

1. CODES AND STANDARDS LISTED IN SPECIFICATIONS AND DRAWINGS ARE MINIMUM STANDARDS. WHERE REQUIREMENTS ON THE DRAWINGS OR SPECIFICATIONS EXCEED THE MINIMUM CODE REQUIREMENTS, THE DRAWINGS OR SPECIFICATIONS SHALL GOVERN.
2. THE POWER RATING OF MOTORS AND OTHER MECHANICAL EQUIPMENT AND THE ELECTRICAL CHARACTERISTICS OF ELECTRICAL SYSTEMS THEREON HAVE BEEN ESTABLISHED AS MINIMUMS WHICH ALLOW THAT EQUIPMENT TO FUNCTION PROPERLY TO PRODUCE THE REQUIRED CAPACITIES. POWER RATINGS ALLOW REASONABLE SAFETY FACTORS TO ACCOMMODATE COMMON DIFFERENCES BETWEEN DESIGN PARAMETERS AND FIELD CONSTRUCTION PRACTICES. EQUIPMENT WITH POWER RATINGS LESS THAN THOSE INDICATED ON THE DRAWINGS SHALL NOT BE PERMITTED.
3. REASONABLE EFFORTS HAVE BEEN MADE TO COORDINATE ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT WITH THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. DIFFERENCES AMONG MANUFACTURERS OF MECHANICAL EQUIPMENT MAKE IT IMPOSSIBLE TO PRODUCE A SINGLE ELECTRICAL DESIGN WHICH WILL SATISFY THE VARYING ELECTRICAL REQUIREMENTS OF THE THOSE MANUFACTURERS. CONSEQUENTLY, THE CONTRACTOR SHALL COORDINATE THE ELECTRICAL REQUIREMENTS OF THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT WITH THE EQUIPMENT ACTUALLY FURNISHED ON THIS PROJECT AND PROVIDE ELECTRICAL SYSTEMS THEREON BY THAT EQUIPMENT. THIS COORDINATION EFFORT SHALL BE COMPLETED PRIOR TO THE INSTALLATION OF EITHER THE MECHANICAL EQUIPMENT OR THE ELECTRICAL SYSTEMS SERVING THAT EQUIPMENT. ELECTRICAL SYSTEM REVISIONS REQUIRED TO COORDINATE WITH THE MECHANICAL EQUIPMENT ACTUALLY FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
4. DRAWINGS INDICATE GENERAL LOCATIONS OF FIXTURES, APPARATUS, EQUIPMENT, PIPING, AND DUCTWORK. CHANGES ON LOCATION SHALL BE MADE TO ACCOMMODATE EXISTING OR NEW BUILDING CONDITIONS AND COORDINATION WITH OTHER TRADES, INCLUDING HVAC, PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL, SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
5. THOROUGHLY CLEAN/FLUSH EXISTING AND NEW HYDRONIC PIPING SYSTEMS WITH CLEAN WATER. AFTERWARDS, REMOVE AND CLEAN OR REPLACE STRAINER SCREENS.
6. ALL HVAC SYSTEMS SHALL BE TESTED AND BALANCED ACCORDING TO NEBB AND SMACNA STANDARDS.
7. PROVIDE ACCESS TO EQUIPMENT AND PORTIONS OF BUILDING SYSTEMS REQUIRING SERVICE.
8. DO NOT INSTALL DUCTWORK, PIPING, OR EQUIPMENT IN ELECTRICAL ROOMS, ELEVATOR ROOMS, OR ELEVATOR SHAFTS, UNLESS EXPLICITLY INDICATED ON APPROVED SUBMITTED LAYOUT DRAWINGS. PIPING, DUCTWORK, AND EQUIPMENT (SWITCHGEAR, SWITCHBOARDS, PANELS, MOTOR CONTROL CENTERS, VARIABLE FREQUENCY DRIVES, TRANSFORMERS, OR STARTERS) SHALL NOT BE INSTALLED DIRECTLY ABOVE OR 42" IN FRONT OF ELECTRICAL EQUIPMENT FROM THE FLOOR TO THE STRUCTURE ABOVE.
9. FOR RENOVATION PROJECTS WHERE THE BUILDING IS OCCUPIED, SCHEDULE WORK SO EXISTING SYSTEMS WILL BE INTERRUPTED FOR A MINIMUM AMOUNT OF TIME. OBTAIN APPROVAL FROM THE OWNER AND ARCHITECT AT LEAST 7 DAYS IN ADVANCE OF INTERRUPTING OR CONNECTION. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
10. UNLESS INDICATED OTHERWISE, EQUIPMENT AND MATERIALS SHALL BE NEW AND OF THE CUSTOMARY STANDARD AND QUALITY FURNISHED BY THE DESIGNATED MANUFACTURER FOR THAT CATALOG NUMBER.
11. FOR EXISTING SYSTEMS, REMOVE EXPOSED PIPING AND DUCTWORK RENDERED USELESS DUE TO CHANGES. PLUG OUTLETS IN PIPING, BLANK OFF AND SEAL OPENINGS IN DUCTWORK AND SEAL AIRTIGHT.
12. AIR SYSTEMS SHALL OPERATE WITHOUT AERODYNAMIC NOISE GENERATED FROM FAULTY INSTALLATION OF DUCTWORK, DIFFUSERS, OR ANY PORTION OF THE AIR DISTRIBUTION SYSTEM.
13. SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT. HANGER RODS SHALL BE SUSPENDED FROM THE STRUCTURE. DO NOT SUSPEND FROM OTHER PIPING, CONDUIT, EQUIPMENT, OR DUCTWORK.
14. ALL WORK REFERENCED UNDER DIVISION 15 SHALL BE DONE BY THE MECHANICAL CONTRACTOR.
15. DRAWINGS INDICATE DESIGN INTENT. CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL INFORMATION. CONTRACTORS SHALL COORDINATE WITH ARCHITECT FOR COORDINATION BETWEEN OTHER TRADES TO ASSURE THE PROPER INSTALLATION OF ALL EQUIPMENT.
16. ALL PIPING, DUCTWORK, INSULATION, CONDUITS, SUPPORTS AND HVAC EQUIPMENT EXPOSED TO VIEW SHALL BE PAINTED. COLOR SHALL BE SELECTED BY ARCHITECT.
17. WHERE DUCTWORK IS EXPOSED DUCT SEAMS SHALL BE MINIMIZED AND SHALL BE OF HIGH QUALITY WORKMANSHIP.

