



Offer and Acceptance

State of Arizona
State Procurement Office

100 N. 15th Ave. Suite 201
Phoenix, AZ 85007

SOLICITATION NO.: ADSP016-00005912 Request
for Qualifications: 2016 Annual Professional
Services List

PAGE
1

Offeror: Energy Systems Design, Inc.

OF
1

OFFER

TO THE STATE OF ARIZONA:

The Undersigned hereby offers and agrees to furnish the material, service or construction in compliance with all terms, conditions, specifications and amendments in the Solicitation and any written exceptions in the offer. Signature also certifies Small Business status.

Energy Systems Design, Inc.

Company Name

7135 E Camelback Rd, Ste 275

Address

Scottsdale

AZ

85251

City

State

Zip

monte.sturdevant@esdaz.com

Contact Email Address

Signature of Person Authorized to Sign Offer

G. Monte Sturdevant

Printed Name

President

Title

Phone: 480-481-4900

Fax: 480-481-4903

By signature in the Offer section above, the Offeror certifies:

1. The submission of the Offer did not involve collusion or other anticompetitive practices.
2. The Offeror shall not discriminate against any employee or applicant for employment in violation of Federal Executive Order 11246, State Executive Order 2009-9 or A.R.S. §§ 41-1461 through 1465.
3. The Offeror has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted offer. Failure to provide a valid signature affirming the stipulations required by this clause shall result in rejection of the offer. Signing the offer with a false statement shall void the offer, any resulting contract and may be subject to legal remedies provided by law.
4. The Offeror certifies that the above referenced organization IS IS NOT a small business with less than 100 employees or has gross revenues of \$4 million or less.

ACCEPTANCE OF OFFER

The Offer is hereby accepted.

The Contractor is now bound to sell the materials or services listed by the attached contract and based upon the solicitation, including all terms, conditions, specifications, amendments, etc., and the Contractor's Offer as accepted by the State.

This Contract shall henceforth be referred to as Contract No. ADSP016-00005912

The effective date of the Contract is March 1, 2016

The Contractor is cautioned not to commence any billable work or to provide any material or service under this contract until Contractor receives purchase order, contract release document or written notice to proceed.

State of Arizona
Awarded this

29

day of

February

20 16

Procurement Officer



ATTACHMENT I – General Qualifications

ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
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DEFINITIONS

Architect Services, Engineer Services, Land Surveying Services, Assayer Services, Geologist Services and Landscape Architect Services: Those professional services within the scope of the practice of those services as provided in ARS § 32-101.

Branch Office: A geographically distinct place of business or subsidiary office of a firm that has a key role on the team.

Discipline: Primary technical capabilities of key personnel, as evidenced by academic degree, professional registration, certification, and/or extensive experience.

Firm: Defined in ARS § 32-101(B.19.).

Key Personnel: Individuals who will have major contract responsibilities and/or provide unusual or unique expertise.

SPECIFIC INSTRUCTIONS:

1. Complete this form for each branch office seeking work under this RFQ.
 - a. – e. **Firm (or Branch Office) Name and Address.** Self-explanatory.
 - f. **Year Established.** Enter the year the firm (or branch office, if appropriate) was established under the current name.
 - g. **Ownership.**
 - (g1). *Type.* Enter the type of ownership or legal structure of the firm (sole proprietor, partnership, corporation, joint venture, etc.).
 - (g2). *Small Business Status.* A firm is a small business if the firm has less than 100 employees **or** has gross revenues of \$4 million or less.
 - h.-j. **Point of Contact.** Provide this information for a representative of the firm that the Customer can contact for additional information. The representative must be empowered to speak on contractual and policy matters.
 - k. **Name of Firm.** Enter the name of the firm.
2. **Employees by Discipline.**
 - a. Select disciplines from the List of Disciplines (Function Code) listed on Page 3 of 4 Instructions. For employees that do not qualify for any of the disciplines, select "Other". *Note: The intended searchable database indicated in the RFQ will be populated from the Qualifications Form I Excel attachment only.*
 - b. Each person can be counted only twice; once for his/her primary function and once for his/her secondary function. Primary and secondary functions should be indicated by including a "P" or an "S" in column b after the Description Title is given.
 - c-d. If the form is completed for a firm (including all branch offices), enter the number of employees by disciplines in column c. If the form is completed for a branch office, enter the number of employees by discipline in column d and for the firm in column c.
3. **Profile of Firm's Experience and Annual Average Revenue for Last Year.**
 - a. Enter the approximate number of projects the firm (or branch) has done attributable by Profile Code listed on Page 3 of 4 Instructions over the last year.



