REQUEST FOR QUOTE

Commissioning Agent Services

pennsylvania
DEPARTMENT OF GENERAL SERVICES

DEPARTMENT OF MILITARY AND VETERANS AFFAIRS

SOUTHWESTERN VETERANS' CENTER

Revitalizing Care Environment

Project No.
DGS C-0967-0054-001

Technical Submission

aramark
ENGINEERING SOLUTIONS

2400 Market Street
Philadelphia, PA 19103

May 24, 2024

Re: Commissioning Agent Services for DGS C-0967-0054-001, Southwestern Veterans' Center Revitalizing Care Environment Project

Attn: Sherri Hankal

We are pleased to respond and provide a proposal and cost estimate for Commissioning Agent Services during the design and construction phase stages of the Department of General Services Project No. DGS C-0967-0054-001, Southwestern Veterans' Center Revitalizing Care Environment project.

Aramark is familiar with the DGS requirements for design and construction and has worked on many projects for DGS. Currently, Aramark is providing commissioning services for the North Central Secure Treatment Unit, the Quehanna Motivational Boot Camp, Penn West CalU Science Building, and the Wilkes-Barre CRC, to name a few.

Brett Bernardo is slated as the project manager for this project and has worked on several projects for DGS in the Western region. Brett is the project manager for the Penn West CalU Science Building and has also managed a variety of past DGS projects over the years. Brett's home office is based in Wexford, PA so he is very close to this project geographically, allowing for great efficiency in travel time and any possible expenses. Cory Callihan and Cory Lomicka are also geographically close (Saxonburg and Greensburg).

Past performance and the ability to provide a cost proposal for design and construction services in the DGS format is meaningless unless the firm has a track record of completing projects within budget. Aramark is currently working on two projects that maintained our pricing throughout the design stage and we held our originally proposed pricing for the construction stage. Other firms see design stage pricing as a loss leader for an assumed construction stage engagement. Aramark will continue to hold its pricing after design and will perform our commissioning tasks to the hours that were initially proposed.

We look forward to continuing and strengthening our relationship with the Department of General Services. Should you have any questions, please do not hesitate to contact Tim Sullivan, Director of Commissioning Services, at (914) 304-6252 or via email at sullivan-timothy@aramark.com.

Sincerely,

Brian Lee, P.E.
Vice President, Engineering Solutions
Authorized Signatory of Aramark Management Services Limited Partnership

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A. CONTRACTOR PRIOR EXPERIENCE

For more than 40 years, Aramark Engineering Solutions has demonstrated proven expertise in developing and implementing energy management programs that promote sustainability and conserve energy. We bring a customized approach based on the individual drivers of each organization. As one of the largest third-party commissioning agents in the United States, our unique operational expertise distinguishes our service from our competitors.

Our commissioning philosophy is guided by the following three tenets:

1. Provide a facility that operates to support the program.
2. Verify systems achieve peak efficiency.
3. Confirm building infrastructure is readily maintainable by the operators.

Our services will further facilitate a seamless transition to the operations group and provide a technical resource to support building operations.

FACILITIES COMMISSIONED

- Hospitals & mission critical facilities
- Large classroom, academic, and computer facilities
- Heating, cooling plants and major electric infrastructure
- Recreation centers (athletic & aquatics)
- Campus & performing arts centers
- Museums, libraries & cultural institutions
- Science, research, vivarium, BSL3 and laboratory
- K-12 Schools and Campuses
- Retro-commissioning of existing buildings and systems

Experience At A Glance

Total Projects Commissioned: **900+**

Total GSF Commissioned: **70+ Million**

Constructed Value of Commissioned Projects: **$11.2 Billion**

Select Aramark Commissioning Clients

- Allegheny Health Network
- Baylor University
- City University of New York
- East Stroudsburg University
- Edinboro University
- George Washington University
- Hershey Medical Center
- NYC Health + Hospitals
- NYS Office of Mental Health
- New York Presbyterian Hospital
- Neighborhood Hospitals
- Penn State Health
- Penn State University
- State of Pennsylvania (PADGS)
- Swarthmore College
- UPMC
- University of Chicago
- University of Pittsburgh
- University of Pennsylvania
- WellSpan Health
- West Chester University

ALLEGHENY HEALTH NETWORK
WEXFORD HOSPITAL

LOCATION:
Wexford, PA

GROSS SQUARE FEET:
344,000

CONSTRUCTION COST:
$400 Million

CX SERVICES:
BAS Commissioning
Design Review
Installation Inspections
Performance Verification
Operations Training

CONTACT:
Brian Mathie
412-330-5533
brian.mathie@ahn.org

SCHEDULE:
2018-2021

As part of a $700M investment in emergency and specialty care access, Allegheny Health Network is constructing five new regional hospitals in the Pittsburgh and surrounding regions. The largest of these, AHN Wexford, is an expansion of the existing Wexford Health and Wellness Pavilion and will add 160 beds for primary care within the region. The facility features five general ORs, a hybrid OR, GI lab, cath lab, full imaging suite (rad/fluoro / ultrasound / CT / MRI / X-ray / nuc camera), clinical lab, pharmacy, two C-section rooms, a NICU, emergency department, and kitchen/cafeteria. Preliminary construction work began in August 2018 and the first patient was seen on September 30, 2021.

Aramark was selected to be the primary commissioning partner with this growing healthcare system and is currently commissioning all projects within the organization. These projects include major upgrades to mechanical, electrical, and plumbing systems within existing facilities as well as new and major renovations throughout the entire system. Aramark was selected for its reputation, size, and experience with healthcare commissioning. Additionally, our ability to support the growth through staffing commissioning projects locally, as well as staffing immediate needs with experienced people from our nationwide commissioning team, made us an obvious selection for a growing organization.

COMMISSIONING SUCCESS:

Aramark worked on developing commissioning standards for Allegheny Health Network including:

- Establishing levels of commissioning tasks for variously sized projects
- Utilizing BIM modeling for project turnover and maintenance
- Establishing electronic turnover documentation that is actually useful for maintaining a facility
- Assisting and conducting holistic training of systems within facilities
- Developing standardized commissioning processes for contractor participation.

Aramark identified over 300 issues through design and construction of the MEP systems and building envelope. Over 80 commissioning meetings were hosted where major resolutions such as cooling issues and building pressure issues were discussed and eventually resolved.

PENN STATE HEALTH
HAMPDEN MEDICAL CENTER

Penn State Health is a multi-hospital health system serving patients and communities across central Pennsylvania. The Hampden Medical Center project is a new-build hospital totaling 300,000 gross square feet, with approximately 20,000 square feet serving as an ambulatory component. The new hospital is a 4-story building which includes 110 private inpatient beds; an emergency department; imaging and lab services; various specialty inpatient services; women's health, labor, and delivery; and complete medical and surgical capabilities.

