



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

Header

List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 153038

SO Doc Code: CEOI

Procurement Type: Central Contract - Fixed Amt

SO Dept: 0506

Vendor ID: 000000208496 

SO Doc ID: HHR1600000002

Legal Name: ZDS Limited Liability Company

Published Date: 2/5/16

Alias/DBA:

Close Date: 2/25/16

Total Bid: \$0.00

Close Time: 13:30

Response Date: 02/24/2016 

Status: Closed

Response Time: 11:55

Solicitation Description: Addendum 01 EOI for professional engineering services

Total of Header Attachments: 0

Total of All Attachments: 0



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

**State of West Virginia
 Solicitation Response**

Proc Folder : 153038

Solicitation Description : Addendum 01 EOI for professional engineering services

Proc Type : Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
	2016-02-25 13:30:00	SR 0506 ESR02241600000003836	1

VENDOR

000000208496

ZDS Limited Liability Company

FOR INFORMATION CONTACT THE BUYER

Beth Collins
 (304) 558-2157
 beth.a.collins@wv.gov

Signature X **FEIN #** **DATE**

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

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

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description : 4.1 Project A: Hopemont Hospital

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Professional engineering services				

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description : 4.2 Project B: Mildred Mitchell-Bateman Hospital

Expression of Interest
to provide
Professional Engineering Services
to the
West Virginia Department
of Health & Human Resources

Hopemont Hospital Boilers and the
Mildred Mitchell-Bateman Hospital Generator

Solicitation No. CEOI 0506 HHR1600000002
February 25, 2016



I – Executive Summary Letter



Design/Consulting Services
281 Smiley Drive
St. Albans, WV 25177
Phone: (304) 755-0075
Fax: (304) 755-0076
www.ZDSDesign.com



MECHANICAL • ELECTRICAL • INDOOR AIR QUALITY • ENERGY • COMMISSIONING • FORENSIC

February 25, 2016

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

Re: Expression of Interest to provide Professional Engineering Services
Solicitation No. CEOI 0506 HHR160000002

Please accept our Statement of Qualifications to provide Professional MEP Engineering Services and related work for the *Hopemont Hospital Boilers and the Mildred Mitchell-Bateman Hospital Generator projects.*

ZDS Design/Consulting Services was founded in 1994 and is located at 281 Smiley Drive, St. Albans, WV 25177. The contact person for **ZDS** is Todd Zachwieja, Telephone: 304-755-0075; Fax: 304-755-0076; Mobile: 304-545-4550; Email: Todd.Zachwieja@ZDSDesign.com; Website: www.ZDSDesign.com.

ZDS founding members have over five decades of MEP engineering experience in West Virginia providing a local understanding of your needs. We have extensive design experience in renovations including phased construction that will assist in reducing potential disruptions. Our approach is different than the traditional role as **we have actual operational and design experience.** **ZDS** can design and commission the Mechanical/Electrical systems, fine-tune them to actual conditions and assist the Owner's personnel after occupancy to provide training that will reduce operating costs and improve comfort.

Our proposed Project Team consists of **ZDS** Design/Consulting Services in the lead role and **CAS** Structural Engineering, Inc. providing support services for any necessary structural portions of the Project. This team has the experience to bring quality professional engineering services to the Project. **CAS** Structural Engineering, Inc. is a full service structural engineering firm with projects ranging from new design, additions, renovations, adaptive reuse, repairs and historic preservation.

We offer the most experienced MEP engineering services in West Virginia and have provided design, commissioning, Agency review, and DEP permitting assistance services for many West Virginia Department of Health and Human Resources (WVDHHR) hospital facilities including William R. Sharpe, Jr. Hospital, Hopemont Hospital, Mildred Mitchell-Bateman Hospital, Lakin Hospital, Jackie Withrow Hospital, John Manchin Sr. Health Care Center, and Welch Community Hospital.

ZDS' provided engineering design services for three (3) facilities in West Virginia that received Energy Star® Certification from the EPA. Each of these buildings performs in the top 25 percent of similar facilities nationwide for energy efficiency while meeting IES lighting levels, ASHRAE standards such as ASHRAE 62.1, Ventilation for Acceptable Indoor Air Quality, IES lighting levels and ASHRAE 55, Thermal Environmental Conditions for Human Occupancy. We met the facility's requirements while providing very energy efficient mechanical, electrical and plumbing systems.

ZDS' experience involves hundreds of projects which include working with many state and federal agencies. We are recognized for our specialties in mechanical and electrical design, indoor air quality, energy conservation, commissioning, Agency reviews and DEP permitting services. Our professionals are dedicated to performing quality services taking into account our clients' needs, scheduling and budgets.

ZDS founder Todd Zachwieja specialized in energy conservation design prior to establishing **ZDS** over 21 years ago and was involved in hundreds of millions of dollars in renovations, new construction, and Performance Contracting.

Our **approach to the projects** will be based on our understanding of the goals and the extensive information on the project facilities that we possess due to our previous design services at each of the hospitals. We have knowledge and documentation of the existing systems and believe we are best suited to provide design for the upgrades necessary to achieve the goals of these two (2) critical projects. **ZDS** can obtain detailed existing conditions at the subject facilities through utilization of our 3D scanning services that will assist with the development of the construction drawings. We will assist the WVDHHR with submission and approval from Agency reviews including the State Fire Marshal, OHFLAC, the State Boiler Inspector and the State Historical Preservation Office as well as securing the necessary DEP permitting as we recently did on the William R. Sharpe, Jr. Hospital HVAC Renovations Project.

A relationship between the WVDHHR, the individual facility's personnel, and **ZDS** is crucial to the successful completion of the projects. These projects offer challenges, but we believe our team of design professionals can address these challenges competently. With the previously available data, it is our goal to take ownership of the information and provide the best design solution that accommodates the project objectives. Members of the **ZDS** team have extensive experience in working with the WVDHHR and the policies and procedures involved in the performance of the overall project. Working together with the WVDHHR and the facility personnel we will make every effort to provide a successful project that meets the criteria and is completed within the budget restraints.

ZDS utilizes digital technology for receiving, tracking, managing, and submitting documents during the construction administration process. All construction administration documents are received and logged by our personnel and distributed to the Project Manager and applicable team members. The Project Manager, being most familiar with the project, will oversee and participate in all construction administration duties, both office and field.

ZDS creates and delivers quality projects by implementing these Quality Control Program strategies including peer review by multiple design professionals and the Principal-in-charge:

- Establish and maintain a working project schedule and budget;
- Periodic print and review of project progression;
- Peer reviewed document checking at the end of each project milestone using our in-house checklist;
- Create a working list of products meeting and/or exceeding the WVDHHR and facility's requirements;
- Early design meeting(s) with the Authority Having Jurisdiction.

ZDS Design/Consulting Services has registered professionals in all of the required disciplines to effectively execute the requirements of MEP projects. We believe that our specialties in commissioning/design of HVAC systems, Electrical systems, Energy Management, Planning and Codes compliance make us 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. Below is a partial listing of the Project Team.

Ted (Todd) A. Zachwieja, ZDS Principal-in-Charge BSME, MSEM, P.E., CEM, LEED AP with over 38 years of experience in M/E 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. Guest Speaker at National System Commissioning Conference. Founding partner of ZDS.*

Jim Watters, ZDS Production Manager/Associate with over 40 years of experience in mechanical, electrical and plumbing design/commissioning and Construction Administration.

Jennings L. Davis II, ZDS Project Manager/Associate, BSME, P.E. with over 25 years of experience specializing in MEP design, Construction Administration and commissioning.

James Lowry, ZDS Senior Engineer, BSME, P.E. specializing in HVAC design and commissioning with over 15 years of experience.

Ted A. Zachwieja III, ZDS Chief Technical Officer, BSME, P.E., CEM and 2012 Legend-in-Energy Award, specializes in 3D MEP design/scanning and IT systems administration with 12 years of experience.

Carol A. Stevens, CAS President, P.E., has over 25 years of experience and will be the individual responsible for any structural design work needed.

ZDS personnel have worked on hundreds of projects throughout West Virginia including many with Governmental agencies. We encourage you to call the references listed below, as well as Mr. Rudy Raynes of the West Virginia State Fire Marshal's office to verify how well we worked with their staff, our technical strengths and our ability to work with contractors to provide a quality project.

1. Mr. Ron Adkins, former Project Manager for WV Air National Guard projects (304) 634-9379, currently Construction Manager for WVDHHR, One Davis Square, Suite 100, Room 103, Charleston, WV 25301, ron.adkins@wv.gov. Construction Manager for multiple addition and renovations projects for William R. Sharpe, Jr. Hospital, Weston, WV including support for other WVDHHR facilities since 2011.
2. Mr. Greg Nicholson, Retired Chief Operations Officer, WVDHHR, Charleston, WV (304) 552-0101, gregnicholson@suddenlink.net Involved with seven hospitals including multiple projects at each facility in West Virginia since 2010.

