UNC GREENSBORO
Board *of* Trustees

Finance *and* Administration Committee
April 01, 2025

Action Item

FAC - 2 Selection of Designer – Spring Garden Apartments HVAC and Roof Replacement

Background Information

Spring Garden Apartments were built in 2005. The building's HVAC system consists of individual heat pumps for each apartment unit. The heat pumps are obsolete and in need of replacement. The roof is 19 years old and shows significant degradation, particularly in the flat portion that accommodates the heat pumps. The project scope is to combine roofing and rooftop HVAC unit replacement to limit building disruption as much as possible. The design is to be completed in time so that bidding, contracting, and material procurement can facilitate construction in the summers of 2026 and 2027 when the apartments are unoccupied.

Project Cost: **$4,615,000**

The University of North Carolina System website advertised the request for qualifications and letters of interest for engineering services for this project. Nine (9) firms submitted letters of interest, two (2) from Guilford County.

The Designer Selection Committee reviewed the letters of interest and invited three firms to interview on March 24, 2025, to present their qualifications and recommends the following in ranking order.

1. Sigma Engineered Solutions, PC, Raleigh, NC
2. Raymond Global, Inc., Raleigh, NC
3. SKA Consulting Engineers, Inc., Greensboro, NC

Sigma Engineered Solutions, PC is an engineering firm and is recommended as the Designer for the following reasons:

1. Sigma Engineered Solutions, PC demonstrated the highest level of preparation related to the project budget analysis and presented cost management ideas and realistic budget expectations.
2. The design team illustrated the most significant familiarity with schedule constraints on state university housing projects.

3. The composition of the Sigma team with mechanical as the lead is best suited for the nature of this project. Sigma presented the most experience with mechanical renovations similar to this project.

Recommended Action

Based on the above information, that the the Board of Trustees of the University of North Carolina at Greensboro approve **Sigma Engineered Solutions, PC**, as the Engineering firm for the Spring Garden Apartments HVAC and Roof Replacement project and, if agreeable terms cannot be met, authorize the administration to negotiate terms with the other firms in ranking order.

Robert J. Shea Jr.

Robert J. Shea, Jr.
Vice Chancellor for Finance *and*
Administration

Attachments:

2.1 Sigma Engineered Solutions, PC Letter of Interest

Statement of Qualifications for

Spring Garden Apartments
Roofing - HVAC Replacement

Prepared for
UNC Greensboro

Prepared by
Sigma Engineered Solutions, PC

February 24, 2025

TAB 1-COMPLETED INFO SHEET

THE UNIVERSITY of NORTH CAROLINA GREENSBORO

Information Sheet

Firm Name	Sigma Engineered Solutions, PC

☐ HUB Certified

If HUB, Specify Type

☐ Female ☐ Disabled ☐ American Indian ☐ Asian-American ☐ Hispanic ☐ Black ☐ Socially & Economically Disadvantaged

Point of Contact	Paul J. Romiti, PE	E-mail Address	promiti@sigmaes.com
Street Address	5909 Falls of Neuse Rd, Suite 101		
City	Raleigh	State NC / Zip Code 27609 / County	Wake
Phone #	919-840-9300	Fax #	
Type of Firm (e.g. Architectural, Civil Engineering, Surveying, Etc)	MEPF Engineering		

Consulting Firms

Architectural:	Lambert Architecture + Interiors	☐ Check If HUB	Mechanical:		☐ Check If HUB
Electrical:		☐ Check If HUB	Plumbing:		☐ Check If HUB
Structural:		☐ Check If HUB	Civil:		☐ Check If HUB
Landscape:		☐ Check If HUB	Interior Design:		☐ Check If HUB
Other (specify type):		☐ Check If HUB			
Other (specify type):		☐ Check If HUB			

TAB 2-LETTER OF INTEREST

February 24, 2025

Mr. Bill Chatfield
UNC Greensboro Facilities Design & Construction
Gray Home Management House
105 Gray Drive
Greensboro, NC 27412
(Via email: wjchati@uncg.edu & fdc@uncg.edu)

Re: **UNC Greensboro Spring Garden Apartments Roofing - HVAC Replacement**

Dear Mr. Chatfield,

I am pleased to offer this Letter of Interest and Statement of Qualifications for the Roofing – HVAC Replacement at Spring Garden Apartments at UNC Greensboro.

Sigma Engineered Solutions, PC (Sigma), a multi-discipline engineering office in Raleigh, opened in 2003. The design and renovation of North Carolina educational and institutional facilities are the heart of our practice. Many of our projects in the last twenty-two years have been renovation or combination renovation and new construction projects in the UNC system, and we've worked for nearly every major university in the UNC system, including:

- UNC Greensboro
- UNC Chapel Hill
- NC State University
- East Carolina University
- Duke University
- Wake Tech Community College
- NC Department of Administration
- NC Department of Health and Human Services
- NC Department of Natural and Cultural Resources

We have formed ongoing relationships with these clients that continue to develop favorably and provide mutual benefit**.** The organization of our firm allows our principals to manage each project personally and to maintain close, constant involvement throughout the design and construction process.

We have extensive experience with replacing rooftop units. Working for the university system for twenty-two years, we know how important usable indoor square footage is to the users. We understand that many projects require roof mounted equipment to make programs work. These equipment replacements range from standard packaged DX equipment as we did for UNC at 208 W Franklin Street; to kitchen hood fans, as we did at the Lenoir Dining Hall at UNC; 100% outside air units for ECU Fletcher Hall and even cooling towers for the NC Community College System Caswell Building.

In all of these circumstances the same major factors all must be considered. Will it fit? Is the roof structure adequate? What screening will be required by local municipalities? Where is the best location for crane rigging? How do you maintain current Roof warranty? And in some cases, how to stage the work so that a building can remain occupied during the replacements.

Sigma will bring our considerable experience in roof mounted equipment to bear in solving all of these challenges.

In response to your Request for Qualifications, we offer the following:

- Current and extensive experience in **HVAC, electrical, and plumbing** design for numerous institutional facilities; our principals and design team are currently working on the design and construction of over 2,000,000 square feet of significant renovations for HVAC, electrical, plumbing, and fire protection systems on facilities across the State of North Carolina.
- Our ability to continue to procure projects from past Clients is a good indicator of our performance - present and past. Over 98% of our Clients are Owners for whom we have completed two or more projects.
- We have a staff of fourteen full-time employees. Our current workload and staff allow us to respond to almost any Client need in a timely fashion.
- We continue to meet all design schedules in a timely fashion. In addition, our record of keeping a project on budget is exemplary. Our estimates are generally within 3-5% of awarded bids on State projects.

We proposed to team up with **Lambert Architecture + Interiors** for the architectural needs of this project. We have a solid history of working with Lambert and have completed many successful projects with them, including university work such as the currently underway Phillips-Hawkins Residence Hall Renovations and the recently completed Ragsdale-Mendenhall renovations at UNC Greensboro.

Please do not hesitate to contact me if I can answer any questions you have or if you would like additional information. I thank you for this opportunity to present our qualifications and look forward to continuing our relationship with you and the good folks at UNCG.

