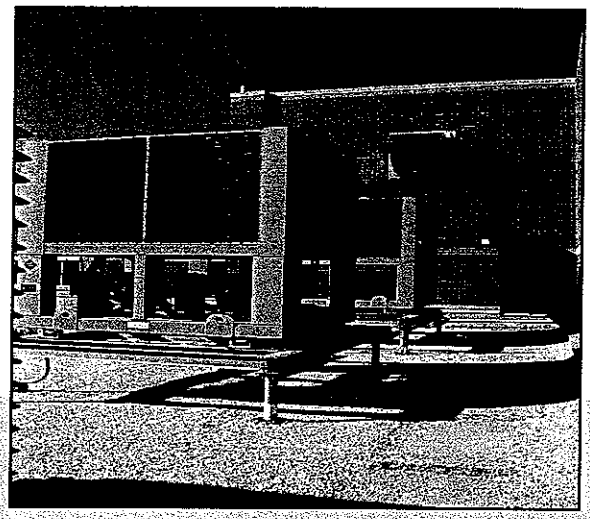
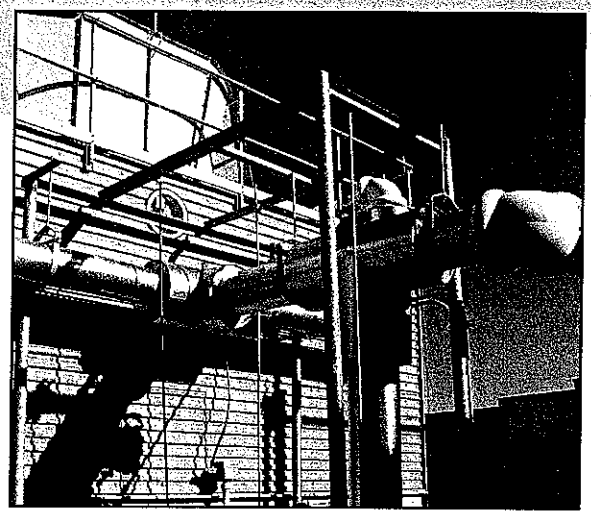
KCI
TECHNOLOGIES



Statement of Qualifications

COMMISSIONING SERVICES

RFP# RJC2016

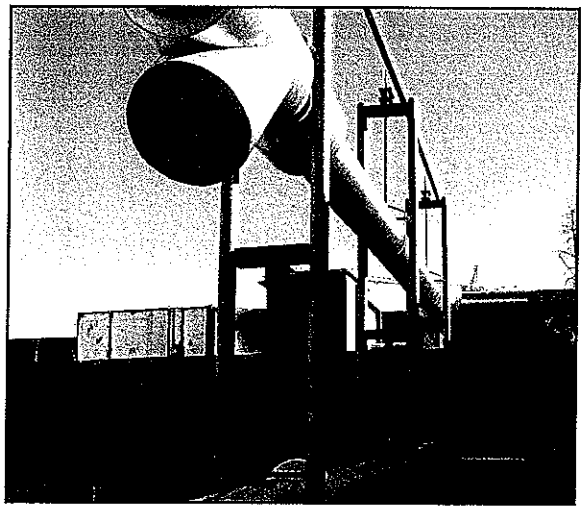


Prepared for

West Virginia Regional Jail and Correctional Authority
Kenneth Honey Reubenstein Center for Youth
State of West Virginia

Prepared by

KCI Technologies
July 2, 2008



KCI

ENGINEERS • SURVEYORS• SCIENTISTS • CONSTRUCTION MANAGERS

240 SCOTT AVENUE | SUITE 240 | MORGANTOWN, WV 26508 | 800-572-7496 | WWW KCI COM

July 2, 2008

Mr. John Abbott
State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Subject: RFP # RJC2016 Regional Jail and Correctional Authority, Kenneth Honey Rubenstein Center for Youth Commissioning Services

Dear Mr. Abbott

KCI Technologies, Inc. (KCI) is pleased to submit our qualifications to the State of West Virginia for commissioning services for the Kenneth Honey Rubenstein Center for Youth

As our qualifications will demonstrate, the KCI team KCI has provided commissioning & LEED consulting services to school systems, private clients as well as U.S federal agencies over the years, including: Washington DC Public Schools, Harford Community College, Fort Meade, MD, the US Army Corps of Engineers and numerous others This work effort has encompassed many types of projects, both large and small

This proposal highlights an impressive record of performing work for similar projects as requested by the RFP KCI offers an experienced staff to devote to this project KCI maintains a local office in Morgantown, West Virginia to provide prompt response to your needs. KCI's offices in Pittsburgh, PA and our headquarters in Hunt Valley, MD offer additional expert staff, ready to be on a project site in a timely manner. The key personnel identified in the attached proposal will be committed to any project assigned under this contract for the duration of the assignment

KCI's corporate history demonstrates industry leadership in the application of advanced technology to the wide variety of projects successfully completed by the firm. The KCI Team has been selected to provide the City of Hampton with an immediately available, highly qualified, experienced staff to provide professional engineering services, as well as the critical technical support services required under this contract Work required will be performed with the highest degree of coordination, efficiency, and quality

Enclosed, you will find our proposal which demonstrates our qualifications and experience relevant to your project. We thank you for this opportunity to submit our proposal for your consideration We look forward to your favorable response and the opportunity to progress to the next phase of your selection process. Once short listed, we stand ready to meet with you on site and review the proposed needs, and then sit down with you and go into more detail how KCI is the firm that you want to provide the commissioning services necessary for your campus Upon review of this letter of interest, we trust you will find our proposed staffing, qualifications, and experience commensurate with your requirements.

Very truly yours,

Franklin R. Snyder, PE
Vice President

Mr. Snyder's Direct Dial 410-316-7926
Mr. Snyder's Fax 410-316-7817
Email franklin.snyder@kci.com

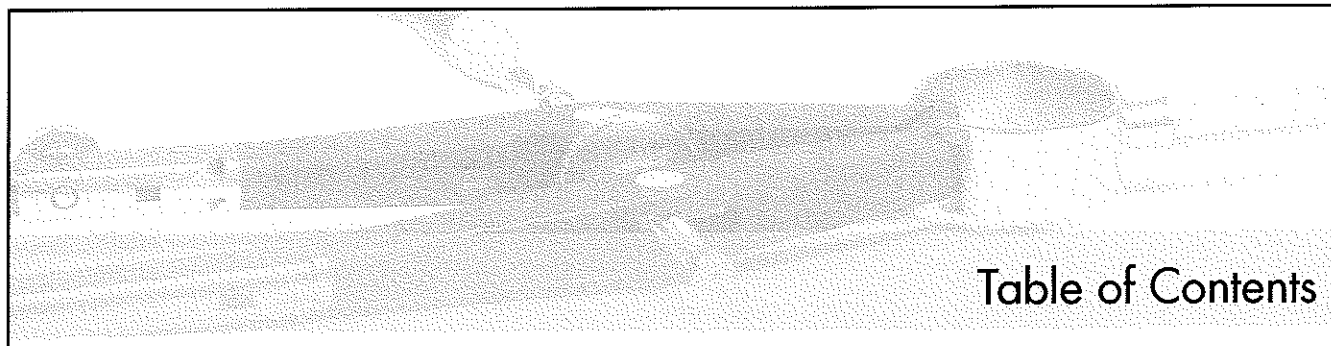


Table of Contents

KCI TECHNOLOGIES

www.kci com

FIRM INFORMATION

Early Corporate History- KCI Technologies, Inc. traces its corporate history to a Baltimore firm founded in 1955. In the early-1970s, the firm-along with a number of other privately held engineering companies-joined Kidde, Inc., and became known in 1978 as Kidde Consultants, Inc During the 1980s, Kidde Consultants opened additional offices in Maryland, Delaware, Virginia, and Pennsylvania.

Employee Ownership- In August 1987, Hanson Trust, PLC, of Great Britain-a manufacturing company with diversified holdings, worldwide-purchased Kidde, Inc. Soon after, Kidde Consultants initiated negotiations with Hanson for an employee buyout, which was completed in December 1988, creating Maryland's largest employee-owned company. The firm officially changed its name to KCI Technologies, Inc., in 1991 and relocated its headquarters to Hunt Valley, Maryland in 1993.

