

STATE OF MARYLAND

PROJECT MANUAL

DGS PROJECT No.: PH-582-232-002

HVAC Replacements / Upgrades

AT

MSP Barrack “H”, La Plata (Charles County)

FOR

MARYLAND DEPARTMENT OF STATE POLICE (MSP)

Department of General Services – State of Maryland

Date: October 12, 2023

PROJECT CLASSIFICATION “C”

Minority Business Enterprises Are Encouraged To Respond To This Solicitation

DEPARTMENT OF GENERAL SERVICES

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Drawings:

“1998” MSP Barrack “H” Mechanical Drawings, **FOR REFERENCE ONLY**

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DIVISION 0 - PROCUREMENT & CONTRACTING REQUIREMENTS

- Notice To Bidders - Solicitation Fact Sheet (eMaryland Marketplace Advantage attachment)
- Instructions to Bidders for Construction Projects (July 1, 2022) (eMaryland Marketplace Advantage attachment)
- General Conditions for Construction Contracts (July 1, 2022) (eMaryland Marketplace Advantage attachment)
- Bid/Proposal Affidavit (eMaryland Marketplace Advantage attachment)
- Payment of Employee Health Care Expenses Certification (eMaryland Marketplace Advantage attachment)
- Contractors Questionnaire (eMaryland Marketplace Advantage attachment)
- Bid Bond, *if applicable* (eMaryland Marketplace Advantage attachment)
- Minority Business Enterprise Forms Attachment D (February 5, 2021), *if applicable* (eMaryland Marketplace Advantage attachment)
- Veteran-owned Small Business Enterprise (VSBE) Forms Attachment E (September 1, 2022), *if applicable* (eMaryland Marketplace Advantage attachment)
- List of Prevailing Wage Rates, *if applicable* (eMaryland Marketplace Advantage attachment)
- Corporate Diversity Addendum, *if applicable* (eMaryland Marketplace attachment)
- Addenda, *if any* (eMaryland Marketplace Advantage attachment)
- List of Drawings (eMaryland Marketplace Advantage attachment)
- Attachment A – Contract (eMaryland Marketplace attachment)
- Pre-Bid Conference/Site Visit – **Refer to: State Finance and Procurement Article §14-302(a)(7)(v) and COMAR 21.11.03.09.C.(2)(e).**

Maryland Department of State Police (MSP)
Barrack “H”, La Plata HVAC Replacements / Upgrades
DGS Project No.: PH-582-232-002

I. SCOPE OF WORK

- a. Work to be accomplished under this Contract is located at the Maryland State Police (MSP) Barrack “H” La Plata, 9500 Mitchell Rd, La Plata, Charles County, MD 20646. Work consists of providing all construction, permits, labor, materials, equipment, services, supplies, miscellany, testing and instrumentation necessary and incidental to the completion of all work as specified herein.
- b. The work of this contract includes replacement of the existing primary Air Handler Unit (AHU) with a new 40-ton split system AC unit with hot water coil. Remove small 5-ton AHU and combine supply and return ductwork with the new 40-ton AHU. Replace all existing VAV’s & hot water coils. Replace the existing Barrack’s boiler. Replace existing garage boiler. The Contractor shall be responsible for all work related to providing a fully operational system with the specified performance characteristics. The work shall include, but not limited to, connection of all mechanical and electrical interfaces, installation of mounting hardware, rigging & transportation services, and testing and balancing. Specific areas and requirements are contained in the following specification and attached drawings.
- c. Dimensions given are approximations provided to potentially assist the Contractor and not intended to define the project. The State assumes no responsibility for the accuracy of measurements and quantities given in this specification.
- d. The Contractor is strongly urged to visit the job site and take his/her own measurements, and examine the conditions under which work must be performed. Items not described in this specification, but required for a safe, complete installation in accordance with all codes, laws, regulations and generally accepted building industry practices are considered to be included and provided by the Contractor as part of this project with no additional cost to owner.

II. PROJECT LOCATION

- a. Barrack “H” La Plata - 9500 Mitchell Rd, La Plata, Charles County, MD 20646.

