AIR DEVICE SCHEDULE (SUPPLY)

MARK	TYPE	AIR FLOW MIN CFM	AIR FLOW MIN [L/s]	AIR FLOW MAX CFM	AIR FLOW MAX [L/s]	MAX APD IN WG	MAX APD [Pa]	MOUNTING	PANEL/FRAME SIZE IN x IN	PANEL/FRAME SIZE [mm x mm]	NECK SIZE IN	NECK SIZE [mm]	NC	DAMPER	FINISH	REMARKS
SD-1	DRUM LOUVER	290	[140]	290	[140]	0.100	[25]	DUCT MOUNTED	18 x 10	[150 x 56]	10 ø	[152 ø]	16	NONE	WHITE	----
SD-2	DRUM LOUVER	1400	[660]	1400	[660]	0.100	[25]	DUCT MOUNTED	72 x 30	[282 x 169]	72 x 30	[203 ø]	16	NONE	WHITE	-----
L-1	SIDEWALL LOUVER	4200	[2000]	4200	[2000]	0.100	[25]	WALL	120 x 112	[1125 x 1050]	NONE	N/A	N/A	MOTORIZED	PRIME	-----

NOTES

1. SEE FLOOR PLAN FOR THROW PATTERN.
2. SEE FLOOR PLAN FOR LOCATION
3. PROVIDE ADAPTER FROM BRANCH DUCT SIZE TO LOUVER.
4. FIXED BLADE GALVANIZED STEEL LOUVER, WITH BLADES SET AT 45 DEGREES. FIELD PAINT FINISH COLOR. MULTI SECTION. FOR MOUNTING IN CMU WALL. WITH BIRDSCREEN
5. GALVANIZED STEEL PARALLEL BLADE DAMPER, MULTISECTION. FOR MOUNTING BEHIND LOUVER. DAMPER NORMALLY CLOSED. 120 V DAMPER OPERATOR.

COOLING TOWER SCHEDULE

	MARK	LOCATION	SERVICE	TOWER TYPE	TOTAL NOMINAL CAPACITY TONS	TOTAL NOMINAL CAPACITY [kW]	# CELLS	FLOW RATE EACH CELL GPM	FLOW RATE EACH CELL [L/s]	WPD FT	WPD [kPa]	TEMPERATURE AMBIENT Wb °F	AMBIENT Wb [°C]	EWT °F	EWT [°C]	LWT °F	LWT [°C]	FAN MOTOR NO	POWER HP/CELL	POWER [kW]	PHASE	VOLT	RPM	SPEED CONTROL	SUMP HEATER TYPE	CAPACITY BTUH	CAPACITY [W]	MAX OPERATING WEIGHT/CELL LB	[kg]	MAX HEIGHT W/HANDRAIL FT	[M]	REMARKS
GFCI	CT-1	ROOF	CONDENSER WATER	COUNTER FLOW	600/CELL 1200 TOTAL	[170]	2	1800	[110]	5.36	[16]	74.7	[24]	95	[35]	85	[29]	2	30	[22]	3	460	1200	VARIABLE	ELECTRIC IMMERSION	82000	[24000]	20750	[38000]	20.8	[6]	ULTRA QUIET FAN SPLASH ATTENUATOR
GFCI	CT-2	ROOF	CONDENSER WATER	COUNTER FLOW	600/CELL 1200 TOTAL	[170]	2	1800	[110]	5.36	[16]	74.7	[24]	95	[35]	85	[29]	2	30	[22]	3	460	1200	VARIABLE	ELECTRIC IMMERSION	82000	[24000]	20750	[38000]	20.8	[6]	ULTRA QUIET FAN SPLASH ATTENUATOR

