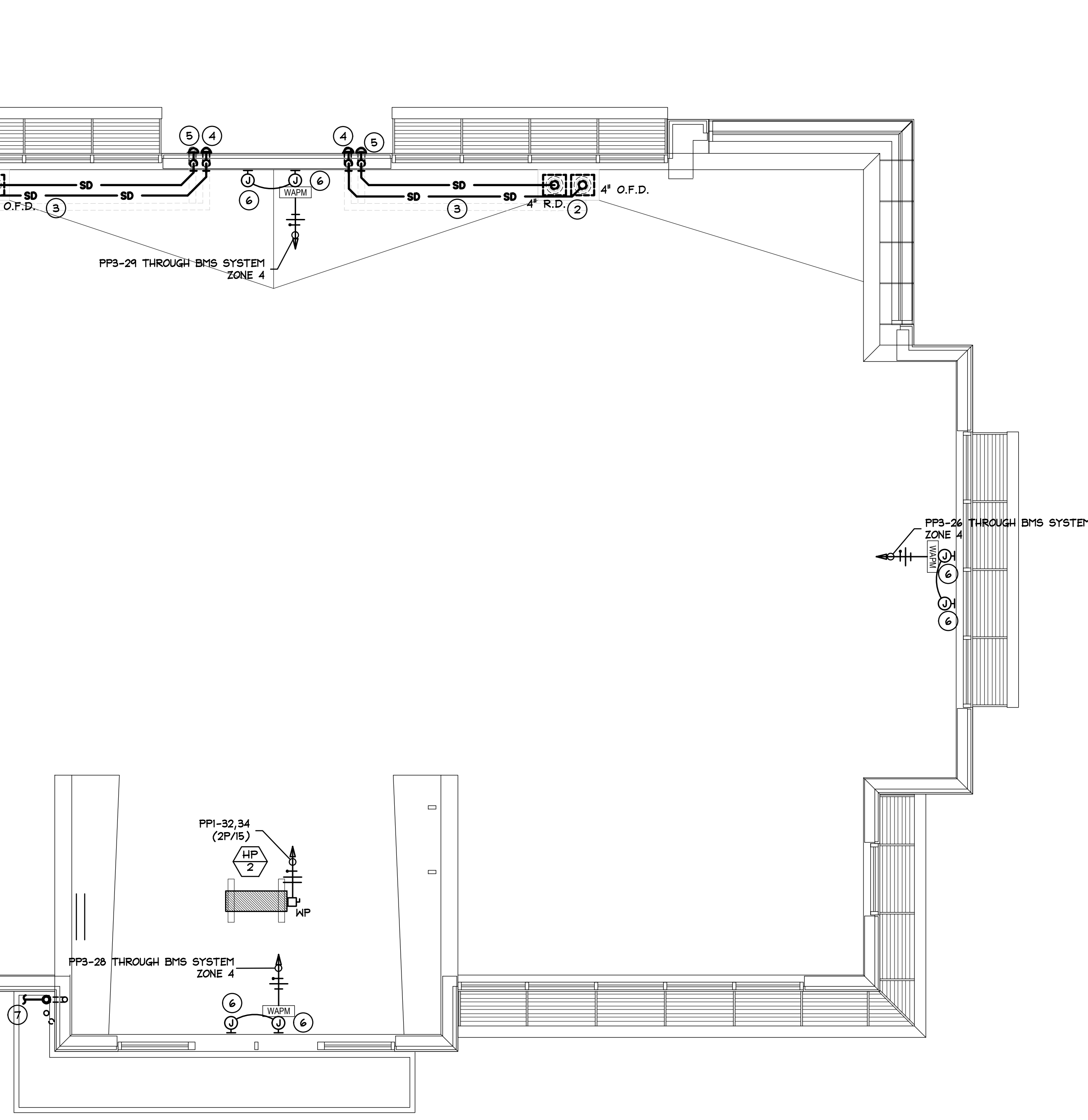
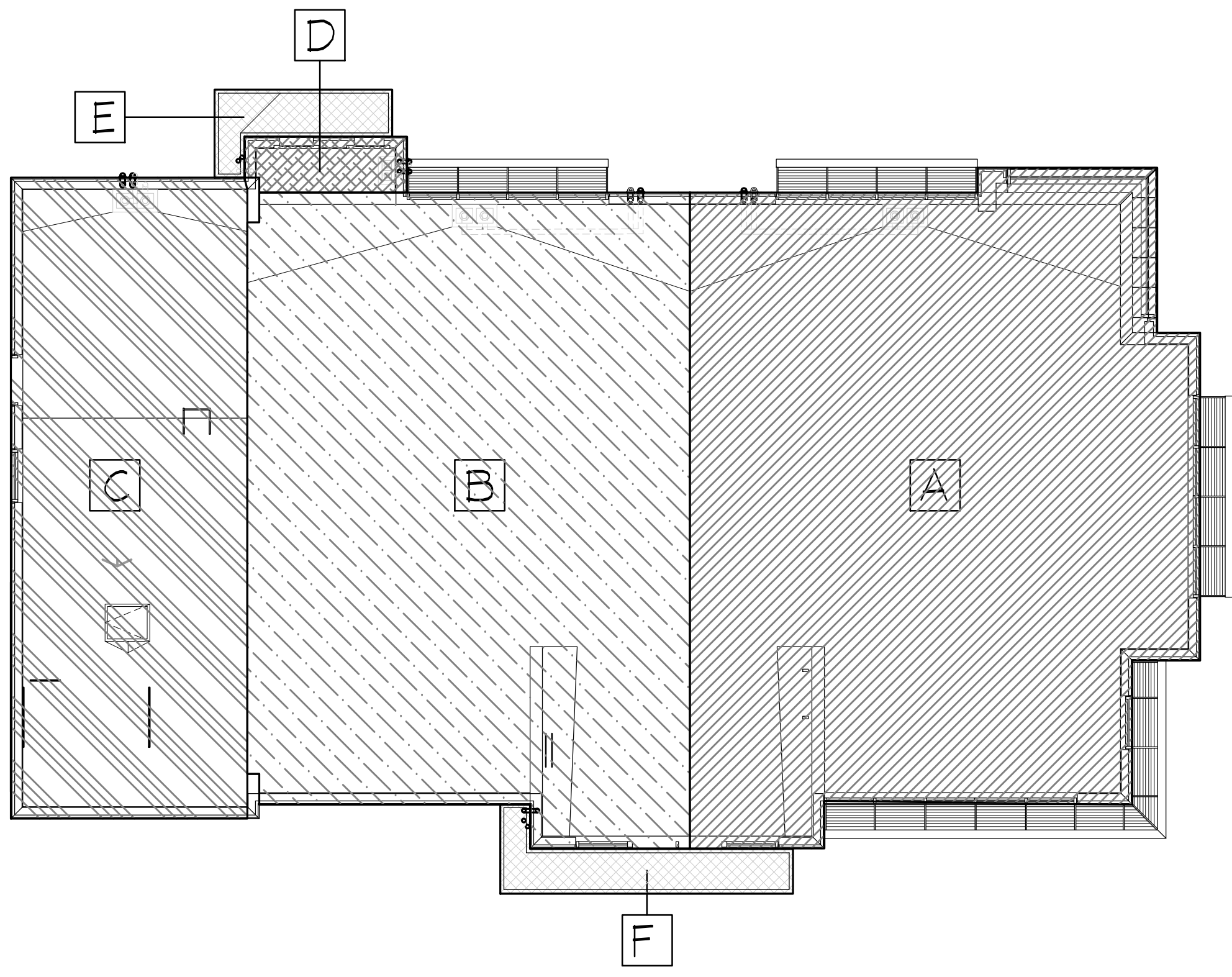


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01 MEP ROOF PLAN
SCALE: 1/4"=1'-0"

ROOF DRAIN SIZING WORKSHEET		
Zone A	Zone B	Zone C
ROOF A 1379 SF - SF - SF	ROOF B 1248 SF - SF - SF	ROOF C 682 SF - SF - SF
PARAPET WALL HT. (FT) 1 93 LF x 4.0 186 SF 2 22 LF x 7.0 77 SF 3 29 LF x 7.0 101.5 SF 4 LF x 0 SF	PARAPET WALL HT. 1 30 LF x 4.0 60 SF 2 39 LF x 3.0 58.5 SF 3 19 LF x 4.0 38 SF 4 51 LF x 7.0 178.5 SF	PARAPET WALL HT. 1 73 LF x 7.0 255.5 SF 2 39 LF x 2.0 39 SF 3 LF x 0 SF 4 LF x 0 SF
TOTAL AREA= 1743.5 SF Rainfall per hour (I) = 6" GPM=(0.0104 * I * A) = 108.8 GPM ROOF DRAIN & LEADER SIZE = 4"	TOTAL AREA= 1583 SF Rainfall per hour = 6" GPM=(0.0104*I*A) = 98.8 GPM ROOF DRAIN & LEADER SIZE = 4"	TOTAL AREA= 976.5 SF Rainfall per hour = 6" GPM=(0.0104*I*A) = 60.9 GPM ROOF DRAIN & LEADER SIZE = 3"
Zone D	Zone E	Zone F
ROOF D 40 SF - SF - SF	ROOF E 43 SF - SF - SF	ROOF F 65 SF - SF - SF
PARAPET WALL HT. 1 20 LF x 7.00 70 SF 2 29 LF x 0.5 7.25 SF 3 LF x 0 SF 4 LF x 0 SF	PARAPET WALL HT. 1 14.75 LF x 7.00 51.625 SF 2 21 LF x 0.5 5.25 SF 3 LF x 0 SF 4 LF x 0 SF	PARAPET WALL HT. 1 22.5 LF x 7.00 78.75 SF 2 28.5 LF x 0.5 7.125 SF 3 LF x 0 SF 4 LF x 0 SF
TOTAL AREA= 117.25 SF Rainfall per hour = 6" GPM=(0.0104*I*A) = 7.3 GPM ROOF DRAIN & LEADER SIZE = 2"	TOTAL AREA= 99.875 SF Rainfall per hour = 6" GPM=(0.0104*I*A) = 6.2 GPM ROOF DRAIN & LEADER SIZE = 2"	TOTAL AREA= 150.88 SF Rainfall per hour = 6" GPM=(0.0104*I*A) = 9.4 GPM ROOF DRAIN & LEADER SIZE = 2"



ROOF AREA DEMARCATION

NOTES BY SYMBOL: #

1. WATER PROOF, GFCI ROOF RECEPTACLE.
2. VERTICAL RISE INTO ROOF DRAIN AND ROOF OVER FLOW DRAIN. CONNECT TO DRAIN AS REQUIRED BY ROOF DRAIN MANUFACTURER. EXTEND HORIZONTAL SLOPE AT 1/4" PER FT TO VERTICAL LEADER DOWN PIPING.
3. HORIZONTAL ROOF DRAIN PIPING. INSTALL AS HIGH UP AS POSSIBLE AND STILL MAINTAIN CODE REQUIRED IS SLOPE.
4. 4" STORM DRAIN DOWN AND OUT TO DISCHARGE NOZZLE. REFER TO ARCHITECTURAL ELEVATIONS FOR PRECISE INSTALLATION HEIGHT.
5. VERTICAL STORM DRAIN DOWN, CONNECT OVERFLOW TO DISCHARGE NOZZLE. REFER TO ARCHITECTURAL ELEVATIONS FOR PRECISE INSTALLATION HEIGHT.
6. JUNCTION BOX FOR CHASE SIGN POWER. CONTRACTOR SHALL VERIFY THE REQUIRED LOCATION AND ALL OTHER REQUIREMENTS WITH THE ARCHITECT AND THE OWNERS SIGNING PROVIDER PRIOR TO ROUGH-IN.
7. 2" STORM DRAIN DOWN AND OUT TO DISCHARGE NOZZLE. REFER TO ARCHITECTURAL ELEVATIONS FOR PRECISE INSTALLATION HEIGHT.
8. 2" OVERFLOW DRAIN PIPE THRU ROOF LID WITH OPEN DISCHARGE, COORDINATE WITH ARCHITECT.
9. REFRIGERANT PIPING DOWN THRU ROOF TO AIR HANDLING UNIT VIA HEAT RECOVERY UNIT, SEE PIPING DIAGRAM.

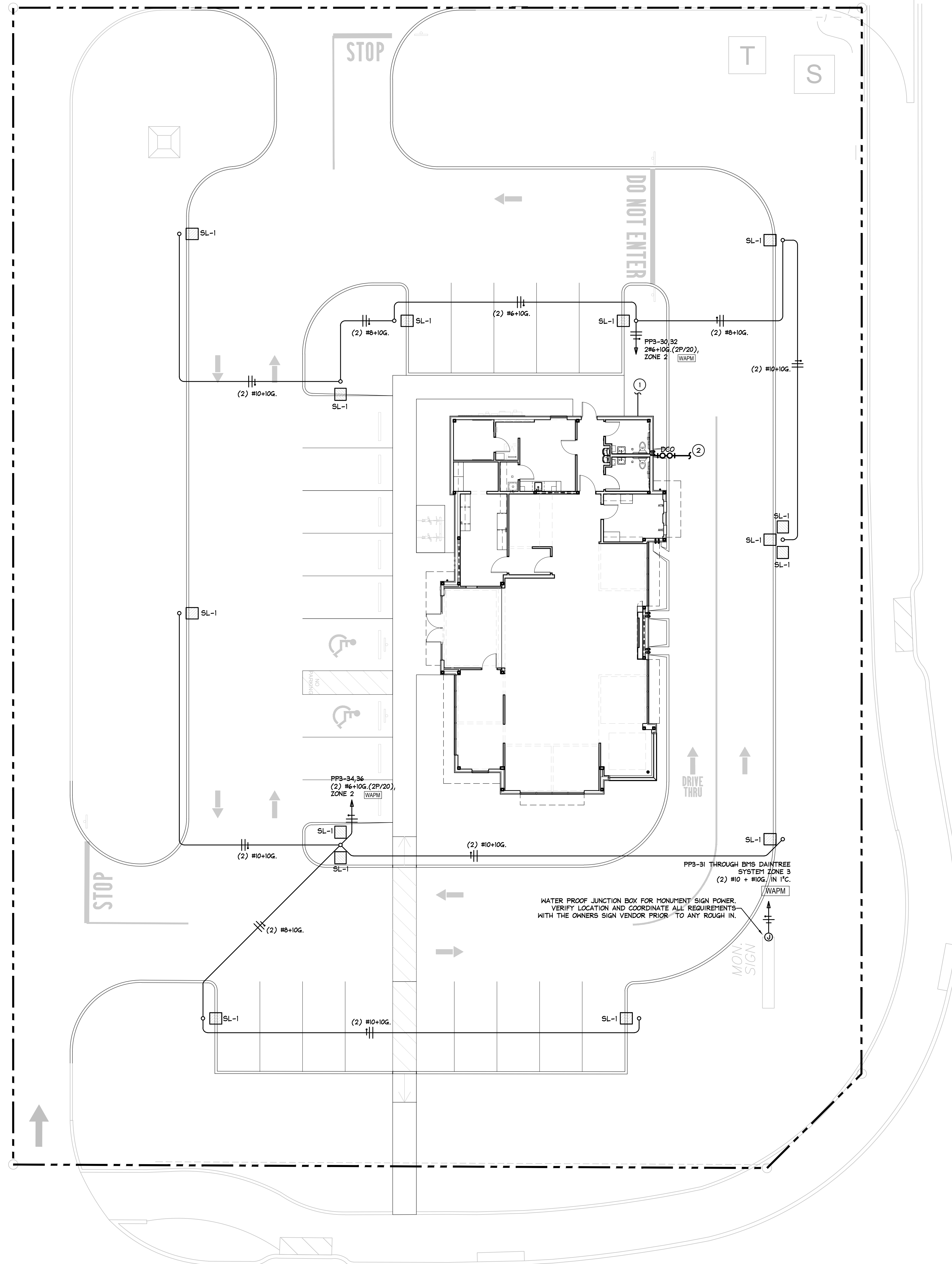
REVISIONS

NO.	DATE	DESCRIPTION

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August 01, 2024
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JOB #: 2023058
SHEET NAME: MEP ROOF PLAN
SHEET #:

MEP1.01

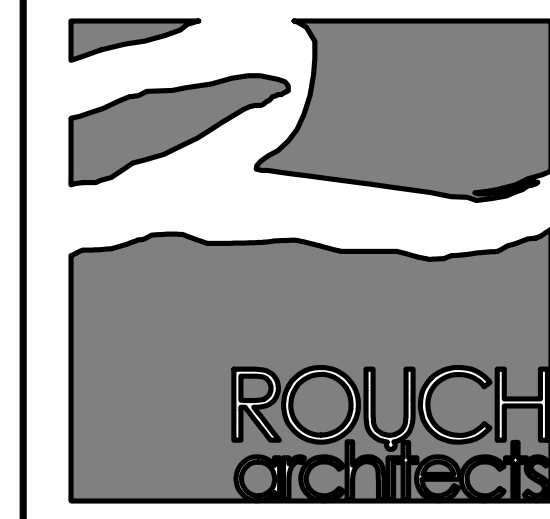


01 MEP SITE PLAN
SCALE: 3/32"=1'-0"

The seal on this document was authorized by Robert L. Morris, P.E. 100589 on the date shown below.

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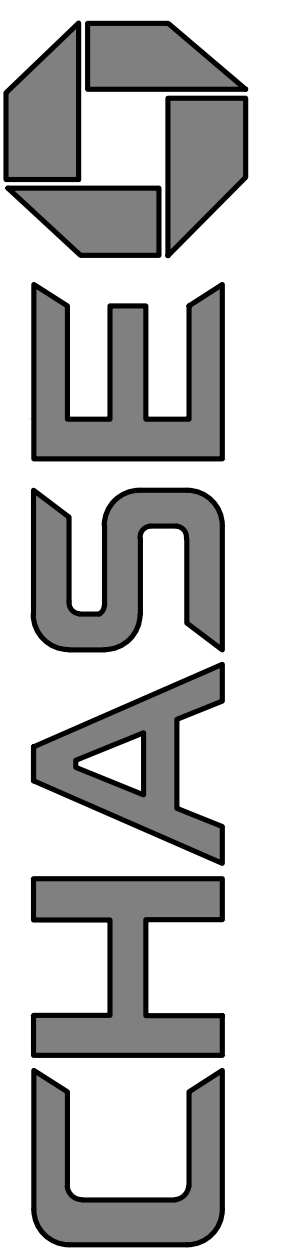


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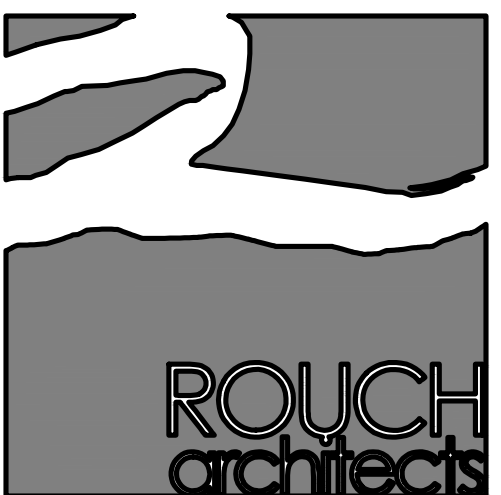
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DATE ISSUED: AUGUST 01, 2024
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SHEET NAME: MEP SITE PLAN
SHEET: MEP SITE PLAN

MEP1.02



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DATE ISSUED: AUGUST 01, 2024
JOB #: 2023058
SHEET NAME: TYPICAL MECHANICAL
NOTES, SYMBOLS & ABBREVIATIONS
SHEET :

M1.01

MEP GENERAL NOTES: (TYPICAL FOR PROJECT):

