

MECHANICAL SYMBOLS AND ABBREVIATIONS

Table containing mechanical symbols and abbreviations. It lists various components like BHP, BTU, CFM, etc., with their corresponding symbols and abbreviations. Includes diagrams for flexible duct connections, dampers, and transitions.

HVAC/ELECTRICAL COORDINATION SCHEDULE

- NOTES:
1. DEVICES TO BE FURNISHED BY THE ELECTRICAL CONTRACTOR (MARKED "E"), HVAC CONTRACTOR (MARKED "HV"), BAS CONTRACTOR (MARKED "B"), PLUMBING CONTRACTOR (MARKED "P"), FIRE PROTECTION CONTRACTOR (MARKED "FP"), OR MANUFACTURER (MARKED "MANUF").
2. ALL CONDUIT AND WIRING FOR TEMPERATURE CONTROL AND EQUIPMENT INTERLOCK SHALL BE BY BAS CONTRACTOR. OTHER CONTROLS AND CONTROL CONDUIT/WIRING BY TRADE FURNISHING RESPECTIVE EQUIPMENT.
3. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO COORDINATE AND REVIEW THE ELECTRICAL CHARACTERISTICS, AMPACITY AND OTHER REQUIREMENTS OF COMPONENTS BEFORE INSTALLATION OF WORK. ALL OTHER CONTRACTORS SHALL ADVISE ELECTRICAL CONTRACTOR OF ANY MOTOR/DEVICE CHANGES.
4. ALL LOOSE STARTERS SHALL INCLUDE HOA SWITCH, CONTROL TRANSFORMER, AND ONE N.O. AND ONE N.C. AUXILIARY CONTACTS. ALL SINGLE PHASE EXHAUST FAN CONTROL SWITCHES SHALL HAVE IDENTIFICATION NAMEPLATE AND PILOT LIGHT.
5. SEE SPECIFICATIONS AND DRAWINGS FOR TYPES AND LOCATIONS OF DEVICES SCHEDULED BELOW.
6. FOR STARTER INFORMATION, REFER TO EQUIPMENT SCHEDULE AND SEQUENCE OF OPERATIONS

Table with columns: EQUIPMENT TAG, EQUIPMENT DESCRIPTION, UNIT MOUNTED DEVICES (STARTER, DISCONNECT, OVERCURRENT PROTECTION, SINGLE POINT CONNECTION), REMOTE OR LOOSE DEVICES (STARTER, DISCONNECT, OVERCURRENT PROTECTION), and REMARKS. Includes an entry for a rooftop unit (RU).

DIFFUSER, GRILLE AND REGISTER SCHEDULE

Table with columns: EQUIPMENT TAG, MANUFACTURER, MODEL, TYPE, NOMINAL FACE SIZE, MATERIAL, MAX. N.C., and NOTES. Includes a floor plan tag legend diagram showing supply, return/relief, and exhaust locations relative to air flow and neck size.

