UNIVERSITY OF ARKANSAS

Request for Qualifications

Commissioning Engineers

Design Professional Services

COVER LETTER

University of Arkansas
Facilities Management
Attn: Selection Committee
C/O Georgeta Galbaith
Construction Coordinator

521 S. Razorback Road
Fayetteville, AR 72701

Reference:
Request for Qualifications
Commissioning Engineers

November 14th, 2024

Dear Ms. Galbaith + The Selection Committee:

On behalf of ES2 and our trusted teaming partner, Cyntergy, I am pleased to submit our qualifications for the University of Arkansas's on-call commissioning engineering services. Our team is eager to bring an experienced and integrated approach to ensuring the highest quality standards across campus building systems.

As commissioning professionals, we understand the value of an integrated approach to quality assurance in building systems, particularly in a dynamic campus environment. Our team combines ES2's deep field expertise in commissioning processes, developed through a wide range of projects in educational facilities, with Cyntergy's extensive experience in collaborative engineering and design solutions. This partnership enhances our ability to address complex building requirements with precision and a strong commitment to sustainability, energy efficiency, and life-cycle performance.

At ES2, we prioritize transparent communication and client satisfaction, and we work proactively to ensure that each building operates as intended. Together with Cyntergy, we are ready to deliver a responsive and comprehensive commissioning approach that aligns with the University's high standards of quality and operational efficiency.

Thank you for considering our qualifications. We look forward to the opportunity to support the University of Arkansas and provide a proactive, high-quality commissioning process.

Sincerely,

Bill Kinser, PE
President | ES2

es2

CYNTERGY

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FIRM QUALIFICATIONS

ES2

MEETING CUSTOMERS' NEEDS, IMPROVING FACILITIES, AND DRASTICALLY LOWERING COST. THIS IS WHAT WE DO.

Engineered Systems & Energy Solutions, Inc. (ES2) has developed a comprehensive suite of products and services to optimize systems and energy use from initial design through the entire life of a building.

Everything we do is designed to save our clients money through lower utility bills and repair costs while increasing occupant comfort and thus productivity.

ES2 is honored to be considered for the University of Arkansas's on-call Commissioning Agent services. The following outlines the comprehensive scope of services ES2 is prepared to provide in response to the issued Request for Qualifications (RFQ). Our service delivery is guided by the standards set forth by the National Environmental Balancing Bureau (NEBB), as well as relevant NFPA codes, ASHRAE guidelines, and ES2's own governing principles.

ES2 has been privileged with the opportunity to provide Commissioning services for a diverse portfolio of projects, including those pursuing LEED certification as well as fundamental and enhanced commissioning initiatives, spanning local, national, and international engagements. ES2's professional team, collectively endowed with over 200 years of cumulative experience, has established a proven track record in delivering comprehensive Test-Adjust-Balance (TAB) and Commissioning Administration services. The team has successfully completed large-scale, complex projects by effectively managing and executing contractual obligations in alignment with diverse proposals, specifications, cost estimates, customer expectations, and project timelines through well-defined management procedures.

We want to express sincere gratitude for the opportunity to present our qualifications and eagerly anticipate the possibility of serving as your commissioning partner, bringing our extensive expertise and commitment to excellence to support the university's needs. Go Hogs!

SERVICES

Building Automation Systems

Test Adjust and Balance

HVAC Mechanical Service

Facilities Management Systems

Commissioning

Engineering

Design Build

Training

FIRM QUALIFICATIONS

CYNTERGY

Cyntergy is a full-service architecture, multidiscipline engineering, and construction services firm based in Tulsa, Oklahoma. Cyntergy's staff performs architecture, interior design and construction services as well as fire protection, civil, structural, mechanical, plumbing, refrigeration, and electrical engineering. Cyntergy was founded in July 1997 with one customer and a passion for service and hard work. This passion combined with the ideals of honesty, integrity and teamwork has allowed the company to expand to its current staff size of 179 professional, technical and support staff. Cyntergy has built its firm with a focus on client relationships with diverse project types ranging from local, state, and federal government agencies and municipalities, to financial, retail, lodging, restaurant, commercial, and many others in between.

The ability to perform all architecture and engineering disciplines under one roof allows us to be extremely efficient, and our staff size enables us to adjust manpower as needed in order to meet deadlines. We pride ourselves in our ability to exceed client expectations.

10 disciplines under one roof
9500+ projects completed
founded in 1997
licensed in 48 states

SERVICES

MULTIDISCIPLINE ENGINEERING

The engineering group encompasses civil, structural, electrical, mechanical, refrigeration, and fire protection engineering professionals. This includes registered engineers, as well as experienced designers, technicians, and support staff, each organized under a specific engineering discipline director. Each group is capable of performing design, troubleshooting, and construction phase support on site, addressing both building and facility projects. The team routinely works on projects that require multidiscipline engineering coordination, as well as seamless integration with Cyntergy's architectural group.

ARCHITECTURE

Cyntergy's architectural discipline involves the efforts of a diverse team of talented architects, interns and technical staff. This team is made up of individuals with extensive experience in the field, and it is this knowledge that allows the group to offer unique architectural services to support a various array of clients and project types. This diverse experience allows the team to tackle the most difficult project and still integrate seamlessly with its own in-house, multidiscipline engineering and construction management staff. Cyntergy's design philosophy is simple—provide creative solutions that make sense for its clients' needs, budgets, and time frames.

FIRM QUALIFICATIONS

OFFICE SIZE, PERSONNEL DESCRIPTIONS + WORKLOAD

ES2

Engineered Systems and Energy Solutions (ES2) has a growing workforce of 77 personnel across our various office locations, with the Springdale, Arkansas, and Tulsa, Oklahoma facilities providing dedicated support for the company's on-call commissioning initiatives. ES2 is equipped with commissioning, engineering, Test-Adjust-Balance (TAB), and localized support capabilities readily available to address the university's requirements.

PERSONNEL

ES2's staff are intimately familiar with the U of A campus and are commissioning certified through NEBB. ES2 will bring their extensive experience in field testing and controls measurement and verification to each Cx project.

WORKLOAD

Engineered Systems and Energy Solutions (ES2) is experiencing growth and expansion within the state of Arkansas, but we are steadfastly prepared to accommodate supplementary projects and client requests, including serving as an on-call commissioning agent for the university.

OFFICE SIZE	LICENSED ENGINEERS	DEDICATED COMMISSIONING STAFF
77	2	8

CYNTERGY

Cyntergy has a staff size of 179 employees all located in Tulsa, Oklahoma. For the University of Arkansas on-call commissioning, Cyntergy plans to make available mechanical, electrical, fire protection and refrigeration engineers as well as an assigned architect for any building envelope concerns.

PERSONNEL

Cyntergy personnel will bring extensive multi-discipline building design experience and Professional Engineer Licensure in Arkansas with Commissioning Certification in ASHRAE/ANSI.

WORKLOAD

Cyntergy has the ability to commence work on this contract upon completion of successful negotiations and a formal Notice to Proceed. We do not anticipate any significant delays in commencing work due to any other work awarded Cyntergy at this time.

OFFICE SIZE	LICENSED MEP ENGINEERS	DEDICATED MEP STAFF
179	12	34

FIRM QUALIFICATIONS

ES2 + CYNTERGY

For over a decade, ES2 and Cyntergy have collaborated in diverse ways to design, build, and enhance high-performing mechanical systems. Now, as we join forces to offer commissioning services, we bring the University the distinct advantages of our shared commitment to quality and precision.

Our approach combines the strengths of two exceptional firms. ES2 leads with decades of hands-on field experience, transforming designs into reality with an unmatched command of control systems and a well-earned reputation for excellence. Building on this expertise, Cyntergy, a top full-service design firm for over 27 years, has a detailed knowledge of the design and construction process delivering successful projects across sectors localy, regionally and nationally, all the while, setting a high standard for design quality.

Together, ES2 and Cyntergy ensure that your project isn't just completed but completed to the highest standard and will operate as intended for years to come.

Please see below a selection of projects this team has worked on together:

- Northeastern Oklahoma Agricultural and Mechanical College - Deferred Maintenance Projects
  - Library-Admin: Cyntergy CxA / ES2 CxA Field Sub-Contractor
  - Copen Hall: Cyntergy CxA / ES2 CxA Field Sub-Contractor
- Meals on Wheels of Metro Tulsa
  - Cyntergy CxA / ES2 CxA Field Sub-Contractor
- GRDA - HQ + Administrative Center
  - Cyntergy CxA / ES2 CxA Field Sub-Contractor
- Oklahoma State Life Sciences East - AHU-7
  - Cyntergy Design Engineer / ES2 TAB Contractor
- Whirlpool Manufacturing Phase 1, Design Build Project
  - Cyntergy Design Engineer / ES2 Prime Contractor
- Oklahoma State Capitol - HVAC Upgrades to Nineteen (19) Buildings since 2011
  - Cyntergy Design Engineer / ES2 Controls Contractor
- Oklahoma Space Industry Development Authority - Facility Upgrades
  - Cyntergy Design Engineer / ES2 Controls Contractor
- Oklahoma State University, Connors State University - Gatlin Hall HVAC Study
  - Cyntergy Design Engineer / ES2 TAB Contractor



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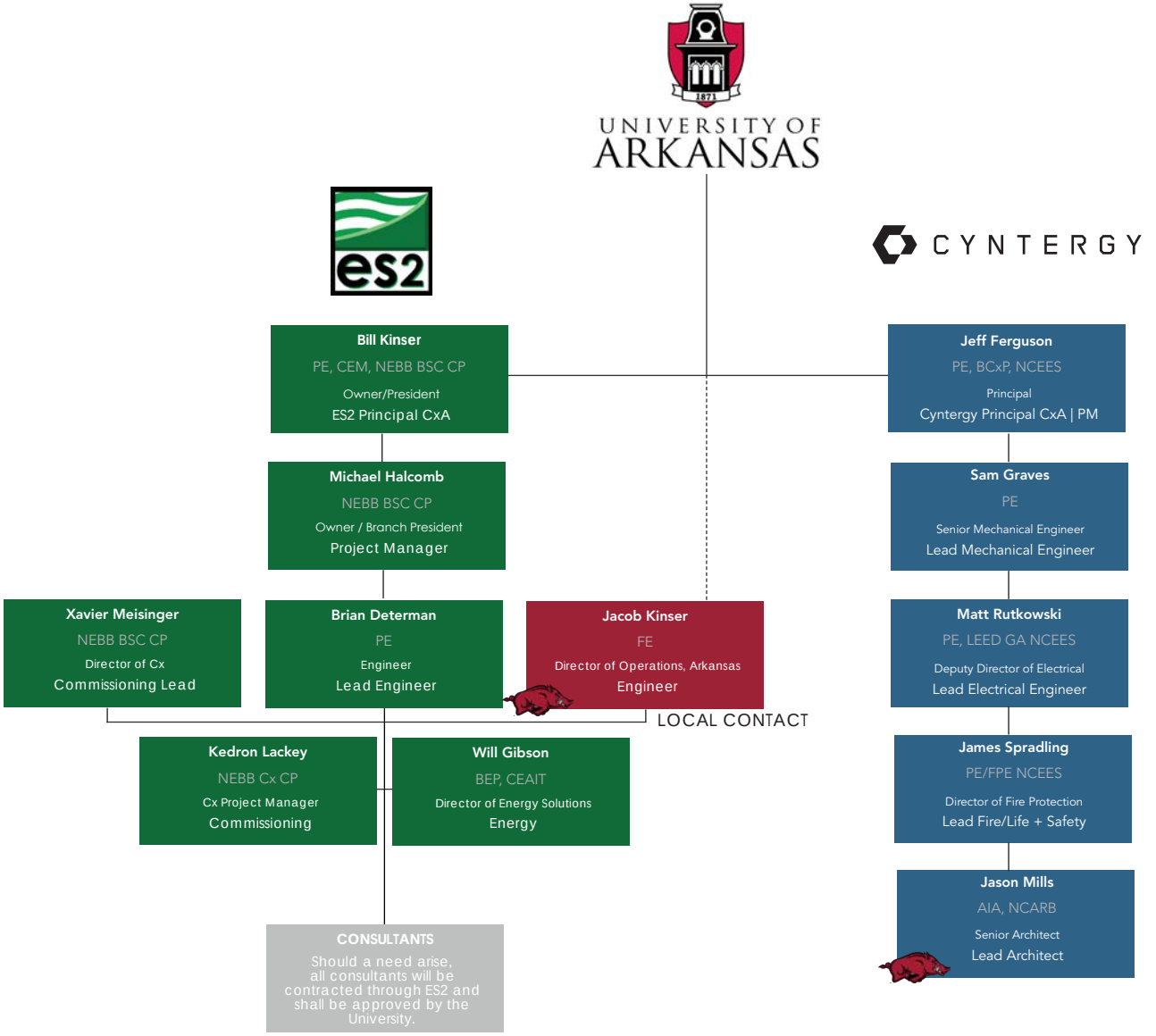
PROJECT TEAM

