



DAVIS PARTNERSHIP ARCHITECTS

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MEP PROJECT 16126
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Issuance Date

SCHEMATIC DESIGN 06/02/16

Revisions Date No.

Project Information

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Sheet Information

Sheet Title:

MECHANICAL LEGEND & SCHEDULES

Sheet Number:

M0.00

MEP Project 16126

MECHANICAL LEGEND

NOT ALL ITEMS LISTED BELOW ARE USED ON THIS SET OF MECHANICAL DRAWINGS

DOUBLE LINE DUCTWORK		GENERAL	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	RECTANGULAR SUPPLY AIR DUCT UP		MECHANICAL/ELECTRICAL EQUIPMENT DESIGNATION
	RECTANGULAR SUPPLY AIR DUCT DOWN		REMOVE EXISTING
	RECTANGULAR RETURN AIR / EXHAUST DUCT UP		UNDERCUT DOOR
	RECTANGULAR RETURN AIR / EXHAUST DUCT DOWN		CONNECT NEW TO EXISTING
	ROUND DUCT UP		
	ROUND DUCT DOWN		
	BRANCH DUCT 45° OFFSET		
	RECTANGULAR DUCT ELBOW WITH TURNING VANES		
	RADIUS ELBOW RECTANGULAR/ROUND DUCT		
	DUCT TRANSITION		
	FLEX CONNECTION		
PIPING			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PC PUMPED CONDENSATE		ARROW IN LINE INDICATES DIRECTION OF FLOW
	D EQUIPMENT DRAIN		INDICATES PIPE SLOPE DOWN
	RL REFRIGERANT LIQUID		BOTTOM PIPE CONNECTION
	RS REFRIGERANT SUCTION		PIPING UP
			PIPING DOWN
			PIPING CAP OR PLUG
			PUMP
PIPING SYMBOLS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	RECTANGULAR DUCT ELBOW WITH TURNING VANES		RADIUS ELBOW RECTANGULAR/ROUND DUCT
	DUCT TRANSITION		DUCT SPIN-IN FITTING
	FITTING W/DAMPER		FLEXIBLE DUCT
CONTROL DEVICES AND DAMPERS			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	HUMIDISTAT		FIRE DAMPER
	PRESSURE SENSOR		COMBINATION FIRE AND SMOKE DAMPER
	SENSOR		MANUAL VOLUME DAMPER
	WALL MOUNTED THERMOSTAT		W/LOCKING QUADRANT
	UNIT MOUNTED THERMOSTAT		MOTORIZED DAMPER
	SWITCH		
ABBREVIATIONS			
AF	ABOVE FINISHED FLOOR	MC	MECHANICAL CONTRACTOR
AP	ACCESS PANEL	NI	NEW
C	COMMON	NC	NORMALLY CLOSED
(E)	EXISTING	NO	NOT IN CONTRACT
EC	ELECTRICAL CONTRACTOR	NO	NORMALLY OPEN
ELEV	ELEVATION	NTS	NOT TO SCALE
EQ	EQUIPMENT	OA	OUTSIDE AIR
GC	GENERAL CONTRACTOR	PRV	PRESSURE REDUCING VALVE
		RA	RETURN AIR
		RE	REFER TO
		SA	SUPPLY AIR
		SRV	SAFETY RELIEF VALVE
		TOC	TEMPERATURE CONTROL CONTRACTOR
		TYP	TYPICAL

NOTE:

AIR COOLED CONDENSING UNIT SCHEDULE (COOLING ONLY)

SYMBOL	MANUFACTURER	MODEL	MATCHED SYSTEM COMPONENT	NOMINAL TONS	MBH COOLING TOTAL @ S.L.	NUMBER OF COMPRESSORS	SUCTION TEMP (F)	LIQUID TEMP (F)	AMB TEMP (F)	ELECTRICAL			SEER	DIMENSIONS LxWxH (IN)	WEIGHT (LBS)	REMARKS
										VOLTAGE/PHASE	MCA	MOCP				
UFCU-1.5	DAIKIN	RZ2R1P/UJ	FCU-1.5	1.5	18	1	X	X	X	208V1	16.5	20	X	X	150	1, 2
UFCU-2	DAIKIN	RZ2R2P/UJ	FCU-2	2	24	1	X	X	X	208V1	16.5	20	X	X	150	1, 2
UFCU-2.5	DAIKIN	RZ2R3P/UJ	FCU-2.5	2.5	30	1				208V1	16.5	20			150	

REMARKS:
1. ACCEPTABLE MANUFACTURERS: DAIKIN, TRANE, CARRIER, LENOX, YORK
2. PROVIDE WITH MINIMUM 14" TALL ROOF CURB
3. PROVIDE WITH MANUFACTURER SIZED REFRIGERANT LINE SET

