

ROOF MOUNTED PACKAGED 100% OUTSIDE AIR UNITS SCHEDULE

UNIT TYPE	TOTAL SUPPLY AIR CFM	TOTAL EXHAUST/RETURN AIR CFM	FAN MOTORS				D.X. COIL		ENERGY RECOVERY WHEEL												GAS HEATING SECTION										
			SUPPLY		EXHAUST		MAXIMUM COIL FACE AREA - SQ. FT.	MAXIMUM AIR SIDE PRESSURE DROP - INCHES OF WATER COL.	MIN. TOTAL CLG. CAP. MBTU/HR	MIN. TOTAL SENS. CAP. MBTU/HR	AIR TEMPERATURES				OUTSIDE AIR TEMPERATURES				LEAVING AIR TEMPERATURES				RETURN / EXHAUST AIR (ENTERING WHEEL FROM BUILDING) TOTAL CFM	WHEEL MAX. PRESS. DROP INCHES W.C.	HEATING CAPACITY OUTPUT MBTUH	LEAVING AIR TEMP. °F					
			APPROX. EXTERNAL STATIC PRESS. - INCHES OF WTR.	HP	APPROX. EXTERNAL STATIC PRESS. - INCHES OF WTR.	HP					ENTERING	LEAVING	SUMMER ENT.	WINTER ENT.	SUMMER	WINTER	MINIMUM TOTAL COOLING CAPACITY MBTUH	MINIMUM TOTAL SENSIBLE CAPACITY MBTUH	MINIMUM TOTAL HEATING CAPACITY MBTUH	SUMMER	WINTER										
OAU-1	2,300	1,900	.50	2.0	.50	1.0	250	0.25	124.4	73.9	82.6	70.1	52.1	51.9	96.0	80.0	22.0	19.0	82.6	70.1	51.3	46.0	91.9	31.8	119.9	1,900	1.10	75.0 / 62.0	70.0 / 60.0	120.0	99.6
OAU-2	2,300	1,900	.50	2.0	.50	1.0	250	0.25	124.4	73.9	82.6	70.1	52.1	51.9	96.0	80.0	22.0	19.0	82.6	70.1	51.3	46.0	91.9	31.8	119.9	1,900	1.10	75.0 / 62.0	70.0 / 60.0	120.0	99.6
OAU-3	3,200	2,500	1.36	5.0	1.41	3.0	350	.35	185.9	108.5	84.2	71.2	51.9	51.7	96.0	80.0	22.0	19.0	84.2	71.2	50.1	44.8	116.8	39.2	160.3	2,500	1.20	75.0 / 62.0	70.0 / 58.0	175.0	102.5
OAU-4	3,700	3,000	1.64	5.0	1.46	3.0	350	.25	201.0	121.6	81.7	69.1	50.5	50.0	96.0	80.0	22.0	19.0	81.7	69.1	53.5	48.0	164.0	55.5	216.0	3,000	0.75	75.0 / 62.0	70.0 / 58.0	211.0	103.3
OAU-5	4,700	4,000	1.59	7.5	2.17	3.0	350	.35	256.0	150.0	82.3	69.6	53.0	52.0	96.0	80.0	22.0	19.0	82.3	69.6	52.0	46.9	199.9	68.0	258.2	4,000	0.85	75.0 / 62.0	70.0 / 58.0	274.0	105.9

NOTES: SEE CONTINUED SCHEDULE AND NOTES BELOW

ROOF MOUNTED PACKAGED 100% OUTSIDE AIR UNITS SCHEDULE (CONTINUED)

UNIT TYPE	HOT GAS REHEAT COIL CAPACITY BTUH	HOT GAS REHEAT COIL MAXIMUM PRESSURE DROP - INCHES OF WATER	COMPRESSORS		CONDENSER		UNIT APPROX. MCA - AMPS	UNIT APPROX. MOCPP - AMPS	MINIMUM E.E.R. AT A.R.I. CONDITIONS	BASIS OF DESIGN
			APPROX. F.L.A.	POWER	APPROX. F.L.A.	POWER				
OAU-1	53,000	.10	22.0	480 V., 3PH., 60 HZ.	5.0	480 V., 3PH., 60 HZ.	32.0	40.0	12.1	AAON RN
OAU-2	53,000	.10	22.0	480 V., 3PH., 60 HZ.	5.0	480 V., 3PH., 60 HZ.	32.0	40.0	12.1	AAON RN
OAU-3	70,000	.10	28.0	480 V., 3PH., 60 HZ.	6.0	480 V., 3PH., 60 HZ.	40.0	50.0	11.3	AAON RN
OAU-4	86,000	.10	28.0	480 V., 3PH., 60 HZ.	6.0	480 V., 3PH., 60 HZ.	44.0	50.0	12.4	AAON RN
OAU-5	95,000	.10	28.0	480 V., 3PH., 60 HZ.	6.0	480 V., 3PH., 60 HZ.	49.0	60.0	12.4	AAON RN