NOTES

1 SELECTION BASED ON MARLEY #MD5018SKF2L

2 PROVIDE SUMP OVERFLOW ALARM AND WIRE TO BMS

WATER COOLED CHILLER SCHEDULE

	MARK	LOCATION	AREA AND/OR BLDG SERVED	TYPE	CAPACITY TONS	CAPACITY [kW]	MAX kW/TON	MIN COP	MAX IPLV (kW/TON)	EVAPORATOR FLOW GPM	FLOW [L/s]	EWT °F	EWT [°C]	LWT °F	LWT [°C]	MAX WPD FT	MAX WPD [kPa]	FOULING FACTOR	CONDENSER FLOW GPM	FLOW [L/s]	EWT °F	EWT [°C]	LWT °F	LWT [°C]	MAX WPD FT	MAX WPD [kPa]	FOULING FACTOR	ELECTRICAL POWER MCA	PHASE	VOLT	SPEED CONTROL	REMARKS
FUTURE	CH-1	BLDG 22A	ALL BLDGS	CENTRIFUGAL	600	[170]	0.475	-	0.305	1440	[91]	54	[12]	44	[7]	12	[36]	0.00010	1800	[110]	85	[29]	95	[35]	22	[66]	0.00025	575	3	460	VARIABLE	SINGLE POINT POWER CONNECTION
FUTURE	CH-2	BLDG 22A	ALL BLDGS	CENTRIFUGAL	600	[170]	0.475	-	0.305	1440	[91]	54	[12]	44	[7]	12	[36]	0.00010	1800	[110]	85	[29]	95	[35]	22	[66]	0.00025	575	3	460	VARIABLE	SINGLE POINT POWER CONNECTION
	CH-3	BLDG 22A	ALL BLDGS	CENTRIFUGAL	600	[170]	0.475	-	0.305	1440	[91]	54	[12]	44	[7]	12	[36]	0.00010	1800	[110]	85	[29]	95	[35]	22	[66]	0.00025	575	3	460	VARIABLE	SINGLE POINT POWER CONNECTION
	(E)CH-4	BLDG 22	ALL BLDGS	CENTRIFUGAL	560	[160]	0.555	-	-	1339	[84]	54	[12]	44	[7]	0	[ ]	-	1572	[99]	85	[29]	95	[35]	13.7	[41]	-	-	3	460	-	SEE NOTE #3

NOTES

1. SEE SPECIFICATIONS FOR OTHER APPLICABLE ENGINEERING REQUIREMENTS.
2. "MAX kW/TON" AND "MIN COP" SPECIFIED ARE AT DESIGN CONDITION INDICATED.
3. RELOCATE TO NEW LOCATION, SEE 22A-MS-102.
4. SELECTION BASED ON YORK YMC2-S2110AB
5. CH-1 AND CH-3 HAVE SERVICE ACCESS ON LEFT SIDE, CH-2 AND (E) CH-4 HAVE SERVICE ACCESS ON RIGHT SIDE

GOVERNMENT SUPPLIED EQUIPMENT LEGEND

MANUFACTURER	DESCRIPTION	REMARKS	QUANTITY
BELL & GOSSETT	MODEL VSC 8x10 1/28 DOUBLE SUCTION SPLIT CASE PUMP	ROTATION WILL BE "RIGHT HAND" MOTOR FRAME WILL BE 324T/TS	4
VICTAULIC	10" VIC-STRAINER SERIES 730 PUMP SUCTION STRAINER		4
PUROFLUX	PF64-050 AP SEPARATOR PACKAGE		2
SPX COOLING TECHNOLOGIES	MARLY MD5018SCFL2L COOLING TOWER	TWO (2) CELL, INDUCED DRAFT COUNTER FLOW COOLING TOWER	2
VICTAULIC	10" 107 SERIES RIDGED COUPLINGS		12
VICTAULIC	10" VIC-300 BFC, GEAR OPERATED BUTTERFLY VALVES		4
VICTAULIC	10" VIC-CHECK 716 CHECK VALVE		4

NOTES:

1. REVIEW SCHEDULES CAREFULLY. SOME EQUIPMENT IS GOVERNMENT FURNISHED EQUIPMENT, CONTRACTOR INSTALLED (GFCI), WITH THIS EQUIPMENT STORED ON CAMPUS.

2. OTHER EQUIPMENT IS FUTURE. THIS EQUIPMENT WILL HAVE ALL PIPING, ELECTRICAL AND CONTROLS ROUGHED-IN, BUT THE EQUIPMENT ITSELF WILL BE INSTALLED IN THE FUTURE.

