

**GENERAL:**

- LOCATE, CUT AND FRAME ROOF OPENINGS AS SHOWN FOR ALL HVAC EQUIPMENT AND EXHAUST FANS.
- IT IS VERY IMPORTANT THAT ACCURATE MEASUREMENTS ARE USED WHEN LOCATING EXHAUST FAN ROOF OPENINGS TO ENSURE THAT NO ADDITIONAL OFF-SETS ARE REQUIRED IN THE EXHAUST DUCTWORK. COORDINATE ROOF OPENINGS WITH THE KITCHEN EQUIPMENT.
- PROVIDE ANY FRAMING REQUIRED FOR DIFFUSER INSTALLATION IN HARD CEILING.

**HVAC:**

- INSTALLATION SHALL CONFORM TO THE ENERGY CONSERVATION DESIGN MANUAL STANDARDS FOR NEW NONRESIDENTIAL BUILDINGS.
- ALL WORK AND MATERIALS SHALL COMPLY WITH GOVERNING CODES, SAFETY ORDERS AND REGULATIONS.
- OBTAIN AND PAY FOR ALL NECESSARY PERMITS, FEES AND INSPECTIONS REQUIRED BY GOVERNING AUTHORITIES.
- E.C. SHALL PROVIDE CONDUIT FOR LINE AND LOW VOLTAGE WIRING, LINE VOLTAGE WIRING SWITCHES, AND FINAL CONNECTIONS.
- M.C. SHALL PROVIDE 24V CONTROL WIRING AND FINAL CONNECTIONS. ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS.
- FOR INSTALLATION OF RECHARGEABLE REFRIGERANT LINES FROM ICE MACHINE TO CONDENSER ON ROOF, SEE SCOPE OF WORK.
- HVAC UNITS SHALL BE MOUNTED LEVEL ON ROOF CURBS.
- ALL SUPPLY / RETURN DUCTWORK SHALL BE EXTERNALLY INSULATED.
- ALL SUPPLY / RETURN DUCTS SHALL BE RIGID, WITH THE EXCEPTION OF THE LAST 5'-0", WHICH MAY BE FLEX.
- SMOKE DETECTOR SHALL BE INSTALLED IN THE RETURN AIR DUCT, PRIOR TO ANY OUTSIDE AIR CONNECTIONS, AND SHALL DEACTIVATE ROOFTOP UNIT UPON SENSING SMOKE.
- ALL HOOD EXHAUST DUCTS SHALL BE RIGID 16 GA MINIMUM, WELDED DUCT. GRIND ALL WELDS SMOOTH. PROVIDE 3M FIRE BARRIER DUCT WRAP FOR ALL HOOD EXHAUST DUCTS. SEE 4/M4.0.
- ALL BRANCH DUCTS FEEDING INDIVIDUAL DIFFUSERS SHALL HAVE DAMPERS AT TAKEOFFS FOR AIR BALANCING. PROVIDE ACCESS PANELS TO DAMPERS. SEE 6/M4.0.
- ALL OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 10'-0" FROM EXHAUST FANS AND / OR VENTS.
- SEE 8/M1.0 AND SCOPE OF WORK FOR DESCRIPTION OF HVAC PACKAGE TO BE PURCHASED THROUGH YUM! BRANDS NATIONAL CONTRACT.
- FINAL HVAC SYSTEM TESTING AND BALANCING SHALL BE PERFORMED BY INDEPENDENT AGENT CONTRACTED DIRECTLY BY THE OWNER. A RE-TEST IS MANDATORY FOR A FALSE START (I.E. NO POWER UPON AGENTS ARRIVAL, EQUIPMENT NOT WIRED, ETC.) AND SHALL BE A COST INCURRED BY THE G.C. IN THE EVENT A SYSTEM / STORE RECEIVES A GRADE OF 5 OR BELOW AS A RESULT OF THE HVAC SYSTEM PERFORMANCE OR OPERATIONAL DEFICIENCIES, OWNER WILL REQUEST A RE-TEST AND THE COST FOR SAME SHALL BE ALSO INCURRED BY THE GENERAL CONTRACTOR.
- LENNOX HUMIDISTAT MODEL #76M31 PROVIDED WITH LENNOX PACKAGE.

