

MECHANICAL GENERAL NOTES

- ALL WORK SHALL BE EXECUTED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE DONE IN ACCORDANCE WITH GOOD TRADE PRACTICE AND IN CONFORMANCE WITH APPLICABLE MANUFACTURERS' RECOMMENDATIONS.
- THIS INSTALLATION SHALL CONFORM TO THE FOLLOWING CODES AND THE REQUIREMENTS OF FEDERAL, STATE, AND LOCAL REGULATORY AGENCIES HAVING JURISDICTION:
- HVAC DRAWINGS ARE IN PART DIAGRAMMATIC AND INTENDED TO SHOW THE SCOPE AND GENERAL ARRANGEMENT OF THE WORK UNDER THIS CONTRACT. WHERE JOB CONDITIONS REQUIRE MINOR CHANGES OR ADJUSTMENTS IN THE INDICATED LOCATIONS OR ARRANGEMENT OF THE WORK SUCH CHANGES SHALL BE MADE WITHOUT CHANGE IN THE CONTRACT AMOUNT.
- CONTRACTOR SHALL REVIEW ALL DISCIPLINE DRAWINGS INCLUDING ARCHITECTURAL, AND SHALL COORDINATE ALL WORK WITH OTHER TRADES AND WITH EXISTING CONDITIONS PRIOR TO INSTALLATION OF ANY WORK. REPORT ALL CONFLICTS IMMEDIATELY TO ARCHITECT AND ENGINEER.
- THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATIONS AND EXACT DIMENSIONS OF ALL EQUIPMENT, CASEWORK, DEVICES, FIXTURES, SWITCHES, SENSORS, ETC. DURING FIELD VISITS AND PRIOR TO PERFORMING ANY ROUGH-IN WORK FOR THE UTILITIES AND DUCTWORK. DISCREPANCIES SHALL BE IMMEDIATELY COMMUNICATED WITH THE ARCHITECT AND ENGINEER.
- ANY CHANGES AND/OR MODIFICATIONS MUST BE REVIEWED AND APPROVED BY THE ENGINEER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
- THE EQUIPMENT INDICATED ON THE DRAWINGS, TOGETHER WITH ITS BASE AND/OR SUPPORT, DUCTWORK, WALL, FLOOR AND ROOF OPENINGS AND ELECTRICAL SERVICE ARE BASED ON THE MAKE AND MODEL INDICATED IN THE EQUIPMENT SCHEDULE. SHOULD CONTRACTOR SELECT AN EQUIVALENT ALTERNATE MAKE OF EQUIPMENT, EVEN IF APPROVED BY THE OWNER AS EQUAL, THE CONTRACTOR SHALL NOTIFY ENGINEER, COORDINATE AND MAKE THE MODIFICATIONS IN THE WORK WITHOUT CHANGE IN CONTRACT AMOUNT.
- SCHEDULE ALL WORK, CUTTING AND BUILDING SERVICE INTERRUPTIONS WITH BUILDING OWNER AND CONSTRUCTION MANAGER, PRIOR TO COMMENCING WORK. ALL CORING TO BE COMPLETED THIRD SHIFT.
- ALL DUCT DIMENSIONS INDICATED FOR NEW DUCTS ARE INSIDE CLEAR DIMENSIONS.
- WALL DEVICES SHOWN ON DRAWINGS ARE DIAGRAMMATIC IN LOCATION AND FOR GENERAL WIRING ONLY. DEVICES INDICATED TO BE INSTALLED IN ONE LOCATION SHALL BE ALIGNED VERTICALLY AND/OR HORIZONTALLY. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING DETAILS. COORDINATE ALL LOCATIONS BETWEEN TRADES.
- ALL NEW AND EXISTING PIPES AND DUCTS SHALL HAVE FIRE RATED SLEEVES AND/OR FIRE RATED DAMPERS, WHEN PASSING THROUGH FIRE RATED CONSTRUCTION.
- VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. VERIFY AND PROVIDE DUCT AND PIPE TRANSITIONS TO FURNISHED EQUIPMENT. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION.
- UNIT & DUCT ACCESS PANELS & DOORS SHALL BE PROVIDED TO CLEAN COILS AND SERVICE DAMPERS, HEATERS, VALVES, AND ALL CONCEALED MECHANICAL EQUIPMENT.
- SUPPORT ALL EQUIPMENT, PIPING AND DUCTWORK FROM BUILDING STRUCTURE TO PROVIDE A VIBRATION FREE INSTALLATION.
- THE CONTRACTOR SHALL INSPECT ALL EXISTING DUCTWORK AND REPAIR/REPLACE ALL DAMAGED DUCTWORK, AND RECONNECT DUCTWORK NOT PROPERLY CONNECTED.
- IN GENERAL, FLEXIBLE DUCTS SHALL BE THE SAME SIZE AS THE DIFFUSER NECK INDICATED ON THE TAGS.
- IN THE ABSENCE OF OTHER SPECIFIC INSTRUCTIONS, ALL WORK AND MATERIALS SUPPLIED SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF THEIR ACCEPTANCE BY THE OWNER.
- INSTALLATION OF WORK SHALL PROVIDE REASONABLE ACCESSIBILITY FOR OPERATION, INSPECTION AND MAINTENANCE OF EQUIPMENT AND ACCESSORIES.
- CUTTING AND PATCHING SHALL BE PROVIDED AS REQUIRED AND WHERE NECESSARY TO ACCOMMODATE NEW WORK AND THE REPAIR OF EXISTING WORK.
- EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM DUST, DIRT AND DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE ALL DUCT AND EQUIPMENT OPENINGS DURING CONSTRUCTION WITH SUITABLE PROTECTIVE COVERING FOR EQUIPMENT AND MATERIALS BEFORE, DURING AND FOLLOWING INSTALLATION.
- UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CLEAN AND ADJUST ALL DUCTWORK, PIPING, AND EQUIPMENT AND TEST ALL SYSTEMS TO SATISFACTION OF OWNER/ENGINEER. TEST CASINGS & DUCTWORK FOR LEAKS.

