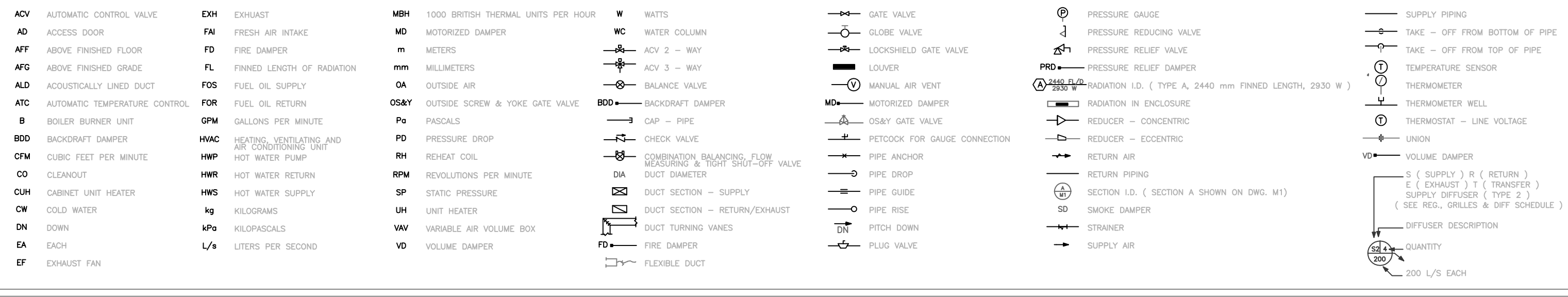


LEGEND



GENERAL NOTES

- MECHANICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TRADES.
- ALL PIPING, DUCTWORK & MECHANICAL EQUIPMENT SHOWN DIAGRAMMATICALLY, DETERMINE EXACT LOCATIONS IN FIELD.
- 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 DRAWINGS.
- ALL EXHAUST AIR PLENUMS SHALL HAVE FLOOR PITCHED TO DRAIN THROUGH LOUVER, LAP FLOOR OVER LOWEST LOUVER BLADE.
- REFER TO REFLECTED CEILING PLAN ON ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF CEILING DIFFUSERS AND REGISTERS.
- ALL PIPING SHOWN IN OUTSIDE WALLS SHALL BE RUN ON WARM SIDE OF BUILDING INSULATION. BUILDING INSULATION SHALL BE CONTINUOUS, WITHOUT JOINTS, BEHIND PIPING.
- ALL PIPING SHALL BE CONCEALED EXCEPT IN MECHANICAL ROOMS AND AS NOTED. WHERE PIPES DROP IN BLOCK WALLS, PROVIDE INSULATION 1/2" THICK MINIMUM.
- PIPING: VENT ALL HIGH POINTS, DRAIN ALL LOW POINTS.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF LOUVERS AND ROOF OPENINGS. COORDINATE ALL DIMENSIONS WITH GENERAL CONTRACTOR.
- BLANK-OFF UNUSED PORTIONS OF ALL LOUVERS WITH METAL-RIGID INSULATION-METAL SANDWICH PANELS, MINIMUM R = 20.
- ALL LOUVER DIMENSIONS SHALL BE CLOSELY COORDINATED WITH THE WORK OF ALL OTHER TRADES INVOLVED.
- ALL DUCTWORK VISIBLE THROUGH CEILING OPENINGS OR DUCT OPENINGS SHALL BE PAINTED FLAT BLACK.
- PROVIDE VOLUME DAMPERS SO THAT EVERY REGISTER, GRILLE AND DIFFUSER (SUPPLY, RETURN & EXHAUST) CAN BE INDIVIDUALLY BALANCED. VOLUME DAMPERS SHALL BE LOCATED AS FAR AWAY FROM REGISTERS, GRILLES & DIFFUSERS AS POSSIBLE TO MINIMIZE NOISE. VOLUME DAMPERS SHALL BE LOCATED ABOVE SUSPENDED CEILING WHEREVER POSSIBLE AND SHALL BE UNOBSTRUCTED AND EASILY ACCESSIBLE FOR THE BALANCING CONTRACTOR. IN LOCATIONS WHERE VOLUME DAMPERS CANNOT BE LOCATED ABOVE SUSPENDED CEILING AND MUST BE LOCATED ABOVE GYPBOARD CEILING, PROVIDE ACCESS DOORS AS SPECIFIED AND NOTIFY THE ARCHITECT VERBALLY AND IN WRITING OF ALL SUCH LOCATIONS. ACCESS DOORS SHALL NOT BE INSTALLED WITHOUT PERMISSION FROM THE ARCHITECT.
- PROVIDE SINGLE THICKNESS, 16 GA., TURNING VANES AT ALL 90 DEGREE ELBOWS IN ALL SUPPLY DUCTWORK.
- FLEXIBLE DUCTWORK IS NOT ALLOWED IN NEGATIVE PRESSURE SYSTEMS. DO NOT USE FLEXIBLE DUCTWORK IN RETURN AND EXHAUST SYSTEMS.
- MOUNT ALL THERMOSTATS AT 48" AFF, LEVEL WITH LIGHT SWITCHES.
- WHERE THERMOSTATS ARE LOCATED NEAR LIGHT SWITCHES, INSTALL THERMOSTATS SO THAT LIGHT SWITCHES ARE CLOSER TO DOOR JAMBS THAN THERMOSTATS. THE INTENT IS TO LOCATE THE THERMOSTATS SO THAT THEY WILL NOT INTERFERE WITH THE ACCESSIBILITY TO LIGHT SWITCHES.

