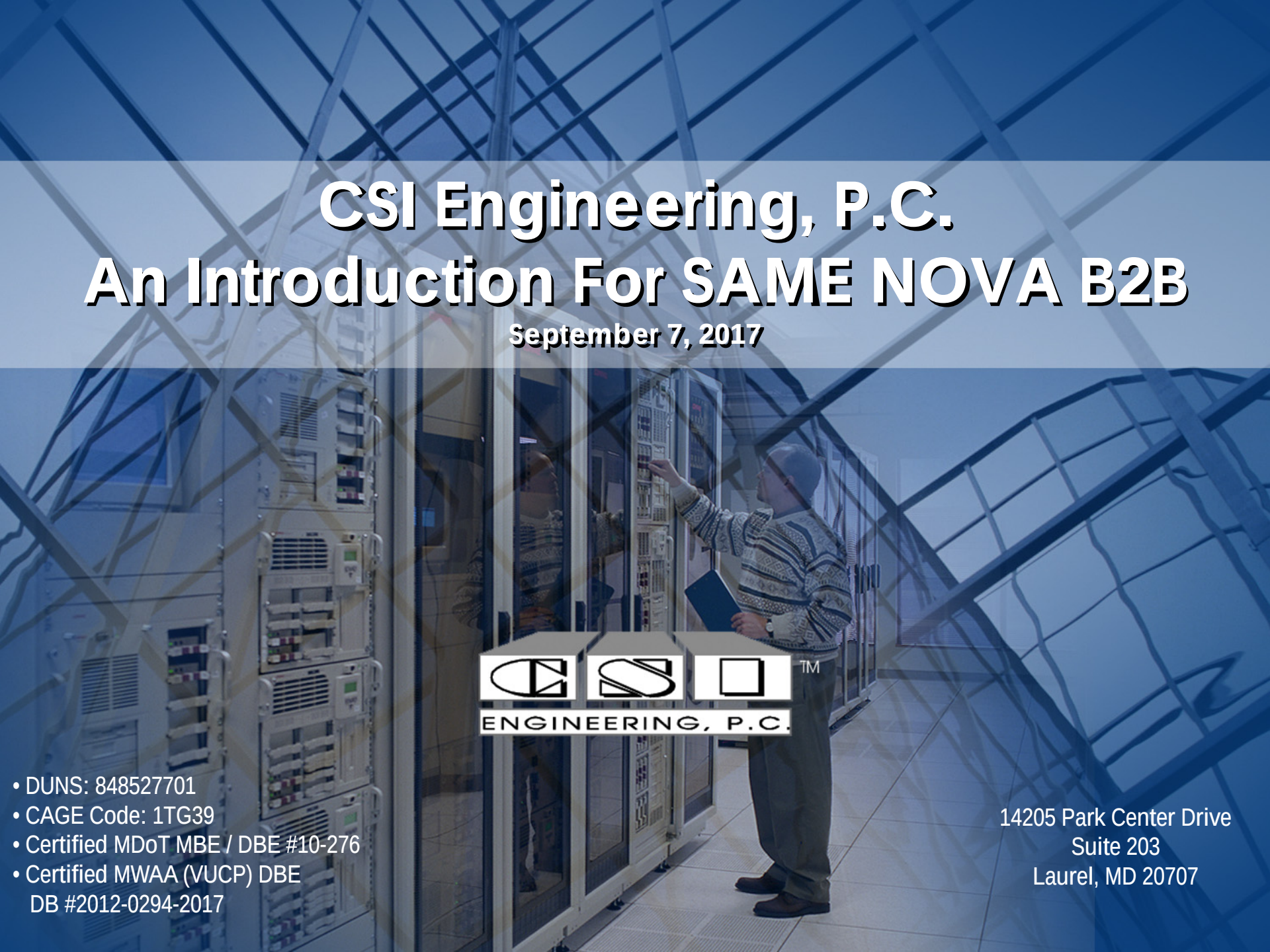
CSI Engineering, P.C.
An Introduction For SAME NOVA B2B

September 7, 2017



CSI ENGINEERING, P.C.™

- DUNS: 848527701
- CAGE Code: 1TG39
- Certified MDoT MBE / DBE #10-276
- Certified MWAA (VUCP) DBE
  DB #2012-0294-2017

