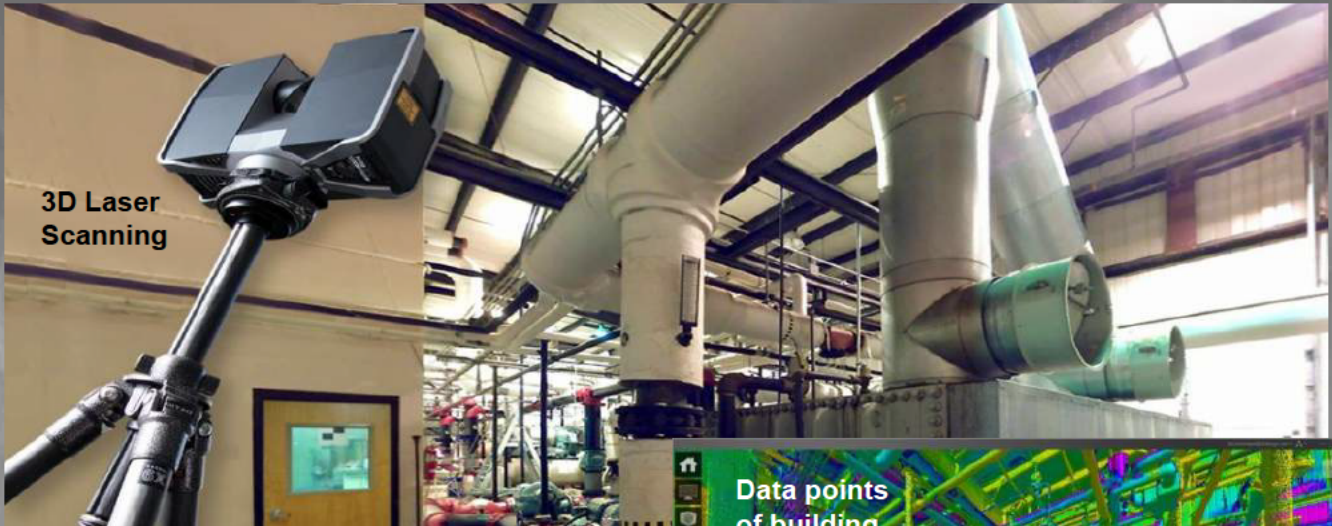
3D laser Scanning allows facility owners to view and measure areas with others on their planning and construction team.



BIM - 3D Digital Imaging

“The 3D laser imaging improves quality, saves time and money while providing a valuable resource now and into the future.”

DHHR



3D Laser Scanning

“The 3D laser scans safely document hard-to-reach interior areas — this greatly reduces our risk for liability.

Also, the excellent details of the laser scans convert to accurate construction drawings, both architectural and engineering.”

*DHHR Director of
Construction & Project Management*



**Data points
of building
interior**



3D Engineering Drawing:
Sample of 3D mechanical
drawing converted from 3D
laser scan data points.

Web Share: Helps construction
team members integrate existing
conditions into BIM models.



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.



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.



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.



CLIENT:

Larry Ladado
Boone County Parks
and Recreation

PROJECT TYPE:

Parks and Recreation

TRIAD SERVICES:

- Geotechnical Investigation
- Soil Borings
- Laboratory Testing
- Civil Site Design
- Permitting
- Surveying

OVERVIEW

Triad prepared a master plan and construction documents for this 20 acre site. The project involved the planning of a multipurpose field, baseball field, walking trail, canoe livery, restroom facility and an amphitheater. The amphitheater was designed around an existing walking path and was incorporated into



the natural surroundings, and to save as many trees as possible.



SERVICES PROVIDED

Triad Engineering generated a master plan and performed full civil site design services as well as geotechnical engineering and surveying for this project.

Surveying was performed to generate a topographic map and to assist in locating utilities. Triad also generated a complete set of Construction Drawings and Specifications

CHALLENGES AND SOLUTIONS

Most of this project was situated in the flood plain also presented many design and permitting challenges. Triad performed a HEC-RAS study for this project and determined potential floodplain impacts. We maximized the use of the floodplain while avoiding any increase in the flood risks.



OVERVIEW

The project consists of the design and construction of two new buildings for the Mt. Olive Correctional Facility located in Fayette County, West Virginia. As a basis for design, Triad performed a topographic survey at each proposed building location. In addition to the topographic survey, TRIAD performed a metes and bounds survey for the perimeter limits of each Building D and L2. Triad also performed a survey to locate all above ground utility features to aid in locating utilities.

CLIENT:

Silling Associates, Inc.
Tom Potts
Charleston, WV

PROJECT TYPE:

Large Facility

TRIAD SERVICES:

- Surveying



SECTION IV.

Proposed Team Staffing Plan

**Team Certifications
Team Resumes**



Team Staffing Plan



ZDS Management Team



Ted Zachwieja III, PE, CEM
CTO/BIM Manager
MEP Engineer-of-Record

Todd Zachwieja
PE, CEM, LEED AP
Principal-in-Charge



Jim Watters
Associate, MEP Design
Cost Estimating/CA



Lauren Headley
Marketing Coordinator



David Cotton, PE,
LEED APBD+C
MEP Designer



Mark Estep, PE
MEP Engineer



Paul O'Dell, PE
MEP Engineer



Vineel Busa, PE
MEP Engineer



Meher Meka, EI
MEP Designer

Carol Stevens, PE
President/Structural Engineer



Joseph Young, RLA
Sr. Landscape Architect

Lloyd Kirk, PS, CFS
Survey Manager



Todd has over 40 years of experience involving the analysis, design, construction management and specifications for mechanical engineering, heating, ventilating, air conditioning, plumbing, fire protection, electrical and lighting, as well as indoor environmental quality analysis, building system commissioning and forensic engineering for educational, governmental, military, commercial, industrial and health care clients. He is also recognized as a campus master planner for utility infrastructure providing master planning at many Universities, hospitals and the State of WV Capitol Complex.

Prior to starting a consulting engineering firm, Todd Zachwieja coordinated comprehensive energy conservation programs resulting in annual energy savings of millions of dollars. He has managed a profitable regional office for one of the country's largest energy companies that service the southeastern United States. Todd also developed computer modeling programs for building energy analysis and monitoring. He has been invited as an industry leader to present technical papers and speak at professional conferences both regionally and nationally.

Todd selected and designed the pilot project for one of the largest geothermal heat pump applications in the Eastern US including designing custom geothermal rooftop AHU's. He has retro-commissioned HVAC systems for millions of square-feet for facilities located in 10 states. He has been involved with many commercial structures including high-rise commercial building renovations. Todd designed renovations to many existing schools which received **Energy Star Certifications** placing them in the nation's top 25% of energy efficiency schools. *The College Planning and Management Magazine* featured Todd and his work with a major University for the performance contracting programs that save millions of dollars in energy and operating costs. Most projects also qualified for EPA's Act which requires buildings use over 50% less energy than buildings designed using ASHRAE 90.1.

