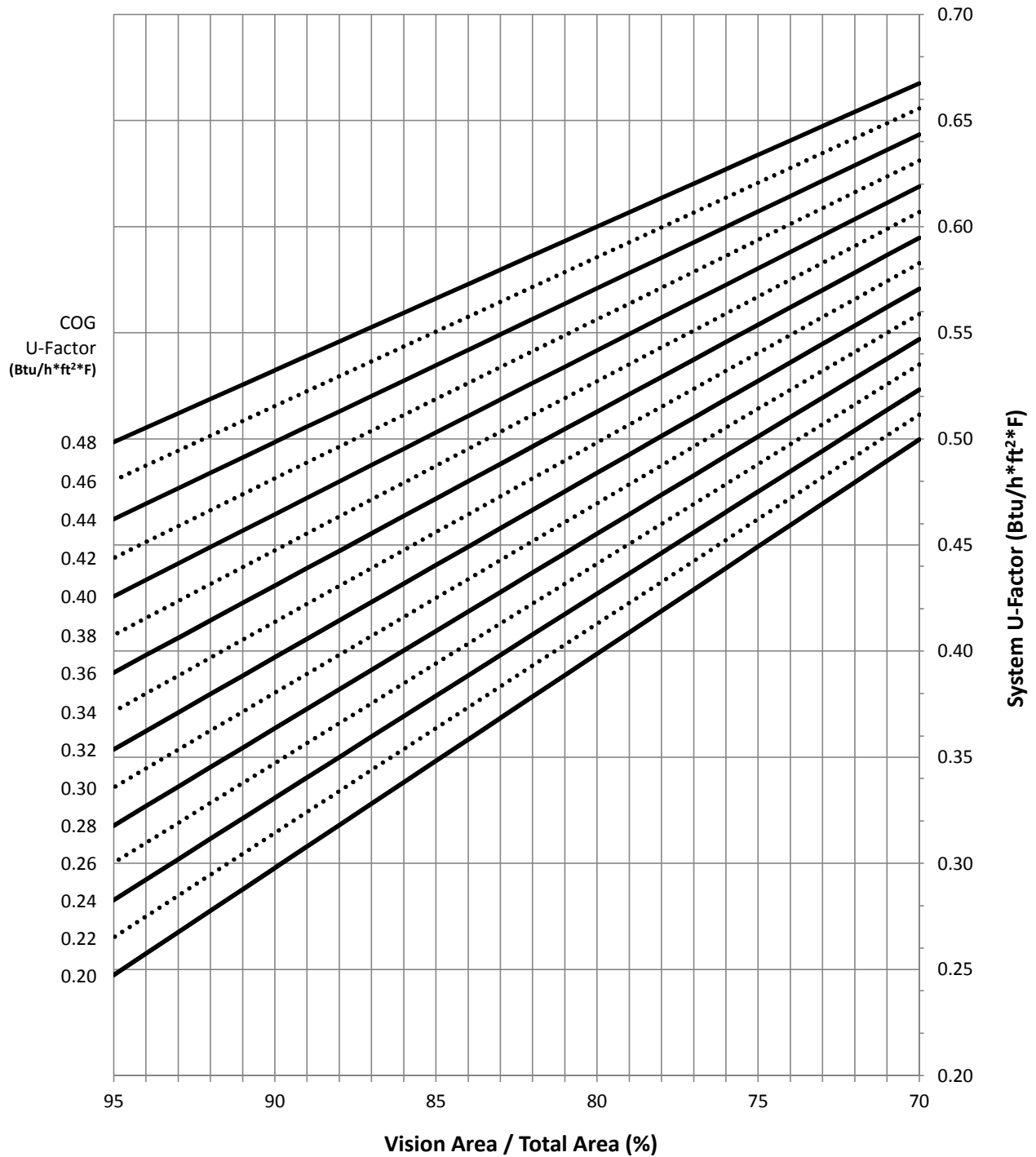
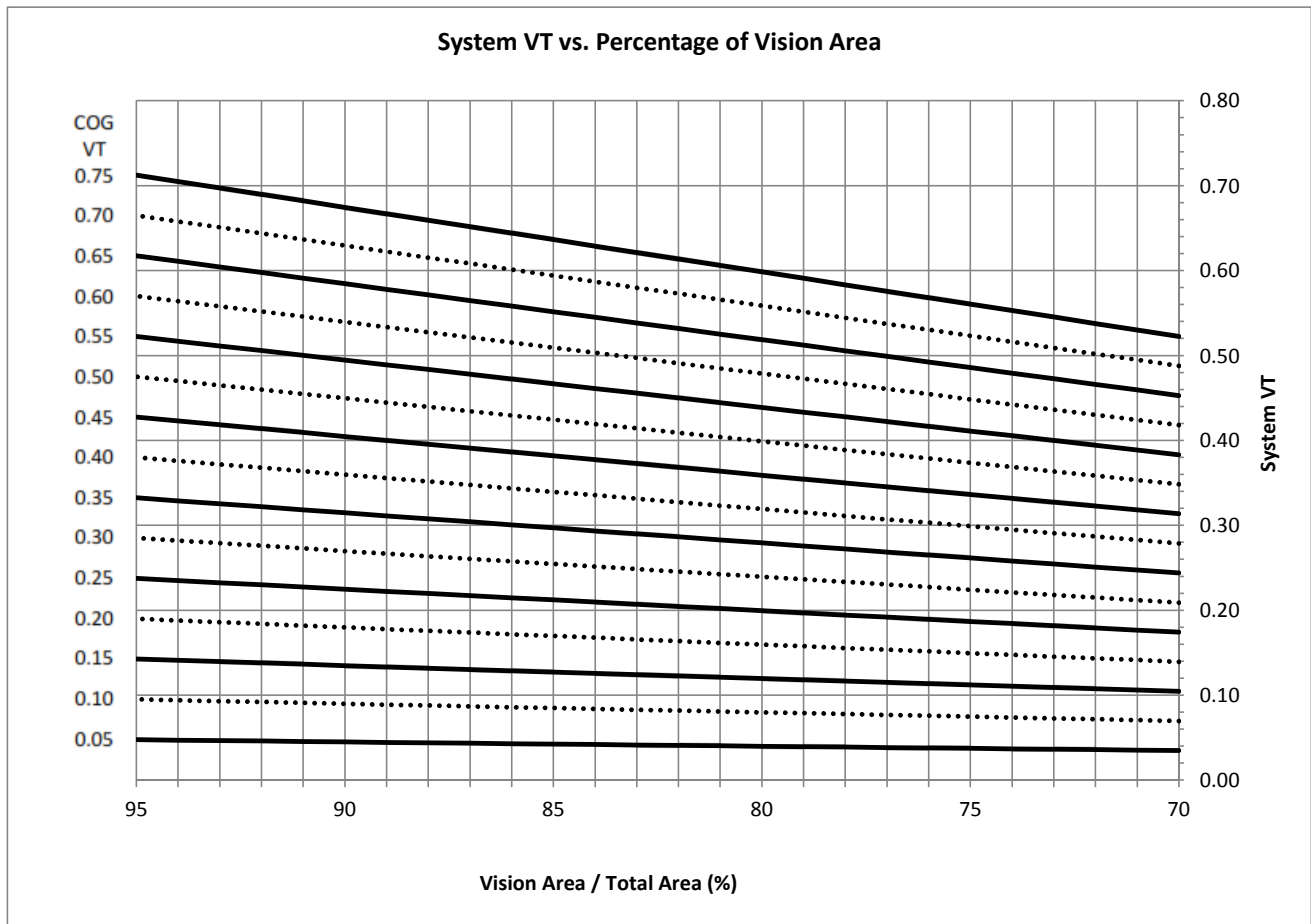
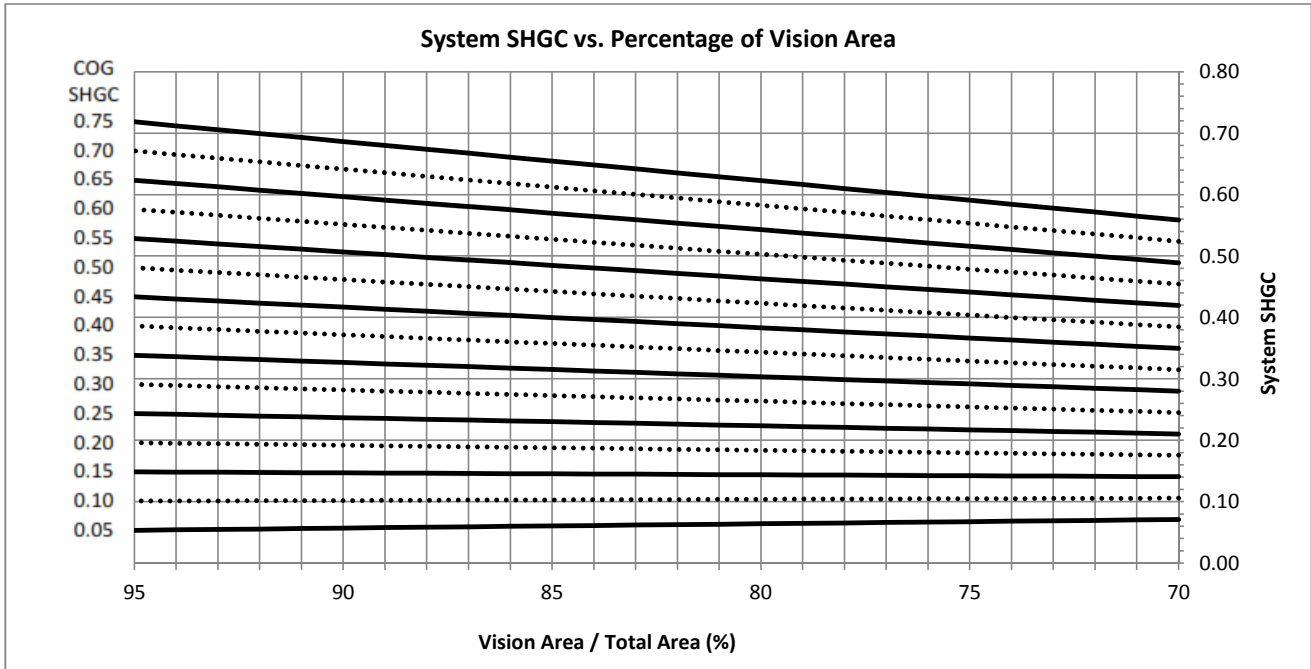


