AIR CONDITIONING DESIGN DATA

DESIGN AREA	SUMMER OUTSIDE Db	SUMMER OUTSIDE Wb	SUMMER INSIDE Db	SUMMER INSIDE % HUMIDITY	WINTER OUTSIDE Db	WINTER INSIDE Db	WINTER INSIDE % HUMIDITY
CYSTO 341, O.R. 346, O.R. 340	94	76	68	55	7	75	50
OTHER ROOMS	92	73	78	50	12	72	30
OTHER ROOMS (100% OA)	94	76	78	50	7	72	30

CENTRIFUGAL OR HELICAL ROTARY SCREW CHILLER UNIT

UNIT NO.	LOCATION	MIN. TONS	MAX. KW PER TON	COMPRESSOR MOTOR KW INPUT	COMPRESSOR MOTOR PHASE VOLT.	EVAPORATOR GPM	EVAPORATOR ENT. WATER TEMP. °F	EVAPORATOR LVG. WATER TEMP. °F	EVAPORATOR MAX. P.D.	CONDENSER GPM	CONDENSER ENT. WATER TEMP. °F	CONDENSER LVG. WATER TEMP. °F	CONDENSER MAX. P.D.
29-CCU2	MECH. BLDG. 29	125	0.698	87	3 - 460	250	57	45	5.6	375	85	95	8.0

COOLING TOWER

UNIT NO.	LOCATION	NO. CELLS	GPM EACH CELL	MAX. P.D. FT. WATER	TEMPERATURES °F AIR Wb	TEMPERATURES °F WATER IN	TEMPERATURES °F WATER OUT	FAN MOTOR SPEED	FAN MOTOR NOM. HP	FAN MOTOR PHASE-VOLT.
29-CT2	MECH. BLDG. 29	1	375	8	78	95	85	TWO	7½	3 - 460

CIRCULATING PUMPS

PUMP NO.	LOCATION	SYSTEM	CIRCULATING FLUID FLUID	GPM	PUMP HEAD FT. FLUID	TEMP. °F	Sp. Gr.	% EFF.	TYPE	MOTOR NOM. HP	MOTOR PHASE-VOLT.	MOTOR RPM
1-P1	MECH. ROOM M4-2	HOT WATER	WATER	24	22	180	1.0	47	IN-LINE	1/2	1-120	1750
1-P2	MECH. ROOM M4-2	HOT WATER	WATER	24	22	180	1.0	47	IN-LINE	1/2	1-120	1750
29-P5	BUILDING 29	CHILLER PUMP	WATER	250	18	57	1.0	72	DBL.SUCTION	5	3-460	1150
29-P6	BUILDING 29	CONDENSER WATER	WATER	375	25	85	1.0	77	DBL.SUCTION	7½	3-460	1150
* EX-29-P1	BUILDING 29	CH.W.DIST.	WATER	520	100	57	1.0	79	DBL.SUCTION	20	3-460	1750
* EX-29-P2	BUILDING 29	CH.W.DIST.	WATER	520	100	57	1.0	79	DBL.SUCTION	20	3-460	1750

* EXISTING PUMP EX-29-P1 SHALL BE BALANCED TO ABOVE RATING WHEN OPERATED IN PARALLEL WITH EX-29-P2. EXISTING PUMP EX-29-P2 SHALL BE PROVIDED WITH NEW MOTOR AS SHOWN ABOVE AND IMPELLER SHALL BE TRIMMED TO 10.3" DIAMETER. EXISTING MOTOR SHALL REMAIN THE PROPERTY OF V.A. EACH PUMP, OPERATING ALONE, SHALL PRODUCE 890 GPM AT 73 FT. HEAD. OPERATION OF EX-29-P1 TWO-SPEED MOTOR ON LOWER SPEED SHALL NOT BE REQUIRED.

