

23.1 Heating, Ventilation, Air Conditioning

SCOPE OF WORK

Subcontractor or Supplier agrees that the Base Bid amount entered above includes the following project-related activities and Scope of Work in accordance with the requirements of the specifications, drawings, and CM Manual. Unless noted otherwise subcontractor will furnish all equipment, materials, labor, supplies, tools, scaffolding, hoisting, transportation, unloading, and handling necessary for the proper installation and completion of this work.

APPLICABLE SPECIFICATIONS

- Division 0 –
- Division 1 – General Requirements
- 07 84 00 - Firestopping
- 23 01 00 - General HVAC Provisions
- 23 05 13 - Common Motor Requirements for HVAC Equipment
- 23 05 48 - Vibration and Seismic Controls for HVAC Piping and Equipment
- 23 05 53 - Identification for HVAC Piping and Equipment
- 23 05 93 - Testing, Adjusting, And Balancing
- 23 07 13 - Duct Insulation
- 23 07 19 - HVAC Piping Insulation
- 23 09 23 - DDC Controls Systems
- 23 23 00 - Refrigerant Piping and Specialties
- 23 31 00 - Ducts
- 23 33 00 - Duct Accessories
- 23 34 23 - Power Ventilators
- 23 37 00 - Air Outlets and Inlets
- 23 40 00 - Air Cleaning Devices
- 23 55 34 - Electric Heaters
- 23 74 13 - Packaged Rooftop Air Conditioning Units
- 23 81 26 - Small-Capacity Split-System Air Conditioners

All General Scope Requirements as outlined in Section 3.01.

Section A: Trade- Specific Requirements

1. HVAC contractor to provide equipment and ductwork shop drawings for coordination with other trades. Shop drawings are to include the locations and sizes of all duct work, equipment and equipment maintenance access.
2. Provide layout locations as needed for roof curb, exhaust fans, vents etc. during steel erection phase.
3. In the case of discrepancy between drawings, specifications, codes, local and state laws, ordinances, or contract documents, the most stringent governs.

4. Include all selective demolition required to install work in the existing building. Remove all HVAC items per HVAC or demolition plans and legally dispose of off-site.
5. Furnish and install a complete HVAC system.
6. Scope includes, but is not limited to equipment, supports, anchors, curbs, flashings, piping, duct work, insulation, controls, stenciling and labeling, VFD's, equipment disconnect switches, air venting devices, air exhausting devices, flow switches, condensation lines, dampers, diffusers, detectors, interconnection of instrumentation I/O control wiring systems, fuels, refrigerants and lubricants, supports for mechanical equipment, and other materials and devices as required for a complete HVAC system as per plans and specifications.
7. Because of the drawing scales it is not possible to indicate all fittings and accessories that may be required. Include any and all fittings, offset, valves, etc., for a complete system.
8. Provide conditioned air at the earliest possible date, as directed by Construction Manager, including all **temporary, final and attic stock air filters** as required.
9. Supply any access doors (24" x 24" min.) needed for access to HVAC equipment.
10. Provide all sleeves, blocking, coring, and other associated caulking required for this scope of work.
11. Provide the necessary temporary air filters materials over permanent return air grills at all entrances to return air ducts weekly or more often if needed.
12. Include concrete cutting, coring and patching as required for the mechanical scope of work.
13. Include Automatic Temperature Controls and interlock wiring including control components and complete control wiring system in strict accordance with construction documents.
14. Furnish and install motor controllers and starters for mechanical equipment as specified.
15. Include roof curbs and penetration enclosures as required and per the roofing manufacturer's requirements to preserve the roof warranty.
16. Furnish and install louvers, access doors, grilles, and vents as required for this scope of work.
17. Include condensate piping.
18. Include all natural gas piping required for this scope of work.
19. Provide air filters including spare air filters for HVAC equipment. Furnish, install and maintain temporary filters during construction operations.
20. Furnish, install and maintain all roof penetrations, openings and curbs associated with this scope of work until all equipment has been installed and flashed in permanently. Remove and dispose of covers at the completion of work.
21. Include fire-stopping, fire sealing and caulking for penetrations created by this scope of work.
22. Duct detectors are to be furnished by the electrical contractor, installed by this scope of work, and terminated by the electrical contractor. Coordinate with the electrical contractor for wiring and terminations.
23. Coordinate with the electrical contractor for the location, size and installation of disconnects. The electrical contractor is to furnish and install disconnects. The locations are to be provided by the HVAC contractor.
24. Coordinate with food service for tie-in locations of mechanical items relating to their equipment.
25. Furnish and install supports for return air boots as necessary.
26. Include all final connections to Owner-furnished equipment.
27. Include testing, adjusting and balancing per contract documents.
28. Include Commissioning per construction documents as required.
29. Include documented instructional training to the owner's representative regarding the operation and maintenance of the plumbing systems.
30. All warranties for fixtures, devices, and equipment begin at date of Substantial Completion of Project.
31. Include warranty per construction documents on all equipment regardless if used temporarily during construction for climatization.

32. Each trade shall provide and install firestopping at all penetrations for their work that crosses through fire-resistance-rated floor and roof construction including both empty / blank openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

Section B: Project Specific Requirements:

1. Include DDC Controls from Alerton Technologies by Northwest Controls.
2. Coordinate roof penetrations in pre-engineered metal buildings with erector.
3. Project specific requirement 3.

Section C: Project-Specific Exclusions:

1. Project specific exclusion 1.
2. Project specific exclusion 2.

Section D: Project Alternates:

1. Alternate 1.

Section E: Unit Pricing:

1. Unit Price 1.

END OF BID PACKAGE