

STATE OF WEST VIRGINIA

PURCHASING DIVISION

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WV PURCHASING
DIVISION

Capitol Campus Steam Distribution System



Expression of Interest to Provide Architectural/Engineering Design Services

August 27, 2019



281 Smiley Drive, St. Albans, WV 25177 / (304) 755-0075 / www.zdsdesign.com



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STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

SECTION I.

Executive Summary Letter Project Goals & Objectives



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD2000000001

August 27, 2019



State of West Virginia

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

**Re: Expression of Interest to provide Professional
Architectural/Engineering Design Services**

Please accept our Expression of Interest to provide Professional Architectural/Engineering Services and related work for the **Capitol Campus Steam Distribution System**.

ZDS Design/Consulting Services was founded in 1994 and is celebrating our 25th anniversary this year. Located at 281 Smiley Drive, St. Albans, West Virginia 25177. The contact person for ZDS is Todd Zachwieja, Principal/CEO; Telephone: 304-755-0075; Fax: 304-755-0076; Mobile: 304-545-4550; Email: Todd.Zachwieja@ZDSDesign.com Website: www.ZDSDesign.com. Legal name: ZDS Limited Liability Company dba ZDS Design/Consulting Services.

It is our understanding that the first step of this project will address HPS and LPS needs in Buildings 1, 3, 4, 5 and 7 including, but not limited to, new safety pressure relief valves, selected condensate pump stations, new/replacement LPS and condensate piping, fittings and valves, and connection of the pump stations to the building BAS in Building 1. Evaluation and engineering work will also include provisions for "slow acting" valves at the HPS/LPS reducing stations in those buildings. **ZDS** will participate in design review meetings with the Agency, prepare bidding documents based on direction from the Agency, provide Construction Administration services and update record drawings to reflect the work in the contract. This work will be bid for completion in 2020.

In addition to the work identified in the first step, concurrent work will occur involving additional investigations of the underground steam systems and survey work to identify other utilities that may conflict with proposed underground work to address the underground steam distribution system and determine the extent of work and phasing of the construction work anticipated for construction to occur in 2021-2022. The goal will be to locate the existing underground utilities, including the steam piping, and determine approximate routing and depths to identify potential relocation of the steam piping and vaults as deemed necessary. The intent of the preliminary design work is to determine the direction to proceed into the design phase.

The design phase work may be executed as a Change Order to prepare the design documents once direction is determined. This design phase will include the engineering design and development of bidding documents for the upgrades to the campus distribution system including underground piping, vaults and entry/exit connections at the buildings. The design concept will be determined by the Agency direction on the most appropriate option for the replacement, relocation and repairs of the existing infrastructure. Construction Administration services will be provided throughout the construction period alongside the successful contractor with the intent for construction to occur in 2021-2022 so heating is maintained in the buildings served by the central heating plant during the October-April heating seasons each year.

Planning and design meetings are important to keep the interested parties informed on the direction of the project. We firmly believe that many levels of the Client's staff should be involved with a successful project including the designated Owner's Representative, operating and maintenance staff and others impacted by the decisions. Recognizing 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. In addition to the Owner's personnel it will be important for the project meetings to include necessary regulatory agencies and other consultants that may be involved. Our belief is that proper communication benefits the client throughout the evaluation, design process, construction and beyond.

ZDS founding members have over six decades of engineering experience in West Virginia and are recognized for our specialties in Central Utility Plant and steam distribution system design, energy conservation, commissioning services and Codes' compliance for Governmental, Commercial, Educational, and Health Care facilities. We have successfully incorporated phased construction in facilities to reduce potential disruptions as necessary to allow adjacent spaces to remain occupied and functional. **ZDS'** experience involves HUNDREDS of projects including working with many state and federal agencies and our professionals are dedicated to performing quality services with the goal of meeting our clients' needs, scheduling and budgets. Many past projects have involved steam boiler and distribution systems' design including our work with Johnson Controls on the Capitol Campus steam distribution installation over ten (10) years ago. ***ZDS understands the Capitol Campus steam distribution system very well since we performed evaluation of the existing systems and prepared bidding documents for the testing of the underground piping systems and related work in 2018 that went extremely well. We feel very strongly that we are the most qualified for the challenges involved in the proposed projects.*** We have worked in 24 states, but our home and corporate offices are in West Virginia just minutes from the Capitol Complex.

ZDS developed the master planning, evaluation and/or design for the WVDHHR William R. Sharpe, Jr. Hospital, University of Charleston Innovation Center, Kanawha County Judicial Annex, Kanawha County Courthouse, Laidley Towers, Chase Towers, West Virginia Capitol Complex, Culture Center, Mercer County Courthouse Annex and many others. We offer experienced MEP engineering services in West Virginia and have provided design and commissioning services on many State facilities.

Section III Refer to this Section for more details on related project experience. **ZDS'** experience involves HUNDREDS of projects including many state and federal agencies. **ZDS** also has extensive experience in renovation projects. We are recognized for our specialties in mechanical design, electrical design, indoor air quality services, energy conservation/performance contracting and commissioning services for Governmental, Commercial, Educational, and Health Care facilities. Our professionals are dedicated to performing quality services considering our clients' needs, scheduling and budgets.



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.



Structural engineering support that may be needed will be provided by **CAS Structural Engineering**. Providing structural engineering design and/or analysis for over 30 years on a variety of projects throughout West Virginia, including industrial facilities, educational facilities, commercial facilities, WV State Parks, and many successful projects at the WV State Capitol campus as you can see detailed in **Section III**.

Section IV Refer to Proposed Staffing Plan in this Section for our Professional Qualifications with detailed resumes. **ZDS Design/Consulting Services** has registered professionals that can effectively execute the requirements of MEP projects and believe that our experience with HVAC systems, Electrical systems, Energy Management, Planning and Codes compliance make us the most qualified to work on your facilities. We continue to have an excellent working relationship with the West Virginia State Fire Marshal and other agencies within the State of West Virginia.

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

Sincerely,

A handwritten signature in blue ink that reads "Todd A. Zachwieja".

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

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GOAL/OBJECTIVE ONE:

Utilizing the existing assessments, Vendor will design construction documents and perform construction administration for a project, to be constructed during the heating off season of April 2020 to October 2020, to address safety needs for both High-Pressure System (HPS) and Low-Pressure Steam (LPS) lines. Vendor will, at a minimum, be responsible to design and specify the removal and replacement of safety pressure relief valves located at the HPS-LPS pressure reducing stations in Buildings 1, 3, 4, 5 and 7; design and specify removal and replacement of pressure relief valves at the 1/3 and 2/3 stage pressure reducing stations in Building 7; design and specify installation of insulation on LPS and condensate piping, fittings, and valve in Building 1 (East and West Wing "Trenches"); design and specify replacement of condensate pumps and adjacent steam traps, condensate transfer tank, installing flash separators upstream of the condensate pump receiving tanks, and connecting condensate pump stations and installed separators into the Agency's Building Automation System, all in Building 1 (this task will include all associated engineering work for any structural modifications required for these installations and connections); perform all evaluation and engineering work to provide "slow-acting" control valving for all HPS-LPS pressure reducing stations in the five buildings; and perform all associated engineering services to conduct this project, including attendance at review meetings, preparation of bidding documents, administering a single competitively bid construction project, and updating previous record drawings to demonstrate completion of this construction work.

Within their proposals, interested firms should include documentation to support having experience in design work for high pressure/low pressure steam distribution systems, while working from existing assessment reports (while will be provided to the selected firm, including the development of construction bid documents and contract administration from such. Firms should discuss their approach to utilizing previous completed system assessments to address design work.

ZDS RESPONSE:

ZDS conducted the initial assessments in 2018 and has extensive experience/knowledge for the Capitol Campus' heating systems including in-depth understanding of the main Capitol Building LPS systems and condensate pumping stations. Our report to the GSD included recommendations for the work that is generally described above for this Objective. We will request copies of any additional existing documentation that may be available for our review and use in preparing a feasible approach to the upgrades described in the Goal/Objective One. Our knowledge and experience obtained from our previous work on Campus will expedite this initial work described in Goal One. Some of the anticipated equipment can have extended lead times so issuing the bidding documents early is important to minimize the risks and have the heating system operational in October 2020. Our knowledge and experience will allow for the initial bid package to be prepared, issued and bids awarded early to allow for long lead equipment to be procured in advance to maximize construction efforts during the 2020 summer heating plant shutdown.

