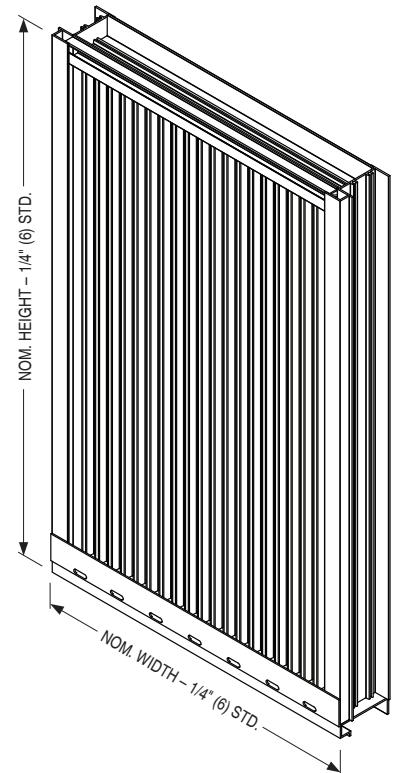


QUALIFICATIONS:

- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Basic "Level D" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 70 PSF.

STANDARD CONSTRUCTION:

- FRAME:** 3" (76) deep, Type 6063-T6 extruded aluminum, .090" (2.29) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
- BLADE STYLE:** Sinusoidal.
- BLADE SPACING:** Approximately .875" (22) on centers.
- BLADE SUPPORT:** 2.5" (64) strap every 40" (102) or less in height.
- SCREEN:** 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 60" W x 120" H (1524 x 3048)
- SCREEN SIZE:** 50 sq. ft. (4.6 m²). Larger louvers will require field assembly of smaller sections.
- MAXIMUM SIZE:** Unlimited Width x 120" H (3048).

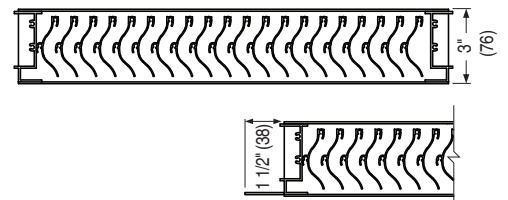

OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38)
- ☐ **FL20** Flanged Frame, 2" (51)
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ **PAAA** Perimeter Anchor Angles (Aluminum, Continuous).
- ☐ Other: _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603.
Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.



OPT. FLANGED FRAME (FL15 STD.)

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
4 - 9 - 25	1600	NEW	1603WDV



**EXTRUDED ALUMINUM STATIONARY LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
3" (76) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1603WDV**

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters								
		12	18	24	30	36	42	48	54	60
Height in Inches and Meters	12	0.23 0.30	0.39 0.02	0.53 0.04	0.69 0.05	0.85 0.06	1.01 0.08	1.17 0.09	1.33 0.11	1.49 0.12
	18	0.47 0.46	0.80 0.04	1.08 0.07	1.41 0.10	1.74 0.13	2.06 0.16	2.39 0.19	2.72 0.22	3.05 0.25
	24	0.71 0.61	1.20 0.07	1.63 0.11	2.13 0.15	2.62 0.20	3.12 0.24	3.61 0.29	4.11 0.34	4.61 0.38
	30	0.95 0.76	1.61 0.09	2.18 0.15	2.85 0.20	3.51 0.26	4.17 0.33	4.84 0.39	5.50 0.45	6.16 0.51
	36	1.19 0.91	2.02 0.11	2.73 0.19	3.56 0.25	4.40 0.33	5.23 0.41	6.06 0.49	6.89 0.56	7.72 0.64
	42	1.43 1.07	2.43 0.13	3.28 0.23	4.28 0.31	5.28 0.40	6.28 0.49	7.28 0.58	8.28 0.68	9.28 0.77
	48	1.67 1.22	2.83 0.15	3.83 0.26	5.00 0.36	6.17 0.46	7.34 0.57	8.50 0.68	9.67 0.79	10.84 1.01
	54	1.91 1.37	3.24 0.18	4.39 0.30	5.72 0.41	7.05 0.53	8.39 0.66	9.72 0.78	11.06 0.90	12.39 1.03
	60	2.15 1.52	3.65 0.20	4.94 0.34	6.44 0.46	7.94 0.60	9.44 0.74	10.95 0.88	12.45 1.02	13.95 1.16
	66	2.39 1.68	4.06 0.22	5.49 0.38	7.16 0.51	8.83 0.66	10.50 0.82	12.17 0.98	13.84 1.13	15.51 1.29
	72	2.63 1.83	4.46 0.24	6.04 0.41	7.88 0.56	9.71 0.73	11.55 0.90	13.39 1.07	15.23 1.24	17.07 1.41
	78	2.87 1.98	4.87 0.27	6.59 0.45	8.60 0.61	10.60 0.80	12.61 0.98	14.61 1.17	16.62 1.36	18.62 1.54
	84	3.10 2.13	5.28 0.29	7.14 0.49	9.31 0.66	11.49 0.87	13.66 1.07	15.83 1.27	18.01 1.47	20.18 1.67
	90	3.34 2.29	5.69 0.31	7.69 0.53	10.03 0.71	12.37 0.93	14.71 1.15	17.06 1.37	19.40 1.58	21.74 1.80
	96	3.58 2.44	6.09 0.33	8.24 0.57	10.75 0.77	13.26 1.00	15.77 1.23	18.28 1.46	20.79 1.70	23.29 1.93
	102	3.82 2.59	6.50 0.36	8.79 0.60	11.47 0.82	14.15 1.07	16.82 1.31	19.50 1.56	22.18 1.81	24.85 2.06
	108	4.06 2.74	6.91 0.38	9.34 0.64	12.19 0.87	15.03 1.13	17.88 1.40	20.72 1.66	23.57 1.92	26.41 2.19
	114	4.30 2.90	7.31 0.40	9.90 0.68	12.91 0.92	15.92 1.20	18.93 1.48	21.94 1.76	24.95 2.04	27.97 2.32
	120	4.54 3.05	7.72 0.42	10.45 0.72	13.63 0.97	16.81 1.27	19.99 1.56	23.16 1.86	26.34 2.15	29.52 2.45

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

4 - 9 - 25

1600

NEW

1603WDV



EXTRUDED ALUMINUM STATIONARY LOUVER HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT 3" (76) DEEP • VERTICAL BLADE • PERFORMANCE DATA MODEL: 1603WDV

AIRFLOW / WATER PENETRATION DATA for 48" x 48" (1219 x 1219) Louver Size

Free Area %	53%
Free Area sq. ft. (sq. m.)	8.50 (0.79)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
Air Volume at 1250 fpm	10,625 cfm (5014 l/s)
Free Area Velocity	
Pressure Drop @ 1250 fpm	.24 in. w.g. (60 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation Rate in fpm (m/s)	0 (0.00)	98 (0.50)	197 (1.00)	295 (1.50)	393 (2.00)	492 (2.50)	590 (3.00)	688 (3.50)	791 (4.02)	888 (4.51)	986 (5.01)
Free Area Ventilation Rate in fpm (m/s)	0 (0.00)	164 (0.83)	328 (1.66)	491 (2.49)	655 (3.33)	819 (4.16)	983 (4.99)	1146 (5.82)	1291 (6.56)	1449 (7.36)	1612 (8.19)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.9
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

Core Ventilation Rate in fpm (m/s)	0 (0.00)	95 (0.48)	192 (0.98)	292 (1.48)	381 (1.94)	474 (2.41)	576 (2.93)	663 (3.37)	764 (3.88)	863 (4.38)	955 (4.85)
Free Area Ventilation Rate in fpm (m/s)	0 (0.00)	159 (0.81)	319 (1.62)	485 (2.47)	635 (3.22)	789 (4.01)	958 (4.87)	1103 (5.60)	1271 (6.46)	1406 (7.14)	1556 (7.90)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

Wind Driven Rain Penetration Classes	
Class	Effectiveness
A	1 to 0.99
B	0.989 to .95
C	0.949 to .80
D	Below 0.80

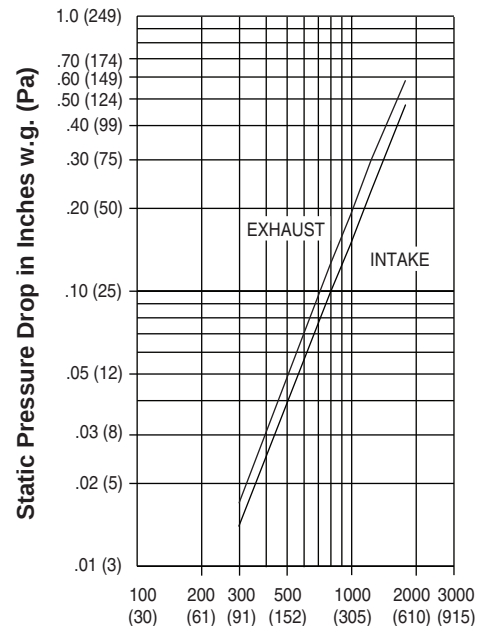


Nailor Industries Inc. certifies that the Model 1603WDV shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain, and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Basic Protection Level D

See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1603WDV louver shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for Basic Protection and +/- 70PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 38 in. (97 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

4 - 9 - 25

1600

NEW

1603WDV

QUALIFICATIONS:

- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 70 PSF.

STANDARD CONSTRUCTION:

FRAME: 5.4" (137) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral caulking slot provided.

BLADES: **Front:** Horizontal Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses. J style.

Rear: Vertical Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.

BLADE SPACING: **Front:** Approximately 1.965" (50) on centers.
Rear: Approximately .875" (22) on centers.

BLADE SUPPORT: 2.5" (64) strap every 60" (1524) or less in height

SCREEN: 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).

FINISH: Mill.

MINIMUM SIZE: 12" W x 12" H (305 x 305).

MAX. SINGLE 60" W x 120" H (1524 x 3048).

SECTION SIZE: 50 ft² (4.6 m²). Larger louvers will require field assembly of smaller sections.

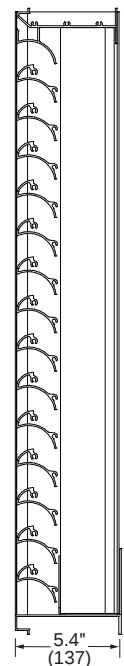
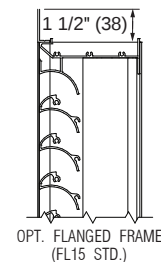
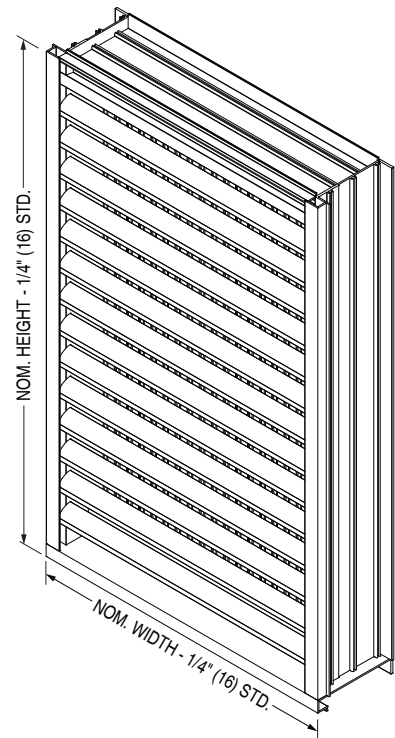
MAXIMUM SIZE: Unlimited Width x 120" H (3048).

OPTIONS:

- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **PASI** Sill Pan.
- ☐ **PAAA** Perimeter Anchor Angles (Aluminum, Continuous).
- ☐ **Other:** _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.


SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 1 of 3
 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 8 - 25	1600M	NEW	1605H



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
5" (127) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1605H

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters								
		12	18	24	30	36	42	48	54	60
Height in Inches and Meters	12	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52
	0.30	0.23	0.39	0.53	0.69	0.85	1.01	1.17	1.33	1.49
	0.46	0.02	0.04	0.05	0.06	0.08	0.09	0.11	0.12	0.14
	18	0.47	0.80	1.08	1.41	1.74	2.06	2.39	2.72	3.05
	0.46	0.04	0.07	0.10	0.13	0.16	0.19	0.22	0.25	0.28
	24	0.71	1.20	1.63	2.13	2.62	3.12	3.61	4.11	4.61
	0.61	0.07	0.11	0.15	0.20	0.24	0.29	0.34	0.38	0.43
	30	0.95	1.61	2.18	2.85	3.51	4.17	4.84	5.50	6.16
	0.76	0.09	0.15	0.20	0.26	0.33	0.39	0.45	0.51	0.57
	36	1.19	2.02	2.73	3.56	4.40	5.23	6.06	6.89	7.72
	0.36	0.11	0.19	0.25	0.33	0.41	0.49	0.56	0.64	0.72
	42	1.43	2.43	3.28	4.28	5.28	6.28	7.28	8.28	9.28
	1.07	0.13	0.23	0.31	0.40	0.49	0.58	0.68	0.77	0.86
	48	1.67	2.83	3.83	5.00	6.17	7.34	8.18	9.67	10.84
	1.22	0.15	0.26	0.36	0.46	0.57	0.68	0.76	0.90	1.01
	54	1.91	3.24	4.39	5.72	7.05	8.39	9.72	11.06	12.39
	1.37	0.18	0.30	0.41	0.53	0.66	0.78	0.90	1.03	1.15
	60	2.15	3.65	4.94	6.44	7.94	9.44	10.95	12.45	13.95
	1.52	0.20	0.34	0.46	0.60	0.74	0.88	1.02	1.16	1.30
	66	2.39	4.06	5.49	7.16	8.83	10.50	12.17	13.84	15.51
	1.68	0.22	0.38	0.51	0.66	0.82	0.98	1.13	1.29	1.44
	72	2.63	4.46	6.04	7.88	9.71	11.55	13.39	15.23	17.07
	1.83	0.24	0.41	0.56	0.73	0.90	1.07	1.24	1.41	1.59
	78	2.87	4.87	6.59	8.60	10.60	12.61	14.61	16.62	18.62
	1.98	0.27	0.45	0.61	0.80	0.98	1.17	1.36	1.54	1.73
	84	3.10	5.28	7.14	9.31	11.49	13.66	15.83	18.01	20.18
	2.13	0.29	0.49	0.66	0.87	1.07	1.27	1.47	1.67	1.87
	90	3.34	5.69	7.69	10.03	12.37	14.71	17.06	19.40	21.74
	2.29	0.31	0.53	0.71	0.93	1.15	1.37	1.58	1.80	2.02
	96	3.58	6.09	8.24	10.75	13.26	15.77	18.28	20.79	23.29
	2.44	0.33	0.57	0.77	1.00	1.23	1.46	1.70	1.93	2.16
	102	3.82	6.50	8.79	11.47	14.15	16.82	19.50	22.18	24.85
	2.59	0.36	0.60	0.82	1.07	1.31	1.56	1.81	2.06	2.31
	108	4.06	6.91	9.34	12.19	15.03	17.88	20.72	23.57	26.41
	2.74	0.38	0.64	0.87	1.13	1.40	1.66	1.92	2.19	2.45
	114	4.30	7.31	9.90	12.91	15.92	18.93	21.94	24.95	27.97
	2.90	0.40	0.68	0.92	1.20	1.48	1.76	2.04	2.32	2.60
	120	4.54	7.72	10.45	13.63	16.81	19.99	23.16	26.34	29.52
	3.05	0.42	0.72	0.97	1.27	1.56	1.86	2.15	2.45	2.74



