

ROOFTOP A/C EQUIPMENT SCHEDULE																		
A/C UNIT TAG	MANUFACTURER	MODEL	CFM	E.S.P.	H.P.	COOLING*			HEATING			ELECTRICAL			OPERATING WEIGHT LBS.	NOTES		
						TOTAL	SENSIBLE	EER	TYPE	INPUT MBH	OUTPUT MBH	STAGES	OUTSIDE AIR CFM	VOLT/PH/Hz			MCA	MOCP
RTU-1	TRANE	YZC120F3RLA	4000	1.0	2.75	116.9	96.1	12.1	GAS	150	121.5	2	300	208/3/60	53	80	1500	1, 2, 3, 4, 5, 6, 7, 8, 9
RTU-2	TRANE	YZC120F3RLA	4000	1.0	2.75	116.9	96.1	12.1	GAS	150	121.5	2	800	208/3/60	53	80	1500	1, 2, 3, 4, 5, 6, 7, 8, 9

\* DESIGN BASED ON 95°F OA, 80° DB AND 67° WB

NOTES:

- PROVIDE UNITS WITH ENTHALPY ECONOMIZER WITH BAROMETRIC RELIEF.
- PROVIDE COMPRESSORS WITH SHORT CYCLE PROTECTION AND MINIMUM OF 5 YEAR WARRANTY.
- PROVIDE INTERNAL DISCONNECT SWITCH.
- PROVIDE CONDENSATE OVERFLOW SENSOR SWITCH
- PROVIDE SMOKE DETECTOR ON RETURN PER AHJ TO SHUT DOWN UNIT IF DETECTING SMOKE.
- PROVIDE UNITS WITH DIRECT DRIVE VARIABLE SPEED INDOOR FAN MOTOR.
- UNITS ARE AHRI RATED.

FAN SCHEDULE																
TAG	SERVICE AREA	MANUFACTURER	MODEL NUMBER	CONFIG	CFM	E.S.P. (IN W.G.)	SONES	HP	RPM	DRIVE	VOLT/PH/Hz	WEIGHT(LBS)	DIMENSIONS LxWxH	OPENING L'xW'	CONTROL	NOTES
EF-1	KITCHEN HOOD	CAPTIVEAIRE	DU180HFA	ROOF	1953	1.25	12.6	1.5	1076	DIRECT	208/3/60	158	28x28	26x26	INTERLOCK WITH EXHAUST HOOD	1, 2, 3
EF-2	MENS RESTROOM	GREENHECK	SP-A290	CEILING	75	0.5	3.5	81 W	1050	DIRECT	115/1/60	24	14.875x13.25	14x11.875	INTERLOCK WITH LIGHT SWITCH	3
EF-3	WOMEN'S RESTROOM	GREENHECK	SP-A290	CEILING	75	0.5	3.5	81 W	1050	DIRECT	120/1/60	24	14.875x13.25	14x11.875	INTERLOCK WITH LIGHT SWITCH	3
MAU-1	KITCHEN HOOD	CAPTIVEAIRE	A1-D-250-15D	ROOF	1562	0.5	16.2	1.0	1741	DIRECT	208/3/60	615	-	-	INTERLOCK WITH EXHAUST HOOD	2, 3

NOTES:

- PROVIDE WITH INSULATED MATCHING ROOF CURB, MINIMUM HEIGHT 14".
- PROVIDE FAN WITH AUTOMATIC BACKDRAFT DAMPER.
- PROVIDE FAN WITH DISCONNECT SWITCH.