3. Mr. Mike Pickens, Executive Director, West Virginia Department of Education, 1900 Kanawha Blvd. East, Bldg. 6, Room 215, Charleston, WV 25305 (304) 558-2711, mepicken@k12.wv.us. Involved with dozens of MEP projects in West Virginia since the 1990's.
4. Mr. David Sneed, Executive Director of SBA, (304) 558-2541, david.a.sneed@wv.gov. Involved with dozens of MEP projects in West Virginia since 1990's.
5. Mr. Gary Boyd, Director of Facility Services, University of Charleston, 2300 MacCorkle Avenue S.E., Charleston, WV 25304 (304) 357-4871, garyboyd@ucwv.edu. Worked on projects at both WVU and UC involving MEP systems since 1990's.

ZDS has an excellent track record of completing projects on time and in budget and 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,



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

II - Organization/Overview



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.
Ted T. Zachwieja, Executive
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.

SERVICES INCLUDE:

**MECHANICAL
INDOOR AIR QUALITY
3D LASER SCANNING
COMMISSIONING
EXPERT WITNESS**

**ENERGY
ELECTRICAL
BIM
PLUMBING**

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.

CLIENTS

- Bluefield Regional Medical Center
- Charleston Area Medical Center (CAMC)
 - General Division
 - Memorial Division
 - Women & Children's Hospital
- Concord University
 - Nick J. Rahall Technology Center
- McDowell County Schools
- Montgomery General Hospital
- Raleigh County Schools
- Summersville Memorial Hospital
- United Hospital Center
- Veterans Affairs (VA) Hospital Administration
- Webster County Memorial Hospital
- WV Capitol Complex
 - Master Planning for Emergency Power
- WV Department of Health & Human Resources
 - Hopemont State Hospital
 - Jackie Withrow Hospital
 - John Manchin, Sr. Health Care Center
 - Lakin Health Care Center Retrofit
 - Mildred Mitchell-Bateman Hospital
 - Welch Community Hospital Retrofit
 - William R. Sharpe, Jr. Hospital Addition
 - William R. Sharpe, Jr. Hospital Retrofit
- WV Division of Culture and History
- WVU NASA Emergency Generator Upgrades

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.



Chart to the right:

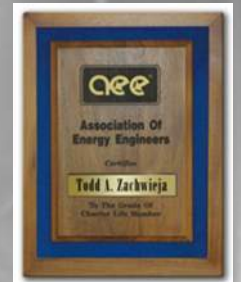
ZDS designed and implemented the region's first and largest commercial geothermal system saving Webster County High School over \$74,596 in energy savings.

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

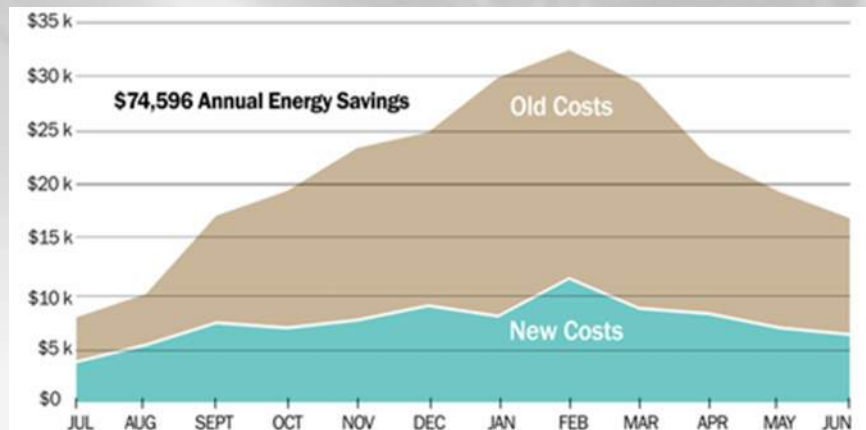


1st Place 2014
ASHRAE
Technology Award



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



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.

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

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 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.





Firm Profile

CAS Structural Engineering, Inc. – CAS Structural Engineering, Inc. is a **West Virginia Certified Disadvantaged Business Enterprise (DBE)** 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 25 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/REVIT for drawing production and Tedds, 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 25 years of experience in the building structures field, working both here in West Virginia and in the York, Pennsylvania vicinity. Carol is also certified by the Structural Engineering Certification Board for experience in the field of structural engineering.

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

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

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

WV **VA** **KY** **OH** **MO** **PA**

III – Expertise and Project Experience

ZDS Design/Consulting Services

Our Personnel's Health Care Experience

ZDS'S STAFF PRIOR TO JOINING ZDS, WHILE EMPLOYED BY OTHERS, AS WELL AS AFTER JOINING ZDS HAVE WORKED ON NUMEROUS HEALTHCARE FACILITIES AND PROJECTS WHICH INCLUDE THE FOLLOWING:

CHARLESTON AREA MEDICAL CENTER, CHARLESTON, WV

MEMORIAL DIVISION, 3200 MACCORKLE AVENUE



Charleston Area
Medical Center

- Cath Lab III Renovations
- 750 kW Emergency Generator & Underground Fuel System
- Two-Four West Nursing Wing
- Main Electrical Service Upgrade
- Emergency Room Renovations
- 600 Ton Central Chiller Plant and Variable Water Pumping
- 700 Ton Chiller Replacement and Variable Water Pumping
- Surgical Intensive Care Retrofit
- Two/Three East Patient Room Renovations
- Four-North HVAC Renovations
- Nuclear Medicine Renovations
- Laboratory Fume Ventilation Problem

GENERAL DIVISION, WASHINGTON & BROAD STREET

- Special Care Facility Contract Administration
- Allied Health, Physical Therapy & Hydrotherapy
- Three-Six Floor Patient Room South
- Emergency Generator Retrofit Design
- Heliport and pilot's quarters
- Wound Center

WOMEN AND CHILDREN'S HOSPITAL, 800 PENNSYLVANIA AVENUE



Women and
Children's Hospital

- Pediatric Intensive Care Unit
- Newborn Intensive Care Unit
- Central Electric Metering Design
- CT Scan Addition
- LDRP/Gynecology
- Surgery Addition
- Operating and Recovery Room HVAC System



Cabell
Huntington
Hospital

CABELL HUNTINGTON HOSPITAL, HUNTINGTON, WV

- Numerous mechanical and electrical renovations projects including master planning for renovations to chiller plant

CHARLESTON SURGICAL CENTER, CHARLESTON, WV

- Design for numerous mechanical and electrical renovations projects

CHILDREN'S NATIONAL MEDICAL CENTER (CNMC), WASHINGTON, D.C.

- 7 Story East Wing Addition and fit-out of inpatient and intensive care suites
- Pediatric Intensive Care Unit (PICU) Renovation
- Pneumatic Tube System Expansion
- Multiple Office Space Renovations
- Multiple Patient Exam and Playroom Renovations
- Quarantine and Infection Control System modifications
- Pharmacy Relocation and Renovation
- Pulmonary Outpatient Suite Renovation
- Hearing and Speech Outpatient Suite Renovation

FRIENDSHIP RIDGE, BEAVER, PA

- Bulk Oxygen System and facility distribution upgrade

HERITAGE VALLEY HEALTH SYSTEM

THE MEDICAL CENTER, BEAVER, PA

- Helipad study
- Radiology Information System and Picture Archiving and Communications System (RIS-PACS) Data Storage Facility
- Bulk Oxygen System Replacement
- Radiology Reading and Processing Suite Renovation

SEWICKLEY VALLEY HOSPITAL, SEWICKLEY, PA

- Outpatient Clinic Renovation
- Emergency Department Renovations
- 5th Floor Central/West Inpatient Wing Renovation
- X-Ray Relocation
- Radiology Reading and Processing Suite Renovation

HOPEMONT STATE HOSPITAL, TERRA ALTA, WV

- Master Plan for Engineering upgrades
- Campus Addressable Fire Alarm System Design
- Steam System Upgrades
- Facility Lighting Upgrades

INDIANA REGIONAL MEDICAL CENTER (IRMC), INDIANA, PA

- Blairsville Medical Office Building
- IT data storage room HVAC Upgrade
- Dialysis Treatment Suite HVAC Study and Upgrade

JACKIE WITHROW HOSPITAL, BECKLEY, WV

- Master Plan for Engineering upgrades
- Central Plant HVAC/Steam System Upgrades
- New natural gas service to campus including emergency systems

JOHN MANCHIN, SR. HEALTH CARE CENTER, FAIRMONT, WV

- Master Plan for Engineering upgrades
- Facility Lighting Upgrades



KINGS DAUGHTERS MEDICAL CENTER, ASHLAND, KY



- Cardiac Care Center
- Medical Office Building

LAKIN STATE HOSPITAL, WEST COLUMBIA, WV

- Master Plan for Engineering upgrades
- Facility Lighting and Window Upgrades

LEWISTOWN OUTPATIENT SURGERY FACILITY, LEWISTOWN, PA

- New Outpatient Surgery Facility

MILDRED MITCHELL-BATEMAN HOSPITAL, HUNTINGTON, WV

- Master Plan for Engineering upgrades
- Facility Lighting Upgrades
- Structural evaluation of multiple buildings
- Emergency Generator upgrades, extensions

MONTGOMERY GENERAL HOSPITAL, MONTGOMERY, WV



- Isolation Rooms Ventilation Design
- Domestic Hot Water System Design

SOMERSET HOSPITAL, SOMERSET, PA

- New Medical Office Building
- Cath Lab Renovation
- CT Scan Renovation
- X-Ray Room Renovation
- Pharmacy Relocation/Renovation

ST. JOSEPH HOSPITAL, PARKERSBURG, WV

- Endoscopy Suite Renovations.