1. TRANSFORMERS OR FILTERS FOR OPERATION OF AUTOMATIC TEMPERATURE CONTROLS FROM BUILDING POWER CIRCUITS SHALL BE PROVIDED UNDER DIVISION 15.
2. WIRING LOWER THAN 110 VOLTS FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE FURNISHED UNDER DIVISION 16. WIRING 110 VOLTS AND HIGHER FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 17.
3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
4. BRANCH CIRCUIT WIRING AND CONDUIT FURNISHED FOR CONTROL EQUIPMENT POWER SHALL BE SEPARATE FROM OTHER POWER WIRING. EACH CIRCUIT SHALL EXTEND TO A 120V BRANCH CIRCUIT PANEL, AND IDENTIFIED 120V, 20 AMPERE, SINGLE POLE BRANCH CIRCUIT BREAKER SHALL BE IN THE PANEL TO SERVE THE CIRCUIT. NO MORE THAN 2 DDC CONTROLLER INSTALLATIONS SHALL OPERATE FROM A SINGLE 120V BRANCH CIRCUIT, UNLESS INDICATED OTHERWISE.
5. WHERE SYSTEMS ARE SERVED BY EMERGENCY POWER, CONTROLS FOR OPERATION OF THOSE SYSTEMS SHALL ALSO BE SERVED BY EMERGENCY POWER.
6. WHERE DAMPERS PREVENT AIRFLOW THROUGH AN AIR HANDLING UNIT OR FAN, THOSE DAMPERS SHALL BE PROVEN OPEN PRIOR TO STARTING THE UNIT OR FAN. A PROOF SHALL BE BY MEANS OF A SAFFI SAFETY SWITCH. THE SAFETY SWITCH SHALL BE OPERATED BY SERVICE WIRE. VARIABLE FREQUENCY DRIVES THE SWITCH SHALL BE WIRED IN THE AUTOMATIC AND HAND/TEST POSITIONS AND IN THE BYPASS POSITION FOR VARIABLE FREQUENCY DRIVES WITH BYPASS.
7. ALL LOW VOLTAGE WIRING AND AIR PIPING OR TUBING SHALL BE PLENUM RATED. MECHANICAL CONTRACTOR SHALL FURNISH ALL LOW VOLTAGE WIRING, AIR PIPING, AND TUBING REQUIRED FOR AUTOMATIC TEMPERATURE CONTROL SYSTEMS. LOW VOLTAGE WIRING IS ALL WIRE OPERATING AT A VOLTAGE LOWER THAN 110 VOLTS.
8. WHEN EQUIPMENT IS INDICATED TO BE DEMOLISHED OR REMOVED, REMOVAL OF ALL CONTROLS, WIRING DEVICES, SUPPORTS ETC IS REQUIRED UNLESS OTHERWISE NOTED.

