



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

**APPLICATION #: OSP-0063**

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: ClimateCraft

Manufacturer's Technical Representative: Andrew Hillis

Mailing Address: 518 North Indiana Ave., Oklahoma City, OK 73106

Telephone: (405) 415-9230

Email: ahillis@climatecraft.com

**Product Information**

Product Name: Air Conditioning Units

Product Type: Air Conditioning Units - Custom

Product Model Number: Custom Air Handling Units

General Description: Rigid mounted Custom Air Handling Units with components as listed in the Certified Product Tables.

Mounting Description: Rigid, Base mounted, with internally isolated fan units.

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

**Applicant Information**

Applicant Company Name: VMC Group

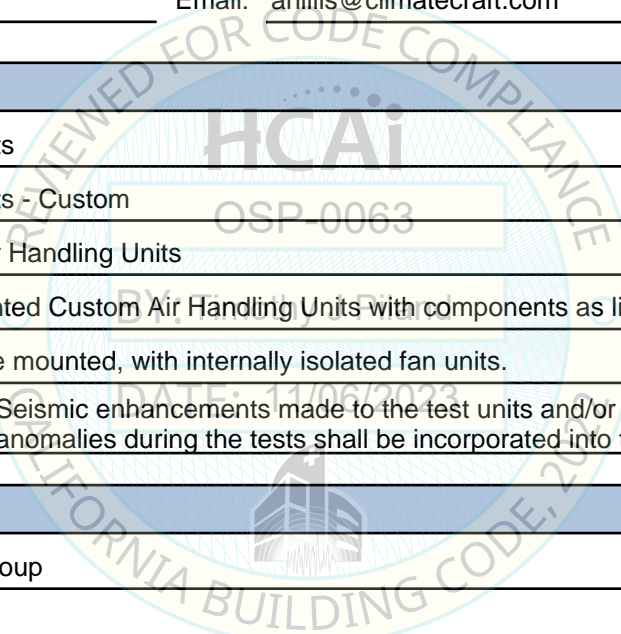
Contact Person: John Guiliano

Mailing Address: 113 Main St., Bloomingdale, NJ 07403

Telephone: (973) 838-1780

Email: john.giuliano@thvmcgroup.com

Title: President





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**California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)**

Company Name: THE VMC GROUP  
Name: Kenneth Tarlow California License Number: S2851  
Mailing Address: 113 Main Street, Bloomingdale, NJ 07403  
Telephone: (973) 838-1780 Email: ken.tarlow@thevmcgroup.com

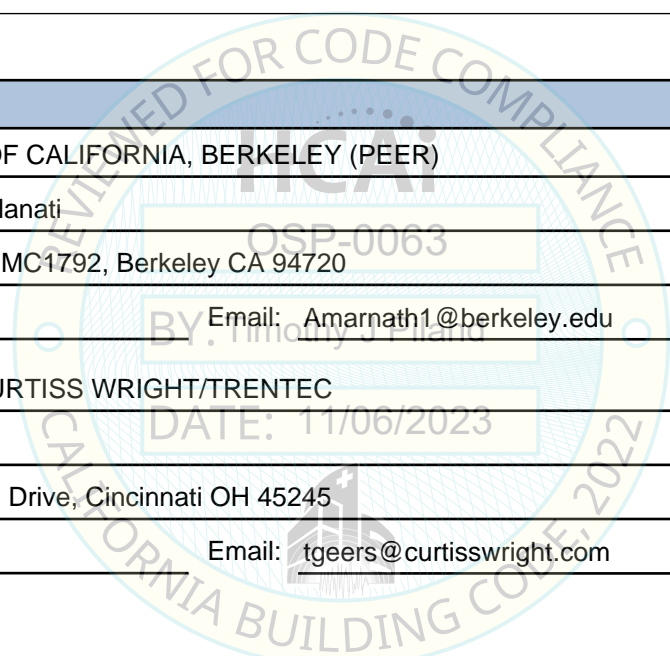
**Certification Method**

GR-63-Core     ICC-ES AC156     IEEE 344     IEEE 693     NEBS 3  
 Other (Please Specify): \_\_\_\_\_

**Testing Laboratory**

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)  
Contact Person: Amarnath Kasalanati  
Mailing Address: 325 Davis Hall, MC1792, Berkeley CA 94720  
Telephone: (510) 642-6475 Email: Amarnath1@berkeley.edu

Company Name: QUALTECH/CURTISS WRIGHT/TRENTEC  
Contact Person: Timothy Geers  
Mailing Address: 4600 East Tech Drive, Cincinnati OH 45245  
Telephone: (513) 528-7900 Email: tgeers@curtisswright.com





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**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 4.34

SDS (Design spectral response acceleration at short period, g) = 1.93

$a_p$  (Amplification factor) = 2.5

$R_p$  (Response modification factor) = 2.0

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height ratio factor) = 1

Natural frequencies (Hz) = See UUT sheets

Overall dimensions and weight = See Product Matrix and UUT Sheets

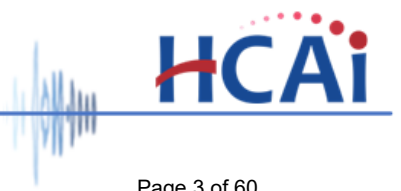
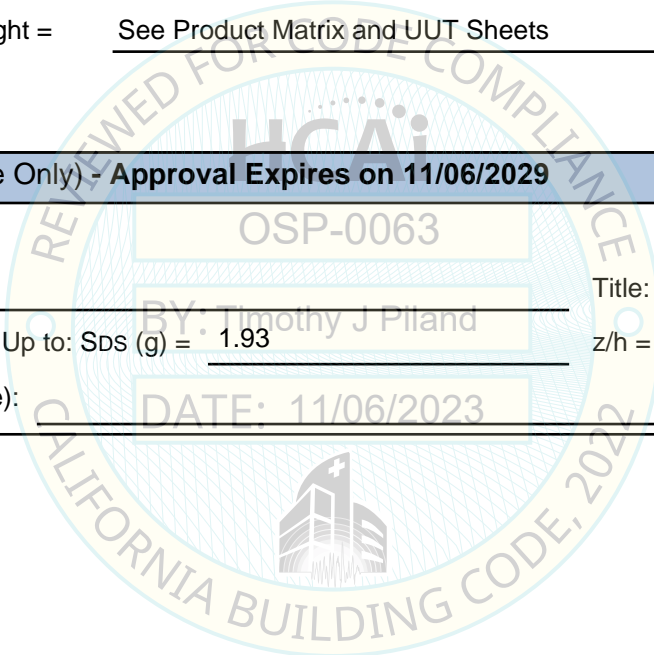
**HCAI Approval (For Office Use Only) - Approval Expires on 11/06/2029**

Date: 11/6/2023

Name: Kelie Zimmer Title: Associate Governmental Program

Special Seismic Certification Valid Up to: SDS (g) = 1.93 z/h = 1

Condition of Approval (if applicable): DATE: 11/06/2023



**Table 1: Cabinet Sizes and Configurations**

	Nominal Height	Max Tested Height	Single Wide Unit Width [in.] (Nominal Size) 6" Increments				Larger than Single Wide Unit Widths	UUT	Tested Weight [lb]	psf	No. of Walls Remaining	Removed Walls	Manufacturer	
			36 to 60	66 to 90	96 to 120	126 to 144								
Non-Stacked Unit Height [ in ]	36	52	X	X	X	X	Refer to Line Drawings of Certified Units	Extrapolated	N/A	106 Max	4 Walls	None	ClimateCraft	
	Interpolated	Interpolated	X	X	X	X		UUT-05A	4,900	73				
	84	99	X	X	99"W x 98"L	X		Interpolated	N/A	106 Max				
	Interpolated	Interpolated	X	X	X	X		Interpolated	N/A	106 Max				
	36	52	X	X	X	X	Refer to Line Drawings of Certified Units	Interpolated	N/A	106 Max	3 Walls	Inlet or Outlet		
	Interpolated	Interpolated	X	X	X	X		UUT-03	6,000	63		Outlet		
	42	51	X	X	117"W x 118"L	X		Interpolated	N/A	106 Max		Inlet or Outlet		
	Interpolated	Interpolated	X	X	X	X		UUT-01	6,700	106		Inlet		
	132	141	X	X	99"W x 82"L	X		Interpolated	N/A	106 Max		Inlet or Outlet		
	138	147	X	X	X	X		Interpolated	N/A	77 Max		2 Walls		Inlet, Outlet, or Side
	36	52	X	X	X	X		UUT-05B	4,500	67				Inlet, Side
	Interpolated	Interpolated	X	X	X	X		Interpolated	N/A	77 Max				Inlet, Outlet, or Side
	90	99	X	X	99"W x 98"L	X	UUT-02	3,700	77	Inlet, Outlet				
	Interpolated	Interpolated	X	81"W x 78"L	X	X	Interpolated	N/A	77 Max	1 Walls	Inlet, Outlet, or Side			
	102	111	X	X	X	X	UUT-04B	10,900	77		Inlet, Outlet			
	Interpolated	Interpolated	X	X	X	X	Interpolated	N/A	76 Max		No Walls	All		
	138	147	X	X	X	141"W x 144"L	UUT-04C	10,500	74			All		
	36	52	X	X	X	X	UUT-08	4,828	40	4 Walls		None		
	Interpolated	Interpolated	X	X	X	X	UUT-07	8,819	72					
	138	147	X	X	X	146"W x 120"L	UUT-06	9,194	76					
Interpolated	Interpolated	X	X	X	146"W x 120"L	UUT-04D	9,200	65						
Stacked Unit Height (Bottom/Top) [ in ]	36 / 36	94	X	X	X	X	Stacked Units only allowed for Single Wide Tunnel Configurations	Interpolated	N/A	119 Max	4 Walls	None		
	Interpolated	Interpolated	X	X	X	X		UUT-04A	16,800	119				
	138 / 48	205	X	X	X	141"W x 144"L								

**Table 1A: Insulation**

Material	Thickness	UUT
Fiberglass	Extrapolated	Extrapolated
	2"	UUT-01, UUT-02, UUT-03, UUT-06, UUT-07, UUT-08
	Interpolated	Interpolated
Foam	4"	UUT-04
	Extrapolated	Extrapolated
	2"	UUT-05
	Interpolated	Extrapolated
	4"	Extrapolated

Note: Foam insulation validated by fiberglass testing as fiberglass is heavier.

**Table 1B: Base Rails**

Material	Thickness	UUT
Carbon Steel	5"	UUT-01, UUT-02, UUT-03, UUT-04, UUT-06, UUT-07, UUT-08
Stainless Steel	6"	Interpolated
	8"	
	5"	Interpolated
	6"	
8"	UUT-05	

**Cabinet Configurations:**

Single Wide Unit, Double Wide Unit, Dual Double Wide Unit, Dual Tunnel and Central Vestibule Unit L & U Shape Configurations  
 144" Vestibule in addition to any maximum standard tunnel size. Side Piping Dog House option included.  
 Partial stacked configuration (Max 4' Empty Plenum Above Single Wide Units Only - As Tested)  
 Nominal height dimensions listed in table 1 does not include height of roof and base rail

**All design changes shall be incorporated into unit as follows:**

- Enclosure corners to have 1/2" bolts in place of 3/8".
- Belt Drive Housed Fan inlet wall screws shall be set at 6" O.C., instead of 12".
- Vertical wall pieces installed per ClimateCraft drawings.
- Cable bracing as defined in approved submittal drawings
- 2"x2" Tube bracing up and downstream of any stacked water coils at top of coil
- 10 ga Brackets for connecting coil faces in any stacked water coils

**Table 1C: Interior Panels**

Material	Thickness	Max Panel Width	UUT
Perforated Carbon Steel	22 ga	24"	UUT-04
Perforated Stainless Steel	22 ga		UUT-05
Solid Galvanized Carbon Steel	20 ga		UUT-01, UUT-02, UUT-03, UUT-04, UUT-06, UUT-07, UUT-08
Solid Stainless Steel	20 ga		UUT-05

**Table 1D: Exterior Panels**

Material	Thickness	Max Panel Width	UUT
Solid Galvanized Carbon Steel	16 ga	24"	UUT-01, UUT-02, UUT-03, UUT-04, UUT-06, UUT-07, UUT-08
Solid Stainless Steel			UUT-05

**Table 2a - AHU Coils (Hydronic)**

Fin Height [ in ]	Fin Length [ in ]										UUT	Manufacturer
	12	13	14	Interpolated		81	98	Interpolated		127		
12	12x12	X	X	X	X	X	X	X	X	X	UUT-05	ClimateCraft
15	X	X	X	X	X	X	X	X	X	X	Interpolated	
18	X	X	X	X	X	X	X	X	X	X		
Interpolated	X	X	X	X	X	X	X	X	X	X	UUT-03	
	X	X	X	X	X	X	39x98	X	X	X		
42	X	X	X	X	X	X	X	X	X	42x127	UUT-07	
45	X	X	X	X	X	45x81	N/A	N/A	N/A	N/A	UUT-05	

**Table 2b - Hydronic Coil Options**

		UUT	Manufacturer
Casing Material:	Galvanized Carbon Steel	UUT-03, UUT-05A/B	ClimateCraft
	Stainless Steel	UUT-05A/B, UUT-07	
Tube Material:	Copper	UUT-03, UUT-05A/B, UUT-07	
Tube Outer Diameter:	5/8"	UUT-03, UUT-05A/B, UUT-07	
Tube Wall Thickness:	0.020"	UUT-03, UUT-05A/B, UUT-07	
	0.035"	UUT-03, UUT-07	
	0.049"	UUT-05A/B	
Permitted Fin Material:	Aluminum	UUT-03, UUT-07	
	Copper	UUT-05A/B	
Permitted Fin Pitch:	4	UUT-05A/B	
	6	UUT-03, UUT-07	
	10	UUT-03	
	12	UUT-05A/B, UUT-07	
Permitted Tube Rows:	1	UUT-05A/B	
	2	UUT-03	
	Interpolated	Interpolated	
	10	UUT-07	
Permitted Coil Configurations	12	UUT-03, UUT-05A/B	
	Single	UUT-03, UUT-05A	
	Staggered	Interpolated	
	Side by Side <sup>1</sup>	UUT-05B	
Header Size:	Stacked <sup>2</sup>	UUT-07	
	0.75"	Extrapolated	
	Interpolated	UUT-05A/B	
	1.00"	Interpolated	
	Interpolated	UUT-03	
	1.25"	Interpolated	
	1.5"	UUT-07	
Interpolated	Interpolated		
4.00"	UUT-03, UUT-05A/B		

- 1) Side by side coil installation is approved by successful testing of coil stack in AHU cabinet with inlet and side walls removed
- 2) Certified for up to 3 high coil stack, with side by side installation included. Stacked coil installation is approved by successful testing of 3 high coil stack in AHU cabinet with inlet, outlet and side walls removed. Refer to detail drawings for required coil bracing design changes.

**Table 2c - AHU Coils (Steam)**

Fin Height [in.]	Fin Length [in.]					UUT	Manufacturer
	12	Interpolated			122		
12	12x12	X	X	X	X	UUT-08	RAE
	Interpolated	X	X	X	X	Interpolated	
	X	X	X	X	X		
	X	X	X	X	X		
48	X	X	X	X	48x122	UUT-08	

**Table 2d - Steam Coil Options**

		UUT	Manufacturer
Casing Material:	Stainless Steel	UUT-08	RAE
Tube Material:	Copper	UUT-08	
Tube Outer Diameter:	5/8"	UUT-08	
	1"	UUT-08	
Tube Wall Thickness:	0.035"	UUT-08	
Permitted Fin Material:	Aluminum	UUT-08	
Permitted Fin Pitch:	Extrapolated	Extrapolated	
	6	UUT-08	
	Interpolated	Interpolated	
Permitted Tube Rows:	12	UUT-08	
	Up to 2	UUT-08	
Permitted Coil Configurations	Single	UUT-08	
	Staggered	Interpolated	
	Side by Side <sup>1</sup>	UUT-08	
Header Size:	Stacked <sup>2</sup>	UUT-08	
	1.5"	UUT-08	
	2.5"	UUT-08	

- 1) Side by side coil installation is approved by successful testing of coil stack in AHU cabinet with inlet and side walls removed
- 2) Certified for up to 2 high coil stack, with side by side installation included. Stacked coil installation is approved by successful testing of 2 high coil stack in AHU cabinet with inlet, outlet and side walls removed. Refer to detail drawings for required coil bracing desing changes.

**Table 3A - Fan Tower Assemblies**

Model Family	# of Fans	Max Weight [ lb ]	UUT	Manufacturer
MiniTower <sup>1</sup>	1	688	Interpolated	ClimateCraft
	2	1003	UUT-06	
	3	1314	Interpolated	
	4	1692	UUT-06	
Matrix Tower <sup>2</sup> (MTX)	1	1751	UUT-03	
	2	2400	Interpolated	
	3	3049	UUT-06, UUT-01	

- 1) MiniTower fan array certified for up to 4 fan high tower, as per tested unit configurations
- 2) Matrix Tower fan array certified for up to 3 fan high tower, as per tested unit configurations
- 3) MiniTowers and Matrix Towers are only one fan wide, and the towers are independently supported, as per tested configurations.
- 4) Fans are available with the following options (as included in test units): Accoustical Sound Baffles, Shaft Grounding Rings, Pressure measuring ports, Safety Screens, BalanceStreams™
- 5) Fans are horizontal shaft, direct drive, as tested

**Table 3B - Tower Fans**

Model Family	Diameter	Weight [ lb ]	Wheel Material	Housing Material	UUT	Fan Wheel Manufacturer	Tower Manufacturer
MiniTower	10"	8.66	Aluminum	Aluminum	UUT-06	Comerfri	ClimateCraft
	11"	9.82			Interpolated		
	12"	12.94					
	14"	15.59					
	16"	19.41	UUT-06				
Matrix Tower (MTX)	12"	20.4	Aluminum	Carbon Steel	Interpolated	Greenheck Fan Corp.	
	15"	22.8			UUT-03		
	16"	25.7			Interpolated		
	18"	28.9					
	20"	33.4					
	22"	52			UUT-06		
	24"	66.5			UUT-06		
	27"	74.6			UUT-01,-06		

**Table 3C - Tower Fan Motors**

HP	Voltage	Weight [ lb ]	Housing Material	UUT	Manufacturer
3	208/230/460	72	Carbon Steel	UUT-06	Nidec
5		120		Interpolated	
7.5		160		Interpolated	
10		170		UUT-06	
15		300		Interpolated	
20		340		Interpolated	
25		380		Interpolated	
30		492		UUT-06	
1	208/230/460	43	Carbon Steel	Interpolated	Baldor
2		52		Interpolated	
3		69		UUT-03	
5		95		Interpolated	
7.5		146		Interpolated	
10		158		UUT-06	
15		217		UUT-06	
20		286		Interpolated	
25		417		Interpolated	
30		380		UUT-01	

**Table 3D - BalanceStream™**

Wheel Size	Weight [lb]	UUT	Manufacturer
18" Diameter	35	Interpolated	ClimateCraft
20" Diameter	40		
22" Diameter	47	UUT-06	
24" Diameter	54		
27" Diameter	63		

**Table 4A - Plenum Fans**

Model Family	Diameter	Weight [ lb ]	Wheel Material	Housing Material	UUT	Manufacturer
QEP	18"	140	Aluminun	Carbon Steel	UUT-05	Greenheck Fan Corp.
	20"	170			Interpolated	
	22"	220				
	24"	270				
	27"	300				
	30"	410				
	33"	480				
	36"	530				
	40"	620				
	44"	770				
	49"	980				
	54"	1300			UUT-04	

- 1) Fans are horizontal shaft, belt drive, as tested
- 2) Fans are available with the following options (as tested): Spring Isolation of Fan Base, Safety Screens, Belt Guards, Airflow Measuring Ports

**Table 4B - Plenum Fan Motors**

HP	Voltage	Weight [lb]	Housing Material	UUT	Manufacturer
3	208/230/460	36	Carbon Steel	UUT-05	Baldor
10		123		Interpolated	
15		217			
20		237			
30		372			
40		441			
50		472			
60		698			
75		808			
100		898		UUT-04	

**Table 5 - VFDs**

Model	Dimensions [in.]			Weight [lb]	Frame Size	Controlled HP Range	Controlled Voltage Range	UUT	Manufacturer	
	Height	Width	Depth							
ACH580	14.69	4.92	8.78	10.1	01-1-R1	1--7.5	208/230/460	UUT-06	ABB	
ACH580-PCR	18.62	4.92	9.02	14.6	01-1-R2	10--15		Interpolated		
ACH580-PDR	19.29	7.99	9.02	26	01-1-R3	20-30		UUT-06		
	25.04	7.99	10.12	41.9	01-1-R4	40-60		Interpolated		
ACH550-UH/01	29.9	10.5"	11.2"	60		75		UUT-03		
ACH550-UH/01	93.6	31.7	25.9	190		150		Interpolated		
ACH550-PCR/PDR	93.6	31.7	25.9	1041		150				
ACH550-BCR/BDR	93.6	31.7	25.9	1041		150		UUT-04		
H300	15	3.3	7.9	10	3	1.5-7.5		UUT-06		Nidec
	15.4	4.9	7.9	14	4	10--15		Interpolated		
	15.4	5.6	7.9	16.3	5	20				
	15.4	8.3	8.9	31	6	25--40	UUT-06			

**Table 6 - Flush Mounted Electrical Enclosure (VFD or Control Panel)**

Height [in.]	Width [in.]	Width [in.]									UUT	Material	Manufacturer
		24	30	36	42	48	54	60	66	72			
24	X	X	X	X	X	X	X	X	X	X	UUT-05	Stainless Steel	ClimateCraft
	X	X	X	X	X	X	X	X	X	X	Interpolated		
	X	X	X	X	X	X	X	X	X	X	UUT-03		
	X	X	X	X	X	X	X	X	X	X	Interpolated		
	X	X	X	X	X	X	X	X	X	X	UUT-01		
	X	X	X	X	X	X	X	X	X	X	Interpolated		
	X	X	X	X	X	X	X	X	X	X			
	X	X	X	X	X	X	X	X	X	X	UUT-06		
	X	X	X	X	X	X	X	X	X	X	Interpolated		
	X	X	X	X	X	X	X	X	X	X	UUT-04		

**Table 7A - Electrical Control Panel Components - Main Distribution Blocks**

Model	Rating [Amps]	Weight [lb]	UUT	Manufacturer
16321-3	175	2	UUT-01,-05	Cooper Bussman
16323-3	310	2	UUT-06	
16330-3	380	2	UUT-01	

**Table 7B - Electrical Control Panel Components - Fuse Blocks**

Model	Description	Rating [Amps]	Weight [lb]	UUT	Manufacturer
T60030-3CR	Cube Fuse	10/15	0.5	Interpolated	Cooper Bussman
T60030-3CR		20	0.5		
T60030-3CR		30	0.5		
T60200-3CR		200	2		
T60060-3CR		50	0.5	UUT-01	
T60100-3CR		100	1		
T60200-3CR		150	2		
T60200-3CR		175	2		
TCFH30	Cube Fuse Holder	30	0.5	UUT-01,-06	Cooper Bussman
TCFH60		60	0.5		
TCFH100		100	0.5		

**Table 7C - Electrical Control Panel Components - Disconnect Switches**

Model	Rating [Amps]	Weight [lb]	UUT	Manufacturer
CDFN30	30	0.79	UUT-01,-05	Cooper Bussman
CDFN60	60	0.79	Interpolated	
CDFN100	100	0.79		
BDNF200A	200	6.61		
BDNF400A	400	6.61	UUT-01	

**Table 7D - Electrical Control Panel Components - Transformer**

Model	Rating [kVA]	Weight [lb]	UUT	Manufacturer
9070T250D19	0.25	7.1	UUT-01,-05	Square D
9070T1000D51	1.00	34	Interpolated	
9070T1500D50	1.50	47		
9070T2000D50	2.00	60		
9070T3000D50	3.00	89	UUT-01	

**Table 7E - Electrical Control Panel Components - Motor Starters**

Model	Rating [Amps]	Weight [lb]	UUT	Manufacturer
8536SDO1-V02-H20	30	7.75	UUT-01,-05	Square D
8536SDO1-V02-H20	40	7.75	Interpolated	
8536SEO1-V02-H20	50	15		
8536SEO1-V02-H20	60	15	UUT-01	
8536SEO1-V02-H20	75	15	Interpolated	
8536SEO1-V02-H20	90	15	UUT-01	
8536SF01-V02-H20	120	22		

**Table 8 - Power Distribution Panel Components**

Matrix Power Distribution Panel and Components		Smallest	Largest	Manufacturer	UUT
	Std. Encl.	36"H x 24"W x 10"D		Climatecraft	UUT-01
	MMP	1.6-2.5A	45-63A	General Electric (GE)	UUT-01
	Cube Fuse	10A	100A	Cooper Bussman	UUT-01
	Fuse Holder	30A	100A	Cooper Bussman	UUT-01
	Terminal Block	335A	335A	Marathon	UUT-01

Note: Power Distribution Panel components can also be mounted within ClimateCraft's Standard Panel Enclosures, as tested

**Table 9A - Dampers**

Height [in.]		Width [in.] (Single Bank)				Max Weight [lb]	UUT	Manufacturer
		6	12	Interpolated	60			Model
		Ruskin CD60/CD50 & SD60/50	6	X	X			X
12	X		X	X	X	25	UUT-05	
18	X		X	X	X	Interpolated	Interpolated	
Interpolated	X		X	X	X			
48	X		X	X	X	140	UUT-04	
Interpolated	X		X	X	X	Interpolated	Interpolated	
60	X		X	X	X			
66	X		X	X	X			
72	X	X	X	X	210	UUT-01		

**Table 9B - Damper Actuators**

Manufacturer	Model	Torque	Voltage	Material	Weight [lb]	UUT
Belimo	AF24-S	133 in-lb	24V	Steel	4.9	UUT-01
Belimo	FSAF24	133 in-lb	24/120V	Steel	4.9	UUT-04

**Table 10A - Humidifier Grids**

Model	Insersion Length	Weight [lb]	Model	UUT	Manufacturer
IP03-10-108"-5	108"	65.5	Intsy-Pac	UUT-03	Pure Humidifier

**Table 10B - Humidifier Grids**

Height [in.]		Width [in.]				Weight [lb]	Model	UUT	Manufacturer	
		12	Interp.	39	Interp.					123
		Dri-Steem	12	X	X					X
Interp.	X		X	X	X					
43.25	X		X	X	X	58	UUT-08			
Interp.	X		X	X	X	Interpolated	Interpolated			
123	X		X	X	X			264	UUT-08	

**Table 11 - Air Blenders**

Height [in.]		Width [in.]				Weight	Model	UUT	Manufacturer	
		8	Interp.	12	Interp.					36
		Blender Products	8	X	X					X
Interp.	X		X	X	X					
12	X		X	X	X	UUT-05				
Interp.	X		X	X	X	Interpolated				
36	X		X	X	X		UUT-05			

**Table 12 - Sound Attenuators**

Height [in.]		Width [in.]				Model	UUT	Manufacturer	
		6	Interp.	24	Interp.				36
		Commercial Acoustics	12	X	X				X
Interp.	X		X	X	X				
24	X		X	X	X	UUT-05			
Interp.	X		x	X	X	Interpolated			
48	X		X	X	X		UUT-05		

Note: Multiple sound attenuators banks may be combined and stacked when larger size is needed



**Table 13 - Filters**

AAF Model	Description	Height [in.]	Width [in.]	Depth [in.]	Weight [lb]	UUT	Manufacturer	
172-112-863	Pleated Filter Class II	24	24	2	1.50	UUT5	AAF	
172-112-319	Pleated Filter Class II	24	12	2	0.83			
179-480-863	Pleated Filter Class II	24	24	4	2.50			
179-480-319	Pleated Filter Class II	24	12	4	1.50			
172-112-872	Pleated Filter Class II	20	24	2	1.30	Interpolated		
172-112-314	Pleated Filter Class II	20	12	2	0.75			
172-112-863	Pleated Filter Class II	24	24	2	1.50			
170-112-319	Pleated Filter Class II	24	12	2	0.83			
172-112-782	Pleated Filter Class II	20	24	2	1.30			
172-112-314	Pleated Filter Class II	20	12	2	0.75			
147-002-863	Pleated Filter Class I	24	24	2	1.83			
147-002-319	Pleated Filter Class I	24	12	2	1.00			
147-004-863	Pleated Filter Class I	24	24	4	3.00			
147-004-319	Pleated Filter Class I	24	12	4	1.70			
147-002-782	Pleated Filter Class I	20	24	2	1.30			
147-20-11E19E-1	Pleated Filter Class I	20	12	2	0.75			
3101951-608	Mini-Pleat Filter CL2 w/ Header	24	24	4	8.5			UUT5
3101951-808	Mini-Pleat Filter CL2 w/ Header	24	24	4	8.5			Interpolated
3101951-908	Mini-Pleat Filter CL2 w/ Header	24	24	4	8.5			
3101951-601	Mini-Pleat Filter CL2 w/ Header	24	12	4	5.5			
3101951-801	Mini-Pleat Filter CL2 w/ Header	24	12	4	5.5			
3101951-901	Mini-Pleat Filter CL2 w/ Header	24	12	4	5.5			
333-039-001	Filter 12" Depth ,V-Bank, CL II	24	24	12	19.0			
333-021-001	Filter 12" Depth ,V-Bank, CL II	24	24	12	19.0			
333-013-001	Filter 12" Depth ,V-Bank, CL II	24	24	12	19.0			
333-039-003	Filter 12" Depth ,V-Bank, CL II	24	12	12	12.0			
333-021-003	Filter 12" Depth ,V-Bank, CL II	24	12	12	12.0			
333-013-003	Filter 12" Depth ,V-Bank, CL II	24	12	12	12.0			
QSOSB	Filter, 6" Rigid, Class II	24	24	6	11.0			
QSOSB	Filter, 6" Rigid, Class II	24	24	6	11.0			
QSOSB	Filter, 6" Rigid, Class II	24	24	6	11.0			
QSOSB	Filter, 6" Rigid, Class II	24	12	6	6.0			
QSOSB	Filter, 6" Rigid, Class II	24	12	6	6.0			
QSOSB	Filter, 6" Rigid, Class II	24	12	6	6.0			
3011079-009	Filter, 12" Rigid, Class II	24	24	12	20.0	UUT5		
3011079-005	Filter, 12" Rigid, Class II	24	24	12	20.0	Interpolated		
3011079-001	Filter, 12" Rigid, Class II	24	24	12	20.0			
3011079-012	Filter, 12" Rigid, Class II	24	12	12	12.0	UUT5		
3011079-008	Filter, 12" Rigid, Class II	24	12	12	12.0	Interpolated		
3011079-004	Filter, 12" Rigid, Class II	24	12	12	12.0			
331-953-147	Filter, 6" Rigid, Class I	24	24	6	11.0			
331-765-147	Filter, 6" Rigid, Class I	24	24	6	11.0			
331-946-147	Filter, 6" Rigid, Class I	24	24	6	11.0			
331-953-149	Filter, 6" Rigid, Class I	24	12	6	8.0			
331-765-149	Filter, 6" Rigid, Class I	24	12	6	8.0			
331-946-149	Filter, 6" Rigid, Class I	24	12	6	8.0			
331-953-148	Filter, 12" Rigid, Class I	24	24	12	18.0			
331-765-148	Filter, 12" Rigid, Class I	24	24	12	18.0			
331-946-148	Filter, 12" Rigid, Class I	24	24	12	18.0			
331-953-150	Filter, 12" Rigid, Class I	24	12	12	9.0			
331-765-150	Filter, 12" Rigid, Class I	24	12	12	9.0			
331-946-150	Filter, 12" Rigid, Class I	24	12	12	9.0			
706-116-150	Filter, 15" Bag, Class II	24	24	15	6.5	UUT5		
708-116-150	Filter, 15" Bag, Class II	24	24	15	6.5	Interpolated		
709-116-150	Filter, 15" Bag, Class II	24	24	15	6.5			
706-123-150	Filter, 15" Bag, Class II	24	12	15	3.5	UUT5		
708-123-150	Filter, 15" Bag, Class II	24	12	15	3.5	Extrapolated		
709-123-150	Filter, 15" Bag, Class II	24	12	15	3.5			

**Table 14 - Louvers**

		Width [in.]					Weight	Model	UUT	Manufacturer
		12	Interpolated			30				
Height [in.]	12	X	X	X	X	X	5 lb/ft	EME3625 (vertical)	Interpolated	Ruskin
	Interp.	X	X	X	X	X				
	60	X	X	X	X	X			UUT-04	
		Width [in.]					Weight	Model	UUT	Manufacturer
		12	Interp.	18	Interp.	84				
Height [in.]	12	X	X	X	X	X	4 lb/ft	ELF 837 (Stationary)	Interpolated	Ruskin
	Interp.	X	X	X	X	X				
	18	X	X	X	X	X			UUT-05	
	Interp.	X	X	X	X	X			Interpolated	
	48	X	X	X	X	X			UUT-05	

**Table 15 - Exterior Hoods**

		Width [in.]					Weight [lb/sq ft]	UUT	Manufacturer
		6	Interp.	54	Interp.	84			
Height [in.]	6	X	X	X	X	X	1.469	Interpolated	ClimateCraft
	Interp.	X	X	X	X	X			
	24	X	X	X	X	X		UUT-05	
	Interp.	X	X	X	X	X		Interpolated	
	48	X	X	X	X	X		UUT-04	

Note:

Exterior hood banks may be combined and stacked when larger size is needed up to 2 stacks. 2 stacked (24x84) exterior hoods were tested on UUT5

**Table 16 - UV Lamp Grid**

Model	Rating	Weight [lb]	UUT	Manufacturer
RLM	40	1.5	UUT-05	UV Resources
RLM	25	1	UUT-05	

**Table 17 - Interior Lights Fixture**

Model	Rating	Weight [lb]	UUT	Manufacturer
TP7600	100W	3.26	UUT4	Thepitt

**Table 18 - Bellmouth Transition**

		Width [in.]			Weight [lb]	UUT	Manufacturer
		18	24	30			
Length [in.]	18	X	X	X	53	UUT-05	ClimateCraft
	24	X	X	X	72	Interpolated	
	30	X	X	X	96		
	36	X	X	X	129.6		
	42	X	X	X	156	UUT-05	
	48	X	X	X	157		

**Table 19 - Access Doors**

		Width [in.]			UUT	
		12	Interpolated	24		
Height [in.]	12	X	X	X	Interpolated	
	18	X	X	X		
	Interpolated	X	X	X	UUT-03	
		X	X	42x24		
		X	X	X		
	60	X	X	X	Interpolated	
		X	X	54x24		UUT-02
		X	X	X		
66	X	X	66x24	UUT-01,-04,-05		



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-1

Test Report: Q9021.0; #Q9021-01-01-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	#CAH132X96	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 20 Ga Galv. CS Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Inlet Wall Removed.

### Options / Subcomponent Summary

Fan Motors: Baldor ; Fan Matrix: ClimateCraft ; Electrical Enclosure: ClimateCraft ; Power Distribution Panel: ClimateCraft ; Actuators: Belimo ; Doors: ClimateCraft

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
6,700	82.00	99.00	141.00	3.9	3.9	N/A

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT attached directly to shake table using (6) 3/4" Grade 5 Bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-2

Test Report: Q9021.0; #Q9021-02-01-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	#CAH102X96	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 20 Ga Galv. CS Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Inlet and Outlet Wall Removed.

### Options / Subcomponent Summary

Hot Water Coils: RAE ; Chilled Water Coils: RAE ; Doors: ClimateCraft

### UUT Properties

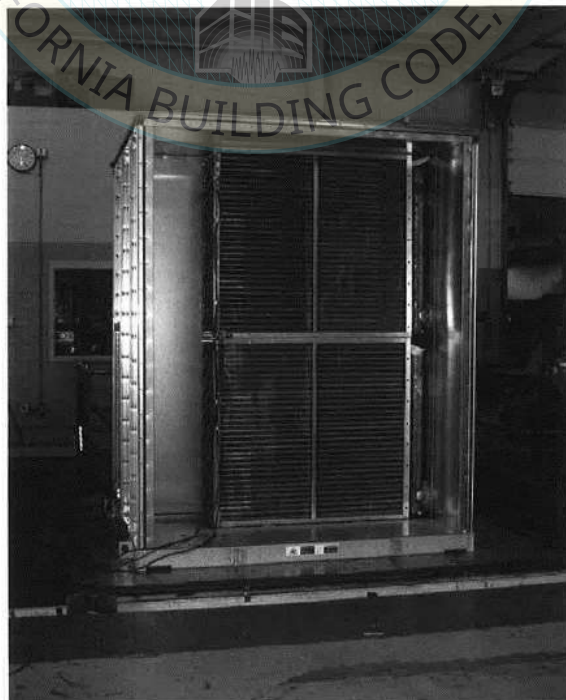
Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
3,700	78.00	81.00	111.00	5.7	9.2	N/A

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT attached directly to shake table using (4) 3/4" Grade 5 Bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-3

Test Report: Q0012.0; #Q0012-01-01-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	#CAH42X114	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 20 Ga Galv. CS Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Outlet Wall Removed.