ZDS staff have many successful projects involving high pressure/low pressure steam distribution systems including work on campus distribution systems with multiple WVDHHR hospital facilities, Charleston Area Medical Center, Ohio University, The Technology Center DOW/MVHEPC complex in South Charleston, United Hospital Center, University of Charleston, Washington & Lee University, West Virginia University, VA Hospital in Huntington, General Motors, many schools and others for over 25 years. Our extensive steam distribution systems experience, and local presence will help GSD meet your goals for a successful project. Our experienced staff and prompt decisions and action during construction keeps the project moving forward. Our offices are located only minutes from the Capitol which allows for rapid responses to any potential construction challenge.

ZDS prepared Construction Documents for upgrades to the steam distribution system at the VA Hospital in Huntington, WV that included piping, valves, manholes, building connections and condensate recovery. The Project was successfully completed with ZDS providing Construction Administration services throughout the construction period.

We have been successful in implementing solutions based on evaluations of systems in the past and are confident that we can provide the Agency with an appropriate design incorporated into bidding documents. Our evaluations and designs have included many steam systems for entire campus facilities of various occupancies, both new and renovation work, so we have the experience and background to address this project. Refer to Section III for examples of Project Experience.

GOAL/OBJECTIVE TWO:

Utilizing the existing assessments, Vendor will evaluate the existing underground steam lines and vaults to determine the methods to address their replacement or repair in-place and/or their relocation (by parallel piping and/or vault relocation/abandonment). Evaluation will include, at a minimum, extensive research, testing of the system, and surveys and mapping of subsurface utilities locations in the areas of the campus in which the steam distribution system is located, to determine possible site locations for relocation of existing piping and vaults. Vendor will provide options to Agency, participating in multiple review meetings to assist Agency in determining the most appropriate option. This assessment and evaluation work will be performed as part of the Basic Services awarded under the initial contract.

Within their proposals, interested firms should include documentation to support their experience with re-routing piping and relocating maintenance access points for utility work, as it relates to the project at hand. Vendors should discuss their approach to determining the most efficient approach to running parallel piping, and relocation and/or replacement of maintenance access points.

ZDS RESPONSE:

As briefly described in response to Goal/Objective One we have many successful projects for many facilities in hospitals, industry, schools and higher education facilities which involved heating system routing, providing maintenance access points and coordinating the connections to various buildings.

ZDS has an excellent understanding of the existing underground steam distribution systems at the Capitol Complex as a result of providing the evaluations and design for the bidding documents in 2018 and Construction Administration services during construction and testing. We maintained contact with the Contractor and Owner throughout the work process including the testing of the underground piping. We also understand some of the challenges for performing construction on the Capitol campus from our previous work there and sensitivity of exposed elements on the campus.

For the Basic Services described in this phase of the Project, we will utilize the services of a licensed land surveyor and an underground investigative services company to assist in locating existing underground utilities as well as the route and approximate depth of the existing underground steam utility lines. ZDS will work closely with the surveyor to connect 3D scan data of built conditions in the existing vaults and the basements of Building #1, #3, #4 and #5 entry/exit points for the underground steam/condensate piping. This information will be used to evaluate the feasibility of eliminating any of the manholes and the possibility of installing new piping systems parallel to the existing piping. We will apply best practices available today for consideration of the upgrades. We will evaluate feasibility of parallel runs which may help in reducing the time period for the steam system to be offline.

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 discussions and to determine the most viable approach prior to beginning the design process. Refer to Section III for examples of Project Experience.

GOAL/OBJECTIVE THREE:

Once the Agency selects the most appropriate options for replacement, repair-in-place, or relocation of the distribution system, Vendor will perform traditional design and construction administration services for a project that will be constructed, in phases, during the heating off seasons of April 2021 to October 2022. These design services will be added, by change order, as Additional Services to the base awarded contract.

Within their proposals, interested firms should include documentation to support their experience with designing and administering phased construction projects, specifically ones in which heating systems needed to remain operational during multi-phase projects. Vendor should discuss their approach to preparing design documents in such a manner as to allow for phased construction.

ZDS RESPONSE:

ZDS successfully worked with GSD to complete renovations work for the heating systems in 2018 during that summer shutdown which included an aggressive schedule with the heating plant operation restored in October 2018 when needed. This is a direct demonstration of our experience.

ZDS has extensive experience in the Capitol Campus' heating systems including the central steam systems and understand the timing on when the steps need to occur to keep the heating system operational during the October-April heating seasons. 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, encouragement to gain 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 keeps 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 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. We also provided central heating plant upgrades to Jackie Withrow Hospital through the WVDHHR that were successfully implemented without downtime during the heating season. Refer to Section III for additional examples of Project Experience.

The underground piping, vaults and building connections for this Project will likely require multiple phases that will occur over a two-year period with extensive work occurring during summer shutdowns. Priorities will be established to develop a viable phasing approach while maintaining steam heating service to the campus during the winter months. The design/bidding documents will be prepared to include the overall distribution systems with selected components to be performed in segments that will be identified in phases.

SECTION II.

ZDS Company Overview

Consultant Overviews;
Triad Engineering
CAS Structural Engineering, Inc.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

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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.

OFFICE

281 Smiley Drive, St. Albans, WV 25177

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
- ◆ Raleigh County Schools
- ◆ 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
- ◆ 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.

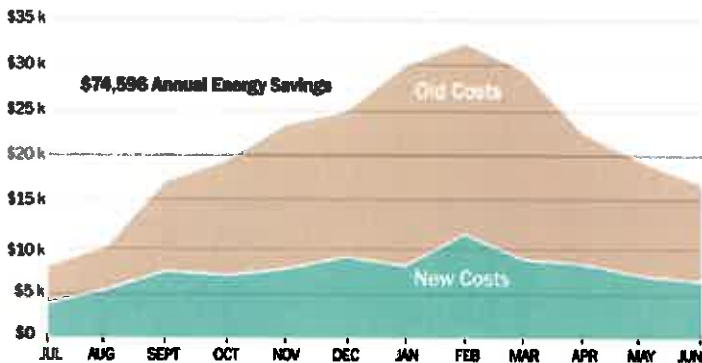


At **ZDS**, our engineering staff integrates energy efficiency into each project design to provide you, our client, with the added value that you expect and deserve. The

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.



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.

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

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 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 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.



Triad Office Locations

Scott Depot

10541 Teays Valley Road
Scott Depot, WV 25560
304-755-0721 Phone

Morgantown

1097 Chaplin Rd.
Morgantown, WV 26501
304-296-2562 Phone

Northern Virginia

46040 Center Oak Plaza
Suite 180
Sterling, VA 20166
703-729-3456 Phone

Athens

1005 East State Street
Suite 10
Athens, OH 45701
740-249-4304 Phone

Winchester

200 Aviation Drive
Winchester, VA 22604
540-667-9300 Phone

Hagerstown

1075-D Sherman Avenue
Hagerstown, MD 21740
301-797-6400 Phone

Pittsburgh

201 Penn Center Boulevard
Suite 400
Pittsburgh, PA 15235
412-257-1325 Phone

Mechanicsburg

4999 Louise Drive
Suite 103
Mechanicsburg, PA 17055
717-590-7429 Phone



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 26003-0469 PHONE 304-756-2564 FAX 304-756-2565 www.casstruceng.com

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WV VA KY OH MD PA

SECTION II.

Description of Project Experience
Additional Project Experience Brochures
Consultant's Project Experience



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD2000000001

State of West Virginia Capitol Complex, Charleston, WV

Project Contact:

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

Total Costs: \$20,000,000

Project Size: 1,900,000 ft² covering 9 buildings



Services Provided:

- HVAC
- Fire Protection
- Electrical Renovations
- Consultant for Performance Contracting Program Engineering



District Heating System

Project Goals & Objectives: 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 Cultural Center. The Capitol Complex renovations are estimated to save near \$2,000,000 annually over the costs of operating the old systems. Engineering services included 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.

WV Division of Culture and History Library

Project Goals & Objectives: 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. Fuel conversion, comprehensive DDC controls for central monitoring and control, converting AHU's from constant air volume to variable air volume while meeting stringent ASHRAE Indoor Air Quality requirements, provide variable water volume pumping and interfacing with the facility into the new District campus chilled water system to reduce long term operating cost. The design also included providing new boiler plant with redundancy heating and piping distribution system and emergency power.

