U.S. General Services Administration
Public Buildings Service

Statement of Work
for
Construction Services

PROJECT IDENTIFICATION

Project Title: Battin CH Cooling Tower Replacement

Building: James F. Battin U.S. Courthouse

Building ID #: MT0050ZZ

Building Location: 2601 2nd Avenue North

BILLINGS, MT 59101

Project Control Number: RMT31076

Kahua Number: 28292

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1. PROJECT INFORMATION

This section provides an overview of the project.

1.1. PROJECT SUMMARY

Replacement of corroded cooling-tower components and relocation of associated control units, including: replacement of cooling-tower coils, sprayer nozzles, and evaporative media; relocation of the existing exterior-mounted VFDs indoors to the mechanical penthouse; replacement of deteriorated heat-trace and insulation on exterior condenser-water and other non-glycol piping serving the towers; and all associated hydronic and electrical work required to support this scope.

See Section 2.1 for detailed project requirements.

The Contractor shall coordinate work and gain approvals required in this Statement of Work (SOW) with the Contracting Officer (CO) and Contracting Officer's Representative/Project Manager (COR/PM) as required.

1.2. PROJECT BACKGROUND

Construction of the James F. Battin Courthouse was completed in 2012. The two (2) existing roof mounted wet cooling towers are Evapco model ESWA-77- 36K-R. were found to be deteriorating as noted in field report dated 05-01-2024 by an Evapco. The authorized service technician found that "both tower coils show signs of rust and pitting indicative of predictive failure." This project also seeks to improve long-term viability and maintainability of the cooling-tower system and associated controls to support reliable operations and ease of O&M.

1.3. CONTRACT TYPE

This contract is a firm-fixed price contract. The services required shall include, but shall not be limited to, the following:

- Contract Management
- Construction Services including Materials, Labor, and Supervision
- Professional Inspection and Testing Services

1.4. DELIVERY TYPE

The project is Construction Services for Design-Bid-Build delivery type.

1.5. PROJECT OBJECTIVES

To be considered successful, the project must achieve the following objectives:

- Provide necessary materials and equipment to complete all aspects of the project
- Coil replacement
- Relocate exterior mounted VFDs and all associated conduit / wiring and remount inside as shown in the construction plans
- Remove pipe insulation and heat tape, replace with new
- Recommission cooling tower units
- Restore / Replace sidewalk, paving, landscaping and irrigation impacted by the project
- Deliver the project on time and within budget

- Complete the project while following all security requirements
- Ensure a safe work environment during construction for workers and authorized visitors on the construction site. Building and parking lot will remain operations during construction.
- Provide timely reports and communications
- Ensure that all sensitive documents are handled, distributed, archived and destroyed according to project procedures

1.6. PROJECT SCHEDULE

The overall Period of Performance shall be 180 calendar days from Notice To Proceed (NTP) to Project Closeout, based on the following:

- NTP to Substantial Completion — 120 calendar days after NTP
- Submit All HSPD-12 Clearance Applications — 10 calendar days after Award
- Project Closeout (as defined in Section 5.4.) — 60 calendar days after Substantial Completion

The Contractor shall plan and sequence work to minimize cooling tower outages during peak cooling season and shall coordinate any required outages with the PM and Building Manager as early as practicable. The schedule shall identify key milestones for coil and evaporative-media replacement, hydronic tie-ins, VFD relocation and energization, completion of TAB, and recommissioning of the cooling-tower system.

2. SCOPE OF WORK

This section details the technical requirements and constraints for which the Contractor is responsible. The Contractor shall perform all services described in this Statement of Work (including work required under exercised options, if any). The Contracting Officer and the COR/PM must approve all proposed changes to the Scope of Work.

2.1. PROJECT REQUIREMENTS

2.1.1. Base Bid

The Base Bid shall include all labor, materials, equipment, testing, and coordination necessary to execute the 100% construction documents for the Battin CH cooling-tower project, including at a minimum:

- Pre-Tab report - all pumps, controls and valves will also remain in place. Flows should remain the same, however, if any irregularities occur after installation, knowing the operating state before the work is critical.
- Replacement of existing cooling-tower coils with new galvanized coils as specified in Division 23 6514 and related sections.
- Replacement of all evaporative media within the cooling towers, including removal, disposal, and installation of new media in accordance with the 100% design.
- Replacement of all cooling-tower sprayer nozzles, including verification of nozzle quantity and type per the design documents.

- Replacement of existing heat-trace cabling and insulation on exterior condenser-water and other non-glycol hydronic piping serving the cooling towers, including heat trace at the basin fill/float location, and restoration of all pipe insulation.
- Relocation of the two existing exterior-mounted VFDs from the roof to the mechanical penthouse, including mounting, conduit and wiring modifications, power and control reconnection, and BAS integration as indicated in the 100% design.
- Associated hydronic and electrical work required to support the above (demolition, piping, valves, supports, heat-trace power, grounding, terminations, panel/feeder modifications, and reconnection of BAS I/O), in accordance with Divisions 23 and 26.
- Testing, adjusting, and balancing (TAB) of condenser-water flows, and functional performance testing of cooling-tower operation, VFDs, and sequences of operation in accordance with Sections 23 0593 and commissioning requirements.

The Contractor shall execute the above scope fully in conformance with the 100% construction documents attached to this SOW.

2.1.2. Permits and Responsibilities

Per FAR 52.236-7 Permits and Responsibilities, the Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work. The Contractor shall also be responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor shall also be responsible for all materials delivered, and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under the contract.

2.2. PROJECT SITE REQUIREMENTS

2.2.1. Work Restrictions

The Contractor shall survey the entire worksite and review existing documentation to be familiar with the existing conditions. This includes all areas of the building, structure, and site affected by the removal and demolition work, alterations and new construction work prior to initiation of construction.

The Contractor shall limit the use of the premises to the work areas indicated, to allow for Government occupancy and public use. The Government reserves the right to perform work, or retain other contractors to perform work, on portions of the project.

The building is to remain fully operational throughout the entirety of the project, with no disruption to tenant operations. All work areas must be cleaned at the end of every workday.

The work shall be sequenced to minimize disruption to building occupants, visitors, and maintenance activities. To the greatest extent feasible, demolition work should not take place until supplies are on hand to perform new work.

The Contractor shall coordinate all work activities with the GSA Building Manager and the COR/PM to ensure that proper security and access arrangements are made without impact on the construction schedule.

Where applicable, the contractor must employ adequate dust control measures.

The Contractor shall develop shutdown and outage plan describing the anticipated duration, impacted zones/air-handling systems, expected indoor temperature ranges, and mitigation strategies to maintain occupant comfort and mission continuity. The plan shall identify proposed outage windows and shall be submitted to the PM and Building Manager for review at least 14 calendar days prior to any planned cooling-tower shutdown.

2.2.2. Working Hours

2.2.2.1. Government Occupied Hours

Government personnel are scheduled to occupy the building during the following hours on weekdays, Monday through Friday, except for established Government Holidays, [6:00] AM to [6:00] PM.

2.2.2.2. Contractor's Working Hours

The following work shall be performed outside of Government Occupied Hours:

- Noisy and/or odor-producing work that may disrupt tenant operations in adjacent spaces.
- Work requiring shutdown of the building's utilities
- Any work that would impact the U.S. Courts while they are in session

Work accomplished outside of Government Occupied Hours shall be included in the bid. The Contractor shall submit a proposed schedule and gain the COR/PM approval at least [72] hours before proceeding with any work during Government Unoccupied Hours.

2.2.3. Loading Dock

Use of the existing loading dock facilities will be shared with Government activities on a first-come-first-served, wait-your-turn basis. The loading dock is available for the delivery of materials, tools, and supplies between the hours of [8:00] AM to [4:00] PM. Loading dock activities shall be coordinated with the GSA Building Manager a minimum of [72] hours in advance.

2.2.4. Parking

No parking is available on site. The Contractor shall make their own arrangements for parking off site.

2.2.5. Staging and Storage

The Contractor may be provided a staging area within the building, contingent upon GSA approval, and provided that its use will not interfere with operations of the Government. No GSA employees will assist with unloading/loading of vehicles(s). The contractor shall provide all personnel and equipment needed for unloading, moving, and assembling the materials.

2.2.6. Dumpster

Limited space may be available on site for a dumpster. Location to be coordinated with Building Manager. Use of existing building dumpsters and trash bins is strictly prohibited.

2.2.7. Restrooms

Restrooms may be available for use. Restrooms must be designated by the GSA Building Manager. Placement of portable facilities must be designated by the GSA Building Manager.

2.2.8. Freight Elevator

A freight elevator is available for use at the project site.

