

COMMON AREA AIR HANDLING UNITS																				HEAT PUMP UNITS										
AREA SERVED	TAG	SA CFM	SA ESP	MAX HP	ELECTRIC HEAT			COOLING COIL				INDOOR UNIT ELECTRICAL DATA			WEIGHT (LBS)	REMARKS	BASIS OF DESIGN LENNOX	TAG	ELECTRICAL		MIN. SEER	UNIT WT (LBS)	BASIS OF DESIGN LENNOX	REMARKS						
					HEATING CAPACITY	NO. OF STAGES	OA CFM	EAT DB	LAT DB	ENT. AIR DB	WB	UNIT L.V.G. AIR DB	WB	VOLTAGE					MCA	MOCP					MCA	MOCP	VOLTAGE			
FITNESS	AHU-1	2,000	0.5	1.0	15 KW	2	225	63.4	96.2		48.3	59.76	76.0	63.6	54.3	53.6	208/1	77	80	216	1.2,3,4	CBX27UH-060	HPU-1	29.4	50	208/1	15.0	295	14HPX-060	① ⑤
CLUBROOM	AHU-2	1,400	0.5	1.0	12.5 KW	2	160	62.1	102.8		35.26	39.12	76.3	63.4	54.2	53.5	208/1	66	70	194	1.2,3,4	CBX27UH-042	HPU-2	24.2	40	208/1	15.5	272	14HPX-042	① ⑤
CLUBROOM	AHU-3	1,200	0.5	1.0	12.5	2	160	62.1	100.8		28.3	35.45	76.8	64.7	54.0	54.0	208/1	66	70	194	1.2,3,4	CBX27UH-042	HPU-3	18.7	30	208/1	16.0	202	14HPX-036	① ⑤
SPIN CLASS/YOGA	AHU-4	1,000	0.5	0.5	10 KW	1	150	61.1	100.6		23.1	29.6	76.8	65.5	54.5	54.5	208/1	50	50	159	1.2,3,4	CBX27UH-030	HPU-4	17.1	25	208/1	15.0	177	14HPX-030	① ⑤

① DISCONNECT ② SEE SCHEDULE FOR OUTSIDE AIR SETTING ③ SMOKE DETECTOR ④ ECM MOTOR ⑤ FILTER/DRYER

APARTMENT AIR HANDLING UNITS											HEAT PUMP UNITS									
MARK	SERVICE	TONS	CFM	OA CFM	COOLING CAPACITIES (MBH)		HEATING CAPACITY	MAX HP	ELECTRICAL		UNIT WT (LBS)	BASIS OF DESIGN GOODMAN	REMARKS	MARK	ELECTRICAL		UNIT WT (LBS)	SEER	BASIS OF DESIGN GOODMAN	REMARKS
					TOTAL	PER TON			MCA	MOCP					MCA	MOCP				
AHU-A	UNITS	1.5	600	②	18	5 KW	1/5	23/27	25/30	85	AWUF-180316B	① ③	HPU-A	11.8	20	199	14	GS214-018	① ④ ⑤	
AHU-B	UNITS	2.0	800	②	24	5 KW	1/5	23/27	25/30	85	AWUF-240316B	① ③	HPU-B	17.5	30	207	14	GS214-024	① ④ ⑤	
AHU-C	UNITS	2.5	1,000	②	30	8 KW	1/3	34/39	35/40	85	AWUF-300316B	① ③	HPU-C	18.7	30	219	14	GS214-030	① ④ ⑤	

