

**AIR HANDLING UNIT SCHEDULE**

GENERAL										FANS										COOLING COIL (NOTE 1)										HEATING COIL (NOTE 2)										REMARKS
DESIG.	LOCATION	SERVICE	TOTAL CFM	MIN	MIN. OA (CFM)	EXT./TOTAL STATIC PRESSURE (IN. W.G.)	(SEE FAN SCHEDULE FOR DUTIES)	TOTAL SENS. CAP. (MBH)	MIN. ROWS/ MAX. FINS PER IN.	DB (°F)	WB (°F)	DB (°F)	WB (°F)	APPROX. SIZE (SQ. FT.)	MAX. FACE VEL. (FPM)	MAX. AIR PD (IN. W.G.)	EWT (°F)	LWT (°F)	GPM PER COIL/ TOTAL	MAX. WPD (FT. W.G.)	CFM	DUTY	SIZE	TOTAL CAP. (MBH)	MIN. ROWS/ MAX. FINS PER IN.	DB (°F)	WB (°F)	DB (°F)	WB (°F)	FACE VEL. (FPM)	MAX. AIR PD (IN. W.G.)	EWT (°F)	LWT (°F)	GPM PER COIL/ TOTAL	MAX. WPD (FT. W.G.)					
AHU-1	PENTHOUSE	FIRST FLOOR	6200	1900	750	1.25 / 3.13	SF-1, RF-1	286 / 194	6 / 12	81	67	51.9	51.2	12.4	500	1.01	45	55	57.2	12.4	6200	PREHEAT	12.4	270.5	1 / 12	48.5	-	87.4	-	500	0.07	180	160	28.4	13.4	YORK - SOLUTION				

- NOTES:
- CHILLED WATER COOLING COIL BANK CONSISTS OF ONE(1) COIL, (51" WIDE x 35" HIGH).
  - HEATING COIL BANK CONSISTS OF ONE (1) COIL, (51" WIDE x 35" HIGH), PROVIDE 30% PROPYLENE GLYCOL HEATING HOT WATER.
  - REFER TO AUTOMATIC TEMPERATURE CONTROL DIAGRAMS FOR ALL ADDITIONAL REQUIREMENTS.
  - PROVIDE MIXING BOX, FILTER SECTION, AIR BLENDER, HEATING HOT WATER PREHEAT COIL, CHILLED WATER COOLING COIL, AND SUPPLY AIR FAN SECTION.

**DEDICATED OUTDOOR AIR UNIT WITH ENERGY RECOVERY SCHEDULE**

DESIG.	DESIGN CONDITIONS	SUPPLY					COOLING AND HEATING COIL					EXHAUST					LOAD TRANSFER BTU/HR	ELECTRICAL V/PH/Hz	MCA	MOCP	MAX UNIT WEIGHT (LBS)	MANUFACTURER				
		CFM	ESP	HP	EAT °F DB	EAT °F WB	LAT °F DB	LAT °F WB	GPM	EWT °F	LWT °F	EAT °F DB	EAT °F WB	LAT °F DB	LAT °F WB	CFM							ESP	HP	EAT °F	RH %
DOAS-1	SUMMER WINTER	2500	1.25	5	95 8	76 5	80 54	68 43	30 12.3	45 180	55 160	80.3 8	- -	55.2 73	- -	2500	1.25	5	75 70	50 35	72,450 157,500	208/1/60	42	50	2172	RENEWAIRE - RD4XRT

- NOTES:
- PROVIDE INTEGRATION WITH VARIABLE REFRIGERANT FLOW SYSTEM.
  - HEATING HOT WATER SHALL BE 30% PROPYLENE GLYCOL.
  - REFER TO DETAILS FOR ADDITIONAL REQUIREMENTS. PROVIDE ALL APPURTENANCES FOR THE CHILLED WATER COOLING COIL AND HEATING HOT WATER PREHEAT COIL WITHIN THE PENTHOUSE.