PROJECT TEAM

ORGANIZATIONAL CHART

ES2 and Cyntergy have combined their specialized strengths to deliver exceptional commissioning services on complex projects. The organizational chart in this section outlines our integrated team structure. While ES2 will serve as the contract lead if awarded, we provide a flat organization that ensures the University has direct access to each firm's lead CxA, as well as ES2's Project Manager. Each team member brings the expertise and dedication needed to ensure the success of your project. Below, you will find the organizational chart, followed by resumes of our key personnel for the University of Arkansas RFQ.



Denotes U of A Graduate

CYNTERGY

PROJECT TEAM

WILLIAM (BILL) M. KINSER, PE, CEM

POSITION: CEO

EXPERIENCE: 34 years of experience in HVAC mechanical, building automation, commissioning, testing and balancing. Bill has been responsible for the successful completion of over 800 projects.

EDUCATION: B.S. – University of Oklahoma, Mechanical Engineering

LICENSES AND CERTIFICATIONS:
P.E. – State of Oklahoma, Registered Professional Engineer PE 20491
ES2 Inc. – Certificate of Authority – CA 5668 PE
CEM – Certified Energy Manager, Association of Energy Engineers (AEE)
NEBB Certifications – Testing and Balancing, Building Systems Commissioning, Sound and Vibration

MEMBERSHIPS:
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
Oklahoma Environmental Balancing Bureau (OEBB)
Association of Energy Engineers (AEE)

DAVID MICHAEL HALCOMB, NEBB, CxCP

POSITION: Vice President

EXPERIENCE: 30 years of experience in HVAC mechanical, building automation, commissioning, testing, and balancing. Michael has been responsible for the successful completion of over 600 projects.

EDUCATION: A.A.S. – Oklahoma State University, HVAC & Refrigeration Technologies

LICENSES AND CERTIFICATIONS:
State Of Oklahoma Licensing – Unlimited Air Conditioning and Heating
NEBB Certifications – Testing and Balancing, Building Systems Commissioning

MEMBERSHIPS:
Oklahoma Environmental Balancing Bureau (OEBB)
American Society of Heating
Refrigerating and Air-Conditioning Engineers (ASHRAE)

CYNTERGY

PROJECT TEAM

BRIAN J. DETERMAN, PE

POSITION: Mechanical Engineer

EXPERIENCE: Over 24 years of experience in HVAC mechanical design.

EDUCATION: B.S. – Oklahoma Christian University, Mechanical Engineering

LICENSES AND CERTIFICATIONS: Registered Professional Engineer, State of Oklahoma, #20912

MEMBERSHIPS: ACEC – American Consulting Engineers Council
ASHRAE – American Society of Heating, Refrigeration, and Air-Conditioning Engineers – Served on Board of Governors, Website Committee Chairman
IGSHPA – International Ground Source Heat Pump Association
AEE – Association of Energy Engineers

XAVIER MEISINGER, NEBB, CxCP

POSITION: Commissioning Department Head

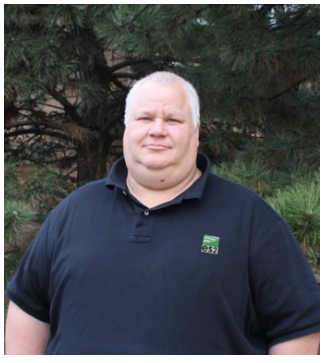
EXPERIENCE: Nine years of experience in HVAC mechanical, building automation, commissioning, testing and balancing. Xavier has been responsible for the successful completion of over 50 projects.

EDUCATION: Cert. in Climate and Energy CTRLS., Metro Technology Centers

LICENSES AND CERTIFICATIONS: State Of Oklahoma Licensing – Unlimited Air Conditioning and Heating
NEBB Building System Commissioning Certified Professional
NFPA 80 Fire Door Inspection- Certificate of Education
NEBB Commissioning Certified Technician
NFPA 101 Life Safety- Certificate of Education

MEMBERSHIPS: Oklahoma Environmental Balancing Bureau (OEBB)

KEDRON LACKEY, NEBB, CxCP



POSITION: Commissioning Project Manager

EXPERIENCE: Twenty-one years of experience in HVAC mechanical, building automation, commissioning, testing and balancing. Kedron has been responsible for the successful completion of over 300 projects.

EDUCATION: AO in HVAC and Refrigeration, Vatterott College

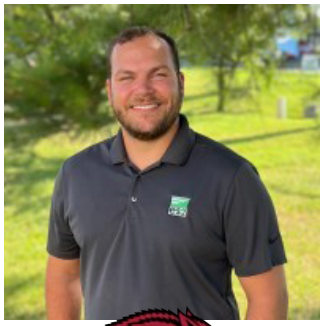
LICENSES AND CERTIFICATIONS: NEBB Commissioning Certified Professional
NEBB Certified Technician

MEMBERSHIPS: Oklahoma Environmental Balancing Bureau (OEBB)

CYNTERGY

PROJECT TEAM

JACOB KINSER



POSITION: Director of Operations - Arkansas Branch

EXPERIENCE: Close to a decade of experience in HVAC mechanical, building automation, commissioning, and testing and balancing. Jacob has been responsible for the successful completion of roughly 20-25 projects.

EDUCATION: B.S. – University of Arkansas, Mechanical Engineering

LICENSES AND CERTIFICATIONS: NCEES FE

MEMBERSHIPS: ASHRAE - Northwest Arkansas Chapter

WILL GIBSON, BEP, CEAIT

POSITION: Director of Energy Solutions

EXPERIENCE: Will Gibson brings over 10 years of expertise in energy solutions, regulatory consulting, mission-critical facility strategy, and mechanical infrastructure optimization. Will has led countless facility audits over the years, resulting in millions of dollars in utility cost savings for industrial and commercial facilities. Will's track record includes implementing successful energy programs across energy, government, and critical infrastructure sectors, with significant achievements in natural gas leak detection, HVAC optimization, and ASHRAE Level 1, 2, and 3 audits.

EDUCATION: B.S. – Oklahoma State University, Mechanical Engineering
Minor in Military Science and Operational Studies

LICENSES AND CERTIFICATIONS:
Certified Business Energy Professional (BEP)
Certified Energy Auditor In Training (CEAIT)
ASME Y14.5 Geometric Dimensioning and Tolerancing Certification
Q-Security Clearance
OSHA 30

MEMBERSHIPS:
Board Member, Great Plains Center of Excellence
Senior Member, Association of Energy Engineers (AEE)
Member, American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
Member, NFPA 59A (Fire Safety and Mechanical Systems Standards)
Member, International Fluid Power Society
Awardee, NextGen Under 30 class of 2022- for exceptional leadership and achievement in the energy & sustainability industry
Awardee, Industrial Assessment Center Outstanding Alumni- for significant achievements in the energy engineering industry

CYNTERGY

JEFF FERGUSON, PE, BCxP, NCEES

Principal
Principal Commissioning Agent | PM

BACKGROUND
Mr. Ferguson serves as the mechanical engineer of record and has over 30 years of professional experience in mechanical design and project management for local and federal government agencies, higher education, industrial, commercial, religious and retail clients. His experience includes complicated renovations as well as ground up structures with extensive experience in sustainable designs using the latest technology and modeling to create energy-efficient facilities.

EDUCATION
- BS | Oklahoma State University | 1991
- MS | Oklahoma State University 1997

REGISTRATION
- Registered Professional Engineer | AR
- Registered in 47 Additional States
- National Council of Engineers, Examiners + Surveyors
- Certified Building Commissioning Professional | 2016

EXPERIENCE

NEO COPEN HALL COMMISSIONING, OKLAHOMA STATE UNIVERSITY NEO CAMPUS, MIAMI, OK
Under our on-call Deferred Maintenance Contract Cyntery provided MEP engineering services on upgrades to Copen Hall at NEO. This included construction-phase commissioning for HVAC systems in Copen Hall, including over 30 chilled water fan coils, two air-cooled chillers, multiple heating and chilled water pumps, pump variable frequency drives, a dedicated outside air system, and direct digital control systems.

GRDA NEW ADMINISTRATIVE CENTER COMMISSIONING, CHOTEAU, OK
Cyntergy provided Architectural and multidiscpliine engineering services on the GRDA Administrative Center, a newly constructed multi-story facility covering approximately 50,000 square feet in the Mid-America Industrial Park. The facility includes various amenities, such as a public welcome area, large meeting room, cafe, and executive offices. The commissioning piece focused on the construction-phase commissioning of essential building systems to ensure optimal functionality, energy efficiency, and occupant comfort.

MEALS ON WHEELS HARDESTY SERVICE CENTER COMMISSIONING, TULSA, OK
The new Meals on Wheels Metro Tulsa facility includes diverse functional spaces such as offices, employee and volunteer areas, a commercial kitchen, shipping and receiving areas, and a public lobby with views into the meal preparation space. Primary commissioning tasks included system installation verification, functional performance testing, testing, adjusting, and balancing (TAB), and comprehensive system documentation.

OSU OADDL FACILITY ANIMAL BIOLOGICAL SAFETY LEVEL 3 COMMISSIONING, STILLWATER, OK
Under its on-call contracts, Cyntergy provided electrical and mechanical scope of commissioning services, which included the following: Review of contract documents and site survey to confirm current lab configuration and "as-built" conditions met original design intent. Review included submittals, controls sequences, TAB reports, and design.

CYNTERGY

SAM GRAVES, PE

Senior Mechanical Engineer
Lead Mechanical

BACKGROUND
A licensed Professional Engineer in the State of Oklahoma with a background in HVAC and plumbing systems, Sam has served as the project manager for multi-discipline projects in assisted living, higher education, general commercial, and hospitality sectors. Leveraging Cyntergy's established engineering expertise, Sam leans on strong communication skills, a deep care for and understanding of the client's needs, a transparent approach, and the ability to form unique relationships with each team member, to manage projects in a way that makes our clients' lives better. Overall, Sam carries over 12 years of engineering experience in project design, management, and production.