2.2.9. Existing Conditions

All Government property or systems displaced, altered, or damaged during the performance of this contract other than stated in this SOW shall be restored to its original condition at no cost to the Government. These repairs, if needed, shall be executed immediately when the Contractor is notified by the Contracting Officer that such repairs are required due to actions by the contractor or his/her subcontractors.

Maintenance of Existing equipment - Contractor shall collect information as needed from the Building Manager or O&M staff for work to be done on any existing equipment / building systems for awareness and knowledge.

Assessment - All due diligence must be performed to assess the existing conditions of the site, building, perimeter security and roadway access for the proposed project.

Survey - A thorough survey must be carried out in order to understand the existing conditions and how the proposed project will impact the use, occupancy and surrounding areas.

2.3. STANDARDS AND CRITERIA DOCUMENTS

The Contractor shall ensure that all work performed, and materials used, under this scope of work are in accordance with the guidelines, codes and specifications of the following associations and agencies. Any conflicts or ambiguities within, or among, the referenced Standards and Criteria Documents, or any deviations from requirements contained in the Standards and Criteria Documents, shall be reported to the COR/PM in writing, for determination as to applicability. The Contractor shall use the most recent versions of these documents issued at the time the RFP for the project is issued. In the event that there are conflicting requirements, the more stringent of the two shall be used.

2.3.1. GSA Requirements

- PBS Interim Core Building Standards, including all applicable Standards, Criteria and Guides listed therein
- PBS P-120, Public Buildings Service Cost and Schedule Management Policy Requirements
- Implementation of Subject Matter Expert Review and Oversight Process for PBS Design, Construction, and Repair Projects
- PBS Building Code Official Authority for GSA Federal Buildings
- Architectural Barriers Act Accessibility Standard (ABAAS)
- PBS Order 3490.3 CHGE 1, “Security for Sensitive Building Information Related to Federal Buildings, Grounds, or Property”, March 22, 2021

- IAQ Guidelines for Occupied Buildings under Construction by SMACNA
- Occupational Safety and Health Administration (OSHA) regulations for Construction and General Industry; 29 CFR Parts 1926 and 1910
- Specification Section 015950 – Safety and Health(see attachments)
- International Code Council Codes (ICC)
- National Fire Protection Association (NFPA) National Fire Codes and Standards
- ANSI NETA Standards
- Section 889
- PBS Building Commissioning Guide (September 2020)
- 40 CFR 61 National Emission Standards for Hazardous Air Pollutants
- 40 CFR 763 Asbestos
- 49 CFR 107 Hazardous Materials Program Procedures
- 49 CFR 172 Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
- EPA Mold Remediation Guidelines, September 2008
- District of Columbia Green Construction Code 2017 *(construction and demolition debris recycling)*
- Polycyclic Aromatic Hydrocarbons (PAHs)/Coal Tar Sealants: D.C. Code § 8–153.01; Maryland Safer Sealant Act of 2022

The following can be found at *https://sites.google.com/gsa.gov/project-management-pm-hub/pm-support/pm-templates#h.z9twkwslm0av*

- Section 02085 - Asbestos Abatement Procedures
- Section 02085R - Asbestos Abatement Roofing Removal Procedures
- Section 02087 - Removal of Bird and Bat Droppings
- Section 02089 - Control of Polychlorinated Biphenyl Specification
- Section 02090 - Control of Lead Based Paint Specification
- Section 02090 - Control Of LBP

2.3.2. Building Management and Controls (BMC) and Federal Government Building Systems Network (BSN) Connection Requirements

- 7002.1 ADM GSA Smart Buildings (December 2021)
- Smart Buildings Implementation Guide Requirements (see attachments)
- Smart Buildings Program Guide (see attachments)
- GSA Data Normalization for Building Automation Systems (see attachments)
- GSA National Capital Region Advanced Metering Systems (AMS) Guide, v1.1 (see attachments)
- Niagara NiCS Statement (see attachments)
- Security and Privacy Controls for Federal Information Systems and Organizations, NIST 800-53 Rev 5
- Guide to Industrial Control Systems (ICS) Security, NIST 800-82 rev 2
- GSA IT Building Technology Technical Reference Guide (BTTRG) v2.0 (see attachments)
- GSA Order 2100.1M GSA Information Technology (IT) Security Policy (see attachments)

- IT Security Procedural Guide: Key Management CIO-IT Security-09-43, rev4 (see attachments)
- IT Security Procedural Guide: Building Monitoring and Control (BMC) Systems Security Assessment Process CIO-IT Security-16-76, rev2, October 13, 2020 (see attachments)
- IT Security Procedural Guide: Managing Enterprise Cybersecurity Risk CIO-IT Security-06-30, rev19, April 15, 2021 (see attachments)
- 2180.2 CIO GSA Rules of Behavior for Handling Personally Identifiable Information (PII), October 8, 2019 (see attachments)
- 2181.1 ADM Homeland Security Presidential Directive-12, Personal Identity Verification and Credentialing, and Background Investigations for Contractors, March 18, 2020 (see attachments)
- PBS Technology Policy (see attachments)

2.4. CUTTING & PATCHING REQUIREMENTS

The Contractor shall replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any existing warranties.

All substrates must be inspected and defects repaired prior to installing new material or finish. All replacement and new materials shall match the existing in material, dimensions, color and finish. All material selections and/or mock-ups need to be reviewed and accepted by the COR/PM and Tenant Agency prior to ordering.

2.4.1. Structural Systems

Do not cut structural beams or major structural elements without the written review and approval of a Licensed Structural Engineer. Additionally, the COR/PM shall obtain review and acceptance from GSA's OE's (Office of Engineering) structural engineer and A/E's structural engineer. Prior to cutting and/or drilling through any structural member, the Contractor shall conduct ground penetrating radar, or similar type of investigative measure to prevent cutting concealed material. Submit structural calculations sealed by a Licensed Structural Engineer to the COR/PM concurrently for acceptance.

Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

2.4.2. Operational Systems

The Contractor shall not cut and patch operating elements, safety related systems, or related components in a manner that would result in reducing their capacity to perform as intended, or that would result in increased maintenance, or decreased operational life or safety.

2.4.3. Visual / Finishes

The Contractor shall not cut and patch exterior materials, or in occupied spaces, in a manner that would, in GSA's opinion, reduce the building's aesthetic qualities, or that would result in visual evidence of cutting and patching. The Contractor shall remove and replace construction that is cut and patched in a visually unsatisfactory manner.

Patched areas shall be neatly trimmed prior to patching. Feather all patches to provide a complete and finished surface. Paint all exposed work provided under the contract including

all patched areas, and exposed areas uncovered during demolition, to provide a complete and finished project. Paint patched areas and surrounding areas to the nearest break in wall surface, or other building line to provide a neat and finished appearance. All paint shall match adjacent painted surfaces. Protect all surrounding areas including fixtures, furniture, floors and accessories from paint splatter and droppings. Clean and restore all areas splashed with paint.

Any work related to removing equipment, brackets, supports, etc. that leaves holes or damaged surfaces on the floor, walls, and ceilings, shall be patched with the same adjacent material and finish.

2.5. NATIONAL HISTORIC PRESERVATION ACT (NHPA) REQUIREMENTS

N/A.

2.6. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS

Pursuant to paragraph 5.3 of the PBS NEPA Desk Guide (October 1999), this project is an automatic CATEX and requires no checklist.

2.7. NATIONAL CAPITAL PLANNING COMMISSION (NCPC) REQUIREMENTS

The design has been approved by NCPC. Modifications to the design of the exterior of the building or site work will require a review by OE (Office of Engineering) and could result in a resubmission to NCPC.

2.8. U.S. COMMISSION OF FINE ARTS (CFA) REQUIREMENTS

The design has been approved by CFA. Modifications to the design of the exterior of the building or site work will require review by OE (Office of Engineering) and could result in a resubmission to CFA.

2.9. FINE ARTS REQUIREMENTS

It is not anticipated that Fine Arts will be disturbed during construction activities. The Contractor shall protect Fine Arts per the Fine Art Protection Work Plan and coordinate with SME in OE (Office of Engineering).

2.10. ACCESSIBILITY REQUIREMENTS

The Architectural Barriers Act Accessibility Standard (ABAAS) is mandatory for all GSA projects and shall be maintained at all times.

2.11. SAFETY AND OCCUPATIONAL HEALTH REQUIREMENTS

The Contractor(s) shall comply with the safety standards and guidelines referenced in Section 2.3.1 as well as the following requirements:

GSA's National Safety and Health are the authority having jurisdiction (AHJ) for all safety and health concerns at all GSA owned facilities.

