NOTES/ACCESSORIES:

1. SUBSTITUTIONS OF EQUAL PERFORMANCE AND CONSTRUCTION ARE ACCEPTABLE ONLY WITH EOR PRIOR APPROVAL. SEE SPECIFICATIONS FOR ALL PERFORMANCE AND CONSTRUCTION REQUIREMENTS. CONTRACTOR TO SUBMIT SUBSTITUTION REQUIREMENTS. 2. PROVIDE AHU WITH FACTORY HEAT KIT. SET MINIMUM FAN SPEED ACCORDING TO MANUFACTURER'S GUIDELINES.

3. PROVIDE SYSTEM WITH PROGRAMMABLE 7-DAY WIRED THERMOSTAT WITH ADAPTIVE HEAT RECOVERY. FOR SYSTEMS WITH ELECTRIC HEAT, CONTRACTOR TO PROVIDE T-STAT AND CONTROLLER TO PREVENT ELECTRIC HEAT FROM ENGAGING UNTIL HEAT PUMP CANNOT MEET DEMAND.

4. ROUTE CONDENSATE TO ROOM FLOOR DRAIN.

5. INSULATE AND WEATHER-PROTECT ALL REFRIGERANT PIPING PER SPECIFICATIONS. 6. PROVIDE MANUFACTURER'S MINIMUM INSTALLATION REQUIREMENTS. SEE DETAILS FOR ADDITIONAL INSTALLATION REQUIREMENTS.

7. PROVIDE 3 SETS OF FILTERS (ONE DURING CONSTRUCTION, ONE AT SUBSTANTIAL COMPLETION, AND ONE FOR STOCK).

8. ACCEPTABLE ALTERNATE MANUFACTURERS ARE DAIKIN & TRANE.

9. FURNISH AND INSTALL IONIZING PRE-FILTER SYSTEM BY GLOBAL PLASMA SOLUTIONS, OR EQUAL. IONIZING PRE-FILTER SHALL BE CAPABLE OF MAINTAINING INDOOR AIR QUALITY AT REDUCED OA VOLUMES IN ACCORDANCE WITH IMC.

											DEDICAT	TED OUT	DOOR AI	R SYSTI	M SCH	EDUL	E							
							SUPPLY FAN ELECTRICAL INFORMATION COOLING PERFORMANCE		HEATING INFORMATION															
MARK	MANUFACTI	URER	MODEL	SERVICE	NOMINAL TONNAGE	SUPPLY AIR QUANTITY	OUTDOOR AIR QUANTITY	EXTERNAL STATIC PRESSURE	POWER	CONNECTION	MCA / MOCP	TOTAL CAPACITY	SENSIBLE CAPACITY	EAT	LAT	IEER (EER)	OUTPUT INPUT	MOISTURE REMOVAL RATE	REHEAT CAPACITY	FLA	EFFICIENCY	DIMENSIONS (H X W X L)	WEIGHT	NOTES / ACCESSORIES
DOAS	-		-	-	-	CFM	CFM	IN. W.C.	ВНР	V / PH / HZ	A/A	MBH	MBH	DB WB	DB WB	-	BTU/HR BTU/HR	LB/HR	MBH	AMPS	-	IN	LBS	-
1	RUPPAIF	R F	RARTU3	ANIMALS	30	4,515	4,515	1.00	4.23	208 / 3 / 60	148.2 / 150	359.7	193.9	95.0 78.0	56.8 56.7	7 18.2	400,000 324,000	139.2	204.6	21.1	81%	69 X 89.75 X 99	3,200	ALL

1. FACTORY MOUNTED SINGLE POINT OF CONNECTION, ANTI-SHORT CYCLE TIMER, THERMAL EXPANSION VALVE, HIGH AND LOW PRESSURE CONTROLLS, ECONOMIZER, DISCONNECT.

2. PROVIDE HORIZONTAL DISCHARGE CONFIGURATION.

3. UNIT MODELS, EFFICIENCIES AND CAPACITIES AS SCHEDULED REPRESENT THE MINIMUM PERFORMANCE REQUIREMENT THAT MUST BE MET. ALTERNATE MANUFACTURER: DAIKIN & TRANE. SEE SPECIFICATIONS FOR ALL PERFORMANCE AND CONSTRUCTION REQUIREMENTS. CONTRACTOR TO SUBMIT SUBSTITUTION REQUEST TO EOR INDICATING ALL ELECTRICAL AND INSTALLATION CHANGES THAT MUST OCCUR SHOULD AN ALTERNATE BE SUBMITTED. COST IMPACTS FOR SUBSTITUTION (SUCH AS INCREASED ELECTRICAL REQUIREMENTS) TO BE PROVIDED BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. PROVIDE HUMIDI-MIZER, LEAVING AIR HUMIDITY SENSOR, AND ASSOCIATED DEHUMIDIFICATION SEQUENCE.