Sincerely,

Paul J. Romiti, PE,
Principal
promiti@sigmaes.com

TAB 3-PROJECT TEAM ORGANIZATION CHART

PROJECT TEAM ORGANIZATION CHART

UNC GREENSBORO

SIGMA ENGINEERED SOLUTIONS, PC
NC C-2490

Sigma Engineered Solutions

Paul Romiti, PE
Principal-in-Charge, Chief Mechanical Engineer

Reginald Adams, PE, LEED AP BD+C
Chief Electrical Engineer

John Erickson, PE
Mechanical Engineer, Project Manager

LAMBERT ARCHITECTURE + INTERIORS

Peter Falk, RA
Architectural Consultant

3.1 ADEQUATE STAFF AND PROPOSED DESIGN OR CONSULTANT TEAM FOR THE PROJECT

Sigma employs seven professional engineers, one graduate engineer, one senior designer, three CAD operators and two administrative personnel. We would propose two of our core members of our staff to work on this project. In addition, we are teamed with Lambert Architecture + Interiors for architectural needs. As you will see in the project summaries included in previous sections of this SF-330, we have partnered with Lambert on several University renovation projects and know how to partner to bring the best project experience to our client. These individuals are uniquely qualified for this project.

Paul J. Romiti, PE – Principal-in-Charge, and Chief Mechanical Engineer
Reginald D. Adams, PE – Chief Electrical Engineer

Lambert Architecture + Interiors – Architectural Consultants

Our design engineers will be involved in both the pre-construction design process for Mechanical, Electrical, Plumbing and Fire Protection engineering, as well as during the construction phase with construction administration of all MEP,FP building systems during the construction phase. We believe that the engineer who designed the work is the best person to ensure that the project is built according to design, so every member of our proposed design team will be involved with the project from kick-off through final completion.

Below are brief resumes of our proposed team members.

PAUL J. ROMITI, PE
PRINCIPAL – CHIEF MECHANICAL ENGINEER

Mr. Romiti has 29 years of experience in Mechanical Engineering and Automated controls. His background includes complete mechanical, plumbing, and fire-protection design in both renovated and new structures. Mr. Romiti applies his extensive controls knowledge to personally verify proper operation of his systems and commissioning. Specializing in tight budgets, and aggressive schedules, he remains client driven and delivers systems that meet project needs. Mr. Romiti has been designing to LEED standards since 2002 and remains well versed in all strategies available to obtain maximum levels of LEED certification.

Education
BSME Mechanical Engineering, 1996
North Carolina State University

Registration
Registered Mechanical Engineer in the following States:
- *North Carolina, #26581*
- *South Carolina*
- *Virginia*
- *Maryland*

Professional Experience
29 Years

REGINALD D. ADAMS, PE, LEED AP BD+C
PRINCIPAL – CHIEF ELECTRICAL ENGINEER

Mr. Adams has 37 years of experience in the electrical engineering field, marketing, and project management. Mr. Adams has extensive management experience including the management of multiple individuals and project teams. He has managed projects with a construction value of $100,000 up to $50,000,000. These projects were often "fast-track" type efforts with project teams ranging from architects to civil engineers to building system engineers. His project management experience includes all phases from programming to project close out.

Education
BSEE Electrical Engineering, 1988
North Carolina State University

Registration
Registered Electrical Engineer in the following States:
- *North Carolina, #19658*
- *South Carolina*
- *Virginia*
- *Maryland*
- *Tennessee*
- *Georgia*

Professional Experience
37 Years
LEED Accredited Professional

JOHN R. ERICKSON, PE
MECHANICAL/PLUMBING ENGINEER

Mr. Erickson has 10 years of experience in Mechanical Engineering. His background includes mechanical, plumbing, and fire protection design and energy analysis for projects including education, retail, medical, institutional, fire & EMS, public assembly, residential, historic, and restaurant facilities. These facilities have included systems involving chilled water, high temperature hot water, steam, and natural gas. Design experience includes both new work and renovations. Mr. Erickson has experience designing to meet LEED standards and obtaining varying levels of LEED project certifications.

Education
BSME Mechanical Engineering, 2015
The University of North Carolina at Charlotte

Registration
Registered Mechanical Engineer in the following State:

- *North Carolina, #50628*

Professional Experience
10 Years

PETER FALK, RA
ARCHITECTURAL CONSULTANT
LAMBERT Architecture + Interiors

Mr. Falk holds a Bachelor of Science in Architectural Technology and has 37 years of experience in architectural design. His recent experience includes the Phillips Hawkins HVAC Replacement at UNC Greensboro (currently in construction, Sigma is prime designer on this project), the Ragsdale/Mendenhall Residence Hall Renovation at UNC Greensboro (recently completed, Lambert was prime designer, Sigma was Building Systems Engineer Consultant), and the Marteena Hall Renovations at NC A&T University.

Firm Profile

FIRM INFORMATION: Sigma Engineered Solutions, PC
5909 Falls of Neuse Rd., Suite 101
Raleigh, NC 27609
Phone: (919) 840-9300
www.sigmaes.com

Professional Corporation
NC Business License # C-2490

PRINCIPAL CONTACT: Paul J. Romiti, PE
O: (919) 840-9300, C: (919) 369-8221
E: promiti@sigmaes.com

COMPANY STRUCTURE AND HISTORY

Sigma Engineered Solutions, PC (Sigma) was established in 2003. Our firm is a partnership of professional engineers with over 100 years of combined experience in consulting engineering and construction administration services in North Carolina, South Carolina, Virginia and Maryland. Principals of the firm are Mr. Reginald Adams, PE, LEED AP, President and CEO; and Mr. Paul Romiti, PE, Vice-President and COO. Mr. Romiti has a vast knowledge of temperature control systems and commissioning. We currently have a staff of 14 full-time employees, comprised of seven (7) professional engineers, one (1) graduate engineer, one (1) senior designer, three (3) CAD operators, and two (2) administrative staff.

Since its inception, Sigma has completed designs in NC, VA, MD, OK, GA, LA and SC, established relationships with premier architectural design firms, and created strategic affiliations with other engineering and related firms. We have demonstrated a capacity to respond successfully to a broad range of design and client challenges. Building upon this experience, our goal is to be a premier and profitable service provider to leading design and construction projects around the United States.

DESCRIPTION OF BUSINESS SERVICES

Our objective is to provide superior consulting services for the design of mechanical (HVAC), plumbing, electrical, fire suppression, and telecommunications systems. Additionally, we provide feasibility studies, cost estimating, due diligence reports, master planning, and systems analysis. We perform life cycle cost analysis and energy modeling on most large projects, and offer temperature control system verification on all projects to ensure that all equipment is operating at design performance.

