

Statement of Work (SOW)
Air Handler Replacement

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Statement of Work (SOW)
Air Handler Replacement
Vision Statement

To replace all air handlers, associated valves, controllers and dampeners.

1 Background

Existing Air Handler Units are twenty years old and need to be replaced. There are twelve air handlers that range from seven thousand to twenty thousand Cubic Feet per Minute (CFM). Existing AHU's will be replaced with like for like units matching the existing CFM capabilities of the unit (Attachment follows). The walls in the AHU rooms will be painted and the floors will be epoxied upon the installation of each air handler. Each air handler is located in its own secure mechanical room, six units on the second floor, four units on the third floor. 2 units on the ground level share a large mechanical room.

1.1 Scope

Contractor will provide all material and labor to replace the 12 Air handler units (AHUs) at the St Petersburg VARO as well as clean the ductwork supplied by each AHU. Contractor will replace each AHU with a new, more efficient AHU capable of providing equal performance capabilities as existing AHU's. Each AHU will include a UV-C light for ultraviolet disinfection and the cabinet will be composed of stainless-steel construction. As part of this requirement all the chiller lines valves shall be upgraded to electric automated butterfly control valves. All Variable Frequency Drives (VFDs) will be replaced and must be able to connect to the existing Building Automation System (BAS). All existing Network Automation Engines (NAEs) and Field Enhanced Controllers (FECs) will be upgraded to the latest versions and also must connect to the BAS. The duct work will be cleaned as the air handlers are being replaced and portions of the ducting will be replaced as needed. All new AHU's will contain Johnson Controls metasys controllers, NAE's and FEC's connected to the Field Controller (FC) buss. NO AHU to include its associated controllers will be on an N2 buss. Existing ductwork is in relatively good condition and will not be replaced, with the exception of any torn or damaged ductwork. Contractor will perform a test, run and balance (TAB) after all AHU's are installed. All ductwork supply and return to the AHU's will be cleaned prior to operating the AHU's. All AHU's will be removed and installed over a weekend (Friday 1800HRS - Sunday 1800HRS) all other work needed to be performed can be accomplished during normal business hrs. 0600hrs -1800hrs M-F.

Apply and install all items in accordance with manufacturer's written instructions. Refer conflicts between the manufacturer's instructions and the contract documents to the COR for resolution. Provide written hard copies and computer files on CD or DVD of manufacturers installation instructions to the COR with submittals prior to commencing installation of any item. Installation of the item will not be allowed to proceed until the recommendations are received and approved by the VA. Failure to furnish these recommendations is a cause for rejection of the material. All items that require access, such as for operating, cleaning, servicing, maintenance, and calibration, shall be easily and safely accessible by persons standing at floor level, or standing on permanent platforms, without the use of portable ladders. Examples of these items include, but are not limited to, all types of valves, filters and strainers, transmitters, control devices. Prior to commencing installation work, refer conflicts between this requirement and contract documents to the COR for resolution. Failure of the Contractor to resolve or point out any issues will result in the Contractor correcting at no additional cost or time to the Government.

Complete coordination/shop drawings shall be required in accordance with Paragraph, SUBMITTALS. Construction work shall not start on any system until the coordination/shop drawings have been approved by VA.

Workmanship/craftsmanship will be of the highest quality and standards. The VA reserves the right to reject any work based on poor quality of workmanship this work shall be removed and done again at no additional cost or time to the Government.

Upon request by Government, provide lists of previous installations for selected items of equipment. Include contact persons who will serve as references, with current telephone numbers and e-mail addresses. Guaranty: Warranty of Construction, FAR

1.2 Submittals

If the project is phased submit complete phasing plan/schedule with manpower levels prior to commencing work. The phasing plan shall be detailed enough to provide milestones in the process that can be verified. Contractor shall make all necessary field measurements and investigations to assure that the equipment and assemblies will meet contract requirements, and all equipment that requires regular maintenance, calibration, etc. are accessible from the floor or permanent work platform. It is the Contractors responsibility to ensure all submittals meet the VA specifications as provided in **attachments** and requirements and it is assumed by the VA that all submittals do meet the VA specifications unless the Contractor has requested a variance in writing and approved by COR prior to the submittal. If at any time during the project, it is found that any item does not meet the VA specifications and there was no variance approval the Contractor shall correct at no additional cost or time to the Government even if a submittal was approved.

2. Non-Personal Services

The Government shall neither supervise contractor employees nor control the method by which the contractor performs the required tasks. Under no circumstances shall the Government assign tasks to, or prepare work schedules for, individual contractor employees. It shall be the responsibility of the contractor to manage its employees and to guard against any actions that are of the nature of personal services or give the perception of personal services. If the contractor believes that any actions constitute, or are perceived to constitute personal services, it shall be the contractor's responsibility to notify the Contracting Officer (CO) immediately.