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

10 - 8 - 25

1600M

NEW

1605H



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
5" (127) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1605H

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %	51%
Free Area sq. ft. (sq. m.)	8.18 (0.76)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)
Air Volume at 1250 fpm Free Area Velocity	10,225 cfm (4826 l/s)
Pressure Drop @ 1250 fpm	.66 in. w.g. (164 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	98	197	295	393	492	590	688	787	889	975
Rate in fpm (m/s)	(0.00)	(0.50)	(1.00)	(1.50)	(2.00)	(2.50)	(3.00)	(3.50)	(4.00)	(4.52)	(4.95)
Free Area Ventilation	0	169	339	508	678	848	1017	1186	1355	1498	1644
Rate in fpm (m/s)	(0.00)	(0.86)	(1.72)	(2.58)	(3.44)	(4.31)	(5.17)	(6.02)	(6.88)	(7.61)	(8.35)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.8
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

Core Ventilation	0	94	190	291	398	477	576	677	762	867	948
Rate in fpm (m/s)	(0.00)	(0.48)	(0.97)	(1.48)	(2.02)	(2.42)	(2.93)	(3.44)	(3.87)	(4.40)	(4.82)
Free Area Ventilation	0	161	327	501	685	821	993	1166	1285	1473	1611
Rate in fpm (m/s)	(0.00)	(0.82)	(1.66)	(2.55)	(3.48)	(4.17)	(5.04)	(5.92)	(6.53)	(7.48)	(8.18)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	99.8	99.7	99.6
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

Wind Driven Rain Penetration Classes	
Class	Effectiveness
A	1 to 0.99
B	0.989 to .95
C	0.949 to .80
D	Below 0.80

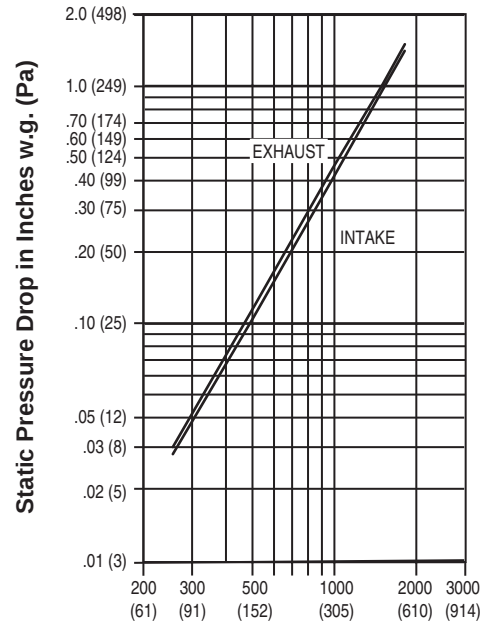


Nailor Industries Inc. certifies that the Model 1605H shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain, and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Enhanced Protection Level E

See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1605H louver shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to wind borne debris impact resistant louvers rated for Enhanced Protection and +/- 70PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 8 - 25	1600M	NEW	1605H

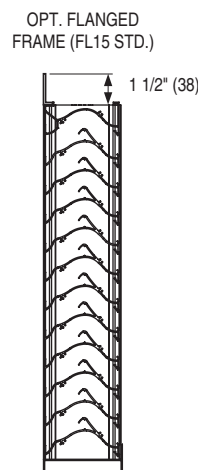
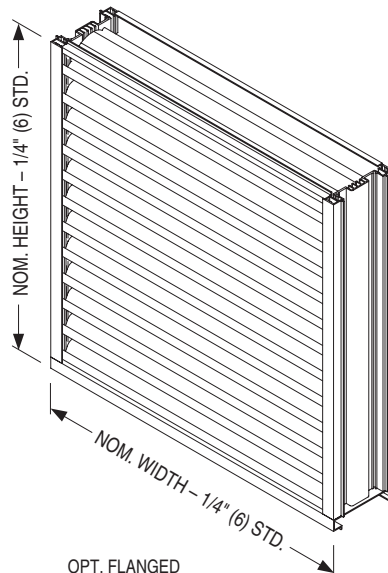


EXTRUDED ALUMINUM STATIONARY LOUVER WIND-DRIVEN RAIN RESISTANT 5" (127) DEEP • HORIZONTAL BLADE MODEL: 1605WD

Model 1605WD wind-driven rain horizontal drainable blade louver provides maximum weather protection in a 5" (127) deep frame, with pleasing sight-proof aesthetics that compliment any structure's exterior styling. Suitable for use in exhaust and low to medium velocity intake applications, the drainable head and drainable blade design divert collected water down concealed side downspouts and out the sill. Blades are reinforced with full length integral bosses for superior strength and the 5" (127) deep channel or optional flanged frame installs easily in most common wall configurations. Model 1605WD is AMCA Licensed for wind-driven rain and is engineered to be architecturally appealing as well as mechanically enduring.

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 30 degrees.
- BLADE SPACING:** Approximately 2" (51) on centers.
- BLADE SUPPORT:** Concealed type, factory installed on rear of louver. Size varies based on design pressure, consult Nailor.
- SCREEN:** 5/8" x .050 (15.9 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H
- SECTION SIZE:** (2134 x 3048). 70 sq. ft. (6.5 m²). Larger louvers will require field assembly of smaller sections.



OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ Other: _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603.
Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®).
Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®).
Color: _____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.



For Installation Instructions, see IOM-LOUVERINSTFPA.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 28 - 25	1600	1 - 30 - 24	1605WD



**EXTRUDED ALUMINUM STATIONARY LOUVER
WIND-DRIVEN RAIN RESISTANT • 5" (127) DEEP
HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1605WD**

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																		
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height in Inches and Meters	12	0.27	0.43	0.60	0.76	0.93	1.09	1.26	1.42	1.59	1.75	1.92	2.08	2.25	2.41	2.58	2.74	2.91	3.07	3.24
	0.30	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.16	0.18	0.19	0.21	0.22	0.24	0.25	0.27	0.29	0.30
	18	0.47	0.76	1.05	1.34	1.63	1.92	2.20	2.49	2.78	3.07	3.36	3.65	3.94	4.23	4.51	4.80	5.09	5.38	5.67
	0.46	0.04	0.07	0.10	0.12	0.15	0.18	0.20	0.23	0.26	0.29	0.31	0.34	0.37	0.39	0.42	0.45	0.47	0.50	0.53
	24	0.74	1.19	1.65	2.10	2.56	3.01	3.46	3.92	4.37	4.82	5.28	5.73	6.19	6.64	7.09	7.55	8.00	8.45	8.91
	0.61	0.07	0.11	0.15	0.20	0.24	0.28	0.32	0.36	0.41	0.45	0.49	0.53	0.57	0.62	0.66	0.70	0.74	0.79	0.83
	30	0.94	1.52	2.10	2.68	3.25	3.83	4.41	4.99	5.56	6.14	6.72	7.30	7.87	8.45	9.03	9.61	10.18	10.76	11.34
	0.76	0.09	0.14	0.19	0.25	0.30	0.36	0.41	0.46	0.52	0.57	0.62	0.68	0.73	0.79	0.84	0.89	0.95	1.00	1.05
	36	1.15	1.85	2.55	3.25	3.95	4.65	5.35	6.05	6.76	7.46	8.16	8.86	9.56	10.26	10.96	11.66	12.37	13.07	13.77
	0.91	0.11	0.17	0.24	0.30	0.37	0.43	0.50	0.56	0.63	0.69	0.76	0.82	0.89	0.95	1.02	1.08	1.15	1.21	1.28
	42	1.35	2.17	3.00	3.82	4.65	5.47	6.30	7.12	7.95	8.77	9.60	10.42	11.25	12.07	12.90	13.72	14.55	15.37	16.20
	1.07	0.13	0.20	0.28	0.36	0.43	0.51	0.59	0.66	0.74	0.81	0.89	0.97	1.04	1.12	1.20	1.27	1.35	1.43	1.50
	48	1.62	2.61	3.60	4.59	5.58	6.57	7.59	8.55	9.54	10.53	11.52	12.51	13.50	14.49	15.48	16.47	17.46	18.45	19.44
	1.22	0.15	0.24	0.33	0.43	0.52	0.61	0.71	0.79	0.89	0.98	1.07	1.16	1.25	1.35	1.44	1.53	1.62	1.71	1.81
	54	1.82	2.93	4.05	5.16	6.27	7.39	8.50	9.62	10.73	11.84	12.96	14.07	15.18	16.30	17.41	18.53	19.64	20.75	21.87
	1.37	0.17	0.27	0.38	0.48	0.58	0.69	0.79	0.89	1.00	1.10	1.20	1.31	1.41	1.51	1.62	1.72	1.82	1.93	2.03
	60	2.02	3.26	4.50	5.73	6.97	8.21	9.45	10.68	11.92	13.16	14.40	15.63	16.87	18.11	19.35	20.58	21.82	23.06	24.30
	1.52	0.19	0.30	0.42	0.53	0.65	0.76	0.88	0.99	1.11	1.22	1.34	1.45	1.57	1.68	1.80	1.91	2.03	2.14	2.26
	66	2.22	3.58	4.95	6.31	7.67	9.03	10.39	11.75	13.11	14.47	15.84	17.20	18.56	19.92	21.28	22.64	24.00	25.36	26.73
	1.68	0.21	0.33	0.46	0.59	0.71	0.84	0.97	1.09	1.22	1.34	1.47	1.60	1.72	1.85	1.98	2.10	2.23	2.36	2.48
	72	2.49	4.02	5.55	7.07	8.60	10.12	11.65	13.18	14.70	16.23	17.76	19.28	20.81	22.33	23.86	25.39	26.91	28.44	29.97
	1.83	0.23	0.37	0.52	0.66	0.80	0.94	1.08	1.22	1.37	1.51	1.65	1.79	1.93	2.07	2.22	2.36	2.50	2.64	2.78
	78	2.70	4.35	6.00	7.65	9.30	10.95	12.60	14.25	15.90	17.55	19.20	20.85	22.50	24.15	25.80	27.45	29.10	30.75	32.40
	1.98	0.25	0.40	0.56	0.71	0.86	1.02	1.17	1.32	1.48	1.63	1.78	1.94	2.09	2.24	2.40	2.55	2.70	2.86	3.01
	84	2.90	4.67	6.44	8.22	9.99	11.77	13.54	15.31	17.09	18.86	20.63	22.41	24.18	25.96	27.73	29.50	31.28	33.05	34.82
	2.13	0.27	0.43	0.60	0.76	0.93	1.09	1.26	1.42	1.59	1.75	1.92	2.08	2.25	2.41	2.58	2.74	2.91	3.07	3.24
	90	3.10	5.00	6.89	8.79	10.69	12.59	14.48	16.38	18.28	20.18	22.07	23.97	25.87						
	2.29	0.29	0.46	0.64	0.82	0.99	1.17	1.35	1.52	1.70	1.87	2.05	2.23	2.40						
	96	3.30	5.32	7.34	9.37	11.39	13.41	15.43	17.45	19.47	21.49	23.51	25.54	27.56						
	2.44	0.31	0.49	0.68	0.87	1.06	1.25	1.43	1.62	1.81	2.00	2.18	2.37	2.56						
	102	3.57	5.76	7.94	10.13	12.32	14.50	16.69	18.87	21.06	23.25	25.43	27.62	29.81						
	2.59	0.33	0.53	0.74	0.94	1.14	1.35	1.55	1.75	1.96	2.16	2.36	2.57	2.77						
	108	3.77	6.08	8.39	10.70	13.01	15.32	17.63	19.94	22.25	24.56	26.87	29.18	31.49						
	2.74	0.35	0.57	0.78	0.99	1.21	1.42	1.64	1.85	2.07	2.28	2.50	2.71	2.93						
	114	3.98	6.41	8.84	11.28	13.71	16.14	18.58	21.01	23.45	25.88	28.31	30.75	33.18						
	2.90	0.37	0.60	0.82	1.05	1.27	1.50	1.73	1.95	2.18	2.40	2.63	2.86	3.08						
	120	4.18	6.73	9.29	11.85	14.41	16.96	19.52	22.08	24.64	27.19	29.75	32.31	34.87						
	3.05	0.39	0.63	0.86	1.10	1.34	1.58	1.81	2.05	2.29	2.53	2.76	3.00	3.24						



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

5 - 28 - 25

1600

1 - 30 - 24

1605WD



EXTRUDED ALUMINUM STATIONARY LOUVER WIND-DRIVEN RAIN RESISTANT • 5" (127) DEEP HORIZONTAL BLADE • PERFORMANCE DATA MODEL: 1605WD

AIRFLOW/WATER PENETRATION DATA for 48" x 48" (1219 x 1219) Louver Size

I N T A K E	Free Area %	47%
	Free Area sq. ft. (sq. m.)	7.59 (0.71)
	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)
	Air Volume at 1250 fpm	9,488 cfm (4477 l/s)
	Free Area Velocity	9,488 cfm (4477 l/s)
	Pressure Drop @ 1000 fpm	.22 in. w.g. (55 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the point of beginning water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	499	585	700	783	884	981
Rate in fpm (m/s)	(0.0)	(0.56)	(0.99)	(1.42)	(2.01)	(2.53)	(2.97)	(3.56)	(3.98)	(4.49)	(4.98)
Free Area Ventilation	0	216	382	547	776	978	1147	1372	1535	1733	1923
Rate in fpm (m/s)	(0.0)	(1.10)	(1.94)	(2.78)	(3.94)	(4.97)	(5.83)	(6.97)	(7.80)	(8.80)	(9.77)
Effectiveness Ratio (%)	100	100	100	100	100	99.6	99.5	99	97.3	94	91.4
Penetration Class	A	A	A	A	A	A	A	A	B	C	C

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

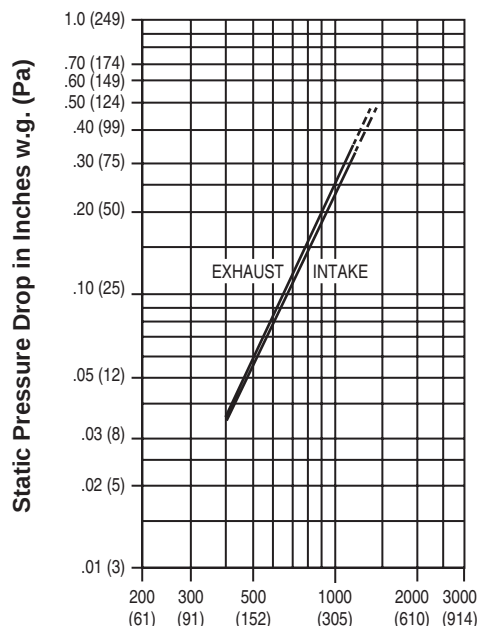
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	91	198	298	410	487	593	686	785	887	992
Rate in fpm (m/s)	(0.0)	(0.46)	(1.01)	(1.51)	(2.08)	(2.47)	(3.01)	(3.48)	(3.99)	(4.51)	(5.04)
Free Area Ventilation	0	178	388	584	804	955	1162	1345	1539	1739	1944
Rate in fpm (m/s)	(0.0)	(0.90)	(1.97)	(2.97)	(4.08)	(4.85)	(5.90)	(6.83)	(7.82)	(8.94)	(9.88)
Effectiveness Ratio (%)	100	99.6	99.3	99.2	98.6	98.1	97.7	96.4	93.4	89.8	85.5
Penetration Class	A	A	A	A	B	B	B	B	C	C	C

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



Nailor Industries Inc. certifies that the Model 1605WD shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain, and Air Performance ratings. Louvers were tested in accordance with AMCA Standard 500-L.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 28 - 25	1600	1 - 30 - 24	1605WD

QUALIFICATIONS:

- Florida Product Approval No. : 19273.2
- Intertek Listed Building Product: Exterior Louvers.
- Tested in accordance with: TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Airflow).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test [with optional Model 2020 damper in closed position]).
- Wind load rating +/- 50 PSF (standard) (up to +/- 150 PSF dependent on size and configuration).

