

**Murray Contractors BID MANUAL
Section 23 HVAC****Bid Package # 23 HVAC**

Your signature on this page is confirmation of your bid and an acknowledgement and acceptance of the requirements of the Murray Bid Manual, project schedule and all Addendums and CM Clarifications.

Company AR State Contractor's License #

Name Title

Address

City State Zip Code

Phone Number w/ Area Code Email Address

Specification:

Bidders will include work from referenced specifications and other work normally associated with this trade whether referenced or not.

1. 23 0000 SUPPLEMENTARY HVAC GENERAL CONDITIONS
2. 23 0529 HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT
3. 23 0548 VIBRATION AND SEISMIC CONTROLS FOR HVAC
4. 23 0553 IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT
5. 23 0593 TESTING, ADJUSTING, AND BALANCING FOR HVAC
6. 23 0713 DUCT INSULATION
7. 23 0719 HVAC PIPING INSULATION
8. 23 0923 DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC
9. 23 0934 VARIABLE-FREQUENCY MOTOR CONTROLLERS FOR HVAC
10. 23 1123 FACILITY NATURAL-GAS PIPING
11. 23 2300 REFRIGERANT PIPING
12. 23 3100 HVAC DUCTS AND CASINGS
13. 23 3300 AIR DUCT ACCESSORIES
14. 23 3423 HVAC POWER VENTILATORS
15. 23 3439 HIGH-VOLUME, LOW-SPEED PROPELLER FANS
16. 23 3700 AIR OUTLETS AND INLETS
17. 23 3813 COMMERCIAL KITCHEN HOODS
18. 23 7416 PACKAGED ROOFTOP AIR-CONDITIONING UNITS
19. 23 8126.13 SMALL-CAPACITY SPLIT-SYSTEM AIR CONDITIONERS
20. 23 8129 VARIABLE REFRIGERANT FLOW HVAC SYSTEMS
21. 23 8200 CONVECTION HEATING AND COOLING UNITS
22. 07 8400 FIRESTOPPING

Scope of Work:

The bid package shall also include the following items but shall not limit more stringent requirements found elsewhere in the contract documents unless specifically listed as exclusion below.

1. Provide all labor, supervision, equipment, hoisting, materials, licenses, and trade permits required to perform all work, turnkey, outlined in this subcontract. Work not specifically shown but considered a standard requirement in the completion of this work is included.
2. All applicable sales tax (unless noted otherwise)
3. Submittals and shop drawings submitted to Murray Contractors within (14) days of award of contract.
4. Closeout documents submitted per Murray Contractors closeout procedures with (14) days prior to the original substantial completion date of the project.
5. Specified warranties shall be from the date of substantial completion.
6. Freight to the jobsite as it pertains to this scope of work, including any quick-shipment premiums.
7. Maintain accurate as-built drawings.
8. Verification of elevations and field measurements shown on documents prior to commencing work.
9. Installation of materials over substrate indicates acceptance of substrate.
10. Required layout for this scope, benchmark provided by others.
11. Required coordination with other trades.
12. Multiple mobilizations as required to perform this scope of work.
13. Should this subcontractor delay the critical path schedule, subcontractor shall provide all necessary overtime and manpower required to return this scope of work to be on schedule no cost to Murray Contractors.
14. Qualified, properly trained, and experienced supervision at all times.
15. Unloading of materials and deliveries to be placed on proper dunnage to prevent product damage.
16. Provide weather protection for stored materials.
17. Repair and replace any damage done to existing SWPPP measures by this trade.
18. Cleanup of any track out by this trade.
19. Subcontractor is responsible for damage done by its own forces to other trade's work.
20. Provide daily clean-up of all debris generated by subcontractor to Murray Contractors provided dumpster.
21. Compliance with all rules, regulations, and requirements of local, state, and federal authorities.
22. All work shall strictly comply with adopted building codes. Any discrepancies should be clarified and approved by authority having jurisdiction.
23. Full compliance with Murray Contractors safety policies and all governing OSHA guidelines.
24. All cost associated with perimeter safety, fall protection, and personal protective equipment.

Trade Specific Scope of Work

1. Perform field verification of existing conditions, existing mechanical systems, utilities, and coordination with architectural, structural, electrical, plumbing, kitchen, and civil drawings prior to starting work.
2. Provide selective demolition of all existing mechanical systems, including ductwork, diffusers, grilles, controls, piping, and thermostats, as indicated on demolition plans (M101–M103, M801); protect existing work to remain and restore finishes as required.
3. Obtain all required permits, fees, inspections, and approvals from the Authority Having Jurisdiction; furnish certificates of final inspection and approval.
4. Submit product data, shop drawings (including ductwork fabrication, equipment submittals, and controls), qualifications, and all Division 01 submittals for equipment, ductwork, accessories, and controls.
5. Furnish and install packaged heat pump air handlers complete with modulating scroll compressors, electric heat, smoke detectors in supply and return, and all accessories per schedules.
6. Furnish and install associated heat pump condensing units with digital scroll compressors, refrigerant and outdoor installation requirements.