The Contractor shall provide a site-specific Safety and Health Plan that includes job hazard analysis, bloodborne pathogens, emergency response, personal protective equipment (PPE) requirements, hazard mitigation, hazardous energy control (lock out/tag out), arc flash

requirements, hazardous noise, confined space, crane plans, fall protection, chemicals being used onsite, trainings/ certification, and when safety toolbox meetings will occur.

The Contractor shall provide Safety Data Sheets (SDSs) for all substances/ materials to be used in the performance of this contract to the onsite O&M shop. The Contractor will ensure all personnel wear the appropriate personal protective equipment required by the SDSs.

The Contractor shall ensure that all hazards at the end of the workday/ project end are mitigated to ensure that the site is not left in an unsafe condition (e.g., fall, confined space, excavation, chemicals, walkways).

The Contractor shall ensure a first aid kit is available at the site and that all employee injuries and incidents are reported to the COR immediately for reporting to GSA Safety and Health.

The Contractor shall ensure that all hazardous energy sources are locked and tagged out, arc flash procedures are followed to include all PPE, lock out/ tag out (LOTO), labeling, demarcation of zones, and all 1-line drawings are updated. All new electrical must be updated on the inside electrical panel door, all wires are run correctly, and wires are labeled.

All equipment and material that is owned by the contractor must be labeled with the contractor's contact name and cell number for rapid identification during inspections or emergency situations.

The Contractor shall only use extension cords with three (3) prongs (ground) and only use them for temporary power on a daily basis. All extension cords will be inspected before use for damage, frayed electrical, exposed wires, and must dispose of all damaged extension cords. Damaged extension cords cannot be repaired with electrical tape and must be replaced with new to prevent electrical shock hazards and fire. Extension cords cannot be plugged into outlets that have appliances or essential equipment plugged into them. The GFCI extension cord adaptors can be used to prevent tripping of electrical services.

The Contractor shall not store chemicals, equipment, debris, or trash in or around electrical rooms/ panels, in hallways, stairwells, on stairs, or in authorized spaces at any time.

The Contractor shall not permit any contractors/ employees from entering a confined space, accessing the roof top areas without the proper clearance, fall protection, RF Radiation hazard areas, or any other area deemed unsafe by the COR or GSA National Safety and Occupational Health.

The Contractor will ensure compliance with all confined spaces with attention to the entry of permit required confined spaces. The contractor is responsible for working with the O&M contractor and Building Manager for compliance with the site’s confined space program.

The Contractor shall at any time be able to submit inspection documentation and training documentation for its employees to the COR and GSA National Safety and Occupational Health personnel.

All accidents must be reported to the COR immediately and any injuries to personnel must be reported to the COR and National Safety and Health immediately with updates hourly until the situation is addressed. A written report shall be submitted within 24 hours of the injury to the COR and National Safety and Health. Incidents without injury must submit a written report to the COR within 24 hours.

Reference Specification 015950 - SAFETY AND HEALTH, included as an attachment.

2.12. FIRE PROTECTION AND LIFE SAFETY REQUIREMENTS

GSA's Fire Protection Engineers are the authority having jurisdiction (AHJ) for all GSA owned facilities.

2.12.1. Egress/Life Safety

- The existing means of egress for the remainder of the occupied building shall be maintained in an NFPA 101 compliant manner at all times unless specifically approved by the GSA regional fire protection engineer.
- Demonstrate compliance with the safeguarding construction and alteration operations requirements of NFPA 241. Construction activities for tenant alterations or building modernizations shall be separated from the remainder of an occupied building with walls having a minimum 1-hr fire resistant rating with 45-min opening protectives or shall be provided with an active sprinkler system and continuous smoke partitions throughout the duration of construction. Construction phasing and/or separation walls shall be located in such a manner to maintain an NFPA 101 compliant egress arrangement for the remainder of the occupied building (dead-ends, common paths of travel, travel distances, etc.).

2.12.2. Fire Protection Systems

- Modify existing sprinkler systems in accordance with the latest requirements of NFPA 13, Standard for the Installation of Sprinkler Systems.
- Working plans sprinkler system layout shall be performed by a minimum NICET Level III or IV Water Based Systems Layout technician, or a licensed Fire Protection Engineer.
- Provide detailed shop drawings, in accordance with NFPA 13, "Working Plans". Drawings shall be drawn to an indicated scale on sheets of uniform size and be submitted to the COR for review and approval by the GSA regional fire protection engineer. Information shall include but not be limited to the following:
    - Layout indicating details, plan view, elevations and sections of the system piping. Indicate the location of sprinkler heads and piping in relation to the ceiling layout, showing pipe lengths and sizes.
    - Detailed riser diagram showing schematic of systems supply, supply connection, devices, valves, pipe and fittings.
    - Hydraulic calculations
    - Annotated manufacturer's data sheets showing the specific model, type and size of each item.
    - The signature and seal of a licensed Professional Fire Protection Engineer, or a NICET Level III or IV Technician.
- Perform hydrostatic testing of sprinkler piping in accordance with the requirements of NFPA 13.
- Final Inspection and Testing: Advise the COR/PM when hydrostatic and alarm tests have been completed and all necessary corrections made, so as to permit final inspection and testing. Submit requests for testing at least 15 calendar days prior to the test date.

- The final test shall be witnessed by the GSA regional fire protection engineer and/or the third-party fire protection engineer responsible for inspections and acceptance testing. The Contractor and an authorized representative from each supplier of equipment shall attend the final test.
- Final testing shall include, but is not limited to, testing of all waterflow and tamper switches.
- Provide all equipment, services and labor to properly perform all required tests.

2.12.3. Fire Alarm Systems

- Modify existing fire alarm system in accordance with the requirements of NFPA 72, National Fire Alarm and Signaling Code. Provide new UL-listed fire alarm equipment. All new equipment shall be compatible with the existing fire alarm equipment manufacturer.
- Fire alarm initiating device and notification appliance shop drawing layout shall be performed by NICET Level III or IV fire alarm systems technician, or licensed fire protection engineer. Installation shall be accomplished by an electrical contractor with a minimum five years of experience in the installation of fire alarm systems.
- All circuits and pathways shall match existing in class and survivability designations. Conductors must match existing gauge, type, and color coding. All conductors which are terminated, spliced, or otherwise interrupted in any enclosure, cabinet, mounting or junction box shall be connected to terminal blocks in a workman like manner.
- Provide detailed installation shop drawings, in accordance with NFPA 72 documentation and shop drawing requirements. Drawings shall be drawn to an indicated scale on sheets of uniform size and submitted to the COR/PM for review and approval by the GSA regional fire protection engineer. Submittal information shall include but not be limited to the following:
  - A complete description of the system operation.
  - A complete list of device addresses and corresponding messages.
  - Point-to-point wiring diagrams showing the points of connection and terminals used for all electrical field connections in the system, including all interconnections between the equipment or systems which are supervised or controlled by the system.
  - Annotated manufacturer’s data sheets showing the specific model, type and size of each item.
  - Notification appliance circuit calculations including voltage drop, circuit capacity, amplifier capacity, and power supply capacity.
  - Battery calculations for both the alarm and supervisory power requirements. Ampere-¬hour requirements for each system component shall be submitted with the calculations.
  - Provide a color code schedule for the wiring and floor plans showing the location of all devices and equipment.
  - The signature and seal of a licensed Professional Fire Protection Engineer, or a NICET Level III or IV Technician.
- Prior to installation the contractor shall coordinate and schedule a fire alarm outage with the GSA project manager or GSA facilities management office. When work is being performed on an active fire alarm circuit(s), the fire alarm system must be taken out of

service by the O&M vendor or their designated representative. The fire alarm system shall be returned to "normal" operating condition before the contractor and subcontractor(s) leave for the work shift.

- Fire alarm programming changes are permitted only when confirmed acceptance testing is scheduled with the AHJ or their designated representative. A fire alarm program change must be tested for acceptance within 24 hours of the change. The AHJ is the GSA regional fire protection engineer.
- Perform preliminary tests to ensure that all devices and circuits are functioning properly. After preliminary testing is complete, provide a letter certifying that the installation is complete and fully operable.
- Perform final acceptance testing in accordance with the requirements of NFPA in the presence of the GSA regional fire protection engineer or third-party fire protection engineer.