- 1.0 Product Manufacturer:** Coral Architectural Products
3010 Rice Mine Road
Tuscaloosa, AL 35406
- 2.0 Product Model:** FS400T Storefront
- 3.0 Operator Type:** Glazed Wall Window Wall O-O
- 4.0 Simulations Performed:** Thermal simulations were performed in accordance with AAMA 507-07, *Standard Practice for Determining the Thermal Performance Characteristics of Fenestration Systems Installed in Commercial Buildings*, using NFRC-approved simulation programs WINDOW6.3 and THERM6.3, and current versions of NFRC 100-2014 and NFRC 200-2014.
- 5.0 Framing Type:** Painted thermally broken aluminum (AT) all members.
- 6.0 Sash Type:** N/A
- 7.0 Grilles:** N/A
- 8.0 Weatherstripping:** N/A
- 9.0 Hardware:** N/A
- 10.0 Edge-of-Glass Construction:** Glazed in pockets with interior and exterior EPDM gaskets.
- 11.0 I.G. Spacer Type:** Generic aluminum box spacer, with 0.01" PIB primary seals between spacer and glass, and .181" depth silicone secondary sealant, was utilized for all simulations.
- 12.0 Grouping:** N/A
- 13.0 Simulation Software:** Simulations were performed using NFRC-approved simulation programs WINDOW6.3 and THERM6.3, in accordance with current versions of NFRC 100-2014, NFRC 200-2014, and NFRC 500-2014.
- 14.0 Drawings:** This report is incomplete if not accompanied by component and assembly drawings of the indicated product, provided by Coral, totaling 5 pages, bearing the initialed stamp of Turner Engineering & Consulting, Inc.
- 15.0 Simulation Results:** Please see the following charts and tables.

