

DUCTLESS SPLIT SYSTEM SCHEDULE																
INDOOR SECTION TAG	OUTDOOR SECTION TAG	TYPE	INDOOR UNIT LOCATION	REFRIGERANT PIPING (LIQUID / GAS)	TOTAL CAPACITY BTU/H	SEER	INDOOR SECTION				OUTDOOR SECTION			OUTDOOR SECTION MODEL NO.	INDOOR SECTION MODEL NO.	NOTES
							CFM (DRY) HI-SPEED	MCA	FLA	V/PHHZ	LOCATION	MCA	V/PHHZ			
ACU-1	ACCU-1	WALL	DATA CLOSET 104	1/4" / 1/2"	12.0	15.2	425	0.33	0.35	208/1 / 60	GARAGE	13	208/1 / 60	mitsubishi PUY-A12NH46	mitsubishi PKA-A12HA6	1-5
ACU-2	ACCU-2	WALL	DATA CLOSET 104	1/4" / 1/2"	12.0	15.2	425	0.33	0.35	208/1 / 60	GARAGE	13	208/1 / 60	mitsubishi PUY-A12NH46	mitsubishi PKA-A12HA6	1-5

NOTES:

- PROVIDE OUTDOOR UNITS WITH ADVANCED WIND BAFFLES FOR LOW AMBIENT COOLING DOWN TO -20°F, DISCONNECT SWITCH AND MOUNTING BASE.
- PROVIDE INDOOR UNITS WITH WIRED THERMOSTAT/CONTROLLER - NO WIRELESS THERMOSTATS PERMITTED.
- PROVIDE UNITS WITH INTERNAL CONDENSATE LIFT MECHANISMS (SAUERMAN B30 OR EQUAL - REQUIRES SEPARATE 115V CONNECTION).
- PROVIDE ALL EXTERIOR INSULATION (BOTH LINES) WITH UV RESISTANT JACKETING.
- INSTALL OUTDOOR UNIT WITH QUICK SLING WALL MOUNTED BRACKET SYSTEM.

VARIABLE AIR VOLUME (VAV) TERMINAL SCHEDULE																		
TAG	INLET SIZE (IN)	OUTLET SIZE WxH (IN)	CFM MAX.	CFM MIN.	INLET STATIC PRESSURE-MAX.	APO MAX.	HOT WATER HEATING COIL										TYPICAL UNIT MFG & MODEL NO.	NOTES
							MBH	MAX CFM	EAT °F	LAT °F	EWTF °F	LWTF °F	GPM	ROWS	WPD FT. HD			
VAV-1	14.0	18x20	1,970	600	0.75	0.17	16.2	600	55	80.0	180	160	2.80	1	2.80	TRANE VCVWF	1-3	
VAV-2	14.0	18x20	1,700	510	0.75	0.12	14.0	510	55	80.0	180	160	3.00	1	0.62	TRANE VCVWF	1-3	
VAV-3	12.0	14x17	1,200	400	0.75	0.18	10.1	400	55	80.0	180	160	2.25	1	2.67	TRANE VCVWF	1-3	
VAV-4	8.0	8x10	365	110	0.75	0.13	5.0	110	55	95.0	180	160	0.65	1	0.76	TRANE VCVWF	1-3	
VAV-5	8.0	8x10	410	125	0.75	0.16	3.4	125	55	80.0	180	160	0.70	1	0.86	TRANE VCVWF	1-3	
VAV-6	8.0	10x11	445	135	0.75	0.18	20.0	445	55	95.0	180	160	2.65	2	0.52	TRANE VCVWF	1-3	
VAV-7	8.0	10x11	445	135	0.75	0.18	20.0	445	55	95.0	180	160	2.65	2	0.52	TRANE VCVWF	1-3	
VAV-8	8.0	10x11	470	145	0.75	0.20	15.0	300	55	95.0	180	160	2.10	2	0.33	TRANE VCVWF	1-3	

