

**EXISTING ROOFTOP PACKAGED AIR CONDITIONING UNIT SCHEDULE**

GENERAL					FAN					COOLING COIL					HEATING COIL					NOTES			
MARK	MANUFACTURER & MODEL No.	TONS	EER / SEER	OSA CFM	CFM	DRIVE	E.S.P.	BHP	ELECTRICAL VOLTS/PH/Hz	MCA	MOCP	AMB. DB/WB	EAT DB/WB	LAT DB/WB	SENS. CAP. MBH	TOT. CAP. MBH	AMB.	DELTA T	FUEL TYPE		HEATER EFF.	INPUT MBH	OUTPUT MBH
RTU 1	JOHNSON J07ZRN15VZEA6	7.5	11.0 EER	750	3000	-	0.6	3.0	208/3/60	47	60	-	-	-	68.5	93.0	-	44.4	NAT. GAS	-	180	144	1
RTU 2	JOHNSON J07ZRN15VZEA6	7.5	11.0 EER	750	3000	-	0.6	3.0	208/3/60	47	60	-	-	-	68.5	93.0	-	44.4	NAT. GAS	-	180	144	1
RTU 3	JOHNSON J12ZFN15VZEA6	12.5	11.2 EER	1000	4800	-	1.0	5.0	208/3/60	79.6	100	-	-	-	108.5	164.4	-	26.7	NAT. GAS	-	180	144	1.2

1. EXISTING ROOF TOP UNIT TO REMAIN.  
2. REBALANCE OUTSIDE AIR TO AMOUNT LISTED IN SCHEDULE.

**MUA/EVAPORATIVE COOLER SCHEDULE**

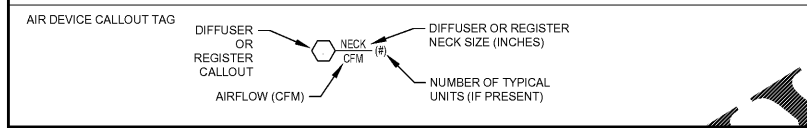
MARK	MANUFACTURER & MODEL No.	LOCATION	BLOWER	HOUSING	CFM	ESP.	RPM	H.P.	B.H.P.	Ø	VOLT	FLA	EVAP COOLER ENTERING DB TEMP. °F	EVAP COOLER ENTERING WB TEMP. °F	EVAP COOLER LEAVING DB TEMP. °F	EVAP COOLER LEAVING WB TEMP. °F	WEIGHT (LBS.)	SONES	NOTES
MUA 1	CAPTIVE AIR A2-G12	EXTERIOR PAD/SERVICE LINE	G12	A2	2800	1.000	957	1.500	1.0130	3	208	4.6	91.0	74.0	74.7	68.1	789	29	1, 2, 3, 4, 5

1. FAN SHALL SET LEVEL AND BE SECURELY FASTENED TO ROOF CURB  
2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH (NEMA 3R)  
3. PROVIDE UNIT MOUNTED DISCONNECT SWITCH (NEMA 3R)  
4. EF-1, EF-2 AND MUA-1 SHALL BE INTERLOCKED WITH KITCHEN AC UNIT (AHU-4).  
5. PROVIDE WITH FACTORY ROOF CURB, WASHABLE INLET FILTERS.

**AIR DEVICE SCHEDULE**

MARK	MFR	TYPE	MODEL	MOUNTING TYPE	SIZE		NOTES
					FACE	NECK	
A	TITUS	SUPPLY	TMS-AA	LAY-IN	24x24	SEE PLAN	ALUMINUM
B	TITUS	SUPPLY	TMS-AA	SURFACE	SEE PLAN	SEE PLAN	ALUMINUM
C	TITUS	RETURN	350RL	LAY-IN	2" + NECK	SEE PLAN	ALUMINUM
D	TITUS	RETURN	350RL	SURFACE	2" + NECK	SEE PLAN	ALUMINUM
E	TITUS	EXHAUST	350RL-AG15	SURFACE	2" + NECK	SEE PLAN	ALUMINUM, PROVIDE WITH O.B.D.

- NOTES:
- IN ACCESSIBLE CEILING PROVIDE VOLUME CONTROL ABOVE CEILING, OTHERWISE INCLUDE IT WITH THE DEVICE.
  - PROVIDE ALL SUPPLY AIR DEVICES WITH BALANCING DAMPERS (DO NOT PLACE AT RETURNS)
  - COORDINATE PAINT COLOR AND FINISH WITH OWNER PRIOR TO PURCHASE AND INSTALLATION
  - PROVIDE MOUNTING FRAMES FOR ALL AIR DEVICES MOUNTED IN GYPBOARD CEILINGS.
  - PROVIDE INSULATION FOR BACK OF DIFFUSERS IN UNCONDITIONED SPACES.



**AIR BALANCE**

ROOM NAME	EQUIPMENT TAG NO.	OSA REQ'D CFM	MAKE UP AIR CFM	EXHAUST AIR CFM	BALANCE CFM	PRESSURIZATION
DINING	RTU-1	750	0	0		
	RTU-2	750	0	0		
SUB TOTAL:		1500	0	0		POSITIVE
KITCHEN	RTU-3	1000	0	0		
	EF-1			-3500		
	EF-2			-400		
	EF-5			-300		
	MUA-1		2800	2800	0	
SUB TOTAL:		1000	2800	-4000	-400	NEGATIVE
BUILDING	GRAND TOTALS:	2500	2800	-4200	1100	POSITIVE

**IMC 2012 TESTING**

HOODS, VENTS, CONNECTIONS AND BASE DUCTING SHALL COMPLY WITH 2012 IMC CHAPTER 5 FOR RATINGS AND TESTING IN ACCORDANCE WITH MANUFACTURERS RATINGS AND APPROVALS AS WELL AS WITH APPLICABLE NFPA REQUIREMENTS.

SEE REQUIREMENTS AND APPROVALS FROM LISTED APPROVED ASSEMBLIES AS NOTED ON MFR EQUIPMENT SHEETS PROVIDED FOR REFERENCE.

**FAN SCHEDULE**

MARK	MANUFACTURER & MODEL No.	LOCATION	CFM/FPM	DRIVE	S.P.	FAN RPM	HP	BHP	MCA	MOCP	ELECTRICAL VOLTS/PH/Hz	SONES (MAX)	OPER. WT. (LB)	NOTES
FF 1	READY ACCESS AA-100	DIT WINDOW	-	DIRECT	-	-	1 @ 1/6	-	4	-	120/1/60	-	-	E
EF 1	CAPTIVE AIR DU180HFA	ROOF	3500	DIRECT	1.50	1426	3.0	1.5	-	-	208/3/60	23	181	3, 4, 5, 6, 8, 9, 10, 11
EF 3	GREENHECK G-075-D	ROOF	400	DIRECT	0.08	1550	1/25 HP	-	1.0	-	120/1/60	5.7	150	1, 2, 4, 5, 12, 13
EF 5	CAPTIVEAIRE DR12HFA	CEILING	300	DIRECT	0.500	1476	0.18 HP	-	-	-	115/1/60	5.7	66	14

- EXHAUST FANS:**
- GRAVITY OPERATED BACKDRAFT DAMPER
  - INTERLOCK EXHAUST FAN WITH OCCUPANCY SENSOR. SEE ALSO ELECTRICAL DRAWINGS.
  - SUPPLIED BY CAPTIVE AIR, INSTALLED BY CONTRACTOR. REFER TO HOOD DRAWINGS FOR ADDITIONAL DETAILS. UNIT IS WITH DX COOLING AND GAS HEATING.
  - FAN SHALL SET LEVEL AND BE SECURELY FASTENED TO ROOF CURB
  - PROVIDE UNIT MOUNTED DISCONNECT SWITCH (NEMA 3R)
  - EF-1, EF-2 AND MUA-1 SHALL BE ELECTRONICALLY INTERLOCKED WITH KITCHEN AC UNITS, AHU-2 & AHU-4.
  - NOT USED
  - PROVIDE FAN WITH FACTORY ROOF CURB, CURB CAP, HINGE KIT, VENTED EXTENSION, AND GREASE TRAP
  - PROVIDE FAN WITH FACTORY PROTECTIVE COATING FOR CORROSION RESISTANCE
  - FAN SHALL BE U.L. RATED FOR HIGH TEMP EXHAUST
  - DISCHARGE OF FAN OUTLET SHALL BE ABOVE PARAPET WALL
  - SUPPLIED BY CONTRACTOR, INSTALLED BY CONTRACTOR
  - PROVIDE FAN WITH FACTORY ROOF CURB, BIRD SCREEN, AND UNIT MOUNTED SPEED CONTROL
  - EXISTING EXHAUST FAN TO REMAIN
- FLY FANS:**
- PROVIDE WALL MOUNTED CONTROL PANEL
  - PROVIDE HARD-WIRED ROLLER TYPE MICROSWITCH AT DOOR/WINDOW. NO OTHER ON/OFF SWITCH IS TO BE PROVIDED/INSTALLED.
  - PROVIDE INLET LOUVER AND FILTER
  - PROVIDE WALL MOUNTING BRACKETS
  - PROVIDED WITH DRIVE THRU

**OUTSIDE AIR CALCULATION**

AREA SERVED	AREA (SQFT)	PEOPLE / 1,000 (SQFT)	# PEOPLE	CFM / PERSON	PEOPLE OUTSIDE AIR (CFM)	CFM / SQFT	SQ.FT. OUTSIDE AIR (CFM)	TOTAL CFM CALCULATED	CFM SUPPLIED
DINING	1786	70	125	7.5	938	0.18	321	1259	1500
KITCHEN	1256	-	-	-	-	0.70	879	679	1000

PER TABLE 403.3 - 2012 INTERNATIONAL MECHANICAL CODE  
BALANCE TO OUTSIDE QUANTITIES AIR SHOWN.

**SEQUENCE OF OPERATIONS**

EACH ZONE SHALL BE PROVIDED WITH 7-DAY PROGRAMMABLE THERMOSTATS. ENTOUCH CONTROLS #ETouch-1-E, WHICH IS USED IN CONJUNCTION WITH ENTOUCH ENERGY MONITORS. CONTROLLER SHALL BE CAPABLE OF OCCUPIED/UNOCCUPIED HEATING AND COOLING CONTROL WITH THERMOSTATIC SETBACK CONTROLS AS FOLLOWS:

- 12 AM (LOCKED): DINING ROOM UNITS (AHU/CU-1 & AHU/CU-3) ARE SET TO UNOCCUPIED MODE WITH NIGHT SET-BACK SETPOINT 85F / 60F DB. KITCHEN UNITS (AHU-2 & AHU-4) ARE SET TO OCCUPIED MODE (FAN MODE SET TO CIRCULATE, WITH CIRCULATE SETTINGS TO CONTINUOUS) WITH COOLING/HEATING TEMPERATURE SETPOINTS OF 76F DB, 50% RH / 67F DB.
- 5 AM (LOCKED): DINING ROOM UNITS (AHU/CU-1 & AHU/CU-3) ARE SET TO OCCUPIED MODE WITH SETPOINT 75F DB, 50% RH / 67F DB. KITCHEN UNITS (AHU/CU-2 & AHU/CU-4) ARE SET TO OCCUPIED MODE WITH COOLING/HEATING TEMPERATURE SETPOINTS OF 75F DB, 50% RH / 68F DB.
- 6 AM (LOCKED): DINING ROOM UNITS (AHU/CU-1 & AHU/CU-3) ARE SET TO OCCUPIED MODE WITH SETPOINT 73F DB, 50% RH / 69F DB. UNITS (AHU/CU-2 & AHU/CU-4) ARE SET TO OCCUPIED MODE WITH COOLING/HEATING TEMPERATURE SETPOINTS OF 73F DB, 50% RH / 68F DB.
- 8:30 PM (LOCKED): DINING ROOM UNITS (AHU/CU-1 & AHU/CU-3) ARE SET TO OCCUPIED MODE WITH SETPOINT 75F DB, 50% RH / 67F DB.
- 11 PM (LOCKED): KITCHEN UNITS (AHU/CU-2 & AHU/CU-4) ARE SET TO OCCUPIED MODE WITH COOLING/HEATING TEMPERATURE SETPOINTS OF 75F DB, 50% RH / 68F DB.
- DEADBAND: 5°F
- SECURITY TEMPERATURE ADJUSTMENT RANGE: ±3°F

CONTROLS SHALL MAINTAIN PROGRAMMING AND TIME DURING A LOSS OF POWER PERIOD OF 2 DAYS MINIMUM AND HAVE THE ABILITY TO DOWNLOAD THE CORRECT TIME FROM THE INTERNET IF LONGER THAN 2 DAYS. BOTH DOOR AIR SUPPLY AND EXHAUST DUCTS SHALL BE EQUIPPED WITH MOTOR OPERATED DAMPERS THAT WILL AUTOMATICALLY SHUT WHEN THE SYSTEMS OR SPACES SERVED ARE UNOCCUPIED. A CATSE CABLE WITH SIGNAL WIRE SHALL BE RUN TO EACH THERMOSTAT LOCATION FOR CONNECTION TO THE ETHERNET ROUTER.

**SMOKE ALARM MODE:**  
SYSTEM SHALL SHUT DOWN AND ACTIVATE AUDIO-VISUAL ALARM UPON ACTIVATION OF SMOKE ALARM. PROVIDE LABEL INDICATING "AIR DETECTOR TROUBLE: AHU-K". IF FIRE ALARM SYSTEM IS REQUIRED, EXHAUST SMOKE DETECTORS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM.

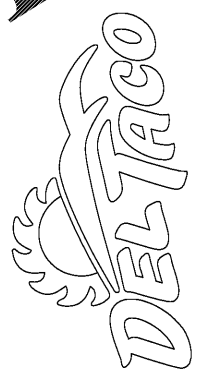
**SEQUENCE OF OPERATIONS - KITCHEN VENTILATION SYSTEM**  
EXHAUST FANS SERVING COOKLINE (EF-1) SHALL BE MANUALLY ACTIVATED AT 8 AM (ADJUSTABLE) BY MANUAL SWITCH AT THE UTILITY CABINET LOCATED AT THE HOOD. ADDITIONALLY, THE EXHAUST FAN SHALL ACTIVATE AUTOMATICALLY WHEN COOKING OPERATIONS OCCUR THROUGH INTERLOCK WITH TEMPERATURE (HEAT) SENSORS LOCATED AT THE HOOD. TEMPERATURE SET-POINT ON THE ACTIVATION OF EXHAUST FAN IS 90°F (ADJUSTABLE, WITH HIGH-LIMIT OF 100°F).

THE MAKE-UP AIR FAN, MUA-1 WILL AUTOMATICALLY BE ACTIVATED WHENEVER EXHAUST FAN SERVING THE HOOD (THROUGH MANUAL OR AUTOMATIC START WHEN COOKING OPERATIONS OCCUR) ARE INITIATED. IN ADDITION, AHU/CU-2 & AHU/CU-3 (SYSTEMS SERVING THE KITCHEN) WILL AUTOMATICALLY START WHEN THE EXHAUST FANS ARE STARTED THROUGH INTERLOCK WITH AUXILIARY BLOWER STARTER CIRCUIT AT THE UNIT AND THE HOOD CONTROL PANEL TO PROVIDE SUFFICIENT MAKE-UP AIR.

THE ACTUATION OF THE FIRE EXTINGUISHING SYSTEM SERVING THE HOOD SHALL AUTOMATICALLY SHUT DOWN THE FUEL AND/OR ELECTRICAL POWER SUPPLY TO THE COOKING EQUIPMENT AND KITCHEN DISPLAY EQUIPMENT UNDER HOOD THROUGH THE PANEL LOCATED AT THE HOOD. THE FUEL AND ELECTRICAL SUPPLY RESET SHALL BE MANUAL. THE HOOD SUPPRESSION SYSTEM SHALL BE MONITORED BY THE BUILDING FIRE ALARM SYSTEM.

IN ADDITION, ACTUATION OF THE FIRE EXTINGUISHING SYSTEM WILL AUTOMATICALLY SHUT DOWN MUA-1, AHU-2, AND AHU-4 (THROUGH INTERLOCK WITH AUXILIARY SHUT DOWN CIRCUIT AT AHU'S), AND INITIATE EF-1.

NOTE: ALL INTERLOCK WIRING BETWEEN THE AIR HANDLING UNITS AND THE CAPTIVEAIRE CONTROLS ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR (MECHANICAL/CONTROLS CONTRACTOR OR AS REQUIRED BY GENERAL CONTRACTOR).



DO NOT SCALE DRAWINGS  
CONTRACTOR TO VERIFY  
ALL EXISTING CONDITIONS AND  
DIMENSIONS - NOTIFY ARCHITECT  
OF ANY DISCREPANCIES PRIOR  
TO BEGINNING CONSTRUCTION



MAY 18TH, 2018  
NO REVISION

DEL TACO STORE # DT2017  
4525 JIMMY LEE SMITH PARKWAY  
HIRAM, GA 30141  
PAULTON COUNTY  
1ST PERMIT SUBMITTAL 05-18-18

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Order Plans