

HYDRONIC AIR HANDLER SCHEDULE																																			
MARK	AREA SERVED	ARRANGEMENT	SCFM	OUTSIDE AIR CFM	EXTERNAL STATIC PRESSURE (IN. W.G.)	COOLING DATA						HEATING DATA (PRE-HEAT)						REHEAT COIL DATA						HUMIDIFIER STEAM RATE (LB/H)	FAN ELECTRICAL DATA					REMARKS					
						EAT (°F)		LAT (°F)		MINIMUM CAPACITY (MBH)		WATER			MAX. PD FT. WG.	EAT (°F)		MIN. CAP. (MBH)	WATER			MAX. PD FT. WG.	EAT DB (°F)		MIN. CAP. (MBH)	WATER									
						DB	WB	DB	WB	SENSIBLE	TOTAL	GPM	EWT (°F)	LWT (°F)		GPM	EWT (°F)		LWT (°F)	GPM	EWT (°F)		LWT (°F)			GPM	EWT (°F)	LWT (°F)	GPM		EWT (°F)	LWT (°F)			
AHU-1	OFFICE	HORIZONTAL/FLOOR MOUNT	2950	600	1.5	80.5	70.2	52.0	51.9	114.1	175.4	32	38	50	20	56.8	95.0	121.8	12.2	180.0	160.0	20	45.0	70.0	79.7	9.7	180.0	160.0	0	1	5	460	3	1,2,3,5	
AHU-2A	INERT AREA	HORIZONTAL/FLOOR MOUNT	9300	9300	1.5	105	93	45	44.4	615.6	1790	323	38	50	20	5	71.4	692.1	69.2	180	160	20	45	70	251.1	33.3	180	160	123	2	10	460	3	1,2,3,5	
AHU-2B	INERT AREA	HORIZONTAL/FLOOR MOUNT	9300	9300	1.5	105	93	45	44.4	615.6	1790	323	38	50	20	5	71.4	692.1	69.2	180	160	20	45	70	251.1	33.3	180	160	123	2	10	460	3	1,2,3,5	
AHU-2C	INERT AREA	HORIZONTAL/FLOOR MOUNT	9300	9300	1.5	105	93	45	44.4	615.6	1790	323	38	50	20	5	71.4	692.1	69.2	180	160	20	45	70	251.1	33.3	180	160	123	2	10	460	3	1,2,3,5	
AHU-3	CASTING & BATCH TEST	HORIZONTAL/FLOOR MOUNT	3400	1475	1.5	85.2	74.7	43.3	43.2	146.8	360	67	38	50	29	41.8	95.0	195.3	19.6	180.0	160.0	20	45.0	70.0	91.8	11	180.0	160.0	77	1	7.5	460	3	1,2,3,5, 6, 7	
AHU-4	ENERGETIC PROCESS & PROCESS SUPPORT	HORIZONTAL/FLOOR MOUNT	11,440	1780	1.5	75.4	65.7	48.4	48.3	396.7	717.5	130	38	50	20	59.9	95.0	433.8	39.03	180.0	160.0	20	45.0	70.0	308.9	40.9	180.0	160.0	274.2	2	10	460	3	1,2,3,5, 6, 7	
AHU-5	RECEIVING	HORIZONTAL/FLOOR MOUNT	3,480	350	1.5	86.2	74.9	46.8	46.8	151.1	191.6	34.6	38	50	20	63.5	95.0	118.5	11.9	180.0	160.0	20	45.0	70.0	94.0	10.6	180.0	160.0	83.4	1	7.5	460	3	1,2,3,5, 6, 7	
AHU-6	CURE OVEN	HORIZONTAL/FLOOR MOUNT	2,485	250	1.5	73.5	63.9	43.8	43.8	77.1	140.3	25.3	38	50	20	63.5	95.0	84.6	8.5	180.0	160.0	20	45.0	70.0	67.1	8.7	180.0	160.0	60.4	1	5	460	3	1,2,3,5, 6, 7	
AHU-7	CARBON LINER MIXING ROOM	HORIZONTAL/SUSPENDED	400	0	0.01	75.4	65.7	48.4	48.3	6.5	12	2	38	50	20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	1	0.5	460	3	4

- NOTES:
1. ESP DOES NOT INCLUDE FILTER OR UNIT LOSSES.

2. REFER TO SPECIFICATIONS FOR UNIT CONSTRUCTION AND ACCESSORY REQUIREMENTS.

3. REFER TO CONTROLS DOCUMENTS FOR CONTROL REQUIREMENTS.

4. PROVIDE UNIT WITH CONDENSATE PUMP CAPABLE OF MOVING CONDENSATE TO NEAREST JANITORIAL ROOM. PROVIDE UNIT WITH MERV13 FILTER.