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: ClimateCraft ; Electrical Enclosure: ClimateCraft ; Hot Water Coils: ClimateCraft ; Chilled Water Coils: ClimateCraft ; Dampers: Ruskin ; Doors: ClimateCraft ; Humidifiers: Pure Humidifier ; VFD: ABB ;

### UUT Properties

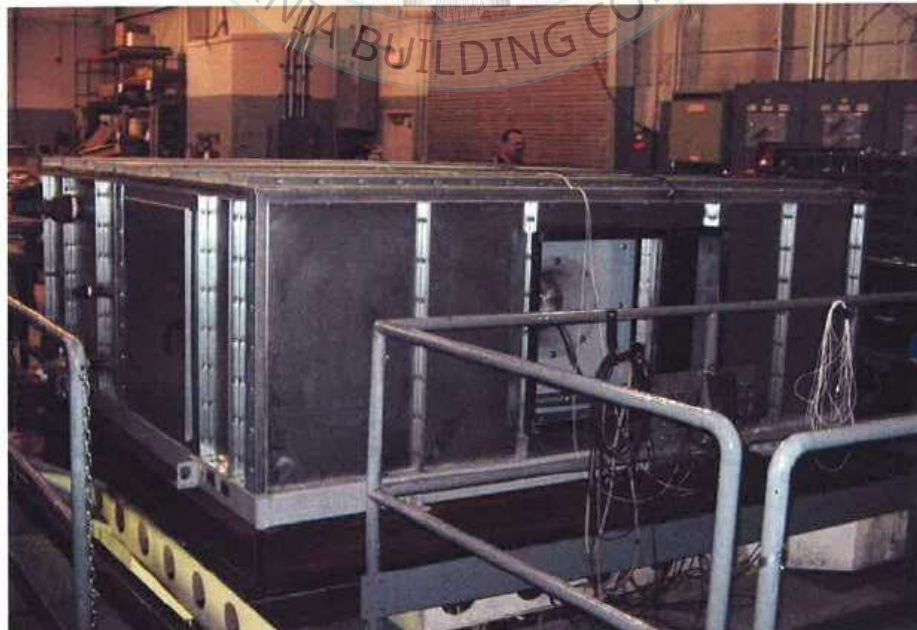
Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
6,000	118.00	117.00	51.00	6.4	5.0	3.4

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT attached to shake table adapting frame using (4) 3/4" Grade 5 Bolts. Adapting frame mounted directly to shake table.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-4A**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH138X138E-S	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 22 Ga Perforated CS/20 Ga Glav. CS Inner Wall; 4" Fiberglass Insulation; 24" Maximum Panel Width; No Walls Removed; 205" Stacked Height; 147" Non-Stacked Height.

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood : ClimateCraft ; Actuators: Belimo ; Doors: ClimateCraft ; Sound Attenuator: Commercial Acoustics ; VFD: ABB

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
16,800	143.25	141.00	204.50	3.8	3.5	5.4

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

Unit mounted to adapting frame using (8) 3/4" Grade 8 Bolts. Adapting frame mounted directly to shake table pedestal fixture. Shake table pedestal fixture mounted directly to shake table concrete slab using 1" prestressed rods.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-4B**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH138X138E-S	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 22 Ga Perforated CS/20 Ga Glav. CS Inner Wall; 4" Fiberglass Insulation; 24" Maximum Panel Width; Inlet and Outlet Walls Removed; Removed Inlet Replaced with Plenum Fan Wall (Airseal Brace Component); Removed Outlet Replaced with Sound Attenuator Wall (Airseal Brace Component).

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood : ClimateCraft ; Actuators: Belimo ; Doors: ClimateCraft ; Sound Attenuator: Commercial Acoustics ; VFD: ABB

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
10,900	143.25	141.00	147.00	3.5	2.8	6.4

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

Unit mounted to adapting frame using (8) 3/4" Grade 8 Bolts. Adapting frame mounted directly to shake table pedestal fixture. Shake table pedestal fixture mounted directly to shake table concrete slab using 1" prestressed rods.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-4C**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH138X138E-S	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 22 Ga Perforated CS/20 Ga Glav. CS Inner Wall; 4" Fiberglass Insulation; 24" Maximum Panel Width; Inlet, Outlet and Side Wall Removed; Removed Side Wall Replaced with 5/16" cable X-Bracing; Removed Inlet Replaced with Plenum Fan Wall (Airseal Brace Component); Removed Outlet Replaced with Sound Attenuator Wall (Airseal Brace Component).

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood : ClimateCraft ; Actuators: Belimo ; Doors: ClimateCraft ; Sound Attenuator: Commercial Acoustics ; VFD: ABB

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
10,500	143.25	141.00	147.00	4.3	2.8	5.4

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

Unit mounted to adapting frame using (8) 3/4" Grade 8 Bolts. Adapting frame mounted directly to shake table pedestal fixture. Shake table pedestal fixture mounted directly to shake table concrete slab using 1" prestressed rods.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.





# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-4D**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH138X138E-S	ClimateCraft, Inc.

### Product Construction Summary

5" CS Base Frame; 16 Ga Galv. CS Outer Wall; 22 Ga Perforated CS/20 Ga Glav. CS Inner Wall; 4" Fiberglass Insulation; 24" Maximum Panel Width; All Walls Removed; Removed Side Walls Replaced with 5/16" cable X-Bracing; Removed Inlet Replaced with Plenum Fan Wall (Airseal Brace Component); Removed Outlet Replaced with Sound Attenuator Wall (Airseal Brace Component).

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood : ClimateCraft ; Actuators: Belimo ; Doors: ClimateCraft ; Sound Attenuator: Commercial Acoustics ; VFD: ABB

### UUT Properties

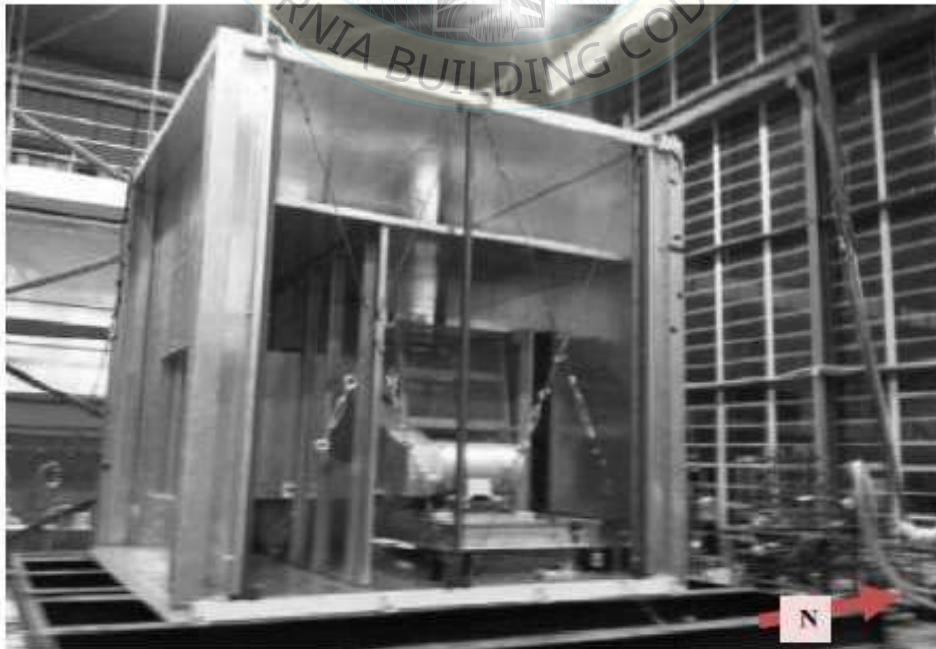
Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
9,200	143.25	141.00	147.00	3.4	2.7	6.5

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

Unit mounted to adapting frame using (8) 3/4" Grade 8 Bolts. Adapting frame mounted directly to shake table pedestal fixture. Shake table pedestal fixture mounted directly to shake table concrete slab using 1" prestressed rods.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-5A**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH90X96E-S	ClimateCraft, Inc.

### Product Construction Summary

8" SS Base Frame; 16 Ga SS Outer Wall; 20 Ga SS, 22 Ga Perforated SS Inner Wall; 2" Foam Insulation; 24" Maximum Panel Width; No Walls Removed

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Hot Water Coils: ClimateCraft ; Chilled Water Coils: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood: ClimateCraft ; Doors: ClimateCraft ; UV Lamp: UV Resources ; Air Blenders: Blender Products ; Bellmouth: ClimateCraft ; Filters (Rigid, Bag, Mini-Pleat, Carbon): AAF/Camfill Farr

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
4,900	97.25	99.00	98.50	4.9	6.8	6.5

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT attached directly to adapting frame using (6) 3/4" Grade 8 Bolts. Adapting frame attached directly to shake table fixture. Shake table fixture attached directly to shake table.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

**UUT-5B**

Test Report: PEER STI 2012-01

Model Line	Model Number	Manufacturer
CAH Air Handling Units	CAH90X96E-S	ClimateCraft, Inc.

### Product Construction Summary

8" SS Base Frame; 16 Ga SS Outer Wall; 20 Ga SS, 22 Ga Perforated SS Inner Wall; 2" Foam Insulation; 24" Maximum Panel Width; Inlet and Side Wall Removed; Removed Side Wall Replaced with 5/16" cable X-Bracing; Removed Inlet Replaced with Water Coil Rack (Airseal Brace Component).

### Options / Subcomponent Summary

Fan Motor: Baldor ; Fan Wheel: Greenheck Fan Corp. ; Electrical Enclosure: ClimateCraft ; Hot Water Coils: ClimateCraft ; Chilled Water Coils: ClimateCraft ; Dampers: Ruskin ; Louvers: Ruskin ; Rainhood: ClimateCraft ; Doors: ClimateCraft ; UV Lamp: UV Resources ; Air Blenders: Blender Products ; Bellmouth: ClimateCraft ; Filters (Rigid, Bag, Mini-Pleat, Carbon): AAF/Camfill Farr

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
4,500	97.25	99.00	98.50	2.7	2.3	6.9

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT attached directly to adapting frame using (6) 3/4" Grade 8 Bolts. Adapting frame attached directly to shake table fixture. Shake table fixture attached directly to shake table.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-6

Test Report: JID 20-00450

Model Line	Model Number	Manufacturer
Custom Air Handlers	CAH120x120	ClimateCraft

### Product Construction Summary

5" CS Base Frame; 16ga Galvanized Steel Outer Wall; 20ga Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Inlet, Outlet and Side Wall Removed. Inlet Wall Replaced with 5/16" cable X-bracing, Outlet Wall Replaced with a Filter Wall constructed of 16ga steel (Airseal Brace Component).

### Options / Subcomponent Summary

Fans: Comerfri; Fans: ClimateCraft; Motors: Baldor; Motors: Nidec; BlanceStream: ClimateCraft; VFDs: ABB; VFDs: Nidec  
Matrix Fan Wall considered as Airseal Brace Component within UUT

### UUT Properties

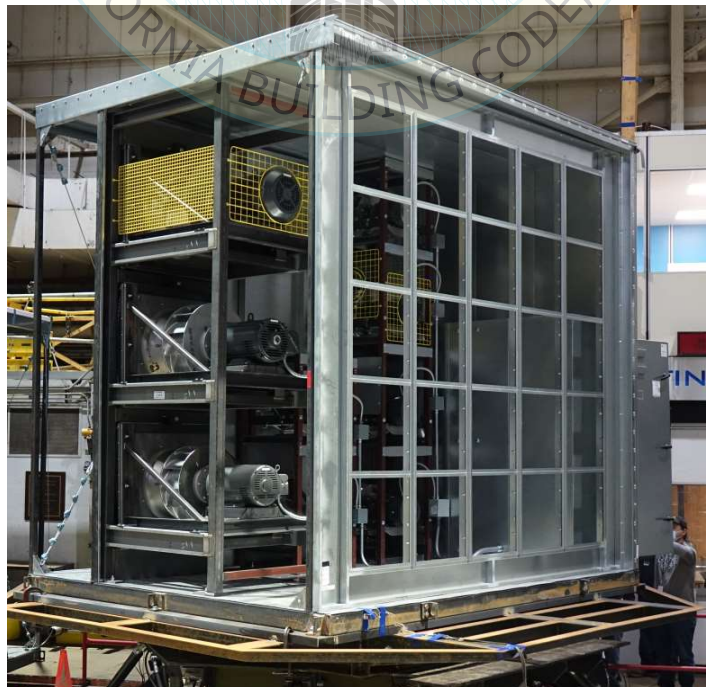
Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
9,194	120.00	146.00	151.00	3.2	7.8	13.4

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT-6 was rigidly mounted to the shake table using (6) 7/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-7

Test Report: JID 20-00450

Model Line	Model Number	Manufacturer
Custom Air Handlers	CAH120x120	ClimateCraft

### Product Construction Summary

5" CS Base Frame; 16ga Galvanized Steel Outer Wall; 20ga Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Inlet, Outlet and Side Wall Removed. Inlet and outlet wall replaced with 5/16" cable X-bracing.

### Options / Subcomponent Summary

Water Coils: ClimateCraft  
Water Coil Rack considered as Airseal Brace Component within UUT

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
8,819	120.00	146.00	151.00	3.2	3.4	11.2

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT-7 was rigidly mounted to the shake table using (6) 7/8" diameter Grade 8 bolts.  
DCRs: Two (2x) 1½" (16ga) box beams at the top center, front and back to secure the top of the coil; Two (2x) 12"L braces were added to the left side of the coils which helped tie the top and middle coil, and bottom to middle coil. Coil diagonally braced at open wall end with two 2"x3"x1/4" steel tubing.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.



# UNIT UNDER TEST (UUT) Summary Sheet

UUT-8

Test Report: JID 20-00450

Model Line	Model Number	Manufacturer
Custom Air Handlers	CAH120x120	ClimateCraft

### Product Construction Summary

5" CS Base Frame; 16ga Galvanized Steel Outer Wall; 20ga Inner Wall; 2" Fiberglass Insulation; 24" Maximum Wall Panel Width; Inlet, Outlet and Side Wall Removed. Inlet and outlet wall replaced with 5/16" cable X-bracing.

### Options / Subcomponent Summary

Steam Coils: RAE; Humidifiers: Dri-Steam  
 Steam Coil Rack considered as Airseal Brace Component within UUT

### UUT Properties

Weight [ lbs ]	Dimensions [ in ]			Lowest Nat. Freq. [ Hz ]		
	Length	Width	Height	F-B	S-S	V
4,828	120.00	146.00	151.00	3.2	4.9	12.9

### UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S <sub>DS</sub>	z/h	I <sub>p</sub>	A <sub>FLX-H</sub>	A <sub>RIG-H</sub>	A <sub>FLX-V</sub>	A <sub>RIG-V</sub>
CBC 2019	ICC-ES AC156	1.93	1.0	1.5	3.09	2.32	1.29	0.52
		-	-	-	-	-	-	-

### Test Mounting Details

UUT-8 was rigidly mounted to the shake table using (6) 7/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

PHONE (405) 415-9230 - FAX (405) 415-9231  
 518 North Indiana  
 OKLAHOMA CITY, OK 73106

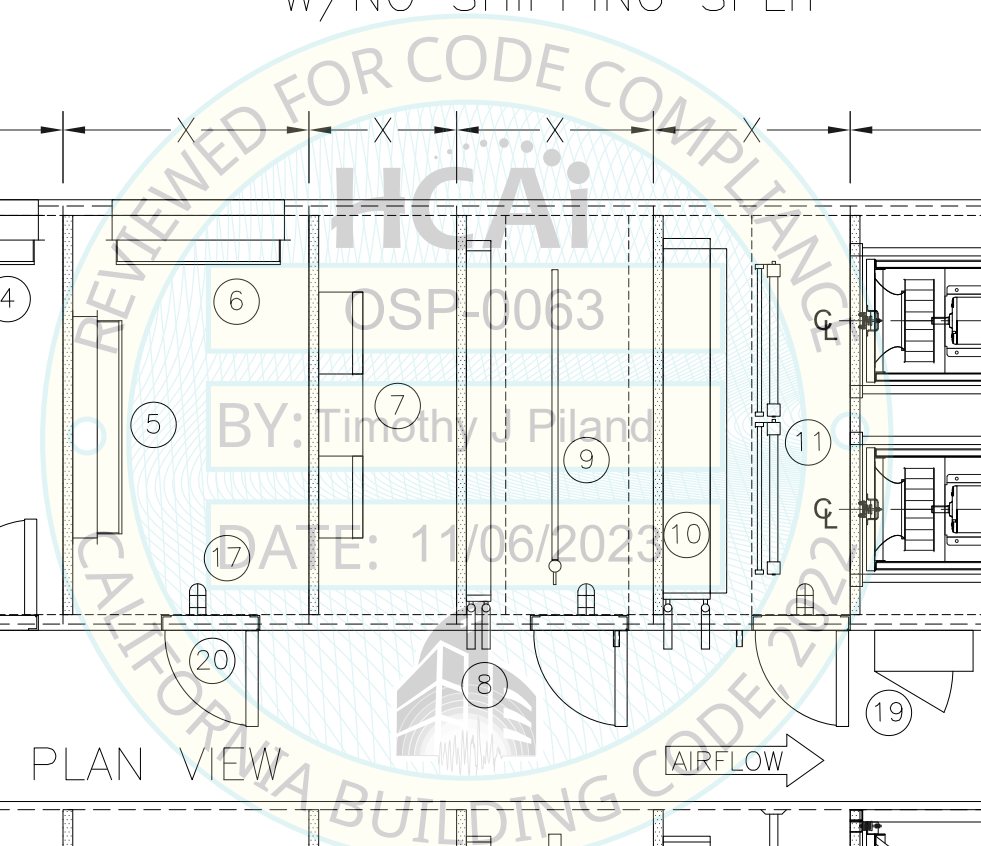
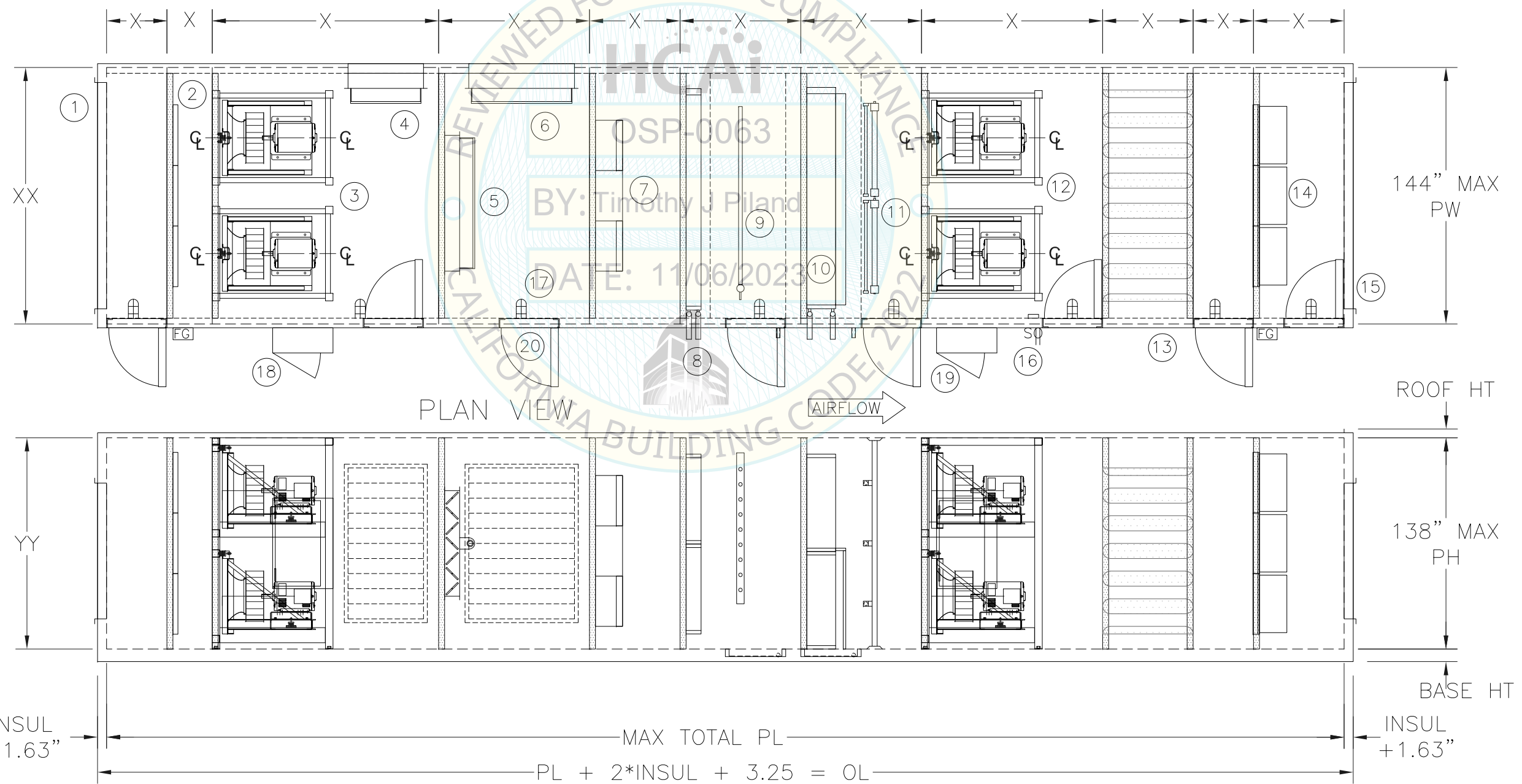


- 1. OPENING
- 2. FILTERS
- 3. MATRIX FANS
- 4. DAMPER
- 5. DAMPERS
- 6. DAMPER
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. MATRIX FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
  - 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

## SINGLE TUNNEL UNIT W/NO SHIPPING SPLIT



JOB	SINGLE TUNNEL UNIT WITH NO SPLITS	TAG	OSP-AHU-TYPE 1
SN	NA	Sheet	1
REV	5/2022	DATE	01/01/2012
BY	BSZ	MODEL NO.	CAHYXXE-S

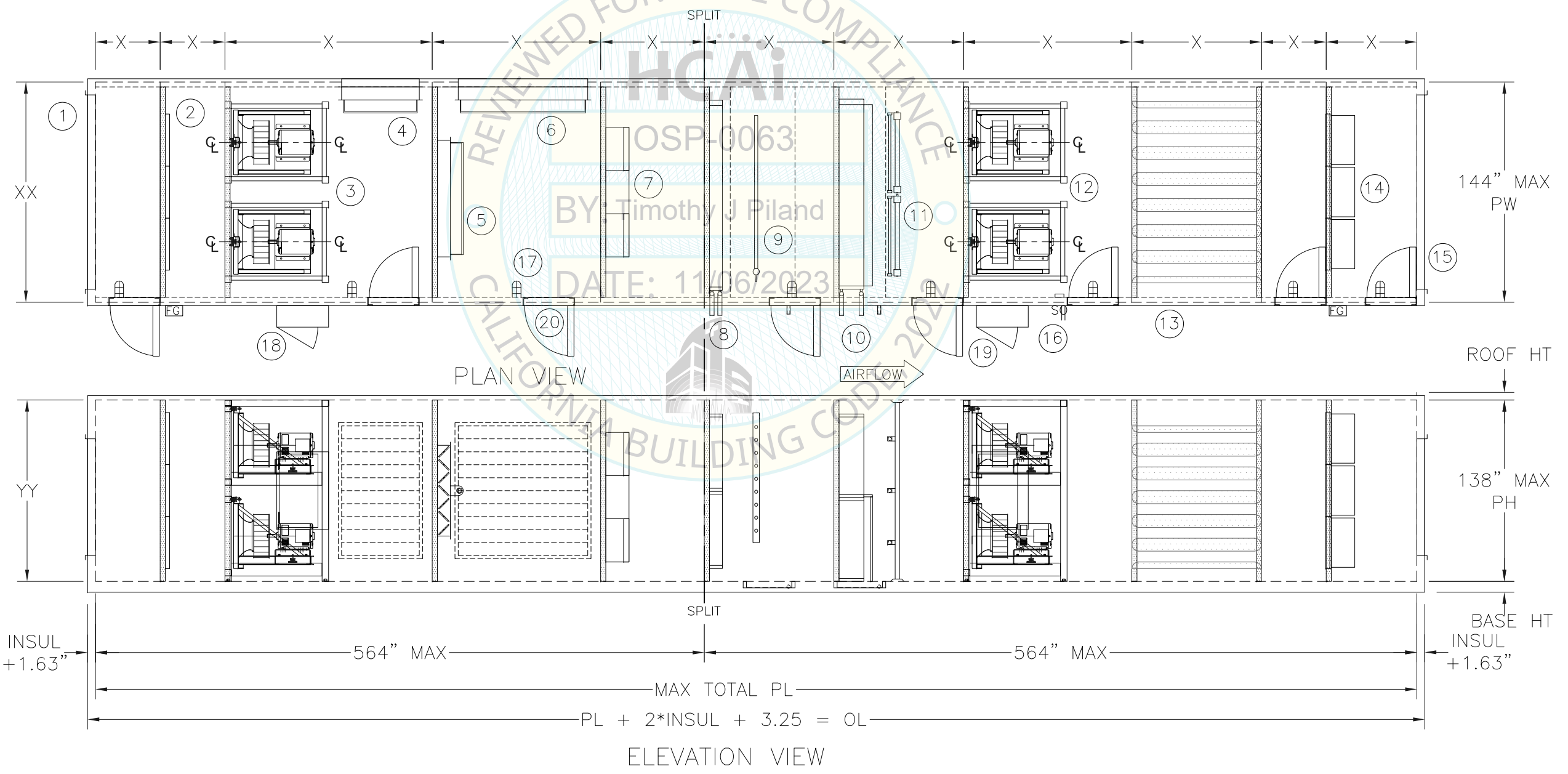
- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. MATRIX FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. MATRIX FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 2	2	01/01/2012	NA	CAHYXXXE-S	5/2022	BSZ

SINGLE TUNNEL UNIT  
W/SINGLE SHIPPING SPLIT





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 518 North Indiana  
 OKLAHOMA CITY, OK 73106



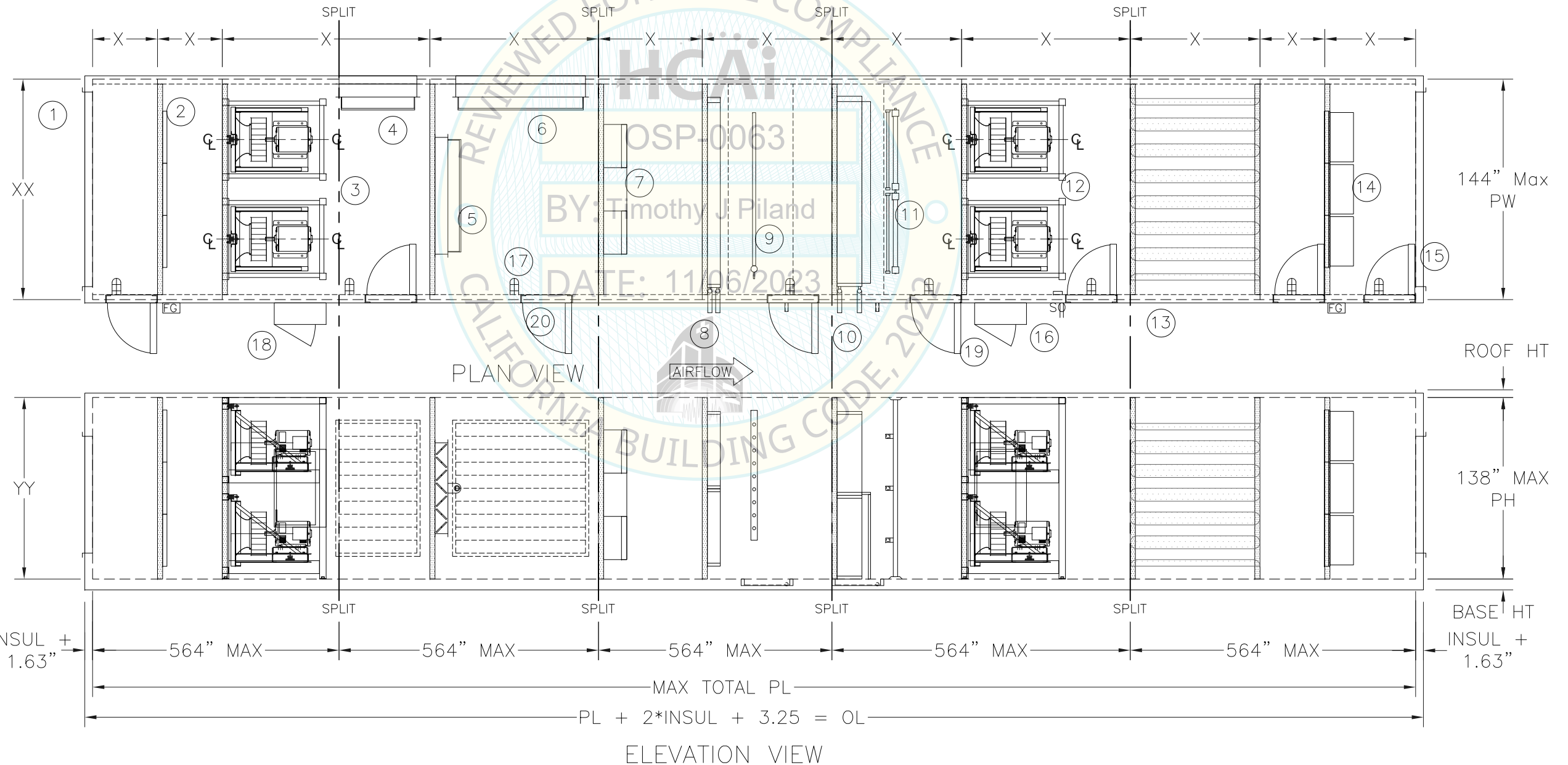
- 1. OPENING
- 2. FILTERS
- 3. MATRIX FANS
- 4. DAMPERS
- 5. DAMPERS
- 6. DAMPERS
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. MATRIX FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

NOTES:

- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
- 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
- 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
- 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
- 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
- 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
- 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
- 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
- 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
- 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

SINGLE TUNNEL UNIT  
 W/ SHIPPING SPLITS



JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 3	3	01/01/2012	NA	CAHYXXXE-S	5/2022	BSZ

PHONE (405) 415-9230 - FAX (405) 415-9231  
 518 North Indiana  
 OKLAHOMA CITY, OK 73106



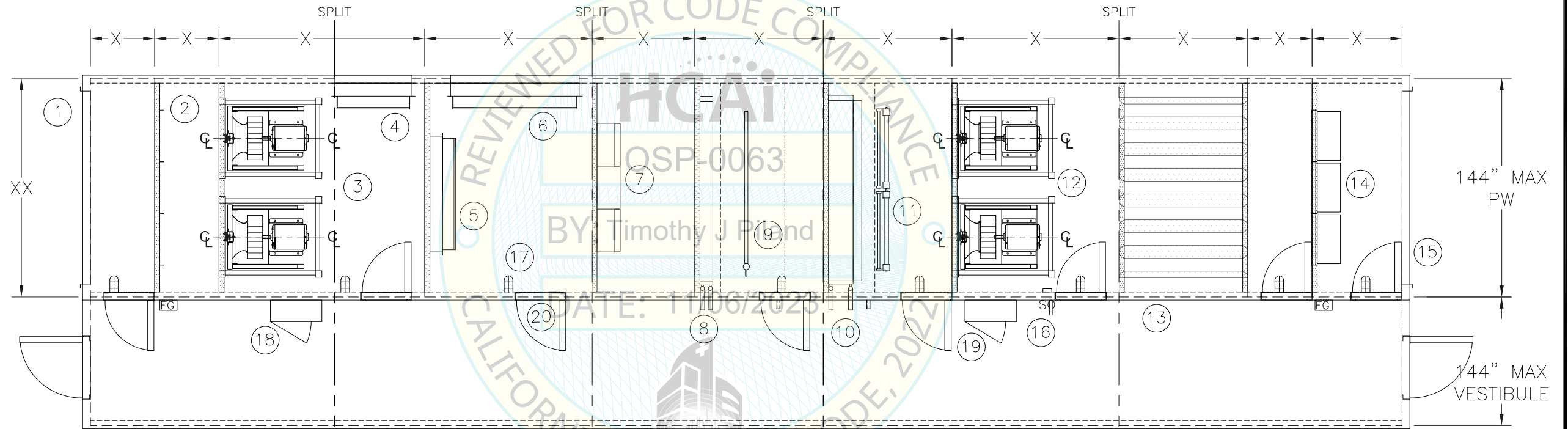
- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. MATRIX FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. MATRIX FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

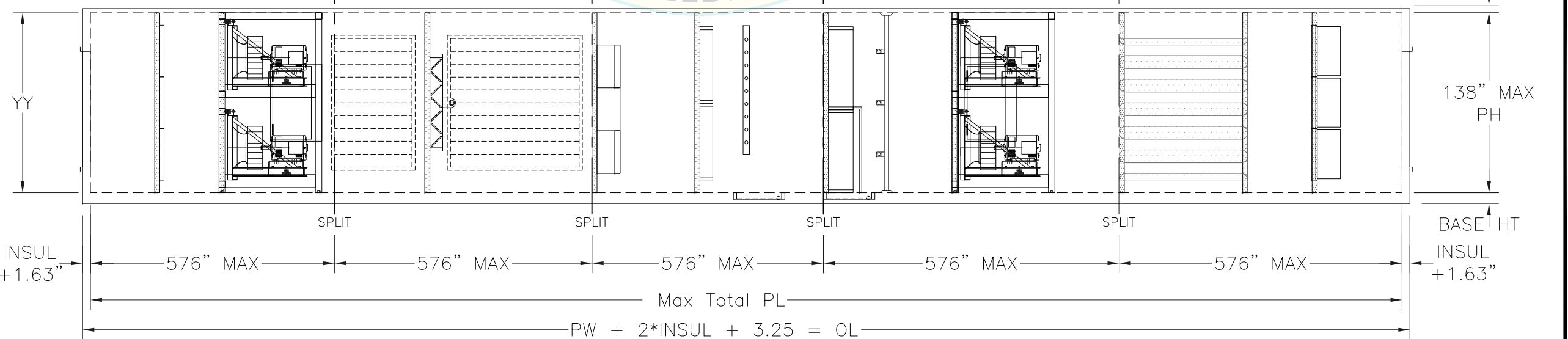
NOTES:

1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

SINGLE TUNNEL UNIT  
 W/VESTIBULE AND MULTIPLE SHIPPING SPLITS



PLAN VIEW



ELEVATION VIEW

JOB	SINGLE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS
TAG	OSP-AHU-TYPE 4
Sheet	4
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ

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 OKLAHOMA CITY, OK 73106  
 518 North Indiana

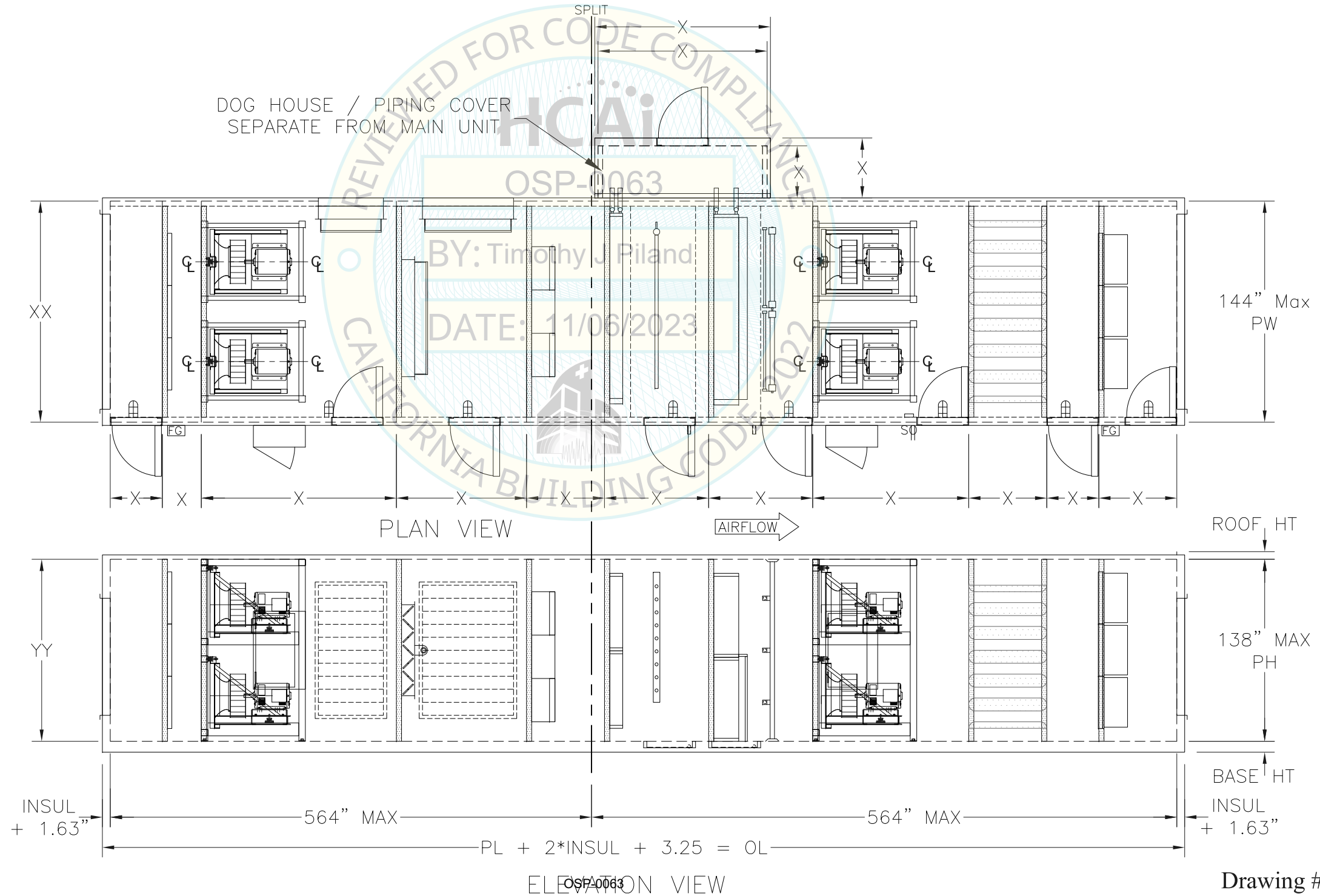


- 1. OPENING
- 2. FILTERS
- 3. MATRIX FANS
- 4. DAMPERS
- 5. DAMPERS
- 6. DAMPERS
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. MATRIX FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
  - 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