GENERAL NOTES - ALL CONTRACTORS

- 1. DRAWINGS ARE GENERALLY DIAGRAMMATIC. ROUTING OF PIPING, DUCTWORK, CONDUITS, RACEWAYS, ETC., AS SHOWN ON DRAWINGS, DOES NOT INTEND TO SHOW EVERY RISE, DROP, OFFSET, FITTING NOR EVERY STRUCTURAL ELEMENT THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THIS WORK. MAKE ANY REQUIRED CHANGES FROM THE GENERAL ROUTING SHOWN ON THESE DRAWINGS, SUCH AS OFFSETS, BENDS OR CHANGES IN ELEVATION DUE TO COORDINATION WITH THE WORK OF OTHER TRADES AND BUILDING CONSTRUCTION. ALL CHANGES SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR DELAY IN COMPLETION DATE OF THE PROJECT.
2. IT IS INTENDED THAT EQUIPMENT SHALL BE LOCATED SYMMETRICALLY WITH THE ARCHITECTURAL ELEMENTS OF THE BUILDING, NOTWITHSTANDING THE FACT THAT LOCATIONS INDICATED BY THESE DRAWINGS MAY BE DISTORTED FOR CLARITY OR PRESENTATION.
3. CHECK DRAWINGS OF OTHER TRADES TO VERIFY THAT SPACES IN WHICH THEIR WORK WILL BE INSTALLED ARE CLEAR OF OBSTRUCTIONS. WORK SHALL BE INSTALLED TO MAINTAIN MAXIMUM HEADROOM AND SPACE CONDITIONS AT ALL POINTS IN THE BUILDING. WHERE HEADROOM OR SPACE CONDITIONS APPEAR INADEQUATE, NOTIFY OWNER/ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE INSTALLATION OF THEIR WORK.
4. FURNISH OTHER TRADES ADVANCE INFORMATION AND SHOP DRAWINGS ON LOCATIONS AND SIZES OF PIPING, DUCTWORK, CONDUIT, RACEWAYS, EQUIPMENT, FRAMES, BOXES, SLEEVES AND OPENINGS, ETC. NEEDED FOR THEIR WORK TO PERMIT OTHER TRADES AFFECTED TO INSTALL THEIR WORK PROPERLY AND WITHOUT DELAY.
5. WHERE THERE IS EVIDENCE THAT WORK OF ONE TRADE WILL INTERFERE WITH WORK OF OTHER TRADES, ALL TRADES SHALL MEET ON JOB SITE TO WORK OUT SPACE CONDITIONS AND MAKE SATISFACTORY ADJUSTMENTS TO INSTALLATION OF THE NEW WORK. VERIFY EXACT LOCATIONS OF ALL DEVICES AND EQUIPMENT WITH FIELD CONDITIONS, SHOP DRAWINGS, AND WORK OF OTHER TRADES PRIOR TO ROUGH-IN. EACH CONTRACTOR SHALL BE RESPONSIBLE, AT THEIR OWN EXPENSE, FOR THE REMOVAL AND REINSTALLATION OF ANY PART OF THEIR WORK IF SAME WAS INSTALLED WITHOUT CONSULTING WITH OTHER TRADES BEFORE INSTALLING THEIR WORK.
6. PROVIDE SLEEVES IN BEAMS, FLOORS, COLUMNS AND WALLS AS SHOWN ON THE DRAWINGS, AS REQUIRED BY JOB SITE CONDITIONS, AND/OR AS SPECIFIED, WHEN INSTALLING THEIR WORK. ALL BEAMS AND COLUMNS WHICH ARE REQUIRED TO BE SLEEVED SHALL BE CUT AND REINFORCED AS REQUIRED BY FIELD CONDITIONS AND LOCATIONS AND SIZES SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE CONTRACTOR CUTS ANY STRUCTURAL BUILDING MEMBER.