With revenues of $142 million in 2007, KCI Technologies is ranked 80th among the top consulting engineering firms in the country by the *Engineering News Record*. Today, the employee-owned, multi-disciplined engineering firm employs more than 1000 people operating in 28 offices in nine states--Delaware, Florida, Georgia, Maryland, North Carolina, Ohio, Pennsylvania, Virginia, and West Virginia-as well as the District of Columbia.

Technical Expertise- KCI's professional engineers, planners, scientists, surveyors, construction managers, and support personnel offer technical expertise in civil, structural, transportation, environmental, hazardous waste, mechanical, electrical, telecommunications, and soils engineering; land planning and landscape architecture; geology; hydrology; ecology; surveying; as well as construction management and inspection.

The professional staff is supported by CADD (Computer-Aided Drafting and Design) designers, BIM (Building Information Modeling) designers, GIS (geographic information systems) experts, and database analysts, programmers, and technicians; as well as state-of-the-art computer, field, and lab equipment. KCI's computer network supports the firm's core production systems, including BIM, CADD, GIS, three-dimensional visualization/animation tools, document processing and desktop publishing, and project management. The firm's integrated approach to automating design, drafting, documentation, and presentation minimizes costs, facilitates coordination among engineering disciplines, and expedites the production of high-quality products.

KCI Technologies, Inc. is an active member of the U.S. Green Building Council and the Building Commissioning Association.

A. STATEMENT OF THE FIRM'S UNDERSTANDING OF ALL FEDERAL AND STATE REGULATIONS REGARDING CONSTRUCTION PROJECTS

KCI Technologies, Inc. has a thorough understanding of all federal and state regulations regarding construction projects in the State of West Virginia. As our experience will demonstrate, KCI's engineers and commissioning agents are adept at working with a variety of federal, state and local agencies from design through the construction process.

B. NARRATIVE OF UNDERSTANDING OF GENERAL MEP SYSTEMS FOR JUVENILE SERVICES FACILITY

KCI understands the mechanical, plumbing, and electrical systems associated with secure facilities. KCI has designed these systems for clients at the Maryland Department of Public Safety and Correctional Services; the Federal Bureau of Prisons; the Pennsylvania Department of Corrections; and the North Carolina Division of Prisons. The mechanical, plumbing, and electrical systems within a Juvenile Services facility focus on security, reliability of operation, redundancy, and maintainability. Frequently systems are centralized for ease of operation and access is restricted for security reasons

C. STATEMENT OF FIRMS EXPERIENCE IN COMMISSIONING PROCESS AND COMMISSIONING TASKS

KCI has a complete understanding of the commissioning process and has performed many different commissioning tasks for various project types and clients. Typically, KCI begins commissioning during the design phase by conducting a review of the project documents to verify that the systems are adequately detailed and designed to the owner's project requirements. In addition, KCI can write commissioning specifications to address the contractor requirements during construction. KCI will develop a commissioning plan to guide this process through design and into the construction phase. During construction, KCI will review shop drawings of commissioned equipment, review startup reports performed by the contactors, develop functional tests for use during equipment testing, document functional performance testing, develop a commissioning report, verify that owner training has been completed, and review O&M manuals. In support of these objectives, KCI will conduct meetings and document and track commissioning correspondence.

D. NARRATIVE INDICATING UNDERSTANDING OF OPERATIONS, SECURITY AND FUNCTIONAL REQUIREMENTS OF MODERN JUVENILE FACILITIES

KCI exhibited our experience in modern juvenile facilities on a 24-bed facility in Washington County, MD and has extensive experience with modern correctional facilities through our current on-call contract with the Federal Bureau of Prisons. KCI performed the mechanical, electrical, plumbing, fire protection, security, and telecommunication engineering services for this design/build facility. Equipment included: a chiller, pumps, oil-fired boilers, air handling units, grease interceptors, electrical ductbanks, emergency power generator, automatic transfer switches, CCTV, PA system, watchtower communications, and duress signal systems.

G. FIRM'S ABILITY TO DO THE WORK IN-HOUSE

KCI has the necessary knowledge and available workforce to perform the commissioning of The Kenneth "Honey" Rubenstein Center for Youth in house. Our staff from Morgantown, WV and Pittsburgh, PA will manage the project and have a resource pool in Hunt Valley, MD, Harrisburg, PA, and Raleigh, NC from which to draw additional talent if required.

E. SIZE, NATURE AND STATUS OF MAJOR COMMISSIONING PROJECTS

CORE RENOVATION COMMISSIONING OPEN END
FORT GEORGE G. MEADE, MD
STATUS: COMPLETE PENDING FINAL REPORTS
KCI provided commissioning services for six (6) building core renovations, each between 30,000 and 45,000 SF of office space – totaling over 200,000 SF. The "core renovations" included complete architectural, mechanical, electrical, and life safety renovations including demolition of all existing features.

Commissioning Services included design review for maintenance, accessibility, and conformance to design intent; authoring of commissioning specifications; development of the commissioning plan; construction review with a focus on maintenance and conformance to contract documents; authoring of functional test procedures developed with the contractor; verification and documentation of functional testing performed by trade contractors in our presence; and the compilation of the final commissioning report.

Typical equipment includes large built-up air handling units, VAV boxes, radiant heating panels, chilled water piping systems, computer room air conditioning units, fan coil units, steam stations, hot water converters, variable frequency drives, piping and ductwork systems, UPS systems, electrical distribution equipment, emergency lighting, preaction and wet type sprinkler systems and fire alarm systems.

COMPUTING CENTER CHILLER COMMISSIONING
FORT GEORGE G. MEADE, MD
STATUS: COMPLETE
KCI provided commissioning services for a specialized chilled water loop at the 145,000 SF Center for Computing Sciences. This loop is comprised of an 800-ton, year round chilled water system, including (3) air-cooled chillers, (3) pumps, variable frequency drives, DDC controls, UPS backup, and terminal equipment serving computing technical load. The project included the development and execution of a commissioning plan and functional test procedures. A review of the equipment installation was conducted to verify compliance with manufacturer recommended procedures and engineers contract documents. The controls sequence of operation was thoroughly tested and inconsistencies were documented and reviewed with the owner and engineers for resolution. An issue log was created to track and manage these conflicts.

As the acting commissioning agent representing the Government, KCI initiated and conducted a systematic process of documentation and functional testing of the systems involved. The first step in the process was for KCI to review the contract documents to gain a thorough understanding of the design intent, with particular concentration on the control logic and sequence of operations. Working in conjunction with the design team, the sequence of operations was finalized and documented which allowed KCI to write and implement a commissioning plan.

As part of the commissioning plan, KCI designed and authored multiple site-specific functional testing requirements. These tests provided system check-out during dynamic conditions under various modes of operations to verify actual system operations against system design intentions. Upon completion, a report was written to document the plan, testing procedures, results, and corrective actions taken. This commissioning effort resulted in a fully documented, verified, and operational system comprised of many separate components operating seamlessly in a complex arrangement.

9800C CHILLER REPLACEMENT
FORT GEORGE G. MEADE, MD
STATUS: DESIGN PHASE COMPLETE
KCI Technologies served as the design phase commissioning agent for this complex chiller replacement project. The critical mission of the building and chilled water system requires reliable and sustained operation of the chiller plant which includes (6) chillers totaling 6,000 tons of chilled water and encompasses approximately 11,000 square feet The chillers and associated pumps, installed in the mid-1980's, have reached the end of their serviceable life and are operating with banned refrigerant media. The chillers and pumps are being replaced in largely the same mechanical space, however at no time can the effective chilled water capacity drop below 4,000 tons Therefore, coordination and constructability are at a premium to maintain sufficient operation while demolishing piping and equipment throughout the space In support of the chilled water operation, pumps, piping, insulation, motor control centers, ventilation systems, and room air conditioning must also be renovated while still providing service to the space

KCI developed a design phase commissioning statement and conducted a kick-off meeting with the owner and A/E design team to discuss the owners project requirements, the commissioning agent's role within the project, and the project design schedule As the design phase commissioning agent, KCI reviewed the contract drawings, specifications, and project manual at the 50%, 75%, 95%, and "For Construction" submission phases of the design. With only a two-week window for review and documenting of any deficiencies, KCI was able to compartmentalize various pieces of the design for independent review by several engineers. By managing this effort, KCI was able to meet an aggressive schedule while still performing quality commissioning based review

KCI was able to identify over 200 commissioning related issues in the mechanical, electrical, and fire protection disciplines. KCI provided the client with comments which were specific as to the deficiency citing widely accepted, professional sources to substantiate each comment. KCI has found this approach of substantiation to be beneficial by eliminating designer preference and allowing the A/E design team to fully consider each comment on its merits Comments on this project included: missing design data in the schedules and project manual; inadequate warranty and training requirements in the specifications; lack of coil piping details; automated building controls sequence of operation issues; invalid fire alarm matrix; improper coordination between mechanical and electrical design; and inadequate maintenance clearance for pulling chiller tubes among others.