EDUCATION
- BS | University of Tulsa | 2012

REGISTRATION
- Registered Professional Engineer

AWARDS
- CSE Magazine 40 under 40, 2022

EXPERIENCE

OSU ON-CALL ENGINEERING + MULTIPLE LAB RENOVATIONS, MULTIPLE CAMPUSES
MEP Services On-Call, Multiple Campuses, OK
Over 200+ Projects since 2003
HBRC Plant Contamination Room, Stillwater, OK
New Campus Engineering Design Guidelines, All Campuses, OK
New University Commons, Stillwater, OK
Venture 1 Chiller Replacement + HVAC Upgrade, Stillwater, OK
Bert Cooper Engineering Lab, Stillwater, OK
Center for Health Sciences, Tulsa, OK
Kerr Drummond Facility Assessment, Stillwater, OK
NRC Emergency Showers, Stillwater, OK
Numerous In-House Mechanical Assessments, Stillwater, OK
ARTC Laboratories 136,215,217,231,232,236, Stillwater, OK
Construction Tech Lab Renovations, Stillwater, OK
Advanced Manufacturing Lab, Oklahoma City, OK
Bio Manufacturing Lab, Oklahoma City, OK
OSU New University Commons, Stillwater, OK
ATRC Lab 342 Hydrogen Piping, Stillwater, OK
Physical Sciences Helium Recovery HEX, Stillwater, OK

MEALS ON WHEELS HARDESTY SERVICE CENTER, TULSA, OK
Cyntergy provided MEP Engineering services on this new project encompasses the commissioning of the new Meals on Wheels Metro Tulsa facility, located at 5151 E 51st St, Tulsa, OK. The facility, designed to increase daily meal production and foster community engagement, includes diverse functional spaces such as offices, employee and volunteer areas, a commercial kitchen, shipping and receiving areas, and a public lobby with views into the meal preparation space.

GRDA NEW ADMINISTRATIVE CENTER, CHOTEAU, OK
Cyntergy provided Architectural and multidiscpliine engineering services on the GRDA Administrative Center, a newly constructed multi-story facility covering approximately 50,000 square feet in the Mid-America Industrial Park. This building centralizes several GRDA departments, consolidating their operations under one roof to improve collaboration and efficiency. The facility includes various amenities, such as a public welcome area, large meeting room, cafe, and executive offices.

CYNTERGY

MATT RUTKOWSKI, PE, NCEES, LEED GA

Deputy Director of Electrical Engineering
Lead Electrical

BACKGROUND

Mr. Rutkowski serves as Deputy Director of Electrical Engineering responsible for electrical design and oversight for a wide range of project types for the DoD, other federal/state/local agencies, educational, retail, commercial and industrial clients. He is a registered professional engineer in numerous states, registered with the National Council of Engineering Examiners and a LEED Green Associate.

EDUCATION

- BS | Kansas State University | 2010

REGISTRATION

- Registered Professional Engineer | AR
- Registered in 37 Additional States
- National Council of Engineers, Examiners + Surveyors
- LEED Green Associate

EXPERIENCE

OSU ON-CALL ENGINEERING + MULTIPLE LAB RENOVATIONS, MULTIPLE CAMPUSES

OSU MEP Services On-Call, Multiple Campuses, OK
Over 200+ Projects since 2003
ARTC Lab Renovations, (10+), Stillwater, OK
McElroy Hall Rooms 154 + 154A New BSL2 Lab, Stillwater, OK
ATRC Generator, Stillwater, OK
Construction Tech Lab Renovations, Stillwater, OK
OSUIT Downtown Housing Renovation, Okmulgee, OK
Advanced Manufacturing Lab, Oklahoma City, OK
Bio Manufacturing Lab, Oklahoma City, OK
Construct Tech Lab, Stillwater, OK
NEO Research and Development Lab Renovations, Miami, OK
OSU ATRC Generator, Stillwater, OK
OSU NEO A&M Deferred Maintenance, Miami, OK
15+ Projects since 2018
CSC Building HVAC Assessments, Warner, OK
OSU North Dining Hall, Stillwater, OK
Math Sciences HP Computer Design, Stillwater, OK
HBRC Plant Contamination Room, Stillwater, OK
New Campus Engineering Design Guidelines, All Campuses, OK

GRDA NEW ADMINISTRATIVE CENTER, CHOTEAU, OK

Cyntergy provided Architectural and multidiscpliine engineering services on the GRDA Administrative Center, a newly constructed multi-story facility covering approximately 50,000 square feet in the Mid-America Industrial Park. This building centralizes several GRDA departments, consolidating their operations under one roof to improve collaboration and efficiency. The facility includes various amenities, such as a public welcome area, large meeting room, cafe, and executive offices.

NEO COPEN HALL COMMISSIONING, OKLAHOMA STATE UNIVERSITY NEO CAMPUS, MIAMI, OK

Under our on-call Deferred Maintenance Contract Cyntergy provided MEP engineering services on upgrades to Copen Hall at NEO. This included construction-phase commissioning for HVAC systems in Copen Hall, including over 30 chilled water fan coils, two air-cooled chillers, multiple heating and chilled water pumps, pump variable frequency drives, a dedicated outside air system, and direct digital control systems.

CYNTERGY

JAMES SPRADLING, PE/FPE, NCEES

Director of Fire Protection Engineering
Lead Fire + Life Safety

BACKGROUND
Mr. Spradling is a registered Fire Protection and/or Mechanical Professional Engineer in 49 states, holds membership in NFPA and maintains certification with the National Council of Examiners for Engineering and Surveying. He has over 24 years of experience with domestic and international fire protection design in federal-state-local agency, commercial, educational, retail, religious, recreational, residential, industrial and hospitality projects.

EDUCATION
- BS | University of Texas | 1992

REGISTRATION
- Registered Professional Engineer | AR
- Registered in 48 Additional States
- National Council of Engineers, Examiners + Surveyors

EXPERIENCE

WALMART STORES + DISTRIBUTION CENTERS FIRE PROTECTION, 1000+ STORES, NATIONWIDE
Supercenter remodels are the heart of the remodel work Cyntergy has done for Walmart. These projects are complex and numerous and have included everything from finish upgrades to vestibule and stockroom additions over the years. The majority of Supercenter remodels include extensive refrigerated case replacements, branding improvements, HVAC and refrigeration system upgrades, electrical service, switch gear and lighting upgrades, plumbing systems and building modifications and/or additions.

OSU ON-CALL ENGINEERING, MULTIPLE CAMPUSES
OSU MEP Services On-Call, Multiple Campuses, OK
Over 200+ Projects since 2003
CSC Student Union Renovation, Warner, OK
NEO A&M Deferred Maintenance, Miami, OK
15+ Projects since 2018
Seretean Center Choral Room, Stillwater, OK
OSUIT Downtown Housing Renovation Project, Okmulgee, OK

UNIVERSITY OF ARKANSAS, PI KAPPA ZETA CHAPTER HOUSE, FAYETTEVILLE, AR
Cyntergy designed the addition to the mid-century modern fraternity house at the University of Arkansas campus. The original building was designed by John G. Williams, the first dean of the University of Arkansas School of Architecture, who remains an important figure at the University. The historic building provided a unique challenge with the addition of a second floor, and the mid century modern structure was studied in depth in order to provide a design that would not only compliment the style, but improve the functionality and durability as well.

DEPARTMENT OF VETERANS AFFAIRS, NEW PARKING GARAGE, FAYETTEVILLE, AR
Cyntergy provided full AE design services on this design-build project, which also included ATFP concerns regarding passive barriers, stand-off distances and vehicular access control as well as coordination with SHPO and the City of Fayetteville for historical requirements.

PROJECT TEAM

CYNTERGY

JASON MILLS, AIA, NCARB

Architect
Lead Architect

BACKGROUND

Jason Mills is a 1996 graduate of the University of Arkansas and a die hard Razorback with 25 years professional experience. He has led design teams on projects nationwide for the majority of his career. He's involved in all aspects of the project and client relations, helping to take projects from feasibility and pre-design phases through to project closeout. Jason has developed positive and productive relationships with clients, consultants, contractors and colleagues; earning their trust. He has a solid background in planning and design with creative problem solving skills.

EDUCATION

- BS | University of Arkansas | 1996

REGISTRATION

- Registered Professional Engineer | AR
- Registered in 7 Additional States
- American Institute of Architects
- National Council of Architectural Boards + Registrations

EXPERIENCE

UNIVERSITY OF ARKANSAS, PI KAPPA ZETA CHAPTER HOUSE, FAYETTEVILLE, AR

Cyntergy designed the addition to the mid-century modern fraternity house at the University of Arkansas campus. The original building was designed by John G. Williams, the first dean of the University of Arkansas School of Architecture, who remains an important figure at the University. The historic building provided a unique challenge with the addition of a second floor, and the mid century modern structure was studied in depth in order to provide a design that would not only compliment the style, but improve the functionality and durability as well.

OSU ON-CALL ARCHITECTURE, MULTIPLE CAMPUSES

OSU Architectural Services On-Call, Multiple Campuses, OK
Bio Conversion Lab, Stillwater, OK
Conners State College Gatlin Hall Remodel, Warner, OK
McElroy Hall Lab 276, Stillwater, OK
Conners State Collee Jacob Johnson Nursing Center, Warner, OK
McElroy Hall Lab 278, Stillwater, OK
McElroy Hall Lab 285, 285A, Stillwater, OK
Center for Health Sciences Hyperbaric Chamber, Stillwater, OK

ORAL ROBERTS UNIVERSITY, BIOLOGICAL SCIENCE CENTER, TULSA, OK

When Oral Roberts University wanted to relocate their Biological Sciences Center to a new location on campus, they turned to Cyntergy to develop an adaptive reuse design and re purposing of an existing building for their needs. The 27,000 sf building was completely renovated to provide all student, faculty and support spaces for the department's program demands and future growth. The newly renovated building includes four academic teaching & lecture labs, an anatomy teaching lab, plant growth lab, computer lab, a large lecture hall, various student study and collaboration areas, eight secure faculty research labs, departmental offices, and student and faculty lounges.

PROJECT TEAM

KNOWLEDGE + EXPERIENCE

ES2 in partnership with Cyntergy, has a history of successfully delivering commissioning services for projects with substantial scale and complexity, particularly within the education sector. Our team has led commissioning efforts on numerous university campuses, research facilities, and government buildings, all of which require stringent performance standards and operational resilience. For example, in a recent commissioning project for a large university science building, our team conducted a phased commissioning approach to align with ongoing construction schedules and mitigate disruptions to adjacent facilities. Through close coordination with architects, contractors, and university stakeholders, we ensured the project met both timeline and quality benchmarks. This experience has equipped us with the skills and flexibility to handle the University of Arkansas's on-call commissioning needs efficiently and reliably.

STARTUP, OPERATION, AND TROUBLESHOOTING OF HVAC, EMERGENCY GENERATORS, AND BUILDING AUTOMATION SYSTEMS

Our team's experience extends to the full life-cycle of building system commissioning, including the startup, operation, and troubleshooting of complex HVAC systems, emergency generators, and building automation systems (BAS). In past projects, we have successfully identified and resolved HVAC performance issues, such as improper airflow and control sequence errors, which could have led to occupant discomfort and increased energy consumption. For instance, during a recent commissioning for an emergency power system in a laboratory facility, our team conducted load bank testing to confirm generator capacity and simulated power loss scenarios to ensure seamless transition to backup power. This attention to detail and deep understanding of system interdependencies allow us to diagnose and resolve issues proactively, ensuring each component functions as intended from the outset.