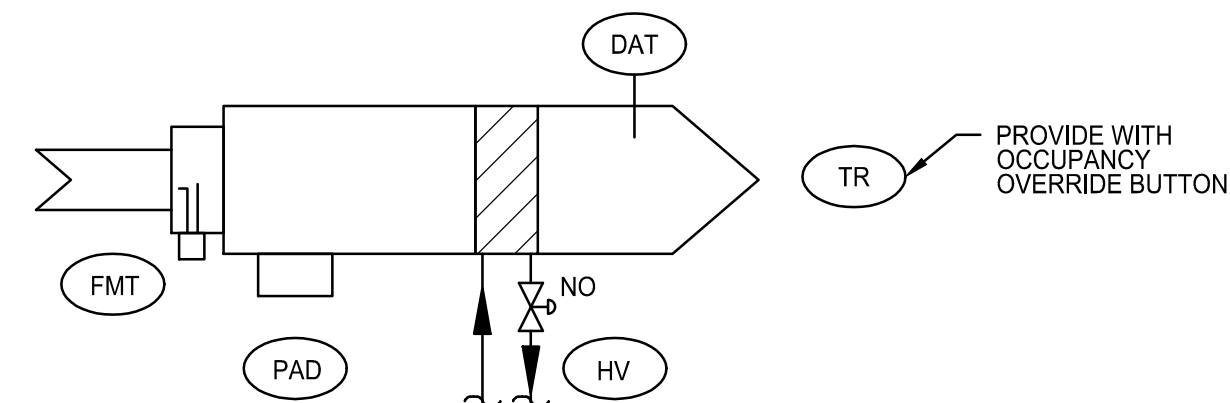
NOTES:

- RUNOUTS TO VAV BOXES SHALL BE THE SAME SIZE AS THE INLET UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL DUCTWORK DOWNSTREAM OF VAV UNITS SHALL BE LINED (MINIMUM 10'-0").
- CONTRACTOR SHALL VERIFY VAV UNIT CONFIGURATIONS WITH FLOOR PLANS AND PRIOR TO ORDERING UNITS.

REGISTER, DIFFUSER & GRILLE SCHEDULE							
TAG	CFM	NECK SIZE (IN)	DIFFUSER SIZE (IN)	TYPE	MAX NC	TYPICAL UNIT MFG & MODEL NO.	NOTES
S-1	130-200	8" ø	24x24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3
S-2	205-325	10" ø	24x24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3
S-3	330-450	12" ø	24x24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3
R-1 / TG-1	305-425	12" ø	24 x 24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3
R-2	425-700	14" ø	24 x 24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3
R-3	700-900	15" ø	24 x 24	LAY-IN SURFACE MOUNT	25	PRICE SPD	1-3

NOTES:

- RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE INLET.
- CONFIRM DETERMINE BORDER TYPE (LAY-IN, SURFACE MOUNT) WITH ARCHITECTURAL CEILING PLANS.
- COORDINATE BLOW PATTERNS WITH FLOOR PLANS.



VARIABLE AIR VOLUME BOX AND HOT WATER COIL CONTROLS:

GENERAL

- VAV BOX AND HOT WATER COIL SHALL BE CONTROLLED BY AN APPLICATION SPECIFIC CONTROLLER (ASC - PROVIDED BY THE ATC CONTRACTOR). VAV MANUFACTURER SHALL PROVIDE AIRFLOW MEASURING STATION AND PRIMARY AIR DAMPER/ ACTUATOR. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
- ALL TEMPERATURES LISTED ARE FAHRENHEIT AND SHALL BE ADJUSTABLE.
- AIRFLOW SHALL BE MEASURED BY THE FLOW MEASURING TRANSMITTER (FMT) AND DISPLAYED ON THE GRAPHICS AT THE EXISTING FRONT END WORKSTATION.
- DURING THE SCHEDULED OCCUPIED HOURS, THE HEATING SETPOINT SHALL BE 70°F AND THE COOLING SETPOINT SHALL BE 5°F WARMER THAN HEATING SETPOINT. COORDINATE SCHEDULES WITH STAFF.
- COORDINATE WITH FACILITIES WHERE ROOM SETPOINTS SHALL BE ADJUSTABLE IN THE LOCATIONS IN WHICH THEY SERVE AND WHERE MANUAL ADJUSTMENT SHALL BE DISABLED. ALL TEMPERATURE SHALL BE CAPABLE OF BEING OVERRIDDEN AT THE FRONT END WORKSTATION.
- MINIMUM, MAXIMUM AND HEATING PRIMARY AIR FLOWS ARE SHOWN ON SCHEDULES.
- PROVIDE TWO-WAY MODULATING TYPE CONTROL VALVE FOR HEATING COIL.

OCCUPIED COOLING CONTROL

- UPON A CALL FOR COOLING FROM THE ROOM TEMPERATURE SENSOR (TR), THE PAD SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM POSITIONS TO MAINTAIN THE OCCUPIED COOLING SETPOINT. THE HEATING CONTROL VALVE (HV) SHALL BE CLOSED.

OCCUPIED HEATING CONTROL

- UPON A CALL FOR HEATING FROM THE ROOM TEMPERATURE SENSOR (TR), THE PRIMARY AIR DAMPER (PAD) SHALL MODULATE TO ITS MINIMUM COOLING POSITION THE HEATING CONTROL VALVE SHALL MODULATE AS REQUIRED TO MAINTAIN SETPOINT. UPON A FURTHER DROP IN TEMPERATURE, THE PAD SHALL MODULATE UP TO THE SCHEDULED HEATING AIRFLOW AND THE HOT WATER CONTROL VALVE (HV) SHALL MODULATE AS REQUIRED. THE DAT SHALL LIMIT THE BOX TO 95°F (ADJ.). THE REVERSE SHALL OCCUR ON A RISE IN SPACE TEMPERATURE.