- 1. THE CONTRACTOR SHALL VISIT THE PREMISES TO THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL DETAILS OF THE WORK, WORKING CONDITIONS, AND VERIFY ALL DIMENSIONS IN THE FIELD. ALSO, THE CONTRACTOR SHALL ADVISE THE ARCHITECT, ENGINEER AND THE OWNER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
- 2. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CONTRACT DOCUMENTS AND APPLICABLE CODES AND STANDARDS AS DICTATED BY THE AUTHORITY HAVING JURISDICTION. SHOULD THE CONTRACTOR PERFORM ANY WORK THAT DOES NOT COMPLY WITH THE REQUIREMENTS OF APPLICABLE CODES AND STANDARDS, THE CONTRACTOR SHALL BEAR ALL COSTS ARISING IN CORRECTING SUCH DEFECT. APPLICABLE CODES AND STANDARDS SHALL INCLUDE ALL ORDINANCES, UTILITY COMPANY REGULATIONS, AND APPLICABLE REQUIREMENTS OF NATIONAL, STATE, LOCAL CODES, AND STANDARDS.
- 3. THE CONTRACTORS SHALL BE RESPONSIBLE FOR PROVIDING ALL CONTROLS FOR ALL SYSTEMS THAT WILL COMPLETELY ACCOMPLISH THE IMPLIED OR INTENDED FUNCTIONS OF THE CONTROL SYSTEMS AS SHOWN ON PLANS, INDICATED IN THE SPECIFICATIONS OR REQUIRED BY GOVERNING CODES. APPLICABLE SYSTEMS SHALL INCLUDE BUT ARE NOT LIMITED TO HVAC, LIGHTING, POWER, AND FIRE ALARM.
- 4. CONTRACTOR SHALL TURN OVER TO OWNER ALL DEMISED EQUIPMENT.
- 5. PATCH FLOORS, WALLS, CEILINGS, ETC. TO MATCH EXISTING CONDITIONS WHERE CUTTING IS REQUIRED.
- 6. AN INDEPENDENT CERTIFIED BALANCING OF WATER AND AIR SYSTEMS SHALL BE PROVIDED UNDER THIS CONTRACT FOR ALL SYSTEMS WITHIN DEMOLITION/NEW CONSTRUCTION BOUNDARIES AND ADJACENT AREAS THAT MAY BE AFFECTED BY BALANCING FOR THE PROJECT.
- 7. ALL DUCTWORK IS SHOWN IN SCHEMATIC FORM. DUCT RISES AND DROPS ARE NOT SHOWN. PROVIDE OFFSETS AS REQUIRED TO MEET SPACE REQUIREMENTS AND TO AVOID INTERFERENCE WITH OTHER TRADES. EACH TRADE SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES.
- 8. PIPING IS SHOWN IN SCHEMATIC FORM. ROUTE PIPING AS REQUIRED FOR CLEARANCE WITH STRUCTURAL CONDITIONS. COORDINATE WITH OTHER TRADES AS REQUIRED. PIPING SHALL BE INSTALLED WITH ADEQUATE SLOPE AS REQUIRED FOR EACH PARTICULAR SYSTEM.
- 9. DUCTWORK AND ITS CONSTRUCTION WILL BE GALVANIZED SHEET METAL AND CONSTRUCTED ACCORDING TO THE LATEST SMACNA STANDARDS.
- 10. DUCTWORK SIZES SHOWN ON PLANS ARE CLEAR AIR STREAM DIMENSIONS.
- 11. PROVIDE RIGID METAL DUCT (WITH NO EXCEPTION) WHERE FIRE WALLS ARE PENETRATED. PROVIDE APPROVED FIRE CAULK EITHER SIDE OF WALL.
- 12. FIELD VERIFY EXISTENCE OF SMOKE DETECTORS, IF NOT INSTALLED, PROVIDE SMOKE DETECTORS IN THE SUPPLY AIR DUCTWORK AND RETURN AIR DUCTWORK PRIOR TO MIXING WITH THE OUTSIDE AIR FOR ANY AIR HANDLING EQUIPMENT 2000 CFM OR GREATER. HARDWIRE TO THE MOTOR STARTER AUXILIARY CONTACTS TO SHUT DOWN THE UNIT UPON DETECTION OF SMOKE.
- 13. MECHANICAL CONTRACTOR SHALL COORDINATE DUCT RUN OUTS EXACTLY OVER THE TOP OF THE SA/RV/EA AIR DEVICES (I.E.: WITHOUT ANY FLEX CRIMPS OR RADICAL TRANSITIONS) WITH THE ARCHITECT'S REFLECTIVE CEILING PLAN, GRIDS, AND THE CEILING SUPPLIER.
- 14. PROVIDE DOUBLE WALL TURN VANES FOR ALL 90 DEGREE DUCT FITTINGS AND SINGLE WALL TURN VANES FOR DUCT FITTINGS LESS THAN 90 DEGREE AND GREATER THAN 30 DEGREE OR VARIED INTAKE/DISCHARGE AREAS. (SUPPLY, RETURN, OUTSIDE, EXHAUST, RELIEF, HORIZONTAL AND VERTICAL FITTINGS.)
- 15. INSULATE ALL DUCTWORK PER DIVISION 15 SPECIFICATIONS. (SIZES SHOWN ARE AIR STREAM DIMENSIONS).
- 16. PROPERLY SUPPORT ALL EQUIPMENT AND PIPING WITHIN THE BUILDING AND PROVIDE ADEQUATE PROVISIONS FOR SLOPE, EXPANSION, AND ANCHORAGE. CONTRACTOR SHALL USE HANGARS, RODS, CLAMPS, AND/OR INSERTS (NO POWDER DRIVEN INSERTS) APPROVED BY UNDERWRITER'S LABORATORIES (U.L.) FOR SERVICE INTENDED, SECURELY SUPPORTED BY AUXILIARY STRUCTURAL MEMBERS WHICH IN TURN ARE SUPPORTED DIRECTLY FROM BUILDING STRUCTURE. DIELECTRICALLY ISOLATE ALL FERROUS TO NON-FERROUS MATERIALS AND SUPPORT POINTS.

PRODUCT SUBMITTAL DATA NOTE:

THIS CONTRACTOR SHALL PREPARE AND PROVIDE ALL EQUIPMENT SUBMITTALS 30 DAYS AFTER PROJECT CONTRACT IS AWARDED. UPON RECEIPT OF THE SUBMITTAL DATA (THROUGH NORMAL CHANNELS), THE ENGINEER SHALL HAVE TEN (10) WORKING DAYS TO REVIEW THE DATA FOR COMPLIANCE. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MOUNTING AND SERVICE CLEARANCES WITH ARCHITECTURAL/ENGINEER DOCUMENTS PRIOR TO SUBMISSION OF ANY PRODUCT SUBMITTED OTHER THAN SCHEDULED MANUFACTURER.

PRODUCT SUBSTITUTIONS NOTE:

REQUEST FOR SUBSTITUTIONS OF PRODUCTS NOT LISTED IN THE SCHEDULES OR SPECIFICATIONS WILL ONLY BE CONSIDERED DURING THE PERIOD OF PRIOR TO TEN (10) DAYS BEFORE THE BID DATE. SUBSEQUENT REQUESTS WILL BE CONSIDERED ONLY IN CASE OF PRODUCT UNAVAILABILITY OR OTHER CONDITIONS BEYOND CONTROL OF THE CONTRACTOR. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL MOUNTING AND SERVICE CLEARANCES WITH ARCHITECTURAL/ENGINEER DOCUMENTS PRIOR TO SUBMISSION OF ANY PRODUCT SUBSTITUTION REQUEST.

PRODUCT SUBSTITUTIONS TRADE COORDINATION NOTE:

MECHANICAL CONTRACTOR SHALL BEAR ALL EXPENSES THAT OTHER TRADES INCUR AS A RESULT OF PHYSICAL MODIFICATIONS REQUIRED BY APPROVED ALTERNATE MECHANICAL EQUIPMENT OTHER THAN ORIGINALLY SPECIFIED OR SCHEDULED.

THE MECHANICAL CONTRACTOR SHALL PROVIDE TEMPORARY CONSTRUCTION FILTERS ON ALL RETURN AIR OPENINGS LEADING TO THE HVAC SYSTEM OF THE SPACE. ADDITIONALLY THE CONTRACTOR SHALL REPLACE THE PERMANENT FILTERS IN THE EXISTING AIR HANDLING UNIT IN OUR SPACE AT THE COMPLETION OF THE PROJECT.

DX CONDENSING OR HEATPUMP CLEARANCE & REFRIGERANT LINE NOTE

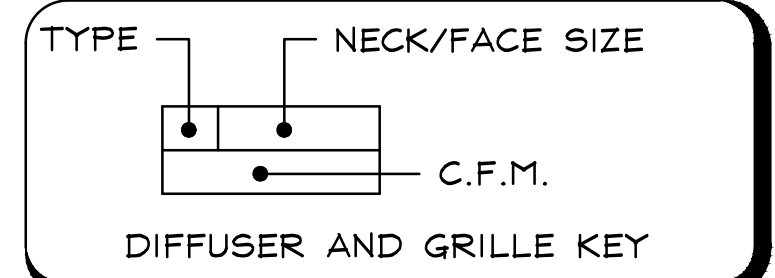
MAINTAIN MANUFACTURER'S MINIMUM RECOMMENDED CLEARANCES BETWEEN CONDENSING UNITS AND BUILDING FOR PROPER OPERATION AND MAINTENANCE. RUN AND SIZE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS.

EQUIPMENT LOCATION ABOVE CEILING:

MECHANICAL CONTRACTOR SHALL PROVIDE A 3/4" DIAMETER RED LOCATION IDENTIFICATION STICKER AT CEILING T-BAR FRAME DIRECTLY BELOW OR ADJACENT TO ALL SERVICEABLE EQUIPMENT ON THE SERVICE SIDE (I.E.: AIR HANDLING / FAN COIL UNITS, VARIABLE AIR VALVE BOXES, FANS, COMBINATION SMOKE/FIRE DAMPERS, FILTER BANKS, UNIT OR DUCT MOUNTED HEATERS, INDEPENDENT COIL BANKS, SOLENOID VALVE BOXES, F.P. TEST ISOLATION VALVES, DOMESTIC WATER ISOL. VALVES, PRODUCTION WATER ISOL. VALVES BEYOND 10 FT. OF EQUIPMENT, ETC.). ALL OF THE ABOVE LISTED MECH. EQUIPMENT MAY NOT BE UTILIZED.

THE CONTRACTORS SHALL COORDINATE ALL REQUIRED ACCESS TO ALL ADJOINING SPACES AND LOCKED SPACES WITH THE GENERAL CONTRACTOR WHO SHALL IN TURN COORDINATE THESE REQUIREMENTS WITH THE BUILDING MANAGEMENT TEAM.

ANY PENETRATIONS OF A FIRE RATED WALL BY ANY MECHANICAL AND PLUMBING PIPING, DUCTWORK (WITHOUT FD/SD), CONDUITS AND CABLING FOR POWER, CONTROLS OR DATA/TELEPHONE MUST BE FIRED SEALED PER U.L. DETAILS ON THIS SHEET. REFER TO ARCHITECTURAL CODE REVIEW PLAN SHEETS FOR EXACT LOCATIONS OF ALL FIRE RATED WALLS.



HVAC & PLUMBING, VALVE & FITTINGS SYMBOLS

Table listing various symbols for HVAC and plumbing components such as SOIL OR WASTE, VENT, COLD WATER, HOT WATER, CHILLED WATER SUPPLY/RETURN, etc.

NOTE: NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED.

MEP ABBREVIATIONS

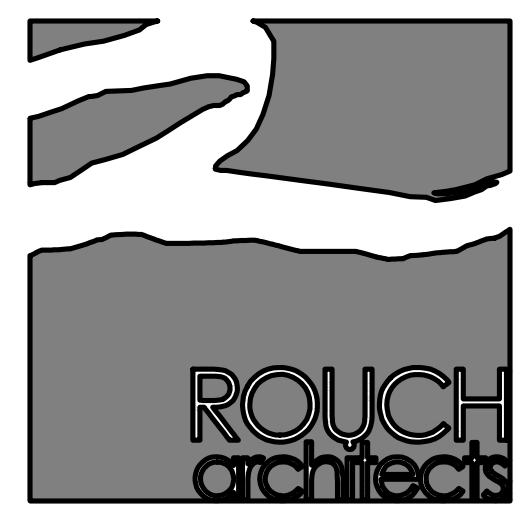
Table listing abbreviations for various MEP components such as AVB., AC, AFC, AFF, etc.

HVAC LEGEND

Table listing HVAC symbols and descriptions such as SINGLE LINE, DOUBLE LINE, 90° ELBOW DOWN, 90° ELBOW UP, etc.

NOTE: NOT ALL SYMBOLS SHOWN ARE NECESSARILY USED.

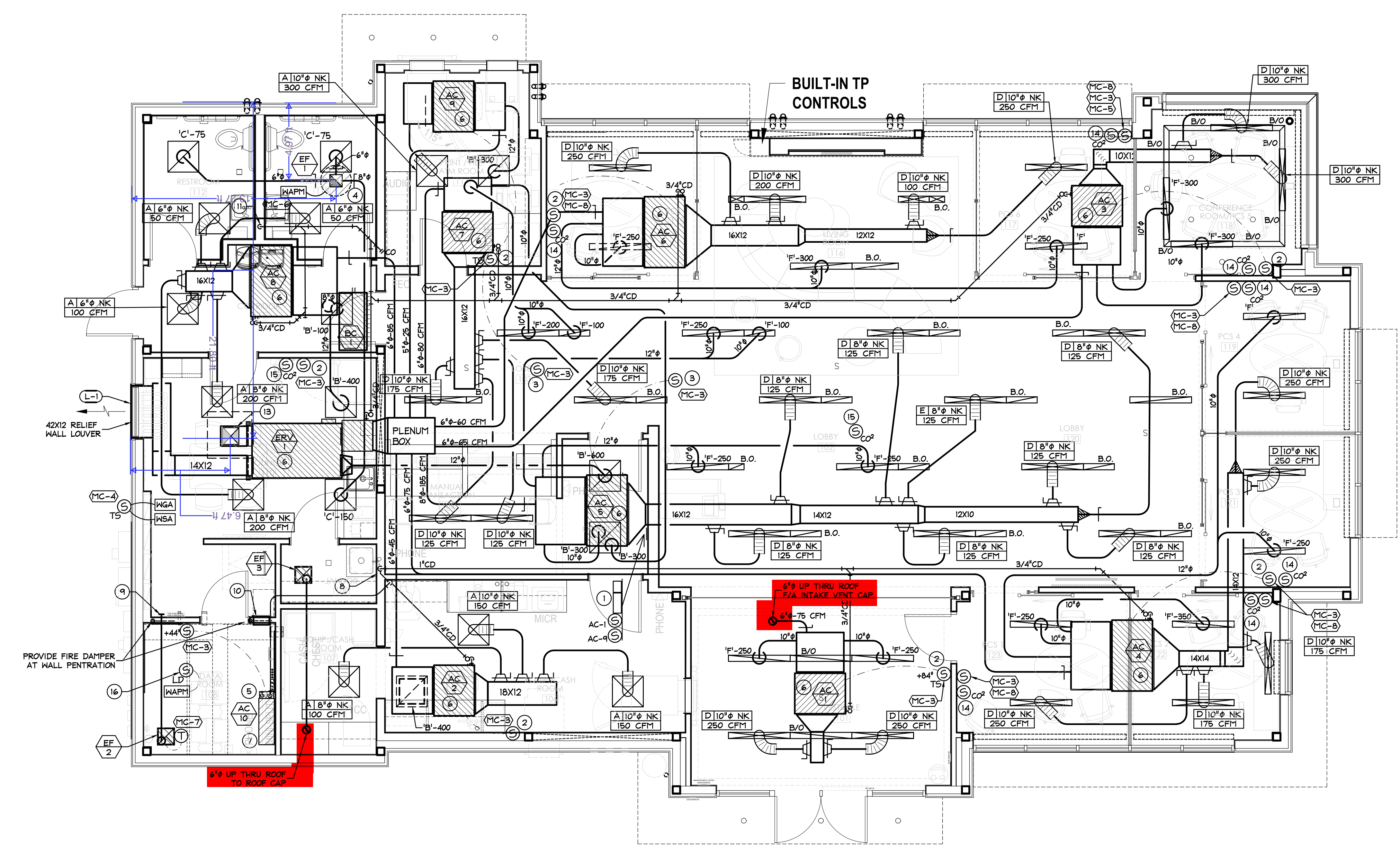
Professional Engineer Seal for Richard L. Morris, State of Texas, License No. 13063, dated August 01, 2024, Project # 2211, R Squared Consulting Engineers, Inc.



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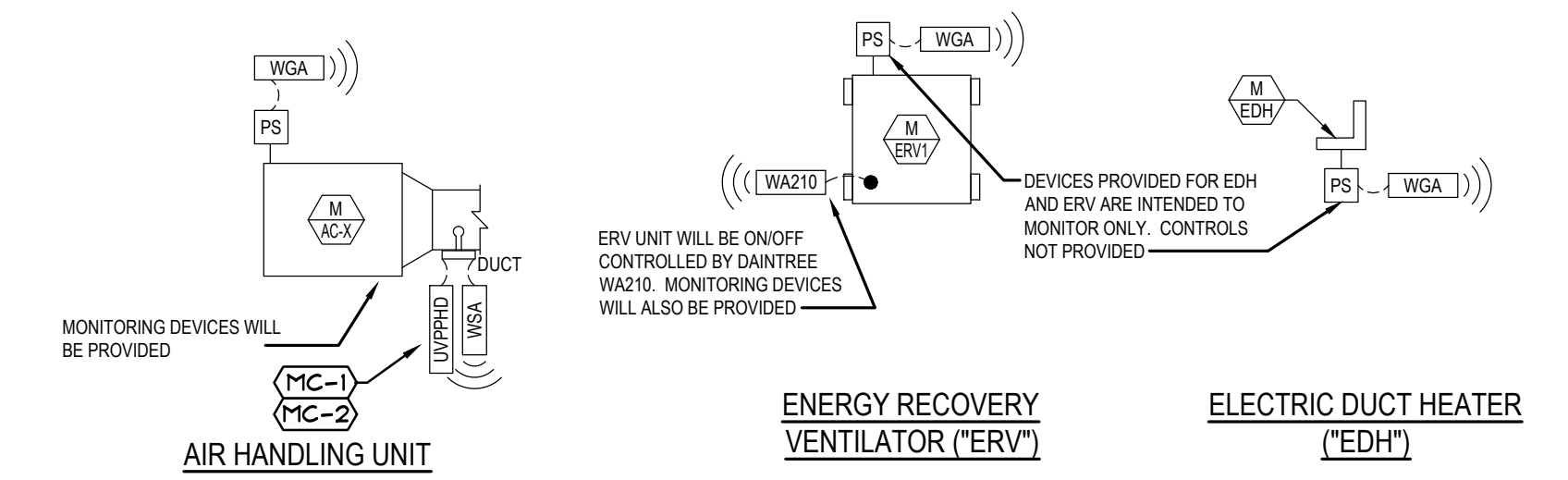
NO.	REVISIONS