Total Costs \$6,800,000 / Project Size: 228,500 ft²



WV Division of Protective Services

Project Goals & Objectives: 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. Assisted in providing information for interdepartmental coordination within State agencies with the goal of achieving a cost-effective integrated system and incorporating the planning and design into other capitol infrastructure projects for consistency with the overall master plan.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Veterans Administration Steam Replacement, Huntington, WV

Project Contact:
Chapman Technical Group; Joe Bird, Vice President:
(304) 727-5501; jbird@chapttech.com

Project Goals & Objectives:

ZDS teamed with **Chapman Technical Group** for the project that included evaluation of the existing steam distribution system from a central boiler plant to buildings #5, #6, #7, #8 and #28.

Following the evaluation, and as determined by the Owner, Construction Documents were developed for new/replacement of existing piping, valves, manholes, building connections and condensate recovery. The project required coordinating with three other building renovation projects involving two different design teams and was completed on schedule and within budgetary limits.

Services Provided:

- Consulting Services
- Study/Evaluation
- New Piping, Valves, Manholes, Building Connectors, and Condensate Recovery
- Construction Administration



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

WV Air National Guard

New Fuel Cell & Maintenance Hangars, Charleston, WV

Project Contact:

Captain Harry Netzer, 130th Civil Engineering Squadron: (304) 341-6649

Construction Costs: \$43,000,000 for both Phase I and II

Project Size: 128,715 ft²

Services Provided:

- Commissioning
- Study/Evaluation
- Construction Administration
- New Maintenance Shops, Central Boiler Plant and Chiller Plant



Project Goals & Objectives:

ZDS worked with the West Virginia Air National Guard on the Commissioning for their new Replacement Aircraft Maintenance Hangar and Shops plus a new Fuel Cell Hangar. The first phase of the program initiated in early 2008 and continued until 2011. This facility included a larger maintenance hangar, miscellaneous maintenance shops, central boiler plant and chiller plant. The project successfully achieved **LEED Silver Certification** with commissioning being an integral part of that certification.

“ZDS performed a stellar job, going above and beyond what was expected.

We would recommend them again!”

Mr. Tom Warner, RA, LEED AP, LEED Coordinator for SAIC for both phases of the project

“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



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

WYK Associates, Inc.

Tyler County Courthouse, Middlebourne, WV

Project Contact:

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

Services Provided:

- Evaluation/Investigation of Existing Facilities
- Code Review
- Preliminary Budget Program Construction Cost Estimates
- 3D Scanning



Project Goals & Objectives:

ZDS provided professional services to perform field investigations of the existing Mechanical, Electrical and Plumbing systems at the historic Tyler County Courthouse. A comprehensive evaluation report listed deficiencies in the mostly obsolete systems throughout the facility, provided recommendations to the County, and included budgetary construction cost estimates to implement the recommendations. As a result of the report, ZDS recently entered into a contract to prepare Construction Documents for the renovations and additions as well as complete Construction Administration services.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

William R. Sharpe, Jr. Hospital, Weston, WV

Year Completed: 2017

Project Contact:

Ron Adkins, Construction Manager; Ron.Adkins@wv.gov



Services Provided:

- Study/Evaluation
- HVAC Renovations
- Lighting Upgrades
- Emergency Generator
- Fire Protection
- Electrical Renovations
- Commissioning
- 3D Scanning
- Consultant for additions through IKM

Original Hospital Size:	212,000 ft ²
Comprehensive Renovation Project Cost:	\$32,000,000 Completed in 2017
Addition to the Hospital Size:	32,000 ft ²
Addition Project Cost:	\$13,000,000 Completed in 2014



MEP Engineering design and Commissioning services for both the HVAC Renovation project retrofitting the 212,000 ft² Hospital and for the 32,000 ft² patient wing addition providing engineering and commissioning services for the Mechanical, Electrical, and central domestic hot water services including a new central plant.

Project Goals & Objectives: William R. Sharpe, Jr. Hospital, originally constructed in 1993, is completing the final phase of a major renovation of the facilities HVAC, lighting, domestic hot water, and emergency power systems. The two-story hospital has had two major projects; a 50-bed forensic patient wing addition and renovations to all of the existing hospital while the hospital remained in operation. Prior to this work, the HVAC and electrical systems experienced frequent equipment failures, power outages and many issues with the facilities operations. ZDS provided complete MEP engineering, 3D scanning and commissioning services for both major projects. The renovations project was split into multiple phases with each phase being commissioned then occupied in a systematic manner. The central plant replacement includes three (3) 10,500 MBH dual fuel heating hot water boilers with variable water volume pumping, three (3) 600 KW Bi-Fuel emergency generators, 15,000-gallon fuel oil storage tank, three (3) 400 ton chillers – two centrifugal chillers with cooling towers and one air cooled chiller with variable water volume pumping, and a new central domestic water heating system. The HVAC renovation includes comprehensive DDC controls for central monitoring, troubleshooting and control, replacing all AHU's, and provides new VAV terminal units with hot water reheat coils. The Hospital's HVAC system is also an integral part of the smoke management system. Careful phasing, and the need to disrupt only small portions of the Hospital at a time, results in an extended construction period with the last phase to be finished by October 2017. All original heating hot water piping and chilled water piping are being replaced. All lighting includes today's energy efficient technology including extensive use of LED lighting and lighting controls. ZDS provided all the MEP engineering and commissioning services for the 32,000 ft² addition. The single-story addition consists of rooms to house fifty (50) forensic patients and supporting staff, a Sally Port, enclosed courtyards and connection to the existing facility. The HVAC system for the addition is integrated into the smoke management system for the main Hospital. The four pipe VAV HVAC system is served from the newly renovated central plant which was upgraded under the Renovation project. The project was designed so the construction could be completed in combination with the renovations work occurring under a separate contract. ZDS provided all the MEP commissioning for the comprehensive renovations work and the addition.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

University of Charleston, Charleston, WV
Russell & Martha Wehrle Innovation Center

Year Completed: 2017

Project Contact:

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

Renovations Area: 87,500 ft²

New Additions Area: 30,000 ft², 4 stories

Construction Cost: \$17,000,000

Services Provided:

- Study/Evaluation
- HVAC Renovations
- Lighting Upgrades
- Fire Protection
- Electrical Renovations
- 3D Scanning



Project Goals & Objectives: ZDS evaluated the 87,500 ft² 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 to prioritize the work to fit available current funding. The Project consisted of major renovations to the Athletic facility to meet NCAA competition requirements, office/support space, interconnection/reconnection of MEP systems impacting the Gorman Hall facility and a four-story 30,000 SF addition to the front of the facility that, when completed, will be 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 and Electrical work includes new chiller and boiler plants with pumps and accessories, HVAC air handling units, DDC Controls, new domestic and fire protection water services, new gas service, domestic water heating equipment, extensive plumbing fixtures/showers/lockers, new electrical service from the campus 12.5 kv distribution loop, switchgear, distribution and branch panel boards, and new state-of-the-art energy efficient LED lighting systems.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Robinson Grand Performing Arts Center, Clarksburg, WV

Year Completed: 2018

Project Contact:

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

Renovations Area: 38,500 ft²

Construction Cost: \$17,000,000



Services Provided:

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



Project Goals & Objectives: The historic Robinson Grand Theatre was originally built in 1913 and eventually closed to the public in the year 2000. When the City of Clarksburg purchased the building in 2014, extensive renovations were needed to re-open the theatre and WYK Associates and ZDS were hired for planning and evaluation. Includes all **NEW** HVAC/Electrical/Plumbing/FP upgrades for the 45,000 ft² building. 3D-Scan-to-BIM of the existing facility was invaluable to develop the comprehensive existing conditions. Now called the *Robinson Grand Performing Arts Center*, this beautiful award winning historic theatre has been brought completely back to life! This project is an excellent example of how wonderfully ZDS and WYK team together!



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Kanawha County Commission

Judicial Annex, Charleston, WV

Project Contact:

Jerie Whitehead, Purchasing Director;
JerieWhitehead@kanawha.us



Services Provided:

- Study/Evaluation
- HVAC Renovations
- Fire Protection
- Plumbing

Renovations Area: Renovations 93,000 ft² plus 23,000 ft² addition

Project Cost: \$11,270,000

Mechanical Project Cost: \$4,200,000

Project Goals & Objectives: The Judicial Annex, across the street from the Kanawha County Courthouse in Charleston, WV, was originally constructed in 1982. The original eight-story building is attached to a multilevel parking garage. The Kanawha County Commission initially contracted ZDS in 1998 to evaluate the Judicial Annex's existing mechanical and electrical systems. ZDS prepared an extensive report which showed opinion of costs for many options. The report covered multiple engineering HVAC approaches with advantages and disadvantages for each. Some of the HVAC equipment was in poor condition and while the Owner was deciding on when to proceed with the recommended work, the primary chiller failed. The weather was hot so ZDS was commissioned under emergency conditions to find a solution as soon as possible to avoid closure of the facility. ZDS designed/project managed a replacement chiller within days of the equipment failure which prevented extended closure of the building.



