

MECHANICAL NOTES

- PERFORM ALL WORK IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS. ALL AIR CONDITIONING, HEATING & VENTILATION WORK SHALL BE DONE IN ACCORDANCE WITH THE 2015 INTERNATIONAL MECHANICAL CODE, THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE, ASHRAE 90.1 & 62.1, AND THE 2012 NFPA. ALL EQUIPMENT SHALL BE U.L. LISTED AND AMCA CERTIFIED.
- FURNISH ALL MATERIALS, LABOR, TOOLS, TRANSPORTATION AND INCIDENTALS TO COMPLETE IN EVERY DETAIL, AND LEAVE IN WORKING ORDER ALL ITEMS CALLED FOR HEREIN OR SHOWN ON THE DRAWINGS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL VERIFY AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS NECESSARY TO SECURE COORDINATION.
- LAYOUT SHOWN IN DRAWINGS IS SCHEMATIC IN NATURE AND CONTRACTOR SHALL VERIFY ALL REQUIREMENTS OF ACTUAL EQUIPMENT FURNISHED. CONTRACTOR SHALL PROVIDE SUB SUBMITTALS TO ARCHITECT FOR APPROVAL PRIOR TO STARTING WORK. IF ANOTHER MAKE OF EQUIPMENT IS DESIRED, THESE SUBMITTALS SHALL ALSO SHOW ALL REQUIRED MODIFICATIONS AND CHANGES, INCLUDING THOSE INVOLVING OTHER TRADES, AND COST THEREOF SHALL BE INCLUDED.
- CONTRACTOR SHALL VISIT THE SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING SCOPE OF WORK. FAILURE TO DO SO SHALL NOT RELIEVE CONTRACTOR OF THE PERFORMANCE OF HIS WORK. ALL WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADE BY CRAFTSMEN SKILLED IN THIS PARTICULAR WORK. CONTRACTOR SHALL FILE ALL DRAWINGS, 30 DAY FEEL, AND OBTAIN ALL PERMITS AND CERTIFICATES OF INSPECTION RELATIVE TO THIS WORK.
- SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION OF FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR ALL FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM. COMPRESSORS SHALL BE PROVIDED WITH A MINIMUM FIVE YEAR FULL WARRANTY.
- UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO ACCEPTABLE CONDITION. ALL EQUIPMENT, COMPONENTS, AND OUTDOOR SHALL BE INSPECTED AND THOROUGHLY CLEANED, READY FOR USE AT COMPLETION OF JOB. ALL SUPPLUS MATERIALS, RUBBISH, AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
- IF HVAC EQUIPMENT IS USED FOR TEMPORARY HEATING, ETC. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CLEANING FILTERS, COALS, ETC.
- CONTRACTOR SHALL SUBMIT THREE COPIES OF INSTRUCTION BOOKS, INCLUDING INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS, OPERATING OR BROCHURES AND ALL EQUIPMENT WARRANTIES OBTAINED FROM EACH MANUFACTURER OF EQUIPMENT TO OWNER AT COMPLETION OF JOB.
- THE CONTRACTOR SHALL SUPPLY, FOR APPROVAL, SIX (6) COPIES OF SHOP DRAWINGS TO COMPLETELY IDENTIFY THE QUALITY OF MATERIALS AND/OR EQUIPMENT INTENDED FOR INSTALLATION.
- THE SUBMISSION OF A BID OF PROPOSAL WILL BE CONSIDERED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE, CLAIMS MADE SUBSEQUENT TO THE PROPOSAL, FOR MATERIAL AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS THESE DIFFICULTIES COULD NOT HAVE BEEN FORESEEN BY THE CONTRACTOR AFTER PROPER EXAMINATION HAD BEEN MADE.
- ALL MECHANICAL SYSTEMS INDICATED ON THE DRAWINGS, OR WITHIN THE SPECIFICATIONS, ARE NEW.
- PRIOR TO ORDERING OR FABRICATING ANY NEW EQUIPMENT THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CLEARANCES AND REPORT ANY DISCREPANCIES BETWEEN THE DRAWINGS AND ACTUAL FIELD CONDITIONS TO THE ENGINEER.