- MECHANICAL GENERAL NOTES:**
- HVAC WORK CONSISTS OF PROVIDING AIR CONDITIONING SYSTEMS FOR A COMPLETE OPERATING SYSTEM AS INDICATED ON THE DRAWINGS. ALL WORK SHALL COMPLY WITH APPLICABLE CODES IN SPECIFICATIONS. IT IS THE INTENTION OF THE CONTRACT DRAWINGS AND SPECIFICATION TO CALL FOR COMPLETE, FINISHED WORK, TESTED, AND READY FOR OPERATION.
 - AN AIR BALANCE SHALL BE PERFORMED BY AN APPROVED INDEPENDENT THIRD PARTY AIR BALANCE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF STANDARDS PUBLISHED BY THE ASSOCIATED AIR BALANCE COUNCIL (AABC), THE NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB), OR THE TESTING, ADJUSTING, AND BALANCING BUREAU (TABB). BALANCE EACH SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR DEVICE WITHIN 5% OF REQUIREMENTS AND FURNISH A REPORT TO THE CONSTRUCTION MANAGER. THE ENTIRE HVAC SYSTEM MUST BE FULLY OPERABLE, BALANCED, AND APPROVED BY THE OWNER'S REPRESENTATIVE.
 - ALL DUCT SIZES SHOWN ARE SHEET METAL SIZES AND DON'T ACCOUNT FOR INSULATION. INSULATE ALL ROUND DUCTS EXTERNALLY. EXCEPT EXHAUST DUCTS, WITH 2" FIBERGLASS INSULATION WITH VAPOR BARRIER. INSULATE ALL RECTANGULAR DUCT WITH 1" THICK, 1-1/2 LB. DENSITY DUCT LINER. USE ALL JOINTS.
 - PROVIDE SPIN-IN FITTINGS AT ALL FLEXIBLE DUCT RUN OUTS TO DIFFUSERS (NO EXTRACTOR) AND DAMPER. TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
 - MAXIMUM LENGTH OF FLEXIBLE DUCT SHALL BE 5'-0".
 - ALL PIPING SUBJECT TO THERMAL EXPANSION AND/OR CONTRACTION THAT PENETRATES A SMOKE, FIRE, OR PRESSURE WALL, PARTITION, OR FLOOR SLAB SHALL BE SUITABLY SLEEVED AND FIRE-SAFED.
 - METAL DUCTS WHICH PENETRATE 1 HOUR RATED FIRE WALLS AND ARE LESS THAN 100-SQUARE INCHES SHALL EXTEND A MINIMUM OF 5 FEET ON BOTH SIDES OF THE WALL WITHOUT AN OPENING TO PRECLUDE THE REQUIREMENT OF A FIRE DAMPER. DUCTWORK SHALL IN NO CASE BE LIGHTER THAN 24 GAUGE STEEL.
 - PROVIDE IDENTIFICATION OF THE LOCATION OF ALL FIRE AND BALANCING DAMPERS. IDENTIFICATION TAGS SHALL BE AFFIXED TO THE WALLS OR CEILING AND SHALL BE VISIBLE FROM THE OCCUPIED SPACE.
 - PROVIDE ORANGE TAGS ON ALL VOLUME AND BALANCING DAMPERS ABOVE THE CEILING. TAGS AND IDENTIFICATION TAGS SHALL BE VISIBLE AND ACCESSIBLE FOR THE TEST AND BALANCING.
 - ALL PIPING SHALL BE SUPPORTED WITH COMMERCIAL MANUFACTURED CLAMPS. PROVIDE ISOLATION SLEEVES TO PREVENT CONTACT OF DISSIMILAR METALS.
 - INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS. PROVIDE VIBRATION ISOLATION DEVICES AND FLEXIBLE CONNECTIONS FOR ALL MOVING MACHINERY.
 - CONTRACTOR TO PROVIDE ALL SUPPLEMENTARY STEEL REQUIRED TO SUSPEND MECHANICAL EQUIPMENT AND MATERIALS.
 - ALL INSULATION SHALL BE FIRE RATED IN ACCORDANCE WITH NFPA 90A 50/25 SMOKE DEVELOPMENT AND FLAME SPREAD REQUIREMENTS. INSULATION "R" VALUES SHALL COMPLY APPLICABLE ENERGY CODE.
 - MOUNT ALL SPACE THERMOSTATS AND/OR SENSORS 4.5 FEET ABOVE THE FLOOR, UNLESS OTHERWISE NOTED.
 - INSTALL DUCT MOUNTED SMOKE DETECTORS (FURNISHED BY DIVISION 16) IN SUPPLY AIR DUCTWORK CONNECTED TO EACH A/C UNIT. WIRE DUCT MOUNTED SMOKE DETECTORS SUCH THAT ACTIVATION WILL DEENERGIZE AIR HANDLING UNIT FAN. LOCATE DUCT MOUNTED SMOKE DETECTORS THE REQUIRED DISTANCE DOWNSTREAM FROM BENDS OR TEES AS RECOMMENDED BY THE MANUFACTURER.
 - SEE ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.
 - UNLESS OTHERWISE NOTED, INSTALL ALL DUCTWORK AS HIGH AS POSSIBLE, TIGHT TO THE BOTTOM OF THE STRUCTURE. COORDINATE ELEVATION AND LOCATION WITH RAIN LEADERS, WATER PIPING, PLUMBING VENTS, AND MAJOR ELECTRICAL CONDUITS OR CABLE TRAY.
 - PROVIDE CONDENSATE LINES AT ALL AIR HANDLING UNITS.
 - ROUTE FULL SIZE PVC DRAIN PIPE FROM EACH RTU (1" MIN) DRAIN FAN AND FROM EACH FCU (3/4" MIN) TO RESPECTIVE FLOOR DRAIN OR TO DAYLIGHT WITH AIR GAP. INSULATE WITH 3/4" ARMSTRONG "ARMATLEX" INSULATION.
 - THE ENGINEER HAS MADE AN EXTENSIVE EFFORT TO IDENTIFY ABOVE CEILING CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO CHECK FIELD CONDITIONS PRIOR TO BIDDING AND REPORT ANY PROBLEMS/CONFLICTS TO THE ENGINEER WITHIN 2 DAYS OF DISCOVERY. ANY CHANGES RESULTING FROM CONDITIONS ARISING IN THE FIELD WHICH WERE NOT BROUGHT TO THE ENGINEER'S ATTENTION ARE TO BE MADE BY THIS CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER.
 - ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10 FEET FROM ANY EXHAUST FANS OR PLUMBING VENTS.
 - ALL WORK IS TO BE FREE OF DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. ALL DEFECTS WHICH DEVELOP OR ARE DISCOVERED WITHIN THIS PERIOD SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
 - UPON COMPLETION OF THE WORK UNDER THIS CONTRACT, THE CONTRACTOR SHALL REMOVE ALL TOOLS, APPLIANCES, SURPLUS MATERIALS, AND SCRAP. ALL IDENTIFIED EXISTING EQUIPMENT TO BE REMOVED SHALL BE TURNED OVER TO THE OWNER.
 - WHEN CONFLICTS OCCUR IN SPECIFICATIONS OR IN THE DRAWINGS, OR BETWEEN EITHER, THE TERMS OF GREATER QUANTITY OR HIGHER COST SHALL BE PROVIDED.
 - THE CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES IN ORDER TO AVOID CONFLICTS.
 - PROVIDE BALANCING DAMPER IN EACH BRANCH CONNECTION.
 - ALL DUCTWORK INSTALLED ON THIS PROJECT SHALL BE OF SHEET METAL CONSTRUCTION. DUCTWORK SHALL BE FABRICATED AND CONSTRUCTED IN ACCORDANCE WITH SMACNA REQUIREMENTS.
 - ALL ROOF ATTACHED EQUIPMENT AND APPURTENANCES INCLUDED IN THE SCOPE OF THIS PROJECT ARE REQUIRED TO BE SECURED TO THE UNDERLYING BUILDING STRUCTURE. THE FASTENING SYSTEMS SHALL BE INSTALLED TO RESIST THE WIND PRESSURES ON THE EQUIPMENT AS DETERMINED IN ACCORDANCE WITH THE CURRENT BUILDING CODE.
 - MECHANICAL CONTRACTOR SHALL PROVIDE NECESSARY INFO TO THE FACILITY MANAGER FOR ALL FAN COILS, CONDENSING UNITS, RTUS, AND EXHAUST FANS.



- MECHANICAL CONTROL PLAN NOTES**
- MC-1 PROVIDE SUPPLY DUCT PROBE TEMPERATURE SENSOR FOR EACH MECHANICAL UNIT SUPPLY DUCT. HARDWARE SUPPLIED BY DAINTREE.
 - MC-2 PROVIDE HUMIDITY SENSOR WIRED, VIA LOW VOLTAGE, TO W6A10 FOR MONITORING ONLY WHEN REFERENCED ON BID DOCUMENTS. REFER TO MECHANICAL EQUIPMENT SCHEDULE OR PLAN NOTES. HARDWARE SUPPLIED BY DAINTREE.
 - MC-3 PROVIDE EMS WIRELESS THERMOSTAT AT EACH VRF INDOOR UNIT. THERMOSTAT ADAPTER MAY BE REQUIRED - VERIFY WITH UNIT MANUFACTURER. SCREWED TO DEMOUNTABLE PARTITION PANEL. CABLE ROUTED THRU MULLION TO CEILING. HARDWARE SUPPLIED BY DAINTREE. MECHANICAL ENGINEER SHALL VERIFY WITH MANUFACTURER USING DAINTREE THERMOSTAT INSTALL GUIDE COMPATIBILITY AND INTERFACE REQUIRED.
 - MC-4 PROVIDE HARDWIRED EXTERIOR TEMPERATURE SENSOR WITH DAINTREE W6A100 AND W6A10 MOUNTED IN THE INTERIOR OF BUILDING FOR MONITORING. HARDWARE SUPPLIED BY DAINTREE.
 - MC-5 PROVIDE REMOTE ROOM TEMPERATURE SENSOR PER MECHANICAL UNIT WHERE THERMOSTAT IS REMOTE. SCREWED TO DEMOUNTABLE PARTITION PANEL; CABLE ROUTED THRU MULLION TO CEILING. HARDWARE SUPPLIED BY DAINTREE.
 - MC-6 REFER TO LIGHTING PLAN FOR EXHAUST FAN CONTROL.
 - MC-7 DATA ROOM EXHAUST FAN EF-2 IS CONTROLLED BY NON-DAINTREE HARDWIRED REVERSE THERMOSTAT PROVIDED BY ELECTRICAL CONTRACTOR.
 - MC-8 ZONE CONTROL TO BE AVERAGED ACROSS THERMOSTAT AND TEMPERATURE SENSOR.
 - MC-9 ZONE CONTROL THRU REMOTE TEMPERATURE SENSOR ONLY.
 - MC-10 ZONE CONTROL TO BE AVERAGED ACROSS THERMOSTAT AND TEMPERATURE SENSOR DURING BUSINESS HOURS. ZONE CONTROL THRU THERMOSTAT ONLY DURING OFF-HOURS.

- MECHANICAL CONTROL GENERAL NOTES**
- FOR VARIABLE REFRIGERANT FLOW (VRF) EQUIPMENT, PROVIDE UNIT MANUFACTURER'S 24V THERMOSTAT INTERFACE ACCESSORY.
 - REFER TO ELECTRICAL PLANS FOR HARDWIRED FANLIGHT CONTROL AND TIMERS.
 - SOME HVAC EQUIPMENT MAY HAVE CONDENSATE PUMPS AND/OR SOLENOID VALVES THAT WILL REQUIRE A WIRELESS LEAK DETECTOR AND W6A07 FOR MONITORING. THIS DOES NOT INTERFERE WITH THE EQUIPMENT FOR SHUTDOWN/CONTROL. REFER BID DOCUMENTS TO MECHANICAL EQUIPMENT SCHEDULE OR PLAN NOTES FOR MORE DETAILS.



02 TYP. MISC. MECHANICAL EQUIPMENT MONITORING AND CONTROL

SCALE: 1/4"=1'-0"

01 FLOOR PLAN-MECHANICAL

SCALE: 1/4"=1'-0"

HVAC SEQUENCE OF OPERATIONS

OCCUPIED AND UNOCCUPIED OPERATION

- THE TEMPERATURE CONTROL SYSTEM SHALL BE SET FOR OCCUPIED AND UNOCCUPIED HOURS.
- SET A/C BLOWER FAN TO "ON" POSITION DURING OCCUPIED MODE. SET A/C BLOWER FAN TO "AUTO" DURING UNOCCUPIED MODE.
- DURING THE OCCUPIED HOURS THE SPACE SHALL BE MAINTAINED AT: 70° F HEATING AND 75° F COOLING; 100% OA UNIT (ERV-1) SHALL BE ON.
- DURING UNOCCUPIED PERIODS, THE SPACE TEMPERATURE SHALL MAINTAIN (ALL MONTHS) 65° F HEATING AND 80° F COOLING; 100% OA UNIT (ERV-1) SHALL BE OFF.
- MORNING WARM-UP: PROVIDE A MORNING WARM-UP MODE, ENGAGE OCCUPIED MODE (1) ONE HOUR PRIOR TO STORE OPENING. WARM-UP MODE START-UP MAY BE ADJUSTED TO OWNERS DESIRED TIME INTERVAL.

CEILING DUCTED AIR HANDLING UNITS

- UPON RECEIVING A SIGNAL FROM THE TEMPERATURE CONTROL SYSTEM FOR OCCUPIED HOURS, THE VRF SYSTEM SHALL ENERGIZE AND REMAIN ON DURING OCCUPIED HOURS.
- THE OUTSIDE 100% OA UNIT (ERV-1) SHALL REMAIN CLOSED FOR MORNING WARM-UP UNTIL THE OCCUPIED HOURS ARE REACHED, AND THEN WILL OPEN.
- THE TEMPERATURE CONTROL SYSTEM SHALL MAINTAIN THE COOLING AND HEATING SETPOINTS AS INDICATED ABOVE FOR OCCUPIED AND UNOCCUPIED OPERATION.

100% OA UNIT (ERV-1)

- 100% OA UNIT SHALL ENERGIZE AND REMAIN ON DURING OCCUPIED HOURS AND POWER OFF DURING UNOCCUPIED HOURS. DURING COOLING AND HEATING MODE, ERV-1 UNIT SHALL MAINTAIN SUPPLY AIR TEMPERATURE AT 80°F SUMMER / 60°F INTER. (ADJ.).
- DURING UNOCCUPIED PERIODS, THE SPACE TEMPERATURE SHALL MAINTAIN (ALL MONTHS) 65° F HEATING AND 80° F COOLING; 100% OA UNIT (ERV-1) SHALL BE OFF.
- CEILING DUCTED UNITS' RETURN AIR PLENUM. THE AMOUNT OF VENTILATION AIR TO EACH UNIT SHALL MEET ASHRAE 62 MINIMUM REQUIREMENT.

CO2 SENSOR (OFFICES, CONF. ROOM)

- SET TO ENGAGE AUDIO/VISUAL ALARM AND/OR DAINTREE CONTROL SYSTEM. MONITOR CO2 CONCENTRATIONS WITHIN ALL DENSELY OCCUPIED SPACES. CO2 MONITORS MUST HAVE AN AUDIBLE OR VISUAL INDICATOR. IF THE SENSED CO2 CONCENTRATION EXCEEDS THE SETPOINT OF 1000 PPMV BY MORE THAN 10%.

24-HOUR VESTIBULE (AC-1)

- THE TEMPERATURE CONTROL SYSTEM SHALL BE SET FOR THE SPACE TO BE MAINTAINED AT 75°F (ADJ.) IN THE COOLING MODE AND 70°F (ADJ.) IN THE HEATING MODE. 24/7.

24-HOUR DATA ROOM (AC-10)

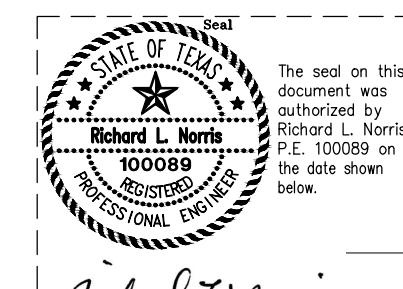
- THE TEMPERATURE CONTROL SYSTEM SHALL BE SET FOR THE SPACE TO BE MAINTAINED AT 72°F (ADJ.) IN THE COOLING MODE AND IF PROVIDED, 68°F (ADJ.) IN THE HEATING MODE. 24/7.

NOTES BY SYMBOL: ⊕

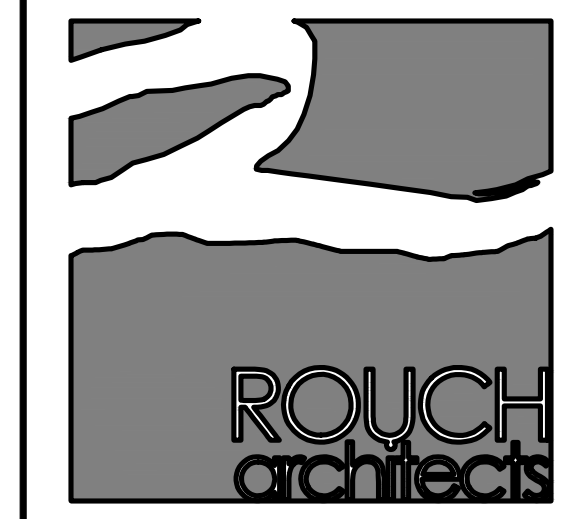
- HVAC VRF SYSTEM CONTROL INTERFACE AND ERV-1 HP1 CONTROLLER.
- WALL MOUNTED REMOTE TEMPERATURE SENSOR.
- CEILING MOUNTED REMOTE TEMPERATURE SENSOR.
- 10X10 EXHAUST DUCT UP TO EXHAUST FAN EF-1 ON ROOF.
- INSTALL CONDENSATE PUMP IF NOT INTEGRAL WITH UNIT AND EXTEND TUBING TO CONDENSATE MAIN PIPE. SEE PLAN, CONNECT INTO TOP OF CONDENSATE MAIN PIPE.
- AHU MOUNTED HORIZONTAL ABOVE CEILING, TIGHT TO STRUCTURE.
- WALL MOUNTED UNIT, REFER TO ARCHITECT FOR MOUNTING HEIGHT.
- CONDENSATE DRAIN PIPE DOWN IN HALL AND OUT TO MS.
- 10"Ø CIRCULATION AIR DUCT TO TERMINATE ABOVE CEILING.
- 12"Ø SIDEMALL TRANSFER GRILLE MOUNTED LOW (TYPE 'B'). PROVIDE FIRE DAMPER AND BACKDRAFT DAMPER. REFER TO ARCHITECT FOR DETAIL AND ADDITIONAL INFORMATION.
- 1" CONDENSATE DRAIN DOWN IN HALL AND OUT TO LAV P-TRAP TAIL PIECE.
- RUN DUCT UP BETWEEN JOISTS OR THRU JOISTS WEBBS.
- 12X12 FRESH AIR INTAKE DUCT UP THRU ROOF TO VENTILATOR CAP ON ROOF CURB. VENTILATOR CAP EQUAL TO COOK MODEL "TRF".
- CO2 SENSOR MOUNTED AT 44" A.F.F., SET TO ENGAGE AUDIO/VISUAL ALARM. MONITOR CO2 CONCENTRATIONS WITHIN ALL DENSELY OCCUPIED SPACES. CO2 MONITORS MUST HAVE AN AUDIBLE OR VISUAL INDICATOR. IF THE SENSED CO2 CONCENTRATION EXCEEDS THE SETPOINT OF 1000 PPMV BY MORE THAN 10%.
- BMS HARDWIRED CO2 SENSOR: BAPI #BA/AGX-D WIRED TO A W6A10 BY DAINTREE.
- CEILING OR WALL MOUNTED LEAK DETECTOR SENSOR WIRED VIA WAMP IN DATA ROOM BY DAINTREE.

PLAN NOTE:

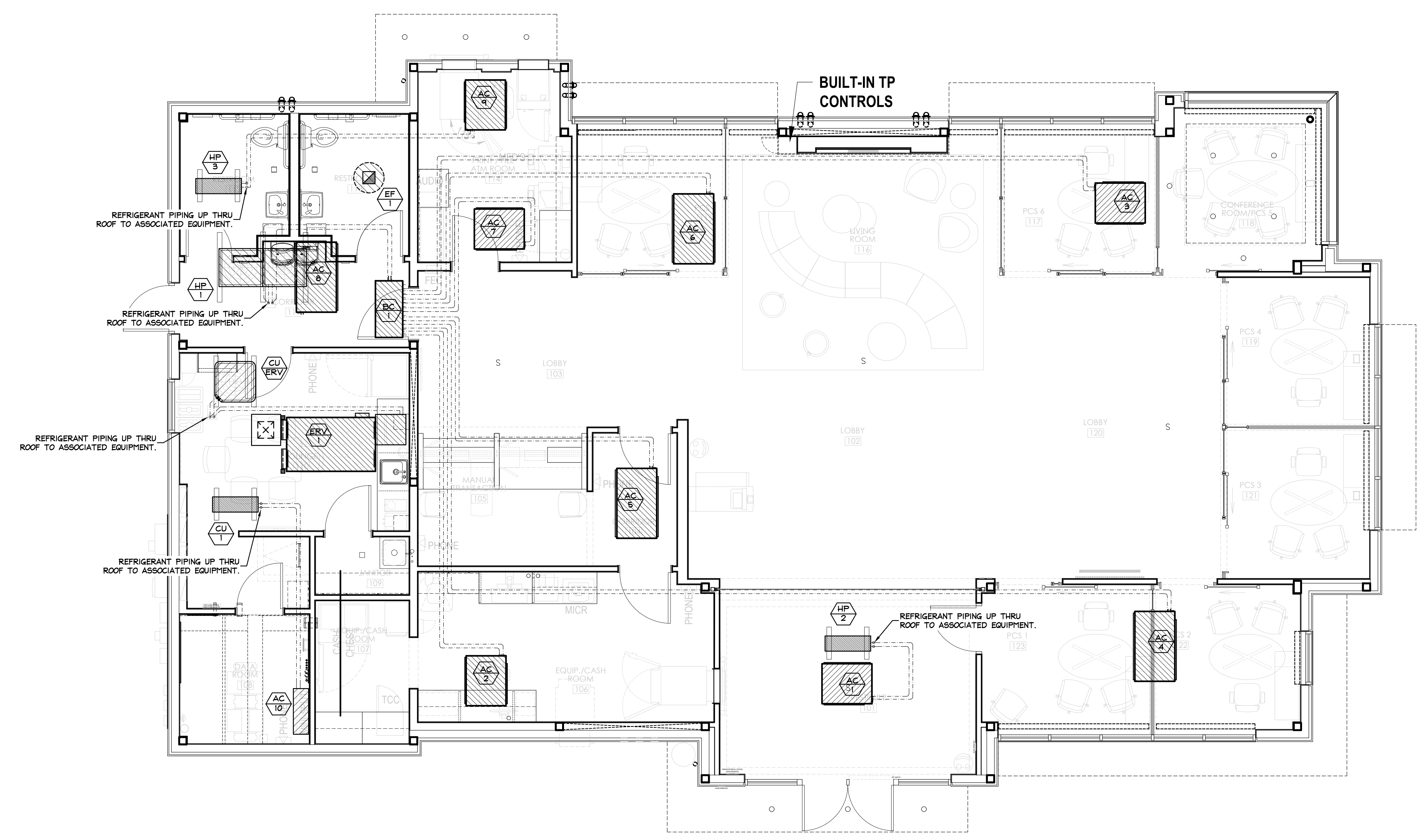
- ROUTING OF MECHANICAL DUCT WORK IS DIAGRAMMATICAL. THE CONTRACTOR SHALL SURVEY THE ACTUAL CONDITIONS OF CONSTRUCTION AND MODIFY THE DUCT ROUTING AS NECESSARY TO ACHIEVE THE DESIGN INTENT.
- CONTRACTOR SHALL COORDINATE WITH THE ARCHITECTURAL REFLECTED CEILING PLAN FOR DIFFUSER LENGTHS, 6', 5', 4', 3', OR 2' / 4' IN OFFICES / 12' IN VESTIBULE AND CONTINUOUS IN CONFERENCE ROOM. VERIFY DIFFUSER END CONDITIONS, STRAIGHT, FILTERED OR PLANGED END. PROVIDE BLANK OFF FOR ALL IN-ACTIVE SECTIONS OF DIFFUSER.
- PROVIDE AIR HANDLING UNITS WITH MERV 13 FILTERS. DURING CONSTRUCTION MERV 11 FILTERS MAY BE USED.



August 01, 2024
Project # 2211
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DALLAS, TEXAS 75202
214.997.6029
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01 FLOOR PLAN—MECHANICAL
SCALE: 1/4"=1'-0"

- PLAN NOTE:**
- ROUTING OF REFRIGERANT PIPING IS DIAGRAMMATIC, FINAL ROUTING AND SIZES PER MFRS' RECOMMENDATIONS INCLUDING ADJUSTMENTS DUE TO FIELD CONDITIONS. REFER TO 18.02 FOR ADDITIONAL INFORMATION.