① DISCONNECT ② SEE SCHEDULE FOR OUTSIDE AIR SETTING ③ PASSIVE OA MAKE-UP ④ HEAT STRIP LOCK-OUT ⑤ LOCKING FREON CAP

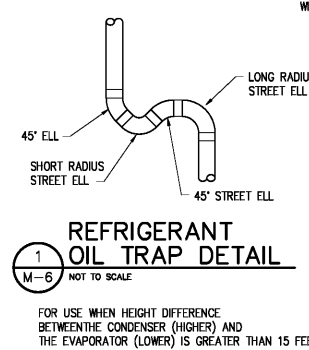
FANS												
MARK	SERVICE	TYPE	CFM	WATTS	ESP IN WC	DRIVE	SONES	UNIT WT (LBS)	BASIS OF DESIGN	REMARKS		
EF-A	PRIVATE RR	CABINET	50	16	0.15	DIRECT	1.5	8	DELTA BREEZE ASSO	① ② ③		
EF-B	KITCHEN	CABINET	100	80	0.25	DIRECT	2.0	8	GREENHECK SP-B110	① ② ⑤ ⑥		
EF-C	DOG WASH	PROP FAN	350	1/25 HP	0.125	DIRECT	5.9	12.5	DAYTON THLAZA	① ② ④ ⑥		
EF-D	POOL EQUIP.	CABINET	230	81	0.375	DIRECT	3.0	31	GREENHECK SP-A290	① ② ③ ⑧		
EF-E	CLUB TOILETS	CABINET	150	128	0.25	DIRECT	3.0	16	GREENHECK SP-B150	① ② ③ ⑤		
EF-F	CLUB PWDR.	CABINET	75	20	0.2	DIRECT	1.6		GREENHECK SP-B150	① ② ③ ⑤		

① BACKDRAFT DAMPER ② DISCONNECT SWITCH ③ CONTROLLED W/LIGHTS ④ SHUTTER/WIND HOOD
⑤ RADIATION DAMPER ⑥ SEPARATE SWITCH ⑦ SOLID STATE SPEED CONTROLLER ⑧ CONTROLLED THERMOSTAT

VENTILATION REQUIREMENTS						
SPACE	GROSS SQ.FT.	NET OCCUPIABLE SQ. FT.	OCCUPANTS PER 1,000 SQ. FT.	OCCUPANCY	CFM PER PERSON	TOTALS
FITNESS	1492	746	20	15	15	225
EQUIPMENT						
AHU-1						225
CLUBROOM	1071	536	30	16	15	240
COMPUTER ROOM	164	164	20	4	15	60
CYBER CAFE	161	N/A	N/A	N/A	0.1 CFM/SQ. FT.	20
NET TOTAL						320
EQUIPMENT						
AHU-2						160
AHU-3						160
TOTAL						320
SPIN CLASSROOM	484	242	20	5	15	75
YOGA	450	225	20	5	15	75
NET TOTAL						150
EQUIPMENT						
AHU-4						150

LONG LINE SET SIZING					
TONS	80-100 EQUIVALENT FEET		81-150 EQUIVALENT FEET		REMARKS FOR 81-150 EQ.FT.
	SUCTION	LIQUID	SUCTION	LIQUID	
1.5	3/8"	3/4"	3/8"	3/4"	PROVIDE CRANKCASE HEATER TXV VALVE HARD START ASSIST VIBRATION ISOLATION FOR SECURING LINES
2.0	3/8"	3/4"	3/8"	7/8"	
2.5	3/8"	3/4"	3/8"	7/8"	
3.0	3/8"	7/8"	3/8"	1-1/8"	
3.5	3/8"	1-1/8"	3/8"	1-1/8"	
4.0	3/8"	1-1/8"	3/8"	1-1/8"	
5.0	3/8"	1-1/8"	3/8"	1-1/8"	

NOTES:
EQUIVALENT FEET = LENGTH (HORIZ) + LENGTH (VERT) + 10 FEET (LOSSES)
USE ONLY LONG SWEEP ELBOWS
MAXIMUM EQUIVALENT FEET SHALL NOT EXCEED 150 FEET



THRU-WALL HEAT PUMP																	
MARK	SERVICE	TONS	CFM	EXTERNAL SP	OA CFM	RETURN CFM	COOLING CAP.		HEAT CAP. KW	ELECTRICAL			UNIT WT (LBS)	COOLING EFFICIENCY	HEATING EFFICIENCY	BASIS OF DESIGN	REMARKS
							TOTAL MBH	SENS. MBH		MCA	MOCP	VOLT					
TWHP-A	DOGWASH	0.75	330	N/A	N/A	330	9.0	9.0	3.5	19.5	20	230/208/1	150	EER 12.0	COP = 3.4	AMANA PTH093G335	① ② ③
TWHP-B	MAINTENANCE	0.75	330	N/A	N/A	330	9.0	9.0	3.5	19.5	20	230/208/1	150	EER 12.0	COP = 3.4	AMANA PTH093G335	① ② ④

