2/20/2026

Project # DGS 1101-0059 Phase1

Commissioning Services for Lincoln University – Lucy Laney Hall and Langston Hughes Library Upgrades

Submitted to:

pennsylvania
DEPARTMENT OF GENERAL SERVICES

1800 Herr Street
Harrisburg, PA 17103

Submitted by:

BORTON LAWSON

A Verdantas Company
613 Baltimore Drive
Wilkes-Barre, PA 18702

Pennsylvania Department of General Services
1800 Herr Street
Harrisburg, PA 17103

February 20, 2026

Proposal for Commissioning Services under ITQ No. DGS 2018-SWCA

Dear PA DGS,

Borton-Lawson (a Verdantas company) is pleased to submit our qualifications for Commissioning Services for the 1101-0059 - PH1- Lincoln University Lucy Laney Hall and Langston Hughes Library Upgrades Project. Our team brings insight and understanding of actively-practicing commissioning specialists, professional engineers, and TAB technicians. Our personnel are specialists in mechanical system design, HVAC / BAS control systems, O&M, project management, retro-commissioning, and training.

Borton-Lawson is familiar with DGS requirements for construction and commissioning. Our staff is also very strong in the design, operation, and checkout of Building Automation Systems. Commissioning makes a good-job-great and Borton-Lawson has the staff to make that happen.

As you review this proposal, please consider the Borton-Lawson advantage and value:

People	• Dedicated, focused Cx team of licensed master electricians, professional engineers, BAS controls technicians, and licensed TAB technicians. • Subject Matter Experts with extensive knowledge of commissioning, building design, construction, start-up, and O&M processes.
Experience	• Depth of knowledge in the operation and troubleshooting of HVAC, energy, and lab systems with “boots on the ground” experience required for an excellent Cx provider. • Understanding that commissioning is less the creation of fancy checklists and more the targeted application of defined skillsets to a new building and/or system.
Stewards	• Committed to the furthering of commissioning in the industry by working with peer groups, societies, etc. to explain and educate clients about commissioning. • We have LEED AP, WELL AP, membership in the USGBC, and commissioning certifications through the BCA and NEBB.

The attached summarizes our staff and prior commissioning experiences. We look forward to partnering with you on this project.

Sincerely,

A.J. Speicher, PE, CCP, CEM, PMP, WELL AP

AVP, Project Manager
Certified Commissioning Provider

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A. Contractor (CxA) Prior Experience

Our team has extensive commissioning experience across new construction, existing buildings, and building envelopes. We create customized test plans that align with design concepts and equipment capabilities. Our facilities management background helps us understand projects from the owner's perspective. We are skilled in handling terminal equipment, large air handlers, and advanced laboratory systems, with former facilities managers and Building Automation System technicians who stay updated with industry advancements. **As per the RFP request, we are showing our past relevant experience on no more than 1 page for each category.**

Projects Similar in Scope

Penn State University – Scranton Campus – Library Classroom Renovation Project

- **Dates**: Start: February 2022 – End: October 2025
- **Description**: This project consisted of a full gut and renovation of an existing 20,800 SF, 2-story classroom and library building.
- **Commissioned Systems**: This project included a large VRF system, full Building Automation System with integration, Heat Recovery Units, local terminal radiant heaters, lighting controls, medical gas/air, and support systems.
- **Construction Cost**: $13,100,000
- **Commissioning Fee**: $25,000
- **Client References**:
  - Kyle W. Hollick, RA, NCARB, Project Manager – Eastern Region
    The Pennsylvania State University, The 328 Building, Suite 325, University Park, PA 16802
    814-865-3789, kwh121@psu.edu

CBRE – Bank of America – 2nd and 3rd Floor Renovations Project

- **Dates**: Start: December 2020 – July 2022
- **Description**: This project included renovations of 30,000SF across 2 floors of a building in Long Island, NY. The commissioned systems for this project included packaged RTUs, VAV boxes, exhaust fans, BAS controls, lighting controls, and natural gas piping.
- **Construction Cost**: confidential
- **Commissioning Fee**: $36,400
- **Client References**:
  Don Howard | Project Manager – North East
  CBRE | Global Workplace Solutions – Bank of America Account | Project Management
  57 Charles Ave | Massapequa Park, NY 11762, C: +1 (516) 313-1041, Donald.Howard@cbre.com

Bucknell University – Vedder Hall Renovations Project

- **Dates**: Start: August 2021 – End: October 2023
- **Description**: This project included a full renovation of a 80,000SF, 350 bed, 4 story, residence building for higher education. Commissioned systems include air handling units, terminal equipment, steam to hot water-heat exchanger, tie-in to campus chilled water, and misc. systems.
- **Construction Cost**: unknown
- **Commissioning Fee**: $28,350
- **Client References**:
  - Gregory Koontz, Director, Energy & Utilities, Bucknell University
    phone: 570.577.2703, fax: 570.577.3529, email: greg.koontz@bucknell.edu