### SINGLE TUNNEL UNIT W/DOGHOUSE AND SHIPPING SPLIT(S)



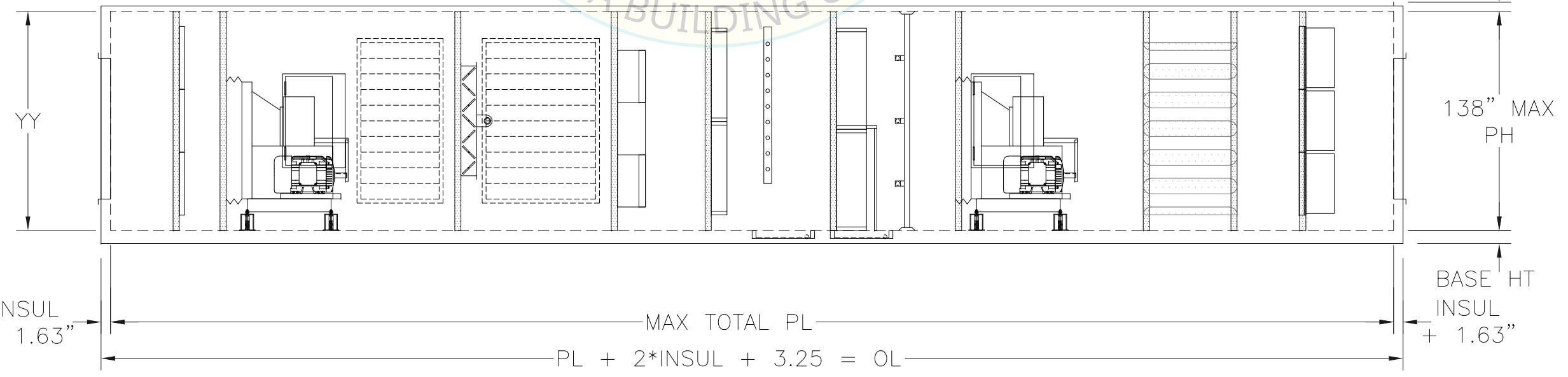
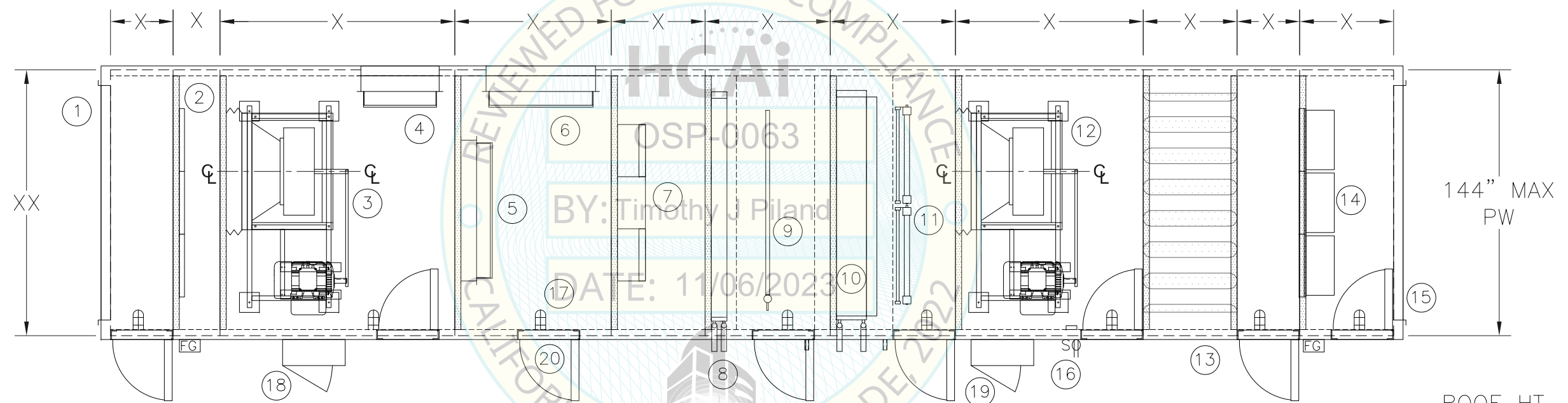
JOB	SINGLE TUNNEL UNIT WITH DOGHOUSE AND ONE SPLIT	TAG	OSP-AHU-TYPE 5
Sheet	5	DATE	01/01/2012
SN	NA	MODEL NO.	CAHYXXXE-S
REV	6/2023	BY	HB
REV	G		

- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. PLENUM FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. PLENUM FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

## SINGLE TUNNEL UNIT W/NO SHIPPING SPLIT



ELEVATION VIEW

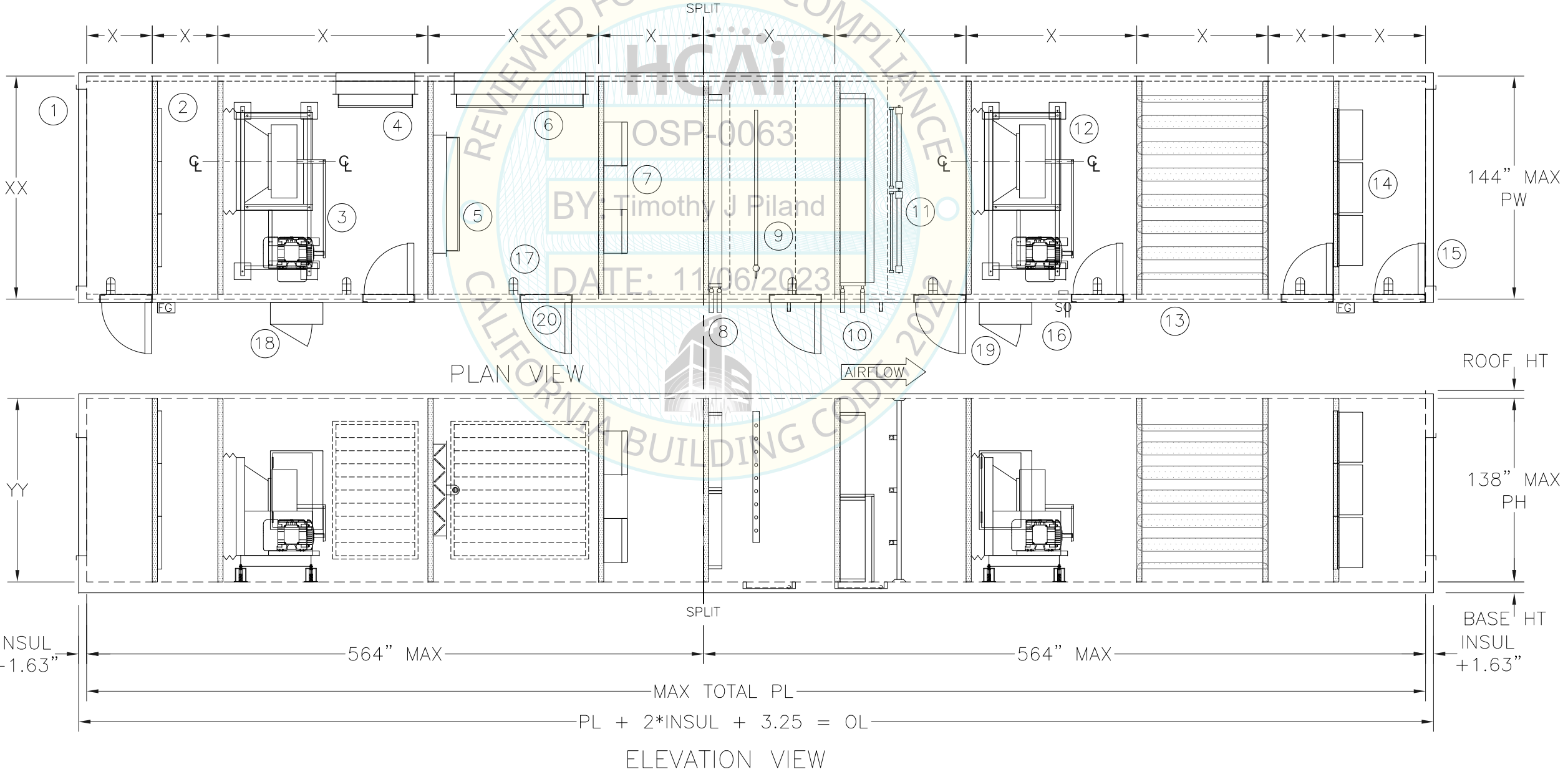
JOB	SINGLE TUNNEL UNIT WITH NO SPLITS	TAG	OSP-AHU-TYPE 6
Sheet	6	DATE	01/01/2012
MODEL NO.	CAHYXXE-S	REV	5/2022
BY	BSZ		

- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. PLENUM FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. PLENUM FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

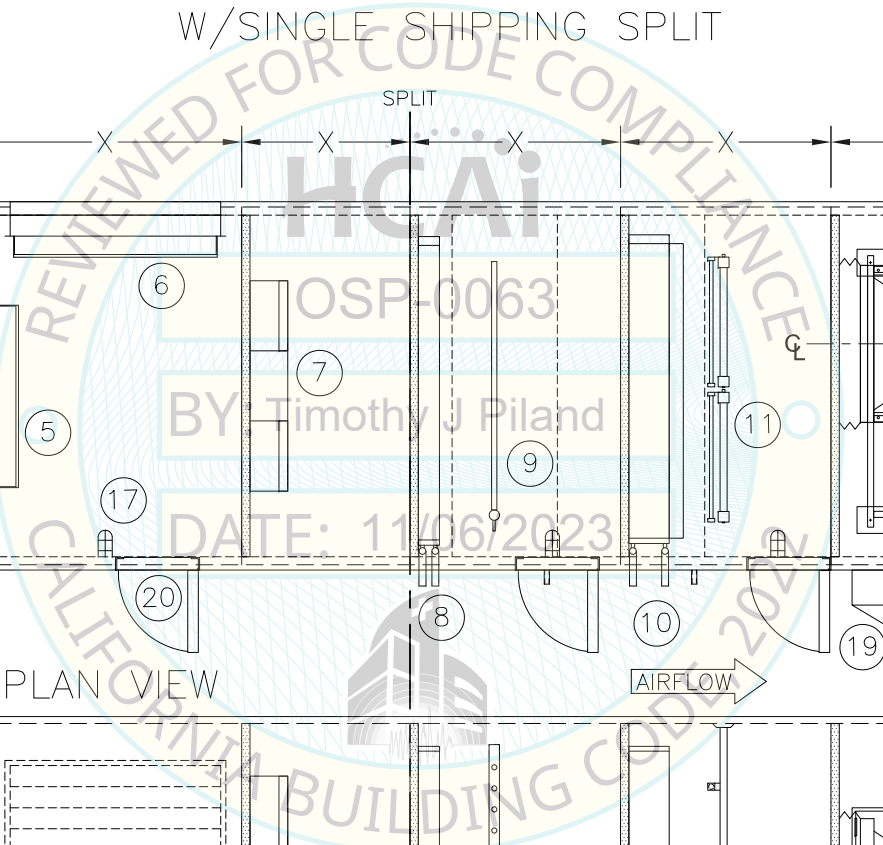
- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

SINGLE TUNNEL UNIT  
 W/SINGLE SHIPPING SPLIT



JOB	OSD-AHU-TYPE 7	DATE	01/01/2012	MODEL NO.	CAHYXXXE-S
TAG	OSD-AHU-TYPE 7	SN		REV	5/2022
Sheet	7	NA		BY	BSZ

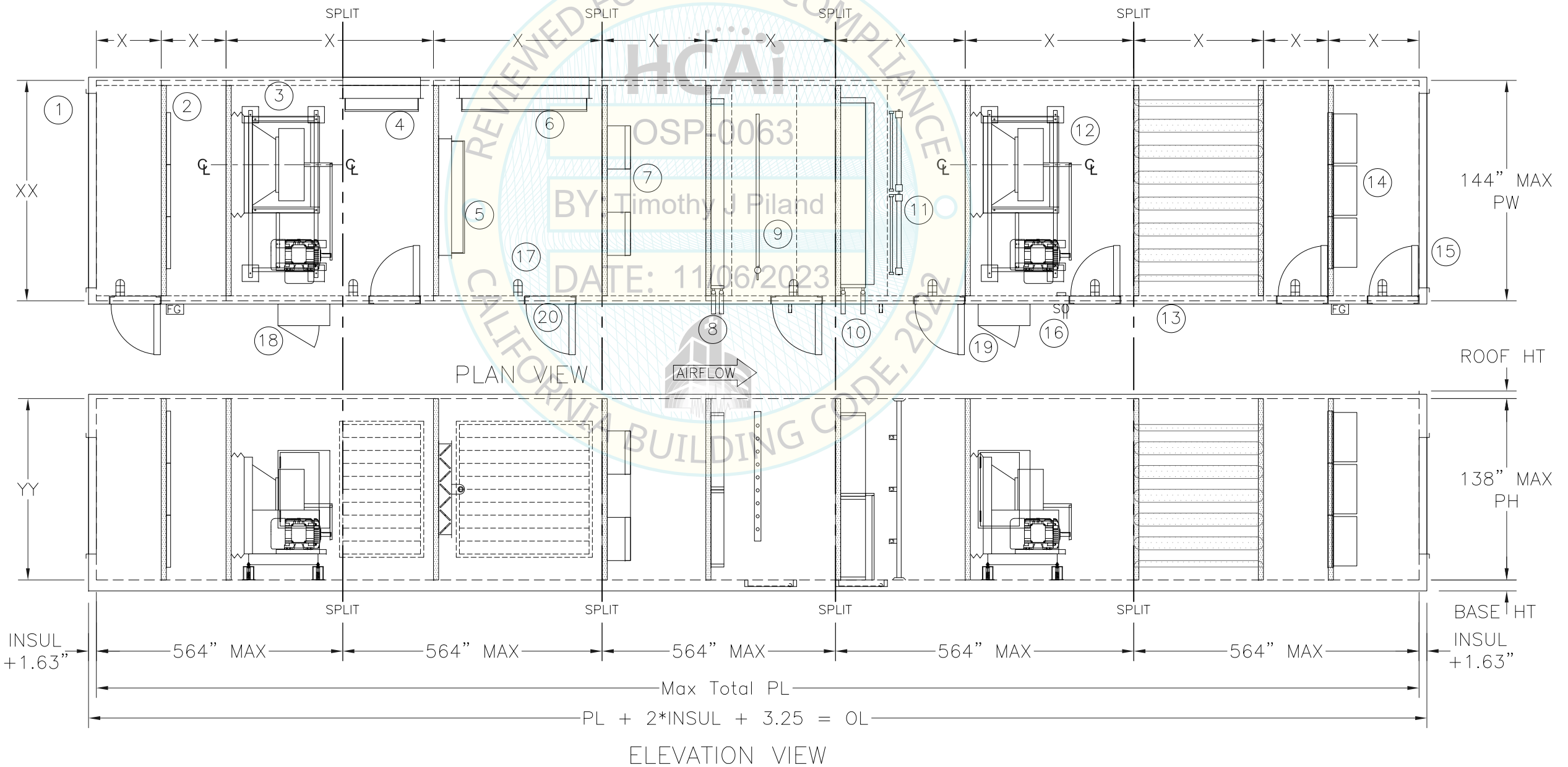


1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. STEAM COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

### SINGLE TUNNEL UNIT W/ SHIPPING SPLITS



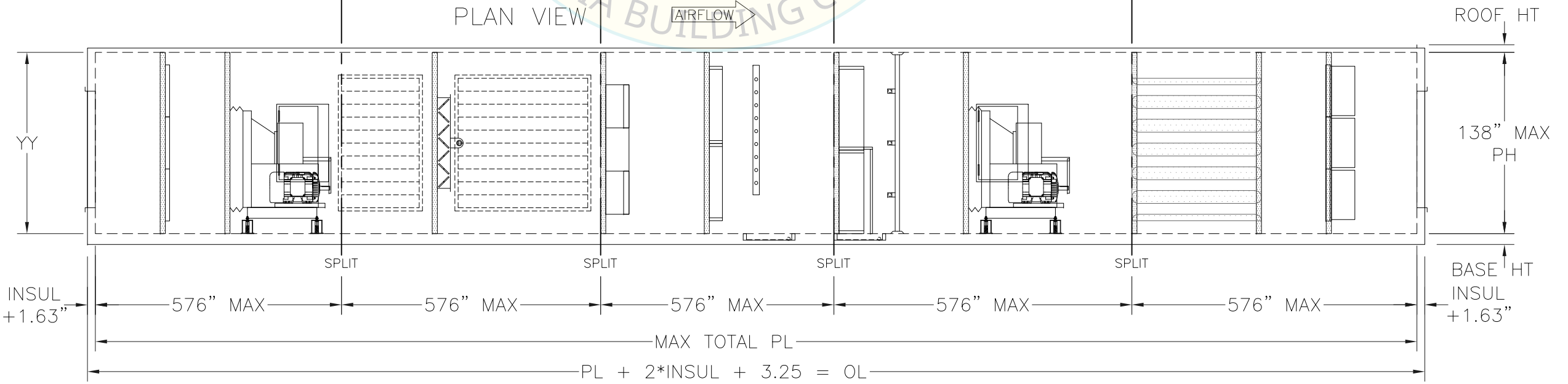
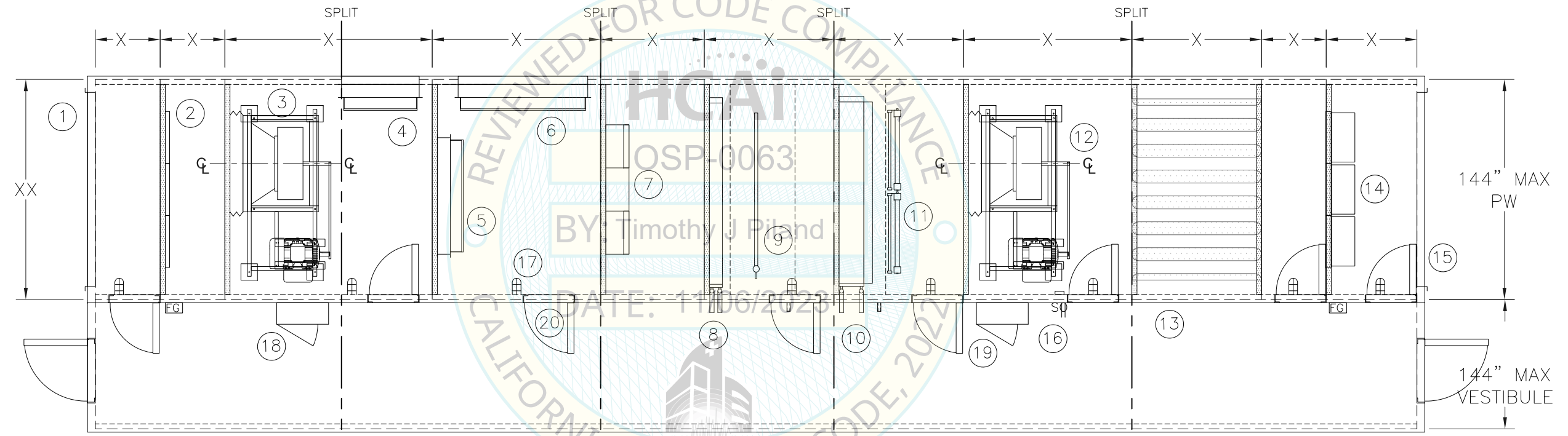
JOB	TAG	Sheet	DATE	SN	MODEL NO.	REV	BY
SINGLE TUNNEL UNIT WITH MULTIPLE SPLITS	OSP-AHU-TYPE 8	8	01/01/2012	NA	CAHYXXE-S	5/2022	BSZ

- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. PLENUM FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. PLENUM FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

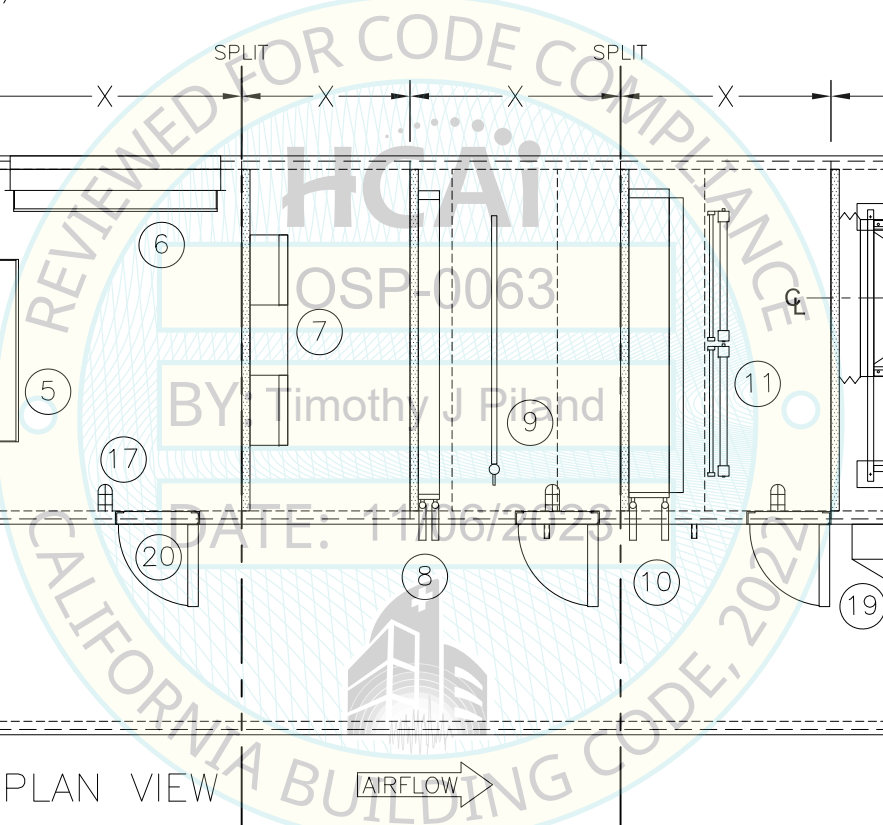
[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

### SINGLE TUNNEL UNIT W/VESTIBULE AND MULTIPLE SHIPPING SPLITS



ELEVATION VIEW

JOB	SINGLE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 9
Sheet	9
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ

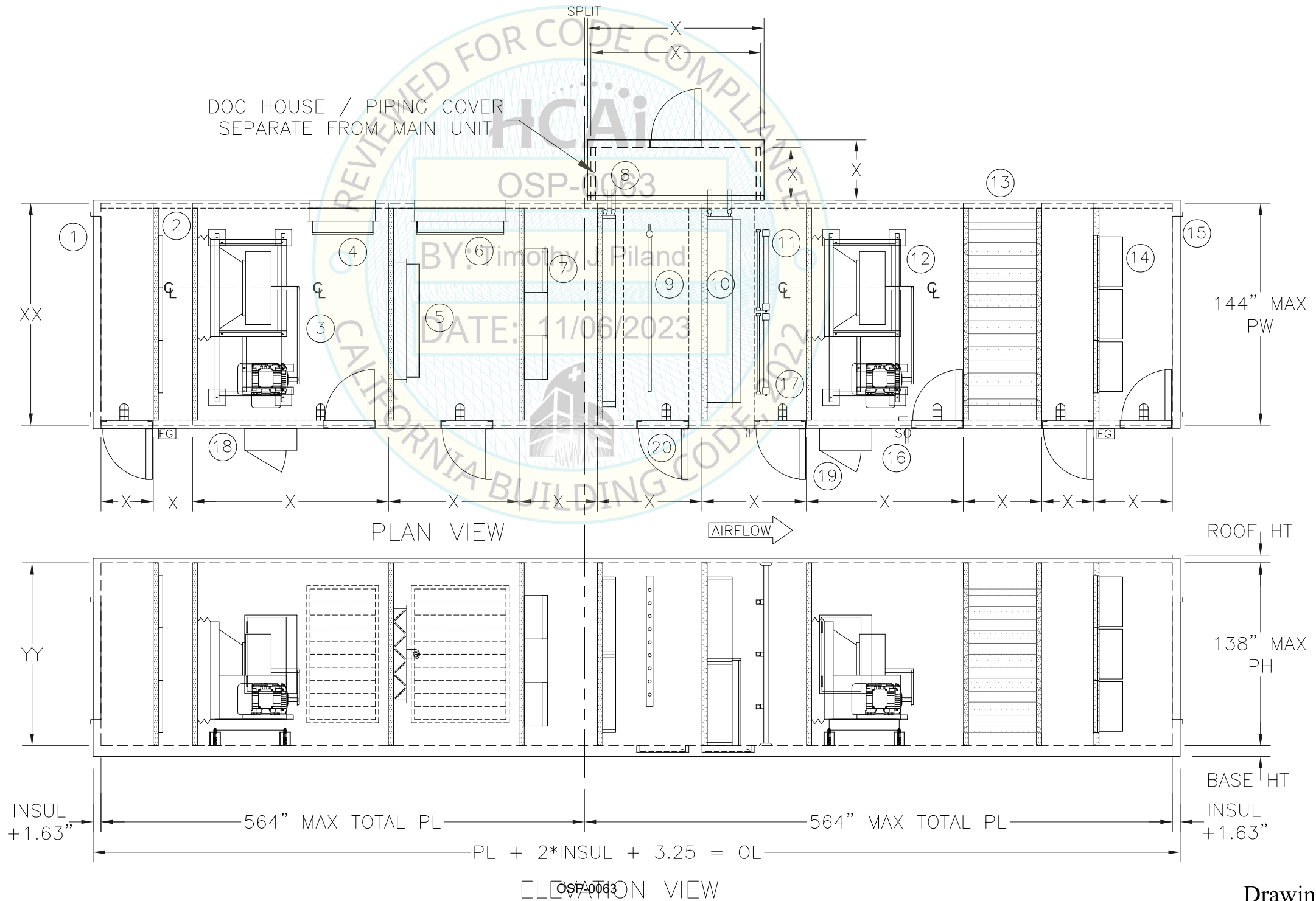


1. OPENING
2. FILTERS
3. PLENUM FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. STEAM COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. PLENUM FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

## SINGLE TUNNEL UNIT W/DOGHOUSE AND ONE SHIPPING SPLIT



JOB	SINGLE TUNNEL UNIT WITH DOGHOUSE AND ONE SPLIT		
TAG	OSP-AHU-TYPE 10	Sheet	10
DATE	01/01/2012	MODEL NO.	CAHYYXXE-S
SN	NA	REV	6/2023
BY	BSZ	REV-G	

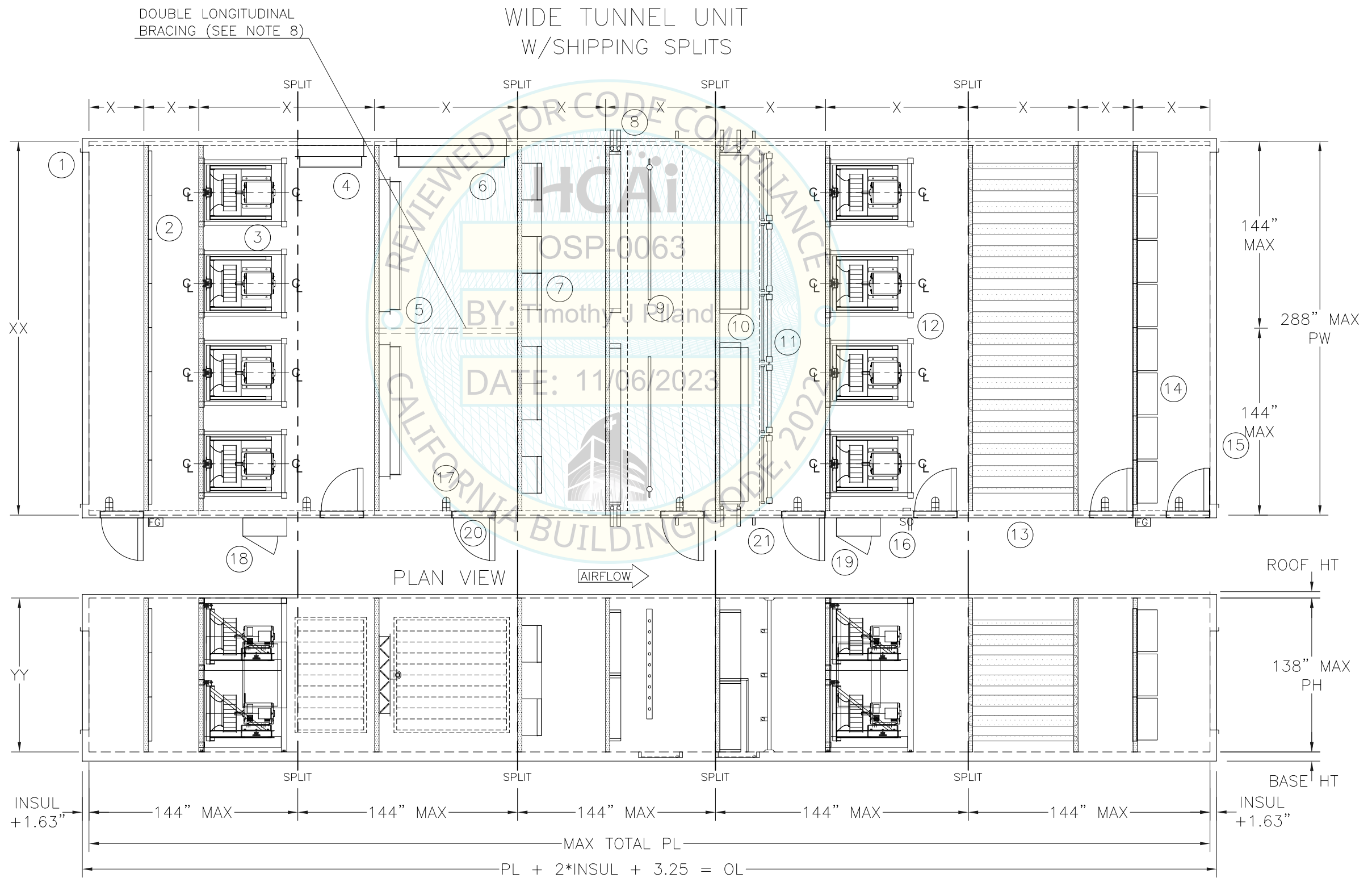


- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. MATRIX FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. MATRIX FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

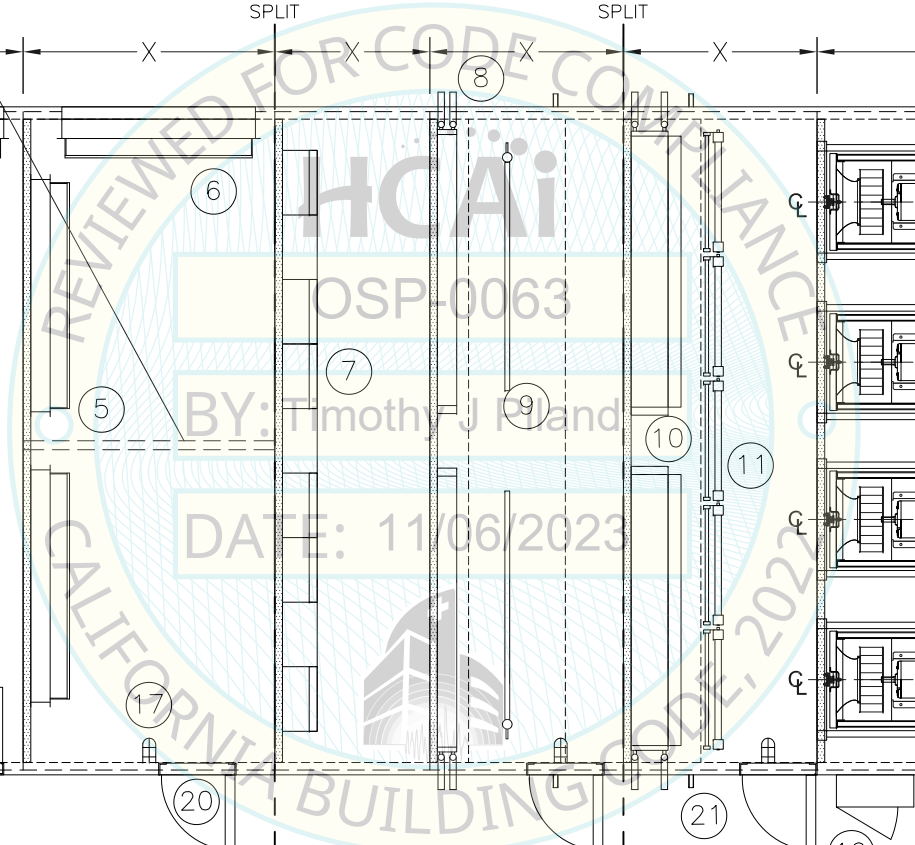
[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24.
  9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

WIDE TUNNEL UNIT  
W/SHIPPING SPLITS



JOB	WIDE TUNNEL UNIT WITH MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 11
Sheet	11
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ



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 OKLAHOMA CITY, OK 73106  
 518 North Indiana



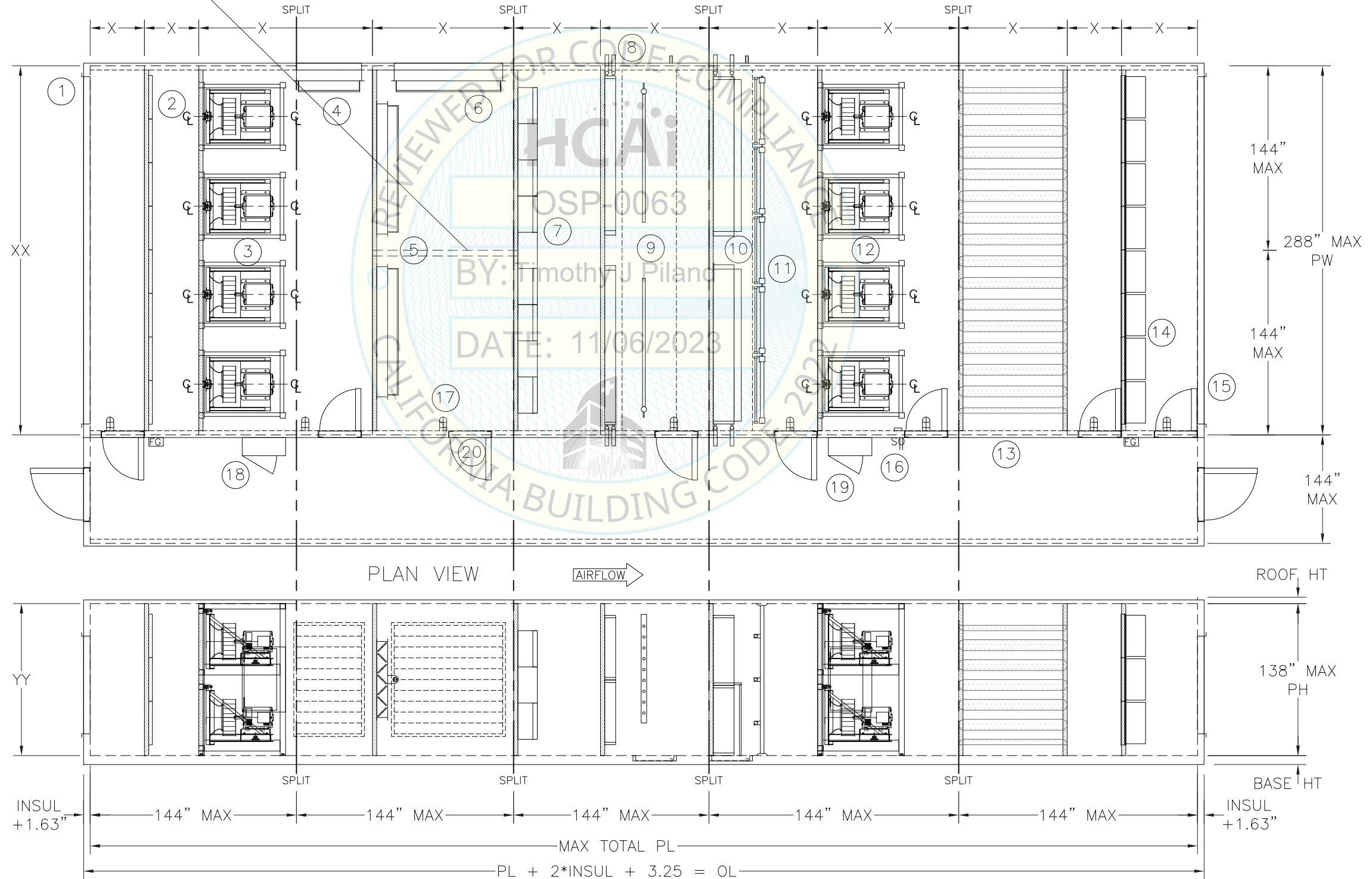
1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. STEAM COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24. EXCEEDS 144" ONLY IN DAMPERS, AIR BLENDERS AND PLENUM FANS SECTIONS.
  9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

