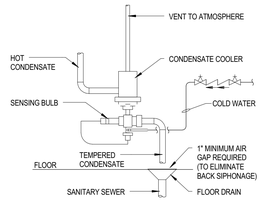


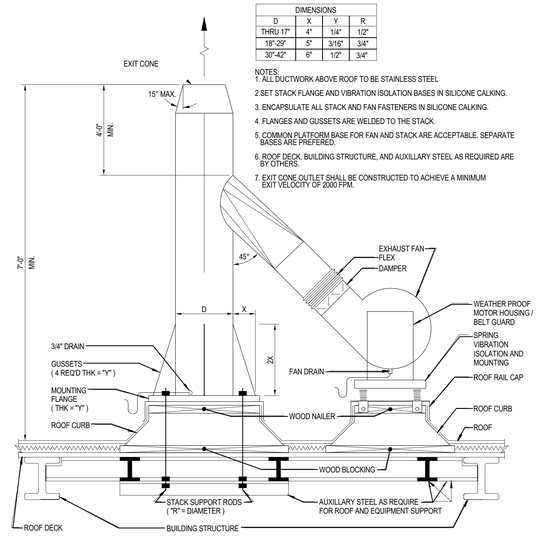
NOTE: CONDENSATE UNDER PRESSURE SHOULD BE FLASHED PRIOR TO ENTERING THE CONDENSATE COOLER

CONDENSATE COOLER

N.T.S.

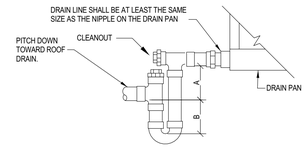
DIMENSIONS			
D	X	Y	R
THRU 17"	4"	1/4"	1/2"
18"-29"	5"	3/16"	3/4"
30"-42"	6"	1/2"	3/4"

NOTES:
1. ALL DUCTWORK ABOVE ROOF TO BE STAINLESS STEEL
2. SET STACK FLANGE AND VIBRATION ISOLATION BASES IN SILICONE CALKING.
3. ENCAPSULATE ALL STACK AND FAN FASTENERS IN SILICONE CALKING.
4. FLANGES AND GUSSETS ARE WELDED TO THE STACK.
5. COMMON PLATFORM BASE FOR FAN AND STACK ARE ACCEPTABLE. SEPARATE BASES ARE PREFERED.
6. ROOF DECK, BUILDING STRUCTURE, AND AUXILLARY STEEL AS REQUIRED ARE BY OTHERS.
7. EXIT CONE OUTLET SHALL BE CONSTRUCTED TO ACHIEVE A MINIMUM EXIT VELOCITY OF 2000 FPM.



EXHAUST STACK AND FAN MOUNTING DETAIL

N.T.S.

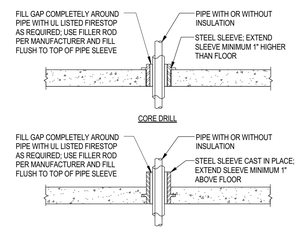


UNIT TYPE	A	B
DRAW THRU	2" [51mm] PLUS X	X
BLOW THRU	1" [25mm] MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

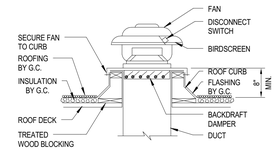
AIR HANDLING UNIT DRAIN TRAP DETAIL

N.T.S.



PIPE PENETRATION THROUGH CONCRETE FLOOR DETAIL

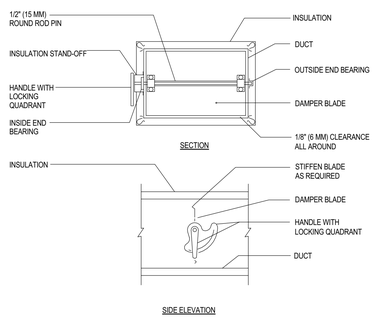
N.T.S.



NOTES:
1. COORDINATE MECHANICAL EQUIPMENT REQUIRING CURBS OR OTHER ROOF WORK WITH G.C.
2. FOR INSTALLATIONS IN EXISTING ROOFING ALL CUTTING, SUPPLEMENTAL FRAMING, AND PATCHING, ETC., IS BY HVAC CONTRACTOR. PERFORM WORK IN SUCH A MANNER AS TO MAINTAIN ROOFING WARRANTY.
3. CURB SHALL BE A MINIMUM OF 8 INCHES ABOVE THE FINISHED ROOF

ROOF MOUNTED EXHAUST FAN

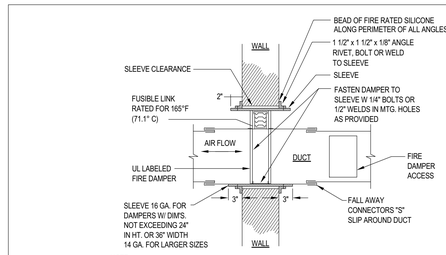
N.T.S.