14205 Park Center Drive
Suite 203
Laurel, MD 20707

CSI Engineering Overview

- CSI Engineering, P.C. (CSIE), founded in 1987, is a small minority-owned business fulfilling the demanding needs of numerous government and private sector clients.
- The firm is a multi-disciplinary engineering design and technology services company focused on mechanical, electrical and communication infrastructure design, program management and commissioning for mission-critical data centers and other projects.
- CSIE has successfully completed numerous data centers/infrastructure projects, ranging from technology infrastructure requirements analysis to the design/build of technology facilities for multi-site, multi-phase, and multi-year projects.

Who We Are

- CSI Engineering is a very unique company in that not only are we a minority owned DBE/MBE but we also have the high level specialized skills and experience to design complex mission critical projects. We have completed Electrical, Mechanical, and Communications design work for Data Centers, NOCs, Telecom Centers, and Co-Location Centers, including 6 Sigma and Tier 4 data centers. Our engineers have performed Commissioning Services on many of the facilities that we have designed.
- Additionally we have experience in Transit Projects where we specialized in Station Design, Power Substations, Traction Power (TPS) and Overhead Catenary (OCS) as well. Other areas of experience include hospitals & health care centers and medical centers, laboratory and education centers, Science and Technology facilities, R&D facilities, schools & Higher Education facilities. Our scopes were generally production of Construction Documents for full scale projects as well as Moves/Adds/Changes and redesign/renovations.
- CSIE is an Engineering and Architectural firm located in Laurel, Prince Georges County, Maryland. We are a small 10 person firm operating for over 30 years as a DBE & MBE.

CSI Engineering, P.C. Milestones

- 2012 – CSIE completes Engineering and CA services for Energy Project at the Center for Medicare and Medicaid Services in Woodlawn, MD; part of GSA's High Performance Green Building Initiative under ARRA Spending Plan
- 2010 – CSIE is certified as a Minority Business Enterprise
- 2009 – CSIE becomes member of U.S. Green Building Council, 9 LEED Certified AP Engineers
- 2007 – CSIE is selected as Firm of the Year by the Prince George's County Technology Council
- 2004 through 2007 – CSIE named among the 50 Fastest Growing technology companies in Maryland by Deloitte & Touche

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CSIE Services Offerings

DESIGN ENGINEERING

- MEP Engineering
- Site Assessment & Feasibility Studies
- Continuous Availability Reviews
- Fault Tolerance & Concurrent Maintainability Analysis
- Critical, Essential & Life Safety Power System Design
- Mechanical System Diagnostic Reviews
- Sustainable Design
- Fire Suppression/Alarm Systems
- Physical Security Systems
- Construction Management

PROGRAM MANAGEMENT

- Project Estimation
- Program Planning, Monitoring & Evaluation
- Policy & Budget Analysis
- Value Engineering
- On-Site Technical Support
- Integrated Logistics Support

COMMISSIONING

- Act as Owner's Commissioning Authority
- Coordination of System Documentation
- Factory Witness Testing
- Equipment Startup
- Performance Testing
- Sub-systems testing
- Integrated Testing
- Training

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Experience with Tier III and Tier IV Data Centers

Client Name	Completion Date	Contract Value	Data Center Size	Tier Class	Raised Floor Size	Permanent Power Electrical Source (MVA)	Emergency Generator Total Power (KW	HVAC Capacity (tons)
United Parcel Service	1996	$1,200,000	120,000 sq. ft.	IV	65000 sq. ft.	2 x 20 MVA @ 25 KV	6 x 1600 KW	4000 tons with 65,000 gal of chilled water storage
Capital One, Glen Allen, VA	1998	$1,250,000	190000 sq ft	III	40,000 sq ft	4 x 2.5 MVA	5 x 1500 KW	4 x 800 tons
Sallie Mae	1999	$800,000	5500	III	30,000 sq. ft.	2 x 2.5 MVA	4 x 1800KW	500 tons
Equant Corp. (formerly Global One)	2003	$2,800,000	average size = 20,000 sq. ft.	III	average of 15,000 sq. ft.	2 to 5 MVA	600 to 3,000 KW	120 to 240 tons
Essex Corporation	2005	$320,000	35,000 sq. ft.	III	15,000 sq. ft.	3.5 MVA	2000 KW	120 tons
COPT/U.S. Army Corps of Engineers, Undisclosed Project	2005	$3,200,000	40,000 sq. ft.	III	25,000 Sq. ft.	3.5 MVA	6600 KW	500 tons
Smithsonian Institute	2007	$400,000 (design portion)	40,000 sq. ft.	III	25,000 sq. ft.	3.5 MVA	2 x 1200 KW	500 tons
JP Morgan Chase - CDC1	2009	$181,900 *	240, 000 sq. ft.	IV	90,000 sq. ft.	50 MVA	8 x 20 JW	6000 tons
JP Morgan Chase - CDC2	2009	$134,900 *	240,000 sq. ft.	IV	90,000 sq. ft.	50 MVA	8 x 20 KW	6000 tons