WIDE TUNNEL UNIT  
 W/SHIPPING SPLITS

DOUBLE LONGITUDINAL BRACING (SEE NOTE 8)



INSUL +1.63"

144" MAX

INSUL +1.63"

MAX TOTAL PL

PL + 2\*INSUL + 3.25 = OL

ELEVATION VIEW

JOB	WIDE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 12
Sheet	12
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYYXXE-S
REV	5/2022
BY	BSZ

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 518 North Indiana  
 OKLAHOMA CITY, OK 73106

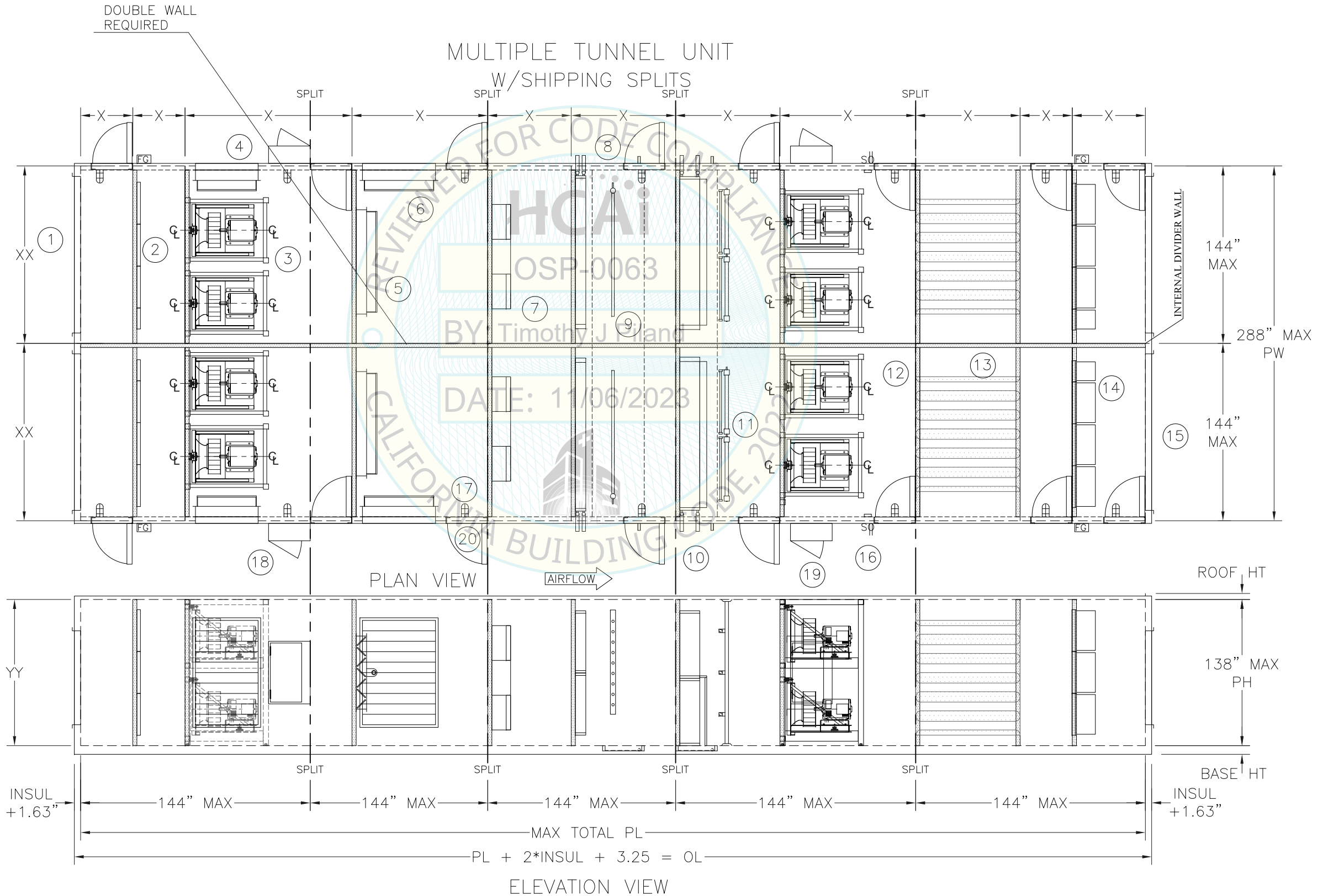


1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. STEAM COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

JOB	DUAL TUNNEL UNIT WITH MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 13
Sheet	13
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXX/XXE-S
REV	5/2022
BY	BSZ

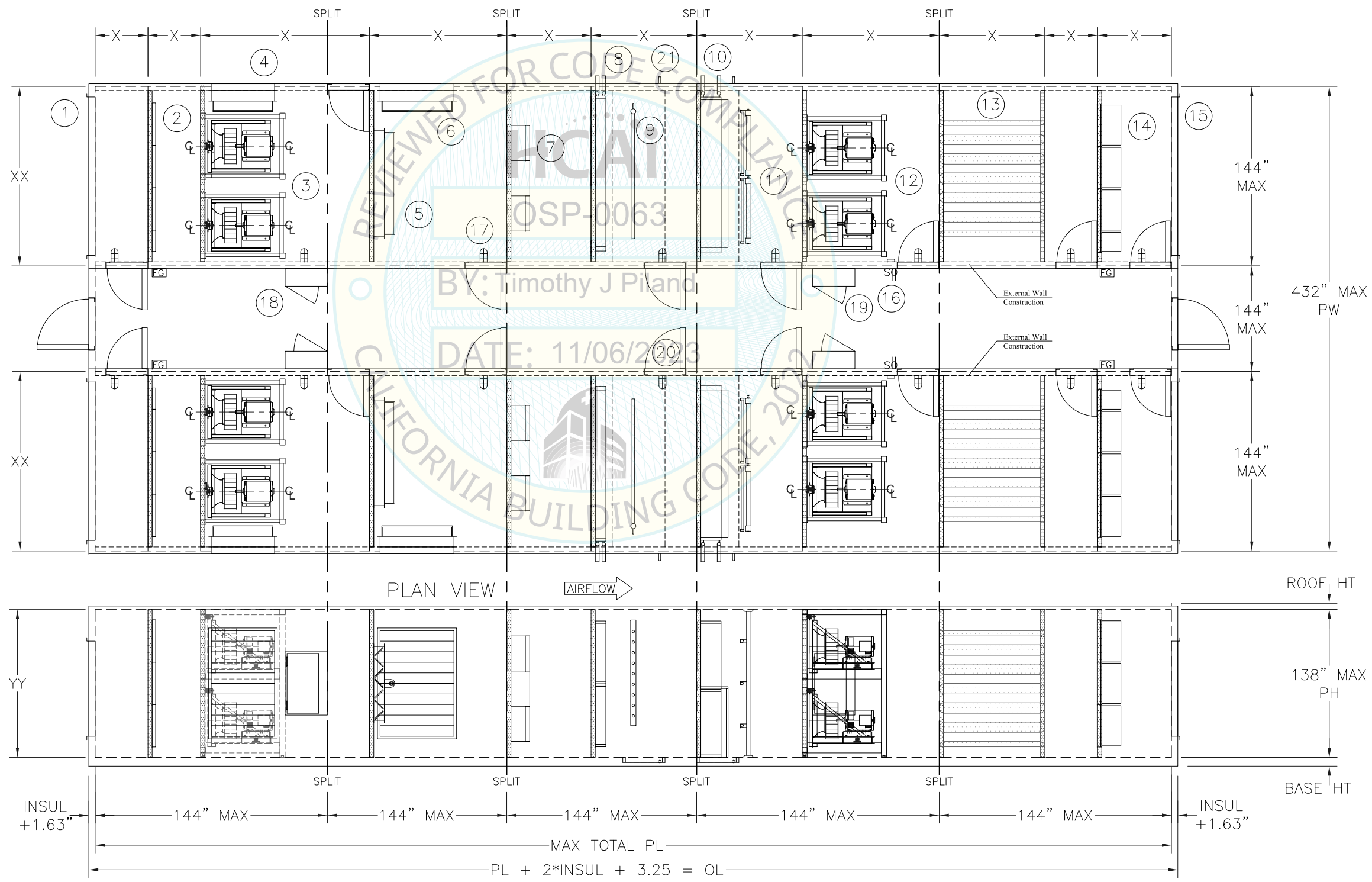


- 1. OPENING
- 2. FILTERS
- 3. MATRIX FANS
- 4. DAMPERS
- 5. DAMPERS
- 6. DAMPERS
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. MATRIX FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  - 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

DUAL TUNNEL UNIT  
 W/CENTER VESTIBULE AND SHIPPING SPLITS



JOB	DUAL TUNNEL UNIT WITH CENTER VESTIBULE AND MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 14
Sheet	14
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXX/XXE-S
REV	5/2022
BY	BSZ

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 OKLAHOMA CITY, OK 73106

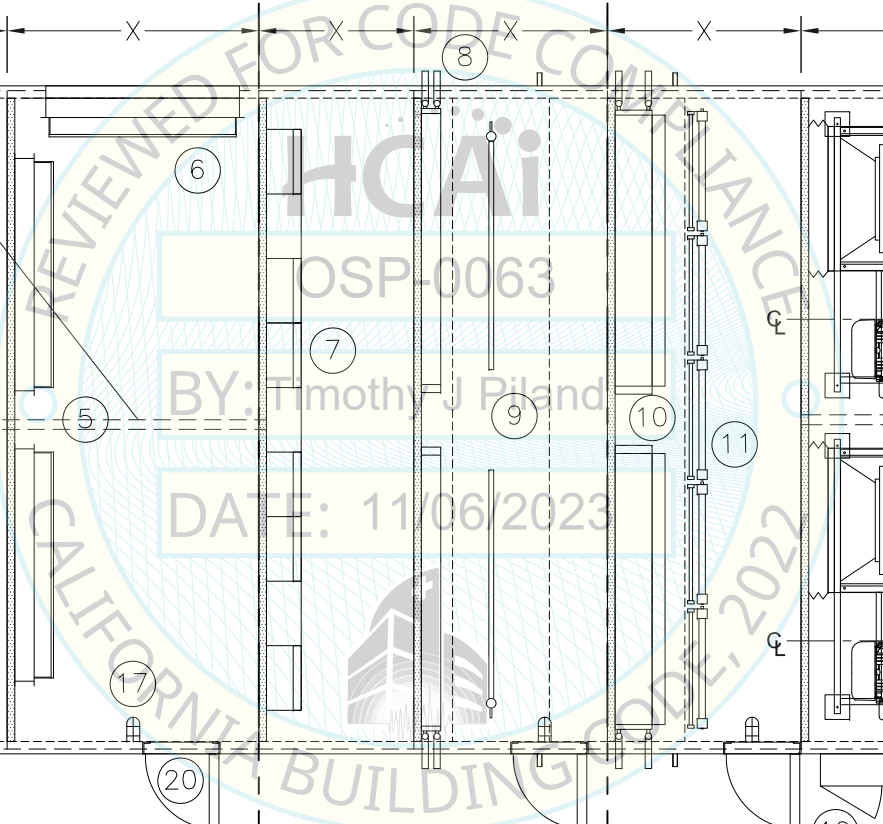
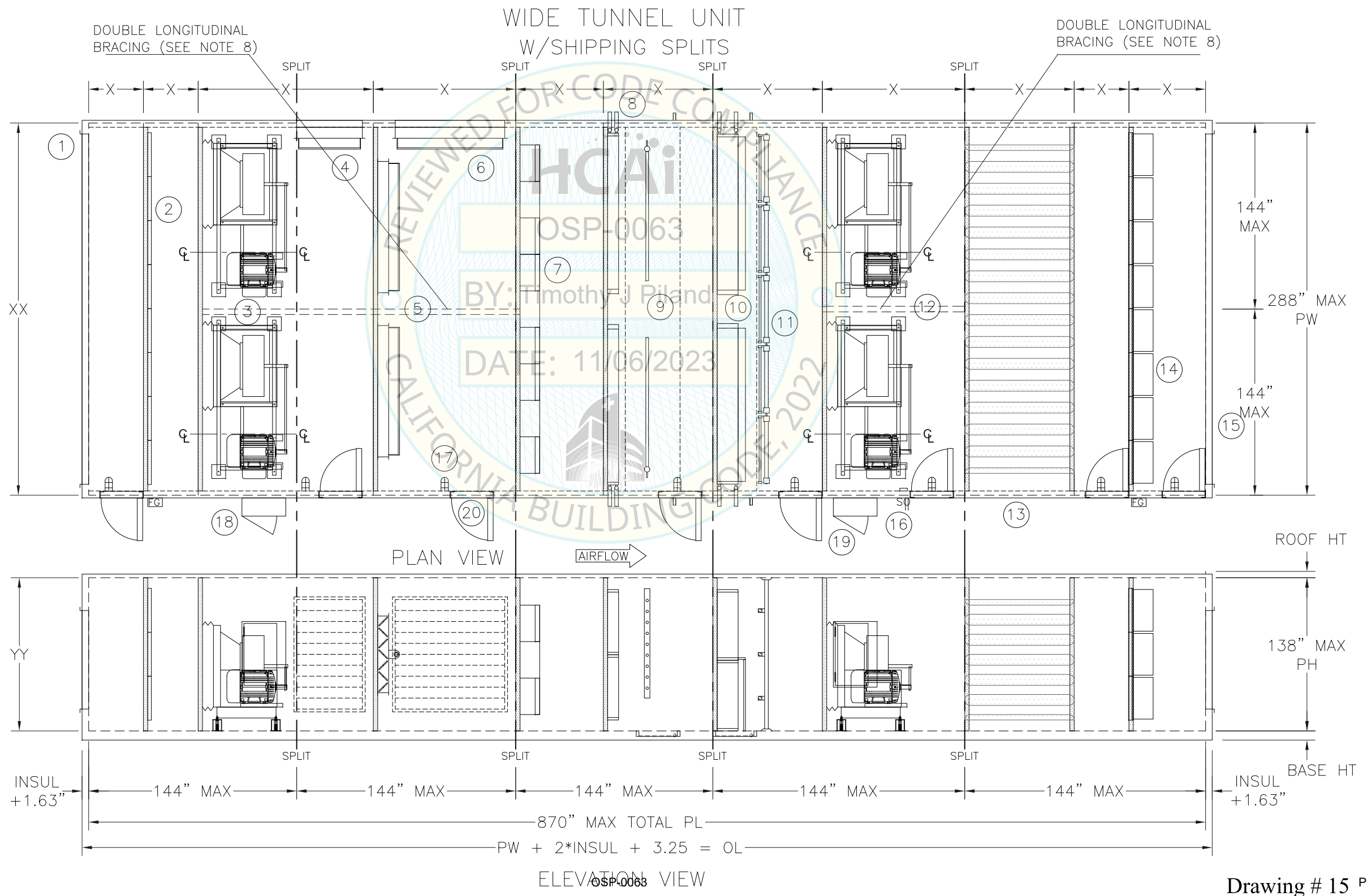


- 1. OPENING
- 2. FILTERS
- 3. PLENUM FANS
- 4. DAMPERS
- 5. DAMPERS
- 6. DAMPERS
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. PLENUM FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  - 8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24.
  - 9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

JOB	WIDE TUNNEL UNIT WITH MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 15
Sheet	15
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ



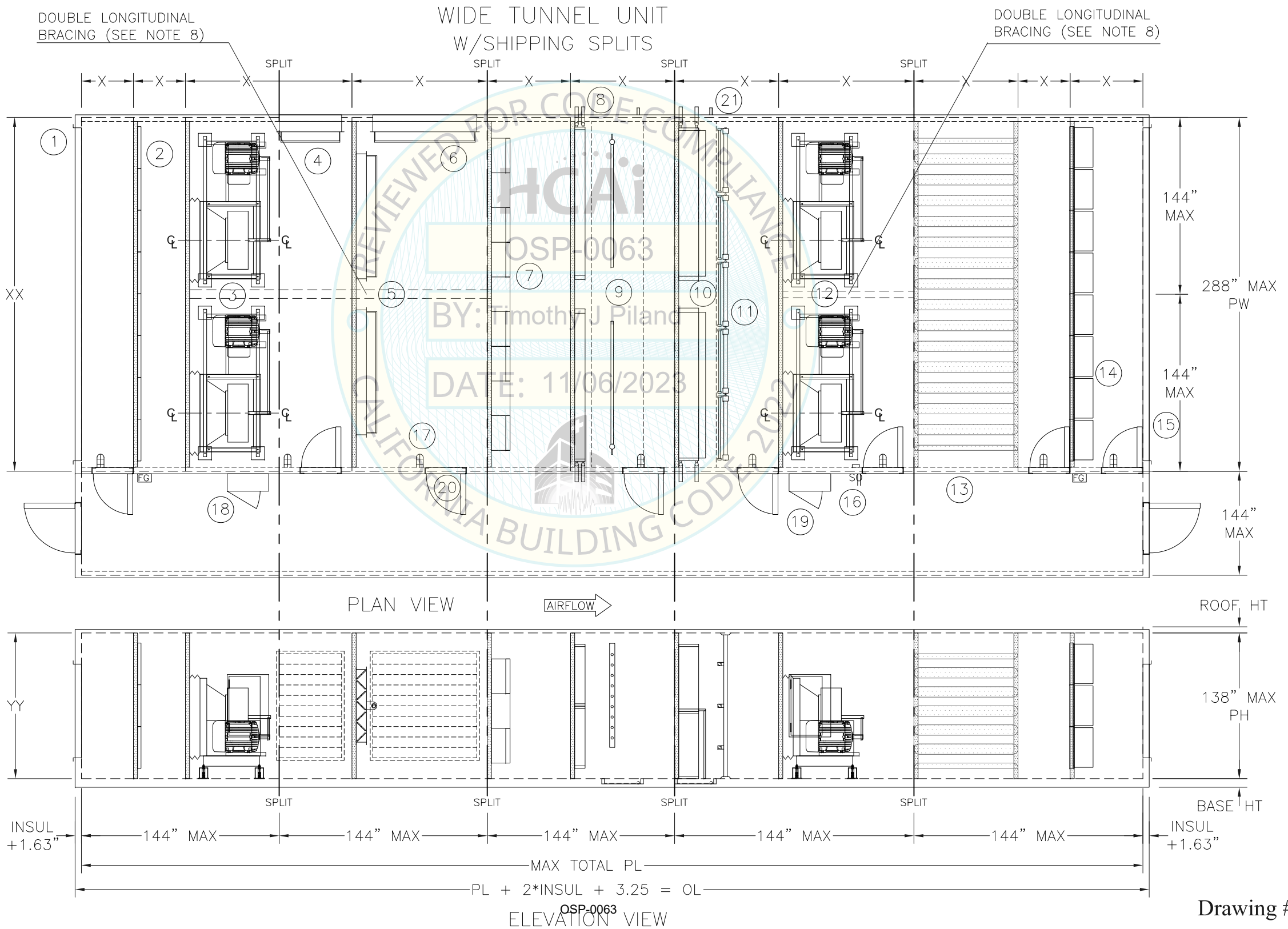
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 518 North Indiana  
 OKLAHOMA CITY, OK 73106



- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. PLENUM FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. PLENUM FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |
- [FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24. EXCEEDS 144" ONLY IN DAMPERS, AIR BLENDERS AND PLENUM FANS SECTIONS.
  9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

JOB	WIDE TUNNEL UNIT WITH VESTIBULE AND MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 16
Sheet	16
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ



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 518 North Indiana  
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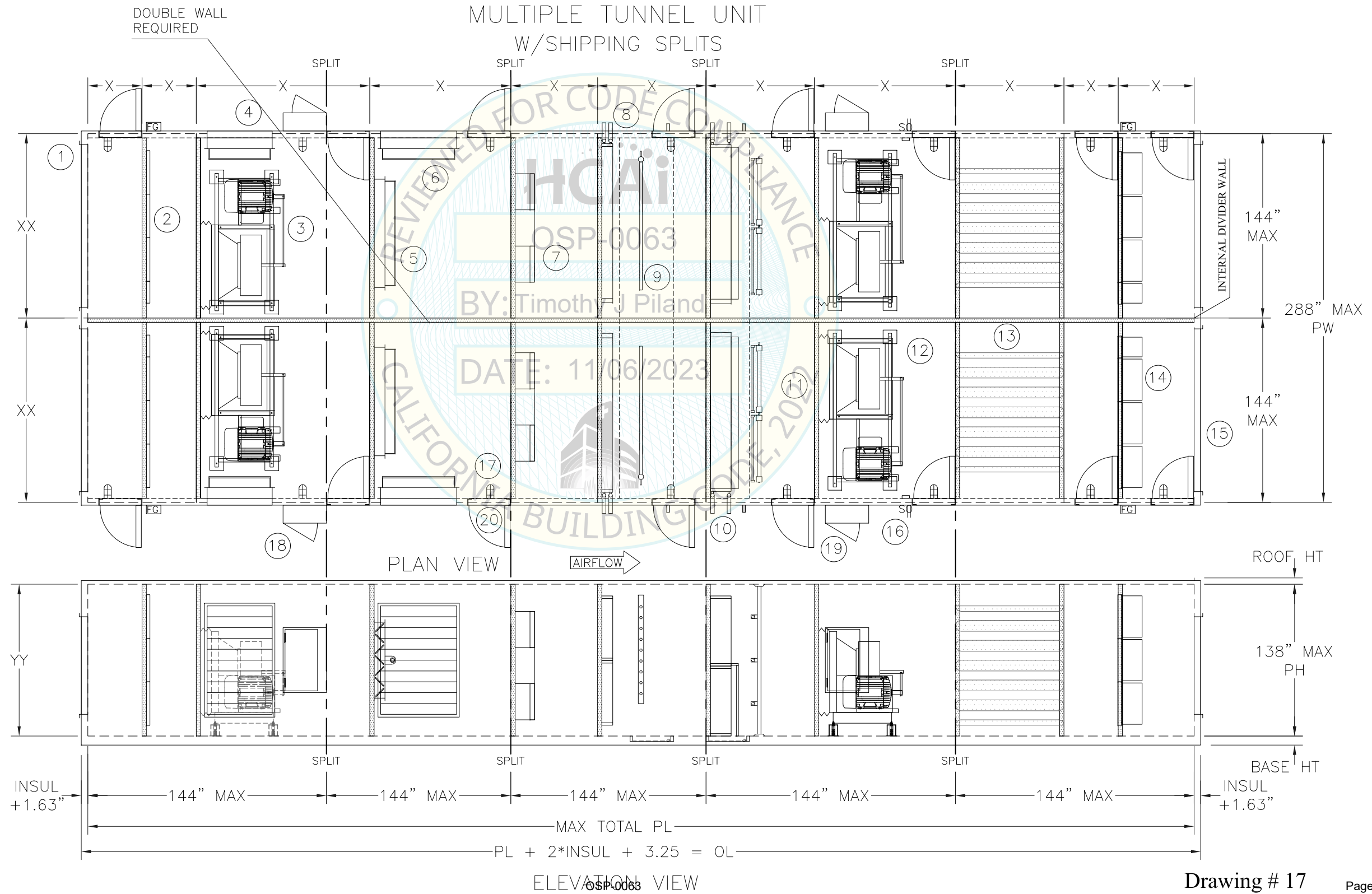
- 1. OPENING
- 2. FILTERS
- 3. PLENUM FANS
- 4. DAMPERS
- 5. DAMPERS
- 6. DAMPERS
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. PLENUM FANS
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  - 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

JOB TAG OSP-AHU-TYPE 17  
 SHEET 17  
 DATE 01/01/2012  
 MODEL NO. CAHYXX/XXE-S  
 REV 5/2022  
 BY BSZ

DUAL TUNNEL UNIT WITH MULTIPLE SPLITS

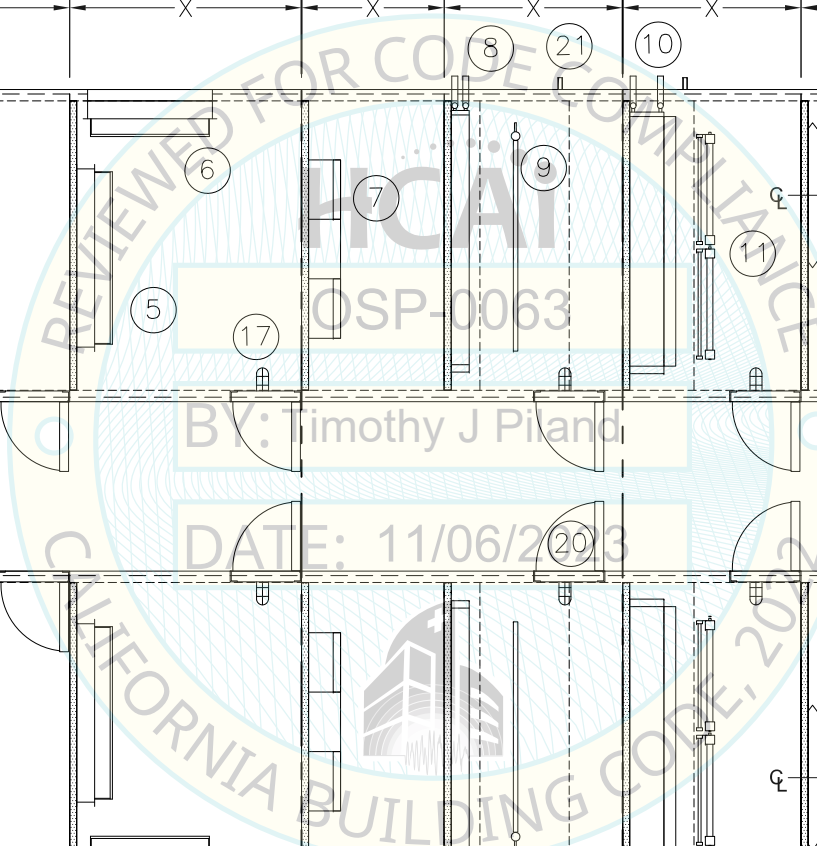
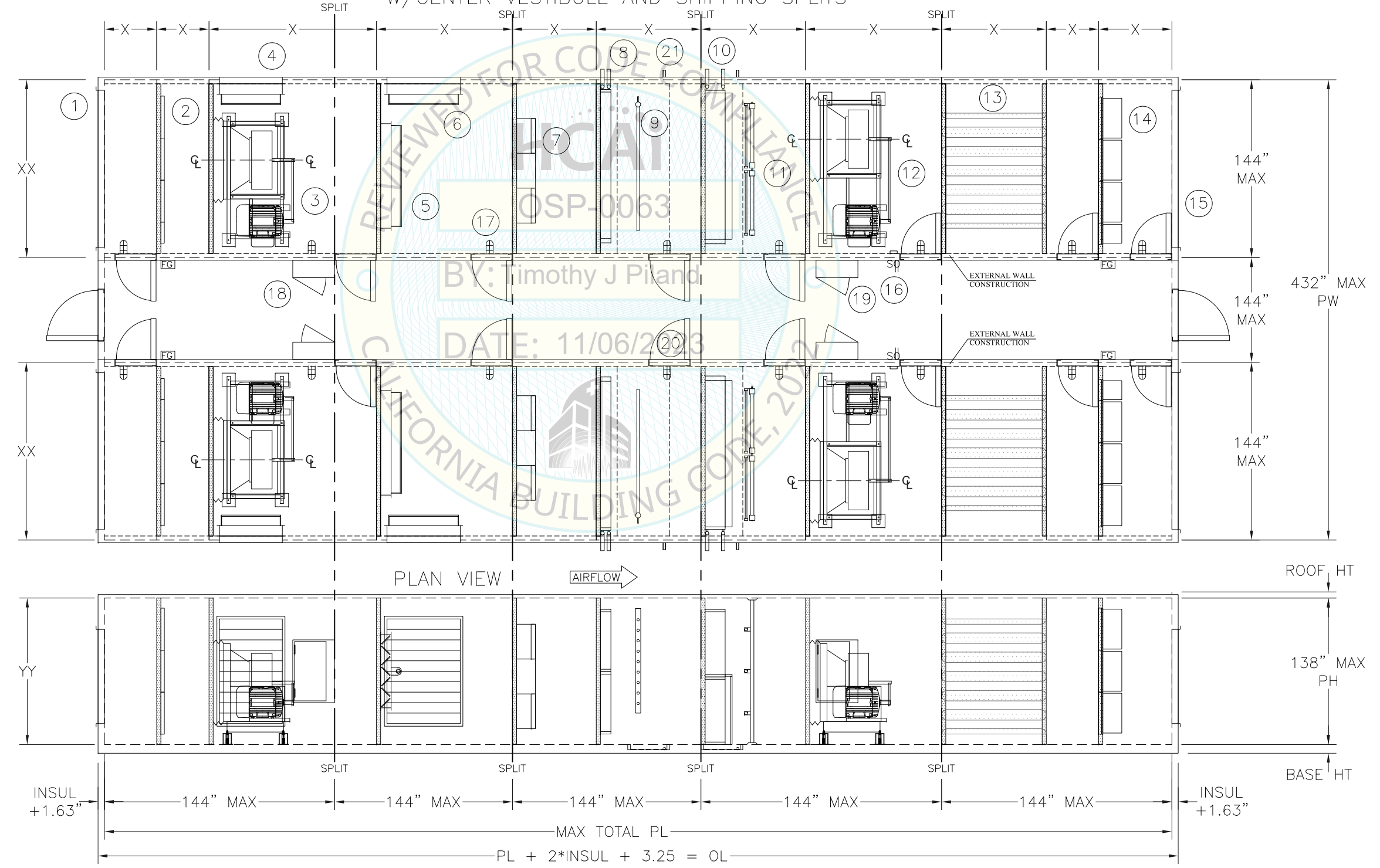


- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. PLENUM FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. PLENUM FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

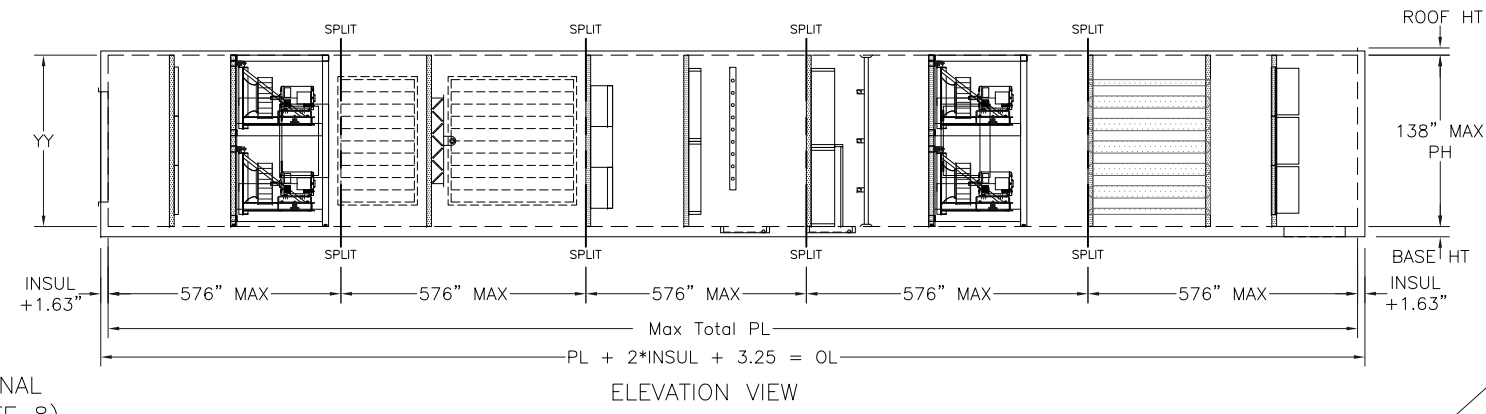
DUAL TUNNEL UNIT  
 W/CENTER VESTIBULE AND SHIPPING SPLITS



JOB	DUAL TUNNEL UNIT WITH CENTER VESTIBULE AND MULTIPLE SPLITS
TAG	OSP-AHU-TYPE 18
Sheet	18
DATE	01/01/2012
SN	NA
MODEL NO.	CAHYXX/XXE-S
REV	5/2022
BY	BSZ

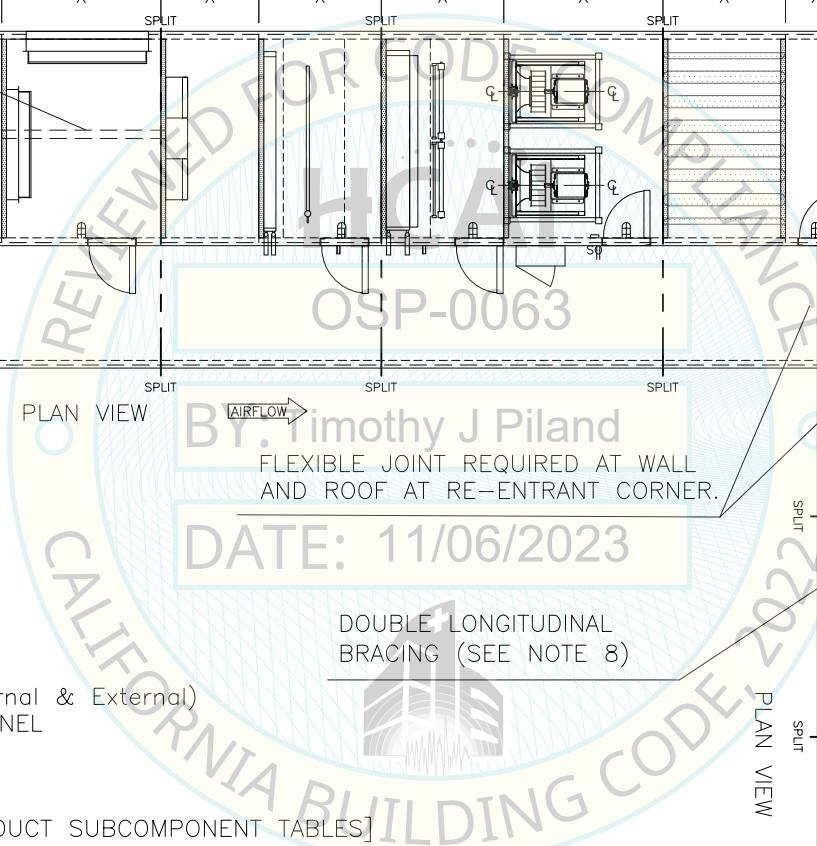
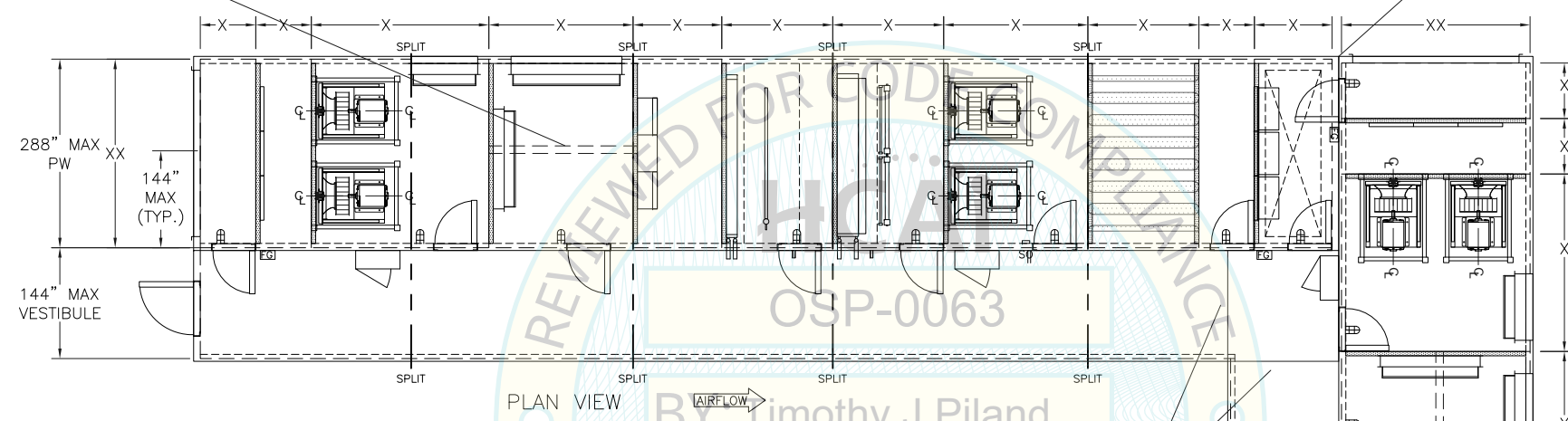


L-SHAPED PLENUM UNIT  
 W/VESTIBULE AND MULTIPLE SHIPPING SPLITS



EXTERNAL WALL CONSTRUCTION ON BOTH SIDES WITH A FLEXIBLE JOINT BETWEEN ENCLOSURE SEGMENTS. FOLLOW BRACING REQUIREMENTS HEREIN.

