

FIRE DAMPER MOUNTING DETAILS

APPLY BEAD OF FIRE ___

ALL ANGLES

RATED SILICONE CAULK ALONG PERIMETER OF

NO SCALE

_ MINIMUM 1 1/2" X 1 1/2" X 1/8"∠ FASTENED TO SLEEVE AND WALL

FASTENERS AT MAXIMUM 6" CENTERS

_ SHEET METAL DUCTWORK

ON ALL FOUR SIDES. INSTALL

---- 2-HR FIRE-RATED CONCRETE BLOCK WALL 1. INSTALLATION & MATERIALS SHALL CONFORM WITH U.L., N.F.P.A. AND DAMPER MFGR'S - INFILL VOID WITH FIBERGLASS INSULATION, TYP. REQUIREMENTS. - PTHP METAL WALL SLEEVE, TERMINATE AT INSIDE EDGE OF FIRE DAMPER, SEAL ALL—AROUND AIR TIGHT WITH FIRE STOP CAULKING PROVIDE CODE REQUIRED CLEARANCE ALL—AROUND AT DAMPER SLEEVE. SLEEVE SHALL BE FLUSH WITH WALL ON BOTH SIDES. - SHEETMETAL CLOSURE PANEL, SEAL ALL-AROUND AIR TIGHT WITH FIRE STOP CAULKING 3. CONTRACTOR SHALL SIZE FIRE DAMPER BASED ON APPROVED PTHP SHOP DWGS,. - DAMPER SLEEVE AND STEEL LINTEL 4. CONTRACTOR SHALL SIZE WALL GRILLE BASED ON APPROVED PTHP SHOP DWGS,. GRILLE SHALL BE REMOVABLE AND SHALL BE SIZED LARGER THAN THE FIRE DAMPER. MINIMUM 1-1/2"x1-1/2" x1/8" STEEL ANGLES ON ALL FOUR SIDES, LAP OPENING 1-INCH MIN. FASTEN TO SLEEVE WITH 1/4" MIN. DIA. FASTENERS AT 8-INCHES O.C., DO NOT PTHP (TYPICAL OF 3) -FASTEN TO BUILDING (ALLOW FREE EXPANSION) EXTEND SHEETMETAL PLENUM (ALL-AROUND) TO INSIDE EDGE OF GRILLE, SEAL AIR TIGHT TO FIRE DAMPER WITH FIRE STOP CAULKING PTHP (TYPICAL OF 3) — UL RATED TYPE B, 1-1/2 HR. FIRE DAMPER, EQUIVIALENT TO RUSKIN IBDT THINLINE - ANODIZED ALUMINUM HORIZONTAL REMOVABLE OUTDOOR GRILLE, SIZED AND PROVIDED BY CONTRACTOR SLOPE BOTTOM SHEETMETAL CLOSURE PANEL DOWN TO ALLOW FOR DRAINAGE SUBBASE WITH LEVELING LEGS -PROVIDED W/SUPPLY OF PTHP FASTEN DAMPER TO SLEEVE WITH 1/4" MIN. DIA. BOLTS EXISTING PARKING LOT CONCRETE SLAB, CONTRACTOR TO CONFIRM SLAB ELEVATION AT PTHP LOCATIONS - DAMPER SLEEVE, TYP. CONCRETE FLOOR -- MINIMUM 1/2" COPPER CONDENSATE DRAIN, PIPE FOR EXTERNAL DISPOSAL OF CONDENSATE, COORDINATE WITH PTHP MANUFACTURER. DO NOT PIPE OR DRAIN CONDENSATE THROUGH FIRE DAMPER.

- CONTRACTOR TO COORDINATE LOCATION AND SIZE OF WALL PENETRATION WITH EXISTING PARKING LOT SLAB ELEVATION AND MASON CONTRACTOR. MAINTAIN MINIMUM 6" VERTICAL CLEARANCE ABOVE PARKING LOT SLAB AND BOTTOM OF WALL PENETRATION.

FIRE DAMPER AT PACKAGED TERMINAL HEAT PUMP DETAIL

GENERAL NOTES

LEGEND

MBH 1000 BRITISH THERMAL UNITS PER HOUR

WR WALL REGISTER CD CEILING DIFFUSER

ER EXHAUST REGISTER

TG TRANSFER GRILLE

─■ VD VOLUME DAMPER

— FD FIRE DAMPER

RH-1 REHEAT COIL

UH-1 UNIT HEATER

RTU-1 ROOFTOP UNIT

RAD RADIATION

DN DOWN

SF-1 SUPPLY FAN EF-1 EXHAUST FAN

UV-1 UNIT VENTILATOR

RR RETURN REGISTER

OED OPEN END DUCT

BOD BOTTOM OF DUCT

F.A.I. FRESH AIR INTAKE

FLEXABLE DUCT

RETURN AIR DUCT

SUPPLY AIR DUCT

400 CFM EA

S2 4 QUANTITY

400

EQUIPMENT

THERMOSTAT/SENSOR

AFF ABOVE FINISHED FLOOR

CUH-1 CABINET UNIT HEATER

EA EACH

— MD MOTORIZED DAMPER

AFF ABOVE FINISHED FLOOR CFM CUBIC FEET PER MINUTE

VAV-1 VARIABLE AIR VOLUME BOX

PTHP-1 PACKAGED TERMINAL HEAT PUMPS

A TYP & CAPACITY OF FINN TUBE RADIATION

90 DEG ELBOW WITH TURNING VANES, PROVIDE

TURNING VANES AT ALL MITERED ELBOWS

FL LENGTH OF FINN TUBE RADIATION

ACOUSTICALLY LINED DUCT

-- S (SUPPLY) R (RETURN)