* = Study portion

Mechanical and Electrical Design of Tier III and Tier IV Data Centers

- United Parcel Service, Alpharetta, GA
- United Parcel Service, Mahwah, NJ
- Capital One Operations Center
- Equant Corp. (formerly Global One)
- Smithsonian Institute
- Essex Corporation
- Sallie Mae
- Bank of America
- Deluxe Electronics
- Baltimore Technology Park
- COPT/U.S. Army Corps of Engineers, Undisclosed Project
- American International Group Data Center
- Federal Deposit Insurance Corp.
- UJB Financial Center
- US Customs Service
- VISA, USA
- First American Data Center
- Quantum Chemical Building
- Reliance Insurance Co.
- Securities & Exchange Commission
- Patuxent River Naval Air Station
- MCI Telecommunication
- Rollins, Hudig, Hall
- Blockbuster Entertainment
- Berkeley Federal Bank & Trust
- NationsBank, TX
- Colo.com data centers at Medford, Massachusetts and at Hudson, St. N.Y.
- QWEST Communication facility, Raleigh N.C.

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United Parcel Service - Atlanta, GA

This project was United Parcel Services' new Tier IV data processing center in Forsyth County, Georgia. CSIE prepared a Requirements Analysis which outlined the architectural and engineering design concepts for the proposed data processing center.

Project Highlights

•120,000 sf facility (60,000 sf of raised floor, 60,000 sf mechanical/electrical support)

•Single story precast concrete wall panel and roof system designed to withstand a wind load of 200mph

•32" raised floor system with a 28" depressed slab for mechanical piping

•Absorption and centrifugal chiller systems with capacities of up to 3,000 tons of Cooling

•Masonry shell cooling towers 700,000 gallon stratified chilled water storage tank

•(3) Three double-redundant uninterruptible power supply systems, each with (2) two paralleled subsystems capable of paralleling up to (5) five 750 kVA modules (3) Three double-redundant uninterruptible power supply systems, each with (2) two paralleled subsystems capable of paralleling up to (5) five 750 kVA modules

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Management Plan

- *Executive Leadership* – The *Principal-In-Charge* will provide leadership, direct lines of communication, allocate resources, and provide timely decision making necessary to ensure the success of the contract.
- *Project Management* – The *Project Manager* will provide the overall coordination and adherence to procedures to ensure a successful project.
- Collaboration and Partnering – In an effort to improve communications and understand project requirements, work sessions will be held on all project issues.
- Quality Assurance - Quality Assurance is critical to the success of any project. The Project Manager along with the key personnel in each discipline will perform quality assurance review of the construction documents prior to each design submission.
- Quality Control – *Design Quality Control Manager* will ensure adherence to the QA/QC structure plan and procedures critical for maintaining design quality control and successful project completion.