Location coordinates for reference only: 38°33'59.3"N 76°58'56.1"W

III. DESCRIPTION OF WORK

General

- a. During this project, the areas adjacent to the work must remain open at all times. No areas or buildings can be made inaccessible to vehicles and/or personnel at any time.
- b. Contractor to assure positive separation between the work area and the public.
- c. The contractor shall also take adequate precautions to protect the work from damage or other situations that would, or would lead to, an undesirable impact on the finished product.
- d. Contractor will work a normal business hours schedule as directed, not to interfere with the activities of the facility. Requests from the Contractor to work non-business hours must be approved by the project manager in advance.
- e. Contractor is responsible for contacting a private utility locator and/or Miss Utility (800-257-7777) to identify all existing utilities prior to any digging. Protection of existing surface and subsurface conditions and utilities are the responsibility of the Contractor. Contractor shall take sole responsibility for any cost incurred, due to damage to such utilities caused by the Contractor.
- f. Contractor is responsible for providing temporary bathroom facilities for workers associated with this project, including any subcontractors, vendors, suppliers, etc.
- g. All work of this specification shall comply with all applicable DGS, MDE, State of Maryland building & access codes, standards, and guidelines. All codes, standards, and guidelines set forth by the American Society of Mechanical Engineers (ASME), Air Conditioning and Refrigeration Institute (ARI), American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and the National Electric Code (NEC).

NOTE: It is the Contractor's responsibility to check/confirm the exact measurements and material quantities to his/her satisfaction prior to bidding.

Mechanical System Demolition

- a. Unless otherwise indicated, demolition and construction waste becomes property of Contractor. Practice efficient waste management in the removal of materials in the course of the work. Facilitate recycling and salvage of materials when applicable.
- b. Discharge and conduct refrigerant recovery requirements per EPA Section 608 of the Clean Air Act. Remove and legally dispose of No.2 existing primary Air Handler Unit, VFD's for AHU fans, ACCU-2, and existing duct connections.
- c. Remove No.1 small 5-ton AHU and dispose of legally. Remove the Air-cooled Condensing Unit No.1 and associated piping. Combine supply and return ductwork with new 40-ton AHU. Integrate and combine 5-ton AHU zone into one zone only.

- d. Remove all twenty-one (21) variable air volume boxes (VAVs) and dispose of them legally.
- e. Remove existing boiler in the Barrack and dispose of it legally.
- f. Remove existing Garage boiler and dispose of it legally.
- g. Remove existing Garage waste oil storage tank and dispose of it legally. Inspect area around tank and provide notice to DGS Construction of any waste oil remediation needed, if applicable.
- h. Remove all identified components and equipment previously connected, and necessary for the replacement equipment. Cap or plug openings in equipment, piping, duct, and conduit systems, to exclude dirt and other foreign material. Do not use rags, wool, cotton, paper, waste or similar materials for plugging. Disconnect any electrical connections as required. Remove and legally dispose of any support or structural components.

Mechanical – Installation

- a. Install new 40-ton split system Air Conditioner unit with hot water heating coil. It's the Contractor's responsibility to establish the proper placement of the equipment to be installed. The Contractor will ensure that the specified equipment can be installed in the available space to affect a legal, code compliant, and properly functioning system.
- b. Approved Manufacturers:
York
Trane
Daikin
- c. Provide new unit mounted dampers for supply, return and relief.
- d. Provide factory packaged controls to do standalone operations with capability to tie into future BMS. BACnet capability.
- e. Provide new VFD's for AHU fans to maintain system static pressure for VAV's.
- f. Combine supply and return ductwork from the removed AHU No.1 with the new 40-ton AHU No.2. Integrate and combine the two previously separate zones into one zone.
- g. Make all electrical connections as specified by the manufacturer.
- h. Proposed replacement equipment shall be submitted to the DGS Project Manager for approval. No work shall begin, and no materials shall be ordered or purchased until the submittals have been approved in writing by the Project Manager.
- i. Replace all existing VAV's & hot water coils (21) with Titus Digital Single Duct Terminal (DESV) VAV boxes, or Owner approved equal. **Half of the control valves are 2 way and the other half 3 way.** Provide appropriate valve for corresponding VAV.

- j. Provide VAV's with standalone controls and the capability to connect to a future BMS. BACnet capable.
- k. Repair any ceilings or finishes damaged by VAV box replacement to original condition.
- l. Make any connections necessary to the existing fire alarm system.

Barrack Boiler Replacement:

- a. Replace existing Barrack boiler with the following:
 - [B-1] Quantity (1) Raypak Firetube Boiler(s), Model 726L XVers L Firetube Condensing Boiler providing 725,000 BTUH Input and 705,000 BTUH
 - Output with 120/1/60 electrical requirement
 - Thermal efficiency up to 97.3%
 - 316L stainless steel heat exchanger construction
 - VERSA IC modulating controller with 7" touchscreen display
 - Low NOx performance, complies with SCAQMD
 - 100% factory fire-tested
 - 10-year heat exchanger limited warranty
 - 60 PSIG (std) relief valve (PLEASE CONFIRM)
 - Propone (LP) Gas Fired
 - Outdoor Air Sensor (Ships Loose)
 - Low Water Cut-Off, Remote Probe
 - Alarm With 4" Bell with Silence and Reset Switches - Mounted
 - Condensate Neutralizer Treatment Kit
 - Factory Certified Startup

Or Owner approved equal.