EXPANSION TANK SYSTEM

UNIT NO.	SYSTEM	APPROX. SYSTEM VOL. GAL.	SYSTEM TEMP. RANGE °F MIN.	SYSTEM TEMP. RANGE °F MAX.	INITIAL PRESS. IN TANK PSIG	PRV FILL PRESS. AT TANK PSIG	MAX. OPER. PRESS. RELIEF VALVE PSIG	MAX. OPER. PRESS. AT TANK PSIG	TANK SIZE GAL.	AIR SEPARATOR SIZE	AIR SEPARATOR GPM	AIR SEPARATOR MAX. P.D.	AIR SEPARATOR BUILT-IN STRAINER REQUIRED	PIPE SIZE TO TANK	COLD WATER FILL SIZE
1-ET1	HEATING	100	140	180	0	12	100	100	15	2"	48	2	YES	1"	3/4"

VIBRATION ISOLATORS FOR EQUIPMENT

UNIT NO.	TYPE ISOLATOR	MIN. STATIC DEFL.	REMARKS	UNIT NO.	TYPE ISOLATOR	MIN. STATIC DEFL.	REMARKS
PUMPS	NONE	-	-	1-RF2	H	1.0"	-
CHILLER	-	-	VIBRATION PADS BY CHILLER MANUFACTURER	1-EF1	H	1.0"	-
COOL. TWR.	NONE	-	-	1-EF2	NONE	-	-
1-AC1	S	1.0"	-	1-EF3	NONE	-	-
1-AC2	S	1.0"	-	1-PEF1	NONE	-	-
1-AC3	S	1.0"	-	1-HE1	NONE	-	-
1-RF1	H	1.0"	-	AIR COMP.	S	1.0"	-

FOUR PIPE FAN COIL UNITS

UNIT SYMBOL	FAN CFM	O.A. CFM	COOLING REQUIREMENTS WITH 45 °F ENTR. WATER TEMP. MIN. SENS. BTUH	MIN. TOTAL BTUH	ENTR. AIR °F Db	ENTR. AIR °F Wb	GPM	MAX. COIL P.D.	RUN-OUT SIZE	HEATING REQUIREMENTS WITH 180 °F ENTR. WATER TEMP. MIN. BTUH	ENTR. AIR °F	GPM	MAX. COIL P.D.	RUN-OUT SIZE	FAN MOTOR NOM. WATTS	FAN MOTOR PHASE VOLT.
A	300	0	5,300	5,600	78	65	0.9	1.4	½"	8,000	72	0.6	0.5	½"	85	1-115
B	400	0	6,800	7,200	78	65	1.2	1.7	½"	14,000	72	0.8	1.4	½"	105	1-115
C	600	0	8,800	10,000	78	65	1.7	3.9	3/4"	16,000	72	1.3	2.3	½"	170	1-115

NOTE: UNITS SHALL PROVIDE THE ABOVE CAPACITIES AT MEDIUM FAN SPEED.

AIR CONDITIONING UNITS (SYSTEMS)

UNIT NO.	LOCATION	AREA SERVED	SUPPLY FAN NO.	CFM SUPPLY	CFM O.A.	FACTORY OR FIELD FABRICATED	INTERNAL INSULATION (YES OR NO)	TYPE OF SYSTEM
1-AC1	MECH. ROOM M1-2	1ST FLR.EX.E.WING	1-SF1	1,540	400	FACTORY	YES	L.P. MULTI-ZONE
1-AC2	MECH. ROOM M4-2	RADIOLOGY & SPD	1-SF2	14,000	4,200	FACTORY	YES	L.P. V.V. REHEAT
1-AC3	MECH. ROOM M4-2	SURGERY	1-SF3	4,760	4,760	FACTORY	YES	L.P. V.V. REHEAT

WATER COILS, COOLING

COIL NO.	SYSTEM	CFM	MAX. FACE VEL. FPM	MAX. S.P. LOSS	ENT. AIR °F Db	ENT. AIR °F Wb	LVG. AIR °F Db	LVG. AIR °F Wb	CIRCULATING FLUID FLUID	GPM	TEMP. IN °F	TEMP. OUT °F	MAX. LOSS FT. FLUID	MIN. BTUH
1-CC1	1-AC1	1,540	410	0.53	84.0	68.0	55.0	54.9	WATER	7.3	45	62.3	2.5	63,400
1-CC2	1-AC2	15,700	460	0.63	86.2	68.8	54.5	54.2	WATER	106.7	45	58.3	12.4	721,600
1-CC3	1-AC3	4,760	410	0.74	*79.4 94.0	66.1 76.0	50.3	50.2	WATER	81.4	45	55.0	8.2	407,700

* COIL PERFORMANCE SHALL BE PROVIDED FOR BOTH ENTERING CONDITIONS; UPPER CONDITIONS ARE NORMAL.