Aramark was chosen for this project based on our long-standing positive relationship with Penn State Health and our experience in the healthcare setting.

Below is a list of select critical issues identified during the commissioning program process that were successfully resolved for the network:

- ATS failure and generator faults on reverse power when on emergency power with critical assets not coming back online. PowerSecure wiring issues discovered.
- Many critical assets in remote locations discovered to require manual resets after a loss of power event. Logic was revised to auto-reset.
- Multiple patient rooms with Room Pressure Monitors discovered to not meet negative pressure -0.01" w.c. code requirements.
- CHW & HW DP stations in the mechanical room and penthouses discovered to not have been installed properly. They were also found to be air trapped in the penthouses providing UNSAT DP readings for maintaining building loop differential pressure control.
- Invalid sequencing and control of boiler fuel oil mode switchover discovered. Incorrect controls wiring found not allowing fuel oil mode to properly enable. Additionally, kinks in the fuel piping as well as fitting leaks were discovered and repaired by the contractor.
- All rooftop AHU HW & CHW recirculation pumps were discovered to be piped in backwards.
- Lab exhaust fan VFD faults were not populating with simulated failure for all fan sets and the rotation logic was not properly functioning on a few of the sets. Logic was revised.
- None of the hydronic pumps across the project had their motor bearings greased at the grease fittings – all were still factory painted over.
- Incomplete lightning protection installation was observed. Multiple breaks in the grounding circuit and scheduled equipment missing protection rods were noted. Contractor brought back on site to remedy.
- All above ceiling steam humidifiers throughout the project found to be improperly piped in and non-functional.

LOCATION:
Enola, PA

GROSS SQUARE FEET:
300,000

CONSTRUCTION COST:
$300 Million

CX SERVICES:
Design Review
Installation Inspections
Performance Verification
Operations Training

CONTACT:
Jesse Myeres
717-602-8819
Jmyers30@pennstatehealth.psu.edu

SCHEDULE:
2019-2022

NEW YORK STATE OFFICE OF MENTAL HEALTH
MANHATTAN PSYCHIATRIC CENTER – BUILDING RENOVATIONS FOR KIRBY FORENSIC RELOCATION

LOCATION:	CX SERVICES:	CONTACT:
Manhattan, NY	Design Review	Marshall Vitale
	Installation Inspections	518-549-501
GROSS SQUARE FEET:	Performance Verification	
244,349	Operations Training	SCHEDULE:
		2019-2020

The major building renovations project at the Manhattan Psychiatric Center consisted of renovating the A side of the Dunlap Building into the new Kirby Forensic Psychiatric Center. The project was a complex gut renovation of all 17 floors of the facility and was completed while patients and administrators continued to function within the occupied B side of the building. The project was designed to accommodate the needs of high-security patients while also addressing the need for more space and an updated facility to meet current building code standards. The newly renovated facility now houses 225 patients and includes upgrades such as updated air handling units, a glass observation station for staff, and more usable space.

COMMISSIONING SUCCESS:

Commissioning of the major renovations project was successful. Aramark distributed numerous field inspection reports throughout the project that were vital to the project's overall success as they provided real-time documentation of the construction progress. Some of the major items found during the inspection process are included below.

- Aramark tested the domestic hot water system including the anti-scald operation. Issues with the anti-scald system were discovered causing a potential safety issue for the building occupants. This key safety issue was a direct result of Aramark's detailed functional testing procedures, and with coordination with the contractors and TDX, all issues were corrected.
- During construction and testing, Aramark coordinated with the project team and STV and raised numerous issues related to the fire/smoke dampers. Aramark's attention to detail with the controlled damper inspection program allowed for a fully operational and complete fire protection system.
- Several issues were identified with the AHUs, including balancing, sequencing, and controls. These issues led to problems with comfort and nuisance low temperature detector trips. Aramark worked with STV and project team to remedy these issues to provide a comfortable and stable system.

PENN STATE HEALTH HERSHEY MEDICAL CENTER
CHILDREN'S HOSPITAL VERTICAL EXPANSION PROJECT

LOCATION:	CX SERVICES:	CONTACT:
Hershey, PA	Design Review	Carolyn Stoner
	Installation Inspections	717-531-1787
GROSS SQUARE FEET:	Performance Verification	
126,000	Operations Training	SCHEDULE:
		2019-2021
CONSTRUCTION COST:		
$150 Million		

The original design of the Children's Hospital located on the Hershey Medical Center complex allowed for the vertical expansion of an additional three floors to the base building which was completed in 2012. Earlier this year, this addition was approved. New floors will house the pediatric intermediate care unit, pediatric acute care unit, post-partum and ante-partum, rooms, labor and delivery rooms, C-section operating rooms, and a Level IV Neonatal Intensive Care Unit.

The project is being delivered as design assist, and Aramark has been instrumental in the delivery of issues to the design of systems. Intimately familiar with the requirements of Penn State Health, we have flagged many items in the design of the mechanical and electrical systems which did not meet the standards of Penn State. This was largely due to the use of larger out-of-town contractors on this project who were unfamiliar with Penn State standards.

COMMISSIONING SUCCESS:

We are currently involved in submittal review, construction coordination assistance, planning of existing system routing and inspections of existing system capacities. Design review comments were numerous and made positive impacts early on in the project before the first piece of equipment was submitted. Some of the comments included:

- Proper placement of emergency lighting.
- Development of connected loads for hydronic and air systems verses design mechanical infrastructure.
- Coil clearances for future maintenance of central equipment.
- Significant overlap in the specifications and drawings concerning the core and shell packages and the fit-out packages.
- Support for outlet boxes on deeper walls.
- Proper positioning of horn/strobes within mechanical rooms for complete coverage.