- b. Replace existing Pumps for boiler with new.
- c. Replace the existing air separator with a new one.
- d. Replace the existing expansion tank with a new one.

Garage Boiler Replacement:

- a. Replace existing Garage boiler with the following:
 - [B-2] Quantity (1) Raypak Firetube Boiler(s), Model 506L XVers L Firetube Condensing Boiler providing 500,000 BTUH Input and 489,000 BTUH
 - Output with 120/1/60 electrical requirement
 - Thermal efficiency up to 97.3%
 - 316L stainless steel heat exchanger construction
 - VERSA IC modulating controller with 7" touchscreen display
 - Low NOx performance, complies with SCAQMD
 - 100% factory fire-tested
 - 10-year heat exchanger limited warranty
 - 60 PSIG (std) relief valve (PLEASE CONFIRM)
 - Propone (LP) Gas Fired
 - Outdoor Air Sensor (Ships Loose)

- Low Water Cut-Off, Remote Probe
- Alarm With 4" Bell with Silence and Reset Switches - Mounted
- Condensate Neutralizer Treatment Kit
- Factory Certified Startup

Or Owner approved equal.

- b. Replace existing Pumps for boiler with new.
- c. Replace the existing air separator with a new one.
- d. Replace the existing expansion tank with a new one.
- e. Contractor to coordinate with MSP designated liquid propane supplier for delivery and setup of new liquid propane storage tank.
- f. Contractor to provide new piping and required connections to new Garage boiler.

Bid Summary

- a. **Base bid** to include the following items:
 - Mechanical System Demolition.
 - New 40-ton split system Air Conditioner unit with hot water heating coil.
 - Integrate and combine the two previously separated zones into one zone.
 - Replace all existing VAV's & hot water coils (21).
 - Replace existing Barrack boiler.
 - Replace existing Garage boiler.
 - Coordinate with MSP liquid propane supplier for delivery and setup of new LP storage tank.

IV. SITE CONDITIONS

- a. The work covered by this specification is in an occupied facility.
- b. The Contractor shall at all times keep the premises as clean as possible and free from an accumulation of waste materials and debris. Upon completion of the work, all debris, tools and surplus materials shall be removed and the work area left completely clean.
- c. The Contractor shall leave no area unsafe or unsecure at the end of the working day.
- d. It shall be the Contractor's responsibility to field verify all existing conditions and dimensions prior to bidding and ordering materials.
- e. The Contractor shall repair and restore to its original condition any equipment, materials or surfaces damaged as a result of their operations during this contract.
- f. The Contractor shall be fully responsible for any loss or damage to his own materials, supplies, or equipment and to the personal property of their employees while they are on State premises.

- g. The Contractor, during the construction period may leave their essential equipment on site at their risk. The State of Maryland will not assume any liability for any of the stored equipment. Any stored equipment, at the Owner's risk, shall be stored in a safe manner and marked with reflective barricades. The Contractor shall be responsible for any and all damages to State of Maryland and/or private property including trees, curbs, asphalt or concrete pavements, mailboxes, private yards and signage.

V. SITE INSPECTION

- a. All prospective bidders are encouraged to attend the pre-bid meeting and familiarize themselves with all requirements for the project. All dimensions and information given are approximations provided to potentially assist the Contractor and not intended to define the project. Contractors shall visit the job site to familiarize him/herself with the project and to make any calculations necessary for a complete project.
- b. Failure to attend the pre-bid meeting will not relieve the successful bidder from complying with the requirements of these specifications at no additional cost to the state.
- c. Any site visits requiring access to the interior of the building (other than the pre-bid meeting) shall be coordinated in advance by calling the Maintenance Supervisor / Facility Manager, **Mr. Alan Rodriguez at (443) 504-9664** or email alan.rodriguez1@maryland.gov.

VI. QUALITY ASSURANCE

Supplier Qualifications:

- a. Company shall have a minimum five years documented experience specializing in manufacturing the products specified in this section.
- b. Equipment specified shall meet all requirements of ASHRAE Standard 90.1, latest version.
- c. Provide UL label on electric powered equipment or certification that equipment has been tested by:
 - 1. Testing agency approved by local authority and is equivalent in safety to UL labeled equipment.
 - 2. AHRI rating and certification.
- d. Optimize Energy Performance:
Performance-based designs demonstrating energy savings of at least 15% better than the currently adopted version of the International Energy Conservation Code (IECC).
- e. Provide Manufacturer's technical product data, installation instructions, performance data, accessories, supports, fittings, finishes, construction details, and dimension of components. Submittal shall include control cabinet layout and electrical wiring diagram.