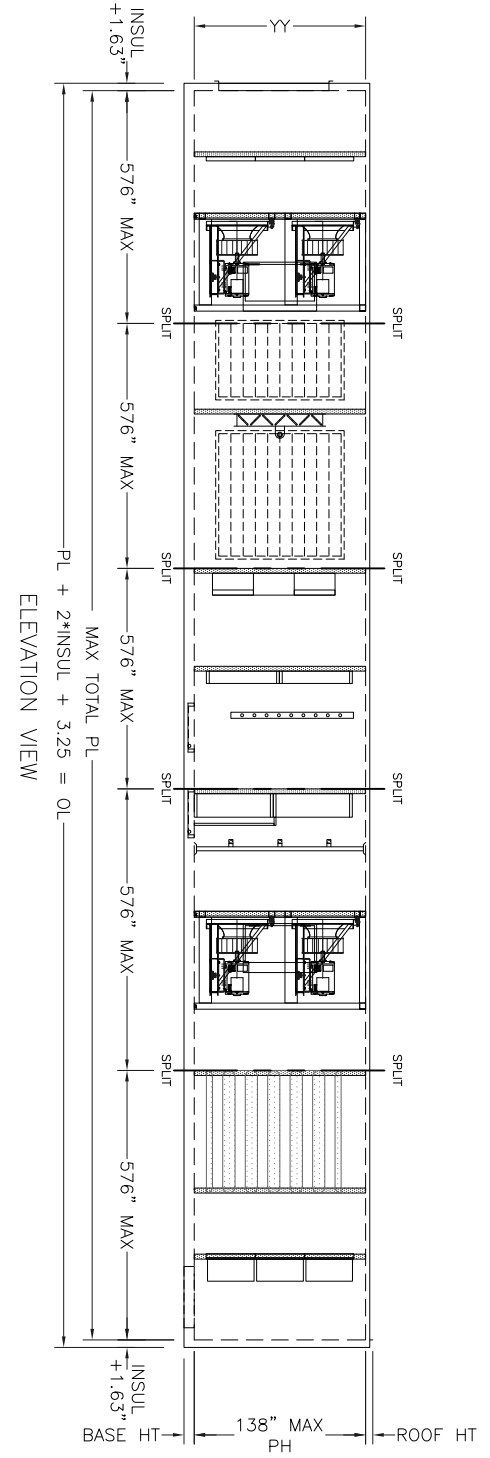
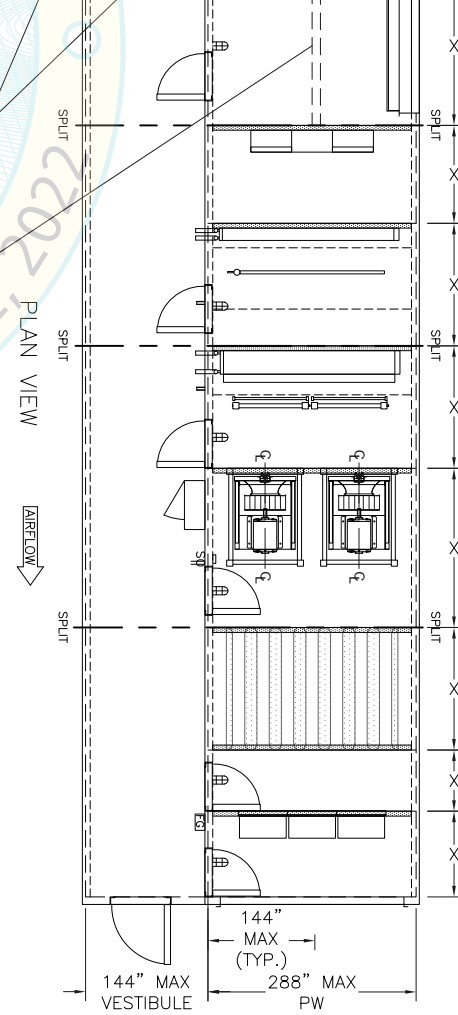
DOUBLE LONGITUDINAL BRACING (SEE NOTE 8)



- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. MATRIX FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. MATRIX FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE 1, SHEET 23.
  8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24.
  9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.





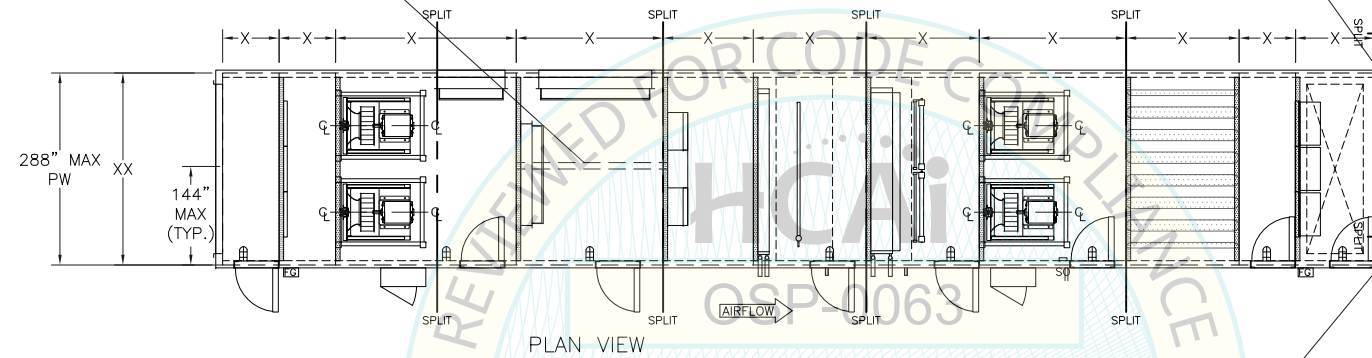
JOB	TAG	Sheet	DATE	SN	REV	BY
T-SHAPED UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS	OSP-AHU-TYPE 20	20	01/01/2012	NA	5/2022	BSZ
MODEL NO. CAHYYXXE-S						

T-SHAPED UNIT  
W/MULTIPLE SHIPPING SPLITS

- |                 |  |
|-----------------|--|
| 1. OPENING      | 12. MATRIX FANS                            |
| 2. FILTERS      | 13. SOUND ATTENUATOR                       |
| 3. MATRIX FANS  | 14. FILTERS                                |
| 4. DAMPERS      | 15. OPENING                                |
| 5. DAMPERS      | 16. SWITCH & OUTLET                        |
| 6. DAMPERS      | 17. SERVICE LIGHT                          |
| 7. AIR BLENDERS | 18. ELECTRICAL PANEL (Internal & External) |
| 8. STEAM COIL   | 19. POWER DISTRIBUTION PANEL               |
| 9. HUMIDIFIER   | 20. ACCESS DOOR                            |
| 10. WATER COIL  |  |
| 11. UV LIGHTS   |  |

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

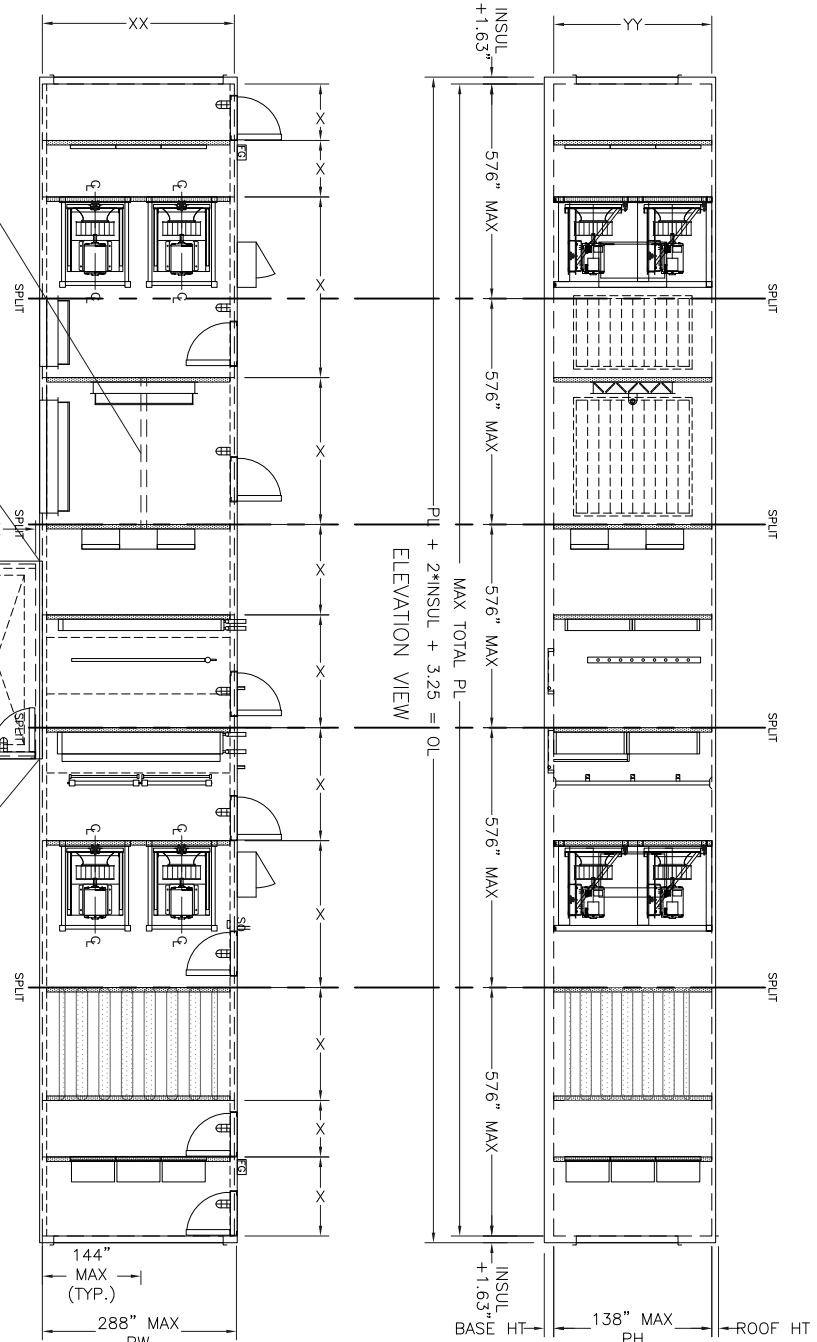
DOUBLE LONGITUDINAL BRACING (SEE NOTE 8)



EXTERNAL WALL CONSTRUCTION ON BOTH SIDES WITH A FLEXIBLE JOINT BETWEEN ENCLOSURE SEGMENTS FOLLOW BRACING REQUIREMENTS HEREIN.

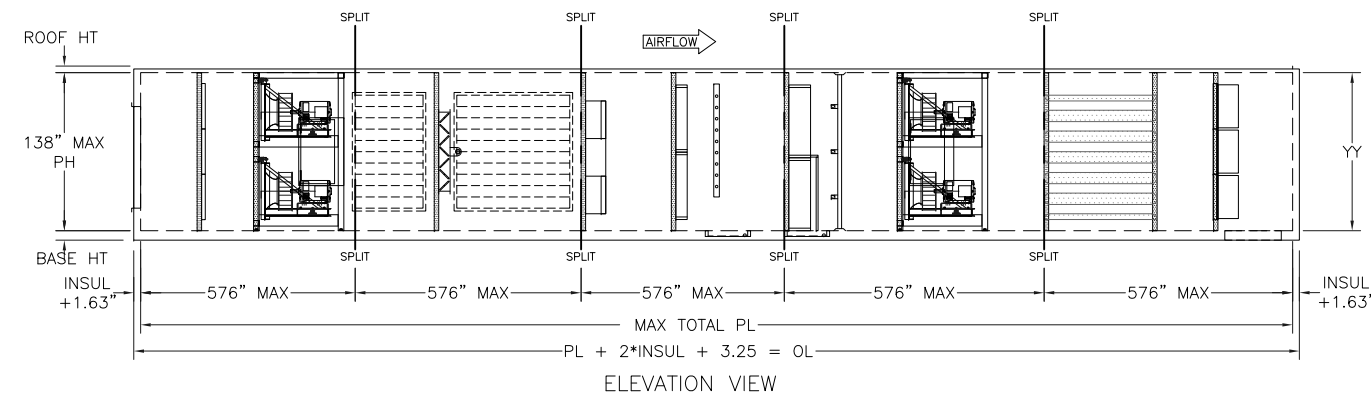
EXTERNAL WALL CONSTRUCTION ON BOTH SIDES WITH A FLEXIBLE JOINT BETWEEN ENCLOSURE SEGMENTS FOLLOW BRACING REQUIREMENTS HEREIN.

PLAN VIEW AIRFLOW

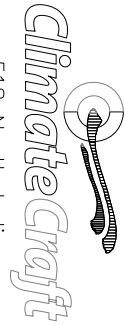


NOTES:

- WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
- EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
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- ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
- SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
- LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
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- REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
- REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.



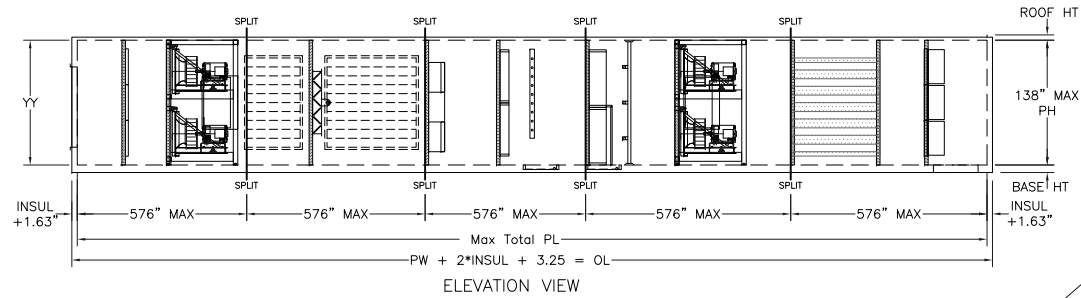
DATE: 11/06/2023



1. OPENING
2. FILTERS
3. MATRIX FANS
4. DAMPERS
5. DAMPERS
6. DAMPERS
7. AIR BLENDERS
8. STEAM COIL
9. HUMIDIFIER
10. WATER COIL
11. UV LIGHTS
12. MATRIX FANS
13. SOUND ATTENUATOR
14. FILTERS
15. OPENING
16. SWITCH & OUTLET
17. SERVICE LIGHT
18. ELECTRICAL PANEL (Internal & External)
19. POWER DISTRIBUTION PANEL
20. ACCESS DOOR

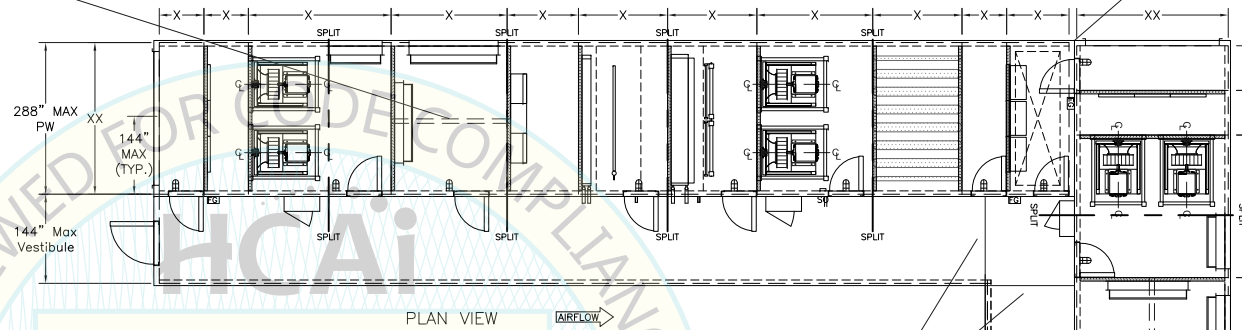
[FOR #1 THROUGH #20, REFER TO CERTIFIED  
 PRODUCT SUBCOMPONENT TABLES]

U-SHAPED UNIT  
 W/VESTIBULE AND MULTIPLE SHIPPING SPLITS



EXTERNAL WALL CONSTRUCTION ON BOTH SIDES WITH  
 A FLEXIBLE JOINT BETWEEN ENCLOSURE SEGMENTS.  
 FOLLOW BRACING REQUIREMENTS HEREIN.

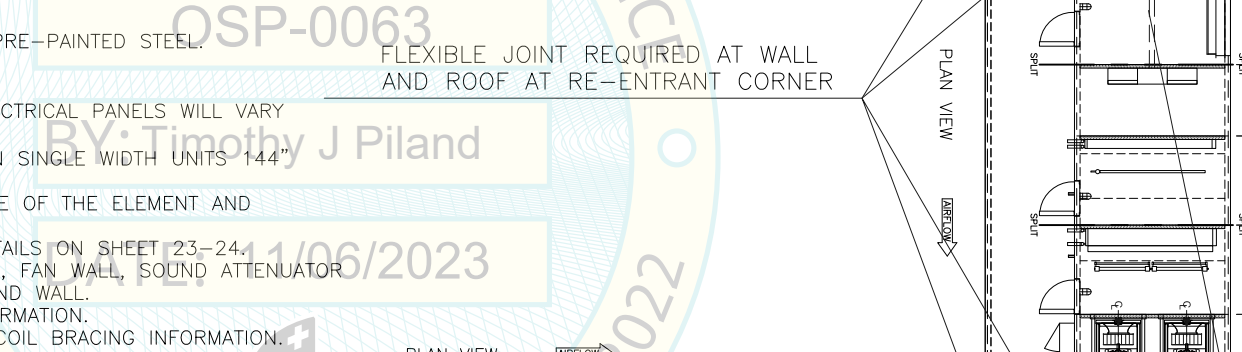
DOUBLE LONGITUDINAL  
 BRACING (SEE NOTE 8)



FLEXIBLE JOINT REQUIRED AT WALL  
 AND ROOF AT RE-ENTRANT CORNER

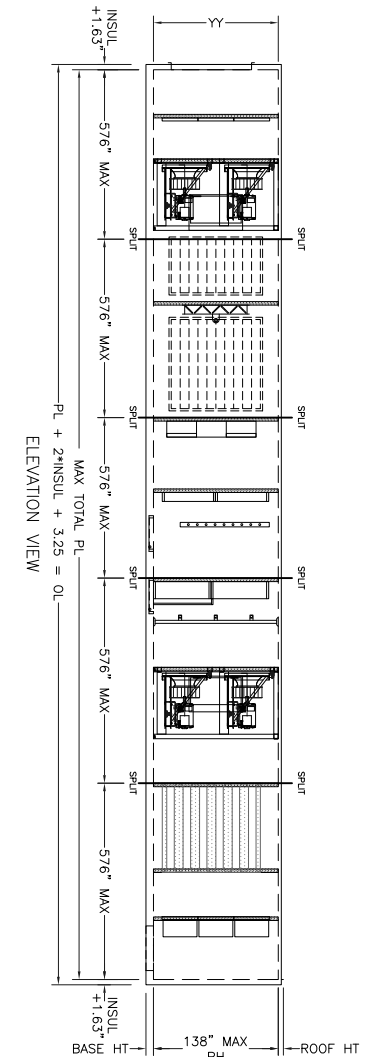
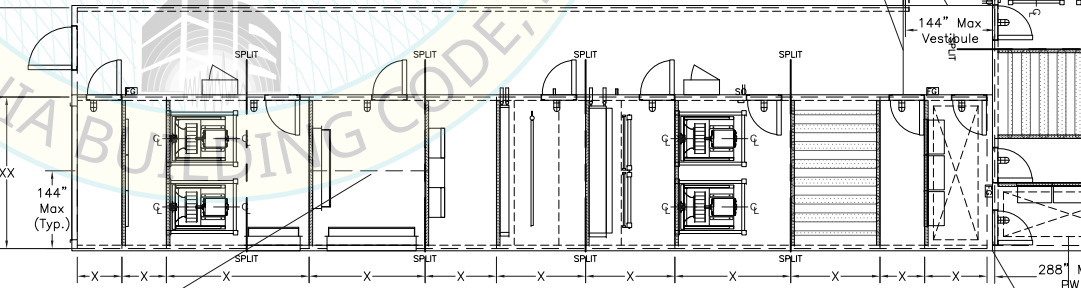
NOTES:

1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
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5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
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8. DOUBLE LONGITUDINAL BRACING IS REQUIRED PER TABLE 2, AND DETAILS ON SHEET 23-24.
9. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
10. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
11. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

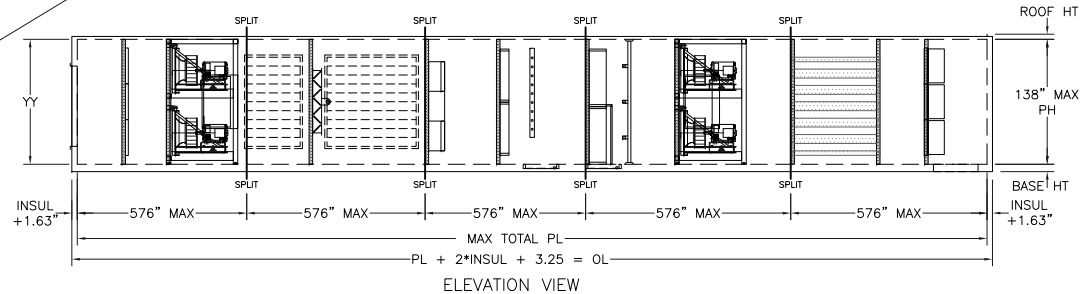


EXTERNAL WALL CONSTRUCTION ON BOTH SIDES WITH  
 A FLEXIBLE JOINT BETWEEN ENCLOSURE SEGMENTS.  
 FOLLOW BRACING REQUIREMENTS HEREIN.

DOUBLE LONGITUDINAL  
 BRACING (SEE NOTE 8)



DOUBLE LONGITUDINAL  
 BRACING (SEE NOTE 8)



TAG	JOB
OSP-AHU-TYPE 21	U-SHAPED UNIT WITH VESTIBULE AND MULTIPLE SHIPPING SPLITS
Sheet	21
DATE	01/01/2012
MODEL NO.	CAHYXXE-S
REV	5/2022
BY	BSZ

PHONE (405) 415-9230 - FAX (405) 415-9231  
 OKLAHOMA CITY, OK 73106

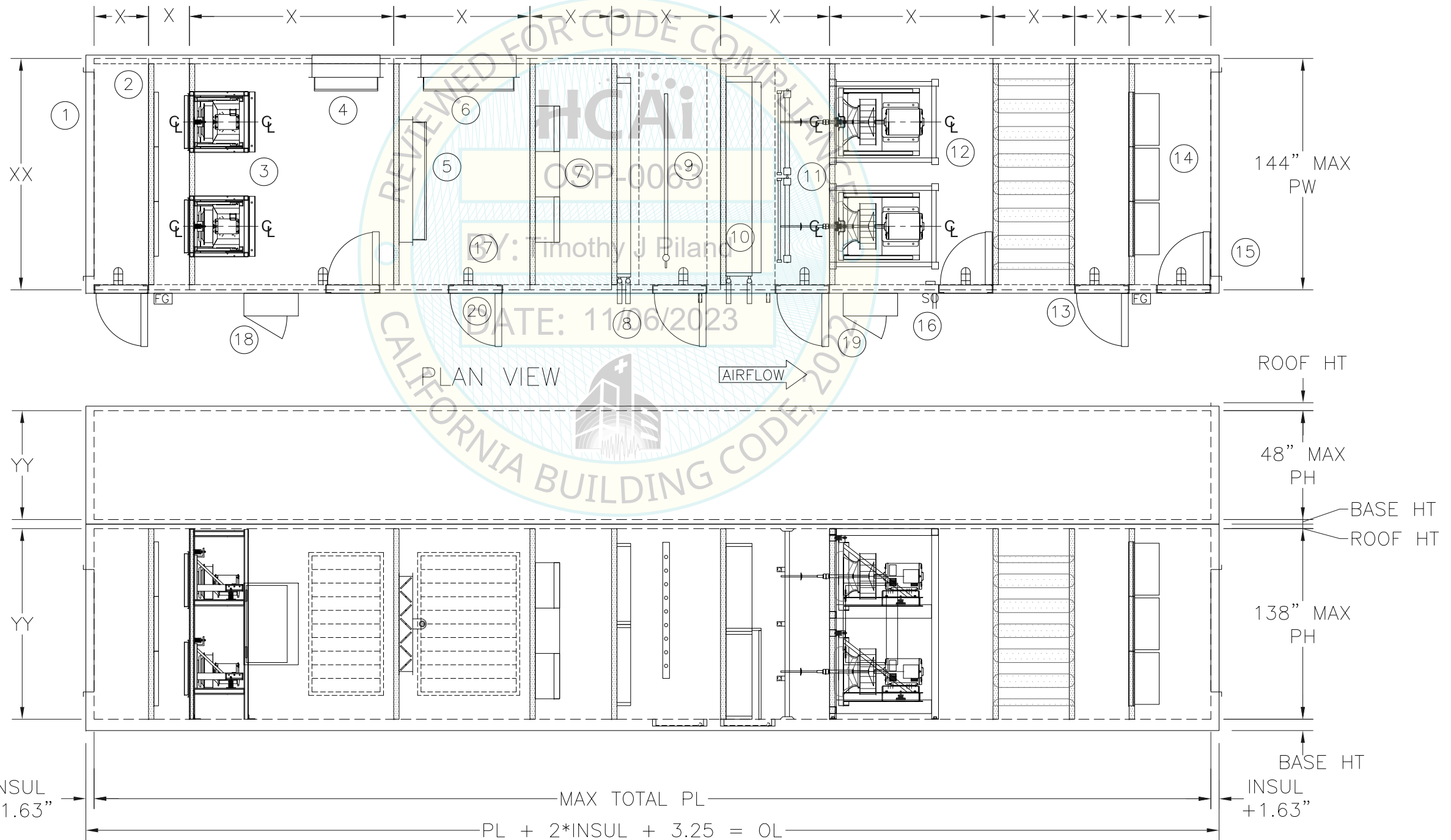


- 1. OPENING
- 2. FILTERS
- 3. MINI-TOWER FANS
- 4. DAMPER
- 5. DAMPERS
- 6. DAMPER
- 7. AIR BLENDERS
- 8. STEAM COIL
- 9. HUMIDIFIER
- 10. WATER COIL
- 11. UV LIGHTS
- 12. MATRIX FANS (with Balance Stream)
- 13. SOUND ATTENUATOR
- 14. FILTERS
- 15. OPENING
- 16. SWITCH & OUTLET
- 17. SERVICE LIGHT
- 18. ELECTRICAL PANEL (Internal & External)
- 19. POWER DISTRIBUTION PANEL
- 20. ACCESS DOOR

[FOR #1 THROUGH #20, REFER TO CERTIFIED PRODUCT SUBCOMPONENT TABLES]

- NOTES:
- 1. WALL INSULATION: 2", 3", 4" (FIBERGLASS OR FOAM).
  - 2. EXTERNAL CABINET MATERIAL: GALVANIZED STEEL, STAINLESS STEEL, PRE-PAINTED STEEL.
  - 3. UNIT BASE HEIGHT: 5", 6", 8" (STEEL OR STAINLESS STEEL).
  - 4. ROOF HEIGHT DEPENDS ON INSULATION THICKNESS & PITCH.
  - 5. SECTION SIZES, COMPONENT LOCATIONS, DOORS, OPENINGS, AND ELECTRICAL PANELS WILL VARY BASED ON CUSTOMER REQUIREMENTS.
  - 6. LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) NOT REQUIRED ON SINGLE WIDTH UNITS 144" WIDE OR LESS.
  - 7. TRANSVERSE SEISMIC BRACING ELEMENT IS REQUIRED BASED ON TYPE OF THE ELEMENT AND DISTANCE DETAILED ON TABLE1 SHEET 23.
  - 8. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL.
  - 9. REFER TO SEISMIC BRACING DETAILS DRAWINGS FOR ADDITIONAL INFORMATION.
  - 10. REFER TO COIL BRACING REQUIREMENTS DRAWINGS FOR ADDITIONAL COIL BRACING INFORMATION.

### STACKED SINGLE TUNNEL UNIT W/NO SHIPPING SPLIT



ELEVATION VIEW

JOB	STACKED SINGLE TUNNEL UNIT WITH NO SPLITS	TAG	OSP-AHU-TYPE 22
SN	NA	Sheet	22
REV	5/2022	DATE	01/01/2012
BY	BSZ	MODEL NO.	CAHYYXXE-S

# SEISMIC BRACING REQUIREMENTS

## BRACING DEFINITION:

LONGITUDINAL BRACING IS THE BRACING PARALLEL TO AIRFLOW DIRECTION.

TRANSVERSE BRACING IS THE BRACING PERPENDICULAR TO AIRFLOW DIRECTION.

APPROVED TRANSVERSE BRACING ELEMENTS (See Table 1):

APPROVED LONGITUDINAL BRACING ELEMENTS (See Table 3):

TABLE 1: EXTERNAL WALL PANELS  
MAX DISTANCES "X" FROM TRANSVERSE ELEMENT  
TO ANOTHER TRANSVERSE ELEMENT.

TRANSVERSE ELEMENT TYPE	"X " MAX (IN)
FAN MATRIX WALL	72
FILTER AIRSEAL WALL	72
WATER COIL WALL	60
STEAM COIL WALL	60
PLENUM FAN WALL	72
SOUND ATTENUATOR	72
SINGLE TRANSVERSE "X" BRACE	72
DOUBLE TRANSVERSE "X" BRACE	144

TABLE1: APPROVED TRANSVERSE BRACING ELEMENTS

TABLE2: SECTIONS THAT REQUIRE  
DOUBLE LONGITUDINAL BRACING ELEMENTS

COMPONENTS	NEEDS DOUBLE LONGITUDINAL BRACING
DAMPER WALL	YES
AIR BLENDERS	YES
PLENUM FAN WALL	YES

TABLE 2: INTERNAL COMPONENTS NEED TO BE SUPPORTED  
BY DOUBLE LONGITUDINAL BRACING ON UNITS  
WIDTH GREATER THAN 144" UP TO 288".

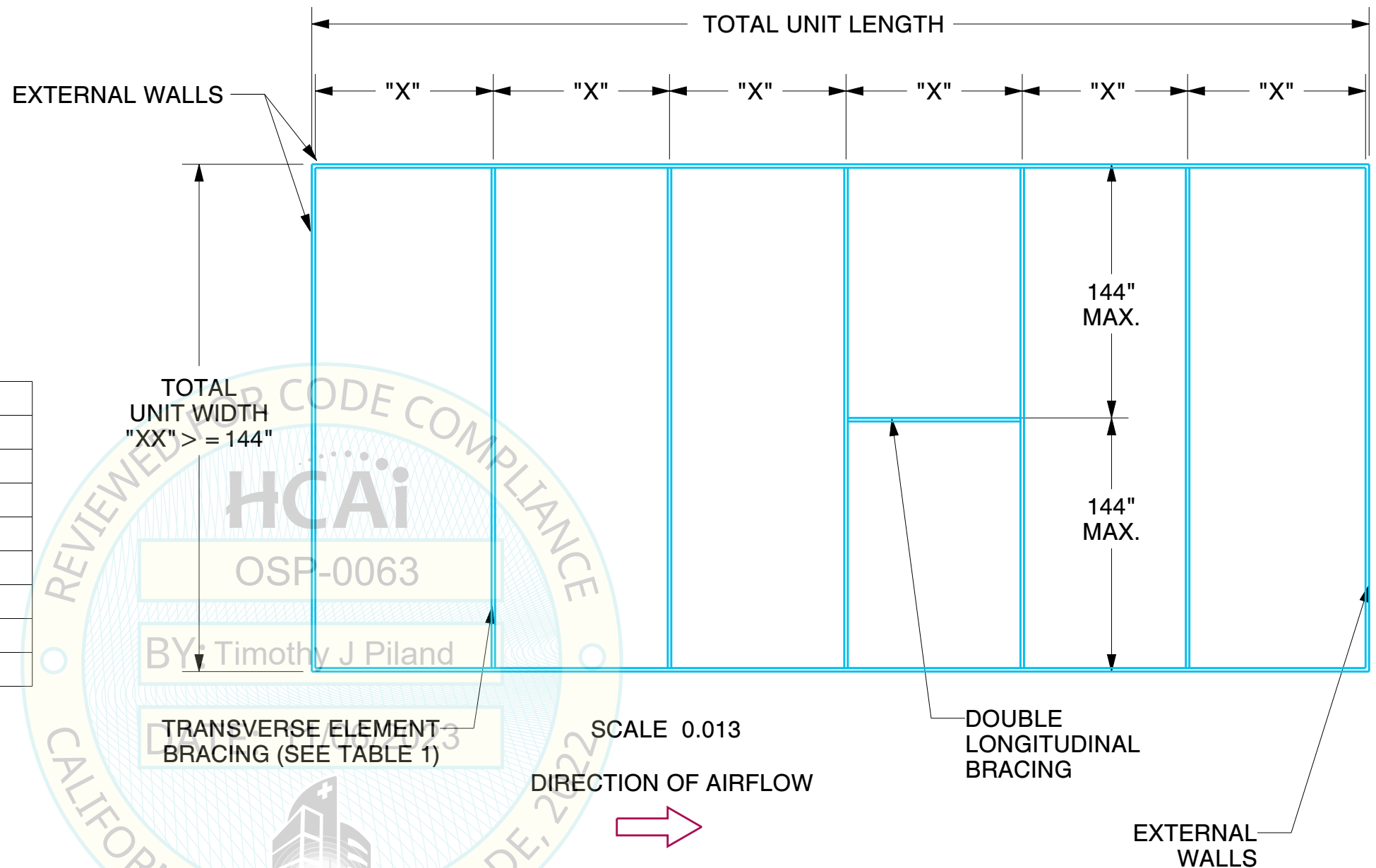


TABLE3: APPROVED LONGITUDINAL BRACING ELEMENTS

DOUBLE LONGITUDINAL "X" BRACE
INTERNAL DIVIDER WALL
EXTERNAL WALL CONSTRUCTION

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS		
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		APPR: H.B.
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH	DATE: 03/26/2012	SIZE: B
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 23 OF 57
G	OSHPD-REV 2023	NA	LB	08/16/2023						

## SEISMIC BRACING REQUIREMENTS ~ Continued

ADDITIONAL SEISMIC BRACING IS REQUIRED ON CLIMATECRAFT UNITS WHEN THE PLENUM WIDTH OF THE TUNNEL EXCEEDS 144" PER THE DETAILS OUTLINED BELOW:

PLENUM WIDTH "XX" - AS SHOWN ON DRAWINGS 1 THROUGH 22.

LONGITUDINAL BRACING IS DEFINED AS THE BRACING PARALLEL TO AIRFLOW DIRECTION.

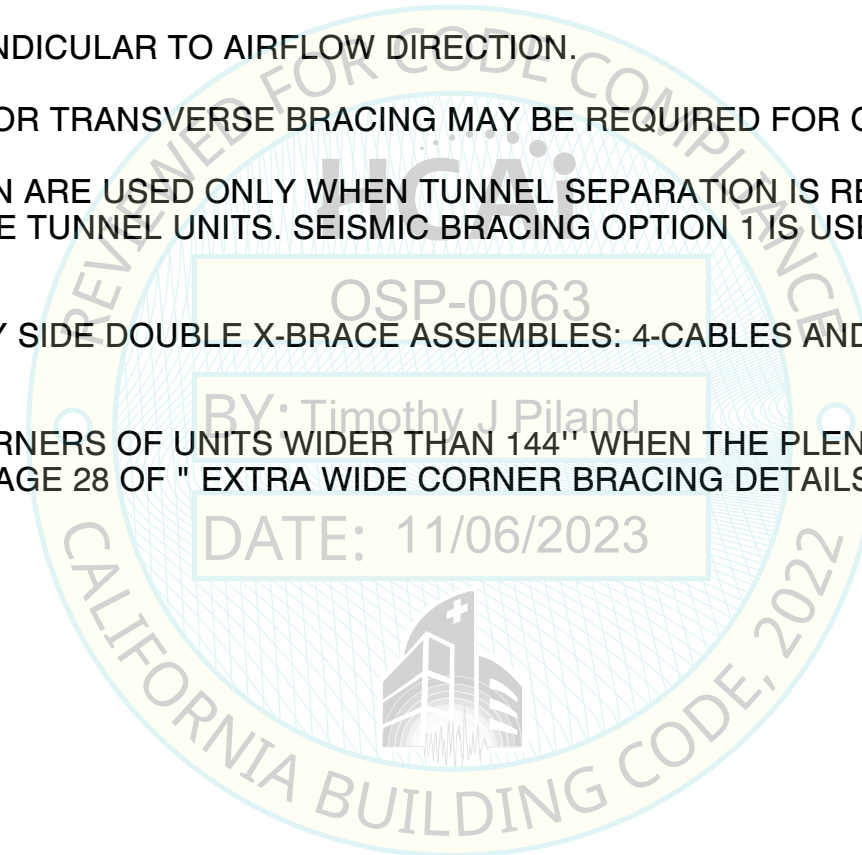
TRANSVERSE BRACING IS DEFINED AS THE BRACING PERPENDICULAR TO AIRFLOW DIRECTION.