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 30 degrees.
- BLADE SPACING:** 1.86" (47) on centers.
- BLADE SUPPORT:** Concealed type, factory installed on rear of louver. Size varies based on design pressure, consult Nailor.
- SCREEN:** 5/8" x .050 (15.9 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 108" W x 84" H (2743 x 2134) or 84" W x 120" H (2134 x 3048). 63 – 70 sq. ft. (5.9 – 6.5 m²).
Larger louvers will require field assembly of smaller sections.

OVERALL MAXIMUM SIZE: Unlimited Width x 120" H (3048).

OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ Other: _____.

OPTIONAL FINISHES:

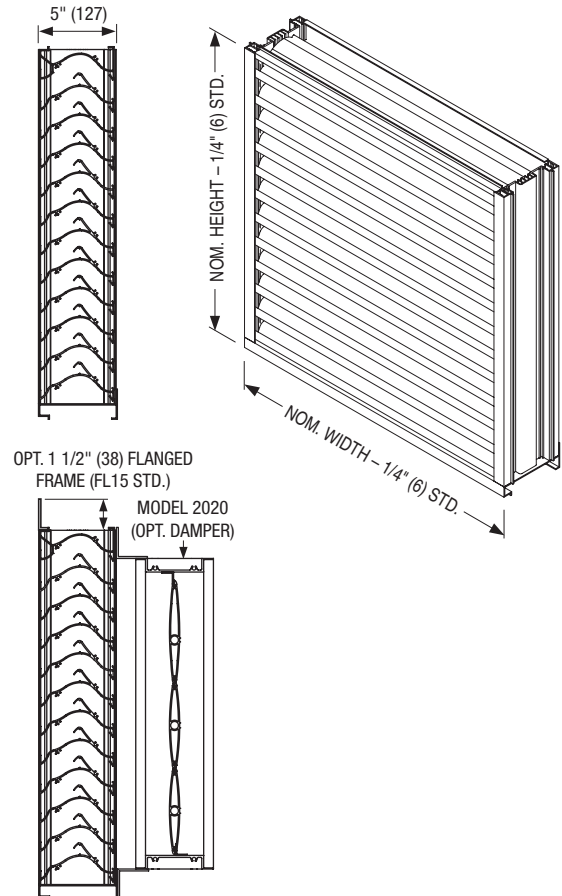
- ☐ **PC3** Powder Coat AAMA 2603.
Color: _____.

- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.

- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

OPT. FACTORY MOUNTED 2020 CONTROL DAMPER:

- Extruded Aluminum
- Opposed Airfoil Blades
- Concealed Linkage
- Silicone Blade Seal
- Cambered Stainless Steel Jamb Seals
- 1/2" (13) Plated Steel Axles



For Installation Instructions, see IOM-LOUVERINSTFPA.

Page 1 of 3

Dimensions are in inches (mm).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	11 - 22 - 24	1600F	1 - 30 - 24	1605WDF



EXTRUDED ALUMINUM STATIONARY LOUVER
FLORIDA PRODUCT APPROVED
WIND-DRIVEN RAIN RESISTANT • 5" (127) DEEP
HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1605WDF



FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																
		12 0.30	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52	66 1.68	72 1.83	78 1.98	84 2.13	90 2.29	96 2.44	102 2.59	108 2.74
Height in Inches and Meters	12 0.30	0.27 0.03	0.43 0.04	0.60 0.06	0.76 0.07	0.93 0.09	1.09 0.10	1.26 0.12	1.42 0.13	1.59 0.15	1.75 0.16	1.92 0.18	2.08 0.19	2.25 0.21	2.41 0.22	2.58 0.24	2.74 0.25	2.91 0.27
	18 0.46	0.47 0.04	0.76 0.07	1.05 0.10	1.34 0.12	1.63 0.15	1.92 0.18	2.20 0.20	2.49 0.23	2.78 0.26	3.07 0.29	3.36 0.31	3.65 0.34	3.94 0.37	4.23 0.39	4.51 0.42	4.80 0.45	5.09 0.47
	24 0.61	0.74 0.07	1.19 0.11	1.65 0.15	2.10 0.20	2.56 0.24	3.01 0.28	3.46 0.32	3.92 0.36	4.37 0.41	4.82 0.45	5.28 0.49	5.73 0.53	6.19 0.57	6.64 0.62	7.09 0.66	7.55 0.70	8.00 0.74
	30 0.76	0.94 0.09	1.52 0.14	2.10 0.19	2.68 0.25	3.25 0.30	3.83 0.36	4.41 0.41	4.99 0.46	5.56 0.52	6.14 0.57	6.72 0.62	7.30 0.68	7.87 0.73	8.45 0.79	9.03 0.84	9.61 0.89	10.18 0.95
	36 0.96	1.15 0.11	1.85 0.17	2.55 0.24	3.25 0.30	3.95 0.37	4.65 0.43	5.35 0.50	6.05 0.56	6.76 0.63	7.46 0.69	8.16 0.76	8.86 0.82	9.56 0.89	10.26 0.95	10.96 1.02	11.66 1.08	12.37 1.15
	42 1.07	1.35 0.13	2.17 0.20	3.00 0.28	3.82 0.36	4.65 0.43	5.47 0.51	6.30 0.59	7.12 0.66	7.95 0.74	8.77 0.81	9.60 0.89	10.42 0.97	11.25 1.04	12.07 1.12	12.90 1.20	13.72 1.27	14.55 1.35
	48 1.22	1.62 0.15	2.61 0.24	3.60 0.33	4.59 0.43	5.58 0.52	6.57 0.61	7.59 0.71	8.55 0.79	9.54 0.89	10.53 0.98	11.52 1.07	12.51 1.16	13.5 1.25	14.49 1.35	15.48 1.44	16.47 1.53	17.46 1.62
	54 1.37	1.82 0.17	2.93 0.27	4.05 0.38	5.16 0.48	6.27 0.58	7.39 0.69	8.50 0.79	9.62 0.89	10.73 1.00	11.84 1.10	12.96 1.20	14.07 1.31	15.18 1.41	16.30 1.51	17.41 1.62	18.53 1.72	19.64 1.82
	60 1.52	2.02 0.19	3.26 0.30	4.50 0.42	5.73 0.53	6.97 0.65	8.21 0.76	9.45 0.88	10.68 0.99	11.92 1.11	13.16 1.22	14.40 1.34	15.63 1.45	16.87 1.57	18.11 1.68	19.35 1.80	20.58 1.91	21.82 2.03
	66 1.68	2.22 0.21	3.58 0.33	4.95 0.46	6.31 0.59	7.67 0.71	9.03 0.84	10.39 0.97	11.75 1.09	13.11 1.22	14.47 1.34	15.84 1.47	17.2 1.60	18.56 1.72	19.92 1.85	21.28 1.98	22.64 2.10	24.00 2.23
	72 1.83	2.49 0.23	4.02 0.37	5.55 0.52	7.07 0.66	8.60 0.80	10.12 0.94	11.65 1.08	13.18 1.22	14.70 1.37	16.23 1.51	17.76 1.65	19.28 1.79	20.81 1.93	22.33 2.07	23.86 2.22	25.39 2.36	26.91 2.50
	78 1.98	2.7 0.25	4.35 0.40	6.00 0.56	7.65 0.71	9.30 0.86	10.95 1.02	12.6 1.17	14.25 1.32	15.90 1.48	17.55 1.63	19.20 1.78	20.85 1.94	22.5 2.09	24.15 2.24	25.80 2.40	27.45 2.55	29.10 2.70
	84 2.13	2.9 0.27	4.67 0.43	6.44 0.60	8.22 0.76	9.99 0.93	11.77 1.09	13.54 1.26	15.31 1.42	17.09 1.59	18.86 1.75	20.63 1.92	22.41 2.08	24.18 2.25	25.96 2.41	27.73 2.58	29.5 2.74	31.28 2.91
	90 2.29	3.10 0.29	5.00 0.46	6.89 0.64	8.79 0.82	10.69 0.99	12.59 1.17	14.48 1.35	16.38 1.52	18.28 1.70	20.18 1.87	22.07 2.05	23.97 2.23	25.87 2.40				
	96 2.44	3.30 0.31	5.32 0.49	7.34 0.68	9.37 0.87	11.39 1.06	13.41 1.25	15.43 1.43	17.45 1.62	19.47 1.81	21.49 2.00	23.51 2.18	25.54 2.37	27.56 2.56				
	102 2.59	3.57 0.33	5.76 0.53	7.94 0.74	10.13 0.94	12.32 1.14	14.50 1.35	16.69 1.55	18.87 1.75	21.06 1.96	23.25 2.16	25.43 2.36	27.62 2.57	29.81 2.77				
	108 2.74	3.77 0.35	6.08 0.57	8.39 0.78	10.70 0.99	13.01 1.21	15.32 1.42	17.63 1.64	19.94 1.85	22.25 2.07	24.56 2.28	26.87 2.50	29.18 2.71	31.49 2.93				
	114 2.90	3.98 0.37	6.41 0.60	8.84 0.82	11.28 1.05	13.71 1.27	16.14 1.50	18.58 1.73	21.01 1.95	23.45 2.18	25.88 2.40	28.31 2.63	30.75 2.86	33.18 3.08				
	120 3.05	4.18 0.39	6.73 0.63	9.29 0.86	11.85 1.10	14.41 1.34	16.96 1.58	19.52 1.81	22.08 2.05	24.64 2.29	27.19 2.53	29.75 2.76	32.31 3.00	34.87 3.24				

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

11 - 22 - 24

1600F

1 - 30 - 24

1605WDF



EXTRUDED ALUMINUM STATIONARY LOUVER
FLORIDA PRODUCT APPROVED
WIND-DRIVEN RAIN RESISTANT • 5" (127) DEEP
HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1605WDF



AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		47%
Free Area sq. ft. (sq. m.)		7.59 (0.71)
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm	9,488 cfm (4477 l/s)
	Free Area Velocity	
	Pressure Drop @ 1000 fpm	.22 in. w.g. (55 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	499	585	700	783	884	981
Rate in fpm (m/s)	(0.0)	(0.56)	(0.99)	(1.42)	(2.01)	(2.53)	(2.97)	(3.56)	(3.98)	(4.49)	(4.98)
Free Area Ventilation	0	216	382	547	776	978	1147	1372	1535	1733	1923
Rate in fpm (m/s)	(0.0)	(1.10)	(1.94)	(2.78)	(3.94)	(4.97)	(5.83)	(6.97)	(7.80)	(8.80)	(9.77)
Effectiveness Ratio (%)	100	100	100	100	100	99.6	99.5	99	97.3	94	91.4
Penetration Class	A	A	A	A	A	A	A	A	B	C	C

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows:
1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	91	198	298	410	487	593	686	785	887	992
Rate in fpm (m/s)	(0.0)	(0.46)	(1.01)	(1.51)	(2.08)	(2.47)	(3.01)	(3.48)	(3.99)	(4.51)	(5.04)
Free Area Ventilation	0	178	388	584	804	955	1162	1345	1539	1739	1944
Rate in fpm (m/s)	(0.0)	(0.90)	(1.97)	(2.97)	(4.08)	(4.85)	(5.90)	(6.83)	(7.82)	(8.94)	(9.88)
Effectiveness Ratio (%)	100	99.6	99.3	99.2	98.6	98.1	97.7	96.4	93.4	89.8	85.5
Penetration Class	A	A	A	A	B	B	B	B	C	C	C

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows:
1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

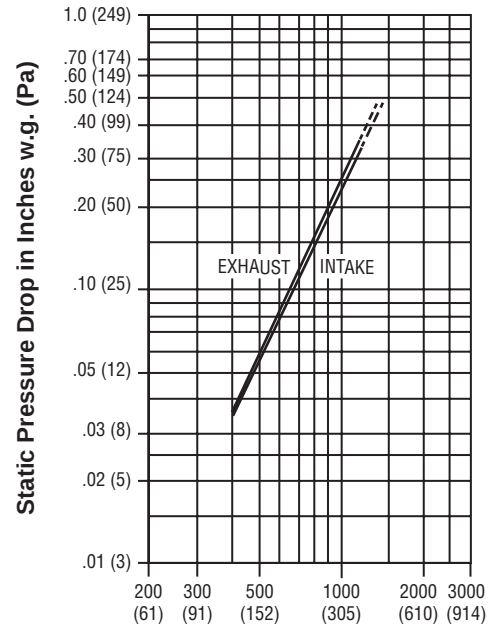


Nailor Industries Inc. certifies that the Model 1605WDF shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program Seal applies to Air Performance, Water Penetration, and Wind-Driven Rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft.³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY CLOSED AND IMPACT RESISTANT LOUVER
Enhanced Protection Level E

See www.AMCA.org for all certified or listed products

This label does not signify AMCA air flow performance certification.