GOVERNMENT/HISTORIC/COMMERCIAL PROJECT EXPERIENCE

- Bank One
- Bayer Material Science
- Calvert County Aquatic Center, MD
- Charleston Area Medical Center
- Cass Scenic Railroad Clubhouse, WVDNR
- Coal Heritage Discovery Center
- Culture Center, HVAC & Fire Protection, WV State Capitol Complex
- General Motors Corp. Re-commissioning
- Hopemont Hospital, WVDHHR
- Jackie Withrow Hospital, WVDHHR
- Jackson County Courthouse Annex
- Kanawha County Commission: 120,000 sf Judicial Annex additions/renovations
- Kanawha County Courthouse
- Kanawha County Metro 911
- Kanawha County Public Library
- Kanawha County Schools
- Kohl's
- Laidley Towers
- Marshall University
- Mercer County Courthouse Annex
- Olin Corporation
- Phillip Morris USA
- Public Service Commission of WV
- Redmond House, WVDOT
- Rhone-Poulenc
- Robinson Grand Performing Arts Theatre
- Santa Anna Federal Building, CA
- St. Patrick's Church
- Tyler County Courthouse
- Tyler County Schools
- Toyota Motor Manufacturer, WV Inc.
- Union Carbide/DOW
- United Center
- University of Charleston Innovation Ctr
- William R. Sharpe, Jr. Hospital, WVDHHR
- Word Trade Center, MD
- WV Air National Guard including Cx \$45M Fuel Cell/ Maintenance Hangars at Yeager Airport – **LEED Silver Certified**
- WV Army National Guard
- WV Capitol Complex Central Heating Plant
- WV Children's Home, WVDHHR
- WV Department of Transportation/DOH
- WV Division of Protective Services
- WV Higher Education Authority
- WV General Services Division
- WV State Capitol Complex renovations
- WVU Stewart Hall & Wise Library
- Yeager Airport



PROFESSIONAL REGISTRATIONS

Professional Engineer:

- Florida
- Georgia
- Kentucky
- Maryland
- North Carolina
- Ohio
- Pennsylvania
- South Carolina
- Virginia
- West Virginia

Fire Investigation Certification under the direction of Peter Vallas, Sr.



Certified Energy Manager
(C.E.M.) National
Certification No. [REDACTED]



LEED Accredited Professional,
National Certification through
USGBC No. [REDACTED]

EDUCATION

Masters of Science in Engineering
Management from West Virginia University
College of Graduate Studies.

Bachelor of Science in Mechanical
Engineering from West Virginia
Institute of Technology.

Todd Zachwieja, PE, CEM, LEED AP

PROFESSIONAL AND COMMUNITY AFFILIATIONS

Past President 2013-14, current Governor - WV ASHRAE Chapter, Served as ASHRAE's Energy and Technical Affairs Chairman for six years. Recognized by ASHRAE Region VII in 2014 with the David Levine Award of Excellence, Presidential Award of Excellence,

Recognized by the International Who's Who of Professionals

Recognized nationally as West Virginia's Business Man of the Year

Recognized by AEE nationally in 2007 as a Legend in Energy

Recognized by AEE nationally in 2008 as a Charter Legend in Energy

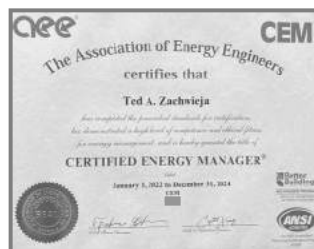
Charter Life Member of the Association of Energy Engineers

Professional Affiliate Member of the American Institute of Architecture

Associate Member West Virginia Society for Healthcare Engineering

Member of the International Code Council

Member of the National Society of Professional Engineers



OTHER RECOGNITIONS

Selected by WVU and the WV Division of Energy to train Code officials and the design community on ASHRAE 90.1 State Energy Code

Presented at regional and national conferences including the annual National System Commissioning Conference

Contributing editor and served on the Editorial Review Panel for *"The Handbook of Building Management and Indoor Air Quality"*

Contributing editor *"Ventilation for a Quality Dining Experience"*

Contributing editor and served on the Editorial Review Panel for *INvironment Professional, Power Prescriptions* and other publications and articles featuring Indoor Air Quality (IAQ) and MEP engineering systems

Energy Star Certified for facilities in the nation's top 25% of energy efficiency

1st Place 2014 ASHRAE Technology Award, Region VII

LEED Silver Certified WVANG Fuel Cell/Maintenance Hangar, Charleston, WV

LEED Gold Certified Harvard Arboretum, Boston, MA

First ASHRAE bEQ certified building in West Virginia, 2015



Ted Zachwieja III, PE, CEM

Ted has over 19 years of experience in building construction design industry. His strategic thinking and development of technical resources at ZDS has helped streamline design processes and improve quality of work office wide. Ted is an innovative problem solver in engineering design, communication methods and management of BIM models between stakeholders during a design project. As a pioneer and a believer in technological processes Ted has championed Integrated Design Practices that has become the fabric of ZDS's day to day operations.

Ted developed ZDS's 3D Scanning services which have assisted in collecting key existing conditions for renovation projects, forensic engineering, historical preservation, and high definition reality capture. Ted has in depth experience on collection, registration, and scan to BIM processes. He has provided training and developed materials for best practices when using 3D scan data. Ted's 3D scanning experience includes governmental, educational, health care, industrial, and commercial facilities. He also has experience in speaking on how 3D laser scanning impacts our industry today.

Ted develops, designs and manages the IT systems. The experience encompasses development and deployment of central server systems to networked client computer systems, strategic development for ZDS' Integrated Design Processes, and research and development into new technologies to continue staying on the cutting edge for ZDS and others.

Ted's project experience includes design and commissioning for heating, ventilating, air conditioning, plumbing, fire protection, electrical and lighting systems for educational, health care, industrial and commercial facilities. His experience encompasses working both on new construction and renovation projects. He also is experienced in historical facilities including theatrical.

Ted maintains an active membership to the ASHRAE professional society and also has a lifetime membership to the Association of Energy Engineers. He maintains an active continuing education towards today's standards and codes as well as participates in ASHRAE at both a local and society level. He was recently appointed to the Electronic Communications Standing Committee with ASHRAE. Ted has designed renovations to existing K-12 schools which received **Energy Star Certifications** placing them in the nation's top 25% of energy efficiency schools.