MECHANICAL SYMBOLS	
12x10	NEW DUCTWORK (SIZE INDICATES INTERNAL FREE AREA)
	CONNECT TO EXISTING VERIFY EXACT LOCATION IN FIELD
MFG	MANUFACTURER
AFF	ABOVE FINISHED FLOOR
UNO	UNLESS NOTED OTHERWISE
V-PH-HZ	VOLTAGE-PHASE-HERTZ
S.P.	STATIC PRESSURE
GPM	GALLONS PER MINUTE
ENT	ENTERING
C	CONDENSATE
CA	COMPRESSED AIR
LVG	LEAVING
G	GAS
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
	THERMOMETER
	NEW CEILING DIFFUSER (AIR DEVICE NO. SUPPLY AIR DEVICE CD-3/100 AIR DEVICE TYPE) (CFM)
	NEW RETURN GRILL (REFER TO AIR DEVICE SCHEDULE)
	DIRECTION OF FLOW
	REDUCTION IN DIRECTION OF FLOW
	CAP
	FLEXIBLE CONNECTOR
(E)	EXISTING TO REMAIN
S.R	SUPPLY REGISTER
R.R	RETURN REGISTER
EHC	ELECTRIC HEAT COIL
MOD	MOD
(RB)	REBALANCE EXISTING TO CFM'S INDICATED
VD	VOLUME DAMPER
FD	FIRE DAMPER WITH ACCESS PANEL
NO.	NUMBER
FPM	FEET PER MINUTE
#	NUMBER
W	WITH
@	AT
VFD	VARIABLE FREQUENCY DRIVE
FLR	FLOOR
MOD	MODULATING MOTORIZED DAMPER
TYP	TYPICAL
WP	WEATHERPROOF
VIF	VERIFY IN FIELD
(RE)	RELOCATE EXISTING
B.D.D.	BACK DRAFT DAMPER
HD FT	DYNAMIC HEAD IN FEET OF WATER
PD FT	PRESSURE DROP IN FEET OF WATER
EWT	ENTERING WATER TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
P/T	PRESSURE/TEMPERATURE TEST PLUG
F.C.	FLEXIBLE CONNECTION
A.P.	ACCESS PANEL
CLG	CEILING
T.A.	TRANSFER AIR SLEEVE WITH FIRE DAMPER
	THERMOSTAT 48" ABOVE FINISHED FLOOR WITH LOCKABLE COVER (FINAL LOCATION TO BE APPROVED BY OWNER PRIOR TO INSTALLATION)
	FLEXIBLE DUCT
DN	DOWN
CFM	CUBIC FEET PER MINUTE
	HVAC SMOKE DETECTOR
	FIRE DAMPER

DUCT/EQUIPMENT SYMBOLS		
SINGLE LINE SYMBOLS	DOUBLE LINE SYMBOLS	DESCRIPTION
		NEW DUCTWORK
		EXISTING DUCTWORK/EQUIPMENT TO REMAIN
		EXISTING DUCTWORK/EQUIPMENT TO BE REMOVED
		NEW THERMOSTAT WIRE
		DROP IN DUCT ELEVATION
		RISE IN DUCT ELEVATION
		MANUAL VOLUME DAMPER
		ACCESS DOOR/ACCESS PANEL
		VANED ELBOW
		90-DEG ELBOW WITH RADIUS/DIAMETER RATIO EQUAL TO OR GREATER THAN 1.5. INSTALL MITERED ELBOW WITH VANES ONLY IF RADIUS ELBOW DOES NOT FIT
		SIDEWALL SUPPLY REGISTER
		RETURN REGISTER/GRILLE
		FLEXIBLE CONNECTION (FC)
		BRANCH DUCT TAKE-OFF
		90 DEG SPLIT (TEE, WITH VANES)
		ROUND DUCT TURNING UP
		ROUND DUCT TURNING DOWN
		RECTANGULAR DUCT TURNING UP
		RECTANGULAR DUCT TURNING DOWN
		FLEXIBLE DUCTWORK
		TRANSITION
		HUMIDIFIER
		TERMINAL UNIT WITH REHEAT
		TERMINAL UNIT
		EXHAUST FAN (IN-LINE TYPE)
		FIRE DAMPER
		COMBINATION FIRE/SMOKE DAMPER
		MOTOR-OPERATED DAMPER
		MOTOR-OPERATED SMOKE DAMPER
		CLEAN AGENT DAMPER
		TRANSFER DUCT
		ELECTRIC DUCT HEATER
		HUMIDITY SENSOR, DUCT MOUNTED
		TEMPERATURE SENSOR, DUCT OR PIPE MOUNTED
		PRESSURE SENSOR PIPE MOUNTED
		STATIC PRESSURE SENSOR, DUCT MOUNTED
		SMOKE DETECTOR, DUCT MOUNTED
		THERMOSTAT/TEMP SENSOR, WALL MOUNTED
		HUMIDISTAT, WALL MOUNTED
		FIRESTAT
		DIFFUSER/GRILLE/REGISTER DESIGNATION