Nailor Industries Inc. certifies that the 1605WDF shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind-borne debris impact resistant louvers rated for "Enhanced Protection" and +/- 50PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 52 in. (1321 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 22 - 24	1600F	1 - 30 - 24	1605WDF

QUALIFICATIONS:

- Miami-Dade County NOA No. : 24-0516.05
- Florida Product Approval No. 28078.1
- Texas Department of Insurance Evaluation ID: LVR-28
- Tested in accordance with: TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test), TAS-100A (Wind-Driven Rain Test [with optional Model 2020 damper in closed position]).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test [with optional Model 2020 damper in closed position]).
- Wind load rating +/- 150 PSF.

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 30 degrees.
- BLADE SPACING:** 1.86" (47) on centers.
- BLADE SUPPORT:** Concealed type, factory installed on rear of louver. Reinforced with 2" x 2" (51 x 51) angle (adds approximately 2" [51] to overall louver depth).
- SCREEN:** 3/4" x .050 (19 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE** 72" W x 120" H (1829 x 3048). 60 sq. ft. (5.6 m²)
- SECTION SIZE:** (36" W x 120" H [914 x 3048] with optional Model 2020 damper). Larger louvers will require field assembly of smaller sections.
- MAXIMUM SIZE:** Unlimited Width x 120" H (3048).

OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **USFL** Universal Sleeve/Flanged Frame.
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ **Other:** _____.

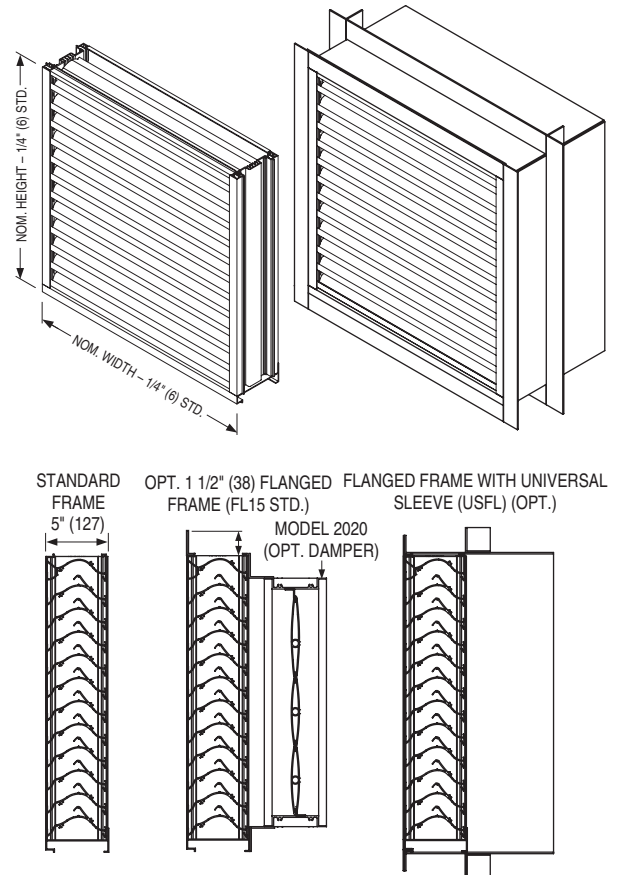
OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.

- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

OPT. FACTORY MOUNTED 2020 CONTROL DAMPER:

- Extruded Aluminum
- Opposed Airfoil Blades
- Concealed Linkage
- Silicone Blade Seal
- Cambered Stainless Steel Jamb Seals
- 1/2" (13) Plated Steel Axles


SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

 For Installation Instructions, see approved NOA.
 Page 1 of 3 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 21 - 24	1600M	7 - 31 - 24	1605WDM



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1605WDM

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters										
		12	18	24	30	36	42	48	54	60	66	72
Height in Inches and Meters	12	0.27	0.43	0.60	0.76	0.93	1.09	1.26	1.42	1.59	1.75	1.92
	0.30	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.13	0.15	0.16	0.18
	18	0.47	0.76	1.05	1.34	1.63	1.92	2.20	2.49	2.78	3.07	3.36
	0.46	0.04	0.07	0.10	0.12	0.15	0.18	0.20	0.23	0.26	0.29	0.31
	24	0.74	1.19	1.65	2.10	2.56	3.01	3.46	3.92	4.37	4.82	5.28
	0.61	0.07	0.11	0.15	0.20	0.24	0.28	0.32	0.36	0.41	0.45	0.49
	30	0.94	1.52	2.10	2.68	3.25	3.83	4.41	4.99	5.56	6.14	6.72
	0.76	0.09	0.14	0.19	0.25	0.30	0.36	0.41	0.46	0.52	0.57	0.62
	36	1.15	1.85	2.55	3.25	3.95	4.65	5.35	6.05	6.76	7.46	8.16
	0.36	0.11	0.17	0.24	0.30	0.37	0.43	0.50	0.56	0.63	0.69	0.76
	42	1.35	2.17	3.00	3.82	4.65	5.47	6.30	7.12	7.95	8.77	9.60
	1.07	0.13	0.20	0.28	0.36	0.43	0.51	0.59	0.66	0.74	0.81	0.89
	48	1.62	2.61	3.60	4.59	5.58	6.57	7.59	8.55	9.54	10.53	11.52
	1.22	0.15	0.24	0.33	0.43	0.52	0.61	0.71	0.79	0.89	0.98	1.07
	54	1.82	2.93	4.05	5.16	6.27	7.39	8.50	9.62	10.73	11.84	12.96
	1.37	0.17	0.27	0.38	0.48	0.58	0.69	0.79	0.89	1.00	1.10	1.20
Height in Inches and Meters	60	2.02	3.26	4.50	5.73	6.97	8.21	9.45	10.68	11.92	13.16	14.40
	1.52	0.19	0.30	0.42	0.53	0.65	0.76	0.88	0.99	1.11	1.22	1.34
	66	2.22	3.58	4.95	6.31	7.67	9.03	10.39	11.75	13.11	14.47	15.84
	1.68	0.21	0.33	0.46	0.59	0.71	0.84	0.97	1.09	1.22	1.34	1.47
	72	2.49	4.02	5.55	7.07	8.60	10.12	11.65	13.18	14.70	16.23	17.76
	1.83	0.23	0.37	0.52	0.66	0.80	0.94	1.08	1.22	1.37	1.51	1.65
	78	2.7	4.35	6.00	7.65	9.30	10.95	12.6	14.25	15.90	17.55	19.20
	1.98	0.25	0.40	0.56	0.71	0.86	1.02	1.17	1.32	1.48	1.63	1.78
	84	2.9	4.67	6.44	8.22	9.99	11.77	13.54	15.31	17.09	18.86	20.63
	2.13	0.27	0.43	0.60	0.76	0.93	1.09	1.26	1.42	1.59	1.75	1.92
	90	3.10	5.00	6.89	8.79	10.69	12.59	14.48	16.38	18.28	20.18	22.07
	2.29	0.29	0.46	0.64	0.82	0.99	1.17	1.35	1.52	1.70	1.87	2.05
	96	3.30	5.32	7.34	9.37	11.39	13.41	15.43	17.45	19.47	21.49	23.51
	2.44	0.31	0.49	0.68	0.87	1.06	1.25	1.43	1.62	1.81	2.00	2.18
	102	3.57	5.76	7.94	10.13	12.32	14.50	16.69	18.87	21.06	23.25	25.43
	2.59	0.33	0.53	0.74	0.94	1.14	1.35	1.55	1.75	1.96	2.16	2.36
Height in Inches and Meters	108	3.77	6.08	8.39	10.70	13.01	15.32	17.63	19.94	22.25	24.56	26.87
	2.74	0.35	0.57	0.78	0.99	1.21	1.42	1.64	1.85	2.07	2.28	2.50
	114	3.98	6.41	8.84	11.28	13.71	16.14	18.58	21.01	23.45	25.88	28.31
	2.90	0.37	0.60	0.82	1.05	1.27	1.50	1.73	1.95	2.18	2.40	2.63
Height in Inches and Meters	120	4.18	6.73	9.29	11.85	14.41	16.96	19.52	22.08	24.64	27.19	29.75
	3.05	0.39	0.63	0.86	1.10	1.34	1.58	1.81	2.05	2.29	2.53	2.76

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

10 - 21 - 24

1600M

7 - 31 - 24

1605WDM



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1605WDM

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		47%
Free Area sq. ft. (sq. m.)		7.59 (0.71)
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm	9,488 cfm (4478 l/s)
	Free Area Velocity	
	Pressure Drop @ 1250 fpm	.36 in. w.g. (90 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	499	585	700	783	884	981
Rate in fpm (m/s)	(0.0)	(0.56)	(0.99)	(1.42)	(2.01)	(2.53)	(2.97)	(3.56)	(3.98)	(4.49)	(4.98)
Free Area Ventilation	0	216	382	547	776	978	1147	1372	1535	1733	1923
Rate in fpm (m/s)	(0.0)	(1.10)	(1.94)	(2.78)	(3.94)	(4.97)	(5.83)	(6.97)	(7.80)	(8.80)	(9.77)
Effectiveness Ratio (%)	100	100	100	100	100	99.6	99.5	99	97.3	94	91.4
Penetration Class	A	A	A	A	A	A	A	A	B	C	C

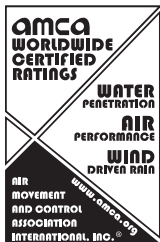
Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	91	198	298	410	487	593	686	785	887	992
Rate in fpm (m/s)	(0.0)	(0.46)	(1.01)	(1.51)	(2.08)	(2.47)	(3.01)	(3.48)	(3.99)	(4.51)	(5.04)
Free Area Ventilation	0	178	388	584	804	955	1162	1345	1539	1739	1944
Rate in fpm (m/s)	(0.0)	(0.90)	(1.97)	(2.97)	(4.08)	(4.85)	(5.90)	(6.83)	(7.82)	(8.94)	(9.88)
Effectiveness Ratio (%)	100	99.6	99.3	99.2	98.6	98.1	97.7	96.4	93.4	89.8	85.5
Penetration Class	A	A	A	A	B	B	B	B	C	C	C

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

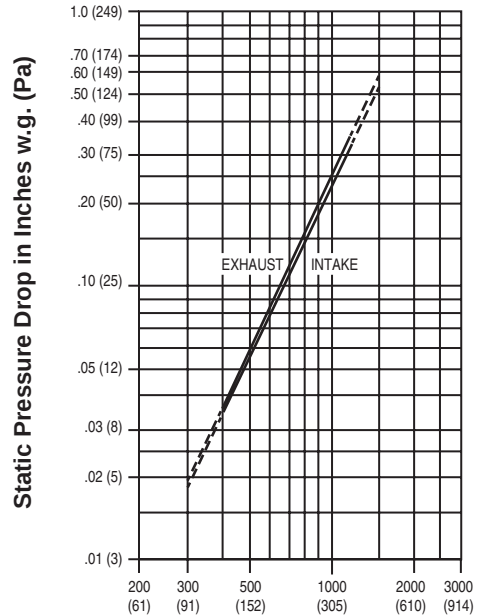


Nailor Industries Inc. certifies that the Model 1605WDM shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain, and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY CLOSED AND IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Nailor Industries Inc. certifies that the 1605WDM louver shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind-borne debris impact resistant louvers rated for Enhanced Protection and +/- 150PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 34 in. (864mm). The AMCA International Listing Label applies to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully closed position that stops airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
10 - 21 - 24	1600M	7 - 31 - 24	1605WDM

EXTRUDED ALUMINUM STATIONARY LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
5" (127) DEEP • VERTICAL BLADE
MODEL: 1605WDV

QUALIFICATIONS:

- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 70 PSF.

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .070" (1.78) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 45 degrees.
- BLADE SPACING:** Approximately 1 1/2" (38) on centers.
- BLADE SUPPORT:** 2.5" (64) strap every 60" (1524) or less in height.
- SCREEN:** 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 72" W x 120" H (1829 x 3048) or 120" W x 72" H (3048 x 1829). 60 sq. ft. (5.6 m²). Larger louvers will require field assembly of smaller sections.
- MAXIMUM SIZE:** Unlimited Width x 120" H (3048).

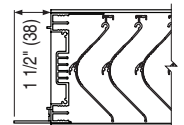
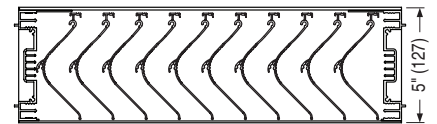
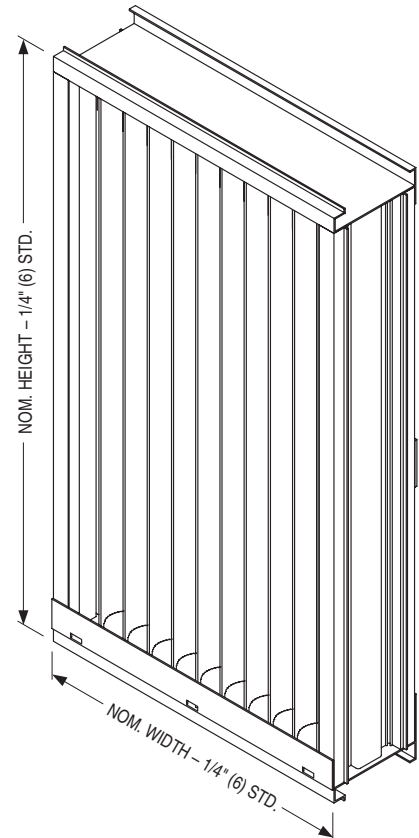
OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ **Other:** _____.

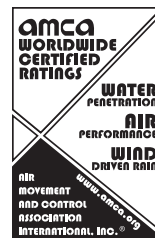
OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.



OPT. FLANGED FRAME
(FL15 STD.)



