



VIBRATION ISOLATION AND SEISMIC RESTRAINT SCHEDULE									
SEE SPECIFICATION SECTION 23 05 41									
Anchorage & Sway Bracing - Mechanical System Components									
Seismic Use Group (I II)					Seismic Design Category (D)				
LISTING OF EQUIPMENT AND SYSTEM COMPONENTS	ANCHORAGE TO FLOORS, ROOFS, ETC.		SWAY BRACING		LOCATION OF PROFESSIONALLY SEALED ANCHORAGE AND SWAY BRACING DETAILS		COMMENTS		
	Not Provided	Provided	Not Provided	Provided	Drawing No. or Spec. Section	Shop Drawings			
AHU ON ROOF		X	X			X			
FAN COIL UNITS	X			X		X			
PIPING	X		X			X			
DUCT	X		X			X			
VAV BOXES	X			X		X			
HVAC GRILLES		X	X						
EXHAUST FAN ON ROOF		X	X			X			

EXHAUST FAN SCHEDULE							
MARK	MODEL NO.	LOCATION	CFM	SP	HP	VOLTS/PH	REMARKS
EF-49	150 ACRUB-HP	D-505 ROOF	600	1.5	1/2	460/3	750
EF-50	195 TCN-HBLE 15	D-505 ROOF	4200	2.5	5	460/3	1715
EF-51	195 ACRUB-HP	D-505 ROOF	3500	1.8	1-1/2	460/3	1420
1. TUBULAR CENTRIFUGAL IN-LINE ARRANGEMENT 9 WITH MIXING BOX. 2. HIGH VELOCITY DISCHARGE CONE. 3. BACKDRAFT DAMPER. 4. DISCONNECT SWITCH. 5. CENTRIFUGAL UPBLAST. 6. BELT DRIVE. 7. VARIABLE FREQUENCY DRIVE. 8. FAN SIZED FOR 10% LEAKAGE. 9. FAN SIZED FOR 10% LEAKAGE / 10% FUTURE. 10. COORDINATE VFD WITH CONTROLS CONTRACTOR. 11. BYPASS PLENUM. 12. SPARK PROOF TYPE.							

VARIABLE FREQUENCY DRIVE							
MARK	EQUIPMENT SERVED	LOCATION	MANUFACTURER	MODEL#	ELECTRICAL VOLTS/Hz/PH	HP	REMARKS
VFD-50S	AC-50 SUPPLY	-	-	-	460/3	(2) 15	1.3,4,5
VFD-50R	AC-50 RETURN	-	-	-	460/3	(2) 5	1.3,4,5
VFD-51S	AC-51 SUPPLY	-	-	-	460/3	(2) 10	1.3,5
VFD-51R	AC-51 RETURN	-	-	-	460/3	(2) 5	1.3,5
VFD-55S	AC-55 SUPPLY	-	-	-	460/3	(2) 15	1.2,3,4
VFD-55R	AC-55 RETURN	-	-	-	460/3	(2) 7-1/2	1.2,3,4
VFD-50E	EF-52 EXHAUST	-	-	-	460/3	5	1.2,3
VFD-51E	EF-52 EXHAUST	-	-	-	460/3	1-1/2	1.2,3
1. REDUNDANT VFD FOR BYPASS OPERATION WITH AUTO CHANGEOVER CAPABILITY IN THE EVENT THAT THE LEAD VFD FAILS. CAPABLE FOR REMOTE MANUAL VFD ALTERNATION. (SUPPLY AND RETURN SET) 2. PROVIDED BY CONTROLS CONTRACTOR. 3. SEE SPECIFICATION SECTION 28 29 11 FOR ADDITIONAL REQUIREMENTS. 4. RATED FOR OUTDOOR USE. UNIT TO BE COORDINATED WITH AHU MANUFACTURER SO VFD IS IN THE AIRSTREAM OF UNIT. 5. VFD PROVIDED WITH OWNER FURNISHED AHU. VFD TO BE INSTALLED, WIRED AND CONTROLLED UNDER THIS PROJECT.							