5. PROVIDE AIR HANDLING UNIT WITH HUMIDIFIER PER HUMIDIFIER SCHEDULE.

6. PROVIDE SPARK A FAN CONSTRUCTION.

7. MOTOR SHALL BE OUT OF THE AIR STREAM OR EXPLOSION PROOF.

AIR COOLED CHILLER SCHEDULE																								
Mark	NOMINAL CAP. (TONS)	O.D. DB (°F)	TYPE	EWT (°F)	LWT (°F)	FLOW (GPM)			WPD FT. WG.	FOULING FACTOR	IPLV EER	REF. TYPE	COMPRESSOR		CONDENSER		UNIT ELECTRICAL					WEIGHT (LBS)	MANUFACTURER & MODEL NO.	REMARKS
						MIN	DES	MAX					QTY	RLA EA.	QTY	FLA EA.	VOLT	PHASE	HZ	MCA	MCOP			
CH-1	410	105	SCREW	50	38	446	630	641.8	11.2	0.0001	16.38	R-513A	4	164/168	24	2.5 RLA	460	3	60	778 A	800 A	22877	TRANE RTAF-410	ALL
CH-2	410	105	SCREW	50	38	446	630	641.8	11.2	0.0001	16.38	R-513A	4	164/168	24	2.5 RLA	460	3	60	778 A	800 A	22877	TRANE RTAF-410	ALL
CH-3	410	105	SCREW	50	38	446	630	641.8	11.2	0.0001	16.38	R-513A	4	164/168	24	2.5 RLA	460	3	60	778 A	800 A	22877	TRANE RTAF-410	ALL

- NOTES:
1. ALL PIPING (AND CHILLER WATER-SIDE COMPONENTS) EXPOSED TO AMBIENT CONDITIONS SHALL BE HEAT TRACED AND INSULATED TO PREVENT FREEZING, DOWN TO 0°F MINIMUM.

2. PROVIDE LOW AMBIENT HEAD PRESSURE CONTROLS TO ALLOW OPERATION DOWN TO 0°F AMBIENT.

3. PROVIDE UNIT MOUNTED NON-FUSED DISCONNECT SWITCH.

4. PROVIDE SUCTION ACCUMULATOR, WATER FLOW SWITCH, AND PUMP DIFFERENTIAL SENSORS.

5. PROVIDE PACKAGED UNIT FOR OUTDOOR APPLICAITON.

6. PROVIDE MINIMUM OF TWO SCROLL COMPRESSORS.

7. PROVIDE A 260 GAL. STAINLESS STEEL BUFFER TANK WITH 1" INSULATION, RELEIF VALVE, DRAIN CONNECTION, LIQUID LEVEL INDICATOR WITH DRY CONTACTS AND ASSOCIATED SIGHT GLASS, AND RECIRC. PUMP WITH BALL VALVE AND STRAINER.