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
 Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

5- 28 - 25

1600

1 - 30 - 24

1605WDV



EXTRUDED ALUMINUM STATIONARY LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1605WDV

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																		
		12 0.30	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52	66 1.68	72 1.83	78 1.98	84 2.13	90 2.29	96 2.44	102 2.59	108 2.74	114 2.90	120 3.05
Height in Inches and Meters	12 0.30	0.28 0.03	0.51 0.05	0.74 0.07	0.96 0.09	1.19 0.11	1.42 0.13	1.65 0.15	1.87 0.17	2.10 0.20	2.33 0.22	2.55 0.24	2.78 0.26	3.01 0.28	3.24 0.30	3.46 0.32	3.69 0.34	3.92 0.36	4.14 0.38	4.37 0.41
	18 0.46	0.49 0.05	0.89 0.08	1.28 0.12	1.68 0.16	2.07 0.19	2.47 0.23	2.86 0.27	3.26 0.30	3.65 0.34	4.05 0.38	4.44 0.41	4.83 0.45	5.23 0.49	5.62 0.52	6.02 0.56	6.41 0.60	6.81 0.63	7.20 0.67	7.60 0.71
	24 0.61	0.63 0.06	1.14 0.11	1.65 0.15	2.15 0.20	2.66 0.25	3.17 0.29	3.67 0.34	4.18 0.39	4.69 0.44	5.19 0.48	5.70 0.53	6.20 0.58	6.71 0.62	7.22 0.67	7.72 0.72	8.23 0.76	8.74 0.81	9.24 0.86	9.75 0.91
	30 0.76	0.84 0.08	1.52 0.14	2.19 0.20	2.87 0.27	3.54 0.33	4.21 0.39	4.89 0.45	5.56 0.52	6.24 0.58	6.91 0.64	7.58 0.70	8.26 0.77	8.93 0.83	9.61 0.89	10.28 0.96	10.96 1.02	11.63 1.08	12.30 1.14	12.98 1.21
	36 0.36	1.05 0.10	1.89 0.18	2.74 0.25	3.58 0.33	4.42 0.41	5.26 0.49	6.10 0.57	6.95 0.65	7.79 0.72	8.63 0.80	9.47 0.88	10.31 0.96	11.15 1.04	12.00 1.11	12.84 1.19	13.68 1.27	14.52 1.35	15.36 1.43	16.21 1.51
	42 1.07	1.26 0.12	2.27 0.21	3.28 0.30	4.29 0.40	5.30 0.49	6.31 0.59	7.32 0.68	8.33 0.77	9.34 0.87	10.35 0.96	11.36 1.06	12.37 1.15	13.38 1.24	14.39 1.34	15.39 1.43	16.40 1.52	17.41 1.62	18.42 1.71	19.43 1.81
	48 1.22	1.47 0.14	2.65 0.25	3.83 0.36	5.00 0.46	6.18 0.57	7.36 0.68	8.53 0.79	9.71 0.90	10.89 1.01	12.07 1.12	13.24 1.23	14.42 1.34	15.60 1.45	16.77 1.56	17.95 1.67	19.13 1.78	20.31 1.89	21.48 2.00	22.66 2.11
	54 1.37	1.68 0.16	3.03 0.28	4.37 0.41	5.72 0.53	7.06 0.66	8.41 0.78	9.75 0.91	11.09 1.03	12.44 1.16	13.78 1.28	15.13 1.41	16.47 1.53	17.82 1.66	19.16 1.78	20.51 1.91	21.85 2.03	23.20 2.16	24.54 2.28	25.89 2.40
	60 1.52	1.89 0.18	3.40 0.32	4.92 0.46	6.43 0.60	7.94 0.74	9.45 0.88	10.97 1.02	12.48 1.16	13.99 1.30	15.50 1.44	17.02 1.58	18.53 1.72	20.04 1.86	21.55 2.00	23.07 2.14	24.58 2.28	26.09 2.42	27.60 2.56	29.12 2.70
	66 1.68	2.10 0.20	3.78 0.35	5.46 0.51	7.14 0.66	8.82 0.82	10.50 0.98	12.18 1.13	13.86 1.29	15.54 1.44	17.22 1.60	18.90 1.76	20.58 1.91	22.26 2.07	23.94 2.22	25.62 2.38	27.30 2.54	28.98 2.69	30.66 2.85	32.34 3.00
	72 1.83	2.31 0.21	4.16 0.39	6.01 0.56	7.85 0.73	9.70 0.90	11.55 1.07	13.40 1.24	15.24 1.42	17.09 1.59	18.94 1.76	20.79 1.93	22.64 2.10	24.48 2.27	26.33 2.45	28.18 2.62	30.03 2.79	31.88 2.96	33.72 3.13	35.57 3.30
	78 1.98	2.52 0.23	4.53 0.42	6.55 0.61	8.57 0.80	10.58 0.98	12.60 1.17	14.61 1.36	16.63 1.54	18.64 1.73	20.66 1.92	22.67 2.11								
	84 2.13	2.73 0.25	4.91 0.46	7.10 0.66	9.28 0.86	11.46 1.06	13.64 1.27	15.83 1.47	18.01 1.67	20.19 1.88	22.38 2.08	24.56 2.28								
	90 2.29	2.94 0.27	5.29 0.49	7.64 0.71	9.99 0.93	12.34 1.15	14.69 1.36	17.04 1.58	19.39 1.80	21.75 2.02	24.10 2.24	26.45 2.46								
	96 2.44	3.15 0.29	5.67 0.53	8.19 0.76	10.70 0.99	13.22 1.23	15.74 1.46	18.26 1.70	20.78 1.93	23.30 2.16	25.81 2.40	28.33 2.63								
	102 2.59	3.36 0.31	6.04 0.56	8.73 0.81	11.42 1.06	14.10 1.31	16.79 1.56	19.47 1.81	22.16 2.06	24.85 2.31	27.53 2.56	30.22 2.81								
	108 2.74	3.57 0.33	6.42 0.60	9.27 0.86	12.13 1.13	14.98 1.39	17.84 1.66	20.69 1.92	23.54 2.19	26.40 2.45	29.25 2.72	32.11 2.98								
	114 2.90	3.78 0.35	6.80 0.63	9.82 0.91	12.84 1.19	15.86 1.47	18.88 1.75	21.91 2.04	24.93 2.32	27.95 2.60	30.97 2.88	33.99 3.16								
	120 3.05	3.99 0.37	7.18 0.67	10.36 0.96	13.55 1.26	16.74 1.56	19.93 1.85	23.12 2.15	26.31 2.44	29.50 2.74	32.69 3.04	35.88 3.33								



SCHEDULE TYPE:	Page 2 of 3			
PROJECT:	Dimensions are in inches (mm).			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5- 28 - 25	1600	1 - 30 - 24	1605WDV



EXTRUDED ALUMINUM STATIONARY LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1605WDV

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

I N T A K E	Free Area %	53%
	Free Area sq. ft. (sq. m.)	8.53 (0.79)
	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm Free Area Velocity	10,663 cfm (5032 l/s)
	Pressure Drop @ 1250 fpm	.29 in. w.g. (72 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	497	588	701	781	891	984
Rate in fpm (m/s)	(0.00)	(0.56)	(0.99)	(1.42)	(2.01)	(2.52)	(2.99)	(3.56)	(3.97)	(4.53)	(5.00)
Free Area Ventilation	0	186	330	473	671	842	996	1187	1323	1509	1667
Rate in fpm (m/s)	(0.00)	(0.95)	(1.68)	(2.40)	(3.41)	(4.28)	(5.06)	(6.03)	(6.72)	(7.63)	(8.47)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	88	199	301	400	485	590	687	787	883	987
Rate in fpm (m/s)	(0.00)	(0.45)	(1.01)	(1.53)	(2.03)	(2.46)	(3.00)	(3.49)	(4.00)	(4.49)	(5.01)
Free Area Ventilation	0	149	337	510	678	822	999	1164	1333	1496	1672
Rate in fpm (m/s)	(0.00)	(0.76)	(1.71)	(2.59)	(3.44)	(4.18)	(5.07)	(5.91)	(6.77)	(7.60)	(8.49)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

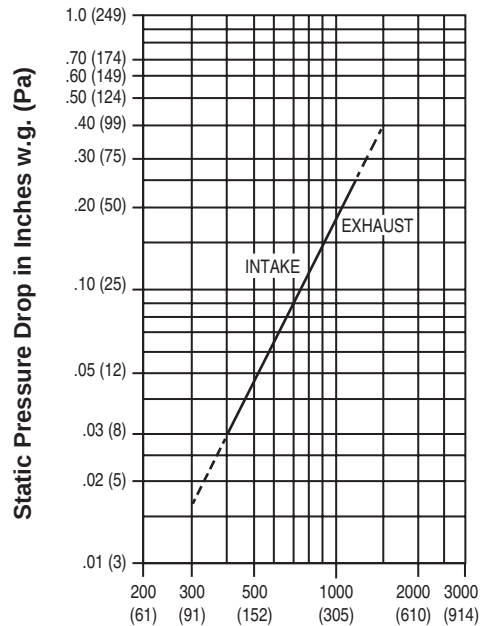


Nailor Industries Inc. certifies that the Model 1605WDV shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program Seal applies to Air Performance, Water Penetration, and Wind-Driven Rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1605WDV shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA Listing Label applies to Wind Borne Debris Impact Resistant louvers rated for "Enhanced Protection" and +/- 70PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

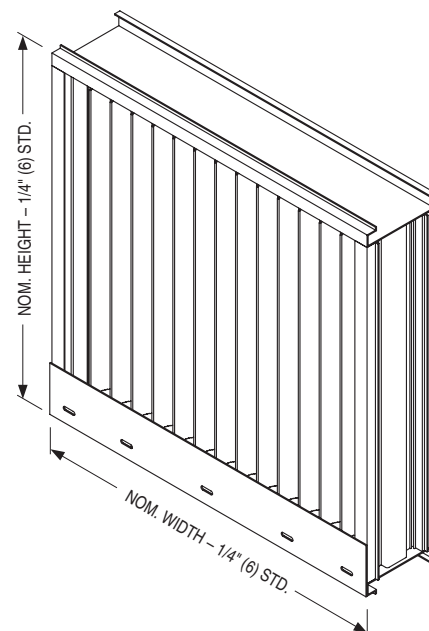
CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5- 28 - 25	1600	1 - 30 - 24	1605WDV

QUALIFICATIONS:

- Florida Product Approval No. : 19273.3
- Intertek Listed Building Product: Exterior Louvers.
- Tested in accordance with: TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Airflow).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 50 PSF (standard) (up to 130 PSF dependent on size and configuration).


STANDARD CONSTRUCTION:

FRAME: 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.

BLADES: Type 6063-T6 extruded aluminum, .070" (1.78) nominal wall thickness, with reinforcing bosses.

BLADE ANGLE: Fixed at 45 degrees.

BLADE SPACING: Approximately 1 1/2" (38) on centers.

BLADE SUPPORT: 2.5" (64) strap every 60" (1524) or less in height.

SCREEN: 5/8" x .050 (16 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).

FINISH: Mill.

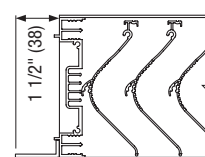
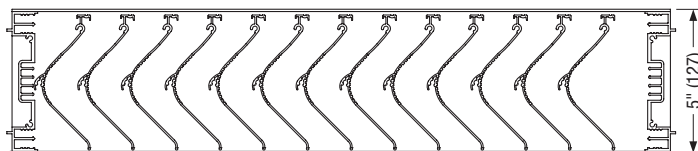
MINIMUM SIZE: 12" W x 12" H (305 x 305).

MAX. SINGLE 72" W x 120" H (1829 x 3048) 60 sq. ft. (5.6 m²).

SECTION SIZE: Larger louvers will require field assembly of smaller sections.

OVERALL MAX. SIZE: Unlimited Width x 120" H (3048).

APPROXIMATE SHIPPING WEIGHT: 5 lbs. per ft² (24.4 Kg per m²).



OPT. FLANGED FRAME
(FL15 STD.)

OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ **Other:** _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

For Installation Instructions, see approved NOA.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 22 - 26	1600F	11 - 25 - 24	1605WDVF



EXTRUDED ALUMINUM STATIONARY LOUVER
FLORIDA PRODUCT APPROVED
 HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
 5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1605WDVF



FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																		
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height in Inches and Meters	12	0.29	0.52	0.74	0.97	1.20	1.43	1.66	1.89	2.12	2.35	2.58	2.81	3.03	3.26	3.49	3.72	3.95	4.18	4.41
	0.30	0.03	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.22	0.24	0.26	0.28	0.30	0.32	0.35	0.37	0.39	0.41
	18	0.50	0.90	1.29	1.69	2.09	2.49	2.89	3.29	3.68	4.08	4.48	4.88	5.28	5.67	6.07	6.47	6.87	7.27	7.67
	0.46	0.05	0.08	0.12	0.16	0.19	0.23	0.27	0.31	0.34	0.38	0.42	0.45	0.49	0.53	0.56	0.60	0.64	0.68	0.71
	24	0.64	1.15	1.67	2.18	2.69	3.20	3.72	4.23	4.74	5.26	5.77	6.28	6.79	7.31	7.82	8.33	8.85	9.36	9.87
	0.61	0.06	0.11	0.15	0.20	0.25	0.30	0.35	0.39	0.44	0.49	0.54	0.58	0.63	0.68	0.73	0.77	0.82	0.87	0.92
	30	0.85	1.53	2.22	2.90	3.58	4.26	4.94	5.63	6.31	6.99	7.67	8.35	9.04	9.72	10.40	11.08	11.76	12.45	13.13
	0.76	0.08	0.14	0.21	0.27	0.33	0.40	0.46	0.52	0.59	0.65	0.71	0.78	0.84	0.90	0.97	1.03	1.09	1.16	1.22
	36	1.06	1.92	2.77	3.62	4.47	5.32	6.17	7.02	7.87	8.72	9.58	10.43	11.28	12.13	12.98	13.83	14.68	15.53	16.38
	0.36	0.10	0.18	0.26	0.34	0.42	0.49	0.57	0.65	0.73	0.81	0.89	0.97	1.05	1.13	1.21	1.28	1.36	1.44	1.52
	42	1.28	2.30	3.32	4.34	5.36	6.38	7.40	8.42	9.44	10.46	11.48	12.50	13.52	14.54	15.56	16.58	17.60	18.62	19.64
	1.07	0.12	0.21	0.31	0.40	0.50	0.59	0.69	0.78	0.88	0.97	1.07	1.16	1.26	1.35	1.45	1.54	1.64	1.73	1.82
	48	1.49	2.68	3.87	5.06	6.24	7.43	8.62	9.81	11.00	12.19	13.38	14.57	15.76	16.95	18.14	19.33	20.52	21.71	22.90
	1.22	0.14	0.25	0.36	0.47	0.58	0.69	0.81	0.91	1.02	1.13	1.24	1.35	1.46	1.57	1.69	1.80	1.91	2.02	2.13
	54	1.70	3.06	4.42	5.77	7.13	8.49	9.85	11.21	12.57	13.93	15.28	16.64	18.00	19.36	20.72	22.08	23.44	24.79	26.15
	1.37	0.16	0.28	0.41	0.54	0.66	0.79	0.92	1.04	1.17	1.29	1.42	1.55	1.67	1.80	1.92	2.05	2.18	2.30	2.43
	60	1.91	3.44	4.97	6.49	8.02	9.55	11.08	12.60	14.13	15.66	17.19	18.72	20.24	21.77	23.30	24.83	26.35	27.88	29.41
	1.52	0.18	0.32	0.46	0.60	0.75	0.89	1.03	1.17	1.31	1.45	1.60	1.74	1.88	2.02	2.16	2.31	2.45	2.59	2.73
	66	2.12	3.82	5.52	7.21	8.91	10.61	12.30	14.00	15.70	17.39	19.09	20.79	22.48	24.18	25.88	27.58	29.27	30.97	32.67
	1.68	0.20	0.35	0.51	0.67	0.83	0.99	1.14	1.30	1.46	1.62	1.77	1.93	2.09	2.25	2.40	2.56	2.72	2.88	3.03
	72	2.33	4.20	6.06	7.93	9.80	11.66	13.53	15.40	17.26	19.13	20.99	22.86	24.73	26.59	28.46	30.32	32.19	34.06	35.92
	1.83	0.22	0.39	0.56	0.74	0.91	1.08	1.26	1.43	1.60	1.78	1.95	2.12	2.30	2.47	2.64	2.82	2.99	3.16	3.34
	78	2.54	4.58	6.61	8.65	10.69	12.72	14.76	16.79	18.83	20.86	22.90								
	1.98	0.24	0.43	0.61	0.80	0.99	1.18	1.37	1.56	1.75	1.94	2.13								
	84	2.76	4.96	7.16	9.37	11.57	13.78	15.98	18.19	20.39	22.60	24.80								
	2.13	0.26	0.46	0.67	0.87	1.08	1.28	1.48	1.69	1.89	2.10	2.30								
	90	2.97	5.34	7.71	10.09	12.46	14.84	17.21	19.58	21.96	24.33	26.70								
	2.29	0.28	0.50	0.72	0.94	1.16	1.38	1.60	1.82	2.04	2.26	2.48								
	96	3.18	5.72	8.26	10.81	13.35	15.89	18.44	20.98	23.52	26.06	28.61								
	2.44	0.30	0.53	0.77	1.00	1.24	1.48	1.71	1.95	2.19	2.42	2.66								
	102	3.39	6.10	8.81	11.53	14.24	16.95	19.66	22.37	25.09	27.80	30.51								
	2.59	0.31	0.57	0.82	1.07	1.32	1.57	1.83	2.08	2.33	2.58	2.83								
	108	3.60	6.48	9.36	12.24	15.13	18.01	20.89	23.77	26.65	29.53	32.41								
	2.74	0.33	0.60	0.87	1.14	1.41	1.67	1.94	2.21	2.48	2.74	3.01								
	114	3.81	6.86	9.91	12.96	16.01	19.06	22.11	25.16	28.22	31.27	34.32								
	2.90	0.35	0.64	0.92	1.20	1.49	1.77	2.05	2.34	2.62	2.90	3.19								
	120	4.02	7.24	10.46	13.68	16.90	20.12	23.34	26.56	29.78	33.00	36.22								
	3.05	0.37	0.67	0.97	1.27	1.57	1.87	2.17	2.47	2.77	3.07	3.36								

