

DEDICATED OUTSIDE AIR UNIT W/ENERGY RECOVERY SCHEDULE																			
No.	SUPPLY FAN			EXHAUST FAN			SUMMER CONDITIONS					WINTER CONDITIONS					MANUFACTURER		
	CFM	ESP (IN. WC)	MIN. HP	CFM	ESP (IN. WC)	MIN. HP	O.A. EAT (°F)	LAT WHEEL (°F)	WHEEL Z/EFF	COOLING MBH	LAT COIL (°F)	HOT GAS RE-HEAT (°F)	O.A. EAT (°F)	LAT WHEEL (°F)	WHEEL Z/EFF	LAT GAS BURNER (°F)		INPUT CAPACITY (BTU/HR)	OUTPUT CAPACITY (BTU/HR)
ERU-01	2,750	1.0	3	2,830	1.0	3	93/75	80/66	65.3	120,400	52/51	70/61	18	72.3	65.3	92.9	150,000	120,000	GREENHECK RVE-40-36-30H
ERU-02	2,750	1.0	3	2,830	1.0	3	93/75	80/66	65.3	120,400	52/51	70/61	18	72.3	65.3	92.9	150,000	120,000	GREENHECK RVE-40-36-30H

- NOTES:
 1. REFER TO SPECIFICATION SECTION 237433 FOR FEATURES.
 2. REFER TO SPECIFICATION SECTION 230900 AND 230993 FOR CONTROLS.
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.
 4. ENERGY RECOVERY WHEEL MOTOR TO BE A MINIMUM 1/2 HP.
 5. ROOM RETURN AIR CONDITIONS: 75 F DB @ 50 R.H.

PAD MOUNTED AIR CONDITIONING UNIT SCHEDULE																
No.	TOTAL CFM COOLING	MAX O.A. CFM	MIN O.A. CFM	EXT. STATIC PRESS. (IN. WC)	MIN. FAN MOTOR B.H.P.	NET COOLING			HEATING				MANUFACTURER			
						TOTAL CAPACITY (BTU/HR)	ENTERING D.B. (°F)	W.B. (°F)	SENSIBLE CAPACITY (BTU/HR)	O.A. CONDENSER (°F)	INPUT CAPACITY (BTU/HR)	OUTPUT CAPACITY (BTU/HR)		ENT. D.B. (°F)	FUEL	MIN. EFF. (EER)
PMU-01	11,400	2,000	1,000	1.2	8.57	397,370	80	67	281,560	90	800,000	648,000	17	N. GAS	9.82	CARRIER 48A4G035
PMU-02	11,400	2,000	1,000	1.2	8.57	397,370	80	67	281,560	90	800,000	648,000	17	N. GAS	9.82	CARRIER 48A4G035

- NOTES:
 1. REFER TO SPECIFICATION SECTION 237413 FOR FEATURES.
 2. REFER TO SPECIFICATION SECTION 230900 AND 230993 FOR CONTROLS.
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.
 4. PROVIDE EACH PMU WITH AN AIR TREATMENT SYSTEM CONTROLLING CONTAMINANTS OF CONCERN AND MEETING THE REQUIREMENTS OF THE INDOOR AIR QUALITY PROCEDURE OF ASHRAE 62.1. AIR TREATMENT MUST BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. SYSTEM SHALL BE POWERED THROUGH THE 24 VOLT CONTROL TRANSFORMER WITHIN THE UNIT. SUPPLIER SHALL PROVIDE A LETTER STATING THAT THEIR PRODUCT MEETS ALL REQUIREMENTS OF ASHRAE 62.1 FOR REDUCTION OF OUTSIDE AIR AS WELL AS SUBMIT ALL SUPPORTING DOCUMENTATION AND CALCULATIONS.
 5. PROVIDE THIRD PARTY ECONOMIZER AS REQUIRED TO ALLOW FOR DUCT CONFIGURATION AS SHOWN ON THE FLOOR PLAN AND RELIEF.