① DISCONNECT ② WALL SLEEVE, SUB-BASE AND ARCHITECTURAL GRILLE ③ EXTERIOR DRAIN KIT ④ INTERIOR DRAIN KIT

- MECHANICAL NOTES AND SPECIFICATIONS**
- THE CONTRACTOR SHALL PROVIDE A COMPLETE HVAC SYSTEM TO INCLUDE ALL LABOR, MATERIALS, TOOLS, AND EQUIPMENT FOR A COMPLETE AND FUNCTIONAL SYSTEM INCLUDING ALL NECESSARY APPURTENANCES CUSTOMARILY INCLUDED IF NOT SPECIFICALLY CALLED OUT.
 - DEVIATION FROM MATERIALS, METHODS AND PROCEDURES SET FORTH HEREIN MUST BE APPROVED IN WRITING. APPROVAL WILL NOT BE GIVEN UNLESS THE PROPOSED SYSTEM IS EQUAL IN PERFORMANCE, DURABILITY, LONGEVITY, AND RELIABILITY TO THAT SPECIFIED.
 - ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES, LAWS, AND ORDINANCES.
 - THE CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL DETAILS OF THE WORK AND THE CONDITIONS AND SHALL VERIFY DIMENSIONS AND CLEARANCES SHALL ASSURE THAT THE EQUIPMENT FITS PROPERLY INTO THE AVAILABLE SPACE.
 - SUBMISSION OF BID OR PROPOSAL SHALL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS, SPECIFICATIONS, AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO BIDS FOR MATERIALS AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS DIFFICULTIES COULD NOT HAVE BEEN FORESEEN THROUGH PROPER EXAMINATION HAD BEEN MADE.
 - THE CONTRACTOR SHALL REVIEW STRUCTURAL DRAWINGS BEFORE INSTALLING DUCTWORK OR EQUIPMENT TO AVOID ANY CONFLICTS.
 - ALL HARD DUCTWORK SHALL BE FABRICATED OF GALVANIZED STEEL OF THICKNESS AND GAUGES TO CONFORM TO SMACNA DUCT CONSTRUCTION STANDARDS. (RECTANGULAR OR EQUIVALENT ROUND)
 - ALL DUCT SHALL BE AIRTIGHT, FREE OF LEAKS, AND SHALL BE INSPECTED FOR LEAKS PRIOR TO INSTALLATION OF FINISHED CEILING SYSTEM.
 - DUCTWORK, DAMPERS, LOUVERS, DIFFUSERS, AND OTHER DISTRIBUTION EQUIPMENT AND MATERIALS SHALL CONFORM TO THE FOLLOWING:
A. ASHRAE/ANSI E. AMCA STANDARD HANDBOOK 99
B. SBCCO/ASME F. AIR DIFFUSION COUNCIL TEST
C. SMACNA CODE 1062R3
D. NFPA G. ANY LOCAL CODES NOT COVERED ABOVE.
 - ALL DUCT SIZES ARE CLEAR NET INSIDE DIMENSIONS.
 - ALL LOW PRESSURE ROUND DUCT AND FLEXIBLE DUCT SHALL BE CONNECTED TO LOW PRESSURE DUCT WITH SPIN-IN FITTINGS AND MANUAL DAMPERS.
 - LOW PRESSURE INSULATED FLEXIBLE DUCT SHALL BE SIZED AS SHOWN. USE R-6 IN CONDITIONED AREAS AND R-8 IN UNCONDITIONED AREAS.
 - ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE LINED WITH 1", 1-1/2" DENSITY FIBERGLASS 5'-0" DOWNSTREAM FROM UNIT. (AHU-1,2,3,4 ONLY)
 - ALL SUPPLY AND RETURN DUCTWORK NOT LINED SHALL BE INSULATED WITH 1-1/2", 3/4" DENSITY FOIL BACKED EXTERNAL INSULATION.
 - ALL THERMOSTATS SHALL BE INSTALLED 60" AFF AND SHALL HAVE CLEAR ACCESS TO AIR. (CLUBHOUSE UNITS ONLY)
 - ALL WITERS SUPPLY AND RETURNS SHALL BE PROVIDED WITH TURNING UNITS.
 - CEILING DIFFUSERS (CD) SHALL BE 24" x 24" TITUS MODEL TMSA OR APPROVED EQUAL. SIZED AS PER DRAWINGS.
SUPPLY REGISTER (SR) SHALL BE TITUS MODEL 272RL OR APPROVED EQUAL. SIZED AS PER DRAWINGS. 2 SIDED THROW
 - SIDEWALL RETURN AIR GRILLE (SRAG) SHALL BE TITUS MODEL 25RL OR APPROVED EQUAL. SIZED AS PER DRAWINGS.
 - RETURN AIR GRILLES (RAG) SHALL BE TITUS 50G EGG-CRATE TYPE, 24" x 24" UNLESS OTHERWISE NOTED.
 - REFRIGERANT PIPING SHALL BE SIZED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR LIQUID, VAPOR HORIZONTALS AND VAPOR RISERS. JOINTS SHALL BE MADE WITH SILVER SOLDER.
 - INSULATE REFRIGERANT SUCTION LINES WITH ARMAFLEX OR EQUAL. INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. RUN IN WALLS AND ABOVE CEILINGS AS MUCH AS POSSIBLE.
 - MANUAL DAMPERS SHALL BE INCLUDED IN OUTSIDE AIR INTAKE DUCTS TO REGULATE OUTSIDE AIR TO THE AIR HANDLING UNITS.
 - UNDERCUT RESTROOM DOORS 3/4" FOR EXHAUST MAKE-UP.
 - CONDENSATE DRAIN MUST TERMINATE AT AN APPROVED POINT. VERIFY AT SITE.
 - ALL LOW VOLTAGE CONTROL WIRING SHALL BE UNDER THIS CONTRACTOR.
 - ALL INSULATING MATERIALS SHALL HAVE A COMPOSITE FLAME SPREAD OF 25 AND SMOKE DEVELOPED OF 50 (ASTM E-84, NFPA 255 & UL 723).
 - THERMOSTATS AND OTHER CONTROL ITEMS SHALL BE A PRODUCT OF THE EQUIPMENT MANUFACTURER. (THERMOSTATS SHALL BE EQUAL TO PROGRAMMABLE HONEYWELL T7300).
 - PROVIDE SMOKE DETECTORS IN ALL SUPPLY AIR DUCTS, OF UNITS SERVING EGRESS CORRIDORS OR GREATER THAN 2,000 CFM, ARRANGED TO SHUT DOWN UNIT BLOWER AND ACTIVATE BUILDING ALARM.
 - FIRE DAMPERS SHALL BE RUSKIN MODEL D-1B02 STYLE "B" OR APPROVED EQUAL WITH A 1-1/2 HOUR RATING.
 - RADIATION DAMPERS SHALL BE RUSKIN MODEL CDF(R)2 OR APPROVED EQUAL WITH A 1-1/2 HOUR RATING.
 - PROVIDE AIR EXTRACTORS AT DUCT TAKE-OFFS AS REQUIRED FOR AIR BALANCING. (CLUBHOUSE UNITS ONLY)
 - BALANCE ALL AIR SYSTEMS TO PRODUCE THE VOLUMES AND QUANTITIES SHOWN ON THE DRAWINGS OR SPECIFIED.
 - THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CHARACTERISTICS WITH ELECTRICAL DRAWINGS BEFORE PURCHASING EQUIPMENT.
 - BACKDRAFT DAMPER (BD) SHALL BE TAMARACK TECHNOLOGIES CAPE BACKDRAFT DAMPER, OR APPROVED EQUAL, SAME SIZE AS INDICATED FOR DUCT SIZE ON DRAWING.