2.12.4. Fire and Life Safety System Testing and Acceptance

- The Contractor shall provide a subcontracting Fire Protection Engineering firm, other than the Design Team Fire Protection Engineer (FPE subcontractor), acceptable to the GSA Fire Protection Engineering Section, to witness system acceptance testing and inspections.
    - The contracting firm shall be a firm whose prime enterprise is in the field of fire protection engineering. The contracting firm must provide a program manager who possesses a BS or MS in Fire Protection Engineering and meets the experience requirements for fire protection engineers listed below. Complete documentation to support fire alarm systems testing experiences must be resubmitted as a part of the submittal package.
    - Qualified fire protection engineer(s) shall witness acceptance testing. The FPE subcontractor must employ a full-time team of at least two qualified fire protection engineers, available for the Testing required by this contract. The engineers shall possess a BS or MS in fire protection or fire safety engineering with at least four consecutive years of experience in fire protection engineering work, within the past six (6) years, or professional engineering licensure in fire protection. Proposed personnel shall demonstrate that they have been involved in fire protection and life safety systems inspection and testing similar in complexity relevant to the scope.
    - The fire protection engineer(s) shall have experience in submittal review, construction inspection, acceptance testing and commissioning systems.
    - The fire protection engineer(s) shall demonstrate thorough working knowledge and formal training in fire protection codes and standards, especially the latest edition of NFPA 101, NFPA 13, NFPA 72, NFPA 90A and the International Building Code. The proposed personnel shall demonstrate that they have acted in charge of fire protection engineering designs including fire protection and extinguishment systems, fire alarm systems, life safety systems, and smoke control systems.
- Testing and inspections for the fire alarm shall include the following minimum criteria:
    - Testing and commissioning in accordance with NFPA 72

  - All new equipment shall be 100% fully tested
  - Confidence (re-acceptance) testing to include 10% of the building field devices
  - Test each fire alarm initiating and indicating device and circuit for proper operation and response
  - Test the system for all specified functions in accordance with the contract specifications, and the approved sprinkler and fire alarm submittals
  - Determine that the system is operable under trouble conditions
  - Test the adequacy of the notification appliances (visible and audible characteristics)
  - Program changes to the building fire alarm control panel will require re-acceptance testing within 24 hours of the change
  - As applicable, perform a battery test for all new control panels and extender panels
- Testing and inspections for the fire protection system shall include the following minimum criteria:
  - Verify compliance with NFPA 13
  - Visual inspection of the sprinkler system adequacy, coverage, piping, hangars, sprinkler locations, hydraulic nameplates, and sprinkler types.
- Inspections for fire compartment integrity shall include the following minimum criteria:
  - Visually inspect fire rated partition/wall and floor assemblies, partition stenciling, fire door, and fire/smoke damper operation.
- Inspections for life safety and egress shall include the following minimum criteria:
  - Verify compliance with the NFPA 101 egress requirements
  - Visually inspect emergency lighting, exit signage, and egress arrangement (pathways, exits, special locking, etc.)

The Contractor shall provide a written Discrepancies and Omissions (D&O) list within 48 hours of completion of each test or inspection. The D & O list shall include a description of the work that was completed, a description on the system equipment and operation, and describe conditions which do not comply with the above criteria. Provide corrective action recommendations for all discrepancies and omissions. Note that the task includes follow up inspections and testing necessary to verify corrections of items. If no items are necessary for correction, the D&O list shall indicate all items have been corrected and the space is acceptable for issuance of an occupancy certificate.

2.13. HAZARDOUS MATERIAL REQUIREMENTS

All work, including contact with and handling of hazardous materials, the disturbance or dismantling of structures containing hazardous materials, and/or the transport and disposal of hazardous materials shall comply with the applicable requirements of 29 CFR 1910/1926, and 40 CFR 761/260-271.

2.13.1. Hazardous Materials Survey

The Contractor shall hire a qualified Industrial Hygiene firm to inspect and test all portions of the building that are included in this project as part of the Existing Conditions Survey. Qualified is defined as utilizing personnel who are U.S. Environmental Protection Agency (EPA) accredited AHERA Inspectors/Management Planners or Project Designers. The survey and assessment shall include the following:

- Search through any existing documentation
- A walk-through inspection
- Sampling of any possible asbestos containing materials (ACM) and lead based paint (LBP) not identified in existing documentation. Sampling of ACM shall conform to the requirements found in 40 CFR 763.85.
- Provide sampling, testing and reporting for ACM and LBP that will be disturbed as a result of the project. If material suspected to be ACMs or LBPs are encountered, the material shall be sampled for bulk asbestos and/or lead paint chips.
- Adequately test and characterize the LBP waste by the toxicity characteristics leaching procedure (TCLP) – Lead
- Provide sampling, testing and reporting for caulking, waterproofing materials, and waste generated for PCB content in accordance with 40 CFR 761
- Consider all unmarked lamp capacitors and ballasts to contain PCBs, and manage these items as required by GSA Specification 02089
- Perform a comprehensive assessment, including the count and location of mercury-containing devices such as switches, thermostats, and gauges
- Perform a comprehensive assessment, including the count and location of observed universal waste (e.g. fluorescent lamps, batteries, etc.) and/or hazardous waste
- Perform a comprehensive assessment, including the number of exit signs that may require special disposal

2.13.2. Asbestos Containing Material

The Contractor shall survey the project area for ACMs per section 2.13.1. of this SOW. It is not anticipated that Asbestos Containing Material will be encountered during work activities.

All thermal systems insulation (i.e. boiler insulation, duct insulation, pipe insulation), surfacing materials (i.e. plaster and sprayed-on fireproofing) and miscellaneous materials (i.e. asphalt flooring, ceiling tiles, adhesives and mastics, drywall, roofing, gaskets and cement board), installed no later than 1980, must be considered asbestos containing unless proven otherwise in accordance with 29 CFR 1926.1101. Work involving the disturbance, dismantling or demolition of asbestos containing materials or structures containing asbestos; or the removal and disposal of asbestos, shall also comply with the requirements of 40 CFR Part 61, Subparts A and M; 29 CFR 1910.1001 (where applicable); and GSA Specification 02085 Asbestos Abatement Procedures.

The most recent asbestos building-wide survey is provided for reference. Materials assessed to be part of a homogenous area previously determined to be NAD need not be re-sampled.

2.13.3. Lead Based Paint

The Contractor shall survey the project area for LBP per section 2.13.1. of this SOW. It is not anticipated that Lead-Based Paint (LBP) will be encountered during work activities.

All finished/painted surfaces of buildings constructed prior to 1978 shall be considered finished with lead-based paint unless proven otherwise. The Contractor shall protect employees and the building by minimizing the creation of dust when patching/repairing/prepping existing surfaces for new paint. Dry sanding is prohibited.

Work involving the disturbance, dismantling or demolition of lead-based paint shall comply with 29 CFR 1926.62, as well as GSA Specification 02090 Lead Based Paint Abatement Procedures.

2.13.4. Polychlorinated Biphenyl

For all caulking and/or waterproofing removal projects in buildings constructed prior to 1979, assume PCB contamination above 50 ppm. Testing of waste materials is not mandatory, but if no testing is conducted the waste must be classified per EPA as "PCB Bulk Waste". The Contractor's Industrial Hygiene Consultant has the option to test caulking, waterproofing materials, and waste generated for PCB content in accordance with 40 CFR 761. If the materials yield PCB levels below 50 ppm they can be disposed of as standard construction debris.

2.13.5. Mercury

The Contractor shall survey the project area for mercury containing devices per section 2.13.1. of this SOW. It is not anticipated that mercury will be encountered during work activities.

2.13.6. Universal / Hazardous Waste

The Contractor shall survey the project area for universal / hazardous waste per section 2.13.1. of this SOW. It is not anticipated that universal / hazardous waste will be encountered during work activities. All fluorescent bulbs shall be disposed of as universal hazardous waste.

2.13.7. Hazardous Materials Cost Tracking

The Contractor shall propose and invoice costs for all effort related to asbestos separately from costs for all efforts related to all other hazardous materials, both of which shall be separate from all other costs for GSA's accounting purposes.

2.13.8. Construction and Demolition (C&D) Debris

The Contractor shall divert a minimum of 50% of C&D waste from landfills and/or incinerators. The Contractor shall provide enough containers for collecting construction debris and construction materials to be recycled. At the beginning of the project, the Contractor shall submit a waste management plan with monthly update reports on progress to the COR/PM, as well as a final report documenting the total tons recycled, total tons reused, and total tons landfilled. The C&D Waste Management Plan and Report form is the required form for reporting, and is attached to this SOW.

Waste reports and associated documentation must be submitted with each invoice.

2.13.9. Protection of Stratospheric Ozone

The Contractor shall not allow the venting of refrigerants to the atmosphere in compliance with section 608 of the Clean Air Act (40 CFR Part 82).