NEW YORK STATE OFFICE OF MENTAL HEALTH
SOUTH BEACH PSYCHIATRIC CENTER RESIDENTIAL BUILDING

LOCATION: Staten Island, NY GROSS SQUARE FEET: 232,000 **SCHEDULE:** **2018- 2020**	CX SERVICES: Enhanced Cx Services Design Review Installation Inspections Performance Verification Operations Training	CONTACT: Marshall Vitale 518-549-5101 USGBC LEVEL: LEED Silver

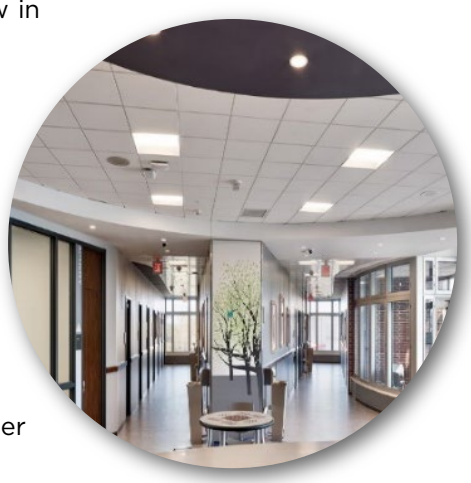
The Residential Building located on the South Beach Psychiatric Center Campus in Staten Island, NY is a newly constructed 232,000 SF five-story state-of-the-art 262-bed inpatient treatment facility that replaces five functionally obsolete buildings that were damaged after superstorm Sandy. Located adjacent to Lower New York Bay and the existing campus, the new inpatient facility and three adjacent recreation yards have been constructed 20 feet above sea level to mitigate damage from future storm surges. The new building includes adult and adolescent behavioral health care beds, a dental clinic, pharmacy, and administrative support spaces and is linked to the recently constructed Central Services Building.

In addition, the building houses dining areas, a centralized pharmacy, a centralized medical mall, centralized nursing, interior and exterior program spaces, patient admissions, a mental health court and visitor center. The new Residential Building is designed to be LEED® for New Construction Silver certified.

COMMISSIONING SUCCESS:

Commissioning of the new Residential Building was successful. Aramark identified over 300 design phase issues and over 3500 construction phase issues over the course of the project. Aramark distributed 44 general field inspection reports and 25 functional verification field reports during the construction and testing process. These reports were vital to the project's overall success as they provided real-time documentation of the construction progress. Some of the major items found are included below.

- Aramark witnessed test and balance for the air side and water side equipment. Issues were found with the airside systems that resulted in STV issuing Bulletins to adjust cfm requirements on some supply and return air grilles, and to change return fan air flow in the AHU systems.
- During construction and testing, Aramark coordinated with the project team, TDX, and STV to raise any issues between the existing systems and the integration of the new mechanical systems. Aramark's collaboration with the project team resulted in the upgrade of the existing Boiler #1 hot water isolation valve to match the new Boilers #2 and #3 new Residential Building scope.
- Several issues were identified with the AHUs, such as the implementation of a revised outdoor air sequence provided by STV and damper actuator adjustments to maintain proper minimum airflow positions.



OHIO MENTAL HEALTH AND ADDICTION SERVICES
TWIN VALLEY BEHAVIORAL HEALTHCARE HOSPITAL

LOCATION: Columbus, OH	CONSTRUCTION COST: $112 Million	CX SERVICES: Design Review BAS Commissioning
CONTACT: Thomas Baker 614-995-4551 thomas.baker@ofcc.ohio.gov	GROSS SQUARE FEET: 285,000 SCHEDULE: 2019-In progress (Est. 2024)	Installation Inspections Performance Verification Operations Training

Twin Valley Behavioral Healthcare Hospital is being replaced by a 208-bed, 285,000 square foot facility that will be 100% new construction, including all mechanical, administrative, food service, and support space. Patient accessible areas will be designed to reflect state-of-the-art safety and security requirements, including ligature–resistant fixtures and hardware and highly durable construction.

This new facility will provide a secure environment for residential patient units, clinical/admitting space, full kitchen, indoor and outdoor recreation, and required support operations consisting of administrative offices, food and bulk storage facilities and maintenance operations. Expected Occupancies include Institutional, Assembly, Storage, Food Processing, and more. Key features of this facility will include the development of a “secure building envelope” for patients.

Aramark was selected for this facility due to our vast experience of commissioning healthcare projects particularly with a specialty in mental health behavioral facilities. We have been providing all commissioning services for the New York State Office of Mental Health which sees over 700,000 individuals each year at over 25 facilities. Aramark commissions any new projects at any given facility.

COMMISSIONING SUCCESS:

Still early in design, Aramark is currently reviewing very early sets of documents and are involved in the selection of equipment for mechanical, electrical, plumbing, and building envelope systems.

ALLEGHENY HEALTH NETWORK
HAMAR NEIGHBORHOOD HOSPITAL

Harmar Neighborhood Hospital is a brand-new, from the ground up "mini hospital" complete with an X-Ray procedure room, CT procedure room, kitchen, isolation rooms, and ten private inpatient beds. The plot of land the building sits on is very small and, as such, prevented room for the traditional mechanical room that has been built on other similar neighborhood hospitals in the Pittsburgh area. As a result, the entire building is electric. There is no circulating hydronic hot water or chilled water. All space temperatures are controlled via electric reheat VAV boxes. Two rooftop air handlers serve air to the 1st and 2nd floors respectively.

LOCATION:
Pittsburgh, PA

GROSS SQUARE FEET:
23.892

CONSTRUCTION COST:
$12 Million

CX SERVICES:
Design Review
Installation Inspections
Performance Verification
Operations Training

CONTACT:
Andres Angel
281-216-1858

SCHEDULE:
2018-2020

SYSTEMS COMMISSIONED:

Air handlers / humidifiers, VAVs, exhaust vans, unit heaters and other terminal heating equipment.

COMMISSIONING RESULTS:

Aramark thoroughly tested airflows and heating capacities at 100% of the VAV boxes and found a wide variety of issues. Aramark was on-site and oversaw the majority of these issues remedied.

Aramark worked with contractors throughout construction and testing and was instrumental in identifying and resolving the issues with the electric heating. In all, Aramark documented 50 operational issues for the building. Some of the issues identified and resolved are below.

- Aramark found that approximately 50% of the VAV boxes were found to have incorrect airflow / control, insufficient heat, or no heat.
- Fire smoker damper 6 was installed right against a steel beam and was thus inaccessible.
- Electrical wires were run in such a way that it would have prevented filter installation.
- RTUs were not utilizing the outside air temperature sensor so it could not enter economizer mode.
- In the Isolation Room on the 2nd floor, more exhaust was needed in actual patient room for the relationship between the patient room and ante-room to be correct.
- In Exam Room 6, the headwall had 4 missing cover plates and a receptacle was installed upside down.
- In electrical room, the return airflow was extremely high - over 475 CFM. Design was only 140 CFM return air.

NEW YORK STATE OFFICE OF MENTAL HEALTH
KINGSBORO PSYCHIATRIC CENTER

The Kingsboro Psychiatric Center is an inpatient care center for those who suffer from serious mental illness located in Brooklyn, NY. The Center provides comprehensive, integrated services 24 hours per day for hospitalized patients, 24-bed Crisis Residence for patients who have been discharged but need to have arrangements completed for residence placement, a 48-bed Transitional Residence, and a 65-bed Family Care Program with certified homes in the community. The project included the installation of the new Building Management System, replacing all FPBs and VAVs throughout the building, and upgrading the controls of the hot water system and major air handling units.