ABERDEEN HALL RENOVATION/EXPANSION COMMISSIONING
BEL AIR, MD
STATUS: DESIGN PHASE COMPLETE, CONSTRUCTION PHASE IN PROGRESS
KCI Technologies provided complete design and construction phase commissioning of the mechanical and electrical systems for the 22,741 SF renovation & 20,000 SF addition to Aberdeen Hall – the Science education building at Harford Community College. The project integrated commissioning of several building systems including (4) boilers, (3) rooftop air handling units, (6) pumps, (6) fume hoods, (6) variable frequency drives, terminal equipment, DDC control and energy management system, motor control center, and emergency generator backup.

This project will be constructed in three phases adding additional complexity to system startup, turnover and the functional testing. Our commissioning agent will work with the design team and owner to review the contract documents at various stages of the design process. The project will include the development and execution of a commissioning plan, specifications and functional test procedures. A review of the equipment installation will be conducted to verify compliance with manufacturer recommended procedures and the engineer's contract documents The controls sequence of operation was thoroughly tested and inconsistencies will be documented and reviewed with the owner and engineers for resolution. An issue log will be created to track and manage these conflicts. The conducting and documentation of the owner training will be the final active commissioning process followed promptly by the submission of the final commissioning report and commissioning notebook.

METER INSTALLATIONS
FORT GEORGE G. MEADE, MD
STATUS: CONSTRUCTION PHASE IN PROGRESS
KCI provided commissioning services for the installation of approximately 100 power meter installations on existing, secondary, main-tie-main substations The secondary substations serve multiple areas consisting of various office space and computer technical loads, as well as, UPS modules and maintenance bypass systems The metering systems are comprised of (3) current transformers, (2) potential transformers, an ION power meter, primary and secondary fuse blocks and fuses, shorting blocks and interconnection wiring. As part of this project, KCI performed commissioning design review of the meter installations; authored a commissioning plan; reviewed equipment shop drawings; conducted field construction inspections; directed and documented functional performance testing of the power meters to verify compliance with manufacturer recommended procedures, applicable codes and regulations; and compiled a final report documenting the project As inconsistencies were found, they were documented and reviewed with the owner and contractor for resolution. KCI created an issue log to track and manage these inconsistencies

At the onset of the project, KCI, as the acting commissioning agent representing the Government, performed a commissioning focused review of the construction documents and provided written comments to the client for resolution Working in conjunction with the client and installation contractor, a construction work plan was developed which allowed KCI to finalize the commissioning plan

As part of the commissioning plan, KCI designed and authored multiple inspection and testing requirements Field construction inspections were performed, per meter, to verify the wiring and components were installed properly. Upon completion of each meter installation, functional performance testing verified and documented functionality and operational performance with respect to the owner's project requirements. During testing, a certified calibration power meter was used as a comparison test to verify the accuracy of the installed meters. Any deficiencies discovered during the testing were documented, logged and reviewed with the owner and contractor for resolution Upon completion of the project, a full commissioning report shall be written and provided to the owner for future reference regarding the project and the testing.

GATEWAY III OFFICE BUILDING
COLUMBIA, MD
STATUS: CONSTRUCTION PHASE IN PROGRESS
KCI Technologies served as the LEED consultant to the Atlantic Builders Group (ABG) on the new Columbia Gateway III speculative office building. This LEED Core and Shell building of approximately 150,000 square feet is expected to achieve Silver certification through the pilot version of the LEED CS building rating system.

KCI worked with ABG to develop a waste management plan, a construction indoor air quality plan, and helped to provide guidance for credits which ABG is responsible for managing and documenting The Materials and Resources and Indoor Environmental Quality credits which the project attempted include provisions for recycled materials, local and regional materials, certified wood, recycling of construction debris, and low-emitting materials Two Innovation in Design credits, increasing the percentage of recycled and locally manufactured materials, were also pursued.

OPS1 OFFICE SUITE COMMISSIONING
FORT GEORGE G. MEADE, MD
STATUS: COMPLETE
KCI provided construction phase commissioning services for a 5,000 SF office renovation, which included high-density server space. Services included the functional commissioning of computer room air conditioning equipment, fan coil units, chilled water piping, ductwork, building automation control system, fire alarm, sprinkler, and emergency lighting. It was discovered and documented that several systems were not functioning as intended and presented to the design team for evaluation.

KCI provided commissioning services for the chiller replacement at Building OPS1. Services will include reviewing, approving, and facilitating the EMCS contractor's requirements for starting up and testing the systems. The project will include the review of programming documentation as well as planning and attending owner training sessions, witnessing test procedures, and verifying that the original design intent has been achieved by the installing contractors.

As the acting commissioning agent representing the Government, KCI initiated and conducted a systematic process of documentation and functional testing of the systems involved. The first step in the process was for KCI to review the contract documents to gain a thorough understanding of the design intent, with particular concentration on the control logic and sequence of operations. Working in conjunction with the design team, the sequence of operations was finalized and documented which allowed KCI to write and implement a commissioning plan.

Prior to on site testing and inspections, KCI will review construction documentation, submittals, shop drawings, field-approved change orders, and as-built drawings to fully understand the original design intent so that commissioning programming requirements can be developed. As part of the project, KCI will perform a system test and balance, including sound testing.

I-70 WELCOME CENTERS
FREDERICK COUNTY, MD
STATUS: DESIGN PHASE IN PROGRESS
KCI Technologies teamed with Kinsley Construction for the design/build reconstruction of the Welcome Centers in Frederick County. The Welcome Centers, each consisting of a restroom facility and information center, serve both eastbound and westbound traffic on I-70. They are located in a natural setting on South Mountain and will be designed to achieve LEED SILVER Certification.

Highlights of the project include separating lanes for vehicles, trucks and buses; increasing the parking areas; and expanding and improving the buildings. When completed, over 20,000-square-feet of building area will have exterior exhibit areas that will showcase some of the region's notable attractions for travelers going both eastbound and westbound, improved vending, play areas, picnic tables and an area for dog walking. The buildings also will be equipped with flat screen televisions that will feature promotional videos and travel information, and a media room where travelers will have hi-speed wireless Internet access. The new buildings also will be environmentally friendly with energy-efficient lighting, water-saving devices and upgraded sewer systems.

In addition to design services, KCI is the LEED project administrator responsible for coordinating the LEED submissions and advising other members of the design and construction teams. A unique twist to the project finds KCI employing the Multiple Buildings and On-Campus Building Projects Application Guide in conjunction with the LEED-NC v2.2 building rating system. With four individual buildings on two distinct sites separated by a major highway, KCI is able to combine the four buildings within one project submission minimizing the effort required to document the project. Additionally, LEED-Online is being used to manage and track the LEED submission process during the design and construction phases of the project.

Resumes

Franklin R. Snyder, PE
Principal-In-Charge

Education
AA/ 1986/ Mechanical Engineering Technology/ Pennsylvania State University
BS/ 1992/ Mechanical Engineering Technology/ Pennsylvania State University

Registration
2005/ PE/ NC/ 031101
2000/ PE/ IL/ 062-054348
2003/ PE/ MD/ 29640
2001/ PE/ NV/ 15142
2005/ PE/ VA/ 0402 041078
2005/ PE/ DE/ 14051
NCEES Certified/ 18575
1999/ PE/ CA/ M-31265
2002/ PE/ MA/ EN 43244-M
2000/ PE/ NM/ 14995
1994/ PE/ PA/ PE-044859-E
2001/ PE/ AZ/ 40630
2005/ PE/ WV/ 16534

Experience
Mr. Snyder is a Vice President and Division Chief of KCI's Mechanical/Electrical Engineering Division, including Commissioning & Fire Protection Services. With more than 20 years of experience, his typical project responsibilities include planning, scheduling, conducting and coordinating all phases of facility related mechanical and plumbing system design and commissioning work. He is responsible for the preparation of plans, specifications, cost estimates, and design of HVAC and plumbing systems for a variety of projects, including office buildings, specialized laboratories, educational facilities, residential, transportation facilities, commercial, industrial, medical, and correctional facilities. As Principal-In-Charge, Mr. Snyder will devote approximately 15% of his time to this project. Relevant project experience includes:

Brockbridge Upgrade, Maryland Department of Corrections. *Principal-in-Charge.* Services included Dining Room and Kitchen Renovations involving the replacement of electrical, plumbing and HVAC systems, adding a fire protection sprinkler system, replacing all kitchen equipment including several kitchen hoods. Project also included replacing the facilities central heating hot water plant and steam generation plant. Steam plant included 2 100 BHP gas fired boilers. Heating Hot Water plant include 2 100 gas fired boilers.