2.13.10. Refrigerant Recovery and Significant New Alternatives Policy (SNAP) Requirements

The Contractor shall identify the type(s) and amount(s) of refrigerant(s) to be recovered as part of the project and their viability for reuse as recovered or after reclamation. GSA will determine and inform the Contractor of the disposition plan (reuse by GSA, reuse by the DOD, sale to a certified technician or reclaimer or disposal per RCRA regulations).

New chiller equipment, refrigerators, air conditioners, and heat pumps may only use refrigerants listed as “Acceptable” by the U.S. Environmental Protection Agency (EPA)’s Significant New Alternatives Policy (SNAP) Program, even if EPA's "Unacceptable as of" date is in the future.

2.13.11. Polycyclic Aromatic Hydrocarbons (PAHs)/Coal Tar Sealants

Note that high PAH sealants, including coal tar sealants, shall not be used. Sealcoat (two applications at a rate of 0.11 – 0.13 gallon/yd²) with a Coal Tar Pitch Emulsion (CTPE) sealer that meets or exceeds RP 355e and ASTM D5727 specifications and standards may be used (strive for 30% asphalt content). Include CTPE sealer specifications.

2.14. ENERGY AND WATER EFFICIENCY REQUIREMENTS

Refer to PBS Interim Core Building Standards for applicable laws and regulations to follow.

If any **pumps** or **motors** are purchased, they shall be NEMA Premium Efficiency rated and controlled by a Variable Frequency Drive (VFD).

If **insulation** is replaced or installed, it shall be the maximum feasible insulation on tanks, pipes, fittings, valves, and other associated equipment related to the domestic hot water system in the building.

2.14.1. Energy Rebates

All available rebates must be pursued and funds returned to GSA at the end of the project. Rebates are available through local utility for some project components.

REF: https://northwesternenergy.com/docs/default-source/default-document-library/billing-and-payment/e-programs/commercial-electric-rebate-2021.pdf.

2.14.2. HVAC System Replacement, HVAC System Controls, Cooling Tower Replacement

Refer to PBS Interim Core Building Standards, ASHRAE, International Energy Conservation Code (IECC), or International Green Construction Code (IGCC), as necessary.

2.15. BUILDING CONTROL SYSTEMS, INCLUDING BUILDING AUTOMATION SYSTEMS (BAS) AND BUILDING MONITORING AND CONTROL (BMC) SYSTEMS

The property does have a BAS or BMC.

The Contractor shall integrate all new equipment into the existing BAS or BMC and controllers. This includes interface compatibility, required programming, and commissioning to ensure performance meets required performance objectives per the *PBS Smart Buildings Directive, Smart Building Implementation Guide Requirements, Smart Buildings Program Guide, GSA Data Normalization for Building Automation Systems, GSA National Capital Region AMS Guide, Technology Policy for PBS Owned Building, Monitoring and Control Systems, and Niagara NiCS Statement*. If the BAS or BMC are on a Federal Government

network, or will be connected to the network by this project, then the Contractor shall comply with Section 2.16 of this SOW.

Existing BAS point list, sequences of operations, including start/stop logic, staging, temperature and level control, freeze protection/heat-trace control, alarm handling, and seasonal changeover are assumed to remain the same.

For the cooling-tower system and relocated VFDs, the Contractor shall:

Implement BAS trending of key cooling-tower and VFD points (e.g., condenser-water supply and return temperatures, basin level where applicable, fan speeds, VFD status, and key alarms) during the shakedown period and through Substantial Completion, with a minimum trending interval of 15 minutes unless otherwise approved. Trend logs shall be made available to FM and the Commissioning Agent.

Provide an operator-friendly narrative describing normal operation, seasonal modes, typical alarm conditions, and basic troubleshooting steps for the cooling-tower system and VFDs.

2.16. CONNECTIONS TO FEDERAL GOVERNMENT BUILDING SYSTEMS NETWORKS (BSN)

This project has an existing connecting to GSA's Network. All individuals working on this task order, and interfacing with a Federal Government internet or intranet network shall be HSPD-12 cleared prior to working on the network, regardless of the number of days engaged in the project. All work shall comply with Section 2.3.3. of this SOW.

HSPD-12, Tier 2 clearance is required for contractor(s) performing BAS work.

2.17. COMMISSIONING

2.17.1. Commissioning Agent

The GSA will retain the services of a Commissioning Agent (CxA) through the Construction Manager as Advisor (CMa) to verify that the Contractor has executed the project per the design. Commissioning services will include HVAC

2.17.2. Mechanical/HVAC Commissioning

The Contractor shall execute commissioning of the required systems identified in the project specifications. The Contractor shall complete the required commissioning checklists, and schedule commissioning of the systems with the CxA, and make adjustments to the systems until the systems pass the required tests including, but not limited to, equipment startup, testing, adjusting and balancing, demonstration of performance, calibration, sequence of operations, capacity verification, and communications interface with the existing building control and monitoring system.

2.18. PROJECT MANAGEMENT INFORMATION SYSTEM (PMIS): KAHUA

The Contractor shall provide all project documentation through GSA's electronic Project Management Information System (PMIS). GSA's current PMIS is Kahua. The Contractor shall request logins to the system for key personnel, after their HSPD-12 Final Fitness is complete and the Personal Identity Verification (PIV) card has been issued, through the PM/COR. The Contractor shall take the Kahua training in order to use the GSA PMIS Kahua. Training videos are available on You Tube.

2.19. MANUFACTURER REQUIREMENTS

The Contractor shall follow all manufacturers' instructions and best accepted trade practices during performance of this work.

2.20. BUILDING INFORMATION MODELING (BIM)

Not applicable.

2.21. ENERGY MODELING AND PERFORMANCE

Not applicable.

2.22. COBie

Not applicable.

2.23. METERS & SUBMETERS

Existing meters or panel CTs ensure they are maintained and ensure data integrity during changeover.

3. DESIGN STAGE

Not applicable.

4. CONSTRUCTION STAGE

This section details the services and submittals required to support the construction stage of the project.

4.1. GENERAL

The D/B Contractor shall provide all necessary labor, materials, supervision, management, quality control plan, and testing to produce work conforming to the contract documents and Issued for Construction (IFC) 100% Final Construction Documents created during the Design Phase

4.1.1. Project Supervision

The Contractor shall have a full-time Superintendent on-site at all times when work is performed. GSA may contract a third-party Construction Manager as Advisor (CMa) for daily on-site project management, monitoring, coordination and inspections. The Contractor's Superintendent shall coordinate with the GSA CMa and COR/PM on all project activities.

4.2. PERMITTING

The Contractor shall obtain and provide to the COR/PM all applicable permits such as, but not limited to, sheeting, shoring, and public space permits as required by federal, state or local jurisdictions; this includes application fees and any fines or penalties that result from noncompliance.

4.2.1. Permit for Welding, Cutting, or Brazing

The Contractor shall comply with NFPA 51B. The Contractor shall not conduct operations involving the use of open-flame, electrical arc equipment, or flammable substances until a permit for welding, cutting, and burning has been issued by the Government.

The Contractor shall complete GSA 1755 - Permit for Welding, Cutting, or Brazing. Contact the Building Management Office to obtain burn permits. 48 HRS notice required Burn permits are required for each separate occurrence. Burn Permits must be displayed at the work site during burning operation. The permit duration shall be one work shift for a specific location unless otherwise agreed to by the Government and Contractor.

All impairment requests and GSA_1755 forms must be submitted via the Smartsheet MOP process. https://app.smartsheetgov.com/b/form/74ac96f973f846ab9a28b91084f3262e

4.2.2. Utility Locating Services

Where sitework shall occur, utility locating services must be provided a minimum 7 calendar days in advance of any sitework work beginning.

4.2.3. Utility Outage

Utility outages (electrical, domestic water, chilled water, steam, gas) must be approved by the GSA Building Manager at least a 7 calendar day notice prior to the outage.

All unscheduled power and communication outages caused by the Contractor as a result of demolition or construction activities shall be restored immediately. The Contractor shall take all necessary precautions to minimize the possibility of such a disruption from occurring by conducting a thorough pre-construction survey. Failure to provide corrective actions for causing an outage as described above will result in the Government executing the repair and charging the Contractor for the full cost of the repair performed by others as well as the administrative costs of the repair.

4.2.4. Fire Protection and Life Safety System Impairment

All impairments to the building fire protection and fire alarm systems shall be submitted to the GSA building manager and COR/PM at least 72 hours prior to any work which could affect an active fire protection or life safety system commencing. Impairment requests shall be submitted via the facility management fire alarm and fire protection system impairment request form.

