

MECHANICAL SPECIFICATIONS

- 1. PROVIDE ALL HEATING, VENTILATION AND AIR CONDITIONING ITEMS INDICATED ON THE DRAWINGS... 2. COMPLY WITH ALL PERTINENT CODES, ORDINANCES AND REGULATIONS... 3. THE CONTRACTOR SHALL NOT ATTEMPT TO PRECISELY SCALE DIMENSIONS FROM THESE DRAWINGS... 4. FURNISH WITHOUT EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR REQUIRED TO COMPLY WITH THE ABOVE CODES AND STANDARDS... 5. ALL EQUIPMENT AND MATERIAL SHALL BE NEW AND OF FIRST QUALITY... 6. COOPERATE AND COORDINATE WITH OTHER TRADES IN ORDER THAT ALL SYSTEMS IN THE WORK MAY BE INSTALLED IN THE BEST ARRANGEMENT... 7. EXAMINE THE AREAS AND CONDITIONS UNDER WHICH WORK OF THIS SECTION WILL BE INSTALLED... 8. AVOID INTERFERENCE WITH STRUCTURE, AND WITH WORK OF OTHER TRADES... 9. ALL OTHER MATERIALS NOT SPECIFICALLY DESCRIBED BUT REQUIRED FOR A COMPLETE AND PROPER INSTALLATION SHALL BE AS SELECTED BY THE CONTRACTOR SUBJECT TO ACCEPTANCE BY THE ENGINEER... 10. ALL DUCTWORK SHALL BE FABRICATED FROM GALVANIZED SHEET METAL DUCT AND CONFORM TO SMACNA 'HVAC DUCT CONSTRUCTION STANDARDS-METAL AND FLEXIBLE... 11. FLEXIBLE DUCT: FLEXMASTER; ATCO UPC#36(R-6.0); ATCO UPC#31 (R-8) OR THERMAFLEX, TYPE 3, INSULATED... 12. DUCT LINER: OWENS CORNING AEROFLEX PLUS, OR EQUIVALENT... 13. CONDENSATE DRAIN PIPING SHALL BE ASTM D2665 PVC WITH SOLVENT WELDED FITTINGS... 14. REFRIGERANT PIPING SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS... 15. THERMOSTATS: PROVIDE 24 VOLT, PROGRAMMABLE 24 HOUR, 7 DAY THERMOSTAT TO CONTROL HEATING STAGES IN SEQUENCE WITH DELAY BETWEEN STAGES AND SUPPLY FAN TO MAINTAIN TEMPERATURE SETTING... 16. PROVIDE FIRE AND SMOKE RATED FLEXIBLE CONNECTIONS BETWEEN FANS AND DUCTS... 17. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS INCLUDING LEAKANCES RECOMMENDED FOR PROPER OPERATION OR SERVICE... 18. INDOOR DUCT INSULATION: FOIL-FACED FIBERGLASS, OWENS CORNING TYPE 75 OR EQUAL, 2.2" THICK(R-6), UNLESS THE INSULATED DUCT IS OUTSIDE BUILDING INSULATION ENVELOPE... 19. ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTS SHALL BE INSULATED... 20. ALL LOW PRESSURE DUCT BRANCHES SHALL CONTAIN MANUAL BALANCING DAMPERS... 21. MAKE ALL DUCT ELBOWS RIGHT ANGLE TYPE WITH SINGLE -THICKNESS TURNING VANES OR CONSTRUCT WITH CENTERLINE RADIUS 1-1/2 TIMES THE DUCT WIDTH... 22. DUCT SIZES SHOWN ON PLANS ARE CLEAR, INTERIOR DIMENSIONS... 23. DO NOT CUT INTO OR REDUCE THE SIZE OF ANY STRUCTURAL MEMBER WITHOUT THE PERMISSION OF THE ARCHITECT... 24. PROVIDE WEATHER-PROOF FLASHING AT ALL DUCT AND PIPE PENETRATIONS THROUGH THE BUILDING WALLS... 