DESIGNATIONS	
	POINT OF CONNECTION BETWEEN NEW WORK AND EXISTING WORK.
	POINT BETWEEN EXISTG WORK TO REMAIN AND EXISTG WORK TO BE REMOVED.
	EQUIPMENT DESIGNATION EQUIPMENT DESIGNATION EQUIPMENT NUMBER
	SECTION DESIGNATION SECTION LETTER/NUMBER DRAWING SECTION SHOWN
	DETAIL DESIGNATION DETAIL LETTER/NUMBER DRAWING NUMBER CONTAINING DETAIL

FAN SYSTEM	DUCT MATERIAL	PRESSURE CLASS	INTERNAL LINER		EXTERNAL INSULATION		REMARKS
			TYPE	THICKNESS	TYPE	THICKNESS	
EXHAUST DUCTWORK	GALVANIZED STEEL	2"	INTERNAL LINER	-	-	-	
RETURN DUCTWORK	GALVANIZED STEEL	2"	INTERNAL LINER	1"	-	-	
TRANSFER DUCTWORK	GALVANIZED STEEL	12"	INTERNAL LINER	1/2"	-	-	
MEDIUM PRESSURE SUPPLY CONCEALED	GALVANIZED STEEL	3"	INTERNAL LINER	1"	FLEXIBLE FIBERGLASS	1-1/2"	
MEDIUM PRESSURE SUPPLY EXPOSED	GALVANIZED STEEL	3"	INTERNAL LINER	1"	RIGID	2"	WITH EXTERNAL RIGID COVER
LOW PRESSURE SUPPLY CONCEALED	GALVANIZED STEEL	1"	INTERNAL LINER	1/2"	FLEXIBLE FIBERGLASS	1-1/2"	
LOW PRESSURE SUPPLY EXPOSED	GALVANIZED STEEL	1"	-	-	RIGID	2"	WITH EXTERNAL RIGID COVER

- NOTES: 1. PROVIDE INTERNALLY LINED DUCTWORK WHERE SHOWN.
 2. DUCTWORK DOWNSTREAM OF EXHAUST FAN TO BE LINED FOR THE FIRST 5'-0", THEN EXTERNALLY INSULATED.
 3. ALL DUCTWORK SHALL BE SEAL CLASS A EXCEPT FOR RELIEF & TRANSFER DUCTS.
 4. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.

**PLATO
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ARCHITECT, LLC**

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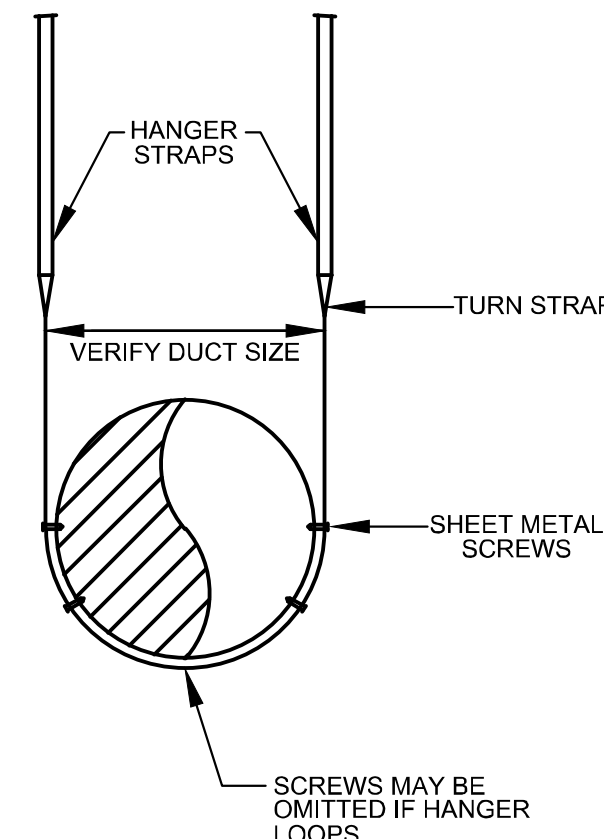
KINDLY RETURN ALL DRAWINGS FOR THE COMPLETE BUILDING, SIGNED AND DATED TO OUR OFFICE LOCATION

**716 EMERSON AVE -
RECTORY**

Project number	N/A
Date	05/01/2021
Drawn by	Author
Checked by	Checker
Scale	1/8" = 1'-0"