System U-Factor vs. Percentage of Vision Area





Size-Specific U-Factor (Btu/h-ft²-F) Matrix: NFRC Standard Size (78.740" x 78.740")

Glazing Option	Center-of-Glass U-Factor	Overall U-Factor
1	0.48	0.54
2	0.46	0.53
3	0.44	0.51
4	0.42	0.50
5	0.40	0.48
6	0.38	0.46
7	0.36	0.45
8	0.34	0.43
9	0.32	0.42
10	0.30	0.40
11	0.28	0.38
12	0.26	0.37
13	0.24	0.35
14	0.22	0.33
15	0.20	0.32

Size-Specific SHGC Matrix:
NFRC Standard Size (78.740" x 78.740")

Center-of-Glass SHGC	Overall SHGC
0.75	0.68
0.70	0.63
0.65	0.59
0.60	0.54
0.55	0.50
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.23
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

Size-Specific VT Matrix:
NFRC Standard Size (78.740" x 78.740")

Center-of-Glass VT	Overall VT
0.75	0.66
0.70	0.62
0.65	0.57
0.60	0.53
0.55	0.49
0.50	0.44
0.45	0.40
0.40	0.35
0.35	0.31
0.30	0.26
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

Glazing Option	NFRC COG U-Factor (Btu/h-ft2-F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft2-F)	Edge U-Factor (Btu/h-ft2-F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (88.3% Vision Area)	95% Vision Area
							28.878"	78.740"	188.220"
							x	x	x
							28.878"	78.740"	188.220"
1	0.48	44.0	L Head	2.2056	1.0038	0.4880	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1571	0.4865	0.4858	0.4678	0.4656
			L Sill	2.5176	1.0312	0.4860	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0038	0.4880	0.67	0.54	0.50
			R Jamb	1.2058	1.1600	0.4919			
			R Sill	2.5176	1.0312	0.4860			
			Int. Vert.	2.4116	1.1586	0.4892			
2	0.46	45.0	L Head	2.2056	1.0036	0.4744	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1563	0.4727	0.4653	0.4488	0.4460
			L Sill	2.5176	1.0311	0.4725	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0036	0.4744	0.66	0.53	0.48
			R Jamb	1.2058	1.1592	0.4782			
			R Sill	2.5176	1.0311	0.4725			
			Int. Vert.	2.4116	1.1578	0.4754			
3	0.44	46.1	L Head	2.2056	1.0031	0.4603	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1546	0.4585	0.4448	0.4298	0.4266
			L Sill	2.5176	1.0308	0.4585	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0031	0.4603	0.64	0.51	0.46
			R Jamb	1.2058	1.1574	0.4640			
			R Sill	2.5176	1.0308	0.4585			
			Int. Vert.	2.4116	1.1560	0.4612			
4	0.42	47.1	L Head	2.2056	1.0026	0.4464	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1529	0.4443	0.4245	0.4106	0.4069
			L Sill	2.5176	1.0305	0.4446	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0026	0.4464	0.63	0.50	0.44
			R Jamb	1.2058	1.1557	0.4499			
			R Sill	2.5176	1.0305	0.4446			
			Int. Vert.	2.4116	1.1543	0.4471			
5	0.40	48.1	L Head	2.2056	1.0022	0.4325	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1512	0.4302	0.4040	0.3915	0.3875
			L Sill	2.5176	1.0302	0.4308	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0022	0.4325	0.62	0.48	0.43
			R Jamb	1.2058	1.1541	0.4359			
			R Sill	2.5176	1.0302	0.4308			
			Int. Vert.	2.4116	1.1527	0.4331			

* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

Glazing Option	NFRC COG U-Factor (Btu/h-ft2-F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft2-F)	Edge U-Factor (Btu/h-ft2-F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (88.3% Vision Area)	95% Vision Area
							28.878" x 28.878"	78.740" x 78.740"	188.220" x 188.220"
6	0.38	49.2	L Head	2.2056	1.0018	0.4187	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1496	0.4162	0.3837	0.3722	0.3679
			L Sill	2.5176	1.0300	0.4171	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0018	0.4187	0.61	0.46	0.41
			R Jamb	1.2058	1.1527	0.4219			
			R Sill	2.5176	1.0300	0.4171			
			Int. Vert.	2.4116	1.1511	0.4190			
7	0.36	50.2	L Head	2.2056	1.0014	0.4050	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1481	0.4023	0.3632	0.3532	0.3488
			L Sill	2.5176	1.0297	0.4035	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0014	0.4050	0.59	0.45	0.39
			R Jamb	1.2058	1.1512	0.4081			
			R Sill	2.5176	1.0297	0.4035			
			Int. Vert.	2.4116	1.1496	0.4052			
8	0.34	51.3	L Head	2.2056	1.0010	0.3914	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1467	0.3884	0.3430	0.3337	0.3291
			L Sill	2.5176	1.0295	0.3900	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0010	0.3914	0.58	0.43	0.37
			R Jamb	1.2058	1.1498	0.3943			
			R Sill	2.5176	1.0295	0.3900			
			Int. Vert.	2.4116	1.1482	0.3914			
9	0.32	52.3	L Head	2.2056	1.0007	0.3778	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1453	0.3747	0.3226	0.3145	0.3099
			L Sill	2.5176	1.0293	0.3765	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0007	0.3778	0.57	0.42	0.35
			R Jamb	1.2058	1.1484	0.3806			
			R Sill	2.5176	1.0293	0.3765			
			Int. Vert.	2.4116	1.1468	0.3776			
10	0.30	53.4	L Head	2.2056	1.0004	0.3643	COG U-factors (Btu/h-ft2-F) *		
			L Jamb	1.2058	1.1440	0.3610	0.3023	0.2952	0.2907
			L Sill	2.5176	1.0292	0.3630	Total Product U-factors (Btu/h-ft2-F)		
			R Head	2.2056	1.0004	0.3643	0.56	0.40	0.34
			R Jamb	1.2058	1.1471	0.3669			
			R Sill	2.5176	1.0292	0.3630			
			Int. Vert.	2.4116	1.1455	0.3639			

* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

Glazing Option	NFRC COG U-Factor (Btu/h-ft ² -F) *	NFRC COG Temperature (F) *	Frame Section	Frame Width (in.)	Frame U-factor (Btu/h-ft ² -F)	Edge U-Factor (Btu/h-ft ² -F)	Size Specific Data **		
							70% Vision Area	NFRC 100 Standard Size (88.3% Vision Area)	95% Vision Area
11	0.28	54.4	L Head	2.2056	1.0001	0.3508	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.2058	1.1428	0.3473	0.2820	0.2758	0.2713
			L Sill	2.5176	1.0291	0.3496	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.2056	1.0001	0.3508	0.55	0.38	0.32
			R Jamb	1.2058	1.1458	0.3533			
			R Sill	2.5176	1.0291	0.3496			
			Int. Vert.	2.4116	1.1443	0.3503			
12	0.26	55.5	L Head	2.2056	0.9999	0.3374	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.2058	1.1415	0.3338	0.2617	0.2565	0.2524
			L Sill	2.5176	1.0290	0.3363	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.2056	0.9999	0.3374	0.54	0.37	0.30
			R Jamb	1.2058	1.1446	0.3398			
			R Sill	2.5176	1.0290	0.3363			
			Int. Vert.	2.4116	1.1431	0.3368			
13	0.24	56.5	L Head	2.2056	0.9997	0.3241	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.2058	1.1404	0.3202	0.2414	0.2370	0.2336
			L Sill	2.5176	1.0289	0.3230	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.2056	0.9997	0.3241	0.52	0.35	0.28
			R Jamb	1.2058	1.1435	0.3263			
			R Sill	2.5176	1.0289	0.3230			
			Int. Vert.	2.4116	1.1419	0.3233			
14	0.22	57.6	L Head	2.2056	0.9995	0.3108	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.2058	1.1393	0.3068	0.2212	0.2175	0.2146
			L Sill	2.5176	1.0289	0.3098	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.2056	0.9995	0.3108	0.51	0.33	0.27
			R Jamb	1.2058	1.1424	0.3129			
			R Sill	2.5176	1.0289	0.3098			
			Int. Vert.	2.4116	1.1408	0.3098			
15	0.20	58.7	L Head	2.2056	0.9994	0.2974	COG U-factors (Btu/h-ft ² -F) *		
			L Jamb	1.2058	1.1385	0.2932	0.2010	0.1979	0.1956
			L Sill	2.5176	1.0290	0.2964	Total Product U-factors (Btu/h-ft ² -F)		
			R Head	2.2056	0.9994	0.2974	0.50	0.32	0.25
			R Jamb	1.2058	1.1417	0.2992			
			R Sill	2.5176	1.0290	0.2964			
			Int. Vert.	2.4116	1.1401	0.2962			

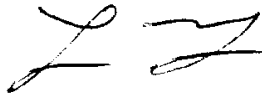
* NFRC COG U-factor and Temperature are calculated at the standard NFRC size of 1 meter glazing height. The Size Specific COG U-factors are calculated at the actual product height.