- NOTES:
- 1) COOLING COIL DEPTH SHALL BE MINIMUM 6-ROWS AND 12 FINS/INCH MAXIMUM SPACING.
 - 2) UNITS SHALL BE PROVIDED WITH FACTORY INSTALLED SINGLE POINT POWER CONNECTION 480V-3PH-60 HZ (FANS, WHEEL AND HEATER) ANY VARIANCE SHALL BE COORDINATED WITH ELEC. ENG. AND ELEC. CONTRACTOR PRIOR TO BID.
 - 3) ALL SUPPLY AND EXHAUST AIR FANS SHALL BE DIRECT DRIVEN PLUG FANS AND PROVIDED WITH FACTORY INSTALLED VFD'S.
 - 4) UNITS HEATING SECTIONS SHALL HAVE MINIMUM 5:1 TURNDOWN AND 80% EFFICIENCY.
 - 5) UNITS HEATERS SHALL BE DOWNSTREAM OF THE ENERGY RECOVERY WHEEL.
 - 6) * DENOTES PROVIDE A DISCHARGE AIR THERMOSTAT TO LIMIT DISCHARGE AIR TEMP. AS SCHEDULED ABOVE.
 - 7) ALL UNITS SHALL BE PROVIDED WITH FACTORY INSTALLED FIRESTATS.

PACKAGED ROOFTOP MOUNTED HEATING & A/C UNITS SCHEDULE (NATURAL GAS HEAT)

UNIT TYPE	RTU-1	RTU-2
MINIMUM TOTAL AIR CFM	5000	2000
OUTSIDE AIR CFM SETPOINTS - MIN/MAX. CO2/MAX. (ECONOMIZER)	700 / NA / 5000	2000 / 2000
APPROXIMATE EXTERNAL STATIC PRESSURE - IN. WATER COLUMN	1.89	1.89
APPROXIMATE INDOOR FAN MOTOR HP - POWER	5.0 HP - 480V., 3PH., 60HZ.	5.0 HP - 480V., 3PH., 60HZ.
MINIMUM TOTAL COOLING CAPACITY AT A.R.I. CONDITIONS - BTU/HR	150,000	150,000
MINIMUM CAPACITY REDUCTION - PERCENT OF FULL LOAD	100 - 50 - 0	100 - 50 - 0
MINIMUM TOTAL HEATING CAPACITY - BTUH OUTPUT	203,000	100,000
APPROXIMATE COMPRESSOR MOTOR(S) F.L.A. - POWER	24.0 - 480V., 3PH., 60HZ.	24.0 - 480V., 3PH., 60HZ.
APPROXIMATE CONDENSER FAN MOTOR(S) F.L.A. - POWER	10.0 - 480V., 1PH., 60HZ.	15.0 - 480V., 1PH., 60HZ.
MINIMUM ENERGY EFFICIENCY RATING AT A.R.I. CONDITIONS	14.0 SEER	14.0 SEER
LOW AMBIENT HEAD PRESS. CONTROL TO DEGREES F (COOLING ONLY)	45	45
APPROX. - MCA	50	12.0
APPROX. - MOP	50	15.0

- NOTES:
1. ALL UNITS SHALL BE FACTORY WIRED FOR SINGLE POINT POWER CONNECTIONS (200V., 3PH., 60HZ).
 2. SEER RATINGS BASED ON ARI 210/240
 3. EER RATINGS BASED ON ARI 340/360
 4. UNIT SHALL BE PROVIDED WITH A REFRIGERANT HOT GAS REHEAT COIL, COMPLETE WITH REFRIGERANT PIPING, PIPE INSULATION, VALVES, CONTROLS, ETC. REQUIRED FOR HUMIDITY CONTROL - PROVIDE MANUAL REFRIGERANT ISOLATION VALVES FOR HOT GAS AND LIQUID LINES - FURNISH FOR APPROVAL DETAILED REFRIGERANT PIPING CONN. DIAGRAM AND CONTROL WIRING DIAGRAM - PRIOR TO SUBMITTING THE DIAGRAM OBTAIN EQUIPMENT MANUFACTURER'S APPROVAL. SEE SPECS FOR ADDITIONAL REQUIREMENTS.
 5. RTU-1 SHALL BE SINGLE ZONE VAV AND PROVIDED WITH FACTORY INSTALLED VAV.

