

	SUPPLY AIR DIFFUSER		AFF	ABOVE FINISH FLOOR
	RETURN AIR GRILLE		AHU	AIR HANDLING UNIT
	EXHAUST AIR GRILLE		B.D.	BOTTOM OF DUCT
	PERFORATED RETURN AIR PANEL		BHP	BRAKE HORSEPOWER
	DIRECTIONAL AIR FLOW		BTU	BRITISH THERMAL UNITS
	MANUAL VOLUME DAMPER		CFM	CUBIC FEET PER MINUTE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN		CONN.	CONNECTION
	RETURN AIR DUCT UP & DOWN		CONT.	CONTINUATION
	EXHAUST AIR DUCT UP & DOWN		CW	DOMESTIC COLD WATER
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN		DB	DRY BULB
	RETURN AIR DUCT UP & DOWN		DIA.	DIAMETER
	EXHAUST AIR DUCT UP & DOWN		DIST.	DISTRIBUTION
	VAV TERMINAL UNIT		EA	EXHAUST AIR
	VVT TERMINAL UNIT		EDB	ENTERING DRY BULB TEMPERATURE
(E)	EXISTING		EWB	ENTERING WET BULB TEMPERATURE
	CONNECT TO EXISTING		EWT	ENTERING WATER TEMPERATURE
① AC-4	THERMOSTAT OR TEMP. SENSOR		FF	FINISH FLOOR
	NOTE		FIXT.	FIXTURE
	EQUIPMENT DESIGNATOR		FPM	FEET PER MINUTE
	BALL VALVE		FPS	FEET PER SECOND
	GATE VALVE		FT.	FEET / FOOT
	CHECK VALVE		GA.	GAUGE
	BALANCING VALVE		GPM	GALLONS PER MINUTE
	THERMOMETER		H	HEIGHT
	DIRECTION OF FLOW		HP	HORSEPOWER
	PUMP		I.D.	INSIDE DIAMETER
	STRAINER		IN.	INCHES
	PRESSURE GAUGE		L	LENGTH
	PETE'S PLUG		LBS.	POUNDS
	DOUBLE CHECK ASSEMBLY		LDB	LEAVING DRY BULB
	PRESSURE REDUCING VALVE		LWB	LEAVING WET BULB
	UNION		LWT	LEAVING WATER TEMPERATURE
	2-WAY CONTROL VALVE		MAX.	MAXIMUM
	3-WAY CONTROL VALVE		MBH	THOUSANDS OF BTUS PER HOUR
	CAP		MIN.	MINIMUM
	SMOKE DETECTOR		NC	NOISE CRITERIA
	MOTORIZED DAMPER		N.C.	NORMALLY CLOSED
			N.I.M.	NOT IN MECHANICAL
			NO.	NUMBER
			N.O.	NORMALLY OPEN
			O.A.	OUTSIDE AIR
			P	PERSON
			PSI	POUNDS PER SQUARE INCH
			P/T	PRESSURE / TEMPERATURE
			R.A.	RETURN AIR
			RECT.	RECTANGULAR
			REQ'D	REQUIRED
			S.A.	SUPPLY AIR
			S.P.	STATIC PRESSURE
			SQ.	SQUARE
			TEMP.	TEMPERATURE
			TYP.	TYPICAL
			VAV	VARIABLE AIR VOLUME
			W	WIDTH
			WB	WET BULB
			WPD	WATER PRESSURE DROP
			ø	DIAMETER
				(E) EXISTING
		- - - - -		(D) DEMOLISH
		— — — — —		NEW WORK
		—— HWS ——		(HWS) HEATING WATER SUPPLY
		—— HWR ——		(HWR) HEATING WATER RETURN
				FIRE DAMPER
				FIRE / SMOKE DAMPER
				SMOKE DAMPER
		<u>SEISMIC BRACING</u>		
				LATERAL BRACING
				LONGITUDINAL BRACING
				LONGITUDINAL & LATERAL BRACING

OUTDOOR MARK NUMBER	
SYSTEM	
TYPE	VRV HEAT PUMP W/HEAT RECOVERY
RATED COOLING CAPACITY	222,000 BTUH
RATED HEATING CAPACITY	240,000 BTUH
EFFICIENCY IEER	19.2
EFFICIENCY /COP @ 47F	3.6
REFRIGERANT	410 A
MAX PIPING LENGTH	230
MAX PIPING HEIGHT	49.0
VOLTS-PHASE	208/3
MCA/MOP	93/115
COMPRESSOR	INVERTER
WEIGHT	1500
BASIS OF DESIGN - DAIKIN	REYQ240TTJU

MARK NUMBER	EF 6A	EF 7A	EF 8A	EF 9A	EF 9B
TYPE	EXP-PROOF UTILITY SET	EXP-PROOF UTILITY SET	CABINET IN-LINE	EXP-PROOF UTILITY SET	UTILITY SET
SYSTEM	LAB 6-HOOD	LAB 7-HOOD	LAB 8	LAB 9-HOOD	WEIGH ROOM
CFM	1800*	1800*	400	1800*	280
TOTAL SP. (IN H2O)	0.75"	0.75"	0.50"	0.75"	1.75"
RPM	1557	1557	827	1557	2570
MOTOR WATTS OR HP	3/4 HP	3/4 HP	121 WATTS	3/4 HP	1/2 HP
CONTROLLED BY	SASH SENSOR**	SASH SENSOR**	CONTINUOUS	SASH SENSOR**	CONTINUOUS
INTERLOCK WITH	-	-		-	-
FAN SPEED CONTROLLER	YES, VFD**	YES, VFD**	YES *	YES, VFD**	-
WHEEL TYPE	BI	BI	FC	BI	BI
BACK DRAFT DAMPER	YES	YES	YES	YES	NO
ISOLATION	SPRING RAILS	SPRING RAILS	RIS	SPRING RAILS	R.I.S.
DESIGN WEIGHT (LBS)	185	185	35	185	110
MAX. SONES	18.6	18.6	1	18.6	17
POWER (VOLTS/PHASE/HZ)	208/3	208/3	208/3	208/3	115/1
BASIS OF DESIGN:	TWIN CITY BCV-135	TWIN CITY BCV-135	GREENHECK CSP-A700	TWIN CITY BCV-135	GREENHECK USF-306

* - PROVIDE WITH SOLID STATE SPEED CONTROL NEAR FAN FOR BALANCING.
 ** - FAN TO RUN AT 50% SPEED WHEN HOOD IS CLOSED AND 100% WHEN SASH IS OPEN.
 WHEN SASH IS OPEN.