WRITING SPECIFICATIONS, TEST PROTOCOLS, AND DEVELOPING COMMISSIONING PLANS

Our commissioning process includes the development of clear, comprehensive commissioning plans, tailored test protocols, and precise specifications that guide each project from inception to completion. We provide commissioning specifications that detail testing and verification requirements for each system, covering both individual equipment and integrated system performance. In one notable project for a research facility, we created custom test protocols for HVAC and lab ventilation systems to account for unique airflow requirements, ensuring that the systems met critical safety and performance standards. These carefully crafted documents not only streamline the commissioning process but also serve as valuable resources for the client's operations team, supporting long-term system reliability and performance.

BUILDING SYSTEM OPERATION, MAINTENANCE, AND TRAINING

Effective commissioning doesn't end with system verification; it extends to ensuring the client's staff are fully prepared to manage ongoing operation and maintenance. We provide in-depth training sessions that cover system functionality, common troubleshooting steps, and preventative maintenance practices. In a recent project for a large academic institution, we developed a series of training modules tailored to the facility's specific HVAC, lighting, and electrical systems. These sessions included hands-on training with system control interfaces and maintenance protocols, equipping the facilities team to maintain optimal system performance. Additionally, we supply comprehensive operation manuals that provide a reliable reference for system troubleshooting and maintenance procedures, contributing to reduced downtime and increased longevity.

PROJECT TEAM

FIELD EXPERIENCE USING TEST EQUIPMENT

Our team's engineers possess extensive hands-on experience with a range of testing equipment necessary for rigorous commissioning, including air and water balancing instruments, power quality analyzers, data loggers, and infrared thermography. In one example, while commissioning an educational facility's HVAC system, our team used air-balancing equipment to verify the proper flow rates in all zones, ensuring that the system delivered consistent comfort to occupants. We also routinely use power analyzers to assess electrical systems, verifying load distribution and ensuring power quality aligns with system requirements. This field experience with specialized test equipment enhances our ability to provide accurate performance data, enabling us to identify and address potential issues early in the commissioning process.

ENERGY-EFFICIENT EQUIPMENT AND SYSTEM DESIGN AND CONTROL STRATEGY

Energy efficiency is a central focus of our commissioning efforts. Our team has worked extensively with high-performance building systems, including variable frequency drives, demand-controlled ventilation, and energy recovery systems that contribute to sustainability goals while maintaining system performance. For example, in a recent LEED-certified university building, we commissioned HVAC and lighting control systems that reduced energy consumption by over 20% compared to baseline models. Our engineers ensured that system setpoints, control sequences, and schedules were optimized for occupant comfort and energy savings. Our approach not only verifies that systems perform as designed but also maximizes energy efficiency, supporting the University of Arkansas's commitment to sustainable operations.

MONITORING AND ANALYZING SYSTEM OPERATION USING BUILDING AUTOMATION SYSTEM TRENDING AND STAND-ALONE DATA LOGGING

Our team has a strong track record of utilizing building automation systems (BAS) for real-time monitoring and trend analysis, enabling us to evaluate system performance and identify areas for improvement. By setting up data logging and trend analysis protocols within the BAS, we monitor key performance metrics such as temperature, humidity, and energy usage, ensuring that systems maintain optimal performance under varying conditions. In one recent project, we implemented trend analysis on a BAS to monitor HVAC performance over seasonal changes, enabling the facilities team to make data-driven adjustments that improved occupant comfort and reduced energy costs. Additionally, we utilize standalone data loggers to capture critical system data independently of the BAS, providing a robust data set for performance verification. This approach allows us to ensure each system operates efficiently and meets the intended performance standards over time.

Our team's unique understanding and expertise in engineering, systems design, construction, and facilities operations ensure that the owner's interests are protected at every stage of the process.

.03

TEAM PROJECT EXPERIENCE

DUNHAM & HEADINGTON RESIDENTIAL COLLEGES

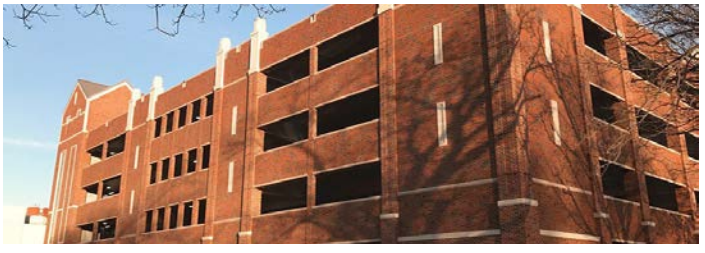
UNIVERSITY OF OKLAHOMA

Norman, OK

The OU Residential College project comprised two five-story residential buildings connected by a single-floor dining hall and an adjacent parking garage. The total project covers 290,000 square feet and provides accommodations for 640 students. Our commissioning scope included delivering technical commissioning of the MEP (Mechanical, Electrical, and Plumbing) systems in accordance with NEBB standards and ensuring the project qualifies for LEED Silver Certification. The Major equipment that was commissioned consisted of:

- Dedicated Outside Air Units w/ Energy Recovery Heat Wheel
- Air Handling Units
- Variable Air Volume Units
- Chilled Beams (Primary Heating/Cooling for Dorm Rooms)
- General Exhaust Fans
- Kitchen Hoods & Make Up Air Units
- Hydronic Units Heaters
- Steam to Water Heat Exchangers
- Hydronic Pumps
- Steam Traps
- Domestic Water System
- Building Automation System and Graphics

Through our detailed commissioning process, which involved Field Installation Verification and Functional Performance Testing, we identified and corrected over 550 issues. The final NEBB-stamped report confirmed that the project was efficient and functional, meeting the owner's specifications and LEED Silver requirements.



CHUN C. LIN HALL PHYSICS + ASTRONOMY

UNIVERSITY OF OKLAHOMA

Norman, OK

The Chun C. Lin Hall project is a two-story building with a basement, covering a total area of 54,100 square feet. It is specifically designed to support NIST-A quantum physics experiments and testing under controlled atmospheric conditions. The facility is recognized as one of the premier environmentally controlled research spaces in the nation. Our commissioning scope included delivering technical commissioning of the MEP (Mechanical, Electrical, and Plumbing) systems in accordance with NEBB standards and ensuring the project qualifies for LEED Silver Certification. The Major equipment that was commissioned consisted of:

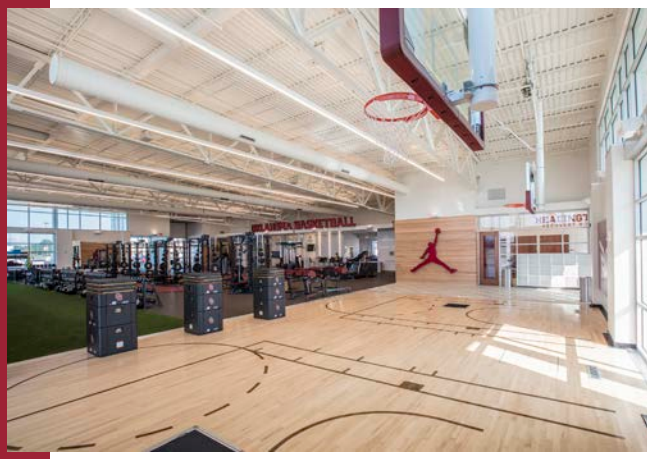
- Air Handling Units
- Variable Air Volume Units
- Supply/Exhaust Air Valves (Hoods)
- Lazer Lab Atmosphere Controls
- Fan Coil Units
- Steam to Water Heat Exchangers
- Humidifiers
- Ventilation Fans
- Fan Coil Units
- Water Metering
- Domestic Water System
- Lighting Control System
- Building Automation System and Graphics

Through our detailed commissioning process, which involved Field Installation Verification and Functional Performance Testing, we identified and corrected over 70 issues. The final NEBB-stamped report confirmed that the project was efficient and functional, meeting the owner's specifications and LEED Silver requirements.

GRIFFIN FAMILY PERFORMANCE CENTER

UNIVERSITY OF OKLAHOMA

Norman, OK



The Griffin Family Performance Center is an 18,000 square foot basketball training facility. It features state-of-the-art training courts, weightlifting areas, and both indoor and outdoor turfs. Additionally, the facility includes an exam and recovery area and a fueling station. Our commissioning scope included delivering technical commissioning of the MEP (Mechanical, Electrical, and Plumbing) systems in accordance with NEBB standards. The Major equipment that was commissioned consisted of:

- Air Handling Units
- Variable Air Volume Units
- Ventilation Fans
- Hydronic Unit Heater
- Building Automation System and Graphics

Through our detailed commissioning process, which involved Field Installation Verification and Functional Performance Testing, we identified and corrected over 25 issues. The final NEBB-stamped report confirmed that the project was efficient and functional, meeting the owner's specifications and requirements.

CYNTERGY

NEO COPEN HALL COMMISSIONING

OKLAHOMA STATE UNIVERSITY - NEO CAMPUS

Miami, OK

This commissioning project focuses on NEO's Copen Hall, a two-story classroom and office building in a comprehensive deferred maintenance upgrade. The scope covered construction-phase commissioning for HVAC systems in Copen Hall, including over 30 chilled water fan coils, two air-cooled chillers, multiple heating and chilled water pumps, pump variable frequency drives, a dedicated outside air system, and direct digital control systems.

The project design includes a unique setup wherein Copen Hall's basement-located chillers, boilers, and pumps are configured to serve both Copen and Shipley Halls. This system is designed for a future connection to Shipley Hall, which, once renovated, will also use the heating and chilled water provided by the Copen Hall central plant. Key challenges included optimizing the control systems for seamless switchover capability, enabling either building to rely on the other's equipment in the event of a system failure, thus ensuring robust redundancy.

Final commissioning revealed outstanding items, particularly in controls, and sound mitigation adjustments were noted for fan coil units above hallways. The commissioning report provides detailed system requirements, equipment data, and testing documentation to ensure long-term operability and alignment with project goals for durability and efficiency.

CYNTERGY

ADMINISTRATIVE CENTER COMMISSIONING

GRAND RIVER DAM AUTHORITY

Choteau, OK

The GRDA Administrative Center is a newly constructed multi-story facility covering approximately 50,000 square feet in the Mid-America Industrial Park. This building centralizes several GRDA departments, consolidating their operations under one roof to improve collaboration and efficiency. The facility includes various amenities, such as a public welcome area, large meeting room, cafe, and executive offices. The commissioning project focused on the construction-phase commissioning of essential building systems to ensure optimal functionality, energy efficiency, and occupant comfort.

Commissioned Systems Included:

- Dedicated Outdoor Air Units (DOAU)
- Air-Cooled Chiller System
- Rooftop Units (RTUs)
- Blower-Coil Units (sensor-operated, covering 20%)
- Fan-Coil Units (sensor-operated, covering 20%)
- Stairwell Pressurization Systems (third-party certified)
- Mini-Split Air Conditioning Systems
- Computer Room Air Conditioning (CRAC) + emergency ventilation fans
- Direct Digital Control (DDC) system

This commissioning report details the project requirements, equipment specifications, and testing results, providing a comprehensive view of system performance and highlighting any outstanding issues to be resolved. Key remaining issues include temperature control in lobby areas, final acceptance of the stairwell pressurization system, and specific warranty checks on heating functions in select fan coil units.

The GRDA project aligns with modern building standards and is designed to be adaptable to future requirements, prioritizing efficient energy use and ease of maintenance across all critical systems.

CYNTERGY

HARDESTY SERVICE CENTER COMMISSIONING

MEALS ON WHEELS

Metro Tulsa, OK

This project encompasses the commissioning of the new Meals on Wheels Metro Tulsa facility, located at 5151 E 51st St, Tulsa, OK. The facility, designed to increase daily meal production and foster community engagement, includes diverse functional spaces such as offices, employee and volunteer areas, a commercial kitchen, shipping and receiving areas, and a public lobby with views into the meal preparation space.