25. SUPPORT ALL HVAC UNITS, DUCTWORK, PIPING AND OTHER APPURTENANCES FROM STRUCTURE... 26. THOROUGHLY CLEAN ALL COMPONENTS AND REMOVE ALL DIRT, SCALE, OIL, AND OTHER FOREIGN SUBSTANCES... 27. PERFORM ALL TESTS NECESSARY TO DEMONSTRATE THE INTEGRITY OF THE COMPLETE INSTALLATION TO THE APPROVAL OF THE ENGINEER AND ALL OTHER AUTHORITIES... 28. THE ENTIRE SYSTEM SHALL BE WARRANTED FOR A PERIOD OF ONE (1) YEAR BEGINNING WITH OWNERS ACCEPTANCE OF THE WORK... 29. THE UNITS SHALL HAVE THE FOLLOWING FUNCTIONS AS A MINIMUM... 30. SUBMITTALS AND SUBMITTAL PROCEDURES... 31. INSTRUCT OWNER'S REPRESENTATIVE IN THE OPERATION OF THE SYSTEMS... 32. PROVIDE AN OPERATION AND MAINTENANCE MANUAL... 33. HORIZONTAL AIR HANDLER UNIT: INDOOR FAN-COIL UNIT SHALL BE DIRECT-EXPANSION HORIZONTAL HEAT PUMP AIR HANDLER WITH ELECTRIC STRIP HEAT SUSPENDED FROM STRUCTURE... 34. AIR SOURCE HEAT PUMPS (HP-1, 2, 3): OUTDOOR-MOUNTED, AIR-COOLED SPLIT SYSTEM OUTDOOR SECTION... 35. CONDENSING UNIT: OUTDOOR-MOUNTED, AIR-COOLED SPLIT SYSTEM OUTDOOR SECTION... 36. SMALL SPLIT AIR HANDLER UNIT(WAY): THE UNIT SHALL BE A FOUR-WAY CASSETTE STYLE INDOOR UNIT... 37. PROVIDE A DUCT SMOKE DETECTOR ON THE SUPPLY DUCT OF EACH AIR HANDLING UNIT... 38. GRILLES, REGISTERS AND DIFFUSERS: GRILLES, REGISTERS, AND DIFFUSERS AS INDICATED ON THE DRAWINGS HAVE BEEN SELECTED FROM THE CATALOG OF THE MANUFACTURER NOTED AS THE BASIS OF DESIGN... 39. BASIC MOTOR REQUIREMENTS: BASIC REQUIREMENTS APPLY TO MECHANICAL EQUIPMENT MOTORS... 40. HANGERS AND SUPPORTS: BUILDING ATTACHMENTS, CONCRETE INSERTS OR STRUCTURAL STEEL FASTENERS APPROPRIATE FOR BUILDING MATERIALS... 41. SEALANT MATERIALS: JOINT AND SEAM SEALANTS, GENERAL... 42. ALL HVAC EQUIPMENT SUCH AS AH, CU, EF, AC, HP, AND RTU SHALL HAVE VISIBLE NAMEPLATES WITH THEIR ASSOCIATED MARKS ON THEM... 43. CEILING VENTILATOR SHALL HAVE CORROSION RESISTANT GALVANIZED STEEL HOUSING WITH FOUR-POINT MOUNTING CAPABILITY... 44. LOUVERS: 6" DEEP, 12 GAUGE (0.081) ETCHED AND 30 MINUTE CLEAR ANODIZED EXTRUDED ALUMINUM... 45. THE PROJECT SHALL BE CONSTRUCTED IN STRICT ADHERENCE TO DRAWINGS AND SPECIFICATIONS... 46. ACCEPTABLE MANUFACTURERS ARE: AIR HANDLERS & HEAT PUMPS, PACKAGED UNITS: CARRIER, TRANE, YORK, LENOX, GRILLES, REGISTERS & DIFFUSERS: TITUS, NAILOR, PRICE, TUTTLE & BAILEY, KRUGER, METAL AIRE(COLOR SELECTION SUBMITTED TOARCHITECT) FANS: TWIN-CITY, COOK, GREENHECK, PENNBARBY, ACME, AMERICAN COOLAIR, CAPTIVE AIR, SOLAR & PALAUJ, MARKEI, Q-MARK, RAYWALL, INDECO ELECTRIC HEATERS: PROVIDE THERMOSTATS BY SAME MANUFACTURER AS EQUIPMENT CONTROLS:SHOULD BE PROVIDED WITH UNIT:

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