STONERISE HEALTHCARE, CHARLESTON, WV

- Master Plan for Engineering upgrades and addition to Eastbrook Nursing Home
- Engineering for Eastbrook addition for 74 patient rooms for Alzheimer's unit, Physical Therapy, Pulmonary, Cardiac, Orthopedic, Palliative and Cancer care.



SUMMERSVILLE REGIONAL MEDICAL CENTER, SUMMERSVILLE, WV

- Numerous Mechanical and Electrical Renovations.

SURGI-CARE CENTER, HUNTINGTON, WV

- Retrofit existing commercial building into Outpatient Care facility

THOMAS MEMORIAL HOSPITAL, SOUTH CHARLESTON, WV

- Design for numerous mechanical and electrical renovations projects





UNITED HOSPITAL CENTER, CLARKSBURG, WV

- Emergency Room Addition M/E Design
- Emergency Generator Design
- Boiler Plant Renovations Design
- Comprehensive Energy Conservation Program Development
- Complete facility Building Automation System and HVAC Renovations
- Skilled Nursing Unit
- Med-Brook Office Building



VA MEDICAL CENTER, HUNTINGTON, WV

- Underground Steam Piping System Replacement entire campus
- Domestic Water Piping Upgrades
- CT Scan
- New Mental Health Transitional Living Facility renovation and Addition

VA MEDICAL CENTER, CLARKSBURG, WV

- Design of a major clinical addition and renovations to the facility
- 4th floor Mental Health inpatient and outpatient suite renovation

VA MEDICAL CENTER, COATESVILLE, PA

- New Hospice Building

VA MEDICAL CENTER, PHILADELPHIA, PA

- Emergency Department and Patient Processing Renovation
- Specialty Clinic Renovations
- Home Health Suite Renovation
- New Patient Express Elevator
- Medical Records Are Renovation
- Canteen Renovation
- Bulk Oxygen System Evaluation
- Dental Lab Renovation
- Steam Condensate System Upgrade
- Replacement of Chillers, Cooling Towers and pumps for main hospital, operating room suites and research facility
- Clean Steam system installation
- Operating Room Suite HAVC System upgrade
- MRI, CT Scan and Angio Suite Renovations

WEBSTER MEMORIAL HOSPITAL, WEBSTER SPRING, WV

- Numerous Mechanical and Electrical Design renovations design and master planning for a replacement hospital



WELCH (EMERGENCY) COMMUNITY HOSPITAL, WELCH, WV

- New Hospital Mechanical and Electrical Design constructed in two phases
- Facility Lighting Upgrades
- Master Plan for Engineering upgrades

WILLIAM R. SHARPE, JR. HOSPITAL, WESTON, WV

- Master Plan for Engineering upgrades
- Facility Lighting Upgrades
- Comprehensive HVAC, electrical, and new central heating and cooling plant
- Natatorium HVAC upgrades
- Kitchen plumbing and HVAC upgrades
- New emergency power plant, distribution system and fuel storage/delivery
- 50 Bed Addition for Forensic Patients with Sally Port entrance



WYOMING COUNTY HOSPITAL. WYOMING COUNTY, WV

- New Hospital Mechanical and Electrical Design

S:\Z\MARKETING-SOURCE FILES\Health Care

Engineering for Health Care Facilities

Our experience includes 75 health care facilities including the hospitals within the West Virginia Department of Health and Human Resources.



Mildred Mitchell-Bateman Hospital



William R. Sharpe, Jr. Hospital



Lakin Hospital



Hopemont Hospital



Jackie Withrow Hospital



Welch Community Hospital



John Manchin, Sr. Health Care Center



Design/Consulting Services

Engineering for Health Care Facilities

Our project experience includes engineering for three divisions of CAMC. CAMC is one of the largest health care providers in West Virginia.



CAMC General Division



CAMC Memorial Division



CAMC Women and Children's Hospital



CAMC General Division Renovations:

Special Care Facility, Physical Therapy, Emergency Room Retrofit, South Patient Retrofit, Medical Records, the District Chiller Plant Replacement & Interconnect, and, most recently, the Wound Healing Center



Energy program saved CAMC approximately \$800,000 annually—plus it paid for the improvements made to the mechanical, electrical and controls systems.

Engineering for Health Care Facilities

Our project experience includes engineering for three divisions of CAMC, one of the largest health care providers in West Virginia.



CAMC Memorial Division Hospital Renovations:

Emergency Room, Patient Rooms, Chiller Replacement and Interconnect, Radiology/Nuclear Medicine, Emergency Generator/Fuel Oil Storage, Surgery Addition Commissioning, Cath Lab, SICU, MICU Renovations and CT Scan Rooms

CAMC Women & Children's Hospital Renovations:

LDRP Additions, NICU and PICU, Emergency Room and Patient Rooms,.



Since 1982, the ZDS founders and staff have provided engineering services while meeting stringent health care requirements and safety of the patients for CAMC.

Engineering for Health Care Facilities

Our project experience includes engineering for over 75 health care facilities — those publicly and privately owned.



Veterans Affairs (VA)
Hospital Administration



Summersville
Memorial
Hospital



Montgomery
General
Hospital



Webster
County
Memorial
Hospital



Bluefield Regional Medical Center



Design/Consulting Services

Health Care Project Experience

Project Name: CAMC General Division
Location: Charleston Area Medical Center (CAMC), Charleston, WV

Description: CAMC is one of the largest health care providers in West Virginia and consists of several separate hospital campuses and facilities encompassing nearly 10 million square feet. Prior to forming **ZDS**, their principals and personnel's work at the General Division included the following: Special Care Facility, Physical Therapy, Emergency Room Retrofit, 3-4-5-6 South Patient Retrofit, District Chiller Plan Replacement and Interconnect, and Medical Records.



Contact: Ray George, Corporate Director of Construction, (304) 388-9740
Bill Williams (Retired), Consultant for Plant Operations, (304) 595-3844 (H)

Project Name: CAMC Memorial Division
Location: Charleston Area Medical Center (CAMC), Charleston, WV

Description: Prior to forming **ZDS**, Todd Zachwieja, Ted Zachwieja, and Jim Watters were involved at CAMC with review of the design and commissioning of a \$40 million surgery addition to the Memorial Division campus. This work paid for itself in less than two years from the savings generated and addressed maintenance reliability and future expandability issues. Their involvement at this location included Emergency Room Renovations, Patient Room Renovations, Chiller Replacement/Interconnect, Radiology/Nuclear Medicine Renovations, Cath Lab, SICU, MICU Renovations and CT Scan, Emergency Generator/Fuel Oil Storage, Surgery Addition Commissioning, and Laundry Facility Renovations.



Contact: Ray George, Corporate Director of Construction, (304) 388-9740
Bill Williams (Retired), Consultant for Plant Operations, (304) 595-3844 (H)

Health Care Project Experience

Project Name: CAMC Women & Children's Hospital
Location: Charleston Area Medical Center (CAMC), Charleston, WV

Description: ZDS' principals and personnel have worked with CAMC since 1982 while at ZDS and through previous employers on many design, energy conservation and commissioning projects involving sophisticated mechanical and electrical systems while meeting stringent health care requirements and safety of the patients for. Some of their involvement at CAMC's Women & Children's Hospital included LDRP Additions/Renovations, NICU & PICU Renovations, Emergency Room Renovations and Patient Room Renovations.



Contact: Ray George, Corporate Director of Construction, (304) 388-9740
Bill Williams (Retired), Consultant for Plant Operations, (304) 595-3844 (H)

Project Name: Hopemont Hospital, Terra Alta, WV – Heating Plant Renovations
Location: West Virginia Department of Health and Human Resources (WVDHHR), Charleston, WV

Description: ZDS' initial work addressed their fire alarm needs in 2003. ZDS was contacted again in 2010 to provide master planning, heating system upgrades and ARRA funded lighting upgrades. The heating plant optimization initial phase involved replacing underground piping between the central plant and hospital, along with comprehensive steam trap upgrades. This required engineering planning, design, supervision, preparation of construction documents, specifications, and construction administration of the heating systems including lighting upgrades with replacement of T-12 lighting fixtures and incandescent lights with energy efficient T-8/T-5 and LED lighting, reducing lighting energy usage by over 30%.