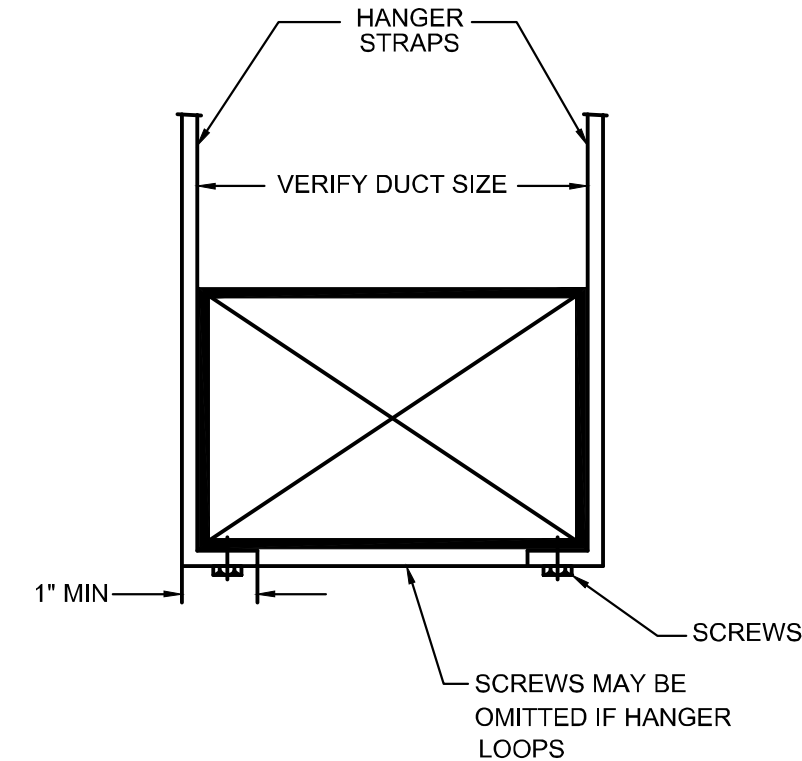
PIPING LEGEND						
SYMBOL	SERVICE	SIZE	MATERIAL	JOINTS	INSULATION	REMARKS
	CONDENSATE	ALL	PVC	GLUED	1" ARMAFLEX	REFER TO SPECIFICATIONS
	DOMESTIC WATER	ALL	COPPER TYPE 'L'	SOLDERED	1" ARMAFLEX	REFER TO SPECIFICATIONS
	REFRIGERANT SUCTION	ALL	ACR COPPER TYPE L	BRAZED	1/2" ARMAFLEX	-
	REFRIGERANT LIQUID	ALL	ACR COPPER TYPE L	BRAZED	NONE	-
	HOT WATER SUPPLY	LESS THAN OR EQUAL 3"	COPPER TYPE 'L' HARD	SOLDERED/SCREWED	2" FIBERGLASS	-
	HOT WATER RETURN	LESS THAN OR EQUAL 3"	COPPER TYPE 'L' HARD	SOLDERED/SCREWED	2" FIBERGLASS	-

DRAFT



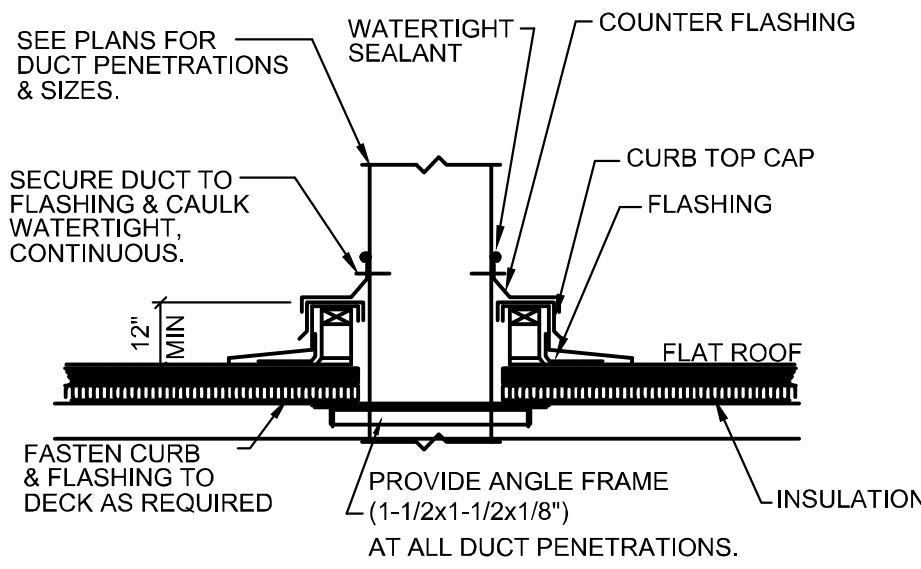
1 ROUND DUCT SUPPORT DETAIL
M300 SCALE: NTS

