



Date: 9/13/24
 Job Name: Miami Pilot
 Model: BF-DOAS-G1

LOCATION: Miami, FL
 TAG: DOAS-1

**BLUE FRONTIER
 PERFORMANCE SHEET**

Summer Design Conditions						Winter Design Conditions				
Elevation (ft)	Outdoor Air		Return Air		Supply (CFM)	Outdoor Air (CFM)	Outdoor Air		Return Air	
	DB (F)	WB (F)	DB (F)	WB (F)			DB (F)	WB (F)	DB (F)	WB (F)
9	83	79	-	-	2250	2250	-	-	-	-

Cooling Specifications					Heating Specifications					
Nominal Tonnage	Process (MBH)		Leaving Air (F)		Water Usage	Type	Capacity (KW/MBH)	Full load Amps (FLA)	Entering Air (F)	Leaving Air (F)
	Total	Sensible	DB	DP	(*\$)					
15	149	30	70	55	\$802	N/A	N/A	N/A	N/A	N/A

Unit Specifications							
Qty	Shipping Weight (lb)	^P Install Weight (lb)	Cooling Type	Heating Type	Unit Installation	Unit ETL Listing	
1	6,500	7,950	Packaged	N/A	Outdoor / Indoor	YES	
Electrical Specifications					Conditioner Motor Specifications		
Rating (V/C/P)	MCA (A)	MOP (A)	#Full Load (kW)	#Storage (kW)	Motor	Qty	Power (kw)
460/60/3	39.9	50	14.9	1.3	Supply	2	0.95
					Purge	1	0.08
					Pumps	2	0.3
Regenerator Compressor Details					^P Includes the weight of liquid desiccant		
Type	Qty	FLA (A)	LRA (A)				
Inverter	1	19	30				

Rated Efficiency							
	ASHRAE 90.1 Min. Efficiency	Blue Frontier (Std.)	Blue Frontier (Storage Mode)	% above Min. Efficiency (Std.)		Blue Frontier (Std.)	Blue Frontier (Storage Mode)
EER**	11.0	17.5	83.3	58.8%	COP**	5.1	33.6
IEER [†]	14.2	22.0	32.5	55.3%	kW/ton**	0.7	0.10
ISMRE ₂₋₇₀	4.0	8.1	45.8	102.2%			

Air Performance			Pressure Drop profile (in. wg)	
Type	Total Volume (CFM)	Total SP (in. wg)	Weatherhood / Duct	
Supply Air	2250	1.57	Filter Bank	0.01
OA Intake	3462		Filter Bank	0.5
RA Intake	-		Damper	0.15
Purge Air	1212		Conditioner	0.41
Regen Air	1400		Heating	0
			External	0.5

* Total Water Rate (EPA WaterSense National Avg.) = \$10.65 per 1000 gallons

** Based on Design CFM & 340/360 EAT & Full Load Capacity

[†] Full Load kW is when the unit is running its Regenerator to condition the space, Storage kW is when the unit is utilizing stored concentrated liquid desiccant to condition the space

[†] Based on Design CFM and test standard 340/360

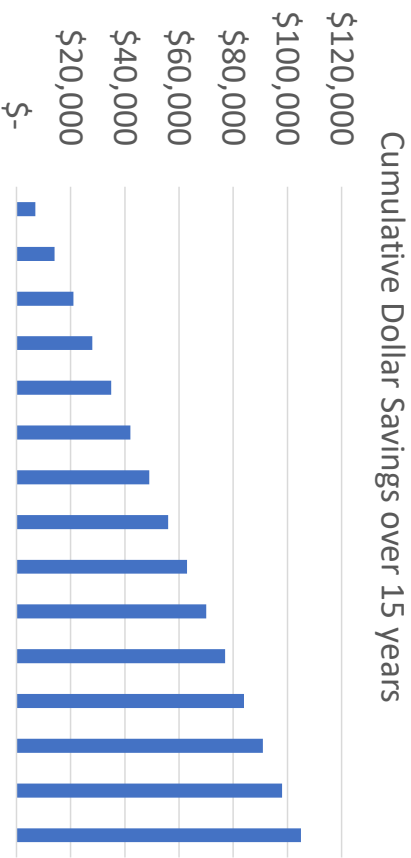
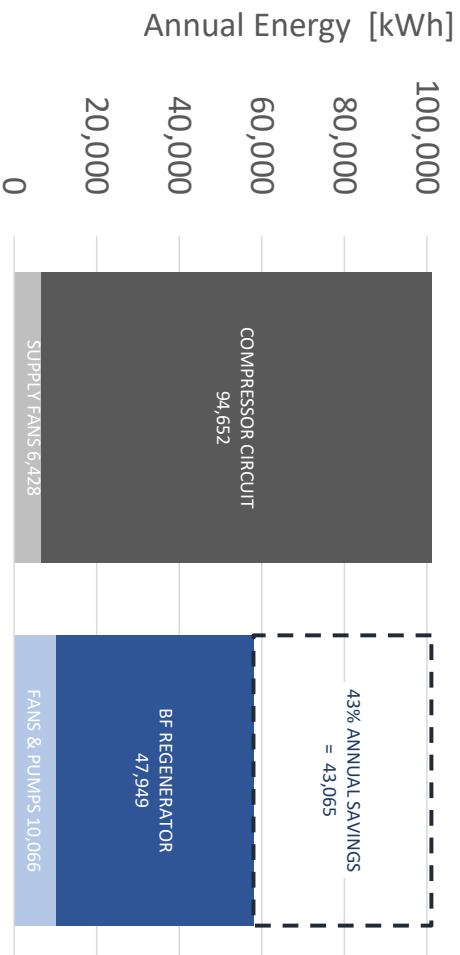
43% SAVED
ANNUAL ELECTRICITY



\$104,998
15-YEAR LIFE
SAVED

BASELINE 101,080 kWh
-VS-
BLUE FRONTIER 58,015 kWh

Blue Frontier Annual Energy Electric Savings



*user input electric rate of \$0.18/kWh



Avoided

Metric Tons of CO2

349



Equivalent

Gasoline Cars Offset

78



Equivalent

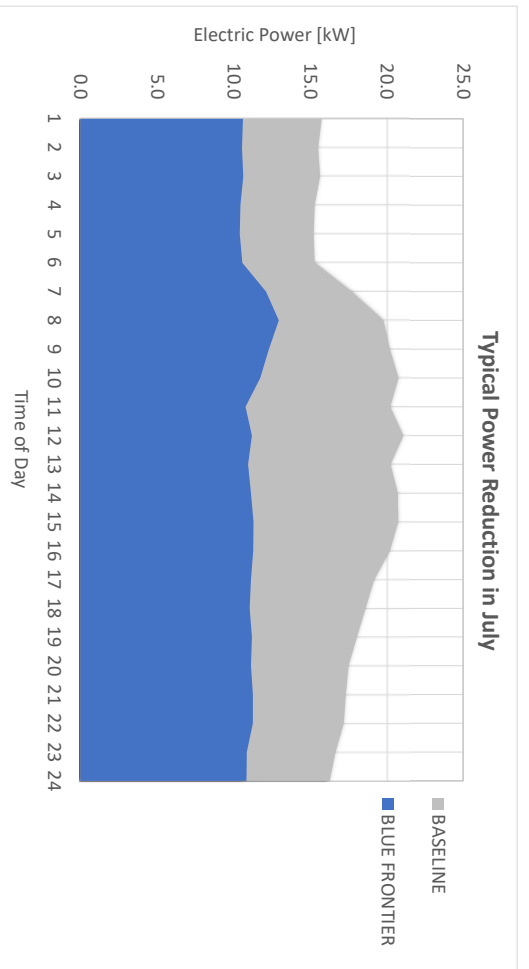
Homes Offset

68

Reference: Carbon emissions based on EPA Greenhouse Gas Equivalencies

Country: US State: FL Climate: MIAMI-KENDALL-TAMIA Total Ventilation: 2250 cfm
 Blue Frontier DOAS: 1 unit(s) with no Reheat needed, no ERV, Supply Air Sipt = 70°F DB / 55°F DP, Primary Heat = None, Aux Heat = None
 Baseline DOAS: 1 unit(s) with Hot Gas Reheat, no ERV, Supply Air Sipt = 70°F DB / 55°F DP, Primary Heat = None, Aux Heat = None