** All product sizes and areas calculated using NFRC centerline approach on verticals.

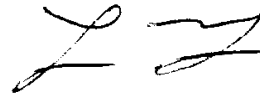
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17.0 Simulator: Lucas A. Turner, P.E.

18.0 Simulator in Responsible Charge: Lucas A. Turner, P.E., attests to the technical accuracy and content of this report.



Simulator Signature

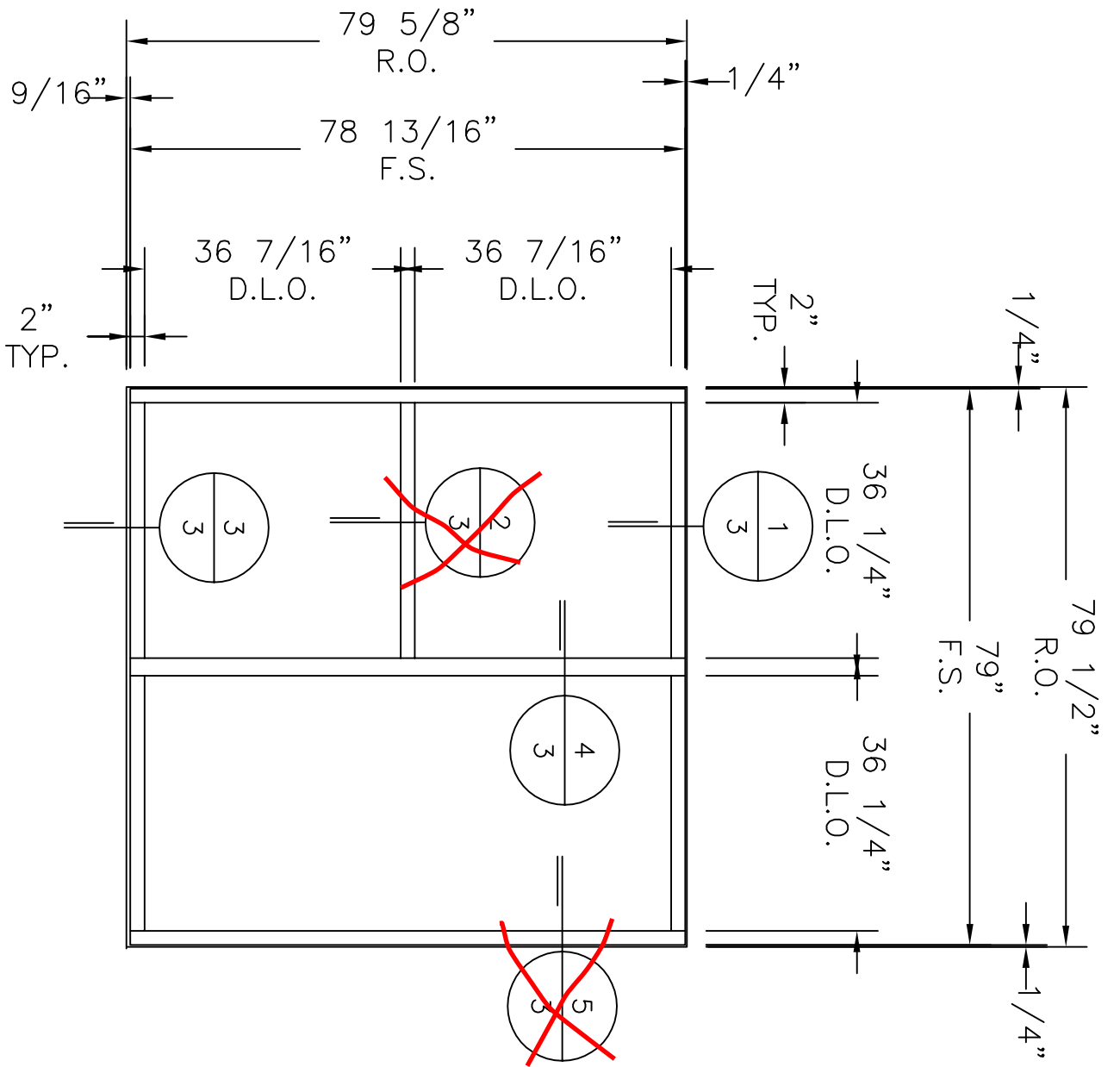


Simulator in Responsible Charge Signature