24-Bed Juvenile Detention Center, Washington County, MD. *Mechanical Engineer.* KCI Technologies provided mechanical, electrical, plumbing, lighting, utility, security, fire protection, and telecommunication engineering services for this design/build project for a 24-bed juvenile detention facility. This approximately 27,800 SF facility is located on 8.5 acres adjacent to the Hagerstown National Guard Armory near Maryland Route 65 and Roxbury Road in Washington County, Maryland.

Center for Computer Services HVAC, Fort Meade, MD *Principal-in-Charge.* KCI provided complete commissioning of an 800-ton, year round chilled water system, including (3) air-cooled chillers, (3) pumps, variable frequency drives, DDC controls, UPS backup, and terminal equipment. The project included the development and execution of a commissioning plan and functional test procedures. A review of the equipment installation was conducted to verify compliance with manufacturer recommended procedures and engineers contract documents. The controls sequence of operation was thoroughly tested and inconsistencies were documented and reviewed with the owner and engineers for resolution. An issue log was created to track and manage these conflicts.

Harford Community College Aberdeen Hall Commissioning. Bel Air, MD. *Principal-in-Charge.* Complete design and construction phase commissioning of the mechanical and electrical systems, including (4) boilers, (3) rooftop air handling units, (6) pumps, (6) fume hoods, (6) variable frequency drives, terminal equipment, DDC control and energy management system, motor control center, and emergency generator backup. This project will be constructed in three phases adding additional complexity to system startup, turnover and the functional testing.

Core Renovation Commissioning, Fort George G. Meade, MD. *Principal-In-Charge.* KCI provided commissioning services for six core renovations, each between 30,000 and 45,000 square feet of office space. The "core renovations" included complete architectural, mechanical, electrical, and life safety renovations including demolition of all existing features. Services included commissioning design review for maintenance, accessibility, and conformance to owners project requirements and basis of design; authoring of commissioning specifications; development of the commissioning plan; construction review with a focus on maintenance and conformance to contract documents; submittal review of commissioned equipment; development of functional test procedures; directed progress meetings and issuance of meeting minutes; review of prefunctional testing and equipment startup reports; verification and documentation of functional testing performed by trade contractors in our presence; and the compilation of the final commissioning report. Commissioned systems included: building automation controls; central station air handling units; chilled water system; computer room air conditioning equipment; steam-to-hot water converters; sprinkler systems; fire alarm system; power distribution units; lighting controls; refrigerant exhaust system; and fan coil units.

OPS1 Office Suite Commissioning, Fort George G. Meade, MD. *Principal-In-Charge.* KCI provided construction phase commissioning services for a 5,000 sf office renovation, which included high-density server space. Services included the functional commissioning of computer room air conditioning equipment, fan coil units, chilled water piping, ductwork, building automation control system, fire alarm, sprinkler, and emergency lighting. It was discovered and documented that several systems were not functioning as intended and presented to the design team for evaluation.

Campus-wide Facilities Service Commissioning, Big Four Chilled Water Project, Fort George G. Meade, MD *Principal-In-Charge* KCI provided commissioning services for reconfiguration piping to convert Headquarters Core 6 and G9 chiller plants into a primary/secondary system. The project installed 14-inch chilled water lines to interconnect the OPS2A and OPS1, Core 5 chiller plants. The four buildings, also known as the "Big Four", include buildings 9800, 9800A, 9800C, and 9800D. All four buildings have gone through various HVAC renovations and are interconnected through a series of corridors at various locations.

Eric A. Horvat, PE, LEED AP
Project Manager/ Commissioning Agent

Education
BS/ 1998/ Architectural Engineering/ Pennsylvania State University

Registration
2006/PE/MD/ 34722
2006/ LEED AP
Member/Building Commissioning Association

Experience
Mr. Horvat has over 11 years of experience in the construction, design & commissioning of mechanical, plumbing, and electrical systems for higher education, K-12, manufacturing, skilled nursing, multifamily, hospital, and clean room projects. Much of this project experience, both from the engineering and construction disciplines, has been gained on the performance of LEED certified projects. Eric brings experience in commissioning, budget and schedule management, construction estimating, negotiations, project administration for systems such as: chilled water, hot water heating, steam, cold and hot potable water, drainage waste and vent, medical gas, heat pump loop, condenser water, and compressed air piping; ductwork; ATC; mechanical equipment repair and installation; telecommunications; fire alarm; emergency power generation; nurse call; lighting; power distribution; and control wiring. He also has experience in service engineering solution providing for heating, cooling, plumbing, and electrical problems and is experienced with investigation of commercial, industrial, and institutional facilities for mechanical preventative maintenance programs. As project manager, Mr. Horvat will devote approximately 45% of his time to this project as needed. His relevant projects include:

Brockbridge Upgrade, Maryland Department of Corrections. M&E Engineering Project Manager for a multidiscipline Architectural / Engineering design effort. Also served as the Lead Mechanical Engineer. Services included Dining Room and Kitchen Renovations involving the replacement of electrical, plumbing and HVAC systems, adding a fire protection sprinkler system, replacing all kitchen equipment including several kitchen hoods. Project also included replacing the facilities central heating hot water plant and steam generation plant. Steam plant included 2 100 BHP gas fired boilers. Heating Hot Water plant include 2 100 gas fired boilers.

Gateway III Office Building, Columbia, MD. *LEED Consultatnt/Commissioning Agent.* KCI Technologies served as the LEED consultant to the Atlantic Builders Group (ABG) on the new Columbia Gateway III speculative office building. This LEED Core and Shell building of approximately 150,000 square feet is expected to achieve Silver certification through the pilot version of the LEED CS building rating system.

I-70 Welcome Centers, Frederick, MD. *Commissioning Agent.* KCI Technologies teamed with Kinsley Construction for the design/build reconstruction of the Welcome Centers in Frederick County. The Welcome Centers, each consisting of a restroom facility and information center, serve both eastbound and westbound traffic on I-70. They are located in a natural setting on South Mountain and will be designed to achieve LEED SILVER Certification.

Harford Community College, Aberdeen Hall Renovation/Expansion Commissioning, Bel Air, MD *Commissioning Agent.* Complete design and construction phase commissioning of the mechanical and electrical systems, including (4) boilers, (3) rooftop air handling units, (6) pumps, (6) fume hoods, (6) variable frequency drives, terminal equipment, DDC control and energy management system, motor control center, and

emergency generator backup. This project will be constructed in three phases adding additional complexity to system startup, turnover and the functional testing.

Commissioning Open End. Ft. Meade, MD. *Commissioning Agent/Project Manager.* KCI provided commissioning services for six core renovations, each between 30,000 and 45,000 square feet of office space. The "core renovations" included complete architectural, mechanical, electrical, and life safety renovations including demolition of all existing features. Services included commissioning design review for maintenance, accessibility, and conformance to owners project requirements and basis of design; authoring of commissioning specifications; development of the commissioning plan; construction review with a focus on maintenance and conformance to contract documents; submittal review of commissioned equipment; development of functional test procedures; directed progress meetings and issuance of meeting minutes; review of prefunctional testing and equipment startup reports; verification and documentation of functional testing performed by trade contractors in our presence; and the compilation of the final commissioning report. Commissioned systems included: building automation controls; central station air handling units; chilled water system; computer room air conditioning equipment; steam-to-hot water converters; sprinkler systems; fire alarm system; power distribution units; lighting controls; refrigerant exhaust system; and fan coil units.

Computing Center Chiller Commissioning, Fort George G. Meade, MD. *Commissioning Agent.* KCI provided complete commissioning of an 800-ton, year round chilled water system, including (3) air-cooled chillers, (3) pumps, variable frequency drives, DDC controls, UPS backup, and terminal equipment serving computing technical load. The project included the development and execution of a commissioning plan and functional test procedures. A review of the equipment installation was conducted to verify compliance with manufacturer recommended procedures and engineers contract documents. The controls sequence of operation was thoroughly tested and inconsistencies were documented and reviewed with the owner and engineers for resolution. An issue log was created to track and manage these conflicts.