AIR COOLED CONDENSING UNIT SCHEDULE (HEAT PUMP)

SYMBOL	MANUFACTURER	MODEL	MATCHED SYSTEM COMPONENT	NOMINAL TONS	MBH COOLING TOTAL @ S.L.	NUMBER OF COMPRESSORS	SUCTION TEMP (F)	LIQUID TEMP (F)	AMB TEMP (F)	ELECTRICAL			SEER	DIMENSIONS LxWxH (IN)	WEIGHT (LBS)	REMARKS
										VOLTAGE/PHASE	MCA	MOCP				
UFCU-1.5	DAIKIN	RZ2R1P/AJ	FCU-1.5	1.5	18	1	X	X	X	208V1	16.5	20	X	X	150	1, 2
UFCU-2	DAIKIN	RZ2R2P/AJ	FCU-2	2	24	1	X	X	X	208V1	16.5	20	X	X	150	1, 2
UFCU-2.5	DAIKIN	RZ2R3P/UJ	FCU-2.5	2.5	30	1				208V1	16.5	20			150	

REMARKS:
1. ACCEPTABLE MANUFACTURERS: DAIKIN, TRANE, CARRIER, LENOX, YORK
2. PROVIDE WITH MINIMUM 14" TALL ROOF CURB
3. PROVIDE WITH MANUFACTURER SIZED REFRIGERANT LINE SET

FAN COIL UNIT SCHEDULE (W/ELECTRIC REHEAT)

SYMBOL	MANUFACTURER	MODEL	LOCATION	ARRANGEMENT	FAN DATA			S.P.	SERVICE	COIL DATA				ELECTRICAL				APPROX. OPER. WT. (LBS)	REMARKS				
					TOTAL CFM	O.A. CFM	N.W.C. IN W.C.			ENTERING AIR TEMP (F)	LEAVING AIR TEMP (F)	DB (F)	WB (F)	DB (F)	WB (F)	COIL MODEL	KW			MCA	MOCP	STEPS	VOLT/PHASE
UFCU-1.5	DAIKIN	FBQ18P/UJ	UNIT	HORIZONTAL	580	40	0.4	HEATING	X	X	X	X	HKS 20XC	2	21	25	1	208V1	1.6	15	350	80	1, 2, 3, 4, 5
									COOLING	X	X	X	X										
UFCU-2	DAIKIN	FBQ24P/UJ	UNIT	HORIZONTAL	620	40	0.4	HEATING	X	X	X	X	HKS 26XC	3	30	30	1	208V1	1.8	15	350	80	1, 2, 3, 4, 5
									COOLING	X	X	X	X										
UFCU-2.5	DAIKIN	FBQ30P/UJ	UNIT	HORIZONTAL	760	40	0.4	HEATING	X	X	X	X	HKS 36XC	5	36	40	1	208V1	2.3	15	350	80	1, 2, 3, 4, 5
									COOLING	X	X	X	X										

REMARKS:
1. ACCEPTABLE MANUFACTURERS ARE AIRTHERM, AMERICAN AIR FILTER, BUFFALO, CARRIER, DAIKIN, MCQUAY, TEMTROL, TRANE, YORK
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
3. REFRIGERANT TYPE TO BE R-410A
4. ELECTRIC COIL TO BE SUPPLIED SEPARATELY
5. UNIT CFM/COIL CAPACITIES BASED ON MEDIUM SPEED OPERATION.

FAN COIL UNIT SCHEDULE (HEAT PUMPS)

SYMBOL	MANUFACTURER	MODEL	LOCATION	ARRANGEMENT	FAN DATA			S.P.	SERVICE	COIL DATA				ELECTRICAL				APPROX. OPER. WT. (LBS)	REMARKS				
					TOTAL CFM	O.A. CFM	N.W.C. IN W.C.			ENTERING AIR TEMP (F)	LEAVING AIR TEMP (F)	DB (F)	WB (F)	DB (F)	WB (F)	COIL MODEL	KW			MCA	MOCP	STEPS	VOLT/PHASE
UFCU-1.5	DAIKIN	FBQ18P/UJ	UNIT	HORIZONTAL	580	40	0.4	HEATING	X	X	X	X	HKS 20XC	2	21	25	1	208V1	1.6	15	350	80	1, 2, 3, 4
									COOLING	X	X	X	X										
UFCU-2	DAIKIN	FBQ24P/UJ	UNIT	HORIZONTAL	620	40	0.4	HEATING	X	X	X	X	HKS 26XC	3	30	30	1	208V1	1.8	15	350	80	1, 2, 3, 4
									COOLING	X	X	X	X										
UFCU-2.5	DAIKIN	FBQ30P/UJ	UNIT	HORIZONTAL	760	40	0.4	HEATING	X	X	X	X	HKS 36XC	5	36	40	1	208V1	2.3	15	350	80	1, 2, 3, 4
									COOLING	X	X	X	X										