- WHERE PIPES, DUCTS, ETC. ARE TO PASS THROUGH WALLS, FLOORS, ETC. SLEEVES SHALL BE PROVIDED PRIOR TO WALL CONSTRUCTION. SLEEVES SHALL BE OF EQUAL OR GREATER GAUGE METAL THAN PIPES OR DUCTS PASSING THROUGH, WHERE SLEEVES PENETRATE EXTERIOR SURFACES, JOISTS SHALL BE SEALED WITH FIRE STOPPING WHERE SLEEVES PASS THROUGH RAFTERS THROUGH SLEEVES PACKING SHALL BE OF U.L. LISTED FIRE STOP TYPE.
- TESTING AND APPROVAL: WHEN INSTALLATION IS COMPLETE, ALL EQUIPMENT SHALL BE TESTED FOR PROPER OPERATION AND FUNCTIONING.
 - ALL EQUIPMENT, MOTORS, FANS, ETC. SHALL RUN AT THEIR REQUIRED SPEED AND BE FREE FROM EXCESSIVE VIBRATION AND NOISE. NO BEARING, JOURNALS OR ANY PART OF THE MOTORS SHALL HEAT TO A TEMPERATURE IN EXCESS OF 40C ABOVE THE TEMPERATURE OF THE SURROUNDING AIR.
 - THE EQUIPMENT, DIFFUSERS, REGISTERS, DAMPERS, ETC. SHALL BE ADJUSTED TO DELIVER AIR AT ALL OUTLETS ACCORDING TO THE AMOUNTS OF AIR SHOWN ON THE DRAWINGS OR AS REQUIRED FOR PROPER OPERATION.
- SUPPLY/RETURN GRILLES TO BE TITUS OR METAL HART AND COLEY OR EQUAL. CONTRACTOR SHALL FIELD DETERMINE EXACT SUPPLY/RETURN DUCT TRANSITION REQUIRED AT EACH AIR HANDLER. CONTRACTOR SHALL ISOLATE TRUNK DUCTS FROM UNIT VIBRATION WITH NJ/P.A. AND ULL APPROVED SOUND DETECTORS IN EACH RETURN DUCT LOCATED AT EACH UNIT FOR AUTOMATIC SHUTDOWN WHEN SMOKE IS DETECTED. IE ALL CENTRAL AIR HANDLERS WITH FINE ALARM SYSTEM FOR SHUT DOWN UPON ACTIVATION OF FIRE ALARM.
- MECHANICAL CONTRACTOR TO FURNISH AND INSTALL ALL NECESSARY DUCTS AND VENTS FOR CLOTHES DRYERS, VERIFY SIZES REQUIRED WITH EQUIPMENT MFR.
- FIRE DAMPERS SHALL BE RATED PER HOURLY RATING OF WALLS AS INDICATED ON ARCHITECTURAL DRAWINGS.
- ALL THRU WALL HANG UNITS TO HAVE A PVC PIPED CONDENSATE DRAIN SYSTEM IN STUO WALL TO GROUND LEVEL OR APPROVED TERMINATION POINT.
- GUEST ROOM THERMOSTATS SHALL BE DIGITAL AND CAPABLE OF CONTINUOUS FAN OPERATION.
- ALL ROUND DUCTS ARE SIZED FOR AIR VOLUME AND STATIC PRESSURE DROP WITHOUT INTERIOR INSULATION. ALL RECTANGULAR DUCTS ARE SIZED FOR 2" INTERIOR INSULATION.
- ALL RECTANGULAR ROUND AND FLEXIBLE DUCTS SHALL BE SIZED AS SHOWN ON THE DRAWINGS. SHEET METAL DIMENSIONS ARE GIVEN. OUTDOOR SHALL BE 24 GA. GALVANIUM, CONSTRUCTED AND INSTALLED PER THE LATEST SMACNA STANDARDS. ALL SUPPLY AND RETURN AIR DUCTS SHALL BE INSULATED. ALL ROUND DUCTS SHALL BE EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OR SEAMLESS NONCOMBUSTIBLE COPOLYMER PLASTIC. RECTANGULAR DUCTS SHALL BE EITHER INTERNALLY OR EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OR SEAMLESS COPOLYMER PLASTIC. PER CLIC FOOT DENSITY INSULATION OR APPROVED EQUAL. (IF EXTERNAL INSULATION IS USED, REMOVE 2" FROM THE INTERNALLY INSULATED RECTANGULAR DUCT SIZES SHOWN ON PLANS).
- ALL FLEXIBLE ROUND DUCT SHALL HAVE 2" THICK FIBERGLASS INSULATION ENCASED IN A VAPOR BARRIER OR SEAMLESS NONCOMBUSTIBLE COPOLYMER PLASTIC. INTERNAL METAL FLEX CLAMP OR ENDER SHALL BE USED. SHOP DRAWINGS MUST BE SUBMITTED.
- ALL FLEXIBLE DUCTS SHALL BE CONNECTED TO TRUNK OR BRANCH DUCTS WITH A MINIMUM OF THREE SHEET METAL SCREWS AT EACH CONNECTION AND TAPED TO PROVIDE AN AIR TIGHT SEAL.
- FLEX DUCT HANGER STRIPS SHALL BE 1" x 24 GAUGE MINIMUM.
- THE MAXIMUM ALLOWABLE LENGTH OF FLEXIBLE DUCT SHALL BE 0"-0" AND SHALL BE USED ONLY FOR DEVICES LOCATED IN LAY-IN CEILING.
- INSTALL TURNING VANES IN ALL 90° DUCTS, ELBOWS AND AT ALL DUCT "TEES".