5. PROVIDE 3 SETS OF FILTERS (ONE DURING CONSTRUCTION, ONE AT SUBSTANTIAL COMPLETION, AND ONE FOR STOCK).

6. THERMOSTAT TO BE 7-DAY PROGRAMMABLE WITH ADAPTIVE HEAT RECOVERY. PROVIDE 5-DEGREE DEADBAND AND HEATING/COOLING OVERLAP RESTRICTION. COOLING SETBACK = 85°F. HEATING SETBACK = 55°F. UNIT IS TO OPERATE 24/7.

7. PROVIDE 3' SERVICE CLEARANCE AND 3' CLEARANCE TO COMBUSTIBLES.

8. PROVIDE EQUIPMENT PAD FOR UNIT, REFER TO MECHANICAL DETAIL ON M501.

9. PROVIDE DUCT SMOKE DETECTOR IN THE SUPPLY DUCT. UPON DETECTION OF SMOKE OR GENERAL ALARM FROM FIRE ALARM SYSTEM, DETECTOR TO SHUTDOWN UNIT.

							FA	N SCHEDU	JLE					
TAG	SERVICE	MANUFACTURER	MODEL	AIRFLOW	ESP	NOISE LEVEL	DRIVE TYPE		E	CONTROL	NOTES / ACCESSORIES			
IAG	SERVICE			CFM	IN WC	SONES	DRIVE TYPE	V / PH / HZ	MOTOR HP (BHP)	MCA / MOCP	WATTS	MOTOR RPM	CONTROL	NOTES / ACCESSORIES
EF - 1	GARAGE	GREENHECK	SP-A410	265	0.35	3.5	DIRECT	120 / 1 / 60	(0.06)	2.1 / 15	121	1,000	CONTINUOUS	1 ,2, 5, 10, 11
EF - 2	ANIMALS	GREENHECK	CUE-240-VG	5,160	1.0	16.6	DIRECT	208 / 1 / 60	2	15.6 / 25	-	883	CONTINUOUS	1, 5, 8, 9
NOTES / A	CCESSORIES	<u>:</u>												
1. PROVID	E WITH INTE	GRAL GRAVITY BAC	KDRAFT DAMP	ER.										
2. PROVID	E CEILING RA	ADIATION DAMPER I	FOR FANS IN RA	ATED CEILIN	G. FOR E	XHAUST FANS	LOCATED IN [PROPPED CEIL	INGS, DELETE BUILT	IN RADIATION [DAMPER AI	ND PROVIDE CRI	D AT ANY RATED I	MEMBRANE
PENETRAT	ION.													
3. INTERLO	OCK WITH SV	VITCHED LEG OF LO	CAL LIGHTING	CIRCUIT.										
4. TIE TO E	XHAUST FAI	N TO OPEN OA DAM	PER. SEE AHU	SCHEDULE.										
5. FAN TO	BE ENERGY	STAR QUALIFIED. EN	IERGY STAR MA	ARK TO BE C	LEARLY	MARKED ON TO	OP/FRONT OF	PRODUCT.						
6. FAN CO	NTROLLED B	Y WALL MOUNTED S	SWITCH, SEE E	LECTRICAL F	LANS.									
7. REQUIR	ES CHLORINI	E RESISTANT COATIN	NG. GREENHEC	K: HI-PRO P	OLYESTE	R OR SIMILAR.								
8. PROVID	E FACTORY F	ROOF CURB.												
9. FACTOR	Y MOUNTED	DISCONNECT.												

	ELECTRIC HEATER SCHEDULE											
TAC	TYPE	CEDVICE	MANUIFACTURER	MODEL	AIRFLOW	ELEC	TRICAL	NOTEC / ACCESCODIES				
TAG	ITPE	SERVICE	MANUFACTURER	MODEL	CFM	V / PH / HZ	WATTS	Α	NOTES / ACCESSORIES			
EDH - 1	DUCT	GARAGE	INDEECO	QUZ	265	208 / 1 / 60	3300	16	1 - 4			
EH - 1	CEILING	UTILITY/STORAGE	INDEECO	925U05000VA	300	208 / 1 / 60	2250	11.2	1 - 3			
NOTES / A	CCESSORI	ES:										
1. HEATER	SHALL BE	UL LISTED. PROVIDE	SINGLE POINT ELEC	TRICAL CONNEC	ΓΙΟΝ.							

2. PROVIDE CEILING MOUNTING BRACKET, FAN, UNIT MOUNTED THERMOSTAT, AND DISCONNECT. INSTALL FOR VERTICAL DISCHARGE. MOUNT AT LEAST 7 FEET ABOVE FINISHED FLOOR.