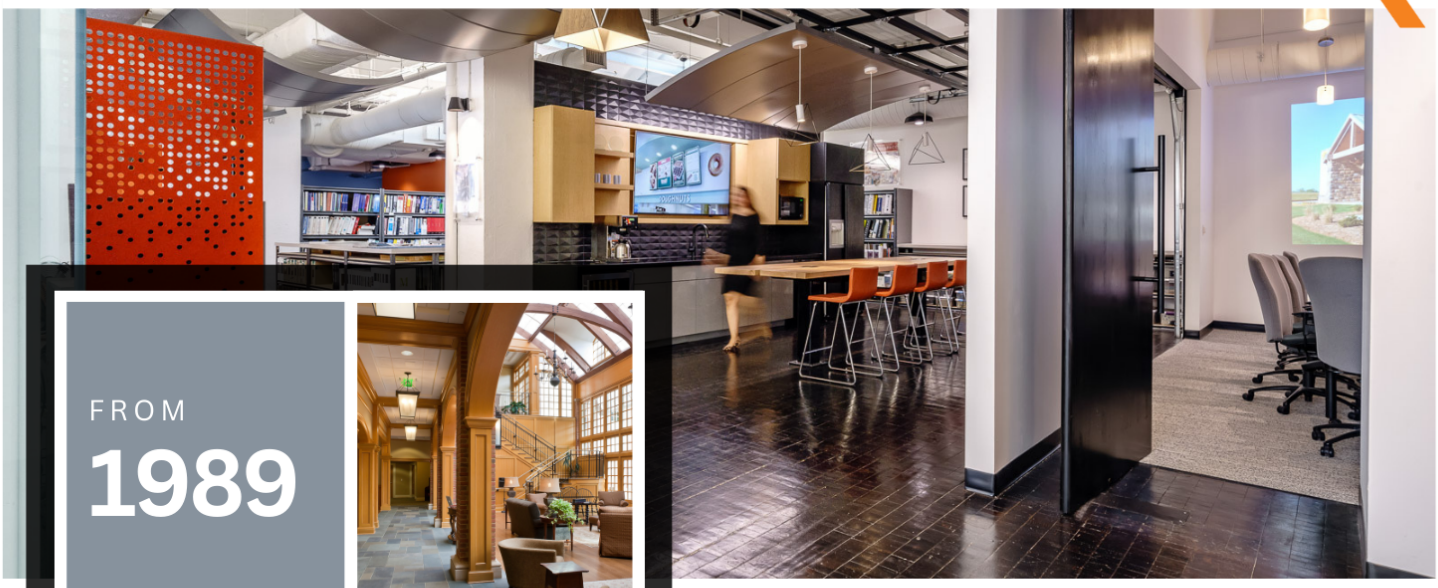
Sigma has a commitment to providing sustainable design for its clients. We are members of the U.S. Green Building Council, and have three LEED Accredited Professionals on staff. Even if the project is not targeted for LEED certification, we consistently bring many of the strategies of LEED to every project.

Sigma has successfully completed over one-thousand projects since its inception. Most of these projects have been renovations or combination renovation-and-new construction projects. Some of our major projects were done while the Owner fully occupied the building. Our principals and engineers are well versed in working on projects in the public sector and have vast experience working with plan reviewers to expedite the approval process on both new and renovation projects.

We are experienced with working directly for many large organizations such as:

- North Carolina State University
- University of North Carolina Chapel Hill
- University of North Carolina Greensboro
- Wake Technical Community College
- City of Raleigh
- City of Durham
- Town of Cary
- Wake County
- Durham County
- NC Dept. of Administration
- NC Dept. of Health and Human Services
- NC Dept. of Information and Technology
- NC Dept. of Natural and Cultural Resources

CRAFTING ENVIRONMENTS, CREATING EXPERIENCES.



FROM
1989

85% +
RENOVATION PROJECTS

1500 +
PROJECTS COMPLETED

Let us be the narrator of your design story.

Founded by Stuart McCormick in 1989, LAMBERT Architecture + Interiors has developed strong ties with North Carolina, the State Construction Office, and the higher education sector. Over three decades, we've earned a reputation for delivering exceptional results on university campuses. Our deep understanding of higher education design allows us to tailor each project to meet the unique needs of academic institutions, balancing functionality, long-term performance, and aesthetics.

Our expertise in managing complex campus environments—whether integrating new construction with historic buildings or executing renovations with minimal disruption—has made us a trusted partner for higher education projects. This foundation, combined with our focus on innovation and collaboration, ensures precise, successful outcomes.

Empowering Your Vision

- Architecture
- Interior Design
- Furniture, Fixtures & Equipment (FF&E)
- Brand Design
- Project Integration
- Sustainability & Wellness

Scan for more about us

336-777-3657

408 N Marshall Street, Suite 300
Winston-Salem, NC

TAB 4-RELEVANT PROJECT EXPERIENCE and OTHER IMPORTANT FACTORS

RELEVANT EXPERIENCE & OTHER IMPORTANT FACTORS

4.1 SPECIALIZED OR APPROPRIATE EXPERTISE IN THE TYPE OF PROJECT

Sigma's engineers are well versed in the North Carolina State Construction Office process, and have vast experience working with plan reviewers to expedite the approval process on both new and renovation projects. Our primary focus has been public projects with the State of North Carolina, local government, and various higher education facilities. To date, this includes over 1,000 projects totaling over $550 million in MEP construction dollars.

Our campus design experience includes multiple renovations at UNC Chapel Hill, UNC Greensboro, NC State University, and Wake Technical Community College. Additionally, we have designed projects for East Carolina University, NC Central University, Elon University, Elizabeth State University, Surry Community College and Wesleyan College.

We currently hold open-ended design agreements with UNC Chapel Hill, NC State, the City of Raleigh, and Wake County, and welcome any design opportunity.

A few projects which we feel are similar in scope to the proposed Roofing – HVAC Replacement at Spring Garden Apartments and which reflect our past performance are detailed below.

PROJECT EXAMPLE #1: UNC Chapel Hill - Hamilton Hall HVAC Replacement

Currently in the final stages of design, the project scope of work includes the replacement of central mechanical systems within Hamilton Hall on Central Campus. The heavily utilized building was completed in 1972 and contains classroom, laboratory and office space for the departments of Archaeology, Sociology, History, Peace, War & Defense, and Political Science within the College of Arts & Sciences.

Specifically, the project will replace the dual-duct built-up AHU-1, located in the basement mechanical room and rated for 71,500 cfm, with a digitally controlled VAV unit. The project will also remove and replace the existing dual-duct ductwork with new VAV ductwork throughout, install digitally controlled VAV hot-water reheat terminal units and install a hot water piping system. The associated work requires the removal and replacement of suspended ceilings and light fixtures in the affected areas. Hazardous materials testing, design and abatement is also a heavy component of the renovation design. Careful attention to project phasing and implementation will be required to limit the displacement time of building occupants.

Project Budget $12,000,000

Prime Designer: Sigma Engineered Solutions, PC

PROJECT EXAMPLE #2: UNC Greensboro - Phillips Hawkins Moore Strong Residence Hall Renovations

These two buildings on central UNCG campus had failing dual-temp fan coil units and HVAC infrastructure. Both buildings are approximately 80,000sf each. Phillips Hawkins is 3 stories fully above grade (5 stories total) and Moore strong was also 3

stories above grade. Renovations included over 600 fan coil units, make-up air units, new steam converters, hot and chilled water pumping and distribution, and new DDC controls.

The projects are scheduled to take advantage of fall/summer semesters to allow for the maximum flexibility of beds available to UNCG Housing and Residence life. In addition, existing buildings were carefully surveyed so that Sigma could make recommendations to the owner as to what elements of the existing systems and structures could be reused to reduce construction costs.

The total construction budget is $8,000,000 to do both buildings

Prime Designer: Sigma Engineered Solutions, PC

Architectural Consultant: Lambert Architecture + Interiors

PROJECT EXAMPLE #3: UNC Greensboro - Ragsdale Mendenhall Residence Hall Renovations

Sigma served as a subconsultant to Lambert Architecture + Interiors on the renovation project at Ragsdale Mendenhall Residence Hall at UNCG. The project included a comprehensive renovation that provided:

- New mechanical and electrical systems throughout the building to meet current code standards
- Replacement of exterior windows for improved energy efficiency
- ADA upgrades including the modernization of the existing elevator
- Interior finishes through the building.