REMARKS:
1. ACCEPTABLE MANUFACTURERS ARE AIRTHERM, AMERICAN AIR FILTER, BUFFALO, CARRIER, DAIKIN, MCQUAY, TEMTROL, TRANE, YORK
2. EXTERNAL STATIC PRESSURE DOES NOT INCLUDE LOSSES FOR UNIT CASING, FILTERS, OR COILS.
3. REFRIGERANT TYPE TO BE R-410A
4. UNIT CFM/COIL CAPACITIES BASED ON MEDIUM SPEED OPERATION.

VENTILATION SUMMARY SCHEDULE (2012 IMC)

ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION (2012 IMC, TABLE 403.3)	AREA OF OCCUPANCY (SQ FT)	OCCUPANCY LOAD (PER 1000 SF)	NUMBER OF PEOPLE	OUTDOOR AIR PER OCCUPANCY (CFM PER PERSON)	EXHAUST RATE (CFM/SF)	ZONE AIR DISTRIBUTION EFFECTIVENESS	OUTDOOR AIR REQUIRED (CFM)	PRIMARY AIRFLOW (CFM)	PRIMARY OUTDOOR AIR FRACTION (%)	
101	LOUNGE/CLUB ROOM	PUBLIC SPACES	1,880	150	189	7.5	0.06	—	1.0	1,531	6,000	0.26
103	LOBBY/FRONT DESK	CORRIDORS	563	10	6	5	0.06	—	1.0	64	500	0.13
89	LEASING	OFFICES	790	5	4	5	0.06	—	1.0	68	500	0.14
91	FITNESS	SPORTS AND AMUSEMENT	1,346	10	14	20	0.06	—	1.0	361	2,000	0.18
102	YOGA	SPORTS AND AMUSEMENT	701	10	8	20	0.06	—	1.0	203	1,000	0.20

NOTES:
1. SCHEDULE BASED ON INTERNATIONAL MECHANICAL CODE, 2012 EDITION, CHAPTER 4 VENTILATION.
2. CALCULATIONS REPRESENT ONLY AREAS WHERE WORK IS EXPECTED.
3. ZONE AIR DISTRIBUTION EFFECTIVENESS DETERMINED USING TABLE 403.3.1.2.
4. SYSTEM VENTILATION EFFICIENCY DETERMINED USING TABLE 403.3.2.2 INTERPOLATION UTILIZED.
5. OCCUPANT DIVERSITY ASSUMED TO BE NEGLECTABLE.

SUMMARY:
OA REQUIRED 2,695 CFM
SA PROVIDED 12,000 CFM
OA PERCENTAGE 30 %
OA PROVIDED 3,600 CFM

THE AMOUNT OF OUTSIDE AIR PROVIDED EXCEEDS THE CODE REQUIRED MINIMUM.

FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL	FAN TYPE	SERVICE	CFM	S.P.	ELECTRICAL DATA			DRIVE TYPE	DAMPER TYPE	SONES	ROOF OPENING	WEIGHT (LBS)	HEIGHT (INCLUDING CURB)	REMARKS
							VOLTI @ S.L.	RPM	HP							
EF-1	GREENHECK	SQ-99-VG	INLINE	FITNESS	775	0.9	120V1	2200	3/4	DIRECT	MOTOR	18.3	X	58	X	
EF-2	GREENHECK	SQ-98-VG	INLINE	TRASH	700	0.5	120V1	2200	3/4	DIRECT	MOTOR	19.5	X	58	X	
EF-3	GREENHECK	G-885-VG	DOWNBLAST	BATHROOMS	350	0.5	120V1	1725	1/2	DIRECT	MOTOR	8.9	12.6x12.5	25		

REMARKS:
1. EQUIPMENT SCHEDULE BASED ON: GREENHECK. ACCEPTABLE MANUFACTURERS INCLUDE: ACME, CARNES, COOK, GREENHECK, PENN, SOLER & PALAU, AND TWIN CITY.
2. PROVIDE FAN WITH UNIT MOUNTED SPEED CONTROL SWITCH.
3. PROVIDE WITH DISCHARGE DUCT COLLAR.
4. PROVIDE WITH ROOF CURB.
5. PROVIDE WITH REVERSE ACTING THERMOSTAT.