3. CONTROLLED BY THERMOSTAT MOUNTED IN SPACE. SET THERMOSTAT AT 50°F.

11. MOUNTED FAN FROM STRUCTURE ABOVE, REFER TO M501 DETAILS FOR MORE.

4. AIRFLOW PROVIDED BY EXHAUST FAN.

10. PROVIDE DISCONNECT SWITCH.

* DURING NORMAL BUSINESS OPERATING HOURS

ACCEPTABLE ALTERNATE MANUFACTURERS: COOK & FANTECH

HVAC SYSTEMS SEQUENCE

CONTRACTOR TO PROGRAM EACH SYSTEM WITH ADAPTIVE HEAT RECOVERY, A 5-DEGREE F DEADBAND, SETPOINT OVERLAP, AND AS FOLLOWS: OCCUPIED: 75 DEG F

OCCUPIED: 70 DEG F

UNOCCUPIED: 85 DEG F

UNOCCUPIED: 55 DEG F

FOR ELECTRICAL HEAT PUMP SYSTEMS, CONTRACTOR TO PROVIDE T-STAT AND CONTROLLER TO PREVENT ELECTRIC HEAT FROM ENGAGING UNTIL HEAT PUMP CANNOT MEET DEMAND.

COMMISSIONING AND TAB IS REQUIRED FOR HVAC SYSTEMS. ALL ECONOMIZERS TO BE TESTED FOR PROPER OPERATION.

	LOUVER SCHEDULE											
TAG	SERVICE	TYPE	MANUFACTURER	MODEL	AIR FLOW RATE	MINIMUM FREE AREA	DIMENSIONS W X H	NOTES/ACCESSORIES				
					CFM	SF	IN					
L-1	GARAGE	INTAKE	GREENHECK	ESD-635	265	0.4	14 X 14	2, 3				
NOTE	S/ACCESS	ORIES:										
1. WI	ND-DRIVE	N RAIN TY	PE, AMCA 540 AND	AMCA 550	CERTIFICATIONS.	NOTICE OF A	PPROVAL NUME	SER 17-1221.29.				

2. PROVIDE WITH BRIDSCREEN AND BAKED ENAMEL 50% PVDF FINISH. COLOR TO BE APPROVED BY ARCHITECT.

3. PRESSURE DROP LISTED INCLUDES BIRD SCREEN (ALL) AND INTEGRAL DAMPER (IF ANY).

	LOUVER SCHEDULE											
TAG	SERVICE	TYPE	MANUFACTURER	MODEL	AIR FLOW RATE	MINIMUM FREE AREA	DIMENSIONS W X H	NOTES/ACCESSORIES				
					CFM	SF	IN					
L-1	GARAGE	INTAKE	GREENHECK	ESD-635	265	0.4	14 X 14	2, 3				
NOTE	S/ACCESS	ORIES:										
1. WI	ND-DRIVFI	N RAIN TY	PE. AMCA 540 AND	AMCA 550	CERTIFICATIONS.	NOTICE OF A	PPROVAL NUME	BER 17-1221.29.				

	SUPPLY AIR	2
	RETURN AIR	2
	OUTDOOR AIR	2
	EXHAUST AIR	2
	DUCTWORK SCHED	ULE
MATERIAL	SERVICE	LOCATION(S)
	OUTDOOR AIR	CONCEALED
METAL - EXTERNALLY INSULATED	SUPPLY AIR	CONCEALED
	RETURN AIR	CONCEALED

DUCT CLASSIFICATION SCHEDULE

DUCTWORK SCHEDULE							
MATERIAL	SERVICE	LOCATION(S)					
	OUTDOOR AIR	CONCEALED					
METAL - EXTERNALLY INSULATED	SUPPLY AIR	CONCEALED					
	RETURN AIR	CONCEALED					
MACTAL EVERNALLY INCLUATED	OUTDOOR AIR	EXPOSED TO OUTDOOR CONDITIONS					
METAL - EXTERNALLY INSULATED (TENTED ALUMINUM JACKET R-8.0 MINIMUM)	SUPPLY AIR	EXPOSED TO OUTDOOR CONDITIONS					
(TENTED ALDIVINOIVI JACKET K-8.0 MINIMONI)	RETURN AIR	EXPOSED TO OUTDOOR CONDITIONS					
	GENERAL EXHAUST	ALL					
METAL - UNINSULATED	DRYER EXHAUST	ALL					
	RANGE HOOD EXHAUST	ALL					
FLEXIBLE - INTERNALLY INSULATED	SUPPLY AIR, RETURN AIR	CONCEALED BRANCH CONNECTIONS NOT EXCEEDING 10 FEET					

1. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION 2. INSTALLED DUCT INSULATION THERMAL PERFORMANCE TO MEET OR EXCEED R-8 OUTSIDE OF THE THERMAL ENVELOPE. 3. THIS SCHEDULE DOES NOT ADDRESS FYRE-WRAP REQUIREMENTS. SEE PLANS FOR THAT INFORMATION.