REVISIONS

NO.	DATE	DESCRIPTION

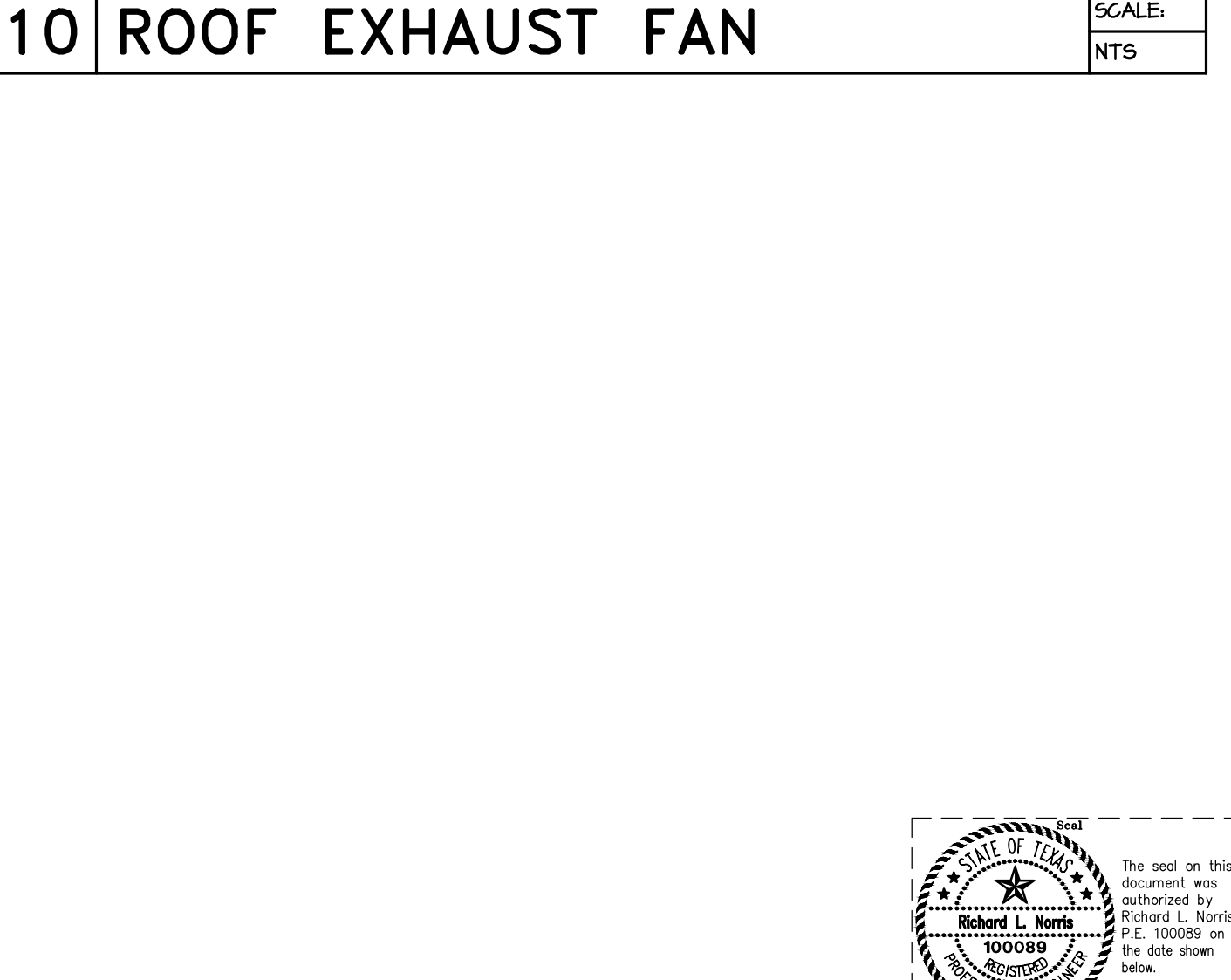
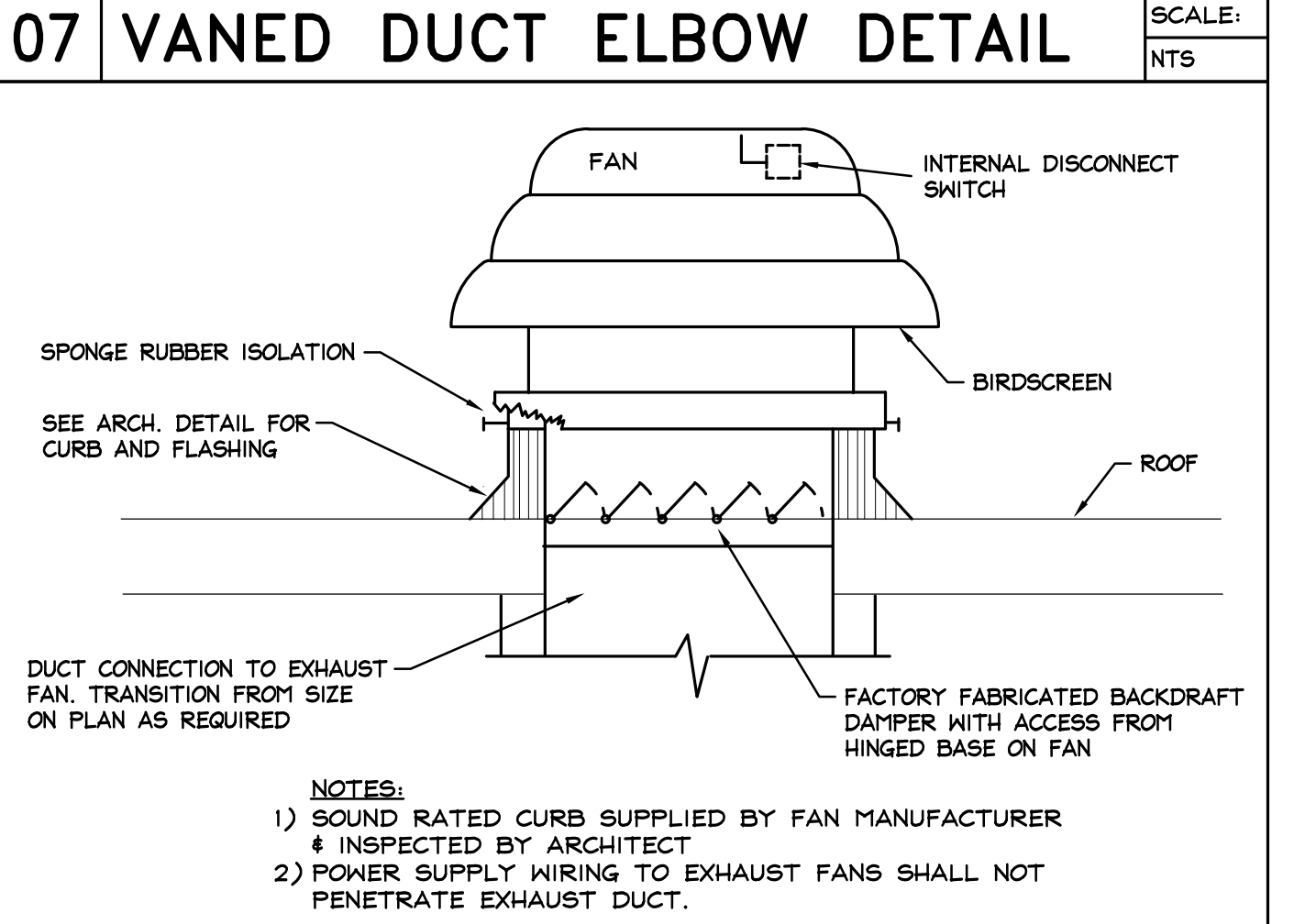
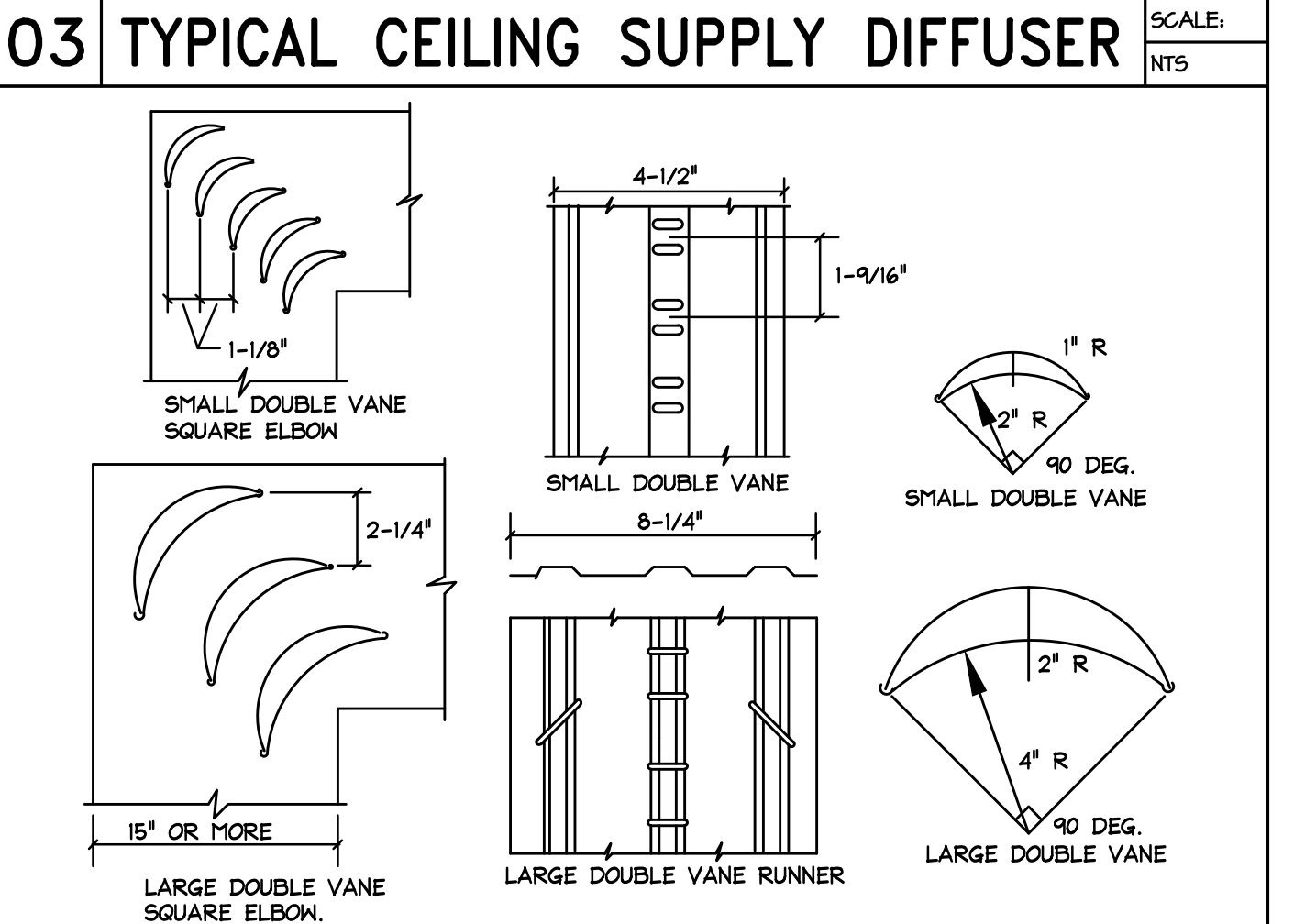
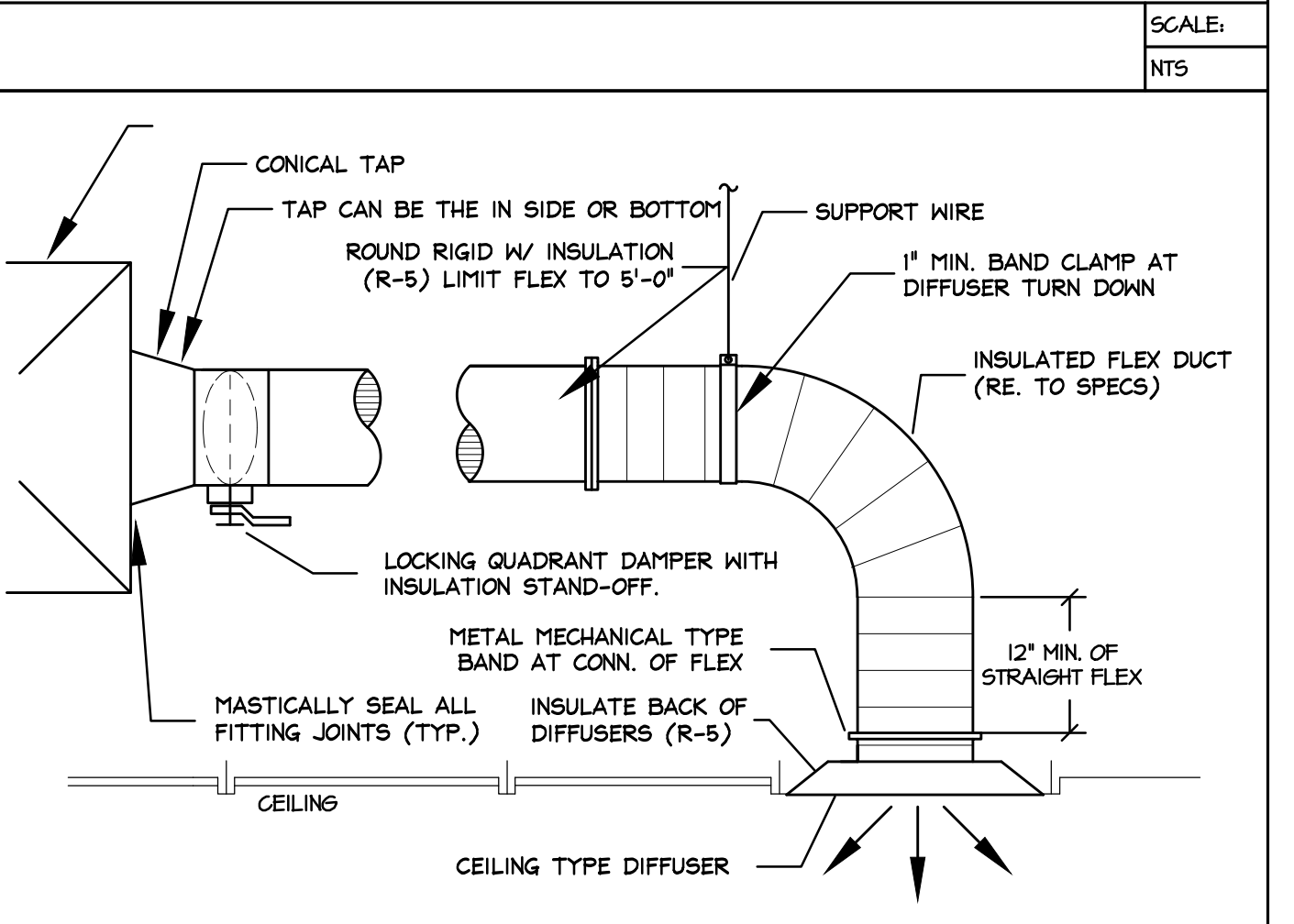
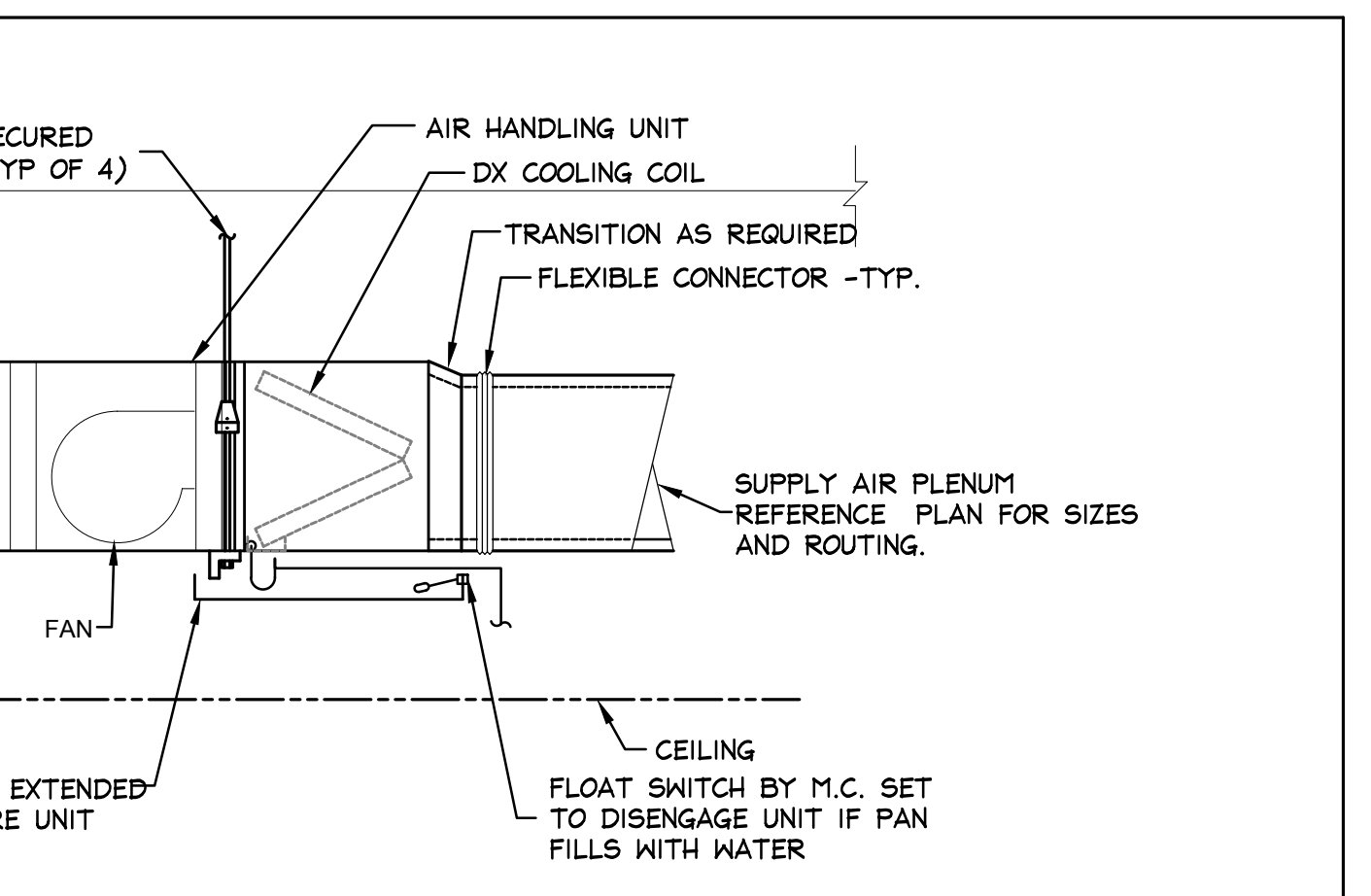
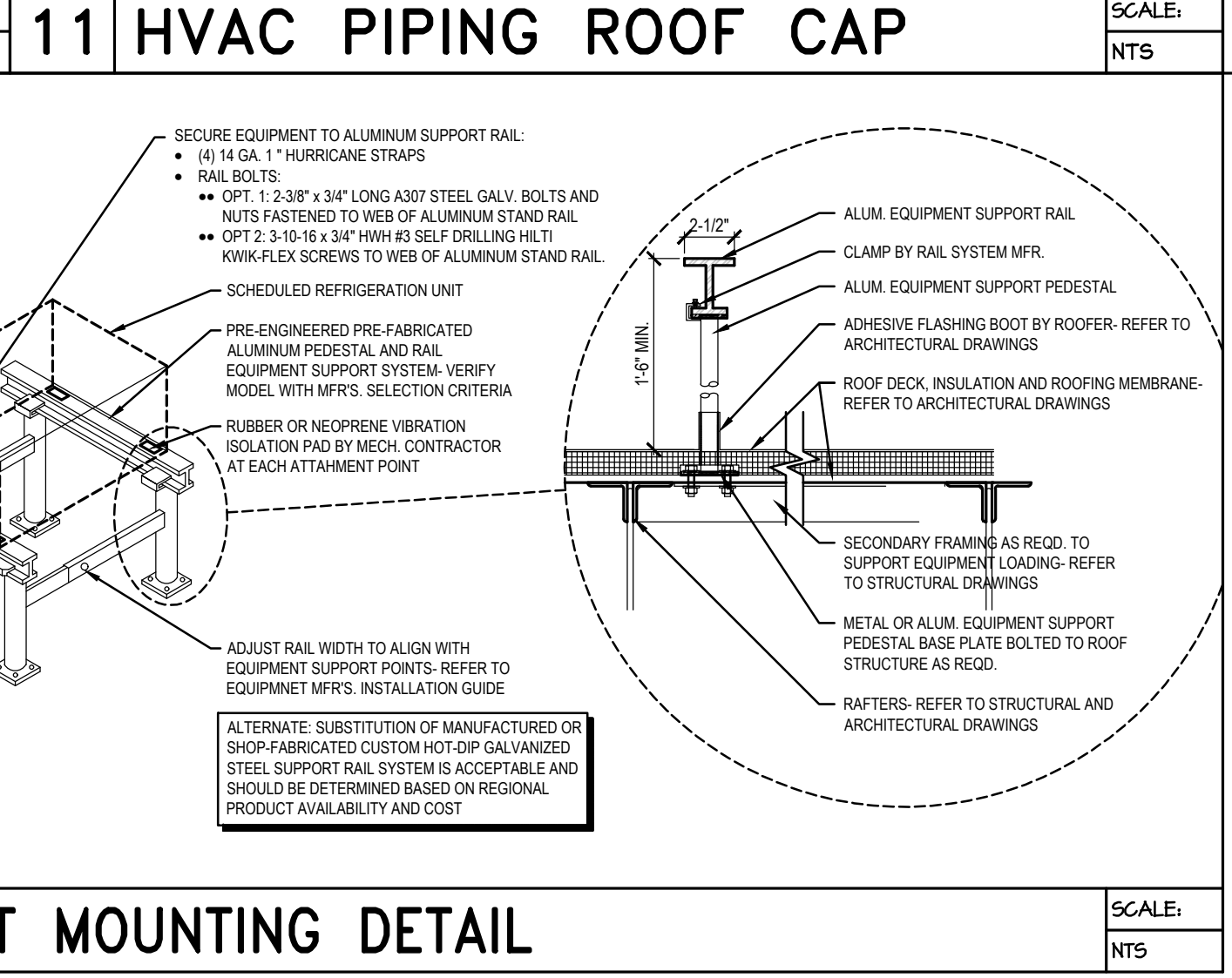