AIRFLOW MEASURING STATION SCHEDULE									
MARK	TYPE	SYSTEM	SERVED	AIRFLOW CFM (H.O.W.)	MEASURING	DUCT SIZE IN X IN	VELOCITY FPM	REMARKS	
AFMS 50-1	A	AC-50	8,000/1,500	RA	N/A	-	-	1.2	
AFMS 50-2	C	AC-50	16,000/3,000	QA	N/A	-	-	1.2	
AFMS 50-3	A	AC-50	8,000/1,500	SA	N/A	-	-	1.2	
AFMS 51-1	A	AC-51	4,500/1,000	RA	N/A	-	-	1.2	
AFMS 51-2	B	AC-51	9,000/2,000	QA	-	-	-	1.2	
AFMS 51-3	A	AC-51	4,500/1,000	SA	N/A	-	-	1.2	
AFMS 55-1	A	AC-55	8,750/1,500	RA	N/A	-	-	1.2	
AFMS 55-2	C	AC-55	17,500/3,000	QA	-	-	-	1.2	
AFMS 55-3	A	AC-55	8,250/1,500	SA	N/A	-	-	1.2	
AFMS 50S-1	B	AC-50	8,250/1,000	RA 5TH PCCU	-	-	-	1.2	
AFMS 50S-2	B	AC-50	8,250/1,000	RA 6TH MICU	-	-	-	1.2	
TYPE A: THERMAL FAN INLET PROBE. EACH FAN TYPE B: PIVOT FLOW STATION - DUCT TYPE C: PNEUMATIC PIVOT TUBE AT RAHHOODES REMARKS: 1. MAINTAIN CONTROLLABILITY AT BOTH HI AND LOW AIRFLOW RATES PER MANUFACTURERS RECOMMENDATIONS. 2. COORDINATE WITH CONTROLS CONTRACTOR.									