Projects Similar in Size

Penn State University – DuBois Campus – PAW Center Renovation Project

- **Dates**: Start: July 2021 – End: July 2023
- **Description**: This project transformed the current Multipurpose Building on campus into a state-of-the-art facility with a focus on athletics, health and recreation. The gymnasium and fitness center were updated to provide students and student-athletes, as well as employees, a space to work toward staying healthy. New heating and air conditioning systems were installed for improved efficiencies.
- **Construction Cost**: $17,300,000
- **Commissioning Fee**: $33,120
- **Client References**:
  - J. Doug Wenger, RLA, LEED AP, DBIA
    Project Manager
    Penn State University, The 328 Building, University Park, PA 16802
    (814) 863-9622, jdw132@psu.edu

Penn State University – Scranton Campus – New Engineering Building Project

- **Dates**: Start: February 2020 – End: April 2022
- **Description**: This project consisted of the conversion of an existing warehouse distribution facility into a new 4-year College of Engineering School. The existing building is approximately 15,500SF and has been designed for future expansion. The program includes engineering labs, meeting rooms, classrooms, administrative space and campus police services.
- **Construction Cost**: $6,400,000
- **Commissioning Fee**: $16,640
- **Client References**:
  - Kyle W. Hollick, RA, NCARB
    Project Manager – Eastern Region
    The Pennsylvania State University, The 328 Building, Suite 325, University Park, PA 16802
    814-865-3789, kwh121@psu.edu

Penn State University – Lehigh Valley – Lab Expansion Project

- **Dates**: Start: February 2020 – End: April 2022
- **Description**: This project consisted of a full-service cafeteria and space for student programming. A new third floor, known as the STEM Wing, is devoted exclusively to STEM education and features a 2,199SF laboratory to accommodate organic chemistry courses, a prep lab, equipment room, and lab technician office. The new lab allowed the campus to offer organic chemistry for the first time.
- **Construction Cost**: $14,400,000
- **Commissioning Fee**: $16,640
- **Client References**:
  - Kyle W. Hollick, RA, NCARB
    Project Manager – Eastern Region
    The Pennsylvania State University, The 328 Building, Suite 325, University Park, PA 16802
    814-865-3789, kwh121@psu.edu

Projects Similar in Building Type / Complexity

Tobyhanna Army Depot (TYAD) – B1E SOD Project

- **Dates**: Start: February 2024 – End: November 2023
- **Description**: This project involved renovations of Building 1E Support Operations Division (S.O.D) included upgrades to the Hexavalent Chromium Exhaust systems to meet current ACGIH requirements. Commissioned systems included open bay area HVAC, lighting systems, exhaust system for the three fume hoods in the Chemical Lab, make-up air systems, and equipment serving restroom areas, break areas, offices, etc.
- **Construction Cost**: $13,000,000
- **Commissioning Fee**: $54,984
- **Client Reference**:
  - James Pencavage, PMP, LEED AP BD+C
    Senate Builders and Construction Managers, INC.
    2232 DeKalb Pike, East Norriton, PA 19401
    (570) 704-6562, jimp@senatebuilders.com

Tobyhanna Army Depot (TYAD) – B1C, Bay 1 Renovation Project

- **Dates**: Start: March 2021 – End: October 2022
- **Description**: This project included renovations and equipment replacements within 52,000SF of B1C. The commissioned systems for this project included packaged RTUs, VAV boxes, exhaust fans, BAS controls, lighting controls, and noise / acoustics.
- **Construction Cost**: $16,500,000
- **Commissioning Fee**: $32,690
- **Client References**:
  - Greg Kazel, Construction Manager, Senate Builders & Construction Managers, Inc.
    (610) 551-2380, greg@senatebuilders.com

West Point Military Academy – B624 Soldier Barracks Flood Repair Project

- **Dates**: Start: February 2024 – End: June 2025
- **Description**: The Building 624 Flood Damage Repair project involved the repair and restoration of damage caused by severe flooding in the basement and surrounding areas of the building in 2023. The floodwaters had significantly affected the electrical, mechanical, civil, structural, and geotechnical components. Project included commissioning on all new HVAC units, domestic hot water heaters, and electrical distribution systems.
- **Construction Cost**: $16,500,000
- **Commissioning Fee**: $50,825
- **Client References**:
  - Wes Toney, Quality Control Manager
    Sealaska
    1200 6th Ave., Suite 800, Seattle, WA 98101
    (804) 337-0415, Wesley.Toney@sealaska.com
  - Patrick McKevitt, Contracting Officer's Rep.
    West Point ABUP Resident Office
    (347) 843-3185.
    Patrick.C.McKevitt@usace.army.mil