Blue Frontier Peak Power Reduction



BF's Avg Power Reduction (kW) - all 12 months

Month	Max	Avg	Min	Month	Hour																									
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
JAN	3.8	2.5	1.6	1	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.7	2.4	3.0	3.3	3.4	3.4	3.8	3.6	3.4	3.4	3.1	2.8	2.5	2.4	2.3	2.2	2.2	2.1
FEB	4.9	3.4	2.4	2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.6	3.2	3.6	4.0	4.6	4.7	4.9	4.8	4.6	4.6	4.1	3.5	3.2	3.1	2.9	2.8	2.7	
MAR	4.5	3.1	2.1	3	2.3	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.6	3.3	3.7	4.1	4.1	4.4	4.5	4.5	4.0	3.7	3.2	3.2	3.2	2.9	2.6	2.4	2.4	
APR	7.1	4.8	3.4	4	3.7	3.5	3.6	3.4	3.4	3.4	3.7	4.4	5.1	5.6	5.9	6.2	6.5	7.1	7.0	7.0	6.4	5.7	4.6	4.1	3.8	3.7	4.0	3.8		
MAY	9.2	6.3	3.8	5	4.4	4.3	4.0	3.8	3.8	3.9	4.9	6.5	7.3	8.1	8.7	8.9	9.1	9.2	9.1	8.5	7.9	7.1	6.3	5.8	5.4	5.2	4.8	4.7		
JUN	8.7	6.2	4.6	6	5.0	4.8	4.7	4.6	4.6	4.6	5.6	6.5	7.5	8.0	8.5	8.7	8.0	7.6	7.3	7.1	6.8	6.5	6.0	5.6	5.5	5.3	5.2	5.1		
JUL	9.9	7.0	4.7	7	5.1	4.9	5.0	4.8	4.8	4.7	5.6	6.8	7.9	9.0	9.4	9.9	9.3	9.6	9.4	8.9	8.0	7.5	6.8	6.3	6.1	5.9	5.8	5.4		
AUG	10.3	7.1	4.9	8	5.4	5.2	5.2	5.0	5.1	4.9	5.7	6.9	8.1	8.9	9.7	10.3	10.1	9.5	9.2	8.3	8.1	7.5	6.8	6.4	6.1	5.9	5.5	5.5		
SEP	8.9	6.3	4.7	9	5.0	4.9	4.7	4.7	4.7	4.7	4.9	6.1	7.1	7.9	8.6	8.9	8.0	8.0	7.7	7.7	7.3	6.8	6.0	5.7	5.5	5.4	5.1	5.1		
OCT	7.6	5.4	3.8	10	4.3	4.1	3.9	4.0	3.9	3.8	3.8	4.9	5.6	6.5	7.1	7.5	7.5	7.6	7.4	7.1	6.6	5.8	5.2	4.9	4.7	4.5	4.4	4.3		
NOV	6.5	4.4	2.9	11	3.4	3.1	3.1	3.0	2.9	2.9	2.9	3.7	4.8	5.7	6.1	6.4	6.4	6.5	6.3	6.0	5.3	4.5	4.2	4.0	3.7	3.4	3.3	3.3		
DEC	3.9	2.5	1.6	12	1.9	1.8	1.7	1.6	1.6	1.6	1.6	1.9	2.5	2.9	3.2	3.5	3.7	3.9	3.7	3.5	3.1	2.7	2.6	2.4	2.2	2.1	2.0	2.0		
				Hr Max	5.4	5.2	5.2	5.0	5.1	4.9	5.7	6.9	8.1	9.0	9.7	10.3	10.1	9.6	9.4	8.9	8.1	7.5	6.8	6.4	6.1	5.9	5.8	5.5		
				Hr Avg	3.7	3.6	3.5	3.4	3.4	3.4	3.7	4.5	5.4	6.1	6.5	6.9	6.7	6.8	6.7	6.4	5.9	5.4	4.8	4.5	4.3	4.1	4.0	3.8		
				Hr Min	1.9	1.8	1.7	1.6	1.6	1.6	1.6	1.7	2.4	2.9	3.2	3.4	3.4	3.8	3.6	3.4	3.4	3.1	2.7	2.5	2.4	2.2	2.1	2.0		

Baseline Input: 1DOAS units @ 2250 cfm each

BF Input: 1DOAS units @ 2250 cfm each

Annual Water Usage: No Water Recovery

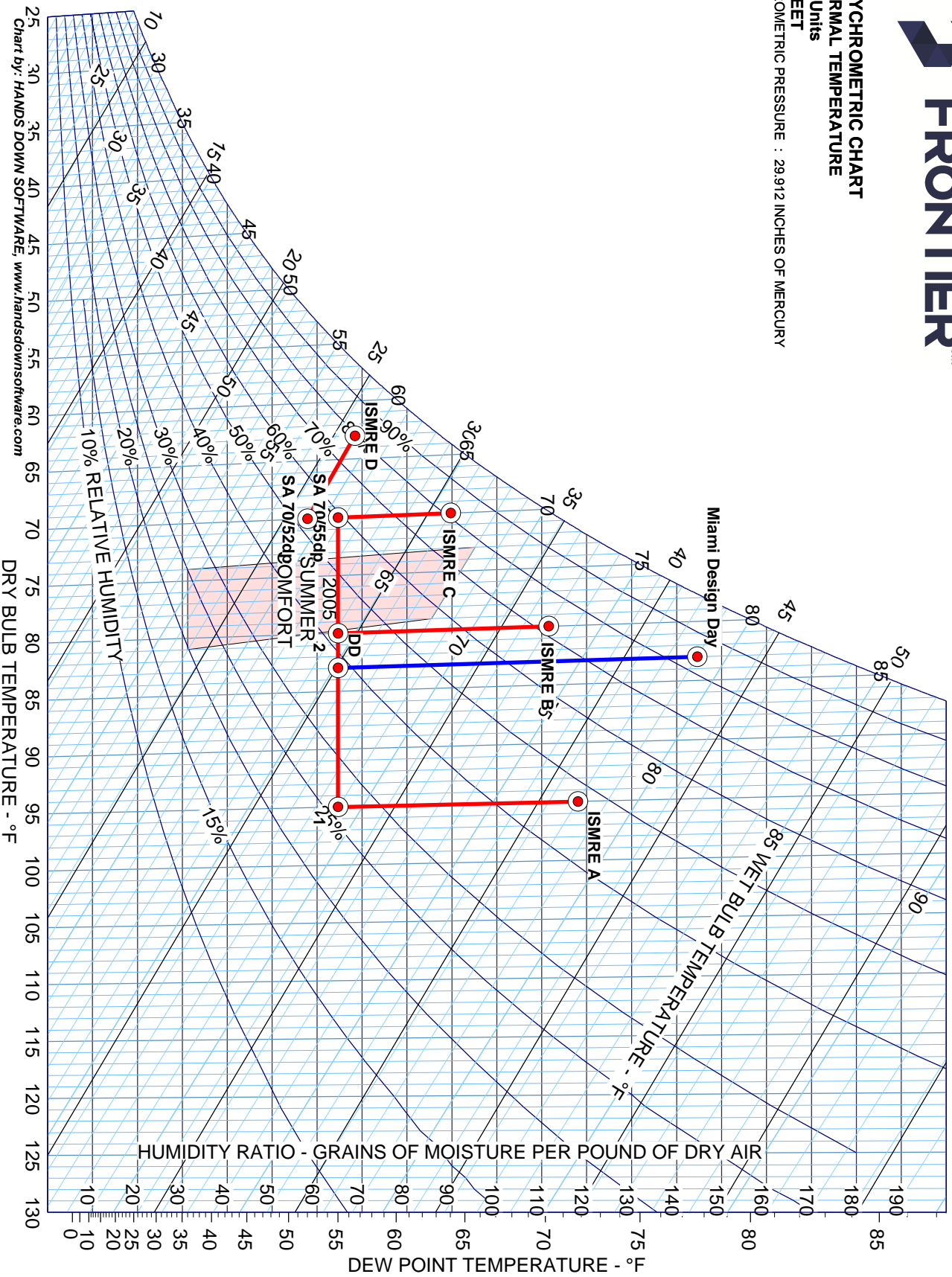
Water Rate (\$)	4.59	per 1000 gallons
Wastewater Rate (\$)	6.06	per 1000 gallons (30% of Intake Water, not evaporated)
Total Water Rate (\$)	10.65	per 1000 gallons