AIR DISTRIBUTION SCHEDULE											
TAG	MANUFACTURER	MODEL NUMBER	FACE SIZE	NECK SIZE	MATERIAL	FRAME	DAMPER	THROW	NC	CFM RANGE	NOTES
CD-1	TITUS	TMSA-AA	12x12	60	ALUMN	SURFACE MOUNTED	-	VERTHORIZ	MAX 30	75	1, 2, 3, 4, 5, 6
CD-2	TITUS	TMSA-AA	24x24	60	ALUMN	LAY-IN	-	VERTHORIZ	MAX 30	100	1, 2, 3, 4, 5, 6
CD-3	TITUS	TMSA-AA	24x24	100	ALUMN	LAY-IN	-	VERTHORIZ	MAX 30	375	1, 2, 3, 4, 5, 6
CD-4	TITUS	TMSA-AA	24x24	120	ALUMN	LAY-IN	-	VERTHORIZ	MAX 30	400-450	1, 2, 3, 4, 5, 6
R-1	TITUS	50FF	24x24	22x22	ALUMN	LAY-IN	-	-	MAX 30	*	3, 4, 5, 6

NOTES:

- PROVIDE WITH SPIN-IN COLLAR WITH VOLUME DAMPER AT TRUNK TO FLEX DUCT CONNECTION.
- PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLANS.
- REFER TO ARCHITECT PLANS FOR CEILING TYPE.
- FLEX DUCT SIZE TO BE SAME AS DIFFUSER NECK SIZE.
- MATCH TO CEILING COLOR.
- PROVIDE INSULATION ON BACK OF CEILING DIFFUSER.

OUTSIDE AIR CALCULATIONS									
AREA SERVED OR UNIT TAG	NET OCCUPIABLE AREA SQ. FT.	MAX. OCCUPANCY P/1000 SQ. FT.	TOTAL NO. OF PEOPLE	VENTILATION RATE CFM/P	VENTILATION SQ. FT.	VENTILATION EFFECTIVENESS	TOTAL CFM O/A REQUIRED	TOTAL CFM O/A PROVIDED	NOTES
KITCHEN	877	20	18	7.5	0.12	80%	296	300	1
DINING	1,220	SEAT COUNT	54	7.5	0.18	80%	781	790	1
CORRIDOR	68	0	0	0	0.06	80%	5	0	
TOTAL							1,082		
RTU-1								300	
RTU-2								0	
TOTAL								1,100	

NOTES:

- CALCULATIONS ARE BASED ON ESTIMATED MAXIMUM OCCUPANCY RATES PER ARCHITECTURAL PLANS AND ASHRAE 62.1-2010 VENTILATION RATES.
- RTU-2 PROVIDE WITH DEMAND CONTROLLED VENTILATION. MINIMUM OUTDOOR AIR SHALL BE SET TO 35% FRESH AIR. OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN CO<sub>2</sub> LEVELS BELOW 1000PPM.

AIR BALANCE SCHEDULE					
AREA SERVED	EQUIPMENT TAG	SUPPLY AIR (CFM)	RETURN AIR (CFM)	OUTSIDE AIR (CFM)	EXHAUST AIR (CFM)
KITCHEN	RTU-1	4,000	3,700	300	X
DINING	RTU-2	4,000	3,200	800	X
EXHAUST HOOD	EF-1		X	X	1,953
MENS RESTROOM	EF-2	X	X	X	100
WOMEN'S RESTROOM		X	X	X	100
MAU	MAU-1	1,562	X	1,562	X
TOTAL		9,562	6,900	2,662	2,153

NOTES:

BUILDING IS (2,662 CFM OA - 2,153 CFM EA) 509 CFM POSITIVE WHEN ALL EXHAUST FANS ARE OPERATING.