**REFER TO SCOPE OF WORK IN DIV 23 SPECIFICATION FOR HVAC FOR TEST & BALANCE & COMMISSIONING REQUIREMENTS WHICH WILL BE SUPPLIED BY THE OWNER AND COORDINATED BY THE GC.**

MARK	AREA SERVED	FAN DATA					COOLING CAPACITY				HEATING CAPACITY				UNIT ELECT DATA				WEIGHT (LBS.)	MODEL	NOTES
		SUPPLY CFM	MIN. O.A. CFM	ESP	HP	RPM	NOMINAL TONS	MIN CAP (MBH) TOT/SEN	MIN EER	INPUT STAGE (MBH)	OUTPUT (MBH)	HEATING STAGES	AFUE %	VOLTS/ PH	MCA (A)	MOCP (A)					
RTU-1	DINING	3000	600	0.8	2	872	8.5	96.6/66.1	12.2	180	144	2	80	208/3	46	50	1336	LGH102H4M	SEE NOTES 1-7		
RTU-2	KITCHEN	6125	1250	1.0	5	1156	17.5	190.8/138.9	12.0	260	208	2	80	208/3	87	100	2560	LGH210H4B	SEE NOTES 1-6		

**SCHEDULE NOTES:**

- LISTED CAPACITY IS THE UNITS NET COOLING CAPACITY AT THE FOLLOWING CONDITIONS: RTU-1 - 80°F DB / 67°F WB EAT AND 105°F AMBIENT / RTU-2 - 80°F DB / 67°F WB EAT AND 105°F AMBIENT. OUTDOOR DESIGN CONDITION, SUMMER 99°F & 75°F WB, WINTER -0°F. THERMOSTAT SHALL BE PROGRAMMED FOR 73°F IN SUMMER AND 68°F IN WINTER WITH 2°F ADJ. FUNCTION UP OR DOWN. THE UNOCCUPIED TEMP SHALL BE SET TO THE STORE SCHEDULE AND 60°F MINIMUM.
- SPECIFIED RTUS ARE DOWN DISCHARGE PACKAGED GAS / ELECTRIC ROOFTOP UNITS WITH MINIMUM 2-STAGE COOLING. INCLUDES THROUGH THE ROOF CURB POWER, GAS & CONDENSATE DRAIN. GAS PIPING SHALL BE FACTORY PIPED WITH SHUT-OFF OUTSIDE OF UNIT.
- SPECIFIED UNIT INCLUDES HINGED ACCESS DOORS, 2" PLEATED FILTERS, LOW AMBIENT CONTROL TO 0 DEG. F., MODULATING ECONOMIZER, CIRCUIT BREAKER WITH SINGLE POINT WIRING, HAIL GUARD, AND FACTORY FABRICATED, KNOCK DOWN 18" ROOF CURB.
- ENHANCED DEHUMIDIFICATION OPTION TO BE INCLUDED. (HUMIDITROL HOT GAS REHEAT), HUMIDITY SENSOR TO BE MOUNTED AS SHOWN ON SHEET M2.0. SEE DETAIL 8 ON SHEET M4.
- UNIT TO HAVE THROUGH THE CURB POWER AND GAS. CONDENSATE WITH DISCHARGE ON THE ROOF.
- THERMOSTAT AND REMOTE SENSOR PROVIDED WITH HVAC PACKAGE. THERMOSTAT TO BE LENNOX COMFORTSENSE 8500 COMMERCIAL 7 DAY PROGRAMMABLE THERMOSTAT WITH TEMP/HUMIDITY SENSORS; OR EQUAL.
- RTU-1 TO HAVE SINGLE ZONE VAV (SZVAV). SZVAV INCLUDES VARIABLE SPEED EVAPORATOR FAN.

**HVAC UNIT SCHEDULE**

**1**

Mark	FAN DATA				VOLTS/PH	DRIVE TYPE	MANUFACTURER	MODEL	NOTES
	CFM	ESP	RPM	HP					
EF-1	1050	0.9	1344	1/2	120/1	DIRECT	STRATOVENT	#SVDU50HFA	1,3,5,6,7,8,10
EF-2	570	0.375	1025	1/4	120/1	DIRECT	STRATOVENT	#SVDR30HFA	2,4,7,8,9,10,11

**REMARKS:**

- UL 762 LISTED (GREASE)
- UL 705 LISTED (HEAT OR STEAM)
- FLAT ROOF CURB, 19.5" X 19.5" X 26"H, VENTED
- FLAT ROOF CURB, 19.5" X 19.5" X 14"H
- GREASE CUP WITH DRAIN
- FACTORY ATTACHED HINGES
- WEATHERPROOF PRE-WIRED DISCONNECT SWITCH
- PROVIDE PRE-WIRED SOLID STATE SPEED CONTROLLER
- GRAVITY BACKDRAFT DAMPER
- PROVIDED BY OWNER WITH HOOD PACKAGE
- PRVIDED WITH DAMPER TRAY