DOAS UNIT # = MONTH	WATER USAGE (PER DOAS UNIT)			WATER USAGE (INCLUDES ALL DOAS UNITS)		
	[cu.ft.]	[gal]	[\$ water bill]	[cu.ft.]	[gal]	[\$ water bill]
JAN 1	458	3,426	36.49	458	3,426	21.95
FEB 2	716	5,353	57.01	716	5,353	34.30
MAR 3	639	4,776	50.87	639	4,776	30.61
APR 4	1,016	7,596	80.90	1,016	7,596	48.68
MAY 5	1,544	11,551	123.02	1,544	11,551	74.02
JUN 6	2,168	16,215	172.69	2,168	16,215	103.90
JUL 7	2,588	19,355	206.13	2,588	19,355	124.03
AUG 8	2,544	19,031	202.68	2,544	19,031	121.95
SEP 9	2,269	16,975	180.79	2,269	16,975	108.78
OCT 10	1,407	10,526	112.10	1,407	10,526	67.45
NOV 11	837	6,259	66.66	837	6,259	40.11
DEC 12	558	4,176	44.47	558	4,176	26.76
Annual Total	16,743	125,238	1,333.79	16,743	125,238	802.53

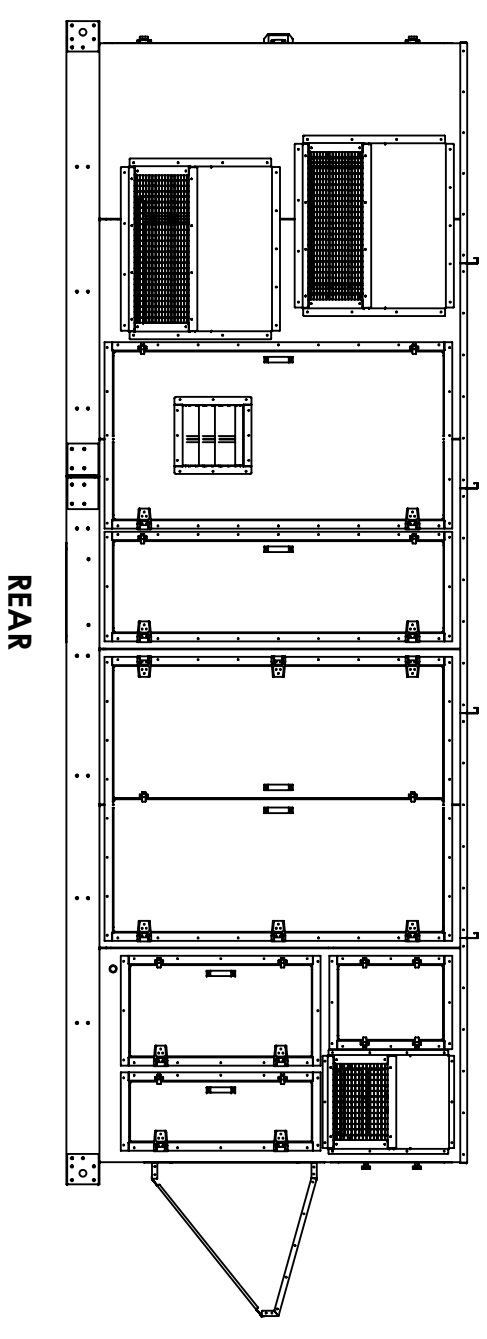
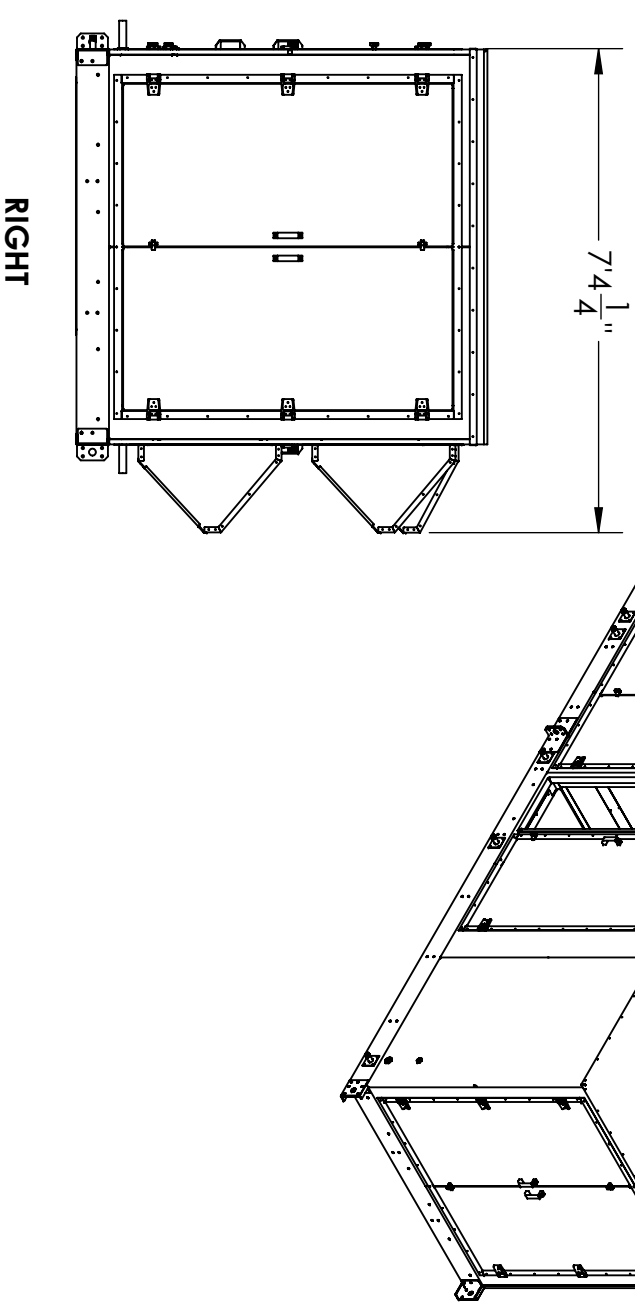
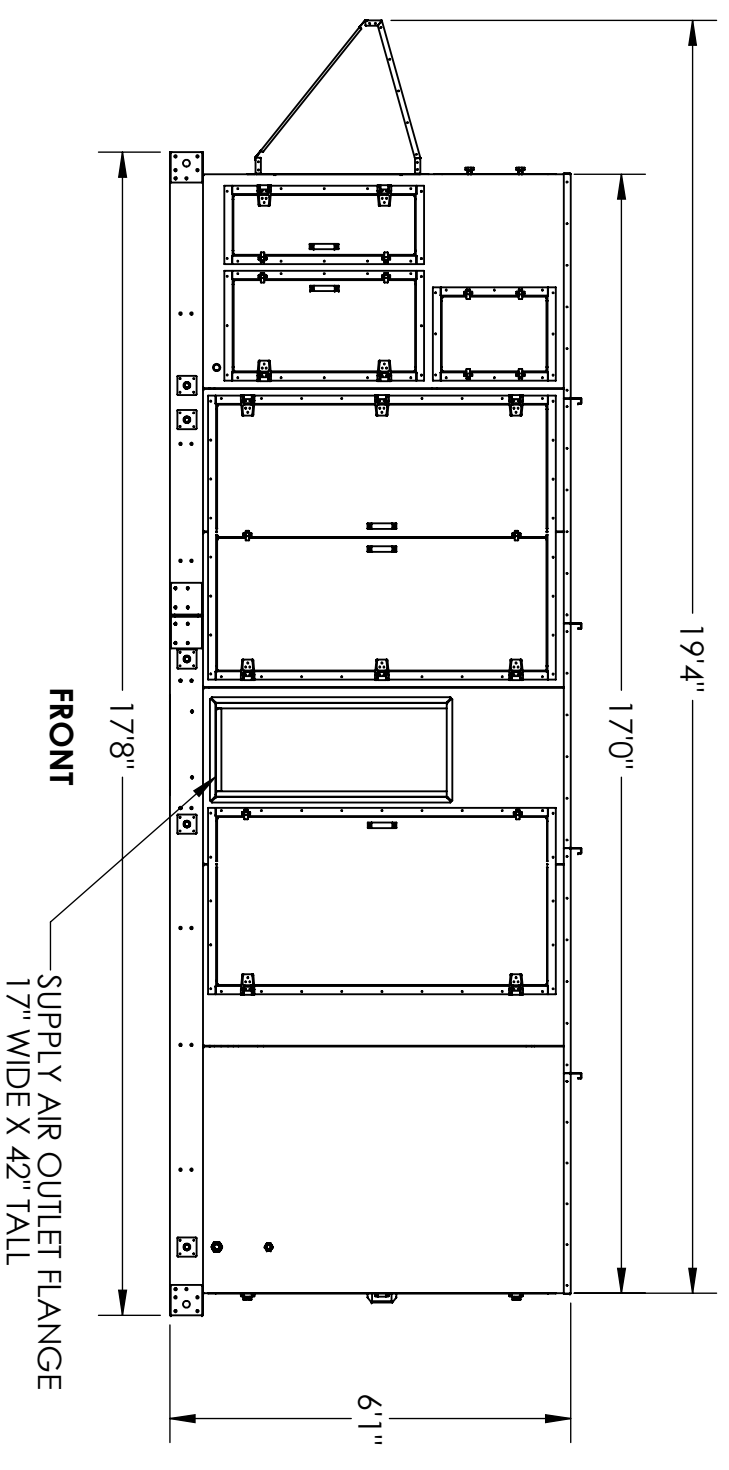
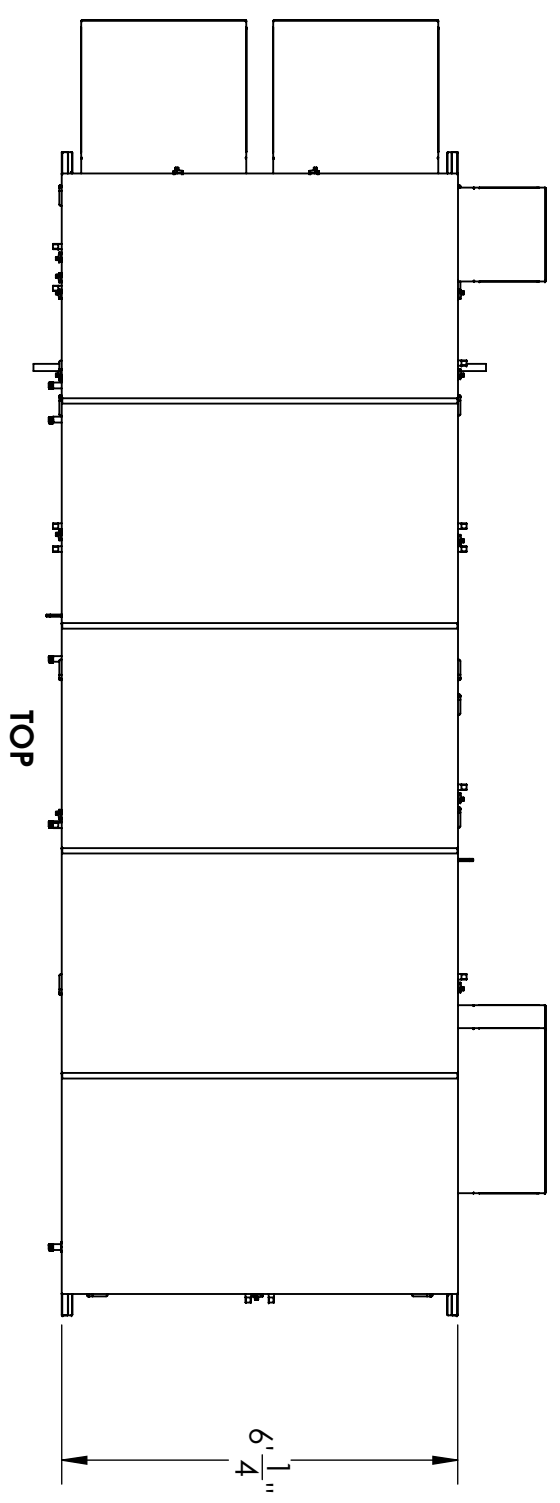