B. Understanding Project Requirements

Thank you for the opportunity to provide this proposal for Commissioning Services to the PA Department of General Services (DGS) for the DGS C-1101-0059 Phase 1 – Lincoln University Lucy Laney and Langston Hughes Library Upgrades Project. The proposed project consists of work in two (2) existing campus buildings. Built in 1966, Lucy Laney Hall is a central campus student residence. It is a 4-story building with a walk-out basement and is approximately 26,000 sq. ft total. Though renovated in 2001, the prior renovation scope was mainly interior, and upgrades to the existing MEP systems are required. Upgrades to the 1st floor student communal spaces and the onsite staff apartment are also planned. Built in the 1960s, the Langston Hughes Library is a 4-story building, with the ground floor being a walk-out basement. It is approximately 67,000 sq. ft. total and houses the campus historical archives and special collections. It is also hub for the student library and research services.

Our commissioning process implements proven, cost-effective solutions to verify and document that the commissioned systems/assemblies are designed, installed, tested, operated, and maintained as required to meet the Owner's Project Requirements (OPR), Basis of Design (BOD), and Construction Documents. Our process also follows the requirements of ASHRAE 202-2013 and the 2017 DGS Project Procedure Manual (Section 1314–Commissioning). To achieve these objectives, we will develop a specific commissioning process to establish and document the Owner's criteria for system function, performance, and maintainability. The Cx process will then describe the steps to verify and document compliance with these criteria throughout the design, construction, start-up, and the initial period of operation.

Systems to be Commissioned

We will perform these commissioning services on the following systems:

i. Protective systems including fire suppression and fire alarm systems
ii. Plumbing systems including domestic hot water systems
iii. HVAC systems including heat generation, refrigeration, ventilation, and controls
iv. Electrical systems including power distribution, lighting and controls

Highlights of our commissioning process include:

Design Phase – Tasks and Deliverables

In our experience, a large commissioning effort during the design stage of a project is essential in ensuring the Client Agency and DGS goals are realized at the completion of the project. To help achieve this, we:

- Owner's Project Requirements (OPR) – Work closely with Client Agency and Design Professional to develop and document the Client Agency's Project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information into the OPR. The completed OPR will provide descriptions of the primary purpose of Project, environmental and sustainability goals, energy efficiency goals, indoor environmental quality requirements, desired equipment/system quality, reliability, and maintenance requirements, and facility O&M requirements including requisite personnel training and orientation. We conduct several OPR creation and review meetings to ensure all input is received and written into the OPR.

- Commissioning Plan (Cx Plan) – We will create the written plan that outlines the overall process, organization, responsibilities, schedule, allocation of resources, and documentation requirements of the Commissioning Process in order to verify and document that the design, construction, and operation of the facility meet the OPR goals.
- Basis of Design (BOD) – We will review the written document provided by Design Professional that describes systems/assemblies to be commissioned, including design assumptions, applicable codes/standards, narrative descriptions, and performance criteria used to meet the OPR.
- Commissioning Specifications – We will provide Commissioning Specifications for all systems/assemblies being commissioned for inclusion within the Project Construction Documents to ensure the subcontractors are aware of their responsibilities. We will provide Cx specifications for each of the design review stages.
- Design Review – We will conduct Commissioning Design Review Comments of Basis of Design (BoD) and Design Documents concurrent with the Concept Design, Detailed Design, and Construction Documents Submissions. We will then back-check the Commissioning Design Review Comments with the final Bid Set Documents. Our reviews shall include the Building Automation System sequences of operation and decisions made that may impact long-term viability of the building and the systems to be commissioned.
- Meetings – We will attend DGS Design Review meetings and any additional design meetings with the design team as needed, which will include conducting a controls integration meeting with the Client Agency and the design team. We have included the following meetings in our scope:
    - Design Team Meetings (virtual): Qty. twenty-five (25) at one (1) meeting bi-weekly for one (1) hour each.
    - Design Review Page Turn Meetings (virtual): Qty. three (3) at four (2) hours each
    - Design Review Conferences (in-person): Qty. three (3) at four (2) hours each
    - Ad-Hoc Meetings: We will be available if/when any pop-up meetings are required to discuss commissioning process or systems.

Construction Phase – Tasks and Deliverables

While commissioning during the design stage sets the project on solid ground, commissioning during the construction phase is critical to ensure complete project success. To drive this overall project success, we:

- Submittal Review – Review Contractor submittals concurrently with the A/E in order to identify any issues that might result in rework or change orders. We also verify conformance with the OPR, BOD, and contract drawings (CDs).
- Job Construction and Commissioning Meetings – We will attend regular job construction meetings as necessary to stay current on project progress and ensure commissioning tasks are included in the overall project schedule. We will hold regularly scheduled commissioning meetings with all project stakeholders to review important aspects of commissioned system installation and issues. We will keep meeting minutes and include in the Final Cx Report. We have included the following meetings:

  - Bi-Weekly Construction Meetings: Qty. twenty-five (25) at one (1) meeting bi-weekly for one (1) hour each.
  - Bi-Weekly Commissioning Meetings: Qty. twenty-five (25) at one (1) meeting bi-weekly for one (1) hour each. Note: These Cx meetings will take place directly after the bi-weekly construction meeting for efficiency.
- Construction Observation and Testing – We will conduct site visits to inspect the installation of systems/assemblies being commissioned to ensure compliance with the OPR, BoD, and CDs. All system checks will be documented on site visit reports and individual equipment checklists. We will direct, witness, and document tests.
- Issues and Resolution Log – We will develop an overall Issue Log that documents open and continuing items, status, and name of person/organization responsible for resolution.
- Systems Manual – Our final report shall contain documentation required by the facilities staff to understand, operate, and maintain commissioned systems. The Systems Manual will be provided in addition to, not in replacement of, contractor O&M data.
- Pre-Functional and Functional Performance Testing – We will confirm manufacturer's startup of individual equipment components for pre-functional testing. We will write, direct completion of, witness and document the functional performance testing. Paramount here will be to confirm proper operation of all control sequences for each season and documents in the final Cx report.
- Training Plans and Records – We will review, pre-approve, and verify training of the Client Agency personnel by the Contractor. Included for review should be attendance sheets, training plan, training materials, and records in the final Systems Manual.
- End of Warranty Cx Report – We will provide post-occupancy operations commissioning to review incomplete, delayed, seasonal testing and warranty issues. These tasks shall begin at Substantial Completion and continue through to the end of the warranty period.
- Cx Report – We will provide a Commissioning Report (Cx Report) summarizing the Commissioning Process and building operation. Include will be the final Commissioning Plan and results of the implementation of the plan. Also included will be documentation of completion of all items specified herein to be provided. An Executive Summary will be provided to describe system problematic areas, including those that were experienced in this commissioning process and their resolution, along with other possible issues that may arise during future system operations.

In summary, our team has the **experience and passion** to apply best practices in the commissioning of new and renovated equipment / systems for PA DGS. We will work with the entire project team to craft a commissioning process to be applied to commissioned equipment/systems. Our Cx process will be further tailored for this project as follows:

Construction Kickoff, Project Expectations, Responsibilities

In our experience, a strong project commissioning kickoff during the construction phase is essential in gaining acceptance by the entire construction team. To help achieve this, we:

- Work with the Owner, CM, A/E, subcontractors as a team to ensure project requirements and goals are documented throughout the entire commissioning process.
- Perform a kickoff meeting to fully explain roles and responsibilities for the commissioning team.
- Explain to the subcontractors what will be required for our commissioning verifications.
- Review submittals for the commissioned systems to ensure compliance with the CD's.

Construction Inspections, Pre-Functional Testing, Functional Performance Testing

Once the project moves from the design phase to the construction phase, our commissioning process entails:

- Create the Commissioning Plan and review with the subcontractors during a Cx Kickoff Meeting.
- Creating specific Pre-Functional Checklists and Functional Performance Tests for each piece of commissioned equipment.
- Work with the CM to add commissioning related tasks and durations into the overall project schedule to allow adequate time for functional testing of the commissioned systems.
- Conduct site visits for the purposes of construction inspection. Additional site visits are coordinated through the CM to follow along with the construction schedule.
- At the end of each site visit, we produce a Commissioning Progress Report of our activities and findings. Also, any discrepancies discovered are identified on an Issues Log for the subcontractors to review and comment upon.
- As systems are ready to be energized, we witness selected start-ups.
- We attend selected construction progress meetings and conduct commissioning specific meetings to review open issues, testing plans, equipment start-ups, etc.