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- b. Enter the appropriate Profile Codes from Instructions Pages 3 of 4 that represent the type of work the firm (or branch) has done over the last year.
 - c. Using the Revenue Index Number on Page 3 of 6 Form, indicate the approximate revenue the firm has earned over the last year per Profile Code entered into the table.
4. **Resumes of Key Personnel Proposed for This Contract.** Complete this section for each key person who will participate in this contract.
 - a. Self-explanatory.
 - b. Self-explanatory
 - c. Total years of relevant experience (block c1), and years of relevant experience with current firm, but not necessarily the same branch/office (block c2).
 - d. Name, City and State of the firm where the person currently works, which must correspond with one of the firms (or branch office or a firm, if appropriate) listed in Section 1.
 - e. Provide information on the highest relevant academic degree(s) received. Indicate the area(s) of specialization for each degree.
 - f. Provide information on current relevant professional registration(s) and in which State(s) they are current.
 - g. Provide information on any other professional qualifications relating to this contract, such as education, professional registration, publications, organizational memberships, certifications, training, awards, and foreign language capabilities.
 - h. Provide information on no more than five (5) projects in the last year which the person had a significant role that demonstrates the person's capability relevant to her/his proposed role in this contract. These projects do not necessarily have to be any of the projects presented in Section 5 for the project team if the person was not involved in any of those those projects or the person worked on other projects that were more relevant than the team projects in Section 5. Use the check box provided to indicate if the project was performed with any office of the current firm. If any of the professional services or construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description and Specific Role.
5. **Example Projects Which Best Illustrate Firms Qualification for this contract.** Select project where multiple team members worked together, if possible, that demonstrate the team's capability to perform work similar to that required for this contract. Complete one Section 5 for each project. List no more than five (5) projects.
 - a. Title and Locations of project or contract. For an indefinite delivery contract, the location is the geographic scope of the contract.
 - b. Enter the year completed of the professional services (such as planning, engineering study, or design), and/or the year completed if construction. If any of the professional services or the construction projects are not complete, leave Year Completed blank and indicate the status in Brief Description of Project and Relevance to This Contract (block f).
 - c. Project Owner or user, such as a government agency or installation, an institution, a corporation or private individual.
 - d. Provide the original budget or not to exceed dollar amount for the project.
 - e. Provide the Total Cost of the Project. If any of the professional services or construction projects is not complete, indicate the percentage complete and whether this project will be on budget, over or under budget.
 - f. Brief Description: Indicate scope, size, and length of project, principle elements and special features of the project. Discuss the relevance of the example project to this contract.
6. **Additional Information.** Use this section to provide additional information you feel may be necessary to describe your firm's qualifications for this contract.
7. **Annual Average Professional Services Revenues of Firm for Last 3 Years.** Complete this block for the firm or branch office for which this form is completed. In column a, enter an approximate percentage of total work attributable to State, Federal or Municipal Work. In column b, enter an approximate percentage of total work attributable to Non-Government work. Percentages should take into consideration work completed over the last 3 years.



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8. **Authorized Representative.** An authorized representative of the firm or branch office must sign and date the completed form. Signing attests that the information provided is current and factual. Provide the name and title of the authorized representative who signed the form.

List of Disciplines (Function Codes) for Question 2

- | | | |
|---------------------------|--|--------------------------|
| Aeronautical Engineer | Environmental Engineer | Mining Engineer |
| Agricultural Engineer | Environmental Scientist | Nuclear Engineer |
| Archeologist | Fire Protection Engineer | Petroleum Engineer |
| Architect | Geodetic Surveyor | Photogrammetrist |
| Architectural Engineering | Geographic Information System Specialist | Project Manager |
| Biologist | Geological Engineer | Sanitary Engineer |
| CADD Technician | Geologist | Soils Engineer |
| Chemical Engineer | Hydrographic Surveyor | Structural Engineer |
| Civil Engineer | Hydraulic Engineer | Technician/Analyst |
| Construction Manager | Hydrologist | Transportation Engineer |
| Construction Inspector | Industrial Engineer | Water Resources Engineer |
| Control Systems Engineer | Landscape Architect | |
| Cost Engineer/Estimator | Mechanical Engineer | |
| Ecologist | Metallurgical Engineer | |
| Electrical Engineer | | |

List of Experience Categories (Profile Codes for Question 3)

- | | |
|---|--|
| Acoustics, Noise Abatement | Dams (<i>Concrete; Arch</i>) |
| Aerial Photography; Airborne Data and Imagery Collection and Analysis | Dams (<i>Earth; Rock</i>); Dikes; Levees |
| Activity Centers | Desalinization (<i>Process and Facilities</i>) |
| Air Pollution Control | Design-Build - Preparation of Requests for Proposals |
| Airports; Navajds; Airport Lighting; Aircraft Fueling | Digital Elevation and Terrain Model Development |
| Airports; Terminals and Hangars; Freight Handling | Digital Orthophotography |
| Agricultural Development; Grain Storage; Farm Mechanization | Dining Halls; Clubs; Restaurants |
| Animal Facilities | Dredging Studies and Design |
| Anti-Terrorism/Force Protection | Design & Planning Structured Parking Facilities |
| Area Master Planning | Detention Security Systems |
| Auditoriums and Theaters | Disability / Special Needs |
| Automation; Controls; Instrumentation | Ecological and Archeological Investigations |
| Barracks; Dormitories | Educational Facilities; Classrooms |
| Bridge Design: Bridges | Electrical Studies and Design |
| Cartography | Electronics |
| Cemeteries (<i>Planning and Relocation</i>) | Elevators; Escalators; People-Movers |
| Chemical Processing and Storage | Energy / Water Auditing Savings |
| Child Care/Development Facilities | Energy Conservation; New Energy Sources |
| Codes; Standards; Ordinances | Environmental Impact Studies, Assessments or Statements |
| Cold Storage; Refrigeration and Fast Freeze | Fallout Shelters; Blast-Resistant Design |
| Commercial Building (<i>Low Rise</i>); Shopping Centers | Fire Protection |
| Community Facilities | Fisheries; Fish Ladders |
| Communications Systems; TV; Microwave | Forensic Engineering |
| Computer Facilities | Garages; Vehicles Maintenance Facilities; Parking |
| Conservation and Resource Management | Gas Systems (<i>Propane; Natural, Etc.</i>) |
| Construction Management | Geodetic Surveying: Ground and Airborne |
| Construction Surveying | Heating; Ventilating; Air Conditioning |
| Corrosion Control; Cathodic Protection Electrolysis | Highways; Streets; Airfield Paving; Parking Lots |
| Cost Estimating; Cost Engineering and Analysis; Parametric Costing; Forecasting | Historical Preservation |
| Cryogenic Facilities | Hospital and Medical Facilities |
| Construction Materials Testing | Hotels; Motels |
| | Housing (Residential, Multi-Family; Apartments; Condominiums) |