**SUPPLY AND EXHAUST FAN SCHEDULE**

**2**

MARK	QUANTITY	NECK SIZE	FACE SIZE OR GRID SIZE	(NO.) & AIR PATTERN	TYPE	MAX FLOW (CFM)	MOUNTING	MATERIAL	MANUFACTURER	MODEL NUMBER	REMARKS
E-1	2	8"X8"	12x12	-	EXHAUST	200	SURFACE	ALUMINUM	METAL-AIRE / TITUS	CC5S-1/50F	FRN SQR TO RND ADAPTER
E-2	1	10"X10 10"X10"	12x12	-	EXHAUST	300	SURFACE	ALUMINUM	METAL-AIRE / TITUS	CC5-FB-TB/50F-NT	FRN SQR TO RND ADAPTER
R-1	5	22x22	24x24	-	RETURN	2000	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	RHE-6/50FF	HINGED/FULLY REMOVABLE FACE
S-1	11	15"X15"	24x24	4W	SUPPLY	600	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	5000-6 / TDC-AA-NT	FRN SQR TO RND ADAPTER
S-2	2	9"X9"	14x14	4W	SUPPLY	250	SURFACE	ALUMINUM	METAL-AIRE / TITUS	5000-1 / TDC-AA	FRN SQR TO RND ADAPTER
S-3	2	SEE PLANS	24x24	4W	SUPPLY	700	LAY-IN	ALUMINUM	METAL-AIRE / TITUS	5000-1/TDC-AA	PLASTIC MODULAR CORE
S-4	6	22"X22"	24x24	4W	SUPPLY	600	LAY-IN	MODULAR PLASTIC CORE	HART & COOLEY	RZMCDST	FRN SQR TO RND ADAPTER

**NOTES:**

- SURFACE MOUNTED DIFFUSERS IN HARD CEILINGS SHALL BE PROVIDED WITH OPPOSED BLADE DAMPERS. SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPES.

TACO BELL HAS A NATIONAL HVAC AGREEMENT WITH LENNOX NATIONAL ACCOUNTS. FOR QUOTES & TECHNICAL SPECIFICATIONS CONTACT BY EMAIL AT YUM!@LENNOXIND.COM OR 800-367-6285 ACCOUNT MANAGER BRAD SMITH

LENNOX HAD AGREED TO SUPPLY AN HVAC PACKAGE CONSISTING OF THE ROOF-TOP UNITS, CURBS, THERMOSTATS, TEMPERATURE SENSORS (REMOTE), AND HUMIDITY SENSORS (REMOTE). RTU'S AS SPECIFIED INCLUDE AN UNPOWERED CONVENIENCE OUTLET (SEE ELECTRICAL) AND AN HACR CIRCUIT BREAKER WHICH PROVIDES UNIT DISCONNECT.

FOR HVAC TEST AND BALANCE, G.C. TO SCHEDULE WITH TACO BELL'S PREFERRED VENDOR PER SCOPE OF WORK WORKSHEETS. BE PREPARED AT TIME OF ORDER OR QUOTE REQUEST TO PROVIDE ALL PROJECT DETAILS REGARDING SPECIFICATIONS AND QUANTITIES AS SITE SPECIFIC DESIGN MAY NOT MATCH NATIONAL DESIGN.

SEE THE SCOPE OF WORK SHEETS FOR ADDITIONAL INFORMATION.

**LENNOX PACKAGE**

**5**

**AIR DEVICE SCHEDULE**

**3**

ITEM	OA	RA	SA	EA	PRESSURE
EF-1	--	--	--	-1050	-1050
EF-2	--	--	--	-570	-570
RTU-1	600	2400	3000	--	+600
RTU-2	1250	4875	6125	--	+1250
TOTAL	1850	7275	9125	-1620	+230

**NOTES:**

THE OUTSIDE PERCENTAGE OF TOTAL SUPPLY AIR IS 20% FOR RTU-1 AND 20% FOR RTU-2. ADJUST OUTSIDE AIR INTAKES TO MAINTAIN VALUES AT ALL EVAPORATOR FAN SPEEDS.

**AIR BALANCE SCHEDULE CFM**

**4**

**MECHANICAL NOTES**

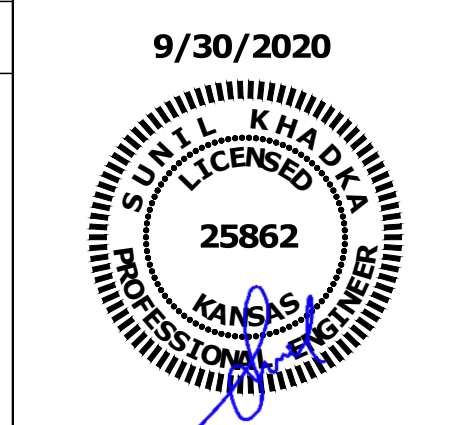
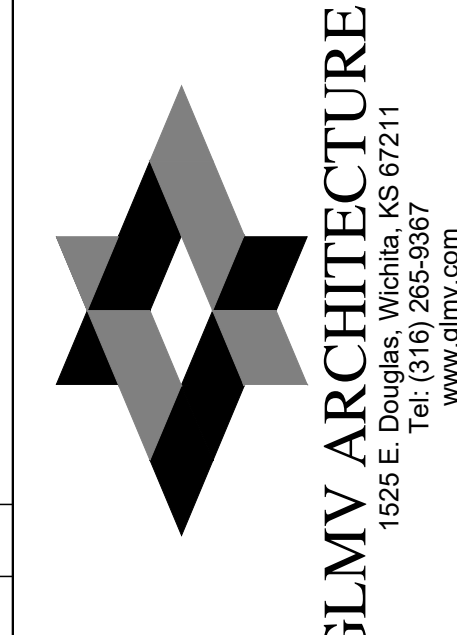
**6**

