PERFORMANCE WORK STATEMENT (PWS)

Performance Work Statement

HVAC Replacement

Weather Forecast Office MOB

Mobile, AL

July 22, 2026

1.0 GENERAL INFORMATION & BACKGROUND

1.1 Background

The National Weather Service (NWS) Weather Forecast Office (WFO) Mobile AL (MOB) Mechanical HVAC System needs replacement. The major HVAC equipment is at the end of its useful life and requires replacement. The existing systems are beyond their useful life due to age and are inefficient.

1.2 Objectives

The primary objective of this contract is the replacement of major HVAC equipment, including:

- **AHU-1:** 15-ton split system serving the Operations Room (and associated condensing unit and refrigerant lines)
- **AHU-2:** 15-ton split system serving the Operations Room (and associated condensing unit and refrigerant lines)
- **AHU-3:** 10-ton split system serving the Administrative space (and associated condensing unit and refrigerant lines)
- **Electric Duct Heaters:** A total of nine (9) duct heaters

Additionally, the Contractor shall:

- Reseal all existing ductwork
- Replace the existing Building Automation System (BAS)
- Replace all existing HVAC control sensors and actuators (refer to as-builts for controls points list)
- Replace Intake Dampers
- Commission the newly installed systems

1.3 Critical Operational Requirements

⚠️ **MANDATORY CONTINUOUS OPERATION:** The weather forecast office will / must remain in active operation throughout the duration of the project. Care must be taken to ensure that HVAC disruptions to the space are minimized to allow for sustained operations 24/7/365.

The Contractor shall dispose of all demolished equipment and construction debris offsite. Recover, dispose, and/or recycle any and all refrigerants per industry standards and EPA regulations unless specifically noted otherwise in sections below where the Government wants to maintain possession of removed equipment.

A pre-bid site visit is **Mandatory** and required by any quoting PRIME Contractor. It is the responsibility of the Contractor to inform themselves of all existing conditions with the systems. The Contractor shall provide pricing for each task. Site visits can be coordinated with WFO's ESA:

- Jeremy Menhennett, Electronic Systems Analyst,
  jeremy.menhennett@noaa.gov
  (907) 891 - 4028

1.4 Place & Period of Performance

Place of Performance:
National Weather Service, Weather Forecast Office Mobile / Pensacola
8400 Airport Blvd #11
Mobile, AL 36608

Period of Performance: Provide a fully functional and operational system 180 days from the

Notice to Proceed (NTP).

2.0 APPLICABLE CODES, REFERENCES & ACRONYMS

2.1 Reference Standards

All clauses and references listed within the awarded contract are applicable to this PWS. In addition, the following references are identified specific to this PWS:

- **ASHRAE Standard 90.1:** Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings
- **SMACNA:** Seal Class B Sealing of all transverse joints and longitudinal seams
- **ASTM E1996:** Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes
- **AMCA 540:** Test Method for Louvers Impacted by Wind Borne Debris
- **MIL-STD-3007G-2019:** Standard Practice for Unified Facilities Criteria
- **OSHA 29 CFR 1926:** Construction and Renovation
- **OSHA 29 CFR 1910:** General Facility Operations
- **NFPA 70:** National Electrical Code, 2026 latest code edition
- **IEEE C2-2017:** National Electrical Safety Code (NESC)
- **IEEE 3003.1-2019:** Recommended Practice for Grounding of Industrial and Commercial Power Systems
- **IAPMO:** Uniform Mechanical Code (UMC), 2024 latest code edition
- **ANSI/ACCA Manual N:** Commercial Load Calculations
- **ANSI/ACCA Standard 180-2018:** Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems

2.2 Acronyms

Acronym	Definition	Acronym	Definition
AABC	Associated Air	**MERV**	Minimum Efficiency

Acronym	Definition	Acronym	Definition
	Balance Council		Reporting Value
ACCA	Air Conditioning Contractors of America	**MIC**	Meteorologist In-Charge
ACU	Air Condensing Unit	**MOB**	Mobile, AL
AHU	Air Handling Unit	**NAM**	NOAA Acquisition Manual
AMCA	Air Movement and Control Association	**NAO**	NOAA Administrative Order
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers	**NEBB**	National Environmental Balancing Bureau
ASTM	American Society for Testing and Materials	**NOAA**	National Oceanic and Atmospheric Administration
BACnet	Building Automation and Control Networks	**NWS**	National Weather Service
BAS	Building Automation System	**OEP**	Office Environmental Planning
BTL	BACnet Testing Laboratories	**OWS**	Operator WorkStation
CAR	Commerce Acquisition Regulation	**POC**	Point of Contact

Acronym	Definition	Acronym	Definition
CFM	Cubic Feet per Minute	**PWS**	Performance Work Statement
CO	Contracting Officer	**SCR**	Silicon Controlled Rectifier
COR	Contracting Officer Representative	**SMACNA**	Sheet Metal & Air Conditioning Contractors' National Assoc.
CRAC	Computer Room Air Conditioning	**TAB**	Test, Adjust, and Balance
DDC	Direct Digital Control	**UFGS**	Unified Facilities Guide Specifications
DOC	Department of Commerce	**WFO**	Weather Forecast Office
DX	Direct Expansion	**EDH**	Electrical Duct Heater
EPA	Environmental Protection Agency	**ESA**	Electronic Systems Analyst
FET	Facility Engineer Technician	**HOA**	Hand Off Auto

3.0 SCOPE OF WORK (TECHNICAL TASKS)

3.1 Task 1 - Replace Existing Split System AHU-1 & AHU-2

(Operations Area)

Replace two (2) existing split DX air handling units (Brand name or equal), AHU-1 (Model TTA180E400AA) & AHU-2 (Model TTA180E400AA). The air handling units are located in an elevated mechanical mezzanine. Refer to as-built drawings. The existing units are both 15-ton, air-cooled DX split systems. The Contractor shall remove and dispose of the existing air handling units, air-cooled condensing units, refrigeration line sets, and any other component associated with the existing units to be demolished. Do not reuse existing refrigerant line sets. Work includes all required services for delivery and installation of the new equipment, as well as the removal and disposal of the existing HVAC equipment.

