DESIGN CONDITIONS

	OUTSIDE		INSIDE	
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH
SUMMER	93	81	75	50%
WINTER	30	-	70	-

NOTES:

1. INSIDE SUMMER DESIGN TEMPERATURE IS +0/-2 DEG. F.
2. INSIDE SUMMER DESIGN RELATIVE HUMIDITY IS +10%.
3. INSIDE WINTER DESIGN TEMPERATURE IS +2/-0 DEG. F.

COOLING ONLY VRF & DUCTLESS SPLIT SYSTEM SCHEDULE

				INDOOR UNIT											OUTDOOR UNIT										
			SEE NOTE 1		COOLING PERFORMANCE						ELECTRICAL DATA					AMBIENT TEMP.							ELECTRICAL DATA			
					EAT		LAT									SUMMER		WINTER								
MARK	TYPE	LOCATION	ARI COOLING CAPACITY (MBH)	AIRFLOW (CFM)	DB (DEG F)	WB (DEG F)	DB (DEG F)	WB (DEG F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	VOLTS	PHASE	Hz	FLA	MARK	DB (DEG F)	WB (DEG F)	DB (DEG F)	COMPRESSOR QTY	CONDENSER FAN QTY	ARI COOLING CAPACITY (MBH)	MIN. SEER	UNIT MCA	VOLTS	PHASE	Hz
DAC 1-1	WALL MOUNT	103 UNIV. SERVER RM.	12	450	70.3	58.1	54.5	52.6	8.1	7.7	208	1	60	0.5											
DAC 1-2	WALL MOUNT	105 PROGRAM SERVER	12	450	70.3	58.1	54.5	52.6	8.1	7.7	208	1	60	0.5	DCU-1	93	81	30	1	1	48	17	27	208	1	60
DAC 1-3	WALL MOUNT	205 PROGRAM SERVER	24	850	70.2	57.1	54.5	50.5	15.2	14.9	208	1	60	0.5											
DAC 2	WALL MOUNT	104 ELEV. MACH. RM.	12	450	70.3	58.1	54.5	52.6	8.1	7.7	208	1	60	0.5	DCU-2	93	81	30	1	1	12	17	9	208	1	60

NOTES:

1. MANUFACTURER RATED CAPACITY AT ARI STANDARD CONDITIONS.
2. PROVIDE UNIT WITH LOW AMBIENT CONTROLS FOR OPERATION DOWN TO 20 DEG F.
3. REFRIGERANT PIPING SIZE, ROUTING, AND CONFIGURATION SHALL BE AS RECOMMENDED BY MANUFACTURER OF AIR CONDITIONING UNIT. INSULATE ENTIRE SUCTION LINE WITH MINIMUM 3/4" THICK UNICELLULAR INSULATION. PROTECT INSULATION EXPOSED TO WEATHER WITH STAINLESS STEEL JACKET.
4. PROVIDE COMPRESSOR WITH ANTI-SHORT CYCLE CONTROLS AND TIME DELAY ON COMPRESSOR RESTART.
5. PROVIDE OUTDOOR UNIT WITH CORROSION PROTECTION FOR COILS AND CASINGS.
6. BASIS OF DESIGN IS MITSUBISHI.
7. PROVIDE WITH CONDENSATE PUMP.

VARIABLE VOLUME AIR HANDLING UNIT SCHEDULE

	FAN DATA													CHILLED WATER COIL DATA												
									FAN MOTOR									AIR SIDE				WATER SIDE				
MARK	TYPE	MAX. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	HEATING AIRFLOW (CFM)	OA AIRFLOW (CFM)	MIN OA AIRFLOW (CFM)	ESP IN W.G.	NO. OF FAN(S)	FAN POWER HP (EA.)	TOTAL FAN POWER HP	VOLTS	PHASE	Hz	MAXIMUM FACE VELOCITY (FPM)	COOLING TOTAL CAPACITY (MBH)	COOLING SENSIBLE CAPACITY (MBH)	COOLING LATENT CAPACITY (MBH)	EAT DB (DEG. F)	EAT WB (DEG. F)	LAT DB (DEG. F)	LAT WB (DEG. F)	EWT (DEG. F)	LWT (DEG. F)	FLOW RATE (GPM)	VALVE TYPE	MAX. WATER PD (FT)
AHU-1	HDT	6,495	1,960	4,865	1,530	165	2.50	2	5.0	10	460	3	60	500	252.1	184.8	67.3	77.7	62.4	50.0	50.0	44	59	33.6	2-WAY	15
AHU-2	HDT	18,225	5,575	11,110	3,440	2,240	3.50	4	10	40	460	3	60	500	595.1	445.0	150.1	77.7	62.3	51.0	50.8	44	59	79.3	2-WAY	15
AHU-3	HDT	6,775	2,055	4,135	1,025	825	3.00	4	3.0	12	460	3	60	500	212.0	143.2	68.8	75.6	62.3	51.0	50.8	44	59	28.3	2-WAY	16