SCHEDULE TYPE:	Page 2 of 3 Dimensions are in inches (mm).			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	1 - 22 - 26	1600F	11 - 25 - 24	1605WDVF

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		55%
Free Area sq. ft. (sq. m.)		8.77 (0.81)
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm Free Area Velocity	10,963 cfm (5174 l/s)
	Pressure Drop @ 1000 fpm	.18 in. w.g. (45 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	497	588	701	781	891	984
Rate in fpm (m/s)	(0.00)	(0.56)	(0.99)	(1.42)	(2.01)	(2.52)	(2.99)	(3.56)	(3.97)	(4.53)	(5.00)
Free Area Ventilation	0	186	330	473	671	842	996	1187	1323	1509	1667
Rate in fpm (m/s)	(0.00)	(0.95)	(1.68)	(2.40)	(3.41)	(4.28)	(5.06)	(6.03)	(6.72)	(7.63)	(8.47)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	88	199	301	400	485	590	687	787	883	987
Rate in fpm (m/s)	(0.00)	(0.45)	(1.01)	(1.53)	(2.03)	(2.46)	(3.00)	(3.49)	(4.00)	(4.49)	(5.01)
Free Area Ventilation	0	149	337	510	678	822	999	1164	1333	1496	1672
Rate in fpm (m/s)	(0.00)	(0.76)	(1.71)	(2.59)	(3.44)	(4.18)	(5.07)	(5.91)	(6.77)	(7.60)	(8.49)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

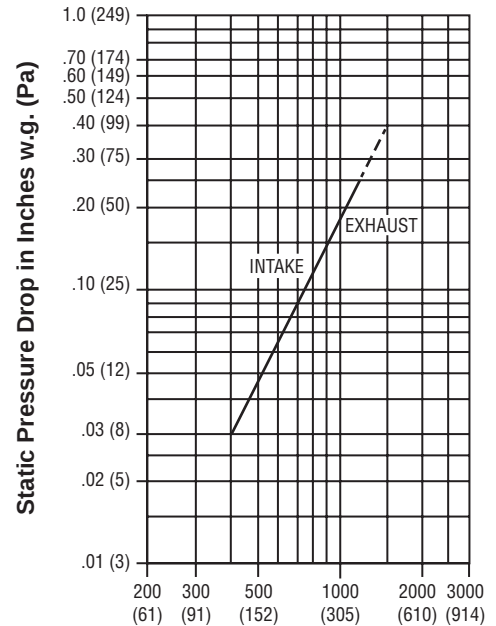


Nailor Industries Inc. certifies that the Model 1605WDVF shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program Seal applies to Air Performance, Water Penetration, and Wind-Driven Rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN RESISTANT WITH BLADES FULLY OPEN AND IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Nailor Industries Inc. certifies that the 1605WDVF shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind-borne debris impact resistant louvers rated for "Enhanced Protection" and +/- 50PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

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Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 22 - 26	1600F	11 - 25 - 24	1605WDVF



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE
MODEL: 1605WDVM

QUALIFICATIONS:

- Miami-Dade County NOA No. : 24-0516.06
- Florida Product Approval No. : 28078.2
- Texas Department of Insurance Evaluation ID : LVR-29
- Tested in accordance with: TAS-100A (Wind-Driven Rain Test), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 130 PSF.

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 45 degrees.
- BLADE SPACING:** Approximately 1 1/2" (38) on centers.
- BLADE SUPPORT:** 2.5" (64) strap every 60" (1524) or less in height.
- SCREEN:** 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 72" W x 120" H (1829 x 3048) or 120" W x 72" H (3048 x 1829). 60 sq. ft. (5.6 m²). Larger louvers will require field assembly of smaller sections.

MAXIMUM SIZE: Unlimited Width x 120" H (3048).

OPTIONS:

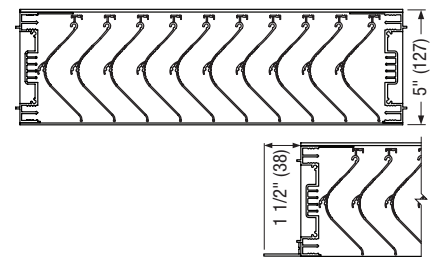
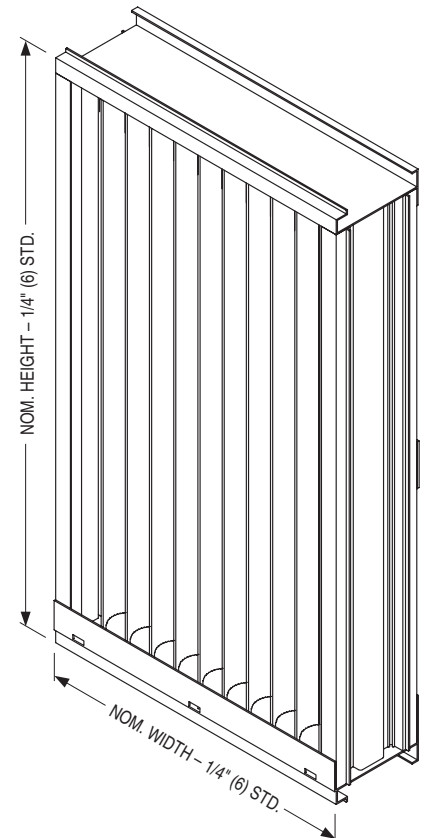
- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ **Other:** _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

For Installation Instructions, see approved NOA.



OPT. FLANGED FRAME
(FL15 STD.)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

DATE

B SERIES

SUPERSEDES

DRAWING NO.

7 - 24 - 24

1600M

1 - 30 - 24

1605WDVM

Page 1 of 3
Dimensions are in inches (mm).



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1605WDVM

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																		
		12 0.30	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52	66 1.68	72 1.83	78 1.98	84 2.13	90 2.29	96 2.44	102 2.59	108 2.74	114 2.90	120 3.05
Height in Inches and Meters	12 0.30	0.28 0.03	0.51 0.05	0.74 0.07	0.96 0.09	1.19 0.11	1.42 0.13	1.65 0.15	1.87 0.17	2.10 0.20	2.33 0.22	2.55 0.24	2.78 0.26	3.01 0.28	3.24 0.30	3.46 0.32	3.69 0.34	3.92 0.36	4.14 0.38	4.37 0.41
	18 0.46	0.49 0.05	0.89 0.08	1.28 0.12	1.68 0.16	2.07 0.19	2.47 0.23	2.86 0.27	3.26 0.30	3.65 0.34	4.05 0.38	4.44 0.41	4.83 0.45	5.23 0.49	5.62 0.52	6.02 0.56	6.41 0.60	6.81 0.63	7.20 0.67	7.60 0.71
	24 0.61	0.63 0.06	1.14 0.11	1.65 0.15	2.15 0.20	2.66 0.25	3.17 0.29	3.67 0.34	4.18 0.39	4.69 0.44	5.19 0.48	5.70 0.53	6.20 0.58	6.71 0.62	7.22 0.67	7.72 0.72	8.23 0.76	8.74 0.81	9.24 0.86	9.75 0.91
	30 0.76	0.84 0.08	1.52 0.14	2.19 0.20	2.87 0.27	3.54 0.33	4.21 0.39	4.89 0.45	5.56 0.52	6.24 0.58	6.91 0.64	7.58 0.70	8.26 0.77	8.93 0.83	9.61 0.89	10.28 0.96	10.96 1.02	11.63 1.08	12.30 1.14	12.98 1.21
	36 0.36	1.05 0.10	1.89 0.18	2.74 0.25	3.58 0.33	4.42 0.41	5.26 0.49	6.10 0.57	6.95 0.65	7.79 0.72	8.63 0.80	9.47 0.88	10.31 0.96	11.15 1.04	12.00 1.11	12.84 1.19	13.68 1.27	14.52 1.35	15.36 1.43	16.21 1.51
	42 1.07	1.26 0.12	2.27 0.21	3.28 0.30	4.29 0.40	5.30 0.49	6.31 0.59	7.32 0.68	8.33 0.77	9.34 0.87	10.35 0.96	11.36 1.06	12.37 1.15	13.38 1.24	14.39 1.34	15.39 1.43	16.40 1.52	17.41 1.62	18.42 1.71	19.43 1.81
	48 1.22	1.47 0.14	2.65 0.25	3.83 0.36	5.00 0.46	6.18 0.57	7.36 0.68	8.53 0.79	9.71 0.90	10.89 1.01	12.07 1.12	13.24 1.23	14.42 1.34	15.60 1.45	16.77 1.56	17.95 1.67	19.13 1.78	20.31 1.89	21.48 2.00	22.66 2.11
	54 1.37	1.68 0.16	3.03 0.28	4.37 0.41	5.72 0.53	7.06 0.66	8.41 0.78	9.75 0.91	11.09 1.03	12.44 1.16	13.78 1.28	15.13 1.41	16.47 1.53	17.82 1.66	19.16 1.78	20.51 1.91	21.85 2.03	23.20 2.16	24.54 2.28	25.89 2.40
	60 1.52	1.89 0.18	3.40 0.32	4.92 0.46	6.43 0.60	7.94 0.74	9.45 0.88	10.97 1.02	12.48 1.16	13.99 1.30	15.50 1.44	17.02 1.58	18.53 1.72	20.04 1.86	21.55 2.00	23.07 2.14	24.58 2.28	26.09 2.42	27.60 2.56	29.12 2.70
	66 1.68	2.10 0.20	3.78 0.35	5.46 0.51	7.14 0.66	8.82 0.82	10.50 0.98	12.18 1.13	13.86 1.29	15.54 1.44	17.22 1.60	18.90 1.76	20.58 1.91	22.26 2.07	23.94 2.22	25.62 2.38	27.30 2.54	28.98 2.69	30.66 2.85	32.34 3.00
	72 1.83	2.31 0.21	4.16 0.39	6.01 0.56	7.85 0.73	9.70 0.90	11.55 1.07	13.40 1.24	15.24 1.42	17.09 1.59	18.94 1.76	20.79 1.93	22.64 2.10	24.48 2.27	26.33 2.45	28.18 2.62	30.03 2.79	31.88 2.96	33.72 3.13	35.57 3.30
	78 1.98	2.52 0.23	4.53 0.42	6.55 0.61	8.57 0.80	10.58 0.98	12.60 1.17	14.61 1.36	16.63 1.54	18.64 1.73	20.66 1.92	22.67 2.11								
	84 2.13	2.73 0.25	4.91 0.46	7.10 0.66	9.28 0.86	11.46 1.06	13.64 1.27	15.83 1.47	18.01 1.67	20.19 1.88	22.38 2.08	24.56 2.28								
	90 2.29	2.94 0.27	5.29 0.49	7.64 0.71	9.99 0.93	12.34 1.15	14.69 1.36	17.04 1.58	19.39 1.80	21.75 2.02	24.10 2.24	26.45 2.46								
	96 2.44	3.15 0.29	5.67 0.53	8.19 0.76	10.70 0.99	13.22 1.23	15.74 1.46	18.26 1.70	20.78 1.93	23.30 2.16	25.81 2.40	28.33 2.63								
	102 2.59	3.36 0.31	6.04 0.56	8.73 0.81	11.42 1.06	14.10 1.31	16.79 1.56	19.47 1.81	22.16 2.06	24.85 2.31	27.53 2.56	30.22 2.81								
	108 2.74	3.57 0.33	6.42 0.60	9.27 0.86	12.13 1.13	14.98 1.39	17.84 1.66	20.69 1.92	23.54 2.19	26.40 2.45	29.25 2.72	32.11 2.98								
	114 2.90	3.78 0.35	6.80 0.63	9.82 0.91	12.84 1.19	15.86 1.47	18.88 1.75	21.91 2.04	24.93 2.32	27.95 2.60	30.97 2.88	33.99 3.16								
	120 3.05	3.99 0.37	7.18 0.67	10.36 0.96	13.55 1.26	16.74 1.56	19.93 1.85	23.12 2.15	26.31 2.44	29.50 2.74	32.69 3.04	35.88 3.33								