Penn State University, LEED Silver Forest Resources Building, University Park, PA. *Project Manager.* Managed the installation of the electrical systems for a LEED-NC Silver educational facility. Project size is 4 stories with rooftop penthouse and basement equipment areas. Project included installation of power distribution, branch circuitry, lighting, fire alarm, building security, tele/data-communication systems, power to mechanical equipment, and support of the commissioning process.

Penn State University, LEED Certified School of Architecture and Landscape Architecture Building, University Park, PA. *Project Manager.* Mr. Horvat provided oversight for the installation of electrical systems for a new, LEED-certified building. The project included installation of power distribution, branch circuitry, lighting, fire alarm, building security, tele/data-communication systems, and power to equipment within a 4-story, modern structure.

OAW, Fort George G. Meade, MD *Commissioning Agent* KCI Technologies served as the design/construction phase commissioning agent for the mechanical, fire alarm, and life safety systems installed under the OAW174 project. The OAW174 area, approximately 4,800 sq ft, houses critical computing equipment that requires an uninterruptible power supply and specific environmental conditions for successful operation as well as a complex fire alarm and life safety system for protection of the equipment and building personnel. The supporting mechanical systems include an 100% outside air battery room air handling unit with 2 associated exhaust fans, computer room air conditioning units, chilled water piping, humidifiers, and constant volume dual-hot/cold deck air terminal units. The complex fire alarm and life safety systems include a VESDA system with devices that can detect minuscule amounts of smoke such as what might be generated from an overheated computer chip.

Core 5 UPS, Fort George G. Meade, MD. *Commissioning Agent* KCI Technologies served as the construction phase commissioning agent for the design and installation of a 400 kVA Un-interruptible Power Supply or UPS system, including the support mechanical and life safety systems associated with the indoor storage and operation of large numbers of wet-cell batteries KCI worked with the manufacturer and contractor to commission the UPS system and document the procedures and functional test data. The mechanical ventilation system included a modular air handling unit, redundant exhaust fans, building automation controls, and hydrogen sensors. A rigorous testing of this system was necessary as an excessive buildup in hydrogen created by battery operation is extremely dangerous within a building environment. KCI fully commissioned the ventilation system, including sensors, safeties, and alarms for proper operation. Life safety systems included a wet-pipe sprinkler system and fire alarm system. KCI developed a commissioning plan; conducted a commissioning kickoff meeting; reviewed commissioned system equipment submittals; pre-functional testing records; performed functional testing; reviewed the O&M documentation for completeness; and submitted a final commissioning report.

OPS1 Office Suite Commissioning, Fort George G. Meade, MD *Commissioning Agent.* KCI provided construction phase commissioning services for a 5,000 sf office renovation, which included high-density server space. Services included the functional commissioning of computer room air conditioning equipment, fan coil units, chilled water piping, ductwork, building automation control system, fire alarm, sprinkler, and emergency lighting. It was discovered and documented that several systems were not functioning as intended and presented to the design team for evaluation.

Big Four Chilled Water Project, Fort George G. Meade, MD *Commissioning Agent* KCI provided commissioning services for reconfiguration piping to convert Headquarters Core 6 and G9 chiller plants into a primary/secondary system. The project installed 14-inch chilled water lines to interconnect the OPS2A and OPS1, Core 5 chiller plants. The four buildings included, also known as the "Big Four", include buildings 9800, 9800A, 9800C, and 9800D. All four buildings have gone through various HVAC renovations and are interconnected through a series of corridors at various locations.

MPO Open-End, Fort Meade, MD, Maryland Procurement Office. *Mechanical Designer.* KCI is providing various architectural and engineering services for the Maryland Procurement Office at Fort Meade, MD. The contract is in the third of five years. The tasks assigned to date include: Roof Truss Repair, Big Four Ventilation Study - Phase 1, Reconfiguration of Generator Controls, Fire Alarm Title II Services, Commissioning services for OPS 1 Chiller, Core 5 Renovations, Penthouse Sprinkler, Roadway Fume Exhaust Study & Design, Perimeter Security Enhancement, High Bay Mezzanine Renovation, Navy Office Renovations, Big 4 Water Commissioning, Center for Computer Studies Renovations, Mechanical Catwalk Design and Control Drawings. Mr. Horvat has provided electrical design services supporting a variety of projects completed under this contract.

ROBERT R. MILNE, PE
Division Chief E-VIII, Senior Associate

Education:
BS/Civil Engineering/ West Virginia University/1990
MS/Civil Engineering/ West Virginia University/1999

Registration:
PE / WV / 014177
PE / PA / PE061465

Experience:
Mr. Milne is the Division Chief in KCI's Morgantown, West Virginia office. He is responsible for the offices' daily operation, supervision of staff, and management of large projects. Mr. Milne is also experienced in civil/site design, utilities and buildings as well as roadway and storm sewer design; highways, bridges, traffic studies; construction administration and inspection. His experience includes:

Federal Bureau of Prisons, A/E Support Services Multiple Award Task Order Contracts. Nationwide, . *Task Manager*. Lead civil engineer for site design; design of parking lots, roadway improvements, utility lines, sidewalks, drainage, stormwater retention, grading plans, E&S, cost estimates. As a subconsultant KCI supported Smolen Emr Associates Architects on this open-end Federal Prison Project. Tasks completed have included: Butner Federal Medical Center, NC; Cumberland Correction Institution, MD; and Alderson FPC Multi-Purpose Building.

New Northside Fire Station. Morgantown, WV. *Project Manager*. KCI is a sub-consultant to Bignell Watkins Hasser for the proposed LEED Certified North Side Fire Station for the City of Morgantown. This project is currently in the final design phase. KCI is responsible for overall site design, access roads, utility lines, sidewalks, landscaping, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting. Final construction documents will be completed in April 2008

West Virginia University Architectural and Engineering Open End. Morgantown, WV. *Project Manager*. KCI was awarded an open end contract to provide multi-disciplined engineering services to the West Virginia University. Work Order No. 1 - KCI performed a structural assessment of the Summit Hall Parking Garage along Grant Street. The garage has been experiencing water leaks from the upper level onto the lower level through cracks in the deck. KCI's scope of services includes the review of existing plans and a building assessment. Upon completion of the building assessment, KCI provided the University with a Report of findings. Upon review of the Report the University has requested KCI to produce construction documents for the rehabilitation of the upper deck. Work Order No 2 - KCI is performing a structural analysis of the Evansdale Library. Work Order No. 3 - KCI is providing the University with Structural Engineering and Drafting Services associated with the design of a replacement wood deck and support beams for the Percival Hall Pedestrian Bridge. KCI was awarded an open end contract to provide multi-disciplinary engineering services to the West Virginia University. This contract will expire in 2008 with KCI's total fees estimated to be $500,000.

WVU Downtown Student Housing Project. Morgantown, WV. *Project Manager* Division Chief/Senior Site/Civil Engineer KCI is a sub-consultant to Paradigm Architecture for the proposed Downtown Student Housing Project. This project is currently under construction. KCI is responsible for overall site design, access roads, courtyard, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting.

Harpers Ferry National Park Historic Train Station. Harpers Ferry, WV. *Project Manager.* KCI was subcontracted to a national design/build contractor to provide electrical, site/civil, and structural engineering support services for this Historical Renovation project. KCI was responsible for designing a 92 space parking lot, sidewalks and lighting at the Historic Harpers Ferry Train Station. In order to meet the deadlines of our client this project was placed on a fast track schedule. The preliminary and final design of the parking lot was completed in less than a month. Construction was completed in February 2007.