FANS

FAN NO.	LOCATION	CFM	S.P.	FAN TYPE	ARRANGEMENT, INLET, ROTATION & DISCHARGE	WHEEL TYPE	WHEEL MIN. DIA.	MAX. RPM	DRIVE	MOTOR NOM. HP	MOTOR PHASE VOLT.	INLET VANE
1-SF1	1-AC1	1,540	1.9	FS	3, DWDI, CCW, THD	FC	10	1,445	BELT	1½	3 - 200	NO
1-SF2	1-AC2	15,700	3.63	FS	3, DWDI, CCW, THD	FC	2-18	1,142	BELT	20	3 - 200	YES
1-SF3	1-AC3	4,760	4.0	FS	3, DWDI, CCW, THD	FC	15	1,360	BELT	7½	3 - 200	YES
1-RF1	1-AC1	1,140	0.75	ICF	-	AF	12	1,765	BELT	1/2	1 - 115	NO
1-RF2	1-AC2	9,960	1.0	FS	3, DWDI, CCW, THD	FC	20	580	BELT	5	3 - 200	YES
1-EF1	1-AC3	4,530	2.0	FS	3, DWDI, CW, THD	FC	15	910	BELT	3	3 - 200	YES
1-EF2	ROOF	2,550	0.375	RV	-	BI	21	800	BELT	1/3	1 - 115	NO
1-EF3	ROOF	1,810	0.375	RV	-	BI	21	705	BELT	1/4	1 - 115	NO
1-EF4	MECH. RM. M4-2	5,700	0.25	RV	-	BI	30	575	BELT	3/4	3 - 200	NO
1-PEF1	ELEC. E103	1,100	0.25	PEF	-	PROP	16	1,725	DIRECT	1/4	1 - 115	NO

AIR FILTERS, EXTENDED MEDIA AREA TYPE

FILTER NO.	CFM	SYSTEM	TYPE	GRADE	RATED EFF. %	MAX. S.P. DROP INITIAL	MAX. S.P. DROP FINAL	CARTRIDGES NUMBER	CARTRIDGES SIZE	CARTRIDGES ARRANGEMENT
1-PF1	1,540	1-AC1	I	D	30	0.30	0.70	1	24 x 24 x 9	1W x 1H SIDE ACC.
1-PF2	14,000	1-AC2	I	D	30	0.30	0.70	5 5	24 x 24 x 9 24 x 12 x 9	5W x 1½H SIDE ACC.
1-PF3	5,170	1-AC3	I	D	30	0.30	0.70	3	24 x 24 x 9	3W x 1H SIDE ACC.
1 PF4	4,120	1-AC3	I	D	30	0.30	0.70	3	24 x 24 x 9	3W x 1H SIDE ACC.
1-AF1	1,540	1-AC1	II	B	85	0.55	1.00	1	24 x 24 x 30	1W x 1H SIDE ACC.
1-AF2	14,000	1-AC2	II	B	85	0.55	1.00	5 5	24 x 24 x 30 24 x 12 x 30	5W x 1½H SIDE ACC.
1-AF3	4,660	1-AC3	II	A	95	0.65	1.00	2	24 x 24 x 30	2W x 1H SIDE ACC.

AIR FLOW MEASURING DEVICES

UNIT NO.	LOCATION FLOOR	LOCATION DUCT	DUCT SIZE W	DUCT SIZE H	DUCT TYPE	CFM MIN.	CFM MAX.	S.P. DROP	FAN SYSTEM
1-AFM1	4TH	EXHAUST	20"	24"	EXHAUST	2,430	4,120	0.03	1-AC3
1-AFM2	4TH	SUPPLY	28"	18"	SUPPLY	2,790	4,760	0.033	1-AC3

ROTARY AIR TO AIR HEAT EXCHANGER

UNIT NO.	MODE	MIN. SUPPLY AIR EFF. %	SUPPLY AIR SUPPLY CFM	SUPPLY AIR MAX. S.P.	SUPPLY AIR ENT.AIR °F Db	SUPPLY AIR ENT.AIR °F Wb	SUPPLY AIR LVG.AIR °F Db	SUPPLY AIR LVG.AIR °F Wb	EXHAUST AIR EXHAUST CFM	EXHAUST AIR MAX. S.P.	EXHAUST AIR ENT.AIR °F Db	EXHAUST AIR ENT.AIR °F Wb	EXHAUST AIR LVG.AIR °F Db	EXHAUST AIR LVG.AIR °F Wb	SCR POWER SOURCE AMPS	SCR POWER SOURCE PHASE VOLT.
1-HE1	SUMMER	74	4160	0.44	94	76	79.4	66.1	4120	0.37	74.3	61.9	91.1	74.4	N/A	N/A
	WINTER				7	6	55.9	48.0			73.1	57.8	16.7	16.5		