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Hotels; Motels
Hydraulics and Pneumatics
Hydrographic Surveying
Industrial Buildings; Manufacturing Plants
Industrial Processes; Quality Control
Industrial Waste Treatment
Intelligent Transportation Systems
Infrastructure
Irrigation; Drainage
Judicial and Courtroom Facilities
Laboratories; Medical Research Facilities
Land Surveying
Landscape Architecture
Libraries; Museums; Galleries
Lighting (Interior; Display; Theater, Etc.)
Lighting (Exteriors; Streets; Memorials; Athletic Fields, Etc.)
Labs - General
Labs – Research – Dry
Labs – Research – Wet
LEED Accredited A/E
LEED Independent 3rd Party Building Commissioning
Mapping Location/Addressing Systems
Materials Handling Systems; Conveyors; Sorters
Metallurgy
Materials Testing
Measurement / Verification / Conservation Water Consumption
Savings
Mining and Mineralogy
Medical Related
Modular Systems Design; Fabricated Structures or
Components
Mold Investigation
Museums
Nuclear Facilities; Nuclear Shielding
Office Buildings; Industrial Parks
Outdoor Recreation
Petroleum and Fuel (*Storage and Distribution*)
Photogrammetry
Pipelines (*Cross-Country - Liquid and Gas*)
Phase I Environmental
Prisons & Correctional Facilities
Plumbing and Piping Design
Prisons and Correctional Facilities
Product, Machine Equipment Design Pneumatic
Structures, Air-Support Buildings Power Generation,
Transmission, Distribution Public Safety Facilities
Radar; Sonar; Radio and Radar Telescopes
Radio Frequency Systems and Shielding's
Railroad; Rapid Transit
Recreation Facilities (*Parks, Marinas, Etc.*)
Refrigeration Plants/Systems
Rehabilitation (*Buildings; Structures; Facilities*)
Research Facilities
Resources Recovery; Recycling
Roof Infrared Imaging to Identify Water Leaks

Roofing
Safety Engineering; Accident Studies; OSHA Studies
Security Systems; Intruder and Smoke Detection
Seismic Designs and Studies
Sewage Collection, Treatment and Disposal
Soils and Geologic Studies; Foundations
Solar Energy Utilization
Solid Wastes; Incineration; Landfill
Special Environments; Clean Rooms, Etc.
Structural Design; Special Structures
Surveying; Platting; Mapping; Flood Plain Studies
Sustainable Design
Swimming Pools
Storm Water Handling and Facilities
Specifications Writing
Toxicology
Testing and Inspection Services
Traffic and Transportation Engineering
Topographic Surveying and Mapping
Towers (*Self-Supporting and Guyed Systems*)
Tunnels and Subways
Traffic Studies
Transportation
Urban renewals; Community Development
Utilities (*Gas and Steam*)
Value Analysis; Life-Cycle Costing
Warehouse and Depots
Water Resources; Hydrology; Ground Water
Water Supply; Treatment and Distribution
Wind Tunnels; Research/Testing Facilities Design
Waste Water Treatment Facility
Water Well Rehabilitation; Water Well Work
Zoning; Land Use Studies



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

1. **Annual Request for Qualifications**

| | |
|---|-------------------------------------|
| a. FIRM (OR BRANCH OFFICE) NAME: | Energy Systems Design, Inc. |
| b. FIRM (OR BRANCH OFFICE) STREET: | 7135 E Camelback Rd, Ste 275 |
| c. FIRM (OR BRANCH OFFICE) CITY: | Scottsdale |
| d. FIRM (OR BRANCH OFFICE) STATE: | AZ |
| e. FIRM (OR BRANCH OFFICE) ZIP CODE: | 85251 |
| f. YEAR ESTABLISHED: | 1988 |
| (g1). OWNERSHIP - TYPE: | Corporation |
| (g2) OWNERSHIP - SMALL BUSINESS STATUS: | Yes – Federal and State |
| h. POINT OF CONTACT NAME AND TITLE: | Monte Sturdevant, President |
| i. POINT OF CONTACT TELEPHONE NUMBER: | 480-481-4900 /480-481-4998 (direct) |
| j. POINT OF CONTACT E-MAIL ADDRESS: | Monte.sturdevant@esdaz.com |
| k. NAME OF FIRM (If block 1a is a branch office): | |