	AIR DEVICE SCHEDULE												
TAG	DIFFUSER SIZE LXH (INCHES)	NECK SIZE	MAXIMUM AIRFLOW (CFM)	FUNCTION	MATERIAL	FINISH	MANUFACTURER AND MODEL	KEY NOTES					
	24 X 24	6"	100										
۸		8"	175	CLIDDLY	ALUMINUM		TITLIC TNAC A A	1 2					
Α		10"	275	SUPPLY	ALUMINUM	WHITE	TITUS TMS-AA	1, 2					
		12"	400										
	8 X 6	8 X 6	135										
	12 X 6	12 X 6	245	CHDDIA	ALUMINUM		TITLIC 200FC	1.2.6					
В	18 X 8	18 X 8	350	SUPPLY	ALOWINOW	WHITE	TITUS 300FS	1, 2, 6					
	30 X 6	30 X 6	550										
С	13.25 X 48	12"	365	SUPPLY	ALUMINUM	WHITE	TITUS FL-30	1, 7					
_	F 2F V 40	8"	150	CLIDDLY	A	\A/I IITE	TITLIC EL 10	4.7					
D	5.25 X 48	8"	230	SUPPLY	ALUMINUM	WHITE	TITUS FL-10	1, 7					
	11.75 X 11.75	8 X 8	220	DETUDA!/									
M	15.75 X 15.75	12 X 12	440	RETURN/ EXHAUST	ALUMINUM	WHITE	TITUS 50FF	3					
	24 X 24	22 X 22	1880	EXHAUSI									
	11.75 X 11.75	8 X 8	220	DETUDA: /									
Ν	15.75 X 15.75	12 X 12	440	RETURN/	STEEL	WHITE	TITUS 50F	4					
	24 X 24	22 X 22	1880	EXHAUST			I						

1. PROVIDE SQUARE TO ROUND TRANSITIONS AS REQUIRED FOR COORDINATION OF DUCT AND AIR DEVICE NECK. REFER

TO SPECIFICATIONS FOR MAXIMUM FLEX LENGTH, BALANCE OF DUCT SHOWN ON PLAN SHALL BE STEEL DUCT SAME SIZE AS BRANCH SIZE INDICATED, EXTERNALLY INSULATED.

2. ALUMINUM SUPPLY GRILLE WITH FACE ADJUSTABLE DAMPER WHERE INSTALLED IN HARD CEILING.

3. ALUMINUM 1/2"X1/2"X1/2" EGGCRATE RETURN WITH FILTER. 4. ALUMINUM 1/2"X1/2"X1/2" EGGCRATE RETURN. FILTER SUPPLIED AT AIR HANDLING UNIT.

5. ALUMINUM TRANSFER GRILLE CONNECT WITH RIGID METAL DUCT TO MATCH NECK SIZE.

6. ALUMINUM DOUBLE DEFLECTION GRILLE FRONT BARS THE SHORT DIRECTION. 7. ALUMINUM 2-SLOT LINEAR DIFFUSER WITH JETTHROW AIR DISTRIBUTION PATTERN.

1. BORDER TYPE SHALL BE SELECTED AS COORDINATED WITH ARCHITECT'S REFLECTED CEILING PLAN. 2. PROVIDE SQUARE TO ROUND TRANSITIONS AS REQUIRED FOR COORDINATION OF DUCT AND AIR DEVICE NECK.

3. COORDINATE FRAME TYPE WITH LATEST ARCHITECTURAL REFLECTED CEILING PLAN. 4. BRANCH DUCT TO DIFFUSER/GRILLE SHALL BE SAME AS NECK SIZE UNLESS NOTED OTHERWISE ON PLANS OR NOTE 5.

5. FOR DEVICE "M", BRANCH DUCT SIZE IS 10 X 8 UP TO 300 CFM, 22 X 6 UP TO 500 CFM, 22 X 8 UP TO 800 CFM, 22 X 10 UP TO

1200 CFM, AND 22 X 12 UP TO 1600 CFM UNLESS OTHERWISE NOTED ON PLANS. 6. PROVIDE CEILING RADIATION DAMPER WHERE INSTALLED IN RATED FLOOR/CEILING ASSEMBLY.

7. INSULATE THE TOPS OF ALL SUPPLY AIR DEVICES WITH 2" FIBERGLASS DUCT WRAP. SEAL AIR TIGHT AROUND EDGES TO PREVENT CONDENSATION.