GOVERNMENT/HISTORIC/COMMERCIAL PROJECT EXPERIENCE

- WV Air National Guard Maintenance Hangar and Fuel Cell Hangar, Charleston, WV – **LEED Silver Certified**
- Adams Morgan Historic Hotel, DC
- Bayer Material Science
- Catholic Church of Ascension, Parish Hall Renovations
- Coal Heritage Discovery Center
- Culture Center, WV State Capitol Complex
- Highland Museum, KY
- Hopemont Hospital, WVDHHR
- Jackie Withrow Hospital, WVDHHR
- Kanawha County Judicial Annex HVAC Renovations
- Laidley Towers
- Meadowbrook Rest Areas
- I-70 Welcome Center
- CASCI Building, Charleston WV
- Morgantown Welcome Center
- Pocahontas County Community Center
- Redmond House, WVDOT
- Robinson Grand Performing Arts Theatre
- Servia Rest Areas
- St. Patrick's Church, Weston WV
- Stonewall Jackson Marina
- Tyler County Courthouse
- University of Charleston Innovation Center Additions/Renovations
- William R. Sharpe, Jr. Hospital Additions/Renovations, WVDHHR
- World Trade Center, Renovations, MD
- WV Children's Home, WVDHHR
- WV Parkways Authority, Toll Booth Plazas
- WV State Capital Complex Central Heating Plant
- WVU Wise Library
- White Sulfur Springs Rest Area
- Numerous K-12 School Renovations
- Kanawha Co. Judicial Bldg. Commissioning
- WV State Capitol Complex Bldgs. 3 & 4 Commissioning



PROFESSIONAL REGISTRATIONS

Professional Engineer:

Florida

West Virginia

Certified Energy Manager (C.E.M.)

National Certificate

No.



EDUCATION

Bachelor of Science in Mechanical Engineering from Rochester Institute of Technology, Rochester, NY

AWARDS AND RECOGNITIONS

Awarded 2012 Legend in Energy by the Association of Energy Engineers

Awarded acceptance into ASHRAE's 2015 Leadership University

ASHRAE Blue Ribbon Award of Excellence
Co-Author at Autodesk University



Energy Star Certified for facilities in the Nation's top 25% of energy efficiency

Jim has nearly 50 years of experience in design and implementation of lighting, HVAC, plumbing and electrical systems including nine years in the construction industry. He has a comprehensive knowledge of construction documents, contracts, and development of cost estimates, budgets and schedules. Jim's strengths reside in his ability to manage projects and people in an organized and cost-effective manner. Jim has been involved with the design and production of mechanical and electrical drawings including HVAC, plumbing, fire protection, lighting, electrical power, fire alarm and specialized systems. He has worked with and managed engineers in projects for health care, educational and commercial buildings in the states of West Virginia, Florida, Maryland, Pennsylvania, Ohio, Kentucky, Virginia, Georgia, New York, Arizona, Illinois and Massachusetts.

Jim has extensive experience in energy savings' programs for lighting, HVAC, plumbing and electrical systems in hospitals, state and government office buildings, school systems, and manufacturing facilities, as well as managing performance contracts for a large facility's campus totaling \$10,000,000 in construction costs on various projects, including the conception, design and construction administration for the installation of a 1.5 Megawatt emergency generator. The propane-fired generator and associated switchgear in conjunction with 60,000 gallons of propane fuel storage served to provide peak shaving/load shedding to save on the campus utility costs as well as emergency power functions. Through the years, Jim has researched and implemented into practice International Building Codes, NFPA Codes, National Electrical Codes, Life Safety Codes, IES standards, AIA Guidelines for Design and Construction, and ADA guidelines. His involvement in construction through the years has been mainly from the design side of the industry with a 9 year stint working for a contracting firm at the turn of this century. His experience includes coordinating with Architects, Owners and Agencies including an excellent relationship with the office of State Fire Marshal.



PROFESSIONAL AFFILIATIONS

Member of the National
Fire Protection Association (NFPA)



Member of the Health
Care Section of the NFPA

Past Member of the Illuminating
Engineering Society (IES)

Past member of the American Society
of Plumbing Engineers (ASPE)

Past member of the Institute of
Electrical Engineers (IEE)

OTHER RECOGNITIONS

Energy Star Certified
for facilities in the Nation's top 25% of
energy efficiency



GOVERNMENT/HISTORIC/COMMERCIAL PROJECT EXPERIENCE

- Bluefield Area Transit Authority Administration and Maintenance Facility
- Kentucky Judicial Center, Boyd County
- Coal Heritage Highway Authority
- Chase Towers (formally Charleston National Bank)
- Culture Center Fire Alarm/Sprinklers, WV State Capitol Complex
- Department of Transportation Rest Area prototype
- Department of Transportation Welcome Center prototype
- Fenway Park Lightning Protection/ Grounding Study, Boston
- Glenville State College
- Hopemont Hospital, WVDHHR
- I-70 Welcome Center
- Jackie Withrow Hospital, WVDHHR
- Jackson County Libraries Renovations
- Kanawha County Commission Judicial Annex Renovations
- Laidley Towers
- Meadowbrook Rest Areas
- Morgantown Welcome Center
- Redmond House, WVDOT
- Rhone-Poulenc New Admin. offices
- Robinson Grand Performing Arts Theatre
- Sacred Heart Pavilion and Daycare Ctr
- St. Patrick's Church
- Shawnee Park Clubhouse
- Stonewall Jackson Marina Renovations
- Tucker County Board Office Boiler Retrofit
- Tucker County Courthouse
- Tyler County Courthouse
- University of Charleston Innovation Ctr
- William R. Sharpe, Jr. Hospital, WVDHHR
- World Trade Center, MD
- WV Air National Guard including Cx \$45M Fuel Cell/ Maintenance Hangars at Yeager Airport — **LEED Silver Certified**
- WV Children's Home, WVDHHR
- WV Department of Military Affairs, Public Safety Maintenance Facility, Eleanor
- WV Department of Transportation Burnsville Rest Area and Domestic Water Pumping Station — **AIA Merit Award Recipient**
- WV State Capitol Complex Renovations to Buildings 1, 3, 4, 5 & 7
- White Sulphur Springs Welcome Center

David is a professional Mechanical Engineer with over 16 years of experience in the design and construction of over 500 projects having construction values up to \$35 million. His design experience ranges from commercial, industrial, institutional, healthcare, education, restaurant, retail, government, airport, and recreational facilities.

David collaborates well with fellow engineers, architects, owners, commissioning agents, contractors, and vendors to define project scope and develop conceptual designs. As a project manager he successfully manages projects from start to finish in design, bidding, and construction administration.