MECHANICAL GENERAL NOTES

- ALL RECTANGULAR, ROUND AND FLEXIBLE DUCTS SHALL BE SIZED AS SHOWN ON THESE DRAWINGS. MINIMUM INTERNAL DIMENSIONS ARE GIVEN.
- ALL SUPPLY, RETURN & OUTSIDE AIR DUCTS ARE SIZED FOR AIR VOLUME AND STATIC PRESSURE DROP WITHOUT INSULATION. SHOULD INTERIOR INSULATION BE USED, THE CONTRACTOR SHALL INCREASE THE DUCT SIZE ACCORDINGLY.
- ALL SUPPLY, RETURN AND OUTSIDE AIR DUCTS SHALL BE INSULATED. EXTERIOR INSULATION SHALL BE USED ON ALL CONCEALED DUCTWORK AND ALL DUCTWORK EXTERNAL TO THE SPACE. INSULATION SHALL BE 2" THICK/ 1 POUND PER CUBIC FOOT DENSITY R=6.0 INSTALLED OR APPROVED EQUAL. ALL EXPOSED DUCTWORK SHALL BE INTERNALLY INSULATED UNLESS NOTED OTHERWISE.
- FLEXIBLE DUCTWORK SHALL BE SIMILAR TO ATCO UPC #036 UL CLASS FIBERGLASS SCRIM REINFORCED METALIZED POLYESTER OUTER JACKET, DOUBLE LAMINATION POLYESTER W/ STEEL HELIX, DOUBLE LAYER CORE, R=6.0 INSTALLED.
- ALL FLEXIBLE DUCTS SHALL BE CONNECTED TO TRUNK OR BRANCH DUCTS WITH A MINIMUM OF THREE SHEET METAL SCREWS. EACH CONNECTION SHALL BE SEALED TO PROVIDE AN AIR TIGHT SEAL.
- FLEX DUCT HANGER STRIPS SHALL BE 1/2" WIDE x 1/8" GAUGE MINIMUM.
- THE MAXIMUM ALLOWABLE SAG OF FLEXIBLE DUCT SHALL BE 6'-0".
- INSTALL TURNING VANES ON ALL 90° DUCT ELBOWS AND AT ALL DUCT "TEES".
- INSTALL ADJUSTABLE AIR VOLUME EXTRACTORS AT ALL BRANCH TO MAIN DUCT CONNECTIONS.
- PROVIDE PAINTED (ASH) IDENTIFICATION ON ALL RTU'S, FANS & CONDENSING UNITS. IDENTIFICATION SHALL INCLUDE DEVICE NUMBER & AREA SERVED (ie: RTU-1/DINING).
- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED ACCORDING TO THE MOST RECENTLY PUBLISHED ASHRAE AND SMACNA STANDARDS.
- RECTANGULAR METAL DUCT SHALL BE MILD GALVANIZED STEEL.
- MANUFACTURERS MINIMUM CLEARANCE RECOMMENDATIONS SHALL BE MAINTAINED ON ALL EQUIPMENT AND DUCTWORK.
- THE CONTRACTOR SHALL CAREFULLY COORDINATE THE LOCATION OF ALL DUCTS, GRILLES, DIFFUSERS, ETC. WITH THE CEILING GRID AND THE PLUMBING AND FRAMING CONTRACTORS.
- ALL KITCHEN RETURN AIR GRILLES SHALL BE EASILY REMOVABLE FOR CLEANING.
- ALL CONTROL WIRING SHALL BE BY THE HVAC CONTRACTOR. CONTROL WIRING SHALL BE SHIELDED CABLE TO PREVENT ANY ELECTRICAL INTERFERENCE.
- ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