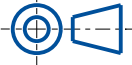

ON UNITS WHERE "XX" > 144" LONGITUDINAL BRACING AND/OR TRANSVERSE BRACING MAY BE REQUIRED FOR OSHPD APPROVAL.

INTERNAL DIVIDER WALL OR EXTERNAL WALL CONSTRUCTION ARE USED ONLY WHEN TUNNEL SEPARATION IS REQUIRED AS SHOWN IN THE CONFIGURATION DRAWINGS FOR DUAL TUNNEL / CENTER VESTIBULE UNITS AND MULTIPLE TUNNEL UNITS. SEISMIC BRACING OPTION 1 IS USED IN ALL OTHER CASES AS THE PRIMARY SEISMIC BRACING METHOD.

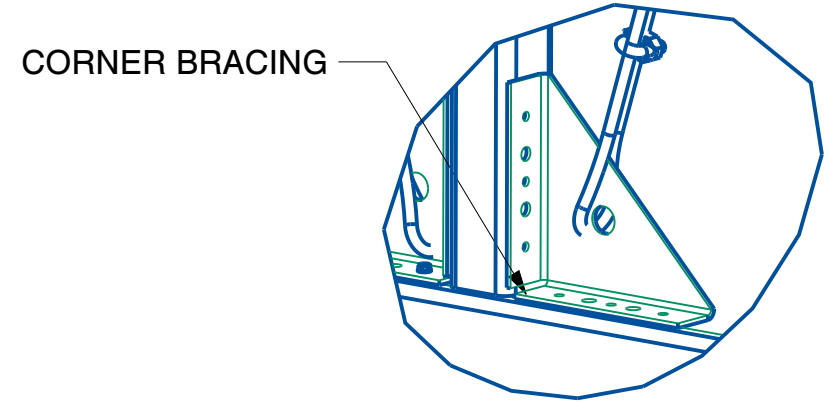
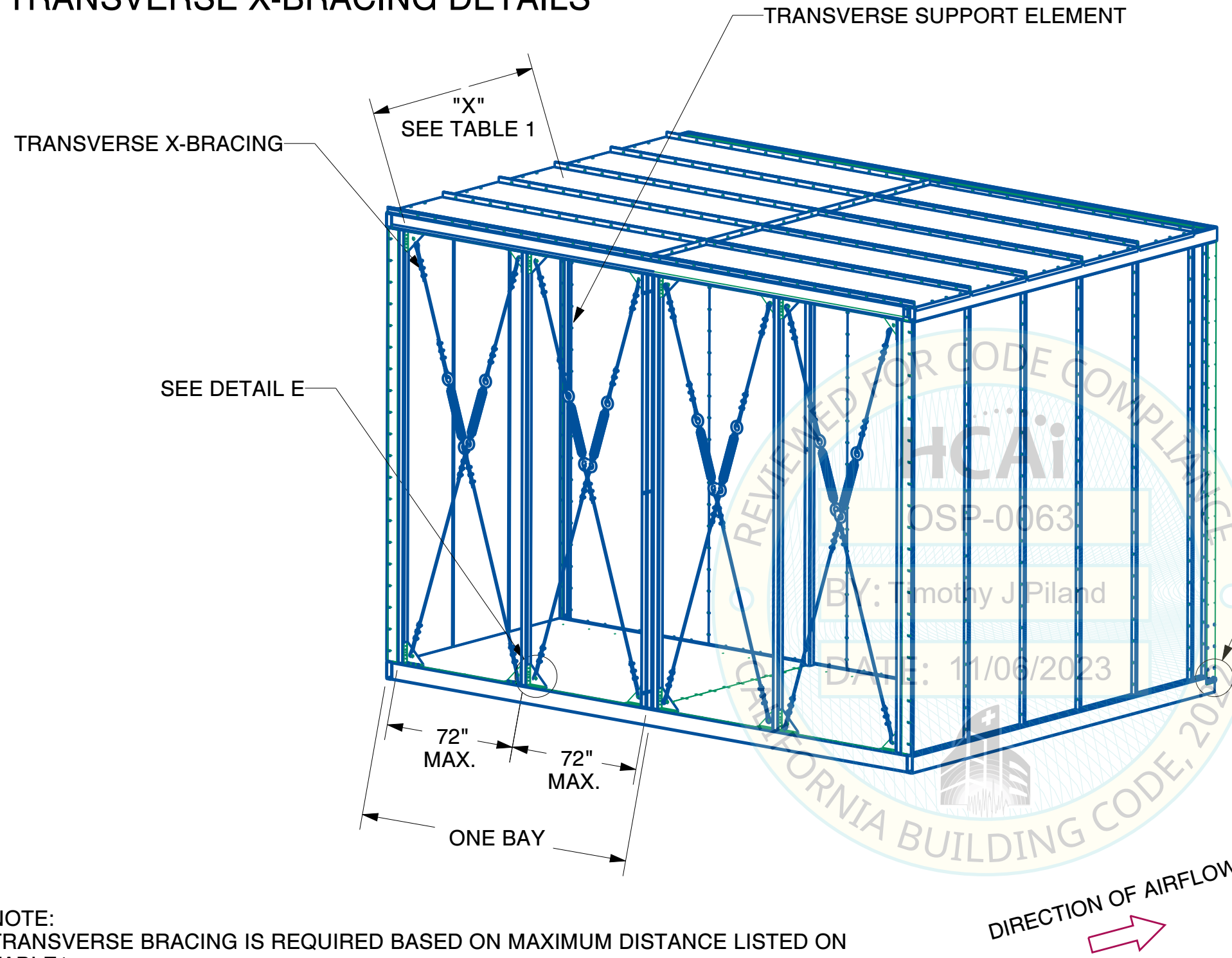
X-BRACING IS REQUIRED TO BE "DOUBLE" X-BRACES (SIDE BY SIDE DOUBLE X-BRACE ASSEMBLES: 4-CABLES AND 4- POSTS) AT ALL INTERIOR SECTIONS; LONGITUDINAL OR TRANSVERSE AND AT ANY EXTERIOR ADJOINING SECTIONS.

EXTERNAL CORNER BRACING IS REQUIRED ON ALL FOUR CORNERS OF UNITS WIDER THAN 144" WHEN THE PLENUM WIDTH " XX " > 144". DETAILS OF TYPICAL CORNER BRACING CAN BE FOUND ON PAGE 28 OF " EXTRA WIDE CORNER BRACING DETAILS".



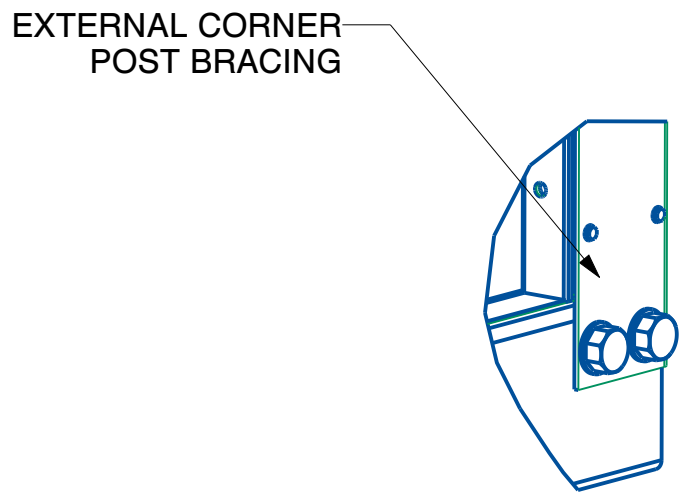
REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS			
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		APPR: H.B.	
E	DRAWING DETAILS , FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH		DATE: 03/26/2012	SIZE: B
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 24 OF 57	
G	OSHPD-REV 2023	NA	LB	08/16/2023							
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# TRANSVERSE X-BRACING DETAILS



DETAIL E  
SCALE 0.200

NOTE:  
EXTERNAL CORNER POST BRACING  
IS REQUIRED FOR UNITS  
GREATER THAN 144" WIDE.  
SEE DETAIL C



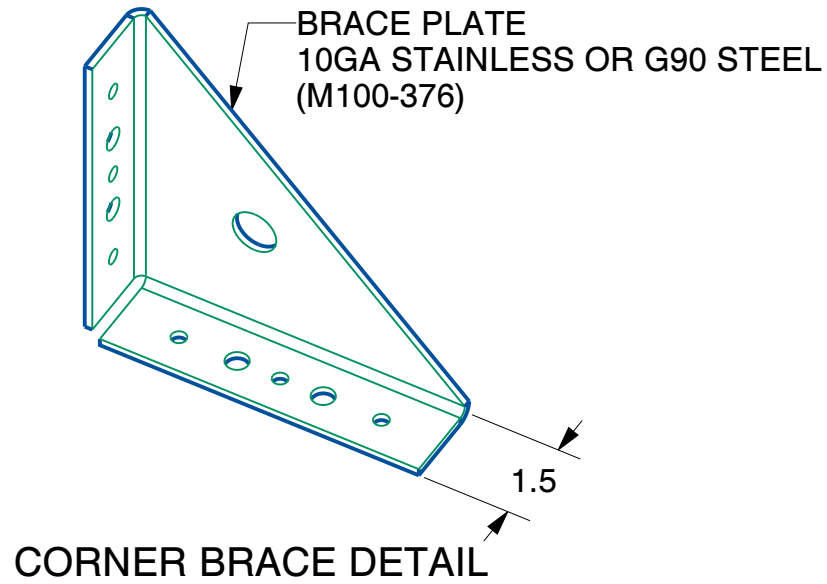
DETAIL C  
SCALE 0.200

NOTE:  
TRANSVERSE BRACING IS REQUIRED BASED ON MAXIMUM DISTANCE LISTED ON  
TABLE 1.

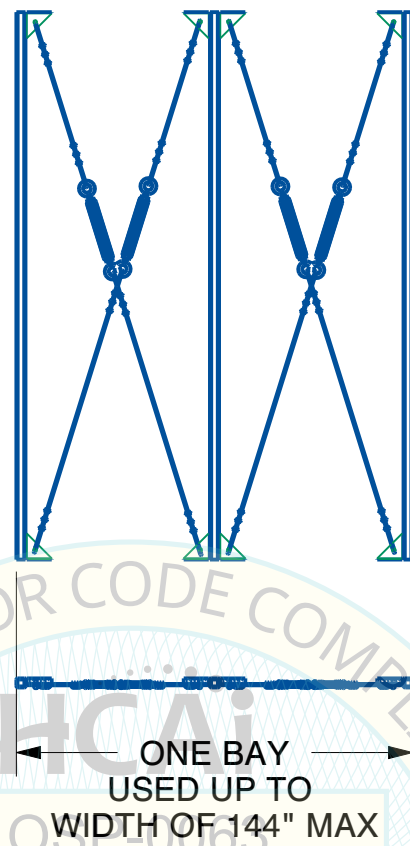
DIRECTION OF AIRFLOW  
➔

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS	
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	<b>ClimateCraft</b> P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01	
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				APPR: H.B.	
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				BY: AJH      DATE: 03/26/2012	
G	OSHPD-REV 2023	NA	LB	08/16/2023				SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED	
								SHEET: 25 OF 57	

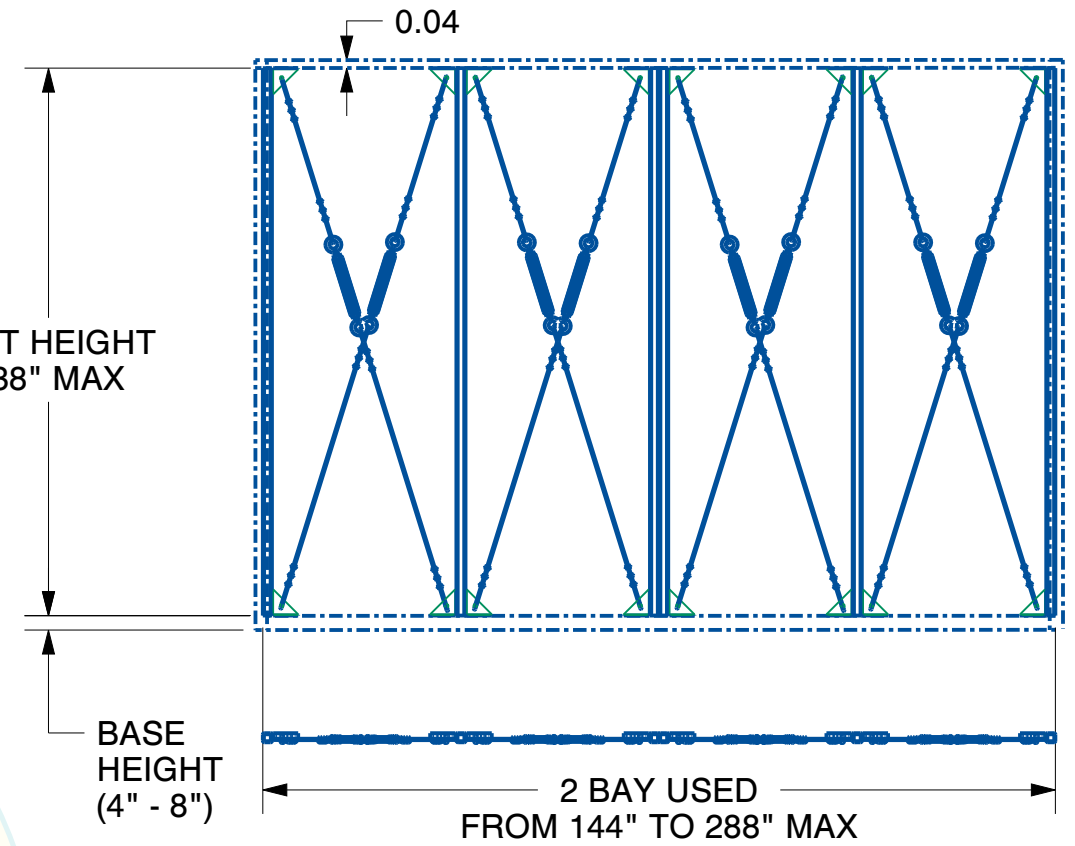
# OSHPD CABLE X-BRACE DETAILS FOR TRANSVERSE AND LONGITUDINAL BRACES



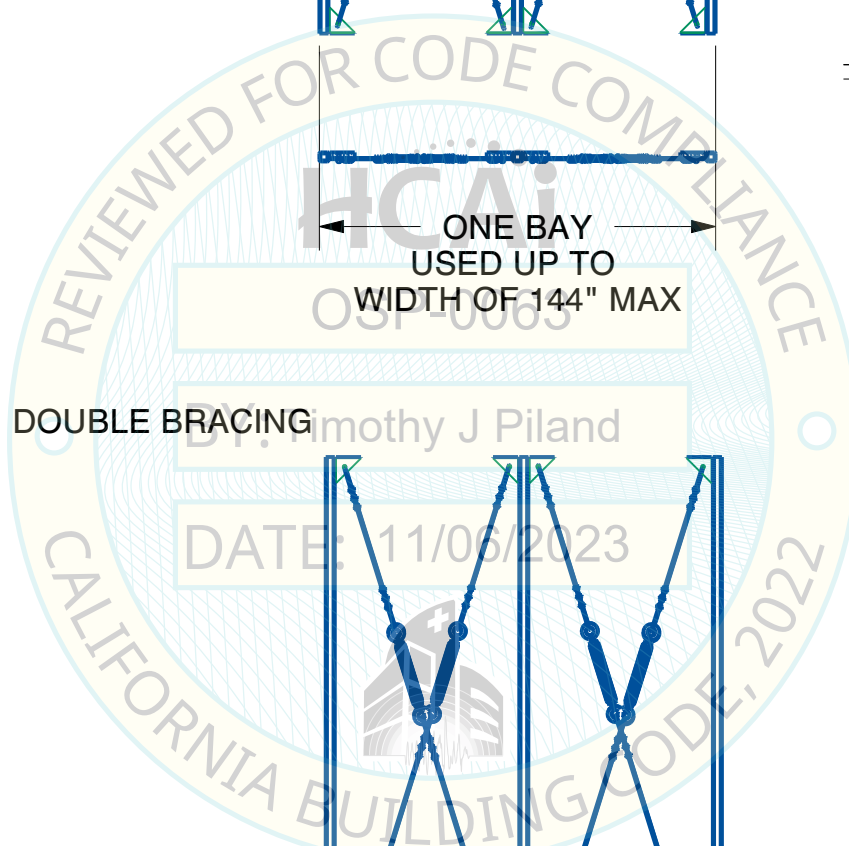
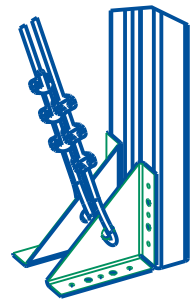
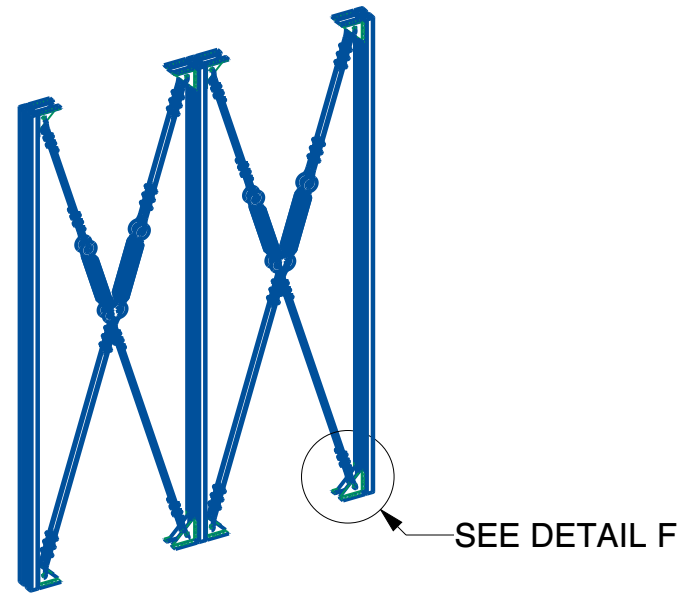
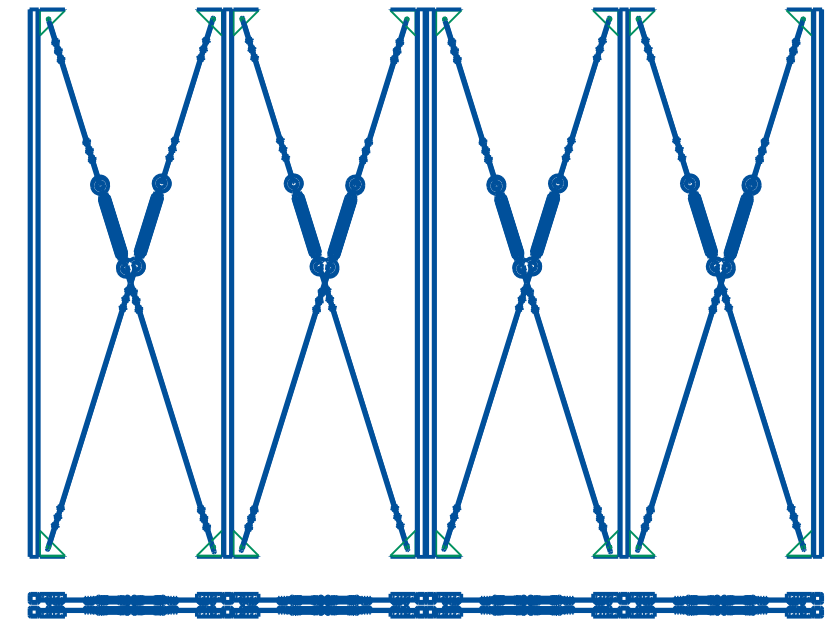
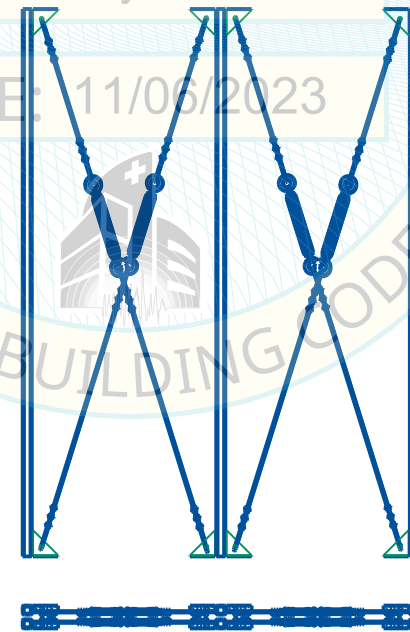
SINGLE BRACING



UNIT HEIGHT  
138" MAX



DOUBLE BRACING



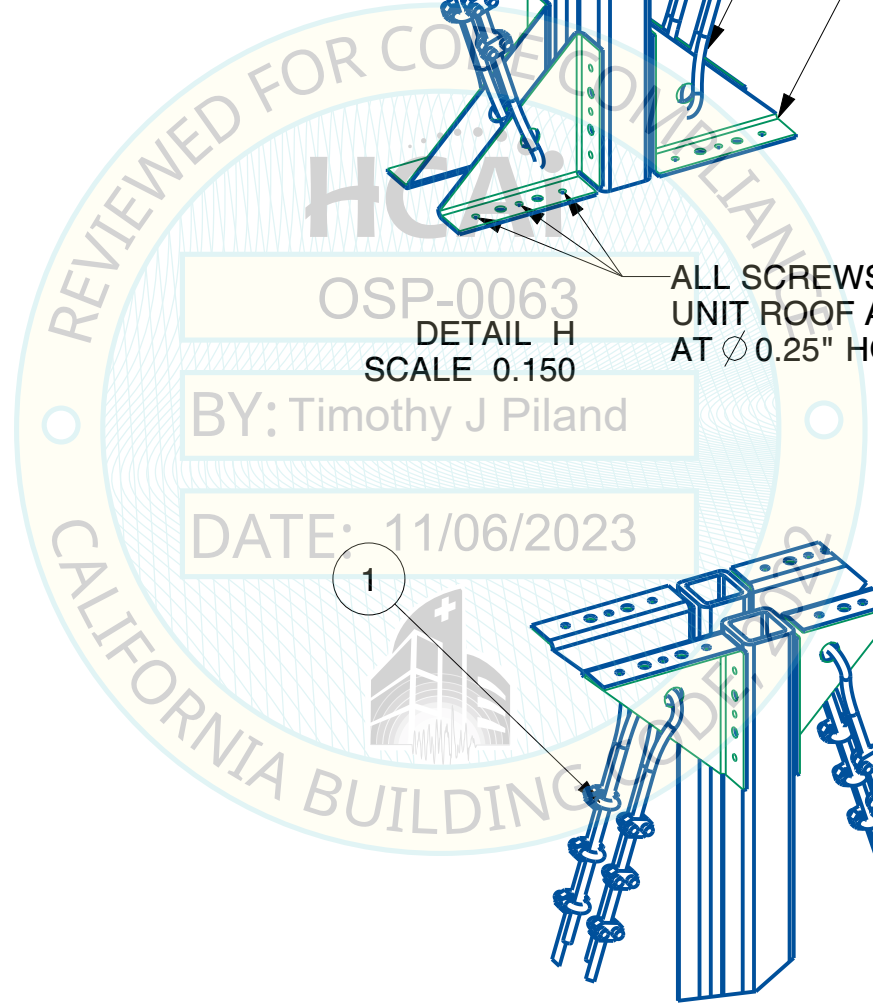
REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS		
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		APPR: H.B.
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH	DATE: 03/26/2012	SIZE: B
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 26 OF 57
G	OSHPD-REV 2023	NA	LB	08/16/2023						



NO	PART NUMBER	U/M	DESCRIPTION
1	PHWR-071-001	EA	5/16 Wire Rope Clips
2	PHWR-072-001	EA	7/8-9 Eye-Eye Turnbuckle
3	M100-376-001	EA	Corner Bracing Plate
4	PFAS-020-001	EA	#12-14 Self Tapping Screw, 3/4" Long
5	PHWR-073-001	EA	5/16 Wire Rope Thimble
6	PHWR-009-002	LF	5/16 Wire Rope, 5.83 Ft
7	PHWR-009-002	LF	5/16 Wire Rope, 8.08 Ft
8	PSTL-011-004	LF	Support Tube, 2 x 2 x 1/4 in wall Length = 137.785

### BRACING REQUIREMENTS:

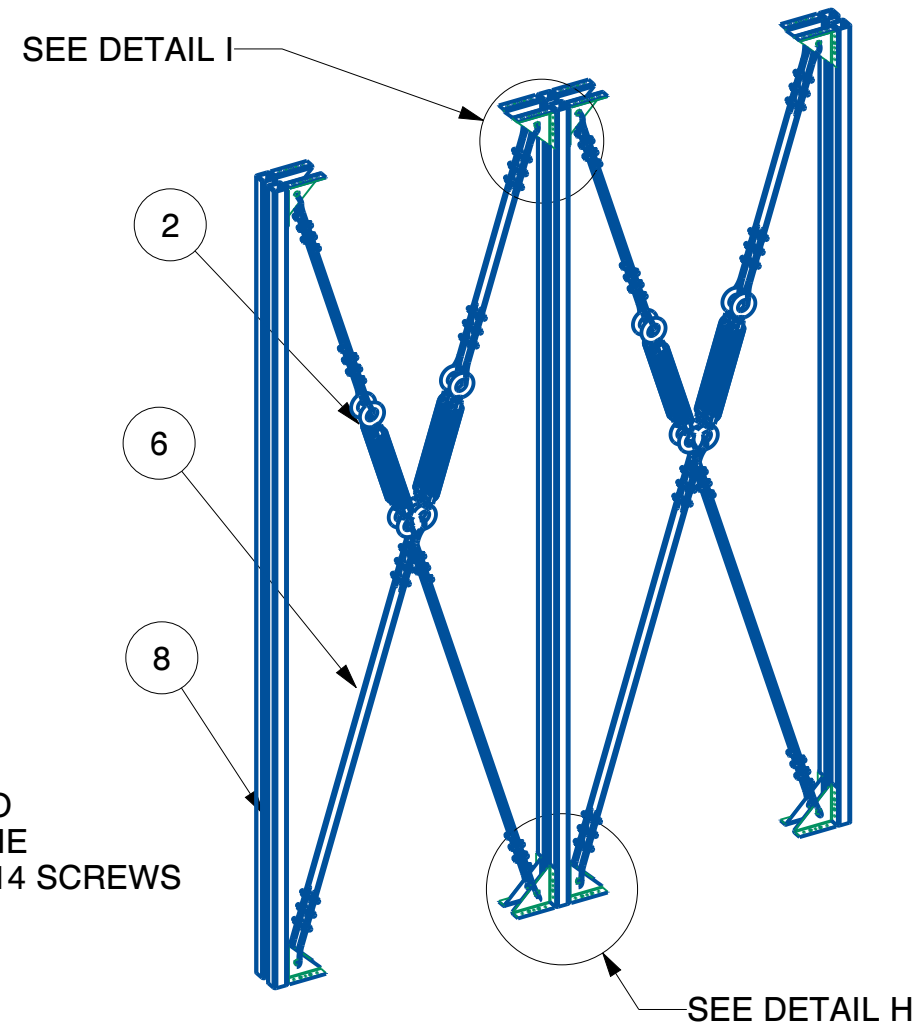
1. SPACING IS CALCULATED AS DIMENSION FROM ONE SIDE OF THE BRACE TO OPPOSITE SIDE OF THE BRACE. IT IS APPLICABLE FOR PLENUM LENGTH OR PLENUM WIDTH.
2. SINGLE BAY USED UP TO SPACING 144" MAX. ADDITIONAL BAY ADDED WHEN SPACING EXCEEDS 144" MAX.
3. TRANSVERSE SEISMIC BRACING IS REQUIRED BASED ON MAXIMUM DISTANCE LISTED ON TABLE 1.



OSP-0063  
 DETAIL H  
 SCALE 0.150  
 BY: Timothy J Piland  
 DATE: 11/06/2023

DETAIL I  
 SCALE 0.150

ALL SCREWS ATTACHING TO UNIT ROOF AND BASE FRAME AT  $\varnothing$  0.25" HOLE TO BE #12-14 SCREWS



DOUBLE BRACING - 1 BAY

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS		
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		APPR: RMW / PSL
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH	DATE: 03/26/2012	SIZE: B
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 27 OF 57
G	OSHPD-REV 2023		LB	08/16/2023						

**EXTRA WIDE UNIT CORNER BRACING DETAIL  
FOR UNITS WHERE "XX" > = 144"**

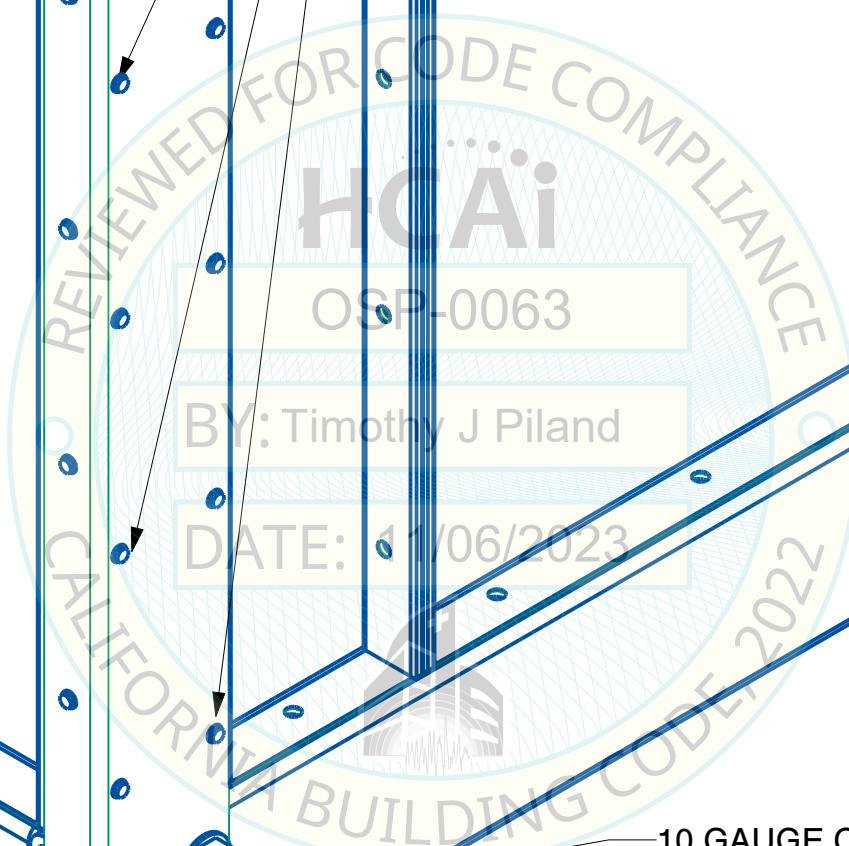
TYPICAL CLIMATE  
CRAFT WALL PANEL  
16 GAUGE MATERIAL

12-14 SELF TAPPING  
SHEET METAL SCREW  
6" O.C. INTO STANDARD  
16 GAUGE CORNER POST

TYPICAL BASE  
PERIMETER TUBE

10 GAUGE CORNER  
POST BRACING  
TYP ALL 4 EXTERNAL  
CORNERS

DIRECTION OF AIRFLOW  
➔



REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS			
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		APPR: H.B.	
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH		DATE: 03/26/2012	SIZE: B
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 28 OF 57	
G	OSHPD-REV 2023	NA	LB	08/16/2023							

# CROSS SECTIONAL VIEW OF WIDE TUNNEL UNIT WITH TRANSVERSE AND LONGITUDINAL BRACING

**NOTE:**

TRANSVERSE SEISMIC BRACING IS REQUIRED BASED ON THE MAXIMUM DISTANCE LISTED ON TABLE 1.

TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL, OR UNIT END WALL

DOUBLE LONGITUDINAL SEISMIC CABLE BRACING (X-BRACE) IS REQUIRED ON UNITS WIDER THAN 144" ONLY IN DAMPERS, AIR BLENDERS AND PLENUM FANS SECTIONS.