Sigma provided the mechanical, electrical, plumbing and fire protection for this 90,000 SF project. Engineering scope of work included tying the building to the existing campus chilled-water loop (limited to 5 ft outside the building), providing new hydronic fan coil units, electrical upgrades, modernizing an existing elevator and renovating single occupancy toilets as well as fire alarm and sprinkler work in order to meet HVAC requirements.

Cost: $10,000,000

Prime Designer: Lambert Architecture + Interiors

MEPF Consultant: Sigma Engineered Solutions, PC

PROJECT EXAMPLE #4: UNC Chapel Hill – Frank Porter Graham Student Union Renovations

Sigma provided engineering systems design for the renovation of this 160,000 SF, 3-story facility, including a 4000 SF auditorium. This project included bringing the entire building up to code compliance, and provisions to add a 2500 SF Commercial Kitchen and dining room to the ground floor and a full replacement of the existing 40 year old switchgear.

Additional scope included energy modeling and controls upgrades to HVAC systems funded by the UNC Renewable Energy Special Projects Committee (RESPC) to reduce building energy consumption.

Other considerations in this project required Building to be occupied through all phases of construction, as well as uninterrupted service to critical Student-run programs such as Radio and TV stations and Yearbook. This facility was occupied during renovation.

Cost: $5,000,000

MEPF Consultant: Sigma Engineered Solutions, PC

4.2 PAST PERFORMANCE ON SIMILAR PROJECTS

90% of our revenues come from repeat clients. We think that this speaks directly to our past performance. All of our projects with similar experience were completed on time, on budget and to the satisfaction of the client. We specialize in "messy" renovation projects that require thorough field investigations and careful planning. We are adept at routing projects through the SCO as the prime designer and managing bidding, contracts, and construction administration.

4.3 CURRENT WORKLOAD AND STATE PROJECTS AWARDED

Below is a list of the most significant projects currently in production at Sigma Engineered Solutions, PC. Projects that have been awarded through the State Construction Office are denoted with 'SCO'.

Jobs in Design

UNCG – Moore Strong HVAC Renovations	Currently Bidding	SCO
DPI – Eastern NC School for the Deaf Renovations	Deadline Spring 2025	SCO
UNC Hamilton Hall HVAC Renovations	Deadline Spring 2025	SCO
East Carolina University – Scott and Jarvis Controls Upgrades	Deadline Spring 2025	SCO
DHHS – State Lab of Public Health Renovation	Deadline Spring 2025	SCO
St. Raphael's Church Renovations	Deadline Spring 2025	
Town Creek Indian Mound Visitor Center	Deadline Summer 2025	SCO

Jobs under Construction

NC DNCR – Electric Vehicle Charging Stations (Statewide)	Completion Spring 2025	SCO
Longleaf Neuro-Medical Treatment Center – Scott Wing Renovations	Completion Summer 2025	SCO
UNCG – Phillips Hawkins HVAC Renovations	Completion Fall 2025	SCO
Wake Tech Community College – Building SP Renovations	Completion Winter 2025	

4.4 PROPOSED DESIGN APPROACH FOR THE PROJECT

Sigma's approach to design is to start with the Owner. We will first meet with all parties associated with the project scope and try to determine exactly what their goals are. We will then collect drawings and information on existing systems and then field verify all data. During this survey period, Sigma will help identify other deficiencies and inaccuracies in record drawings and discuss any deficiencies with the Owner, allowing the opportunity for refinement of the project scope and reconciliation with the available project budget. Once these issues are decided upon, we will provide a design schedule acceptable to the owner and project manager.

Commitment

Schedule and Communication mean nothing if your designer is not committed to them. We have never missed a deadline at Sigma because failure is never an option. Every project is personal to us, every client is our most important client. Our staff is totally committed to keep the promises that we make in scheduling, in design, and in construction.

4.5 RECENT EXPERIENCE WITH PROJECT COSTS AND SCHEDULES

Recent Project Cost Experience

The market is changing in the contractor's favor. Prices have been escalating 15-30% over expected costs only one year ago. We have personally bid a half of a dozen projects this past year, and each one has come in slightly above our prices, even on projects that we are not directly involved in.

Recent Schedule Keeping Experience

We have never missed a deadline. Ever. Sigma is small and flexible, and everyone on our staff shares a personal commitment to each of our clients and have, and always will do whatever it takes to make a client's deadline. We understand working within the higher education system that the semester starts when it starts and missing that deadline is not an option.

4.6 CONSTRUCTION ADMINISTRATION CAPABILITIES

Sigma Engineers always do their own construction administration. We feel that when the actual designer also oversees all aspects of their designs being installed, they are the most qualified to ensure adherence to the documents. We also feel that their institutional knowledge of the entire design process empowers them to make appropriate and timely decisions in the field. This attention to detail and quick response to changing field conditions can substantially decrease the potential for change orders and leads to a more successful project for all parties involved.

4.7 PROXIMITY AND FAMILIARITY WITH THE AREA WHERE THE PROJECT IS LOCATED

Sigma's office is 1 hr and 5 min from the Gray Home. We know this because our staff have made this trip regularly for nearly 10 years. The trip from Raleigh to Greensboro can literally take less time than getting to some jobsites even in the Raleigh area. Greensboro has become our second home and I do not think you can find an example where Sigma didn't present as a local firm.

4.8 RECORD OF SUCCESSFULLY COMPLETED PROJECTS WITHOUT MAJOR LEGAL OR TECHNICAL PROBLEMS

Sigma specializes in invasive renovation projects that require accurate filed surveying and detailed planning. Our proposed team has completed over 350 projects with the state construction office since 2003 with more than half of them being the prime design consultant. We understand the complexities of working at universities and the importance of public projects being designed to budget and on schedule. This is what we do.

4.9 ENERGY CONSERVATION / LEED EXPERIENCE

An existing structure offers more challenges to energy modeling than a new building because parameters like building orientation are set, and accurate data about the building envelope can be difficult to collect.

One of the most effective strategies we have used at UNCG is in bringing new technologies to the projects. Over the three seasoned projects that we've completed for UNCG housing, we understand that HRL has seen 30% or more decrease in annual energy operating costs because we implemented hyper-efficient and (at the time) cutting edge system technologies. Sigma is always on the lookout for new technologies that might fit the owner's needs and budget. We will run multiple simulation with different design selection and present actionable data for you to decide how to proceed.

When it comes to energy modeling, We use Autodesk's Revit Insight, Trane's Tracer 3D, and the US Department of Energy's eQuest simulation software to generate accurate load profiles, project annual energy consumption, and provide life-cycle costing data used with the goal of maximizing the long term impact of initial investments.

Our energy modeling is an iterative process. We will update our energy model at every major design milestone and when significant changes are made to the building envelope, systems, or programming. We stand behind our predictions and have often times revisited completed projects at an owner's request to compare our projections with actual energy costs. We can then help to identify any operational anomalies that might be the cause of deviations from the mathematical predictions.

TAB 5-MINORITY BUSINESS PARTICIPATION PLAN

MINORITY BUSINESS PARTICIPATION PLAN

Sigma was founded by in 2003 with our Senior Partner, Massoud Eftekhar. We held HUB status for 11 years, until his passing in 2014. Sigma is no longer considered a HUB, however we intend to seek partnership with HUB firms should any additional sub-consulting services be required. On HUB sensitive projects, we found ourselves often selected with other HUB firms and so have enjoyed many working relationships with them.