SYMBOL & ABBREV.	DESCRIPTION
	SA/SUP SUPPLY AIR (RISE/DROP)
	RA/RET RETURN AIR DUCT (RISE/DROP)
	EA/EXH EXHAUST AIR DUCT (RISE/DROP)
	CD/SR CEILING DIFFUSER/SUPPLY REGISTER (ARROWHEAD REPRESENTS NUMBER OF THROW)
	RR/RG RETURN REGISTER/GRILLE
	ER/EG EXHAUST REGISTER/GRILLE
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
	MCD MANUAL VOLUME DAMPER
	FD FIRE DAMPER
	(L) DUCT LINING (1" THICK UNLESS OTHERWISE NOTED)
	SINGLE LINING DUCT BRANCH TAKEOFF
	DUCT TRANSITION (RECTANGULAR TO ROUND)
	FLEX FLEXIBLE DUCT (14'-0" MAXIMUM)
	T-STAT PROGRAMMABLE THERMOSTAT, PROVIDED WITH HVAC PACKAGE
	(TS) THERMOSTAT SENSOR (REMOTE), PROVIDED WITH HVAC PACKAGE
	(H) HUMIDITY SENSOR (REMOTE), PROVIDED WITH HVAC PACKAGE
	D CONDENSATE DRAIN
	Ø DIA. DIAMETER
	DL DOOR LOUVER
	UC DOOR UNDERCUT (3/4" MINIMUM)
	(X-X) 0000 MECHANICAL EQUIPMENT DESIGNATION
	(R) RESET SMOKE DETECTOR RESET

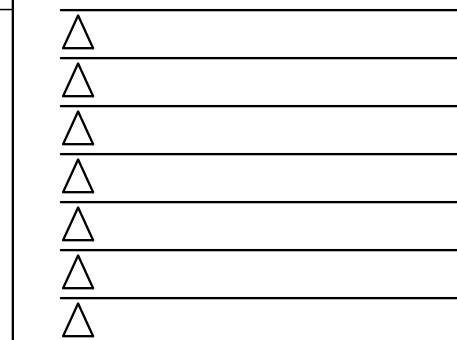
SYMBOL & ABBREV.	DESCRIPTION
A/C, AC	AIR CONDITIONING
BDD	BACK DRAFT DAMPER
CB	CIRCUIT BREAKER
CLG.	CEILING
CONN.	CONNECT/CONNECTION
CONT.	CONTINUATION
CONTR	CONTRACTOR
CFM	CUBIC FEET PER MINUTE
DET.	DETAIL
DISC.	DISCONNECT
DTR	DOWN THRU ROOF
EF	EXHAUST FAN
(E)	EXISTING
GA.	GAGE/GAUGE
GC	GENERAL CONTRACTOR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
MFR.	MANUFACTURER
MECH.	MECHANICAL
(N)	NEW
OA/OSA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
S/S	STAINLESS STEEL
TYP.	TYPICAL
UON	UNLESS OTHERWISE NOTED
UTR	UP THRU ROOF

**MECHANICAL SYMBOLS**

**7**



18048.20003



CONTRACT DATE:  
BUILDING TYPE: END. MED40  
PLAN VERSION: MARCH 2020  
SITE NUMBER: #000000  
STORE NUMBER: #000000

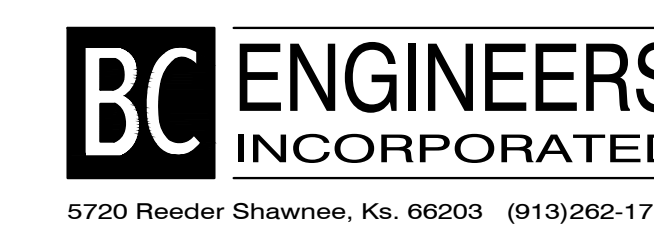
**TACO BELL**  
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LEAVENWORTH, KS 66048



ENDEAVOR 1.0  
**MECHANICAL SCHEDULES AND NOTES**  
**M1.0**

PLOT DATE: 9/30/2020 1:00 PM

KANSAS BC PROJECT #: PE COA #E-359 20684  
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