VARIABLE REFRIGERANT FLOW HEAT PUMP OUTDOOR UNIT SCHEDULE

UNIT TYPE	MIN. COOLING CAP. - BTUH AT 95°F DB/ AND 80°F WB OUTDOOR TEMPERATURE	MIN. HEAT CAPACITY BTU/HR. AT 70°F INDOOR / 43°F DB OUTDOOR TEMPERATURE	MINIMUM S.E.E.R. AT AHRI 1230 STANDARDS	MINIMUM COP/SPF AT 47°F FDB AT AHRI 1230 STANDARDS	POWER REQUIREMENTS					BASIS OF DESIGN
					ELEC. SUPPLY MCA	ELEC. SUPPLY MOP	VOLTS	PHASE	HERTZ	
VRF-1	45,200	40,800	20.0	3.8 / 11.7	31.0	44.0	208	3	60	mitsubishi PUMY-P48NKM1

- NOTES:
- 1) UNIT MANUFACTURER SHALL PROVIDE RECOMMENDED VARIABLE REFRIGERANT FLOW PIPING DESIGN AND INTERFACE CONTROL SYSTEM DIAGRAMS - SEE SPECIFICATIONS.
 - 2) COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO BID AND PROVIDE AS REQUIRED.

VARIABLE REFRIGERANT FLOW INDOOR UNITS SCHEDULE

UNIT NUMBER	NOMINAL COOLING CAPACITY EA - BTU/HR AT 80°F DB / 67°F WB ENT. AIR TEMP.	NOMINAL HTG. CAP. EA - BTUH AT 43°F OUTDOOR 70°F INDOOR DESIGN TEMP.	SUPPLY AIR CFM AT SPEED INDICATED (H, M, L)	OUTSIDE AIR CFM	POWER REQUIREMENTS			BASIS OF DESIGN	RELATED OUTDOOR UNIT		
					MIN. CIRCUIT CAPACITY (MCA)	MAXIMUM FUSE SIZE (A)	VOLTS				
1-1	15,000	17,000	390	50	1.0	15.0	208	1	60	mitsubishi PLYF-P15NFMU	VRF-1
1-2	12,000	13,500	335	50	1.0	15.0	208	1	60	mitsubishi PLYF-P12NFMU	VRF-1
1-3	12,000	13,500	335	50	1.0	15.0	208	1	60	mitsubishi PLYF-P12NFMU	VRF-1
1-4	12,000	13,500	335	40	1.0	15.0	208	1	60	mitsubishi PLYF-P12NFMU	VRF-1

- NOTES:
- 1) CONTRACTOR SHALL PROVIDE UNIT MANUFACTURER RECOMMENDED VARIABLE REFRIGERANT FLOW PIPING DESIGN AND INTERFACE CONTROL SYSTEM DIAGRAMS - SEE SPECIFICATIONS
 - 2) COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO BID AND PROVIDE AS REQUIRED
 - 3) SCHEDULED CAPACITIES BASED ON 96°F OUTDOOR SUMMER DESIGN TEMPERATURE
 - 4) SCHEDULED HEATING AND COOLING CAPACITY IS BASED ON FULL DEMAND.
 - 5) ALL ZONE CONTROLLERS TO BE STANDARD MANUFACTURER CONTROLLER WITH BACKLIT TOUCH SCREEN LCD INTERFACE, TEMPERATURE AND SHALL INTERFACE WITH SPECIFIED BUILDING ENERGY MANAGEMENT SYSTEM
 - 6) SCHEDULED COOLING CAPACITIES ARE MINIMUM REQUIRED CAPACITIES FOR EACH UNIT INCLUDING ANY CAPACITY DERATES FOR LINE LENGTHS, AMBIENT AND INDOOR TEMPERATURES
 - 7) ALL INDOOR CEILING CASSETTE UNITS WITH SCHEDULED COOLING CAP. OF 15,000 BTUH OR LESS SHALL HAVE MAX. DIMENSIONS OF 26X26 THAT WILL ALLOW INSTALLATION INTO A NOMINAL 24"X24" CEILING GRID

