

Statement of Work (SOW)

Repair and Replace Deficient HVAC Unit Components in Fort Pulaski Visitor Center and Comfort Stations, Headquarters, and Maintenance Shop

Required Services

The contractor shall provide all labor, tools, equipment, materials and supervision required to complete diagnostic testing, repairs, and replacement of necessary assets and components of ductwork, vents, handlers, and mini-split systems for the units in four buildings at Fort Pulaski National Monument (FOPU) as outlined below. Contractor shall also provide everything necessary to construct elevated wooden equipment platforms to protect exterior HVAC equipment from coastal flooding and hurricane storm surge. All work shall be based on a pre-bid site visit, field measurements, and system design performed by the Contractor and approved by Contracting Officer's Representative (COR) prior to installation.

1. Maintenance Shop (Location 66518) – Service the current operational high-efficiency multi-zone ductless mini-split heat pump system serving five (5) conditioned zones. The system shall be installed in accordance with manufacturer specifications, applicable codes, and industry best practices. Additionally, install a new HVAC unit and associated connections. The system shall be installed in accordance with manufacturer specifications, applicable codes, and industry best practices.
2. Visitor Center (Location 66529) – Service the current operational high-efficiency multi-zone ductless mini-split heat pump system serving four (4) conditioned zones. Additionally, install complete 10-ton HVAC unit and associated connections. The system shall be installed in accordance with manufacturer specifications, applicable codes, and industry best practices.
3. VC Comfort Station (Location 81677) - Service the current operational high-efficiency multi-zone ductless mini-split heat pump system serving two (2) conditioned zones. The system shall be installed in accordance with manufacturer specifications, applicable codes, and industry best practices.
4. Cottage (Location 66517) – Service the current HVAC system and operational high-efficiency multi-zone ductless mini-split heat pump system serving one (1) conditioned zone.

See Appendix A for photos of existing equipment per building.

Location of Work

Fort Pulaski National Monument – Headquarters Building
41 Cockspur Island Road
Savannah, GA
31410

Fort Pulaski National Monument – Maintenance Shop
50 Cockspur Island Road
Savannah, GA
31410

Fort Pulaski National Monument – Visitor Center and Visitor Center Comfort Stations
101 Fort Pulaski Road
Savannah, GA
31410

Pre-Bid Site Survey

A pre-bid site walk-through must be performed prior to bid with Contracting Officer's Representative or other authorized park management representative present. Any provided site plans, maps, or photos cannot be used as a substitute for a site visit.

Period of Performance

Within 30 days after award, unless otherwise negotiated and agreed by park and Contracting Officer.

1. General Requirements

- Site to be left clean and orderly at the end of each day. No materials are to be left onsite that are not easily secured. The park assumes no liability for any equipment not properly secured that is stolen, missing, or damaged over the course of the contract period of performance.
- Disposal of any demolished building, site, or landscape materials will be done in accordance with applicable state and local laws. Park waste management facilities may not be used for disposal of any construction material.
- Site is to be closed to all visitor and vehicle traffic while work is being performed as well as while the site is left unattended. This is to be done with signage and appropriate, neatly placed closures such as stanchions, construction fencing, cones, or other sturdy materials.
- The contractor must exercise care and caution in all activities performed on or near historic structures, landscapes, and other National Park Service (NPS) properties. Measures must be taken to protect the landscape and surrounding areas from damage during the execution of the work, ensuring that no harm comes to the landscapes, sites, or park structures throughout the project.
- Contractor is to stop work and alert the park's contracting officer representative (COR) or other authorized management representative of any accidental damage immediately so that it can be documented and handled according to proper NPS procedure.
- Contractor will be held responsible for all restoration of the site, both landscape and building, if damaged while work is performed. The restoration must bring the worksite to the appearance and condition that existed prior to the work being performed. The contractor is responsible for cleanup, removal, and disposal of any debris associated with their installation of equipment and restoration of the building if damaged.
- All planned service interruptions must be coordinated with the park, and the time-of-service interruption must be as short as possible. The park shall be notified of any scheduled utility or access interruptions as early as possible, but no less than 48 hours prior to any planned interruption. The contractor shall inform the government as soon as it is known that there may be an unplanned interruption.