**IMC Ventilation Table**

System	AHU-1 (Single Zone System)														
Room	Description	Area Ft2	Area Outdoor	Area Outdoor	Occupant Load Rate	Occupancy PZ	Occupant Air Rate	Occupant Air Rate	Occupant Air Rate	Breathing Zone Vbz= RpPz + RaAz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Voz=Vbz/ Ez	Supply Air Design Vpz	Outdoor Air Fraction Zp=Voz/ Vpz	
MEETING	Meeting Room	2400	0.06	144	50	120	5	600	744	1	744	6200	0.12		
Totals		2400		144		120			744		744	6200	0.12		
System Ventilation Efficiency: 1													Max Zp= 0.12	Total Required Outdoor Air 744.00	Total Outdoor Air Provided 750.00
Percentage of outdoor Air 12.0%													Percentage of outdoor Air 12.1%		

**VARIABLE REFRIGERANT FLOW HEAT PUMP OUTDOOR UNIT SCHEDULE**

DESIG.	COOLING TC MBH @ 95°F	HEATING TC MBH @ 47°F	HEATING TC MBH @ 0°F	ELECTRICAL V/PH/Hz	MCA	MOCP	APPROX. UNIT WEIGHT (lbs)	REMARKS	MANUFACTURER	MODEL
VRF-1	192	215	215	208/3/60	60/54	80/80	1105	1,2,3,4	mitsubishi	PURY-HP192TSKMU-A-H
VRF-2	192	215	215	208/3/60	60/54	80/80	1105	1,2,3,4	mitsubishi	PURY-HP192TSKMU-A-H

NOTES:

- UL LISTED
- SNOW SENSOR
- DUAL SOURCE POWER
- LOW AMBIENT CONTROL TO 0°F

**IMC Ventilation Table**

System	DOAS-1 (Dedicated Outdoor Air Unit for VRF Zones)														
Room	Description	Area Ft2	Area Outdoor	Area Outdoor	Occupant Load Rate	Occupancy PZ	Occupant Air Rate	Occupant Air Rate	Breathing Zone Vbz= RpPz + RaAz	Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Voz=Vbz/ Ez	Supply Air Design Vpz			
LOBBY	Lobby	177	0.06	10.62	10	1.77	5	8.85	19.47	1	19.47	50			
CONF RM	Conference	165	0.06	9.9	5	0.825	5	4.125	14.025	1	14.025	50			
RECEPTION	Reception	550	0.06	33	30	16.5	5	82.5	115.5	1	115.5	120			
VIDEO MEDIA	Office	180	0.06	10.8	5	0.9	5	4.5	15.3	1	15.3	50			
LUNCH ROOM	Break Room	525	0.12	63	25	13.125	5	65.625	128.625	1	128.625	130			
COMMS	Office	100	0.06	6	5	0.5	5	2.5	8.5	1	8.5	50			
COMMS	Office	100	0.06	6	5	0.5	5	2.5	8.5	1	8.5	50			
COMMS PRES	Office	160	0.06	9.6	5	0.8	5	4	13.6	1	13.6	50			
COMMS	Office	85	0.06	5.1	5	0.425	5	2.125	7.225	1	7.225	50			
COMMS	Office	85	0.06	5.1	5	0.425	5	2.125	7.225	1	7.225	50			
CNTY ADMIN	Office	220	0.06	13.2	5	1.1	5	5.5	18.7	1	18.7	50			
ASST ADMIN	Office	130	0.06	7.8	5	0.65	5	3.25	11.05	1	11.05	50			
CNTY CLERK	Office	420	0.06	25.2	5	2.1	5	10.5	35.7	1	35.7	50			
COPIER RM	Office	100	0.06	6	5	0.5	5	2.5	8.5	1	8.5	50			
LAW LIBRARY	Office	640	0.06	38.4	5	3.2	5	16	54.4	1	54.4	55			
CNTY ATTY	Office	200	0.06	12	5	1	5	5	17	1	17	50			
DPTY ATTY	Office	170	0.06	10.2	5	0.85	5	4.25	14.45	1	14.45	50			
ASST ATTY	Office	170	0.06	10.2	5	0.85	5	4.25	14.45	1	14.45	50			
LEGAL ASST	Office	175	0.06	10.5	5	0.875	5	4.375	14.875	1	14.875	50			
SECURITY POST	Reception	1000	0.06	60	30	30	5	150	210	1	210	225			
MAIL ROOM	Office	345	0.06	20.7	5	1.725	5	8.625	29.325	1	29.325	50			
CORRIDOR	Comdor	800	0.06	48	0	0	0	0	48	1	48	50			
LOBBY	Lobby	700	0.06	42	10	7	5	35	77	1	77	80			
OFFICE	Office	110	0.06	6.6	5	0.55	5	2.75	9.35	1	9.35	50			
OFFICE	Office	135	0.06	8.1	5	0.675	5	3.375	11.475	1	11.475	50			
OFFICE	Office	235	0.06	14.1	5	1.175	5	5.875	19.975	1	19.975	50			
OFFICE	Office	150	0.06	9	5	0.75	5	3.75	12.75	1	12.75	50			
OFFICE	Office	200	0.06	12	5	1	5	5	17	1	17	50			
OFFICE	Office	150	0.06	9	5	0.75	5	3.75	12.75	1	12.75	50			
OFFICE	Office	160	0.06	9.6	5	0.8	5	4	13.6	1	13.6	50			
KITCHENETTE	Break Room	110	0.06	6.6	50	5.5	5	27.5	34.1	1	34.1	50			
CONF RM	Conference	400	0.06	24	50	20	5	100	124	1	124	125			
OFFICE	Office	190	0.06	11.4	5	0.95	5	4.75	16.15	1	16.15	50			
OFFICE	Office	135	0.06	8.1	5	0.675	5	3.375	11.475	1	11.475	50			
OFFICE	Office	135	0.06	8.1	5	0.675	5	3.375	11.475	1	11.475	50			
OPEN OFFICE	Office	720	0.06	43.2	5	3.6	5	18	61.2	1	61.2	65			
BASEMENT OFFICES	Office	2600	0.06	156	5	13	5	65	221	1	221	250			
Totals		12627		789.12		135.72		1467.72	1467.72		1467.72	2500			
System Ventilation Efficiency: 1													Max Zp= 1	Total Required Outdoor Air 1,467.72	Total Outdoor Air Provided 2,500.00
Percentage of Outdoor Air 58.7%													Percentage of Outdoor Air 100.0%		

**FAN SCHEDULE**

DESIG.	SERVICE	AIR FLOW (CFM)		E.S.P. (INCHES W.G.)	FAN RPM	DRIVE TYPE	HP / WATTS	VOLT/PHASE HZ	NOTES	MANUFACTURER
		MAX	MIN.							
SF-1	AHU-1 SUPPLY AIR	6200	1900	1.25	2250	BELT	7.5 HP	208V/30/60HZ	1	YORK - DWDI - AF- 15x15
RF-1	AHU-1 RETURN AIR	5450	1150	1.25	3500	DIRECT	5 HP	208V/30/60HZ	2	GREENHECK - AX47-190
EF-1	1512 MEN	240	240	0.375	1150	DIRECT	166 W	120V/10/60HZ	3,4,5	SOLER & PALAU - FF250
EF-2	1513 WOMEN	240	240	0.375	1150	DIRECT	166 W	120V/10/60HZ	3,4,5	SOLER & PALAU - FF250

- NOTES:
- FAN SUPPLIED WITH AIR HANDLING UNIT AND VFD.
  - INTEGRATE INLINE RETURN FAN WITH AHU-1 CONTROLS. PROVIDE VFD FOR FAN (ABB MODEL: ACH550, WITH BYPASS AND INTEGRAL DISCONNECT).
  - PROVIDE BACKDRAFT DAMPER.
  - PROVIDE ISOLATION KIT.
  - PROVIDE FAN SPEED CONTROL.