1. CHANGES IN SHAPE OR DIMENSION SHALL BE MADE WITH MAXIMUM TRANSITION OF 1 TO 7.
2. SEPARATE GALVANIZED SHEET METAL FROM ALUMINUM OR COPPER WITH LEAD OR FELT GASKETS.
3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPURTENANCES CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE A STRUCTURALLY SOUND ASSEMBLY.
4. INSTALL DUCT FROM SHOWER EXHAUST GRILLES GRADING DOWN TO EXHAUST GRILLE, WITHOUT DIP, OR TRAP.
5. PROVIDE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER WORK.
6. PROVIDE DUCTWORK AND TRANSITIONS TO CONNECT DUCTWORK TO EQUIPMENT AND COILS.
7. INSTALL FLEXIBLE DUCTWORK IN A FULLY EXTENDED CONDITION WITHOUT SAGS AND KINKS.
8. INSTALL DUCT MOUNTED SMOKE DETECTORS IN ACCESSIBLE LOCATIONS.
9. UNLESS NOTED OTHERWISE, PROVIDE 1" THICK DUCT LINING FOR A MINIMUM OF 10 FEET OF DUCTWORK FROM THE EXHAUST FAN TO THE END OF AIR HANDLING UNITS, COILS, AIR FILTERS, ENERGY RECOVERY UNITS, AND BLOWER COILS. FOR ALL LINED DUCTWORK, DIMENSIONS INDICATED ON DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS MEASURED FROM FACE-OF-LINER TO FACE-OF-LINER. LINING IS NOT REQUIRED FOR TOILET EXHAUST FANS. ROOF MOUNTED DUCTS TO BE LINED AS DESCRIBED ABOVE AND ARE TO BE INSULATED WITH 2" THICK RIGID INSULATION AND WRAPPED WITH EPDM MEMBRANE, SAME COLOR AS ROOF.
10. WHEN DUCTWORK IS INDICATED TO BE DEMOLISHED OR REMOVED, REMOVAL OF ALL SUPPORTS, ACCESSORIES AND DEVICES IS ALSO REQUIRED UNLESS OTHER WISE NOTED.

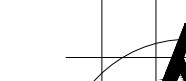
1. DEMOLITION PLANS ARE DIAGRAMMATIC. THIS CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ALL NEW WORK AND DEMOLITION OF EXISTING WORK. ALL DEMOLITION PLANS, ANY AND ALL DEMOLITION REQUIRED AS TO FACILITATE THE NEW WORK MUST BE COMPLETED AND FULLY INCLUDED WITHIN THE BASE CONTRACT.
2. THE REMOVAL OF DUCTWORK INDICATED TO BE DEMOLISHED INCLUDES BUT IS NOT LIMITED TO THE DISCONNECTION REMOVAL AND DISPOSAL OF ALL SHEETMETAL, SUPPORTS, HANGERS, INSULATION, DAMPERS, ACCESS DOORS, FITTINGS ETC AS TO FACILITATE THE COMPLETE REMOVAL OF THE ASSOCIATED SYSTEM WITHIN THE LIMITS OF DEMOLITION AS INDICATED ON THE DRAWINGS.
3. THE REMOVAL OF PIPING INDICATED TO BE DEMOLISHED INCLUDES BUT IS NOT LIMITED TO THE ISOLATION, DRAINING, AND REMOVAL/ DISPOSAL OF ALL PIPING, INSULATION, SUPPORTS, HANGERS, VALVES, FITTINGS ETC AS TO FACILITATE THE COMPLETE REMOVAL OF THE ASSOCIATED SYSTEM WITHIN THE LIMITS OF DEMOLITION AS INDICATED ON THE DRAWINGS.
4. THE REMOVAL OF EQUIPMENT INDICATED TO BE DEMOLISHED, INCLUDES BUT IS NOT LIMITED TO THE REMOVAL AND DISPOSAL OF THAT EQUIPMENT AND ALL ASSOCIATED, CONTROLS, CONNECTION ACCESSORIES, SUPPORT SYSTEMS, HANGERS, ETC AS TO FACILITATE THE COMPLETE REMOVAL OF THE ASSOCIATED EQUIPMENT.
5. THE REMOVAL OF CONTROLS AS REFERENCED IN NOTE 3 REFERS TO THE REMOVAL OF ALL CONTROL FIELD DEVICES, WIRING, DUBING, CONDUIT, SUPPORTS ETC BACK TO AND INCLUDING THE ASSOCIATED CONTROLLER (OR PNEUMATIC PANEL).
6. THIS CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL CODES OR REQUIREMENTS WITH REGARDS TO THE RESPONSIBLE DISPOSAL OF DEMOLISHED MATERIALS.
7. THIS CONTRACTOR IS RESPONSIBLE FOR THE SECUREMENT OF THE PREMISES AT THE END OF EACH WORK DAY. VERIFY THAT ANY OUTSIDE OPENINGS CREATED AS PART OF THE DEMOLITION SCOPE OF WORK ARE PROPERLY SECURED AS TO PREVENT UNLAWFUL ENTRY INTO THE FACILITY.
8. ALL OPENINGS CREATED AS PART OF THE DEMOLITION SCOPE OF WORK MUST BE PROPERLY SEALED OR FIRE CAULKED WEATHER TIGHT AT THE END OF EACH WORK DAY.