**TABLE 1:**

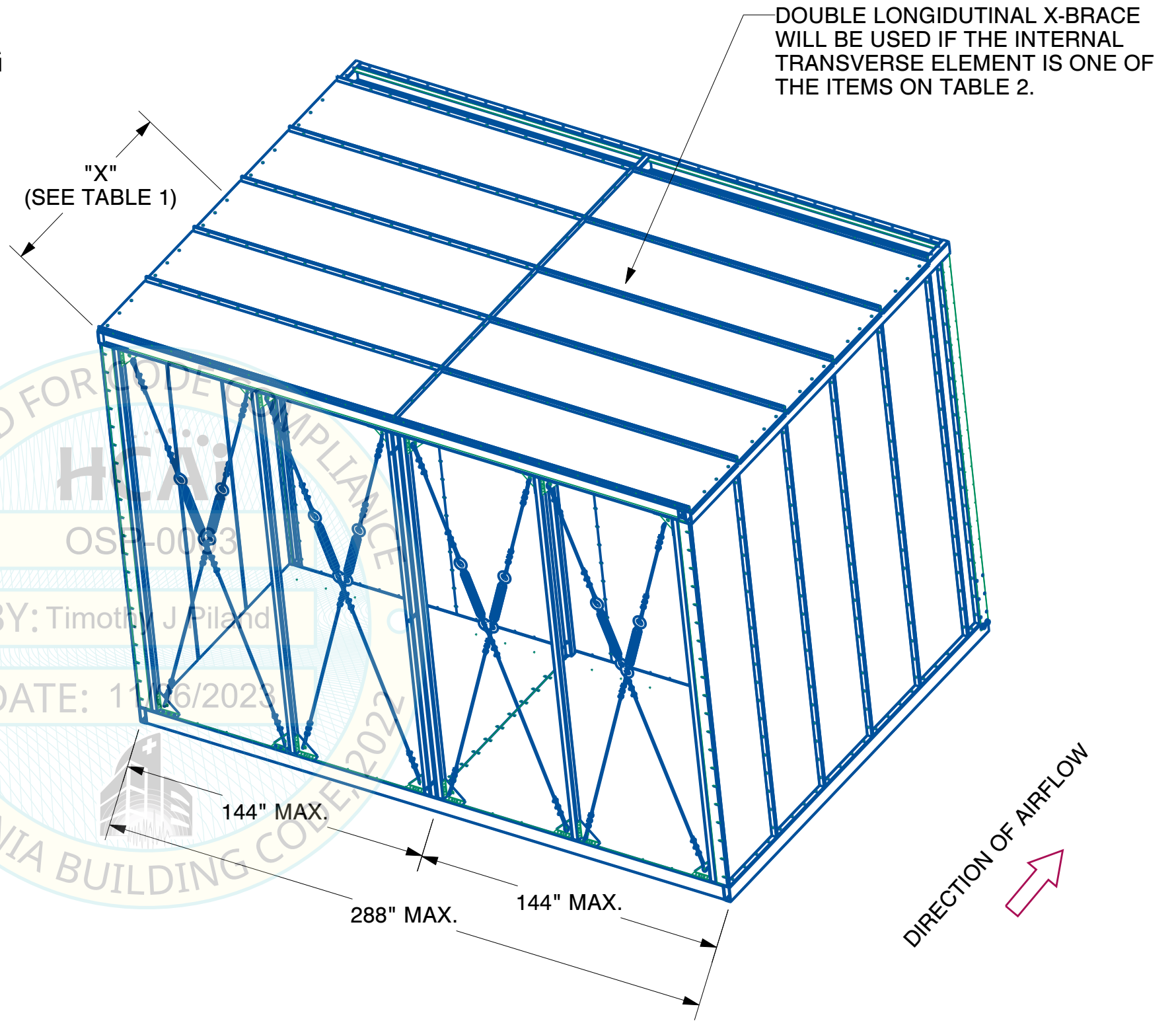
TRANSVERSE ELEMENT	"X " MAX (IN)
FAN MATRIX WALL	72
FILTER AIRSEAL WALL	72
WATER COIL WALL	60
STEAM COIL WALL	60
PLENUM FAN WALL	72
SOUND ATTENUATOR	72
SINGLE TRANSVERSE BRACING ELEMENT	72
DOUBLE TRANSVERSE BRACING ELEMENT	72

**TABLE 1: MAX DISTANCES "X" FROM TRANSVERSE ELEMENT TO ANOTHER TRANSVERSE ELEMENT OR A TRANSVERSE CROSS BRACE CABLING.**

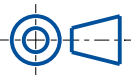

**TABLE 2:**

COMPONENTS	NEEDS DOUBLE LONGITUDINAL BRACING
DAMPER WALL	YES
AIR BLENDERS	YES
PLENUM FAN WALL	YES

**TABLE 2: INTERNAL COMPONENTS THAT NEED TO BE SUPPORTED BY DOUBLE LONGITUDINAL BRACING ON UNITS WIDTH GREATER THAN 144".**

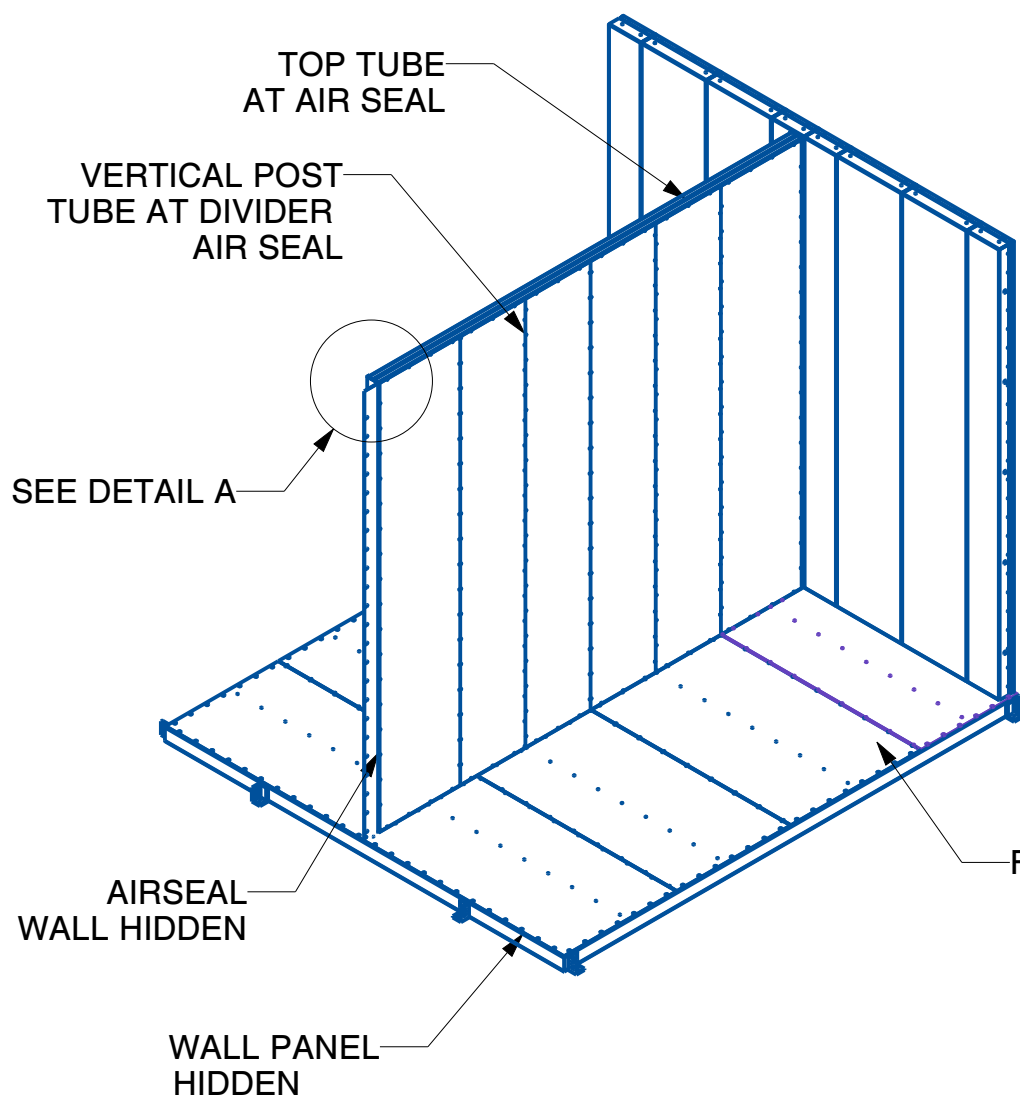


SCALE 0.030

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	SEISMIC BRACING DETAILS		
D	DRAWING DETAILS	N/A	BSZ	04/07/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: SBD01		
E	DRAWING DETAILS, FIRST OSP REV	N/A	BSZ	1/13/2022				BY: AJH	DATE: 03/26/2012	APPR: H.B.
F	DRAWING DETAILS, SECOND OSP REV	N/A	BSZ	5/25/2022				SIZE: B		
G	OSHPD-REV 2023	NA	LB	08/16/2023				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED	SHEET: 29 OF 57	

DIVIDER AIRSEAL ACTS AS LONGITUDINAL MEMBER

FACE SHEETS ARE HIDDEN AT THE VIEWING SIDE



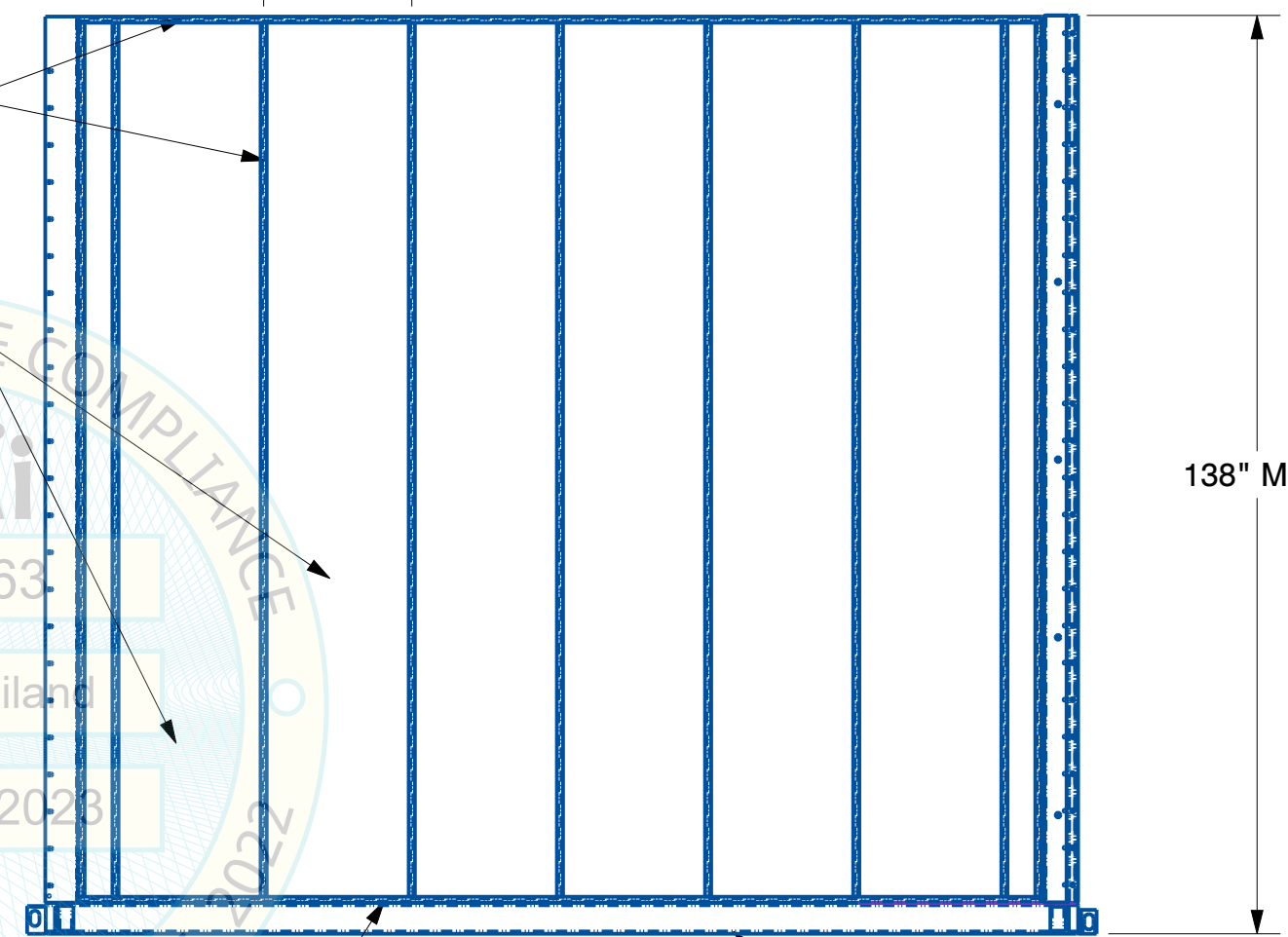
TUBES SPACING  
SEE TABLE BELOW

ALL OTHER TUBING IS  
1" x 2" GA GALV  
or S.S. TUBING

20 GA. SHEETS (TYP)  
TO FILL OPENING  
(MIN 6" TO 48")  
DIVIDER WALL  
AIRSEAL FACE SHEETS

FLOOR SHEET

138" MAX



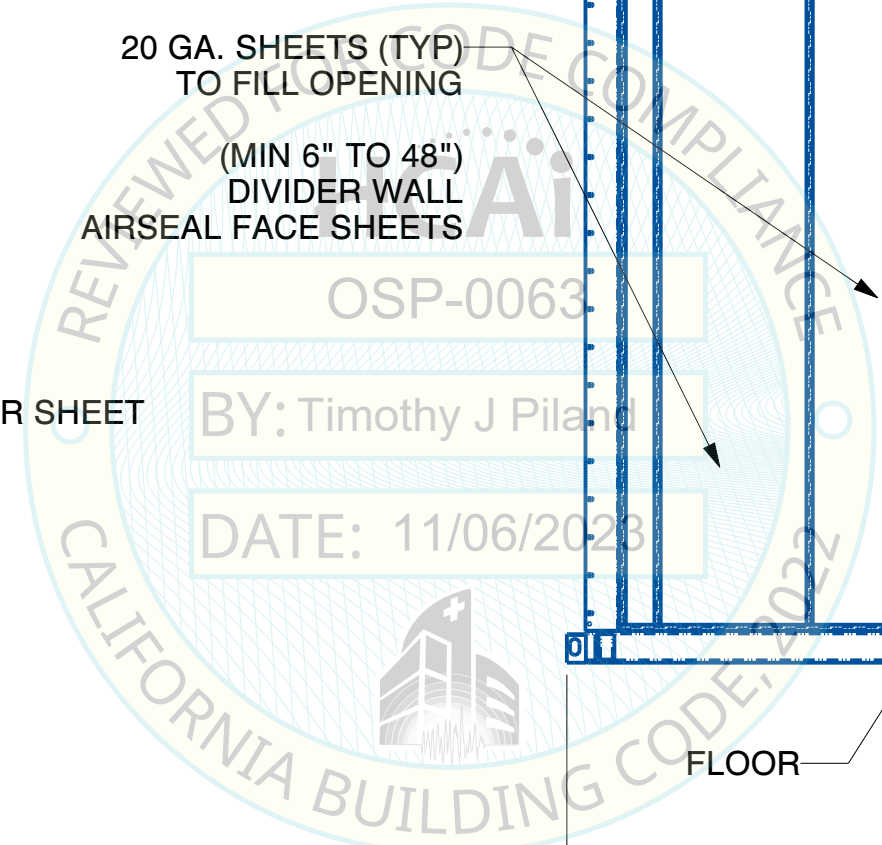
FLOOR

BASE TUBE

288" MAX

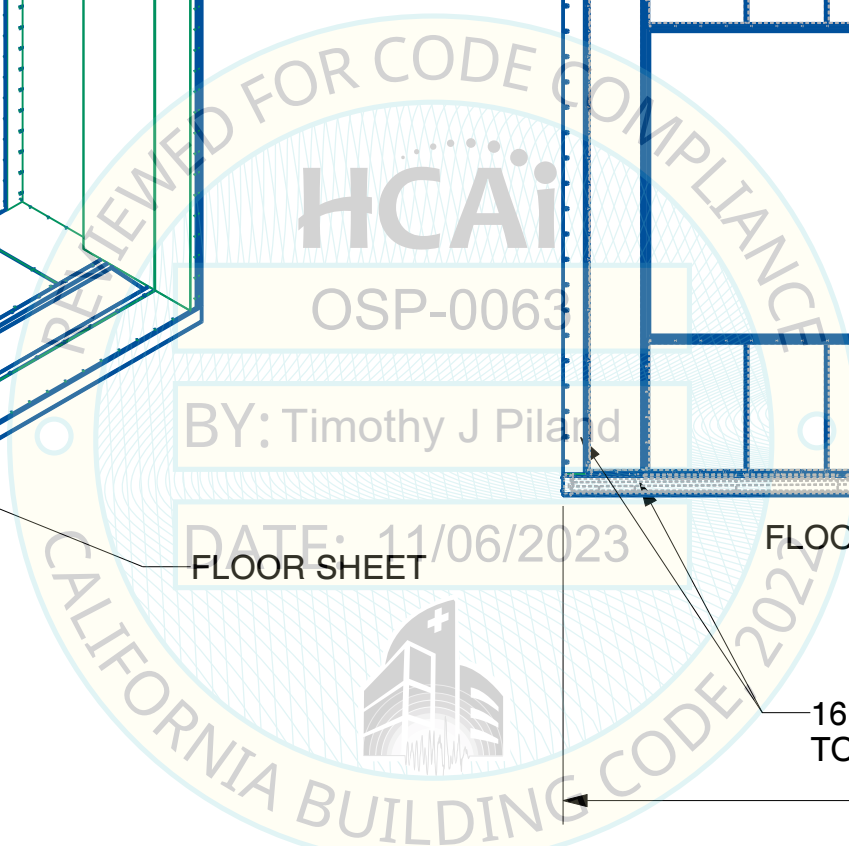
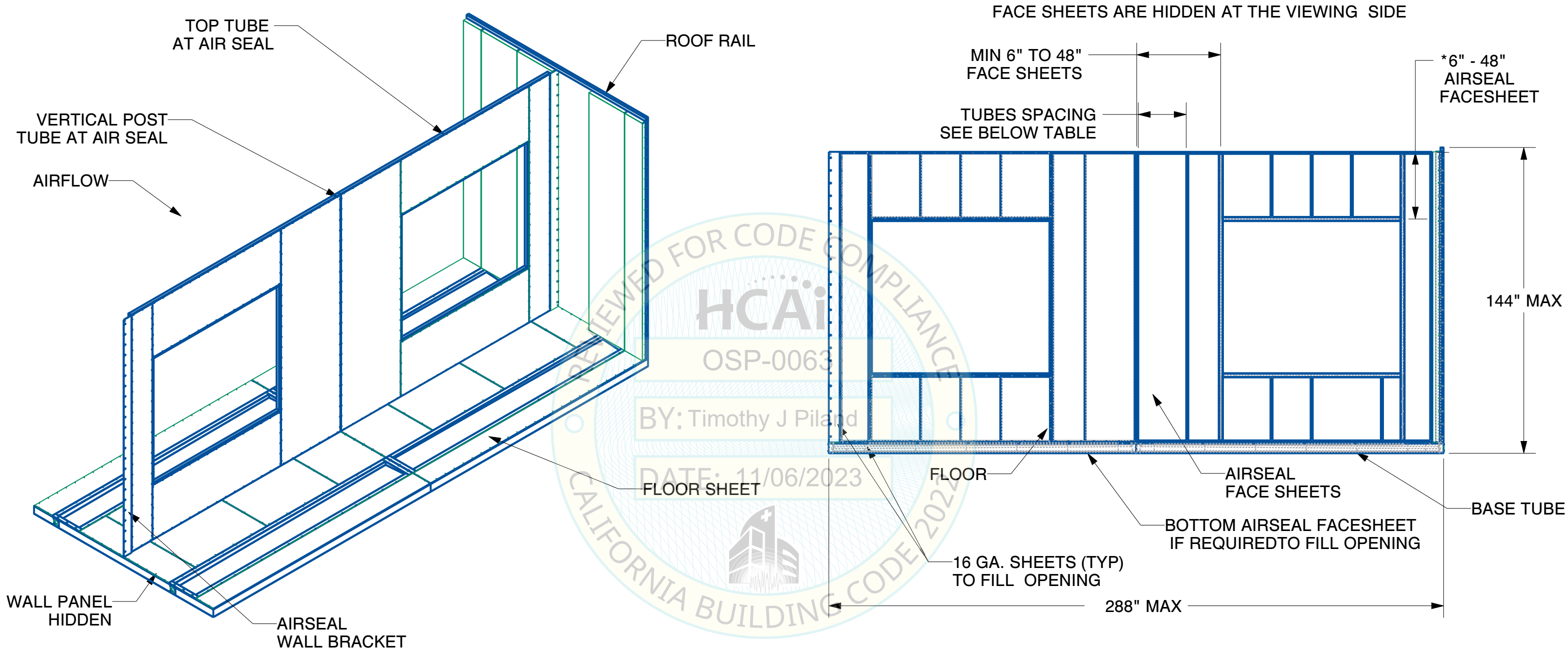
2" TUBE WELDED  
TOGETHER

DETAIL A  
SCALE 0.072



REV	DESCRIPTION	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	PRODUCTION DRAWING	4 INCH DIVIDER WALL AIRSEAL DETAILS			
A	INITIAL RELEASE	SZ-PC	08/22/2023		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	<b>ClimateCraft</b> P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	JOB NAME: N/A		FAB ID:	
B	OSHPD REV-2023	LB	08/25/2023				SERIAL #:	TAG:	SECTION #:	
							BY: SZ-PC	DATE: 08/22/2023	SIZE: B	
	11/06/2023						UNITS IN INCHES UNLESS OTHERWISE SPECIFIED			

# TYPICAL DESIGN FOR AIR BLENDERS , DAMPERS , SOUND ATTENUATORS , PLENUM FANS



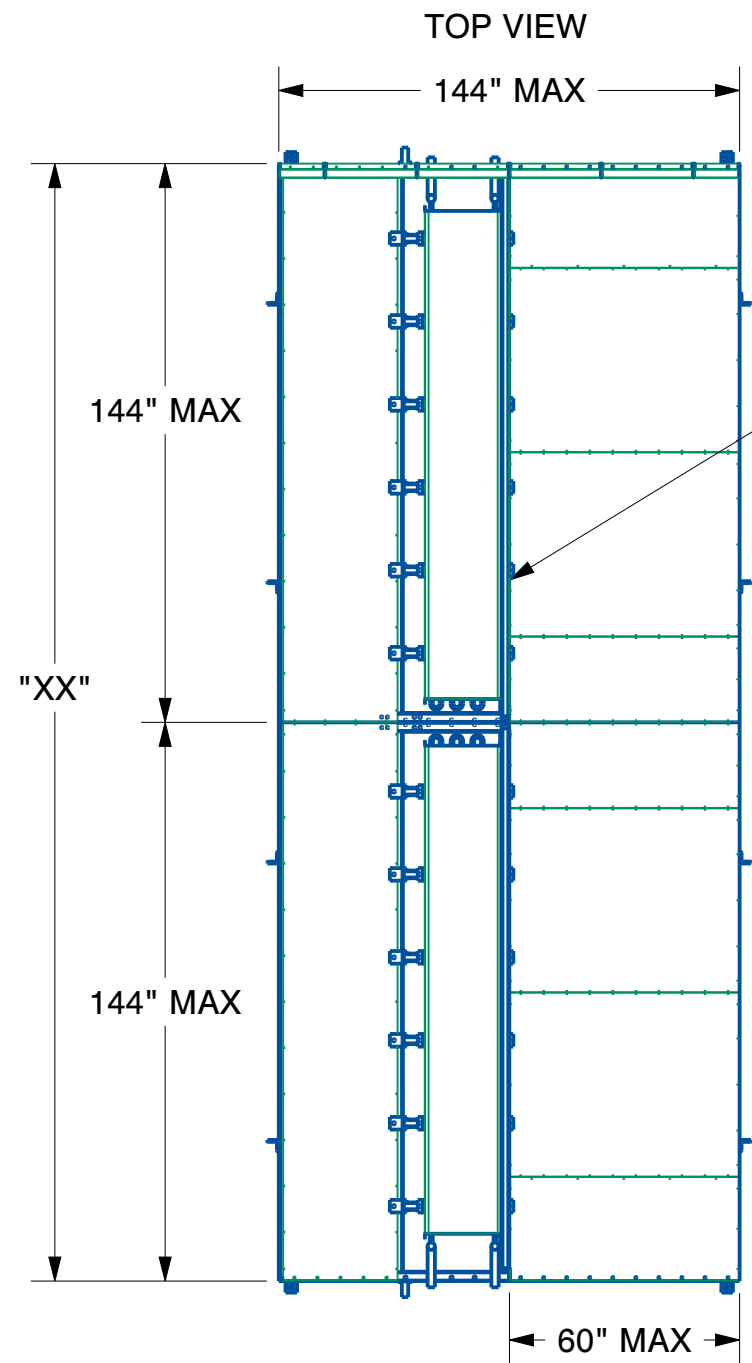
TUBE SPACING SCENARIOS	GENERAL TUBE CHOICE
AIRSEAL HEIGHT < 48", (LOW PRESSURE IN. W.C)	1x2 TUBE EVERY 24"
AIRSEAL HEIGHT < 48", (LOW PRESSURE IN. W.C OR BLOWER AIRSEAL)	2x2 TUBE EVERY 24"
AIRSEAL HEIGHT > 48", (LOW PRESSURE IN. W.C)	2x2 TUBE EVERY 24"
AIRSEAL HEIGHT > 48", (LOW PRESSURE IN. W.C OR BLOWER AIRSEAL)	2x2 TUBE EVERY 18"

- \* MULTIPLE SHEETS ABOVE (BELOW) MAY BE USED, AIRSEAL FACESHEET MUST EXTEND OR ADDED WIDTH OF OPENING
- \*\* SPACE MAY BE EMPTY IF AIRSEAL IS ONLY REQUIRED FOR RIGIDITY
- \*\*\* MIN 6" AIRSEAL FACESHEET EACH SIDE AND TOP FOR WIDTH ≤144", FOR WIDTH > 144" AS PER AIRSEAL REQUIRED SIZES.

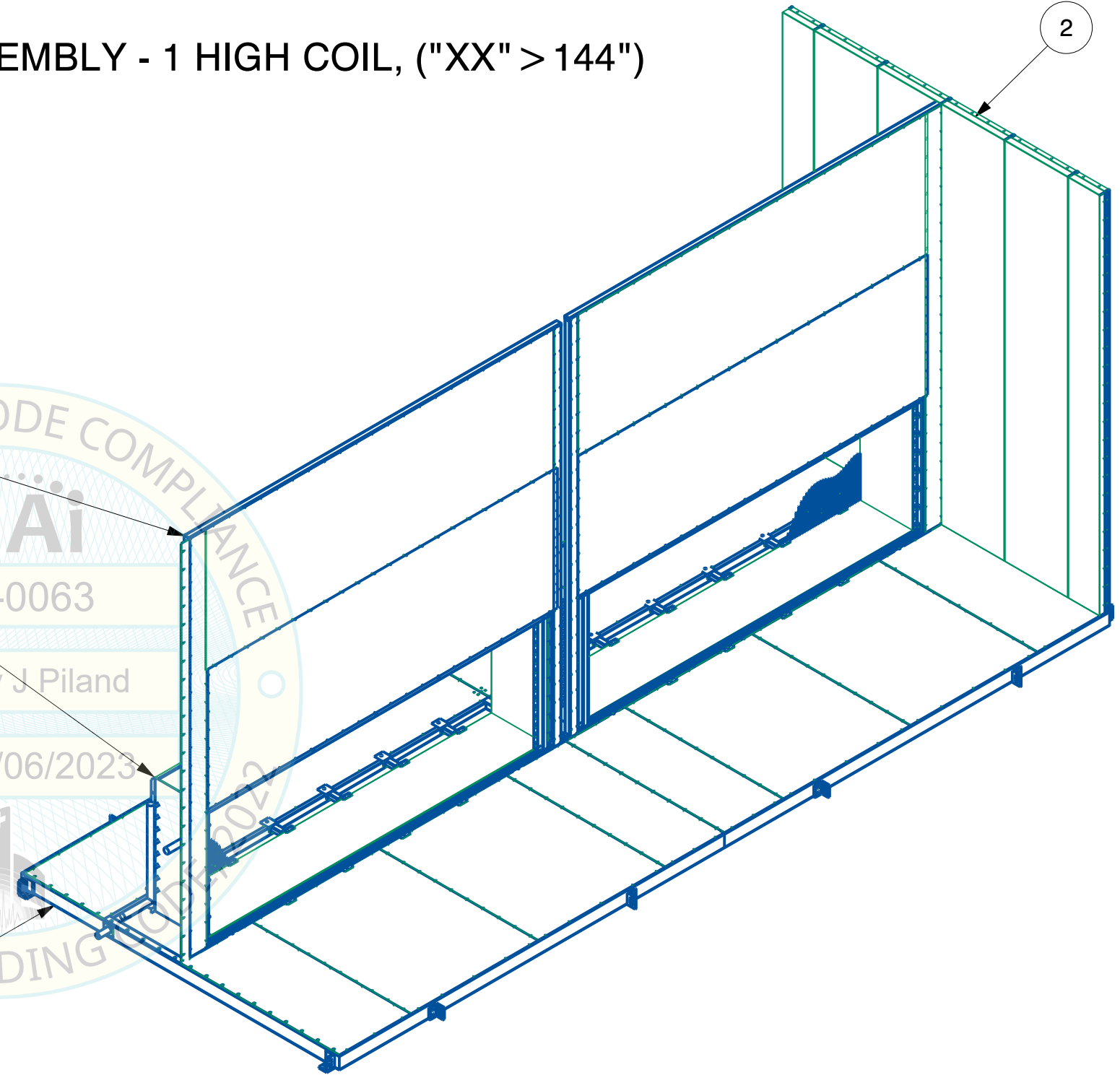
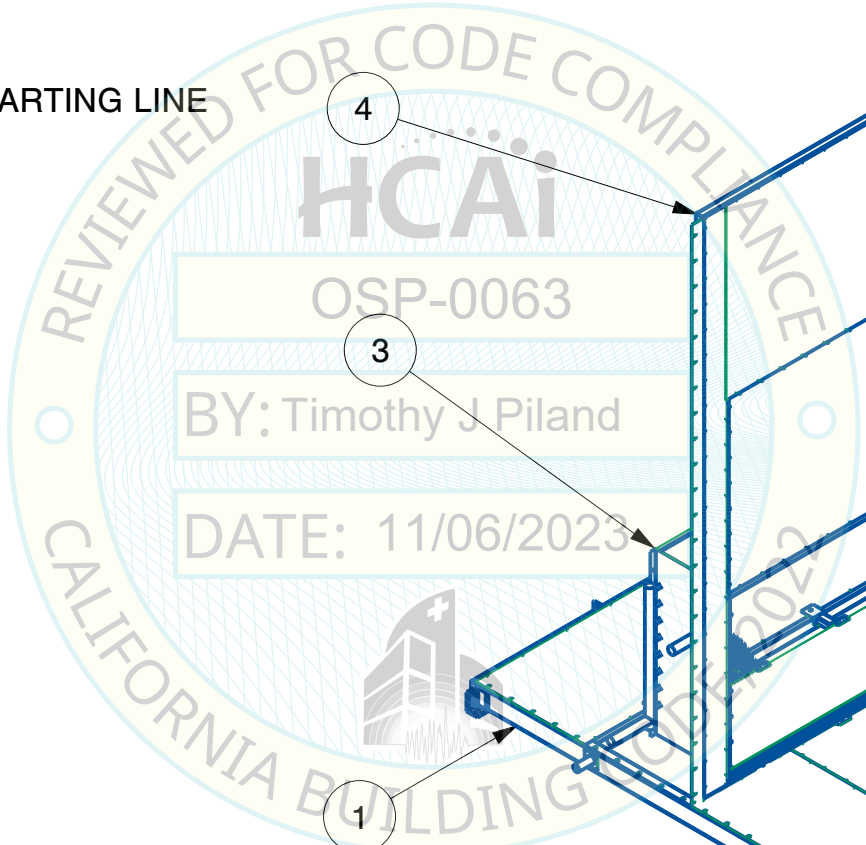
REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	OSHPD AIRSEAL DETAILS			
A	INITIAL RELEASE	-	-	04/08/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: AIRSEAL		APPR: PSL / RMW	
B	DRAWING UPDATE, OSP FIRST REV		BSZ	01/19/2022				BY: PSL		DATE: 04/08/2021	SIZE: B
C	OSHPD REV-2023		LB	08/24/2023				UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 32 OF 57	

ITEM NO	DESCRIPTION
1	BASEFRAME
2	WALL PANELS
3	WATER COIL
4	WATER COIL AIRSEAL

## WATER COIL UNIT ASSEMBLY - 1 HIGH COIL, ("XX" > 144")



COIL RACK STARTING LINE



**NOTES:**

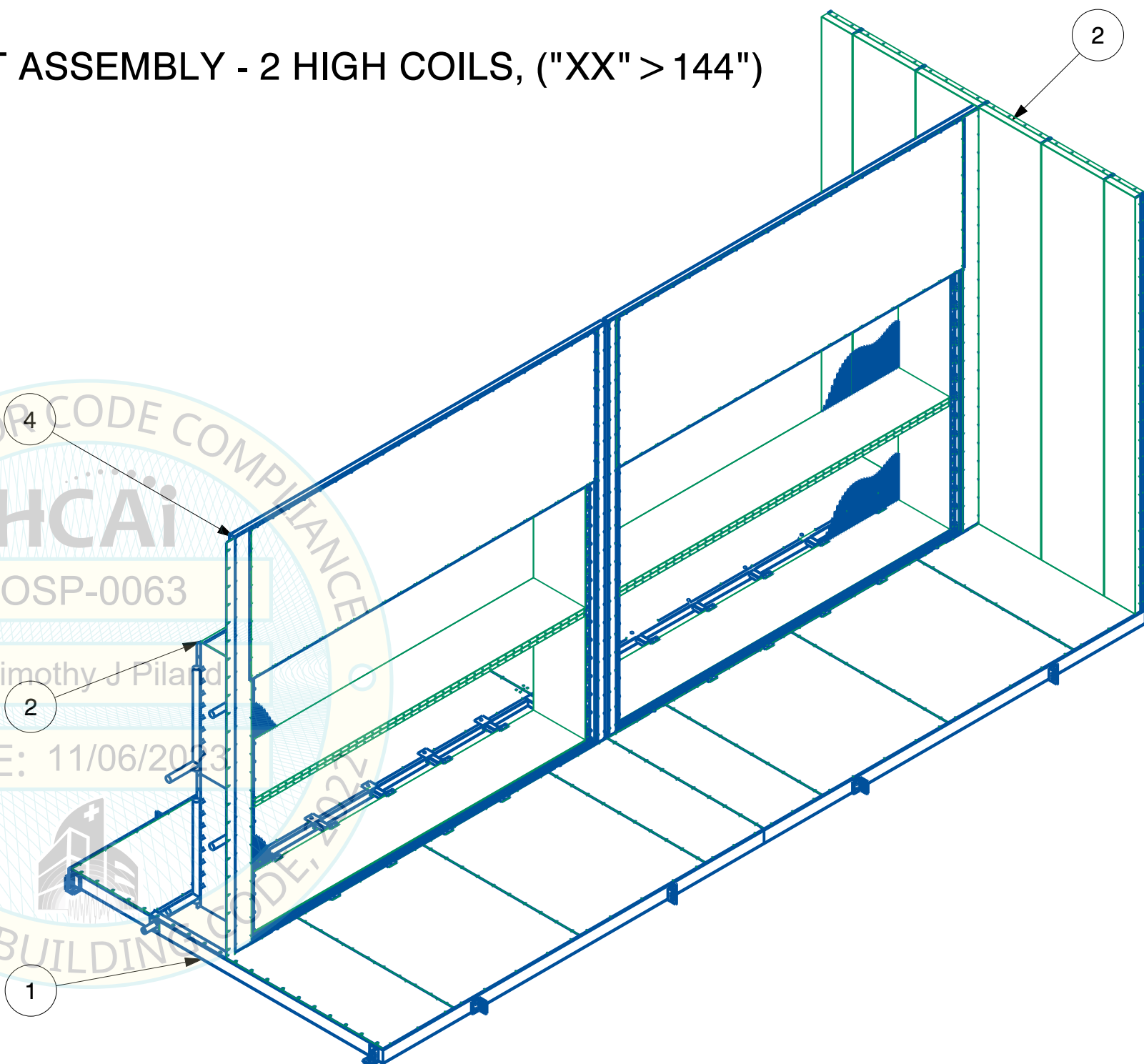
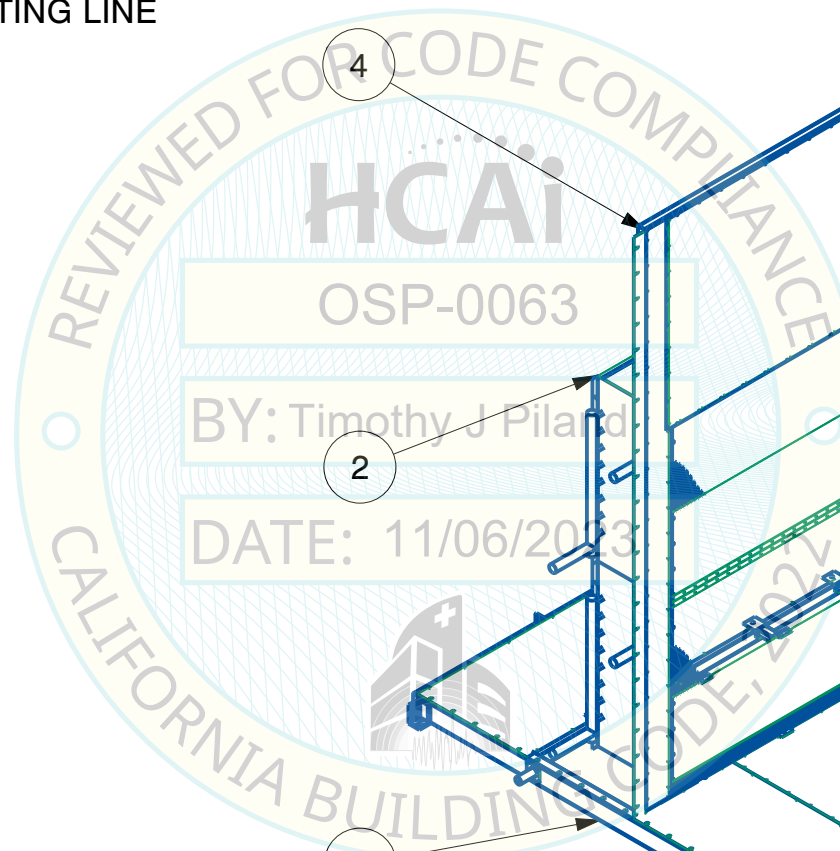
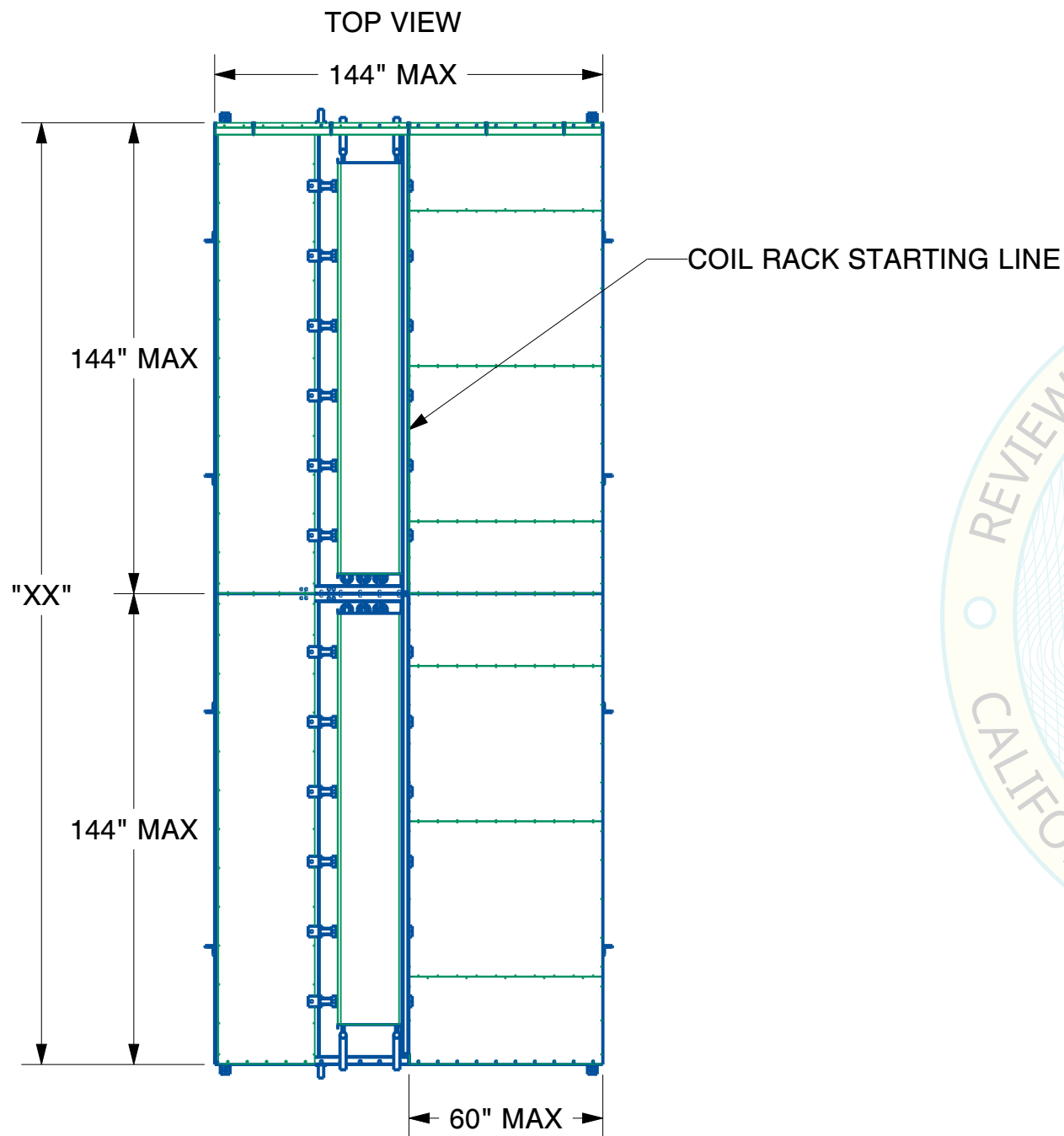
1. NO COIL BRACING IS REQUIRED ON 1 HIGH COIL,
2. 60" MAX SPACING ALLOWED FROM COIL FACE (IN THE AIRFLOW DIRECTION) BEFORE A TRANSVERSE BRACING ELEMENT IS REQUIRED.
3. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL OR UNIT END WALL.