RADIATOR SCHEDULE

TAG	MANUFACTURER	MODEL	LENGTH	HEIGHT [IN]	EWT [°F]	LWT [°F]	AWT [°F]	OUTPUT [BTUH/LF]	GPM	NOTES
R2F-6	QHT RADIATOR	B-20.XX ECO	SEE PLANS	20	160	120	140	1,470	SEE PLANS	INCLUDE TEMPERATURE CONTROL VALVE
R2F-8	QHT RADIATOR	B-24.XX ECO	SEE PLANS	24	160	120	140	1,710	SEE PLANS	INCLUDE TEMPERATURE CONTROL VALVE

UNIT HEATER SCHEDULE

TAG	TYPE	CFM	HP	MBH	GPM	EWT [°F]	ΔT [°F]	VOLT/Ø	MANUFACTURER	MODEL
UH-1	HORIZONTAL	2010	1/8	49	3.7	160	40	115/1	MODINE	HSB/HC-108
UH-2	HORIZONTAL	1340	1/8	35	2.6	160	40	115/1	MODINE	HSB/HC-86
UH-3	HORIZONTAL	730	1/12	18	1.3	160	40	115/1	MODINE	HSB/HC-47
UH-4	HORIZONTAL	630	1/25	13	1.0	160	40	115/1	MODINE	HSB/HC-33

PUMP SCHEDULE

UNIT	LOCATION	SERVING	MANF	MODEL & SIZE	GPM	HEAD [FT]	POWER [W]	ELECTRICAL		NOTES
								MCA	VOLT/Ø	
P-1	BOILER ROOM	AMERICAN ROOTS LOOP	GRUNDFOS	MAGNA3 40-80 F	13.9	22.0	165	2.45	115/1	1,2
P-2	BOILER ROOM	BUNKER LOOP	GRUNDFOS	MAGNA3 40-120 F	24.6	27.0	202	3.88	115/1	1,2
P-3	BOILER ROOM	REDHOOK LOOP	GRUNDFOS	MAGNA3 40-80 F	7.1	13.0	74	2.45	115/1	1,2
P-4	BOILER ROOM	WAREHOUSE LOOP	GRUNDFOS	MAGNA3 40-80 F	13.7	19.0	137	2.45	115/1	1,2

NOTES:
 1. DIFFERENTIAL TEMPERATURE CONTROL
 2. PROVIDE EXTERNAL TEMPERATURE SENSOR IN RETURN PIPE

VARIABLE REFRIGERANT SPLIT SYSTEM EVAPORATOR SCHEDULE

UNIT TYPE	MANF	MODEL	CLG CAP [BTUH]	HTG CAP [BTUH]	CFM (HIGH)	REFRIGERANT	RLA	VOLT/Ø	NOTES
VRF-1	LG HVAC	LMN078HVT	7,000	8,100	198	R410A	0.2	208/1	WALL-MOUNT
VRF-2	LG HVAC	LSN090HSV4	9,000	10,400	247	R410A	0	208/1	WALL-MOUNT
VRF-3	LG HVAC	LSN120HSV4	12,000	13,800	335	R410A	0.2	208/1	WALL-MOUNT
VRF-4	LG HVAC	LSN180HSV4	18,000	20,800	572	R410A	0.3	208/1	WALL-MOUNT