The commissioning scope covered construction-phase commissioning for critical HVAC systems, including:

Rooftop Units (RTU-1 & RTU-2): Gas-fired heating and DX cooling.

Variable Air Volume (VAV) Boxes: 23 single-duct VAV boxes with electric reheat.

Dedicated Outdoor Air Systems (DOAS-1, 2 & 3): Kitchen ventilation start-up and testing.

Primary commissioning tasks included system installation verification, functional performance testing, testing, adjusting, and balancing (TAB), and comprehensive system documentation. The commissioning report details all testing outcomes, equipment data, and any outstanding items, including an access challenge for VAV-13 located above restroom ceilings.

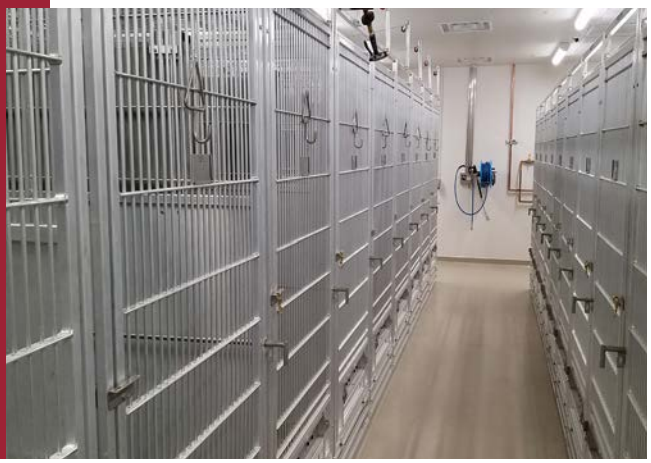
This project supports Meals on Wheels Metro Tulsa's operational goals while ensuring optimal performance and reliability of the HVAC and related building systems through thorough testing, documentation, and follow-up.

CYNTERGY

MULTI SPECIES RESEARCH FACILITY

OKLAHOMA STATE UNIVERSITY

STILLWATER, OK



Cyntergy provided engineering design services for the redesign of the heating and humidification systems at the Multi-Species Research Facility. The following services were provided:

- Increase the humidifier capacity + effectiveness to raise overall facility relative humidity to required AAALAC ranges (30-70 % RH).
- Troubleshoot existing humidifier system to increase overall effectiveness + minimize wasted condensate. Trap modification will be required.
- Design new gas service to new humidifier.
- Design + coordinate location of additional humidifier system and duct-mounted humidifier dispersion unit.
- Add a new 2" supply + return line for the east reheat coils SAV12 – SAV22 (Approximately 70 GPM).
- Provide freeze protection to the main air handler heating water coil (add run-around pump).
- Replace 2-way valves with 3-way valves.
- Replace the heating water expansion tank with a larger tank.
- Relocate a+ insulate Room 110 temperature sensors.
- Install alternate supply air diffusers in Room 110 for better air mixing to reduce air temperature stratification. This modification will require input from the principle researchers to determine allowable diffuser throws + resulting velocities at the cage level.
- Adjust supply + exhaust air flows in room 110 to increase offsets to meet required room pressure differentials. Drawings will indicate required offset pressure differentials for this room. Overall room is required to be negative.
- Modify pump impeller to allow for full 285 GPM design flow (no system diversity).
- Call for re-balance of heating water system for the new piping and valve changes.
- Call for re-balance of air-side system affected by modified offsets (primarily Room 110).
- Provide AHU leaving air temperature reset (winter season).
- Provide higher humidity set point.
- Adjust heating water pump differential Pressure set point based on re-configured heating
- Verify that the two condensing boilers are sequenced for equal run time.
- Verify that the two heating water pumps are sequenced for equal run time.

TEAM PROJECT EXPERIENCE

PROJECTS CURRENTLY UNDER CONSTRUCTION

ES2
ES2 is proud to serve Universities across the country. Below is a list of our active University projects:

- University of Oklahoma First Year Housing
  - Whole Building Technical Commissioning
  - LEED Silver Project
- University of Oklahoma Charlie Coe Golf Club Learning Center
  - Whole Building Technical Commissioning
- University of Oklahoma Radar Innovations Lab
  - Whole Building Technical Commissioning

CYNTERGY
As a multi-discipline firm, Cyntergy works on a variety of projects in several sectors. Below is a list of projects Cyntergy currently has under construction at state institutions and educational facilitates.

- Oklahoma State University Connors State College Fire Alarm Upgrades, Warner, OK
- Oklahoma State University Connors State College Classroom Building HVAC Upgrades, Warner,OK
- Oklahoma State University Power Plant Demolition, Stillwater, OK
- Oklahoma State University Wes Watkins Restroom HVAC, Stillwater, OK
- OMES ODMHSAS Forensic Center Flooring, Oklahoma City, OK
- OMES ODMHSAS Tornado Shelters, Oklahoma City, OK
- OSB Carter Hall Boys Dormitory Remodel, Muskogee, OK
- OSIDA Utility Upgrades, Burns Flat, OK
- VHiT Veteran's Hospital Tulsa, OK
- Oklahoma State University NEO Dyer Hall Chiller Replacement, Miami, OK
- Tulsa Community College SE Campus Pond Renovation, Tulsa, OK
- OSBI Headquarters Air Quality Renovations, Oklahoma City, OK

SIMILAR PROJECTS AT COLLEGES + UNIVERSITIES

ES2
As a commissioning partner to universities and educational institutions, ES2 ensures that building systems operate at peak performance. With extensive experience in new construction, facility upgrades, and complex renovations, our team understands academic settings. Selected Experience Includes:

- Connors State College, Gatlin Hall
  - Retro Commissioning/ Site Assessment
- Oklahoma State University Geology Research
  - NEBB Whole Building Technical Commissioning
- University of Oklahoma ROTC Armory
  - NEBB Whole Building Technical Commissioning
- University of Oklahoma Jenkins Parking Garage

TEAM PROJECT EXPERIENCE

NEBB Whole Building Technical Commissioning
- University of Oklahoma Library Service Center
  NEBB Whole Building Technical Commissioning
- University of Oklahoma Linn Hall
  NEBB Whole Building Technical Commissioning
  LEED Silver Certified
- University of Oklahoma Griffin Family Performance Center
  NEBB Whole Building Technical Commissioning
- University of Oklahoma Radar Innovation Building
  NEBB Whole Building Technical Commissioning
- University of Oklahoma Student Housing Expansion
  NEBB Whole Building Technical Commissioning
  LEED Silver Certified
- University of Central Oklahoma Howell Hall
  Fume Hood Testing and Certification

CYNTERGY

Cyntergy is proud to be a trusted partner to universities and educational institutions, where we have delivered a variety of successful projects focused on enhancing learning environments and supporting research. With extensive experience in new constructions, facility upgrades, and complex renovation projects, our team understands the unique demands of academic settings—from budget-sensitive planning and scheduling to phasing construction around ongoing campus operations. Selected Experience Includes:

- Animal Biological Safety Lab (Level 3 CX) Engineering, Stillwater, OK
- Advanced Technology Research Center Lab 215, 136, 217, 236, 254, 232, 213, 342, Stillwater, OK
- HBRC Plant Containment Room 140 AA BSL-2 + Conversion, Stillwater, OK
- Noble Research Center Emergency Showers, Stillwater, OK
- Venture 1 Chiller Replacement Study, Stillwater, OK
- Advanced Technology Research Center Lab Hydrogen Piping, Stillwater, OK
- Bert Cooper Engineering Lab, Stillwater, OK
- NRC 226 Fume Hood and Emergency Shower, Stillwater, OK
- Physical Sciences 201EA CRAC Unit, Stillwater, OK
- Physical Sciences Helium Recovery Chilled Water, Stillwater, OK
- Construction Tech Lab Room 114, Stillwater, OK
- McElroy Hall Steam Line Replacement, Stillwater, OK
- Life Sciences East AHU-7 Replacement, Stillwater, OK
- Animal Sciences Lab Fume Hood, Stillwater, OK
- Advanced Technology Research Center Lab 024 Gas Cabinet
- CEAT Renewable Energy Lab, Stillwater, OK
- McElroy Hall Veterinary Medical Emergency Generator, Stillwater, OK
- McElroy Hall BSL-1, BSl-2 and Basement Lab Suite Renovations, Stillwater, OK
- McElroy Hall Labs 276 + 278 Remodel, Stillwater, OK
- McElroy Hall Labs 284, 295, 285A + 286A Remodel, Stillwater, OK
- McElroy Hall Steam Line Replacement, Stillwater, OK

TEAM PROJECT EXPERIENCE

- Agricultural Sciences Department New Bioconversion Lab, Stillwater, OK
- University Commons Student Housing and Commissioning, Stillwater, OK
- North Dining Hall, Stillwater, OK
- OSUIT Downtown Student Housing, Okmulgee, OK

SIMILAR PROJECTS AT COLLEGES + UNIVERSITIES ON-CALL

Cyntergy has a proud record of service to higher educational institutions and have specialized in on-call style contracts including Oklahoma State University as well as NSU, UCO, ORU, OU, and RSU. In addition, Cyntergy's clients include numerous federal agencies and municipalities, such as General Services Administration, Federal Aviation Agency, Oklahoma Air National Guard, OMES/DCAM, Oklahoma Tourism and Recreation Department, Oklahoma Military Department, City of Tulsa, Tulsa County, City of Broken Arrow, etc.

84

Cyntergy has successfully held, maintained, and managed over 84 on-call or IDIQ style contracts since our inception.

EXPERIENCE WITH LEED

ES2

At ES2, we recognize that LEED commissioning is essential for ensuring a building's systems are designed, installed, and operating as intended to achieve optimal energy efficiency and sustainability. This comprehensive process includes an in-depth review of the building's mechanical, electrical, plumbing, and renewable energy systems, along with rigorous testing and verification of their performance.

The benefits of LEED commissioning are substantial: significant energy savings, improved building performance, and healthier indoor environments. Although some building owners may initially hesitate due to the upfront costs, the long-term savings and environmental benefits make commissioning a wise investment. As sustainability remains a global priority, commissioning will increasingly play a vital role in fostering an environmentally conscious built environment.

By choosing ES2, the University of Arkansas is investing in a future where buildings are not only efficient and sustainable but also contribute positively to the environment and occupant well-being.

Aligning with University of Arkansas's Sustainability Goals

Our commitment to sustainability aligns closely with the University of Arkansas's ambitious goals, such as achieving carbon neutrality by 2040, reducing emissions to 1990 levels, and striving for zero waste. ES2 will ensure that all new buildings meet at least LEED Silver standards. We share this vision, and our LEED commissioning services are designed to support these sustainability objectives by optimizing building systems for energy

efficiency and environmental performance. This not only aids in achieving LEED certification but also contributes to the University of Arkansas's broader sustainability targets.

By integrating rigorous standards and sustainability initiatives into our commissioning process, we help create buildings that are compliant with LEED requirements and exemplify the highest standards of environmental stewardship.

LEED SILVER CERTIFIED
First Year Housing, Norman OK
University of Oklahoma

LEED SILVER CERTIFIED
Linn Hall, Norman OK
University of Oklahoma

LEED SILVER CERTIFIED
Student Housing Expansion, Norman OK
University of Oklahoma

CYNTERGY

As a standard of responsible design practice, Cyntergy consistently targets sustainable design strategies as a central and vital role throughout our process. While striving to maintain sustainability principles in everything we do, we also understand and work towards specific client goals and when required, within the LEED Green Building Rating System or Green Globes Assessment tools. The goal of sustainable design is to meet the needs of society in the present world, without compromising the potential of future generations. Good sustainable design practices should provide a common vision of healthful environments, economic prosperity, and social equity.