8. PROVIDE CITY WATER MAKEUP SOLENOID.

9. PROVIDE 115V NEMA 3R SERVICE OUTLET.

10. PROVIDE WATER PRESSURE GAUGE SET.

11. PROVIDE TWO STAINLESS STEEL SYSTEM PROCESS PUMPS WITH NEMA 3R DRIVES, SUCTION AND DISCHARGE ISOLATION VALVES.

12. PROVIDE 30% PROPYLENE GLYCOL SOLUTION.

13. PROVIDE TWO (2) CHILLERS TO DELIVER 100% CAPACITY AND THIRD CHILLER AS BACK UP.

PUMP SCHEDULE																
MARK	LOCATION	SERVICE	TYPE	DIAMETER (IN)	GPM	TOTAL HEAD FT. WG.	PUMP EFFICIENCY	MOTOR DATA				MANUFACTURER & MODEL	WEIGHT (LB)	REMARKS		
								HP	RPM	V	PH					
CHP-1	OUTDOORS	CH-1 THRU CH-3	END SUCTION	11	630	100	82.20%	25	1800	460	3	Bell & Gossett	757	1,2,3,4,5,6,7		
CHP-2	OUTDOORS	CH-1 THRU CH-3	END SUCTION	11	630	100	82.20%	25	1800	460	3	Bell & Gossett	757	1,2,3,4,5,6,7		
CHP-3	OUTDOORS	CH-1 THRU CH-3	END SUCTION	11	630	100	82.20%	25	1800	460	3	Bell & Gossett	757	1,2,3,4,5,6,7		
CRP-1	INDOOR NEXT TO OAHU'S	OAHU-4, OAHU-5, OAHU-6	CONDENSATE RETURN PUMP	N/A	3	15	50.00%	0.333	1750	120	1	ROTH	100	9,10,11,13		
CRP-2	INDOOR NEXT TO OAHU'S	OAHU-1, OAHU-2, OAHU-3	CONDENSATE RETURN PUMP	N/A	3	15	50.00%	0.333	1750	120	1	ROTH	100	9,10,11,13		
CRP-3	INDOOR NEXT TO OVENS	INERT OVEN	CONDENSATE RETURN PUMP	N/A	2	15	50.00%	0.25	1750	120	1	ROTH	200	9,10,12,13		
CRP-4	INDOOR NEXT TO OVENS	INERT OVEN	CONDENSATE RETURN PUMP	N/A	2	15	50.00%	0.25	1750	120	1	ROTH	200	9,10,12,13		
HWP-1	BOILER ROOM	HEAT EXHANGER	END SUCTION	9.5	299	70	76.60%	10	1800	460	3	Bell & Gossett	388	1,2,3,4,5,6,8		
HWP-2	BOILER ROOM	HEAT EXHANGER	END SUCTION	9.5	299	70	76.60%	10	1800	460	3	Bell & Gossett	388	1,2,3,4,5,6,8		

- NOTES:
1. PROVIDE BRONZE FITTED IMPELLER (ASTM B584-836).

2. PROVIDE WITH NEMA MG 1 PART 31 - PREMIUM EFFICIENCY MOTOR IN ACCORDANCE WITH NEMA STANDARDS. PROVIDE WITH SHAFT GROUNDING RINGS.

3. PUMP SUBMITTED MUST MEET STATED PUMP EFFICIENCY AT CONDITIONS SPECIFIED.

4. PUMP MOTOR SHALL BE INVERTER DUTY RATED.

5. PROVIDE WITH ANSI CLASS 125 FLANGES.

6. PROVIDE WITH ABB VARIABLE FREQUENCY DRIVE TO BE MOUNTED ON PUMP SKID STRUCTURE. PROVIDE A NEMA 3R ENCLOSURE FOR ALL VARIABLE REQUENCY DRIVE.

7. PROVIDE TWO (2) CHILLED WATER PUMPS TO DELIVER 100% CAPACITY AND THIRD PUMP AS BACK UP.

8. PROVIDE ONE (1) HEATING WATER PUMP TO DELIVER 100% CAPACITY AND SECOND PUMP AS BACK UP.

9. PUMP HAS AN 8 GALLON SIMPLEX RECEIVER TANK

10. PUMP CAN HANDLE UP TO 5 GPM AND 2500 LB/HR CONDENSATE

11. PUMP HAS A 15 PSIG DISCHARGE PRESSURE. SCHEDULED PUMP GPM IS CONDENSATE GPM. ACTUAL PUMP MINIMUM GPM IS 10 GPM.

12. PUMP HAS A 15 PSIG DISCHARGE PRESSURE. SCHEDULED PUMP GPM IS CONDENSATE GPM. ACTUAL PUMP MINIMUM GPM IS 6 GPM.

13. PUMP DIAMETER, EFFICIENCY, AND WEIGHT IS AN ESTIMATE.

CURE OVEN AIR HANDLING UNIT SCHEDULE														
EQUIPMENT NUMBER	MANUFACTURER	LOCATION	STEAM COIL OUTPUT (BTUH)	STEAM DESIGN PRESSURE (PSI)	AIRFLOW (CFM)	EAT (F)	LAT (F)	TOTAL NUMBER OF COILS	FAN H.P.	EXTERNAL STATIC PRESSURE (IN. W.G.)	VOLT/PHASE	MCA	MOP (AMPS)	REMARKS
OAHU-1	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL
OAHU-2	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL
OAHU-3	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL
OAHU-4	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL
OAHU-5	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL
OAHU-6	MACINTYRE CORP.	CURE OVEN	540,000	5	10,000	155 °F	205 °F	2	10	1.5	460/3	17.5	20	ALL

- NOTES:
1. PROVIDE TWO INDEPENDENT STEAM COILS FOR EACH OAHU, EACH WITH 100% CAPACITY FOR REDUNDANCY. COILS SHALL BE REMOVABLE TO ALLOW COIL REPLACEMENT.