ISMRE Entering Air Conditions

PSYCHROMETRIC CHART
 NORMAL TEMPERATURE
 I-P Units
 9 FEET
 BAROMETRIC PRESSURE : 29.912 INCHES OF MERCURY



REVISIONS					
ZONE	REV.	DESCRIPTION	DATE	BY	APPROVED
	A	ADDED SHEET 2	2/20/2024	PJS	PJS
	B	ADDED SHEET 3	4/8/2024	PJS	PJS
	C	ADDED SHEET 4	6/5/2024	PJS	PJS



UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 ONE PLACE DECIMAL ±0.1
 TWO PLACE DECIMAL ±0.01
 THREE PLACE DECIMAL ±0.0005
 ANGLES ± 2 DEG
 INTERPRET GEOMETRIC
 TOLERANCING PER: ANSI Y14.5



PROPRIETARY AND CONFIDENTIAL

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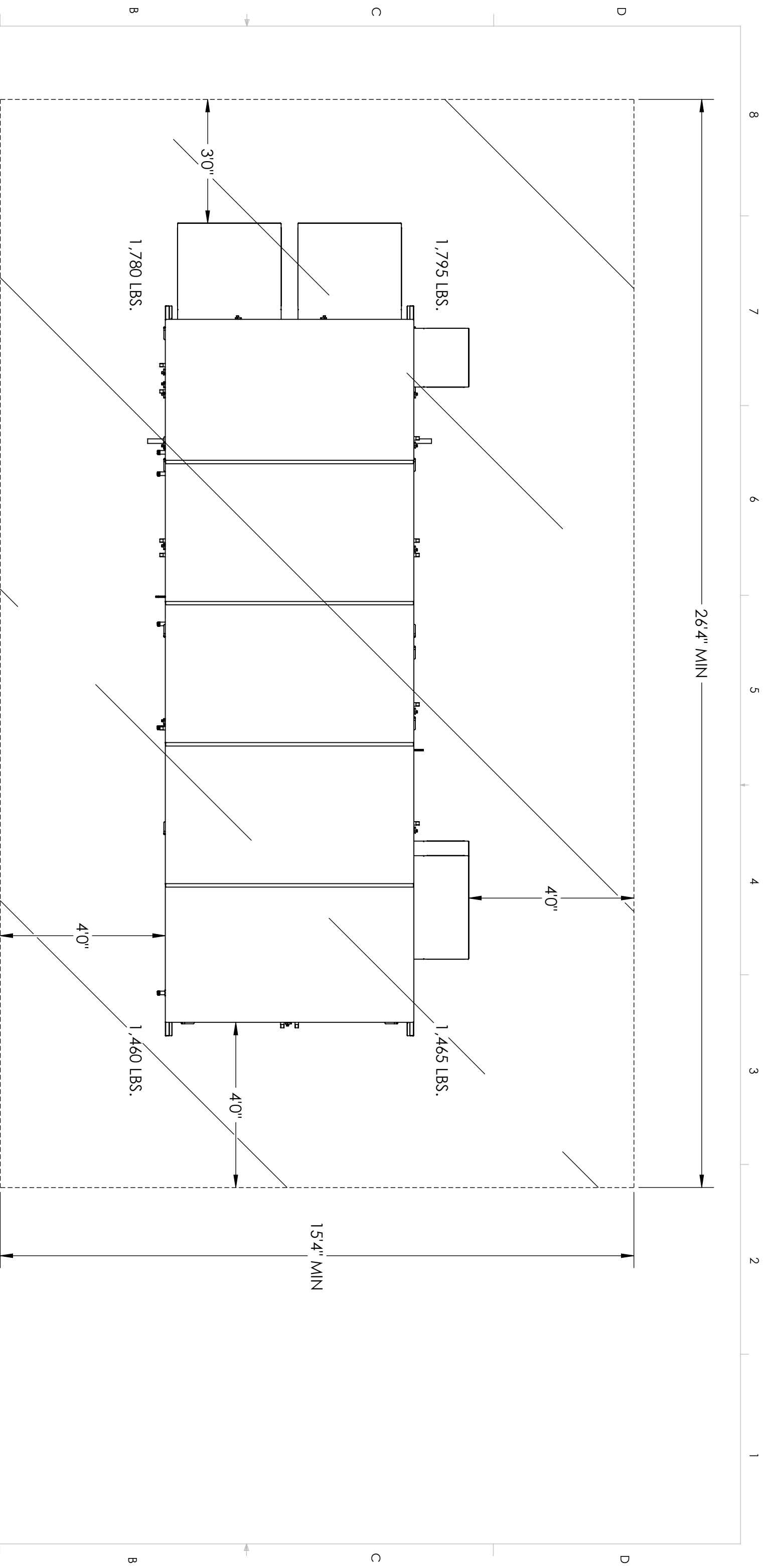
GENERATED	NAME	DATE
ENG REVIEWED	PJS	1/5/24
MFG REVIEWED		
APPROVED		
MATERIAL		
FINISH		

BLUE FRONTIER
 6100 BROKEN SOUND PKWY NW
 SUITE 14
 BOCA RATON, FL 33487

TITLE:
 2024 DOAS

SIZE DWG. NO. REV
B BF141 **C**

DO NOT SCALE DRAWING SCALE: 1:35 WEIGHT: SHEET 1 OF 4



TOP VIEW

DOAS SERVICE CLEARANCE REQUIREMENTS

OPERATING WEIGHT: 7,950 LBS.
 SHIPPING WEIGHT: 6,500 LBS.
 CORNER WEIGHTS AS SHOWN ON TOP VIEW

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES:
 ONE PLACE DECIMAL ±0.1
 TWO PLACE DECIMAL ±0.01
 THREE PLACE DECIMAL ±0.0005
 ANGLES: 2 DEG
 INTERPRET GEOMETRIC
 TOLERANCING PER: ANSI Y14.5