2.1 Business Relations

The contractor shall successfully integrate and coordinate all activity needed to execute the requirement. The contractor shall manage the timeliness, completeness, and quality of problem identification. The contractor shall provide corrective action plans, proposal submittals, timely identification of issues, and effective management of subcontractors. The contractor shall seek to ensure customer satisfaction and professional and ethical behavior of all contractor personnel.

2.2 Contract Management

The contractor shall establish clear organizational lines of authority and responsibility to ensure effective management of the resources assigned to the requirement. The contractor must maintain continuity between the support operations at **[9500 Bay Pines Blvd. St Petersburg Florida 33708]** and the contractor's corporate offices.

2.3 Contract Administration

The contractor shall establish processes and assign appropriate resources to effectively administer the requirement. The contractor shall respond to Government requests for contractual actions as soon as possible but no later than one hour upon notification. The contractor shall have a single point of contact between the Government and Contractor personnel assigned to support contracts or task orders. The contractor will be working with the assigned CO. The contractor shall assign work effort and maintaining proper and accurate time keeping records of personnel assigned to work on the requirement.

2.4 Subcontract Management

The contractor shall be responsible for any subcontract management necessary to integrate work performed on this requirement and shall be responsible and accountable for subcontractor performance on this requirement. The prime contractor will manage work distribution to ensure there are no Organizational Conflict of Interest (OCI) considerations. Contractors may add subcontractors to their team after notification and approval to the Contracting Officer (CO) and Contracting Officer Representative (COR). Cross teaming may or may not be permitted.

2.5 Location and Hours of Work

Accomplishment of the results contained in this SOW requires work at [9500 Bay Pines Blvd St Petersburg FL 33708 and at various contractor, subcontractor, and Government facilities (mainly in the continental United States). Normal workdays are Monday through Friday except US Federal Holidays. Because of the nature of work to be performed, the demolition and installation of this requirement will need to be performed after 1800hrs Friday until 2300hrs Sunday. The rest of the work involved can be performed Monday – Friday 6:00 AM – 6:00 PM

3 Performance Requirements

The following section specifies the Performance Objectives and Performance Elements for the contract.

3.1 Phase 1 Pre-construction

3.1.1 Osha Safety Training.

All contractors must have completed Occupational Safety and Health Administration (OSHA) safety training.

Performance Standards

a) STD: 30hrs of training for supervisors and 10 hrs. for laborers

AQL: 100%

Deliverables

A004 OSHA Training Certificates

3.1.2 Obtain all materials and permits.

Contractor will ensure that all materials necessary to perform this statement of work are on hand or readily accessible as to not delay the project prior to commencement of work. The contractor will also ensure that all work permits, licenses, bonds, accident prevention plan, scheduled of products used Material safety data sheets are on hand prior to beginning construction.

Performance Standards

a) STD: Compliant with all federal, state and county laws and regulations.

AQL: 100%

3.1.3 Staging of dumpster and temporary air handler unit and misc. tools and equipment.

Contractor will coordinate with the COR for placement of dumpster and any equipment on job site.

Performance Standards

a) STD: In compliance and coordinated with COR.

3.1.4 Provide a work breakdown schedule (WBS).

Contractor will provide the COR within ten days from the Notice To Proceed (NTP) a detailed work schedule outlining how the contractor will meet the conditions of this contract. The work to be performed for this contract will take place on the weekends/nights to avoid any conflicts with day to day operations.

Performance Standards

a) STD: WBS

AQL: 100%

3.1.5 Information Assurance and Security awareness training.

Contractor will coordinate with the COR for the Information Assurance training, provided by the COR within 10 days of the NTP.

3.2 Phase 2 Demolition & Construction

The contractor will provide all necessary materials, expertise and labor to perform the removal and replacement of twelve Air Handlers located on three floors of the St Petersburg Regional Office as well as clean all HVAC ductwork in BLD 46.

3.2.1 Removal of air handlers

There are two air handlers (see Attachment1) on the ground level, six on the second floor and four on the third floor. Air handlers will be disassembled in their current location of the mechanical closets. All bulk waste will be disposed of properly in accordance with all applicable laws and regulations.

In an open office cubicle environment, maintain the operation, cleanliness and safety. Government personnel will be carrying on their normal duties. Confine the work to the immediate area concerned; maintain cleanliness and wet down demolished materials to eliminate dust. Debris accumulated in the area to the detriment of plant operation is prohibited. Perform all flame cutting to maintain the fire safety integrity of this facility. Adequate fire extinguishing facilities shall be available at all times. Perform all work in accordance with recognized fire protection standards. Inspection will be made by personnel of the Support Services Division, and Contractor shall follow all directives of the COR with regard to rigging, safety, fire safety, and maintenance of operations.