PERSONAL PROJECT EXPERIENCE

- Dominion Office Building—LEED Gold, Bridgeport, WV
- Mon General Hospital Echo Renovations, Morgantown, WV
- Mon Health LTAC for Acuity, Morgantown, WV
- UHC POB 4th Floor Fitout, Clarksburg, WV
- Clarksburg Comprehensive Care Clinic Renovations, Clarksburg, WV
- Jerry Dove Medical Office Building, Bridgeport, WV
- Medbrook Building HVAC Replacement, Bridgeport, WV
- Mylan Pharmaceuticals, Morgantown, WV
- Total Dental, New Multi-Tenant Building for PCE, LLC, Bridgeport, WV
- Beckley Police Station, Beckley, WV
- Doddridge County Athletic Complex, Doddridge County, WV
- Boy Scouts of America, Rex W. Tillerson Leadership Center, Fayette County, WV
- White Hall Public Safety Building, White Hall, WV
- Beitzel/Pillar Innovations Office Building, Garrett County, MD
- Shady Spring Middle School HVAC Renovations, Shady Spring, WV
- Maxwell Hill Elementary School HVAC Renovations, Beckley, WV
- Percival Hall Absorption Chiller and Cooling Tower Replacement, Morgantown, WV
- Thrasher Engineering Office Building, Bridgeport, WV
- WVU Creative Arts Center Rehearsal Hall, Morgantown, WV
- WVU Towers Dining Hall Renovations, Morgantown, WV
- WVU Athletic Performance Center, Morgantown, WV
- HP Hood Addition/Renovations, Winchester, VA
- Dominion Office Building, Delmont, PA
- University of Pittsburgh Softball Practice Facility, Pittsburgh, PA
- Westmoreland Community and Technical College, Indiana, PA
- WVU Alumni Center, Morgantown, WV
- WVU Biomedical Research Facility, Morgantown, WV
- WVU Milan Puskar Locker Room Renovations, Morgantown, WV
- NOAA GOES-R Supercomputing Center, Fairmont, WV
- Columbia Gas Transmission Compressor Station, Mathias, WV
- Mabscott Elementary School HVAC Renovations, Beckley, WV
- Independence Middle School HVAC/Roof Upgrades, Coal City, WV



PROFESSIONAL REGISTRATIONS

Professional Engineer:

West Virginia ☐

Maryland ☐

Virginia ☐

Ohio ☐

Pennsylvania ☐

LEED AP BD+C Professional Accreditation

NCEES Record Certificate

EDUCATION

Bachelor of Science

Mechanical Engineering

WV Institute of Technology

MEMBERSHIPS

WV ASHRAE, Current President

National Fire Protection Association

WV Society of Healthcare Engineers

Mark has over 18 years of experience and is responsible for the design of commercial, institutional, and industrial mechanical and electric projects. He works with architects, civil and structural engineers to coordinate design and construction documents. He is responsible for project specifications and submittal review. Mark holds Degrees in Engineering and Architectural Technology which provide more than engineered solutions. He designs solutions that incorporate essential and functional needs, as well as aesthetic, life-safety, and constructability considerations.

Before joining ZDS, Mark was the President and Principal Engineer of another firm where he provided mechanical and electrical engineering design and analysis for commercial construction projects and was responsible for acquiring new projects.

He analyzes systems to determine best value solutions. He evaluates contractor equipment and material submittals as well as conduct on-site review of construction progress and quality.

PERSONAL COMMERCIAL/GOVERNMENTAL PROJECT EXPERIENCE

- General Motors Dealerships; Lewisburg, Charleston & Beckley.
- Toyota Manufacturing Facility; multi-purpose addition containing office spaces, medical treatment area, and weight room.
- Berkeley County EMS; New Facility.
- Buzz Food Processing Facility; New 12,000 sf processing facility includes offices, refrigeration, and abattoir spaces.
- Princeton War Memorial; HVAC Renovations.
- Brickstreet Insurance Headquarters; 86,100 sf renovation.
- Beckley PSD; 3 Water Storage Tanks; Sweeneysburg Water Treatment Plant.
- Shops at Kanawha Plaza; extensive renovation and tenant fit-up project of 195,000 sf shopping center.
- Huntington Museum of Art; HVAC Renovations.
- New Automobile Showrooms; two new showrooms with office and/or repair facilities.
- First Bank of Charleston; New Building.
- Hargis Laundry Facilities; laundry facility renovations.
- Harley Davidson; Store Renovations.
- Shawnee Sports Complex; Six multi-purpose fields and four baseball field complex with amenities.
- Charleston Housing Authority; Lee Terrace Boiler; Jarrett Terrace HVAC; Lee Terrace HVAC; Carroll Terrace Boiler; Little Page Boiler; Washington Manor Boiler; Switzer Center.
- Clay County PSD; Water Storage Tank; Water Treatment Plant.
- Putnam County Courthouse Complex; HVAC Replacement at the Sherriff's Office Building and the Main Courthouse Building.
- Trans Canada; New Control Building.
- Willow I & II and Elk Village Senior Centers; Three new two-story senior apartment buildings in multiple locations.
- Raleigh County Airport; Runway Lighting Upgrade.
- Yeager Airport; Runway & Tarmac Repairs.
- Upshur County Commission; Upshur County Courthouse Addition.
- Huntington Housing Authority; New 50 Unit Apartment Building; Administration Building Renovations.
- Maranatha Fellowship Church; New Annex Building.
- Mount Olive Correctional Facility; Foundation Verification.
- State of West Virginia Bioterrorism Lab; Upgraded existing mechanical and electrical systems to Bioterrorism facility to current federal standards.
- WV Department of Transportation; Kelly Creek Bridge; Marmet Bridge.
- WV Water Development Authority; New Facility.
- Dunbar Housing Authority; Dutch Hollow HVAC Replacement.
- WV Hygienic Lab; HVAC & Electrical Upgrades.
- WV Division of Motor Vehicles; Kanawha City.



PROFESSIONAL REGISTRATIONS

Professional Engineer:

West Virginia ☐
Maryland ☐
Virginia ☐
Kentucky ☐
Ohio ☐

EDUCATION

Bachelor of Science

Mechanical Engineering

WV Institute of Technology

Bachelor of Science

Architectural Engineering Technology

Associates of Science

Mechanical Engineering Technology

Fairmont State College



Paul has 30 years of engineering experience involving the analysis, design, project management, specifications' writing and construction management on many projects throughout the region. This experience includes heating, ventilation, air conditioning (HVAC), plumbing, electrical systems and lighting for governmental, commercial, educational, healthcare, industrial and military facilities. He also has knowledge and experience with indoor environmental quality assessment, recommended remedial work and design of the necessary modifications in various types of buildings.