The new air handling units shall be brand name or equal to the existing units (no mixing brands) and conform to the following requirements:

- Air handling unit shall be configured for both humidification and dehumidification
- Provide condensing unit with a 2-stage compressor
- Provide a low ambient kit and hail guard
- Provide a factory-applied corrosion coating to the condensing units
- All exterior electrical piping shall be rigid galvanized piping
- Insulate all copper piping to industry standards
- Provide filter bank that can accommodate a 2” deep MERV 8 pleated filter

The Contractor shall reconfigure ductwork, as necessary, to accommodate for the installation of the new air handling units. After installation, the Contractor shall test and balance the entire HVAC system (refer to as-built drawings for CFM quantities). Prior to balancing the system, the contractor shall inspect the existing ductwork to be reused and seal any found leaks.
The contractor shall provide up to 8 hours of end-user training which includes system operations, training of the complete system, system description and orientation, operation of the complete system, and troubleshooting procedures of likely failures.

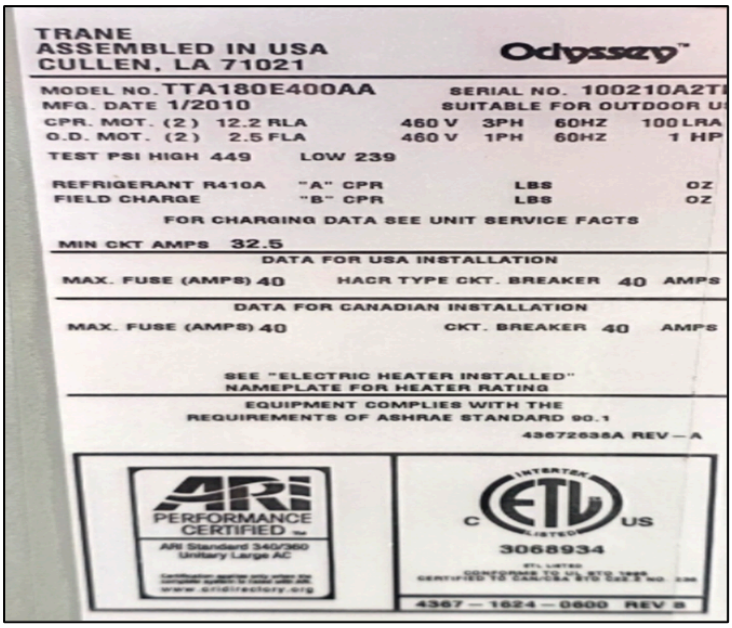

Figure 1.1: Existing ACU-1 Nameplate

Model No. TTA180E400AA

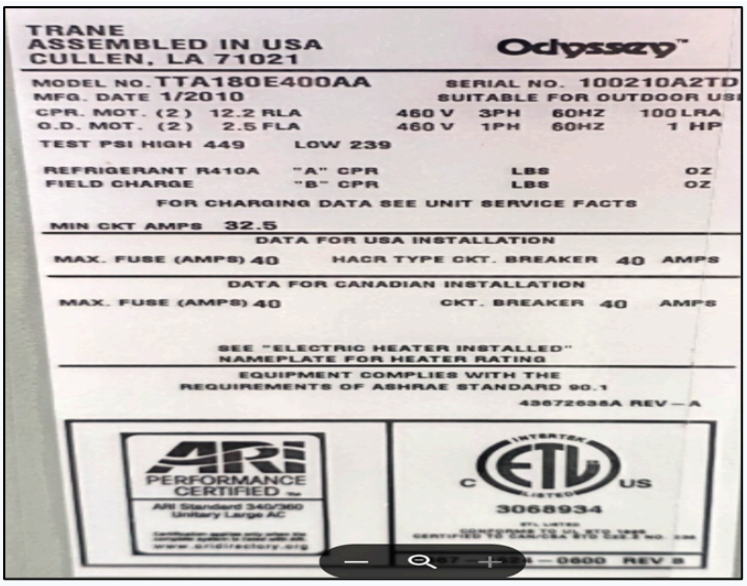

Figure 1.2: Existing ACU-2 Nameplate

Model No. TTA180E400AA

Figure 1.3: Existing Mezzanine AHU-1 & AHU-2 Configuration

Figure 1.4: Existing Exterior Piping and ACUs

3.2 Task 2 - Replace Existing Split System AHU-3 (Administrative Area)

Replace one (1) existing split DX air handling unit (Model TTA12044DAC03BS) with brand name or equivalent. This unit services the administrative areas within the office. The air handling unit is located in an elevated mechanical mezzanine. Refer to as-built drawings. The existing unit is a 10-ton, air-cooled DX split system.

Existing Condensing Unit (Government Property Retention):
The existing condensing unit will be removed but shall remain the property of the Government. It will be retained on-site at a location designated by the ESA or FET.

Existing Air Handling Unit and Refrigeration Line Sets:

The Contractor shall remove and dispose of the existing air handling unit, refrigeration line sets, and any other component associated with the existing air handling unit to be demolished. Do not reuse existing refrigerant line sets.

The new air handling unit and condensing unit shall be brand name or equal to the existing unit (no mixing brands) and conform to the following requirements:

- Air handling unit shall be configured for both humidification and dehumidification
- Provide condensing unit with a 2-stage compressor
- Provide a factory-applied corrosion coating to the condensing unit
- All exterior electrical piping shall be rigid galvanized piping
- Insulate all copper piping to industry standards
- Provide filter bank that can accommodate a 2” deep MERV 8 pleated filter

The Contractor shall reconfigure ductwork, as necessary, to accommodate for the installation of the new air handling unit. Work includes all required services for delivery and installation of the new equipment, as well as the removal and disposal of the existing HVAC equipment.
After installation, the Contractor shall test and balance the entire HVAC system (refer to as-built drawings for CFM quantities). Prior to balancing the system, the contractor shall inspect the existing ductwork to be reused and seal any found leaks.

Contractor-Provided Temporary HVAC: The Contractor must provide and maintain temporary AC units in the administrative area. These units must be maintained in good working order at the Contractor's expense until the building's permanent administrative AC system (Unit 3) is fully replaced and operational.