Drawing Appendix

**Following drawings and data provided
by Client, totaling 5 pages**

**TYPICAL ELEVATION FOR FS400T
AAMA 507 NFRC CMAST**



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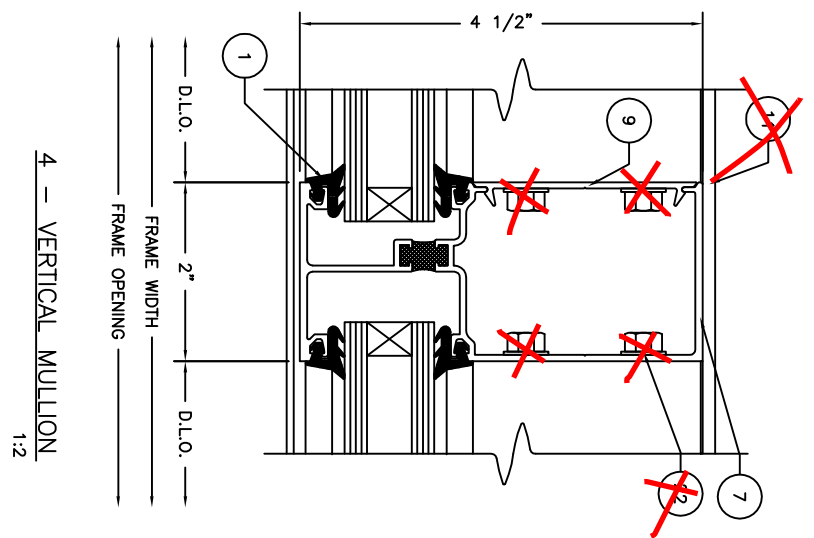
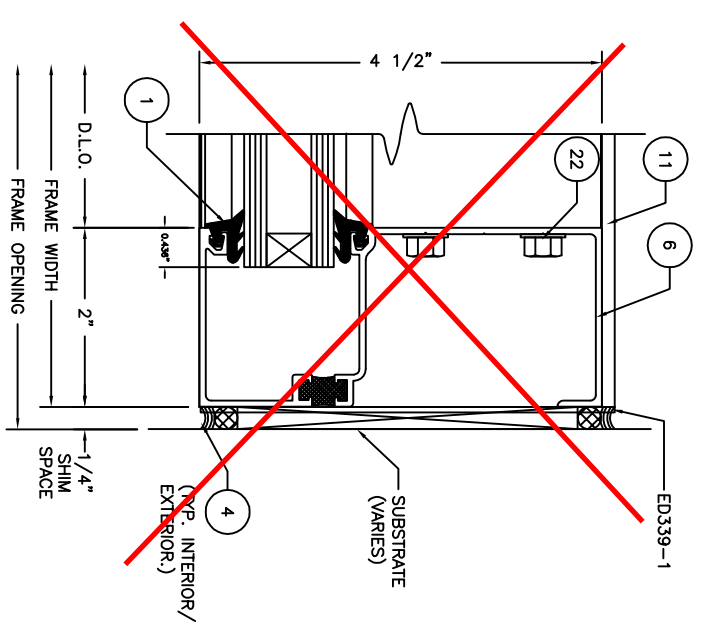
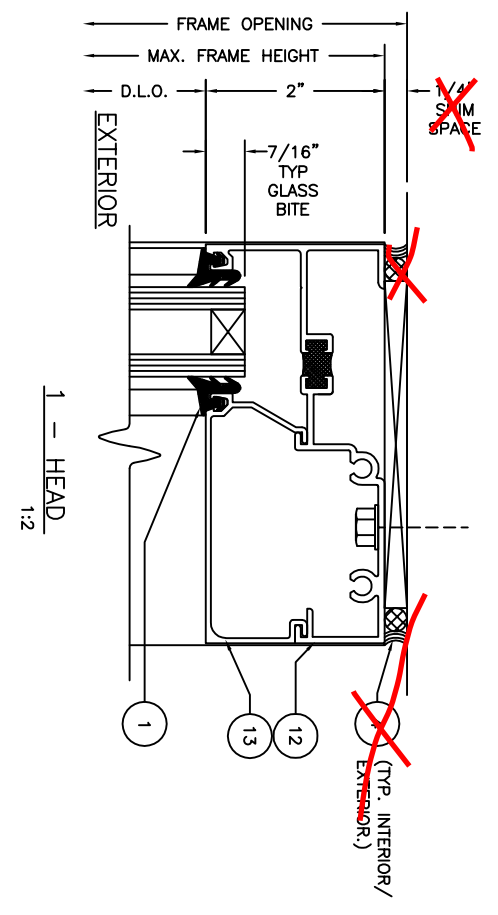
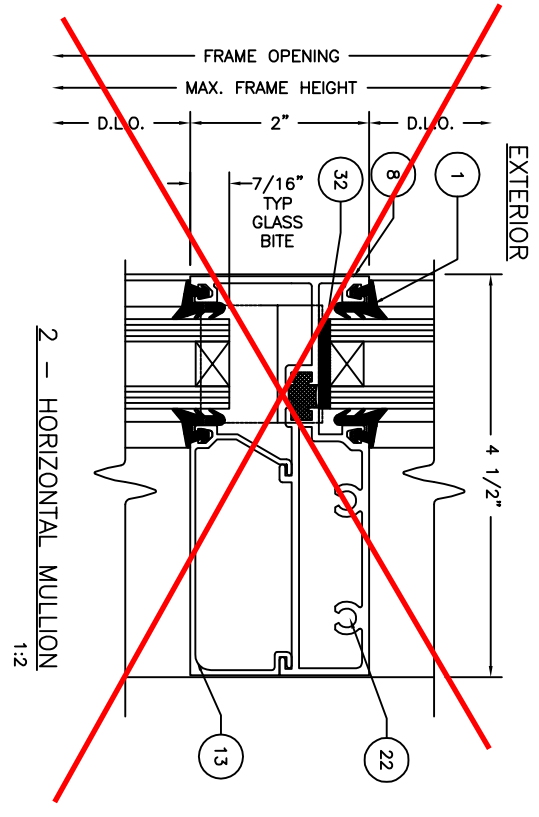
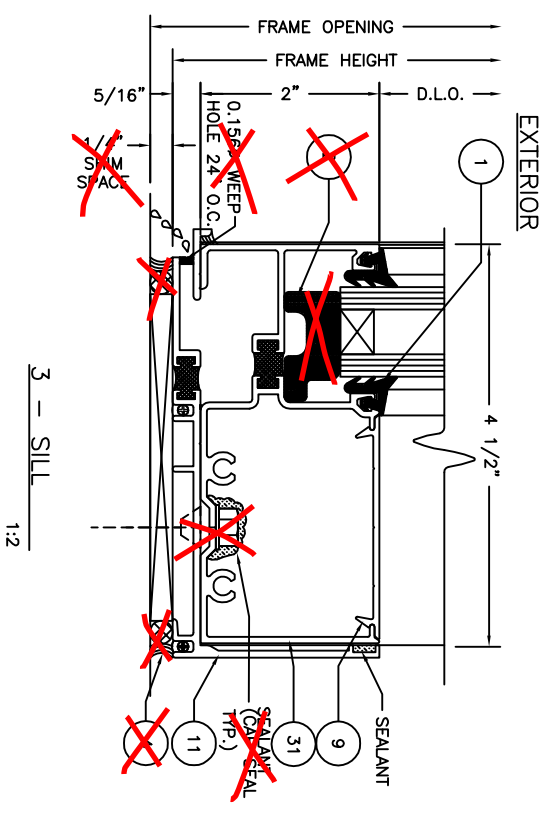
FS400T AAMA 507
SIMULATION NFRC CMAST
SUBMITTAL DRAWINGS