Paul assisted in the design and implementation of the pilot project for one of the largest geothermal heat pump systems in the mid-Atlantic region. He has also been involved in the design of facilities that have received the Energy Star Certification placing them in the nation's top 25% in energy savings for similar buildings and systems as well as his contribution as part of a large team effort performing mechanical systems' retro-commissioning at numerous automotive manufacturing facilities in North America.

His project experience is wide-ranging and includes the development of scope, design criteria and budget conscious designs. Working with other design professionals and through rapport with the clients he has conducted design peer reviews, construction budget and project schedule overview, Construction Administration and closeout of projects.

GOVERNMENT/HISTORIC/COMMERCIAL PROJECT EXPERIENCE

- WVARNG Armory/Annex
- Bruceton Bank
- Bank One
- Culture Center, WV State Capitol Complex
- Cuissets Residence
- Camp Dawson barrack/mess hall
- DOT Huntington District II Headquarters Renovations
- Yeager Airport Terminal Expansion/Renovation
- DOH Testing Lab
- GMC Lordstown Assembly Plant
- GMC Janesville Assembly Plant
- GMC Pontiac East Assembly Plant
- GMC Bowling green Assembly Plant
- GMC Arlington Assembly Plant
- Harrison County Bank
- IMC Office Bldg.
- Kanawha County Commission, Judicial Annex
- WV Capitol Complex Central Boiler Plant
- Appalachian Tire
- Laidley Towers
- Robinson Grand Performing Arts Theatre
- USDA Forestry Building
- University of Charleston Innovation Center Additions/Renovations
- World Trade Center, MD
- William R. Sharpe, Jr. Hospital Additions/Renovations, WVDHHR
- Numerous K-12 School Renovations



PROFESSIONAL REGISTRATIONS

Professional Engineer:
West Virginia

EDUCATION

Bachelor of Science in Mechanical Engineering from WV Institute of Technology, Montgomery, WV (Graduated Cum Laude)

PROFESSIONAL AFFILIATIONS

Member American Society
of Mechanical Engineers

Member ASHRAE

Vineel is a professional Mechanical Engineer with a Masters Degree in Mechanical Engineering and nearly 6 years experience in HVAC & Refrigeration. Technically sophisticated engineering professional with solid history of effective integration, and deployment of HVAC systems. Significant experience in designing, commissioning and implementing efficient HVAC systems for various commercial, healthcare and educational facilities.

Vineel is knowledgeable on HVAC systems, Heat Transfer, Refrigeration and Thermodynamic specializing in HVAC heating and cooling load calculations, Psychrometric and hydronic analyses and Energy modeling. He has applied that foundation in the MEP industry, manufacturing industry and the commercial industry. Vineel has a comprehensive knowledge of mechanical principles and drafting techniques.

He is experienced hands-on in designing Variable Refrigerant Flow systems, Steam Systems, hydronic systems, Geothermal systems and Building Automation System. He is also proficient in Revit, AutoCAD, IESVE, Navisworks, and Autodesk Recap. Vineel is experienced in utilizing point clouds in the development of Scan to Building Information Modeling (BIM) and performing 3D scanning. Vineel is well-versed in technical specification writings and development of construction drawings. He has hands-on experience in performing Functional Performance Testing in leading Commissioning projects.

PROJECT EXPERIENCE

- New Bluefield Elementary School Commissioning
- Clay County High School Commissioning
- North Fork Elementary School HVAC/Roof Renovations, 3D Scanning, Scan-to-BIM and Commissioning
- Pendleton County Middle/High School HVAC/Roof Renovations, 3D Scanning, Scan-to-BIM and Commissioning
- New 911 Center high performance "Net Zero" facility and Commissioning
- Tyler County Courthouse Additions/Renovations and Commissioning
- Riverside High School HVAC/Lighting Renovations
- Roane General Hospital Commissioning
- Kanawha County Judicial Building Renovations & Commissioning
- New Clendenin Elementary School Commissioning
- Marshall University—Jomie Jazz HVAC Renovations
- Veteran Administration Clarksburg Hospital Mechanical BIM
- Veteran Administration Huntington Hospital Mechanical-Electrical BIM
- WVARNG Brushfork Armory HVAC Renovations
- WV Capitol Complex Campus Heating System Renovations Buildings #1, #3, #4, #5 and #7 over multiple phases
- WV State Capitol Complex Bldgs. 3 & 4 Commissioning
- St. Marys High School
- Raleigh County Schools: 4 Schools - Renovations & Commissioning
- New Stratton Elementary School Commissioning



PROFESSIONAL REGISTRATIONS

Professional Engineer:
West Virginia

EDUCATION

VIT University
Bachelor of Science
in Mechanical Engineering

Southern Illinois University Edwardsville
Master of Science
in Mechanical Engineering

University of Cumberland
Working on PhD in Project Management

AWARDS AND RECOGNITIONS

Certified by ASHRAE in
HVAC Design Essentials & Applications

Meher is a graduate Electrical Engineer with a Masters Degree in Electrical Engineering and nearly 5 years of experience in Power Distribution & Protection, Lighting design, Lightning protection, Fire Alarm, Communications and Schematics. He also is experienced in plumbing design for educational, commercial and governmental facilities.

He leads solar power applications including WV's first net zero 911 Center involving aggregate net metering where the additional solar power generated at a new 911 Center is credited towards the County's Courthouse. Knowledgeable in High performance building design.

PROJECT EXPERIENCE

- St. Marys High School
- CEA office
- Blennerhassett Island Dock Study
- Coney Island Hot Dogs Central Kitchen
- Brushfork Armory Renovations
- C.R. Hipp Industrial Warehouse
- Eucalyptus Wellness Company
- Ed Harleys Private Garage
- High Wire Distillery
- Kanawha County Judicial Bldg.
- Jones Trading Upfit office space
- Kimley Horne Charleston Buildout
- HSGS Solar Office Space
- IX Artistry Salon
- JW Aluminum upfit office space
- J McLaughlin Upfit Retail Outlet
- Maple Street Office Building
- North Fork Elementary Retrofit
- Northwood Middle School
- River Oaks Storage
- Raleigh County Schools
- 4 Schools Renovations
- Riverside High School Renovations
- Orange Theory Fitness, Acworth
- Orange Theory Fitness, Milton GA
- Pack Rat Storage Bees Ferry road
- Pendleton County Middle/High School Renovations
- Sherwin Williams
- South State Bank Renovations
- Steel City Pizza Cranes
- Stella Nova Cigar Factory
- Trimnal Mayers Law office
- Tyler County Schools
- Tyler County 911 Center
- Tyler County Courthouse Retrofit
- VA Hospital - Clarksburg
- VA Hospital - Huntington
- WV Capitol Complex Renovations Bldg. #1, #3, #4, #5 and #7
- WVDOT - Servia Rest Area
- Airforce Base Clinic
- Canadian Consulate office
- JBL Harman office space
- HP Office Space



PROFESSIONAL REGISTRATIONS

Engineer in Training (E.I.T)
Fundamentals of Engineering (F.E)

EDUCATION

Bachelor of Technology, Electrical and
Electronics Engineering

UNC Charlotte
Master of Science
Electrical & Computer Engineering

Carol A. Stevens, PE, 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
P.E.	2013	Virginia

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
West Virginia University Institute of Technology
Department of Civil Engineering Advisory Committee

EXPERIENCE

West Virginia, Riverview at Clendenin School: Structural evaluation report and construction documents for renovations to a 1912 historic school. Proposed use was senior apartments and a non-profit community health center.