3. CHILLER ORIENTATION IS CRITICAL. SEE DRAWING 22A-MS-102 FOR ACCESS DIRECTION.

CHILLER PLANT • PUMP SCHEDULE

	MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	TYPE	CIRCULATING FLUID FLUID	FLOW GPM	FLOW [L/s]	HEAD FT	HEAD [kPa]	NPSH AVAILABLE FT	NPSH AVAILABLE [kPa]	TEMPERATURE °F	TEMPERATURE [°C]	SP GR	MIN % EFF	ELECTRICAL MOTOR NOMINAL POWER HP	NOMINAL POWER [kW]	PHASE	VOLT	MAX RPM	SPEED CONTROL	REMARKS
	CHWP1	CHILLER PLANT	ALL BLDGS	SECONDARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	2160	[140]	100	[1600]	50	[800]	45	[7]	1	76%	100	[75]	3	460	1800	ABB ACH550-01	BELL&GOSSETT #VSX
	CHWP2	CHILLER PLANT	ALL BLDGS	SECONDARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	2160	[140]	100	[1600]	50	N/A	45	[7]	1	76%	100	[75]	3	460	1800	ABB ACH550-01	BELL&GOSSETT #VSX
	CHWP3	CHILLER PLANT	ALL BLDGS	SECONDARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	2160	[140]	100	[1600]	50	N/A	45	[7]	1	76%	100	[75]	3	460	1800	ABB ACH550-01	BELL&GOSSETT #VSX
	CHP-1	CHILLER PLANT	ALL BLDGS	PRIMARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	1440	[91]	30	[480]	20	N/A	45	[7]	1	76%	15	[11]	3	460	1180	NONE	BELL&GOSSETT #VSX
	CHP-2	CHILLER PLANT	ALL BLDGS	PRIMARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	1440	[91]	30	[480]	20	N/A	45	[7]	1	76%	15	[11]	3	460	1180	NONE	BELL&GOSSETT #VSX
	CHP-3	CHILLER PLANT	ALL BLDGS	PRIMARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	1440	[91]	30	[480]	20	N/A	45	[7]	1	76%	15	[11]	3	460	1180	NONE	BELL&GOSSETT #VSX
	CHP-4	CHILLER PLANT	ALL BLDGS	PRIMARY CHILLED WATER	DOUBLE SUCTION SPLIT CASE	CHILLED WATER	1440	[91]	30	[480]	20	-	45	[7]	-	76%	15	[11]	3	460	1150	NONE	BELL&GOSSETT #VSX
GFCI	CWP-1	CHILLER PLANT	ALL BLDGS	CONDENSER WATER	DOUBLE SUCTION SPLIT CASE	CONDENSER WATER	1800	[110]	55	[880]	50	N/A	85	[29]	1	73%	40	[30]	3	460	1800	NONE	BELL&GOSSETT #VSX
GFCI	CWP-2	CHILLER PLANT	ALL BLDGS	CONDENSER WATER	DOUBLE SUCTION SPLIT CASE	CONDENSER WATER	1800	[110]	55	[880]	50	N/A	85	[29]	1	73%	40	[30]	3	460	1800	NONE	BELL&GOSSETT #VSX
GFCI	CWP-3	CHILLER PLANT	ALL BLDGS	CONDENSER WATER	DOUBLE SUCTION SPLIT CASE	CONDENSER WATER	1800	[110]	55	[880]	50	N/A	85	[29]	1	73%	40	[30]	3	460	1800	NONE	BELL&GOSSETT #VSX
GFCI	CWP-4	CHILLER PLANT	ALL BLDGS	CONDENSER WATER	DOUBLE SUCTION SPLIT CASE	CONDENSER WATER	1680	[110]	55	[880]	50	N/A	85	[29]	1	70%	40	[30]	3	460	1800	NONE	BELL&GOSSETT #VSX

AIR SEPARATOR SCHEDULE

MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	AIR SEPARATOR SIZE IN	SIZE [mm]	FLOW GPM	FLOW [L/s]	WPD FT	WPD [kPa]	BUILT-IN STRAINER REQ'D	REMARKS
AS-1	ROOF	CHILLED WATER	FULL FLOW HIGH VELOCITY	14	[350]	4650	[290]	3	[9]	YES	UNIT OPER. WEIGHT = 3120 LBS. BUILT-IN SCREEN IS MICROBUBBLE ELIMINATOR. PROVIDE UNIT WITH STRUCTURAL FOOTINGS FOR ROOF MOUNT