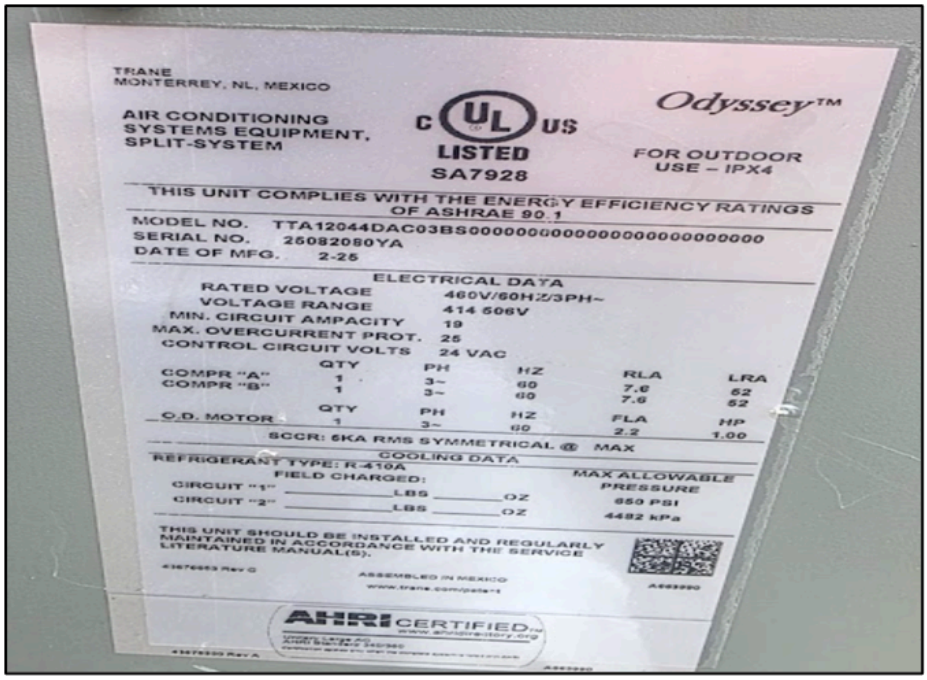

Figure 2.1: Existing ACU #3 Nameplate

Model No. TTA12044DAC03BS

Figure 2.2: Existing Mezzanine AHU #3 Unit

3.3 Task 3 - Replace Existing Duct Heaters

Replace a total of nine (9) electric duct heaters. See electric duct heater schedule below. Refer to as-built drawings for duct heater locations and duct heater sequences of operations. Duct heater schedule shown below can also be found in as-built drawings.

ELECTRIC DUCT HEATER SCHEDULE

Equip No.	Heating Cap. (kW)	Airflow (CFM)	E.A.T. DB (°F)	SP (IN WG)	Power	Steps	Accessories	Remarks
EDH-1	17.5	1190	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-2	50.0	3480	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-3	8.0	540	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-4	7.0	445	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-5	10.0	640	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-6	4.0	270	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-7	10.0	680	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-8	7.0	475	55.0	0.05	460V / 3PH	2	FS, DS	–
EDH-9	10.0	670	55.0	0.05	460V / 3PH	2	FS, DS	–

Note: MAINTAIN 3’-0” CLEARANCE IN FRONT OF ELECTRICAL CONTROL PANEL.

FS = Flow Switch | DS = Disconnect Switch

3.4 Task 4 - Clean and Reseal All Ductwork

The Contractor shall clean, reseal, and re-insulate all existing ductwork. Care should be taken to protect surrounding areas from dust and debris while performing this task. All existing furniture and equipment shall be covered and protected prior to commencing duct cleaning.

- Remove all grills and registers for cleaning, replace once duct cleaning has completed. Take special care to document the location and method of connection for all removed grills and registers. This documentation must be used for the reinstallation of all removed air terminal devices.
- Clean ducts until all loose debris is removed. Fog ducts as needed.
- Reseal all duct joints to minimize air loss within the system.
- Seal all ductwork to a SMACNA Seal Class B.
- Replace all duct insulation with new Duct insulation r-values shall conform with ASHRAE 90.1 insulation requirements.

3.5 Task 5 - Replace Intake Dampers

Remove and replace the existing building life-safety dampers and actuators with heavy-duty, Category 4 hurricane-rated systems designed to withstand severe pressure differentials, wind loads, and windborne debris protection standards (ASTM E1996 and AMCA 540). The contractor shall provide all engineering, labor, equipment, and certified materials necessary to decommission the existing units, prep the existing ductwork, and install the new high-velocity hurricane zone (HVHZ) compliant assemblies. All work must strictly adhere to current structural codes, local mechanical regulations, and emergency standby protocols to ensure continuous building pressurization and safety.

- **Demolition and Preparation:** Remove existing damaged dampers and actuators, clean structural openings, and inspect adjacent ductwork for integrity.
- **Equipment Installation:** Install new Category 4 hurricane-rated, missile-impact-resistant dampers and high-torque, fail-safe electronic actuators.
- **Integration and Testing:** Wire all components into the existing Building Automation System (BAS) and perform pressure-testing to verify proper emergency operation. Dampers must be able to be controlled directly from the Operations Area touchscreen display panel.
- **Compliance and Certification:** Provide final engineering signoffs, manufacturer warranties, and localized structural compliance certificates.

3.6 Task 6 - Replace Existing Building Automation System (BAS)

Remove and replace the existing BAS. Replace with the latest Automated Logic Building Automation System BACnet, BTL Certified system. **ALL REMOVED BAS EQUIPMENT MUST BE TURNED OVER TO THE GOVERNMENT AT THE COMPLETION OF THE PROJECT.** Components to be replaced and upgraded include, but are not limited to:

- Supervisory controller
- 3 AHU controllers
- 9 EDH controllers
- 10 thermostats

3.6.1 AHU-1 & AHU-2 Sequence of Operations

AHU-1 & AHU-2 shall be programmed to operate in a lead/lag rotation.