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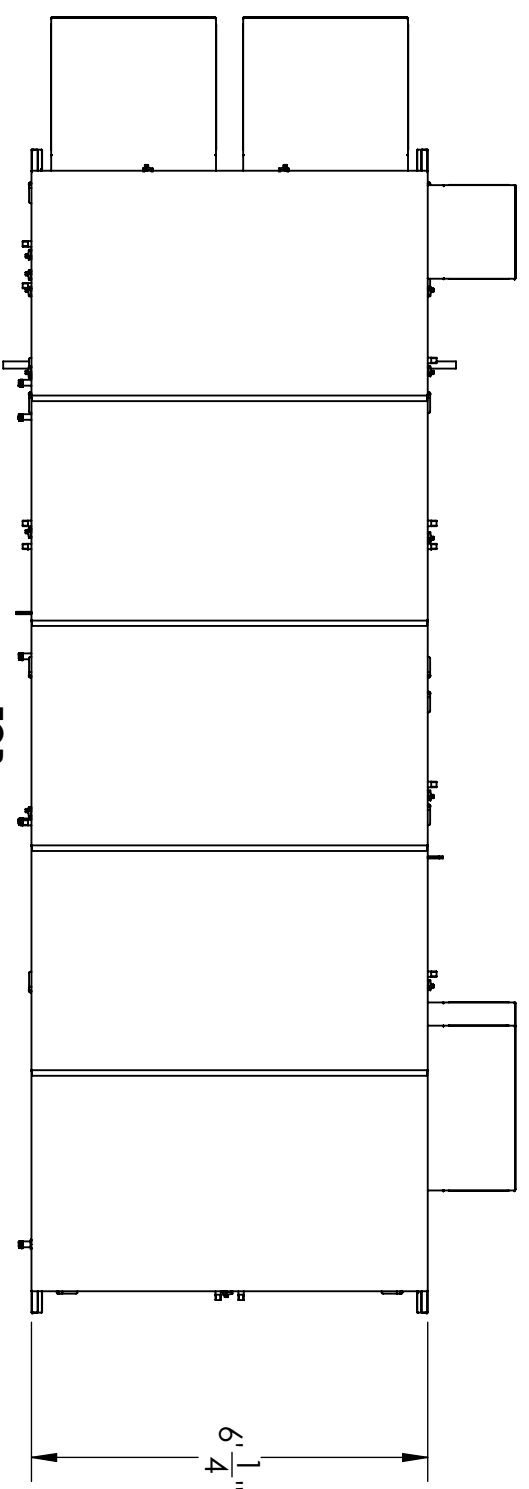
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ENG REVIEWED	PJS	2/15/24
MFG REVIEWED		
APPROVED		
MATERIAL		
FINISH		

BLUE FRONTIER
 6100 BROKEN SOUND PKWY NW
 SUITE 14
 BOCA RATON, FL 33487

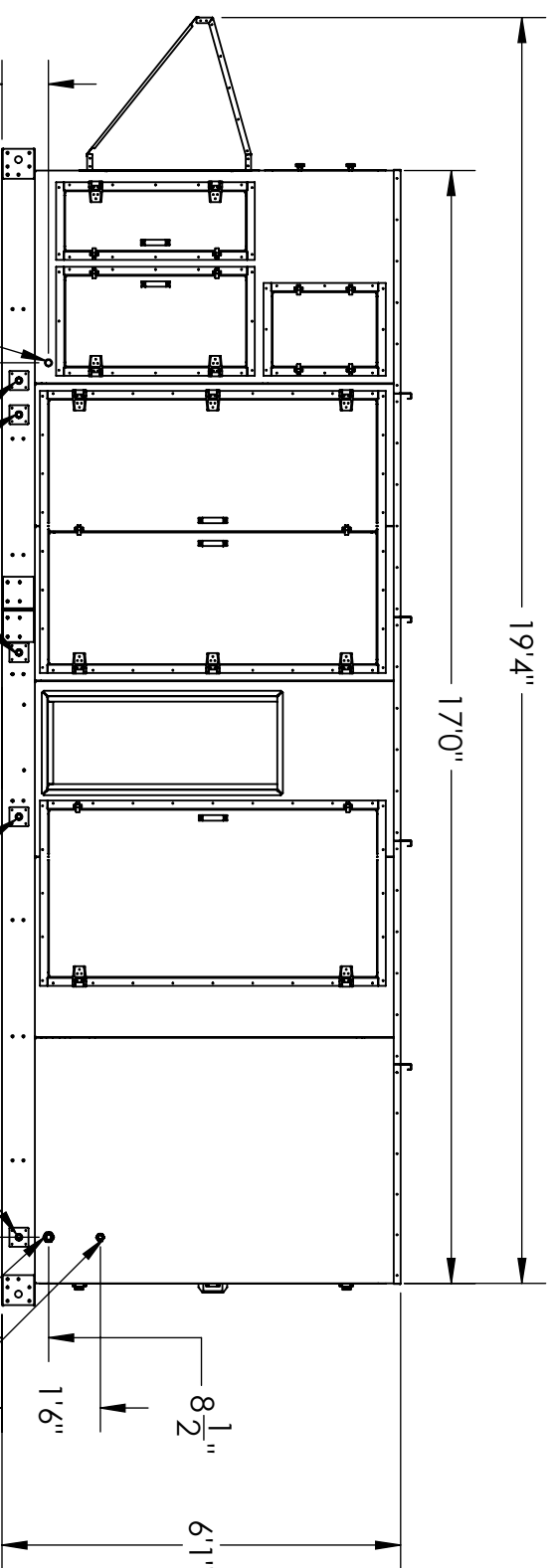
TITLE:
 2024 DOAS TOP VIEW

DO NOT SCALE DRAWING

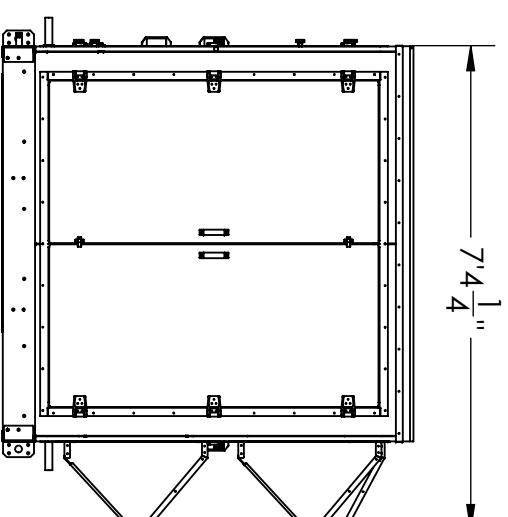
SIZE	DWG. NO.	REV
B	BF141	C
SCALE: 1:28	WEIGHT:	SHEET 2 OF 4