2. PROVIDE UNITS WITH MERV13 AIR FILTRATION.

3. PROVIDE UNIT WITH LOW-PRESSURE-DROP STEAM VALVES.

SPLIT SYSTEM AIR UNIT SCHEDULE																				
EQUIPMENT NUMBER	BASIS OF DESIGN			GENERAL			FAN		FILTER TYPE	COOLING DATA					ELECTRICAL DATA			OPERATING WT. (LB)	REMARKS	
	MANUFACTURER	MODEL	LOCATION	AREA SERVED	DESCRIPTION	TOTAL CFM	O.A. CFM	EXT. S.P. (IN.WG.)		SENS.	TOTAL	EAT DB	EAT WB	LAT DB	LAT WB	V/PH/HZ	MCA (A)			MOP (A)
SSAU-1	TRANE	TWE09044BAA	DATA ROOM 138	DATA ROOM 138	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	66.8	80.3	76 °F	62 °F	50.4 °F	49.9 °F	480/3/60	4	15	373	ALL
SSAU-2	TRANE	TWE09044BAA	ELECTRICAL ROOM 112	ELECTRICAL ROOM 112	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	66.8	80.3	76 °F	62 °F	50.4 °F	49.9 °F	480/3/60	4	15	373	ALL
SSAU-3	TRANE	TWE07244BAA	AUTOMATION CONTROL ROOM 114	AUTOMATION CONTROL ROOM 114	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	60.2	64.9	76 °F	62 °F	53.3 °F	52.6 °F	480/3/60	4	15	373	ALL
SSAU-4	TRANE	TPKA0A0361KA70A	ELECTRICAL ROOM 121	ELECTRICAL ROOM 121	WALL MOUNTED DUCTLESS UNIT	810	0	0.00	MERV8	25.2	36.0	80 °F	67 °F	52.3 °F	52.3 °F	N/A	N/A	N/A	46	ALL
SSAU-5	TRANE	TWE07244BAA	DATA ROOM 120	DATA ROOM 120	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	60.2	64.9	76 °F	62 °F	53.3 °F	52.6 °F	480/3/60	4	15	373	ALL
SSAU-6	TRANE	TPKA0A0361KA70A	ELECTRICAL ROOM 133	ELECTRICAL ROOM 133	WALL MOUNTED DUCTLESS UNIT	810	0	0.00	MERV8	25.2	36.0	80 °F	67 °F	52.3 °F	52.3 °F	N/A	N/A	N/A	46	ALL
SSAU-7	TRANE	TWE07244BAA	DATA ROOM 132	DATA ROOM 132	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	60.2	64.9	76 °F	62 °F	53.3 °F	52.6 °F	480/3/60	4	15	373	ALL
SSAU-8	TRANE	TWE09044BAA	ELECTRICAL ROOM 112	ELECTRICAL ROOM 112	HORIZONTAL HUNG DUCTED UNIT	2400	0	0.50	MERV13	66.8	80.3	76 °F	62 °F	50.4 °F	49.9 °F	480/3/60	4	15	373	ALL

- <= 36 TOTAL MBH SSAU NOTES:

1. POWER FROM CORRESPONDING CONDENSING UNIT.

2. PROVIDE WITH CONDENSATE PUMP.

3. PROVIDE WITH SCHEDULED FILTER OR FILTER THAT MEETS OR EXCEEDS SCHEDULED LEVEL OF FILTRATION.
- >36 TOTAL MBH SSAU NOTES:

1. PROVIDE WITH CONDENSATE PUMP.

2. PROVIDE WITH SCHEDULED FILTER OR FILTER THAT MEETS OR EXCEEDS SCHEDULED LEVEL OF FILTRATION.

SPLIT SYSTEM CONDENSING UNIT SCHEDULE											
EQUIPMENT NUMBER	BASIS OF DESIGN		LOCATION	DESCRIPTION	SERVICE	OUTSIDE AIR TEMP. °F	COOLING CAPACITY MBH	V/PH/HZ	MCA (A)	MOP	REMARKS
	MANUFACTURER	MODEL NO.									
SSCU-1	TRANE	TTA09044DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-2	105 °F	90	460/3/60	16	20 A	ALL
SSCU-2	TRANE	TTA09044DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-8	105 °F	90	460/3/60	16	20 A	ALL
SSCU-3	TRANE	TTA07244DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-6	105 °F	72	460/3/60	14	15 A	ALL
SSCU-4	TRANE	TRUZA0361KA70BA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-4	105 °F	36	208/1/60	25	31 A	ALL
SSCU-5	TRANE	TTA07244DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-6	105 °F	72	460/3/60	14	15 A	ALL
SSCU-6	TRANE	TRUZA0361KA70BA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-6	105 °F	36	208/1/60	25	31 A	ALL
SSCU-7	TRANE	TTA07244DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-6	105 °F	72	460/3/60	14	15 A	ALL
SSCU-8	TRANE	TTA09044DAA	EXTERIOR	COOLING ONLY CONDENSING UNIT	SSAU-2	105 °F	90	460/3/60	16	20 A	ALL