

## **Scope: Data Center and I.T. Directors Office HVAC Project – 3/12/2024**

### **General Intent**

The contractor shall provide a proposal for HVAC equipment, labor, additional material, equipment, and all other products in order to deliver a complete project with fully functional new HVAC units in the Data Center and the I.T. Director's office located within the District Office warehouse.

The scope of work involves the demolition and disposal of 3 existing HVAC units, the procurement and installation of 3 new HVAC units, and all other ancillary equipment, materials, and associated controls and auxiliary devices to deliver to the District fully functional new HVAC units; implementation of control programming is included in the scope of work.

New HVAC units: one (1) 5 ton Carrier package unit for the Data Center room, installed at grade level, and two (2) 1.5 ton Carrier High Wall heat pump ductless units, one on the first floor and one on the second floor.

Equipment delivery, coordination, and temporary storage shall be provided by the installing contractor and equipment distributor. HVAC unit storage shall be provided by the contractor off-site, and/or the HVAC unit distributor. The contractor shall be responsible for receiving all HVAC equipment from the distributor before the date of installation, and for removing and legally disposing of existing units off-site.

The above is not intended as an all-inclusive requirement list; additional tasks and material may be required for the completion of the project, and are the responsibility of the contractor to determine.

The term "provide" used within this document is defined as "furnish" and "install".

### **Programming, Start-Up, and Commissioning**

All startup and commissioning activity to be performed in the presence of the owner's representative.

Perform the set-up, startup, and all other installation procedures per the manufacturer's operation & configuration manual for all units; perform the startup operation for both cooling and heating cycles per installation and operations manual, to ensure fully functioning HVAC units.

Provide completed Manufacturer's startup checklist and reports validating the proper functioning of the HVAC unit in all operational modes.

Also, perform all test operations and equipment testing as described in the manufacturer's operations and installation manual.

**Scope of Work Shall Include, but not be limited to, the following:**

**Mechanical**

**Furnish and install the following new items:**

1. Contractor shall safe-off HVAC existing units.
2. Contractor shall recapture/recycle refrigerant from existing units in accordance with Federal, State, and local laws.
3. Contractor to remove and dispose of existing units, including all ancillary equipment related to those units.
4. (2) 38MARBQ18AA3
5. (2) 40MAHB-04PD
6. (1) 50VT-21PD
7. (3) 3 Remote controllers
8. (3) Wired local thermostats
9. All necessary piping, line sets, unit, and branch box supports
10. All necessary low voltage wiring from thermostats to fan coils
11. All necessary low voltage wiring from the fan coils to the condenser
12. All low voltage wiring shall be installed in conduit in exposed to view locations
13. All necessary ductwork for each fan coil to each zone
14. All required grills, ceiling diffusers for the ducted fan coils
15. Outside air ductwork for fan coil in an occupied space
16. All necessary drain line piping for each fan coil; all condensate drains as required
17. All necessary refrigerant piping for each fan coil
18. All necessary insulation on ductwork and piping, and wall penetrations
19. Install the new parts listed above in the correct location, height, and orientation for flow.
20. Contractor responsible for storing all equipment and material off-site.
21. After the installation is complete a comprehensive leak test will be performed.
22. Clean up the area and any debris created from work performed by the Contractor.
23. All work is to be performed during normal business hours.
24. Contractor will be responsible for the startup and verification of all new installed equipment.
25. Drywall patching and framing for removed units; patching of exterior wall
26. 4" Concrete pad for condenser and HVAC unit, with a minimum of 2" above adjacent grade.
27. All high voltage and low voltage electrical to be provided by the contractor.
28. HD Electrical disconnect switches.
29. All installations shall be weather-tight. Installation shall maintain existing warranties

The above is not intended as an all-inclusive requirement list; additional tasks and materials may be required for the completion of the project, and are the responsibility of the contractor to determine.

### **Shop Drawings**

- High and Low voltage wiring plans and diagrams
- All ductwork, including dampers, vanes, and related ancillary equipment and material
- Concrete pads for condensers
- Additional shop drawings and details may be required.