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

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, State Capitol Complex, Main Capitol Building Exterior Façade Restoration: Investigation and preparation of details for repairs to limestone and terra cotta exterior façade. Building is on the National Register of Historic Places and was constructed in the 1920's and 1930's.

West Virginia, Roane County Courthouse: Structural analysis of existing floor framing for addition of new high-density file storage system on upper floor level.

West Virginia, Lewis County Courthouse: Structural investigation for work required to update structure and apply for grant monies through WVCFIA.

West Virginia, Tucker County Courthouse: Structural investigation for work required to update structure and apply for grant monies through WVCFIA.

West Virginia, Boone County Courthouse: Structural analysis of existing floor framing for addition of high-density file storage systems at different locations.

West Virginia, Gilmer County Courthouse: Structural analysis of existing floor framing for addition of high-density file storage system on upper floor level.

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, 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, 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, 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.

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.

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.

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



EDUCATION

West Virginia University, WV
BSLA, Landscape Architecture

PROFESSIONAL EXPERIENCE

24 Years

REGISTRATIONS & LICENSES

- Registered Professional Landscape Architect, WV, KY & OH

PROFESSIONAL AFFILIATIONS

West Virginia Recreation and Park Association (WVRPA)
American Society of Landscape Architects (ASLA)

SKILLS

- Site Inventory and Analysis
- Program Production
- Conceptual Design
- Master Planning

HIGHLIGHTS OF EXPERIENCE

Mr. Young currently serves as Senior Landscape Architect for the Southwestern Region of Triad Engineering, Inc. In this capacity, he provides clients with a variety of landscape architectural services including site inventory and analysis, program production, conceptual design, design development, high quality graphic presentations, project management, construction document preparation and construction administration. In this capacity, Mr. Young brings years of experience on a diverse range of projects covering all aspects of landscape architectural design and planning in both the public and private sector. Mr. Young's experience includes park and streetscape design, resort and campus master planning, subdivision layout, landscape and hardscape design, landscape design, grading and earthwork calculations, construction detailing, specifications, and estimating. Mr. Young also performs Project Management on related projects, and has been involved in planning projects for national and international military bases, pocket parks, 5,000 acre reserves, large downtown streetscapes, subdivision layout and design, and campus master plans for many college and universities.

RELEVANT PROJECT EXPERIENCE

DESCO Credit Union, Huntington, WV

Triad provided site civil engineering services as well as landscape architectural services for this project. As Project Manager and Landscape Architect, Mr. Young headed the Triad team that worked with a full project team headed by Tanner Stone and Company, the Architect, and the owner, to develop a complete comprehensive set of construction drawings. Site features included concrete drives and parking areas, sidewalks, site utility routing and drainage. This project involved optimizing the available property to accommodate the Credit Union and the associated visitor and employee parking and the drive thru lanes.

Boone County Sports Complex, Julian, WV

Boone County Parks and Recreation (BCPR) wanted to expand the activities at their existing 130 acre park site near Julian West Virginia. The park is home of the Waterway, a swimming and water slide facility. BCPR enlisted the help of Triad Engineering to expand the facility and to provide other recreational opportunities for the community. The only available land for the expansion was in the Little Coal River flood plain. The development of this area required a flood study. Triad studied the flood prone area and determined that the development would not affect the flood plain or any downstream communities. Mr. Young worked with BCPR to incorporate their vision for the park and develop a program, construction documents and the permits needed for the construction of a football field, soccer field, baseball field, parking areas, restroom facilities, trailhead, and a 300 seat amphitheater.

Bojangles Restaurants, Huntington, Cross Lanes, Kanawha City, & Southridge, WV and Pikeville, KY | 04-15-0263

As a Senior Landscape Architect, Mr. Young worked on a project team for six sites across West Virginia and Kentucky for Bojangles Restaurants. Mr. Young assisted in developing a site design plan for each subject property. These site design plans maximized parking, showed vehicular circulation and general dimensions while complying with pertinent development standards.



PROFESSIONAL EXPERIENCE
22 Years

REGISTRATIONS & LICENSES

- Licensed Professional Surveyor – WV# [REDACTED] & NC # [REDACTED]
- FEMA Certified Flood Plain Surveyor – NC # [REDACTED]

SKILLS

- Construction Layout
- Boundary Subdivision
- Right of Way Plans
- Photogrammetric Control
- Mine Surveying
- Topographic Location

PROFESSIONAL AFFILIATIONS

- WV Society of Professional Surveyors
- NC Society of Professional Surveyors
- National Society of Professional Surveyors

HIGHLIGHTS OF EXPERIENCE

Mr. Kirk is currently the Survey Manager for the Scott Depot office of TRIAD. In this capacity, he is responsible for the supervision of the survey crews, overseeing the field work through drafting to the finished product delivered to the client, meeting with clients, and performing field work on large and complex projects. Mr. Kirk is experienced in, construction layout, boundary and road work surveying, photogrammetric and topographic surveying. He has supervised and/or performed survey work on various types of work including surface mine surveying for coal mine facilities, site surveys and construction layout for landfill facilities, site surveys and right of way plans for WVDOH and NCDOT highway projects, and site surveys and construction layout for site development projects. Mr. Kirk has been involved in survey projects in several states including West Virginia, Kentucky, Virginia, South Carolina and North Carolina.

In his capacity, he is responsible for schedules, project budgets, and the overall coordination of all survey projects. He works with all levels of engineering staff, the overall project team, and the project owner to produce a quality work product which satisfies all project requirements.

RELEVANT PROJECT EXPERIENCE

5th Street Bridge Rehabilitation, Cabell County, WV

Mr. Kirk was the project manager and lead surveyor for this project. The project consisted of an existing conditions survey of the entire bridge including substructure and approaches.

Dingess Street Bridge, Logan WV

This project consisted of the replacement of the Dingess Street Bridge in Logan, WV. Mr. Kirk was the project manager and lead surveyor for this project which entailed generating an existing conditions survey of the existing bridge, approaches and affected roadway areas.