The Kanawha County Commission then hired ZDS to provide engineering design/construction administration services for renovations for the facility and significant additions. The renovations included seven Circuit Court courtrooms; jury deliberation rooms; attorney conference rooms; witness rooms; Court Clerk's offices, public research area; adult probation offices; Maintenance Shops, Prosecutors offices, Voter's Registration, Court Administration offices; and all public areas. The engineering for the additions included a new entrance, security checkpoint, and lobby to alleviate a very overcrowded situation and a building expansion for Juvenile Probation and a newly established Family Court.

ZDS designed a VAV air handling system with reheat HVAC system to address health, safety, and IAQ issues. DDC monitoring & control, carbon monoxide demand control ventilation, outside air measuring/monitoring and other design strategies were designed. Multiple HVAC options with their associated opinion of costs for modifying, updating and replacing the existing equipment were reviewed with the Owner for their preferences to find the best fit with the existing maintenance staff.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Kanawha County Schools

Services Provided:

- Study/Evaluation
- HVAC Renovations
- Lighting Upgrades
- Electrical Renovations
- Commissioning
- 3D Scanning



Ben Franklin Career Center, Dunbar, WV

Year Completed: 2019

Project Contact: Amanda Washington,
Coordinator Facilities Planning; (304) 348-6148

School Size: 78,050 ft²

Project Cost: \$9,651,722

Piedmont Elementary School, Charleston, WV

Year Completed: 2018

Project Contact: Amanda Washington,
Coordinator Facilities Planning; (304) 348-6148

School Size: 31,500 ft²

Project Cost: \$352,090



Project Goals & Objectives: ZDS conducted an extensive study and performed 3D Scan-to-BIM of the facility that was utilized to develop comprehensive existing conditions and to assist KCS with procuring SBA funds. The work was done in two (2) phases for replacement of the aging HVAC equipment, ductwork and piping and includes electrical upgrades to accommodate the new equipment, new lighting throughout, roof replacement and new exterior overhead doors for the shops. ZDS provided, Design, Bidding, Construction Administration and Commissioning services. The first phase is complete and the second phase is under construction. Work designed/phased so construction could occur while school in use. ZDS included Faculty/Staff specific current HVAC, Electrical needs and Future IT Expansions in the Design. Includes specialized custom energy-efficient HVAC to meet the challenging comfort and Indoor Air Quality needs for the Welding, Machine, Wood, Sheetmetal, HVAC, Diesel and Heavy Equipment Shops and school. EAct qualified energy efficient design provides excellent long-term operating savings.

Project Goals & Objectives: ZDS performed MEP design, 3D Scan-to-BIM, bidding and CA services for the replacement of an existing custom multizone unit, associated DDC controls and refurbished other HVAC units that had failed and were in need of constant maintenance/repairs. The work included necessary electrical modifications to serve the new rooftop unit. Project was completed within the budget allocated by the County.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Tyler County Schools

Tyler Consolidated Middle/High School

Middlebourne, WV

Year Completed: 2019

Project Contacts:

Amanda Kimble, Director Child Nutrition, Facilities & Support Services;
(304) 758-2145 ext. 111

School Size: 188,156 ft²

Project Cost: \$4,796,903

Project Goals & Objectives:

ZDS provided professional engineering design, bidding, construction administration, and commissioning services for HVAC upgrades at the Tyler Consolidated Middle/High School to meet Indoor Air Quality and today's energy codes. The initial step in the project was to provide engineering investigations of existing conditions where ZDS performed 3D Scan-to-BIM for reliable and accurate 3D capture of "built" conditions to use in design, bidding and construction. The 3D scans were also valuable to communicate remotely between the Owner and Contractors. The demolition and new work to be included in Phase I of the project included two (2) new high efficient chillers piped so they could be used even during winter months, three (3) new high efficient condensing boilers, variable water volume hydronic pump system, VAV Air-Handling Units, VAV Blower Coil Units, Fan Coil Units, Energy Recovery Ventilators, DDC control upgrades, select new hydronic piping and ductwork for the equipment, exhaust fans, electric work associated with serving the new HVAC system equipment and new electrical panelboards. The energy efficient design qualifies this school for the federal EAct credit and will provide excellent long-term operating savings to the Tyler County School systems over the life of the new systems.

Services Provided:

- Study/Evaluation
- HVAC Renovations
- Lighting Upgrades
- Electrical Renovations
- Commissioning
- 3D Scanning



The school remained occupied and phasing of the Work was critical throughout the Project which is on track to be completed ahead of schedule.

Phase II work has been proposed by ZDS (once funding is awarded) and is intended to complete the HVAC upgrades and provide high efficiency lighting for this 188,156 ft² building.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Mercer County Schools

Princeton Middle School

Princeton, WV

Year Completed: 2018

Project Contacts:

Leslie Wellman, Director of Purchasing; (304) 487-1551

School Size: 103,847 ft²

Project Cost: \$3,265,000



Services Provided:

- Study/Evaluation
- HVAC Renovations
- Lighting Upgrades
- Electrical Renovations
- 3D Scanning



Project Goals & Objectives: HVAC, electrical system and lighting upgrades to improve Indoor Air Quality addressing current codes, improve energy efficiency and comfort. Provide DDC controls and outdoor ventilation with energy recovery dramatically reducing indoor CO2 levels for a better learning environment. Providing air conditioning for classrooms, cafeteria, kitchen, Auditorium and administrative offices. Project included an electrical service upgrade to accommodate the added HVAC loads. ZDS performed 3D Scan-to-BIM for reliable and accurate 3D capture of "built" conditions to use in design, bidding and construction and remote communication.

Due to the extensive energy savings from these renovations/upgrades, Princeton Middle School qualified for **Energy Star Certification for 2018**

This is just one of five ZDS school projects which are Energy Star Certified.



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

Engineering for State & Local Government Facilities



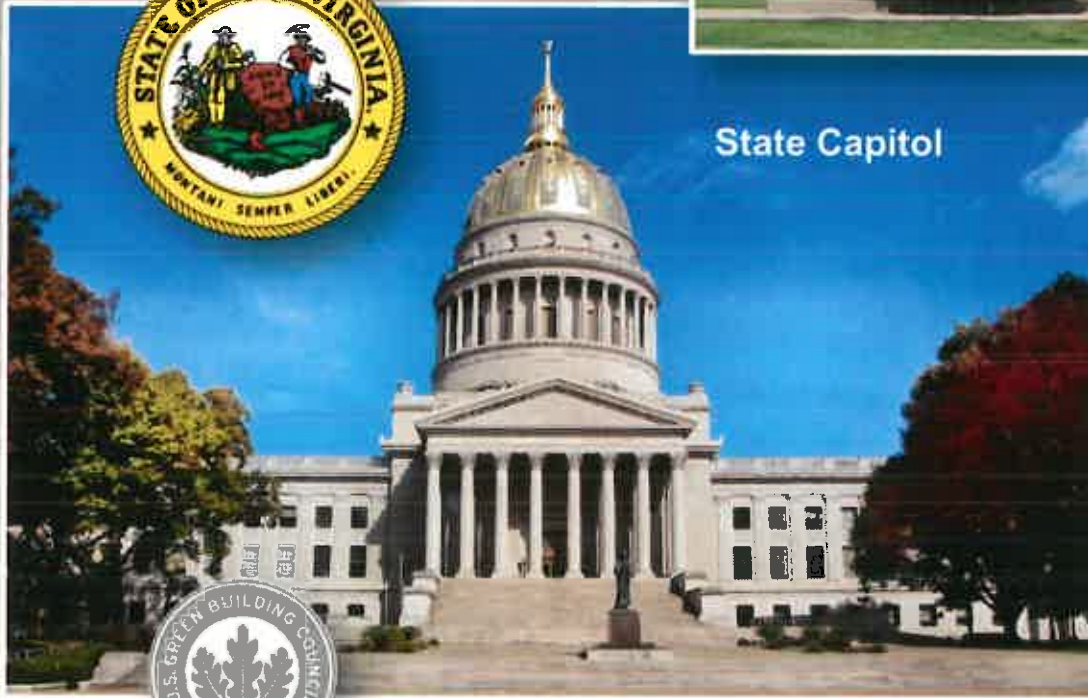
Governor's Mansion

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

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

ZDS project experience includes historical facilities sensitive to finding solutions that address IEQ which includes acoustics, lighting, Indoor Air Quality and comfortable energy-efficient HVAC systems.