Cyntergy is an active members of the US Green Building Council. We both currently employ many LEED Accredited Professionals who respond in various capacities on projects pursuing LEED Certification. Our engineers understand and perform energy modeling and consistently implement engineering solutions that meet or exceed ASHRAE requirements. We perform best sustainable and energy saving design practices regardless of whether the project is required to achieve LEED Certification.

LEED GOLD CERTIFIED
DHS-CAP Building Renovation, Oklahoma City, OK
Oklahoma Division of Capital Assets Management
First building renovation project to achieve Gold status in the State of Oklahoma.

LEED CERTIFIED
Engineering Technology Building, Oklahoma City, OK
Oklahoma State University

LEED SILVER CERTIFIED
C-130 Flight Simulator Addition (DB), Little Rock, AR
United States Army Corps of Engineers

Training Support Center (DB), Fort Leonard Wood, MO
United States Army Corps of Engineers

TEAM PROJECT EXPERIENCE

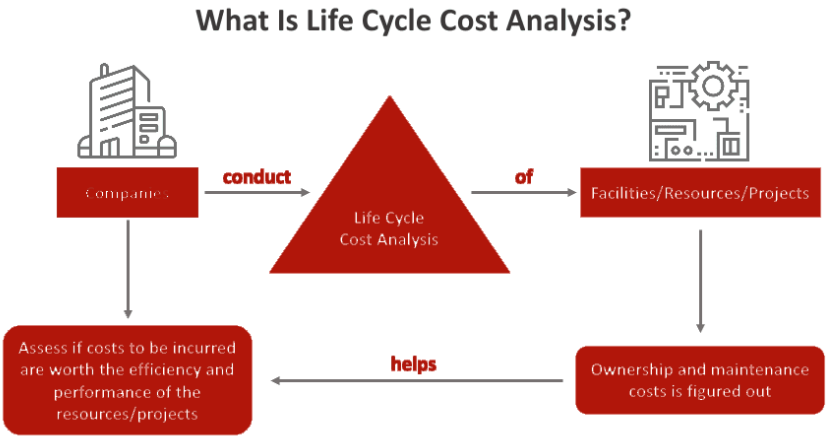
RECENT PROJECT EXPERIENCE

EXPERIENCE WITH PROJECT PHASING

Our team, led by ES2 Engineers with Cyntergy as a trusted partner, has extensive experience managing phased commissioning projects that ensure uninterrupted functionality during construction. We understand that campus environments, like that of the University of Arkansas, require careful planning to minimize disruptions to daily operations. Our approach to project phasing involves close collaboration with all stakeholders, including architects, contractors, and facilities management, to develop detailed schedules and sequencing that align with each project phase. In a recent project for a large university, we implemented a phased approach for HVAC system upgrades across multiple buildings, which allowed each facility to remain operational while upgrades were systematically completed. This phased execution not only minimized impact on occupants but also ensured that each system was fully verified and operational before moving to the next phase, maintaining safety and comfort throughout the project.

LIFE CYCLE COST ANALYSIS

Our team has experience providing universities with cost-effective solutions that prioritize long-term value. Through comprehensive life cycle cost analysis (LCCA), we evaluate the total cost of ownership for building systems, encompassing initial installation, maintenance, energy consumption, and end-of-life replacement. We have conducted LCCA for various projects, identifying sustainable, high-efficiency systems that meet performance requirements while minimizing costs over their operational lifespan. In one recent university project, our LCCA identified a high-efficiency chiller system that, despite a higher initial cost, would deliver significant energy savings and reduced maintenance costs over a 20-year period. This analysis supported an informed decision-making process for our client, ensuring that both financial and environmental goals were met. Our commitment to LCCA aligns with the University of Arkansas's sustainability objectives and long-term facility planning needs, delivering systems that offer optimized performance with lower total ownership costs.



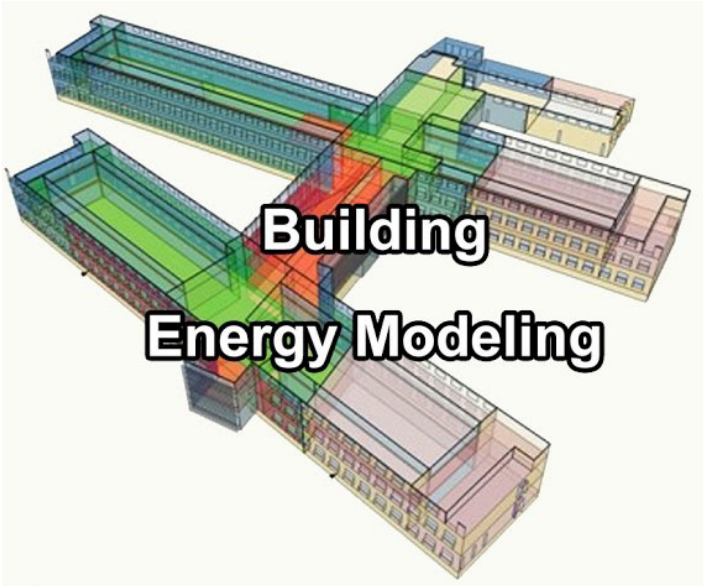
TEAM PROJECT EXPERIENCE

TESTING, ADJUSTING, AND BALANCING OF AIR AND WATER SYSTEMS

Testing, adjusting, and balancing (TAB) of air and water systems is critical to ensuring optimal HVAC system performance, comfort, and energy efficiency. Our commissioning team has deep experience in performing TAB services for a wide range of facilities, from educational to healthcare environments. We utilize specialized equipment and follow industry-standard protocols to verify that air and water flow rates meet design specifications, adjusting as necessary to achieve uniform distribution. In a recent project for a multi-building academic complex, our team conducted TAB for both air and hydronic systems, identifying and correcting imbalances that could have impacted occupant comfort and energy efficiency. This rigorous TAB process ensures that HVAC systems operate as intended, providing reliable temperature control, minimizing energy waste, and supporting a healthy indoor environment for building occupants.

BUILDING ENERGY SIMULATION

Our expertise in building energy simulation enables us to assess and optimize building energy performance during the design phase, supporting the selection of systems and strategies that meet stringent energy efficiency goals. By using advanced simulation software, we model the energy use of proposed systems, analyzing factors such as thermal performance, HVAC loads, lighting, and occupancy patterns. In a recent project, our team performed energy modeling for a university laboratory facility, which allowed us to compare the performance of different HVAC configurations and envelope upgrades. The simulation identified opportunities to reduce energy consumption by 15% through optimized insulation and high-efficiency HVAC systems. These insights directly informed design decisions, contributing to reduced operational costs and environmental impact. Our commitment to energy simulation aligns with the University's sustainability objectives, providing valuable data that supports informed decision-making for energy-efficient design.



SUSTAINABLE DESIGN

Sustainable design is at the core of our commissioning philosophy, and we are committed to advancing environmentally responsible building practices in all our projects. Our team's experience includes commissioning numerous LEED-certified and sustainably designed facilities, ensuring that each building meets rigorous standards for energy and water efficiency, indoor air quality, and resource conservation. We support sustainable design by verifying that all systems function efficiently and adhere to design intent, preventing issues that could compromise performance and sustainability goals. Our sustainable design approach provides long-term environmental and financial benefits, helping institutions like the University of Arkansas achieve their sustainability targets and reduce their carbon footprint. Examples of certified projects can be found in the LEED section on pages 29 and 30.

.04

PROJECT APPROACH

PROJECT APPROACH

MANAGEMENT PLAN

PROPOSED APPROACH TO MANAGING THE PROJECT

Our approach to project management emphasizes clear communication, efficient task distribution, and precise scheduling to meet the needs of the University of Arkansas.

Providing services on U of A's on-call contract starts with the organization of an experienced team of professionals with significant on-call experience.

ES2 and Cyntergy will make these experienced individuals immediately available to assist upon any communication signifying that U of A requires commissioning assistance. Our experience in providing on-call support indicates that when a particular agency needs assistance, quite often they need it quickly. Upon notification, the ES2 and Cyntergy U of A on-call team will immediately set up a site visit with the appropriate parties to determine the specific scope of services, schedule of deliverables, and estimate of fees to complete the work. After these items are discussed and negotiated and all parties agree, we will commence commissioning work and communicate directly with the designated U of A representative.

We are presenting a "flat" organization, giving the U of A staff full access to ES2 and Cyntergy's personnel. We understand that communicating the status of each task order is vital to the management of an on-call services contract and we have the staff and processes in place to track all task orders and provide status updates as needed.

Distribution of Tasks: Our team is structured to ensure that each member has clearly defined roles and responsibilities, which are aligned with their areas of expertise. The principal commissioning engineers will lead the development of commissioning plans and oversee the testing, adjusting, and balancing (TAB) of all major systems, while field technicians and supporting staff will handle on-site testing and documentation. Administrative staff will assist in managing scheduling, reporting, and communication, ensuring smooth coordination between team members, contractors, and university stakeholders. Each team member's role is designed to streamline the commissioning process, allowing us to efficiently address each phase without duplication or gaps in responsibility.

Travel Requirements: Given the on-call nature of this project, our team will adopt a flexible travel strategy that allows us to respond promptly to university needs. Team members from our Arkansas offices will be strategically assigned to reduce travel time and expenses, ensuring rapid mobilization when on-site presence is required. This flexibility also allows us to schedule travel around key project milestones and reduce the overall cost for the University. **Our frontline force will ascend from Old Missouri Road right there in Northwest Arkansas.**

We approach commissioning from the perspective of the operator, the ultimate owner.

Duration on Site for Team Members: Team members' time on-site will vary based on project phase and complexity. Senior engineers will be present for critical phases such as initial setup, major equipment testing, and final verification, while field technicians will conduct routine inspections and testing. Our goal is to ensure that key personnel are available on-site for critical milestones, while remote work will be conducted when feasible to reduce time on-site without sacrificing quality. This approach allows us to maintain high levels of oversight and quality control while maximizing efficiency.

PROJECT APPROACH

APPROACH TO INTEGRATING COMMISSIONING INTO THE NORMAL DESIGN AND CONSTRUCTION PROCESS

Integrating commissioning into the design and construction process from the outset is essential to avoiding delays and maximizing efficiency. Our team adopts a proactive approach, engaging with architects, engineers, and contractors early in the design phase to ensure that commissioning requirements are clearly communicated and integrated into project plans. By conducting design reviews and pre-installation meetings, we identify potential issues early and provide input on system designs that may impact commissioning outcomes. During construction, we coordinate closely with contractors to align commissioning activities with the construction schedule, ensuring that testing and verification are conducted promptly as each system reaches installation milestones. This collaborative, phase-aligned approach minimizes rework and helps maintain project timelines.

FOSTERING TEAMWORK WITH CONTRACTORS AND THE DESIGN TEAM

Our team is committed to fostering positive, cooperative relationships with all project stakeholders. We recognize that successful commissioning requires a collaborative approach, where each team member shares the goal of delivering a high-performance building.

Open Communication: We prioritize open lines of communication with contractors and the design team, conducting regular meetings to discuss progress, address questions, and coordinate activities. These meetings allow us to identify and address potential issues early, helping to prevent misunderstandings or delays.

Transparency and Respect: We approach each engagement with respect for the expertise of contractors and design professionals, ensuring that our commissioning efforts are seen as a support to their work rather than as an adversarial process. By providing clear, objective feedback based on empirical data, we minimize any perception of conflict and build trust.