- **Scheduled Rotation:** AHU-1 operates as lead for 2 weeks, then AHU-2 operates for 2 weeks.
- **AHU Failure:** If lead AHU or condensing unit fails, the lag AHU shall be assigned as lead, and the failed system shall be commanded off. A lead unit failure alert shall be generated on the BAS.
- **High Discharge Temperature:** If the lead AHU's supply air temperature is above its supply air setpoint by 10°F for 10 minutes, the lead AHU shall be commanded off and the lag unit shall be commanded on as the new lead unit.
- **Maintenance Mode:** The lead/lag mode shall be manually commanded from the operator's workstation for required maintenance. While in this mode, an alarm shall be generated until the maintenance mode is released.
- **Fan Operation:**
    - The supply fan shall be automatically controlled to stop and start whenever the hand-off-auto (HOA) switch is in the Automatic position. The supply fan shall start and stop manually whenever the HOA switch is in the Hand or Off position respectively.
    - The supply fan shall run continuously. If the fan command and fan status does not match for 30 seconds, the fan shall be commanded off. An AHU failure alert shall be generated on the BAS. The lag AHU shall be commanded on and will operate as the new lead unit.
    - On general power loss and restart there shall be a 1-minute delay on fan restart. A power loss should not be considered an AHU failure.
- **Dehumidification:** Both AHU shall be designed to have dehumidification capabilities. The humidity setpoint for AHU-1 & AHU-2 (the Operations Room) is to be 45% (adj).

- **Mechanical Cooling Control:** The Direct Digital Control (DDC) system shall poll all associated room cooling delta T's. A cooling request shall be generated when any delta T exceeds 1°F (room temperature – room cooling setpoint). Two cooling requests shall be generated when a separate room sensor exceeds a delta T of 1°F or the same room exceeds a delta T of 2°F. When more than one (adj) cooling request is generated, the first stage solenoid valve shall be enabled. When there are more than two (adj) cooling requests, and stage one has been enabled for at least 10 minutes (adj), the second stage solenoid valve will be enabled to cycle. The first stage shall be disabled when there are no cooling requests and the first stage has been on for ten minutes (adj).
- **Supply Air Temperature Control:** If the system is in either economizer mode or requiring second stage cooling, the DDC shall control to maintain supply air temperature setpoint. Supply air temperature is reset in relation to associated room cooling delta T as described above. As room delta T increases, the supply air temperature setpoint decreases between a range of 55 – 70°F. The initial setpoint shall be 60°F. The control algorithm shall be Trim and Respond.
- **Electric Duct Heater Control:**
    - When there is a proof of fan status from AHU-1 or AHU-2, the electric duct heaters shall be enabled on.
    - The DDC shall modulate the Silicon-Controlled Rectifier (SCR) heat to maintain discharge air setpoint. The discharge air setpoint is reset in relation to room heating delta T.
    - The discharge air shall be reset from 50°F to 95°F (adj) as the delta T varies from 0 to 3°F (adj). The room heating setpoint shall be 70°F (adj).
    - The room temperature sensor shall allow occupants to adjust heating/cooling setpoints by +/- 2°F (adj).

3.6.2 AHU-3 Sequence of Operations

- AHU-3 shall be enabled to run from a time of day schedule. The system shall be occupied from 0630 to 1600 Monday through Friday (adj). It shall be unoccupied all other times.
- During unoccupied times, if any associated occupant override button is pushed, the system shall become occupied for 1 hour (adj).
- During unoccupied times and not in unoccupied override, the DDC shall control to maintain night setback temperatures. If any associated room temperature drops to 55°F (adj) or rises to 80°F (adj), AHU-3 shall start. AHU-3 shall continue to run until all associated room temperatures are 5°F above/below the night setback temperature, respectively.
- **Fan Operation:** The supply fan shall be automatically controlled to stop and start whenever the hand-off-auto (HOA) switch is in the Automatic position. The supply fan shall start and stop manually whenever the HOA switch is in the Hand or Off position

respectively. The supply fan shall run continuously during occupied mode. On general power loss and restart there shall be a 1-minute delay on fan restart. During unoccupied times the fan shall be off, unless commanded to maintain night setback temperatures.

- **Electric Duct Heater Control:**
  - When there is a proof of fan status from AHU-3, the electric duct heaters shall be enabled on.
  - The DDC shall modulate the SCR heat to maintain discharge air setpoint. The discharge air setpoint is reset in relation to room heating delta T. Room heating delta T is the difference between room heating setpoint and room temperature.
  - The discharge air shall be reset from 50°F to 95°F (adj) as the delta T varies from 0 to 3°F (adj). The room heating setpoint shall be 70°F (adj).
  - The room temperature sensor shall allow occupants to adjust heating/cooling setpoints by +/- 2°F (adj).

3.6.3 CRAC Unit 1 & 2 Integration

Integrate existing Liebert CRAC units into the new BAS network. Program the units to operate in an automated lead / lag rotation schedule. Ensure redundant backup capabilities for the critical data center environment.

- **Scheduled Rotation:** CRAC-1 operates as lead for 2 weeks, then CRAC-2 operates for 2 weeks.
- **CRAC Failure:** If lead CRAC unit or condensing unit fails, the lag CRAC unit shall be assigned as lead, and the failed system shall be commanded off. A lead unit failure alert shall be generated on the BAS.
- **High Discharge Temperature:** If the lead CRAC unit's supply air temperature is above its supply air setpoint by 10°F for 10 minutes, the lead CRAC unit shall be commanded off and the lag unit shall be commanded on as the new lead unit.
- **Maintenance Mode:** The lead/lag mode shall be manually commanded from the operator's workstation for required maintenance. While in this mode, an alarm shall be generated until the maintenance mode is released.

3.6.4 Point Mapping & Remote BAS Display Panel

Point Mapping Requirements:

- Space temperature and humidity
- Unit operational status and fan speed
- Component status (compressors, heaters, humidifiers)
- Active alarms (airflow loss, sensor failure, high / low limits)
- Remote setpoint control adjustments

Remote BAS Display (Operations Room):
Install a new remote BAS display panel (minimum 15-inch screen) in the Operations area. The new monitor must be compatible with the existing system. The monitor shall display the status for each AHU, ACU, CRAC Unit, and Humidifier. The alarm status should also be displayed. In addition to displaying equipment status, the remote display panel shall also allow for the clearing and resetting of alarms, control of intake dampers, and for the enabling of the Emergency Shut Off button (which shuts off all HVAC equipment). This Emergency Shut Off feature should have a two-step software prompt to satisfy the "Do you really want to shut off?" or “Are you sure?” requirement to prevent accidental deactivation.