Use of Central Building Automation System in the Commissioning Process

In order to functionally test the various equipment and systems, we heavily employ the use of the Central Building Automation System (BAS). With our extensive BAS background (programming, checking out, starting up, commissioning), we can ensure that this critical system is accomplishing everything expected of it. We will work early in the process with the BAS contractor to discuss and document all of the expectations and needs of the system. Our functional testing process is:

- Take the engineer's approved BAS sequence of operation and create functional performance test plans specific for each piece of equipment, control sequence and control mode on the project.
- The system/equipment specific functional performance checklists are broken down to test all modes: occupied, unoccupied, morning warm-up, alarms/safeties, etc. to ensure the Owner's Project Requirements are realized in the final operation of the systems.
- For field testing, we always place one technician at the tested piece of equipment and a second technician sitting with the BAS subcontractor at the front end workstation. By doing this, we not only ensure that the physical equipment operates as required, but also that the BAS graphics are shown correctly. This will greatly assist the Owner's Facilities Staff for routine maintenance and troubleshooting issues.
- Each functional test mode of operation is simulated at the BAS terminal and the resulting response (both graphically at the BAS front end workstation and physically at the equipment) in the field is documented.
- Any discrepancies in expected outcome vs. actual outcome are recorded and documented on the Commissioning Issues Log. That log serves as a living document to help guide and provide a final record of the commissioning process from design, to construction and finally in testing/acceptance.

Final Documentation, Project Closeout, Warranty

Toward the end of construction, our commissioning process works to close-out the project by:

- Documenting that the maintenance / facilities staff training has been performed to Owner's satisfaction.
- Ensuring that all open Commissioning Issues are closed out to the satisfaction of the Owner, CM and A/E.
- Submit electronic document prototypes to allow the Owner's O&M staff to help re-commission the building at a later date if required.
- Creating a Systems Manual that consist of the OPR, BOD, performance metrics, associated drawings/single lines and a table for all setpoints and implications for changing them.

Commissioning Software

We feel that a solid project management approach is required to guide the project expertly and efficiently. We will work closely with PA DGS facilities staff and management to ensure Cx tasks and required durations are included in the normal pre-construction and construction process to minimize potential time delays. The commission process works best as a collaborative process with the entire team. We plan to utilize a third party Cx software (BlueRithm) to assist with that management and communication of Cx tasks, status, issues, tracking, communication, etc. This will provide an instantaneous snapshot of progress, open items, ball in court, etc. All information will be downloaded and added to Trimble at the completion of the project.

BlueRithm

We feel that our commissioning team differentiates itself by the following:

- With our engineering background, we can seamlessly integrate into the overall design process and bring value with a detailed focus on the Operations and Maintenance goals for the building and systems.
- We have deep understanding and experience with many of the familiar Building Automation Systems. This expertise is critical during functional performance testing to ensure the designed sequences of operation are programmed in the field.
- Trust, but verify: We complete all of the pre-functional checklists ourselves instead of turning them over in a binder for the contractors to fill out. We feel that as a commissioning agent, we need to trust that the contractors are doing a good job, but we will verify against the design documents.
- We have experience with all types of HVAC equipment including geothermal well fields, pumps, and terminal heating/cooling systems. There isn't a system we have not seen in operation. Our team has the experience with facilities just like the National Guard Bureau (NGB) Readiness Centers. Our past experience will translate well to this project to ensure all NGB checklist items are being completed.

We have the subject matter experts, skillsets, and experience to make this project a success.