NOTES: 1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARD



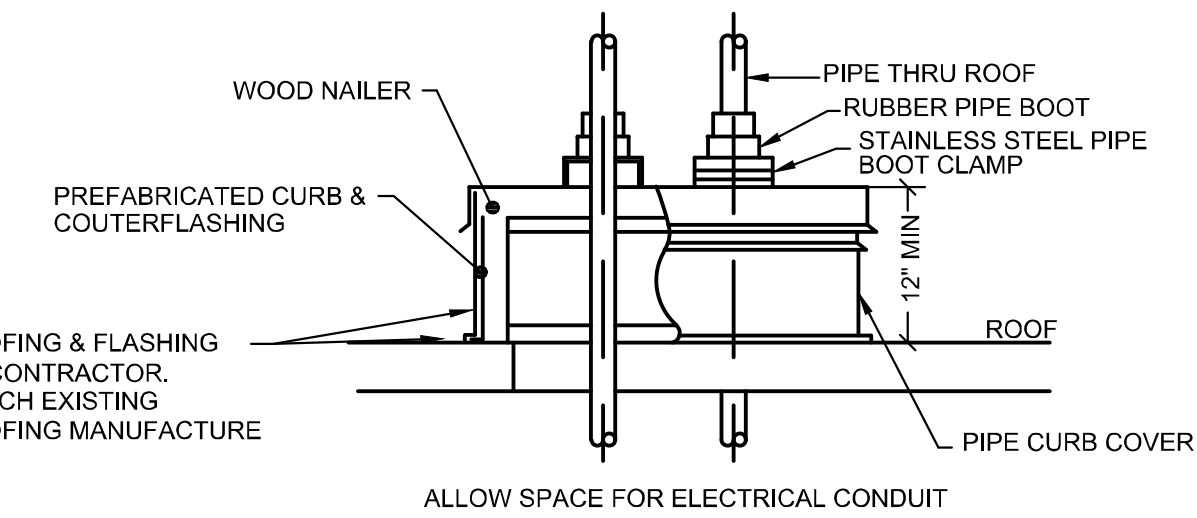
2 DUCT SUPPORT DETAIL
M300 SCALE: NTS

NOTES: 1. REFER TO SMACNA HVAC DUCT CONSTRUCTION STANDARD
TABLE - RECTANGULAR DUCT HANGERS MIN. SIZE SCHEDULE.

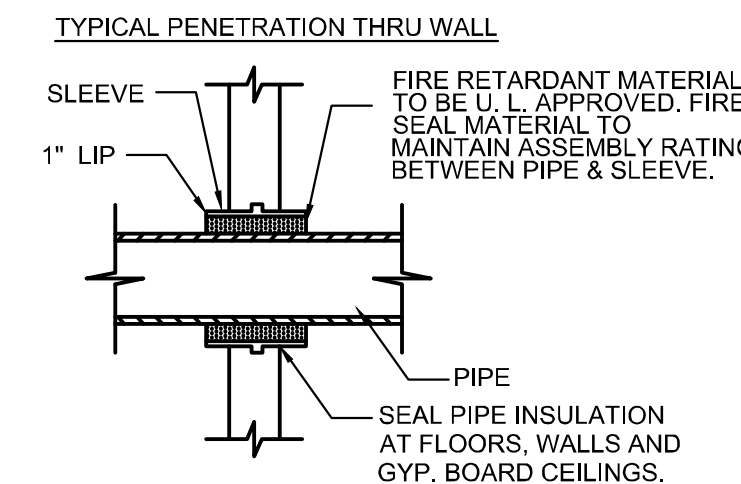
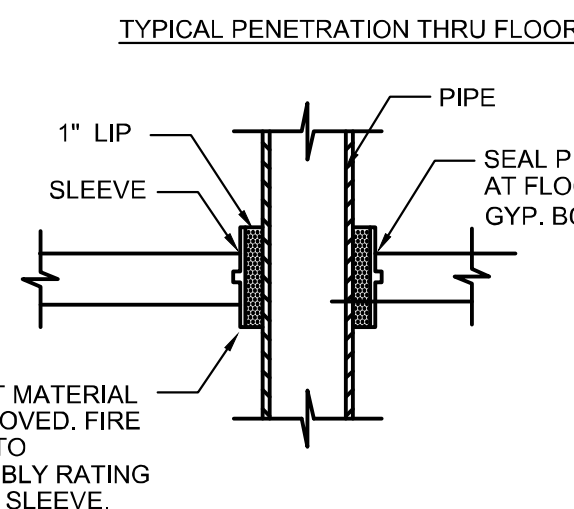


3 TYPICAL DUCT THROUGH ROOF DETAIL
M300 SCALE: NTS

NOTE:
SHIM CURB LEVEL AS NEEDED.