- MECHANICAL EQUIPMENT**
- ELECTRIC BASEBOARD HEATER (EBBH-A) SHALL BE MARKEL SERIES 2100 CAPABLE OF 500 WATTS. SUPPLIED WITH THERMOSTAT.
 - ELECTRIC UNIT HEATER (EUH-A) SHALL BE MARKEL SERIES 5100 OR APPROVED EQUAL WITH 5 KW RATING PRODUCING 17,100 BTUH. PROVIDE WITH UNIT MOUNTED THERMOSTAT.
 - ALL MECHANICAL EQUIPMENT WHICH HAVE ELECTRICAL CONNECTIONS SHALL BE SUPPLIED WITH DISCONNECT (PROVIDED BY ELECTRICAL CONTRACTOR).
 - LOUVERS SHALL BE RUSKIN MODEL ELF8110-55 OR APPROVED EQUAL SIZED AS ON DRAWINGS.
 - OUTSIDE AIR TO AIR HANDLING UNITS SHALL CONFORM TO 2003 IMC TABLE 403.3.



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Legacy at Jones Farm Phase 2
HUNTSVILLE, ALABAMA
AN APARTMENT COMMUNITY FOR
RBJ BAILEY, LLC

MECHANICAL SCHEDULES/NOTES

SHEET NO.
M-6