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

7 - 24 - 24

1600M

1 - 30 - 24

1605WDVM



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1605WDVM

AIRFLOW / WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %	53%
Free Area sq. ft. (sq. m.)	8.53 (0.79)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
Air Volume at 1250 fpm	10,663 cfm (5032 l/s)
Free Area Velocity	
Pressure Drop @ 1250 fpm	.29 in. w.g. (72 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	497	588	701	781	891	984
Rate in fpm (m/s)	(0.00)	(0.56)	(0.99)	(1.42)	(2.01)	(2.52)	(2.99)	(3.56)	(3.97)	(4.53)	(5.00)
Free Area Ventilation	0	186	330	473	671	842	996	1187	1323	1509	1667
Rate in fpm (m/s)	(0.00)	(0.95)	(1.68)	(2.40)	(3.41)	(4.28)	(5.06)	(6.03)	(6.72)	(7.63)	(8.47)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	88	199	301	400	485	590	687	787	883	987
Rate in fpm (m/s)	(0.00)	(0.45)	(1.01)	(1.53)	(2.03)	(2.46)	(3.00)	(3.49)	(4.00)	(4.49)	(5.01)
Free Area Ventilation	0	149	337	510	678	822	999	1164	1333	1496	1672
Rate in fpm (m/s)	(0.00)	(0.76)	(1.71)	(2.59)	(3.44)	(4.18)	(5.07)	(5.91)	(6.77)	(7.60)	(8.49)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

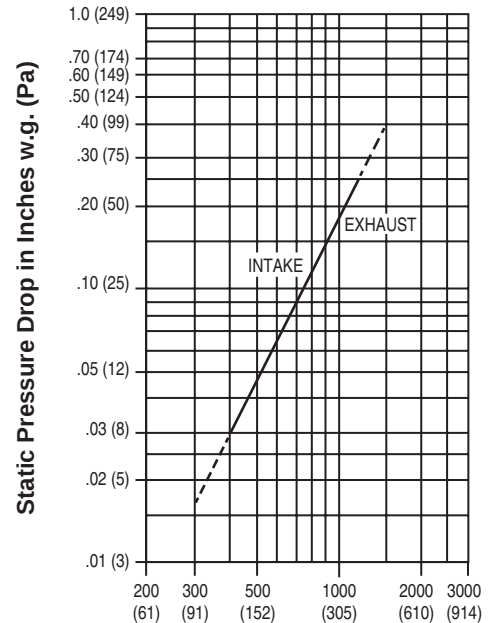


Nailor Industries Inc. certifies that the Model 1605WDVM shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).

Standard air density @ 0.075 lbs/ft³.

Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Enhanced Protection Level E

See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1605WDVM louver shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for Enhanced Protection and +/- 130PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

7 - 24 - 24

1600M

1 - 30 - 24

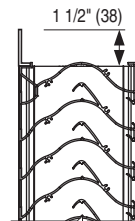
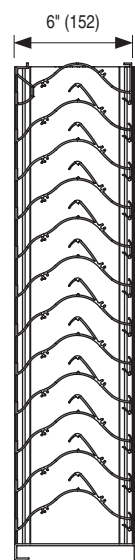
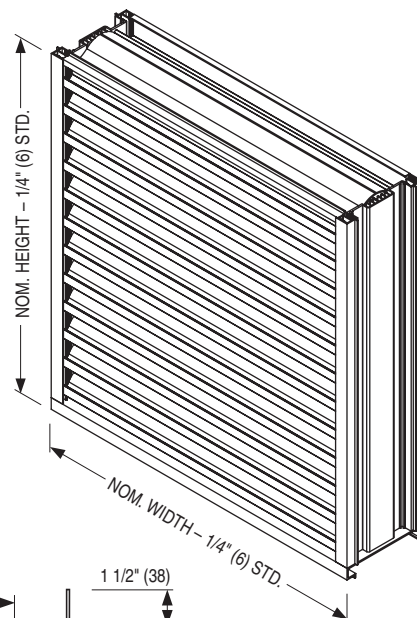
1605WDVM

EXTRUDED ALUMINUM STATIONARY LOUVER WIND-DRIVEN RAIN RESISTANT 6" (152) DEEP • HORIZONTAL BLADE MODEL: 1606WD

Model 1606WD Wind-Driven Resistant Horizontal Drainable Blade Louver provides maximum weather protection in a 6" (152) deep frame, with pleasing sight-proof aesthetics that compliment any structure's exterior styling. Suitable for use in exhaust and low to medium velocity intake applications, the drainable head and drainable blade design divert collected water down concealed side downspouts and out the sill. Blades are reinforced with full length integral bosses for superior strength and the 6" (152) deep channel or optional flanged frame installs easily in most common wall configurations. Model 1606WD is AMCA Licensed for Wind-Driven Rain, Water Penetration and Air Performance.

STANDARD CONSTRUCTION:

- FRAME:** 6" (152) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 30 degrees.
- BLADE SPACING:** Approximately 1.94" (49) on centers.
- BLADE SUPPORT:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers. Reinforced with 1 1/2" x 2" (38 x 51) angle (adds 2" [51] to overall louver depth).
- BLADES:**
- MULLIONS:** Concealed type allowing continuous line appearance up to 120" (3048) wide. Larger assemblies require separate visible frames with downspouts.
- SCREEN:** 5/8" x .050 (15.9 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 120" W x 84" H (3048 x 2134) or 84" W x 120" H (2134 x 3048). 70 sq. ft. (6.5 m²). Larger louvers will require field assembly of smaller sections.



OPT. FLANGED FRAME
(FL15 STD.)



OPTIONS:

- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **ESI** Extended Sill.
- ☐ **FR1** 1" (25) Filter Rack.
- ☐ **FR2** 2" (51) Filter Rack.
- ☐ **PAC** Perimeter Anchor Clips.
- ☐ **Other:** _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.

Color Anodized:

- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

OPTIONAL W x H SIZING

(1/4" [6.5] Undersize standard):

- ☐ **U00** Exact Size.
- ☐ **U38** Undersize 3/8" (9.5).
- ☐ **U50** Undersize 1/2" (12.7).

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

5 - 29 - 25

1600F

1 - 13 - 22

1606WD



**EXTRUDED ALUMINUM STATIONARY LOUVER
WIND-DRIVEN RAIN RESISTANT • 6" (152) DEEP
HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1606WD**

FREE AREA in Square Feet and Square Meters

		24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
		0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
Height in Inches and Meters	12	0.62	0.79	0.97	1.14	1.31	1.48	1.65	1.82	1.99	2.16	2.34	2.51	2.68	2.85	3.02	3.19	3.36
	0.30	0.06	0.07	0.09	0.11	0.12	0.14	0.15	0.17	0.19	0.20	0.22	0.23	0.25	0.26	0.28	0.30	0.31
	18	1.25	1.59	1.93	2.27	2.62	2.96	3.30	3.64	3.99	4.33	4.67	5.01	5.36	5.70	6.04	6.39	6.73
	0.46	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.34	0.37	0.40	0.43	0.47	0.50	0.53	0.56	0.59	0.63
	24	1.71	2.18	2.65	3.13	3.60	4.07	4.54	5.01	5.48	5.95	6.42	6.89	7.37	7.84	8.31	8.78	9.25
	0.61	0.16	0.20	0.25	0.29	0.33	0.38	0.42	0.47	0.51	0.55	0.60	0.64	0.68	0.73	0.77	0.82	0.86
	30	2.18	2.78	3.38	3.98	4.58	5.18	5.78	6.38	6.98	7.58	8.18	8.78	9.37	9.97	10.57	11.17	11.77
	0.76	0.20	0.26	0.31	0.37	0.43	0.48	0.54	0.59	0.65	0.70	0.76	0.82	0.87	0.93	0.98	1.04	1.09
	36	2.65	3.37	4.10	4.83	5.56	6.29	7.01	7.74	8.47	9.20	9.93	10.66	11.38	12.11	12.84	13.57	14.30
	0.36	0.25	0.31	0.38	0.45	0.52	0.58	0.65	0.72	0.79	0.85	0.92	0.99	1.06	1.13	1.19	1.26	1.33
	42	3.11	3.97	4.83	5.68	6.54	7.40	8.25	9.11	9.97	10.82	11.68	12.54	13.39	14.25	15.11	15.96	16.82
	1.07	0.29	0.37	0.45	0.53	0.61	0.69	0.77	0.85	0.93	1.01	1.08	1.16	1.24	1.32	1.40	1.48	1.56
	48	3.58	4.56	5.55	6.53	7.52	8.51	9.49	10.48	11.46	12.45	13.43	14.42	15.40	16.39	17.37	18.36	19.34
	1.22	0.33	0.42	0.52	0.61	0.70	0.79	0.88	0.97	1.06	1.16	1.25	1.34	1.43	1.52	1.61	1.71	1.80
	54	4.20	5.36	6.51	7.67	8.83	9.98	11.14	12.30	13.45	14.61	15.77	16.92	18.08	19.24	20.39	21.55	22.71
	1.37	0.39	0.50	0.61	0.71	0.82	0.93	1.03	1.14	1.25	1.36	1.46	1.57	1.68	1.79	1.89	2.00	2.11
	60	4.67	5.95	7.24	8.52	9.81	11.09	12.38	13.66	14.95	16.23	17.52	18.80	20.09	21.37	22.66	23.94	25.23
	1.52	0.43	0.55	0.67	0.79	0.91	1.03	1.15	1.27	1.39	1.51	1.63	1.75	1.87	1.99	2.11	2.22	2.34
	66	5.14	6.55	7.96	9.38	10.79	12.20	13.62	15.03	16.44	17.86	19.27	20.68	22.10	23.51	24.92	26.34	27.75
	1.68	0.48	0.61	0.74	0.87	1.00	1.13	1.26	1.40	1.53	1.66	1.79	1.92	2.05	2.18	2.32	2.45	2.58
	72	5.76	7.34	8.93	10.51	12.10	13.68	15.27	16.85	18.44	20.02	21.61	23.19	24.78	26.36	27.95	29.53	31.12
	1.83	0.53	0.68	0.83	0.98	1.12	1.27	1.42	1.57	1.71	1.86	2.01	2.15	2.15	2.45	2.60	2.74	2.89
	78	6.23	7.94	9.65	11.37	13.08	14.79	16.51	18.22	19.93	21.65	23.36	25.07	26.79	28.50	30.21	31.93	33.64
	1.98	0.58	0.74	0.90	1.06	1.21	1.37	1.53	1.69	1.85	2.01	2.17	2.33	2.33	2.65	2.81	2.97	3.13
	84	6.69	8.53	10.38	12.22	14.06	15.90	17.74	19.58	21.43	23.27	25.11	26.95	28.79	30.64	32.48	34.32	36.16
	2.13	0.62	0.79	0.96	1.14	1.31	1.48	1.65	1.82	1.99	2.16	2.33	2.50	2.67	2.85	3.02	3.19	3.36
	90	7.16	9.13	11.10	13.07	15.04	17.01	18.98	20.95	22.92	24.89	26.86						
	2.29	0.67	0.85	1.03	1.21	1.40	1.58	1.76	1.95	2.13	2.31	2.50						
	96	7.63	9.72	11.82	13.92	16.02	18.12	20.22	22.32	24.42	26.52	28.61						
	2.44	0.71	0.90	1.10	1.29	1.49	1.68	1.88	2.07	2.27	2.46	2.66						
	102	8.25	10.52	12.79	15.06	17.33	19.60	21.87	24.14	26.41	28.68	30.95						
	2.59	0.77	0.98	1.19	1.40	1.61	1.82	2.03	2.24	2.45	2.66	2.88						
	108	8.72	11.11	13.51	15.91	18.31	20.71	23.11	25.51	27.90	30.30	32.70						
	2.74	0.81	1.03	1.26	1.48	1.70	1.92	2.15	2.37	2.59	2.82	3.04						
	114	9.18	11.71	14.24	16.76	19.29	21.82	24.35	26.87	29.40	31.93	34.45						
	2.90	0.85	1.09	1.32	1.56	1.79	2.03	2.26	2.50	2.73	2.97	3.20						
	120	9.65	12.30	14.96	17.62	20.27	22.93	25.58	28.24	30.89	33.55	36.21						
	3.05	0.90	1.14	1.39	1.64	1.88	2.13	2.38	2.62	2.87	3.12	3.36						



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

5 - 29 - 25

1600F

1 - 13 - 22

1606WD



EXTRUDED ALUMINUM STATIONARY LOUVER WIND-DRIVEN RAIN RESISTANT • 6" (152) DEEP HORIZONTAL BLADE • PERFORMANCE DATA MODEL: 1606WD

AIRFLOW/WATER PENETRATION DATA for 48" x 48" (1219 x 1219) Louver Size

Free Area %		47%
Free Area sq. ft. (sq. m.)		7.52 (0.70)
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm	9,400 cfm (4436 l/s)
	Free Area Velocity	
	Pressure Drop @ 1250 fpm	.20 in. w.g. (50 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	98	197	295	394	492	591	668	763
Rate in fpm (m/s)	(0.0)	(0.5)	(1.0)	(1.5)	(2.0)	(2.5)	(3.0)	(3.39)	(3.88)
Free Area Ventilation	0	209	419	628	838	1047	1257	1421	1623
Rate in fpm (m/s)	(0.0)	(1.06)	(2.13)	(3.19)	(4.26)	(5.32)	(6.39)	(7.22)	(8.24)
Effectiveness Ratio (%)	100	99.6	99.2	98.7	98.4	98.4	98.3	97.8	97.3
Penetration Class	A	A	A	B	B	B	B	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

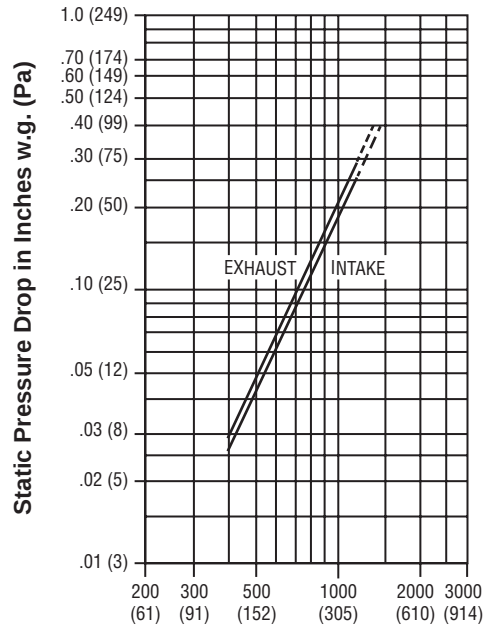
DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	98	197	295	394	492	591	668	763
Rate in fpm (m/s)	(0.0)	(0.5)	(1.0)	(1.5)	(2.0)	(2.5)	(3.0)	(3.39)	(3.88)
Free Area Ventilation	0	209	419	628	838	1047	1257	1421	1623
Rate in fpm (m/s)	(0.0)	(1.06)	(2.13)	(3.19)	(4.26)	(5.32)	(6.39)	(7.22)	(8.24)
Effectiveness Ratio (%)	100	99.5	99.4	99.2	98.6	98.7	98.4	97.9	97.4
Penetration Class	A	A	A	A	B	B	B	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



Nailor Industries Inc. certifies that the Model 1606WD shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to air performance, water penetration and wind driven rain performance ratings.