EXHAUST FAN SCHEDULE								
No.	CFM	EXT. S.P. (IN. WC)	MAX. SONE LEVEL	DRIVE	H.P.	LOCATION	MANUFACTURER	CONTROLLED BY
EF-02	300	.125	4.5	DIRECT	1/25	TOIL 718	PENN DX10R	INTERLOCK WITH LIGHTS
EF-03	150	.2	5	DIRECT	1/10	BOYS LOCKERS 711	FANTECH FR 110	PRESSURE SWITCH
EF-05	700	.125	8.1	DIRECT	1/5	ELEC 710	PENN DX10R	THERMOSTAT
EF-06	1050	.125	3.8	BELT	1/4	LOBBY 101	PENN DX11B	TIMING DEVICE
EF-10	225	.125	4.5	DIRECT	1/25	CONCESSIONS 702	PENN DX10R	INTERVAL TIMER

- NOTES:
 1. REFER TO SPECIFICATION SECTION 233423 FOR FEATURES.
 2. REFER TO SPECIFICATION SECTION 230900 AND 230993 FOR CONTROLS.
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.
 4. AT CONTRACTOR'S OPTION, PROVIDE TRANSITION FROM FAN BACKRAFT DAMPER TO EQUIVALENT ROUND DUCT AND EXTEND DOWN TO EXHAUST GRILLE, WHEN FAN SERVES A SINGLE GRILLE.
 5. FAN NUMBERING SCHEME CORRESPONDES WITH EXISTING FAN NUMBERING. OMITTED FAN NUMBERS ARE THOSE THAT HAVE BEEN REMOVED IN THIS PROJECT.

AIR DISTRIBUTION COMPONENTS SCHEDULE							
SYMBOL	MAX. CFM	FACE SIZE	NECK SIZE	THROW	FUNCTION	MANUFACTURER	REMARKS
E1	750	24 X 12	22 X 10	---	E/RAG	PRICE 80	SUITABLE FOR DUCTING
E2	1600	24 X 24	22 X 22	---	E/RAG	PRICE 80	SUITABLE FOR DUCTING
S1	400	24 X 24	10 D/A	4 WAY	CD	PRICE SCG-I	FACTORY INSULATED METAL BACK PAN
SR1	---	74 X 62	72 X 60	---	SRAG	PRICE 96	AVT UNIT 1/4" SPACE

- NOTES:
 1. PROVIDE SQUARE TO ROUND ADAPTERS FOR EXHAUST/RETURN GRILLES AS REQUIRED.
 2. ALL SUPPLY-AIR DIFFUSERS SHALL BE FACTORY INSULATED, FOIL-BACKED TYPE.
 3. SEE WALL HUNG UNIT SCHEDULE FOR ADDITIONAL DEVICES.
 4. ALL SIDEWALL MOUNTED DEVICES SHALL BE FACTORY PRIMED FOR FIELD PAINTING MATCH THE WALL PER SPECIFICATION SECTION 099123.

MINI-SPLIT HEAT PUMP SCHEDULE										
No.	INSIDE UNIT (MAHU)			OUTSIDE UNIT (MHP)					MANUFACTURER	
	TOTAL CFM COOLING	OUTSIDE AIR CFM	ADD. HTG. (KW)	TOTAL CAP. (BTU/HR)	ENTERING		O.A. CONDENSER (°F)	OUTPUT CAPACITY (BTU/HR)		AMBIENT D.B. (°F)
					D.B. (°F)	W.B. (°F)				
MAHU-01	275	---	---	---	---	---	---	---	---	CARRIER 40VAQ09
MAHU-02	275	---	---	---	---	---	---	---	---	CARRIER 40VAQ09
MAHU-03	275	---	---	---	---	---	---	---	---	CARRIER 40VAQ09
MHP-01	---	---	---	9,000	80	67	95	10,000	17	CARRIER 38MAQ09
MHP-02	---	---	---	9,000	80	67	95	10,000	17	CARRIER 38MAQ09
MHP-03	---	---	---	9,000	80	67	95	10,000	17	CARRIER 38MAQ09

- NOTES:
 1. REFER TO SPECIFICATION SECTION 238126 FOR FEATURES.
 2. REFER TO SPECIFICATION SECTION 230900 AND 230993 FOR CONTROLS.
 3. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL CHARACTERISTICS.

ELECTRIC HEATER SCHEDULE					
No.	TYPE	LOCATION	KW	CHARACTERISTICS	MANUFACTURER
EH-01	WALL	MECH 710	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3320HD
EH-02	WALL	ELEC 702	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3320HD
EH-03	CEILING	CONCESSIONS 703	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3480
EH-04	CEILING	CONCESSIONS 702	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3480
EH-05	CEILING	LOBBY 101	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3480
EH-06	CEILING	BOYS 711	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3480
EH-07	WALL	JAN 705	4	RE: ELECTRICAL DOCUMENTS	MARKEL 3320HD

- NOTES:
 1. REFER TO SPECIFICATION SECTION 238239.19 FOR FEATURES.
 2. REFER TO SPECIFICATION SECTION 230900 AND 230993 FOR CONTROLS.
 3. SURFACE MOUNT WALL HEATERS WITH BOTTOM OF UNIT 2'-0" A.F.F. UNLESS OTHERWISE NOTED.

