

WATER PUMP SCHEDULE																							
UNIT #	SERVICE	LOCATION	TYPE	FLUID	PUMP DATA								MOTOR				SPEED CONTROL	BASE DIMENSIONS (LxW, IN)	OPERATING WEIGHT (LBS)	BASIS OF DESIGN			
					IMPELLER DIA (IN)	CAPACITY (GPM)	TOTAL HEAD (FT H2O)	DUTY POINT POWER (HP)	NPSHr (FT H2O)	PART LOAD EFF. (PLEVv)	DUTY POINT EFF.	MAX. WWP (PSIG)	WATER TEMP. (°F)	TYPE	ENCLOSURE TYPE	HP				RPM	V/PHz	MANUFACTURER	MODEL #
CHWP-1	CHILLED WATER	OUTDOORS	BASE MOUNTED, END SUCTION	30% PROPYLENE GLYCOL	8.625	320	50	6.13	9.2	70.3	67.5	175	44	NEMA PREMIUM, VFD READY	TEFC	7.5	1800	208/3/60	VARIABLE	34x14	367	BELL & GOSSETT	e-1510 2.5BB
CHWP-2	CHILLED WATER	OUTDOORS	BASE MOUNTED, END SUCTION	30% PROPYLENE GLYCOL	8.625	320	50	6.13	9.2	70.3	67.5	175	44	NEMA PREMIUM, VFD READY	TEFC	7.5	1800	208/3/60	VARIABLE	34x14	367	BELL & GOSSETT	e-1510 2.5BB
CHWP-3	CHILLED WATER	CHILLER ROOM	BASE MOUNTED, END SUCTION	30% PROPYLENE GLYCOL	5.25	320	80	9.12	11.8	70.9	72.4	175	44	NEMA PREMIUM, VFD READY	TEFC	10	1800	208/3/60	VARIABLE	34x14	328	BELL & GOSSETT	e-1510 2.5AC
CHWP-4	CHILLED WATER	CHILLER ROOM	BASE MOUNTED, END SUCTION	30% PROPYLENE GLYCOL	5.25	320	80	9.12	11.8	70.9	72.4	175	44	NEMA PREMIUM, VFD READY	TEFC	10	1800	208/3/60	VARIABLE	34x14	328	BELL & GOSSETT	e-1510 2.5AC
NOTES: 1. PROVIDE OPERATIONS AND MAINTENANCE MANUALS. 2. PROVIDE VARIABLE FREQUENCY DRIVE WITH HOA CONTROL. 3. PROVIDE INTERNALLY SELF-FLUSHING MECHANICAL SEALS.																							

CONDENSATE DRAIN PIPE SIZING SCHEDULE	
SIZE (IN)	MAXIMUM CONNECTED COOLING CAPACITY (TONS)
3/4	20
1	40
1 1/4	90
1 1/2	125
2	250
NOTES: 1. SIZE CONDENSATE DRAIN PIPING PER THIS SCHEDULE WHERE NOT OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS.	

COOLING COIL SCHEDULE																
TAG	SERVICE	REFRIGERANT	TOTAL COOLING CAPACITY (BTU/H)	SENSIBLE COOLING CAPACITY (BTU/H)	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	PRESS. DROP (IN WC)	EAT (°F DB)	EAT (°F WB)	LAT (°F DB)	LAT (°F WB)	MAX. FACE VELOCITY (FPM)	MIN. FACE AREA (SF)	ROWS	OVERALL DIMENSIONS (WxH)(IN)	BASIS OF DESIGN
CC-3	AHU-3	R-410A	52,380	36,660	2000	1000	0.5	79.0	67.0	55.0	54.0	400	5.0	4-8	44x35.25	TRANE CSAA SIZE 6, TYPE UF COIL
CC-4	AHU-4	R-410A	115,605	80,900	7000	1360	0.5	75.0	65.0	55.0	54.0	400	17.5	4-8	80x52.75	TRANE CSAA SIZE 21, TYPE UF COIL
CC-5	AHU-5	R-410A	115,605	80,900	7000	1360	0.5	75.0	65.0	55.0	54.0	400	17.5	4-8	80x52.75	TRANE CSAA SIZE 21, TYPE UF COIL
CC-7	AHU-7	R-410A	52,380	36,660	2000	1000	0.5	79.0	67.0	55.0	54.0	400	5.0	4-8	44x35.25	TRANE CSAA SIZE 6, TYPE UF COIL
CC-8	AHU-8	R-410A	52,380	36,660	2000	1000	0.5	79.0	67.0	55.0	54.0	400	5.0	4-8	44x35.25	TRANE CSAA SIZE 6, TYPE UF COIL
NOTES: 1. THE COILS SHALL BE FACTORY INSTALLED WITHIN A DOUBLE-WALLED, INSULATED HOUSING COMPLETE WITH ACCESS DOORS AND DRAIN PLAN. 2. PROVIDE LINEAR EXPANSION VALVE KITS FOR EACH COIL. THE EXPANSION VALVES SHALL BE A PRODUCT OF THE VRF SYSTEM MANUFACTURER (REFER TO THE SPLIT SYSTEM AIR CONDITIONING UNIT SCHEDULE).																

AIR COOLED WATER CHILLER SCHEDULE				
CHILLER TAG			CH-1 AND CH-2	
LOCATION			OUTDOORS	
DIMENSIONS	LENGTH x WIDTH x HEIGHT (IN)		251 x 89 x 94	
	HEIGHT (IN)		94	
	OPERATING WEIGHT (LBS)		10691	
REFRIGERATION CAPACITY (EACH CHILLER)(TONS)			116.81	
COMPRESSORS (EACH MODULE)	QUANTITY		2	
	CAPACITY CONTROL		VARIABLE	
	RLA EACH		98	
EVAPORATOR (TOTAL)	TEMP. ENT F.		54	
	TEMP. LVG F.		44	
	GPM		320	
	MAX. P.D.-FT.		11.6	
	FOULING FACTOR		0.0001	
	WORKING FLUID		30% GLYCOL	
	AMBIENT AIR TEMP. °F		95	
CONDENSER (EACH MODULE)	FANS	QUANTITY	10	
		FLA EACH	2.5	
		FAN TYPE	VARIABLE SPEED	
ELECTRICAL	VOLTS/PH/HZ		208/3/60	
	MCA (A) CIRCUIT #1		310.72	
	MOP (A) CIRCUIT #1		500	
	MCA (A) CIRCUIT #2		298.56	
	MOP (A) CIRCUIT #2		500	
REFRIGERANT DATA	REFRIGERANT		R-513A	
	REFRIGERANT CHARGE CKT #1 (LB)		86.6	
	REFRIGERANT CHARGE CKT #2 (LB)		84.9	
	REFRIGERANT SAFETY CLASS		A1	
A-WEIGHTED SOUND POWER (DBA AT 30 FEET FULL LOAD)			100	
TOTAL SYSTEM EER, FULL LOAD, AHRI (BTU/W)			9.931	
TOTAL SYSTEM EER, IPLV (BTU/W)			16.10	
REMARKS:				
1. PROVIDE OPERATIONS AND MAINTENANCE MANUALS.				
2. PROVIDE MANUFACTURER'S STANDARD FREEZE PROTECTION PACKAGE AND SEPARATE 115V POWER SOURCE.				
3. PROVIDE CONVENIENCE OUTLET WITH SEPARATE 115V POWER SOURCE.				
4. THE POWER CONNECTIONS FOR EACH CIRCUIT SHALL BE PROVIDED IN TWO SEPARATE ENCLOSURES.				
5. REFER TO THE CHILLER ACOUSTIC ACCESSORIES SCHEDULE BELOW FOR SOUND ATTENUATION TO BE PROVIDED UNDER THIS CONTRACT.				
6. THE CHILLERS HAVE BE PRE-ORDERED (TRANE RTAF130EUAH) BY THE OWNER. INSTALL THE CHILLERS UNDER THIS CONTRACT.				

CHILLER ACOUSTIC ACCESSORIES					
CHILLER TAG #	COMPRESSOR ACOUSTIC BLANKETS		CHILLER NOISE REDUCTION SYSTEM		
	QUANTITY	BASIS OF DESIGN	BASIS OF DESIGN	DIMENSIONS (LxWxH)(IN)	WEIGHT (LBS)
	CH-1	2	BRD HUSH COVER	VERTICAL BY-PASS	242x98
CH-2	2	BRD HUSH COVER	NOT APPLICABLE		
NOTES: 1. THE CHILLERS HAVE BEEN PRE-ORDERED WITHOUT THE ACOUSTIC ACCESSORIES SPECIFIED IN THIS SCHEDULE. COORDINATE WITH THE CHILLER MANUFACTURER AND PROVIDE THE ITEMS LISTED IN THIS SCHEDULE UNDER THIS CONTRACT.					

CHEMICAL SHOT FEEDER SCHEDULE								
UNIT #	SERVICE	LOCATION	TYPE	SIZE (GAL)	MAX. PRESS. (PSIG)	WEIGHT (LBS)	BASIS OF DESIGN	
							MANUFACTURER	MODEL #
CF-1	CHW	OUTDOORS	VERTICAL BY-PASS	5	300	38	NEPTUNE	DBF-5HP
CF-2	CHW	CHILLER RM	VERTICAL BY-PASS	5	300	38	NEPTUNE	DBF-5HP

AIR SEPARATOR SCHEDULE									
UNIT #	SERVICE	LOCATION	TYPE	AIR SEPARATOR			OPERATING WEIGHT (LBS)	BASIS OF DESIGN	
				SIZE (IN)	FLOW (GPM)	PRESS. DROP (FT H2O)		MANUFACTURER	MODEL #
AS-1	CHW	BASEMENT	COALESCING AIR & DIRT	6	320	0.81	366	BELL & GOSSETT	CRSN-6F
AS-2	CHW	BASEMENT	COALESCING AIR & DIRT	6	320	0.81	366	BELL & GOSSETT	CRSN-6F

WATER FILTER SCHEDULE								
UNIT #	SERVICE	LOCATION	TYPE	SIZE (IN)	FLOW (GPM)	FILTER MEDIA (MICRON)	BASIS OF DESIGN	
							MANUFACTURER	MODEL #
WF-1	CHW	OUTDOORS	SIDE STREAM	1	10	5	AXIOM INDUSTRIES	SFP-10
WF-2	CHW	CHILLER RM	SIDE STREAM	1	10	5	AXIOM INDUSTRIES	SFP-10
WATER FILTER SCHEDULE NOTES: 1. PROVIDE WITH 304SS FILTER HOUSING WITH BRASS HEAD, SIGHT GLASS, BALL VALVES, BALANCING VALVE, BRASS DRAIN VALVE, AND BRASS NIPPLES. FILTER MEDIA SHALL BE COTTON WOUND WITH TIN CORE (25 MICRON). 2. REPLACE THE FILTER MEDIA WITH A NEW 25 MICRON CARTRIDGE AFTER SYSTEM START-UP AND BALANCING. PROVIDE ATTIC STOCK OF TWO 25 MICRON AND TWO 5 MICRON FILTERS.								

GLYCOL MAKEUP UNIT												
UNIT #	LOCATION	FLOW RATE (GPM)	MAX. PRESS. (PSIG)	TANK SIZE (GAL)	ELECTRICAL				OVERALL DIMENSIONS (LxWxH, IN)	UNIT WEIGHT (LBS)	BASIS OF DESIGN	
					VOLTS	PHASE	Hz	MOP (A)	MCA (A)		MANUFACTURER	MODEL #
MU-1	CHILLER RM	1.4	85	100	115	1	60	15	0.9	33x33x60	900	AXIOM INDUSTRIES SF-100-PRV-HP-L
NOTES: 1. PROVIDE A PACKAGED MAKE-UP UNIT WHICH SHALL BE CAPABLE OF MAINTAINING THE SYSTEM FILL PRESSURE AT 30 PSIG. PROVIDE A POLYETHYLENE TANK WITH REMOVABLE LID, STRAINER, ISOLATION VALVES, PUMP, CHECK/BALANCING VALVE, EXPANSION TANK, DISCHARGE PRESSURE GAUGE, STEEL PIPING, LOW LEVEL CUT-OUT, AND CONTROL/ALARM PANEL WITH INDICATOR LIGHTS IN A NEMA 4 ENCLOSURE. 2. PROVIDE WITH DUAL PRVS AND CONTROLS CAPABLE OF SUPPLYING TWO SEPARATE SYSTEMS.												

EXPANSION TANK SCHEDULE												
UNIT #	LOCATION	SYSTEM	APPROX. SYSTEM VOLUME (GAL)	SYSTEM TEMP. RANGE		INITIAL TANK PRESS (PSIG)	MIN. VOLUME (GAL)	MIN. ACCEPT-ANCE VOLUME (GAL)	PIPE SIZE TO TANK (IN)	UNIT WEIGHT WHEN FULL (LBS)	BASIS OF DESIGN	
				MIN. (°F)	MAX (°F)						MANUFACTURER	MODEL #
ET-1	OUTDOORS	CHW	2000	40	100	12	50	25	1	700	BELL & GOSSETT	200-L
ET-2	CHILLER RM	CHW	2000	40	100	12	50	25	1	700	BELL & GOSSETT	200-L
NOTES: 1. PROVIDE VERTICAL ASME BLADDER EXPANSION TANK.												

VAV BOX SCHEDULE							
TAG	SERVICE	INLET SIZE	CFM		MAX NC LEVEL	DESIGN BASIS	REMARKS
			MAX	MIN		TRANE	
V-01	CLASSROOM	12	1520	460	20	VCCF	SEE NOTES
V-02	CLASSROOM	10	1220	365	20	VCCF	SEE NOTES
V-03	CLASSROOM	10	1220	365	20	VCCF	SEE NOTES
V-04	CLASSROOM	10	1220	365	20	VCCF	SEE NOTES
V-05	CLASSROOM	10	1200	360	20	VCCF	SEE NOTES
V-06	CLASSROOM	10	1200	360	20	VCCF	SEE NOTES
V-07	CLASSROOM	10	1200	360	20	VCCF	SEE NOTES
V-08	CLASSROOM	10	1040	315	20	VCCF	SEE NOTES
V-09	CLASSROOM	10	1200	360	20	VCCF	SEE NOTES
V-10	CLASSROOM	10	1340	400	20	VCCF	SEE NOTES
V-11	CLASSROOM	14	2000	600	20	VCCF	SEE NOTES
V-12	CLASSROOM	10	950	285	20	VCCF	SEE NOTES
V-13	CLASSROOM	10	950	285	20	VCCF	SEE NOTES
V-14	CLASSROOM	12	1500	450	20	VCCF	SEE NOTES
V-15	CLASSROOM	10	1140	340	20	VCCF	SEE NOTES
V-16	CLASSROOM	8	400	120	20	VCCF	SEE NOTES
V-21	KITCHEN	14	1990	600	20	VCCF	SEE NOTES
V-21D	FAC ROOM	10	1230	365	20	VCCF	SEE NOTES

NOTES:

1. PROVIDE CONTROLS CABINET WITH CONTROL TRANSFORMER AND 120V TO CONTROL VOLTAGE.
2. PROVIDE REMOVABLE FLOW SENSOR.
3. PROVIDE HANGER BRACKET SUPPORTS, SIDE ACCESS DOOR, FIBER-FREE LINER.