NOTES

1. SELECTION BASED ON SPIROTHERM #14" SPIROVENT

SOLID SEPARATOR SCHEDULE

	MARK	LOCATION	SYSTEM AND/OR SERVICE	TYPE	SIZE IN	SIZE [mm]	CAPACITY GPM	CAPACITY [L/S]	MAX WPD FT	MAX WPD [kPa]	AUTOMATIC VALVE PRESSURE RANGE PSIG	[kPa]	SIDE STREAM	PUMP #	REMARKS
GFCI	SSR-1	ROOF	CONDENSER	CENT	6	[150]	600	[38]	12	[36]	0 to 160	[28 to 410]	NO	[1]	PUROFLUX PF64-050 15 HP PUMP
GFCI	SSR-2	ROOF	CONDENSER	CENT	6	[150]	600	[38]	12	[36]	0 to 160	[28 to 410]	NO	[1]	PUROFLUX PF64-050 15 HP PUMP

COOLING ONLY TWO PIPE FAN COIL UNIT SCHEDULE

MARK	LOCATION	TYPE	FAN AIR FLOW CFM	FAN AIR FLOW [L/s]	EXTERNAL APD IN WG	EXTERNAL APD [Pa]	COOLING REQUIREMENTS MIN SENS CAPACITY BTUH	MIN SENS CAPACITY [W]	MIN TOTAL CAPACITY BTUH	MIN TOTAL CAPACITY [W]	EAT Db °F	EAT Db [°C]	EAT Wb °F	EAT Wb [°C]	CIRCULATING WATER FLOW GPM	FLOW [L/s]	EWT °F	EWT [°C]	WPD FT	WPD [kPa]	RUNOUT SIZE IN	RUNOUT SIZE [mm]	WEIGHT LB	FILTER MERV RATING	FAN MOTOR POWER HP	POWER [W]	PHASE	VOLT	RPM	SPEED CONTROL	REMARKS
FC-1	CHILLER ROOM	HORIZONTAL	2750	[1300]	0.5	[130]	72600	[21000]	73600	[22000]	85	[29]	63	[17]	14.7	0.9	46	[8]	8.4	[25]	1 1/2	[38]	637	8	1	[750]	3	460	1725	NONE	GREENHECK LFC-65-FC-10
FC-2	ELECTRICAL ROOM	HORIZONTAL	4200	[2000]	0.1	[25]	140000	[41000]	141700	[42000]	85	[29]	63	[17]	20.2	1.3	46	[8]	19.3	[58]	1 1/2	[38]	786	8	3	[2200]	3	460	1725	NONE	GREENHECK LFC-85-FC-30

FAN SCHEDULE

MARK	LOCATION	AREA AND/OR BLDG SERVED	SYSTEM AND/OR SERVICE	AIR FLOW CFM	AIR FLOW [L/s]	TSP IN	TSP [Pa]	FAN TYPE	WHEEL	DRIVE	FAN MAX RPM	MOTOR ELECTRICAL NOMINAL POWER BHP	NOMINAL POWER HP	NOMINAL POWER [kW]	PHASE	VOLT	RPM	REMARKS
EF1	ROOF	CHILLER ROOM	REFRIGERANT EMERGENCY PURGE	4200	[2000]	1	[250]	UPBLAST CENTRIFUGAL	BIW	BELT	1062	1.4	1.5	[1]	3	460	1750	GREENHECK CUBE-200-15

100% CONSTRUCTION DOCUMENT SUBMITTAL

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Drawing Title	Project Title	Project Number	
CENTRAL PLANT EQUIPMENT SCHEDULES	VA CENTRAL CALIFORNIA HEALTH CARE SYSTEM NEW BUILDING 22A + CHILLER INFRASTRUCTURE	570-13-300	Office of Construction and Facilities Management
		Building Number: 22A	
Approved: Project Director	Location: FRESNO, CA.	Drawing Number: 22A-MS-601	Department of Veterans Affairs
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