Project Cost: ARRA Renovation \$760,000 Completed in 2011
Fire Alarm \$175,000 Completed in 2003

Hospital Size: 124,800 ft²

Contact: Ron Adkins, Construction Manager, Central Facility Management, WVDHHR, One Davis Square, Charleston, WV 25301. (304) 957-0205 ron.adkins@wv.gov

Health Care Project Experience

Project Name: Jackie Withrow Hospital, Beckley, WV – Heating Plant Renovations
Location: West Virginia Department of Health and Human Resources (WVDHHR), Charleston, WV

Description: ZDS was the Prime for this project. Renovations included creating a central plant at one end of the large facility which included three 3,000 MBH, 125 psi steam boilers with upgrades to the condensate return system and comprehensive steam trap upgrades, providing a new gas service to the new boiler plant. The existing boiler plant in the opposite end of the large facility was upgraded to lengthen the life of it including a 2,500 MBH steam boiler. Several old or poor condition boilers were removed or isolated from providing heat to the system. The natural gas service upgrades were coordinated through the State Fire Marshal for approval to meet emergency backup fuel needs required by current code for both heating and emergency power.



Heating Project Cost: \$1,907,000 408,820 ft² Completed in 2011

Contact: Ron Adkins, Construction Manager, Central Facility Management, WVDHHR, One Davis Square, Charleston, WV 25301. (304) 957-0205 ron.adkins@wv.gov

Project Name: WV Department of Health and Human Resources
Location: William R. Sharpe, Jr. Hospital – Renovations & Addition, Weston, WV

Description: Prime consultant for renovation work including Engineering Master Planning, energy analysis, Mechanical, Electrical, and Fire Protection design, bidding and construction administration services for retrofitting the 212,000 ft² Hospital. Consultant for all MEP engineering for the 32,000 ft² addition.

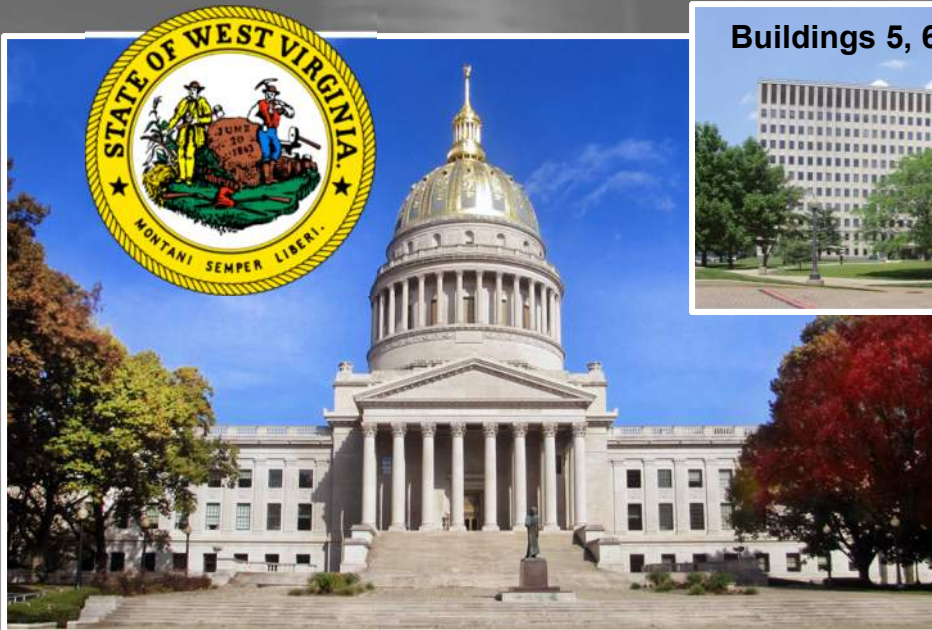


Construction Costs:	Phase I HVAC Cost	\$ 1,403,000	Completed in 2011
	ARRA Funded Lighting Upgrade Costs	\$ 618,700	Completed in 2011
	Comprehensive Renovation Cost	\$30,000,000	Completed in 2016
	Addition Project Cost	\$13,500,000	Completed in 2014

Contact: Ron Adkins, Construction Manager, Central Facility Management, WVDHHR, One Davis Square, Charleston, WV 25301. (304) 957-0205 ron.adkins@wv.gov

Emergency Generator Projects

ZDS electrical engineering projects include governmental facilities and complexes that often require multiple levels of security.



Buildings 5, 6 & 7



Engineering master planning and design for specific life safety issues involving homeland security, fire alarm, sprinklers, emergency power, CCTV, intercom, and mass notification system.



Building #3



Building #4



East Wing and West Wing



**West Virginia Division
of Culture and History
A 228,500 ft² Facility**



Emergency Power Generator

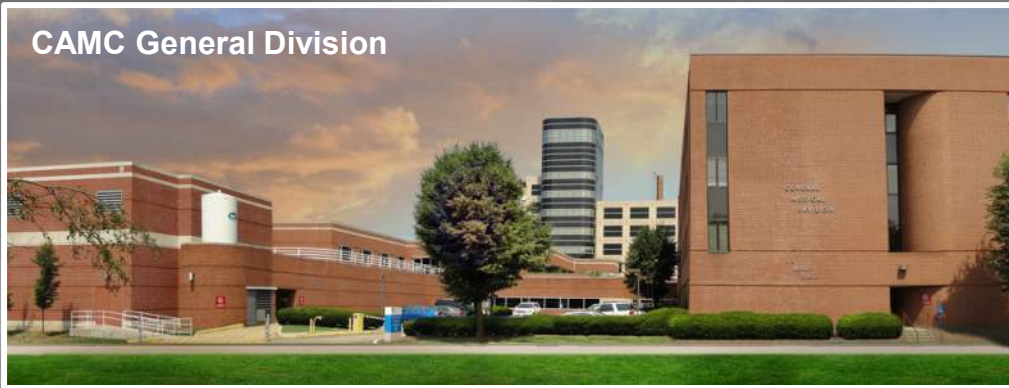
Engineering master planning, energy analysis, Mechanical/Electrical/Fire Protection design, bidding and construction.



Design/Consulting Services

Emergency Generator Projects

Our experience includes health care facilities and complexes that require multiple levels of security and power requirements.



Charleston Area Medical Center (CAMC)
One of the largest health care providers in West Virginia.

- Commissioning
- Energy Conservation
- Electrical Systems
- Emergency Generator
- Fuel Oil Storage
- HVAC Systems
- Power Controls
- Emergency Retrofits
- Campus Interconnects



The WVDHHR hired ZDS as the prime consultant for renovation work including engineering master planning, energy analysis, emergency power generators, M/E/P, bidding and construction administration for retrofitting the 212,000 ft² hospital.



Crane lowering the emergency power generator into the electrical room.



Design/Consulting Services

ZDS Commissioning Experience



ZDS helps a client determine whether equipment meets a facility's operational goals or whether adjustments are needed to improve efficiency and overall performance.

Our expertise helps clients in projects with the following:

- Fundamentals of Commissioning
- Enhanced Commissioning
- Retro Commissioning projects

ZDS offers these and other commissioning services:

- Compliance with LEED
- Construction Document Review
- Performance Documentation
- Equipment Performance Testing
- Value Engineering
- Post-Occupancy Fine Tuning



An integration of nine buildings involving over 1.9 million square-feet including the Capitol, Governor's Mansion, Center for Culture and History, plus six other administration facilities.