STANDARD ELEVATION

Coral
Architectural Products
3010 RICE MINE ROAD, TUSCALOOSA, AL 35406
PHONE: 800-772-7737 FAX: 800-255-7320

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STANDARD DETAILS


Coral
Architectural Products
3010 RICE MINE ROAD, TUSCALOOSA, AL 35406
PHONE: 800-772-7737 FAX: 800-255-7320

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BILL OF MATERIALS

ITEM NO.	P/N	DESCRIPTION	DIMENSIONS	MATERIAL	MANUFACTURER	NOTES
1	NG1	GLAZING GASKET	.561 x .350	EPDM	VARIES	USED ON EXT. AND INT.
2	SB3	SETTING BLOCK	1.50 X 4.00 X .625	EPDM	VARIES	
4	795	JOINT/PERIMETER SEALANT	VARIABLE SPACE	SILICONE	DOW	
6	FS407T	JAMB				
7	FS404T	VERTICAL MULLION	2.00 X 4.5 X .070	6063-T6 ALUMINUM	CORAL	
8	FS406T	HORIZONTAL MULLION	6.168 X 2.390	6063-T6 ALUMINUM	CORAL	
9	FS405	FILLER	2.00 X 4.5 X .190	6063-T6 ALUMINUM	CORAL	
11	FL339T	SUBSILL	2.5 X 1.543 X .050	6063-T6 ALUMINUM	CORAL	
12	FS401T	HEAD	2.00 X 4.5 X .070	6063-T6 ALUMINUM	CORAL	
13	FS403	HEAD/HORIZONTAL COVER	2.00 X 4.460 X .070	6063-T6 ALUMINUM	CORAL	
22	AST6	TYPICAL SPLINE SCREW	#14 X 1" HHSTS	STEEL	VARIES	TYPICAL SPLINE SCREW
31	FS402	HEAD/SILL	2.00 X 4.5 X .190	6063-T6 ALUMINUM	CORAL	
32	SB7	SETTING BLOCK	1.5 X .125 X 4.00	EPDM	VARIES	