7. Furnish and install complete VRF system including outdoor condensing unit, branch selector unit, and indoor fan coil units with refrigerant piping, controls, and accessories.
8. Furnish and install ductless split system ceiling cassette and outdoor unit with refrigerant line set.
9. Furnish and install energy recovery ventilator with associated ductwork, controls, and interlocks.
10. Furnish and install commercial kitchen hood complete with stainless steel construction, fire suppression system, make-up air provisions, utility cabinets, and all accessories.
11. Furnish and install kitchen exhaust fan and associated stainless steel grease exhaust ductwork (continuous welded) with residue traps and cleanouts.
12. Furnish and install general exhaust fans, including ceiling-mounted units with backdraft dampers, interlocks, and aluminum face covers.
13. Furnish and install high-volume, low-speed propeller fan with controller and coordination of color/finish with Architect.
14. Furnish and install electric unit heaters with wall mounting brackets, disconnects, and remote thermostats.
15. Furnish and install complete galvanized steel supply, return, exhaust, and outside air ductwork systems including mains, branches, fittings, turning vanes, and transitions for all floors and buildings.
16. Furnish and install all air outlets and inlets per Air Devices schedule on M402 , including finishes, face dampers, and insulation blankets where specified; coordinate final locations with Architect.
17. Furnish and install volume control dampers, motorized dampers, backdraft dampers, fire dampers, and flexible duct connectors at all required locations.
18. Provide duct access doors, test holes, and sealing of all duct joints and connections per specifications.
19. Insulate all supply, return, and outside air ductwork (internal or external as specified) and refrigerant piping per specifications including vapor barriers and protection at supports.
20. Furnish and install refrigerant piping systems (suction and liquid lines) for all heat pumps, VRF, and split systems, including insulation, supports, and leak testing.
21. Provide condensate drain piping from all cooling coils, air handlers, and equipment to approved discharge points, including traps, pumps, and insulation where required.
22. Furnish and install hangers, supports, vibration isolators, and seismic restraints for all ductwork, piping, and equipment per specifications.
23. Provide complete Direct Digital Control system / Building Automation System integration per Section 23 0923 and control diagrams (M501–M502), including controllers, sensors, thermostats, dampers, VFDs (where required), and sequence of operations for AHUs, VRF, ERV, and zones.
24. Furnish and install variable-frequency motor controllers where specified for HVAC equipment.
25. Coordinate natural gas piping connections and final connections to any fuel-fired HVAC equipment.
26. Coordinate all rough-in, final connections, clearances, and electrical power requirements with electrical, plumbing, kitchen, and structural trades; provide flexible connections and vibration isolation at equipment.
27. Provide identification (labels, tags, and color coding) for all ductwork, piping, valves, and equipment per plans and specifications.
28. Perform testing, adjusting, and balancing (TAB) of all air and hydronic systems per Section 23 0593, including airflows, temperatures, and verification of sequences of operation.
29. Start up, test, and commission all equipment and systems, including manufacturer-authorized startup where required; demonstrate operation to Owner.
30. Clean all duct systems and equipment prior to final acceptance; protect systems during construction.
31. Furnish operation and maintenance manuals, as-built drawings (including duct routing and equipment locations), spare parts lists, and owner training.
32. Provide all required firestopping at penetrations (coordinate with Section 07 8400), access panels for concealed equipment/controls, and restoration of finishes.
33. Provide warranties and all closeout documentation for a complete, operational system..

Base Bid Amount

	\$
--	----

Bid Breakouts

	\$	
	\$	
	\$	

Alternates

Alternate #	Description	Amount
		\$
		\$
		\$

Addenda

Addenda #	Date

VOLUNTARY VALUE ANALYSIS

Value Analysis propositions will be strongly considered in the subcontractor selection process. Bidders are encouraged to explore and identify Value Analysis savings for this scope of work. Please describe below (and on separate page if necessary) any cost saving opportunities as well as potential savings:

Unit Prices:

The contract between Murray Contractors and the successful low bidder will be a fixed lump sum Subcontract Agreement. For revisions to the scope of the project and/or revisions to the contract documents, the lump sum contract amount would be adjusted by change order at the following unit prices. All unit prices shall include labor, materials and equipment. Where applicable to Scope of Work, provide the following unit prices. (Insert N/A if it does not apply)

Unit Price	Amount	Unit
	\$	
	\$	
	\$	