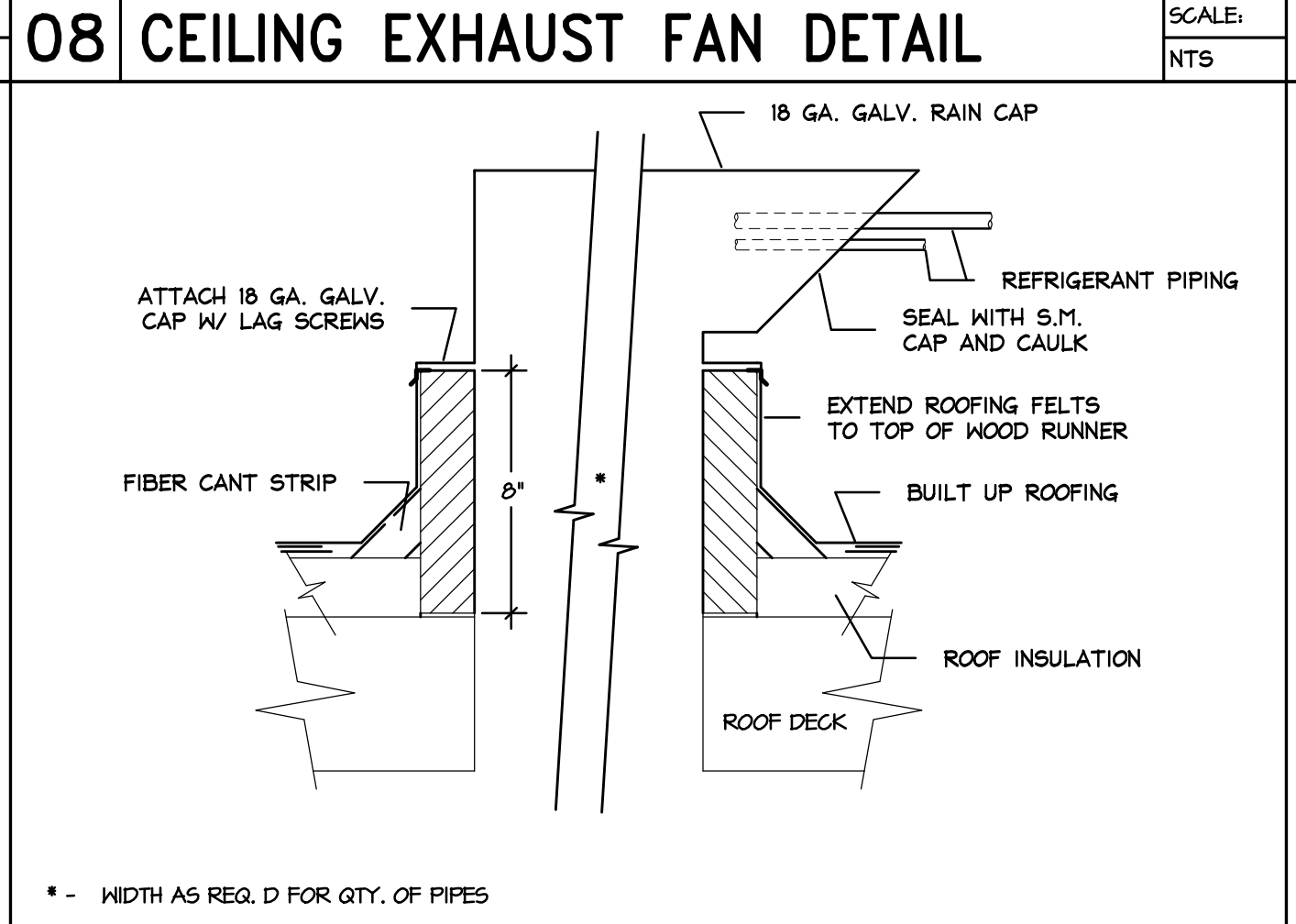
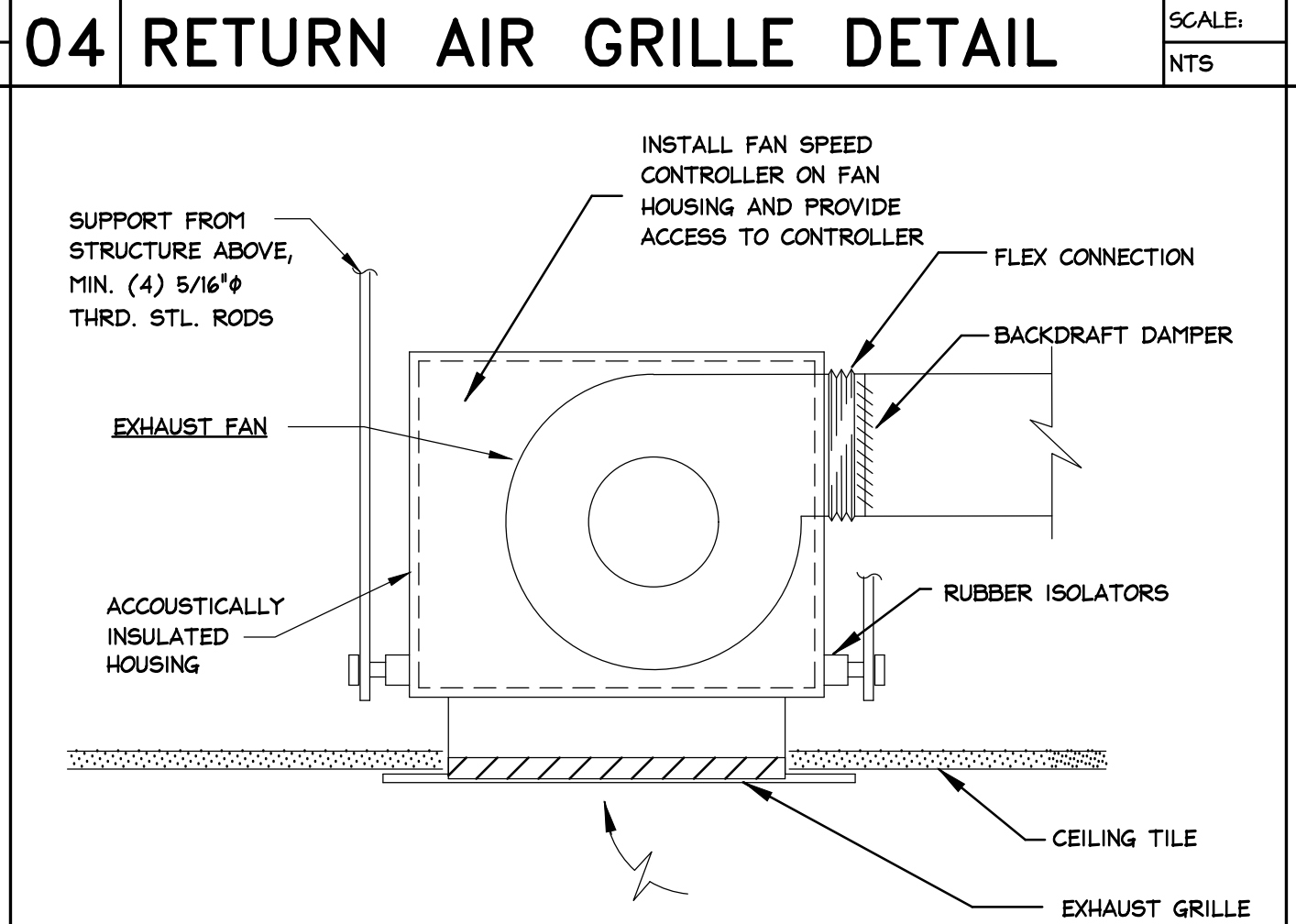
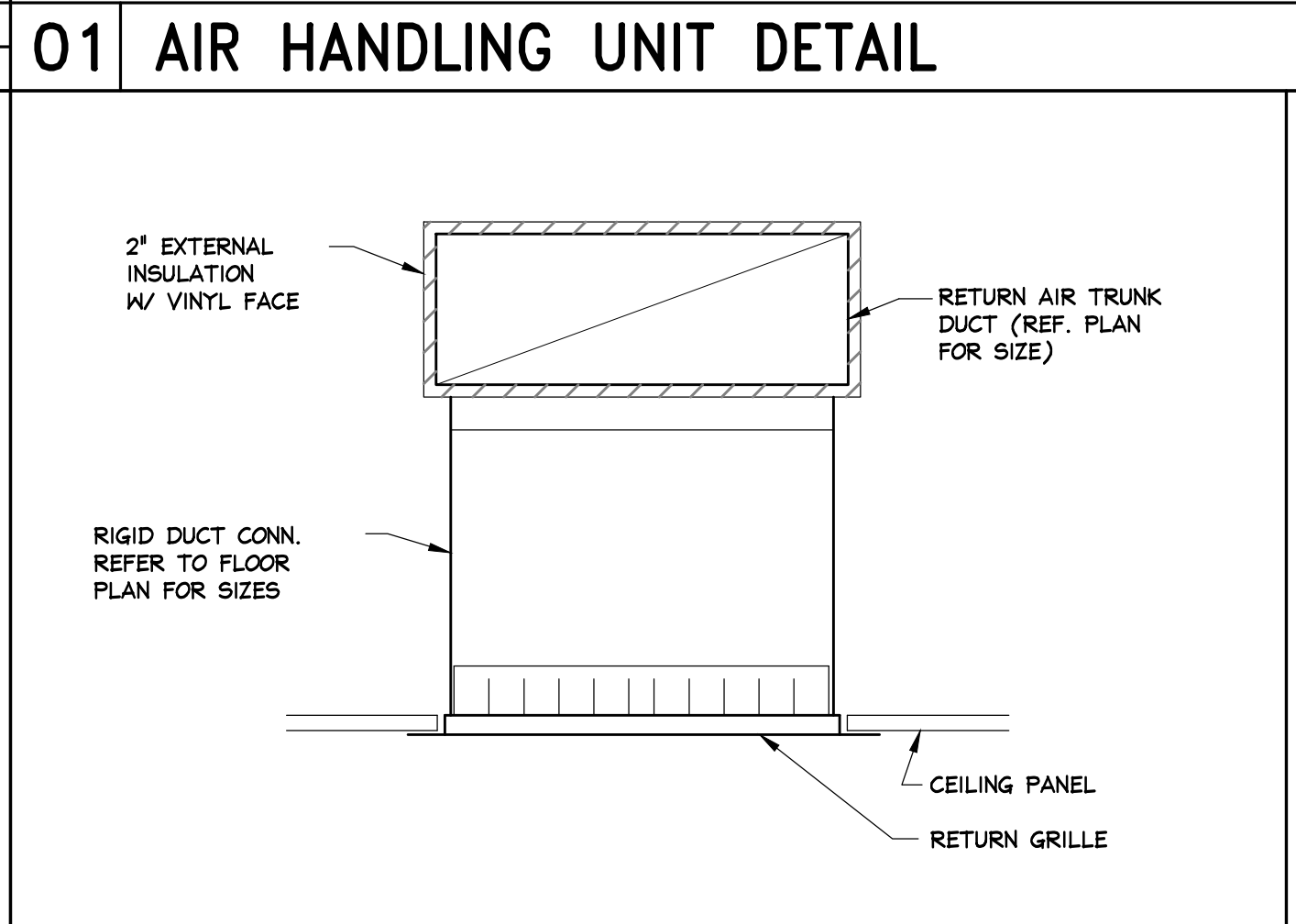
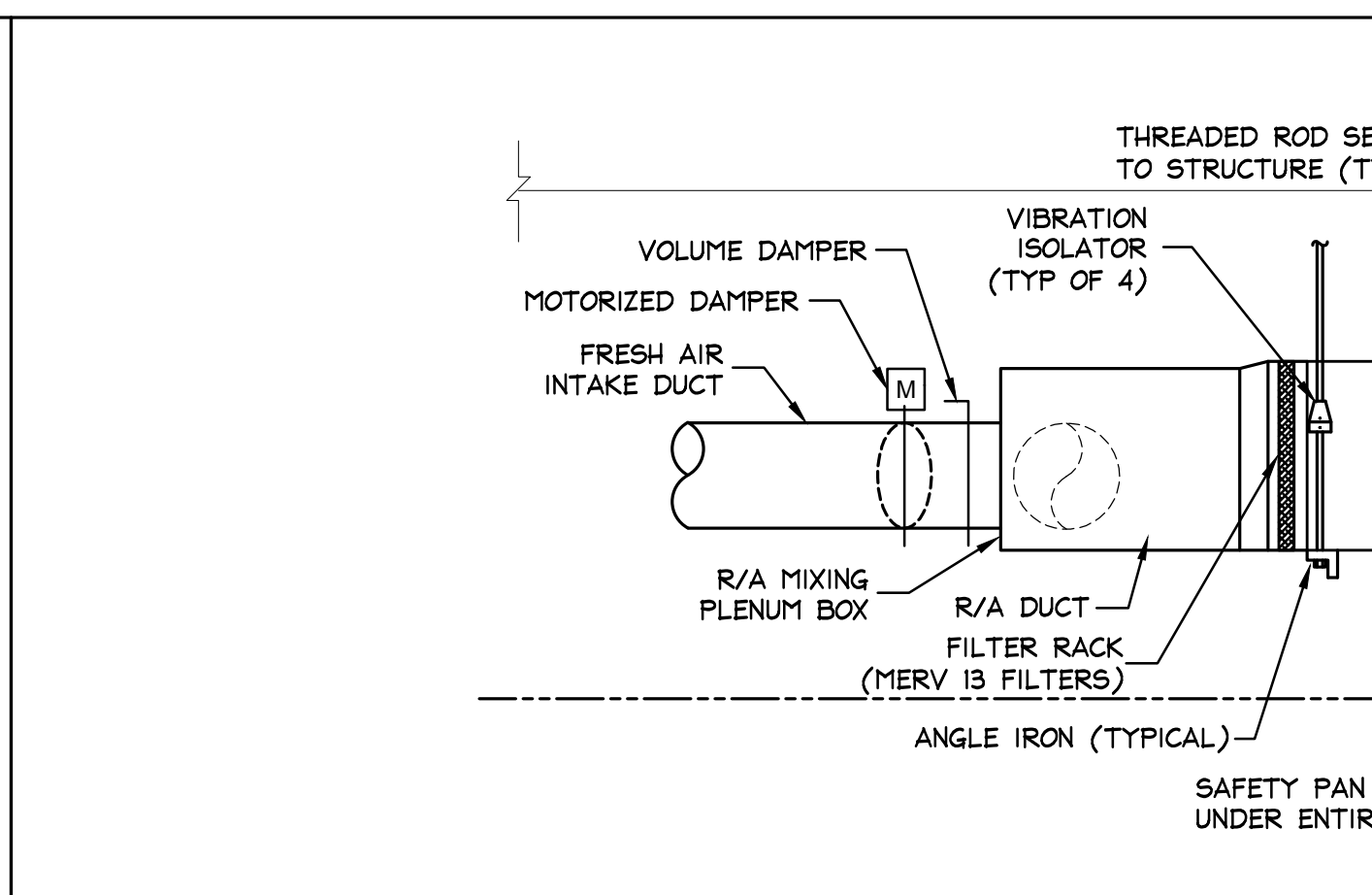
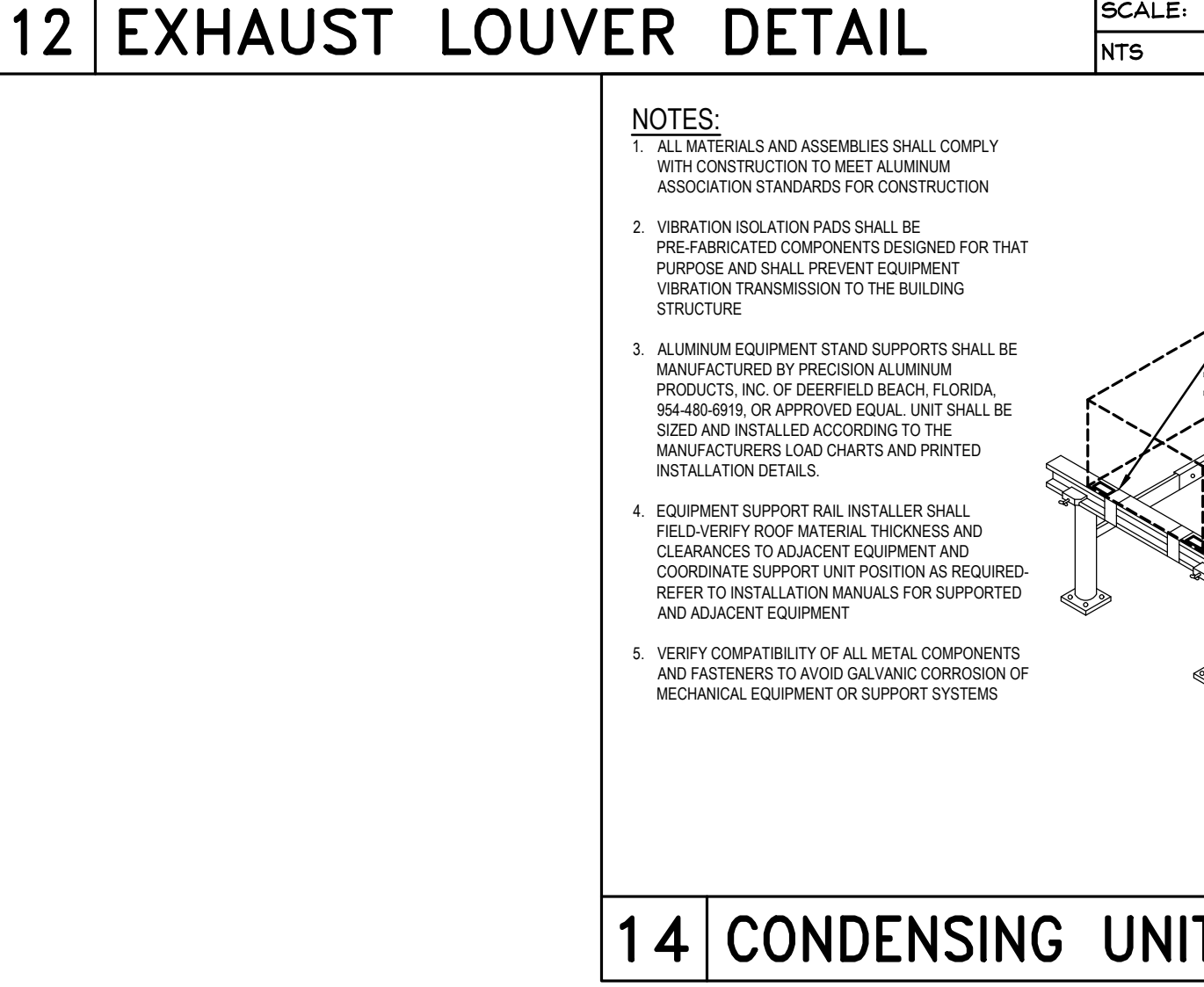
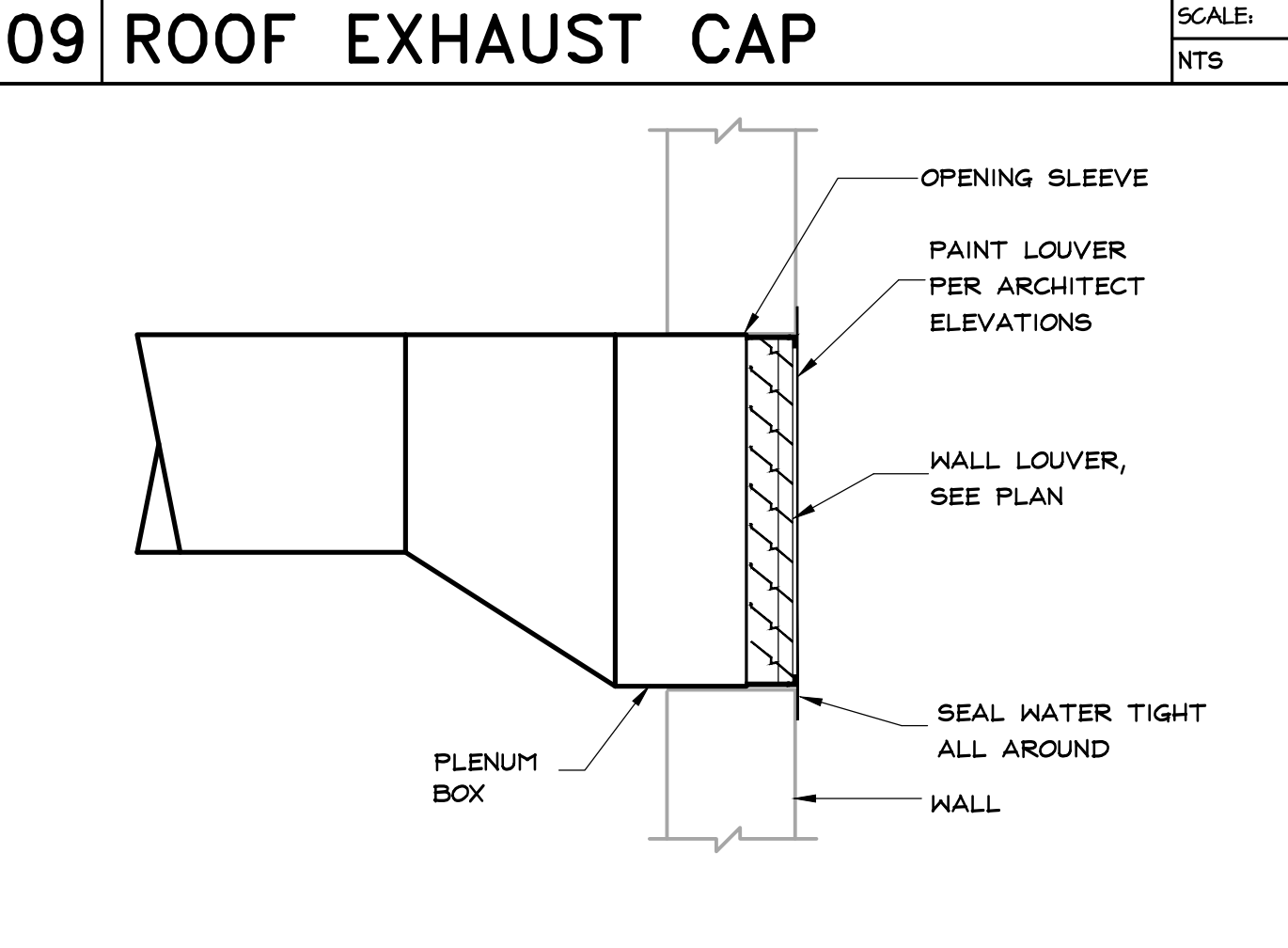
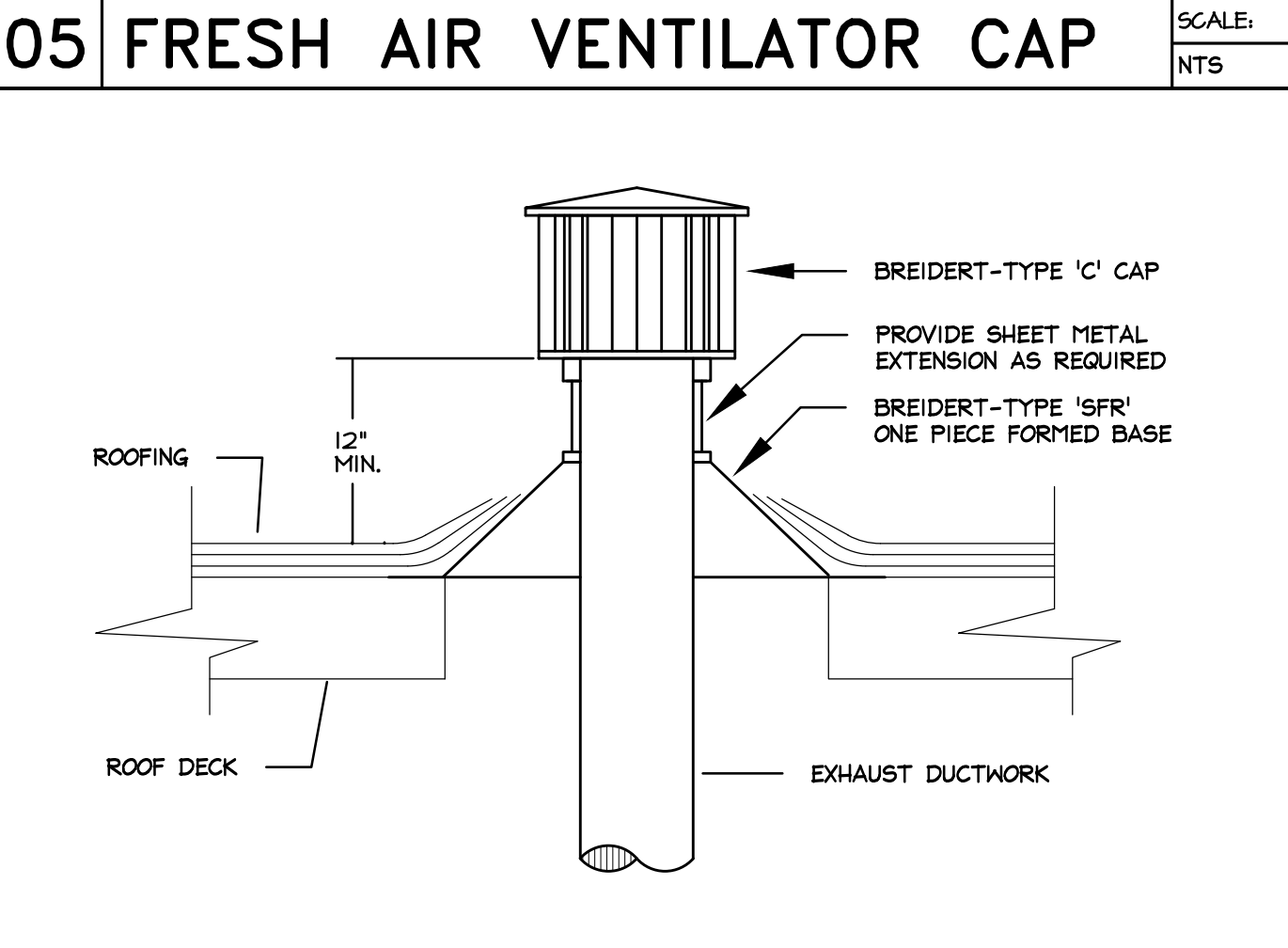
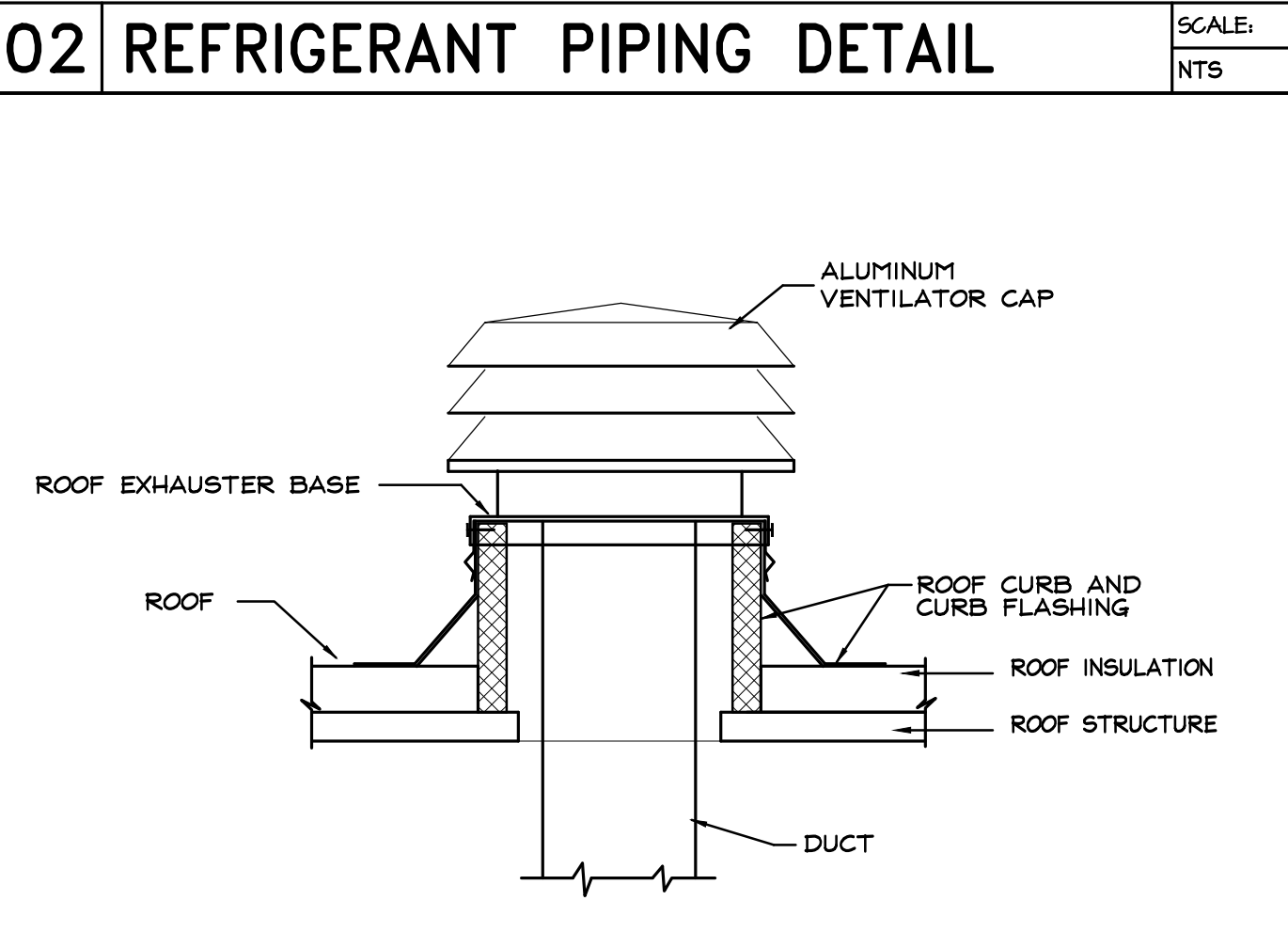