3.6.5 Alarms, Safeties, Interlocks & General BAS Requirements

Alarms, Safeties, and Interlocks:

- The following shall generate an alarm at the operator workstation (OWS):
  - Dirty filter
  - Any active duct smoke detector
- The following shall generate an alarm at the OWS, stop the lead system, and start the lag system:
  - Lead AHU fails for 60 seconds (adj)
  - Lead condensing unit fails to prove status for 10 minutes (adj)
  - High discharge temperature
  - Room temperature above cooling setpoint by 3°F (adj)
  - Room temperature below heating setpoint by 3°F (adj)
  - Discharge air temperature above setpoint by 5°F (adj) for 10 minutes (adj)
  - Discharge air temperature below setpoint by 5°F (adj) for 10 minutes (adj)

Commissioning Mode Requirements:

- The commissioning mode shall have a high priority command.
- All analog inputs shall have the capability of being calibrated from the OWS.
- All control setpoints, measured values, output control commands, and alarm limit values noted above shall be configured to allow manual override from the OWS for commissioning of control loops.
- All damper actuators shall be able to be manually commanded to a specific percent open/close value (i.e. override control algorithms).
- Start/stop or open/close commands shall be configured to allow manual override from the OWS for commissioning.
- All points shall have the capability of being trended.

General BAS Requirements:

- All Outside Air intake dampers shall be configured to be closed when the office emergency generator is running. Condensing Units shall be programmed to supply cooling as needed when dampers are closed.

- Install Current Transformers (CT Switches) for each compressor and fan motor.
- Provide all necessary wiring, hardware, and parts required for a complete and operational system.
- Provide all necessary start/stop relays and current devices.
- Provide all system programming for controllers.
- Provide all necessary temperature, pressure, and humidity sensors compatible to new controllers to include but not limited to: outside air temperature, outside air humidity, duct pressure, duct temperature, supply temperatures, discharge air temperatures, and return temperatures.
- Provide all system site graphic upgrades.
- Provide all labor and project management during normal working hours.
- Provide complete system startup and commissioning of all HVAC Controls installed.
- Training of the complete system, to be provided by the contractor and will include system description and orientation, operation of the complete system, web-based access and troubleshooting procedures of likely failures. 8 hours will be needed.
- Provide Operation and Maintenance manuals, including detailed operation procedures, drawings, a detailed bill of materials, and a recommended spare parts list.

3.7 Task 7 - Testing, Adjusting, and Balancing (TAB)

After all controls have been replaced, the Contractor shall Test, Adjust and Balance the new HVAC system (in its entirety). TAB will be conducted by a NEBB Certified TAB Firm or AABC Certified Agency. Perform air measurements, adjustments, and balancing on all HVAC equipment, fans, pumps, and terminal devices (VAV boxes, coils, diffusers). Performance tolerance: Airflow: 10% for fans/AHUs; 10% for terminal units. Submit certified TAB reports on approved SMACNA/NEBB/AABC forms, including air readings, equipment model/size, motor data (V/A/HP), and final settings.

3.8 Task 8 - Commissioning and Formal Closeout

The Contractor will contract with a third-party commissioning agent to validate operations of new equipment. The Commissioning Agent shall provide a systematic process of documentation, adjustment, testing, and verification to confirm that HVAC systems (AHUs & BAS) perform interactively, efficiently, and in accordance with the Contract Documents.

3.8.1 Construction Phase

- **On-Site Inspections:** Conduct multi-point field inspections in coordination with NWS to verify proper installation, physical integrity, and complete compliance with project specifications.

- **Maintenance Accessibility:** Audit equipment spacing, clearance paths, and component placement to guarantee safe, unhindered access for future preventative maintenance.
- **Pre-Functional Checklists:** Complete and sign off on static component checklists, factory test verifications, and component tagging prior to any equipment startup.
- **Test Planning:** Develop, review, and schedule performance verification tests (PVTs) for all HVAC equipment under full and part-load conditions.
- **Issues Log Management:** Maintain a centralized, real-time issues log detailing all non-conformance items, tracking them from initial detection to final resolution.

3.8.2 Performance Verification Test (PVT)

- **Setpoint Demonstration:** Conduct operational performance verification tests to demonstrate that new units consistently maintain desired environmental setpoints.
- **Continuous Operations Window:** Execute the PVT over a minimum of one work week (5 consecutive days) of uninterrupted, fully automated HVAC systems operation.
- **Pre-Requisite Timing:** Complete all baseline PVT protocols, data logging, and system balancing before requesting final acceptance of the work.

3.8.3 Deficiency Handling & Resolution Process

- **Identification and Logging:** Formally document any inspection or PVT failure in the issues log within 24 hours of discovery, noting the exact technical deviation.
- **Corrective Action Planning:** Require the installation contractor to submit a written remediation plan and root-cause analysis for any major system deficiency.
- **Re-Testing Protocols:** Re-inspect and re-execute full performance verification tests on corrected equipment at the Contractor's expense to ensure compliance.
- **Escalation Path:** Escalate unresolved deficiencies or recurring test failures to project management for withholding of progress payments or structural remedies.

3.8.4 Formal Project Closeout & Warranty Commencement

- **Final Documentation Package:** Submit a comprehensive Final Commissioning Report compiled by the Commissioning Agent, featuring all signed checklists, raw test data logs, and a fully closed issues log showing zero open deficiencies.
- **Operations & Maintenance (O&M) Manuals:** Deliver certified O&M manuals, approved system submittals, and as-built BAS graphics/wiring diagrams to the owner.
- **Owner Training:** Conduct and document formalized instructional walkthroughs and technical training sessions for NWS facilities and operations staff.
- **Final Acceptance & Sign-Off:** Issue a formal Certificate of Final Acceptance jointly signed by NWS, the Contractor, and the Commissioning Agent.
- **Warranty Start Trigger:** Establish the exact date of the signed Certificate of Final

Acceptance as the official, binding commencement date for all equipment and system warranties.