- INSTALL ADJUSTABLE AIR VOLUME EXTRACTORS AT ALL BRANCH TO MAIN DUCT CONNECTIONS.
- ALL OUTDOOR SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MOST RECENTLY PUBLISHED ASHRAE & SMACNA STANDARDS.
- UNIONS AND OUTLETS MUST BE LOCATED AT EACH SUPPLY AND RETURN, AT EACH AIR HANDLING UNIT.
- MANUFACTURERS MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT AND DUCTWORK.
- THE CONTRACTORS SHALL CAREFULLY COORDINATE THE LOCATION OF ALL DUCTS, GRILLES, DIFFUSERS, ETC. WITH THE CEILING GRID AND THE PLUMBING AND FRAMING CONDITIONS.
- ALL RETURN AIR GRILLES SHALL BE EASILY REMOVABLE FOR CLEANING.
- ALL CONTROL WIRING SHALL BE DONE BY THE ELECTRICAL CONTRACTOR.
- ALL POWER WIRING SHALL BE DONE BY THE ELECTRICAL CONTRACTOR.
- EXHAUST FANS SHALL BE FURNISHED WITH BRID SCREWS, BACKDRAFT DAMPERS AND DISCONNECTS WHERE APPLICABLE AND ACCORDING TO THE SCHEDULE.
- CEILING MOUNTED EXHAUST FANS - SUPPORT FROM STEEL ANCHORS, FRAMING AS REQ'D. NO SUPPORT FROM CEILING. FANS SHALL BE CONTROLLED BY WALL SWITCH, TIED TO LIGHTS, OR SHALL RUN CONTINUOUSLY (SEE EXHAUST FAN SCHEDULE). COORDINATE WITH ELECTRICAL CONTRACTOR.
- OUTDOOR LOCATED ABOVE FINISHED CEILING, COORDINATE WITH STRUCTURE - TYPICAL.
- ALL CONDENSATE DRAIN LINES SHALL BE SLOPED MIN. 1/8" PER LINEAR FOOT OF RUN. ALL DRAIN EXITS FROM A/C UNITS SHALL INCLUDE A TRAP AND CLEAN OUT PLEG.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL GAS PIPING AND CONDENSATE DRAINS. ALL GAS LINES SHALL BE SCHEDULE 40 BLACK IRON AND INSTALLED IN ACCORDANCE WITH NFPA 30-77 PARABOLIC AND CONDENSATE LEAKS CHECK FIRE PREVENTION CODE AND ANY APPLICABLE STATE OR LOCAL CODES. CONDENSATE LINES SHALL BE INSTALLED USING GALVANIZED PIPE, PVC, OR A.B.S.
- PROVIDE FLEXIBLE CONNECTOR ON SUPPLY AND RETURN AIR DUCT CONNECTIONS TO UNIT - TYPICAL.
- INSULATE THE BACKS OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES WHICH ARE EXPOSED TO THE NON-AIR CONDITIONED SPACE ABOVE THE CEILING.
- PROVIDE PROGRAMMABLE THERMOSTATS WHERE INDICATED ON THE DRAWINGS. T-STATS SHALL HAVE 7 DAY SCHEDULING AND DAILY OCCUPIED AND UNOCCUPIED SETTINGS. GUESTS SHALL HAVE ACCESS AND CONTROL OVER THERMOSTATS LOCATED IN MEETING ROOMS AND FITNESS ROOM.
- PLENUM RATED WIRE SHALL BE NEATLY BUNDLED IN GROUPS AND SHALL BE COMBINED WHERE APPLICABLE TO FOLLOW A SINGLE PATH BETWEEN CONDENSED BUNDLES SUPPORTED WITH APPROPRIATE STRIPS FOR THIS PURPOSE, ON A SPACING NOT TO EXCEED 6 FEET. AT RATED WALL ASSEMBLY PENETRATIONS PROVIDE A METAL CONDUIT SLEEVE TO EXTEND A MINIMUM OF ONE FOOT BEYOND EACH SIDE OF THE ASSEMBLY. SEAL CONDUIT ENDS WITH FIRE PROOF PUTTY UPON COMPLETION OF WIRE INSTALLATION.
- THE CONTRACTOR SHALL CAREFULLY COORDINATE ALL THERMOSTAT LOCATIONS WITH INTERIOR FINISHES. VERIFY LOCATIONS WITH INTERIOR ELEVATIONS.
- PROVIDE CONDENSATE DRAIN LINES FROM ALL A/C UNITS TO BUILDING DRAIN LINES OR EXTERIOR. PROVIDE TRAPS ON ALL CONDENSATE DRAIN LINES.
- A THIRD PARTY BALANCE REPORT, PAID FOR BY THE CONTRACTOR, SHALL BE SUBMITTED TO THE ARCHITECT.
- INDOOR AIR HANDLING UNITS AND ROOFTOP UNITS SHALL BE PROVIDED W/ FOL FACED FIBERGLASS INSULATION OR CLOD-CLOSED CELL POLYURETHANE INSULATION.
- WHEN POSSIBLE ABOVE LAY-IN CEILING, PROVIDE MANUAL VOLUME DAMPERS IN SUPPLY/RETURN AIR DUCTS. DAMPERS MUST BE EASILY ACCESSIBLE, IF NO SUCH SPACE IS AVAILABLE, PROVIDE OPPOSED BLADE DAMPER AT DEVICE FOR BALANCING.