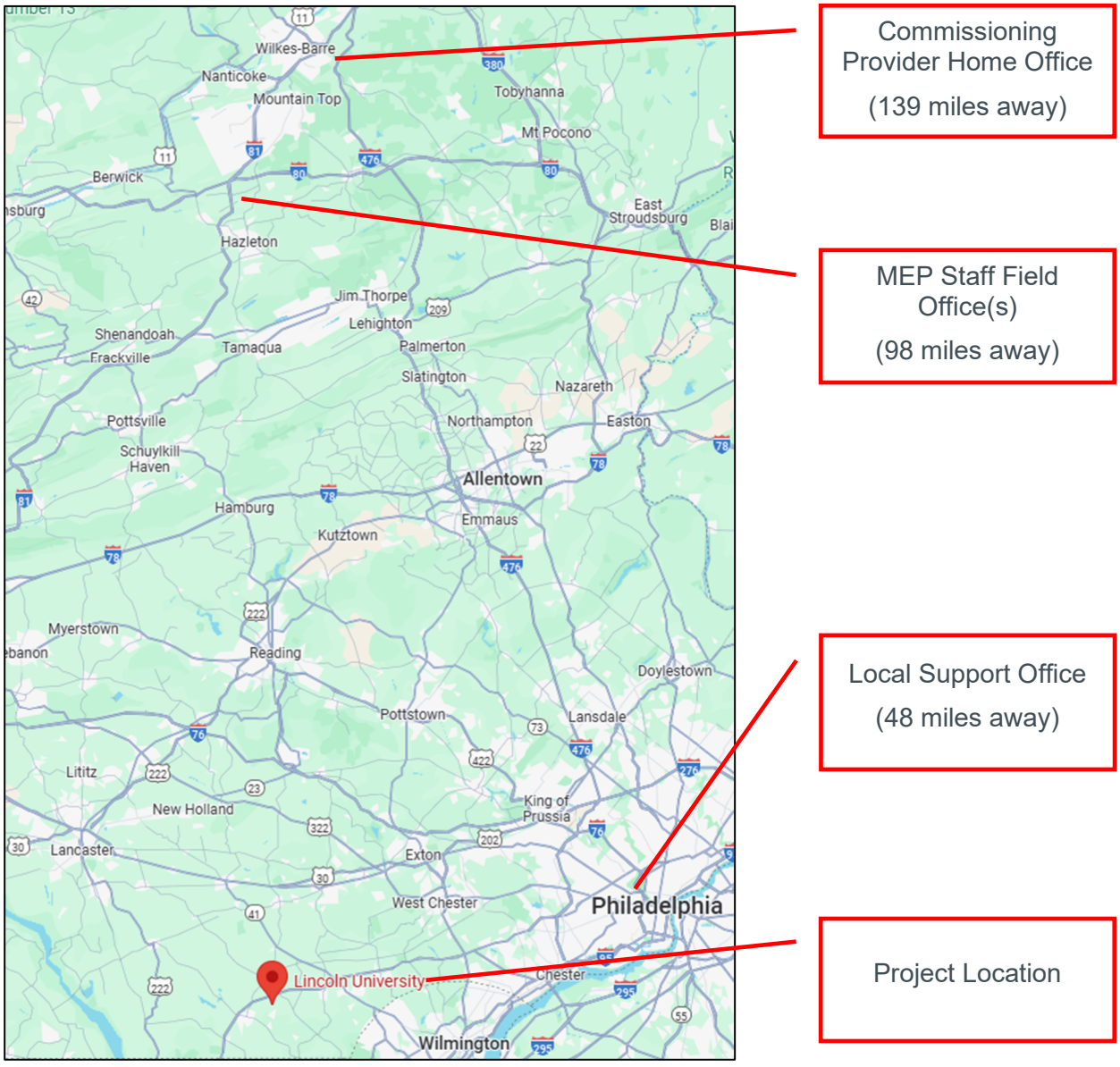
C. Geographic Proximity

Our Project Manager (A.J. Speicher, CCP) is based in our Wilkes-Barre office at 613 Baltimore Drive, Wilkes-Barre, PA 18702. This office is 139 miles from the project site and is adjacent to the northeast extension of the PA Turnpike (I-476).

Evan Lunney and Dean Avillion (key supporting MEP commissioning staff) work remotely and are located about 98-100 miles away in the Drums / Hazleton, PA areas.

Our local office for any needed support is based in Center City Philadelphia, about 48-50 miles from the project site.

Due to the proximity of staff to the project site, travel time will not be billed.



D. Project Work Plan

Our team fully understands how commissioning "fits" into a typical construction project. We explain very clearly to the subcontractors that commissioning is not meant as a roadblock or bottleneck for a project. Many of our commissioning specialists are former contractors so we know how to "speak their language" and keep the commissioning process moving through the life of the project. We take pride in being part of the team, not an adversarial component. See below for how our commissioning process fits into the overall construction project:

Project Phase	Typical Design / Construction Tasks	Our Commissioning Tasks / Deliverables
Design	• Owner Formulates Project • A/E Selected • Owner's goals documented • A/E begins SD/DD design	• Develop Owner's Project Requirements (OPR) • Review Basis of Design (BOD) • Develop Cx Specifications • Develop the initial Cx Plan • Attend meetings as described
Construction	• A/E finalizes CD designs • Contractor bidding phase • Contractor agreements finalized • Construction Commences	• Perform design reviews to ensure that the OPR items are being incorporated. • Contractor kickoff meeting • Schedule Cx activities • Develop Pre-Functional Tests • Deliver PFTs to contractors • Perform site visits and inspections • Witness key start-ups • Maintain issues log • Conduct Cx Meetings
Acceptance	• Equipment submittals • Equipment Procurement • Project installation begins • Equipment start-ups • Owner Training • Project completion and turnover	• Review TAB report • Perform functional performance testing. Special emphasis is placed on the BAS and its tie-in with the building and equipment. • Monitor staff training • Review O&M manuals • Conduct Cx Meetings • Provide final commissioning report and systems manual
Warranty	• Punchlist completion • Owner operates the facility	• Conduct off season testing if required • Follow-up on any deferred testing • Follow-up on any remaining open Cx Issues or warranty issues • Supplement Final Cx Report as needed

Commissioning Software

Our use of BlueRithm commissioning management software provides process transparency and project information available at all times. We will provide access for each member on the team to access the portal, provide updates, share documents, etc. This will provide an instantaneous snapshot of progress, open items, ball in court, etc. All information will be downloaded and added to Trimble at the completion of the project.