4.2.5. Fire Watch

When a required fire alarm system or automatic sprinkler system is out of service for more than 4 hours in a 24-hour period, the GSA Building Manager and AHJ shall be notified at least 7 calendar days in advance. Work cannot commence until the AHJ has given written approval of the proposed Fire Watch or building evacuation plan. Comply with NFPA 101 and OSHA 1910.252 for all Fire Watch requirements.

4.3. CONSTRUCTION SCHEDULE

The Contractor shall submit a Preliminary Schedule detailing the complete scope of work and proposed logical relationships with Bid. Provide within 14 calendar days after Award, a detailed, time-scaled computer-generated Project Schedule with activities representing each portion of the Work for the entire Contract Performance Period. Submit both as MS Project and PDF. The Project Schedule shall be updated on a monthly basis throughout the entire

Project performance period until Project completion is achieved. A revised project schedule shall be submitted with each invoice.

Throughout construction the Contractor shall provide a two-week look ahead with a description of on-site activities happening within the period, and a list of sub-contractors on-site. The two-week look ahead shall include the time of day the work will be performed, areas of the project site where the work will occur, any utility outages required, and any deliveries scheduled. The two-week look ahead shall be provided one week prior to the first day on the schedule and shall be updated weekly.

All owner furnished equipment and materials shall be identified with dates needed to be received by the Contractor.

All durations shall be shown in calendar days.

The Project Schedule shall use the Critical Path Method (CPM) for the planning, scheduling and reporting of the work to be performed under the contract.

No unspecified constraints, float suppression techniques, or use of activity durations, logic ties and/or sequences deemed unreasonable by GSA shall be used in the Project Schedule.

As defined by the Contract, the entire project performance period shall establish the Project Substantial Completion Date which shall be used in the planning and presentation of the Contractor's Project Schedule. GSA reserves the right not to approve any schedule deemed to have an unrealistic forecasted Substantial Completion Date. Government approval of an early completion Project Schedule shall not modify the Contractual Substantial Completion Date or Project Completion Date. The time difference between the Contractor's planned Substantial Completion Date and the Contract directed Substantial Completion Date shall be considered Project Float, jointly owned and for the mutual use of both the Contractor and GSA.

4.4. CONSTRUCTION PROGRESS REPORTS

Prepare an electronic daily construction report recording the following information including, but not limited to, events at the site. All daily reports are to be uploaded to Kahua daily, and the COR/PM shall be notified.

Each daily report shall include:

- List of subcontractors at the site
- List of separate contractors at the site
- Count of personnel at the site
- High and low temperatures, general weather conditions
- Accidents
- Meetings and significant decisions
- Unusual events
- Stoppages, delays, shortages, and losses
- Meter readings and similar recordings
- Emergency procedures
- Orders and requests of governing authorities
- Change Orders received or implemented
- Services connected or disconnected
- Equipment or system tests and startups
- Partial completions or occupancies

- Summary of all work performed

4.5. SHOP DRAWINGS / PRODUCT DATA SUBMISSIONS

The Contractor shall submit shop drawings and product data as stipulated in the project specifications, or as required by GSA, for acceptance prior to procurement of materials, installation, and construction. All submissions shall be made to the COR/PM. Prior to submitting shop drawings to the COR/PM, the Contractor shall review the shop drawings for completeness and shall establish that the shop drawings meet the contract requirements.

Shop drawings must illustrate manufacturer's recommended clearances around installed equipment for access and maintenance. Shop drawings shall be checked for compliance with manufacturer's recommended clearances.

Shop drawings shall be continuously annotated showing solutions to problems not encountered during survey period or anticipated. The government shall be appraised of all modifications, and each solution shall be submitted to the COR/PM for acceptance and approval within three days of change.

Shop drawings shall have the professional seals and signatures of the preparing Registered Professional Engineers. Shop drawings shall have the signatures of the reviewing Registered Professional Engineers and/or Architects.

4.5.1. Submittal Log

Contract to provide a Submittal Log for ALL submittals required by the contract documents. Provide this submittal log within 14 calendar days of the NTP. Provide updates of the Submittal Log every month.

4.5.2. Government Review

The Government review period for all submittals is 14 calendar days. Government rejection of submittals does not relieve the Contractor from responsibility of meeting the period of performance.

4.5.3. Changes

Should shop drawing and/or product data changes take place after Government review and approval, the Contractor shall submit the altered material within three days of the change.

4.5.4. Products for Submission

The Contractor shall provide shop drawings and product data for all systems, equipment and materials referenced within the Contract Documents.

4.6. SCHEDULE OF INSPECTIONS AND TESTS

Prepare and submit a schedule of inspections, tests and similar services required by the Contract Documents within 10 calendar days after issuance of the Notice to Proceed.

The Contractor shall coordinate the schedule of inspections and tests with the Construction Schedule and other related documents. Prepare the schedule in tabular form, including but not limited to the following information:

- Specification section number
- Description

- Identification of applicable standards
- Identification of methods to be used
- Number of inspections, tests or similar services
- Time schedule or time span
- Responsible entity
- Requirements for taking samples
- Unique characteristics

4.7. CONSTRUCTION INSPECTIONS

Construction inspections shall be scheduled, coordinated and performed to ensure that all specified materials, means and methods are installed per code compliance and contract. At a minimum, inspections must be performed at the following intervals:

- Site inspection (before staging crane and project related materials)
- Recommissioning if required
- Final inspection (after all construction is complete)

Inspections include, but are not limited to, adherence to construction documents, contract requirements, and the following:

- Equipment, materials and workmanship
- Labor and safety conditions
- Defects and omissions
- Problems encountered
- Qualitative and quantitative differences between construction contract documents and actual work in place

Key personnel from the Contractor and the A/E of Record shall be in attendance in-person at all inspections directly related to their discipline.

4.8. SPECIAL INSPECTIONS

The Contractor shall provide the coordination and services for the special inspections as indicated in the Schedule of Inspections and Testing, including, but not limited to:

- Coordination of the trades, quality control and the sequence of construction to ensure continuity of the system for the inspection(s)
- Not covering or encasing inspection areas prior to inspections
- Additional testing or retesting
- Associated services for the inspections
- Repair

The Contractor shall obtain and include the cost for special inspections as a separate line in the Contract Sum.

4.9. COMMISSIONING

The Contractor shall be fully engaged in the commissioning process. This includes completion of the Pre-Commissioning Checklists and coordination of resources needed to complete commissioning required in the Commissioning Plan.

The Contractor shall make the recommended corrections to commissioned systems for any system which fails to meet the required test parameters.

At least one witnessed cooling-tower performance test shall be conducted prior to final acceptance, with FM and the Commissioning Agent present. The test shall, at a minimum, verify condenser-water flow and cooling-tower approach temperature under representative load conditions, and demonstrate stable operation of the cooling-tower controls and VFDs.

4.10. QUALITY CONTROL PLAN

The Contractor shall develop, provide, and maintain a Quality Control Plan during the construction initiation of the project, based upon the USACE Three-Phases of Control, to accomplish the contract requirements. The Quality Control Plan shall identify personnel, procedures, instructions, records and forms to be used in carrying out the requirements of the Project. It will provide the means to maintain effective Quality Controls for construction, sampling and testing activities.

The Quality Control Plan shall also describe the quality assurance, quality control, and other technical activities that will be implemented to ensure that sampling and analyses are performed in order to meet applicable data quality objectives for the project.

4.10.1. Submissions

The Quality Control Plan shall be prepared and submitted within [14] calendar days of NTP. Construction shall not begin until the Quality Control Plan is approved.

4.10.2. Content

The Quality Control Plan shall identify and address the special factors impacting the construction and specify the considerations and provisions to be made by the Contractor during construction of the project. Consideration and provisions proposed to accommodate special factors impacting the construction shall be outlined and described in sufficient detail to clearly indicate all facets of how they relate to the coordinated construction of the project. The Contractor is not relieved from any requirements specified in this document should they not be included in the plan.

Special factors impacting construction include, but are not limited to:

- Work hour restrictions
- Construction phasing
- Utility outages
- Security and access requirements
- Safety Plan per OSHA requirements
- Staging and storage area space limitations
- The Contractor’s Quality Control (QC) program shall specifically include the following inspections and tests for the cooling-tower scope:
- Coil pressure tests and verification of coil integrity prior to final closure and startup, including documentation of test pressures and durations.
- Hydronic system flushing and cleanliness verification (e.g., strainers cleaned and acceptable turbidity or other agreed metric) for condenser-water and other impacted piping.
- Inspection of insulation and heat-trace installation on exterior piping, confirming correct routing, attachment, labeling, and continuity checks for heat-trace circuits.