The View II at the Park. Morgantown, WV. *Project Manager.* KCI is a sub-consultant to Paradigm Architecture for the proposed View II. The View II is the second phase of a three phased development along the waterfront in Morgantown, WV. The View II is a 4-story structure that will be the new home to the Morgantown Area Chamber of Commerce once completed, along with several residential condominiums. This project is currently under construction. KCI is responsible for overall site design, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting

Maple/Ogden Gateway Revitalization Project. Fairmont, WV. *Project Manager.* KCI has been providing the Fairmont Community Development Partnership (FCDP) with consulting services associated with the development of a streetscape revitalization plan. Thus far KCI has provided the FCDP with basic concepts associated with streetscaping such as sidewalk upgrades, pedestrian lighting, adding brick pavers, and landscaping into the sidewalk system. KCI also provided photo simulations of the existing street that portrayed various design alternatives. The use of these photo simulations enabled the FCDP to see what the proposed streetscape alternatives would look like prior to an actual design

Jeremy S. Shughart, PE
Mechanical Project Engineer

Education
BS / 1999/ Mechanical Engineer/ Pennsylvania State University

Registration
2004/PE/ PA /PE071389
American Society of Heating, Refrigeration & Air Conditioning Engineers (ASHRAE)

Experience
Mr. Shughart has over 8 years of experience in the design of mechanical, plumbing and fire protection systems for higher education, K-12, manufacturing, skilled nursing, multifamily, hospital, and clean room projects. Jeremy brings experience in the complete design of systems such as: automatic temperature controls; chilled water; hot water heating; steam; heat pump loops; ductwork; cold and hot potable water; drainage waste and vent; condenser water; and compressed air piping.

Selinsgrove Elementary School, Selinsgrove PA. *Mechanical Project Engineer/ Project Manager*. Provided plumbing design, underfloor air distribution design, chilled water distribution, and heating water distribution for this LEED Silver project. Highlights of this 75,000 SF renovation and addition included a variable flow air cooled chiller, rainwater cistern for grey water toilet flushing, individual classroom underfloor air distribution for heating and cooling, and an energy recovery dedicated outdoor air (DOAS) system. Design was completed in Spring of 2008 with an estimated construction completion of 2009.

Interstate 70 Welcome Center, Frederick, MD. *Mechanical Project Engineer*. Provided plumbing and HVAC design for the replacement Welcome Centers, eastbound and westbound. This proposed LEED Silver project includes geothermal heat pump loops, radiant floor heating, energy recovery ventilators and domestic hot water produced from the geothermal field. Documented the following LEED-NC v2.2 credits using LEED-Online: WE CR's 3.1 & 3.2; EA prereq 2, CR 1; and EQ prereq 1, CR's 2, 3.1, 6.2 and 7.1

New Central Energy Plant, Dickinson College, Carlisle, PA. *Mechanical Project Engineer*. Provided engineering services to design a new chilled water and steam heating central energy plant to service the entire Dickinson College campus. Energy efficiency is a major concern to the College and several chiller plant alternatives have been evaluated to optimize energy performance. Designs include accommodations for future ice storage and a cogeneration plant. The existing central plant is reaching the end of its' useful life and campus growth has caused the existing plant's location to be undesirable. A recently purchased property at the North edge of the campus was selected for the new Central Energy Plant as it will provide room for future plant growth and will be unobtrusive to the campus operations. The new Central Plant will consist of two 500 ton chillers with space for a future 500 ton machine. Two 800 horsepower boilers will be installed with future expansion space for a third boiler. Norfolk Southern Rail Lines separates the new Central Energy Plant from most of the existing campus and new steam, condensate, and chilled water lines are being routed underground, beneath the rail lines.

Wickersham Hall, Millersville University, Millersville, PA. *Mechanical Project Engineer*. Provided mechanical and plumbing construction administration services associated with renovations to this 25,000 SF facility housing classrooms and offices. The HVAC systems involved an energy recovery ventilation system,

exhaust, air control terminals and ductwork. Plumbing fixtures, domestic water piping, and sanitary lines were also replaced throughout the facility.

Truman Elementary School, New Haven, CT. *Mechanical Designer* Provided Mechanical, Electrical, Plumbing, and Fire Protection engineering services for the renovation and expansion of the Truman Street Elementary School, an existing three-story brick building built in 1910. This $18 million project of more than 110,000 SF includes a 51,000 SF renovation and 60,000 SF expansion. Services include existing facility survey with mechanical, electrical, fire protection, and plumbing design. It will provide a modern Pre-K through eighth grade educational facility with additional classroom and administrative space, music/band room, art studios, library, foreign language labs, science and computer labs, cafeteria/auditorium, and gymnasium.

Nathan Hale Elementary School, New Haven, CT: *Mechanical Designer.* Provided design support on the renovation and expansion of Nathan Hale School, an existing three-story brick building originally constructed in 1925. This 88,000 SF, $22 million project includes 38,000 SF of renovation with a 50,000 SF expansion. Design work featured new plumbing, fire protection and HVAC systems. Rooftop units providing air conditioning and utilized variable air volume fan coil units in the classrooms. A central boiler plant is responsible for heating. ATC Systems were designed for controlling the VAV boxes, boilers and hydronic baseboard, which compensated for exterior wall heating loads. This building will provide modern facilities for pre-kindergarten through eight grade, as well as a library/media center, cafeteria, administrative offices, and science labs.

Plainfield Elementary School, Carlisle, PA. *Mechanical Designer.* The purpose of this project was to replace an existing steam boiler and install a new domestic water heater. Being approximately 50 years old, the plant required several upgrades to bring it up to code. New combustion air louvers and electrical service upgrades were required. The existing domestic water heating system did not provide dual temperature hot water to the kitchen, which was corrected in this project. The boiler plant and water heater were sized for an anticipated school expansion of double it's present size. An interesting feature of this project is the steam boiler was specified to be capable of conversion to hot water to satisfy future school renovation plans.

Renovation of Rowland and Shearer Halls, Shippensburg University, Shippensburg, PA. *Mechanical Designer.* Designed new mechanical and electrical systems for this project. The two buildings house 47,000 SF of laboratory and classroom space. Originally built in 1937, the facilities are to be retrofitted with new HVAC, plumbing, power, and DDC Controls systems. The buildings are being modernized to support multi-media teaching technology. Telecommunications (voice, data, and video) are being provided to support language labs and communications/ journalism media laboratories.

Building Renovations, Pennsylvania State University, Mont Alto, Chambersburg, PA. *Mechanical Designer.* Renovation and addition of Chiller/Boiler Plant for the General Studies Building at The Pennsylvania State Universities Mont Alto Campus. This three-story, 1920-era classroom facility of 35,000 SF is currently heated using steam radiators and required the removal of existing boiler and steam systems. New hot water boilers and a chiller plant were added as well as four-pipe unit ventilator/fan coil units in classrooms and offices.

Ralph Jack Warren, PE
Electrical Engineer

Education
BSE / Electrical Engineering / 1993

Registration
Electrical Engineering / MD / 27995

Experience
Mr. Warren is a Project Manager with diverse experience stemming from his background as a Journeyman Lineman, an electronic technician, a NETA certified test engineer, and a design engineer. He complements his field experience with a variety of design projects and electrical studies. His project experience includes: medium and low voltage distribution systems; overhead and underground distribution systems; emergency and standby systems; uninterruptible power systems; interior distribution systems; warning and alarm systems; lighting and control systems; supervisory control and data acquisition systems; fire alarm systems, premise wiring and distribution systems (voice/data), intrusion detection systems, controlled access systems, in addition to closed circuit television , intercom and sound systems. Mr. Warren brings a unique blend of practical as well as theoretical engineering in many different areas such as air transportation, surface transportation, and facility design in the industrial, commercial, educational, pharmaceutical, recreational and residential sectors.

Architect - Engineer Services in the Fort Meade, MD and Surrounding Areas. Ft. Meade, MD. *Electrical Engineer.* Mr. Warren performed various architectural and engineering services for the Maryland Procurement Office at Fort Meade, MD. Led efforts for several tasks working as the senior electrical engineer. His services primarily involved electrical components, alarm systems, and lighting for existing building renovation projects at the FGGM complex. Worked creatively with power load impediments to accommodate additional electrical gear. KCI is the prime consultant, managing an on-call type contract to provide various architectural and engineering services for the Maryland Procurement Office at Fort Meade, MD. The contract is in the third of five years. Over 50 tasks have been assigned to date, including: Big Four Ventilation Study - Phases 1 & II, Reconfiguration of Generator Controls, Fire Alarm Title II Services, Commissioning services for OPS 1 Chiller, Core 5 Renovations, Penthouse Sprinkler, Roadway Fume Exhaust Study & Design, Perimeter Security Enhancement, Navy Office Renovations, Big 4 Water Commissioning, and Center for Computer Studies Renovations.

Replace Building 9800C UPS Systems and Building 9800C, 9800D, and 9840 Unit Substation. Fort Meade, MD. *Project Manager.* KCI provided facilities engineering and design services, inclusive of site survey and a construction package to upgrade current system capacity at various buildings by replacing secondary substations and Uninterruptible Power Supplies throughout the campus.