7. THE SEQUENCE FOR THE INSTALLATION OF ALL WORK SHALL BE COORDINATED BETWEEN ALL CONTRACTORS ON THE PROJECT AND IN STRICT ACCORDANCE WITH ARCHITECT/ENGINEER.
8. ALL CORING, CUTTING, PATCHING, REPAIRING, REFINISHING AND REMOVAL/REPLACEMENT OF BUILDING CONSTRUCTION ALREADY IN PLACE AS REQUIRED TO ACCOMMODATE THE INSTALLATION OF THIS WORK IS INCLUDED IN THE BASE PRICE. ALL PATCHING, REPAIRING AND REFINISHING WORK SHALL BE PERFORMED BY THOSE REGULARLY INVOLVED IN THAT TRADE AND SHALL MATCH THE ADJACENT CONSTRUCTION AS CLOSELY AS POSSIBLE. CARE SHALL BE TAKEN SO AS NOT TO DAMAGE ANY PREVIOUSLY INSTALLED NEW BUILDING CONSTRUCTION. ANY PREVIOUSLY INSTALLED FINISHES THAT ARE DAMAGED DURING THE INSTALLATION OF NEW WORK SHALL BE REPAIRED, REPLACED AND PAID FOR BY THE INSTALLING CONTRACTOR WHO DAMAGED THEM TO THE SATISFACTION OF THE ARCHITECT AND OWNER.
9. EACH CONTRACTOR IS RESPONSIBLE FOR DAILY CONSTRUCTION AREA CLEAN-UP. IF A CONTRACTOR FAILS TO PROVIDE SUCH CLEAN-UP, THE ARCHITECT/ENGINEER WILL DIRECT ANOTHER CONTRACTOR TO PERFORM THE CLEAN-UP AND THE NEGLIGENT CONTRACTOR SHALL PAY THE ASSOCIATED BACK-CHARGES AS DEEMED APPROPRIATE BY THE ARCHITECT/ENGINEER.
10. UNLESS INDICATED OTHERWISE, THE ARCHITECT/ENGINEER MAKES NO REPRESENTATION AS TO WHETHER OR NOT ANY HAZARDOUS OR CONTAMINATED MATERIALS (INCLUDING BUT NOT LIMITED TO ASBESTOS, PCB'S, CONTAMINATED SOILS, ETC.) ARE PRESENT ON THE SITE. WORK SHOWN ON THE DRAWINGS AND/OR INDICATED IN THE SPECIFICATIONS SHALL NOT BE CONSTRUED TO CALL FOR CONTACT WITH ANY OF THESE MATERIALS. IF THESE MATERIALS ARE ENCOUNTERED OR SUSPECTED, THE CONTRACTOR SHALL NOT DISTURB THEM AND SHALL CONTACT THE ARCHITECT/ENGINEER IMMEDIATELY.
11. STORE ALL MATERIALS AND EQUIPMENT SHIPPED TO THE SITE IN A PROTECTED AREA. IF MATERIAL IS STORED OUTSIDE OF THE BUILDING, IT MUST BE STORED OFF THE GROUND A MINIMUM OF SIX INCHES (6") SET ON 6 X 6 PLANKS AND/OR WOOD PALLETS. ALL MATERIAL AND EQUIPMENT MUST BE COMPLETELY COVERED WITH WATERPROOF TARPS OR VISQUIN. ALL PIPING AND DUCTWORK WILL HAVE THE ENDS CLOSED TO KEEP OUT DIRT AND OTHER DEBRIS. NO EQUIPMENT WILL BE ALLOWED TO BE STORED OUTSIDE THE BUILDING ON THE SITE UNLESS IT IS SUPPORTED OFF THE GROUND AND COMPLETELY PROTECTED WITH WEATHERPROOF COVERS.