Kenney Hamrick Sr. Memorial Bridge, Webster County, WV

This project consisted of the replacement of the existing bridge. Mr. Kirk was the project manager and lead surveyor for this project which entailed generating an existing conditions and topographic survey of the existing bridge, approaches and affected roadway areas, stream cross sections and R.O.W. surveys.

Rt. 10 Roadway, Man, WV

Mr. Kirk was the project manager and lead surveyor on this project which consisted of construction layout surveying during construction.

Ona Mall I-64 Bridge, Cabell County, WV

This project will eventually consist of the widening of I-64 in the area of the Ona Mall, which will affect the I-64 Bridge in this area. Mr. Kirk was the project manager on this project. Survey work on this project consisted of an existing conditions and topographic survey of the bridge and surrounding area.

City of Raleigh, Raleigh, NC

Buffalo Road Sanitary Sewer Collector Easement Acquisition Survey

As Surveyor-of-Record, provided direct supervision of various field crews and conducted field surveys for right-of-way acquisition, topographic location, and wetlands delineation

SECTION V.

References

Client Testimonial Letters



ZDS has worked on hundreds of projects in West Virginia. We encourage you to call the references listed below:

Mike Pickens, Executive Director, National Council for School Facilities: (304) 400-9993.



Chuck Smith, Executive Director, Kanawha County Schools: (304) 348-6148, or (304) 395-9352.



Gary Boyd, Director of Facility Services, University of Charleston & WVU: (304) 357-4871, garyboyd@ucwv.edu; worked on projects at both WVU and University of Charleston involving MEP systems since 1990's.



Greg Nicholson, Retired COO, WV DHHR: (304) 552-0101, gregcnicholson@suddenlink.net.



Dale Freeman, Director of Facilities, Roane General Hospital: (304) 927-6345, dafreeman@rghwv.org.



STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Earl Ray Tomblin
Governor

DHHR Operations
Construction and Project Management Section
One Davis Square, Suite 100, West
Charleston, West Virginia 25301
Telephone: (304) 957-0205 Fax: (304) 558-8294

Karen L. Bowling
Cabinet Secretary

Reference Letter

To: Whom it May Concern

RE: **ZDS Design/Consulting Services**

The West Virginia Department of Health and Human Resources (DHHR) worked closely with the ZDS team for comprehensive HVAC/electrical renovations for the 245,000 s.f. William R. Sharpe Jr., Hospital in Weston, West Virginia hospital and a 33,000 s.f. 50 bed forensic psychiatric patient unit addition. The ZDS team provided a well-coordinated and integrated sustainable energy efficient design and commissioned the HVAC and electrical systems for optimal operation. Their efforts gave us unique solutions that meets our growing needs in caring for our behavioral health patients. The facility is designed to be extremely energy efficient and state-of-the-art while addressing the important needs for forensic psychiatric patients. The coordination between ZDS leadership of the team in the design and construction was excellent and superior to firms that have all disciplines under the same company. This experience showed combining the talents of knowledgeable and well-coordinated companies proved to be a great decision.


The addition and renovations were positioned so disruptions to the existing hospital were minimal while meeting the stringent infectious control measures required for healthcare. The ZDS team understood our needs and applied their expertise as a strong healthcare design team. Our goal is to work towards getting all our health care facilities up to the high-quality standards we now have in this new addition and renovations!

ZDS has a history of going above and beyond expectations when providing their services. Their guidance through design and construction has been invaluable. DHHR has had the privilege of working with ZDS Design/Consulting Services on many DHHR projects since 2010 and we hope to be able to work with them again in the future. Using ZDS's Teams combined expertise for multiple concurrent projects allowed for seamless integration of the goals and objectives while providing for practical energy efficient solutions.

Anyone considering the long-term needs of a facility should consider using the 3D imaging/scanning services provided by ZDS that saved countless hours in coordination during the design and construction process for the renovation project. This service has provided the infrastructure information necessary to transfer the knowledge of the facility as personnel change. We highly recommend the ZDS team to anyone and are convinced that they will be able to help you design and develop an energy efficient health care facility!

Sincerely,


Greg Nicholson
Executive Director of Operations


Ron Adkins
Director of Construction,
Maintenance and Contract Management



Michael Pickens

172 Oak Street

Dunbar, WV 25064

(304) 400-9993

RE: ZDS Design/Consulting Services

I have had the privilege to work with ZDS Design/Consulting Services' principals and many of their staff since working at the School Building Authority in the 1990's in my roles at the School Building Authority to my current role as Executive Director of the Office of School Facilities at the West Virginia Department of Education.

When an emergency issue arose, they would immediately make themselves available to help. ZDS's principal, Todd Zachwieja, did not hesitate to board a helicopter during a weekend to help assess the damage to the State's school facilities when damaging floods occurred. Helicopters were the only way to reach many of the facilities because the roads had been washed away or were impassible. Anytime a challenging issue has arisen that no one knew how to resolve, ZDS has stepped up to solve the challenges. Their extensive engineering knowledge of energy efficient systems, HVAC, controls, lighting, power and plumbing systems has always been at the leading edge in the industry, providing innovative solutions that also minimize energy and operating costs. I have always considered their approach in engineering design and commissioning for buildings to be the best and would highly recommend them to anyone.

Their ability to work with the State Fire Marshal and other agencies – while guiding everyone to a practical design approach – always provided each project with the best value. They are much more than excellent design engineers; they also understand the importance of operating and maintaining equipment and have hands-on knowledge to troubleshoot and also commission to ensure our projects were a great success. Their combined engineering design and commission skills prove to be invaluable.

ZDS Design/Consulting Services was also selected to help the WV Department of Education and the School Building Authority in writing new codes and standards to raise the bar for the entire State. They were chosen because their projects were a success while we were having challenges with others. Todd Zachwieja was also asked to teach school facility staff members, and his reference books continue to be used today. I would always think of ZDS first whenever a challenge would occur, knowing I would get the best results possible.

I trust ZDS's staff in their technical expertise and their approach in solving challenging engineering issues and believe that anyone who uses them will be as satisfied as I have been. They are worth it!

Sincerely,

A handwritten signature in blue ink that reads "Michael E. Pickens". The signature is fluid and cursive, with the first name "Michael" being the most prominent.

Michael E. Pickens



ELSWICK & ASSOCIATES, LLC

To Whom It May Concern:

I am distinctly honored to provide this letter of recommendation for ZDS Design/Consulting Services to your organization. I have known ZDS's principals and many of their staff since working with Ted and Todd Zachwieja at West Virginia Institute of Technology located in Montgomery, WV, from the 1970's, while I was the Physical Plant Director there. That relationship continues through today. Their knowledge of energy efficient systems related to Heating, Ventilating, and Air-Conditioning (HVAC), Building Automation Systems (BAS), lighting, power distribution, and plumbing systems has always been at the cutting edge of the industry. They have routinely provided innovative solutions to complex design challenges while minimizing energy and operating costs and enhancing maintenance efficiency. I have always considered their approach to engineering design and commissioning systems first for higher education, hospitals and schools to be superior and I would recommend them to anyone.