POOL ROOM DEHUMIDIFIER AND CONDENSING UNIT SCHEDULE

MARK	MANUFACTURER MODEL NO.	CFM	BLOWER COIL		TOT. COOL. CAP. (TON)	WATER HEATING CAPACITY (GPH)	MOIST. REPT. (GPH)	VOLTS	MCA	MODEL NO. (COND. (F) AMBIENT (F))	NOTES
			ESP (INCH)	SEN. COOL. (MESH)							
DEH-1	DESHEAT ARE 1,130	3000	79.0	42.8	96.0		208	3	125	RS2302CS-2412200	1 - 10

Notes:

- Microprocessor Humidity and Temperature Control (DH2000-B Controller)
- R-410A @ Hot Gas Bypass Valve
- Electronic Coiling
- Single Point Duct Heater - (16 KW Low / 24 KW High)
- Dehumidifier to be equipped with outdoor air intake option & electrical terminals to control an exhaust fan and outside air duct damper.
- Provide a transformer or a power source connection for the outdoor air damper and the external blower controller.
- AsU to reject heat back to pool. Provide air ports for a proper pool water heating installation.
- Provide cut-off contacts on Dehumidifier to be tied into fire alarm system to shutdown when activated as local code requires.
- Contact Josh Davis @ Aritech. For information call 1-479-756-8600.
- Provide MERV 8 Filters.

* ESP = Static Pressure available to Furnace. (Not including the coil.)
 ** AIR 910 Standard rating of 84 degree F/60% RH with no pool heat.