MAX 60" BEFORE TRANSVERSE ELEMENT IS REQUIRED

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 33 OF 57		

ITEM NO	DESCRIPTION
1	BASEFRAME
2	WALL PANELS
3	WATER COIL
4	WATER COIL AIRSEAL

## WATER COIL UNIT ASSEMBLY - 2 HIGH COILS, ("XX" > 144")



**NOTES:**

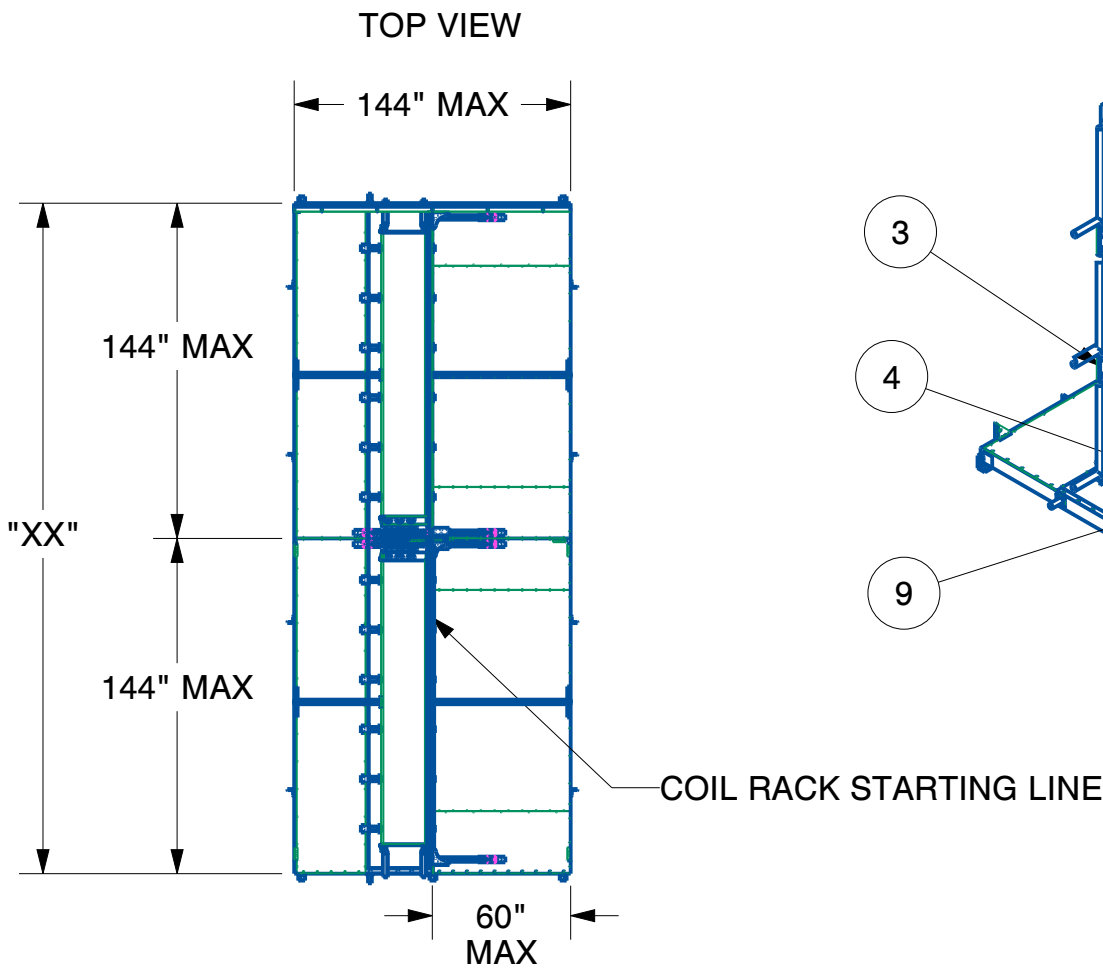
1. NO COIL BRACING IS REQUIRED ON 1 HIGH COIL,
2. 60" MAX SPACING ALLOWED FROM COIL FACE (IN THE AIRFLOW DIRECTION) BEFORE A TRANSVERSE BRACING ELEMENT IS REQUIRED.
3. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL OR UNIT END WALL.

MAX 60" BEFORE TRANSVERSE ELEMENT IS REQUIRED

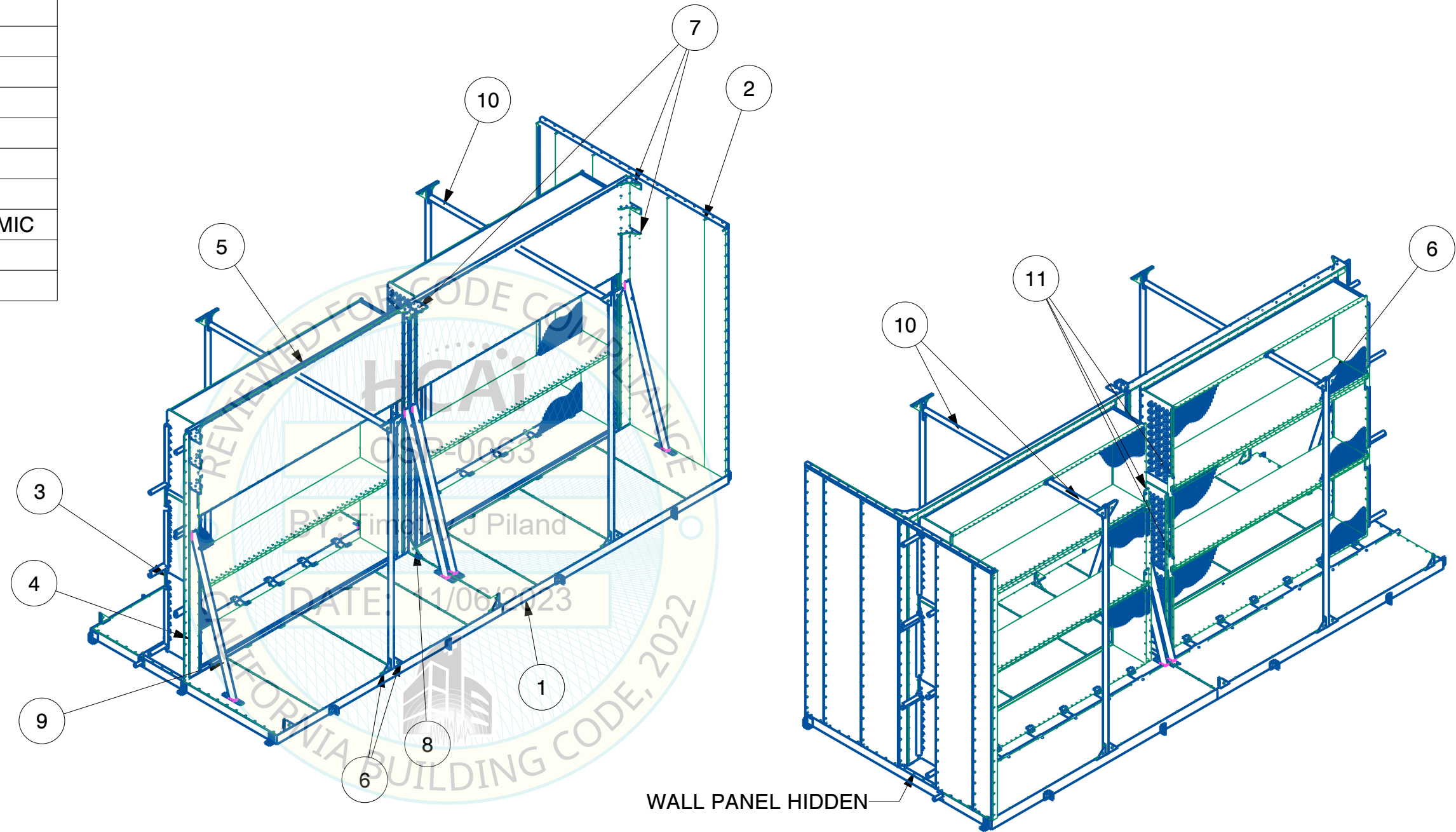
REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 34 OF 57		

# WATER COIL UNIT ASSEMBLY - 3 HIGH COILS, ("XX" > 144")

ITEM NO	DESCRIPTION
1	BASEFRAME
2	WALL PANELS
3	WATER COIL
4	WATER COIL AIRSEAL
5	ROOF SEISMIC COIL BRACE
6	CORNER BRACE
7	COIL GUSSET
8	COIL CORNER GUSSET
9	A-BRACE SIDE ASSY WELDMENT SEISMIC
10	LATERAL BRACING
11	SEISMIC COIL BRACKET



MAX 60" BEFORE TRANSVERSE ELEMENT IS REQUIRED

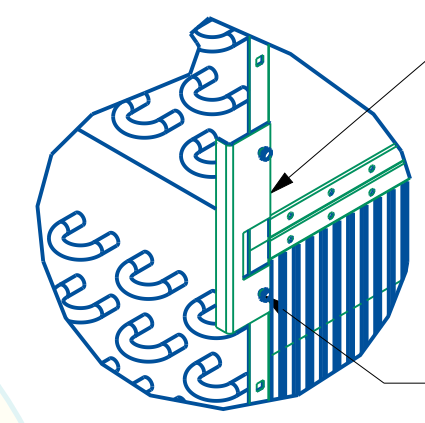
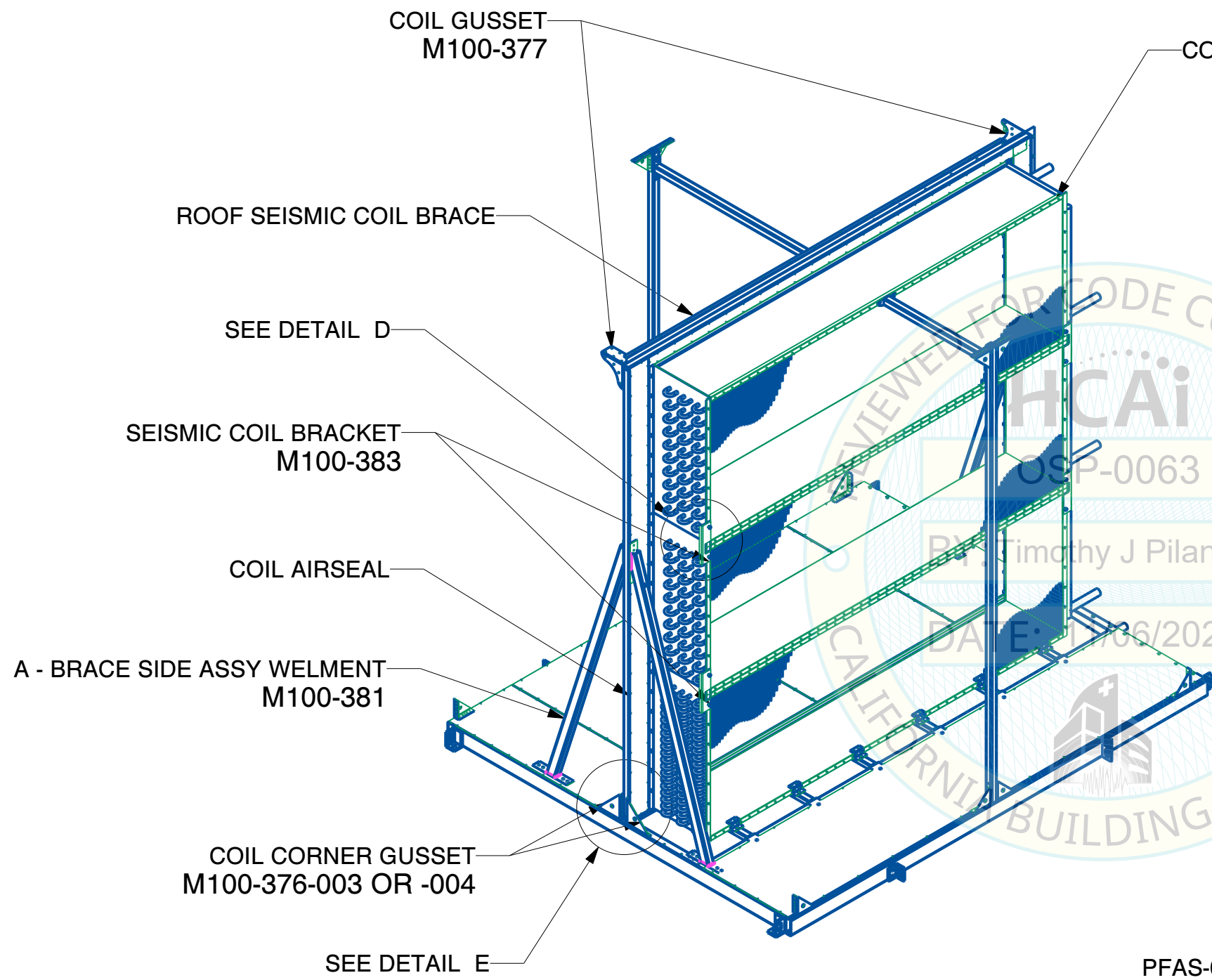


**NOTE:**

1. 60" MAX SPACING ALLOWED FROM COIL FACE (IN THE AIRFLOW DIRECTION) BEFORE A TRANSVERSE BRACING ELEMENT IS REQUIRED.
2. TRANSVERSE SUPPORT ELEMENTS ARE CONSIDERED AS ANY X-BRACE, FAN WALL, SOUND ATTENUATOR WALL, COIL, BLENDER WALL, DAMPER WALL, FILTER WALL OR UNIT END WALL.

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS		
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR	DATE: 04/21/2021	SIZE: B
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 35 OF 57

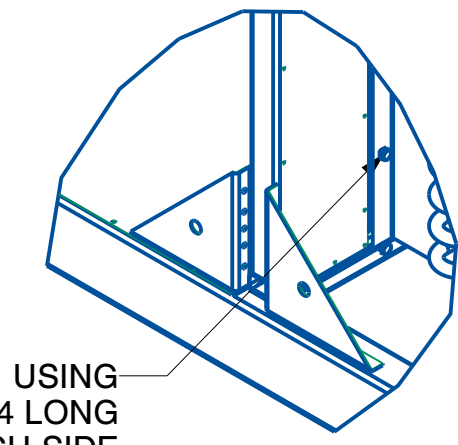




DETAIL D  
SCALE 0.100

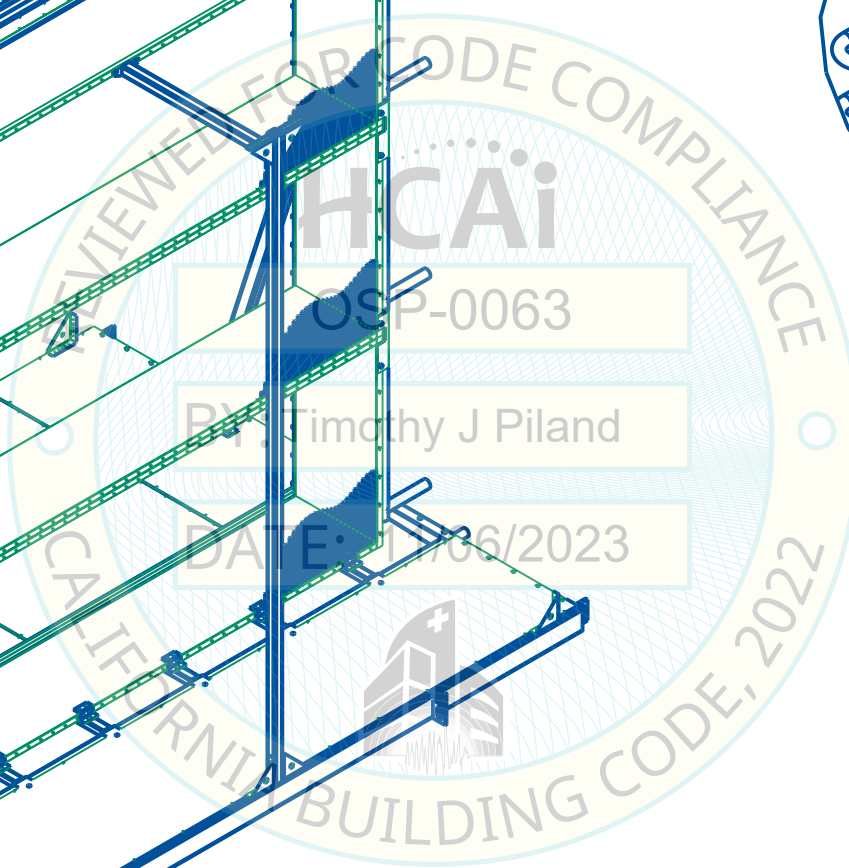
SEISMIC COIL BRACKET  
M100-383

PFAS-034-002, 3/8"-16 BOLT,  
PFAS-014-006, FLAT WASHER,  
PFAS-015-005, SPRING WASHER  
PFAS-017-003, HEX NUT



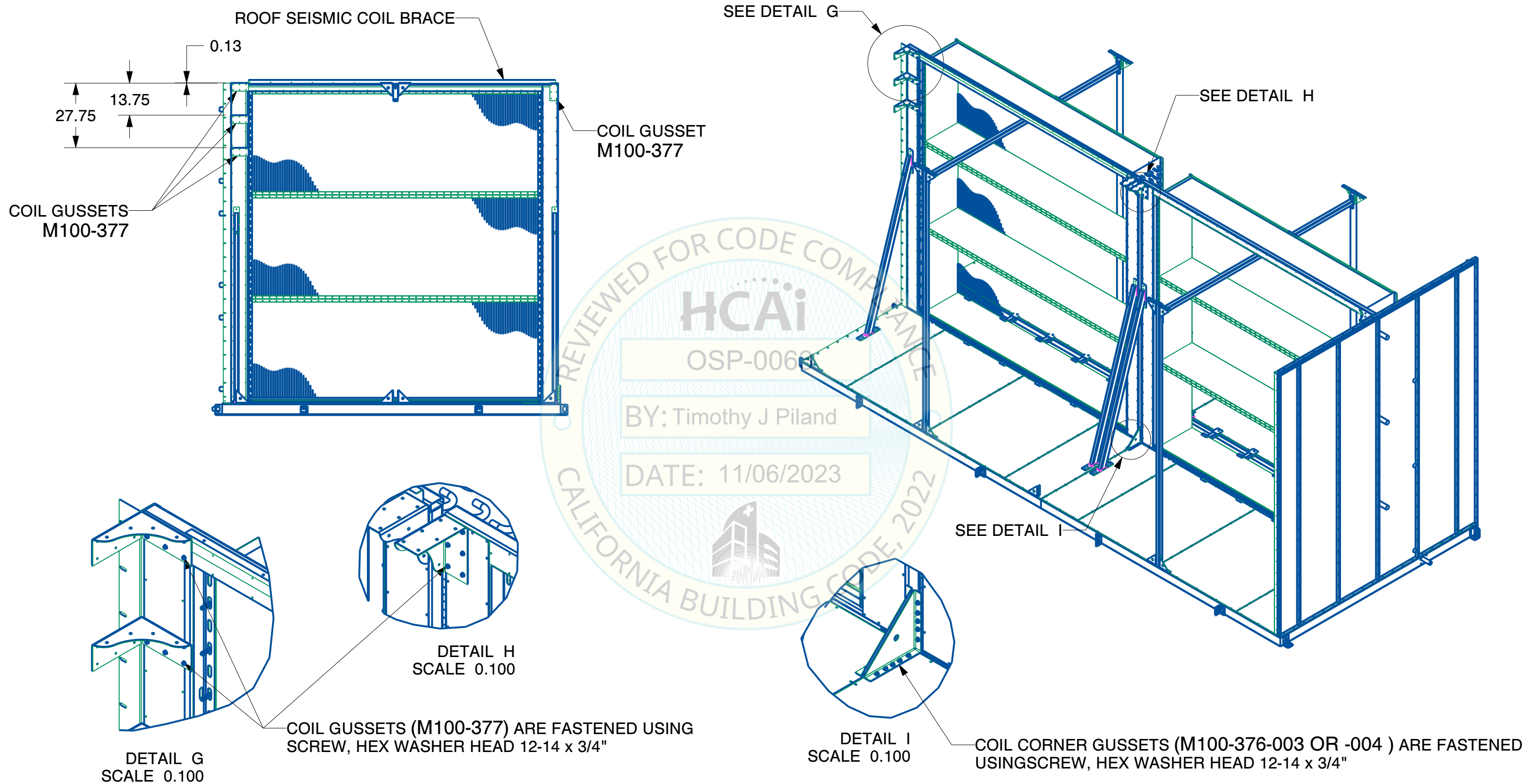
DETAIL E  
SCALE 0.100

COIL ASSEMBLED TO AIRSEAL USING  
PFAS-034-002, 3/8"-16 BOLT, 1-1/4 LONG  
PFAS-014-006, FLAT WASHER, ONE FOR EACH SIDE  
PFAS-015-005, SPRING WASHER  
PFAS-017-003, HEX NUT



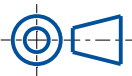

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 36 OF 57		

# COIL GUSSETS AND COIL CORNER GUSSETS DETAILS (3 HIGH COILS)



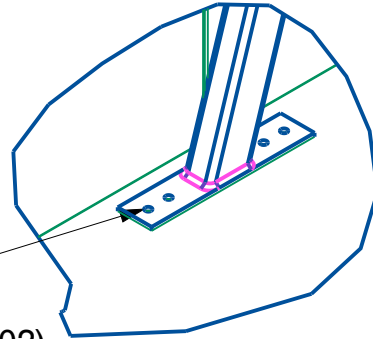
COIL GUSSETS (M100-377) ARE FASTENED USING SCREW, HEX WASHER HEAD 12-14 x 3/4"

COIL CORNER GUSSETS (M100-376-003 OR -004 ) ARE FASTENED USING SCREW, HEX WASHER HEAD 12-14 x 3/4"

REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 37 OF 57		

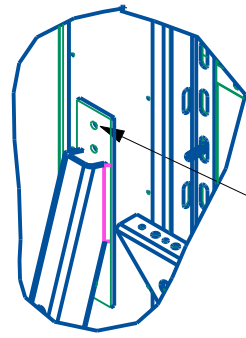
# A-BRACE SIDE ASSY, LATERAL BRACING MOUNTING DETAILS (3 HIGH COILS), ("XX" > 144")

BOTTOMS OF A - BRACES ARE FASTENED USING HEX, 3/8"-16 THREAD, 1-1/4" LONG, SS, BOLT (P/N: PFAS-034-002) FLAT WASHER (P/N: PFAS-014-006) TAP 3/8"-16 THREAD ON BASEFRAME FOR BOLT FASTENING



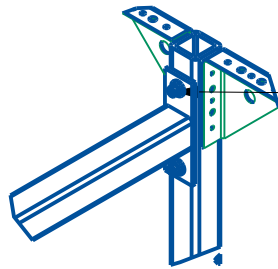
DETAIL A  
SCALE 0.100

TOPS OF A - BRACES ARE FASTENED USING HEX, 3/8" THREAD, 3-1/2" LONG, SS BOLT, WASHER (P/N: PFAS-014-006) ON EACH SIDE AND HEX NUT, 3/8"-16 (P/N: PFAS-017-003)



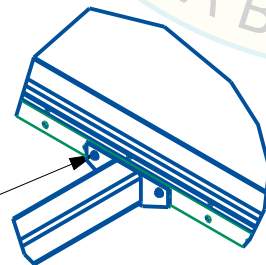
DETAIL B  
SCALE 0.100

SUPPORT SIDE LATERAL BRACINGS ARE FASTENED USING HEX BOLT, 5/16"-18 x 2 - 3/4", LOCK WASHER 5/16" AND HEX NUT, 5/16"-18 ON SUPPORT TUBE.

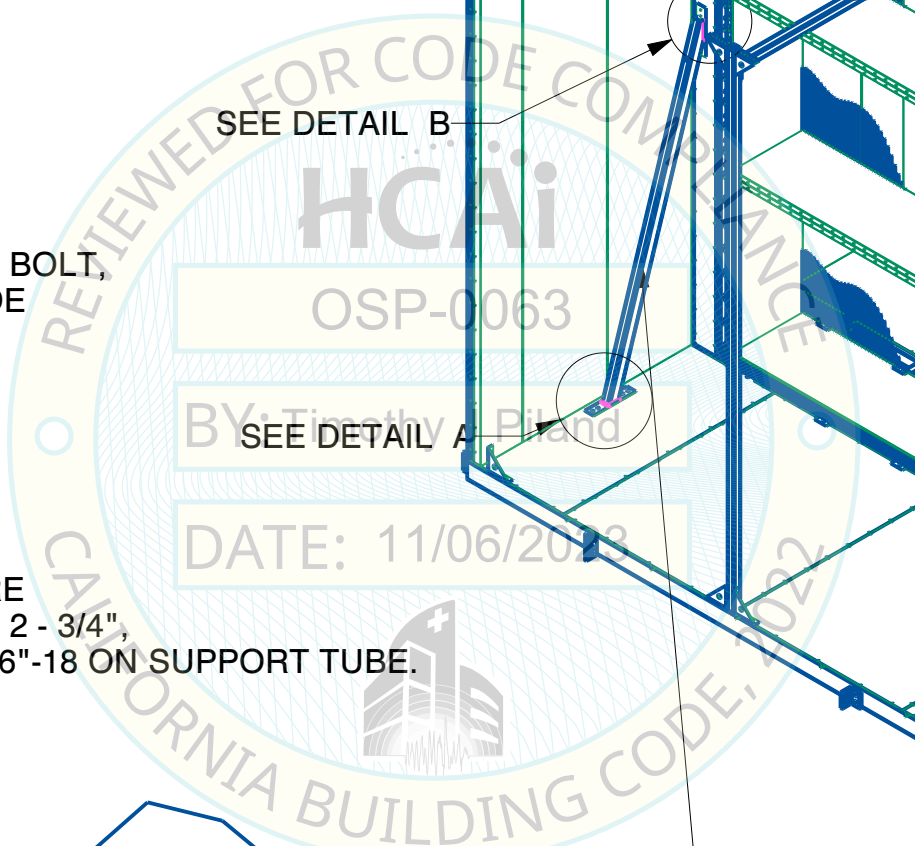
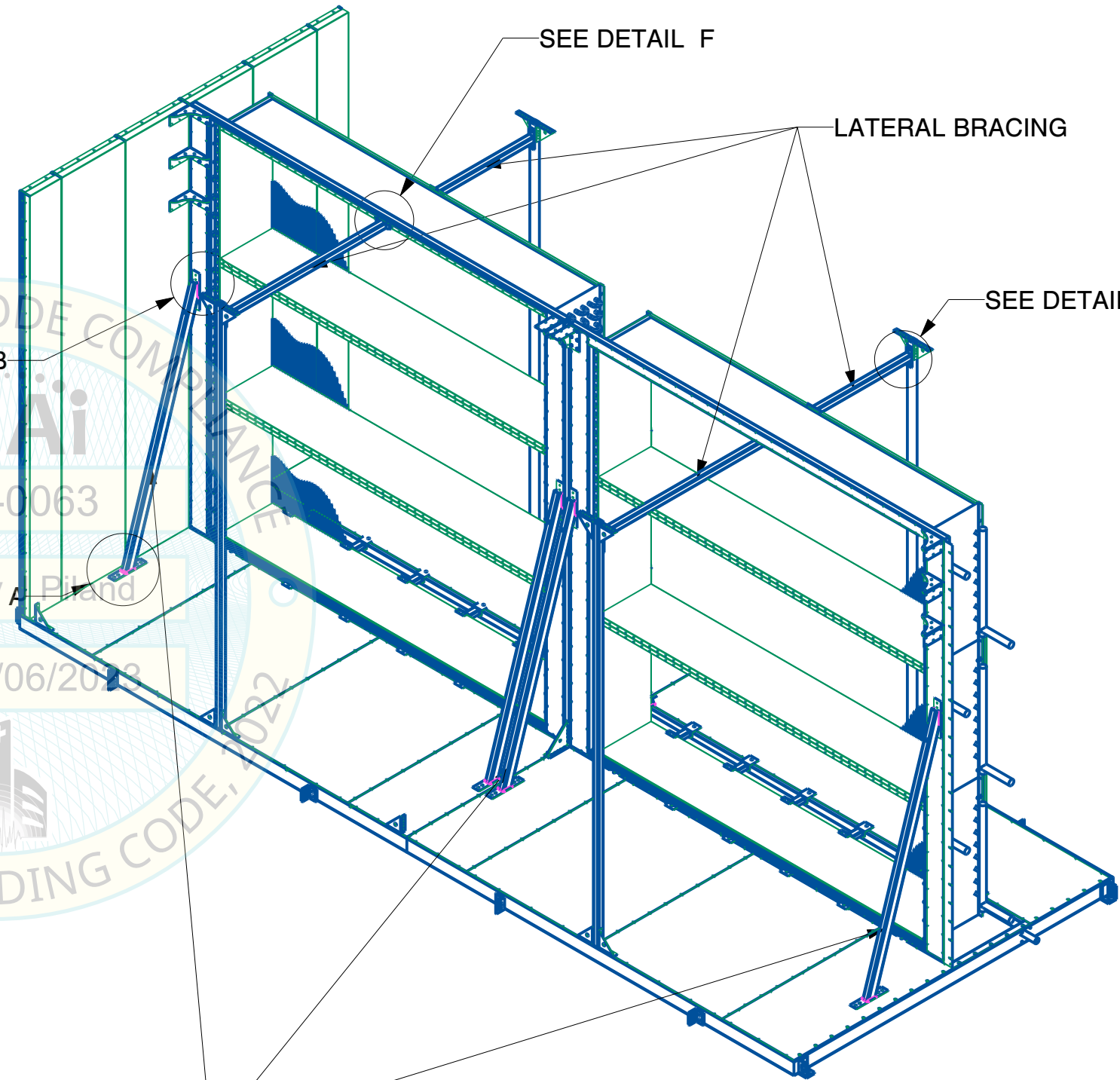


DETAIL C  
SCALE 0.100

COIL SIDE LATERAL BRACINGS ARE FASTENED USING SCREW, 12-24 x 1-14" (SELF DRILL, SELF TAP)

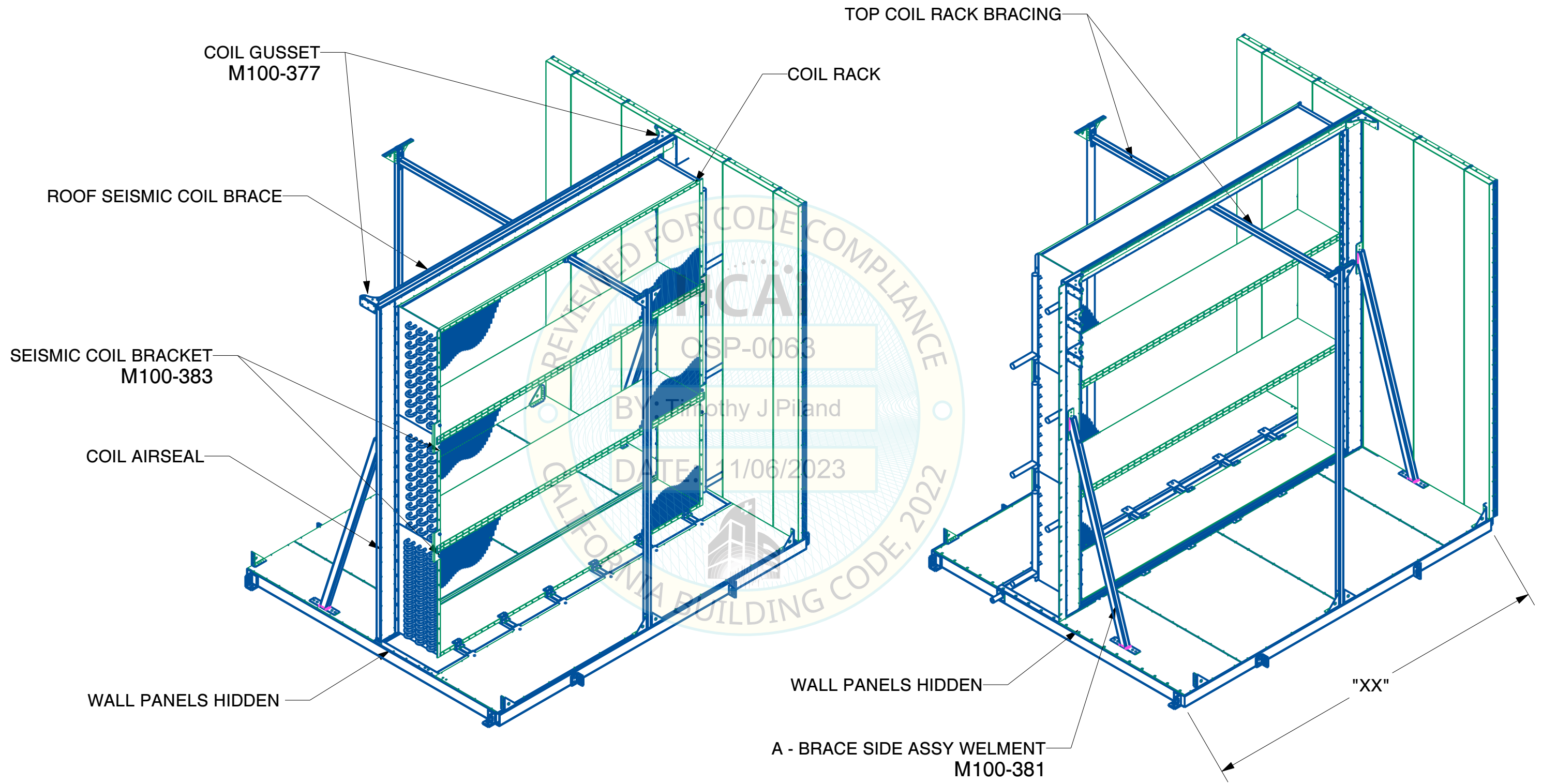


DETAIL F  
SCALE 0.100



REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 38 OF 57		

# WATER COIL UNIT ASSEMBLY - SINGLE TUNNEL UNIT, (3 HIGH COILS), ("XX" > 144")



REV	DESCRIPTION	ECN #	BY	DATE	THIRD ANGLE PROJECTION	TOLERANCES	MANUFACTURING DRAWING	COILS BRACING REQUIREMENTS				
A	INITIAL RELEASE	NA	SZ-VKR	04/21/2021		UNLESS OTHERWISE SPECIFIED .XXX ± .015 .XX ± .030 .X ± .060 ANG ± 1°	 P.O. BOX 1538, 1427 N.W. THIRD OKLAHOMA CITY, OK 73101-1538 PHONE (405) 415-9230 FAX (405) 415-9231	DRAWING #: OSHPD TESTING UNIT (UUTS)		APPR: PSL / BSZ		
B	OSHPD-2023		LB	08/17/2023				BY: SZ-VKR		DATE: 04/21/2021	SIZE: B	
								UNITS IN INCHES UNLESS OTHERWISE SPECIFIED		SHEET: 39 OF 57		