Contractor Qualifications:

- a. Company shall have a minimum five years documented experience specializing in performing the work of this specification.
- b. Upon request, prospective bidders may be required to submit a list of references and similar projects which they have successfully completed. A copy of the Contractor's license to be provided to the DGS Procurement Officer and/or Project Manager if required.
- c. The Contractor shall be licensed in the State of Maryland in accordance with COMAR regulations.
- d. The Contractor shall coordinate all work with the Contractor's sub-contractors, the various trades, and suppliers in order to complete the project expeditiously and within the time limits of the contract.
- e. All work shall be performed in accordance to applicable code requirements. These shall include, but are not limited to, AASHTO, BOCA, State and local Health Department requirements.
- f. All work shall be performed in the best and most professional manner by technicians skilled in their respective trades.
- g. The Contractor shall maintain the job site in a safe, neat, and orderly manner throughout the entire project. Upon completion of the project, the Contractor shall dispose of all excess materials and debris in a lawful manner and leave the entire area clean and in an acceptable condition.
- h. Contractor shall adhere to OSHA-MOSH regulations throughout the project to ensure the safety of his/her employees, state employees, and the public.
- i. All work shall conform to the requirements of the latest edition of the International Building Code and all state and local code requirements. All work shall be performed in a top-quality workmanship like manner in accordance with standards of the trade.
- j. If applicable, Contractor shall be required to obtain an Electrical Inspection Certificate from a non-governmental inspection agency approved by the State Fire Marshall's office. All fees for said inspection certificate shall be paid by the Contractor. Upon completion of the project, prior to final payment, the Contractor shall provide an approved E.I.C. for all electric work performed under this project.
- k. Contractor shall examine the premises prior to submitting the bid and observe the conditions under which the work will be done or other circumstances which will affect the completed work. No allowance will be made, subsequently, in connection for any error or negligence on the Contractor's part.
- l. Return surrounding site to a pre-construction condition. Seed and mulch any disturbed areas as necessary.

MATERIALS AND SUPPLIES

- a. All materials shall be as specified or approved equal. All materials to be used must be submitted and approved by the DGS Project Manager. In the event the Contractor chooses to substitute materials other than those specified, the Contractor shall provide to the Project Manager data necessary to determine the “or equal” rating. The Project Manager will make a decision and notify the Contractor within 10 business days of receipt of this information, as to the “or equal” status.
- b. All materials shall be New and where applicable shall be delivered to the job site in their original unopened containers with labels intact and legible. Handling of materials shall be in accordance with the written directions and/or recommendations of the manufacturer. All materials used in the performance of this contract shall comply with all standards given herein.
- c. The Contractor shall be responsible for the coordination, off-loading and proper storage of all materials and supplies up until the time of final inspection.
- d. Materials shall be stored in a safe area, out of the way of traffic. Storage site location shall be approved by the Project Manager prior to the storage of any materials on site. If in the event the Contractor elects to store materials or equipment onsite they elect to do so at their own risk. The State will not be held responsible for any lost or damage to materials or equipment.
- e. Any materials that have not been specifically mentioned, but are necessary for the complete, safe, and satisfactory completion of the project, shall be provided by the Contractor as specified herein.

SUBMITTALS

- a. The Contractor shall submit all mix designs, material information, material suppliers’ information, and SHA plant certifications to the state representative for approval prior to starting any work.
- b. Specifics:
 1. Administrative Submittals
 2. Equipment / Product Information Sheets / Shop Drawings
 4. Construction Schedule
 3. Manufacturer’s Operation and Maintenance Manuals (O&M)