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FS400T AAMA 507
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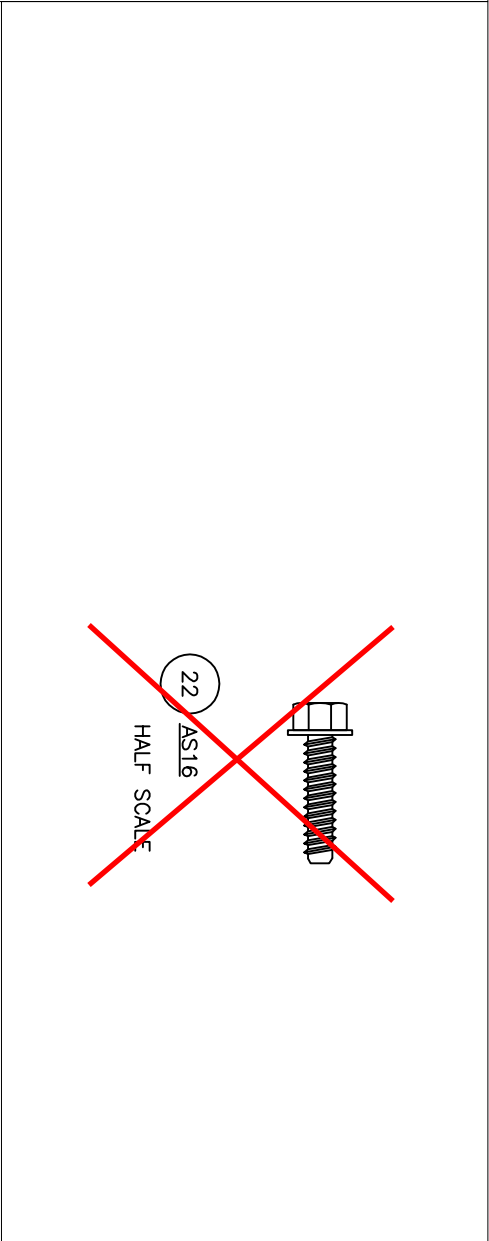
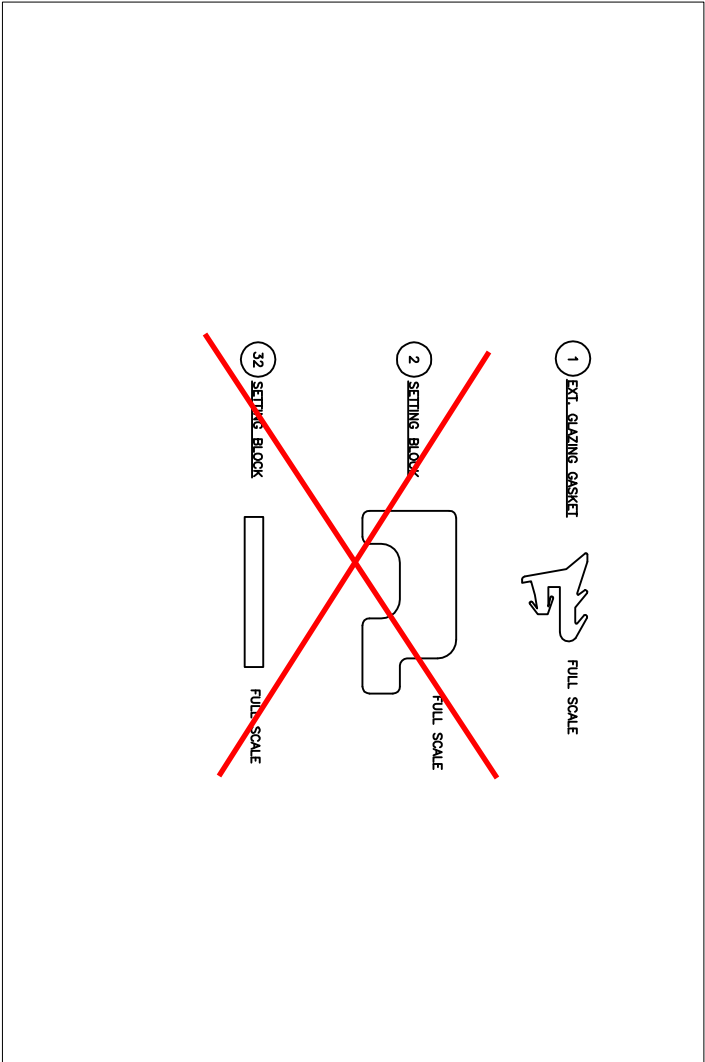
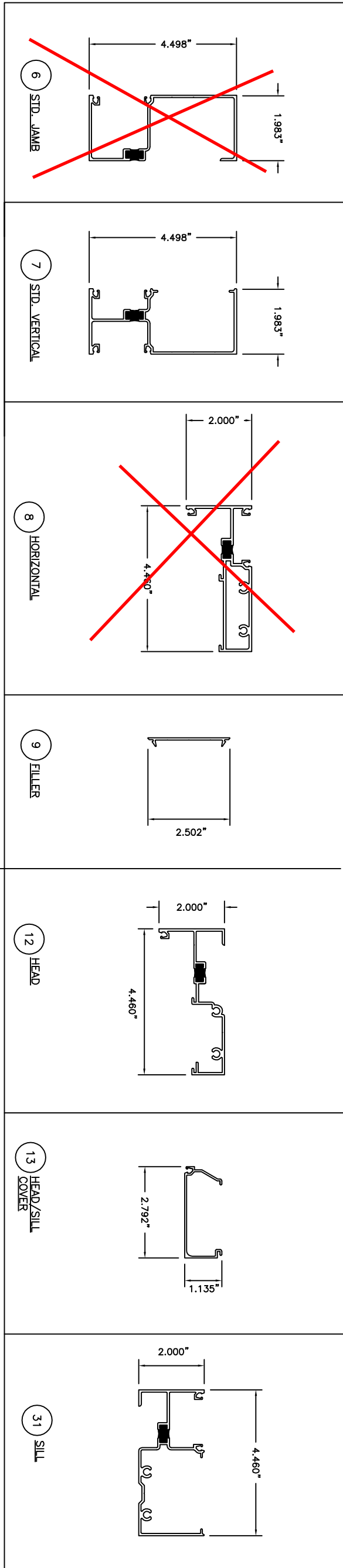
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FS400T AAMA 507
SIMULATION NFRC CMAST
SUBMITTAL DRAWINGS

DIE DRAWINGS



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