4.0 GENERAL CONTRACT REQUIREMENTS & COMPLIANCE

4.1 Environmental, Health & Safety Compliance

The Contractor shall comply with all local, state, and Federal environmental, health, and safety regulations while conducting this work. In addition, the Contractor shall ensure that all work complies with applicable, current codes and be responsible for all licenses, permits, and fees required to complete this project. Typical codes are referenced here:

- Occupational Safety & Health Standards (OSHA) Safety Requirements
- Uniform Building Code (UBC)
- Uniform Facilities Criteria (UFC)
- American National Standards Institute (ANSI)
- American Society of Testing & Materials (ASTM)
- American Society of Heating, Refrigerating, and Air-conditioning Engineers (ASHRAE)
- Sheet Metal & Air Conditioning Contractor's Association (SMACNA)
- Applicable local, state, and federal codes and standards
- Energy Star Certification Program

4.2 Waste Disposal

The Contractor will be required to properly remove and dispose of all waste material in an environmentally friendly manner unless specifically noted otherwise in sections above.

4.3 Project Guidelines

The Project shall follow the guidelines stated in the Statement of Work, site diagrams, blueprint, and any contractor provided quoted documents. All modifications must be submitted and approved by the Contracting Officer.

4.4 Hours of Operation & Facility Access

Work shall be performed between 7:00am & 4:00pm Central time Monday thru Friday unless

otherwise approved by the COR. The Contractor agrees to observe all Federal Holidays, and any other day off work designated by Federal Statute, Executive Order, or Presidential Proclamation.

A Project sign-in sheet shall be completed each day for all contractors, contractor employees, and sub-contractors on site. The Contractor will provide their own work space.

4.5 Government Contact & Representation

The Contracting Officer Representative (COR) will serve as the Government's point of contact for all submissions.

4.6 Davis-Bacon Act Compliance

The Contractor shall comply with the current wages of the Davis-Bacon Act. This project is strictly subject to the Davis-Bacon Act (FAR 52.222-6). The Contractor and all subcontractors shall pay all mechanics and laborers prevailing wages and benefits in accordance with the applicable Department of Labor (DOL) Wage Determination incorporated into this contract. The Contractor is required to submit weekly certified payroll records (using Form WH-347 or equivalent) to the Contracting Officer's Representative (COR) for all weeks in which contract work is performed.

4.7 Bonds and Insurance

The Contractor shall secure and provide executed Performance and Payment Bonds (in accordance with FAR 52.228-15) and a Certificate of Insurance (COI) confirming compliance with all specified liability and coverage limits (in accordance with FAR 52.228-5). These original documents must be submitted to the Contracting Officer for review and approval within ten (10) calendar days after receipt of the Notice of Award. No on-site work or physical mobilization may occur, and the formal Notice to Proceed (NTP) will not be issued, until all required bonds and insurance certificates are approved by the Government.

4.8 Safety and Emergency Plan

- The Contractor shall observe and institute all applicable OSHA safety requirements and procedures to prevent accidents and injuries to both Contractor and Government employees including 40 CFR 1926 Subpart M for fall protection requirements.
- The Contractor shall designate one person as Safety Coordinator for purposes of communication between the Contractor and the National Weather Service COR Primary Contact: James Moore ; james.moore@noaa.gov.

- The Contractor shall provide a Safety Plan and Procedure to protect employees from being injured while on the job site. Submit the plan to the Contracting Officer for review and approval.
- The Contractor shall provide an Emergency Plan and Procedure to provide immediate care for an employee injured while on the job site. Submit the plan to the Contracting Officer for review and approval.

4.9 Government-Provided Materials and/or Services

Exclusions: Unless otherwise indicated elsewhere in this SOW, the Government will provide no data, materials, equipment, and/or services to the Contractor. Any and all research required to fulfill the SOW described herein shall be the responsibility of the Contractor. The Government retains the right to request the Contractor to acquire additional information on behalf of the Government.
Attachments/Documents: The Government does not guarantee that any documents provided as attachments to be free from discrepancies, ambiguities, errors, omissions, or changing conditions. It is the responsibility of the Contractor to confirm existing conditions and resolve discrepancies between documents.

4.10 Contractor Personnel & Security Requirements

The Contractor's employees visiting a Government facility shall wear an identification badge that, at a minimum, displays the Contractor name, the employee's photo, name, clearance level, and badge expiration date. Visiting Contractor employees shall comply with all Government escort rules and requirements. All Contractor employees shall identify themselves as Contractors when their status is not readily apparent and display all identification and visitor badges in plain view above the waist at all times.

The Contractor's employees shall comply with all applicable Government regulations, policies, and procedures (e.g., fire, safety, sanitation, environmental protection, security, "off limits" areas, etc.) when visiting or working at Government facilities. The Contractor shall ensure Contractor employees present a professional appearance at all times and that their conduct shall not reflect discredit on the United States or the Department of Commerce (DOC). The Project Manager shall ensure Contractor employees understand and abide by DOC established rules, regulations, and policies concerning safety and security.

The Government may, at its sole discretion (in coordination with the CO where practical), direct the Contractor to remove any Contractor employee from NOAA facilities for misconduct or security reasons. Removal does not relieve the Contractor of the responsibility to continue providing the services required under the contract. The CO will provide the Contractor with a

written explanation to support any request to remove an employee.

4.11 Key Personnel & Responsibilities

The contractor will provide the following Key Personnel positions prior to the start of the project. These positions can be occupied by the same person but must be able to fulfill both positions. If Key Personnel changes are made, the CO must be notified in writing prior to the change.

- **Project Manager:** Must be able to represent the contractor in regards to contract requirements and issues.
- **Onsite Manager (Superintendent):** Must be at the location of the project whenever work is being performed by contractor or subcontractors. Communication to NWS COR/POC must be through this position.

The Contractor's Project Manager and On-Site Manager must be readily available during working hours to ensure the project stays on schedule. Response times to inquiries from the CO or COR shall not exceed the following limits:

- **Emergencies/Safety Issues:** Immediate response required, not to exceed one (1) hour by phone or text.
- **Routine Project Updates/Questions:** Response required via phone or email within 24-48 hours.

Unresolved or repeated failure to meet these response times will be documented as a performance issue and may result in a request to replace the non-responsive personnel.