AIR HANDLING UNIT SCHEDULE																															
MARK	SERVES	PHASE RECEIVED	PHASE COMPLETED	TOTAL CFM	OUTSIDE CFM	SUPPLY SP (IN)		RETURN SP (IN)		SUPPLY FAN (2)		RETURN FAN(2)		CLG COIL	CLG COIL	HTG COIL	HUMID IFIER	S.F. 1	S.F. 2	S.F. 1	S.F. 2	R.F. 1	R.F. 1	R.F. 2	R.F. 2	ELEC V/PH	DISC SWITCH	STARTER	REMARKS		
IN	EX	TOT	IN	EX	TSP	DIA.	TYPE	DIA.	TYPE	DIA.	TYPE	DIA.	TYPE	CC-50	CC-50	HC-50	H-50	12.30	15	12.30	15	3.92	5	3.92	5	460/3	VFD	VFD			
AC-50	6TH, 7TH FLR	1*	2B+	16,000(A)	5400(A)	3.33	3.00	6.33	0.06	2.00	2.06	18.25	PLENUM	24.50	PLENUM	CC-51	CC-51	HC-51	H-51	6.88	10	6.88	10	2.84	5	2.84	5	460/3 <td>VFD<td>VFD</td><td>3 THRU 16, 17</td></td>	VFD <td>VFD</td> <td>3 THRU 16, 17</td>	VFD	3 THRU 16, 17
AC-51	4TH SUPPORT	1*	2B+	9000	3600	3.41	3.00	6.41	0.11	2.00	2.11	15.75	PLENUM	15.75	PLENUM	CC-51	CC-51	HC-51	H-51	6.88	10	6.88	10	2.84	5	2.84	5	460/3 <td>VFD<td>VFD</td><td>2 THRU 16, 18, 19</td></td>	VFD <td>VFD</td> <td>2 THRU 16, 18, 19</td>	VFD	2 THRU 16, 18, 19
AC-52																															
AC-53																															
AC-54																															
AC-55	PACU/SICU	2B+	2B+	17,500	5900	3.33	3.00	6.3	0.06	2.00	2.2	18.25	PLENUM	24.50	PLENUM	CC-55	CC-55	HC-55	H-55	12.30	15	13.8	15	3.92	7.5	3.92	7.5	460/3 <td>VFD<td>VFD</td><td>3 THRU 15</td></td>	VFD <td>VFD</td> <td>3 THRU 15</td>	VFD	3 THRU 15
REMARKS: 1. INDOOR AIR HANDLER WITH SOLID DOUBLE WALL CONSTRUCTION, 12" TALL BASE. 2. 4" DEFLECTION SPRING ISOLATION (RESTRAINED) WITH HEIGHT SAVING STRUCTURAL BASE. FRAMING SPACING SHALL ACCOMMODATE THE SHIPPING SPLITS OF UNIT AND MAINTAIN STRUCTURAL STABILITY. 3. REDUNDANT VFD FOR BYPASS OPERATION WITH AUTO CHANGEOVER CAPABILITY IN THE EVENT THAT THE LEAD VFD FAILS. CAPABLE FOR REMOTE/MANUAL VFD ALTERNATION. (SUPPLY AND RETURN SET) 4. SEE ELEVATION AND PLAN ON THIS SHEET. 5. 18" WIDE ACCESS DOORS TO EACH AHU SECTION. 6. UVG FILTERS DOWNSTREAM OF COOLING COIL. WIDE BODY TYPE, WITH ELECTRICAL JUNCTION BOXES AND DISCONNECT SWITCH. UV LIGHTS TO INTERLOCK WITH ACCESS DOORS SO LIGHTS TURN OFF WHEN OPEN. 7. STAINLESS STEEL DRAIN PAN IN COOLING COIL SECTION AND HUMIDIFIER SECTION. AIRFLOW REMARKS: (A) FUTURE TOTAL IS 12750 CFM, OUTSIDE AIRFLOW IS 4250 CFM. * A SEPARATE PROJECT PREVIOUS TO THIS PROJECT.																															
8. MERV-7 PRE-FILTER. 9. MERV-11 PRE-FILTER. 10. MERV-14 AFTER FILTER. 11. CONTROLS TO BE FIELD MOUNTED BY CONTROLS CONTRACTOR. 12. COPPER FIN COILS (HEATING AND COOLING). 13. FANS SIZED FOR LEAKAGE / SAFETY. 14. OUTDOOR AHU WITH SOLID DOUBLE WALL CONSTRUCTION, 14" TALL SEISMIC CURB TO FIT PIPE CURB. 15. OUTDOOR AIRFLOW MEASURING STATION WITH AHU. 16. FOR REFERENCE ONLY. 17. AC-50 WAS PRE-PURCHASED AND CURBED INTO THE ROOF ON A PREVIOUS PROJECT. 18. AC-51 WAS PRE-PURCHASED ON A PREVIOUS PROJECT. UNIT IS LOCATED AT THE VAJC WAREHOUSE ON WINDSOR AVE, JUST NORTH OF BUILDING 1. COORDINATE WITH VA COR. 19. 4" DEFLECTION SPRING ISOLATION (RESTRAINED) WITH HEIGHT SAVING STRUCTURAL BASE FOR LOWER AHU. BY THIS CONTRACTOR. THE 12" BASE IS SPLIT INTO (3) SHIPPING SECTIONS. STRUCTURAL BASE FRAMING TO ACCOUNT FOR THESE SPLITS.																															

VAVR TERM. UNIT SCHEDULE - FOR REFERENCE ONLY				
TAG	AREA SERVED	INLET SIZE	NOMINAL CFM	REMARKS
VAVR 55-01	H416 N CORR	12	400	1
VAVR 55-02	H416 CORR	12	500	1
VAVR 55-03	PACU	20x14	2200	1.2
VAVR 55-04	H416 S CORR	12	400	1
VAVR 55-05	SICU	20x14	2075	1
VAVR 55-06	H421 SR CORR	16	1500	1
VAVR 55-07	H422 SR CORR	16	1500	1
VAVR 55-08	H407 PRE INDUCTION	10	275	1
VAVR 55-09	H424 SR CORR	16	1500	1
1. DDC CONTROLS. 2. 1075 CFM PHASE 2B, SEQUENCE "M1".				

VAVR TERM. UNIT SCHEDULE				
TAG	AREA SERVED	INLET SIZE	NOMINAL CFM	REMARKS
VAVR 50-01	5TH PCCU RETURN	24x16	2000	1.2
VAVR 50-02	6TH MICU RETURN	24x16	2200	1.2
1. DDC CONTROLS. 2. COORDINATE WORK IN INTENSIVE CARE UNIT WITH COR.				