2A. Project Specific Requirements

2.1 Measurement, Design, and Specification – All Systems

Contractor shall perform a pre-installation site visit to verify existing conditions and confirm system design prior to procurement and installation. Work under this section includes:

- Field measurements of all conditioned zones per building
- Verification of mounting locations for indoor and outdoor units
- Electrical load verification and panel capacity review
- Confirmation that existing refrigerant line sets meet manufacturer specifications (size, length, elevation change, condition)
- Confirmation of structural adequacy of mounting surfaces
- Performance of load calculations (if required)
- Final equipment selection and sizing

2.2 Equipment to Be Serviced

Equipment or approved equivalent equipment as recommended by the Contractor after design verification:

- Maintenance Shop
 - One (1) Multi-Zone Outdoor Inverter Heat Pump Unit.
 - Five (5) wall-mounted ductless indoor air handler units.
 - 14-4 AWG stranded 600V interconnecting communication tray cable wire.
 - One (1) 60-Amp disconnect switch.
 - One (1) compact surge protective device
 - Corrosion-resistant protective coating applied to all indoor evaporator coils and outdoor condenser coils
- Visitor Center
 - One (1) Multi-Zone Outdoor Inverter Heat Pump Unit
 - Four (4) Ductless Wall-Mounted Indoor Air Handler Units
 - 14-4 AWG Stranded 600V Interconnecting Communication Tray Cable Wire
 - One (1) 60 Amp Disconnect Switch
 - One (1) Surge Protective Device
 - Corrosion-resistant protective coating applied to all indoor and outdoor coils
- Visitor Center Comfort Station
 - One (1) Multi-Zone Outdoor Inverter Heat Pump Unit
 - Two (2) wall-mounted ductless indoor air handler units.
 - 14-4 AWG Stranded 600V Interconnecting Communication Tray Cable Wire
 - One (1) 60 Amp Disconnect Switch
 - One (1) Surge Protective Device
 - Corrosion-resistant protective coating applied to all indoor evaporator coils and outdoor condenser coils
- Cottage
 - Exterior main condenser/heat pump unit (existing)
 - Interior air handling unit (existing)
 - Existing ductwork, drain system, refrigerant lines, and other serviceable parts

2.3 Equipment to Be Furnished and Installed

Equipment or approved equivalent equipment as recommended by the Contractor after design verification:

- Maintenance Shop
 - Installation of new packaged HVAC unit containing compressor, condenser coil, evaporator coil, blower fan, air filter, heating components, and supply/return duct.
 - Compatible disconnect switches
- Visitor Center
 - One (1) new 10-ton outdoor condenser unit with connection to existing ductwork or duct transitions or modifications as required.
 - New indoor air handler/furnace compatible with new outdoor condenser unit.
 - Installation of supply and return connections for new 10-ton HVAC unit.
 - Installation of new disconnect (if required) for new 10-ton HVAC unit.
 - Installation of electrical whip and proper sizing for new 10-ton HVAC unit.
 - Installation of condensate drain and trap for new 10-ton HVAC unit.
 - Installation of thermostat and controls for new 10-ton HVAC unit.
 - Integration with existing building control system for new 10-ton HVAC unit.

All equipment shall be new, factory-authorized, and compatible as a complete matched system.

2.3 Pre-Construction and Mobilization

- Conduct required pre-site visit with park representatives
- Verify site access, work hours, staging areas, and occupant coordination
- Obtain mechanical and electrical permits as required by County, State, and Federal regulations, and provide proof to COR.
- Schedule and coordinate utility location verification if outdoor trenching or conduit routing is required.
- Coordinate designated areas for offloading and staging all equipment to be installed. Ensure protection of equipment from weather prior to installation and secure storage of all materials on site.
- Coordinate any planned electrical service or other utility interruptions with the park.
- Establish a safe work zone and temporary barricades as necessary at each work site.