4.12 Points of Contact

James Moore, COR - james.moore@noaa.gov / (816) 343-8360
Marcus Watson, Facilities Engineering Technician – marcus.watson@noaa.gov | (318) 250-5622
Barry Floyd, Project Manager – barry.floyd@noaa.gov | (619) 922-4798
Jeremy Menhennett, On-Site Electronic Systems Analyst (ESA) – jeremy.menhennett@noaa.gov | (907) 891-4028

4.13 Project Plan & Schedule

The contractor must submit a draft Project Schedule with payment milestones during their quote submission. The contractor (awardee) must provide a final Project Plan & Schedule to the COR no later than thirty (30) calendar days after the Post Award Conference (Only applicable for the

awardee and if the Government has feedback for the submitted project schedule/payment milestones Gantt chart that was provided during quote submission).

Inclement weather in the forecast could necessitate a delay in start of work in order to ensure continuity of weather forecasting operations at DOC/NOAA/NWS.

4.14 Post Award Conference

The contractor must attend a Post Award Conference with the CO and COR no later than ten (10) calendar days after the date of award. The purpose of the Post Award Conference (chaired by the Contracting Officer and/or COR) is to discuss technical and contracting objectives of this contract and review the contractor's project plan/schedule that was submitted during the quote submission. The Post Award Conference will be held via a teleconference.

4.15 Site Completion: Progress updates, Field activity reports, photographs

The contractor must issue to the COR and LPOC a brief daily verbal progress update (prior to leaving the site) summarizing all work performed and identification of any critical issues before leaving the customer site. Contractor must also note any environmental concerns and off-line equipment.

The contractor must issue a written Weekly Field Activity Report (signed typewritten report on company letterhead) listing status of each piece of equipment, site conditions, tasks completed, and percent completion of the project, along with any applicable notes and observations to the COR within three (3) business days. These must include five to ten (5-10) photos representative of the completed work.

At the completion of all daily field work, the contractor must remove from the area all trash, rubbish, packing material, and debris caused by its operations, leaving the job site clean.

4.16 Progress Reports

The Project Manager must provide a Monthly Progress Report to the COR via electronic mail within three (3) business days after the following month’s work. This report must include: (1) a summary of all contractor work performed, (2) schedule status, (3) an updated project schedule against original milestones, (4) an assessment of technical progress, and (5) any contractor concerns or recommendations. The final progress report must include, at minimum, ten (10)

photos representative of the completed project.

4.17 Notification of Delays

The Contractor shall notify both the Contracting Officer (CO) and the Contracting Officer's Representative (COR) via email immediately, and in no event later than twenty-four (24) hours, upon identifying any actual or potential project delay. This written notification must detail the cause of the delay, the specific impact on the project schedule, and proposed mitigation steps. Timely email notification to both the CO and COR is a strict condition precedent to any request for an extension of time or an equitable adjustment. Failure by the Contractor to provide such immediate email notification shall constitute an absolute waiver of the Contractor's right to seek an extension of performance, additional compensation, or an equitable adjustment at a later date. The Contractor shall remain solely responsible for all impacts and costs resulting from uncommunicated delays.

4.18 Warranty Terms

The Contractor shall provide a written warranty for the installed system for a period of one (1) year for parts and one (1) year for labor from the date of final project acceptance.

5.0 DELIVERABLES & SUBMITTAL SPECIFICATIONS

5.1 Deliverables Schedule Table

#	Item	Quantity	Due Date	Deliver To	Reference
1	Sexual Assault & Harassment Training	1 per employee	Within 30 days of award, yearly by Mar 1st	CO & COR	NAM 1330-52.222-70
2	Security Processing Requirements	1 per employee	As determined for personnel working on site	COR	CAR 1352.237-71

#	Item	Quantity	Due Date	Deliver To	Reference
3	Safety & Emergency Plan	1 Each	Within 5 days of Kickoff Meeting	CO & COR	NOAA 209-10 / OEP & PWS Section 4.8
4	Post award Conference & Associated Documents	1 Each	Within 15 days of award	CO & COR	NAO 217-104 & PWS Section 4.14
5	Meeting Minutes	As needed	Within 5 days of meetings held w/ Gov.	CO & COR	NAO 217-104
6	Submittals (Product Data, BAS, TAB, etc.)	As required	As required for approval	CO & COR	NAO 217-112
7	Daily Progress Reports	1 Daily	Daily while on site	POCs	PWS Section 4.15
8	Monthly Progress Reports	1 Monthly	Monthly	CO & COR	PWS Section 4.16
9	Tentative Project Schedule (Gantt Chart)	1 Each	Upon submission of quote	CO & COR	RFQ Section 6, Factor 2
10	Payment & Performance Bonds / COI	1 Package	Within 10 days post-award	CO	RFQ 52.228-15 & 52.228-5 & PWS Section 4.7

#	Item	Quantity	Due Date	Deliver To	Reference
11	Certified Payrolls	Weekly	Weekly in accordance with Davis-Bacon	CO & COR	FAR 52.222-6 & PWS Section 4.6
12	Final Project Plan & Schedule	1 Each	Within 30 days post-conference	CO & COR	PWS Section 4.13
13	CLOSEOUT Package (Warranties & As-Builts)	1 electronic soft copy + 2 hard copies (distributed POCs listed in PWS	Upon final project acceptance walkthrough	COR	PWS Sections 5.2 & 5.3
14	Submittals	As required	As required for approval	CO & COR	PWS Section 5.2

5.2 Submittal Review Process

Submittals shall be sent to:

Marcus Watson – marcus.watson@noaa.gov
Barry Floyd – barry.floyd@noaa.gov
Matthew DeGeorge – matthew.degeorge@noaa.gov

The Government requires 5 business days to review all submittals. The COR will review deliverables prior to acceptance and provide the contractor with an email that provides documented reasons for non-acceptance. If the deliverable is acceptable, the COR will send an email to the Contractor notifying it that the deliverable has been accepted.