12. THE DRAWINGS, SCHEDULES AND SPECIFICATIONS HAVE BEEN PREPARED USING ONE MANUFACTURER FOR EACH PIECE OF EQUIPMENT AS THE BASIS FOR DIMENSIONAL DESIGN. IF THE CONTRACTOR PURCHASES EQUIPMENT FROM A SPECIFIED ACCEPTABLE MANUFACTURER, BUT NOT THE SCHEDULED MANUFACTURER USED FOR THE BASE DESIGN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING ALL THE DIMENSIONS OF THE EQUIPMENT TO VERIFY THAT IT WILL FIT IN THE SPACE SHOWN ON THE DRAWINGS. MINOR DEVIATIONS IN DIMENSIONS WILL BE PERMITTED, PROVIDED THE RATINGS MEET THOSE SHOWN ON THE DRAWINGS AND EQUIPMENT WILL PHYSICALLY FIT INTO THE SPACE ALLOCATED WITH SUITABLE ACCESS AROUND EQUIPMENT FOR OPERATION AND MAINTENANCE OF THE EQUIPMENT. WHEN EQUIPMENT SUBMITTED FOR REVIEW DOES NOT MEET THE PHYSICAL SIZE OR ARRANGEMENT OF THAT SCHEDULED AND SPECIFIED, CONTRACTOR SHALL PAY FOR ALL ALTERATIONS REQUIRED TO ACCOMMODATE SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR WILL ALSO PAY ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT TO FIT IN THE SPACE AND FUNCTION AS INTENDED.
13. VERIFY THAT THE CHARACTERISTICS OF THE EQUIPMENT SUBMITTED FOR REVIEW MEET THE CAPACITY AND DUTY SPECIFIED. WHEN EQUIPMENT SUBMITTED FOR REVIEW REQUIRES MODIFICATIONS TO THE WORK OF OTHER CONTRACTORS, SUBMITTING CONTRACTOR SHALL PAY FOR ALL COSTS FOR ADDITIONAL WORK REQUIRED BY OTHER CONTRACTORS, OWNER, ARCHITECT OR ENGINEER TO MAKE CHANGES WHICH WOULD ALLOW THE EQUIPMENT FUNCTION SAFELY AND PROPERLY.
14. COORDINATE THE INSTALLATION OF HIS WORK WITH CONSTRUCTION OF THE BUILDING, INCLUDING VERIFYING THE SIZE OF EXISTING OPENINGS, WINDOWS, DOORS, CORRIDORS, ROOMS, ETC. FOR ACCESS OF HIS NEW EQUIPMENT INTO THE BUILDING AREAS WHICH WILL ALREADY BE CONSTRUCTED WHEN HIS EQUIPMENT IS READY TO BE INSTALLED. IF OPENINGS ARE TOO SMALL FOR ACCESS THEN CONTRACTOR SHALL, AT HIS OWN EXPENSE, PROVIDE NEW OR ENLARGED OPENINGS AND RESTORE SAME TO PREVIOUS SIZE AND CONDITION. CONTRACTOR MAY ELECT TO ORDER THE EQUIPMENT DISASSEMBLED AND/OR WITH SPLIT HOUSING FOR ENTRANCE INTO THE SPACE OR BUILDING. CONTRACTOR SHALL REASSEMBLE EQUIPMENT AFTER IT IS IN THE SPACE AT HIS OWN EXPENSE.

