

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. All work shall be subject to the General Conditions and shall comply with applicable requirements of the Contract.
- B. Requirements of Section 230500 shall also govern work specified herein, together with all applicable paragraphs of Mechanical sections.

PART 2 - SCOPE OF WORK

2.01 WORK INCLUDED

- A. This Specification and the accompanying Contract Drawings are intended to include the furnishing and installation, in a workman-like and approved manner, of all labor, materials, equipment and appliances necessary and required to completely install the HVAC Systems as specified and shown on the Drawings.
- B. General scope of work shall be as listed below, however, omission of specific items shall not be construed as being omitted from the Contract if the item is mentioned elsewhere or implied.
- C. The list is not intended to be complete, but it is to serve as a guide to the character and extent of the work, and in general, shall consist of the following:
 - 1. Cleaning of all piping and duct systems prior to operation.
 - 2. All electrical interlock wiring, except as noted otherwise.
 - 3. Complete DDC control system with devices, valves, dampers, controllers, panels and BMS system.
 - 4. All control and interlock wiring (in conduit) for the BMS loop system and all components.
 - 5. All miscellaneous appurtenances, accessories and specialties required for a complete installation placed into satisfactory operating condition.
 - 6. Signs, charts, identifications, labels, etc., conforming to the requirements of the specifications, codes and Authorities Having Jurisdiction.
 - 7. Hot water piping system, circulating pumps, heat exchangers, valves, expansion tanks accessories and air separator.
 - 8. Chilled water piping system, circulating pumps, valves, expansion tanks, air separator and accessories.

9. Low pressure steam supply and condensate return piping system, steam traps, valves, condensate return pump units and accessories.
10. Refrigerant piping, valves, specialties.
11. Supply, return, exhaust ventilation systems and air conditioning systems, including fans, air-handling units, ductwork, motors, volume dampers, filters, air distribution devices, fire and smoke dampers, access doors and all accessories.
12. Air-cooled self-contained or split systems.
13. Fin tube radiators, convectors, unit heaters, cabinet heaters.
14. All drains and drainage systems from HVAC coils, protective drain pans and plenum duct drains.
15. Motor starters, motor control centers and variable frequency drives (VFD) for the fans, pumps and all other mechanical equipment as specified and/or scheduled
16. Insulation of piping, ductwork, equipment, etc.
17. Prime painting of equipment and piping, shop finishes, piping identification, stenciling, color coding and painting of exposed ductwork.
18. Training, instructions and guarantees.
19. "Air-Side Economizer Systems" including controls.
20. Water treatment systems for all closed and open water systems.
21. Auxiliary steel required for supporting HVAC equipment, ductwork and piping other than those available in the building structure.
22. Access doors and panels required in acoustical tile hung ceilings and plaster or dry wall ceilings and partitions.
23. Housekeeping pads for all floor mounted equipment.
24. Vibration and inertia bases for fans, pumps, air conditioning units etc., and vibration isolators for all equipment and piping.
25. Curbs for equipment.
26. Counter flashing around roof penetrations or waterproofed floor penetrations of HVAC ducts and piping. Caulking around sleeves and fire-stopping at all floor and wall penetration of piping and ductwork.
27. Sound control and acoustical treatment.
28. Furnishing and setting of sleeves, required for piping or ductwork in walls and/or slabs.
29. Connections to Engine Generator: installation of exhaust flues and silencers.
30. Hangers, supports and vibration isolators.

31. System commissioning.
32. Duct cleaning.
33. Testing, Adjusting, Balancing and Commissioning.
34. Gas detection systems.
35. Install duct smoke detectors furnished by Electrical Contractor.
36. Protection during construction.

END OF SECTION