The COR will have the right to reject or require correction of any deficiencies found in the deliverables that are contrary to the information contained in the Contractor's accepted quote. In

the event of a rejected deliverable, the Contractor will be notified in writing by the COR of the specific reasons for rejection. The Contractor may have an opportunity to correct the rejected deliverable and return it per delivery instructions. The COR will have 5 business days to review deliverables and make comments. The Contractor must have 5 business days to make corrections and redeliver.

All other review times and schedules for deliverables must be agreed upon by the parties based on the final approved Project Plan/schedule. The Contractor must be responsible for timely delivery to Government personnel in the agreed upon review chain, at each stage of the review. The Contractor must work with personnel reviewing the deliverables to assure that the established schedule is maintained.

Required Submittals Summary:

- Payment & Performance Bonds/Liability Insurance – 10 days after award
- Final Project Schedule including all milestones (if necessary) – within 30 days of Post Award Conference
- HVAC Manufacturer Data – Prior to ordering
- Building Automation System – Manufacturer data
- Testing and Balancing Report
- Construction Commissioning Report
- Final Commissioning Report
- Building Automation System – Programming Diagrams
- Operations and Maintenance Manuals – Prior to closeout
- Spare Parts Data
- Warranty Management Plan & Warranty Tags – Prior to closeout
- As-Built Drawings – Prior to closeout

****All submittals shall become the property of the U.S. Government****

5.3 As-Built & Record Drawings Guidelines

5.3.1 Definitions

As-Built Drawings: Marked-up drawings maintained by the Contractor on-site depicting actual conditions and deviations from Contract Documents. These deviations and additions may result from coordination required by contract modifications, RFIs, Contracting Officer direction, Contractor design, or differing site conditions. Maintain as-builts throughout construction as red-lined hard copies on site. These files serve as the basis for record drawings.

Record Drawings: The final compilation of actual conditions reflected in the as-built drawings.

5.3.2 Source Drawing Files & Terms of Use

Request full electronic drawings in source format for Record Drawing preparation after award and at least 30 days prior to required use.

Data contained on these electronic files must not be used for any purpose other than as convenience in the preparation of construction drawings and data for the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waive to the fullest extent permitted by law, any claim or cause of action against the Government arising out of or in connection with the use of these electronic files.

The Contractor must indemnify and hold the Government harmless against all damages, liabilities, or costs arising out of the use of electronic files. In the event of conflict between signed/sealed construction documents and furnished source drawing files, signed/sealed documents govern. If Contractor uses source drawing files to produce construction drawings, remove all previous indicia of ownership (seals, logos, signatures, initials, and dates).

5.3.3 As-Built Markup Guidelines and Content

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for information only.

Markup Guidelines:

- Provide and maintain two black line print copies of PDF contract drawings for As-Built Drawings. Maintain red-lined hard copies and red-lined PDF files. Submit 30 days prior to Beneficial Occupancy Date (BOD).
- Use base colors:
    - **Special (Blue):** Items requiring special information, coordination, or detailing notes.
    - **Deletions (Red):** Over-strike deleted graphic items (lines), lettering in notes and leaders.
    - **Additions (Green):** Added items, lettering in notes and leaders.
- Provide a legend if colors other than red, green, and blue are used.
- Use frequent written explanations on markup drawings to describe changes.
- Wherever a revision is made, update related section views, details, legend, profiles, plans, elevations, schedules, notes, and callouts to avoid conflicting data.
- Incorporate all shop and fabrication drawings into markup drawings.

As-Built Drawings Content Requirements:

- Actual location, kinds, and sizes of sub-surface utility lines (offset dimensions to two permanently fixed surface features). Locate valves, splice boxes, and record average depth below surface.
- Location and dimensions of changes within building structure.
- Layout and schematic drawings of electrical circuits and piping.
- Correct grade, elevations, cross section, or alignment of roads, earthwork, structures, or utilities.
- Changes in design details or additional information from working drawings (shop drawings, pipe sizes, insulation, foundations).
- Topography, invert elevations, and grades of drainage installed/affected.
- Changes resulting from final inspection.
- Selected option where contract drawings/specifications present options.
- Contour map of final borrow pit/spoil area elevations if Government property is used.
- Systems designed or enhanced by Contractor (HVAC controls, fire alarm, fire sprinkler, irrigation).
- Changes in location of equipment and architectural features.
- Modifications and actual location of concrete anchors and joints.
- Unusual or uncharted obstructions encountered.
- Location, extent, thickness, and size of stone protection.

5.4 Spare Parts Data Specifications

Submit two copies of the Spare Parts Data list. Indicate manufacturer's name, part number, and stock level required for test and balance, pre-commissioning, maintenance, and repair activities. List those items that may be standard to the normal maintenance of the system.

5.5 Warranty Management Plan & Tagging Specifications

5.5.1 Warranty Management Plan

Develop a warranty management plan relevant to FAR 52.246-21 (Warranty of Construction). Submit one set at least 30 days before planned pre-warranty conference. Include all required actions and documents to assure the Government receives all entitled warranties.
The warranty management plan must include:

- Roles and responsibilities of personnel associated with the warranty process, including POCs and phone numbers.
- Name, address, phone number, and email of guarantor's nearest representative.
- List and status of delivery of Certificates of Warranty for extended warranty items.

- As-Built Record of Equipment and Materials list for each warranted item (Item name, model/serial numbers, location, manufacturer POC, spare parts sources, terms of warranty, warranty start date/duration).
- Summary of maintenance procedures required to keep warranty in force.
- Cross-references to pertinent O&M manuals.
- Callout organization and expected response/repair times.
- Plans for attending 9-month post-construction warranty inspection conducted by Government.
- Procedure and status of tagging equipment covered by warranties longer than 1 year.
- Copies of instructions posted near selected critical equipment.

5.5.2 Warranty Tags

At installation, tag each warranted item with a durable, oil- and water-resistant tag approved by Contracting Officer. Attach with copper wire and spray with silicone waterproof coating.
Submit two record copies of warranty tags showing layout and design. Date of acceptance and QC signature remain blank until project acceptance.
Show the following information on the tag:

- Model number & Serial number
- Contract number
- Warranty period (from/to)
- Inspector's signature
- Construction Contractor name, address, phone number
- Warranty contact name, address, phone number
- Warranty response time priority code
- **WARNING – PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.**

END OF STATEMENT OF WORK