SECURITY DIFFUSER/GRILLE AND REGISTER SCHEDULE

SYMBOL	DEVICE	CFM RANGE	TYPE	NECK SIZE	BRANCH DUCT SIZE	BASIS OF DESIGN	REMARKS
A	SUPPLY AIR	25 - 97	MAX. SECURITY	6x6	8x8	TITUS SG-SD	SUPPLY AIR GRILLE
B	SUPPLY AIR	80 - 180	MAX. SECURITY	10x10	12x7	TITUS SG-SD	SUPPLY AIR GRILLE
C	SUPPLY AIR	185 - 280	MAX. SECURITY	12x12	14x8	TITUS SG-SD	SUPPLY AIR GRILLE
D	SUPPLY AIR	285 - 415	MAX. SECURITY	16x16	18x8	TITUS SG-SD	SUPPLY AIR GRILLE
E	SUPPLY AIR	420 - 550	MAX. SECURITY	18x18	20x9	TITUS SG-SD	SUPPLY AIR GRILLE
F	SUPPLY AIR	555 - 675	MAX. SECURITY	20x20	22x9	TITUS SG-SD	SUPPLY AIR GRILLE
G	SUPPLY AIR	675 - 800	MAX. SECURITY	22x22	24x10	TITUS SG-SD	SUPPLY AIR GRILLE
A	EXHAUST AIR	10 - 75	MAX. SECURITY	6x6	8x8	TITUS SG-SD	CEILING REGISTER
B	EXHAUST AIR	80 - 180	MAX. SECURITY	10x8	12x7	TITUS SG-SD	CEILING REGISTER
C	EXHAUST AIR	185 - 280	MAX. SECURITY	12x10	14x8	TITUS SG-SD	CEILING REGISTER
D	EXHAUST AIR	285 - 415	MAX. SECURITY	18x10	18x8	TITUS SG-SD	CEILING REGISTER
E	EXHAUST AIR	420 - 550	MAX. SECURITY	18x12	20x9	TITUS SG-SD	CEILING REGISTER
F	EXHAUST AIR	555 - 675	MAX. SECURITY	16x16	22x9	TITUS SG-SD	CEILING REGISTER
G	EXHAUST AIR	675 - 800	MAX. SECURITY	18x16	24x10	TITUS SG-SD	CEILING REGISTER

- NOTES:
- 1) RUNOUTS/BRANCH DUCTS SHALL BE AS SCHEDULED ABOVE UNLESS NOTED OTHERWISE ON THE PLANS
 - 2) CONTRACTOR SHALL INSULATE THE EXTERIOR OF EACH SECURITY SLEEVE AND ANY UNINSULATED SURFACE ASSOCIATED WITH THE CEILING SECURITY DEVICE WITH 2" THICKNESS EXTERNAL DUCT INSULATION WITH CHARACTERISTICS SPECIFIED FOR EXTERNAL DUCT INSULATION.

FANS SCHEDULE

FAN TYPE	EF-A	EF-B
C.F.M.	70	140
MINIMUM FAN SIZE - INCHES	8.0	8.0
APPROX. ROOF/WALL OPENING - INCHES	N/A	N/A
MAXIMUM FAN SPEED - RPM	1050	1050
APPROX. EXTERNAL STATIC PRESSURE - IN. OF WATER	.25	.25
MINIMUM FAN MOTOR H.P. - POWER	77WATTS - 120V, 1PH., 60 HZ.	77WATTS - 120V, 1PH., 60 HZ.
CONTROL INTERLOCK	LIGHTING CIRCUIT	LIGHTING CIRCUIT
DESCRIPTION	CEILING MOUNTED, CENTRIFUGAL, DIRECT DRIVE	CEILING MOUNTED, CENTRIFUGAL, DIRECT DRIVE

PAR architects inc.
 Montgomery, Alabama
 CIP-2017-001
 UPGRADES TO THE MOBILE COUNTY METRO JAIL
 For The MOBILE COUNTY COMMISSION
 MOBILE, ALABAMA



DRAWN	CW	CHECK	12
DATE	APRIL 2, 2019 RTA		
REVISED			
REVISED			
SHEET TITLE	HVAC SCHEDULES		
DWG NO.	PH&J#1801GV		
SEQUENCE NO.	122	of	175