TERMINAL REHEAT UNIT (VARIABLE OR CONSTANT VOLUME)

UNIT SYMBOL	CFM RANGE	INLET DUCT SIZE	MAX. SP WITH DAMPER OPEN	MIN. FACE AREA	HOT WATER HEATING COIL TEMP. AIR °F ENT.	TEMP. AIR °F LVG.	GPM	TEMP. WATER °F IN	TEMP. WATER °F OUT	MIN. BTUH
A	0- 290	5"	0.30	0.83 SQ.FT.	55	83.5	0.5	180	144	8,930
B	300- 390	6"	0.30	0.83 SQ.FT.	55	78.4	0.5	180	141	9,865
C	400- 490	7"	0.25	1.13 SQ.FT.	55	81.3	1.0	180	152	13,920
D	500- 790	8"	0.38	1.13 SQ.FT.	55	73.9	1.0	180	148	16,127
E	800-1190	10"	0.46	1.56 SQ.FT.	55	97.0	4.0	180	153	54,000
F	1200-1590	12"	0.36	2.18 SQ.FT.	55	75.7	2.0	180	144	35,615
G	1600-2000	14"	0.30	3.19 SQ.FT.	55	75.1	2.0	180	136	43,492
H	800-1190	10"	0.46	1.56 SQ.FT.	55	71.6	1.0	180	135	21,497

NOTE: VARIABLE VOLUME BOXES MINIMUM CFM SHALL BE 50% OF MAXIMUM CFM SHOWN ON THE PLANS.

CONVERTORS

CONVERTOR NO.	LOCATION	CIRCULATING FLUID FLUID	GPM	TEMP. IN °F	TEMP. OUT °F	MAX. LOSS FT. FLUID	STEAM PSIG ENTERING CONTROL VALVE	STEAM PSIG ENTERING CONVERTOR	CONTROL VALVE LBS/HR	TRAP LBS/HR
1-C1-A	MECH. ROOM M4-2	WATER	24	140	180	2	30	13	504	756
1-C1-B	MECH. ROOM M4-2	WATER	24	140	180	2	30	13	504	756

STEAM UNIT HEATERS

UNIT NO.	LOCATION	TYPE UNIT	MIN. BTUH	CFM AT 70 °F	ENT. AIR °F	STEAM PSIG	STEAM LBS/HR	TRAP LBS/HR	MOTOR NOM. HP	MOTOR PHASE-VOLT.
1-UH2	MECH. ROOM M4-2	HORIZ.	18,765	224	60	30	19	28	1/25	1 - 115

HOT WATER CABINET UNIT HEATERS AND UNIT HEATERS

UNIT NO.	LOCATION	TYPE UNIT	CFM	MIN. BTUH	ENT. TEMP. °F AIR	ENT. TEMP. °F WATER	GPM	MAX. P.D.	MOTOR WATTS OR HP	MOTOR PHASE VOLT.
1-UH1	ELECTRICAL E103	HORIZ.	280	4200	60	180	.58	.01	1/25 HP	1-115

PRESSURE REDUCING VALVES

PRV NO.	LOCATION	STEAM PRESSURE PSIG INLET	STEAM PRESSURE PSIG OUTLET	CAPACITY LBS/HR REQUIRED	CAPACITY LBS/HR MAXIMUM	BYPASS SIZE	MINIMUM DIMENSIONS AS SHOWN ON STANDARD DETAIL L_1	L_2	L_3
1-PRV 1	BASEMENT	59	40	10,000	10,520	3"	60"	72"	24"
1-PRV 2	BASEMENT	40	5	170	280	½"	10"	30"	6"
1-PRV 3	PENTHOUSE	159	30	1,453	2,060	1"	15"	40"	8"

SAFETY VALVES & RELIEF VALVES

VALVE NO.	SERVICE	FLUID	TEMP. °F	MINIMUM CAPACITY	SET PRESS. PSIG	SIZE & ORIFICE
1-SV1	1-PRV1	STEAM	308	16,332 lbs/hr	50	4" x 6" (P)
1-SV2	1-PRV2	STEAM	287	430 lbs/hr	10	1½" x 1" (G)
1-SV3	1-PRV3	STEAM	308	2,623 lbs/hr	40	1½" x 2½" (J)