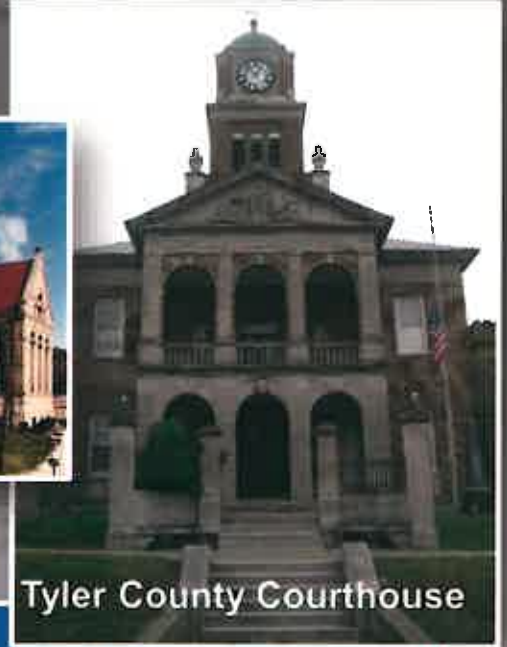
St. Patrick's Church



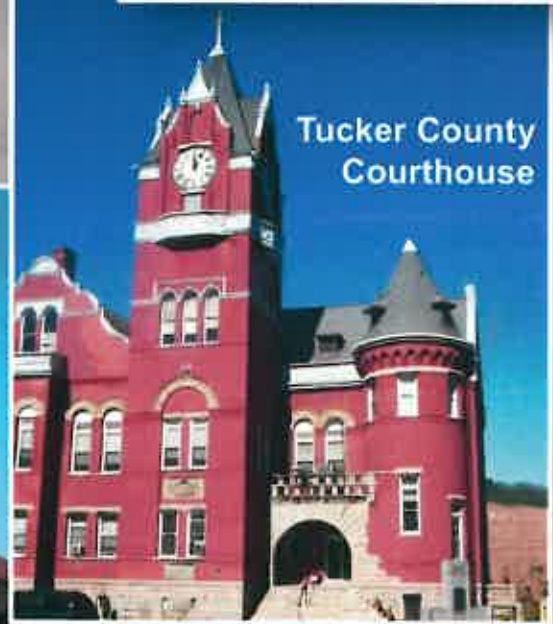
WVU Stewart Hall



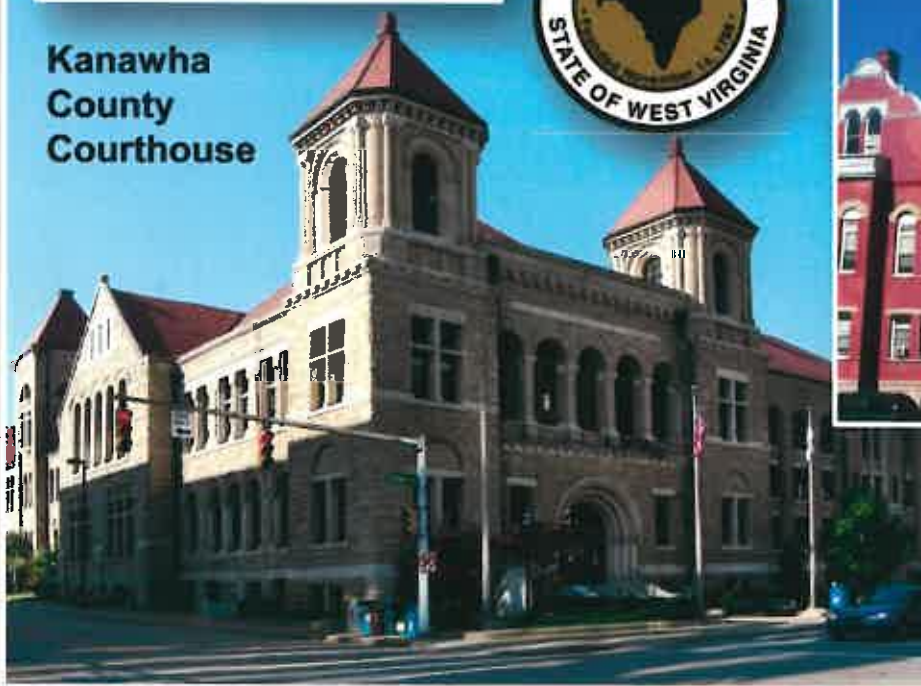
Tyler County Courthouse



Tucker County Courthouse

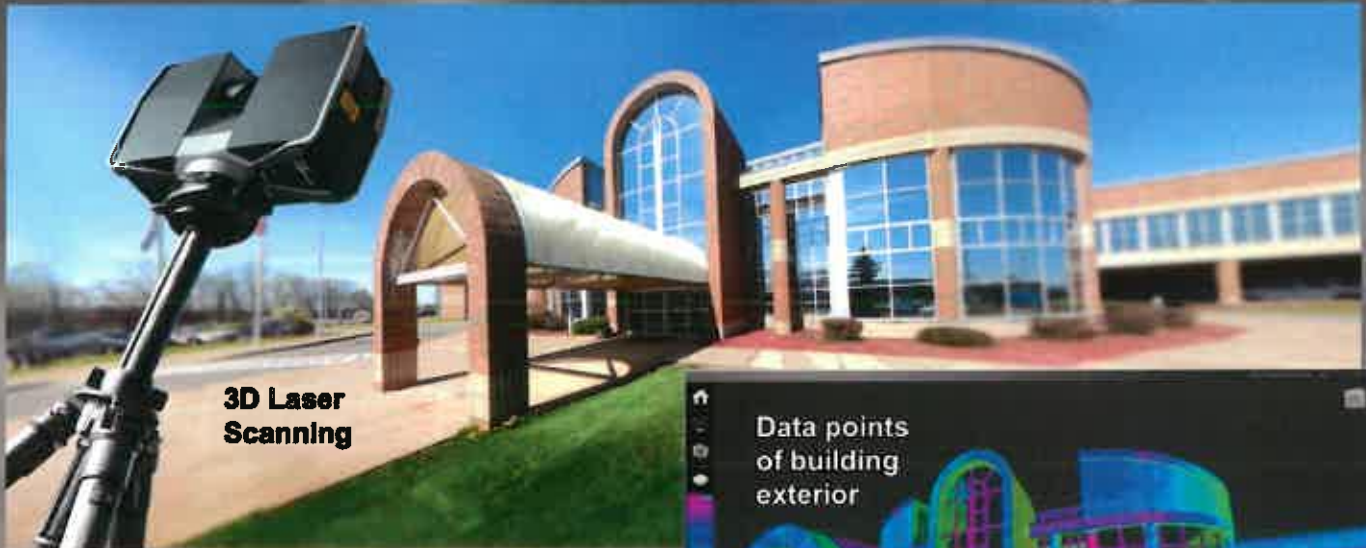


Kanawha County Courthouse

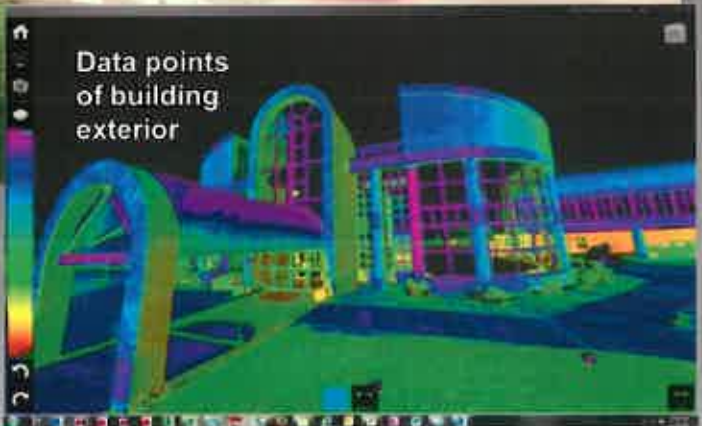


BIM - 3D Digital Imaging

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



3D Laser Scanning



Data points of building exterior

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."