Anticipated Schedule and Milestones

The current proposed schedule is as follows:

- CxA Onboarding Meeting: April 2026
- Owner's Project Requirements Development: April thru June 2026
- Design Kickoff: May 2026
- Design Complete: March 2027
- Construction Start: August 2027
- Construction Finish: Sept 2028

The construction budget is estimated at $8,000,000. Our fee and **expected hours for each phase and staff classification** are shown below and in Attachment B – Cost Submittal:

Project Phase	Total Hours per Phase		
	Principle / Supervisor	MEP Technical CxA	Total
Design	8	40	48
Construction	34	202	236
Training	2	4	6
Warranty	2	4	6
Final Documentation	4	16	20
Total Hours per Staff	50	266	316

E. Contractor Personnel and Qualifications

Borton-Lawson is a technology-driven firm offering a comprehensive range of services to its clients. We work diligently to maintain our professional reputation based on an unwavering commitment to project excellence while serving clients in the public and private sectors. Clients recognize our passion for quality, commitment to project deliverables and dedicated service. Our success is marked by clients who choose our services for the first time and those who we have served for years. Over 90% of our work is with repeat clients.

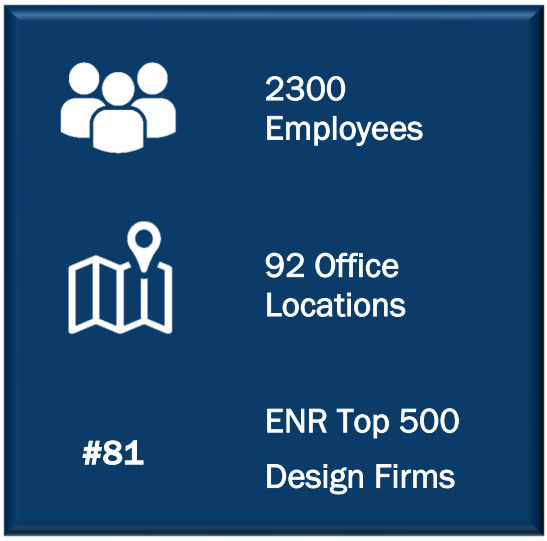
We focus on leveraging technology to provide superior solutions to our clients. We service clients like the Pennsylvania Department of General Services (PA DGS) through our practice groups. ***Our practice groups are technical communities that focus on collaboration of staff from similar and aligned technical backgrounds to lift the quality, consistency, and efficiency of our work product.*** Our commissioning services span several practice groups such as:

Mechanical, Electrical & Automation Engineering

Sustainability & Commissioning

Environmental Health & Safety

Digital Visualization & Optimization



Borton-Lawson are design professionals comprised of commissioning specialists, engineers (mechanical, structural, electrical, civil), architects, environmental scientists, surveyors, technical designers and administrative team members all working together to “build a better tomorrow”. We look for the most efficient ways to execute each project with a focus on helping our clients minimize energy consumption and maximize new system operations in their buildings. We are committed to the furthering of commissioning in the industry by working with peer groups, societies, etc. to explain and educate about the commissioning / quality process and provide lessons learned.

In commissioning projects, Borton-Lawson has encountered almost every type of primary and secondary HVAC system and equipment imaginable, as well as a large variety of building automation systems, mission critical lab, electrical lighting systems, automated controls, commercial refrigeration, and renewable energy systems.

We staff commissioning projects with a **well-rounded, experienced team** who use their expertise to ensure that projects are designed, built, started-up and tested as per the Owner's Project Requirements (OPR), Basis of Design (BOD) and Construction Documents (CDs). Our commissioning technicians have experience with higher-education, healthcare, commercial office, government, and high-end pharmaceutical projects. Our Cx Team includes:

A.J. Speicher, PE, CCP, CEM, PMP, LEED GA, WELL AP

Certified Commissioning Provider (BCA), WELL AP, Professional Engineer

Role: Project Manager & Commissioning of HVAC/BAS

Education: B.S., Mechanical Engineering, Penn State University
M.S., Mechanical Engineering, Villanova University