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2. EMPLOYEES BY DISCIPLINE

| a. Discipline Title | b. Function: Primary (P) or Secondary (S) | c. No. of Employees - Firm | d. No. of Employees - Branch |
|-----------------------------|---|----------------------------|------------------------------|
| Mechanical Engineer | P | 5 | |
| Electrical Engineer | P | 4 | |
| Project Manager | S | 12 | |
| CADD Technician | P | 17 | |
| Other: Administrative Staff | P | 4 | |
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| Total | | 30 | |



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3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR

| a. Approximate No. of Projects | b. Experience | c. Revenue Index Number (see below) |
|--------------------------------|---|-------------------------------------|
| 2 | Auditoriums, Theatres | 1 |
| 9 | Computer Facilities (Data Centers) | 3 |
| 9 | Dining Halls/Restaurants/Kitchens | 2 |
| 60 | Educational/Classrooms | 5 |
| 41 | Electrical Studies/Design (only) | 3 |
| 4 | Garages; Vehicles Maintenance Facilities; Parking | 1 |
| 27 | Heating/Ventilation/Air Conditioning (only) | 3 |
| 5 | Hotels/Motels | 2 |
| 6 | Housing (Multi-Family; Apartments; Condominiums) | 4 |
| 5 | Hospitals/Medical | 2 |
| 6 | Industrial | 2 |
| 5 | Judicial and Courtroom Facilities | 3 |
| 7 | Labs - General | 1 |
| 4 | Libraries/Museums | 1 |
| 120 | Office/Tenant Improvements | 7 |
| 5 | Outdoor Recreation | 2 |
| 8 | Plumbing/Piping (only) | 1 |
| 5 | Prisons and Correctional Facilities | 3 |
| | | |

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section #4 for each key person.)*

| | | | |
|--|---|---|----------------------------|
| a. NAME Mo Ardebili | b. ROLE IN THIS CONTRACT Mechanical Engineer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 38 | 2. WITH CURRENT FIRM 28 |
| d. LOCATION <i>(City and State)</i> Scottsdale, AZ | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S. Mechanical Engineering, 1977, Iowa State University | | f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer, Mechanical, Arizona #17853 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> LEED Accredited Professional , Commissioning Process Management Professional, ASHRAE Member | | | |

H. RELEVANT PROJECTS

| | | | |
|----|---|-------------------------------------|--|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> DPS Forensic Sciences Lab Chiller/Cooling Tower Replacement, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE MPE Engineering to increase the capacity of the existing DPS central plant in addition to connecting the two adjacent central plant chilled water supply/return piping provide better reliability to operation of both central plants. Role: Project Manager; Mechanical Engineer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> Maricopa County West Courts Data Center and BIX Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2015 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Electrical and mechanical engineering services to prepare the engineering analysis and the design documents to upgrade the existing Maricopa County BIX Rooms and the West Courts Data Center (WCDC). Major mechanical systems upgrades included coordination of several maintenance activities; provide (1) 10 ton DX cooling unit in BIX1 and in BIX2; modifying the WCDEC cooling system by replacing the existing York units and providing a new 20 ton DX up-flow unit; and modifying the air distribution system to provide more consistent, reliable cooling. Role: Mechanical Engineer **Currently awaiting construction start** | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Adobe Mountain School Housing Mechanical Piping Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mechanical engineering design services for the replacement of existing heating hot water piping due to leaking in the existing piping and installation of new preinsulated welded steel heating hot water piping from the connections in the chiller plant throughout the facility to above grade piping connections at each building. Role: QA/QC | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOA Data Center Upgrade, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2007 | Construction (if applicable) 2008 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE An existing raised floor area was converted to a new data center, with new split system computer room A/C units, condensing mounted on the roof. Plumbing work includes new floor sinks along with domestic water for humidification purposes. Electrical modifications include power to the new A/C units and power to the PDU's. The existing wet fire protection system was converted to a pre-action (dry) system Role: Project Manager; Mechanical Engineer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> Phoenix City Hall Cooling Tower Analysis and Replacement, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2007 | Construction (if applicable) 2008 |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE MPE engineering to evaluate and replace the cooling towers and existing condenser water piping at Phoenix City Hall. Role: QA/QC | <input checked="" type="checkbox"/> | Check if project performed with current firm |



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4. Resumes of Key Personnel Proposed for this Contract *(Complete one Section #4 for each key person.)*

| | | | |
|---|---|---|----------------------------|
| a. NAME G. Monte Sturdevant | b. ROLE IN THIS CONTRACT Mechanical Engineer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 34 | 2. WITH CURRENT FIRM 23 |
| d. LOCATION <i>(City and State)</i> Scottsdale, AZ | | | |
| e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> B.S. Mechanical Engineering 1982, Oklahoma State University | | f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer, Mechanical, Arizona #20981 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS <i>(Organizations, Awards, etc.)</i> ASHRAE, ASPE, Certified Energy Manager | | | |