- Verification of VFD programming, setpoints, and protective functions consistent with the approved sequences, including motor overload, minimum/maximum speed limits, and alarm reporting.
- BAS point-to-point checks for all new or modified cooling-tower and VFD points, confirming correct point mapping, units, command/status directionality, and alarm functionality.

QC documentation for these checks shall be provided to the COR/PM and Commissioning Agent prior to final acceptance.

4.10.3. Workmanship Standards

The Contractor shall initiate and maintain procedures to ensure personnel performing the work are skilled and knowledgeable in the methods and craftsmanship needed to produce the required levels of workmanship. The Contractor shall remove and replace work that does not comply with workmanship specified and standards recognized in the construction industry for the applications indicated. The Contractor shall remove work damaged during construction and replaced with work per the requirements of the drawings and specifications.

4.10.4. Manufacturer's Instructions

Where installations include manufactured products, comply with manufacturer's applicable installation instructions and recommendations to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in the Contract Documents.

4.10.5. Specialists

Where the individual sections of the specifications require specialists to perform the work, the contractor shall comply with the stated requirements. The assignment of a specialist shall not relieve the Contractor from complying with applicable regulations, union jurisdictional settlements or similar conventions, and the final responsibility for fulfillment of the entire requirements remains with the Contractor.

4.10.6. Minimum Quality and Quantity

The quality level, or quantity shown or specified, shall be the minimum required for the work. Except as otherwise indicated, the actual work shall comply exactly with that minimum or may be superior to that minimum within limits acceptable to GSA. Specified numeric values are either minimums or maximums as indicated, or as appropriate for the context of the requirements.

4.10.7. Availability of Tradespersons and Manufacturer's Field Services Representatives

The Contractor shall, at each progress or coordination meeting, review the availability of tradespersons, qualified manufacturers' representatives required in the specifications, and projected needs to accomplish work as scheduled. Require each subcontractor to report on events which might affect progress of work. Where possible, consider alternatives and take actions to avoid disputes and delays.

4.10.8. Inspection / Testing

The Contractor shall provide all inspection and testing, except where required by code, specification, or detailed elsewhere in the requirements of this document.

The Quality Control Plan shall identify the equipment and/or system to be inspected and/or tested, exact test(s) to be performed, measured parameters, and the stage of construction development when tests are to be performed. The Contractor shall organize inspection and/or testing of equipment in accordance with a recognized method which delineates all facets of construction. The method shall identify all equipment items, subsystems, and/or components which influence operation, function, quality or referenced on timeline charts to identify when tests should be performed. The Contractor is not relieved from the required performance test should these not be included in the plan.

4.10.9. Test Parameters

For each component to be inspected/adjusted/tested, identify each test parameter and represent each operating condition and all control modes of operation. Tests shall document any observed deficiencies or improper operation. Tests shall identify capacity readings, normal operation of equipment and verification of required automatic controls.

4.10.10. Test Report

For each inspection/adjustment/test parameter, identify the test(s) to be conducted, methodology, adjustments contemplated, test result comparison to that of performance parameters, the date and time of the test, and who will do the work. Consider the following as an example:

- Test
- Test Method
- Adjustments
- Performance Parameters
- Actual Performance
- Test Occurrence
- Test Performed by

4.10.11. Coordination with others

The Contractor shall cooperate with agencies and others performing required tests, inspections and other quality control services, and shall provide reasonable auxiliary services as requested. The Contractor shall notify the testing and inspection entities sufficiently in advance of operations to permit their timely assignment of personnel. Auxiliary services include but are not limited to the following:

- Provide access to the work
- Furnish incidental labor and facilities necessary to facilitate inspections and tests
- Take adequate quantities of representative samples of materials that require testing or assist the agency in taking samples
- Provide facilities for storage and curing test samples
- Deliver samples to testing laboratories
- Provide the agency with a preliminary design mix proposed for material mixes that require control by the testing agency

- Provide security and protection of samples and test equipment at the Project site
- Coordinate the sequence of activities to accommodate required services with a minimum of delay
- Coordinate to avoid the necessity of removing and replacing construction to accommodate inspections and tests
- Schedule times for inspections, tests, taking samples and similar activities

4.11. CONSTRUCTION INDOOR AIR QUALITY (IAQ) MANAGEMENT

The Contractor shall submit an air quality plan prior to any demolition or construction. Chapter 3 of the referenced “IAQ Guidelines for Occupied Buildings under Construction” outlines IAQ measures in five categories as listed below. The Construction IAQ Management Plan shall be organized in accordance with the SMACNA format and shall address measures to be implemented by the D/B Contractor and/or its subcontractors in each of the five categories, including subsections. All Subsections shall be listed in the Plan; items that are not applicable for this project should be listed as such by the Contractor.

- HVAC Protection
    - Return Side
    - Central Filtration
    - Supply Side
    - Duct Cleaning
- Source Control
    - Product Substitution
    - Modifying Equipment Operation
    - Changing Work Practices
    - Local Exhaust
    - Air Cleaning
    - Cover or Seal
- Pathway Interruption
    - Depressurize Work Area
    - Pressurize Occupied Space
    - Erect Barriers to Contain Construction Areas
    - Relocate Pollutant Sources
    - Temporarily Seal the Building
- Housekeeping
    - Routine Jobsite Cleaning
    - Protection of Stored Materials
    - Protection of Materials During and After Installation
- Scheduling
    - Airing-Out of New Materials
    - Sequencing of Finish Applications
    - Proper Curing of Concrete before Covering
    - Installation During Unoccupied Periods
    - Avoidance of Building Occupancy While Pollutants Are Present

4.11.1. Protection of Materials from Moisture Damage

The Contractor shall describe measures to prevent installed materials, or material stored on-site, from moisture damage in the Housekeeping section of the Construction IAQ Management Plan. This section shall also describe measures to be taken if moisture damage does occur to absorptive materials during the course of construction.

4.11.2. Installation and Replacement of Filtration Media

The Contractor shall provide a description of the filtration media in all ventilation equipment in the HVAC Protection section of the Construction IAQ Management Plan. The description shall include replacement criteria for filtration media during construction and confirmation of filtration media replacement for all equipment immediately prior to occupancy.

4.11.3. Sequence of Finish Installation for Materials

Where feasible, the Contractor shall install absorptive materials (referred to herein as “Type 2” products) after the installation of materials or finishes which have high short-term emissions of VOCs, formaldehyde, particulates, or other air-borne compounds (referred to herein as “Type 1” products).

Type 1 materials include, but are not limited to adhesives, sealants and glazing compounds (specifically those with petrochemical vehicles or carriers); paints; wood preservatives and finishes; control and/or expansion joint fillers; hard finishes requiring adhesive installation; gypsum board (with associated finish processes and products); and composite or engineered wood products with formaldehyde binders.

Type 2 materials include, but are not limited to, carpets; acoustical ceiling panels; fabric wall coverings; insulations (exposed to the airstream); upholstered furnishings; and other woven, fibrous or porous materials.

The Contractor shall develop a separate sequencing plan that identifies possible opportunities to meet the above-stated goals for the project. The plan shall be submitted to the COR/PM for review and acceptance.

4.12. SITE SPECIFIC SAFETY AND HEALTH PLAN

The Contractor shall develop, provide, and maintain a site specific Safety and Health Plan based upon OSHA requirements and the requirements of GSA-issued specifically 01546 as well as Section 2.11 requirements. The Plan shall be prepared and submitted within [14] calendar days of NTP. Construction shall not begin until the Plan is approved by National Safety and Health.

4.13. COORDINATION OF WORK

The Contractor shall coordinate the work of this contract with that of other contractors in the building at the same time.

4.14. REQUESTS FOR INFORMATION

Each RFI shall include a specific description of the issue requiring clarification and cite the specific related contract documents requiring clarification. RFI’s should only be submitted after performing due diligence to confirm that the contract requirements in question are in fact unclear or otherwise inadequate.

Upon receipt of the response to each RFI submitted, coordinate the response with all involved subcontractors to ensure understanding and appropriate action. The Contractor shall keep a log of all RFIs.

4.15. MODIFICATIONS / CHANGE ORDERS

A Contract Modification (Change Order) will only be approved if the CO agrees that additional work to be performed by the Contractor, based on resolution of an RFI is beyond the original scope of work. No work shall be performed until an executed contract modification has been awarded. Proposals from sub-contractors shall be included in any proposal requested by the Contracting Officer.