### **Submittals**

Prepare product submittals for all products furnished for installation, including but not limited to HVAC units, conduit, refrigerant line sets, duct material, digital thermostats, electrical disconnect switches, flexible weatherproof conduit, and **galvanized metal connectors**; new high and low voltage conductors; HD high voltage disconnect switches; stucco and concrete; non-shrink grout; lag bolts for HVAC unit installation. All other equipment related to new HVAC installs; and all ancillary support material required but not listed here. The above may not be an all-inclusive list of submittals.

### **Warranty**

Installing contractor shall provide 1-year Full Labor and Material Warranty for all work performed. HVAC unit manufacturer shall provide a standard warranty for HVAC units.

### **Other Requirements**

Contractor to procure and install new MERV-13 filters for all HVAC equipment, and shall install the filters after construction period and before final inspection with the District

Provide all necessary supervision and coordination to ensure the correct sequence of shutdowns and startups for the project.

Before any work shall begin the power shall be locked out and tagged out for safety.

Protect all building finishes, and equipment throughout the entirety of the project.

Provide protection and containment for any work that may create dust or damage to the interior or exterior of any buildings, structure, or equipment.

Before any work begins, the owner shall be notified of the scheduled activities and shall work as directed by the owner.

Clean up the area and any debris created from work done by Contractor.

The jobsite is to be kept broom clean at the end of every working day and organized throughout the working day to ensure a safe working environment.

## **Additional Contractor Requirements**

- a) Develop project schedule with phasing plan, submit in Excel format.
- b) Job walk surveys were completed by and the accuracy of the survey is the sole responsibility of the contractor.
- c) Procurement and supply of system components necessary for the turn-key installation of HVAC equipment unless otherwise noted. Storing and handling of the equipment.
- d) All labor, materials, equipment, supervision, etc. as required for complete functioning systems which comply with all Federal, State, and local applicable codes and Title 24 requirements.
- e) One-year labor warranty and 5-year parts warranty starting from the date of Substantial Completion of the entire project, and manufacturer's warranty on all other components (i.e., compressors, heat exchangers, contactors).
- f) Trash dumpsters as needed, clean up and disposal of all refuse generated by the project.
- g) Temporary fencing as required for access control in the areas and duration of for this scope of work.
- h) All cranes, lifts, forklifts, and rigging as necessary for this scope of work to rig old equipment off and rig new equipment into place.
- i) Perform start up, acceptance testing, commissioning, training and O&M manuals as needed on all systems provided under this scope of work.
- j) All manufacturers' warranties shall be assigned to the Owner.
- k) Daily cleanup and storage of all protection materials, equipment, tools, lifts, etc.
- l) Daily cleanup of affected surfaces and work areas is included.
- m) Contractor has surveyed the existing conditions and has determined that the proposed scope and pricing will be sufficient to complete the scope within the requirements.
- n) Damage to site or building from installation is the responsibility of contractor to repair to original condition, per contract documents Special Conditions.
- o) Contractor to field verify the project site. Verify existing conditions matches the scope of work, manufacturer's and code requirements are satisfied prior to procuring and installing equipment.
- p) Contractor shall coordinate the receiving, handling, and storing of all equipment.
- q) HVAC Systems to be installed shall be Title 24 compliant, and MERV 13 compliant.
- r) Participation during regularly scheduled weekly construction meetings.
- s) Provide O&M manuals (1 set).
- t) All electrical work shall be performed by a certified electrician.
- u) All mechanical work shall be performed by a technician trained and certified by the HVAC equipment manufacturer.
- v) All labor shall be Prevailing Wages.
- w) The Bidder and will agree to a payment schedule which may include work progress payment(s), final payment when work is completed, and a 10% retainage to be paid upon final acceptance.

## TECHNICAL SPECIFICATIONS - PLANS AND DRAWINGS

### ***HVAC and Electrical Specifications***

- HVAC and Electrical Specifications\_V02.pdf

### ***Carrier Product Cut Sheets***

- 38MARBQ18AA3.pdf
- 40MAHB-04PD (2)
- 50VT-21PD.pdf
- SUB40MAHB-18-3-02.pdf
- District Office Data Center Packaged Unit Cut Sheet - R1.pdf1.pdf