VARIABLE REFRIGERANT SPLIT SYSTEM CONDENSING UNIT SCHEDULE

UNIT TYPE	MANF	MODEL	CLG CAP [BTUH]	HTG CAP [BTUH]	AMBIENT TEMP RANGE [°F]	CONDENSER FAN				COMPRESSOR			MCA	MOP	VOLT/Ø	NOTES
						QTY	TYPE	CFM	AMPS	QTY	TYPE	FLA				
CU-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CU-2	LG HVAC	LMU36CHV	34,000	41,000	118°F CLG / -4°F HTG	1	PROPELLER	2,119	0.73	1	TWIN-ROTARY INVERTER	11.2	17.9	25	208/1	
CU-3	LG HVAC	LMU480HV	48,000	54,000	118°F CLG / -4°F HTG	2	PROPELLER	4,238	1.46	1	TWIN-ROTARY INVERTER	17.5	27.3	40	208/1	
CU-4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

HOT WATER BOILER SCHEDULE

TAG	SERVING	MANF	MODEL & SIZE	GAS REQ				ELEC		DESIGN LWT [°F]	DESIGN ΔT [°F]	OUTDOOR AIR RESET @ 40°F [°F]	NOTES
				GROSS OUTPUT [MBH]	MAX INPUT [MBH]	NET AHRI OUTPUT [MBH]	GAS PRESSURE REQ'D [IN WG]	RLA	VOLT/Ø				
B-1a	HOT WATER HEATING	VISSMANN	VITODENS 200-W 100KW	333	352	286	4	12	120/1	160	40	120	CASCADING 2-BOILER SYSTEM
B-1b	HOT WATER HEATING	VISSMANN	VITODENS 200-W 100KW	333	352	286	4	12	120/1	160	40	120	