STEAM HUMIDIFIERS

HUMID. NO.	SYSTEM	CFM	NUMBER OF MANIFOLDS	ENT. AIR °F Db	ENT. AIR °F Wb	LVG. AIR °F Db	LVG. AIR °F Wb	STEAM PSIG ENTERING ON-OFF VALVE	STEAM PSIG ENTERING CONTROL VALVE	ON-OFF & CONTROL VALVE LBS/HR
1-SH1	1-AC1	1,540	1	52	42	52	46	30	24	13
1-SH2	1-AC2	14,000	1	52	42	52	46	30	24	111
1-SH3	1-AC3	4,760	1	48	33	48	43	30	24	92
1-SH4	1-AC3	850	1	68	57.4	68	61	30	24	9
1-SH5	1-AC3	900	1	59	48.2	59	56.5	30	24	19
1-SH6	1-AC3	1,050	1	59	48.2	59	56.5	30	24	22
1-SH7	1-AC3	960	1	59	48.2	59	56.5	30	24	20

STEAM COILS

COIL NO.	TYPE	SYSTEM	CFM	MAX. FACE VEL. FPM	MAX. S.P. LOSS	TEMP. AIR °F ENT.	TEMP. AIR °F LVG.	MIN. BTUH	STEAM PSIG ENT. CONTROL VALVE	STEAM PSIG ENT. COIL	CONTROL VALVE LBS/HR	TRAP LBS/HR
1-PH1	INTEGRAL FACE AND BYPASS	1-AC1	1540	360	0.06	7	52	74,845	30	10	79	2 @ 118
1-PH2	INTEGRAL FACE AND BYPASS	1-AC2	7000	520*	0.25*	7	52	340,200	30	10	357	2 @ 536
1-PH3	INTEGRAL FACE AND BYPASS	1-AC3	4160	410	0.21	7	48	210,110	30	10	220	2 @ 330
1-HC1	STEAM DISTRI-BUTING	1-AC1	770	260	0.05	52	95	35,760	30	10	38	56

* AT 14,000 CFM

WATER FLOW MEASURING DEVICES

UNIT NO.	LOCATION	SYSTEM	SERVICE	TYPE	CAPACITY GPM	SIZE	REMARKS
29-FM12	BUILDING 29	CWFT	29-CCU2	ORIFICE FLG. OR VENTURI	375	5"	-
29-FM13	BUILDING 29	CH		ORIFICE FLG. OR VENTURI	250	4"	-
1-FM1	MECHANICAL ROOM M1-2	CHR	1-CC1	ORIFICE FLG. OR VENTURI	8.0	1"	-
1-FM2	MECHANICAL ROOM M4-1	CHR	1-CC2	ORIFICE FLG. OR VENTURI	106	3"	-
1-FM3	MECHANICAL ROOM M4-1	CHR	1-CC3	AUTO.BALANC-ING VALVE	82	3"	RANGE 1.3 TO 20 PSI
1-FM4	MECHANICAL ROOM M4-1	CHR	1-CC3	AUTO.BALANC-ING VALVE	40	2"	MAINTAINS MIN. FLOW THRU EX. ACRCU, 2 TO 32 PSI
1-FM5	MECHANICAL ROOM M4-1	HWHR	MAIN DIS-TRIBUTION	ORIFICE FLG. OR VENTURI	48	2"	-
1-FM6	MECHANICAL ROOM M4-1	HWH	FILTER	AUTO.BALANC-ING VALVE	1	3/4"	RANGE 1.3 TO 20 PSI

6-0-2-1803

AS-BUILT

Revisions	Date

LASER KNIGHT HENDRIX & GUEST, P.A.
ARCHITECTS • HEALTH CARE PLANNERS
800 FIRST NATIONAL BANK • FORT SMITH, ARKANSAS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER H. W. GOODMAN, JR. No. 1657

Drawing Title: SCHEDULES	Project Title: CLINICAL ADDITION	Date: OCT 1 1981	Veterans Administration
Approved Project Director	Drawn: D.R.H.	Project No: 564-019	
	Checked: H.W.G.	Building Number: 1	DRAWING NO: H-2
		Location: VAMC FAYETTEVILLE, ARKANSAS	Dwg. 2 of 24

VA FORM 08-6231A, OCT 1978

U.S. GOVERNMENT PRINTING OFFICE : 1980-327-086