Greg Nicholson, DHHR Chief Operations Officer



Web Share:

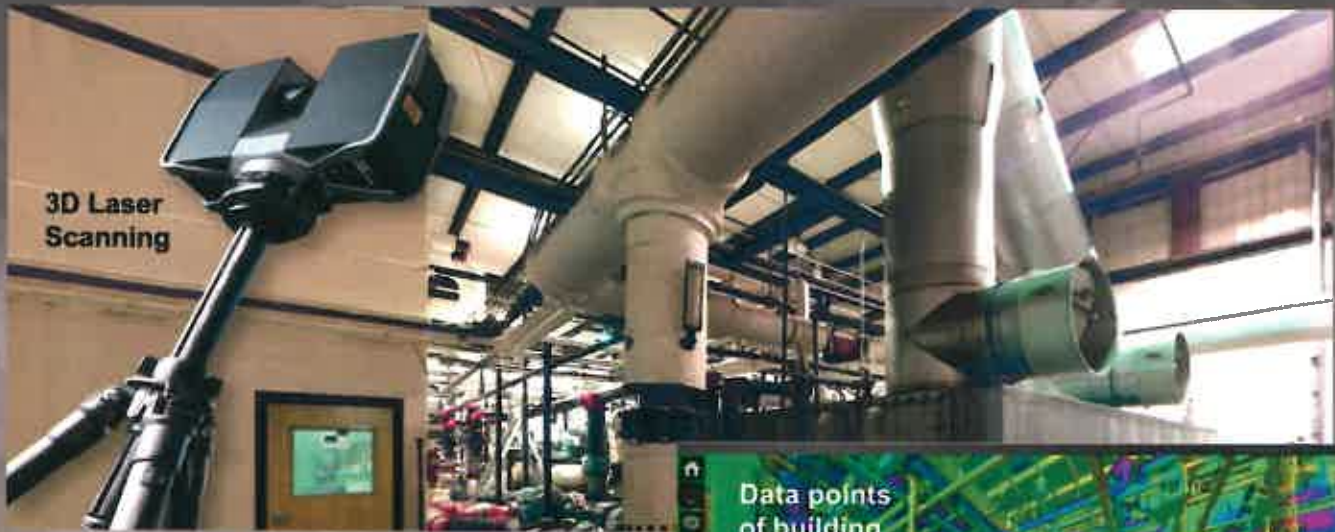
3D laser Scanning allows facility owners to view and measure areas with others on their planning and construction team.



BIM - 3D Digital Imaging

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

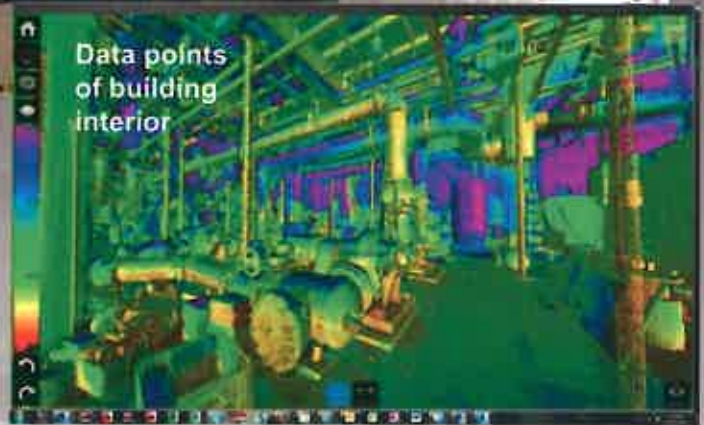
DHHR



"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



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.



CLIENT:

Larry Ladado
Boone County Parks
and Recreation

PROJECT TYPE:

Parks and Recreation

TRIAD SERVICES:

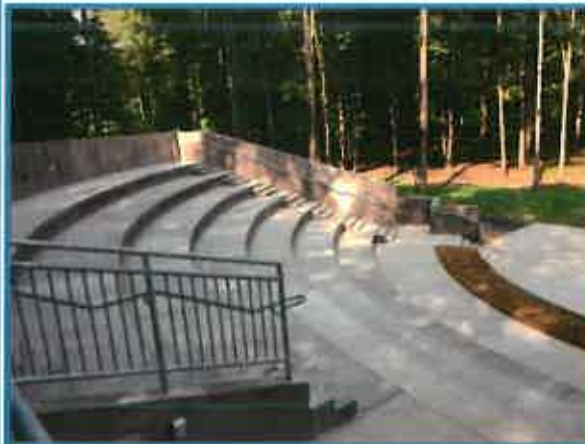
- Geotechnical Investigation
- Soil Borings
- Laboratory Testing
- Civil Site Design
- Permitting
- Surveying

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

CLIENT:
MOUNTAIN HOSPICE,
INC.
DONALD R. TRIMBLE,
II
(304)823-3922

PROJECT TYPE:
CIVIL DESIGN

PROJECT NUMBER:
04-19-0311

TRIAD SERVICES:

- Civil
- Survey and Mapping
- Drilling
- Geotechnical

This project was an addition to the existing Mountain Hospice facility located in Bellington, West Virginia. The property for the expansion was a mix of paved and wooded areas. The project will include an addition of approximately 12,375 square feet to the existing structure, including a single story that will house 12 additional patient beds, as well as other living spaces. In addition, a new 20-space parking area will be constructed. It is our understanding that outcropping of bedrock exists on the project site and that grading will be proposed to minimize excavation of this bedrock. It is assumed that the total disturbed acres will be less than 1 acre, eliminating the need for WVDEP permitting and stormwater management.

Triad performed a retracement survey of the existing boundary of the property, field operations to derive a 1-foot contour interval topographic site map with included planimetric features. Triad also performed a geotechnical investigation and preliminary site layout plan for this project.

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



OVERVIEW

This project included the construction of a two story building, vehicular access, parking and utilities for a new Desco Credit Union facility located in Ashland, Kentucky. Triad provided environmental, geotechnical, and survey and mapping services for this project.

Triad conducted public document research and field operations to collect sufficient data and field evidence to satisfy the due diligence required by Kentucky regulatory law for performing a retracement survey of the existing boundary of the subject property.

Triad also conducted a boundary analysis of all field collected boundary evidence, compiled with data from best available public records, to provide a full boundary retracement survey.

Triad performed field operations to collect data sufficient to derive a topographic site map with included planimetric features within the limits of survey. Planimetric features will include buildings, structures, utilities accessible from the surface, and other improvements within the limits of survey.

CLIENT:
DESCO FEDERAL
CREDIT UNION
JOHN E MAHLE
(740)354-7791

PROJECT TYPE:
CIVIL DESIGN

PROJECT NUMBER:
04-18-0584

TRIAD SERVICES:

- Environmental
- Survey
- Geotechnical

Project Experience



CAPITOL PARAPET WALL REPAIRS

Charleston, West Virginia

This project included an exploratory investigation and preparation of construction documents for repairs to the limestone and brick parapet wall and balustrade at the top of the Capitol Building.

CAPITOL DOME RESTORATION

Charleston, West Virginia

This project included an exploratory investigation and preparation of construction documents for repairs to the structural steel in Capitol Dome.



WEST VIRGINIA GOVERNOR'S MANSION RENOVATIONS

Charleston, West Virginia



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

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



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

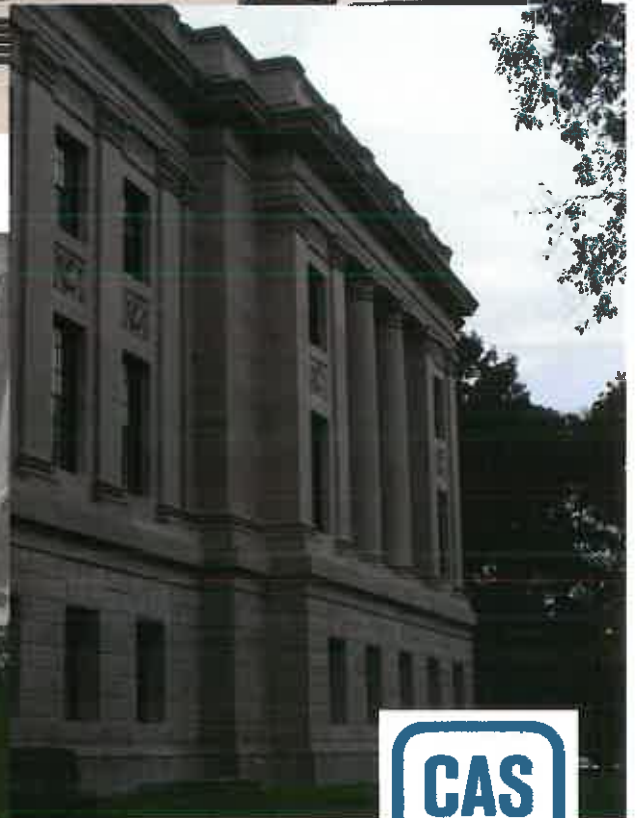


EXTERIOR FAÇADE RESTORATION MAIN CAPITOL BUILDING

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.