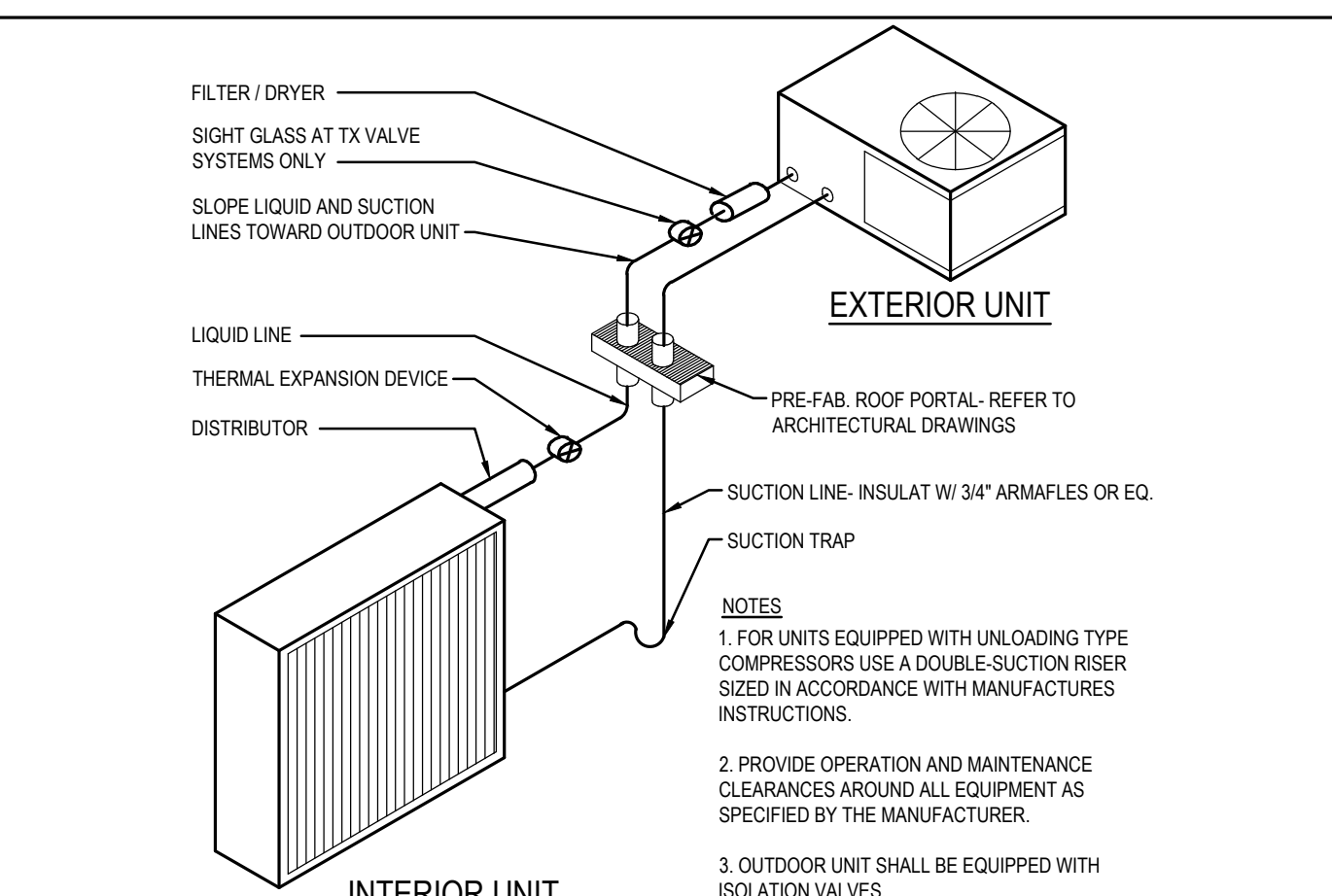
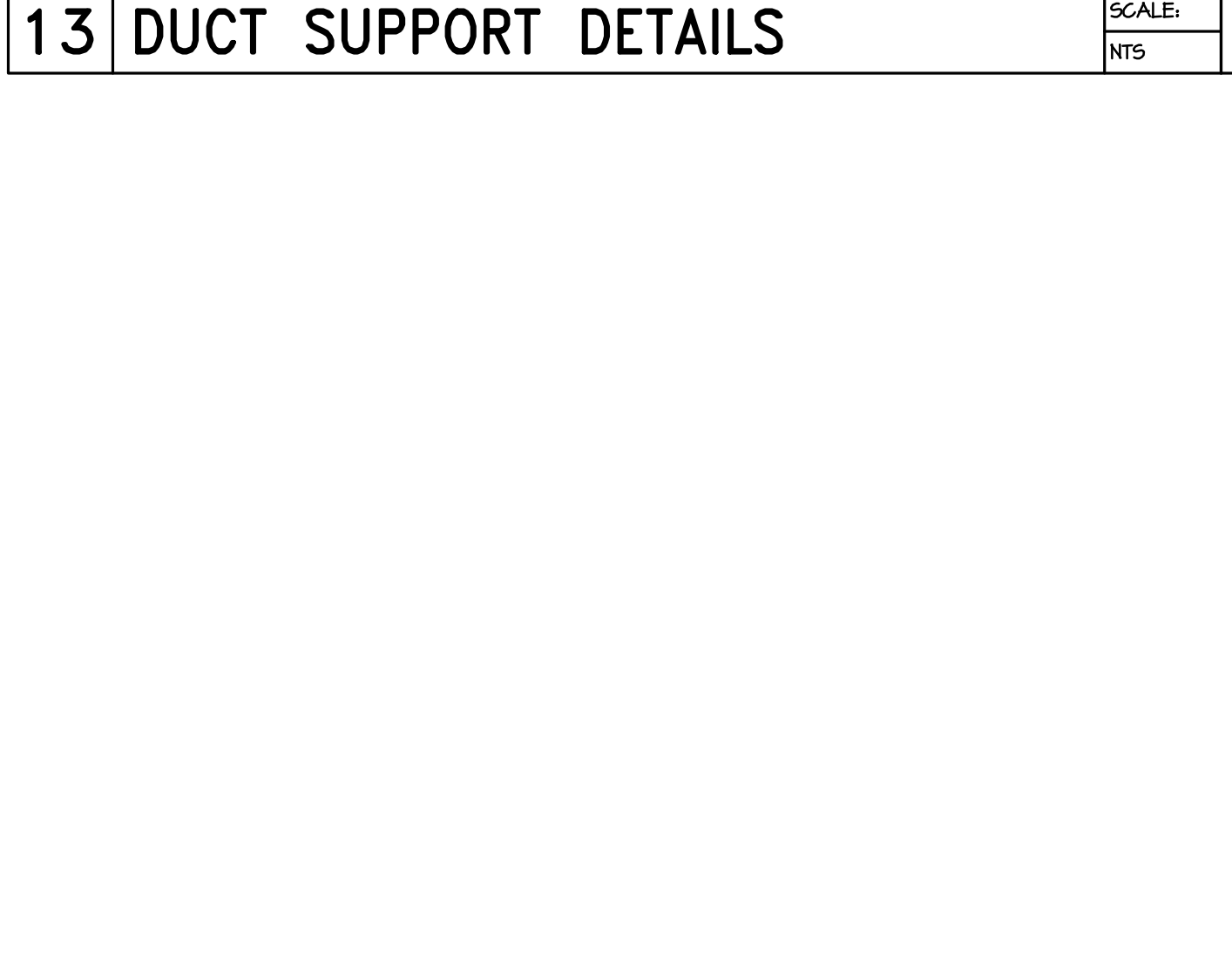
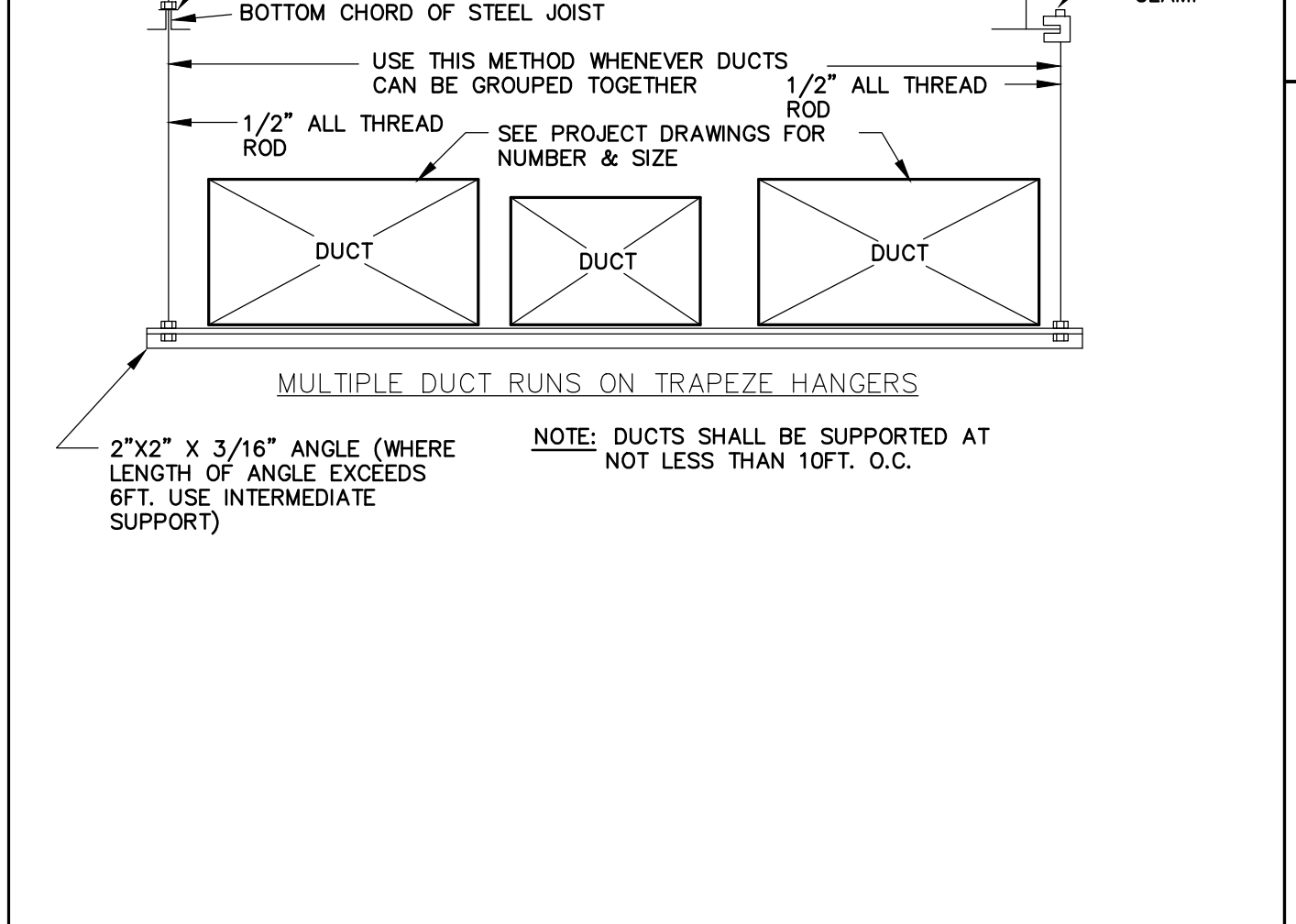
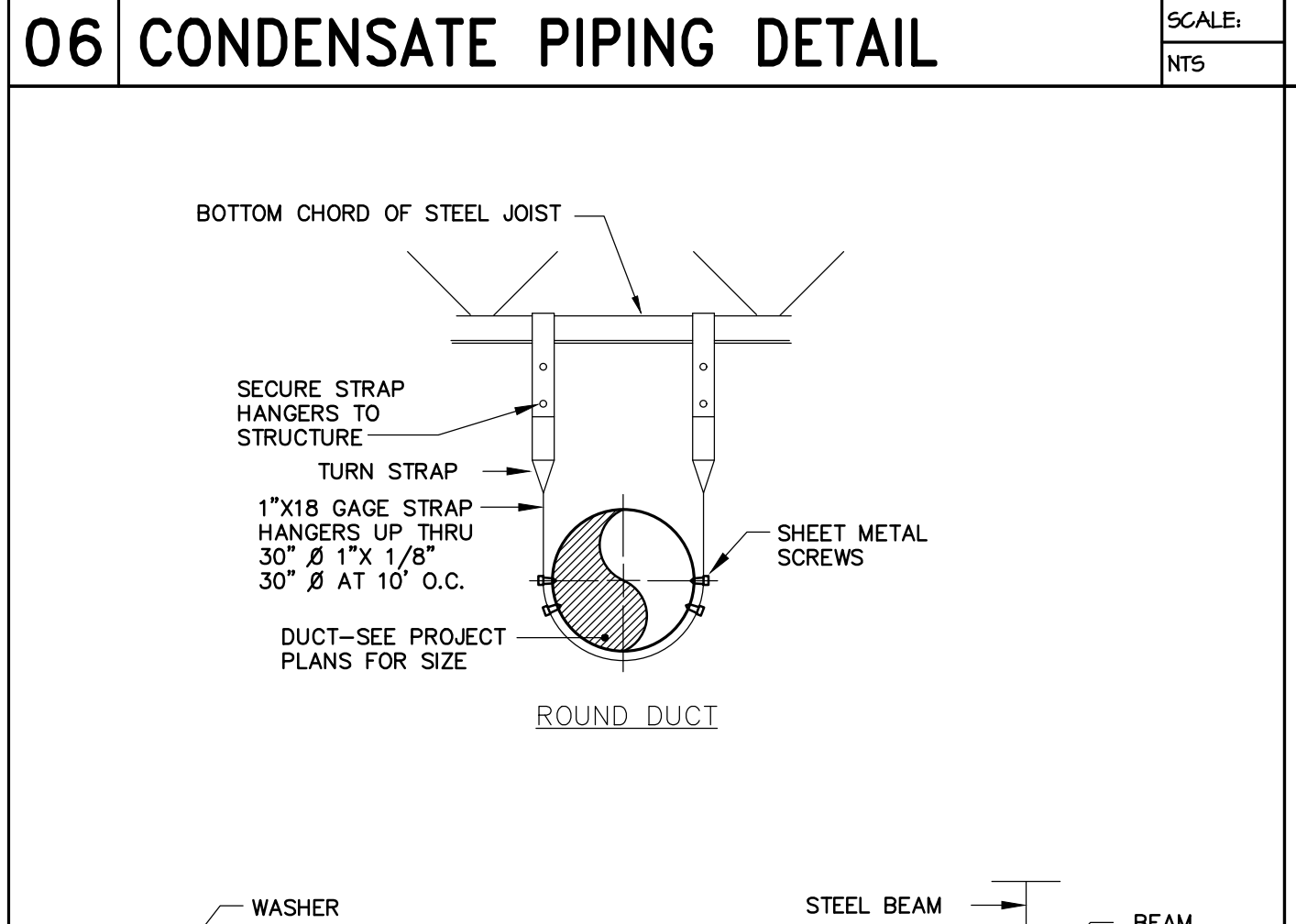
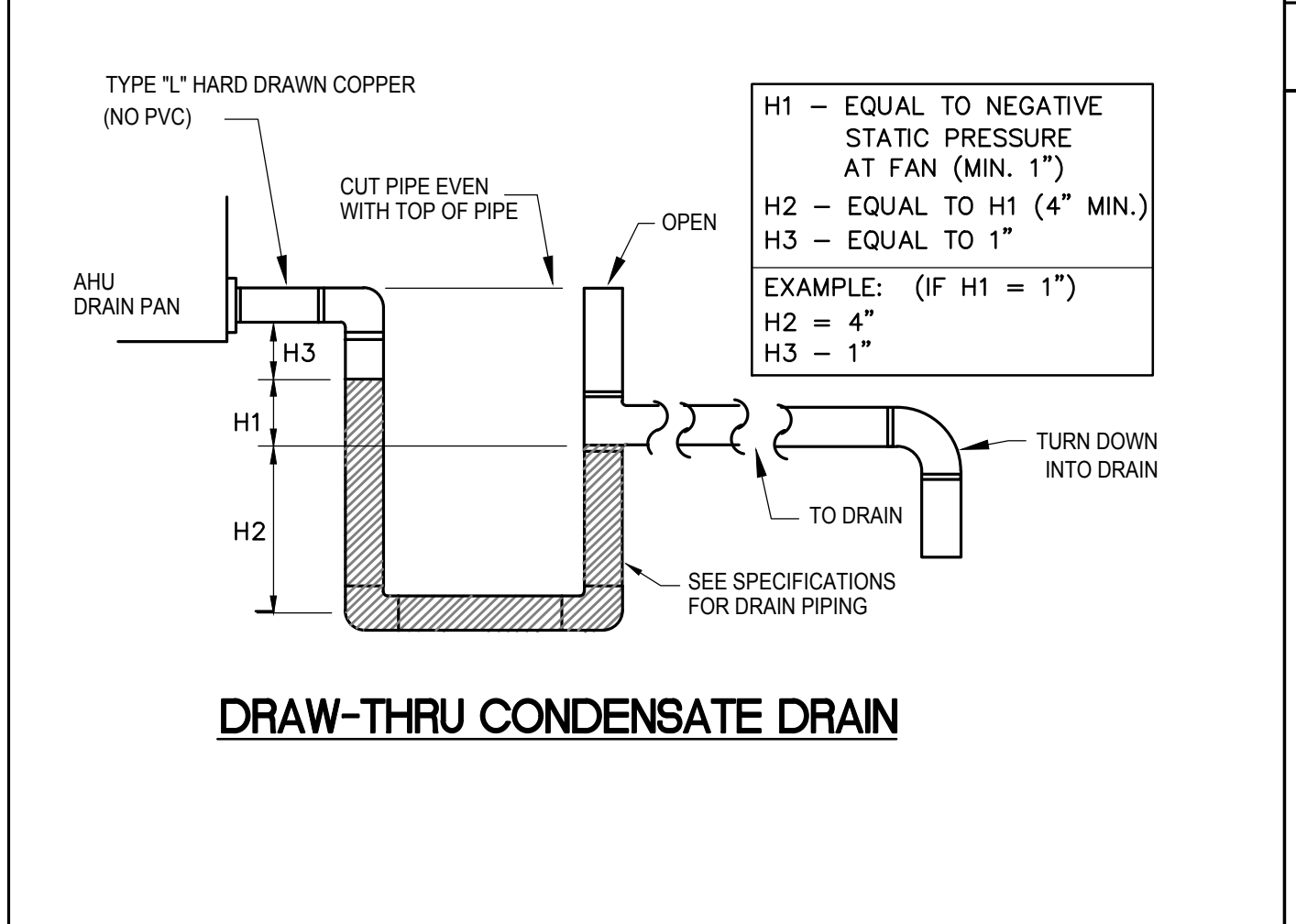
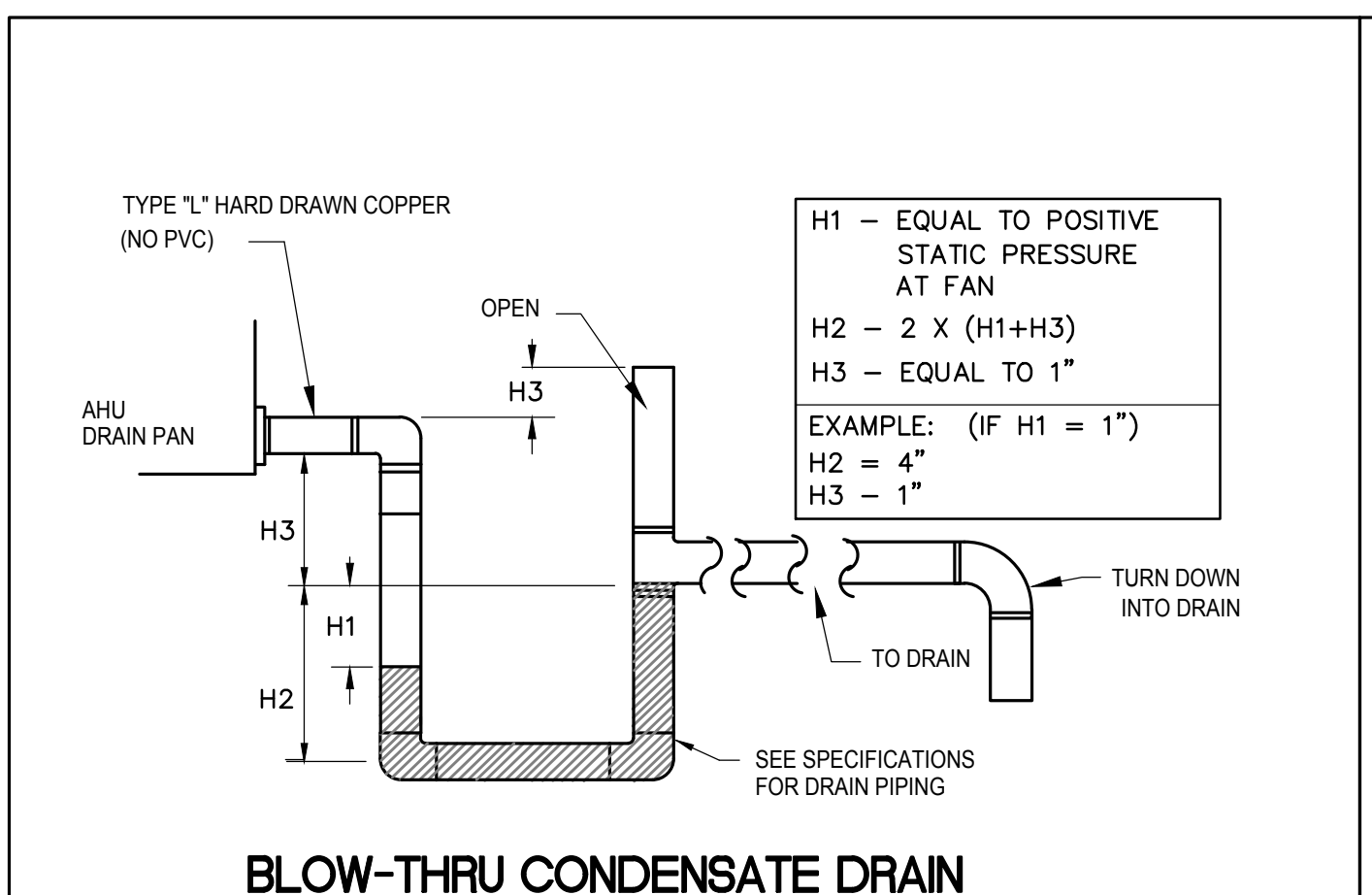
August 01, 2024
Project # 2211