TAG #	TYPE	INSTALLATION	Heat Pump Unit	BOD: DAIKIN	Airflow (CFM)	Outside Air (CFM)	ESP ("W.G.)	Rated TOTAL Cooling (BTUH)	Rated Heating (BTUH)	AUX HEAT (KW)	Weight (LBS)	Electrical V/PH	MCA/MOCP	MOTOR HP	Notes
FC-B1	AHU	HORIZONTAL	HP-B	FXTQ24	760	135	0.50"	24,000	27,000	10	150	208/1	46.5/50	3/4	1,2
FC-B2	AHU	HORIZONTAL	HP-B	FXTQ36	1105	80	0.50"	36,000	40,000	10	150	208/1	46.5/50	3/4	1,2
FC-B3	AHU	HORIZONTAL	HP-B	FXTQ24	785	100	0.50"	24,000	27,000	10	150	208/1	46.5/50	3/4	1,2
FC-B4	AHU	HORIZONTAL	HP-B	FXTQ36	1125	145	0.50"	36,000	40,000	10	150	208/1	46.5/50	3/4	1,2
FC-B5	AHU	HORIZONTAL	HP-B	FXTQ18	600	60	0.50"	18,000	20,000	5	125	208/1	29.9/30	1/2	2
FC-B6	AHU	HORIZONTAL	HP-B	FXTQ18	600	35	0.50"	18,000	20,000	5	125	208/1	29.9/30	1/2	2
FC-B7	WALL MOUNT	-	HP-B	FXAQ18	500/400	0	-	18,000	20,000	0	35	208/1	0.5/15	-	2
FC-B8	AHU	HORIZONTAL	HP-B	FXTQ48	1600	400	0.50"	48,000	54,000	10	170	208/1	46.5/50	3/4	1,2

Notes

1. CONNECT OSA DUCT TO RA PLENUM
2. PROVIDE UNIT WITH CONDENSATE PUMP

MARK NUMBER	BS B1	BS B2	BS B3
TYPE	MULTI PORT	SINGLE PORT	SINGLE PORT
VRV SYSTEM	HP-B	HP-B/FC-7	HP-B/FC-8
MAX. CONNECT LOAD	216,000 BTUH	36000 BTUH	60000 BTUH
HEIGHT	11.75"	8.125"	8.125"
WIDTH	19"	15.25"	15.25"
LENGTH	22"	13"	13"
WEIGHT	70	30	30
POWER VOLTS/HZ/PHASE	208-230/60/1	208-230/60/1	208-230/60/1
MCA	0.60	0.10	0.10
MOP	15	15	15
CONDENSATE	NONE	NONE	NONE
DAIKIN MODEL	BS6Q54TVJ	BSQ36TVJ	BSQ60TVJ
# OF PORTS	6	1	1
HEAT RECOVERY	YES	YES	YES

AMBIENT TEMPS:
SUMMER: 95°F/64°F
WINTER: -5°F

DESIGN SPACE TEMPS:
ROOM TEMP TEMP = 68°F - 75°F
OFF HOURS TEMP SET POINT: (ADJUSTABLE, COORD. WITH OWNER)

SPACE PRESSURE:
LABS 1, 6, 7, 8, 9: -0.05" W.C. WITH RESPECT TO ADJACENT CORRIDOR.
WEIGHT ROOM : -0.05" W.C.

AIRFLOWS:
1 CFM/SQFT EXHAUST/OSA IS CODE MINIMUM.
FUME HOOD: 1800 CFM EXHAUST

BOTTOM DUCT
 TOP DUCT
 DUCT CROSSING
 TURNING VANES IN ALL SQUARE ELLS AND TEES
 LINED DUCTWORK
 RECT. TO RECT.
 RECT. TO ROUND
 SPECIFICATION REFERENCE
 SA = SUPPLY DIFFUSER
 RA = MATCHED RETURN
 EXH = EXH GRILLE
 TRANSITIONS
 8"ø SA 200 CFM
 ARROWS INDICATE DIRECTION OF AIR FLOW
 CEILING DIFFUSER/GRILLE
 FLEX DUCT - MAX 48"
 BRANCH DUCT
 SPIN-IN FITTING WHERE APPLICABLE. GENFLEX SM-1DEL (WITH DAMPER AND 45° EXTRACTOR) OR APPROVED EQUAL.
 MANUAL VOLUME DAMPER
 MAIN DUCT
 AIR TERMINALS
 ROUND DUCT W/ CONICAL FITTING
 ROUND DUCT TEE
 ROUND DUCT TRANSITION W/ SPIN-IN FITTING OFF TOP OF RECTANGULAR MAIN
 MANUAL VOLUME DAMPER
 WALL
 BALANCED AIRFLOW, CFM.
 CEILING DIFFUSER/GRILLE
 FLEX DUCT - MAX 48"
 BRANCH DUCT
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DRAWN/ CHECKED

ISSUED:

MECHANICAL DEMO PLAN

M6.1