The initial years **savings of \$1,079,296** paid for the \$10,108,102 investment costs over time

LEED Certified Candidate

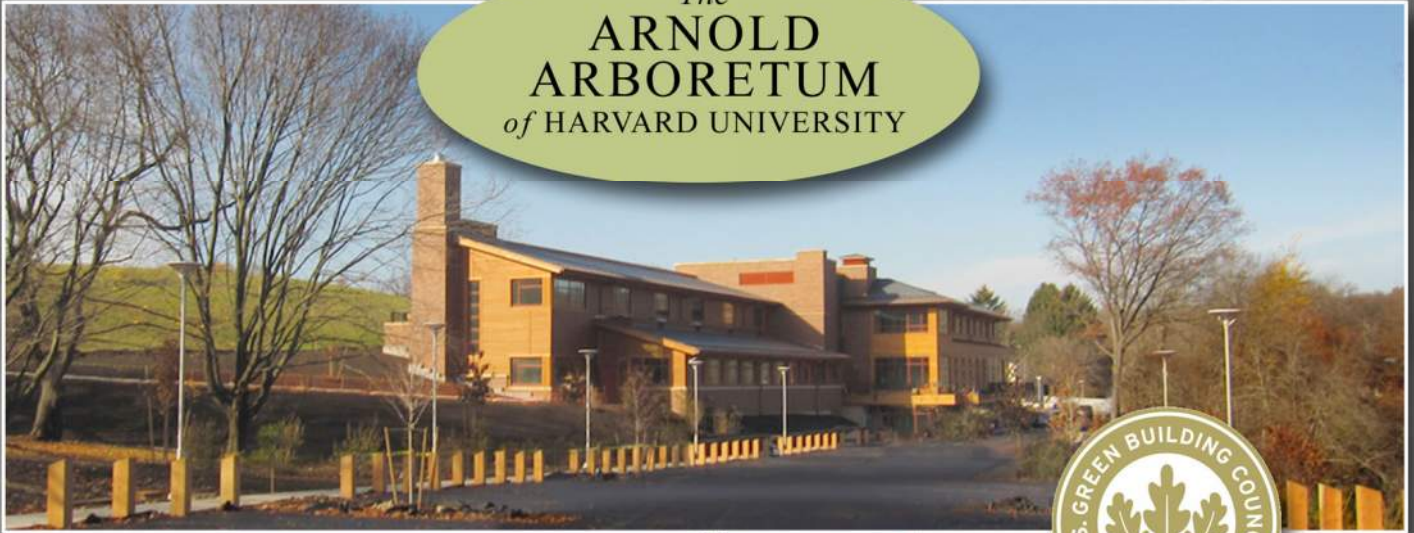


Design/Consulting Services



ZDS Commissioning Experience

The
**ARNOLD
ARBORETUM**
of HARVARD UNIVERSITY



Washington
and Lee
University
Lexington, VA



Harvard University
Arnold Arboretum Weld Hill
Research and Administration
Building

LEED Gold Certified



**Ohio University - Chillicothe
Campus**

ZDS received national publicity for the article entitled, *How to Avoid an ESCO Fiasco*, published in College Planning & Management, a highly-respected



Design/Consulting Services

ZDS Commissioning Experience



Air National Guard

130th Airlift Wing at Yeager Airport, Phase I and Phase II: Aircraft Maintenance Fuel Systems Hangars and Shops

Awarded a **LEED Silver Certification** for each of the two phases



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

Honolulu, Hawaii



General Motors (GM) of North America



Design/Consulting Services

ZDS Commissioning Experience



The Cuisset Residence, Charleston, WV



1st Place 2014
Technology Award

Webster Springs Elementary School



Webster County High School

ZDS Commissioning Project Experience

- Air National Guard (Phase I)
Replacement Aircraft Maintenance Facility
- Air National Guard (Phase II)
Replacement Fuel Cell Hangar Facility
- Beckley Stratton Middle School
- Cuisset Residence, Charleston, WV
- General Motors (GM) of North America
- Harvard University - Arnold Arboretum Weld Hill
Research and Administration Building
- Maryland – Calvert County Indoor Aquatic Center
- Montgomery County Departments of
Correction and Police
- Ohio University – Chillicothe Campus,
Stevenson Library and Bennett Hall
- PJKK Federal Building, Hawaii
- Santa Ana Federal Building Renovations
- University of California, Davis School of
Veterinary Medicine Instructional Facility
- Washington & Lee University
- Webster County High School
- Webster Springs Elementary School

- William R. Sharpe, Jr. Hospital
- WV Museum of Culture and Natural History
- WV State Capitol Complex
- WVU—Downtown Campus

Commissioning Projects Experience by Personnel before ZDS established:

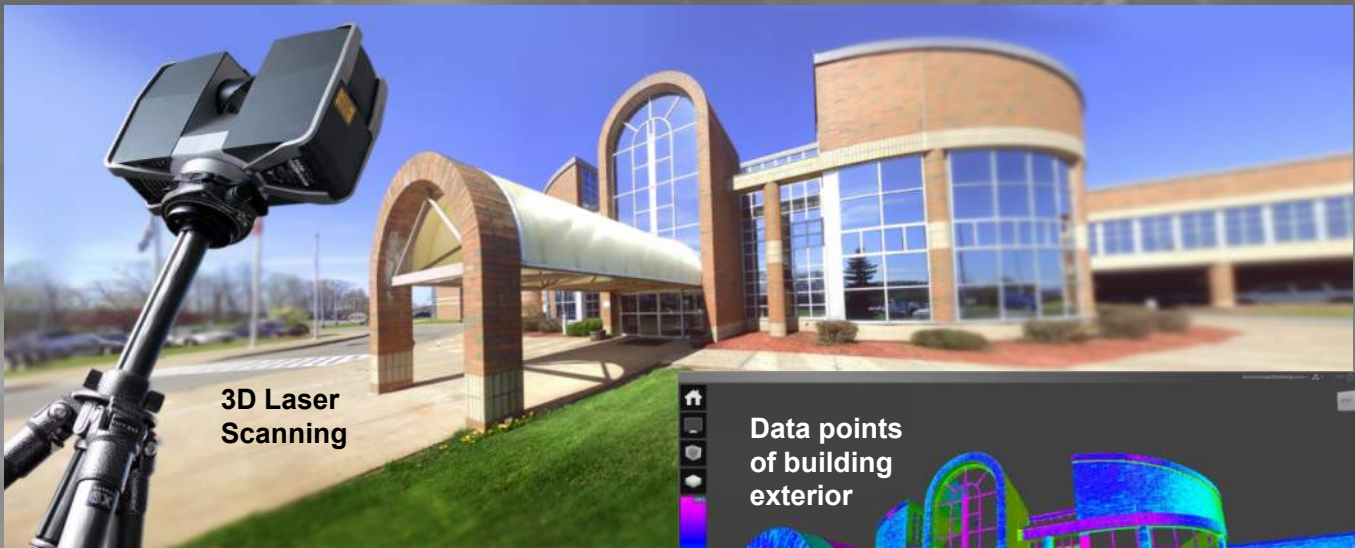
- CAMC General Division
- CAMC Memorial Division
- CAMC Women & Children's Hospital
- General Motors North America
- Kanawha County Schools –
Capitol High School
- Milledgeville Georgia
Correctional Facility
- United Hospital Center
- WVU—Downtown
Campus



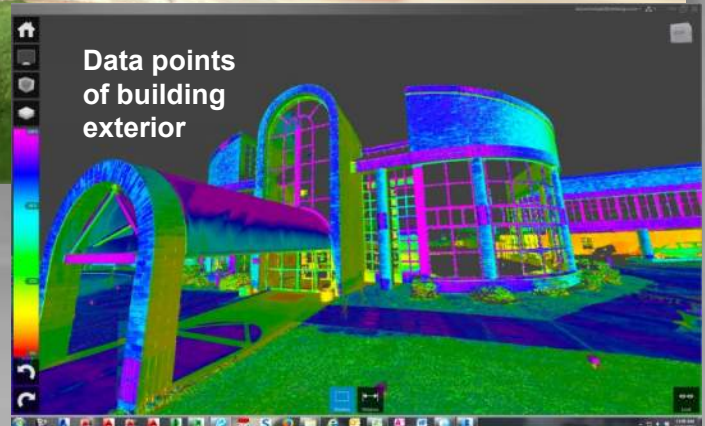
Design/Consulting Services

3D Digital Imaging for Facilities

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



3D Laser Scanning



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.



3D Digital Imaging for Facilities

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

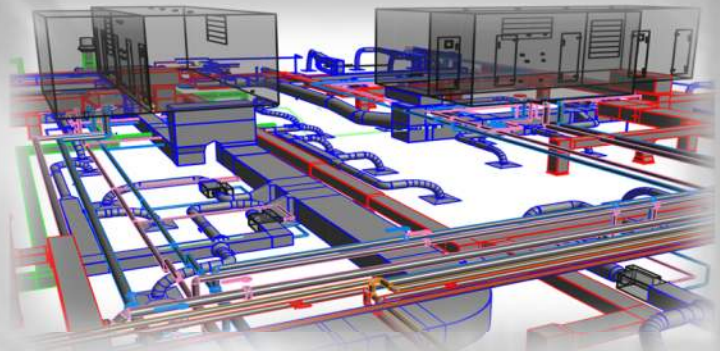
DHHR



“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.



MILDRED MITCHELL BATEMAN HOSPITAL INVESTIGATION

Huntington, West Virginia



The project included limited investigation of the cracks in the brick façade of the structure. Provided a letter report with recommendations for repairs.



SHARPE HOSPITAL HVAC RENOVATIONS

Weston, West Virginia



The project included design of framing for piping enclosures, fuel tank foundations, generator foundations, cooling tower foundations and steel structure support, and other miscellaneous support designs and analyses for complete redesign of HVAC systems in existing facility.