NOTES:

1. MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS. EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH CASING COILS, INITIAL FILTERS, AND FILTER HOUSINGS. EXTERNAL PRESSURE DROP DOES INCLUDE PRESSURE DROP THROUGH PRE-FILTER, FINAL FILTER, AND HOT WATER COIL LOCATED DOWNSTREAM OF AHU.
2. PROVIDE EXTENDED LUBE LINES TO OUTSIDE OF UNIT CASING ON THE SIDE WHICH IS ACCESSIBLE FOR SERVICING ON ALL UNITS.
3. ADJUST LOCATION OF UNITS IN MECHANICAL ROOMS AS REQUIRED FOR SERVICE AS RECOMMENDED BY MANUFACTURER. COORDINATE ACCESS DOOR LOCATION FOR UNIT ACCESS.
4. PIPE ALL CONDENSATE FROM UNITS TO DRAIN WITH TRAP. PROVIDE PADS AND BASE RAILS OF SUFFICIENT HEIGHT TO ENABLE CORRECT TRAP DEPTH. TRAP CONDENSATE PIPING AT UNIT AND ROUTE TO POINT INDICATED.
5. NEW UNITS MAY REQUIRE DISASSEMBLY AND REASSEMBLY IN THE MECHANICAL ROOM. CONTRACTOR SHALL COORDINATE WITH SPECIFIC EQUIPMENT PROVIDER AND INCLUDE FACTORY SPLIT REQUIREMENTS IN BID ACCORDINGLY.
6. AIR HANDLER FILTERS SHALL BE AS PER ASHRAE 62.1 . PROVIDE DIFFERENTIAL PRESSURE GAUGE FOR FILTER. PROVIDE MERV 8 PRE FILTERS AND MERV 13 FINAL FILTERS.
7. INTERLOCK AHU'S TO ENABLE FAN SHUTDOWN UPON AN INDICATION OF ALARM CONDITION BY THE BLDG. FIRE ALARM SYSTEM. SEE CONTROLS SEQUENCE OF OPERATIONS.
8. HDT - HORIZONTAL DRAW THRU
9. PROVIDE WITH UVC (ULTRA VIOLET C-BAND) DISINFECTION SYSTEM ON DISCHARGE SIDE OF CHILLED WATER COIL. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
10. CONTROL VALVE Cv TO BE CALCULATED AT THE SCHEDULED WATER FLOW WITH A VALVE AUTHORITY OF 0.5 BY CONTROLS SUB-CONTRACTOR.
11. PROVIDE SINGLE POINT POWER CONNECTION FOR AIR HANDLER (INCLUDING LIGHTS, UV LIGHTS, FANS, ETC.).
12. VAV - VARIABLE AIR VOLUME UNIT (MULTIPLE ZONES) - VFD SHALL BE OWNER FURNISHED, CONTRACTOR INSTALLED.
13. BASIS OF DESIGN IS JOHNSON CONTROLS - YORK.