Richard L. Morris
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1500 West 13th Street
Fort Worth, Texas 76102
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www.rsquaredeng.com

DATE ISSUED: AUGUST 01, 2024
JOB #: 2023058
SHEET NAME: REFRIGERANT PIPING PLAN
SHEET #:

M2.02

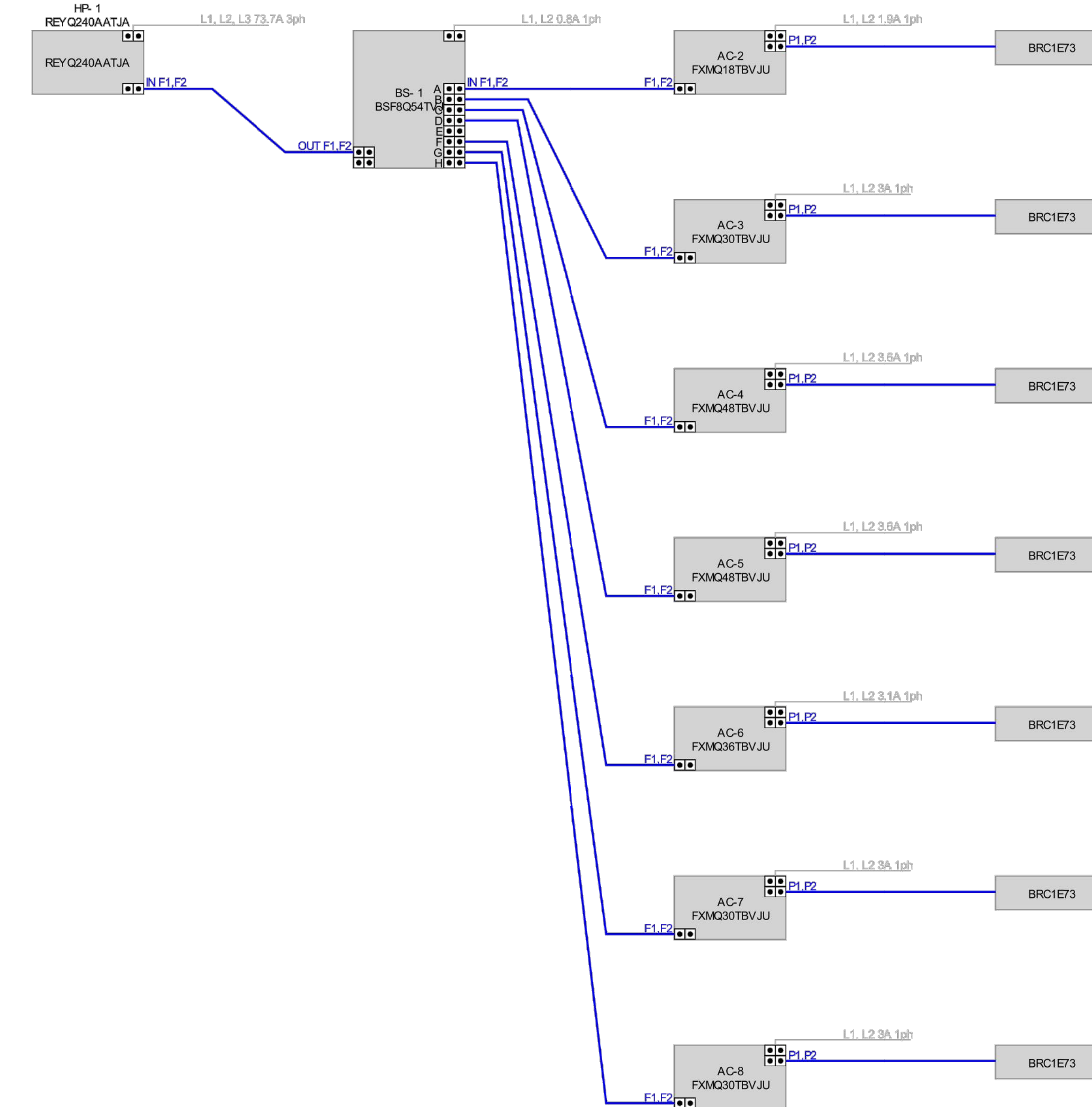
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REVISIONS

NO.	DATE	DESCRIPTION

Wiring HP- 1



Remarks

P1P2 = AWG 18-2 is required - however always refer to local code for further information.

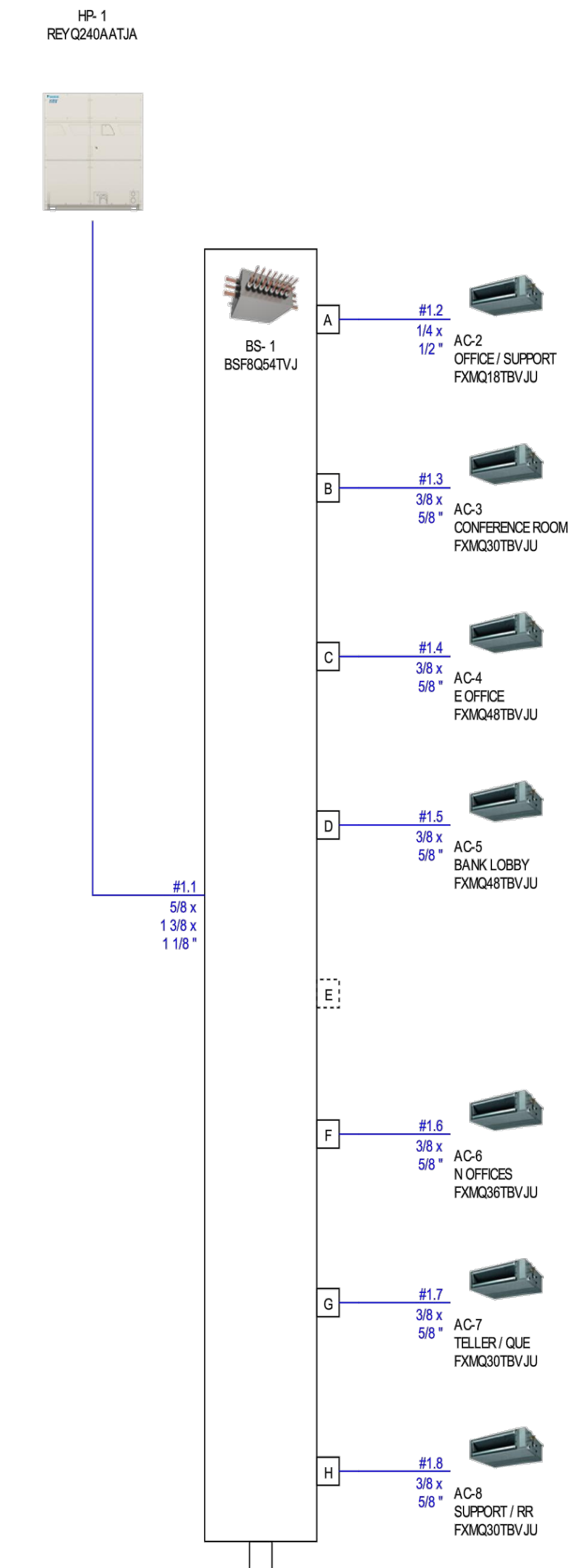
F1F2 IN/OUT = AWG 18-2 is required - however always refer to local code for further information

Note:

Piping

Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

Piping HP- 1



Oxygen8 Controls by Distech

Debugging and Troubleshooting Tools

With algorithm coding owned by Oxygen8, we have the ability to debug live, make changes on the fly, and have faster response times for in-field issues.

Better Connectivity

Accessible wirelessly or by access point, our control interface is available on the web or in the palm of your hand on our new app. Powered by Microsoft Azure, the Oxygen8 IAQ dashboard brings together machine learning, AI, and custom integrations.

Unitouch thermostats support bluetooth connectivity. Control temperature setpoint and fan speed directly from your mobile device with the app!

Connect seamlessly to Daikin's D-Controller for Hot Gas Reheat applications, and W-Controller for VRV Integration.

Oxygen8's Distech Controller supports BACnet IP.

Commission from Mobile App

Mobile app for iOS and Android provides access to all necessary controls and parameters to commission a unit via a wifi link.

Customized & Powerful Interfaces

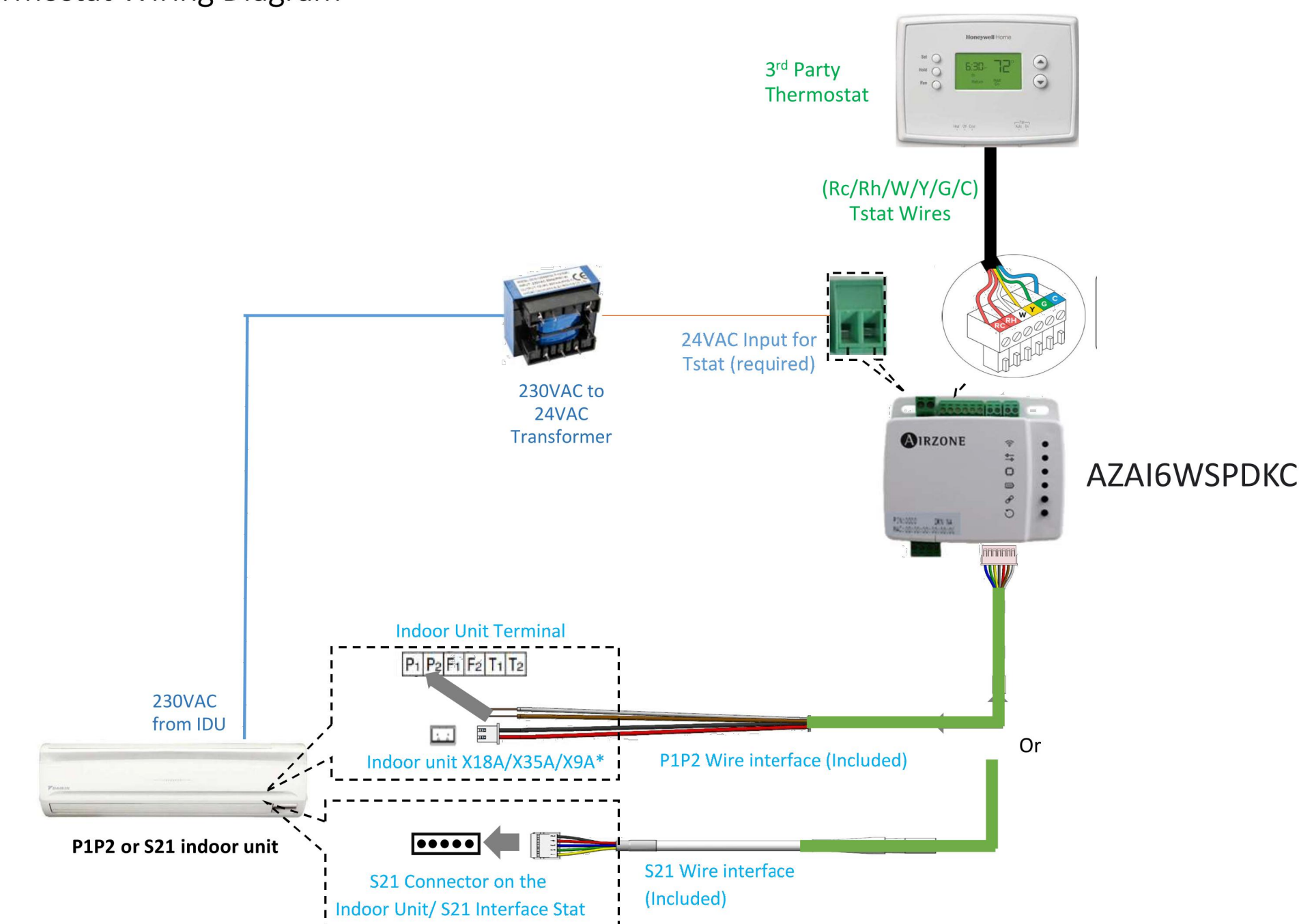
Oxygen8's platform allows for the creation of customized and branded visual interfaces that can be accessed via web or mobile internet browsers.