2.4 Site Preparation

Contractor shall prepare all work areas to safely and properly receive the new equipment. Any unforeseen conditions discovered during site preparation shall be documented and addressed through written change order prior to proceeding. Site preparation includes:

- Interior Areas
 - Protection of floors, walls, ceilings, and furnishings
 - Verification of structural support for wall-mounted indoor units
 - Layout marking and Owner confirmation prior to penetrations
 - Removal and reinstallation of ceiling tiles (if required)
 - Minor obstruction removal necessary for installation
- Exterior Area
 - Verification of manufacturer-required clearances
 - Preparation or installation of mounting pad or bracket

- Leveling and stabilization of outdoor unit location
- Installation of vibration isolation pads
- Verification of drainage conditions
- Wall Penetrations
 - Core drilling or wall penetrations as required
 - Weatherproof exterior sealing
 - Fire-rated sealing where required
 - Minor cosmetic patching
- Condensate Planning
 - Verification of gravity drainage path
 - Installation of condensate pumps as required
 - Proper termination of condensate lines
 - Freeze protection where applicable

2.5 Removal of Existing Systems

Contractor shall remove the existing equipment from all locations as follows:

- Maintenance Shop
 - Remove existing exterior HVAC unit
- Visitor Center
 - Remove existing 10-ton HVAC unit, including all associated inoperable or inefficient mechanical equipment including but not limited to disconnects, controls, obsolete duct connections, refrigerant lines, and condensate components.

All removal work shall include:

- Safe recovery of refrigerant in accordance with EPA regulations
- Disconnection of electrical power and communication wiring
- Disconnection of refrigerant piping and condensate drains
- Removal of mounting brackets (unless reusable)
- Proper disposal or recycling of equipment and refrigerant
- Protection of adjacent finishes during removal

Existing refrigerant line sets and main power wiring shall remain in place for reuse provided they meet manufacturer requirements and pass inspection.

2.6 Servicing – All Systems

Contractor shall:

- Clean indoor head coils and blower wheels
- Check refrigerant pressures
- Flush condensate lines
- Inspect electrical connections
- Test inverter board
- Clean outdoor coil
- Apply corrosion resistant coatings

- Service existing breakers as necessary. Any necessary replacement breakers shall be installed per manufacturer specifications. Verify proper breaker sizes, grounding and bonding. Label breakers and disconnects.
- Test voltage and verify proper electrical operation.

All electrical work shall comply with the National Electrical Code (NEC) and applicable local codes.

2.7 Refrigerant Installation – All Systems

Existing refrigerant line sets shall be reused provided they meet manufacturer requirements.

Contractor shall:

- Inspect line sets for damage, kinks, oil contamination, and insulation deterioration
- Verify proper sizing, length, and elevation
- Perform nitrogen pressure testing
- Flush and prepare line sets per manufacturer guidelines
- Replace flare fittings and seals as required
- Insulate and seal all exposed sections

If line sets fail inspection or pressure testing, replacement shall require written change order approval.

2.8 Mechanical Installation – Ductless Systems

Contractor shall:

- Inspect and service all units per location as outlined and approved by COR.
- Inspect vibration isolation components, refrigerant piping connections, condensate drain piping, and all penetrations.
- Ensure proper airflow clearances.
- All installations shall conform to manufacturers' installation manuals.

2.9 Mechanical Installation – HVAC Systems

Contractor shall:

- Install all units per location as outlined and approved by COR.
- Mount units' level and secure per manufacturer instructions
- Verify compatibility of new HVAC units with existing ductwork
- Modify ductwork as required for proper airflow
- Seal all duct connections
- Install new flexible connectors if required
- Verify proper static pressure
- Balance airflow as required

2.10 Protective Coating – Ductless system

- Contractor shall apply corrosion resistant protective coating (or approved equivalent) to all indoor evaporator coils and all outdoor condenser coils.
- Application shall follow coating manufacturer procedures and required curing times.