_ DIFFUSER DESCRIPTION

SECTION NUMBER 1 ON DWG M-1

E (EXHAUST) T (TRANSFER)

SUPPLY DIFFUSER (TYPE 2)

▼▼ (SEE REG., GRILLES & DIFF SCHEDULE)

- 1. MECHANICAL CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE WORK OF ALL OTHER TRADES.
- 2. ALL DUCTWORK AND MECHANICAL EQUIPMENT SHOWN DIAGRAMMATICALLY. DETERMINE EXACT LOCATIONS IN FIELD.
- 3. COORDINATE LOCATION OF ALL NEW ROOFTOP EQUIPMENT, LOCATED ON ROOF, WITH ROOF JOIST.
- 4. THE MECHANICAL CONTRACTOR SHALL NOT FABRICATE ANY DUCTWORK UNTIL HE HAS COORDINATED WITH ALL OTHER TRADES TO INSURE THAT THE DUCTWORK CAN BE INSTALLED WITH THE SIZES INDICATED ON THE DRAWINGS AND IN THE LOCATIONS SHOWN ON THE
- 5. REFER TO REFLECTED CEILING PLAN ON ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CEILING DIFFUSERS AND
- 6. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF LOUVERS AND ROOF OPENINGS. COORDINATE ALL DIMENSIONS WITH GENERAL CONTRACTOR.
- 7. ALL LOUVER DIMENSIONS SHALL BE CLOSELY COORDINATED WITH THE WORK OF ALL OTHER TRADES.
- 8. PROVIDE VOLUME DAMPERS SO THAT EVERY REGISTER, GRILLE, AND DIFFUSER (SUPPLY, RETURN, AND EXHAUST) CAN BE INDIVIDUALLY BALANCED. VOLUME DAMPERS SHALL BE LOCATED AS FAR AWAY FROM REGISTERS, GRILLES, AND DIFFUSERS AS POSSIBLE TO MINIMIZE NOISE. VOLUME DAMPERS SHALL BE LOCATED ABOVE SUSPENDED CEILINGS WHEREVER POSSIBLE AND SHALL BE UNOBSTRUCTED AND EASILY
 ACCESSIBLE FOR THE BALANCING
 CONTRACTOR. CONTRACTOR SHALL VERIFY INSTALLATION OF EXISTING VOLUME DAMPERS AT ALL BRANCHES IN EXISTING SUPPLY DUCT. CONTRACTOR SHALL INSTALL NEW VOLUME DAMPERS WHERE REQUIRED. IN LOCATIONS
 WHERE VOLUME DAMPERS CANNOT BE LOCATED ABOVE SUSPENDED CEILINGS AND MUST BE LOCATED ABOVE GYPBOARD CEILINGS, PROVIDE ACCESS PANELS AS SPECIFIED AND NOTIFY THE ARCHITECT VERBALLY AND IN WRITING
- PROVIDE SINGLE THICKNESS TURNING VANES AT ALL 90 DEGREE ELBOWS IN ALL SUPPLY DUCTWORK.

WITHOUT PERMISSION FROM THE

OF ALL SUCH LOCATIONS. ACCESS PANELS SHALL NOT BE INSTALLED

- 10. FLEXIBLE DUCT WORK IS NOT ALLOWED IN NEGATIVE PRESSURE SYSTEMS. DO NOT USE FLEXIBLE DUCTWORK IN RETURN AND EXHAUST SYSTEMS. WHERE FLEXIBLE DUCT IS USED, LENGTHS SHALL NOT EXCEED 5'-0".
- 11. ALL DUCTWORK VISIBLE THROUGH CEILING OPENINGS, DUCT OPENING REGISTERS, GRILLES, AND DIFFUSERS SHALL BE PAINTED BLACK.
- 12. ALL FRESH AIR AND EXHAUST AIR PLENUMS SHALL HAVE FLOOR PITCHED TO DRAIN THROUGH LOUVER.
- 13. VERIFY EXISTING DUCT SIZES PRIOR TO FABRICATION OF NEW DUCTWORK. IF DISCREPANCIES EXIST, NOTIFY THE
- 14. FOR ALL NEW HVAC UNITS, SUPPLY AND RETURN DUCT MAINS OUT OF UNITS SHALL DROP DOWN AS CLOSE TO CEILING AS POSSIBLE (COORDINATE WITH LIGHTING, SPRINKLER, & OTHER TRADES
) BEFORE FIRST RADIUS ELBOW FITTING ÍS INSTALLED. THE INTENT IS TO PROVIDE THE LONGEST RUN OF DUCT POSSIBLE OUT OF THE HVAC UNITS SO THAT STATIC PRESSURE LOSS IS MINIMIZED.
- 15. THE CONTRACTOR SHALL VISIT THE BUILDING SITE PRIOR TO BIDDING TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS AND TO TAKE MEASUREMENTS AS NECESSARY SO THAT HE MAY PROPERLY COMPLETE ALL WORK ASSOCIATED WITH THE DESIGN INTENT OF THESE DOCUMENTS.
- 16. ALL DUCTWORK AND PIPING PENETRATIONS THROUGH MECHANICAL ROOM WALLS AND FLOORS SHALL BE SEALED WITH FIRE CAULKING.

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