WEST VIRGINIA VETERANS MEMORIAL

Charleston, West Virginia



Performed condition survey of existing structure to determine what repairs would be needed. The memorial is constructed with hollowcore precast concrete planks at each bridge with limestone and granite stone at the reflecting pool and seat walls. Prepared construction documents for repairs to cracked hollow core precast, detailed new anchorage for both limestone and granite components, and performed construction administration services.



**NORTH PORTICO STEPS—MAIN CAPITOL BUILDING
CAPITOL COMPLEX
Charleston, West Virginia**

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



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



This project was completed while working for a previous employer.

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

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



SECTION IV.

Proposed Team Staffing Plan

Team Certifications
Team Resumes



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

State of WV Department of Administration
Capitol Campus Steam Distribution System

General Services Division



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

Ted Zachwieja III, PE, CEM
ZDS CTO, BIM Manager
& MEP Engineer

Chase Thomas, PE
ZDS MEP Engineer &
Commissioning

Jim Watters
ZDS Construction Administration

Vineel Busa, BSME, MSME, EI
ZDS MEP Designer

Larry Weese, BSF, MSF
ZDS MEP Designer



Carol Stevens, PE,
President
Structural Engineering

Joseph Young, RLA
Sr. Landscape Architect



Lloyd Kirk, PS, CFS
Survey Manager





ZDS Principal-in-Charge
Ted (Todd) A. Zachwieja, BSME, MSEM, P.E., CEM, LEED AP with over 40 years of experience in MEP design, energy management, IAQ and commissioning. Nationally recognized for expertise in IAQ, LEED and Certified Energy Manager. Received "Legend in Energy" by AEE in 2007/2008. Founding partner of **ZDS**.



ZDS Chief Technical Officer
BIM Manager/MEP Engineer
Ted A. Zachwieja III, BSME, P.E., CEM and 2012 Legend-in-Energy Award, specializes in MEP design, energy management, IAQ and commissioning. Forerunner in adaption of 3D scanning for buildings for use in MEP design for renovations. Extensive experience in IT systems administration with over 16 years of experience at **ZDS**. Co-authored BIM Training for Autodesk University presented in Las Vegas 2015, receiving national recognition.



ZDS Construction Administration
Jim Watters, with over 40 years of experience in mechanical, electrical and plumbing design/commissioning and Construction Administration. Extensive construction experience, including cost estimating, contractor coordination and scheduling for various projects.



Joseph Young, RLA, *Triad Engineering's* Senior Landscape Architect with over 24 years of experience. He provides clients with a variety of landscape architectural services including site inventory/analysis, conceptual design, and high quality graphic presentations. He has experience on a diverse range of projects covering all aspects of both the public and private sector.



ZDS MEP Engineer
Charles (Chase) J. Thomas, BSME, P.E. with 10 years of experience specializing in mechanical and electrical engineering design. He provides HVAC, electrical and plumbing design and commissioning services for a variety of clients in West Virginia with extensive experience.

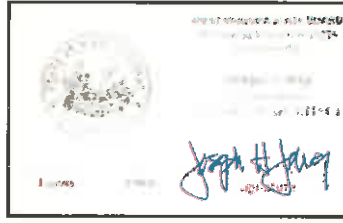
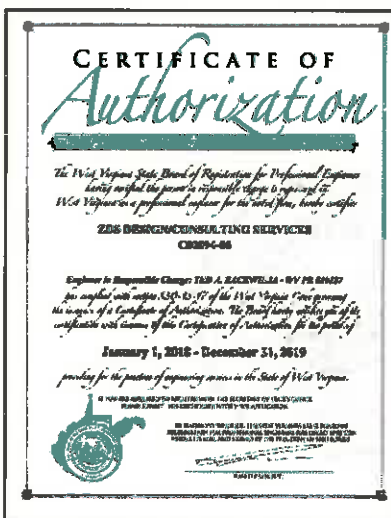
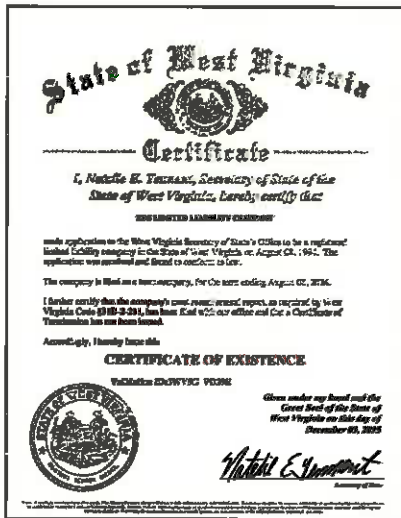
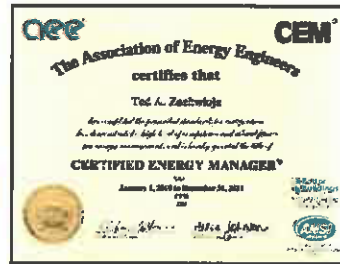
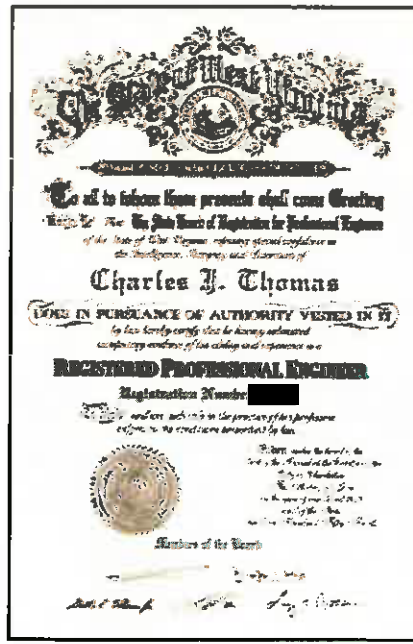


Lloyd Kirk, P.S., CFS, *Triad Engineering's* Survey Manager with over 22 years of experience. He is responsible for the supervision of the survey crews and overseeing the field work on large complex projects. His experience ranges from boundary and road work surveying to photogrammetric and topographic surveying.



Carol Stevens, P.E., *CAS Structural Engineering's* Founder and President with over 30 years of experience as a Professional Structural Engineer. Carol has performed structural evaluations and design for many projects at the WV Capitol Complex including the extensive Dome Restoration, Capitol Complex steps, Governor's Mansion, as well as Buildings 3, 5, & 7.





Ted (Todd) A. Zachwieja, P.E., CEM, LEED AP

CEO, Principal-in-Charge M/E/P/FP Design and Commissioning

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 0402
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.



Ted (Todd) A. Zachwieja, P.E., CEM, LEED AP

CEO, Principal-in-Charge M/E/P/FP Design and Commissioning

PROFESSIONAL AND COMMUNITY AFFILIATIONS

Member of Investigative Engineers Association (I-ENG-A) and founder of I-ENG-A of the Tri-State Region

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, P.E., CEM

Chief Technical Officer

Ted has over 16 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



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



Member & Co-Founder:
I-ENG-A of the Tri-State Region

James E. Watters

Project Manager/Construction Administration

Jim has over 40 years' 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.

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



PROFESSIONAL AFFILIATIONS

Member of Investigative Engineers Association (I-ENG-A) of the Tri-State Region

Member of the National Fire Protection Association (NFPA)

Member of the Health Care Section of the NFPA

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

Chase J. Thomas, PE

Project Engineer



Chase has 10 years of experience providing design, Construction Administration and Commissioning services in mechanical, plumbing, fire protection and various electrical systems. His experience encompasses a broad range of Projects including, but not limited to, Commercial, Government, Healthcare, Educational and Industrial facilities. These Projects over the years have ranged extensively from small to large in terms of both physical sizes and construction budgets. He also has construction experience adding a practical hands on knowledge to both design and commissioning.

Chase specializes in the design/commissioning and layout of HVAC systems, fire protection/sprinkler systems, lighting and other electrical systems. He has an excellent understanding of the design and implementation of piping systems encompassing all domestic water, sanitary waste/vent, storm water and natural gas combined with a knowledge in steam/water heating systems, boilers, pumps, recirculating systems, Thermostatic Mixing Valves, etc. He consistently stays current with applicable Codes and national, as well as local, standards and regulations.