Unless specified otherwise, all piping, wiring, conduit, and other devices associated with the equipment not re-used in the new work shall be completely removed from Government property. This includes all concrete pads, pipe, valves, fittings, insulation, and all hangers including the top connection and any fastenings to building structural systems. All openings shall be sealed after removal of equipment, pipes, ducts, and other penetrations in roof, walls, floors, in an approved manner and in accordance with contract documents where specifically covered. Structural integrity of the building system shall be maintained. Reference shall also be made to the contract documents of the other disciplines in the project for additional facilities to be demolished or handled.

All indicated Johnson control metasys devices, controllers, drives and related hardware shall remain Government property and shall be removed and delivered to COR and stored as directed. The Contractor shall remove all other material and equipment, devices and demolition debris under these contract documents. Such material shall be removed from Government property expeditiously and shall not be allowed to accumulate.

Performance Standards

a) STD: Remove and replace each air handler and associated ductwork, valves and controllers.

AQL: 100%

3.2.2 Install new air handlers

The new Air handlers will be set up per manufacturers specifications. Contractor will provide a temporary air handler for the duration of the down time. The newly installed air handler will be installed and function per the manufacture's specifications. Contractor will perform a Test and Balance (TAB) after installation of a new AHU. Contractor will not proceed to the removal of the next AHU until the COR has verified units are performing to written specifications. Acceptance of Work for Government Operation: As new equipment, systems and facilities are made available for operation and these items are deemed of beneficial use to the Government, inspections will be made, and tests will be performed. Based on the inspections, a list of contract deficiencies will be issued to the Contractor. After correction of deficiencies as necessary for beneficial use, the Contracting Officer will process necessary acceptance and the equipment will then be under the control and operation of Government personnel.

Performance Standards

a) STD: Install each air handler

AQL: 100%

3.2.3 Install new valves on chiller lines.

Replace all old valves Chilled Water Supply (CWS) & Chilled Water Return (CWR) with new automated electric valves and tie into metasys building automation. In addition, an Electromagnetic Flow Meter (EFM) similar to the Onicon F-3200 will be installed on each AHU CWS and CWR line. EFM will be connected and visible on the metasys BAS.

Performance Standards

a) STD: All valves will be graphically displayed on the on existing metasys BAS.

AQL: Valves can be monitored and manipulated by HVAC technicians via metasys.

3.2.4 Install new Metasys graphic controllers for Air handlers.

Contractor will remove old Johnson Control AS AHU 103 logic boards supporting the N2 Buss and replace with a network automation engine (NAE) or a Network Control Engine (NCE) boards. To ensure programmability the contractor will also provide a laptop computer / tablet capable preloaded with the control configuration tool, CCT. The CCT is required and necessary when used in conjunction with the metasys system to configure, simulate and commission the FEC family of controllers.

Performance Standards

a) STD: Install the latest version of metasys graphic controllers.

AQL: 100%

3.2.5 Clean Associated Ductwork

As part of this requirement all duct work shall be cleaned by a Certified Air Duct Cleaning Specialist. **See Attachment #2**, ductwork dimensions for ductwork associated with the 12 air handlers.

3.2.6 Paint mechanical room walls.

All mechanical room walls will be painted with Sherwin Williams paint #SW6057 Malted Milk flat. Prior to final inspection and acceptance of the plant and facilities for beneficial use by the Government, the plant facilities, equipment and systems shall be thoroughly cleaned and painted.

The following material and equipment shall not be painted

- a. Motors, controllers, control switches, and safety switches.
- b. Control and interlock devices.
- c. Regulators.
- d. Pressure reducing valves.
- e. Control valves and thermostatic elements.
- f. Lubrication devices and grease fittings.
- g. Copper, brass, aluminum, stainless steel and bronze surfaces.
- h. Valve stems and rotating shafts.
- i. Pressure gauges and thermometers.
- j. Glass.
- k. Nameplates.

Performance Standards

a) STD: Must be performed after hours and use zero Volatile Organic Compounds (VOC) paint

AQL: Cannot smell paint after rooms have been painted.

3.3 Phase 3 post construction

3.3.1 Walk Through and punch list.

Contractor will conduct a pre-punch list prior to conducting a joint walk through and punch list with the COR.

Performance Standards

a) STD: Contractor corrects all faults identified on joint punch list.

AQL: Corrections made within 48hrs.