AIR HANDLER UNITS & HEAT PUMP SCHEDULE

BLOWER COIL						HEAT PUMP					
MARK	MANUFACTURER MODEL NO.	CFM	TOT. COOL. CAP. (TON)	ELECTRIC HEAT (KW) @ 208V	MCA	MARK	MODEL NO.	VOLTS	MCA	SEER	ACCESSORIES
AH-1	LENNOX CBK27UM-060-230-6-01	6000	54.0	58.0	49.0	HP-1	TPA03854	208	21.3	13.0	ob,cd,a,g
5 TON	UPTLOW	...	44.8	38.3	30	3	95	60	35	7.7	1,2,3
AH-2	LENNOX CBK27UM-036-230-6-01	1200	27.2	33.9	20.8	HP-2	TPA03854	208	14.2	13.0	ob,cd,a,g
3 TON	UPTLOW	...	20.0	21.0	15.0	3	95	60	20	8.0	1,2,3
AH-3	LENNOX CBK27UM-036-230-6-01	1200	27.2	33.9	20.8	HP-3	TPA03854	208	14.2	13.0	ob,cd,a,g
3 TON	UPTLOW	...	20.0	21.0	15.0	3	95	60	20	8.0	1,2,3
AH-4	LENNOX CBK27UM-048-230-6-01	1600	36.0	45.4	26.4	HP-4	TPA04854	208	18.8	13.0	ob,cd,a,g
4 TON	UPTLOW	...	28.2	28.2	20.8	3	95	60	30	7.7	1,2,3
AH-4b	LENNOX CBK27UM-048-230-6-01	1600	36.0	45.4	26.4	HP-4b	TPA04854	208	18.8	13.0	ob,cd,a,g
4 TON	UPTLOW	...	28.2	28.2	20.8	3	95	60	30	7.7	1,2,3
AH-5	LENNOX CBK27UM-024-230-6-01	800	24.2	22.1	15.0	HP-5	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
2 TON	UPTLOW	...	18.6	13.6	13.5	3	95	60	30	7.35	1,2,3
AH-5b	LENNOX CBK27UM-024-230-6-01	800	24.2	22.1	15.0	HP-5b	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
2 TON	UPTLOW	...	18.6	13.6	13.5	3	95	60	30	7.35	1,2,3
AH-6	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-6	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-6b	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-6b	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-7	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-7	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-7b	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-7b	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-8	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-8	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-8b	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-8b	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3
AH-9	LENNOX CBK27UM-024-230-6-01	800	24.2	22.1	15.0	HP-9	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
2 TON	UPTLOW	...	18.6	13.6	13.5	3	95	60	30	7.35	1,2,3
AH-9b	LENNOX CBK27UM-024-230-6-01	800	24.2	22.1	15.0	HP-9b	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
2 TON	UPTLOW	...	18.6	13.6	13.5	3	95	60	30	7.35	1,2,3
AH-10	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-10	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	7.35	1,2,3
AH-10b	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-10b	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	7.35	1,2,3
AH-11	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-11	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	7.35	1,2,3
AH-11b	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-11b	13HPX-024-230-2-1	208	18.0	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	7.35	1,2,3
AH-12	LENNOX CBK27UM-042-230-6-01	1400	34.8	41.1	23.8	HP-12	TPA04254	208	18.6	13.0	ob,cd,a,g
3.5 TON	UPTLOW	...	25.4	25.4	20.8	3	95	60	30	8.0	1,2,3