H. RELEVANT PROJECTS

| | | | |
|----|---|--|--------------------------------------|
| 1. | (1) TITLE AND LOCATION <i>(City and State)</i> Maricopa County Towers Jail Building 1610 HVAC Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mechanical, Plumbing and Electrical design to replace an existing gas-fired evaporative cooled makeup air unit with a new chilled water air handling unit with hot water heating coil. In addition, removal of 11 existing evaporative coolers and extension new medium pressure ductwork to condition the areas served by the evaporative coolers. <i>Role:</i> Project Manager; Mechanical Engineer | Professional Services 2014 | Construction (if applicable) 2015 |
| | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 2. | (1) TITLE AND LOCATION <i>(City and State)</i> ADOC HVAC System Replacement at Six Prisons, Various Locations, AZ | (2) YEAR COMPLETED | |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE MPE design for replacement of HVAC Systems to convert currently Evap Cooled Spaces to Air Conditioned Spaces at six prison/secured facility locations throughout the State. These locations include: Lewis Stiner Unit (15,208 SF), Lewis Barchey Unit (15,208), Perryville Lumley Yard (35,435 SF), Eymen Meadows Health Unit (11,185 SF), Tucson Manzanita Health Unit (3,915 SF) and Florence South Health Unit (7,500 SF). <i>Role:</i> QA/QC, Mechanical Engineer **Project is ongoing** | Professional Services 2015 | Construction (if applicable) |
| | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 3. | (1) TITLE AND LOCATION <i>(City and State)</i> Adobe Mountain School Housing Mechanical Piping Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE Mechanical engineering design services for the replacement of existing heating hot water piping due to leaking in the existing piping and installation of new preinsulated welded steel heating hot water piping from the connections in the chiller plant throughout the facility to above grade piping connections at each building. <i>Role:</i> QA/QC | Professional Services 2012 | Construction (if applicable) 2013 |
| | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 4. | (1) TITLE AND LOCATION <i>(City and State)</i> Papago Farms Border Patrol C2 Renovation, Papago Farms, AZ | (2) YEAR COMPLETED | |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE MPE engineering services to renovate the existing Command and Control (C2) Facility and the Communication Shelter Facility at the Papago Farms Border Patrol Facility. Modifications to the command station in the C2 included modifications of furniture, computers and TV monitors with new accommodations for this equipment, as well as an upgrade of the existing service entrance section and transformer to a full 800A 120/208V. There were also new communication racks being installed in the existing Communications Shelter facility that required new power distribution and new HVAC cooling for the racks, and an upgraded humidification system. <i>Role:</i> Mechanical Engineer | Professional Services 2015 | Construction (if applicable) 2015 |
| | | <input checked="" type="checkbox"/> Check if project performed with current firm | |
| 5. | (1) TITLE AND LOCATION <i>(City and State)</i> DPS Forensic Sciences Lab Chiller/Cooling Tower Replacement, Phoenix, AZ | (2) YEAR COMPLETED | |
| | (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE MPE Engineering to increase the capacity of the existing DPS central plant in addition to connecting the two adjacent central plant chilled water supply/return piping provide better reliability to operation of both central plants. <i>Role:</i> Mechanical Engineer | Professional Services 2013 | Construction (if applicable) 2014 |
| | | <input checked="" type="checkbox"/> Check if project performed with current firm | |



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**STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007**



ATTACHMENT I – General Qualifications
ANNUAL REQUEST FOR QUALIFICATIONS AND EXPERIENCE NO:
ADSP016-00005912

STATE PROCUREMENT OFFICE
Department of Administration
100 North 15th Avenue, Suite 201
Phoenix, Arizona 85007

4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

| | | | |
|---|---|---|----------------------------|
| a. NAME Ronald Korte | b. ROLE IN THIS CONTRACT Electrical Engineer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 35 | 2. WITH CURRENT FIRM 19 |
| d. LOCATION (City and State) Scottsdale, AZ | | | |
| e. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Electrical Engineering 1981, Iowa State University | | f. PROFESSIONAL TRAINING - REGISTRATIONS Professional Engineer, Electrical, Arizona #22929 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) 7x24 | | | |