LOCATION:
Brooklyn, NY

GROSS SQUARE FEET:
59,152

CX SERVICES:
Design Review
Installation Inspections
Performance Verification
Operations Training

CONTACT:
Marshall Vitale
518-549-5101

SCHEDULE:
2020-2024

SYSTEMS COMMISSIONED:

Building automation system, air handling units, H&V units, general and toilet exhaust fans, hot water heating system and associated equipment, variable air volume terminal units (VAVs) and fan powered boxes (FPB) equipped with reheat coil.

COMMISSIONING RESULTS:

Aramark documented over 30 issues that will provide adequate and optimal building controls and/or improve occupants' comfort when corrected. Aramark monitored the project's progress, observed multiple issues at an early stage, and prevented from carrying the incorrect installations further into the project. Highlights of discovered issues include:

- The FPB heating coil balancing valve was installed incorrectly, with the readout port facing down. Aramark observed incorrect installation early in the project, and after correction, the mechanical contractor proceeded with the proper installation.
- There were airflow discrepancies in measurements taken at the box and in the space at multiple FPBs. Aramark measurements correlated with the balancing report, which showed airflow higher at the box than in the space. During the investigation, Aramark determined that the flexible inlet ducts were extremely kinked, and many tight bends and curves were formed.
- The sequence of operation for the FPB didn't match the design sequence of operation. Aramark observed incorrect controls early in the project, and after correction, the control contractor proceeded with the right sequence.
- During a static inspection of the major AHUs, Aramark observed multiple issues with existing control end devices, the replacement of which was not included in the current upgrade. Therefore, Aramark recommended replacing the end devices, such as dampers, damper actuators, and temperature and pressure sensors, ahead of the system upgrade. Replacing the failed end devices will provide a fully functional system when its controls are upgraded.

WELLSPAN HEALTH
YORK HOSPITAL SURGICAL AND CRITICAL CARE TOWER

LOCATION: York, PA GROSS SQUARE FEET: 325,000 LEED STATUS: Pursuing LEED Gold	CONTACT: David Simon Project Director 215-520-2786 david.simon@purepm.com CONSTRUCTION COST: $255 Million	CX SERVICES: Design Review Installation Inspections Performance Verification Operations Training COMPLETED: Design – 2023 Construction – In Progress

WellSpan Health is constructing a 325,000 GSF, LEED Gold surgical and critical care tower at the York Hospital that will include eight occupied levels with 22 operating rooms, 96 ICU beds, and a relocated central sterile processing department. A parking structure will also be constructed with 150 new parking spaces. Also included is 45,000 GSF of PACU renovation within the existing Century Tower, which will connect to the surgical tower on at least one level.

SYSTEMS COMMISSIONED

- Central BAS, including linkages to remote monitoring and control sites
- Life safety systems (fire alarm, egress pressurization, fire protection, emergency lighting)
- All HVAC systems equipment
- Domestic and process water pumping systems
- Refrigeration systems
- Communication and paging systems
- Emergency power
- Lighting control systems
- Nurse Call Stations

COMMISSIONING RESULTS:

The design phase is near completion with construction starting in 2024 with substantial completion by December 2025. Aramark put a primary focus on identifying any potential project issues; constructability, energy savings, system sequencing, maintenance accessibility, contractor change request avoidance, etc. early in design. All deficiencies were brought to the immediate attention of the Owner and Design Professional in writing for review and response.

Decisions regarding deficiencies and corrections were made at an appropriate level as possible, preferably between the CxA and the Design Professional, with the Owner having final authority. Identifying project issues early in the project life cycle before they arise in the field had a significant impact on unforeseen project cost avoidance.

B. PROJECT UNDERSTANDING AND APPROACH

PROJECT UNDERSTANDING

The Southwestern Veteran's Center provides skilled nursing and memory care to residents in its 236-bed, 165,000 square foot facility. As part of the commonwealth's mission to provide quality service to veterans and their families, this project includes critical upgrades to the facilities infrastructure. These upgrades will focus on the Environment of Care – the physical realm of where that care takes place and will also address safety and security.

The general scope includes:

- Perform a major interior upgrade with some exterior improvements. Proposed general project scope is listed: a. Rehabilitate and perform improvements to all six units totaling 236-beds (one (1) – dementia, and five (5) – nursing care), to include resident's bedrooms, resident's bathrooms, resident's dining rooms, and programs spaces such as, community tub rooms, nurse's stations, employee locker rooms, hallways, resident's lounges, janitor and electrical closets, and soiled linen rooms.
- Rehabilitate and perform improvements to the facility's three passenger elevators that was last updated during 2014.
- Rehabilitate and perform improvements to the facility's courtyards (PT/OT, Chapel, and 2- North). Access to outdoor spaces and the quality of the outdoor environment has a direct effect on the quality of life for residents. It is important to provide many different types and scales of gardens for residents, staff, and visitors to encourage activity, passive engagement, and tranquility.

PROJECT APPROACH

It is evident that in order to truly assist in the short- and long-term success of this project, our commissioning plan requires a unique and varied blend of technical, operational, and engineering expertise. The challenges involved in the construction of this project focus around:

1. Project schedule
2. Minimizing disruptions
3. Project turnover and operations expectations

We are familiar with these significant challenges through our extensive commissioning, operations backgrounds, and experience with capital and operation teams. Our focus is to "bridge the gap" between the construction teams, design teams, project management, and operations groups. We work in hospital settings frequently in the Pittsburgh region. We thoroughly understand and can assist in developing schedules that minimize disruption for residents and mechanical systems. Our solution to these challenges is to develop and integrate a unique commissioning program that will provide collaboration between teams, verify that the design intent (installation and performance) is met, establish parameters for acceptance of the construction/end users, and integrate turnover/operations smoothly and effectively.

A summary of the solutions are outlined in the following bullets.

- Creating partnerships and leading collaboration within the project and construction teams.
- Providing "on-site" representation to focus and coordinate the commissioning efforts.

- Coordinating and integrating teams of professionals in supporting corrective actions.
- Establishing parameters and testing requirements for system acceptance as opposed to component acceptance.
- Exercising the systems throughout operating ranges, safety, and emergency conditions.

Aramark will develop a program specifically geared towards the Southwestern Veterans' Center Revitalizing Care Environment project. Aramark will work directly for the PADGS and provide an unbiased, objective view of the systems installation, operation, and performance. As part of the owner's building systems commissioning process, Aramark will cooperate with and coordinate all commissioning activities with the project manager, design professionals, construction manager, and contractors. This process is not to take away or reduce the responsibility of the design team or installing contractors, but to provide a finished and fully operational product in accordance with design intent.