He has a good awareness of all aspects of the design process and how the various disciplines need to be coordinated to avoid conflicts during construction. Chase has maintained growth as technology has changed throughout the years in the field of engineering design and drafting standards beginning with varying degrees of CAD drafting and currently BIM/REVIT.

Chase is the President for the WV ASHRAE professional society. 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 has also continued his education with relevant courses associated with the field of engineering, and has been active in leadership training provided through ASHRAE and other highly reputable coaching services.

PROJECT EXPERIENCE

- Ashland Community & Technical College HVAC Controls
- Ben Franklin Career Center HVAC Renovations and Commissioning; Kanawha County Schools
- NEW Bluefield Primary School Commissioning; Mercer Co. Schools
- Bluestone Dam Gate Controllers Electrical Renovations
- Bluestone & Dunbar Armory HVAC Renovations
- Bonsak Elementary (VA) HVAC Controls Renovations
- Cabell Huntington Hospital Surgery Center HVAC Controls Renovations
- CAMC Memorial Hospital Patient Rooms HVAC Renovations
- NEW Mountain Valley Elementary Commissioning; Mercer County Schools
- St. Mary's Hospital Patient Rooms
- HVAC Renovations
- North Central Regional Jail Renovations
- North Fork Elementary Renovations and Commissioning
- Pendleton County Middle/High School Renovations and Commissioning
- Tucker County High School HVAC Renovations
- Tyler County Courthouse
- Tyler Consolidate Middle/High School HVAC Renovations and Commissioning
- Urlings General Store Renovations
- West Edge Factory Renovations
- Weston Hampton Inn HVAC Retrofit
- WV Capitol Complex Central Heating Plant Renovations
- World Trade Center Renovations, MD

PROFESSIONAL REGISTRATIONS

Professional Engineer:
West Virginia

EDUCATION

West Virginia University
Bachelor of Science
in Mechanical Engineering

AWARDS AND RECOGNITIONS

Member of Boy Scouts of America
(Eagle Scout)

General Contractor License Holder

PROFESSIONAL AFFILIATIONS

President of WV ASHRAE



Member I-ENG-A
of the Tri-State Region





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.

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

West Virginia, 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.

SECTION V.

References
Client Testimonial Letters



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD200000001

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

1. **Mike Pickens**, Retired Executive Director, WV Department of Education: (304) 400-9993; involved with dozens of MEP projects in WV since the 1990's.
2. **Chuck Smith**, Executive Director of Facilities Operation, Kanawha County Schools: (304) 348-6148, dcsmith@mail.kana.k12.wv.us; for projects with Kanawha County Schools as well as previous projects with the Kanawha County Commission.
3. **Charles Wilson**, Retired Executive Director Facilities Operation, Kanawha County Schools: (304) 533-6149, cwilson@mail.kana.k12.wv.us and **Amanda Washington**, Coordinator Facilities Planning, Kanawha County Schools: (304) 348-6148, awashington@mail.kana.k12.wv.us; for many projects with Kanawha county Schools.
4. **Ron Adkins**, former Project Manager for WV Air National Guard projects: (304) 634-9379, currently Construction Manager for WVDHHR: ron.adkins@wv.gov; multiple additions and renovations projects for William R. Sharpe, Jr. Hospital, Weston, WV including support for other WVDHHR facilities since 2011.
5. **Greg Nicholson**, Retired Chief Operations Officer, WVDHHR: (304) 552-0101, gregnicholson@suddenlink.net; involved with seven hospitals consisting of multiple projects at each facility.
6. **Racine Thomas**, Retired Assistant Superintendent, Raleigh County Schools: (304) 222-3907.
7. **Gary Boyd**, Director of Facility Services, University of Charleston: (304) 357-4871, garyboyd@ucwv.edu; worked on projects at both WVU and UC involving MEP systems since 1990's.
8. **Amanda Kimble**, Director of Facilities, Tyler County Schools: akimble@k12.wv.us; for renovations to Tyler Consolidated Middle/High School.



1. **Mayor Travis Copenhaver**, Town of Alderson: (304) 445-2916; tlcopenhaver@frontier.com.
2. **Shawn Lopez**, Project Manager, American Electric Power: (304) 380-8552; salopez@aep.com.
3. **Kirk Donges**, Architect/Principal, TSHD Architects: (740) 354-8621; kdonges@TSHDarchitects.om.



1. **Brad Leslie**, PE, Chief Engineer, WV Division of Natural Resources: (304) 558-2764; Brad.S.Leslie@wv.gov.
2. **Andy Wiseman**, President, Wiseman Construction Company: (304) 344-1200; awiseman@wisemancorp.com



STATE OF WV - PURCHASING DIVISION
CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM
CEOI 0211 GSD200000001

References



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,

Michael E. Pickens

Boyd, Gary MA, CEFP

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

To Whom It May Concern

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

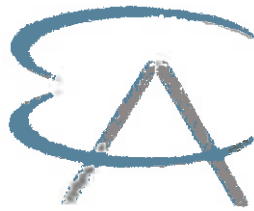
I have had multiple opportunities to work on highly technical projects with Todd Zachwieja and his team of skilled engineers. The first project that I had the opportunity to work with ZDS was a WVU project that connected several older chillers to develop a chilled water loop on the downtown campus. The 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,



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



ELSWICK & ASSOCIATES, LLC

References

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 long, sweeping horizontal line extending to the right.

Bill Elswick, MBA, CEO

SECTION VI.

Attachments

State of WV Centralized Expression of Interest

State of WV Purchasing Affidavit

Designated Contact/Certification Form

Addendum Acknowledgement Form



STATE OF WV - PURCHASING DIVISION

CAPITOL CAMPUS STEAM DISTRIBUTION SYSTEM

CEOI 0211 GSD2000000001



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

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

Proc Folder: 610233

Doc Description: EOI: Capitol Campus Steam Distribution System

Proc Type: Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
2019-08-06	2019-08-27 13:30:00	CEOI 0211 GSD2000000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

ZDS Design/Consulting Services
 281 Smiley Drive
 St. Albans, WV 25177
 (304) 755-0075

FOR INFORMATION CONTACT THE BUYER

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

Signature X *Jodd A. Zehring*

FEIN # 550735995

DATE 08/27/2019

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

ADDITIONAL INFORMATION:**Expression of Interest**

The West Virginia Purchasing Division for the West Virginia Department of Administration, General Services Division is soliciting CEOI responses from qualified architectural/engineering firms to provide design services for repairs and/or replacement of the existing West Virginia Capitol Complex steam distribution system per the bid requirements, specifications and terms and conditions as attached hereto.

* Online submissions of Expressions of Interest are Prohibited*

INVOICE TO	SHIP TO
DEPARTMENT OF ADMINISTRATION GENERAL SERVICES DIVISION 112 CALIFORNIA AVENUE, 5TH FLOOR CHARLESTON WV25305 US	STATE OF WEST VIRGINIA JOBSITE - SEE SPECIFICATIONS No City WV 99999 US

Line	Comm Ln Desc	Qty	Unit Issue
1	A/E Services Capitol Campus Steam Line/Vault Rehabilitation		

Comm Code	Manufacturer	Specification	Model #
81101508			

Extended Description :

A/E Services Capitol Campus Steam Line/Vault Rehabilitation

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

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

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

DEFINITIONS:

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

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

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

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: ZDS Design/Consulting Services

Authorized Signature: *Todd A. Zebireja* Date: 08/27/2019

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 27 day of August, 2019.

My Commission expires May 21, 2019.

AFFIX SEAL HERE




NOTARY PUBLIC

Lauren M. Headley

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.

ZDS Design/Consulting Services
(Name, Title)
Todd A. Zachwieja, Principal/CEO
(Printed Name and Title)
281 Smiley Drive, St. Albans, WV 25177
(Address)
(304) 755-0075, (304) 755-0076
(Phone Number) / (Fax Number)
todd.zachwieja@zdsdesign.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation 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 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 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.

ZDS Design/Consulting Services
(Company)

(Authorized Signature) (Representative Name, Title)
Todd A. Zachwieja, Principal/CEO
(Printed Name and Title of Authorized Representative)
08/27/2019
(Date)
(304) 755-0075, (304) 755-0076
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI GSD2000000001

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 checked="" 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 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

08/27/2019

Date

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