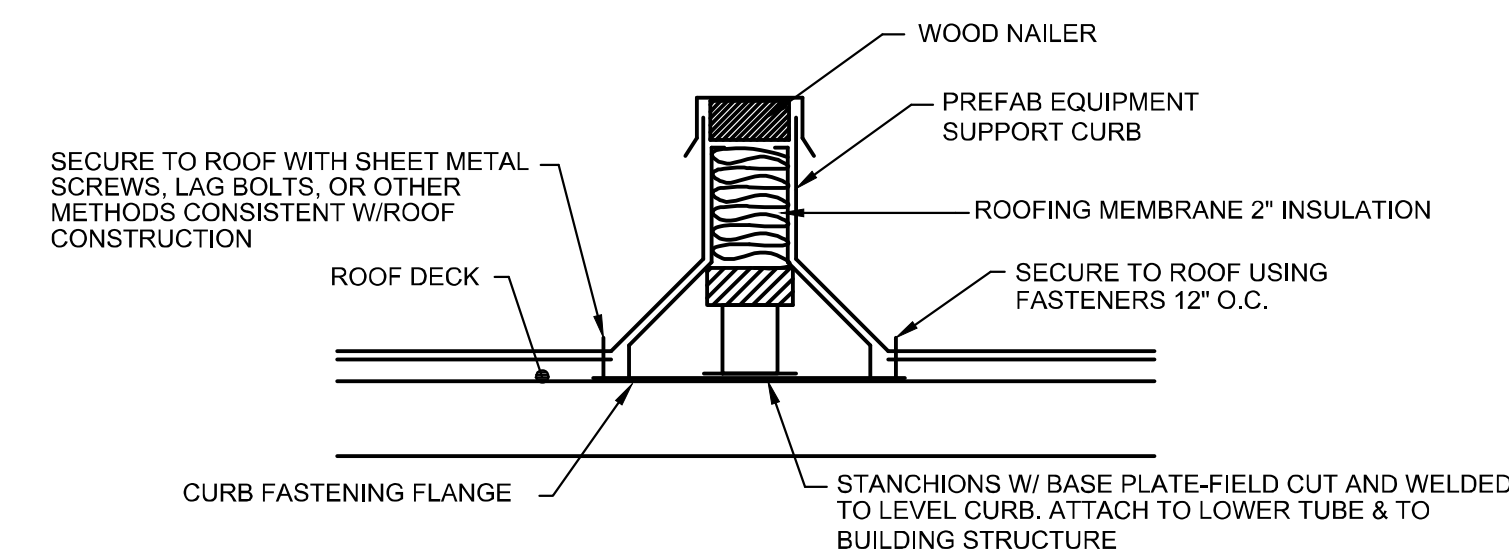
4 PIPE CURB DETAIL
M300 SCALE: NTS



U.L. NUMBER REQ'D			
MATERIAL	GYPSUM WALL	CMU WALL	FLOOR
STEEL PIPE STEEL PIPE	428	594	272
W/INSULATION COPPER	444	444	443
PIPE COPPER PIPE	442	442	429
W/INSULATION	445	335	335

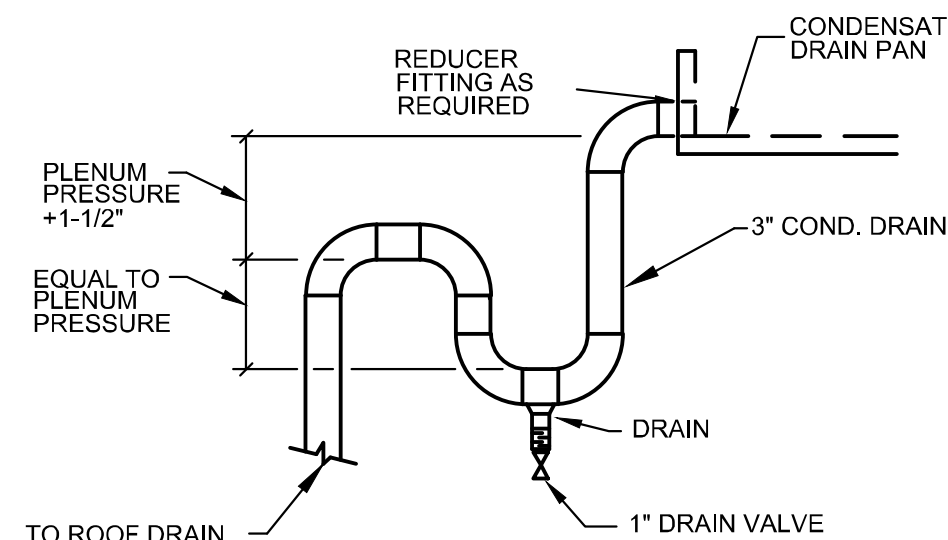
7 PIPE SLEEVE DETAIL
M300 SCALE: NTS

REFER TO ARCHITECTURAL
PLANS FOR
WALL RATINGS.



5 EQUIPMENT/PIPE CURB SUPPORT DETAIL
M300 SCALE: NTS

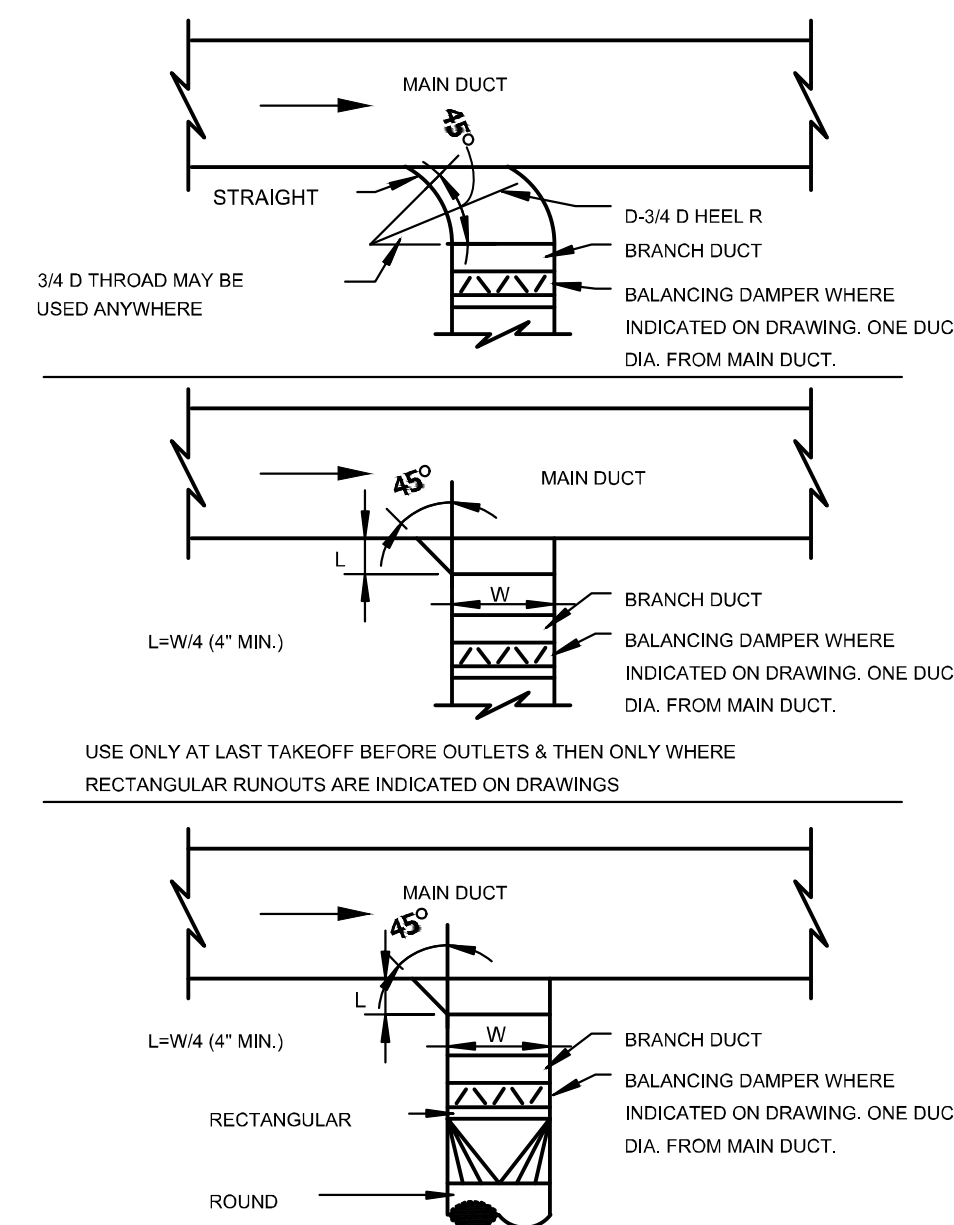
1-CURB MUST HANDLE WIND AND SEISMIC LOADS.
2-REFER TO UNIT MANUFACTURERS ROOF CURB INSTALLATION FOR EXACT EQUIPMENT INSTALLATION.