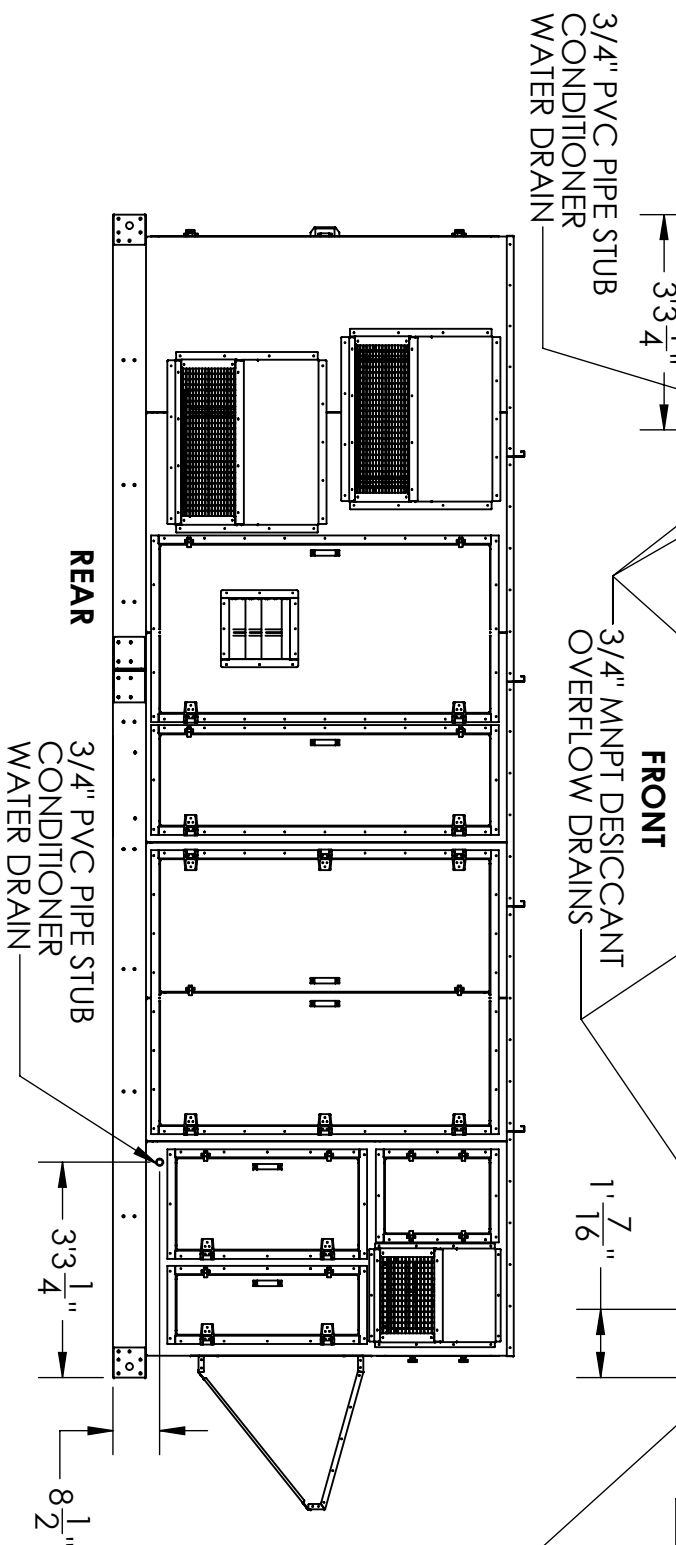
TOP



FRONT



RIGHT



REAR

3/4" FNPT
REGENERATOR
WATER DRAIN

1/2" FNPT
SYSTEM
WATER INLET

3/4" MNPT DESICCANT
OVERFLOW DRAINS

3/4" PVC PIPE STUB
CONDITIONER
WATER DRAIN

3/4" PVC PIPE STUB
CONDITIONER
WATER DRAIN

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
ONE PLACE DECIMAL ±0.1
TWO PLACE DECIMAL ±0.01
THREE PLACE DECIMAL ±0.0005
ANGLES ± 2 DEG
INTERPRET GEOMETRIC
TOLERANCING PER: ANSI Y14.5



THIRD ANGLE

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GENERATED	NAME	DATE
ENG REVIEWED	PJS	4/11/24
MFG REVIEWED		
APPROVED		
MATERIAL		

BLUE FRONTIER
6100 BROKEN SOUND PKWY NW
SUITE 14
BOCA RATON, FL 33487

TITLE:
2024 DOAS EXTERNAL CONNECTIONS

SIZE DWG. NO.
B BF141

REV
C

DO NOT SCALE DRAWING

SCALE: 1:35 WEIGHT:

SHEET 3 OF 4

8 7 6 5 4 3 2 1

A

A

B

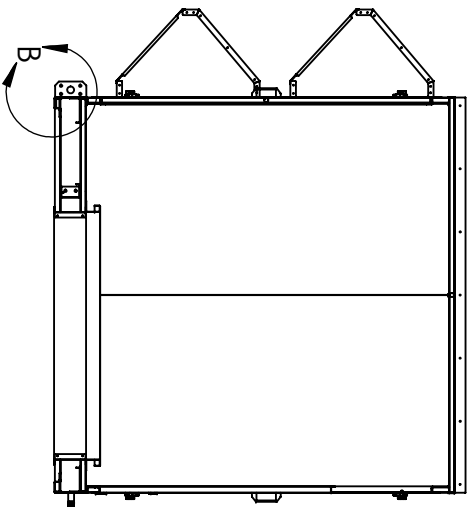
B

C

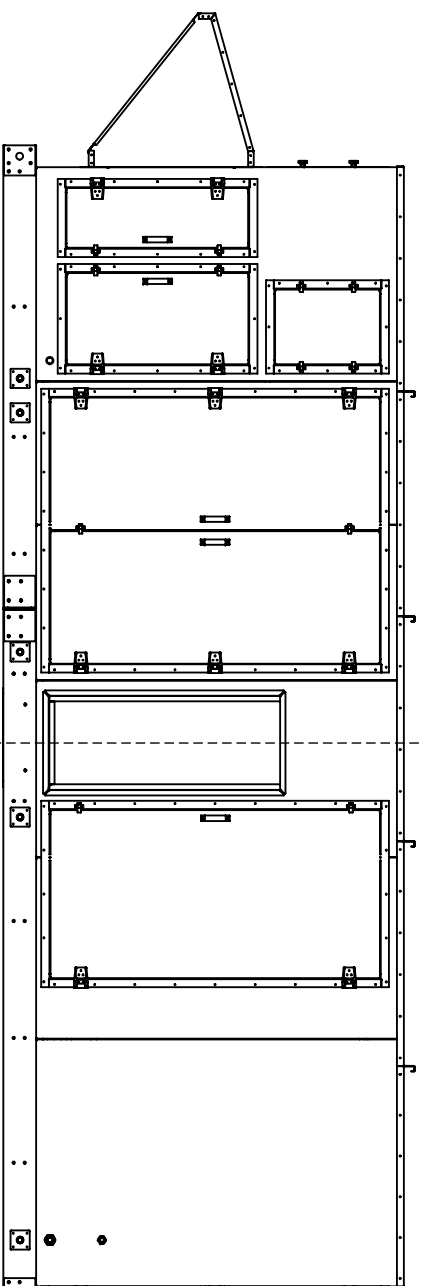
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D

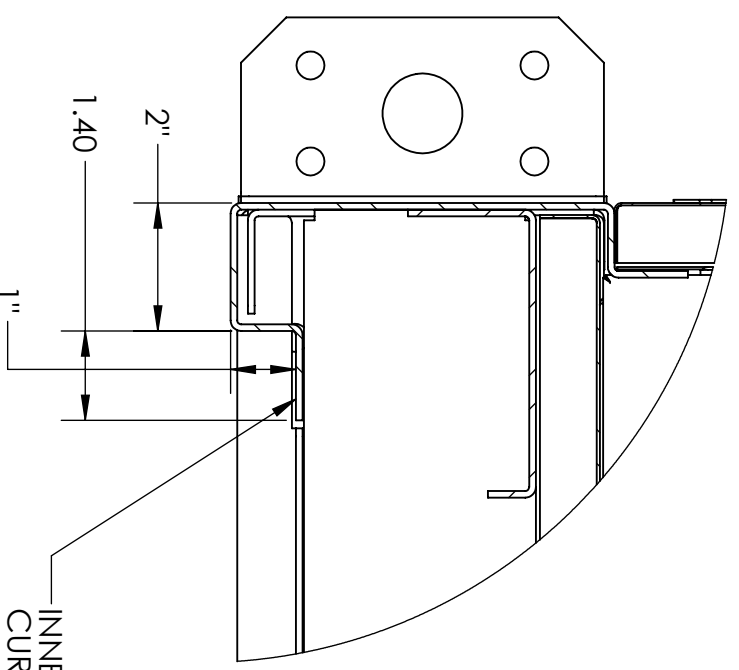
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SECTION A-A

