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HVAC DESIGN DATA												
DESIGN CONDITIONS	SUMMER					WINTER					LOWEST AVERAGE ANNUAL DEWPOINT	
	TEMP		WET BULB TEMP		% HUMIDITY	TEMP		DEWPOINT TEMP		% HUMIDITY		
	°F	°C	°F	°C		°F	°C	°F	°C		°F	°C
OUTDOOR DESIGN CONDITIONS	98.5	[37]	78.0	[26]	30.7	21.5	[-6]	26	[-3]	98.2	26	[-3]
INDOOR AREA DESIGN CONDITIONS												
PATIENT ROOM	75	[24]	65.3	[19]	60	70	[21]	27.5	[-3]	20		
CLASS ROOM	75	[24]	65.3	[19]	60	70	[21]	50	[10]	20		
CLEAN UTILITY / STORAGE ROOM	N/A		N/A		N/A	N/A		N/A		N/A		
CONFERENCE ROOM	75	[24]	65.3	[19]	60	70	[21]	28.5	[-2]	20		
CORRIDOR	75	[24]	65.3	[19]	60	70	[21]	28.5	[-2]	20		
WAITING	75	[24]	65.3	[19]	60	70	[21]	28.5	[-2]	20		
OFFICE	75	[24]	65.3	[19]	60	70	[21]	28.5	[-2]	20		
TOILET PATIENT INTERIOR	N/A		N/A		N/A	N/A		N/A		N/A		
TOILET PUBLIC PERIMETER	N/A		N/A		N/A	68		N/A		N/A		
SOILED UTILITY AND STORAGE	N/A		N/A		N/A	N/A		N/A		N/A		

AIR HANDLING UNIT SCHEDULE																						
MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	AIR FLOW	AIR FLOW						SUPPLY FAN MARK	RETURN OR RELIEF FAN MARK	EXHAUST FAN MARK	PREFILTER MARK	AFTER FILTER MARK	FINAL FILTER MARK	HEAT RECOVERY MARK	PREHEAT COIL MARK	COOLING COIL MARK	REHEAT COIL	HUMIDIFIER MARK	REMARKS
					SUPPLY		MIN OA		RETURN/EXHAUST													
					CFM	[L/s]	CFM	[L/s]	CFM	[L/s]												
AHU-72A	ROOF	BONE MARROW	CUSTOM	CV	16,400	[7700]	10,500	[5000]	16,400	[7700]	1-SF72A WALL	1-RF72A WALL	N/A	1-PF72A	1-AF72A	1-FF72A	RAHX-72A	1-PHC72A	1-CC72A	-	1-HT2A	1 - 11
NOTES:																						
1. SCHEDULED AIRFLOWS ARE MAXIMUM DESIGN. SELECTION PROVIDES ADDITIONAL CAPACITY PER HVAC DESIGN MANUAL.																						
2. CONTROLS CONTRACTOR TO WORK WITH TEST AND BALANCE AND MECHANICAL CONTRACTORS TO ADJUST ERV CFM PRESSURE OFFSETS.																						
3. SEE AIR BALANCE SCHEDULE FOR SUPPLY AIRFLOWS AND OUTDOOR AIR REQUIREMENTS.																						
4. FAN AIRFLOW MEASUREMENT STATION SHALL BE FACTORY INSTALLED. THERMAL DISPERSION TYPE, INDIVIDUAL FAN MEASUREMENT, SINGLE TRANSMITTER SUPPORTS UP TO 8 FANS.																						
5. PROVIDE AHU WITH SINGLE POINT POWER CONNECTION AND NON-FUSED SERVICE DISCONNECT SWITCH.																						
6. EACH FAN SHALL HAVE ITS OWN VFD, FACTORY INSTALLED. PROVIDE COMMUNICATION CARD FOR INTEGRATION TO ECC AS REQUIRED.																						
7. ENERGY WHEEL MOTOR AND VFD SHALL BE FACTORY INSTALLED. PROVIDE COMMUNICATION CARD FOR INTEGRATION TO ECC AS REQUIRED.																						
8. PROVIDE COIL TREATMENT. EPOXY IMMERSION COATING - ELECTRICALLY DEPOSITED, PER SPECIFICATION.																						
9. OUTSIDE AIR INTAKE HAS A 1" CHARCOAL FILTER, 2" MERV 8 AND 2" MERV 11. AHU FINAL FILTER IS A MERV 14.																						
10. HUMIDIFIER MANIFOLD INTEGRAL TO AHU-72A. HUMIDIFIER AND CONTROL VALVE SHIPPED LOOSE. CONTRACTOR TO PROVIDE PIPING CONNECTION AND PIPING REQUIREMENTS, INCLUDING BUT NO LIMITED TO STEAM TRAPS.																						
11. SEE SPECIFICATION FOR ADDITION AHU REQUIREMENTS AND PLENUM REQUIREMENTS. BASIS OF DESIGN WAS TEMTROL OUTDOOR UNIT.																						

ROTARY AIR TO AIR HEAT RECOVERY WHEEL SCHEDULE																																
MARK	LOCATION	SYSTEM AND/OR SERVICE	MODE	SUPPLY AIR												EXHAUST AIR												ROTOR MOTOR				REMARKS
				SUPPLY AIR FLOW		APD		EAT				LAT				AIR FLOW		APD		EAT				LAT								
								Db		Wb		Db		Wb						Db		Wb		Db		Wb						
				CFM	[L/s]	IN	[Pa]	°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]	CFM	[L/s]	IN	[mm]	°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]	HP	[kW]	PHASE	VOLT	
RAHX-72A	ROOF	AHU-72A	SUMMER	16,400	[7700]	0.98	[75]	98.5	[37]	78.0	[26]	88.3	[31]	73.0	[23]	16,400	[7700]	0.84	[21]	75.0	[24]	65.0	[18]	86.9	[31]	71.9	[22]	0.5	[]	1	120	-
			WINTER	16,400	[7700]	0.94	[24]	21.5	[-6]	18.0	[-8]	45.4	[7]	43.3	[6]	16,400	[7700]	0.77	[19]	75.0	[24]	65.0	[18]	45.1	[7]	41.4	[5]					-
NOTES: 1. UNIT MOUNTED ENERGY RECOVERY WHEEL WITH FROST CONTROL, ROTATION FAILURE OUTPUT TO ECC, COMMUNICATION PROTOCOL FOR SIEMENS P1 NETWORK. 2. UNIT MOUNTED ENERGY RECOVERY WHEEL VFD WITH COMMUNICATION CARD FOR INTEGRATION TO ECC. 3. BASIS OF DESIGN TEMTROL CUSTOM AIR HANDLING UNIT. 4. PROVIDE CUSTOM PLENUM CURB FOR AIR HANDLING UNIT 72A. SEE DETAIL 5M.503.																																

CHILLED WATER COOLING COIL SCHEDULE																														
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		MAX FACE VELOCITY		APD		EAT				LAT				TOTAL CAPACITY		SENSIBLE CAPACITY		CHILLED WATER								REMARKS
										Db		Wb		Db		Wb						FLOW		EWT		LWT		WPD		
				CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	°F	[°C]	°F	[°C]	°F	[°C]	°F	[°C]	MBH	[kW]	MBH	[kW]	GPM	[L/s]	°F	[°C]	°F	[°C]	FT	[M]	
CC-72A	ROOF	BONE MARROW	AHU-72A	16,400	[7700]	472.5	[2]	0.77	[190]	98.5	[37]	78.0	[26]	54.8	[13]	54.4	[12]	1,255.5	[370]	735.2	[220]	209	[13]	43	[6]	55	[13]	9.5	[3]	1.2.4
CC-72A	ROOF	BONE MARROW	AHU-72A	16,400	[7700]	472.5	[2]	0.77	[190]	84.5	[29]	71.1	[22]	54.2	[12]	53.9	[12]	865.9	[250]	523.3	[150]	143.6	[9]	43	[6]	55	[13]	4.66	[1]	1.3.4
NOTE																														
1. COIL CORRECTIONS HAVE BEEN APPLIED FOR GPM, WPD, APD, EWT, LWT FOR A 30% PROPYLENE GLYCOL / WATER SOLUTION.																														
2. COIL PERFORMANCE WITHOUT ENERGY RECOVERY WHEEL CONTRIBUTION.																														
3. COIL PERFORMANCE WITH ENERGY RECOVERY WHEEL CONTRIBUTION.																														
4. THE COOLING COIL FIN SPACING SHALL NOT EXCEED 132 FINS PER FOOT [400 FINS PER METER].																														

ALTERNATE #1 EQUIPMENT COORDINATION SCHEDULE																			
TAG	DESCRIPTION	HP / KW	MCA RLA/FLA	VOLTS	CONDUCTORS			CONDUIT	LOCATION	PANEL	CIRCUIT	BREAKER SIZE	STARTER			DISCONNECT			NOTE
					PH	N	GND						TYPE	PROVIDED BY	INSTALLED BY	TYPE	PROVIDED BY	INSTALLED BY	
EXF-7-2A	EXISTING EF(INTERSTITIAL SPACE)	NA	NA	NA	NA	NA	NA	NA	B730.5	NA	NA	NA							1
1-EF-1	EXISTING EF(ON ROOF)	NA	NA	NA	NA	NA	NA	NA	ROOF	NA	NA	NA							2
CP-1	CIRCUIT PUMP 1	.4	NA	120	#12	#12	#12	3/4"	INTER.	L7H	NA	20/1	NA	NA	NA	HP/S	EC	EC	3
CP-2	CIRCUIT PUMP 2	.4	NA	120	#12	#12	#12	3/4"	INTER.	L7H	NA	20/1	NA	NA	NA	HP/S	EC	EC	3
AHU-72A	EXISTING-AHU(ON ROOF)	NA	NA	NA	NA	NA	NA	NA	ROOF	NA	NA	NA							4
AHU-72A	NEW AHU(ON ROOF)	2(6)/2(6)		480/3	(3) #4	-	#8	1 1/4"	ROOF	EX	EX	EX	VFD	EQM	EQM	HP/S	EC	EC	5
GENERAL NOTES: A. COORDINATE INSTALLATION OF MOTORS WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS. B. CONTROL WIRING SHALL BE BY MECHANICAL CONTRACTOR UNLESS NOTED OTHERWISE. C. MCA=MINIMUM CIRCUIT AMPS; MOP=MINIMUM OVER-CURRENT PROTECTION; RLA=RATED LOAD AMPS; FLA=FULL LOAD AMPS D. EC=ELECTRICAL CONTRACTOR; MC=MECHANICAL CONTRACTOR; INT=INTERGRAL TO UNIT; EQM=EQUIPMENT MANUFACTURER MOTOR SCHEDULE NOTES: 1. CONTRACTOR TO REMOVE EXISTING EXF-7-2A INCLUDING STARTER, CONDUIT AND WIRE BACK TO SOURCE 2. CONTRACTOR TO REMOVE EXISTING 1-EF-1 INCLUDING CONDUIT AND WIRE BACK TO SOURCE 3. PROVIDE HP RATED SWITCH TO ACT AS DISCONNECT. PUMPS ARE LOCATED DIRECTLY BELOW AHU-72A IN THE INTERSTITIAL SPACE. PROVIDE NEW 20A/1 BREAKER IN PANEL L7H FOR PUMP. 4. CONTRACTOR TO DISCONNECT AHU-72A EXISTING AND REMOVE EXISTING CONDUIT AND WIRE BACK TO SOURCE. 5. EC SHALL USE EXISTING BREAKER FROM DEMOED AHU. BREAKER SIZE SHALL REMAIN THE SAME. CONDUIT AND CONDUCTOR SIZE SHALL BE UPSIZED.																			

HOT WATER HEATING COIL SCHEDULE																										
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	APPLICATION	AIR FLOW		MAX FACE VELOCITY		APD		TEMPERATURES				TOTAL MIN CAPACITY	HOT WATER								ROWS	REMARKS	
											EAT		LAT			FLOW		EWT		LWT		WPD				
					CFM	[L/s]	FPM	[M/s]	IN WG	[Pa]	"F	"C	"F	"C	MBH	[kW]	GPM	[L/s]	"F	"C	"F	"C	FT	[kPa]		
PHC-1	ROOF	BONE MARROW	AHU-72A	REHEAT	16,400	[85]	472.5	[2]	0.08	[50]	21.5	[13]	51.8	[11]	593.0	[23]	32.3	[]	180	[82]	140	[60]	1.97	[2]	1	1.2
PHC-1	ROOF	BONE MARROW	AHU-72A	REHEAT	16,400	[160]	472.5	[2]	0.07	[55]	45.4	[13]	58.5	[15]	243.3	[41]	9.0	[]	180	[82]	140	[60]	0.18	[1]	1	1.3
SD7W-40	INTERSTITIAL	CORR 136	AHU-72A	REHEAT	640	[290]	350	[2]	0.07	[13]	54	[13]	85	[29]	21.5	[69]	2.1	[]	180	[82]	140	[60]	0.5	[3]	2	4
NOTE																										
1. COIL CORRECTIONS HAVE BEEN APPLIED FOR GPM, WPD, APD, EWT, LWT FOR A 30% PROPYLENE GLYCOL / WATER SOLUTION.																										
2. COIL PERFORMANCE WITHOUT ENERGY RECOVERY WHEEL CONTRIBUTION.																										
3. COIL PERFORMANCE WITH ENERGY RECOVERY WHEEL CONTRIBUTION.																										

FAN SCHEDULE																									
MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW		TSP		FAN								MOTOR ELECTRICAL							CONTROL SEQUENCE	REMARKS	
								TYPE	WHEEL	CLASS	ARRANGEMENT, ROTATION, AND DISCHARGE	DIAMETER		MIN % EFF	DRIVE	FAN MAX RPM	NOMINAL POWER			PHASE	VOLT	RPM			SPEED CONTROL
				IN	[mm]	BHP	HP					[kW]													
1-SF72A	ROOF	BONE MARROW	AHU-72A	16,400	[7700]	8.65	[2200]	FAN WALL	AF	II	2 WIDE X 2 HIGH ARRAY MULTI-DRIVE	16	[400]	85%	DIRECT	3,862	NA	7.50	[6]	3	460	3515	MULTI-DRIVE	VARIABLE	-
1-RF72A	ROOF	BONE MARROW	AHU-72A	16400	[7700]	4.95	[1200]	FAN WALL	AF	II	1 WIDE X 3 HIGH ARRAY MULTI-DRIVE	16	[400]	85%	DIRECT	3,930	NA	6.50	[5]	3	460	1735	MULTI-DRIVE	VARIABLE	-
NOTE: SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.																									