H. RELEVANT PROJECTS

| | | | |
|----|--|-------------------------------------|--|
| 1. | (1) TITLE AND LOCATION (City and State) ADOA State Hospital Power Plant & Dietary Building Emergency Generator, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical Engineering for a new emergency generator back up power system that will support the Arizona State Hospital chilled water central plant and the Dietary Building. The project construction budget is \$1,700,000. Role: Project Manager, Electrical Engineer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 2. | (1) TITLE AND LOCATION (City and State) ADOC Florence ACI Electrical Modifications, Florence, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical engineering services to prepare the design for electrical power for Arizona Correctional Industries for two new enterprises on the Florence Prison property. Wild Horse Farm: This project involves providing a new electrical service and feeding several panels around the property to support electrical needs related to anticipated operations. Fish Farm: This project will reuse the existing SES feeding an irrigation pump and an existing equipment building to provide power to a Ranch House that is being renovated. Role: Project Manager, Electrical Engineer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 3. | (1) TITLE AND LOCATION (City and State) DPS Forensic Sciences Lab Chiller/Cooling Tower Replacement Project, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE MPE Engineering to increase the capacity of the existing DPS central plant in addition to connecting the two adjacent central plant chilled water supply/return piping provide better reliability to operation of both central plants. Role: Electrical Engineer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 4. | (1) TITLE AND LOCATION (City and State) Maricopa County West Courts Data Center and BIX Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2015 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical and mechanical engineering services to prepare the engineering analysis and the design documents to upgrade the existing Maricopa County BIX Rooms and the West Courts Data Center (WCDC). Major electrical systems upgrades included providing a new UPS Room with redundant (2N) UPS systems with fully redundant electrical distribution to the equipment racks, a new standby generator system with separate electrical distribution; a new RDC cabinet in WCDC and provide A/B power to each rack; and provide A/B power from the new UPS system to all of the racks in BIX1 and BIX2. Role: Project Manager; Electrical Engineer **Currently awaiting construction start** | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 5. | (1) TITLE AND LOCATION (City and State) ADOC HVAC System Replacement at Six Prisons, Various Locations, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2015 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE MPE design for replacement of HVAC Systems to convert currently Evap Cooled Spaces to Air Conditioned Spaces at six prison/secured facility locations throughout the State. These locations include: Lewis Stiner Unit (15,208 SF), Lewis Barchey Unit (15,208), Perryville Lumley Yard (35,435 SF), Eyman Meadows Health Unit (11,185 SF), Tucson Manzanita Health Unit (3,915 SF) and Florence South Health Unit (7,500 SF). Role: Electrical Engineer **Project is ongoing** | <input checked="" type="checkbox"/> | Check if project performed with current firm |



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4. Resumes of Key Personnel Proposed for this Contract (Complete one Section 4 for each key person.)

| | | | |
|---|---|--|----------------------------|
| a. NAME William Schubert | b. ROLE IN THIS CONTRACT Certified Plumbing Designer | c. YEARS EXPERIENCE | |
| | | 1. TOTAL 33 | 2. WITH CURRENT FIRM 14 |
| d. LOCATION (City and State) Scottsdale, AZ | | | |
| e. EDUCATION (DEGREE AND SPECIALIZATION) Water Systems and Plumbing Design Certificate – 1983 New York University, School of Continuing Education – 1974 Rio Salado Community College – 1988 Paradise Valley Community College – 1990 | | f. PROFESSIONAL TRAINING - REGISTRATIONS Certified Plumbing Designer, #4839 | |
| g. OTHER PROFESSIONAL QUALIFICATIONS (Organizations, Awards, etc.) ASPE | | | |

H. RELEVANT PROJECTS

| | | | |
|----|---|-------------------------------------|--|
| 1. | (1) TITLE AND LOCATION (City and State) DPS Forensic Sciences Lab Chiller/Cooling Tower Replacement, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2013 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE MPE Engineering to increase the capacity of the existing DPS central plant in addition to connecting the two adjacent central plant chilled water supply/return piping provide better reliability to operation of both central plants. Role: Plumbing Designer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 2. | (1) TITLE AND LOCATION (City and State) Adobe Mountain School Housing Mechanical Piping Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2012 | Construction (if applicable) 2013 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Mechanical engineering design services for the replacement of existing heating hot water piping due to leaking in the existing piping and installation of new preinsulated welded steel heating hot water piping from the connections in the chiller plant throughout the facility to above grade piping connections at each building. Role: Plumbing Designer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 3. | (1) TITLE AND LOCATION (City and State) ADOA Data Center Upgrade, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2007 | Construction (if applicable) 2008 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE An existing raised floor area was converted to a new data center, with new split system computer room A/C units, condensing mounted on the roof. Plumbing work includes new floor sinks along with domestic water for humidification purposes. Electrical modifications include power to the new A/C units and power to the PDU's. The existing wet fire protection system was converted to a pre-action (dry) system Role: Plumbing Designer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 4. | (1) TITLE AND LOCATION (City and State) Adobe Mountain School Water Softener Replacement, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2014 | Construction (if applicable) 2014 |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Plumbing engineering for demolition of the existing water softener system and replacement with a new system. The existing water softener system has not operated for a number of years and is abandoned in place. It was reported that the domestic water heaters were being replaced prematurely due to extreme hard water conditions. Role: Project Manager; Plumbing Designer | <input checked="" type="checkbox"/> | Check if project performed with current firm |
| 5. | (1) TITLE AND LOCATION (City and State) Maricopa County West Courts Data Center and BIX Upgrades, Phoenix, AZ | (2) YEAR COMPLETED | |
| | | Professional Services 2015 | Construction (if applicable) |
| | (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Electrical and mechanical engineering services to prepare the engineering analysis and the design documents to upgrade the existing Maricopa County BIX Rooms and the West Courts Data Center (WCDC). Major mechanical systems upgrades included coordination of several maintenance activities; provide (1) 10 ton DX cooling unit in BIX1 and in BIX2; modifying the WCDEC cooling system by replacing the existing York units and providing a new 20 ton DX up-flow unit; and modifying the air distribution system to provide more consistent, reliable cooling. Role: Plumbing Designer **Currently awaiting construction start** | <input checked="" type="checkbox"/> | Check if project performed with current firm |