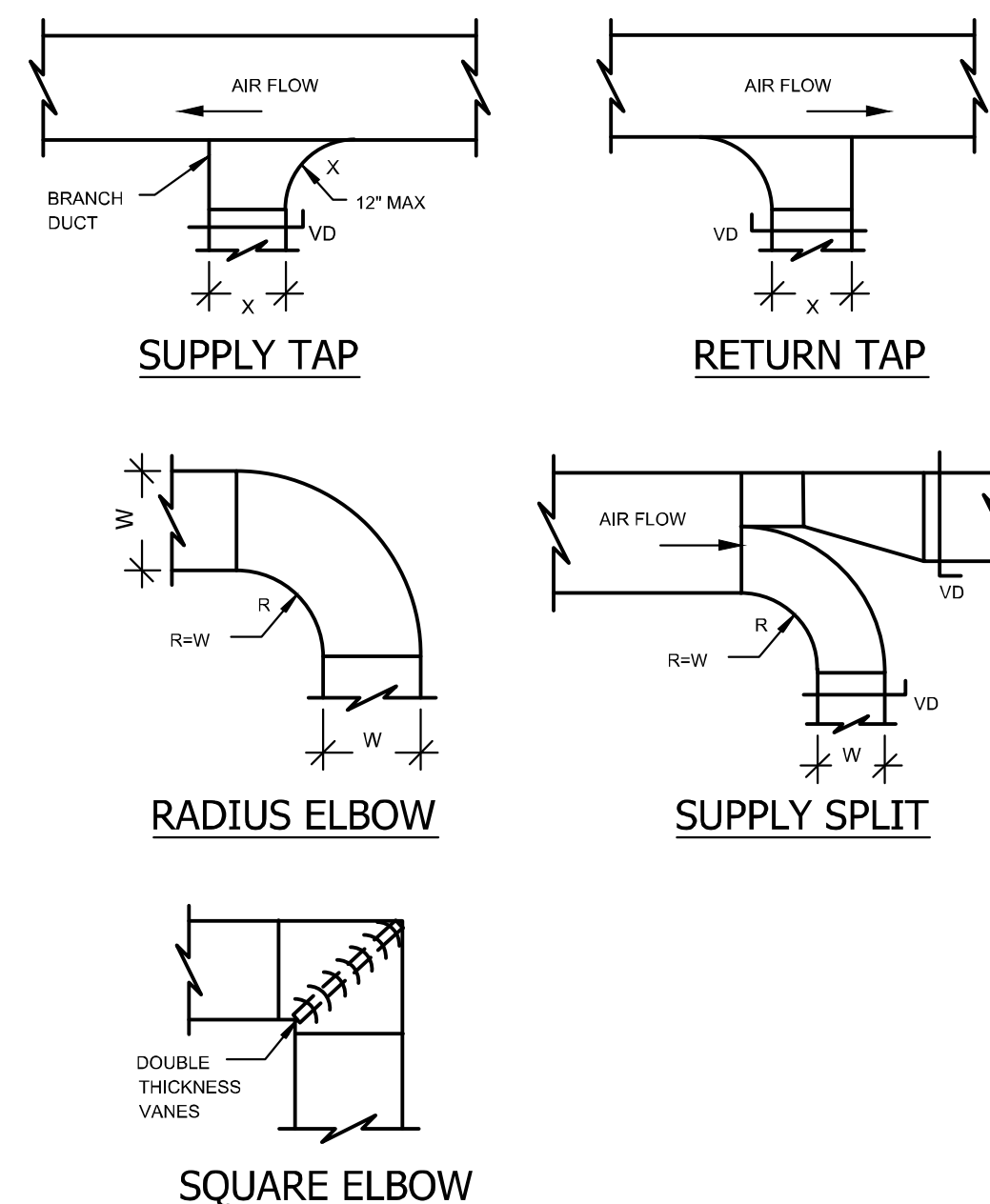
6 CONDENSATE DRAIN PIPING DETAIL
M300 SCALE: NTS