- EXHAUST FANS SHALL BE FURNISHED WITH BIRD SCREENS, BACKDRAFT DAMPERS AND DISCONNECTS WHERE APPLICABLE AND ACCORDING TO THE SCHEDULE.
- CONTRACTOR SHALL PROVIDE A THIRD PARTY AIR BALANCING CONTRACTOR FOR SYSTEM BALANCING. BALANCING CONTRACTOR SHALL BE CERTIFIED NEBB OR AABC.
- THE CONTRACTOR SHALL CAREFULLY COORDINATE ALL THERMOSTAT LOCATIONS WITH INTERIOR FINISHES.
- THE CONTRACTOR SHALL COORDINATE FULLY WITH ALL OTHER TRADES.
- 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. THERE WILL BE NO DRAW UNTIL SHOP DRAWINGS HAVE BEEN SUBMITTED AND REVIEWED BY ARCHITECT/ENGINEER.
- THE SUBMISSION OF A BID OR PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT THE CONTRACTOR HAS FAMILIARIZED HIMSELF WITH THE PLANS AND BUILDING SITE. CLAIMS MADE SUBSEQUENT TO THE PROPOSAL FOR MATERIALS AND/OR LABOR DUE TO DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED, UNLESS THESE DIFFICULTIES COULD NOT HAVE BEEN FORESEEN EVEN THOUGH PROPER EXAMINATION HAD BEEN MADE.
- ALL ROUND TAKE-OFFS FROM RECTANGULAR DUCTS SHALL BE A DAMPERS EXPRESS COMMERCIAL AIR TITE SPIN IN MODEL ATCS1-2 W/ DAMPER OR APPROVED EQUAL.
- ROOFTOP AIR CONDITIONING UNITS SHALL BE INSTALLED ON FULL PERIMETER ROOF CURBS FURNISHED BY THE GENERAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE CURB INSULATION.
- ALL CONDENSATE DRAIN LINES SHALL BE SLOPED MINIMUM 1/8" PER LINEAR FOOT OF RUN. ALL DRAIN EXITS FROM A/C UNITS SHALL INCLUDE A TRAP AND CLEAN-OUT PLUG. REFER TO DETAIL 3/M-510.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL GAS PIPING AND CONDENSATE DRAINS. REFER TO PLUMBING PLANS FOR GAS PIPING AND CONDENSATE DRAINS.
- ALL ROOF CURBS FOR FANS, ETC. SHALL BE A MINIMUM OF 12" HIGH. KITCHEN HOOD FAN CURBS MAY NEED TO BE HIGHER TO MAINTAIN CORRECT DISCHARGE HEIGHT OF FAN PER N.F.P.A. #98.
- ALL KITCHEN HOOD EXHAUST DUCTWORK WELDS SHALL COMPLY WITH THE LATEST APPLICABLE AWS STANDARDS.
- PROPERLY SECURE ALL FANS TO CURBS & DUCTWORK. PROVIDE NECESSARY GASKET ON CURBS TO PREVENT WATER PENETRATION.
- PROVIDE FLEXIBLE CONNECTIONS FOR SUPPLY, RETURN, AND MAKE-UP AIR DUCT DROPS UNDER ROOF LEVEL.
- PROVIDE 3" MINERAL-FIBER BOARD INSULATION ON EXTERIOR DUCTWORK. PROVIDE FLEXLAD-400 PRE-FABRICATED SELF-ADHERING, SHEET-TYPE PROTECTIVE MEMBRANE ON EXTERIOR DUCTWORK/INSULATION.