EAST RIDGE HEALTH SYSTEMS INVESTIGATION

Martinsburg, West Virginia



The project included limited investigation of the masonry façade and review of the existing drawings to determine cause for masonry failures and efflorescence. Recommendations for additional investigation were made to determine if structural steel supporting the masonry was compromised.



MANCHIN HOSPITAL STRUCTURAL RAMP INVESTIGATION

Fairmont, West Virginia



The project included limited investigation of the precast concrete ramp structure with recommendations for repairs to restore to pedestrian only usage.

Vehicular usage was not permitted under any circumstances without significant structural repairs.



IV - Resumes

Todd has over 38 years of experience involving the analysis, design, construction management and specifications for mechanical engineering, heating, ventilating, air conditioning, plumbing, electrical and lighting, as well as indoor environmental quality analysis, building system commissioning and forensic engineering for educational, governmental, commercial, industrial and health care clients.

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.

Some of Todd's project experience includes governmental and commercial, health care, educational and military facilities. Todd selected and designed the pilot project for one of the largest geothermal heat pump applications in the mid-Atlantic region. He has retro-commissioned HVAC systems and mechanical engineering at numerous automotive facilities in North America. He has been involved with many commercial structures including high-rise commercial building renovations. Todd designed three West Virginia schools which received Energy Star Certifications in 2013, 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 EPAct which requires buildings use over 40% less energy than buildings designed using ASHRAE 90.1-2001.

PROFESSIONAL REGISTRATIONS

Professional Engineer:

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

EDUCATION

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

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

CERTIFICATIONS

- Certified Energy Manager (C.E.M.) National Certification No. 2205
- LEED Accredited Professional, National Certification through USGBC No. 1008389



PROFESSIONAL/COMMUNITY AFFILIATIONS AND RECOGNITIONS

Past President 2013-14, current Governor - WV ASHRAE Chapter. Recognized by ASHRAE Region VII in 2014 with the David Levine Award of Excellence, Presidential Award of Excellence,

1st Place 2014 ASHRAE Technology Award, Region VII



First ASHRAE beQ certified building in WV, 2015

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



Member of the National Society of Professional Engineers



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



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

LEED Gold Certified Harvard Arboretum, Boston, MA



HEALTH CARE PROJECTS

- Bluefield Regional Medical Center
- Cabell Huntington Hospital
- Charleston Area Medical Center Memorial Division - millions in renovation and new construction design, including commissioning of Charleston Area Medical Center Surgery Center
- Charleston Area Medical Center General Division - millions in renovations
- Charleston Area Medical Center Women & Children's Hospital - millions in renovations
- Charleston Surgical Center
- Family Practice Center
- Jackie Withrow Hospital
- John Manchin Sr. Health Care Center
- Hometown Healthcare Center
- Hopemont Hospital
- Lakin Hospital
- Lewistown Outpatient Surgical Facility, PA
- Mercy Medical Center
- Mildred Mitchell-Bateman Hospital
- Monongalia General Hospital
- Montgomery General Hospital
- St. Joseph's Hospital
- St. Mary's Hospital
- Summersville Regional Medical Center
- Surgicare Center
- Thomas Memorial Hospital
- United Hospital Center
- VA Hospital - Clarksburg
- VA Hospital - Huntington
- Wayne Memorial Hospital
- Webster Memorial Hospital
- Welch Community Hospital
- William R. Sharpe, Jr. Hospital Additions and Renovations

Ted has over twelve years of experience in building construction design industry. His strategic thinking and development deployment 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 educational, health care, industrial, and commercial facilities. He also has experience in speaking on how 3D laser scanning impacts our industry today.

Ted develops 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 at ZDS.

Ted's project experience includes the commissioning and design for heating, ventilating, air conditioning, plumbing, electrical and lighting systems for educational, health care, industrial and commercial facilities. His experience encompasses working both on new construction as well as renovation projects.

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.

PROFESSIONAL REGISTRATIONS

Professional Engineer:
West Virginia [REDACTED]
Certified Energy Manager (C.E.M.) - National Certification No. [REDACTED]

EDUCATION

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



PROFESSIONAL AFFILIATIONS

Member of Investigative Engineers
Association (I-ENG-A)



**Secretary, Past Membership
Promotion Chair** - American Society of
Heating, Refrigeration and Air
Conditioning Engineers (ASHRAE)
West Virginia Chapter



Lifetime Member of the Association of
Energy Engineers (AEE)



Associate Member West Virginia
Society for Healthcare Engineering



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

HEALTH CARE PROJECTS

- West Virginia Department of Health and Human Resources Hospitals:
 - Jackie Withrow Hospital, Beckley: Master Planning Study, new central steam plant and renovations to heating system and lighting renovations.
 - Hopemont State Hospital, Terra Alta: Master Planning Study, renovations to heating system and lighting systems.
 - John Manchin, Sr. Health Care Center, Fairmont: Master Planning Study, renovations to lighting systems.
 - Lakin State Hospital, West Columbia: Master Planning Study and exterior envelop renovations and lighting renovations.
 - Mildred Mitchell-Bateman Hospital, Huntington: Master Planning Study and lighting renovations.
 - Welch Community Hospital, Welch: Master Planning Study and lighting renovations.
 - William R. Sharpe, Jr. Hospital, Weston: fifty bed forensic addition and renovations to entire existing hospital while building remains in use including new central heating/cooling plant, 1,800 KW emergency power station and comprehensive HVAC and electrical renovations throughout the facility.

Jennings has over 25 years of experience as an engineer involving the design, project management and construction management of heating, ventilating and air conditioning (HVAC), plumbing, electrical, lighting and specialized systems for health care, institutional and commercial facilities. His experience also includes indoor environmental quality analysis, building system commissioning and forensic engineering.

Prior to joining ZDS, Jennings' professional experience included working as an Owner's Representative at West Virginia University (WVU) in the positions of Staff Engineer and Construction Project Manager, and as a Mechanical Engineer for the West Virginia Department of Education (WVDE).

During his employment at WVU, Jennings was responsible for management of major repair and capital construction projects and in-house design of smaller projects. While working for the WVDE, he was responsible for quality control of design documents for various school system construction projects throughout the state of West Virginia; troubleshooting issues related to HVAC systems and Indoor Air Quality (IAQ); re-commissioning of HVAC systems to original design parameters; recommendations for HVAC operational and energy savings procedures; and training of county school systems' maintenance personnel. He performed annual investigations of facilities concentrating primarily on HVAC operation and occupant safety. Tasks included IAQ measurements such as temperature, humidity and carbon dioxide; HVAC equipment visual inspection; life safety assessment; and building component checks.

As a Project Engineer, Jennings specializes in developing scope, budget and design parameters; establishing program requirements through interaction with Owners and other Team members; design reviews; budget analysis and control; schedule control; complete design oversight and task assignment; construction administration and project closeout.

PROFESSIONAL REGISTRATIONS

Professional Engineer:

- West Virginia [REDACTED]
- Pennsylvania [REDACTED]
- Virginia [REDACTED]
- Maryland [REDACTED]

Jennings has completed multiple forensic education courses, some of which were under the direction of Peter Vallas, Sr. Such training included structural failures, fire investigations, product failures, mold and water damage, accident reconstruction and bodily injury, among others. He is a member of the Investigative Engineers Association (I-ENG-A) of the Tri-State Region.



EDUCATION

Bachelor of Science in
Mechanical Engineering from
West Virginia University

PROFESSIONAL AFFILIATIONS

Member of Investigative Engineers Association (I-ENG-A) of the Tri-State Region. Fire Investigation Certification under the direction of Peter Vallas, Sr.