Our scope of services consists of the following focused efforts:

PROFESSIONAL COMMISSIONING SERVICES – PHASE APPROACH

DESIGN REVIEW PHASE

With construction documentation in progress and submission scheduled for 4/27/23, design phase tasks are limited to compiling documentation as noted. The commissioning team leader will develop, organize, implement, observe, document, and lead the commissioning effort in a manner that furthers the success of the project. This effort will not only minimize the impact on project schedule, but also promote efficient system startup and turnover. A summary of activities in this phase consists of:

a. **Owner's Project Requirements (OPR)** – Working with the DGS Design Project Manager, Design Professional, and the Client Agency's facilities maintenance staff, conduct an OPR workshop early in the DD design stage to determine the project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information. Provide descriptions of the following: a) primary purpose of Project, b) environmental and sustainability goals, c) energy efficiency goals, d) indoor environmental quality requirements, e) desired equipment/system quality, reliability, and maintenance requirements, f) facility operation and maintenance requirements including requisite personnel training and orientation.

b. **Commissioning Plan (Cx Plan)** – Provide written document that outlines the overall process, organization, responsibilities, schedule, allocation of resources, and documentation requirements of the Commissioning Process to verify and document that the design, construction, and operation of the facility meet the Owner's Project Requirements (OPR). This Cx Plan will specifically identify all items to be commissioned and what Cx processes will be utilized to do so. Provide pre-functional test documents for each unique type of item. Provide a unique tag name for each item that coordinates with naming established in the design. Provide a list of all product submittals that will need to be reviewed by CxA. Provide draft and final documents. Final document will include functional test procedures and outline of training requirements and plan.

c. **Design Review** – The latest design documents have been conformed to the bidding process. Provide a review and comments of the Professional's design documents and Basis of Design (BoD) narrative in order to prepare the Owner's Project Requirements, Cx Plan, and Commissioning Specifications. Provide a back-check of design professional and DGS response comments to review comments.

d. **Commissioning Specifications** – Evaluate current project specifications and determine if the documents describe the commissioning process in enough detail to complete the commissioning process. Where specifications are missing or insufficient, provide Commissioning Specifications for all systems/assemblies being commissioned for preparation of Change Order Requests.

e. Team Meetings - Participate in (1) design team meeting every two weeks, (3) hours each, virtually, totaling (30) meetings; participate in the job review conference, one (1) occurrence, in person, totaling (8) eight hours.

CONSTRUCTION PHASE

A pivotal aspect of our commissioning program is enabling team reviews and inspections of the systems in their area of expertise (i.e., mechanical, electrical, and plumbing). Deficiencies and outstanding issues are documented in the commissioning database. The intent of the database is to generate a comprehensive list for the project manager to distribute to the design and construction teams for response and action. Subsequent to each focused inspection, a progress report will be issued detailing the deficiencies, resolution actions, and status of each item. We will maintain a current status for each item on the deficiency list as well as document the resolution actions in the final report. The commissioning team leader will act as the point person and bring up issues to the construction and design teams. The focus of the construction installation phase will include the following:

a. **Submittal Review** – Identify and review Contractor submittals applicable to systems/assemblies being commissioned. Identify issues that might result in rework or change orders. Verify the following: a) conformance with Owner's Project Requirements (OPR) and Basis of Design (BoD), b) achievement of operations and maintenance requirements, c) enablement of performance testing. All submittal reviews and correspondence must take place in eBuilder.

b. **Job Construction Meetings** – CxA shall attend regular job construction meetings as necessary to ensure the systems are properly installed, operated, and tested and are functioning correctly to meet the design intent. Meetings may be attended virtually until installation begins and then will be attended in person after. Participate in (1) meeting every (2) weeks for duration of construction, (3) hours each, totaling (52) total meetings.

c. **Commissioning Meetings** – CxA shall hold regularly scheduled jobsite Commissioning Meetings with all project stakeholders to review important aspects of equipment, system, and controls installation. Review and document necessary installation details, system testing procedures, and documentation requirements. For efficiency, onsite commissioning meetings shall coincide with onsite job construction meetings when possible. Distribute meeting minutes after every meeting and store in e-Builder. Include in the draft and final Cx Report. Meetings to be held in conjunction with inspections and other on-site activities.

d. **Construction Observation and Testing** – Verify that the performance of the systems/assemblies being commissioned, as installed, meet the Owner's Project Requirements (OPR), Sustainability Criteria, Basis of Design (BoD), and Contract Documents. Furnish test procedures and checklists prior to equipment installation. Prepare a pre-functional test for each test. Test procedures shall list the entities responsible for executing each test. Collect completed pre-functional test results from installation contractors prior to field verification inspections. Post results to e-Builder. Provide installation inspections. Direct, witness, and document tests and demonstrations, including evaluate test results and verify that installed systems/assemblies meet the criteria for the Project; sign off with installation contractor on every item to be commissioned.

e. **Device Matrix** – Prepare a spreadsheet with every device to be commissioned. Update as information becomes available. Group devices by type, reference each device by tag name; identify all aspects of the device in spreadsheet including tag name, shop drawing submitted, shop drawing approved, Pre-functional test procedure, pre-functional test received from contractor date, date of installation inspection, inspection status, pass/fail, inspector, functional test procedure, functional test executed, test status, pass/fail, O&M documentation receipt date, training documentation receipt date, date of CA training, notes, and other fields that may be required.

f. **Issues and Resolution Log** – Develop a commissioning issues log containing open and continuing items, status, and name of person/organization responsible for resolution. Each issue will be identified with tag name of device or system, date issue recorded, name of person recording issue, name of responsible person, date responsible person was notified, date issue was resolved, name of person signing off on resolution, status of issue resolution (not corrected, corrected, accepted without correction), notes, and other fields that may be required.

g. **Systems Manual** – During the design and construction of the project, the design and construction documents should be assembled into the systems manual. This assembly of documents provides the details and history of the design and construction of the building and information needed to properly operate the building. The systems manual includes the project final OPR, BOD, construction record documents, submittals, completed startup, verification checklists, functional and performance checklists, verified sequence of operation, facility guide, training records, and commissioning report. The systems manual should be used in the initial and subsequent training of the building operations staff and occupants. The systems manual will be formatted in such a way that it can be updated throughout the life of the building as systems are modified, replaced, or updated.

h. **Pre-Functional and Functional Performance Testing** – Confirm manufacturer's startup of individual equipment components (Pre-Functional Performance Testing) by receiving completed checklists for all devices and systems; inspect every device and system for correct installation per the project manual requirements, manufacturer's installation instructions, and applicable codes and standards; review checklists during inspection; sign off on all correct installations; reject and reinspect all substandard installations; prepare, distribute, direct completion of, witness, and document full Functional Performance Testing of each system and system component; confirm proper operation of all control sequences for each season operation. Document in Cx Report.