HVAC UNIT SPECIFICATIONS

ALL UNITS SHALL BE SINGLE PACKAGE TYPE, CONDITION AIR TO AIR COOLING AND HEATING. EACH UNIT SHALL BE MOUNTED ON A NEW CONCRETE PAD ON STRUCTURAL TOWER ABOVE ROOF OF BUILDING (SEE STRUCTURAL SHEET FOR ADDITIONAL INFORMATION). FILTERS IN ALL HVAC UNITS SHALL BE 2" THICK PLEATED. (SEE FURNISHING ECONOMIZER/ BAROMETRIC RELIEF. UNITS SHALL ALSO BE FURNISHED WITH AUTOMATIC ELECTRIC IGNITION SYSTEM. UNITS SHALL BE FURNISHED WITH INTERLOCK PARTS.

SEQUENCE OF OPERATION

THE MECHANICAL CONTRACTOR SHALL INSTALL ALL REQUIRED COMPONENTS FOR THE FOLLOWING SEQUENCES OF OPERATION FOR EACH HVAC UNIT. DISCONNECTS SHALL BE FURNISHED AND INSTALLED BY THE UNIT MANUFACTURER.

- UNIT SHALL BE STARTED AND STOPPED THROUGH ITS RESPECTIVE THERMOSTAT. OCCUPIED CONTACT SHALL BE THROUGH THE HOOD INTERLOCK.
- ROOM THERMOSTATS SHALL ENERGIZE COOLING AND HEATING SYSTEMS TO MAINTAIN DESIRED SPACE TEMPERATURE.
- M.C. SHALL HOLD (3) TRAINING SESSIONS (SUMMER & WINTER) WITH STORE MANAGER TO INSURE THEIR KNOWLEDGE OF PROPERLY USING THE CONTROLS.

CONTROLS

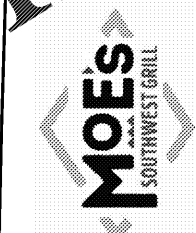
- PROVIDE TRANE PROGRAMMABLE THERMOSTAT W/ REMOTE SENSOR. THERMOSTAT SHALL PROVIDE TWO STAGE HEATING AND TWO STAGE COOLING.
- THERMOSTATS SHALL PROVIDE CONSTANT FAN DURING OCCUPIED PERIODS AND INTERMITTENT FAN DURING UNOCCUPIED PERIODS.
- ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR. ALL CONTROL WIRING BY M.C.
- PROVIDE PHENOLIC LABEL ON ALL T-STATS & REMOTE SENSORS.
- THE KITCHEN HOOD EXHAUST FAN & ROOFTOP UNITS SHALL BE INTERLOCKED WITH HOOD CONTROLS BY AN ELECTRICAL INTERLOCK SWITCH. TEMPERATURE SENSOR ON HOOD SHALL AUTOMATICALLY ENERGIZE EXHAUST FANS, MAKE-UP AIR UNIT & ROOFTOP UNIT FANS.

HVAC SYMBOL LEGEND

- ☒ SUPPLY AIR DIFFUSER
- ☑ RETURN AIR GRILLE
- ⊖ THERMOSTAT
- ⊖(R) THERMOSTAT REMOTE SENSOR
- ⊖(CO) CARBON DIOXIDE SENSOR
- AIR DEVICE TYPE
- AIR VOLUME IN CUBIC FEET/MINUTE (CFM)
- MANUAL VOLUME DAMPER

TEST AND BALANCE

THE GENERAL CONTRACTOR SHALL SUBCONTRACT TO AN AIR TEST AND BALANCE CONTRACTOR THE TESTING, ADJUSTING AND BALANCING OF ALL ENVIRONMENTAL SYSTEMS SHOWN OR SPECIFIED ON THE CONTRACT DOCUMENTS. THE WORK SHALL BE PERFORMED BY A FIRM CERTIFIED BY EITHER AABC OR NEBB, AND FOUR (4) COPIES OF THE FINAL REPORT, SUBMITTED ON CERTIFYING AGENCY FORMS, SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL. THE REPORT SHALL BEAR THE CERTIFYING AGENCY SEAL OF THE TAG SUPERVISOR IN CHARGE. REPORTS SHALL CONTAIN ALL AIR SIDE BALANCING DATA, INSTRUMENTS USED AND THEIR LATEST CALIBRATION DATES, PERSON(S) PERFORMING THE WORK AND A WRITTEN GUARANTEE THAT ALL TAB WORK WAS PERFORMED IN ACCORDANCE WITH THE CERTIFYING AGENCY STANDARDS AND PROCEDURES. AN INDEPENDENT AIR BALANCING CONTRACTOR MAY PERFORM THIS WORK ONLY UPON WRITTEN SUBMISSION OF QUALIFICATIONS AND SUBSEQUENT APPROVAL BY THE PROJECT ENGINEER.



REV. NO.	DATE	ISSUED FOR PERMIT	DESCRIPTION
07/27/18			

DRAFT

MOE'S SOUTHWEST GRILL  
3732 US HWY 280  
PHENIX CITY, AL 36867

MECHANICAL GENERAL NOTES AND SCHEDULES

DATE:	
BRAND REVIEW	07/27/2018
PERMIT	07/27/2018
BID	--/--/--
CONSTRUCTION	--/--/--
RECORDED	--/--/--

PROJECT MANAGER	DESIGNER
JB	DTI

JOB NO.  
2018375.13

M-010