President - American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) West Virginia Chapter

Associate Member West Virginia Society for Healthcare Engineering

AWARDS AND RECOGNITIONS

Selected to assist in training of Code officials and the design community on the new ASHRAE 90.1-2007 State Energy Code adopted by West Virginia in 2013

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



HEALTH CARE PROJECTS

- Children's National Medical Center (CNMC) – Washington, D.C.: 7-story East Wing Addition and Fit Out, multiple office suite renovations, Pediatric Intensive Care Unit (PICU) renovations, Hearing & Speech Outpatient Suite renovations, Quarantine Infection Control System Modifications, Pulmonary Outpatient Renovations, and Pharmacy Renovations
- Friendship Ridge – Beaver, PA: Bulk Oxygen System and Facility Distribution Upgrade
- Heritage Valley Health Systems (HVHS)/Sewickley Valley Hospital (SVH) - PA: Radiology Reading and Processing Suite Renovations, Outpatient Clinic and Emergency Department Renovations, 5th Floor Central/West Inpatient Wing Renovations
- HVHS/Moon – PA: Imaging X-Ray Relocation
- HVHS/The Medical Center (TMC) of Beaver - PA: Helipad Study, Bulk Oxygen Supply and Storage Replacement, Radiology Reading and Processing Suite Renovations, RIS-PACS Data Storage Facility
- Indiana Regional Medical Center (IRMC) - PA: New Blairsville Medical Office Building, IT Data Storage Room HVAC Upgrade, Dialysis Treatment Suite HVAC Upgrade
- Mount Nittany Medical Center (MNMC) - PA: Commissioning for East Wing addition, ED renovations, Central Utility Plant upgrades, Special Services/Computer Services Building
- Somerset Hospital - PA: ADL Suite Fit-out, New Medical Office Building, Cath Lab Renovation, CT Replacement Renovation, X-Ray Replacement Renovation, and Pharmacy Relocation/Renovations
- VAMC Clarksburg - WV: 4th Floor Renovations (Psychiatric Suite)
- VAMC Coatesville - PA: New Hospice Facility
- VAMC Huntington - WV: Mental Health-Psychiatric Residential Rehabilitation Treatment Program (MH PR RTP) Addition and Renovations
- VAMC Philadelphia - PA: Canteen Renovations, Dental Lab Renovations, Emergency Department and Patient Processing Renovations, Home Health Suite Renovations, Medical Records Renovations, MRI Renovations, CT Scan Renovations, Angio Suite Renovations, Specialty Clinic Renovations, OR Suite HVAC System Upgrades, Chiller and Cooling Tower Replacements, New Patient Transport Elevator, Clean Steam System for Facility Wide Humidification
- West Virginia Department of Health and Human Resources:
 - o Jackie Withrow Hospital, Beckley: Master Planning Study, new central steam plant and renovations to heating system and lighting renovations
 - o Hopemont State Hospital, Terra Alta: Master Planning Study, renovations to heating system and lighting systems
 - o John Manchin, Sr. Health Care Center, Fairmont: Master Planning Study, renovations to heating system and lighting systems
 - o Lakin State Hospital, West Columbia: Master Planning Study and exterior envelope renovations and lighting systems
 - o Mildred Mitchell-Bateman Hospital, Huntington: Master Planning Study and lighting renovations
 - o Welch Community Hospital, Welch: Master Planning Study and lighting renovations
 - o William R. Sharpe, Jr. Hospital, Weston: 50 bed forensic addition and renovations to entire existing hospital while building remains in use including new central heating/cooling plant, 1,800 KW emergency power station and comprehensive HVAC and electrical renovations throughout the facility. Projects include commissioning of all new equipment and systems.

Jim has nearly 40 years' experience in design and implementation of 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 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, Ohio, Kentucky, Virginia, Georgia, New York, Arizona, Illinois and Massachusetts.

Jim has extensive experience in energy savings' programs for 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 a very good relationship with the office of the West Virginia State Fire Marshal.



PROFESSIONAL AND COMMUNITY AFFILIATIONS

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



Member of the National Fire Protection Association (NFPA)



Past 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



HEALTH CARE PROJECTS

- Cabell Huntington Hospital
- Charleston Area Medical Center (CAMC) (prior to joining ZDS)
Projects included: Cath Lab III Renovations; 750 kW Emergency Generator/Underground Fuel System; Two-Four West Nursing Wing; Main Electrical Service Upgrade; Emergency Room Renovations; Surgical Intensive Care Retrofit; Two/Three East Patient Room Renovations; Four-North HVAC Renovations; Nuclear Medicine Renovations; Special Care Facility Contract Administration; Allied Health, Physical Therapy & Hydrotherapy; Three-Six Floor Patient Room South; Emergency Generator Retrofit Design; Heliport and pilots quarters; Wound Center; Pediatric Intensive Care & Newborn Intensive Care Unit; Central Electric Metering Design; CT Scan Addition; LDRP/Gynecology; Surgery Addition; Operating and Recovery Room HVAC System; Medical Office Building – General Division
- Kings Daughters Medical Center, Ashland (prior to joining ZDS)
Projects included: Cardiac Care Center; Medical Office Building
- Thomas Memorial Hospital
- St. Mary's Medical Center, Huntington
- United Hospital Center
- VA Hospital, Huntington –steam distribution system to serve six additional facilities on campus, main hospital domestic water line replacement and CT Scan renovations
- West Virginia Department of Health and Human Resources Master Planning and renovations:
 - Jackie Withrow Hospital, Beckley: new central steam plant and renovations to heating system and lighting renovations.
 - Hopemont State Hospital, Terra Alta: renovations to heating system and lighting systems.
 - John Manchin, Sr. Health Care Center, Fairmont: renovations to lighting systems.
 - Lakin State Hospital, West Columbia: lighting renovations.
 - Mildred Mitchell-Bateman Hospital, Huntington: lighting renovations.
 - Welch Community Hospital, Welch: lighting renovations.
 - William R. Sharpe, Jr. Hospital, Weston: fifty bed forensic addition and renovations to entire existing hospital, 1,800 KW emergency power station.

James has over 15 years of experience in the building construction design industry. James specializes in design and project management for HVAC, Fire Protection, Plumbing and Commissioning engineering. James is an innovative problem solver in engineering design, communication methods and project management.

James' experience includes the Project Management, Engineering Design and Commissioning for heating, ventilating, air conditioning, plumbing, electrical and lighting for health care, industrial, educational and commercial facilities. He researches and applies International Building Codes, NFPA, ASHRAE standards, NEC and FGI Guidelines for Design and Construction of Health Care Facilities.

James implements ZDS' 3D Scanning services which have assisted in collecting key existing conditions for renovation projects, forensic engineering, historical preservation, and high definition reality capture. James has in-depth experience on collection, registration, and scan to BIM processes. His 3D scanning experience includes educational, health care, industrial and commercial facilities.

James maintains an active membership to the ASHRAE professional society and 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.

EDUCATION

Bachelor of Science in Mechanical Engineering from West Virginia University Institute of Technology, Montgomery, WV

PROFESSIONAL REGISTRATIONS

Professional Engineer:

- West Virginia [REDACTED]
- Ohio [REDACTED]
- Maryland [REDACTED]

OTHER RECOGNITIONS

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

LEED Gold Certified Harvard Arboretum, Boston, MA



PROFESSIONAL AFFILIATIONS

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



Chapter Technology Transfer Committee (CTTC) Chair - American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) West Virginia Chapter



Association of Energy Engineers (AEE)



OTHER RECOGNITIONS

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



HEALTH CARE PROJECTS

- Charleston Area Medical Center (Wound Center)
- Charleston Surgical Center
- United Hospital Center
- VA Hospital, Huntington – Evaluation of existing campus steam distribution system and extension/upgrades to the steam distribution system to serve six additional facilities on campus, main hospital domestic water line replacement and CT Scan renovations
- Woodcrest Medical Center
- West Virginia Department of Health and Human Resources:
 - Jackie Withrow Hospital, Beckley: Master Planning Study, new central steam plant and renovations to heating system and lighting renovations.
 - Hopemont State Hospital, Terra Alta: Master Planning Study, renovations to heating system and lighting systems.
 - John Manchin, Sr. Health Care Center, Fairmont: Master Planning Study, renovations to lighting systems.
 - Lakin State Hospital, West Columbia: Master Planning Study and exterior envelop renovations and lighting renovations.
 - Mildred Mitchell-Bateman Hospital, Huntington: Master Planning Study and lighting renovations.
 - Welch Community Hospital, Welch: Master Planning Study and lighting renovations.
 - William R. Sharpe, Jr. Hospital, Weston: fifty bed forensic addition and renovations to entire existing hospital while building remains in use including new central heating/cooling plant, 2,100 KW emergency power station and comprehensive HVAC and electrical renovations throughout the facility.

Carol A. Stevens, P.E.

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, WV Section
National Society of Professional Engineers
American Concrete Institute
American Institute of Steel Construction
West Virginia University Department of Civil and
Environmental Engineering Visiting Committee
West Virginia Tech Department of Civil Engineering
Advisory Committee

CIVIC INVOLVEMENT

ASCE Christmas in April Project/Engineer's Wk Speaker

EXPERIENCE

West Virginia, CAMC Boiler Room: Structural design of roof framing, walls and foundations for new boiler enclosure.

West Virginia, CAMC Cancer Center: Structural design of connections for architecture/structure interfaces.

West Virginia, Sharpe Hospital: Structural design of framing and foundations for HVAC renovations at existing facility.

West Virginia, Manchin Hospital: Structural evaluation of existing concrete ramp structure.

West Virginia, Bateman Hospital: Structural evaluation of existing masonry façade with recommendations for repairs.

West Virginia, East Ridge Health Systems: Structural investigation of existing masonry façade to determine cause of failures in exterior envelope.

West Virginia, Teays Medical Office Building: Design of foundations and framing for new 2-story medical building.

West Virginia, Thomas Hospital Parking Garage: Design of structural repairs to 1980's precast concrete garage.

West Virginia, St. Francis Hospital Parking Garage: Design of structural repairs to 1980's precast concrete garage.