RANGE HOOD NOTES

- RANGE HOOD TO BE AS PER DRAWING. HOOD CONSTRUCTED OF 16 GAUGE STAINLESS STEEL WITH GALV. DUE (ALL WELDED) ON EXHAUST. 3" CLEARANCE TO CEILING AND REAR WALL. CAVITY TO BE INSULATED WITH HIGH DENSITY INSULATION. EXHAUST TO BE SLEEVED 3" CLEARANCE THRU ROOF CURB.
- FIRE PROTECTION TO BE 2-1/2" GYL RANGE GUARD WITH STAINLESS STEEL & GAS (MECHANICAL) VALVE COORDINATE WITH FIRE PROTECTION CONTRACTOR, LOCAL CODES AND KITCHEN EQUIPMENT SUPPLIER.
- THE HOOD SHALL BE CONSTRUCTED OF AND BE SUPPORTED BY STEEL MEMBERS WITH #18 MSG OR STAINLESS STEEL NOT LESS THAN 200 MSG IN THICKNESS. ALL SEAMS AND JOINTS SHALL HAVE A LIQUID TIGHT CONTINUOUS EXTERNAL WEILD.
- HOOD SHALL BE SIZED AND CONFIGURED TO PROVIDE FIVE CAPTURE AND REMOVAL OF GREASE LADEN VAPOURS. THIS IS CONSIDERED IN COMPLIANCE IF THE HOOD COMPLETELY COVERS THE COOKING UNIT IS DESIGNATED TO VENTILATE PLUS AN OVERHANG OF AT LEAST SIX INCHES ON ALL SIDES OF THE EQUIPMENT; AND THE DEPTH OF THE HOOD FROM THE LOWER TO THE UPPER EDGE IS AT LEAST 3 FEET.
- THE CONSTRUCTION OF THE OUTER SHELL OR THE INNER MUST SHALL HAVE A CONTINUOUS LIQUID TIGHT EXTERNAL WEILD IF THE OUTER SHELL SHALL BE OF GREATER WEIGHT.
- A FIRE ACTUATED DAMPER OF AT LEAST THE SAME GAUGE AS THE HOOD SHALL BE INSTALLED IN THE SUPPLY PLUMB AT THE SAME PLANE AS THE EXTERNAL WEILD. ACCESS MUST BE PROVIDED FOR INSPECTION AND MAINTENANCE OF THE DAMPER.
- THE EXHAUST DUCT SHALL BE CONSTRUCTED AND SUPPORTED BY CARBON STEEL NOT LESS THAN #16 MSG OR STAINLESS STEEL NOT LESS THAN #18 MSG IN THICKNESS. ALL SEAMS AND JOINTS SHALL HAVE LIQUID TIGHT CONTINUOUS EXTERNAL WEILD. THE HOOD SHALL BE CONNECTED TO THE HOOD AS SHOWN IN NFPA - 96.
- THE HOOD AND DUCT SHALL HAVE A CLEARANCE OF NOT LESS THAN 18 INCHES FROM COMBUSTIBLE MATERIAL UNLESS COMPARTMENTED AS NOTED IN ACCORDANCE WITH NFPA - 96 - APPENDIX A.
- THE HOOD SHALL BE CLEARLY IDENTIFIED WITH THE DISCHARGE HANGING AT LEAST 40 INCHES OF CLEARANCE FROM THE OUTLET TO THE DEET SIGHTING WITH THE DIRECTION OF FLOW OF EXHAUST AIR AWAY FROM THE ROOF SURFACE.
- THE GASKETS SHALL BE U.L. LISTED FOR USE WITH COMMERCIAL COOKING EQUIPMENT, AND THEY SHALL BE TIGHTENED AND FIRMLY HELD IN PLACE AT AN ANGLE NOT LESS THAN 45 DEGREES FROM THE HORIZONTAL. THE EXHAUST AIR VELOCITY SHALL NOT BE LESS THAN 1,500 FEET PER MINUTE.
- ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH NFPA - 70, NATIONAL ELECTRICAL CODE, WITH REGARD TO THE EFFECTS OF VAPOURS, AND GREASE ON THE EQUIPMENT. (ELECTRICAL WIRING SHALL NOT BE INSTALLED UNDER THE HOOD OR IN THE EXHAUST DUCT.)
- APPROVED FIRE EXTINGUISHING EQUIPMENT SHALL BE PROVIDED FOR THE PROTECTION OF DUCT SYSTEMS, GREASE REMOVAL DEVICES, AND HOODS. INSTALL IN COMPLIANCE WITH THE APPLICABLE NFPA STANDARDS.
- THE MAKE-UP AIR AND EXHAUST FAN SHALL BE SWITCHED TO OPERATE TOGETHER. COORDINATE WITH MECHANICAL CONTRACTOR.
- PROVIDE A SAFETY SWITCH AT OR ADJACENT TO THE EXHAUST FAN ON THE RANGE.
- RANGE HOOD SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT PRIOR TO RANGE HOOD FABRICATION AND INSTALLATION.
- THE HOOD FIRE SUPPRESSION SYSTEM SHALL BE ACTIVATED EITHER MANUALLY OR AUTOMATICALLY VIA HEAT DETECTION UPON ACTIVATION, APPLICABLE ENERGY SOURCES GAS & ELECTRIC, SHALL BE SHUT OFF. THE FIRE EXTINGUISHING AGENT SHALL BE DISCHARGED INTO THE PLUMB AND DUCT AND ONTO THE COOKING APPLIANCES. A SET OF DRY CONTACTS SHALL BE PROVIDED FOR ACTIVATION OF THE GENERAL FIRE ALARM SYSTEM.
- DISCHARGE NOZZLES SHALL HAVE A METAL OR RUBBER BLOW-OFF CAP TO KEEP THE NOZZLE TIP FREE OF COOKING GREASE BUILD-UP.
- THIS IS A BRIEF SUMMARY OF THE NFPA 96 REQUIREMENTS FOR THE KITCHEN RANGE HOOD AND DOES NOT MEAN THAT A WAIVER WILL BE GRANTED FOR ANY NFPA 96 REQUIREMENTS NOT LISTED HEREIN.