TAB 6-CURRENT SF-330 FORM

ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*

The University of North Carolina at Greensboro
Spring Garden Apartments Roofing - HVAC Replacement

2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
01/31/25	N/A

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

Paul J. Romiti, PE, Principal-In-Charge / Mechanical Engineer

5. NAME OF FIRM

Sigma Engineered Solutions, PC

6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
919-840-9300		promiti@sigmaes.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check) PRIME	J-V PARTNER	SUBCON-TRACTOR	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a.	✓			Sigma Engineered Solutions, PC ☐ CHECK IF BRANCH OFFICE	5909 Falls of Neuse Rd. Suite 101 Raleigh, NC 27609	Prime Designer, MEPF Engineering Design Services
b.			✓	Lambert Architecture + Interiors ☐ CHECK IF BRANCH OFFICE	408 N Marshall Street Suite 300 Winston-Salem, NC 27101	Architectural Consultant
c.				☐ CHECK IF BRANCH OFFICE		
d.				☐ CHECK IF BRANCH OFFICE		
e.				☐ CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM ☒ *(Attached)*

SIGMA ENGINEERED SOLUTIONS, PC

NC Business License # C-2490

ORGANIZATIONAL CHART

Paul Romiti, PE
Chief Mechanical Engineer

Reggie Adams, PE, LEED AP BD+C
Chief Electrical Engineer

Brent Hanes, PE, LEED AP
Sr. Mechanical Engineer

Vic Bird, PE
QA/QC, Construction Manager

Engineers, Engineering Interns, and Sr. Designers

Elton Smith, PE, LEED AP
Mechanical Engineer

John Erickson, PE
Mechanical Engineer

Isaac Johnson, PE
Commissioning Director

Steve Richardson, EI
Sr. Electrical Designer

Michael Pallante
Sr. Electrical Designer

Todd Victor
Electrical Designer

Designers, Drafters, Administrative Personnel

Adam Romiti
Designer/Drafter

Art Alexander
Designer/Drafter

Jennifer Curro
Firm Administrator

Emily Langley
Administrator

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Paul J. Romiti, PE	Chief Mechanical Engineer	a. TOTAL: 29	b. WITH CURRENT FIRM: 22

15. FIRM NAME AND LOCATION (City and State)
Sigma Engineered Solutions, PC, Morrisville, NC

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION
BS Mechanical Engineering, 1996	NC #026581; MD; SC Mechanical Engineer

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)
Paul is the Vice-President and a Principal of Sigma Engineered Solutions, PC, and serves as senior mechanical engineer and project manager.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
a.	**Phillips Hawkins/Moore Strong Residence Halls Renovations** (UNC-Greensboro), Greensboro, NC	2023-2024	(under construction)
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm Renovations of two 80,000 SF, 3- story residential dormitories. Scope includes total HVAC replacement, including air handling and fan coil units; addition of DDC controls with infrared room sensor to turn off lights and air conditioning if the room is unoccupied; and renovation of the bathrooms for ADA compliance. Principal in Charge/Mechanical Engineer.		
b.	(1) TITLE AND LOCATION (City and State) **Ragsdale Mendenhall Residence Hall Renovations** (UNC-Greensboro) Greensboro, NC	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018	CONSTRUCTION *(if applicable)*: 2020
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm Sigma provided the mechanical, electrical, plumbing and fire protection for this 90,000 SF project. Engineering scope included tying the building to the existing campus chilled-water loop limited to 5 ft outside the building, providing new hydronic fan coil units, electrical upgrades and life safety generator, modernizing an existing elevator and DDC controls. Principal in Charge and Mechanical Engineer of Record.		
c.	(1) TITLE AND LOCATION (City and State) **HVAC Obsolete Equipment Replacement** (NC Department of Administration) Raleigh, NC	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2022-2024	CONSTRUCTION *(if applicable)*: (under construction)
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm Engineering design and management of obsolete building controls for the North Carolina Department of Revenue, Old Revenue Building in downtown Raleigh. In this 6-story building, a mix of old pneumatic and electric controls were upgraded to new DDC controls, integrated with some existing DDC controls in the building and synchronized with DOA controls front-ends in the State Construction Office. Principal in Charge/Mechanical Engineer.		
d.	(1) TITLE AND LOCATION (City and State) **HVAC Upgrades at Fletcher Residence Hall** (East Carolina University) Greenville, NC	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2018	CONSTRUCTION *(if applicable)*: 2019
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm Sigma was the prime design contract to design a makeup air system for the 8-story Fletcher Residence Hall on ECU campus. Scope of work included Installation of 100% OA make up unit and glycol hot water system. Included the foundations of new DDC controls for future expansion. Principal in Charge/Mechanical Engineer.		
e.	(1) TITLE AND LOCATION (City and State) **Spartan Village II Residence Hall** (UNC-Greensboro) Greensboro, NC	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2016	CONSTRUCTION *(if applicable)*: 2018
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑ Check if project performed with current firm Sigma designed the MEPF systems for this $30,000,000 mixed used residential/retail facility at the edge of the UNCG Campus. Scope of work included both the Core and Shell part of the four buildings, as well as individual fit-ups for the retail spaces. Project Manager/Mechanical Engineer of Record.		
f.	(1) TITLE AND LOCATION (City and State) **Reynolds & Grogan Residential Halls Renovations** (UNC-Greensboro) Greensboro, NC	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2013	CONSTRUCTION *(if applicable)*: 2015
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm Renovations of two 80,000 SF, 8-story residential dormitories. Scope includes total HVAC replacement, including air handling and fan coil units; addition of DDC controls with infrared room sensor to turn off lights and air conditioning if the room is unoccupied; and renovation of the bathrooms for ADA compliance. Mechanical engineer of record.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Reginald D. Adams, PE, LEED AP BD+C	Chief Electrical Engineer	a. TOTAL: 37	b. WITH CURRENT FIRM: 22

15. FIRM NAME AND LOCATION (City and State)
Sigma Engineered Solutions, PC, Morrisville, NC

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION
BSEE Electrical Engineering, 1988	NC #19658; MD, SC, VA, TN, GA Electrical Engineer

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)
Reggie is a Principal of Sigma Engineered Solutions, PC; and serves as chief electrical engineer and project manager. He is a LEED Accredited Professional BD+C.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
a.	Phillips Hawkins/Moore Strong Residence Halls Renovations (UNC-Greensboro), Greensboro, NC	2023-2024	(under construction)

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm

Renovations of two 80,000 SF, 3- story residential dormitories. Scope includes total HVAC replacement, including air handling and fan coil units; addition of DDC controls with infrared room sensor to turn off lights and air conditioning if the room is unoccupied; and renovation of the bathrooms for ADA compliance. Electrical Engineer of Record.

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
b.	HVAC Obsolete Equipment Replacement (NC Department of Administration) Raleigh, NC	2022-2024	(under construction)

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑Check if project performed with current firm

Engineering design and management of obsolete building controls for the North Carolina Department of Revenue, Old Revenue Building in downtown Raleigh. In this 6-story building, a mix of old pneumatic and electric controls were upgraded to new DDC controls, integrated with some existing DDC controls in the building and synchronized with DOA controls front-ends in the State Construction Office. Electrical Engineer of Record.