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

(Present no more than five (5) projects. Complete one Section 5 for each project.)

| | | |
|---|-------------------------------|-------------------------------------|
| a. TITLE AND LOCATION <i>(City and State)</i> ADOC HVAC System Replacement at Six Prisons, Various Locations, AZ | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2015 | CONSTRUCTION <i>(If applicable)</i> |

23. PROJECT OWNER'S INFORMATION

| | | |
|---|---|---------------------------------|
| c. PROJECT OWNER Arizona Department of Corrections | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$323,429 | e. TOTAL COST OF PROJECT N/A |
|---|---|---------------------------------|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
MPE design for replacement of HVAC Systems to convert currently Evap Cooled Spaces to Air Conditioned Spaces at six prison/secured facility locations throughout the State. These locations include: Lewis Stiner Unit (15,208 SF), Lewis Barchey Unit (15,208), Perryville Lumley Yard (35,435 SF), Eyman Meadows Health Unit (11,185 SF), Tucson Manzanita Health Unit (3,915 SF) and Florence South Health Unit (7,500 SF).
Tucson: The scope consists of replacement of the existing Energy Labs Evap Coolers with gas heat at buildings 5 and 6 in the Manzanita Health unit with new packaged air conditioning units with gas heat. The new units will be mounted on the ground on concrete pads. Reuse the existing supply and return air ductwork
Eyman Meadows: The scope consists of replacement of five existing United Metal Products evap coolers with gas heat at one building with new packaged air conditioning units with gas heat. The new units will be mounted on the ground on concrete pads. The existing ceilings are hard ceilings. The ceiling framing may be rusted so it may be necessary to replace the ceilings.
Florence South: The scope consists of removal of a ground mounted evap cooler and installation of a packaged air conditioning unit on a new concrete pad on grade. The building is the one indicated on the attached pdf. The existing ceilings are hard ceilings. The ceilings are to remain. New ductwork will be installed and will be exposed in the space below the ceilings similar to that in another building at this site.
Perryville Lumley: This is the women's prison and the inmates are in cells. The building is two stories. There are existing roof equipment wells containing evap coolers with ductwork located in a cavity between the roof and ceiling. There are also furnace units located in mechanical chases. It is anticipated that the existing evap coolers and furnace units will be removed and new air conditioning units will be ground mounted on concrete pads. New ductwork will be extended to the roof to reconnect to the existing ductwork feeding the cells from above. It will be necessary to provide some type of furring around the new ductwork. The details still need to be worked out for this site. It is anticipated that the existing ceilings will remain.
Lewis Stiner and Barchey: The scope at this site consists of two identical buildings in different units at the same prison complex. The scope consists of replacement of three existing roof mounted United Metal Products evap coolers with gas heat with new air conditioning units with gas heat. Ductwork is exposed inside the buildings but will need to be replaced in the same locations. It will be necessary to add return air ductwork. The existing ceilings are hard ceilings and are to remain.
ESD is acting as the project manager, with Arrington Watkins Architects and Pangolin Structural as consultants.**Project is ongoing**

| | | |
|--|-------------------------------|-------------------------------------|
| a. TITLE AND LOCATION <i>(City and State)</i> Maricopa County West Courts Data Center and BIX Upgrades, Phoenix, AZ | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2015 | CONSTRUCTION <i>(If applicable)</i> |

23. PROJECT OWNER'S INFORMATION

| | | |
|-------------------------------------|---|---------------------------------------|
| c. PROJECT OWNER Maricopa County | d. ORIGINAL BUDGET/NTE AMOUNT OF PROJECT \$240,400 | e. TOTAL COST OF PROJECT \$259,133 |
|-------------------------------------|---|---------------------------------------|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
Electrical and mechanical engineering services to prepare the engineering analysis and the design documents to upgrade the existing Maricopa County BIX Rooms and the West Courts Data Center (WCDC). Major electrical systems upgrades included providing a new UPS Room with redundant (2N) UPS systems with fully redundant electrical distribution to the equipment racks, a new standby generator system with separate electrical distribution; a new RDC cabinet in WCDC and provide A/B power to each rack; and provide A/B power from the new UPS system to all of the racks in BIX1 and BIX2. Major mechanical systems upgrades included coordination of several maintenance activities; provide (1) 10 ton DX cooling unit in BIX1 and in BIX2; modifying the WCDEC cooling system by replacing the existing York units and providing a new 20 ton DX up-flow unit; and modifying the air distribution system to provide more consistent, reliable cooling. Budget increases were the result of owner requested changes. ESD acted as the project manager, with Dick and Fritsche Design Group, PK Associates, and DSI Data Specialties as consultants.
Currently awaiting construction start



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| | | |
|--|-------------------------------|---|
| a. TITLE AND LOCATION <i>(City and State)</i> Adobe Mountain School Housing Mechanical Piping Upgrades, Phoenix, AZ | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2012 | CONSTRUCTION <i>(If applicable)</i> 2013 |