VAV TERMINAL UNIT SCHEDULE (FOR REFERENCE ONLY - DONE ON PHASE 2B PROJECT)															
TAG	SERVES ROOM(S)	INLET SIZE MODEL	MAX. CFM	MIN CLG CFM	HTG. CFM	GPM	EAT °F	LAT °F	EWT °F	LWT °F	MBH	MAX WPD (FT)	MAX APD (IN)	ROWS	REMARKS
VAV 55-01	C437 - PACU SICU CLEAN	6	200	200	200	1.0	54	105.8	160	136.3	11.6	0.2	0.2	2HC	1.2,3,4
VAV 55-02	H416 - CORRIDOR	8	400	400	400	1.1	54	92.4	160	129.1	17.2	0.3	0.2	2	1.2,3,4
VAV 55-03	H416 - CORRIDOR	8	400	400	400	1.1	54	92.4	160	129.1	17.2	0.3	0.2	2	1.2,3,4
VAV 55-04	C427, C428, C429, C430 - PACU 5-8	10	650	650	650	1.7	54	92.4	160	127.4	27.9	0.8	0.2	2	1.2,3,4
VAV 55-05	C431, C432, C433 - SOILED, CLEAN, MEDS	8	350	350	350	1.0	54	92.4	160	125.5	15.0	0.2	0.2	2	1.2,3,4
VAV 55-06	C434, C435 - PACU 9-10	7	300	300	300	1.0	54	92.4	160	121.7	15.0	0.2	0.2	2	1.2,3,5
VAV 55-07	C425 - PACU 1-4	10	600	600	600	1.5	54	92.4	160	124.9	25.7	0.6	0.2	2	1.2,3,5
VAV 55-08	C401 - CONSULT CORRIDOR	10	350	275	275	1.0	54	92.4	160	129.1	17.2	0.3	0.2	2	1.2,3,4
VAV 55-09	C402 - TEMP SICU WAITING	8	225	225	225	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-10	C403 - SICU 11 ISOLATION	8	375	375	375	2.3	54	103.5	160	140.2	22.2	1.0	0.2	2HC	1.2,3,4
VAV 55-11	C415 - SICU CORRIDOR W	10	625	625	625	1.6	54	92.4	160	126.2	26.8	0.7	0.2	2	1.2,3,4
VAV 55-12	C419 - MEDS, WORKROOM	10	725	550	550	1.6	54	92.4	160	122.3	26.0	0.5	0.3	2	1.2,3,4
VAV 55-13	C422 - OFFICE	4	125	125	125	1.0	54	92.4	160	144.9	7.0	0.3	0.03	1HC	1.2,3,4
VAV 55-14	C421 - BREAK ROOM	5	150	150	150	1.2	54	92.4	160	149.3	6.4	0.6	0.04	1HC	1.2,3,4
VAV 55-15	C415 - SICU CORRIDOR E	8	400	400	400	1.1	54	92.4	160	129.1	17.2	0.3	0.2	2	1.2,3,5
VAV 55-16	C414 - SICU 1	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-17	C413 - SICU 2	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-18	C412 - SICU 3	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-19	C411 - SICU 4	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-20	C410 - SICU 5	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-21	C409 - SICU 6	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-22	C408 - SICU 7	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-23	C407 - SICU 8	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-24	C406 - SICU 9	6	250	175	250	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4
VAV 55-25	C405 - INFECT ISOLATION SICU 10	6	225	225	225	1.5	54	103.7	160	138.7	15.5	0.3	0.2	2HC	1.2,3,4

1. VERIFY LEFT OR RIGHT HAND PIPING CONNECTIONS SIDE AND CONTROL BOX SIDE.

2. FRIER FREE INSULATION.

3. FACTORY MOUNTED CONTROLS COORDINATE WITH CONTROL CONTRACTOR.

4. 2WAY HOT WATER ELECTRONIC PCV.

5. 3WAY HOT WATER CONTROL VALVE.

HC = HIGH CAPACITY COIL