2.11 Construction of Elevated Equipment Platforms – All Systems

Contractor shall design and construct elevated wooden platforms to support all newly installed exterior HVAC equipment. Contractor shall verify required elevation prior to construction. Platforms shall elevate equipment above anticipated coastal and hurricane maximum flood levels as determined by:

- FEMA Flood Insurance Rate Maps (FIRM)
- Local floodplain management regulations
- Base Flood Elevation (BFE) plus required freeboard (as required by local jurisdiction)

Platforms shall:

- Be constructed of pressure-treated lumber rated for exterior and ground-contact use
- Be designed to support the deadload and operational load of equipment
- Include corrosion-resistant fasteners and hardware (stainless steel or hot-dipped galvanized)
- Include diagonal bracing for lateral stability
- Be anchored to concrete footings, piers, or approved structural foundation system
- Be designed to resist wind uplift and lateral hurricane forces in accordance with local wind load requirements
- Elevate equipment to or above required flood protection elevation
- Provide minimum manufacturer-required service clearances
- Include vibration isolation pads between platform and equipment
- Securely anchor equipment to platform to prevent displacement during high winds
- Allow for proper drainage

2.13 System Start-Up and Commissioning – Ductless Systems

Upon completion of installation, Contractor shall:

- Perform nitrogen pressure testing
- Evacuate system to manufacturer-required micron level
- Charge refrigerant system per specifications
- Verify communication between all zones
- Test heating and cooling operation in each zone
- Confirm thermostat and control operation
- Verify condensate drainage
- Balance airflow as required
- Provide written start-up and commissioning report

System shall be fully operational in all zones prior to completion.

2.14 System Start-Up and Commissioning – HVAC Systems

Upon completion of installation, Contractor shall:

- Charge refrigerant system per specifications
- Verify communication between all zones
- Test heating and cooling operation in each zone
- Confirm thermostat and control operation

- Verify condensate drainage
- Balance airflow as required
- Verify amperage draw within manufacturer limits
- Provide written start-up and commissioning report

System shall be fully operational in all zones prior to completion

2.15 Permits and Code Compliance – All Systems

Contractor shall obtain all required permits and coordinate inspections. All work shall comply with:

- Manufacturer installation instructions
- National Electrical Code (NEC)
- Applicable mechanical and building codes
- OSHA safety standards

Contractor shall correct any deficiencies identified during inspection.

2.16 Protection of Property and Cleanup – All Systems

Contractor shall:

- Protect adjacent finishes and surfaces
- Maintain clean and safe work areas
- Remove debris and packaging daily
- Remove replaced breaker and wiring from site
- Leave premises in clean condition
- Repair any minor incidental damage caused by installation.

2.17 Closeout – All Systems

At project completion, Contractor shall provide:

- All deliverables and submittals required by contract, COR, and Contracting Officer
- Demonstration and operational training for park facility management team.
- Final inspection approvals
- Commissioning report

Work shall be considered complete upon successful system operation, inspection approval, delivery of documentation, and park COR acceptance.

3. Additional Requirements

- All work will be performed in a safe, professional manner according to accepted, required, and mandated industry standards.
- Contractor is responsible for all permits from State, County, or Local offices.

4. Deliverables and Submittals

- General Planning
 - Project schedule

- Quality control plan
 - Safety Data Sheet (SDS) for protective coatings
 - Waste disposal plan detailing compliance with federal, state, and local regulations.
 - Submittal register
 - Utility locate report
 - Temporary occupant/visitor detour plan and accessibility compliance checklist
- Design and Field Verification – for park approval prior to equipment submittals
 - Load calculation summaries for each location
 - Refrigerant line set verification
 - Electrical panel capacity verification
 - Mounting location layout showing indoor unit placement
 - Outdoor unit placement showing clearances (site maps can be provided by park upon request)
- Equipment Submittals – for approval prior to final ordering
 - Manufacturer data sheets for all equipment to be ordered
 - Dimension and weight
 - Clearance requirements
- Electrical Specifications
 - Breaker spec sheet
 - Wire spec sheet
 - Surge protector cut sheet
 - Disconnect cut sheet
- Commissioning
 - System start-up and commissioning report for all locations to include verification of the following:
 - Refrigerant pressure testing
 - Vacuum evacuation
 - Refrigerant charge documentation
 - Electrical start-up checklist
 - Waste disposal records to demonstrate compliant disposal
- Warranty Documentation
 - Manufacturer equipment warranty certificates of installed equipment, organized by location
 - Warranty registration confirmation
 - Written one-year workmanship warranty
 - Protective coating warranty documentation
- O&M Documentation
 - Operation and maintenance manuals
 - Filter replacement instructions
 - Recommended service intervals
 - Troubleshooting guide
 - On-site demonstration of mode switching, remote/thermostat operation, filter removal and cleaning, and basic troubleshooting indicators

In the absence of other agreements negotiated with respect to time provided for government review, deliverables will be inspected and the contractor notified of the COR or other authorized management representative findings within 15 business days of normally scheduled review. If the deliverables are not acceptable, the COR or other authorized management representative will notify contractor immediately.