Commissioning, Substations 1-4. Ft. Meade, MD. *Project Manager.* KCI Technologies served as the construction phase commissioning agent and construction inspector for the revitalization of an interconnecting electrical feeder between two high voltage substations. This project provided additional power and flexibility during maintenance and contingency operations for the owner and also included upgrades to the transformer cooling system, substation protective devices, and load tap charger controls. Project schedule was critical and required the contractors and KCI to work around the clock in several instances. KCI developed a commissioning plan; conducted a commissioning kickoff meeting; reviewed commissioned system equipment submittals; pre-functional testing records; performed functional testing;

reviewed the O&M documentation for completeness; and submitted a final commissioning report In addition, KCI performed construction support services such as: full time inspection; review of equipment submittals; preparing of construction punchlists; and preparing estimates for construction change orders.

Cosden Chemical Corporation. , NJ. *Electrical Engineer* Mr. Warren developed construction drawings, specifications and an estimate for a new grounding system for five antiquated ammunition strorage bunkers. Grounding System included lighting and static protection. Provided calculations to substantiate the design met fluctuating seasonal requirements. Provided a grounding system designed to reduce construction costs by 10%. KCI Technologies was retained by URS Corporation to perform the mechanical, plumbing, electrical, PLC process controls design, and construction administration services for the Cosden Chemical Coating Inc. Superfund Site locate in Beverly, New Jersey. The scope of services was part of the United States Army Corps of Engineers (USACE) program for Remedial Design for the ground water extraction and treatment system is underway.

Building 572, Naval Air Engineering Station. New Jersey *Electrical Engineer* Mr. Warren developed construction drawings, specifications and an estimate to increase the electrical service for a 60,000sf building. Design included replacing three transformers totaling approximately 1000-kVA with a single 1500-kVA transformer. Additional work included extending a 5-kV underground feeder and installing several manholes.

VA New Jersey Health Care System. New Jersey *Electrical Engineer.* Mr. Warren coordinated with the general contractor and subcontractors for the installation of a new campus-wide telecommunications system. Developed construction schedules, coordinate outages, reviewed shop drawings and changed orders. Provided info to contractor to make field adjustments as needed, facilitated schedule.

PSE&G Facility Study, Edison, New Jersey *Electrical Project Engineer.* Conducted a grounding and harmonic study to eliminate transients which were affecting sensitive communication equipment. The study included a summary of existing conditions, code requirements, recommendations, diagrams and an estimate to correct deficiencies found

Site Alarm System, NIST, Gaithersburg, Maryland *Electrical Project Engineer.* Developed construction drawings, specifications and an estimate for a campus-wide fiber-optic back-bone infrastructure. Design included manhole and subsurface investigations. The infrastructure was designed to support a new addressable alarm system monitoring fire, mechanical, electrical and security points for 39 research buildings.

Benjamin Becker, EIT
Field Commissioning Agent

Education
BS / Mechanical Engineering / 2004
MS / Mechanical Engineering / 2005

Registration
EIT - Mechanical / MD / 35130

Experience

Mr. Becker is a mechanical engineer with KCI's Mechanical and Electrical Division. He has experience in field commissioning activities including progress meetings, writing and executing functional performance tests, and preparing final commissioning reports. His experience also includes executing site construction inspections and reviewing submittals for conformance to contract documents

Commissioning Open End. Ft. Meade, MD. *Field Commissioning Agent.* KCI provided commissioning services for six core renovations, each between 30,000 and 45,000 square feet of office space. The "core renovations" included complete architectural, mechanical, electrical, and life safety renovations including demolition of all existing features. Services included commissioning design review for maintenance, accessibility, and conformance to owners project requirements and basis of design; authoring of commissioning specifications; development of the commissioning plan; construction review with a focus on maintenance and conformance to contract documents; submittal review of commissioned equipment; development of functional test procedures; directed progress meetings and issuance of meeting minutes; review of prefunctional testing and equipment startup reports; verification and documentation of functional testing performed by trade contractors in our presence; and the compilation of the final commissioning report. Commissioned systems included: building automation controls; central station air handling units; chilled water system; computer room air conditioning equipment; steam-to-hot water converters; sprinkler systems; fire alarm system; power distribution units; lighting controls; refrigerant exhaust system; and fan coil units.

OAW, Fort George G. Meade, MD KCI Technologies served as the design/construction phase commissioning agent for the mechanical, fire alarm, and life safety systems installed under the OAW174 project. The OAW174 area, approximately 4,800 sq ft, houses critical computing equipment that requires an uninterruptible power supply and specific environmental conditions for successful operation as well as a complex fire alarm and life safety system for protection of the equipment and building personnel. The supporting mechanical systems include an 100% outside air battery room air handling unit with 2 associated exhaust fans, computer room air conditioning units, chilled water piping, humidifiers, and constant volume dual-hot/cold deck air terminal units. The complex fire alarm and life safety systems include a VESDA system with devices that can detect minuscule amounts of smoke such as what might be generated from an overheated computer chip.

Core 5 UPS, Fort George G. Meade, MD KCI Technologies served as the construction phase commissioning agent for the design and installation of a 400 kVA Un-interruptible Power Supply or UPS system, including the support mechanical and life safety systems associated with the indoor storage and operation of large numbers of wet-cell batteries. KCI worked with the manufacturer and contractor to commission the UPS system and document the procedures and functional test data. The mechanical ventilation system

included a modular air handling unit, redundant exhaust fans, building automation controls, and hydrogen sensors. A rigorous testing of this system was necessary as an excessive buildup in hydrogen created by battery operation is extremely dangerous within a building environment. KCI fully commissioned the ventilation system, including sensors, safeties, and alarms for proper operation. Life safety systems included a wet-pipe sprinkler system and fire alarm system. KCI developed a commissioning plan; conducted a commissioning kickoff meeting; reviewed commissioned system equipment submittals; pre-functional testing records; performed functional testing; reviewed the O&M documentation for completeness; and submitted a final commissioning report.

MPO Architect - Engineer Services in the Fort Meade, MD and Surrounding Areas. Ft. Meade, MD. *Mechanical Designer.* Core 5 Stack and 8.3 Renovations – Inspection and commissioning of approximately 158,000 SF of office space, mechanical, electrical, and telephone rooms. Included site inspections, and electrical, mechanical, and fire protection systems commissioning. KCI is the prime consultant, managing an on-call type contract to provide various architectural and engineering services for the Maryland Procurement Office at Fort Meade, MD. The contract is in the third of five years. Over 50 tasks have been assigned to date, including: Big Four Ventilation Study - Phases 1 & II, Reconfiguration of Generator Controls, Fire Alarm Title II Services, Commissioning services for OPS 1 Chiller, Core 5 Renovations, Penthouse Sprinkler, Roadway Fume Exhaust Study & Design, Perimeter Security Enhancement, Navy Office Renovations, Big 4 Water Commissioning, and Center for Computer Studies Renovations.

OPS1 Core 5 Title II. Ft. Meade, MD. *Mechanical Designer.* As the Government's engineering construction administration representative, KCI managed the submittal review process; reviewed and recommended submittals for approval or rejection; conducted field construction inspections on mechanical, electrical, and life safety systems; attended progress meetings and issued meeting minutes; reviewed contractor requests for change orders; issued independent government estimates for additional work; and supported the government with review and advice on several constructability and engineering design issues.

Kevin M. Barnett
Field Commissioning Agent

Education
BS/ 1996/ Electrical Engineering Technology/ Pennsylvania State University
AA/ 1994/ Electrical Technology/ Pennsylvania State University

Experience
Mr. Barnett is an Electrical Engineer with KCI's Mechanical and Electrical Engineering Division. Mr. Barnett has over 11 years experience in primarily Pennsylvania and Maryland with additional experience in most of the 50 states. His experience includes commissioning, designing, installing and project management of building automation systems and equipment controls. In addition, Mr. Barnett's duties included managing all business operations pertaining to a Building Automation Systems Department and profit center, which included overseeing all sales, estimating, engineering, installations, contracting, subcontracting and project management.