23. PROJECT OWNER'S INFORMATION

| | | |
|--|------------------------------------|---------------------------------|
| c. PROJECT OWNER Arizona Department of Administration | d. DOLLAR AMOUNT OF PROJECT N/A | e. TOTAL COST OF PROJECT N/A |
|--|------------------------------------|---------------------------------|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
 The existing underground heating hot water piping was fiberglass with solvent welded joints and was leaking below grade. This project consisted of mechanical engineering design services for replacement of existing heating hot water piping and installation of new preinsulated welded steel heating hot water piping from the connections in the chiller plant throughout the facility to above grade piping connections at each building.

| | | |
|--|-------------------------------|---|
| a. TITLE AND LOCATION <i>(City and State)</i> ADOA State Hospital Power Plant & Dietary Building Emergency Generator, Phoenix, AZ | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2013 | CONSTRUCTION <i>(If applicable)</i> 2014 |

23. PROJECT OWNER'S INFORMATION

| | | |
|--|--|---|
| c. PROJECT OWNER Arizona Department of Administration | d. DOLLAR AMOUNT OF PROJECT \$1,700,000 | e. TOTAL COST OF PROJECT \$1,700,000 |
|--|--|---|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
 Electrical Engineering for a new emergency generator back up power system that will support the Arizona State Hospital chilled water central plant and the Dietary Building. The project included full design and construction administration services including site verification of affected electrical systems. ESD coordinated with the electric power utility company for modifications to the existing service entrances to the affected buildings. ESD also provided engineering support for startup and commissioning of the new emergency backup systems in conjunction with the contractor and equipment suppliers. Specifications were included describing commissioning requirements and ESD reviewed the procedures and witnessed testing to ensure the systems operate as designed.

| | | |
|---|-------------------------------|---|
| a. TITLE AND LOCATION <i>(City and State)</i> DPS Forensic Sciences Lab Chiller/Cooling Tower Replacement, Phoenix, AZ | b. YEAR COMPLETED | |
| | PROFESSIONAL SERVICES 2013 | CONSTRUCTION <i>(If applicable)</i> 2013 |

23. PROJECT OWNER'S INFORMATION

| | | |
|--|--|---------------------------------------|
| c. PROJECT OWNER Arizona Department of Administration | d. DOLLAR AMOUNT OF PROJECT \$139,000 | e. TOTAL COST OF PROJECT \$139,000 |
|--|--|---------------------------------------|

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)
 MPE Engineering to increase the capacity of the existing DPS central plant in addition to connecting the two adjacent central plant chilled water supply/return piping provide better reliability to operation of both central plants. During the programming phase, ESD evaluated the space and electrical power capacity in respect to the proposed new chillers and installed the largest chillers possible to meet the cooling demand. Our objective was to function in a partnership with the Arizona State Procurement Office, while working in association with other design and construction team members, so as to fulfill the State's needs. Our scope included:

- Removal of two existing 200 ton chillers and installation of two new larger VSD chillers in central plant.
- Removal of three existing cooling towers and addition of three new cooling towers.
- Review of and size the capacity of the new chiller and cooling towers with ADOA and facilities personnel to determine the appropriate size to meet owner requirements and needs.
- Modification to cooling tower piping.
- Addition of tower filtration system.
- Modification to chilled water piping inside the central plant.
- Addition of new chilled water and condenser water pumps.
- Modification to control system.
- Connection of chilled water piping between two central plants.
- Review existing condenser water treatment setup and any modification required for upgrade.
- New concrete pad for chillers and modification to cooling tower support.
- New chemical treatment system and addition of filtration in chilled water piping.
- Modification to controls and addition of control valves and VFDs to pumps and towers as needed.



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6. ADDITIONAL INFORMATION

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

Energy Systems Design is a client-focused team of mechanical, plumbing and electrical engineers. We are committed to creative and technically innovative solutions, and sustainable engineering design for every project.

Established in 1988, we have been providing exemplary engineering design for over two decades. Our goal is to meet the Owner's functional needs, and provide the most cost beneficial designs and solutions, while representing the best interest of the Owner. We utilize a project management approach, with company principal leadership, and promote a collaborative team environment, which includes Owner's representation (both functional and management), architectural and engineering design team members, construction managers, subcontractors, etc.; whoever is appropriate for each specific project.

ESD is a member of the US Green Building Council and the majority of our Engineering Staff are LEED Accredited Professionals.

Our consistently high level of engineering services has resulted in long-term, on-going, successful relationships with building Owners, Architects, Governmental Agencies, Universities, School Districts, Developers, and Contractors.

Services we provide

- MPE Systems Engineering
- Lighting Design
- Building Energy Analysis/Simulation
- Energy Audits
- Building Assessments/Due Diligence
- Systems Evaluations/Life Cycle Analysis
- BIM/3D Modeling (Revit/MEP)
- Thermal/Airflow Modeling
- Federal/State Incentive Evaluation/Application
- Test and Balance
- Daylighting Design
- Photovoltaic/Solar Design
- Code Studies
- Fire Protection
- LEED Consulting
- LEED Energy Analysis
- LEED Commissioning
- Commissioning

ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

| | | |
|----|--|-----|
| a. | Percentage of Total Work Attributable to State, Federal and Municipal Government Work: | 15% |
| b. | Percentage of Total Work Attributable to Non-Government Work: | 85% |

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: G. Monte Sturdevant

Date: 12/18/2015

Name: G. Monte Sturdevant

Title: President