West Virginia, Braxton Health Associates: Designed foundations and roof framing for new one-story medical office building.

West Virginia, St. Mary's Hospital Parking Garage: Structural evaluation of precast concrete parking garage.

West Virginia, Thomas Memorial Hospital: Various projects related to analysis of floor structure for installation of new equipment and relocation of functions within existing facility.

West Virginia, Cabell Huntington Hospital: Designed floor framing for new blood collection reception area within new Marshall University Medical Center.

PREVIOUS EXPERIENCE

West Virginia, Johnson Ave Professional Building:

Structural design of new 9,400 SF steel framed multi-tenant medical office building.

West Virginia, Cabell Huntington Hospital Boiler

Mezzanine: Structural analysis and testing of existing reinforced concrete mezzanine with significant degradation from brine tank leakage. Developed new structural system to replace existing concrete mezzanine utilizing steel framing and steel grating.

West Virginia, Morgantown High School Additions:

Designed steel framing and foundations for science classroom, cafeteria and gymnasium additions to existing education complex.

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

West Virginia, North Fork Hughes River Water Treatment Plant: Designed reinforced concrete structure for new water treatment facility.

Pennsylvania, Apple Hill Medical Center: Designed structural steel framing and foundations for new surgicenter addition to existing medical facility.

Pennsylvania, Metropolitan Edison Company, Headquarters: New 80,000 SF two-story office addition to existing complex.

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

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

Maryland, U.S. Army, Ft. Dietrich Hospital: Structural design for new second floor addition to existing functioning hospital facility.

Pennsylvania, Carlisle Syntec: Design of foundation supports for 800,000 lb rubber vulcanizing machine; enlargement of foreman's office including new framing to support mechanical equipment on roof; new monorail installation; extension of existing gantry rail.

Pennsylvania, Engel Worldwide: Steel framing and foundations for new 12,000 SF two-story office building;

design of crane beams and columns for adjacent 60,000 SF crane building.

Pennsylvania, AMP IMF: Structural design for the renovation and conversion of a stamping facility into an integrated manufacturing facility (IMF) housing operations for stamping as well as blow molding processes.

Texas, York International: Structural survey of existing building structure for modifications to incorporate large testing and manufacturing areas for mechanical equipment.

Maryland, Columbia 100: Design of structural steel framing for new two-story 43,000 SF office building.

Pennsylvania, York Federal Savings and Loan Association/New Service Corporation: Design of steel framing, reinforced concrete retaining wall and foundations for new 14,400 SF two-story office building.

Pennsylvania, Yorktowne Parking Garage: Study of reinforced concrete/steel framed parking garage.

Pennsylvania, Blakey Yost Bupp & Schaumann: Re-construction of a 3-story 10,200 SF, fire damaged urban building and conversion into law offices.

Pennsylvania, Queensgate Theaters: Structural analysis of existing mall area for conversion to movie theaters.

Pennsylvania, College Misericordia: Structural design of new 50,000 SF student resident hall utilizing precast concrete planks and masonry bearing walls.

Pennsylvania, Homewood Suites: Structural and foundation design for new two-story hotel.

Pennsylvania, Comfort Inn: Structural and foundation design of new 5-story hotel.

Pennsylvania, Glatfelter Insurance: Design of steel framing and foundations for new 30,200 SF building.

Pennsylvania, M&M Mars: Multi-level steel structure to support dust collectors positioned over existing building, steel framing for motor control center within existing silo building, design of 4-story Alkalizing and Roasting Addition with accommodations for existing functioning railroad siding which remained operations beneath new building.

Pennsylvania, York City Ice Arena: Design of heavy timber exposed roof trusses and foundations for new 6,500 SF masonry wall bearing building.

V – Testimonial Letters and Recognition

TIM HOLBROOK

305 East Foster Street, Lewisburg, WV 24901

Phone: 304-645-1073 Cell: 304-546-1893



February 3, 2016

Re: ZDS Design/Consulting Services.

To Whom It May Concern:

I have had the recent privilege to work with ZDS Design/Consulting Services on several construction projects for the Greenbrier County Board of Education. In my role as the Clerk of the Works (owner's representative) for these projects, I was fortunate to be able to work with a company possessing their level of knowledge and expertise as an important part of our design team.

ZDS was on board from the conceptual design/development phase through the completion of construction and close out of the project. They constantly pushed to see that work progressed as it should and was done right.

Their personnel was extremely qualified and easy to work with. They were immediately responsive to any questions, problems, or issues that came up, and often called offering ideas and suggestions that could benefit the owner.

They were also instrumental in helping the board secure some rebates and credits that helped with the project costs.

I would be very happy to do another project with ZDS as they were a first class company, willing to do what it took give the owner a quality job. I highly recommend them for any mechanical and electrical construction project you may have.

Very truly yours,

A handwritten signature in black ink that reads "Tim Holbrook". The signature is written in a cursive, slightly slanted style.

Tim Holbrook



Michael Pickens

172 Oak Street

Dunbar, WV 25064

(304) 400-9993

February 1, 2016

RE: ZDS Design/Consulting Services

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

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

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

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

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

Sincerely,

A handwritten signature in blue ink that reads "Michael E. Pickens". The signature is written in a cursive style with a large, stylized initial "M".

Michael E. Pickens



ELSWICK & ASSOCIATES, LLC

April 15, 2015

To Whom It May Concern:

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

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

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

513 Havana Dr.
Charleston, WV 25311
304.542.8877

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

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

Sincerely,

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

Bill Elswick, MBA, CEO

VI – Attachments



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: 153038

Doc Description: EOI for professional engineering services

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2016-01-14	2016-02-24 13:30:00	CEOI 0506 HHR1600000002	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, West Virginia 25177
 (304) 755-0075

FOR INFORMATION CONTACT THE BUYER

Beth Collins
 (304) 558-2157
 beth.a.collins@wv.gov

Signature X *Josh Q. Zochineja*

FEIN # 550735995

DATE 2/24/2016

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

ADDITIONAL INFORMATION:

The West Virginia Purchasing Division, for the Agency, the West Virginia Department Health and Human Resources, is soliciting Expressions of Interest for professional engineering and design services for the Hopemont Hospital Boilers and Mildred Mitchell-Bteman Hospital Generator, per the attached bid requirements and specifications.

INVOICE TO		SHIP TO	
BUYER - 304-957-0209 HEALTH AND HUMAN RESOURCES OFFICE OF PROPERTY MANAGEMENT ONE DAVIS SQUARE STE 100, RM 106 CHARLESTON WV25301-1613 US		BUYER - 304-957-0209 HEALTH AND HUMAN RESOURCES OFFICE OF PROPERTY MANAGEMENT ONE DAVIS SQUARE, STE 106 CHARLESTON WV 25301 US	

Line	Comm Ln Desc	Qty	Unit Issue
1	Professional engineering services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :

4.1 Project A: Hopemont Hospital

INVOICE TO		SHIP TO	
BUYER - 304-957-0209 HEALTH AND HUMAN RESOURCES OFFICE OF PROPERTY MANAGEMENT ONE DAVIS SQUARE STE 100, RM 106 CHARLESTON WV25301-1613 US		BUYER - 304-957-0209 HEALTH AND HUMAN RESOURCES OFFICE OF PROPERTY MANAGEMENT ONE DAVIS SQUARE, STE 106 CHARLESTON WV 25301 US	

Line	Comm Ln Desc	Qty	Unit Issue
2	Professional engineering services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :

4.2 Project B: Mildred Mitchell-Bateman Hospital

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Question Submittal Deadline at 5:00 PM, EST	2016-02-01

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: ZDS Design/Consulting Services

Authorized Signature: *Josh A. Zochireja* Date: 2/23/2016

State of West Virginia

County of Kanawha, to-wit:

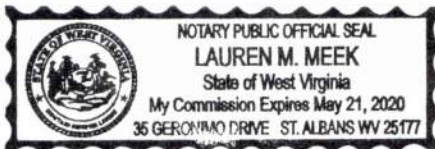
Taken, subscribed, and sworn to before me this 23 day of February, 2016.

My Commission expires May 21, 2020.

AFFIX SEAL HERE

NOTARY PUBLIC

Lauren Meek
Purchasing Affidavit (Revised 07/01/2012)




CERTIFICATION AND SIGNATURE PAGE

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)

 Todd A. Zachwieja - CFO

(Authorized Signature) (Representative Name, Title)

(304) 755-0075, (304) 755-0076, 2/24/2016

(Phone Number) (Fax Number) (Date)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.:

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

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

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

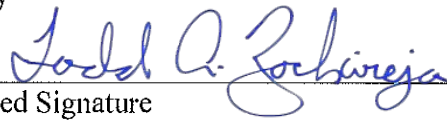
- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/>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

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

ZDS Design/Consulting Services

Company

Authorized Signature



2/24/2016

Date

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