1. TRANSFORMERS OR FILTERS FOR OPERATION OF AUTOMATICALLY OPERATED BUILDING POWER CIRCUITS SHALL BE PROVIDED UNDER DIVISION 23.
2. WIRING LOWER THAN 110 VOLTS FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE INSTALLED AND INSTALLED UNDER DIVISION 23. WIRING SHALL BE HIGHER FOR INTERLOCKED DEVICES, DDC CONTROLLERS, TERMINAL CONTROL UNITS, FLOW MEASURING DEVICES, AND OTHER POWER CONSUMING CONTROL DEVICES SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 26.
3. PROVIDE SUPPLEMENTAL STIFFENING AND SUPPORTS TO DUCTS AND APPARATUS CASINGS TO PREVENT DRUMMING, SAGGING AND TO PROVIDE PROPER CLEARANCES.
4. BRANCH CIRCUIT WIRING AND CONDUIT FURNISHED FOR CONTROL EQUIPMENT POWER SHALL BE SEPARATE FROM OTHER POWER WIRING. EACH CIRCUIT SHALL EXTEND TO A 120V BRANCH CIRCUIT BREAKER. THE CIRCUIT BREAKER SHALL BE INSTALLED IN THE CIRCUIT BREAKER FURNISHED IN THE PANEL TO SERVE THE CIRCUIT. NO MORE THAN 2 DDC CONTROLLER INSTALLATIONS SHALL OPERATE FROM A SINGLE 120V BRANCH CIRCUIT UNLESS INDICATED OTHERWISE.
5. WHERE SYSTEMS ARE SERVED BY EMERGENCY POWER, CONTROLS FOR OPERATION OF THOSE SYSTEMS SHALL ALSO BE SERVED BY EMERGENCY POWER.
6. WHERE DAMPERS PREVENT AIRFLOW THROUGH AN AIR HANDLING UNIT OR FANS, THOSE DAMPERS SHALL BE PROVEN OPEN PRIOR TO STARTING THE UNIT OR FAN. PROOF SHALL BE BY MECHANICAL SWITCH OR SWITCHING DEVICE. THE DAMPER SHALL BE OPERATED WITH VARIABLE FREQUENCY DRIVES THE SWITCH SHALL BE WIRED IN THE AUTOMATIC AND HAND/TEST POSITIONS AND IN THE BYPASS POSITION FOR VARIABLE FREQUENCY DRIVES WITH BYPASS.
7. ALL LOW VOLTAGE WIRING AND AIR PIPING OR TUBING SHALL BE PLUMBING QUALITY. ALL AIR PIPING SHALL BE PLUMBING QUALITY. LOW VOLTAGE WIRING, AIR PIPING, AND TUBING REQUIRED FOR AUTOMATIC TEMPERATURE CONTROLS SYSTEMS. LOW VOLTAGE WIRING IS ALL WIRE OPERATING AT A VOLTAGE LOWER THAN 110 VOLTS.

Revisions	Date			



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