CONDENSATE TRAP SIZE SCHEDULE	
UNIT NOMINAL TONS (MAXIMUM)	MINIMUM TRAP DIAMETER
2	3/4"
5	1"
25	1-1/4"

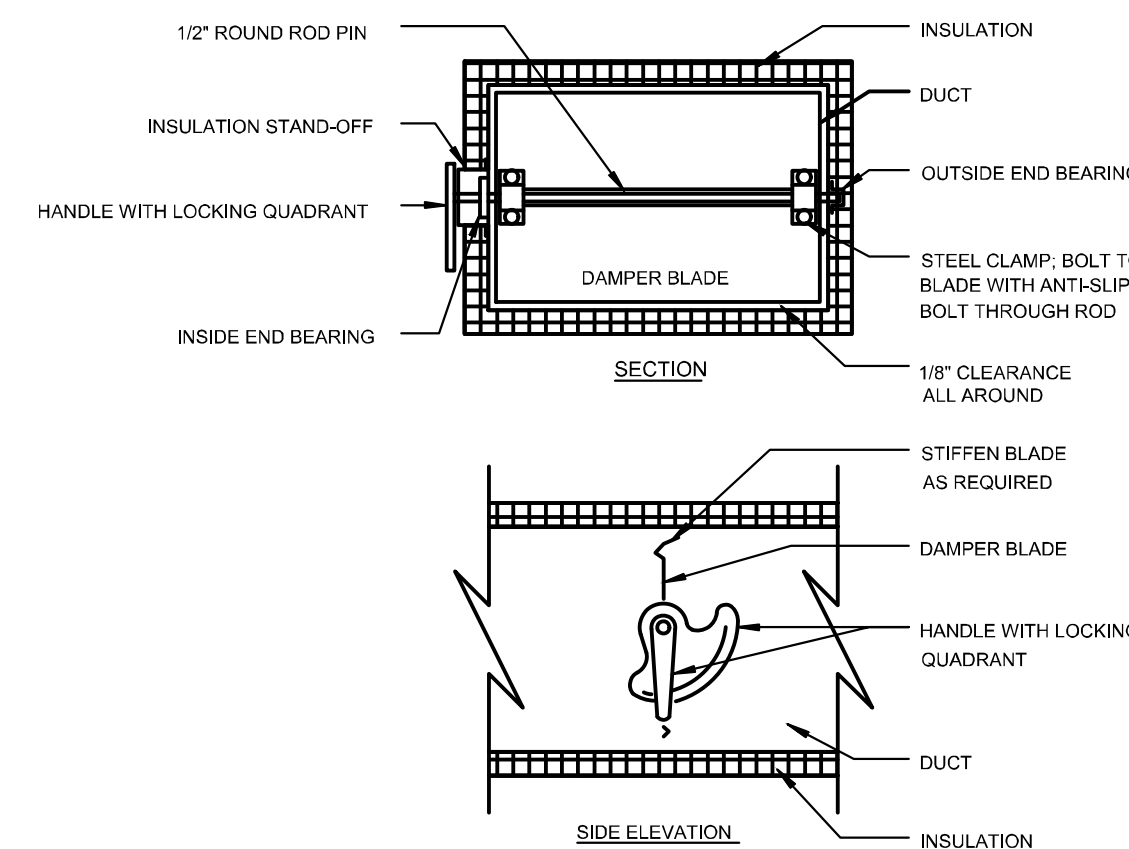
NOTE: SIZES ARE FOR EACH TRAP CONNECTION, EXAMPLE: AHU/2-65 TONS, REQUIRES TWO 2" TRAPS AS NOTED ON DRAWINGS.



8 SUPPLY BRANCH TAKEOFF
M300 SCALE: NTS



9 DUCT CONSTRUCTION
M300 SCALE: NTS



NOTES:
1. DETAIL SHOWS SINGLE BLADE DAMPER, DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS AND ROUND DAMPERS.
2. SINGLE BLADE DAMPER LIMITED TO 12" MAXIMUM DUCT DEPTH.

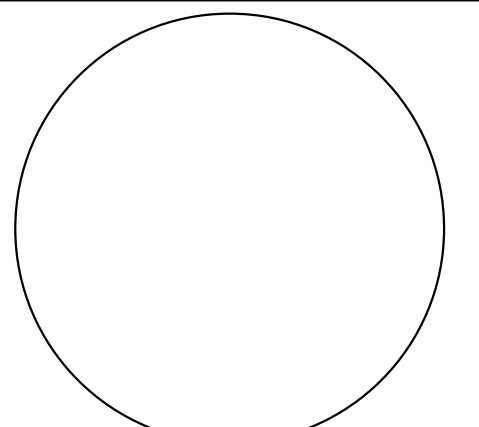
10 MANUAL VOLUME DAMPER
M300 SCALE: NTS

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CLIENT SIGNATURE DATE

NAME (PLEASE PRINT)

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DETAILS

Project number N/A
Date 05/01/2021
Drawn by Author
Checked by Checker

M300

Scale 1/8" = 1'-0"