UNOCCUPIED CONTROL

- IF THE ROOM TEMPERATURE FALLS BELOW 55°F FOR 10 MINUTES OR LONGER, THE AHU-1 SHALL START IN UNOCCUPIED MODE. ALL VAV BOXES SHALL OPEN TO THE SCHEDULED HEATING AIRFLOW AND ALL HW VALVES (HV) SHALL MODULATE TO MAINTAIN A DISCHARGE AIR TEMPERATURE (DAT) OF 95°F. WHEN EACH ROOM TEMPERATURE RISES ABOVE 60°F, THE ASSOCIATED BOX HV SHALL MODULATE TO MAINTAIN 60°F UNTIL ALL ROOMS REACH 60°F. THEN THE BOXES AND ASSOCIATED AIR HANDLER SHALL SHUT DOWN.
- THERE SHALL BE NO UNOCCUPIED COOLING.

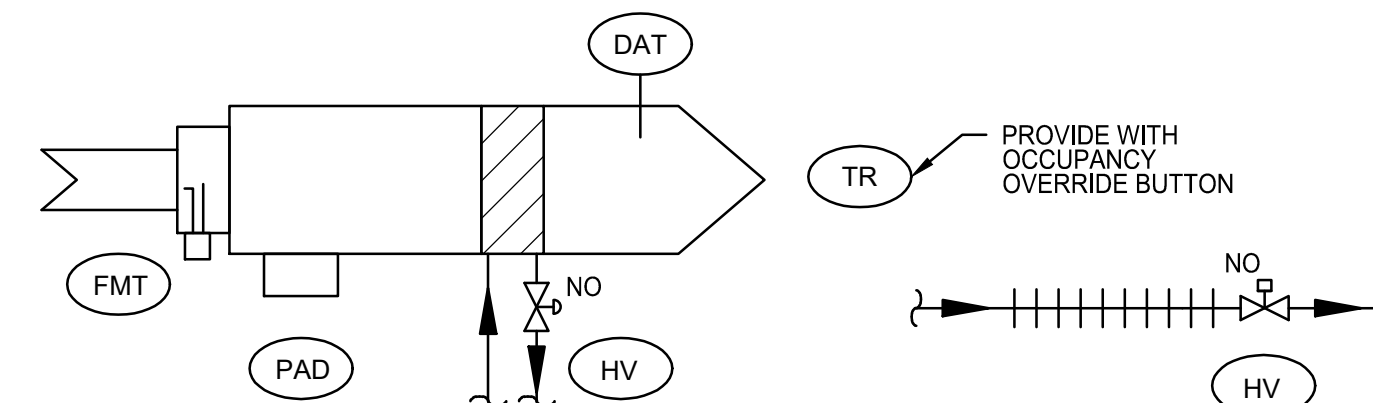
WARM-UP CONTROL

- PROVIDE OPTIMUM START CAPABILITY. IF ROOM TEMPERATURE IS BELOW 63°F, WARM UP SHALL BE DONE WITH HW VALVE (HV) MODULATING TO MAINTAIN A DISCHARGE AIR TEMPERATURE (DAT) OF 100°F. PAD SHALL BE AT ITS MINIMUM HEATING POSITION. WHEN ROOM TEMPERATURE RISES ABOVE 69°F, OCCUPIED MODE SHALL START.

ALARMS

- IF THE ROOM TEMPERATURE SENSOR (TR) SENSES A TEMPERATURE MORE THAN 5°F ABOVE OR BELOW THE SETPOINT FOR 5 MINUTES, THE DDC SYSTEM SHALL GIVE A DETAILED ROOM "HIGH" OR "LOW" TEMPERATURE ALARM SIGNAL TO THE BAS.