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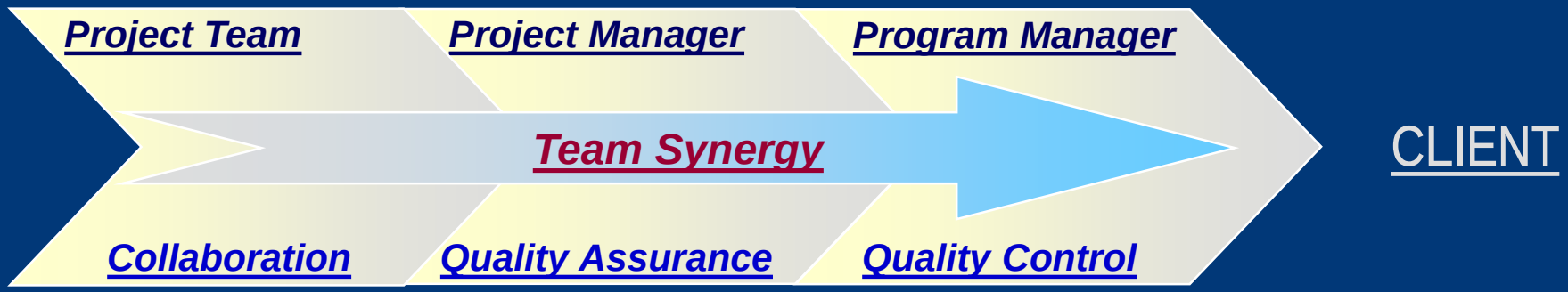
Management Approach



- ✓ Direct lines of communication.
- ✓ Project team who has experience working together, following CSIE project standards and procedures critical for maintaining Quality Control.
- ✓ Quality Assurance review of all documentation and progress throughout all phases of project.
- ✓ Project team meetings with the user to understand scope, schedule and budget.
- ✓ Multi-disciplinary meetings with all team members to ensure coordination.

Clear and Consistent Communication

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Clients
Government Sector

US Army Corps of Engineers®

GSA

Department of Defense

Department of Energy

Department of Transportation

The Department of the Treasury

Department of the Navy

Smithsonian

Human Genome Sciences

National Geospatial-Intelligence Agency

Social Security Administration

Department of Labor

Federal Aviation Administration

FDIC

CDC Centers for Disease Control and Prevention

Department of Energy Federal Energy Regulatory Commission

U.S. Securities and Exchange Commission

U.S. Customs Service

United States Coast Guard

Department of Veterans Affairs

U.S. Air Force

Scientiae Inter Arma Spiritus

NASA

National Institutes of Health

Department of Homeland Security

Department of Justice Federal Bureau of Investigation

Department of Health & Human Services

Metropolitan Washington Airports Authority

CSO Engineering, P.C.™

Clients
Private Sector

CSO ENGINEERING, P.C.™

Recognition and Commendation

"This letter offers the Smithsonian Institute's recognition and appreciate for the high degree of professionalism displayed by CSI Engineering (CSIE) during the design, design-build and renovation process of the Smithsonian Institute's new Herndon, VA Data Center. We greatly appreciate CSIE's commitment to excellence and the ability to overcome the numerous hurdles involved with the engineering, demolition, renovation and construction of our state of-the-art mission critical facility".

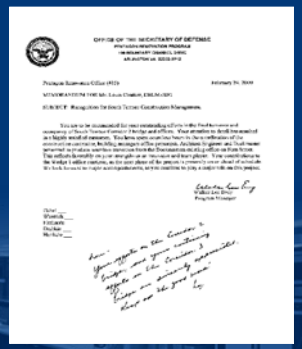
-Smithsonian, Construction Division

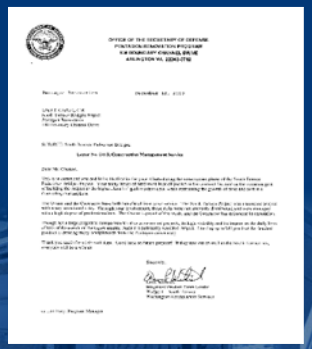
"Over the past several years, we have had a number of contractual relationships with CSIE and in every case have found them to be professional and extremely easy to work with, particularly with fast moving requirements in support of Homeland and National Security initiatives. Without CSI Engineering's support and professionalism, we would likely have not met our objectives."

-Program Manager - U.S. Army Corps of Engineers

"CSIE's focus on mission critical facilities, extensive data center experience, superior design capability, and dedications to customer service were the key factors in our decision to select them for the UPS Data Center project in Atlanta, GA. This well known 172,000 s.f. 6-Sigma serves as living proof."

-Dave Sjogren – Strategic Facilities Inc., Principal
(Former Manager, United Parcel Service)





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