Throughout my career I have continued my working relationship with Ted and Todd Zachwieja and Jim Watters while I was Director of Facilities Management at Charleston Area Medical Center (CAMC), General Division, located in Charleston, WV. During that time, they provided mechanical, electrical, and plumbing (MEP), engineering, and construction administration services for all areas of CAMC's facilities. Their knowledge of health care code and practical design approach always provided the uniqueness required for the scope of the work. They understood the importance of operating and maintaining equipment and used their hands-on knowledge to ensure all our projects were on schedule and within budget. As a matter of fact, Todd led the first energy services performance contract in West Virginia. Through Todd's leadership, CAMC saved in excess of \$800,000.00 annually in energy costs and those savings were used for mechanical, electrical, and infrastructure upgrades at all three CAMC divisions. Ted, Todd, and Jim also assisted in many other projects at all CAMC divisions, including commissioning the work implemented as part of the energy savings program. Their combined engineering design and commissioning skills proved to be invaluable.

I also worked with ZDS Design/Consulting Services while I was Director of Facilities, Planning and Management at Washington & Lee University in the 1990's. They designed, acted as the construction project manager and commissioned the campus chilled water plant and distribution system to address the needs of the growing campus while fast tracking the project from start to finish in just nine months. I would always think of ZDS first whenever I was faced with a challenge, knowing that I would get the best technical expertise available.

513 Havana Dr.
Charleston, WV 25311
304.542.8877

Likewise, ZDS helped establish one of the first performance contracting programs in the State of Ohio's higher education system for Ohio University, saving the Athens campus millions annually while the savings were used for the mechanical, electrical and building automation improvements to generate the savings.

I have the utmost confidence in the technical expertise, the collaborative approach and ethical standards of ZDS Design/Consulting Services. Furthermore, these individuals are truly honorable professionals. In this regard, if you have questions or need additional information, please don't hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Bill Elswick', with a stylized flourish extending to the right.

Bill Elswick, MBA, CEO

Boyd, Gary MA, CFP

2300 MacCorkle Ave. SE | 304 357-4871 | garyboyd@ucwv.edu

To Whom It May Concern

With well earned respect I would like to recommend ZDS as a high quality MEP design firm.

I have had multiple opportunities to work on highly technical projects with Todd Zachwieja and his team of skilled engineers. The first project that I had the opportunity to work with ZDS was a WVU project that connected several older chillers to develop a chilled water loop on the downtown campus. The project included piping through congested areas, load calculations, differential pressure and pump control, and load balancing. This project was designed to become a phased approach to a central chiller plant which is now in operation. The project was efficiently managed and the performance exceeded expectations. As the system changed and older chillers were removed from the loop, Todd always responded to questions and concerns to insure a positive outcome for the overall objective.

At present I am working with ZDS on a University of Charleston project constructing a new Innovation Center and Athletic Complex. ZDS has accommodated many twist and changes to this project. We are on track to open the new facility in December of this year. I have found Todd and his team to be highly responsive and professional.

Sincerely,

A handwritten signature in blue ink that reads "Gary L. Boyd". The signature is fluid and cursive, with the first name "Gary" being the most prominent.

Boyd, Gary MA, CFP
Director of Facilities
University of Charleston

SECTION VI.

Attachments

**State of WV Centralized
Expression of Interest
Designated Contact Form
Addendum Acknowledgement Form**





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

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder: 1165807

Doc Description: Campus Chill Water Loop / Plant Evaluation and Enhancements

Reason for Modification:

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2023-01-30	2023-02-14 13:30	CEOI 0211 GSD2300000007	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code: 000000208495

Vendor Name :



Address :

Street : 135 Corporate Center Drive, Suite 532

City : Scott Depot

State : West Virginia

Country : USA

Zip : 25560

Principal Contact : Todd A. Zachwieja

Vendor Contact Phone: 304-755-0075

Extension: 1001

FOR INFORMATION CONTACT THE BUYER

Melissa Pettrey
(304) 558-0094
melissa.k.pettrey@wv.gov

Vendor
Signature X

Todd A. Zachwieja

FEIN#

550735995

DATE

02/14/2023

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

ADDITIONAL INFORMATION

Expression of Interest
CEOI

The Acquisitions and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting Expression(s) of Interest ("EOI" or "Bids") for WV Department of Administration, General Services Division ("Agency"), from qualified firms to provide architectural/engineering services for the Campus Chill Water Loop/Plant Evaluation, per the specifications and terms and conditions as attached hereto.

INVOICE TO

DEPARTMENT OF ADMINISTRATION
GENERAL SERVICES DIVISION
103 MICHIGAN AVENUE
CHARLESTON WV 25305
US

SHIP TO

DEPARTMENT OF ADMINISTRATION
GENERAL SERVICES DIVISION BLDG 11 - CHILLER PLANT
218 CALIFORNIA AVE
CHARLESTON WV 25305
US

Line	Comm Ln Desc	Qty	Unit Issue
1	Campus Chill Water Loop / Plant Evaluation		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description:

Campus Chill Water Loop / Plant Evaluation

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Vendor Question deadline @ 3 PM	2023-02-06

	Document Phase	Document Description	Page 3
GSD2300000007	Draft	Campus Chill Water Loop / Plant Evaluation and Enhancements	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Printed Name and Title) Todd Zachwieja, CEO, Principal
(Address) 135 Corporate Center Drive, Suite 532, Scott Depot, WV 25560
(Phone Number) / (Fax Number) 304-755-0075, 304-755-0076
(Email address) todd.zachwieja@zdsdesign.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

ZDS Design/Consulting Services

(Company) Todd Q. Zachwieja
(Signature of Authorized Representative)
Todd Zachwieja, CEO, Principal
(Printed Name and Title of Authorized Representative) (Date)
304-755-0075, 304-755-0076
(Phone Number) (Fax Number)
todd.zachwieja@zdsdesign.com
(Email Address)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI GSD2300000007

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

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

Addendum Numbers Received:

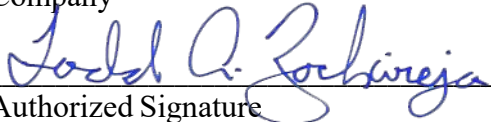
(Check the box next to each addendum received)

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

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

ZDS Design/Consulting Services

Company



Authorized Signature

02/09/2023

Date

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