A1 VAV W/ REHEAT AND BASEBOARD RADIATION CONTROL SEQUENCE
NOT TO SCALE



VARIABLE AIR VOLUME BOX HOT WATER COIL AND BASEBOARD RADIATION CONTROLS:

GENERAL

- VAV BOX AND HOT WATER COIL SHALL BE CONTROLLED BY AN APPLICATION SPECIFIC CONTROLLER (ASC - PROVIDED BY THE ATC CONTRACTOR). VAV MANUFACTURER SHALL PROVIDE AIRFLOW MEASURING STATION AND PRIMARY AIR DAMPER/ ACTUATOR. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
- ALL TEMPERATURES LISTED ARE FAHRENHEIT AND SHALL BE ADJUSTABLE.
- AIRFLOW SHALL BE MEASURED BY THE FLOW MEASURING TRANSMITTER (FMT) AND DISPLAYED ON THE GRAPHICS AT THE FRONT END WORKSTATION.
- THE HEATING SETPOINT SHALL BE 70°F AND THE COOLING SETPOINT SHALL BE 5°F WARMER THAN HEATING SETPOINT. COORDINATE SCHEDULES WITH OWNER.
- COORDINATE WITH FACILITIES WHERE ROOM SETPOINTS SHALL BE ADJUSTABLE IN THE LOCATIONS IN WHICH THEY SERVE AND WHERE MANUAL ADJUSTMENT SHALL BE DISABLED. ALL TEMPERATURE SHALL BE CAPABLE OF BEING OVERRIDDEN AT THE FRONT END WORKSTATION.
- MINIMUM, MAXIMUM AND HEATING PRIMARY AIR FLOWS ARE SHOWN ON SCHEDULES.
- PROVIDE TWO-WAY MODULATING TYPE CONTROL VALVE FOR HEATING COIL.

OCCUPIED COOLING CONTROL

- UPON A CALL FOR COOLING FROM THE ROOM TEMPERATURE SENSOR (TR), THE PAD SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM POSITIONS TO MAINTAIN THE OCCUPIED COOLING SETPOINT. THE

HEATING CONTROL VALVE (HV) SHALL BE CLOSED.

OCCUPIED HEATING CONTROL

- UPON A CALL FOR HEATING FROM THE ROOM TEMPERATURE SENSOR (TR), THE PRIMARY AIR DAMPER (PAD) SHALL MODULATE TO ITS MINIMUM COOLING POSITION AND THE BASEBOARD RADIATION CONTROL VALVE SHALL OPEN. UPON A FURTHER DROP IN TEMPERATURE, THE VAV BOX CONTROL VALVE SHALL MODULATE OPEN TO MAINTAIN SETPOINT. UPON A FURTHER DROP TEMPERATURE, THE VAV BOX SHALL MODULATE TO ITS HEATING AIRFLOW AND MODULATE THE CONTROL VALVE AS REQUIRED TO MAINTAIN TEMPERATURE. THE DAT SHALL LIMIT THE BOX TO 90°F (ADJ.). THE OPPOSITE SHALL OCCUR UPON A RISE IN TEMPERATURE.

UNOCCUPIED CONTROL

- IF THE ROOM TEMPERATURE FALLS BELOW 55°F FOR 10 MINUTES OR LONGER, THE BASEBOARD RADIATION CONTROL VALVE SHALL OPEN. WHEN THE TEMPERATURE SENSOR TEMPERATURE RISES ABOVE 60°F, THE HOT WATER VALVE SHALL CLOSE.
- THERE SHALL BE NO UNOCCUPIED COOLING.

WARM-UP CONTROL

- PROVIDE OPTIMUM START CAPABILITY. IF ROOM TEMPERATURE IS BELOW 63°F, WARM UP SHALL BE DONE WITH HW VALVE (HV) MODULATING TO MAINTAIN A DISCHARGE AIR TEMPERATURE (DAT) OF 100°F. PAD SHALL BE AT ITS MINIMUM HEATING POSITION. WHEN ROOM TEMPERATURE RISES ABOVE 69°F, OCCUPIED MODE SHALL START.

ALARMS

- IF THE ROOM TEMPERATURE SENSOR (TR) SENSES A TEMPERATURE MORE THAN 5°F ABOVE OR BELOW THE SETPOINT FOR 5 MINUTES, THE DDC SYSTEM SHALL GIVE A DETAILED ROOM "HIGH" OR "LOW" TEMPERATURE ALARM SIGNAL TO THE BAS.

A8 VAV W/REHEAT CONTROL SEQUENCE
NOT TO SCALE

NOTE:

- SEE SHEET M-001 FOR THE LEGEND AND ABBREVIATIONS.

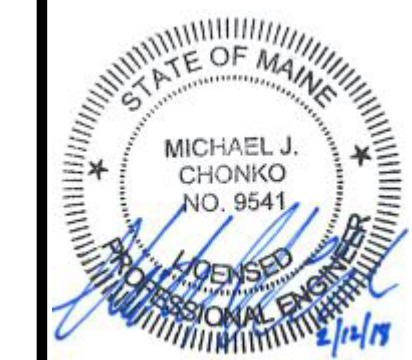
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BANGOR SAVINGS BANK - RENOVATIONS TO 280 FORE STREET PORTLAND, MAINE

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MECHANICAL SCHEDULES AND CONTROLS

M-601