Fan motors are controlled via Modbus, which allows for more reliable control and data collection including (but not limited to) hours of operation, input power, current, and faults.

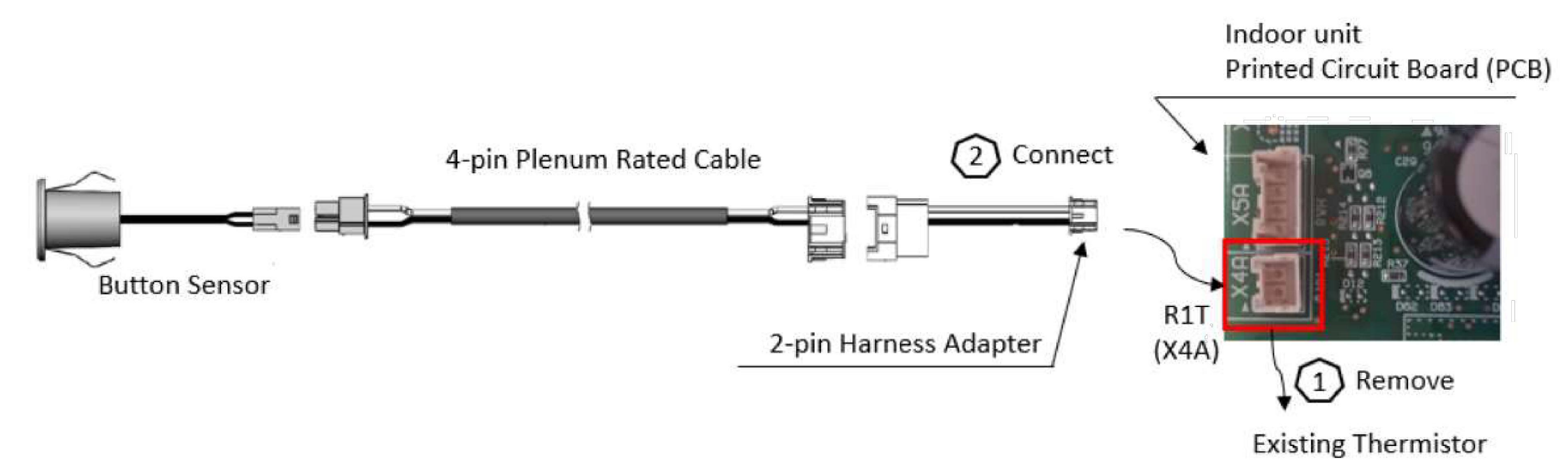
More Sensor Availability

In addition to standard CO2 sensors, Oxygen8 is proud to offer VOC and PM2.5 (or PM10) as optional IAQ sensors.

DKN Plus / 24V thermostat Wiring Diagram



FTQ / FXTQ / CXTQ Return Air Temp Sensor wiring Diagram



REVISIONS

NO.	DESCRIPTION	DATE

DAIKIN Submittal Data Sheet DCM601B71 – intelligent Touch Manager

Table with fields: Project Name, Location, Engineer, Submitted to, Submitted by, Reference, Approval, Date, Construction, Unit #, Drawing #.

- Features: Management size, Control / Monitoring, Web Accessibility, Visual Navigation Screens, Easy installation, Easy Engineering, Building facilities management, Power Proportional Distribution (PPD) (Optional), Web (HTTP) Interface Software (Optional).

WIRING SPECIFICATION:

Table with columns: Specifications of Communication Cabling, DII-Net, Plus Adaptor (DGE601A72), WAGO.

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DAIKIN Submittal Data Sheet DCM601B71 – intelligent Touch Manager

Table with fields: Project Name, Location, Engineer, Submitted to, Submitted by, Reference, Approval, Date, Construction, Unit #, Drawing #.

- Specifications: Model, Description, Maximum Indoor Unit Groups, Max Indoor Units, Max ACNet Servers, System Total with option adaptors, Power Supply, Power Consumption, Operating Temp Range, Operating Humidity Range, Dimensions, Weight, Certifications, DII-Net Systems, RJ-45 (Ethernet), Subbase-TX or I0base-T, USB Port-USB2.0 (2GB to 32GB), RS485 (19 - 22 AWG), Digital Input forced shutdown of all indoor unit systems, Digital Input and/or Pulse Input Terminals.

Table with columns: Specifications of Communication Cabling, DII-Net, Plus Adaptor (DGE601A72), WAGO.

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Table with columns: Parameter, Description, and Notes for various sensors and modes.

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Table with columns: Parameter, Description, and Notes for various sensors and modes.

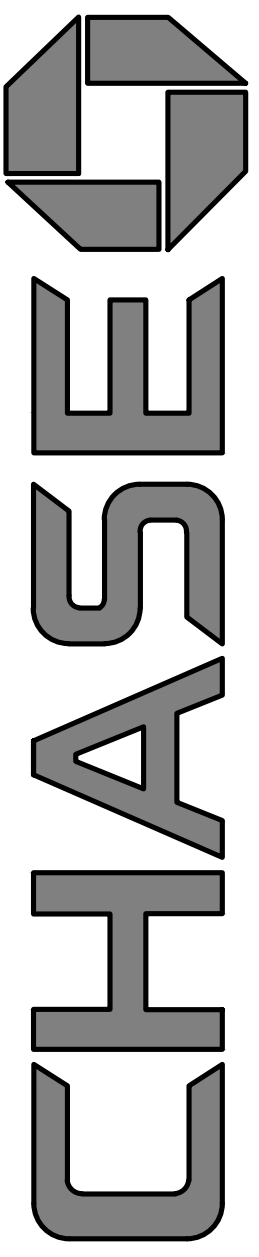
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DAIKIN Submittal Data Sheet DCM601B71 – intelligent Touch Manager

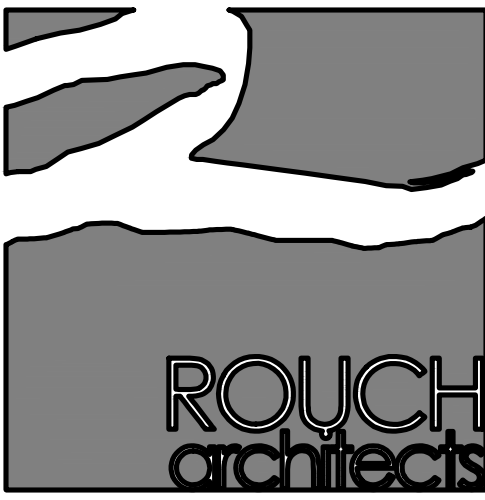
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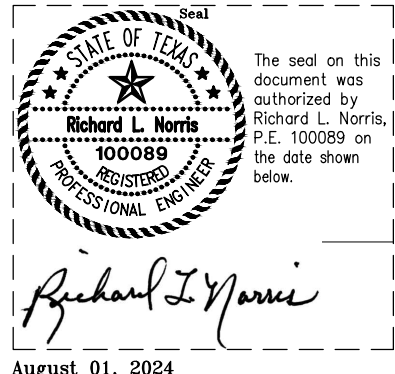
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REVISIONS

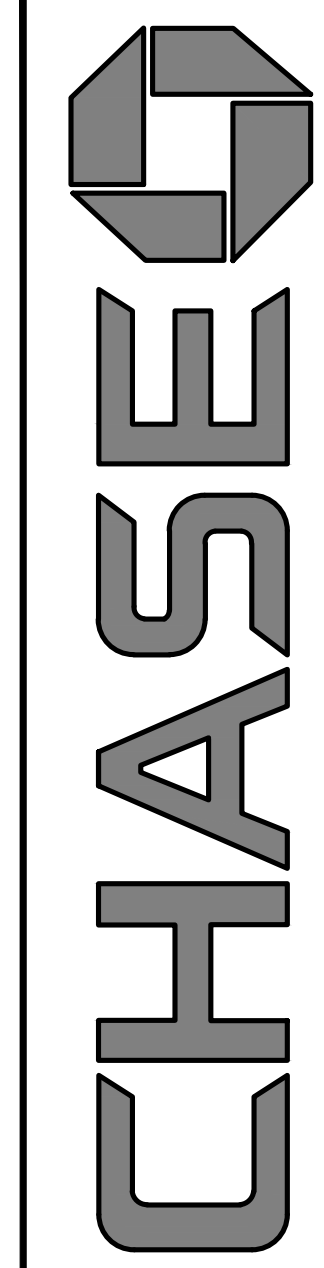
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R Squared Consulting Engineers, Inc. Project # 2211

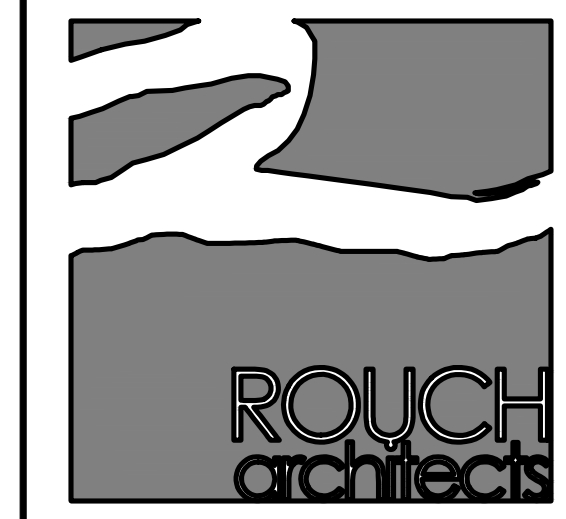


The seal on this document was authorized by Robert L. Morris, P.E. 100289 on the date shown below.

CONTROL NOTES: DCM601B71 (IM) THIS IS DAIKIN CENTRAL CONTROLLER THAT IS ON EVERY PROJECT. FUNCTIONALITY IT GIVES A LOCAL INTERFACE, ALL DIRECT CONTROL STILL RESIDE WITH THE DANTRITE WIRELESS STAT. THIS IS A GOOD BACK UP FOR THE SYSTEM OVER ALL BRICET'S WE INSTALL THIS WIRE STAT ON ALL FAN COILS. THE MAIN PURPOSE IS FOR PROGRAMMING ONLY OR FUTURE ADJUSTMENTS OR CHANGES THAT MIGHT BE REQUIRED. ONCE THE PROGRAMMING IS COMPLETE THE STAT IS DISCONNECTED AND MOUNTED AT THE FAN COIL, NOT IN SPACE. OXYGEN CONTROLLER THIS IS A STANDALONE CONTROLLER. THIS CONTROL GIVES US ALL THE NECESSARY CAPABILITY TO CONTROL ALL ELEMENTS ASSOCIATED WITH ANY OF THE ERV DESIGNS BEING UTILIZED BY ORE. DKN PLUS ADAPTER THIS DEVICE IS HOW DANTRITE WIRELESS STAT WILL INTERFACE WITH THE DAIKIN FAN COIL (RVV OR MINI-SPLIT) TRANSFORMER RELAYS MULTI-TENANT ADAPTER ALL SCHEDULING IS DONE BY DANTRITE SET POINT CONTROL. TO FAN COILS DONE BY DANTRITE WIRELESS STAT. DANTRITE DOES NOT HAVE USABILITY INTO SPECIFIC CONTROL POINTS WITHIN DAIKIN SYSTEM. SEE INCLUDED POINTS LIST IN DCM601B71. DANTRITE IS NOT A BACNET SYSTEM. THEY USE THEIR OWN PROTOCOL.



CHASE RETAIL BANKING CENTER
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FORT WORTH, TX 76179



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DALLAS, TEXAS 75202
214.997.6029
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VARIABLE REFRIGERANT VOLUME - AIR-COOLED CONDENSING UNIT SCHEDULE

Table with columns: TAG, ROOM, BASIS OF DESIGN, NOMINAL TONNAGE, DESCRIPTION, COOLING CAPACITY, HEATING CAPACITY, REFRIGERANT CHARGE, CONNECTION, ELECTRICAL, DIMENSIONS, EFFICIENCY, NOTES, Options and Accessories.

VARIABLE REFRIGERANT VOLUME - INDOOR UNIT SCHEDULE

Table with columns: TAG, ROOM, BASIS OF DESIGN, NOMINAL TONNAGE, TYPE, CONNECTED TO, SUPPLY FAN, COOLING CAPACITY, HEATING CAPACITY, ELECTRICAL, DIMENSIONS, WEIGHT, NOTES, Options and Accessories.

Schedule Notes:
1. PROVIDE UNITS WITH MERV 13 FILTERS.

Ventilation Requirements Schedule

Large table with columns: Rm. No., Space description, occupancy classification, Gross Area, SF per Occupant, Occupants, Occupancy count, CFM/occ, CFM/SF, OIA/CFM, Effectiveness, Single Zone System, LEED +15%, LEED +30%, Min/Max Exhaust, Actual Exhaust, Actual unit operating conditions, conveyance equipment.

VARIABLE REFRIGERANT VOLUME - ZONE HEAT RECOVERY DEVICE SCHEDULE

Table with columns: TAG, ROOM, BASIS OF DESIGN, CONDENSING UNIT SERVED, VOLTAGE-PHASE, MIN CIRCUIT AMPS, MAX OVERCURRENT PROTECTION, MAX CAPACITY, DIMENSIONS, WEIGHT, ZONE SERVED, Options and Accessories.

MECHANICAL FIXTURE SCHEDULE

Table with columns: TAG, TYPE, REF. CEILING PLAN DESIGNATION, MANUFACTURER, MODEL, SIZE, FINISH, ACCESSORIES, NOTES.

- MECHANICAL FIXTURE NOTES: 1. COORDINATE WITH LIGHT FIXTURES AND OTHER CEILING DEVICES FOR EXACT LOCATIONS OF ALL AIR FIXTURES. 2. COORDINATE FRAME STYLES WITH CEILING OR WALL SYSTEM FRAMING AND FINISH MATERIALS. 3. PROVIDE BACK SIDE OF SUPPLY AIR FIXTURES WITH FACTORY-INSTALLED R-6 INSULATION BLANKET.

FAN SCHEDULE

Table with columns: MARK, SERVES, LOCATION, TYPE, CFM, S.P., FAN RPM, TYPE DRIVE, MOTOR DATA, MFR., MODEL NO., REMARKS, OPERATING WEIGHT.

- NOTES: (1) MINIMUM LEAKAGE GRAVITY BACKDRAFT DAMPER, (2) AUTOMATIC DAMPER WITH ACTUATOR, (3) 2-SPEED MOTOR, (4) BIRDSCREEN, (5) MANUFACTURER'S ROOF CURB, (6) INLET SAFETY GUARD, (7) PREMIUM EFFICIENCY ELECTRIC MOTOR, (8) MANUFACTURER'S DISCONNECT SWITCH, (9) SPEED CONTROLLER, (10) THROW AWAY FILTERS, (11) 24" VENTED ROOF CURB, (12) EXPLOSION PROOF MOTOR AND DRIVE WITH NON SPARKING WHEEL, (13) SWITCH WITH LIGHTS, (14) SWITCH WITH TIME CLOCK, (15) PROVIDED WITH LINE-VOLTAGE THERMOSTAT, SET TO ENGAGE FAN AT 85°F., (16) PROVIDE WITH ROOF CAP.

AIR HANDLING UNIT SCHEDULE

Table with columns: MARK, CFM, OIA, A.P.E., INT. AIR TEMP. DBE, FTR, ELECTRICAL DATA, NOMINAL COOLING DATA, HEATING DATA, UNIT, EQUAL TO.

- NOTES: 1. DISCONNECT PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR PER NEC. 2. UNITS SINGLE ELECTRICAL CONNECTION FROM CU/HP, POWER AND CONTROLS FROM OUTDOOR UNIT. 3. PROVIDE WITH AUXILIARY DRAIN PAN. 4. PROVIDE SPRING TYPE VIBRATION ISOLATORS AND REQUIRED MOUNTING HARDWARE. 5. PROVIDE UNIT WITH 7-DAY PROGRAMMABLE THERMOSTATS WITH NIGHT SET-BACK CAPABILITIES, WITH REMOTE SENSOR, INTERFACE MOTORIZED DAMPER TO CLOSE IN NIGHT SET-BACK MODE AND SET TO OPEN IN OCCUPIED MODE.

AIR COOLED CONDENSING UNIT SCHEDULE

Table with columns: MARK, MATCHING INDOOR UNIT, COOLING CAPACITY, HEATING CAPACITY, AMBIENT TEMP., REFRIG. TYPE, ELECTRICAL DATA, MFR., MODEL NUMBER, SEER2, HSPF2, UNIT WEIGHT.

- NOTES: 1. PROVIDE WITH FILTER DRYER, LOW AMBIENT CONTROL, TIME DELAY CUT-OFF AND TXV PER MANUFACTURERS RECOMMENDATIONS, PIPE SIZES SHALL BE PER MFRS. RECOMMENDATIONS BASED ON FINAL ROUTING. 2. INSTALLATION SHALL BE PER MANUFACTURERS RECOMMENDATIONS FOR COMMERCIAL INSTALLATION. REFRIGERANT PIPE 3. PROVIDE UNITS WITH ANTI-CYCLE TIME DELAY AND HIGH AND LOW PRESSURE PROTECTION. 4. PROVIDE WITH MERV 13 FILTER KIT.

HEAT PUMP UNIT SCHEDULE

Table with columns: MARK, MATCHING INDOOR UNIT, COOLING CAPACITY, HEATING CAPACITY, AMBIENT TEMP., REFRIG. TYPE, ELECTRICAL DATA, MFR., MODEL NUMBER, SEER2, HSPF2, UNIT WEIGHT.

- NOTES: 1. PROVIDE WITH FILTER DRYER, LOW AMBIENT CONTROL, TIME DELAY CUT-OFF AND TXV PER MANUFACTURERS RECOMMENDATIONS, PIPE SIZES SHALL BE PER MFRS. RECOMMENDATIONS BASED ON FINAL ROUTING. 2. INSTALLATION SHALL BE PER MANUFACTURERS RECOMMENDATIONS FOR COMMERCIAL INSTALLATION. REFRIGERANT PIPE 3. PROVIDE UNITS WITH ANTI-CYCLE TIME DELAY AND HIGH AND LOW PRESSURE PROTECTION. 4. SINGLE POINT POWER SOURCE AT OUT DOOR UNIT. FEED INDOOR UNIT FROM OUTDOOR UNIT, PER MFRS. RECOMMENDATIONS.

ERV UNIT SCHEDULE

Table with columns: MARK, MFR, MODEL NO., CFM, COIL (R410A), CAPACITY (MBH), E.S.P., MOTORS (ECH) DIRECT, ELECTRICAL, FILTERS, UNIT WT., REMARKS/NOTES.

- NOTES: 1. INSTALL PER MANUFACTURER RECOMMENDATIONS.

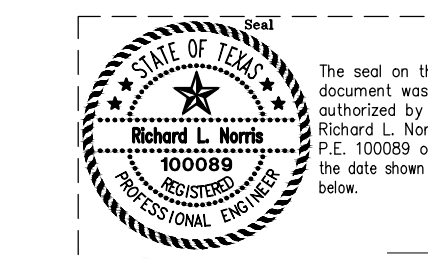
LOUVER SCHEDULE

Table with columns: TYPE, DESCRIPTION, EQUAL TO, MFR, MODEL, CFM, SIZE, MINIMUM FREE AREA, S.F., %, NOTES.

- NOTES: 1. DRAINABLE BLADE TYPE 2. FIELD PAINTED BY GC, VERIFY COLOR W/ ARCHITECT 3. PROVIDE WITH INSECT SCREEN.

DESIGN CONDITIONS

Table with columns: SUMMER, WINTER, 96°F db, 73°F wb, 22°F db.



August 01, 2024
Project # 2211
R Squared Consulting Engineers, Inc.

REVISIONS

DATE ISSUED: AUGUST 01, 2024
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SHEET: M4.01