VII. WARRANTY

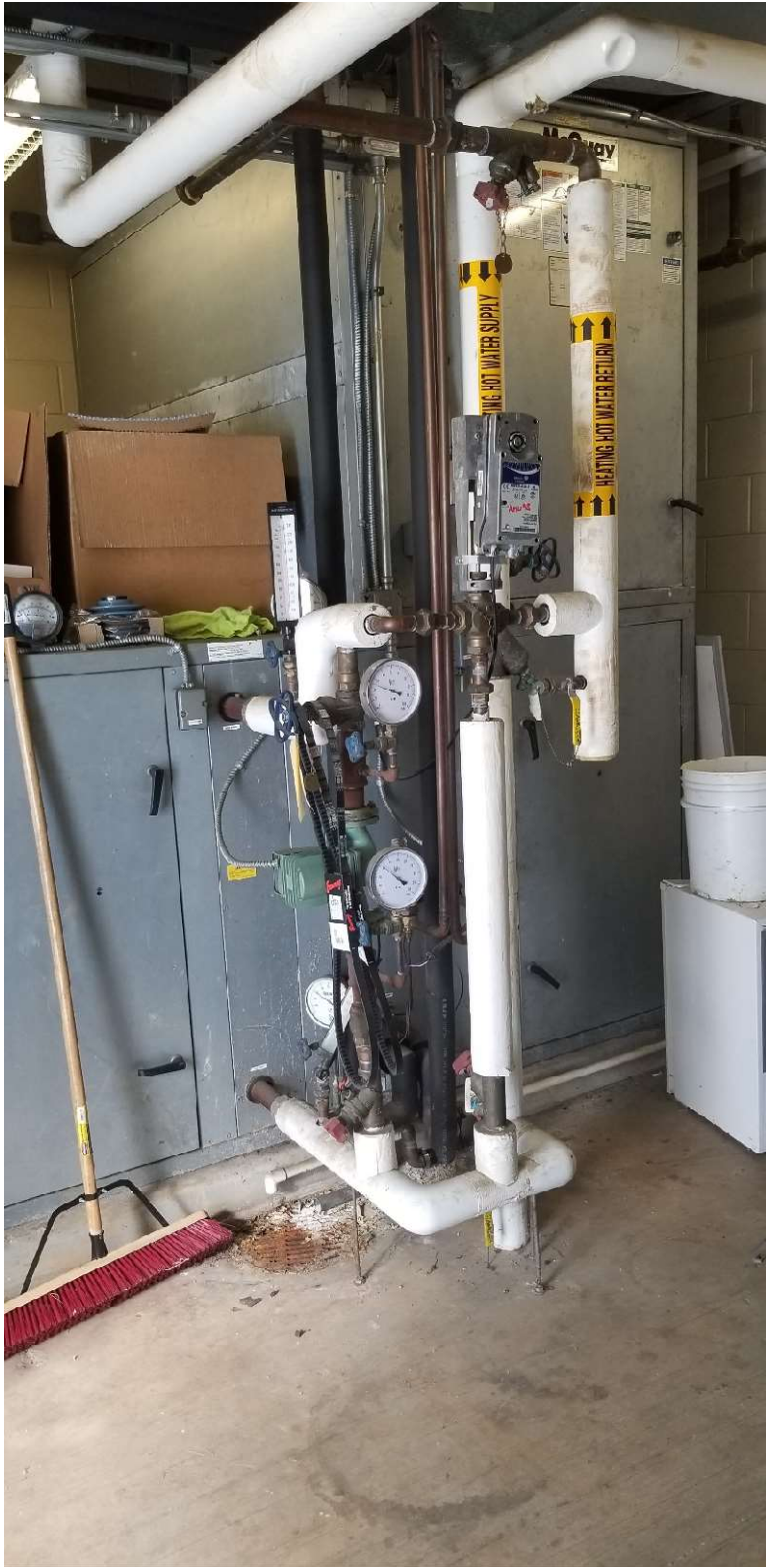
- a. Project Warranty: Refer to “Department of General Services General Conditions for Construction Contracts” (“General Conditions”) revised January 2023 for basic project warranty provisions.
- b. Contractor Warranty Period: Two (2) years from the date of substantial completion of the project on installed parts and labor.

VIII. GENERAL REQUIREMENTS

- a. All work shall be coordinated with the Maintenance Supervisor / Facility Manager, DGS Project Manager, and DGS Construction Representative during the Pre-Construction meeting.
- b. Work shall be accomplished during normal business hours Monday through Friday. Work at any other time must be requested in writing and subject to approval by the Maintenance Supervisor / Facility Manager and DGS Construction Manager.
- c. The project shall be considered complete upon final inspection and approval by the Maintenance Supervisor / Facility Manager, the DGS Project Manager, and DGS Construction Representative.
- d. Liquidated damages for this project shall be **\$550.00** per day.
- e. Administrative Submittals shall be required and submitted to the DGS Project Manager and/or Construction Division, and the DGS Construction Representative.
- f. Work to be completed within one hundred eighty (**180**) calendar days from the date cited in the written Notice to Proceed. The date to be cited will be determined at the work initiation meeting.

IX. ATTACHMENTS

- La Plata - VAV Review - Summary Report











END OF SPECIFICATION