**PUMP SCHEDULE**

DESIG.	LOCATION	SERVICE	CAPACITY (GPM)	HEAD (FT. W.G.)	MOTOR HP	VOLT/PHASE HZ	REMARKS
P-1	PENTHOUSE	HEATING HOT WATER	55	40	1.5	208V/10/60HZ	BELL & GOSSETT SERIES 1510
P-2	PENTHOUSE	AHU-1 PREHEAT	30	20	0.25	208V/10/60HZ	BELL & GOSSETT SERIES 60
P-3	PENTHOUSE	DOAS-1 PREHEAT	25	25	0.25	208V/10/60HZ	BELL & GOSSETT SERIES 60

- NOTES:
- HEATING HOT WATER SHALL BE 30% PROPYLENE GLYCOL.

**EXPANSION TANK**

DESIG.	LOCATION	SERVICE	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	FILL PRESSURE (PSIG)	RELIEF VALVE SETTING (IN)	REMARKS
ET-1	PENTHOUSE	HEATING HOT WATER	8	5	40	150	TACO - PAX-30

**STEAM - TO - WATER CONVERTER SCHEDULE**

DESIG.	SERVICE	HEATING CAPACITY				CONTROL VALVE (LBS/HR)	TRAP (LBS/HR)	STEAM PRESSURE ENTERING SHELL (PSIG)	REMARKS
		MBH	GPM	EWT (°F)	LWT (°F)				
C-1	HEATING HOT WATER	460	55.0	160	180	550	1650	5.0	TACO - E10206S

- NOTES:
- HEATING HOT WATER SHALL BE 30% PROPYLENE GLYCOL.

**BRANCH CIRCUIT CONTROLLER SCHEDULE**

DESIG.	BRANCH NUMBERS	VOLTAGE	MCA	MOCP	APPROX. UNIT WEIGHT (LBS)	REMARKS	MANUFACTURER	MODEL
BCC-1A	16	208V/10/60HZ	2	15	180	U.L., MAIN	mitsubishi	CMB-P1016NU-GA
BCC-1B	8	208V/10/60HZ	1	15	100	U.L., SUB	mitsubishi	CMB-P108NU-GB
BCC-2A	16	208V/10/60HZ	2	15	180	U.L., MAIN	mitsubishi	CMB-P1016NU-GA
BCC-2B	8	208V/10/60HZ	1	15	100	U.L., SUB	mitsubishi	CMB-P108NU-GB
BCC-2C	16	208V/10/60HZ	2	15	180	U.L., SUB	mitsubishi	CMB-P1016NU-HB

**VARIABLE REFRIGERANT FLOW AIR HANDLING UNIT SCHEDULE**

DESIG.	COOLING MBH	HEATING MBH @ 0°F	SF KW CONSUMPT.	STYLE	ELECTRICAL V/PH/Hz	MCA	CONNECTED TO			REMARKS	MANUFACTURER	MODEL
							HP	BCC				
AHU-2	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PLFY-P08NCMU-E	
AHU-3	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PLFY-P08NCMU-E	
AHU-4	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PLFY-P08NCMU-E	
AHU-5	12	9	0.2	DUCTED	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PEFY-P12NMAU-E	
AHU-6	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PLFY-P08NCMU-E	
AHU-7A	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4,5	mitsubishi	PLFY-P08NCMU-E	
AHU-7B	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4,5	mitsubishi	PLFY-P08NCMU-E	
AHU-8	8	6	0.2	CEILING	208/1/60	1	1	1A	1,2,3,4	mitsubishi	PLFY-P08NCMU-E	
AHU-9	8	6	0.2	CEILING	208/1/60	1	1	1A				