i. **Training Plans and Records** – Review, pre-approve, and verify training of the Client Agency personnel by the Contractor, to operate and maintain systems/assemblies being commissioned. Include training plan, training materials, and records in final Systems Manual.

j. **End of Warranty Cx Report** – Provide post-occupancy operation commissioning, including incomplete, delayed, and seasonal testing, as well as warranty issues. Post-occupancy operations shall begin at Substantial Completion and shall continue through to the end of the warranty period. Conduct opposite season testing in appropriate weather conditions approximately 6-months after completion of initial testing. Conduct a complete warranty inspection and investigation 10 months after the commencement of warranty coverage for each system commissioned. Report all deficiencies in equipment performance. Document all reporting and follow-up in e-Builder.

k. **Preliminary and Final Cx Report** – A preliminary commissioning report should be prepared that shows the commissioning progress and equipment performance to date at the time the Certificate of Occupancy is issued. At the completion of the project the final commissioning report should be assembled and provided to the owner and others as required by the OPR and local jurisdiction requirements. This report includes the final commissioning plan, copy of design and submittal review reports, all startup, inspection, verification, functional and performance test forms and reports, the

verified sequence of operation, the final Issues and Resolutions log, and summary report of the performance of commissioned systems.

SYSTEMS TO BE COMMISSIONED

Plumbing Systems including:

- Domestic Hot and Cold-Water Systems. A significant replacement is proposed for the Resident Bathroom's plumbing systems and there is renovation and new work in the Dining Rooms. Systems include but are not limited to water pump, heaters, and piping.

Heating, Ventilating, Air Conditioning and Refrigeration Systems (HVAC) including:

- Heat Generation
- Cooling
- Heat Pump
- Refrigeration
- Ventilation
- HVAC Control Systems including interfaces with fire protection and suppression systems.
- New Fan Coil Units will be equipped with new controls that are compatible with the building's existing controls.
- All Fan Coil Units in Resident Bedrooms will be replaced, the existing piping will be modified to be reused with the new units.

Electrical Systems including Low Voltage systems, Lighting, and Controls including:

- Lighting control systems and LED fixture installation
- Low Voltage - All services associated with the design of low voltage systems, including infrastructure (voice and data systems), audio visual (video conferencing and telepresence systems), and core/shell (building system entrances and communication and distribution rooms)

C. GEOGRAPHIC LOCATION

Brett Bernardo lives in Wexford, PA, only 17 miles from the job site. Cory Callihan will also play a significant role in the project and lives in Saxonburg, PA which is 30 miles from the project site. In addition, Connor Lomicka's home office is in Greensburg, just 26 miles from the project site. Travel time will not be required for reimbursement as travel will be performed on the employee's time.

D. PROJECT WORK PLAN

I. Schedule of Milestones

DESIGN REVIEW PHASE – JUNE 2024 THROUGH AUGUST 2025

- Conduct Owner's Project Requirements (OPR) workshop and further develop / review OPR.
- Develop and provide the Cx Plan.
- Provide design review and comments.
- Develop and provide Cx specs for all systems/assemblies being commissioned.
- Team Meetings

CONSTRUCTION PHASE – MARCH 2026 THROUGH MARCH 2028

- Perform submittals review.
- Conduct Cx kick-off meeting with contractors.
- Attend construction meetings as needed.
- Hold regular commissioning meetings.
- Develop pre-functional test forms and provide to contractors.
- Conduct construction observation and testing.
- Develop and maintain issues and resolution log.
- Witness start-up of Cx systems.
- Perform functional performance testing of Cx systems.
- Conduct Cx meetings as needed.
- Develop and deliver Systems Manual.
- Review, pre-approve and verity training of personnel.
- Develop Preliminary Cx Report.

ACCEPTANCE PHASE – MARCH 2028 THROUGH DECEMBER 2028

- Develop End of Warranty Cx report
- Develop Final Cx report

II. **Indicate all resources needed to complete the assignment including staff assignments, consultants, and reimbursements**.

Aramark will perform all commissioning activities with its own personnel. Staff assignments are indicated in the organizational chart. Reimbursements will be submitted for mileage only which is detailed in Section C above.

III. **Note inefficiencies or risks to successful implementation, and any planning efforts to mitigate issues such as travel distance, schedule conflicts and required coordination.**

Aramark has no scheduling conflicts associated with performing the commissioning requirements of this project.

IV. **Indicate the anticipated number of hours required for completion of the work described in the Scope of Work (Attachment A).**

Design Phase:	84
Construction Phase:	464

E. PROJECT PERSONNEL AND QUALIFICATIONS

All of Aramark's engagements rely on our experienced professional staff to function as the catalyst for the success of the overall program. Our staffing strategy for managing this relationship expertly and efficiently is straightforward:

- Provide PADGS with a qualified commissioning agent to lead the overall program and serve as the primary contact person.
- Support PADGS with a core technical team comprised of individuals with the requisite technical experience and skill sets.
- Provide experienced "quality assurance" resources to verify that the highest level of quality services is provided.

The success of our approach has always been the quality and consistency of our senior leadership as well as the professionals that comprise the core technical team. The organizational chart illustrates the proposed team for this engagement. Biographies including experience with similar projects as well as overall expertise are included on the next pages.

Although the proposed staff will have primary responsibility for the proposed engagement, any of the more than 85 technical professionals within the Engineering Solutions group will be made available to PADGS if their skills, expertise, and/or availability will add incremental value to this engagement.

Aramark's Engineering Solutions group consists of more than 85 technical professionals including: Professional Engineers (PE), Certified Building Commissioning Professionals, LEED Accredited Professionals (LEED AP) and other technical designations. We verify that each facility's operating, maintenance, and program support requirements are met during construction and renovation.

- (17) Professional Engineers (PE)
- (15) Certified Energy Managers (CEM)
- (5) Certified Measurement Verification Professionals (CMVP)
- (3) Certified Building Commissioning Professionals (BCxP)
- (10) LEED® Accredited Professionals (LEED AP)
- (3) LEED® Green Associates
- (3) Project Management Professionals (PMP)
- (2) Commissioning Process Management Professionals (CPMP)

BRETT BERNARDO, P.E.
Senior Manager
Aramark Engineering Solutions

TOTAL GSF COMMISSIONED
> 2.3 Million GSF

TOTAL COMMISSIONING PROJECTS
> 100 Projects

EDUCATION
Penn State University
Bachelor of Science
Mechanical Engineering

CERTIFICATION
Professional Engineer (State of PA)

OSHA 10

Mr. Bernardo possesses more than 22 years of experience as a diversified mechanical engineer with a strong background in manufacturing, organization, and computer programming. On behalf of Aramark, Mr. Bernardo supports the western Pennsylvania region specializing in medical facilities, pharmacies, labs, clean rooms, and BSL labs. His work in higher education institutions includes the Penn State University Satellite Campuses, West Virginia University, Penn West: Edinboro University, Indiana University of Pennsylvania, and CalU. K12 experience includes Bethel Park School District, Upper Saint Clair School District, Fox Chapel School District, and Franklin Regional School District.