ELECTRIC WALL HEATER SCHEDULE

MARK	MANUFACTURER MODEL NO.	CFM	VOLTS	MOTOR HP/PH	DIMENSIONS (WxHxD) (IN)	NOTES
EW-1 <td>MARVEL THRU F343J1</td> <td>245</td> <td>208</td> <td>1/8 HP</td> <td>26x18x6</td> <td>1,2,3,4</td>	MARVEL THRU F343J1	245	208	1/8 HP	26x18x6	1,2,3,4
EW-4 <td></td> <td>3.0</td> <td>80</td> <td></td> <td>HORIZONTAL</td> <td></td>		3.0	80		HORIZONTAL	

Notes:

- HEATER SHALL BE RECESSED TYPE TO EXTEND NO MORE THAN 1-1/2" FROM FINISHED WALL.
- PROVIDE WALL-MOUNTED THERMOSTAT, 24 VAC CONTROL VOLTAGE.
- PROVIDE BUILT-IN CONTROL POWER TRANSFORMER.
- PROVIDE BUILT-IN CIRCUIT BREAKERS TO ACT AS LOCAL DISCONNECT.

PACKAGED TERMINAL AIR CONDITIONERS

MARK	TOTAL CFM	AIR CAP. (GPH)	DB	COOLING CAPACITIES				HEATING CAPACITY (BTU/H)	EER	MANUFACTURER/ UNIT MODEL NO.	POWER CONSD									
				DB	WB	TOTAL	SENSE													
A	316	.5	25	THRU WALL	80	67	100	78	8.9	---	8.1	3.3	2.9	208/1	19.4	20	208/1	11.6	AMMA PTH03E35A0000AA	6-20P
B	316	.3	25	THRU WALL	80	67	100	78	11.1	---	10.5	3.1	2.9	208/1	19.4	20	208/1	10.4	AMMA PTH12E35A0000AA	6-20P

1. CE, IG, Trane, Amson, and Friedman are Considered Equivalent Manufacturers. Zonosire is Not Acceptable.
 2. Provide Wall Mounted Wired Digital Thermostat.
 3. Units shall be Furnished with Architectural Exterior Grilles. (Color to be Approved by Owner)
 4. Unit shall Automatically Switch to Electric Heat at Approximately 24°F Outdoor Ambient.
 5. Each Unit to Include Standard Disposable 1" Filter.
 6. Each Unit Shall be Mounted Using Wall Sleeve with Sealed Wall Penetration and Secured to Wall Structure.
 7. Provide Unit with Wall Sleeve, and Condensate Drain Kit for External Disposal of Condensate.

FIRE DAMPER NOTES

- REFER TO DETAILS FOR MOUNTING OF VERTICAL AND HORIZONTAL FIRE DAMPERS.
- DAMPERS SHALL BE SECURED TO COLLARS WITH 1/4" NUTS AND BOLTS OR WELDED IN THE MOUNTING HOLES PROVIDED WITH NO. 10 SHEET METAL SCREWS (8" ON CENTER) OR 3/16" STEEL PIPEROCKETS.
- ANGLES SHALL BE A MINIMUM OF 1/2"-1/4" WITH 1/8" RETAINING ANGLE MUST LAP STRUCTURAL OPENING 1" MINIMUM AND COVER CORNERS OF OPENINGS. FASTEN ANGLE TO COLLARS WITH 1/4" NUTS AND BOLTS OR WELDS ON 2" CENTERS OR 10 SHEET METAL SCREWS (8" ON CENTERS OR 3/16" STEEL PIPEROCKETS).
- ALL SLEEVES FOR FIRE DAMPERS THAT ARE MOUNTED