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
c.	Ragsdale Mendenhall Residence Hall Renovations (UNC-Greensboro) Greensboro, NC	2018	2020

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑ Check if project performed with current firm

Sigma provided the mechanical, electrical, plumbing and fire protection for this 90,000 SF dormitory renovation project. Engineering scope included tying the building to the existing campus chilled-water loop limited to 5 ft outside the building, providing new hydronic fan coil units, electrical upgrades, modernizing an existing elevator and renovating single occupancy toilets, as well as fire alarm and sprinkler work in order to meet HVAC requirements. Electrical scope included power upgrades including a life safety generator. Chief Electrical Engineer.

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
d.	Taylor Theater Dimming System Renovations (UNC-Greensboro) Greensboro, NC	2019	2019

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑ Check if project performed with current firm

Sigma provided electrical and mechanical engineering design services for the upgrades to the dimming systems in Taylor Theater as well as power and HVAC upgrades in the Dimming Booth. ACM was also abated as part of the project. Chief Electrical Engineer.

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
e.	Weil Winfield Fire Alarm and ADA Upgrades (UNC-Greensboro) Greensboro, NC	2018	2020

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑ Check if project performed with current firm

Electrical and fire protection engineering design services for this 284 bed, 75,000 SF residence hall. Project scope includes a new mass notification fire alarm system, and a new 500 kW generator to provide life safety and standby power for eight buildings on the UNCG Quad, security system enhancements, and replacement of an existing non-freeze wet-pipe sprinkler system in the attic with a dry-pipe sprinkler system. Principal in Charge/Electrical Engineer of Record.

	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(if applicable)*
f.	Elliott University Center – Cone Ballroom Auditorium Lighting Upgrades (UNC-Greensboro), Greensboro, NC	2018	2019

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE ☑ Check if project performed with current firm

Lighting upgrades including replacement of all existing lighting, wiring and controls with new color changing cove and downlighting systems, new white LED lighting, new wiring and dimming controls. Principal in Charge/Electrical Engineer of Record.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete on Section E for each key person)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS OF EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Peter Falk	Project Manager	37	20

15. FIRM NAME AND LOCATION *(City and State)*

LAMBERT Architecture + Interiors
408 N. Marshall Street, Suite 300
Winston-Salem, NC 27101

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Bachelor of Science in Architectural Technology	Registered Architect - NY

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: UNCG Philips/Hawkins HVAC Replacement (SCO): Greensboro, NC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2022 | CONSTRUCTION *(if applicable)*: Ongoing

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Project Manager assisting MEP (prime) of mechanical replacement by detailing the removal and replacement of several chases that house mechanical piping within door rooms and ceilings in corridors, as well as providing new soffits within bedrooms and new pipe chases within restrooms. Services also include providing add-alternates for replacing flooring and painting within dorm rooms.

b.

(1) TITLE AND LOCATION *(City and State)*: NC A&T University Marteena Hall Renovation (SCO): Greensboro, NC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2022 - 2023 | CONSTRUCTION *(if applicable)*: Est. 2025

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Project Manager of 72,000 SF residence hall renovation starting with Pre-Design Services to assist the University in establishing a scope of work/budget. Renovation included replacement of mechanical, electrical, and plumbing systems; upgrade of fire alarm system; replacement of light fixtures and windows; stabilized floor/foundation, waterproofing, and laboratory upgrades. **Project cost: $9.1M**

c.

(1) TITLE AND LOCATION *(City and State)*: UNCG Ragsdale/Mendenhall Residence Hall Renovation (SCO): Greensboro, NC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2016 - 2020 | CONSTRUCTION *(if applicable)*: 2019 - 2020

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Project Manager of 78,000 SF residence hall renovation providing new mechanical, electrical, and plumbing systems to meet current standards. Included new HVAC System connected to Campus Chilled Water System; Plumbing Fixtures and Rough Plumbing through the building; Electric Panels, wiring, and light fixtures; replacement/relocation of Fire Suppression Heads. Replaced exterior windows; ADA upgrades to new elevator and interior accessible ramps; new interior finishes throughout the building. **Project cost: $11.5M**

d.

(1) TITLE AND LOCATION *(City and State)*: Davidson College Residence Life Offices Renovation: Davidson, NC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2017 - 2019 | CONSTRUCTION *(if applicable)*: 2018 - 2019

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Project Manager of a 5,000 SF laundry building renovated to office space. Renovation included raising floor level to above adjacent grade level with access floor system; waterproofing foundation/building walls; grading to slope away from building; new entryway, finishes, lighting, windows, and doors; structural repairs to the existing building and wood timber roof structure. **Project cost: $2.5M**

e.

(1) TITLE AND LOCATION *(City and State)*: Duke University Power House Building Renovation: Raleigh, NC

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013 | CONSTRUCTION *(if applicable)*: 2014

(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE — [X] Check if project performed with current firm

Project Manager of repurposing the 27,000 SF historic building for university's TIP program. Scope included integrating modern mechanical systems while maintaining the building's historic character. Exposed systems were incorporated to align with the industrial aesthetic, and new HVAC was designed to provide efficient climate control and ventilation without disrupting the existing structure. **Project cost: $4.3M**

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **1**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hamilton Hall – HVAC Replacement (UNC-Chapel Hill) Chapel Hill, NC	Est. 2025 – Currently In Design	(Currently In Design)

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
UNC Chapel Hill	Mr. Chris Johnson, AIA – UNC CH Facilities Planning and Design	(919) 843-0849

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Hamilton Hall – HVAC Replacement
UNC Chapel Hill

Currently in the final stages of design, the project scope of work includes the replacement of central mechanical systems within Hamilton Hall on Central Campus. The heavily utilized building was completed in 1972 and contains classroom, laboratory and office space for the departments of Archaeology, Sociology, History, Peace, War & Defense, and Political Science within the College of Arts & Sciences.

Specifically, the project will replace the dual-duct built-up AHU-1, located in the basement mechanical room and rated for 71,500 cfm, with a digitally controlled VAV unit. The project will also remove and replace the existing dual-duct ductwork with new VAV ductwork throughout, install digitally controlled VAV hot-water reheat terminal units and install a hot water piping system. The associated work requires the removal and replacement of suspended ceilings and light fixtures in the affected areas. Hazardous materials testing, design and abatement is also a heavy component of the renovation design. Careful attention to project phasing and implementation will be required to limit the displacement time of building occupants.

Project Budget $12M

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	PRIME DESIGNER, MEPF ENGINEER, & CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **2**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Phillips Hawkins Moore Strong Residence Hall Renovations University of North Carolina at Greensboro Greensboro, NC	2022-2024	(Moore Strong - currently in design; & Phillips Hawkins – currently in construction)

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
UNC Greensboro	Mr. Tim Rouse, UNCG HRL	(336) 334-4317

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Phillips Hawkins Moore Strong Residence Hall Renovations

These two buildings on central UNCG campus had failing dual-temp fan coil units and HVAC infrastructure. Both buildings were approximately 80,000sf each. Phillips Hawkins is 3 stories fully above grade (5 stories total) and Moore strong was also 3 stories above grade.

Renovations included over 600 fan coil units, make-up air units, new steam converters, hot and chilled water pumping and distribution, and new DDC controls.

The projects were scheduled to take advantage of fall/summer semesters to allow for the maximum flexibility of beds available to UNCG Housing and Residence life. In addition, existing buildings were carefully surveyed so that Sigma could make recommendations to the owner as to what elements of the existing systems and structures could be reused to reduce construction costs.