Conflict Resolution: In the event of any disagreements, our team uses a problem-solving approach that focuses on project goals and outcomes. Our team members are trained in conflict resolution techniques, ensuring that any issues are resolved professionally and in a way that strengthens rather than hinders the team dynamic. By remaining flexible and solution-oriented, we work to turn potential adversarial situations into productive, team-building experiences.

YOUR NEW OR RENOVATED BUILDING SHOULD PERFORM TO YOUR EXPECTATIONS FROM DAY ONE.

OUR COMMISSIONING SERVICES ENSURE THAT IT WILL.

DETERMINING THE APPROPRIATE LEVEL OF COMMISSIONING EFFORT FOR VARIOUS SYSTEMS

We determine the level of commissioning effort for each system based on a risk-based approach that considers system complexity, criticality, and the university's objectives.

System Complexity and Integration: Systems that are highly integrated, such as HVAC, building automation, and emergency power systems, typically require a more comprehensive commissioning effort due to their complexity and the impact of any performance issues. For these systems, we implement detailed testing protocols, thorough

documentation, and extensive functional testing to verify performance under all expected operating conditions.

System Criticality: Critical systems, such as life safety systems and emergency power, receive a higher level of commissioning effort because of their importance to occupant safety and facility resilience. We employ stringent testing and verification for these systems, including performance testing under simulated emergency conditions, to ensure they function reliably when needed.

University Goals and Sustainability Objectives: For systems that impact sustainability and energy efficiency, such as lighting controls, HVAC, and energy recovery systems, we apply a commissioning approach that maximizes energy performance. This includes ongoing monitoring, trend analysis, and fine-tuning to optimize these systems in alignment with the university's sustainability targets.

By calibrating the level of commissioning effort to each system's unique requirements and importance, we ensure efficient allocation of resources, delivering high-quality outcomes that meet both performance and cost objectives.

COMMISSIONING PLAN

INTRODUCTION

Commissioning is the process of planning, documenting, scheduling, testing, adjusting, verifying, and training to provide a facility, which operates as a fully functional system as per the design intent. This process covers construction, start-up, and operation of the HVAC Equipment.

The purpose of the plan is to detail the process of commissioning on this project. This plan is the Commissioning Management Plan. It provides the basis for the commissioning process, to include the responsibilities, authority, and lines of communication of the commissioning team. The commissioning team consists of selected project members as described in the plan.
As your Commissioning Administrator, it is our goal to provide the highest level of functional integrity and reliability of the subject facility. This is accomplished through coordination and efforts of the owner, designers, contractors, and the Commissioning Administrator.

THE COMMISSIONING TEAM

The commissioning process is a team effort and its results are accomplished by the work and cooperation of the commissioning team members. The Commissioning Team consists of the following members:

- Prime Contractor/Construction Manager:
- Owner's Construction Representative:
- Owner/End-User:
- Architect:
- Mechanical Engineer:
- Mechanical Subcontractor:
- Electrical Subcontractor:
- HVAC Controls Subcontractor:
- Test, Adjust & Balance (TAB) Subcontractor:
- Commissioning Administrator (CxA):

- Witness Authority: The Commissioning Administrator, Owner, and the Owner's designated representative shall have the responsibility of witnessing major operational and functional tests as part of the commissioning process.

COMMISSIONING TEAM MEMBER RESPONSIBILITIES

Owner's Construction Representative: The Owner's Construction Representative:

- Has sole authority to negotiate contracts, order changes to the construction contract, and make final contract related decisions such as the acceptance of equipment, systems, and operational and functional test results.
- Determines the scope of commissioning for the project.
- Provides commissioning direction to all Commissioning Team members.
- Serves as the final authority for all commissioning related disputes, communications, and resolutions.
- No changes to construction documents may be made without the written permission of the contracting officer.

Owner/End-User: The User is the Commissioning Team's authority on the facility operations and maintenance needs. The Owner/End User:

- Provides communication concerning the operational needs of the maintenance staff.
- May attend periodic commissioning meetings.
- May attend training for facility operations.
- May function as a Witness Authority if designated by the Commissioning Administrator and Owner.
- Incorporates the commissioned facility into the facility's maintenance program.

Architect: The Architect:

- Provides communication and assistance with commissioning issues, conflicts, and design questions.
- May attend periodic commissioning meetings.
- May attend training for facilities operations.
- May provide training and training assistance concerning the design intent and the basis of design.

Mechanical Engineer: The Mechanical Engineer is the Commissioning Team's authority on the facility's mechanical design intent. The Mechanical Engineer:

- Provides communication and assistance with commissioning issues, conflicts, and design questions.
- May attend periodic commissioning meetings.
- Reviews the mechanical subcontractor's submittal for conformance to the design intent.
- Provides training and training assistance concerning the design intent and the basis of design.

Prime Contractor: The Construction Manager:

- Shall assist and coordinate the following activities communication between;
  - The Owner
  - Commissioning Administrator
  - Design Professionals
  - All Subcontractors
- Schedule and hold commissioning and coordination meetings.
- Coordinate all commissioning schedules with the Commissioning Administrator and the contractors

performing the startup and commissioning tasks.
- Coordinate and track all corrective work required to complete the commissioning work.

Mechanical Subcontractor: The Mechanical Subcontractor is the Commissioning Team's primary authority on the materials and methods used to implement the mechanical project scope of work. The Mechanical Contractor;

- Attends commissioning meetings and provides commissioning coordination for all mechanical systems commissioning activities.
- Provides all mechanical submittal information required for the design of commissioning tests.
- Assists the CxA in reviewing and modifying commissioning checklists, for the mechanical systems, to verify consistency with the materials and methods used in the construction of the mechanical systems.
- Provides technicians, tools, and instrumentation for mechanical commissioning activities and tests.
- Assists CxA in developing commissioning schedules for all mechanical commissioning activities and complete all mechanical commissioning activities to those schedules.
- Completes all corrective actions, in a timely manner, for successful completion of all mechanical commissioning activities.
- Prepares all operating and maintenance manuals and all required as-built documents, in accordance with the specifications, prior to owner training activities.
- Provides owner training in accordance with the project specifications.

Electrical Subcontractor: The Electrical Subcontractor is the Commissioning Team's primary authority on the materials and methods used to implement the electrical project scope of work. The Electrical Subcontractor:

- Attends commissioning meetings and provides commissioning coordination for all electrical commissioning activities.
- Provides all electrical submittal information required for the design of commissioning tests.
- Assists the CxA in reviewing and modifying commissioning checklists, for the electrical systems, to verify consistency with the materials and methods used in the construction of the electrical systems.
- Provides technicians, tools, and instrumentation for electrical commissioning activities and tests.
- Assists CxA in developing commissioning schedules for all electrical commissioning activities and completes all electrical commissioning activities to those schedules.
- Completes all corrective actions, in a timely manner, for successful completion of all electrical commissioning activities.

HVAC Controls Subcontractor: The Controls Subcontractor is the Commissioning Team's primary authority on the materials and methods used to implement the controls project scope of work. The Controls Subcontractor:

- Attends commissioning meetings and provides commissioning coordination for all controls systems commissioning activities.
- Provides all submittal information required for the design of commissioning tests.
- Assists the CxA in reviewing and modifying commissioning checklists, for the automation systems, to verify consistency with the materials and methods used in the construction of the building automation systems.
- Provides technicians, tools, and instrumentation for controls commissioning activities and tests.
- Assists CxA in developing commissioning schedules for all controls commissioning activities and completes all controls commissioning activities to those schedules.
- Completes all corrective action, in a timely manner, for successful completion of all controls commissioning activities.
- Provides all Control System Start-up for inclusion in the Final Cx Report.

- Provides trend data to verify that the automation systems operate according to the sequence of operations and the design intent during normal occupied conditions.
- Prepares all operating and maintenance manuals and all as-built documents, in accordance with the specifications, prior to owner training activities.
- Provides owner training, in accordance with the project specifications.

TAB Subcontractor: The TAB Subcontractor is the Commissioning Teams primary authority on the materials and methods used to implement the TAB project scope of work. The TAB Subcontractor:

- Attends commissioning meetings and provides commissioning coordination for all TAB related commissioning activities.
- Provides all required submittal information for TAB Verification.
- Provides technicians, tools, and instrumentation for TAB related commissioning activities and tests.
- Assists CxA in developing commissioning schedules for all TAB related commissioning activities and completes all TAB related commissioning activities to those schedules.
- Completes all corrective action, in a timely manner, for the successful completion all TAB related commissioning activities.
- Prepares all TAB reports and all required as-built documents in accordance with the specifications prior to owner training activities.
- Makes periodic site visits, during construction, to verify that all TAB devices are installed for successful completion of TAB procedures.

Commissioning Administrator: The Commissioning Administrator (CxA) is the third-party consultant, independent from the design team, and the leader of the Commissioning Team. The CxA:

- Advises the Prime Contractor and the Owner's Construction Representative on issues involving the commissioning process and its intended results.
- Directs the commissioning process, in accordance with the project commissioning specifications.
- Direct Commissioning Meetings.
- Makes periodic site visits, during construction, to verify that installation of the HVAC and process equipment is in compliance with the construction documents.
    + The objective of this activity is a proactive approach to the discovery of issues that could inhibit the successful completion of TAB, HVAC and Process Equipment Functional Performance Tests.
        ++ Systems can only be tested after installation of all associated systems is complete. The earlier issues are discovered and resolved, the lower the impact on the construction schedule and cost.
- Provides Project Issue Report to track the installation progress of the HVAC and process equipment and the resolution of issues.
- Witnesses Mechanical Contractor's Start-up.
    + Mechanical Start-up Reports are included in the Final Cx Report.
- Performs Field Installation Verification (FIV) to ensure that all HVAC and Process Equipment will be accessible for maintenance and complies with the construction documents and equipment submittal data.
    + The objective of this activity is to ensure long-term performance and maintainability of the HVAC and Process Equipment systems.
- Witness and documents TAB Verification, performed by the TAB Contractor.
    + To be included in the Final Cx Report together with the Final TAB Report.
- Witness the Controls contractor's Start-up written and performed by the Controls Contractor.
    + To be included in the Final Cx Report.
- Makes recommendation to the Prime Contractor and Owner's Construction Representative regarding the acceptance of all equipment and system tests.

PROJECT APPROACH

- Reviews the operation and maintenance manuals and as-built documents.
- Reviews training agenda.
- Witness owner training.
- Analyzes trend data provided by the Controls Contractor.
- Provides a Final Cx Report to the Prime Contractor
- Witness any post season commissioning tests.

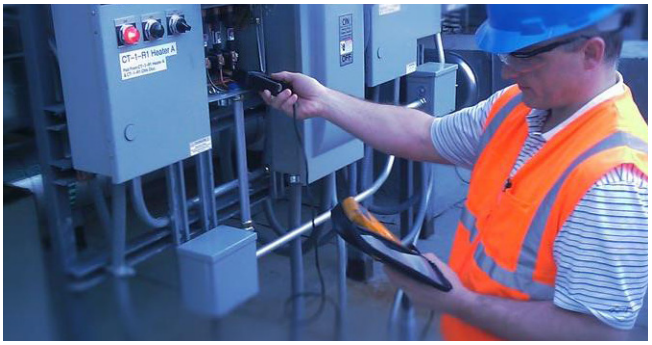
The CxA is the main communication contact for all commissioning work.

The CxA shall author and maintain the Project Issue Report document where issues discovered during the commissioning process are recorded as well as their status and resolution. This document is to be distributed to all members of the team directly by the CxA. The Prime Contractor is responsible for timely responses by the sub-contractors on all issues assigned to them. All communications related to the Project Issue Report are to be circulated to all members of the CX team.