5. CONTRACT ADMINISTRATION

5.1. CONTRACTOR'S STAFF

5.1.1. Personnel Qualifications

The Contractor shall exclusively utilize the Key Personnel named and/or otherwise identified in the Contractor's bid submission materials to perform services required under this contract. In the event that any personnel named in the Contractor's Technical Qualifications Statement are unable to perform their duties due to death, illness, resignation from the Contractor's employment, the Contracting Officer's request for removal, or similar reasons, the Contractor shall, within five working days, submit to the CO in writing, the name and qualifications of proposed replacement with equal or superior qualifications. No substitution shall be made without prior approval of the CO. Any approved substitutions shall be made at no increase in the lump sum contract price.

5.1.2. Contracting Officer Acceptance

The CO shall accept or reject personnel proposed by the Contractor. The Contractor shall make a timely and prompt re-submittal to provide other personnel required to replace any that are rejected by the CO, both at initial submittal or any subsequent rejection or substitution of personnel.

5.1.3. Personnel Security Requirements

The Contractor shall comply with the Security Clearances requirements of the contract documents (see The Agreement) and GSAR 552.204-9 Personal Identity Verification Requirements. The Contractor shall review the CIO policy noted in the GSAR 552.204-9 on this GSA webpage on How Contractors Obtain a GSA Access Card.

Application for HSPD-12 clearance includes an electronic application process, in-person fingerprinting at a federal facility, and in-person pickup of the badge. For any individual whose Initial Fitness Determination requires that the applicant wait for Final Fitness Determination, the Contractor shall promptly provide a qualified replacement.

All personnel in this contract shall comply with all building security provisions and facility access requirements beyond HSPD-12. In addition to the GSA-issued badge, some Agencies require their Agency badges to be obtained, and worn at all times while in the building, this may require additional information to be submitted. Contact COR/PM for requirements.

No extensions for schedule will be given for failure to get personnel credentialed in a timely manner.

Building badges must be worn above the waist and below the neck in a visible fashion at all times by the Contractor while in the subject facility.

5.1.4. Escorting

All Contractor personnel not authorized to be unescorted shall be escorted at all times in compliance with the HSPD-12 escorting requirements. It is solely the responsibility of the Contractor to escort the labor crews/subcontractors and directly supervise during all durations of work. Government employees will not escort in place of the Contractor.

5.2. MEETINGS

The Contractor shall prepare and distribute an agenda for each Contractor hosted project meeting in advance of the meeting date. Agenda for all meetings shall include review of all open items (e.g. RFIs, Design Comments, Issue Tracking), a look-ahead to the next scheduled meeting, and a round robin opportunity for all participants to introduce items to the meeting.

The Contractor shall participate in pre-installation meeting(s) at the installation site. This meeting may include the Government's COR/PM, the Building Manager (or representation) and others. This is to ensure a clear and orderly installation that is coordinated with other trades working in the building.

The Contractor's in-person representation at all meetings shall include those individuals having knowledge of the agenda topics and authority to make decisions and commit resources.

The Contractor shall provide minutes of all Contractor hosted project meetings and presentations to all attendees identifying new and unresolved action items and associated responsible parties. Minutes shall be provided within 1 calendar day after each meeting.

5.2.1. Design Review Meetings

Not applicable.

5.2.2. Construction Kickoff Meeting

Before Construction NTP, the Contractor shall conduct a Construction Kickoff Meeting with the COR/PM and Building Manager to provide an overview of the project requirements including phasing, staging, working hours, vertical transportation of materials, and any other special building requirements.

5.2.3. Construction Progress Meetings

After Construction begins, the Contractor shall conduct, and a GSA representative and/or consultant, will attend weekly progress meetings. Field inspections by the COR/PM may coincide with these progress meetings.

5.3. COMMUNICATION

The Contractor shall reply to correspondence from the GSA, tenant agencies, and GSA contractors within 3 calendar days. The COR/PM shall be included on all correspondence.

5.4. PROJECT CLOSEOUT

The Contractor shall complete all punchlist items prior to the completion of project closeout.

5.4.1. Final Inspection and Test

Unless otherwise identified, manufacturer recommendations shall be followed for all inspection and test procedures.

5.4.2. As-Built Drawings

The Contractor shall provide "As-Built Drawings" and documents based upon actual site installation, as should be reflected within latest Record Drawings/documents. Should Record Drawings not present As-Built conditions, the Contractor shall perform field measurements and shop drawing take offs as required to support accurate As-Built drawings. Should the Government determine that variation exists between finished construction and the As-Built drawings, the Contractor shall correct drawings to the satisfaction of the government. Electronic As-Built drawings shall be submitted through Kahua and a GACA account.

5.4.3. Specification Manual

The Contractor shall provide electronic copies of the specification manual submitted through Kahua and a GACA account with complete sets of all final design specifications and related documents. Specifications shall be precisely edited to match installed features/systems/equipment and materials.

5.4.4. Product Data and Shop Drawing Manuals

The Contractor shall combine all product data submission material and shop drawings into hard copy manuals for reference during construction. Shop drawings shall be bound with product data or separately bound in drawing racks. The manuals shall be divided into sections corresponding to design specification section headings. The Contractor shall provide electronic copies submitted through Kahua and a GACA account containing all approved shop drawing submissions.

5.4.5. Operation and Maintenance Manual

The Contractor shall prepare a detailed Operation and Maintenance Manual identifying all procedures, tools, equipment and parts necessary to assure satisfactory operations and to provide maintenance per manufacturer's recommendations, including the following:

- Instruction manuals covering the care, preservation and maintenance of materials and finishes
- Operation, maintenance, troubleshooting and parts manuals for equipment and building operating systems
- Instruction to Government operating personnel in the operation and maintenance of building systems and equipment
- Equipment inventories

- Emergency manuals
- Electronic versions uploadable to GSA's NCMMS

The Contractor shall deliver electronic copies submitted through Kahua a GACA account to the PM/COR.

5.4.6. Maintenance Training

Maintenance Training shall address cycles of replacement, use of any special tools, and other product- or system-specific maintenance requirements. Include references to record documents, spare parts, material lists, warranties, maintenance agreements and similar continuing commitments.

5.4.7. Warranties

The Contractor is required to provide the government with three (3) original signed copies of all warranties. Warranty start date shall begin no earlier than the date of installation acceptance.

5.4.8. Attic Stock

Not Applicable

5.4.9. Energy Rebates

The Contractor shall provide confirmation to the COR/PM that High Performance Facilities Branch has received the energy rebate funds from the Rebate Administrator. E-mail the GSA National BA63 Fund Manager at HPFB@gsa.gov to obtain confirmation to provide to COR/PM.

5.4.10. Return All HSPD-12 and/or Tenant Agency Badges

The Contractor shall return all badges to the COR/PM that were issued for the project.

5.4.11. Release of Claims

The Contractor shall furnish the Government with a release of all claims against the Government under the applicable portions of this contract.

5.5. SCHEDULE OF VALUES

The Contractor shall submit a completed Schedule of Values no later than 14 calendar days after Award. Schedule of Values must include the following:

- Work activity – (by division or specific work activity)
- Dollar value of each specific work activity – both with an amount in dollars and cents, and as a percentage of the Contract Sum to the nearest one-hundredth percent. Adjust the amounts to total to the Contract Sum and the percentages to total 100 percent
- Line items for mobilization and demobilization
- Line item for closeout – 5%
- Total cost and proportionate share of general overhead and profit for each item. (i.e. no standalone item for Overhead, and Profit)

- Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at the government's option
- Separate prices for design stage and construction stage costs

Each item in the Schedule of Values and Requests for Payment shall be complete.

5.5.1. Modifications

Update affected work branches and subordinate line items and resubmit the Schedule of Values before the next Request for Payment when Modifications result in a change in the Contract Sum.

5.5.2. Options

Not applicable

5.6. FEE & PAYMENT

The Contractor shall be paid per the progress of construction according to the Schedule of Values, submitted on a monthly interval.

Prior to final payment under this Contract, the Contractor shall complete all items in Section 5.4 Project Closeout and furnish the Government with a release of all claims against the Government.

5.7. GOVERNMENT FURNISHED PROPERTY

There is no government furnished property for this contract.

6. ATTACHMENTS

- 100% Construction Document Drawings and Specifications
- C&D Waste Management Plan & Reporting Template (XLSX)
- *https://insite.gsa.gov/system/files/insite/CD_Waste_Management_Plan__Reporting_Template.xlsx*
- GSA Affiliated Customer Accounts (GACA)
- *https://insite.gsa.gov/cdnstatic/insite/GACA__GSAAffiliatedCustomerAccounts_May_2016-v2.pdf*
- NDA Document Security
  https://insite.gsa.gov/system/files/insite/NDA_Document_Security.pdf
- Specification Section 01546 – Safety and Health

Controlled Unclassified Information (CUI), documents and photographs too large to share here are available on GSA Affiliated Customer Account (GACA) in Gmail.