The total construction budget was $8M to do both buildings.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS, PC	RALEIGH, NC	PRIME DESIGNER, & MEPF ENGINEER
b.	LAMBERT ARCHITECTURE + INTERIORS	WINSTON SALEM, NC	ARCHITECTURAL CONSULTANT

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **3**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ragsdale Mendenhall Residence Hall Renovations (UNCG) Greensboro, NC	2018	2020

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
UNC Greensboro	Mr. Stuart McCormick, AIA – Lambert Architecture	(336) 777-3657

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Ragsdale Mendenhall Residence Hall Renovations
UNC Greensboro

Sigma served as a subconsultant to Lambert Architecture + Interiors on the renovation project at Ragsdale Mendenhall Residence Hall at UNCG. The project included a comprehensive renovation that provided:

- New mechanical and electrical systems throughout the building to meet current code standards
- Replacement of exterior windows for improved energy efficiency
- ADA upgrades including the modernization of the existing elevator
- Interior finishes through the building.

Sigma provided the mechanical, electrical, plumbing and fire protection for this 90,000 SF project. Engineering scope of work included tying the building to the existing campus chilled-water loop (limited to 5 ft outside the building), providing new hydronic fan coil units, electrical upgrades, modernizing an existing elevator and renovating single occupancy toilets as well as fire alarm and sprinkler work in order to meet HVAC requirements.

Cost: $10,000,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	MEPF ENGINEER
b.	LAMBERT ARCHITECTURE + INTERIORS	WINSTON SALEM, NC	PRIME DESIGNER, & ARCHITECT

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **4**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Frank Porter Graham Student Union (UNC-Chapel Hill) Chapel Hill, NC	2011	2012

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
UNC Chapel Hill	Ms. Brandy Thompson, AIA – Clearscapes, PA	(919) 821-2775

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Frank Porter Graham Student Union
UNC Chapel Hill

Sigma provided engineering systems design for the renovation of this 160,000 SF, 3-story facility, including a 4000 SF auditorium. This project included bringing the entire building up to code compliance, and provisions to add a 2500 SF Commercial Kitchen and dining room to the ground floor and a full replacement of the existing 40 year old switchgear. Additional scope included energy modeling and controls upgrades to HVAC systems funded by the UNC Renewable Energy Special Projects Committee (RESPC) to reduce building energy consumption. Other considerations in this project required Building to be occupied through all phases of construction, as well as uninterrupted service to critical Student-run programs such as Radio and TV stations and Yearbook. This facility was occupied during renovation.

Cost: $5,000,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	MEPF ENGINEER, and CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **5**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
HVAC Renovations at Robertson/Biltmore, Pulp & Paper, and Jordan Hall (NCSU) Raleigh, NC	2013	2014

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NC State University	Mr. David Hammock – NCSU Project Manager	(919) 515-2030

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

HVAC Renovations at Robertson/Biltmore, Pulp & Paper, and Jordan Hall
NC State University

Sigma provided mechanical and electrical engineering design to connect the existing chiller serving Robertson/Biltmore (75,737 SF) and Jordan Hall (114,443 SF) to the campus chilled water loop to provide additional capacity to the campus chilled water system; and at the same time connect the Pulp & Paper Building (38,494 SF) to the campus chilled water system. All four buildings are research/classroom buildings, and any proposed changes had to be coordinated in multiple phases across multiple buildings. Sigma's engineers also provided construction administration.

Cost: $1,200,000

- ☑ *Extension of campus chilled water to buildings*
- ☑ *Replacement of air handling units and pumps*
- ☑ *DDC controls*
- ☑ *Occupied buildings*
- ☑ *State Construction Office-Capital Project*

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	PRIME DESIGNER, MECHANICAL & ELECTRICAL ENGINEER, and CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **6**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Energy Improvements to Partners I and Research II (NCSU) Raleigh, NC	2015	2016

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NC State University	Mr. David Hammock – NCSU Project Manager	(919) 515-2030

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Energy Improvements to Partners I and Research II,
NC State University

Sigma provided mechanical and electrical engineering design, and construction administration for the replacement of existing mechanical systems in these two laboratory and office buildings to increase energy efficiency and tenant comfort.

The Partners I building is 78,500 SF and was built in 1992. The HVAC systems were all low-efficiency DX split and packaged systems. This project replaced all of the existing DX equipment with high-efficient, high-comfort hydronic air handlers and connected the building to nearby campus steam and chilled water. Sigma worked closely with NCSU facility ops and the Centennial Campus Development Office to completely convert the HVAC systems in this laboratory and office building with zero interruptions to existing tenants. The project was phased and remained fully occupied during all phases of construction.

Cost: $2,800,000

"This project was like performing a heart transplant on a patient without them knowing it."
– M. Michaelson, NCSU Construction Manager

The Research II building was another early 90's laboratory/office building that originally housed the NCSU contributions to NASA Mars rover project. The systems were aging and inefficient and laboratory exhaust was twice what the building actually needed. This project combined multiple smaller air handlers into more efficient systems, and rebalanced exhaust air for current laboratory needs.

Cost: $1,500,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	PRIME DESIGNER, MECHANICAL & ELECTRICAL ENGINEER, and CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **7**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Fletcher Residence Hall Make-Up Air (ECU) Greenville, NC	2017	2018

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
East Carolina University	L.L. Everett – ECU Project Manager	(252) 328-6858

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Fletcher Residence Hall Make-Up Air
East Carolina University

Sigma was retained as the prime designer on this renovation project at East Carolina University.

Fletcher Residence Hall is a 60,000 SF high rise dormitory on ECU main campus. It had been expressing signs of overall negative pressurization due to a progression of energy saving measures, code revisions, and a recent bathroom renovation project. This project corrected the building negative pressure by introducing an increased volume of conditioned outside air into the space. The mechanical scope included installing new 100% Outside Air, DX Packaged Make-Up Air units capable of providing requisite outside air to each floor to make up for bathroom and other exhausts and support for these units involved a new glycol hot water generation station. All new equipment was integrated into a new BAS.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	PRIME DESIGNER, MEPF ENGINEER, and CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **8**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Longleaf Neuro-Medical Treatment Center – Kitchen and HVAC Upgrades Wilson, NC	2018	Currently in Construction

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NC Dept. of Health and Human Services	Mr. Peter Veit, PE	(919) 733-6829

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Kitchen Renovations and Service/Spruill Wings HVAC Upgrades
Longleaf Neuro-Medical Treatment Center – Wilson, NC

Sigma provided mechanical, electrical, plumbing and fire protection design and construction administration services for the complete replacement of the mechanical systems and plumbing water supply piping, along with faucet/flush valve replacement for the entire facility except the 7-story bed tower. The last phase of the project includes a complete kitchen renovation and increase in dining space for the facility. The project also included a replacement of the existing light fixture with new LED light fixtures along with modifications to the fire protection system as required.

This project was a 7-phase project that remained fully occupied and operational during the entire renovation. Sigma was the prime designer on the project while utilizing Huffman Architecture for the ADA bathroom renovations and space change renovation architectural components. This project also included temporary Kitchen renovations to the Eastern North Carolina School for the Deaf McAdams Kitchen to be utilized by the LLNMTC staff during the kitchen renovation phase.