5. Government Furnished Staff, Property, Materials & Supplies

None.

6. Business Hours

The contractor shall complete on-site work during normal business hours of 7:30 am to 4:30 pm, Monday through Friday, excluding Federal holidays. The contractor shall coordinate specific on-site work schedule with the Contracting Officer and Contracting Officer Representative five days prior to performance start date. While on site, the COR or authorized management representative may be reached by mobile phone during normal business hours. Any work outside of normal business hours shall be pre-approved by the COR or other authorized management representative.

7. Site Access and Use

The NPS issues access to government property as needed. The contractor shall initiate and coordinate all necessary access approvals no later than 15 days before the project's start date.

Access and use of NPS sites and property is limited to scheduled execution of contract work only. Contractor personnel shall not:

- a) enter closed sites outside of approved working hours
- b) use access credentials such as keys or codes for any purposes other than authorized work
- c) visit, tour, recreate, or otherwise remain on the site for personal reasons at the end of the workday unless entering as a private citizen in accordance with park visitation rules and regulations of applicable entrance fees and operating hours, Superintendents Compendium, and other policy and law
- d) bring non-authorized personnel onto the site during working hours, or
- e) use site facilities, roads, trails, vehicles, equipment, utilities, or communications systems for personal or non-work purposes.

Misuse of site access can result in removal from the site, revocation of access, or termination for cause. Contractors shall ensure all subcontractors and suppliers comply with this clause.

8. Performance Management

The contractor shall manage the total work effort in accordance with effective and efficient management principles and safe working practices to ensure the successful completion of contract work. The contractor shall immediately bring problems or potential problems affecting performance to the attention of the COR or other authorized management representative. Problems affecting a particular action should be resolved prior to starting the specific task.

10. Contracting Officer's Representative or Authorized Park Management Representative

Emily Forlenza

Chief of Facility Management
Emily_forlenza@nps.gov
404-273-0788

9. Onsite Project Manager

Emily Forlenza
Chief of Facility Management
Emily_forlenza@nps.gov
404-273-0788

11. Safety & Environmental Compliance

- The contractor shall comply with pertinent provisions of the Occupational Safety and Health Act (OSHA), and state, local, safety, laws.
- The contractor shall comply with pertinent Environmental Protection Agency laws and regulations.
- The COR or authorized management representative has the authority to issue restraint or cease-and-desist orders to the contractor when violations or unsafe acts are present and threaten Government and contractor employees or damage Government property.
- The contractor shall immediately stop work and report officer all accidents resulting in employee injury or death or damage to property while performing this contract to the COR or other authorized management representative of all accidents resulting in employee injury or death or damage to property while performing this contract.

12. Applicable Standards and Regulations

The Contractor shall conform to, and be compliant with, all applicable Federal Communications Commission (FCC) rules and regulations, local construction codes, and established industry standards. The standards shall be applied during the engineering, fabrication, assembly, wiring, installation, testing, operation, maintenance, and management of the system(s) and service(s). If a conflict arises between standards, the contractor shall submit written request for clarification citing the specific particulars to the Contracting Officer. The Contracting Offer will respond with written direction.

13. Insurance

The Contractor shall be insured in accordance with Chatham County, GA insurance regulations. The Government is not responsible for damage to Contractor's equipment, vehicles, tools or materials or their employees and the personal property brought on-site. The Government will not accept any liability due to contractor employee negligence.

Workers Compensation and Liability: The contractor shall maintain workers compensation insurance to the Contracting Officer for those employees performing work related to this contract and shall comply with the Workman's Compensation Laws of Georgia. The Contractor shall maintain a level of insurance that will protect the contractor and the Government from any claims as a result of bodily injury (including death) and property damage which may arise from and during the performance of this contract.

14. Invoices

Invoices must show item details or work order references. Invoices without correct details will be returned as improper invoices.