BLOW-THROUGH COIL UNIT SCHEDULE

					COOLING COIL DATA								HEATING COIL DATA							ELECTRICAL DATA	
								ENT. AIR TEMP. (DEG F)	LVG AIR TEMP. (DEG F)	WATER TEMP. (DEG F)				AIR TEMP. (DEG F)		WATER TEMP. (DEG F)					
MARK	TYPE	FAN CFM	OA CFM	EXT. STATIC PRESS. (IN. W.C.)	MIN. TOTAL CAP. (MBH)	MIN. SENSIBLE CAP. (MBH)	MIN. LAT CAP. (MBH)	DB/WB	DB/WB	EWT	LWT	GPM	MAX. PRESS. DROP (FT. W.C.)	MIN. TOTAL CAP. (MBH)	EAT	LAT	EWT	LWT	GPM	MAX. PRESS. DROP (FT. W.C.)	SA FAN POWER (HP)	V/PH/HZ
BCU-1	HDT	420	0	0.5	10.6	10.6	0.0	73.7/57.2	51.0/46.6	44	59	1.5	10	11.4	65	90	180	150	0.8	10	0.5	115/1/60
BCU-2	HDT	2100	0	0.5	56.3	56.3	0.0	73.7/57.2	49.19/46.76	44	57	8.7	10	57.0	65	90	180	150	3.8	10	1	115/1/60
BCU-3	HDT	2100	0	0.5	56.3	56.3	0.0	73.7/57.2	49.19/46.77	44	57	8.7	10	57.0	65	90	180	150	3.8	10	1	115/1/60
BCU-4	HDT	2100	0	0.5	56.3	56.3	0.0	73.7/57.2	49.19/46.78	44	57	8.7	10	57.0	65	90	180	150	3.8	10	1	115/1/60
BCU-5	HDT	2100	0	0.5	56.3	56.3	0.0	73.7/57.2	49.19/46.79	44	57	8.7	10	57.0	65	90	180	150	3.8	10	1	115/1/60

NOTES:

1. MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS. EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH CASING COILS, FILTERS, AND FILTER HOUSINGS.
2. PIPE ALL CONDENSATE FROM UNITS TO DRAIN WITH TRAP. TRAP CONDENSATE PIPING AT UNIT AND ROUTE TO NEAREST FLOOR DRAIN OR HUB DRAIN.
3. CHILLED WATER CONTROL VALVES SHALL BE TWO WAY TYPE. HOT WATER CONTROL VALVES SHALL BE OF TWO-WAY TYPE.
4. PROVIDE WITH FACTORY MOUNTED DISCONNECT. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
5. HDT - HORIZONTAL DRAW THRU
6. PROVIDE WITH CONCEALED CONDENSATE PUMP. COORDINATE POWER WITH ELECTRICAL.
7. FURNISH AND FIELD INSTALL SECONDARY DRAIN PAN FLOAT VALVE. PROVIDE ALARM POINT TO DDC PANEL.
8. WIRE VALVE INTO LOW VOLTAGE POWER SUPPLY TO SHUT UNIT DOWN IF THE CONDENSATE PUMP FAILS.
9. BASIS OF DESIGN IS YORK/JOHNSON CONTROLS.

PUMP SCHEDULE

			PERFORMANCE DATA					ELECTRICAL DATA			REMARKS
MARK	SERVICE	TYPE	FLOW (GPM)	HEAD (FT. W.C)	MIN. EFF. (%)	MAX. SPEED (RPM)	MIN. POWER HP	VOLTS	PHASE	Hz	
CHWP-1	CHILLED	IL	221	60	65%	1,760	7.5	460	3	60	PROVIDE WITH VFD, SEE NOTE 7
CHWP-2	CHILLED	IL	221	60	65%	1,760	7.5	460	3	60	PROVIDE WITH VFD, SEE NOTE 7
HWP-1	HOT WATER	IL	68	50	45%	1,760	5	460	3	60	PROVIDE WITH VFD, SEE NOTE 7
HWP-2	HOT WATER	IL	68	50	45%	1,760	5	460	3	60	PROVIDE WITH VFD, SEE NOTE 7

NOTES:

1. IL - CLOSED COUPLED VERTICAL INLINE
2. SEE DETAIL 8/M5.01
3. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
4. BASIS OF DESIGN IS TACO.
5. CHW PUMPS ARE SIZED TO INCLUDE 80 GPM FOR FUTURE 3RD FLOOR BUILDOUT.
6. HW PUMPS ARE SIZED TO INCLUDE 25 GPM FOR FUTURE 3RD FLOOR BUILDOUT.
7. VFDS SHALL BE OWNER PROVIDED, CONTRACTOR INSTALLED. COORDINATE WITH OWNER.

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MECHANICAL SCHEDULES

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