3.3.2 Copies of OEM manuals, warranties, commissioning.

Contractor will provide the COR all appropriate Original Equipment Manufacturer (OEM) and user manuals for new AHU's and JCI network controllers.

Performance Standards

a) STD: Contractor provides two hard copies and one digital copy of all OEM manuals for each unique piece of equipment provided, i.e., AHUs, NAEs, FECs EFM's, etc.

AQL: OEM manuals provided prior final invoice submission.

4 Special Requirements

The bulk of the work performed for the removal and replacement of the air handlers will be accomplished over weekends.

4.1 Security and Safety

Equipment - The Contractor shall provide all safety equipment/devices, MSDS, personal protective equipment and clothing as required for its employees. Copies of all MSDS shall be provided to the COR. OSHA - Prior to commencing work the Contractor shall provide proof that an OSHA designated "competent person (CP)(29 CFR 1926.20(b)(2) will maintain a presence at the work site whenever the general or subcontractors are not present. The Contractor as well as the on-site supervisor will have completed no less than 30 hours of OSHA approved safety training. All other Contractor employees will have no less than 10 hours of OSHA approved safety training.

Safety Plan Contractor will provide a site-specific safety plan as well as an Activity Hazards Analysis. An example of a VA approved AHA can be found at <http://www.usace.army.mil/Portals/2/docs/AHA2.pdf>

Compliance - The Contractor shall comply with all applicable Federal, State and local legal requirements regarding workers health and safety. The requirements include but are not limited to, those found in Federal and State Occupational Safety and Health Act (OSHA) statutes and regulations, such as applicable provisions of Title 29, Code of Federal Regulations (CFR) Parts 1910 and 1926. Contractor is solely responsible for determining the legal requirements that apply to activities, and shall ensure safe and healthful working conditions for its employees

During normal business hours (6am - 6pm) the Contractor is required to enter and exit the St Petersburg VARO through the front entrance. Entering or exiting the building through any other door will require VARO approval and an escort will be required. Upon entering the building, the contractor and/or contractor employees will be required to show proof of identity (must have a valid photo ID) as well as pass through a security screening. Due to the sensitivity and personal information processed at the VARO the Contractor as well as the Contractors employees will be required to complete VA Privacy and Information Security and Rules of Behavior Training. This training will be provided by the COR to all Contractor employees to include sub-contractor employees. The Contractor will coordinate and schedule the training with the COR. Training must be completed within 10 working days from the contract award date. In addition, VA Form 20-0334 and form VA Form 0711 must be completed by the Contractor, contractor employees, and sub-contractors and original copies turned in to the COR prior beginning construction. See Attachment 2 - Forms to this SOW for VA Form 20-0344 and VA Form 0711.

4.2 Government Furnished Materials

The Government will make available space for tools and equipment while working on this project.

4.3 Environmental Requirements

The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non-mandatory is the contractors' option.

Mandatory compliance (list)

Non-Mandatory document (list)

4.4 Applicable Directives

The contractor shall comply with all documents listed below as mandatory and referenced under paragraph 3.0, Performance Requirements. Compliance with documents listed as non-mandatory is the contractors' option.

Mandatory compliance (list)

Non-Mandatory document (list)

4.5 Quality

This section describes the Quality Control components for this effort. The following sub-sections provide details of various considerations on this effort.

4.5.1 Quality Control

The Contractor shall develop a QCP and maintain an effective quality control program to ensure services are performed in accordance with the contract and this SOW. The Contractor shall develop and implement

procedures to identify, prevent, and ensure non-recurrence of defective services. The Contractors QCP is the means by which he assures himself that his work complies with the requirement of the contract. The finalized QCP will be accepted by the Government at the time of the award of the Task/Delivery Order. The Contracting Officer may notify the Contractor of required modifications to the plan during the period of performance. The Contractor then shall coordinate suggested modifications and obtain acceptance of the plan by the Contracting Officer. Any modifications to the program during the period of performance shall be provided to the Contracting Officer for review no later than 10 working days prior to effective date of the change. The QCP shall be subject to the Governments review and approval. The Government may find the QCP "unacceptable" whenever the Contractors procedures do not accomplish quality control objective(s). The Contractor shall revise the QCP within 10 working days from receipt of notice that QCP is found "unacceptable."

4.5.2 Quality Assurance Surveillance Plan (QASP)

The Government shall monitor the Contractors performance under this Order in accordance with the Governments QASP.

5 Deliverables

The contractor shall provide deliverables as referenced in the QASP.

Identifier	Name	Description
A001	Warranty for equipment	
A002	Installation and operating manuals for each air handler	
A003	Valve warranty and paperwork	
A004	OSHA Training Certificates	

6 Attachments