The CxA is authorized and obligated to advise the Prime Contractor and Owner's Construction Representative of issues involving the construction materials, system start-up, testing, adjusting and balancing, and other activities that are required to maximize system performance and maintainability. The CxA is authorized and obligated to make recommendations to the Prime Contractor and Owner's Construction Representative regarding the acceptance, modification, tests, reports, or other items pertaining to the systems within the commissioning scope of work. The CxA is not authorized to change existing contract documents, schedules, costs, or scope of work for any parties contracted on the project. The CxA is not empowered to direct any contractor, subcontractor or person on the project as to required changes in the work, materials used or construction methods utilized in completing their scope of work. All directives for corrective action will come through the contract chain of command as dictated by the contract documents.

The CxA will require the following prior to beginning commissioning activities: project plans; project specifications; approved project submittals relevant to the scope of work as discussed on page 2. The CxA will require the following prior to the commencement of Functional Performance Testing: Building Automation System complete; Test, Adjust, & Balance complete with submitted report.

Witness Authority: The Owners Construction Representative observes all required system tests and demonstrations required by the project specification and commissioning specification. The Owners Construction Representative shall observe and review the results of each test or demonstration form, then sign and date each form. The CxA shall be the Owner/End-User's primary witness authority. The CxA is responsible for making recommendations regarding the acceptability of any test results. If deficiencies are discovered during a test the witness shall document the deficiency on the test form along with a complete description of the problem and any recommendations for resolution. Only the Owner has the authority to accept any test or recommendation regardless of the commissioning team's recommendations.



PROJECT APPROACH

COMMISSIONING ACTIVITIES

Commissioning Sequences

ACTIVITIES	PHASES	
	CONSTRUCTION	ACCEPTANCE
Commissioning Meetings	•	•
Field Installation Verification (FIV)	•	
Test & Balance Verification	•	
HVAC Functional Performance Tests (FPT)	•	
Final O & M Manual's		•
Owner Training		•
Final Commissioning Report		•

CONSTRUCTION PHASE COMMISSIONING

The CxA shall represent the Owner/End User and report directly to the Commissioning Team for all construction phase activities.

Commissioning Meetings: All Commissioning Team members shall attend on-site commissioning meetings as required to complete and coordinate the commissioning process.

Field Installation Verification (FIV): The CxA shall develop and execute FIV documents. Information for the FIV's shall be gathered from the approved submittals and mechanical drawings. Deficiencies listed in the FIV's will be noted on the Project Issue Report.

Test & Balance verification: TAB Verification shall be done in accordance project specifications. Including:

ACCEPTANCE PHASE COMMISSIONING

NOTE

Completion of TAB and the BAS is required for commissioning substantial completion and must be completed prior to FPT.

HVAC Functional Performance Tests (FPT): The CxA shall develop and perform, with assistance from the Controls Contractor, all HVAC Functional Performance Tests (FPT). FPT tests are designed to demonstrate how the system performs compared to the design intent. All tests are documented on the FPT forms. **FPT cannot begin until the TAB and the BAS is completed.** If the FPT test cannot be completed or fails, the contractor or vendor will be granted 15 minutes to repair the problem. If the problem cannot be corrected within this amount of time the test shall be documented as failed and a deficiency notice will be filed. The contractor shall correct the deficiencies and schedule a re-test for the system. **The contractor(s) must reimburse the costs for any test expense required beyond one retest per system.**

PROJECT APPROACH

Commissioning Meetings: All Commissioning Team members shall attend on-site commissioning meetings as required to complete and coordinate the commissioning process.

Preliminary O & M Manuals: Each contractor and vendor must submit all maintenance manuals early in the construction process to the CM. These documents are required to develop the commissioning procedures for FIV and FPT tests.

Final O & M Manuals and As-Built Drawings: Upon the completion of all FIV tests all O & M manuals and As Built Drawings shall be finalized to "As Built" condition and supplied to the CM. These manuals shall be reviewed by the CxA in conjunction with the A/E firms for use in the Owner training seminar.

Owner Training: The CxA shall coordinate the Owner training seminar. This training session shall be presented by the design professionals, installing contractors, and equipment suppliers. The CxA shall provide documentation of all training activities for future use by the owner.

Final Commissioning Report: The CxA shall provide a final commissioning report to the Owner which shall include: Executive Summary, all commissioning communication, test results, Pre-Function check sheets, FIV, startup documents, and HVAC FPT reports.

COMMISSIONING COMMUNICATIONS

Communication is the most important factor in providing an effective commissioning project. The CxA has the primary responsibility for establishing the communication channels and procedures to provide effective commissioning. The channel of communication is as follows:

Construction Phase Communications

The primary communication point is the CM for the project. The Project Issue Report shall be authored by the CxA and distributed directly to all CX team members. All commissioning communication from the CxA to the Owner's Rep, A/E firms, subcontractors or vendors shall be copied to all members of the CX team. All commissioning communication from A/E firms, subcontractors, or vendors shall go to the CM for distribution to the appropriate party. The CM shall track and facilitate timely communication between all parties. The CxA does not have any authority to direct any of the project consultants, contractors or vendors. The Owner with the CxA's recommendations must make all commissioning decisions. All commissioning decisions will follow the communication channels established by this Commissioning Plan. Documentation of working communication may be passed directly between team members as long as copies of such documents are sent through the communication channels for proper documentation. All commissioning activities are documented as they occur. All commissioning reports are distributed as they are generated. All commissioning documentation, tests reports, and demonstration reports are included in the final commissioning report. It is each Commissioning Team member's responsibility to distribute any required communication to their subcontractors or vendors who are not a normal Commissioning Team member.

COMMISSIONING REPORTS

The Commissioning Report shall consist of completed Field Installation Verifications (FIV's) and completed HVAC Functional Performance Tests (FPT's) organized by system and by subsystem and submitted as one package. The Commissioning Report shall also include all HVAC systems test reports, inspection reports (Preparatory, Initial, and Follow-up inspections), start-up reports, TAB reports, TAB verification report, Controls start-up test reports, and The Executive Summary. The results of failed tests shall be included along with a description of the corrective action taken.

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LICENSES + INSURANCE

LICENSES + INSURANCE

ES2 and Cyntergy emphasizes a continued commitment to not only follow the laws and policies by which all business organizations are bound, but we also feel the true integrity of a company is determined by adherence to a high level of ethical standards. Our teams works hard to foster a climate based on moral values and sound ethical procedures. We are committed to upholding ourselves, our partners and employees to these standards and will make certain that as our client the University of Arkansas will be respected, and any type of transaction or interaction will be upheld to the highest level of business ethics and personal integrity.

ARKANSAS CERTIFICATE OF AUTHORITY

ARKANSAS BOARD OF LICENSURE FOR
PROFESSIONAL ENGINEERS/SURVEYORS
P.O. Box 3750, Little Rock, AR 72203
LICENSE INVALID AFTER
12-31-2025

Cyntergy Engineering PLLC

IS DULY LICENSED AS

Certificate of Authorization
Certificate Number: 1179

Executive Director

MECHANICAL + ELECTRICAL ENGINEERING LICENSES

Jeffery Don Ferguson

Employer:	Cyntergy Engineering PLLC
Mailing Address	810 S Cincinnati Ave Ste 200 Tulsa, OK 74119
PE PDH CarryOver Hours:	30.0

Disciplinary Status
This individual has **NOT** been formally disciplined by the board.

License
Type: PE
Number: 12770

License Date: 23-Jan-07
Expiration Date: 31-Dec-24

Matthew Rutkowski

Employer:	Cyntergy Engineering
Mailing Address	810 S Cincinnati Avenue Ste 2 Tulsa, OK 74119
PE PDH CarryOver Hours:	30.0

Disciplinary Status
This individual has **NOT** been formally disciplined by the board.

License
Type: PE
Number: 17452

License Date: 19-Dec-16
Expiration Date: 31-Dec-24

PROOF OF INSURANCE

ENGISYS-01 SSCHWARZ

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 11/4/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Shelia Schwarz
Rich & Cartmill, Inc. 9401 Cedar Lake Avenue Oklahoma City, OK 73114	PHONE (A/C, No, Ext): (405) 463-7510 FAX (A/C, No): E-MAIL ADDRESS: sschwarz@rcins.com

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Engineered Systems & Energy Solutions, PC, ES2, Inc. HKS Energy Solutions Inc. dba ES2 Tulsa ES2 AR PO Box 18428 Oklahoma City, OK 73154	INSURER A : Phoenix Insurance Company	25623
	INSURER B : Travelers Prop Cas Co of Am	25674
	INSURER C : Columbia Casualty Company	31127
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			DTCO0R848784PHX24	7/28/2024	7/28/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 300,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO X OWNED AUTOS ONLY X SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY			8100R8019822426G	7/28/2024	7/28/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			CUP0R8508352426	7/28/2024	7/28/2025	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
C	Professional Liab			6076601029	2/11/2024	2/11/2025	Per Claim/Aggregate	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

The University of Arkansas
Facilities Management
521 S. Razorback Road
Fayetteville, AR 72701

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Clay Hamee

ACORD 25 (2016/03)


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STAMPS
LICENSED
OKLAHOMA
Carlo Colibao
30441

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DIVERSITY + INCLUSION

DIVERSITY + INCLUSION

STATEMENT OF DIVERSITY

DIVERSITY IN THE WORKFORCE

The ES2 and Cyntergy team is committed to fostering, cultivating and preserving a culture of diversity and inclusion.

As a certified small business, ES2 knows our human capital is the most valuable asset we have. The collective sum of the individual differences, life experiences, knowledge, innovation, self-expression, unique capabilities and talent that our employees invest in their work represents a significant part of not only our culture, but our reputation and company's achievement as well.

We embrace and encourage our employees' differences in age, color, disability, ethnicity, family or marital status, gender identity or expression, language, national origin, physical and mental ability, political affiliation, race, religion, sexual orientation, socio-economic status, veteran status, and other characteristics that make our employees unique.

The team's diversity initiatives are applicable—but not limited—to our practices and policies on recruitment and selection; compensation and benefits; professional development and training; promotions; transfers; social and recreational programs; layoffs; terminations; and the ongoing development of a work environment built on the premise of gender and diversity equity that encourages and enforces:

- Respectful communication and cooperation between all employees.
- Teamwork and employee participation, permitting the representation of all groups and employee perspectives.
- Work/life balance through flexible work schedules to accommodate employees' varying needs.
- Employer and employee contributions to the communities we serve to promote a greater understanding and respect for the diversity.

ACCESS| EQUALITY| ENGAGEMENT

We routinely partner with and include minority owned firms in our project execution teams, including the following minority/small business categories:

- Woman Owned Business
- African American Owned Business
- Service-Disabled Veteran-Owned Business
- Hispanic Owned Business
- HUBZone Business
- Certified Small Business
- 8a Certified Business
- Native American Owned Business

We have ongoing programs whereby our representatives are continually in communication with individuals either in ownership of these firms and/or representing these firms, and have an aggressive outreach program to utilize these firms on an ongoing basis. We continue, through various sources, to contact these firms and maintain good working relationships for utilization as needed on a wide variety of projects.

CONTACT US:

ARKANSAS OFFICE
Unit #B
1108 S. Old Missouri Road
Springdale, AR 72764
Telephone: (479) 595-0910

OKLAHOMA CITY OFFICE
13401 N. Santa Fe Ave.
Oklahoma City, OK. 73114
Telephone: (405) 528-4500

TULSA OFFICE
10404 E 55th Place Suite E
Tulsa, OK 74146
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www.es2built.com