- 28+ years' experience in Building Automation System (BAS) controls, commissioning, facility design, and construction processes.
- Experienced in a broad range of design and direct digital control (DDC) work including project engineering of steam, hot water, chilled water, and compressed air systems.
- Engineered cGMP validated pharmaceutical and lab projects covering detailed design specifications, site acceptance tests, mechanical commissioning, and operations.
- Member of the UCC Code Review Board in 2009 – **familiarity with the commissioning requirements in the 2018 International Energy Conservation Code (IECC) (current version adopted in Pennsylvania).**
- Certified Commissioning Provider (Building Commissioning Association), CCP #243 (expires 6/30/2028).
- Certified Energy Manager (CEM) from the Association of Energy Engineers
- WELL Accredited Professional (AP) & LEED Green Associate
- Incoming President for the Penn State Mechanical Engineering Alumni Society

Bart Rado (Role: TAB and HVAC Cx Specialist)

NEBB Certified in TAB Supervisor, Sound & Vibration and Commissioning

Education: Bachelor of Science, Baldwin Wallace College

Bart has 50+ years of experience in testing/balancing, commissioning, and construction of projects such as government, K-12, hospital, pharmaceutical, general office, higher education, science buildings, clean rooms, manufacturing, and hospitals. He has 20+ years of experience in commissioning and validation of sophisticated environmental control and building automation systems. Bart is certified through NEBB for building, HVAC and plumbing commissioning and sound/vibration. He is also a NEBB certified TAB supervisor and has NEBB Sound and Vibration and Commissioning certifications.

Together, A.J. and Bart form the core of a strong, experienced commissioning team that has the knowledge and experience to fully test and inspect the required systems within a total **technical** commissioning process. Highlights of our team's processes and experience include:

- Development and implementation of the Site-Specific Commissioning Processes, including customized Commissioning Plans and Testing Checklists. **We use custom checklists / documents tailored specifically for the project at hand.**
- We use a customized access database to capture notes and observations to be able to quickly produce report for our clients which allows contractors to address issues without a delay.
- Our team over-communicates at all phases of a project to ensure the entire design and construction team stays on the path of achieving the Owner's Project Requirements (OPR).

Our commissioning team includes key Subject Matter Experts in each area of Commissioning:

Dean Avillion (Role: Electrical Cx Specialist)

Education: Electrical Construction – Assoc. Builders & Contractors Technical School

Dean has over 30 years of experience within the electrical industry. He will provide field investigations, start-up witnessing, and electrical functional testing assistance. The majority of Dean's career was spent as an electrician in the field which gives him unique insight and ability to provide valuable guidance to the design and commissioning process. Additionally, Dean has spent extensive time embedded on client sites as their electrical SME to conduct field studies, review drawings, and perform field work.

Evan Lunney (Role: HVAC/Plumbing/FP Cx Specialist)

Education: B.S., Mechanical Engineering Technology, Penn State University

Evan has 5 years mechanical / HVAC system experience with respect to design, preventative maintenance, reliability engineering, field testing, and commissioning. Evan is a mechanical commissioning provider with experience in the design of HVAC systems for government, commercial, residential, and industrial process applications He will direct and perform the HVAC field commissioning, management of our internal Commissioning database and issue resolution.

We will round out our high-performing commissioning team with the experience, capabilities, and knowledge of our entire professional staff as required to make this project a success.

In summary, our experienced commissioning teams are built around a nucleus of Subject Matter Experts with extensive experience in large scale renovation design projects and who have a passion for the work. We offer a one-stop, safety-focused, nationwide, full-team approach with key subconsultants to round out the design, which means we have actively practicing commissioning technicians, professional engineers, master electricians, former facility managers and a wealth of experience gained in the successful completion of numerous similar endeavors to apply to this project. Through multi-disciplined coordination amongst these experts, we can deliver the best quality program possible.

In addition, our technology forward, value added approach to projects fosters a deeper client understanding of their project, a product that extends beyond the life of the project and benefits the client long term. These value-added services are inherent in the way Borton-Lawson does business and are not additional costs passed on to the client. We are well versed in integrating these services into our projects as part of our standard workflow; benefiting our clients.

We believe this proposal will show the extent to which we are invested in growing our partnership with PA DGS. We welcome the opportunity to further discuss our qualifications and next steps.

Thanks for your consideration of Borton-Lawson as the commissioning provider for the Lincoln University Lucy Laney and Langston Hughes Project.

Remember the following:

- Our team experience and subject matter experts, especially in the areas of high-tech, geothermal, and laboratory systems verification.
- Our involvement in Commissioning Professional societies (BCA, ASHRAE, AEE, NEBB, USGBC) to further the knowledge for the industry.
- Our passion for the work.
- Our commitment to build a relationship with PA DGS to assist in the successful execution of your plan and goals.
- Our experience with the IECC code with respect to design and commissioning.

Thanks again for the opportunity to submit our qualifications.