MULTI-ZONE ROOFTOP UNIT SCHEDULE

Table with columns: GENERAL (EQUIP. TAG, LOCATION, MANUFACTURER, MODEL, TYPE OF SYSTEM, NO. OF ZONES, EER, TYPE OF UNIT), PHYSICAL CHARACTERISTICS (DIMENSIONS, WEIGHT, CFM, MIN. O.A., ESP/TSP), ZONE (ZONE, MANUF., INDOOR MODEL, OUTDOOR MODEL, SUPPLY CFM, O.A. CFM), GAS HEATING SECTION (INPUT CAPACITY, OUTPUT CAPACITY, STAGES, EAT, LAT, COMPR. QTY., TOTAL CAPACITY, SENSIBLE CAPACITY, OAT, EAT, EAT), DX COOLING SECTION (R-410A) (QTY./DIA., MOTOR RPM/HP), CONDENSER FAN, FILTERS (SIZE, TYPE), ELECTRICAL DATA (MINIMUM CIRCUIT AMPS, MOCAP, PHASE, VOLTS), and NOTES.

- NOTES:
1. OTHER ACCEPTABLE MANUFACTURERS: NONE.
2. R410 EVAPORATOR COIL TO BE FULL FACE INTERTWINED. PROVIDE 16 GA. STAINLESS STEEL COIL CASING AND PITCHED GALVANIZED STEEL DRAIN PAN.
3. VERIFY FILTER SIZES WITH EQUIPMENT MANUFACTURER.
4. PROVIDE PREMIUM EFFICIENCY TOTALLY ENCLOSED FAN MOTORS.
5. PROVIDE TUBULAR POWER VENTED STYLE HEATER WITH ALUMINIZED STEEL HEAT EXCHANGER. MODULATING GAS CONTROLS. EXHAUST STACKS SHALL BE A MINIMUM OF 3'-0" ABOVE ROOF LINE AND SELF SUPPORTING.
6. PROVIDE UNIT MOUNTED CONTROLLER TO BE INTERFACED WITH THE EXISTING INTEL-BUILDING BUILDING AUTOMATION SYSTEM. REFER TO SPECIFICATIONS.
7. RTU MANUFACTURER AND THE MECHANICAL CONTRACTOR SHALL FIELD VERIFY THE EXACT SUPPLY AND RETURN OPENING LOCATIONS AND ZONE DAMPER SIZES AND ARRANGEMENT PRIOR TO FABRICATION OF THE ROOFTOP UNIT.
8. SEE ZONE AIR DISTRIBUTION SCHEDULES ON DRAWING HV2.1 FOR ESTIMATED ROOFTOP UNIT TOTAL CFMs. CONTRACTOR AND EQUIPMENT MANUFACTURE TO VERIFY EXISTING ZONE AIR FLOW RATES PRIOR TO FABRICATION OF THE ROOFTOP UNIT.
9. EQUIPMENT MANUFACTURER TO PROVIDE 120V GFI CONVENIENCE OUTLET AND INTERIOR LIGHTING.
10. PROVIDE LOW LEAKAGE OUTSIDE AIR DAMPER.
11. PROVIDE 100% ENTHALPY ECONOMIZER WITH MODULATING POWER EXHAUST FAN. CO2 DEMAND CONTROL VENTILATION SENSOR FOR CONTRACTOR INSTALLATION AND WIRING.
12. PROVIDE FIVE YEAR COMPRESSOR AND TEN YEAR HEAT EXCHANGER PARTS WARRANTY. PROVIDE MANUFACTURER'S STARTUP SERVICE.
13. SMOKE DETECTORS SHALL BE INSTALLED IN THE RETURN AIR DUCT OR PLENUM UPSTREAM OF ANY FILTERS, EXHAUST AIR CONNECTIONS, OUTDOOR AIR CONNECTIONS, OR DECONTAMINATION EQUIPMENT AND APPLIANCES.
14. ALL UNITS SHALL COMPLY WITH ASHRAE 90.1, 2015 INTERNATIONAL MECHANICAL CODE AND 2015 INTERNATIONAL ENERGY CONSERVATION CODE.
15. ROOFTOP UNITS SHALL BE STARTED AT A LOW SPEED AND GRADUALLY RAMPED UP TO THE REQUIRED CFM TO AVOID DAMAGE TO THE EXISTING FIBERGLASS DUCTWORK. THE TEST AND BALANCE CONTRACTOR SHALL ASSIST THE MANUFACTURER'S START-UP TECHNICIAN.
16. COLOR SHALL BE DETERMINED BY OWNER.
17. BASE: PROVIDE MANUFACTURERS INSULATED CURB EXTENSION MINIMUM HEIGHT SO BASE OF UNIT IS 18" ABOVE ROOF MEMBRANE. PROVIDE CURB DIVIDER TO ISOLATE RETURN AIR PLENUM. CONTRACTOR TO FILL VOID BETWEEN BOTTOM OF UNIT AND ROOF DECK PER DETAIL ELSEWHERE.
ALTERNATE: PROVIDE MANUFACTURERS 24" HIGH INSULATED CURB WITH CURB DIVIDER TO ISOLATE RETURN AIR PLENUM. CONTRACTOR TO FILL VOID BETWEEN BOTTOM OF UNIT AND ROOF DECK PER DETAIL ELSEWHERE.

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HVAC SCHEDULES, NOTES, SYMBOLS, AND ABBREVIATIONS

ROOFTOP UNIT REPLACEMENT RAYMOND ELLIS ELEMENTARY SCHOOL 720 CENTRAL PARK DR, ROUND LAKE, IL 60073 ROUND LAKE CUSD 116 884 W NIPPERSINK RD ROUND LAKE, IL 60073

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