HVAC LEGEND			
SYM.	DESCRIPTION	SYM.	DESCRIPTION
A/100	AIR DISTRIBUTION MARK / CFM	MAHU	MINI-SPLIT AIR HANDLING UNIT
AC	AIR CONDITIONER	MAU	MAKE-UP AIR UNIT
AD	ACCESS DOOR	MEP	MECHANICAL EQUIP. PAD - RE: ARCH.
AFF	ABOVE FINISHED FLOOR	MHP	MINI-SPLIT HEAT PUMP
AHP	AIR HANDLING HEAT PUMP UNIT	MOD	MOTOR OPERATED DAMPER
AHU	AIR HANDLING UNIT	MVD	MANUAL VOLUME DAMPER
B	BOILER	O.A.	OUTSIDE AIR
BMC	BUILDING MANAGEMENT CONTROLLER	P	PUMP
BPD	BYPASS DAMPER	PIU	POWERED INDUCTION UNIT
CFM	CUBIC FEET PER MINUTE	PMHP	PAD MOUNTED HEAT PUMP UNIT
CH	CHILLER	PMU	PAD MOUNTED UNIT
CR	CONDENSER WATER RETURN	RA	RETURN AIR
CD	CEILING DIFFUSER	RTHP	ROOF TOP HEAT PUMP UNIT
CS	CONDENSER WATER SUPPLY	RTU	ROOF TOP UNIT
CT	COOLING TOWER	SA	SUPPLY AIR
CU	CONDENSING UNIT	S.D.	SMOKE DAMPER
CWR	CHILLED WATER RETURN	S/FD	COMBO SMOKE / FIRE DAMPER
CWS	CHILLED WATER SUPPLY	So.c	OUTDOOR AIR SENSOR - ENTHALPY
D	DRAIN	S.P.	STATIC PRESSURE
DCS	DUST COLLECTION SYSTEM	TWHP	THROUGH THE WALL HEAT PUMP UNIT
DF	DUCT FURNACE	VAV	VARIABLE AIR VALVE
DG	DOOR GRILLE	VVT	VARIABLE VOL./VARIABLE TEMP. VALVE
DN	DOWN	WHP	WALL HUNG HEAT PUMP UNIT
EDH	ELECTRIC DUCT HEATER	CO2	CARBON DIOXIDE SENSOR
EF	EXHAUST FAN	DM	DUCT MOUNTED SMOKE DETECTOR
EH	ELECTRIC HEATER	HUMIDISTAT	HUMIDISTAT
ERV	ENERGY RECOVERY VENTILATOR	INTV	INTERVAL TIMER
EUH	ELECTRIC UNIT HEATER	NIGHT	NIGHT SETBACK
FD	FIRE DAMPER	ROOM	ROOM SENSOR
F.L.D.G.	FUSIBLE LINK DOOR GRILLE	THERM	THERMOSTAT
GF	GAS FURNACE UNIT	W.M.	WALL MOUNTED SWITCH
GH	GRAVITY INTAKE HOOD	NOTE	SPECIFIC KEYED NOTE
GRH	GRAVITY RELIEF HOOD	SPIN	SPIN-IN W/ SCOOP & VOL. DAMPER
GWU	GAS WALL HUNG UNIT	DOOR	DOOR GRILLE
GUH	GAS UNIT HEATER	FD	FIRE DAMPER IN CEILING
HP	HEAT PUMP	EXTRACTOR	EXTRACTOR
HRE	HEAT RECOVERY FAN	FD	FIRE DAMPER IN WALL
HVS	HOODED VENTILATION SYSTEM	DUCT	DUCT W/ ACOUSTICAL LINER
HWR	HEATING WATER RETURN	DUCT	DUCT W/ TURNING VANES
HWS	HEATING WATER SUPPLY	SUPPLY	SUPPLY AIR
L	LOUVER	RET/EX	RETURN / EXHAUST AIR
L/D	COMBO LOUVER / DAMPER	VENT	VENT THROUGH ROOF

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