Current Cost: $7,816,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	PRIME DESIGNER, MEPF ENGINEER, & CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **9**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Bureau of Mines Renovations (NCSU) Raleigh, NC	2019	2021

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NC State University	Ms. Brandy Thompson, AIA – Clearscapes, PA	(919) 821-2775

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Bureau of Mines Renovations
NC State University

Sigma was retained to provide MEPF design services for the renovations of the Bureau of Mines building (15,000 SF, c. 1945) on the main campus at NCSU.

The engineering scope of this project consisted of the following:

- HVAC – complete removal and replacement
- Thermal imaging study
- New plumbing water and waste
- New fire protection system for previously unsprinklered building
- FA system – complete removal and replacement
- Electrical – New power and receptacles. New LED lighting and emergency/egress lighting throughout. Telecom system upgrades and new BDF room installed.

Cost: $4,400,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	MEPF ENGINEER, and CONSTRUCTION ADMINISTRATION

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

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **10**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
111 Lampe (Daniels) – First Floor Renovation Raleigh, NC	2020	2021

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
NC State University	Ms. Katherine Hogan, AIA – Tonic Design	(919) 793-5063

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

111 Lampe Drive (formerly Daniels Hall) – First Floor Renovation
NC State University

In conjunction with Tonic Design, Sigma was hired to provide the engineering design to completely renovate the ground floor (33,000 SF) of 111 Lampe Drive Hall to accommodate the relocation of the Industrial Design Department of the College of Design.

Sigma evaluated and made modifications to the existing HVAC to accommodate the changes, along with designing the replacement of 80% of the floors lighting with high-efficiency LED lights and providing new power at desk locations and to equipment as required.

Cost: $750,000

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION *(City and State)*	(3) ROLE
a.	SIGMA ENGINEERED SOLUTIONS PC	RALEIGH, NC	MEPF ENGINEER

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Paul J. Romiti, PE	Chief Mechanical Engineer	X	X	X	X	X	X	X	X	X	X
Reggie Adams, PE	Chief Electrical Engineer	X	X	X	X	X	X	X	X	X	X
Peter Falk, RA	Architect		X	X							

29. EXAMPLE PROJECTS KEY

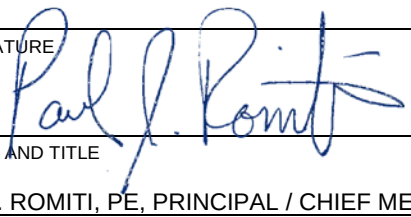
NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Hamilton Hall HVAC Renovations (UNC CH)	6	Energy Improvements to Partners I and Research II (NCSU)
2	Phillips Hawkins Moore Strong Residence Hall Renovations (UNCG)	7	Fletcher Residence Hall Make-Up Air (ECU)
3	Ragsdale Mendenhall Residence Hall Renovations (UNCG)	8	Kitchen Renovations and Service/Spruill Wings HVAC Upgrades (NC DHHS Longleaf Neuro-Medical Treatment Center)
4	Frank Porter Graham Student Union Renovations (UNC CH)	9	Bureau of Mines Renovations (NCSU)
5	HVAC Renovations at Roberston/Biltmore, Pulp &paper, and Jordan Hall (NCSU)	10	Lampe Hall– First Floor Renovations (NCSU)

H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE	32. DATE
	02/24/25

33. NAME AND TITLE

PAUL J. ROMITI, PE, PRINCIPAL / CHIEF MECHANICAL ENGINEER

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*:

PART II - GENERAL QUALIFICATIONS

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

2a. FIRM (*or Branch Office*) NAME	SIGMA ENGINEERED SOLUTIONS, PC
2b. STREET	5909 FALLS OF NEUSE RD., SUITE 101
2c. CITY	RALEIGH
2d. STATE	NC
2e. ZIP CODE	27609
3. YEAR ESTABLISHED	2003
4. UNIQUE ENTITY IDENTIFIER	177422818
5. OWNERSHIP	
a. TYPE	PROFESSIONAL CORPORATION
b. SMALL BUSINESS STATUS	SMALL BUSINESS
6a. POINT OF CONTACT NAME AND TITLE	REGINALD D. ADAMS, PE, PRINCIPAL
6b. TELEPHONE NUMBER	(919) 840-9300
6c. E-MAIL ADDRESS	radams@sigmaes.com
7. NAME OF FIRM *(If Block 2a is a Branch Office)*	

8a. FORMER FIRM NAME(S) *(If any)*	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. Number of Employees (1) FIRM	(2) BRANCH
02	ADMINISTRATIVE	2	
08	CADD TECHNICIAN	3	
21	ELECTRICAL ENGINEER	3	
42	MECHANICAL ENGINEER	6	
	Other Employees		
	Total	14	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
F03	FIRE PROTECTION	2
S02	FIRE ALARM	2
E03	ELECTRICAL DESIGN	2
H04	HVAC	3
H08	HISTORICAL PRESERVATION	2
L01	LABS: MEDICAL RESEARCH FACILITIES	2
P07	PLUMBING & PIPING DESIGN	2
S06	SOLAR ENERGY UTILIZATION	1
R07	RESEARCH FACILITIES	2
B01	DORMITORIES	2
A11	AUDITORIUM & THEATRES	2
E02	EDUCATIONAL FACILITIES AND CLASSROOMS	4

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	
b. Non-Federal Work	5
c. Total Work	5

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: Reginald D. Adams, P.E.

b. DATE: 01/07/25

c. NAME AND TITLE: REGINALD D. ADAMS, PE, PRESIDENT — SIGMA ENGINEERED SOLUTIONS, PC

STANDARD FORM 330 (REV. 8/2016) **PAGE 6**

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*: N/A

PART II - GENERAL QUALIFICATIONS

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

2a. FIRM (OR BRANCH OFFICE) NAME: LAMBERT Architecture + Interiors		3. YEAR ESTABLISHED: 1989	4. DUNS NUMBER: 80-000-3154
2b. STREET: 408 N. Marshall Street, Suite 300		5. OWNERSHIP a. TYPE: SubChapter S	
2c. CITY: Winston-Salem	2d. STATE: NC / 2e. ZIP CODE: 27101	b. SMALL BUSINESS STATUS: n/a	
6a. POINT OF CONTACT NAME AND TITLE: Stuart H. McCormick, AIA, LEED AP, NCARB - President & Design Principal		7. NAME OF FIRM *(if block 2a is a branch office)*: n/a	
6b. TELEPHONE NUMBER: 336.777.3657	6c. EMAIL ADDRESS: smccormick@lambertai.com		

8a. FORMER FIRM NAME(S) *(if any)*	8b. YR. ESTABLISHED	8c. DUNS NUMBER
n/a	n/a	n/a

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
06/48	Architect + Project Management	5	
48	Project Manager	1	
37	Interior Designer	2	
08	CADD Technicians	2	
02	Administrative	2	
	Other Employees		
	Total	12	

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(See Below)*
E02	Educational Facilities; Classrooms	6
H08	Historical Preservation	2
I05	Interior Design; Space Planning	3
O01	Office Buildings; Industrial Parks	6
R08	Research Facilities	5
S11	Sustainable Design	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	1
b. Non-Federal Work	7
c. Total Work	7

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

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

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: 

b. DATE: February 5, 2025

c. NAME AND TITLE: Stuart H. McCormick, AIA, LEED AP, NCARB - President & Design Principal