NOTES:
1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

VOLUME DAMPER DETAIL

N.T.S.



NOTE:
INSTALLATION AND MATERIALS TO CONFORM TO UL AND NFPA REQUIREMENTS. INSTALLATION OF SMOKE DAMPERS ARE SIMILAR.

FIRE DAMPER DETAIL AT WALL

N.T.S.

POINTS LIST

SYSTEM/POINT	DO	DI	AO	AI	COMMENTS
REHEAT VALVE			●		
SUPPLY AIR DAMPER			●		
SPACE TEMPERATURE				●	
SPACE TEMPERATURE SETPOINT				●	
SUPPLY AIR VOLUME				●	
RADIATION VALVE			●		
AIRFLOW PROVING				●	
SUPPLY AIR TEMPERATURE				●	OMIT FOR DEDUCT ALTERNATE

VAV BOX W/ HOT WATER REHEAT
GENERAL ZONE CONTROL
DEDICATED, SINGLE SENSOR ZONES SHALL BE CONTROLLED FROM SENSORS AS SHOWN ON "M" DRAWINGS. THE VARIABLE VOLUME (VAV) TERMINAL UNIT IS CONTROLLED INDEPENDENT OF SYSTEM PRESSURE FLUCTUATIONS BY AN APPLICATION SPECIFIC DDC CONTROLLER USING ELECTRIC ACTUATION. THE SPACE SERVED BY THE VAV TERMINAL UNIT IS CONTROLLED IN OCCUPIED AND UNOCCUPIED MODES AS FOLLOWS:

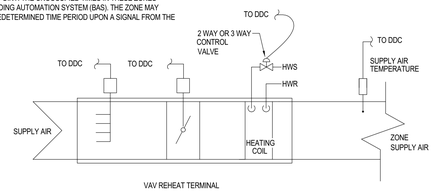
OCCUPIED ZONE CONTROL
THE VAV TERMINAL UNIT IS CONTROLLED BETWEEN MAXIMUM AND MINIMUM SUPPLY AIR VOLUME SETTINGS. THE CONTROLLER MONITORS THE ROOM TEMPERATURE SENSOR AND AIR VELOCITY SENSOR AND MODULATES THE SUPPLY AIR DAMPER IN SEQUENCE WITH THE REHEAT VALVE, AND RADIATION VALVE TO MAINTAIN THE ROOM TEMPERATURE AT SET POINT.

HEATING MODE
THE ZONE HEATING MODE IS DEFINED AS ANY SENSED TEMPERATURE LESS THAN ONE DEGREE BELOW SET POINT. IN HEATING MODE, THE HOT WATER REHEAT COIL WILL MODULATE TO MAINTAIN SPACE SETPOINT.

COOLING MODE
THE ZONE COOLING MODE IS DEFINED AS ANY SENSED TEMPERATURE GREATER THAN ONE DEGREE ABOVE SETPOINT. IN COOLING MODE, THE VAV TERMINAL AND REHEAT VALVE SHALL MODULATE TO MAINTAIN SPACE SETPOINT.

CONSTANT VOLUME - THE VAV BOX DAMPER WILL MODULATE TO MAINTAIN A CONSTANT AIR VOLUME AS INDICATED ON THE SCHEDULE. THE REHEAT COIL CONTROL VALVE SHALL MODULATE TO MAINTAIN THE SUPLY AIR TEMPERATURE SETPOINT.

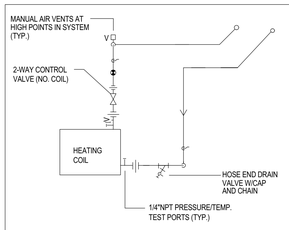
UNOCCUPIED ZONE CONTROL
THE TERMINAL UNITS SHALL BE CONTROLLED SAME AS OCCUPIED MODE IN EITHER THE HEATING OR COOLING MODE USING THE NIGHT SET POINT. THE UNOCCUPIED TIMES IN THESE ZONES SHALL BE SCHEDULED THROUGH THE BUILDING AUTOMATION SYSTEM (BAS). THE ZONE MAY RESET TO THE OCCUPIED MODE FOR A PREDETERMINED TIME PERIOD UPON A SIGNAL FROM THE CONTROL SYSTEM.



VAV REHEAT TERMINAL

VAV/HOT WATER REHEAT (NEW VVR BOXES)

NO SCALE | CS-05



VAV BOX HEATING COIL PIPING DETAIL

N.T.S.

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 05/03/16

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PORTLAND GASTROENTEROLOGY CENTER

161 Marginal Way - Portland, Maine 04101

No.	Date	Description
Revision Schedule		

STATE OF MAINE
CHRISTOPHER M. PIIK
No. 11095
3-18-2016
LICENSED
PROFESSIONAL ENGINEER

JOB NO.
195210852

DRWN. CHK
ERD CMP

SCALE:

ISSUE
PERMIT SET
3/18/2016

TITLE
HVAC DETAILS

SHEET
M502

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