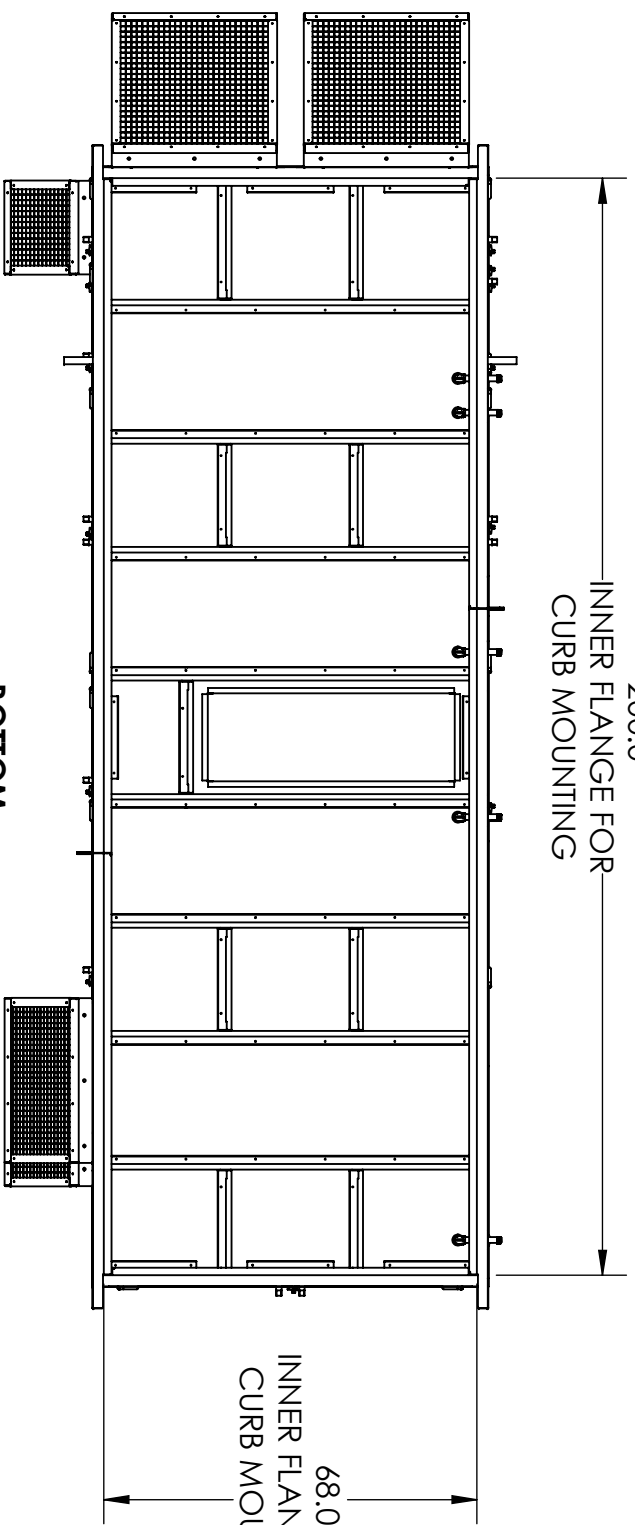


FRONT



INNER FLANGE FOR CURB MOUNTING

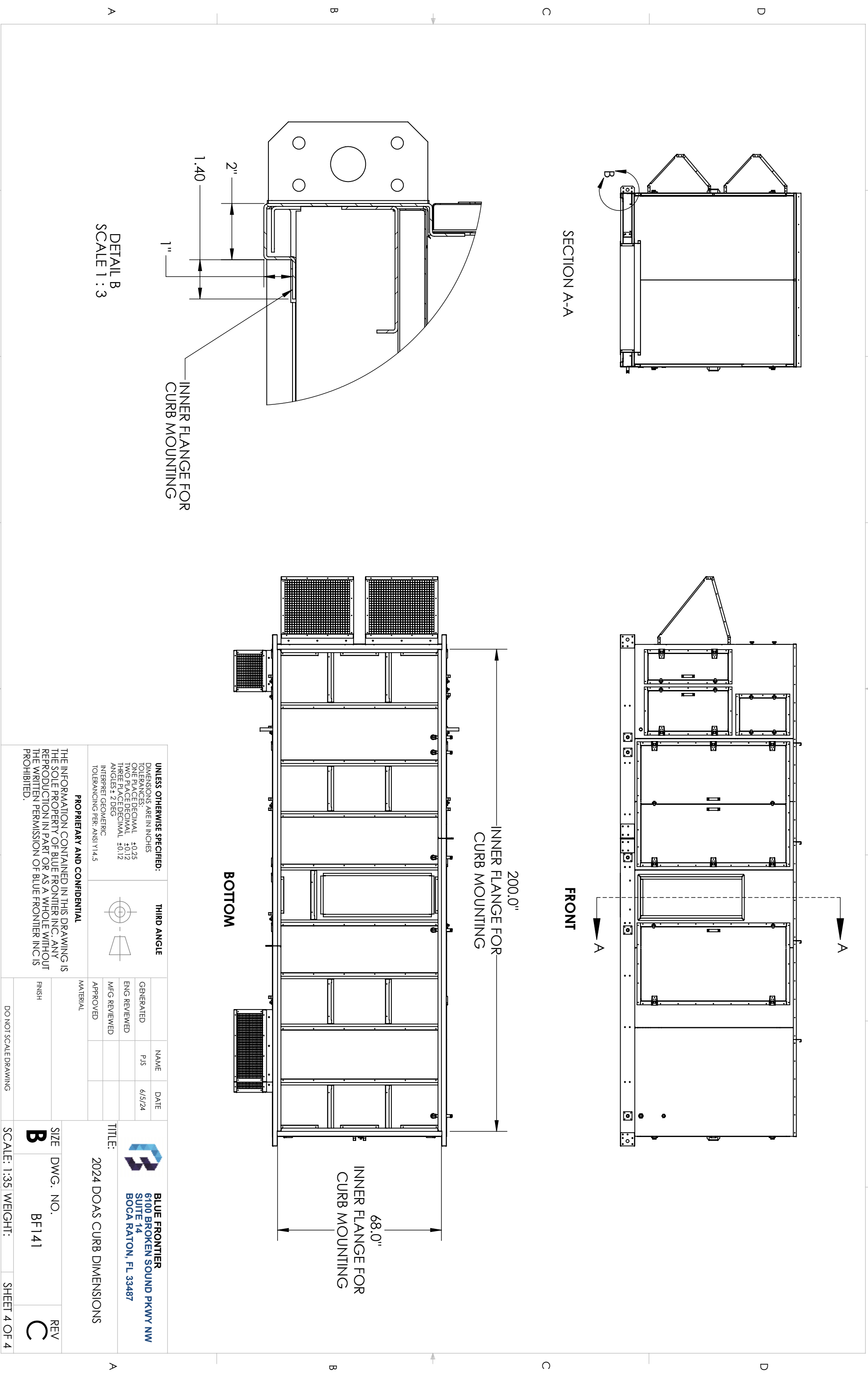
DETAIL B
SCALE 1:3

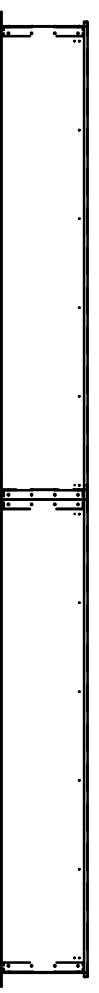
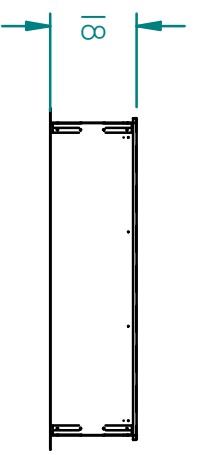
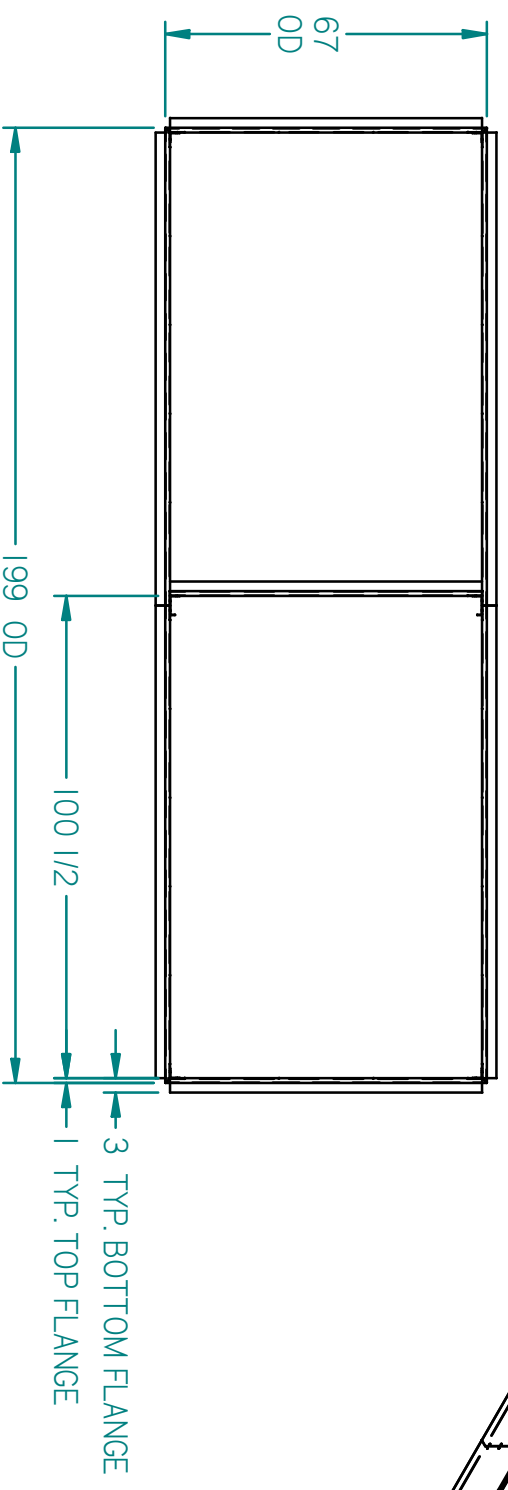
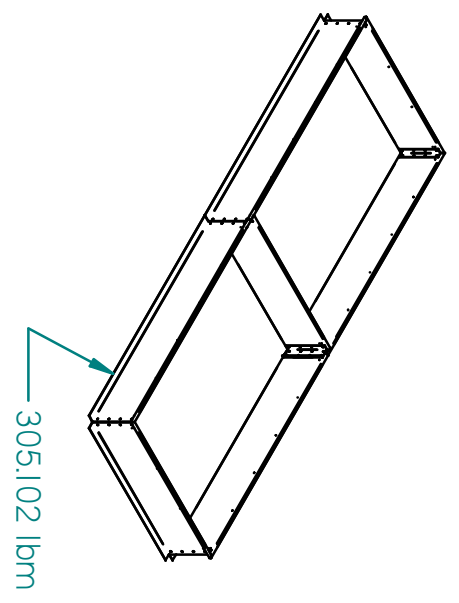