Prior to joining Aramark, Mr. Bernardo served as a mechanical engineer for Epic Metals Corporation, a manufacturer of architectural steel decking. His responsibilities included project management, where he interfaced with vendors to verify that products met specifications and were completed in a timely fashion. Additionally, he developed product testing procedures to be completed and documented in-house.

Mr. Bernardo also served as an in-service mechanical engineer for the US Navy. His general responsibilities included developing new ship specifications and acting as a technical liaison between the naval ship personnel and the ship building contractors. He was also responsible for future design changes, including modification of deck edge elevator rail design to prevent future expensive maintenance, and verify proper working order of the elevator system. Additionally, he was responsible for editing operating and maintenance procedures to streamline shipboard operations, while verifying compliance with applicable standards and ship manufacturers' requirements.

COMMISSIONING PROJECT MANAGER EXPERIENCE:

Allegheny Health Network
- Wexford Hospital, $275M, 345K GSF
- AGH Emergency Department Expansion
- AGH GI Lab
- AVH Linear Accelerator Suite
- Brentwood Neighborhood Hospital, $12M, 36K
- McCandless Neighborhood Hospital, $12M, 49K
- AGH Cancer Center, $50M, 79K GSF
- Forbes Cancer Center, $50M, 79K GSF

Altoona Regional Medical Center – Equipment Inventory and Survey

PA Department of General Services:
- Waynesburg Readiness Center
- State Police Headquarters
- PA State Police Butler Barracks

University of Pittsburgh Medical Center:
- Administrative Office Building – $20M, 85K GSF
- Central Plant – $35M, 50K GSF
- Clinical Services Building – $500M, 1M GSF
- Faculty Pavilion East – $30M, 107K GSF
- Research Building – $150M, 250K GSF

ALLISON BAILEY, P.E.
Senior Manager
Aramark Engineering Solutions

TOTAL GSF COMMISSIONED
> 10 Million GSF

TOTAL COMMISSIONING PROJECTS
> 56 Projects

EDUCATION
Ohio State University
Bachelor of Science
Mechanical Engineering

CERTIFICATIONS
Professional Engineer (States of KY, OH, WV)

OSHA 10

Ms. Bailey is a mechanical engineer who possesses more than 28 years of experience in HVAC design, DDC control programming, HVAC system troubleshooting, project management, and project coordination.

On behalf of Aramark, Ms. Bailey is a member of our building commissioning team, providing commissioning services for various educational institutions throughout the U.S., including Ohio State University, Baylor University, University of Kentucky, Oberlin College, Edinboro University, Millikin University, and the University of Pittsburgh. Currently, Allison supports commissioning programs throughout the region and is involved in all design reviews as the design lead and mechanical systems reviewer. She is also project manager for the new Twin Valley Behavioral Health Hospital in central Ohio. Allison performs over 40 design reviews per year (25+ healthcare) and has most recently reviewed multiple projects for Nemours, renovations at M&T Bank Stadium and various other projects for Penn State University.

Prior to joining Aramark, Ms. Bailey worked as a mechanical engineer for MKC Associates where she was a project engineer for HVAC systems for new and existing buildings with an HVAC construction budget ranging from $1K - $5.6M. She was responsible for meeting with clients to present design ideas and to discuss system expectations. She was responsible for the coordination of HVAC systems design with all disciplines, including architectural, structural, electrical, plumbing, and technology. Ms. Bailey was also responsible for the installation, maintenance, and upgrade of HVAC computer software. She completed projects on time and under budget.

COMMISSIONING AGENT EXPERIENCE:

Allegheny Health Network
- Wexford Hospital, $275M, 345K GSF
- AGH Cancer Center, $50M, 79K GSF
- Forbes Cancer Center, $50M, 79K GSF

Baylor University
- McLane Football Stadium - $260M, 860K GSF on 93 Acres Williams Soccer
- Rosenbalm Fountain
- Penland Dormitory – $19M, 96K GSF
- Hankamer Cashion - $26M, 164K GSF
- Foster Business School – $100M, 275K GSF

Children's Hospital of Pittsburgh – John G. Rangos Research Ctr. – $150M, 250K GSF

University of Pittsburgh
- Benedum Hall – LEED Registered – $40M, 180K GSF
- Medical Center – Clinical and Research – $17M, 30K GSF

Edinboro – Ross Hall

New York State Office of Mental Health South Beach Psychiatric Center

Twin Valley Behavioral Healthcare - $88.7M, 285K GSF

FRANKLIN R. SNYDER, JR., P.E., LEED AP, CxA, EM
Cx Specialist
Aramark Engineering Solutions

EDUCATION

Penn State University
Bachelor of Science
Mechanical Engineering Technology

Penn State University
Associate of Arts Degree
Mechanical Engineering Technology

CERTIFICATIONS

Professional Engineer (PE)
(AZ, CA, CO, DC, DE, IL, MA, MD, NC, NH, NJ, NM, NV, NY, PA, VA, UT, and WV)

USGBC LEED AP BD+C

Certified Commissioning Agent (CxA), AABC / ACG

Energy Management Professional (EMP), AABC / ACG

OSHA 10

Mr. Snyder has more than 37 years' experience including building commissioning, sustainable design consulting, and mechanical, electrical and fire protection engineering services. His typical project responsibilities include planning, scheduling, conducting, and coordinating all phases of facility related MEP/FP system design and commissioning work.

Frank is currently providing commissioning services to multiple healthcare and higher education clients in the Northeast and Mid-Atlantic areas, including Hershey Medical Center, Shippensburg University, University of Maryland, and WellSpan Health.