Core 5 UPS, Fort George G. Meade, MD KCI Technologies served as the construction phase commissioning agent for the design and installation of a 400 kVA Un-interruptible Power Supply or UPS system, including the support mechanical and life safety systems associated with the indoor storage and operation of large numbers of wet-cell batteries. KCI worked with the manufacturer and contractor to commission the UPS system and document the procedures and functional test data. The mechanical ventilation system included a modular air handling unit, redundant exhaust fans, building automation controls, and hydrogen sensors. A rigorous testing of this system was necessary as an excessive buildup in hydrogen created by battery operation is extremely dangerous within a building environment. KCI fully commissioned the ventilation system, including sensors, safeties, and alarms for proper operation. Life safety systems included a wet-pipe sprinkler system and fire alarm system. KCI developed a commissioning plan; conducted a commissioning kickoff meeting; reviewed commissioned system equipment submittals; pre-functional testing records; performed functional testing; reviewed the O&M documentation for completeness; and submitted a final commissioning report.

Raytheon Retro-Commissioning, Raytheon, State College, PA *Project Manager and Commissioning Agent.* Tasks included corresponding with the customer to guide and develop a commissioning plan to identify and verify proper operation of mechanical equipment and building automation control systems and to project manage the ensuing audits, field surveys and corrective actions.

Commissioning of New Wellspan Woman's Imaging Center, York, PA *Commissioning Agent.* Tasks included full commissioning of a new construction project of a medical facility. The facility had air handlers, VAV boxes, chillers, boilers humidifiers, stand alone split ac units and misc. terminal heating equipment used to satisfy the loads in the entire space including multiple MRI rooms and patient rooms.

Meter Installations, Fort George G. Meade, MD KCI provided commissioning services for the installation of approximately 100 power meter installations on existing, secondary, main-tie-main substations. The secondary substations serve multiple areas consisting of various office space and computer technical loads, as well as, UPS modules and maintenance bypass systems. The metering systems are comprised of (3) current transformers, (2) potential transformers, an ION power meter, primary and secondary fuse blocks and fuses, shorting blocks and interconnection wiring. As part of this project, KCI performed commissioning design review of the meter installations; authored a commissioning plan; reviewed equipment shop drawings; conducted field construction inspections; directed and documented functional

performance testing of the power meters to verify compliance with manufacturer recommended procedures, applicable codes and regulations; and compiled a final report documenting the project. As inconsistencies were found, they were documented and reviewed with the owner and contractor for resolution. KCI created an issue log to track and manage these inconsistencies.

United States Department of Agriculture, APHIS Site Mechanical and Building Automation Systems Installations and Servicing, Beltsville MD. *Account/Project Manager*. Tasks included ongoing HVAC, automatic temperature control and building automation systems installations and servicing of many critical office, lab and greenhouse environments, and working closely with the commissioning agent to ensure all mechanical and ATC systems are verified to be operating properly.

MiniTAB Natatorium ATC and Commissioning, State College, PA *Design Engineer/ Project Manager*. Tasks included commissioning of the automatic temperature controls and pool equipment monitoring controls for the new construction of a natatorium and office space, assisting design-build of mechanical systems, estimating, ATC design, and project management.

ATC Construction of W.I.T.F. Public Media Center, Harrisburg, PA *Project Manager*. Tasks included project management of the automatic temperature controls and commissioning of the building automation systems and mechanical systems for the new construction of a public media center which included several sensitive and critical areas such as media equipment rooms, studios and satellite equipment rooms. Several Air Handlers, VAV Boxes, CRAC Units and HW Radiators were used to satisfy the space heating/cooling requirements.

Pinnacle Health – Harrisburg Hospital –Building Automation Systems Installations, Servicing and Commissioning, Harrisburg, PA *Account/Project Manager*. Tasks included on-going commissioning of existing and new mechanical and building automation systems, and ongoing automatic temperature control and building automation systems installations and servicing of many critical office, lab, patient rooms and operating rooms.

Hershey Entertainment and Resorts, Co. Corporate Headquarters Renovation, Hershey, PA *Project Manager and Commissioning Agent*. Tasks included assist in design-build of mechanical systems, design and project management of the automatic temperature controls and commissioning of the building automation systems and mechanical systems for the renovation of a four floor office building including corporate offices, tenant fit-outs, and a Houlihans Restaurant. The automatic temperature controls were applied to energy recovery ventilators, heat pumps, radiators and lighting controls. The commissioning included all mechanical systems / HVAC, lighting control, building automation controls and sound testing.

References

We encourage you to contact any of our references listed below who can attest to our past performance. KCI is pleased to include a reference from WVU with whom we have worked since award of our current open end contract.

Mr. Paul Hanko
West Virginia University
One Waterfront Place
3rd Floor
Morgantown, WV 26506
(304) 293-2854
paul.hanko@mail.wvu.edu

Mr. Mark Duvall
Maryland Procurement Office
9800 Savage Road
Fort George G. Meade, MD 20755
(301) 688-729
maduva1@nsa.gov

Mr. Kevin Kilnsky
West Virginia University
979 Rawley Lane
P O. Box 6572
Morgantown, WV 26506
(304)293-2876
kevin.kilnsky@mail.wvu.edu

ADDITIONAL INFORMATION

H. STATEMENT EXPLAINING ANY LITIGATION OR ARBITRATION PRCEEDINGS RELATED TO THE FIRM'S PERFORMANCE OF A CONTRACT FOR COMMISSIONING SERVICES

KCI is not engaged in any arbitration or litigation relating to Commissioning Services.

I. STATEMENT OF WHETHER FORM HAS EVER BEEN DEBARRED FROM BIDDING OR PROPOSING GOVERNMENTAL CONTRACTS FOR THE FEDERAL GOVERNMENT OR ANY STATE

KCI has never been debarred from bidding or proposing governmental contracts for the federal government or any state.

J. STATEMENT AS TO WHETHER ANY PROCUREMENT LAWS IN THE STATE OF WEST VIRGINIA WOULD AFFECT THE POTENTIAL AWARD OF A CONTRACT TO THE FIRM FOR THIS PROJECT

No procurement laws in the State of West Virginia would affect the award of this contract to KCI

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

Request for Quotation

RFQ NUMBER	PAGE
RJC2016	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
KCI Technologies, Inc.
240 Scott Avenue
Suite 2
Morgantown, WV 26508

RECEIVED
JUN 20 2008
KCI TECHNOLOGIES, INC
MORGANTOWN, WV

SHIP TO
REG'L JAIL & CORR'L AUTH'Y
KENNETH HONEY RUBENSTEIN
CENTER FOR YOUTH
141 FORESTRY CAMP ROAD
DAVIS, WV
26260 304-558-2110

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
06/11/2008				

BID OPENING DATE: 07/02/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		906-07		

ARCHITECT SERVICES, PROFESSIONAL

EXPRESSION OF INTEREST (EOI)

PROVIDE ARCHITECT AND ENGINEERING SERVICES FOR THE WV REGIONAL AND CORRECTIONAL FACILITY AUTHORITY, KENNETH "HONEY" RUBENSTEIN CENTER PROJECT, FOR COMMISSIONING SERVICES, PER THE SPECIFICATIONS.

NOTICE

A SIGNED BID MUST BE SUBMITTED TO:

DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
P.O. BOX 50130
2019 WASHINGTON STREET, EAST
CHARLESTON, WV 25305-0130

THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:

SEALED BID

BUYER: JOHN ABBOTT----------

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE [signature] TELEPHONE (304) 296-3611 DATE June 30, 2008

TITLE Senior Vice President FEIN 521604386 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

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

Request for Quotation

RFQ NUMBER	PAGE
RJC2016	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
KCI Technologies, Inc
240 Scott Avenue
Suite 2
Morgantown, WV 26508

SHIP TO
REG'L JAIL & CORR'L AUTH'Y
KENNETH HONEY RUBENSTEIN
CENTER FOR YOUTH
141 FORESTRY CAMP ROAD
DAVIS, WV
26260
304-558-2110

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
06/11/2008				

BID OPENING DATE: 07/02/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT

RFQ. NO.: RJC2016

BID OPENING DATE: 07/02/2008

BID OPENING TIME: 1:30 PM

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:

(304) 296-8046

CONTACT PERSON (PLEASE PRINT CLEARLY):

Rob Milne, PE

****** THIS IS THE END OF RFQ RJC2016 ****** TOTAL: N/A

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE _____ TELEPHONE (304) 296-3611 DATE June 30, 3008

TITLE Senior Vice President FEIN 521604386

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

RFQ No. RJC2016

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: 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 the debt owed is an amount greater than one thousand dollars in the aggregate

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

LICENSING: Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

Vendor's Name: KCI Technologies, Inc.

Authorized Signature:  Date: June 30, 2008