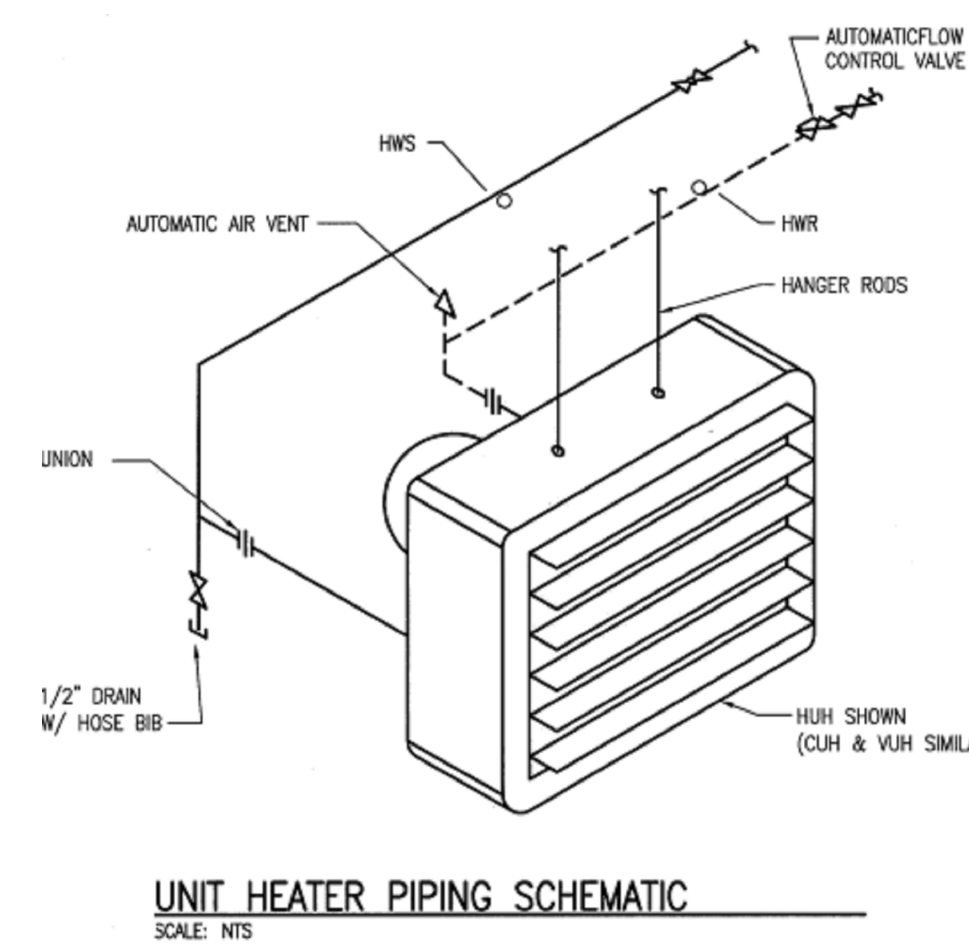
HEAT RECOVERY VENTILATOR SCHEDULE

UNIT TYPE	MANF	MODEL	SERVES	OUTDOOR AIR [CFM]	EXHAUST [CFM]	EXT STATIC PRESSURE [IN. WG]	WEIGHT [LBS]	RLA	VOLT/Ø	NOTES
HRV-1	FANTECH	SHR3205RD	AMERICAN ROOTS OFFICES	110	110	0.75	79.4	2.5	120/1	
HRV-2	FANTECH	SHR3205RD	AMERICAN ROOTS SEWING	150	150	0.5	79.4	2.5	120/1	
HRV-3	FANTECH	SHR3205RD	BUNKER OFFICES	100	100	0.5	79.4	2.5	120/1	
HRV-4	FANTECH	SHR6904	BUNKER HIGH BAY	375	375	1.0	185	5.5	120/1	
HRV-5	FANTECH	SHR3205RD	REDHOOK WOODWORK	130	130	0.60	79.4	2.5	120/1	
HRV-6	-	-	-	-	-	-	-	-	-	-
HRV-7	-	-	-	-	-	-	-	-	-	-

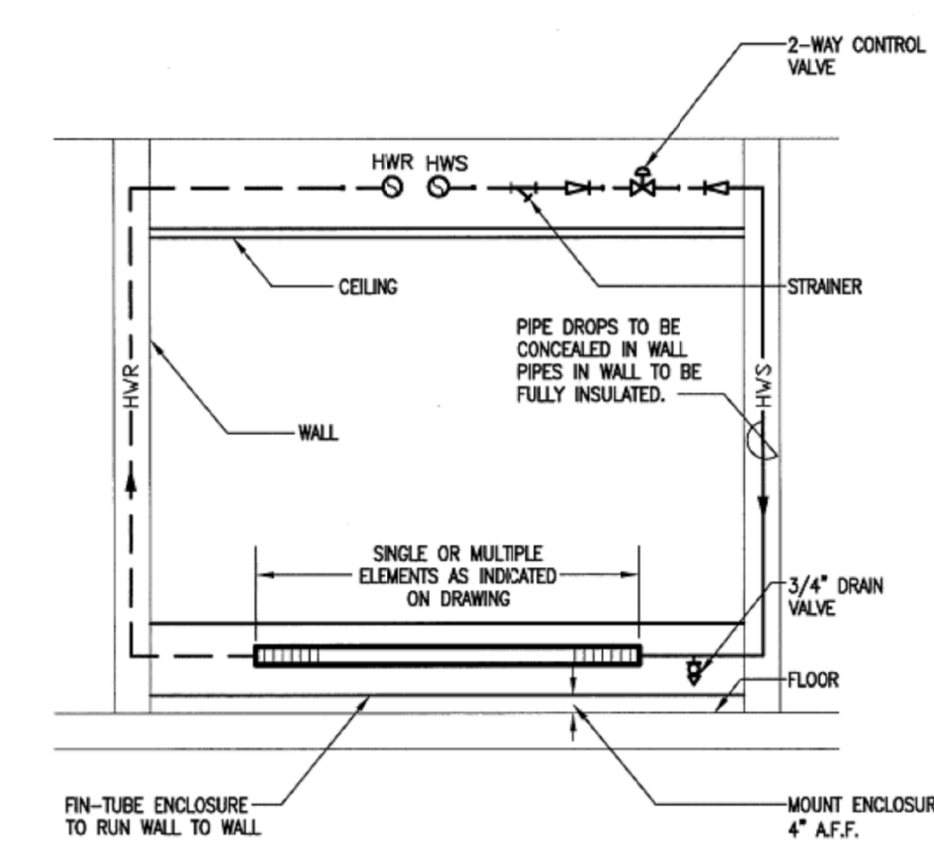
DIFFUSER & GRILL SCHEDULE

TAG	MANF	MODEL	NECK SIZE	MAX FLOW [CFM]
S1	PRICE	SPD	4"	50
S2	PRICE	SPD	6"	100
S3	PRICE	RCD	8"	170
E1	PRICE	PDDR	6"	110
E2	PRICE	RPG	6"	110
E3	PRICE	RPG	8"	185

NOTES:
 1.COORDINATE MOUNTING WITH ARCHITECTURAL CEILING TYPE



UNIT HEATER PIPING SCHEMATIC
SCALE: NTS



RADIATION INSTALLATION DETAIL FED FROM ABOVE
SCALE: NTS

NO.	DATE	BY	CHKD
1	11/11/2011	JMB	JMB
2	11/11/2011	JMB	JMB
3	11/11/2011	JMB	JMB
4	11/11/2011	JMB	JMB
5	11/11/2011	JMB	JMB
6	11/11/2011	JMB	JMB
7	11/11/2011	JMB	JMB
8	11/11/2011	JMB	JMB
9	11/11/2011	JMB	JMB
10	11/11/2011	JMB	JMB

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THIS
WESTFIELD BLDG MECHANICAL NOTES & SCHEDULES