BOTTOM

UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE	
DIMENSIONS ARE IN INCHES			
TOLERANCES:			
ONE PLACE DECIMAL	±0.25		
TWO PLACE DECIMAL	±0.12		
THREE PLACE DECIMAL	±0.12		
ANGLES ± 2 DEG			
INTERPRET GEOMETRIC TOLERANCING PER: ANSI Y14.5			
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GENERATED	NAME	DATE	<p>BLUE FRONTIER 6100 BROKEN SOUND PKWY NW SUITE 14 BOCA RATON, FL 33487</p>
ENG REVIEWED	PJS	6/5/24	
MFG REVIEWED			
APPROVED			
MATERIAL			
FINISH			
TITLE:		2024 DOAS CURB DIMENSIONS	

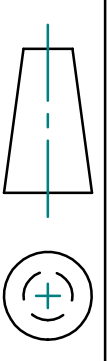
DO NOT SCALE DRAWING	SCALE: 1:35	WEIGHT:	
SIZE	DWG. NO.	REV	
B	BF141	C	





APPROX. WEIGHT
350 LBS

CURB TECHNOLOGIES™



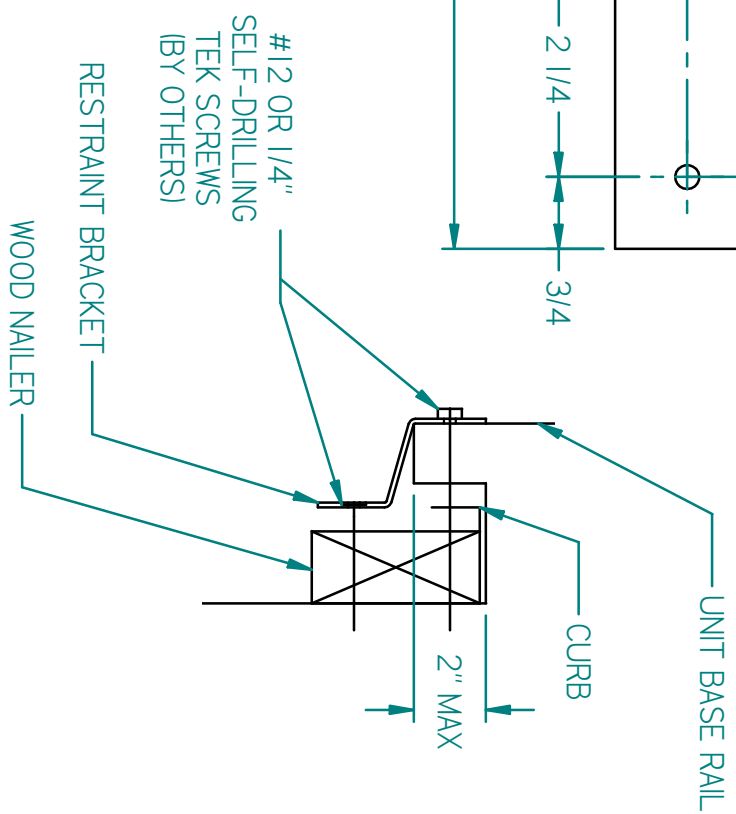
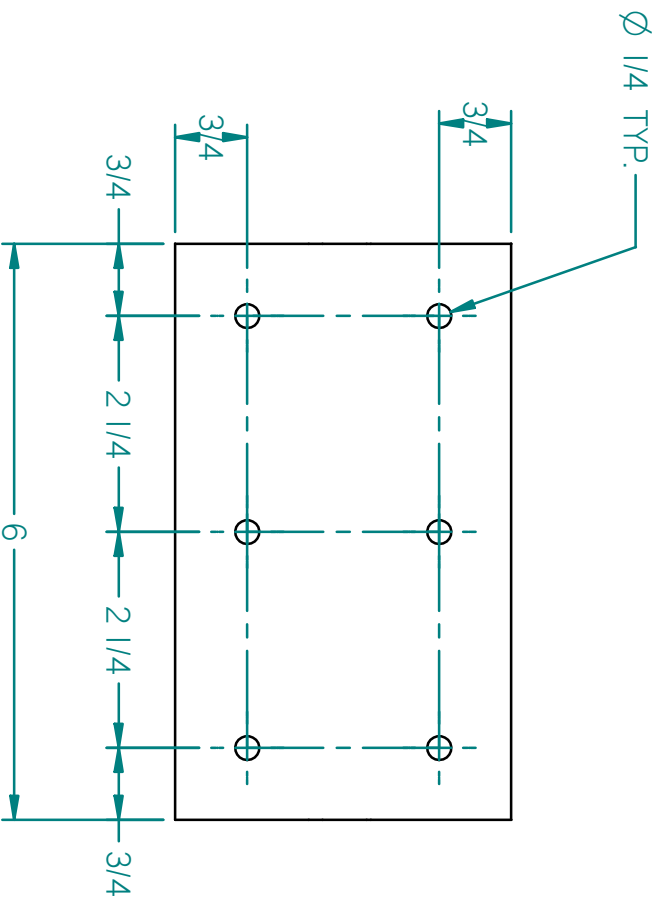
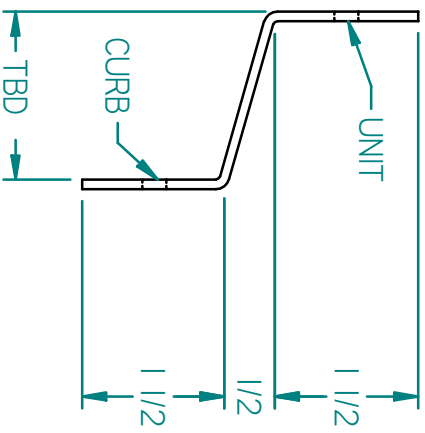
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DIMENSIONS: INCHES

DRAWN BY SAT

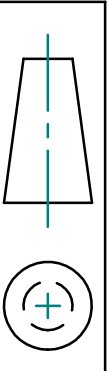
PROJECT: Blue Frontier
UNIT TAG: DOAS
MODEL: CTRL-2

Rev. 00 06/06/24

- NOTES:
1. CURB SHIPPED IN PIECES FOR FIELD ASSEMBLY
 2. CURB MUST BE INSTALLED SQUARE AND LEVEL
 3. MATERIAL IS GALVANIZED 14ga STEEL
 4. FACTORY INSTALLED P.T. 1X4 WOOD NAILER
 5. SUPPLIED WITH 1-1/2x1/4" CLOSED CELL NEOPRENE GASKET
 6. ALLOW FOR 1" LONG CONNECTING HARDWARE AS NEEDED WHEN SIZING DUCT
 7. WIND CALCS AND ATTACHMENT BRACKETS INCLUDED



- NOTES:
1. MATERIAL IS 12ga GALVANAIZED STEEL
 2. ATTACHED TO UNIT & CURRB W/ #12 OR 1/4" SELF-DRILLING SCREWS
 3. PLACE BRACKETS ON 24" CENTERS UNLESS OTHERWISE SPECIFIED



QUANTITY:
DIMENSIONS: INCHES

DRAWN BY JAS

CURRB TECHNOLOGIES™

PROJECT:
UNIT TAG:
MODEL: