

AIR BALANCE SCHEDULE

TAG	ROOMS SERVED	O.A. CFM	EXHAUST CFM
EF1-VDR1	KITCHEN	-	- 1600
EF2-VDR2	KITCHEN	-	- 1600
EF3-VDR3	KITCHEN	-	- 200
EF4-VDR4	KITCHEN	-	- 1600
EF5-VDR5	KITCHEN	-	- 1600
RTU-DOAS	KITCHEN	+ 5100	-
HVAC (RTU1)	BUILDING	+ 1010 (MIN)	-
HVAC (RTU2)	BUILDING	+ 1005 (MIN)	-
NET		+515 CFM (DOES NOT INCLUDE TOILETS)	

KITCHEN TO MAINTAIN A SLIGHTLY NEGATIVE PRESSURE. OVERALL BUILDING PRESSURE TO BE BETWEEN -0.02" TO +0.02" WC PER IMC COMMENTARY RECOMMENDATIONS

**DOAS SYSTEM**



**CAPTIVEAIRE**

<i>JOB</i> West Social FoodHall (Dayton)	
<i>LOCATION</i> Dayton, OH, 45402	
<i>DATE</i> 12/23/2021	<i>JOB #</i> 4604989
<i>DWG #</i> 1	<i>DRAWN BY</i> jcirilli
<i>REV.</i>	<i>SCALE</i> 3/8' = 1'-0'

**DOAS/RTU FAN SCHEDULE - JOB#4604989**

FAN UNIT NO	TAG	QTY	DOAS/RTU MODEL #	MANUFACTURER	BLOWER	RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	ESP	HP	BHP	PHASE	VOLT	MCA	MCCP	WEIGHT (LBS)
4	DDAS-1	1	CASRTU4-1.600-30-25T-DDAS	CAPTIVEAIRE	30P-4	900	4500	5400	0.800	7.500	2.4880	3	208	127.5A	150A	4476

**DOAS/RTU COOLING SCHEDULE**

FAN UNIT NO	TAG	COMPRESSOR			OUTDOOR FAN				INDOOR COIL		OUTSIDE AIR DB TEMP	OUTSIDE AIR WB TEMP	MIXED AIR DB TEMP	MIXED AIR WB TEMP	LEAVING DB TEMP	LEAVING WB TEMP	LEAVING DP TEMP	TOTAL CAPACITY	SENSIBLE CAPACITY
		TONNAGE	VOLTAGE	PHASE	MOTOR VOLTAGE	MOTOR Ø	MOTOR FREQUENCY	MOTOR QTY	ROWS	FACE AREA									
4	DDAS-1	25	190-240	3	200-240	3	60	3	6	25.3 SQFT	82.5°F	76.8°F	81.2°F	74.6°F	55.9°F	55.8°F	55.8°F	336.0 MBH	143.9 MBH

LATENT CAPACITY	REHEAT LEAVING DB TEMP	REHEAT LEAVING WB TEMP	DESIRED REHEAT CAPACITY	MAX REHEAT CAPACITY	REHEAT LEAVING RELATIVE HUMIDITY	MOISTURE REMOVAL RATE	IEER
192.1 MBH	71.0°F	61.4°F	89 MBH	260 MBH	59	173.9 LBS/HR	17.9

**DOAS/RTU HEATING SCHEDULE**

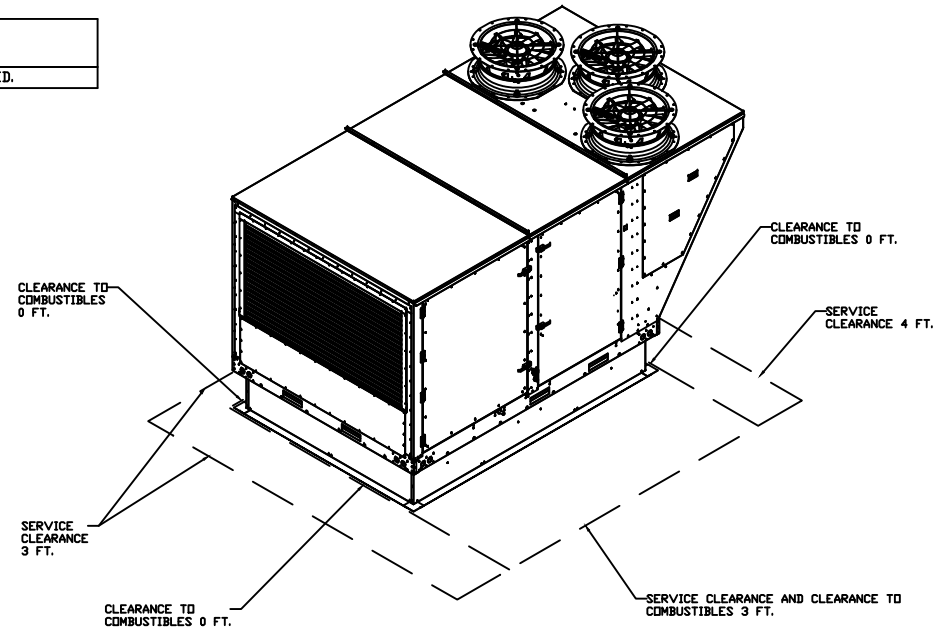
FAN UNIT NO	TAG	INPUT BTUs	OUTPUT BTUs	TEMP RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
4	DDAS-1	477512	382010	60°F	7 IN. W.C. - 14 IN. W.C.	NATURAL	80

**CURB ASSEMBLIES**

DN FAN	TAG	WEIGHT	ITEM	SIZE
# 4	DDAS-1	108 LBS	CURB	80.000"W X 111.000"L X 14.000"H ALONG WIDTH, RIGHT INSULATED.

**FAN OPTIONS**

FAN UNIT NO	TAG	QTY	DESCRIPTION
4	DDAS-1	1	SINGLE POINT ELECTRICAL CONNECTION FOR RTU, 750VA TRANSFORMER USED. IF A NON-DCV PREWIRED CONTROLS THIS UNIT, THE #28, #47, #4A, OR #E2 PREWIRE OPTION MUST BE SELECTED. DOES NOT PROVIDE SUPPLY STARTER IN PREWIRE
		1	CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED
		1	RTU4 DOWN DISCHARGE
		1	2" MERV 13 FILTERS FOR RTU4 (QTY. 12)
		1	OVERHEAT STAT
		1	RTU TOTAL CFM MONITORING
		1	VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE
		1	MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE
		1	INLET PRESSURE GAUGE, 0-35"
		1	RTU4 CURB DUCT HANGER
		1	OCCUPIED SCHEDULING
		1	25 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS
		1	25 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL
		1	RTUVZH170 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED
		1	RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED
		1	RTU INTAKE/RETURN DAMPER - STATIC PRESSURE CONTROL
		1	RTU4 DOWN RETURN
		1	2" MERV 8 FILTERS FOR RTU4 (QTY. 12)
		1	VAV PACKAGE W/ MANUAL/DDC CONTROL (S71 VFD INCLUDED)
		1	LINE REACTOR MOUNTED IN FAN
1	5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS)		



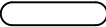
**DOAS SYSTEM**



**CAPTIVEAIRE**

JOB West Social FoodHall (Dayton)	
LOCATION Dayton, OH, 45402	
DATE 12/23/2021	JOB # 4604989
DWG # 2	DRAWN BY jcirilli
REV.	SCALE 3/8" = 1'-0"

NOTES:

1. DO NOT OBSTRUCT OUTSIDE AIR INLET, OUTSIDE AIR COIL OR OUTSIDE AIR FAN.
2.  DENOTES CORNER WEIGHT.
3. ROOF OPENING MUST BE 2" SMALLER THAN CURB DIMENSIONS IN BOTH DIRECTIONS.

\*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 30.875" x 39.75".

OPTIONS

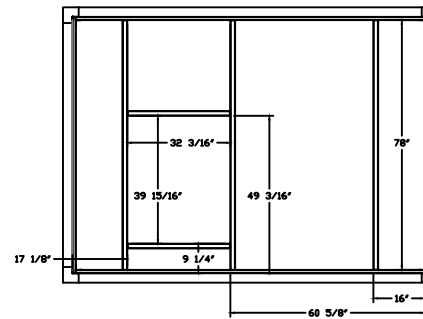
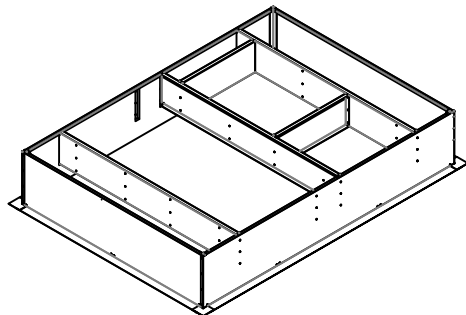
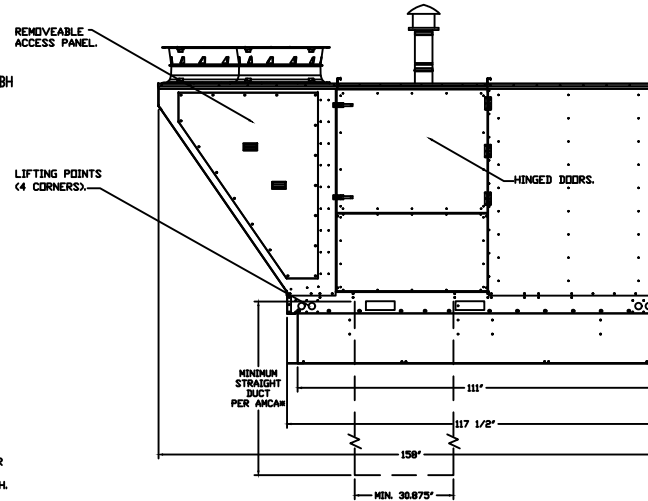
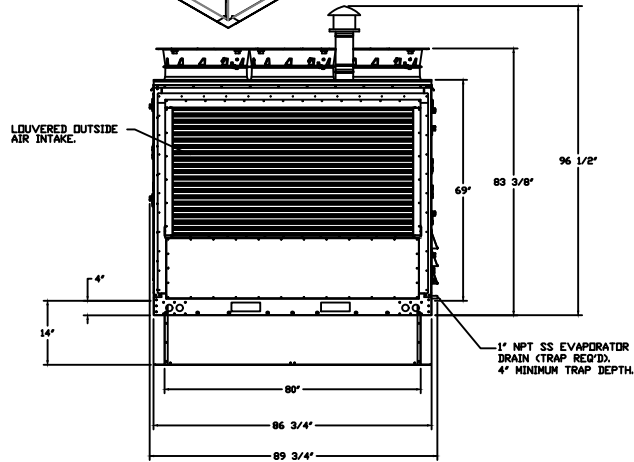
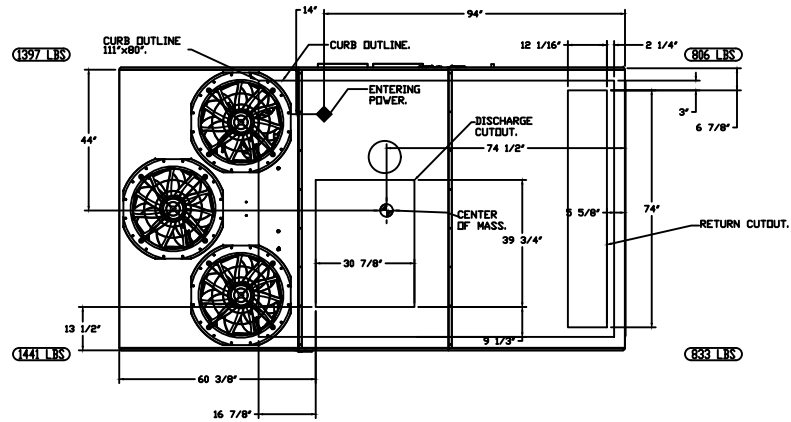
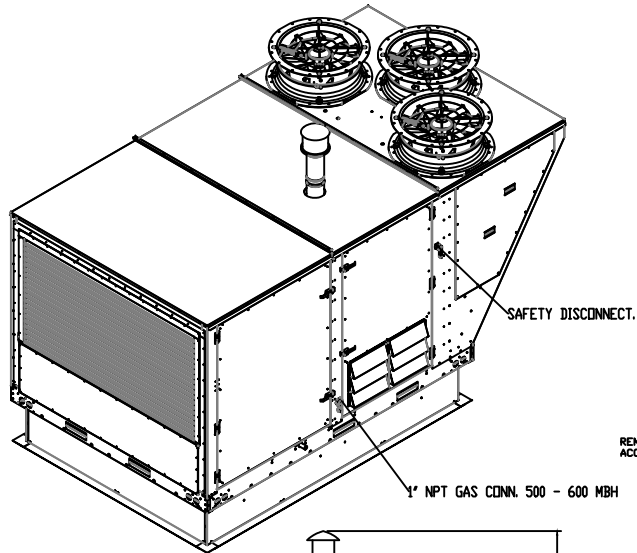
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2. CASLINK BUILDING MONITORING SYSTEM - INTERNET OR CELLULAR CONNECTION REQUIRED.
3. RTU4 DOWN DISCHARGE.
4. 2" MERV 13 FILTERS FOR RTU4 (QTY. 12).
5. OVERHEAT STAT.
6. RTU TOTAL CFM MONITORING.
7. VFD FACTORY MOUNTED AND WIRED IN RTU COMMERCIAL CONTROL VESTIBULE.
8. MANIFOLD PRESSURE GAUGE, 0 TO 10" WC, 1 FURNACE.
9. INLET PRESSURE GAUGE, 0-35".
10. RTU4 CURB DUCT HANGER.
11. OCCUPIED SCHEDULING.
12. 25 TON MODULATING COOLING OPTION, 208/230V. R410A REFRIGERANT, VARIABLE SPEED COMPRESSOR, ECM CONDENSING FANS.
13. 25 TON MODULATING REHEAT OPTION - SPACE DEWPOINT CONTROL.
14. RTUVZH170 COMPRESSOR SOUND BLANKET 230V - FACTORY INSTALLED.
15. RTU RETURN MOUNTED SMOKE DETECTOR AND SAMPLING TUBE - FACTORY INSTALLED.
16. RTU INTAKE/RETURN DAMPER - STATIC PRESSURE CONTROL.
17. RTU4 DOWN RETURN.
18. 2" MERV 8 FILTERS FOR RTU4 (QTY. 12).
19. VAV PACKAGE W/ MANUAL/DDC CONTROL (571 VFD INCLUDED).
20. LINE REACTOR MOUNTED IN FAN.
21. 5 YEAR ENTIRE UNIT PARTS WARRANTY, 10 YEAR ENTIRE UNIT PARTS WARRANTY WITH REMOTE MONITORING AND CAPTIVEAIRE SERVICE CONTRACT, 25 YEAR STAINLESS STEEL FURNACE PARTS WARRANTY (SEE ADDITIONAL DETAILS).

**DOAS SYSTEM**



**CAPTIVEAIRE**

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<i>LOCATION</i> Dayton, OH, 45402	
<i>DATE</i> 12/23/2021	<i>JOB #</i> 4604989
<i>DWG #</i> 3	<i>DRAWN BY</i> jcirilli
<i>REV.</i>	<i>SCALE</i> 3/8' = 1'-0'



**DOAS SYSTEM**



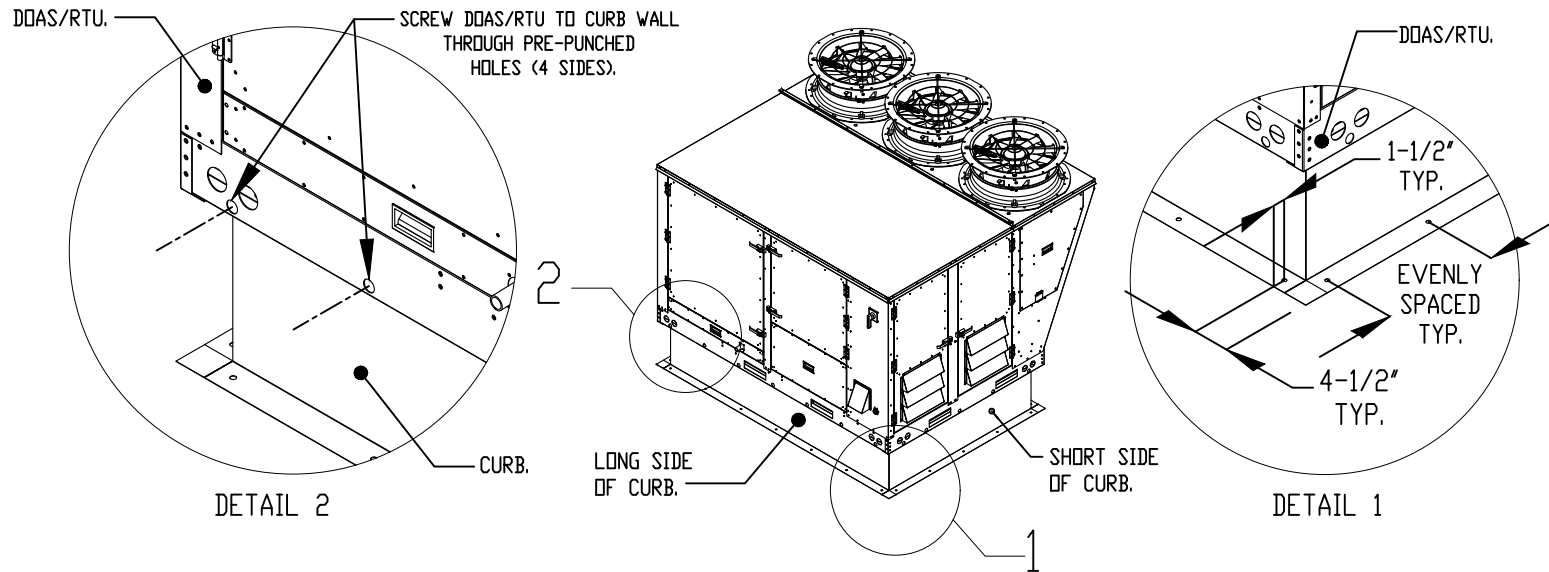
**CAPTIVEAIRE**

JOB West Social FoodHall (Dayton)	
LOCATION Dayton, OH, 45402	
DATE 12/23/2021	JOB # 4604989
DWG # 4	DRAWN BY jcirilli
REV.	SCALE 3/8" = 1'-0"



# TYPICAL DOAS/RTU ROOF MOUNTING INSTALLATION INSTRUCTIONS

1. SECURE THE CURB TO THE ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGES AT LOCATIONS SHOWN IN THE DIAGRAM BELOW. USING 3/8" X 2" ZINC PLATED STEEL LAG BOLTS, AND ZINC PLATED WASHERS, SCREW THROUGH THE CURB FLANGES AND INTO THE ROOF FRAMING MEMBERS. A MINIMUM OF (5) LAG BOLTS ON EACH SHORT SIDE, AND (7) LAG BOLTS ON EACH LONG SIDE IS REQUIRED.
2. SECURE THE UNIT BASE TO THE SIDE WALLS OF THE CURB USING (24) 1/4"-14 X 2" SELF-DRILLING, STEEL ZINC PLATED SCREWS. PRE-PUNCHED HOLES HAVE BEEN PROVIDED FOR EACH SCREW LOCATION.



**DOAS SYSTEM**



**CAPTIVEAIR**

JOB West Social FoodHall (Dayton)	
LOCATION Dayton, OH, 45402	
DATE 12/23/2021	JOB # 4604989
DWG # 5	DRAWN BY jcirilli
REV.	SCALE 3/8" = 1'-0"