COMMISSIONING AGENT AND DESIGN REVIEW EXPRIENCE:

Hershey Medical Center – 3rd Floor Main Hospital & South Addition Patient Units
Hershey Medical Center – Comparative Medical Facility
Hershey Medical Center – AC 10&11 Replacement
Manheim Central High School
PADGS – Danville Field Maintenance Building
PADGS – Shippensburg University – Franklin Science Center
PADGS – State Museum and PHMC Tower
Penn State Health – Hampden Cancer Center
Tulpehocken Jr./Sr. High School
University of Maryland – Stanley Zupnik Engineering Hall
University of Maryland – Barry Gossett Basketball Facility
WellSpan Health – Gettysburg AHU-12 Replacement
WellSpan Health – Gettysburg CHW Plant Renovations
WellSpan Health – Gettysburg Pharmacy Renovation
York Hospital – SCCT Expansion
York Hospital – Central Utility Plant, CHW Plant

CORY CALLIHAN
Cx Manager
Aramark Engineering Solutions

TOTAL GSF COMMISSIONED
> 4 Million GSF

TOTAL COMMISSIONING PROJECTS
> 50 Projects

EDUCATION
Pennsylvania College of Technology
Bachelor of Science Building Automation Engineering Technology

A.S – HVAC Technology

CERTIFICATIONS
OSHA 10

Mr. Callihan possesses more than 11 years of experience in HVAC, refrigeration, electrical, plumbing, and controls within the residential and commercial markets. On behalf of Aramark, Cory provides commissioning services to clients in the healthcare and higher education sectors primarily in western Pennsylvania.

Recently, Cory worked with Santek Labs and developed a new VOC testing procedure for an IVF Clinic at AHN North Fayette. This testing will be used on an annual basis.

Prior to Aramark, Mr. Callihan was an HVAC controls technician for Automated Logic Controls out of the Pittsburgh branch. While with ALC, Cory worked for clients such as Allegheny Health Network, UPMC, CMU, PSU satellite campuses, and the University of Pittsburgh.

SELECT COMMISSIONING PROJECT EXPERIENCE:
Allegheny Health Network
- Allegheny Valley Hospital – AHU-12 Replacement
- Allegheny Valley Hospital – BAS Upgrade
- Jefferson Hospital – BAS upgrade
- North Fayette Health and Wellness Pavilion - Custom Fit-out of an existing building, IVF Laboratory
- Wexford Hospital

Chartwell Pharmacies
Carnegie Mellon University MRI and Neurological Research Carnegie Mellon University MRI and Neurological Research
State Correctional Facility Forrest – BAS Upgrade
Twin Valley Mental Health Hospital – Emergency Power System
University of Pittsburgh Medical Center

CONNOR LOMICKA
Cx Manager
Aramark Engineering Solutions

EDUCATION

University of Pittsburgh
Bachelor of Science
Mechanical Engineering

TOTAL COMMISSIONING PROJECTS

> 36 Projects

CERTIFICATION

OSHA 10

Mr. Lomicka is a mechanical engineer and part of the Aramark Engineering Solutions team. As a Commissioning Manager, he provides building commissioning services to various projects and clients. Currently, he is providing support for projects at various Allegheny Health Network facilities, Penn State Satellite Campuses, and for the Department of General Services at Pennwest California and SCI Forest State Penitentiary.

Prior to Aramark, Mr. Lomicka worked as a mechanical engineer at Westmoreland Mechanical Testing & Research in Latrobe, PA. His role was providing engineering design support for testing fixtures and processes for clients in the aerospace, automotive, and nuclear industries.

SELECT COMMISSIONING PROJECT EXPERIENCE:

Allegheny General Hospital
- Angiography Suite
- Neurology (Hemlock Building)
- Dialysis Relocation
- Sterilizer (Central Sterile Renovation)
- Cardiac Procedure Rooms
- Nuclear Medicine
- Triplet Air Handlers
- Cystoscopy Rooms

Forbes Hospital
- Behavioral Health Suite
- Central Sterile
- Grossing Lab Renovation
- North Tower Air Handlers
- Winter Chiller

West Penn Hospital
- Nuclear Medicine Suite
- Women's Center PCP
- Operating Rooms Air Handler
- Melanoma Lab
- Radiology Renovation

Penn State Behrend
- Science Complex
- Nick Building Boiler
- Senat Hall MAU's
- Fasenmeyer Renovation
- Erie Hall

Penn State Beaver
- General Classroom Building Renovation
- Harmony Hall Bathroom Renovations

Department of General Services
- PennWest California University, Science Building
- SCI Forest State Penitentiary, BAS Upgrade

TIM SULLIVAN, P.E., BCxP, CEM, LEED AP, G.B.E.
Director, Commissioning
Aramark Engineering Solutions

TOTAL GSF COMMISSIONED
> 20 Million GSF

TOTAL COMMISSIONING PROJECTS
> 60 Projects

EDUCATION
Manhattan College
Bachelor of Science
Mechanical Engineering

CERTIFICATIONS
Professional Engineer (State of NY)

Certified Energy Manager

Certified Green Building Engineer

LEED Accredited Professional

Building Commissioning Professional

OSHA 10

Mr. Sullivan has accumulated 35 years of experience in the HVAC industry, including design engineering, installation, programming, commissioning, project management, and service operations. As Director of Commissioning for Aramark Engineering Solutions, Mr. Sullivan oversees the commissioning program. Primarily advising on commissioning services with both proposal development and successful execution, Tim is involved in quality control of the commissioning group as well as higher level elevation of issues. His background and hands on experience as a commissioning agent provides him with expertise in building automation systems, central utility plants, and laboratory control systems including BSL3.

Currently, Tim manages six senior direct reports and an overall Commissioning Team of 24 professionals who serve as project and client managers of our premier partners. Each of the senior managers have approximately four direct reports who serve as project managers and systems specialists for all of our commissioning and retro-commissioning efforts. The senior managers are strategically located in Pennsylvania, New York, and North Carolina and direct reports are scattered throughout the country to provide our clients with the best local support.

On behalf of Aramark, Mr. Sullivan has been the commissioning project manager for the Sterling and Francine Clark Art Institute's campus expansion project, which includes a new heating and cooling plant and a new exhibition and conference center as well as a Museum. Mr. Sullivan has extensive Museum experience in both commissioning and retro commissioning, and has worked at The New Museum, Sperone Westwater Gallery, The Whitney, The American Museum of Natural History, and The Metropolitan Museum of Art. Past and current Clients include the City University of New York (CUNY) and Department of Citywide Administrative Services (DCAS) projects in New York, NY.

COMMISSIONING PROJECT MANAGER EXPERIENCE:
Albert Einstein College of Medicine - Center for Genetic & Translational Medicine - $230M, 201K GSF
American Museum of Natural History - Energy Saving Initiatives - 1.5M GSF
The Sterling and Francine Clark Art Institute - Campus Expansion - 147.3M GSF
The Metropolitan Museum of Art: Costume Institute HVAC Renovation
The Metropolitan Museum of Art: Employee Cafeteria RCx
US Post Office – Westchester P&DC Building

COMMISSIONING AGENT EXPERIENCE:
Bard College – Bard Graduate Center – $5M, 15K GSF
Bronx Psychiatric Center – $350M, 300K GSF
General Theological Seminary – Retro Commissioning
Grace Church School
Hudson River Psychiatric Center