Louvers were tested in accordance with AMCA Standard 500-L.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

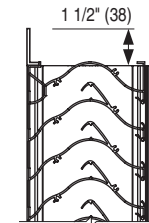
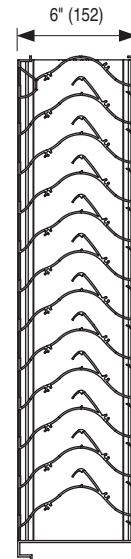
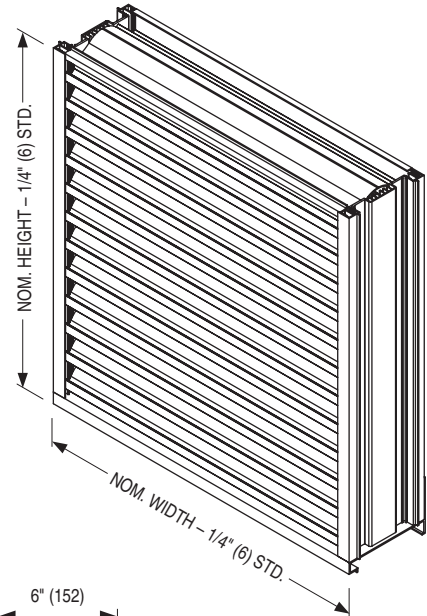
DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 29 - 25	1600F	1 - 13 - 22	1606WD

QUALIFICATIONS:

- Florida Product Approval No. : 19273.5
- Intertek Listed Building Product: Exterior Louvers.
- Tested in accordance with: TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Airflow).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- Wind load rating +/- 50 PSF (standard) (up to +/- 150 PSF dependent on size & configuration).

STANDARD CONSTRUCTION:

- FRAME:** 6" (152) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 30 degrees.
- BLADE SPACING:** 1.94" (49) on centers.
- BLADE SUPPORT:** Concealed type, factory installed on rear of louver. Size varies based on design pressure. Consult Nailor.
- SCREEN:** 5/8" x .050 (15.9 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 108" W x 84" H (2743 x 2134) or 84" W x 120" H (2134 x 3048). 63 – 70 sq. ft. (5.9 – 6.5 m²). Larger louvers will require field assembly of smaller sections.
- OVERALL MAXIMUM SIZE:** Unlimited Width x 120" H (3048).



OPT. FLANGED
FRAME (FL15 STD.)

OPTIONS:

- ☐ BSSS Type 304 S.S. Bird Screen.
- ☐ BSN No Bird Screen.
- ☐ ISA Aluminum Insect Screen.
- ☐ ISSS Type 304 S.S. Insect Screen.
- ☐ FL15 Flanged Frame, 1 1/2" (38).
- ☐ FL20 Flanged Frame, 2" (51).
- ☐ ESI Extended Sill.
- ☐ PASI Sill Pan.
- ☐ Other: _____.

OPTIONAL FINISHES:

- ☐ PC3 Powder Coat AAMA 2603. Color: _____.
- ☐ PC4 High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____.
- ☐ PC5 Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____.
- ☐ PCC Prime Coat.

- ☐ AN04 Clear Anodized 204-R1.
- ☐ AN15 Clear Anodized 215-R1.
- ☐ ANLB Light Bronze.
- ☐ ANMB Medium Bronze.
- ☐ ANDB Dark Bronze.
- ☐ ANBK Black.

For Installation Instructions,
see IOM-LOUVERINSTFPA.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 22 - 24	1600F	4 - 18 - 24	1606WDF

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																
		12 0.30	18 0.46	24 0.61	30 0.76	36 0.91	42 1.07	48 1.22	54 1.37	60 1.52	66 1.68	72 1.83	78 1.98	84 2.13	90 2.29	96 2.44	102 2.59	108 2.74
Height in Inches and Meters	12 0.30	0.28 0.03	0.45 0.04	0.62 0.06	0.79 0.07	0.97 0.09	1.14 0.11	1.31 0.12	1.48 0.14	1.65 0.15	1.82 0.17	1.99 0.19	2.16 0.20	2.34 0.22	2.51 0.23	2.68 0.25	2.85 0.26	3.02 0.28
	18 0.46	0.56 0.05	0.90 0.08	1.25 0.12	1.59 0.15	1.93 0.18	2.27 0.21	2.62 0.24	2.96 0.27	3.30 0.31	3.64 0.34	3.99 0.37	4.33 0.40	4.67 0.43	5.01 0.47	5.36 0.50	5.70 0.53	6.04 0.56
	24 0.61	0.77 0.07	1.24 0.12	1.71 0.16	2.18 0.20	2.65 0.25	3.13 0.29	3.60 0.33	4.07 0.38	4.54 0.42	5.01 0.47	5.48 0.51	5.95 0.55	6.42 0.60	6.89 0.64	7.37 0.68	7.84 0.73	8.31 0.77
	30 0.76	0.98 0.09	1.58 0.15	2.18 0.20	2.78 0.26	3.38 0.31	3.98 0.37	4.58 0.43	5.18 0.48	5.78 0.54	6.38 0.59	6.98 0.65	7.58 0.70	8.18 0.76	8.78 0.82	9.37 0.87	9.97 0.93	10.57 0.98
	36 0.86	1.19 0.11	1.92 0.18	2.65 0.25	3.37 0.31	4.10 0.38	4.83 0.45	5.56 0.52	6.29 0.58	7.01 0.65	7.74 0.72	8.47 0.79	9.20 0.85	9.93 0.92	10.66 0.99	11.38 1.06	12.11 1.13	12.84 1.19
	42 1.07	1.40 0.13	2.26 0.21	3.11 0.29	3.97 0.37	4.83 0.45	5.68 0.53	6.54 0.61	7.40 0.69	8.25 0.77	9.11 0.85	9.97 0.93	10.82 1.01	11.68 1.08	12.54 1.16	13.39 1.24	14.25 1.32	15.11 1.40
	48 1.22	1.61 0.15	2.59 0.24	3.58 0.33	4.56 0.42	5.55 0.52	6.53 0.61	7.52 0.70	8.51 0.79	9.49 0.88	10.48 0.97	11.46 1.06	12.45 1.16	13.43 1.25	14.42 1.34	15.40 1.43	16.39 1.52	17.37 1.61
	54 1.37	1.89 0.18	3.05 0.28	4.20 0.39	5.36 0.50	6.51 0.61	7.67 0.71	8.83 0.82	9.98 0.93	11.14 1.03	12.30 1.14	13.45 1.25	14.61 1.36	15.77 1.46	16.92 1.57	18.08 1.68	19.24 1.79	20.39 1.89
	60 1.52	2.10 0.19	3.38 0.31	4.67 0.43	5.95 0.55	7.24 0.67	8.52 0.79	9.81 0.91	11.09 1.03	12.38 1.15	13.66 1.27	14.95 1.39	16.23 1.51	17.52 1.63	18.80 1.75	20.09 1.87	21.37 1.99	22.66 2.11
	66 1.68	2.31 0.21	3.72 0.35	5.14 0.48	6.55 0.61	7.96 0.74	9.38 0.87	10.79 1.00	12.20 1.13	13.62 1.26	15.03 1.40	16.44 1.53	17.86 1.66	19.27 1.79	20.68 1.92	22.10 2.05	23.51 2.18	24.92 2.32
	72 1.83	2.59 0.24	4.17 0.39	5.76 0.53	7.34 0.68	8.93 0.83	10.51 0.98	12.10 1.12	13.68 1.27	15.27 1.42	16.85 1.57	18.44 1.71	20.02 1.86	21.61 2.01	23.19 2.15	24.78 2.15	26.36 2.45	27.95 2.60
	78 1.98	2.80 0.26	4.51 0.42	6.23 0.58	7.94 0.74	9.65 0.90	11.37 1.06	13.08 1.21	14.79 1.37	16.51 1.53	18.22 1.69	19.93 1.85	21.65 2.01	23.36 2.17	25.07 2.33	26.79 2.33	28.50 2.65	30.21 2.81
	84 2.13	3.01 0.28	4.85 0.45	6.69 0.62	8.53 0.79	10.38 0.96	12.22 1.14	14.06 1.31	15.90 1.48	17.74 1.65	19.58 1.82	21.43 1.99	23.27 2.16	25.11 2.33	26.95 2.50	28.79 2.67	30.64 2.85	32.48 3.02
	90 2.29	3.22 0.30	5.19 0.48	7.16 0.67	9.13 0.85	11.10 1.03	13.07 1.21	15.04 1.40	17.01 1.58	18.98 1.76	20.95 1.95	22.92 2.13	24.89 2.31	26.86 2.50				
	96 2.44	3.43 0.32	5.53 0.51	7.63 0.71	9.72 0.90	11.82 1.10	13.92 1.29	16.02 1.49	18.12 1.68	20.22 1.88	22.32 2.07	24.42 2.27	26.52 2.46	28.61 2.66				
	102 2.59	3.71 0.34	5.98 0.56	8.25 0.77	10.52 0.98	12.79 1.19	15.06 1.40	17.33 1.61	19.60 1.82	21.87 2.03	24.14 2.24	26.41 2.45	28.68 2.66	30.95 2.88				
	108 2.74	3.92 0.36	6.32 0.59	8.72 0.81	11.11 1.03	13.51 1.26	15.91 1.48	18.31 1.70	20.71 1.92	23.11 2.15	25.51 2.37	27.90 2.59	30.30 2.82	32.70 3.04				
	114 2.90	4.13 0.38	6.65 0.62	9.18 0.85	11.71 1.09	14.24 1.32	16.76 1.56	19.29 1.79	21.82 2.03	24.35 2.26	26.87 2.50	29.40 2.73	31.93 2.97	34.45 3.20				
	120 3.05	4.34 0.40	6.99 0.65	9.65 0.90	12.30 1.14	14.96 1.39	17.62 1.64	20.27 1.88	22.93 2.13	25.58 2.38	28.24 2.62	30.89 2.87	33.55 3.12	36.21 3.36				

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

 Page 2 of 3
 Dimensions are in inches (mm).

DATE
B SERIES
SUPERSEDES
DRAWING NO.

11 - 22 - 24

1600F

4 - 18 - 24

1606WDF

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

I N T A K E	Free Area %	47%
	Free Area sq. ft. (sq. m.)	7.52 (0.70)
	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm	9,400 cfm (4436 l/s)
	Free Area Velocity	
	Pressure Drop @ 1250 fpm	.20 in. w.g. (50 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration. *Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	98	197	295	394	492	591	668	763
Rate in fpm (m/s)	(0.0)	(0.5)	(1.0)	(1.5)	(2.0)	(2.5)	(3.0)	(3.39)	(3.88)
Free Area Ventilation	0	209	419	628	838	1047	1257	1421	1623
Rate in fpm (m/s)	(0.0)	(1.06)	(2.13)	(3.19)	(4.26)	(5.32)	(6.39)	(7.22)	(8.24)
Effectiveness Ratio (%)	100	99.6	99.2	98.7	98.4	98.4	98.3	97.8	97.3
Penetration Class	A	A	A	B	B	B	B	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	98	197	295	394	492	591	668	763
Rate in fpm (m/s)	(0.0)	(0.5)	(1.0)	(1.5)	(2.0)	(2.5)	(3.0)	(3.39)	(3.88)
Free Area Ventilation	0	209	419	628	838	1047	1257	1421	1623
Rate in fpm (m/s)	(0.0)	(1.06)	(2.13)	(3.19)	(4.26)	(5.32)	(6.39)	(7.22)	(8.24)
Effectiveness Ratio (%)	100	99.5	99.4	99.2	98.6	98.7	98.4	97.9	97.4
Penetration Class	A	A	A	A	B	B	B	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 2. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

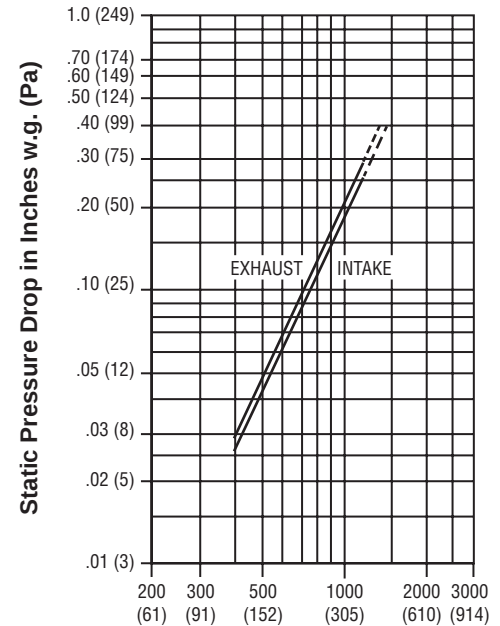


Nailor Industries Inc. certifies that the Model 1606WDF shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to air performance, water penetration and wind driven rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



540 IMPACT
RESISTANT
LOUVER
Enhanced Protection Level E

See www.AMCA.org for all certified or listed products

This label does not signify AMCA airflow performance certification.

Nailor Industries Inc. certifies that the 1606WDF shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind-borne debris impact resistant louvers rated for "Enhanced Protection" and +/- 50PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 52 in. (1321 mm).

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

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Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 22 - 24	1600F	4 - 18 - 24	1606WDF



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
MODEL: 1609H

QUALIFICATIONS:

- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 70 PSF.

STANDARD CONSTRUCTION:

- FRAME:** **Front:** 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral caulking slot provided.
Rear: 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts provided.
- BLADES:** **Front:** Horizontal Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses. J style. Fixed at 37 degrees.
Rear: Vertical Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.
- BLADE SPACING:** **Front:** Approximately 4" (102) on centers.
Rear: Approximately 1 1/2" (38) on centers.
- BLADE SUPPORT** **Front:** Concealed type, factory installed on rear of louver on maximum 60" (1524) centers.
Rear: 2.5" (64) strap every 60" (1524) or less in height.
- SCREEN:** 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- SILL PAN:** Aluminum sill pan with end dams. (louver width undersized an additional 1/4" (6) to accommodate sill pan).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 60" W x 120" H (1524 x 3048). 50 sq. ft. (4.6 m²). Larger louvers will require field assembly of smaller sections.
- MAXIMUM SIZE:** Unlimited Width x 120" H (3048).

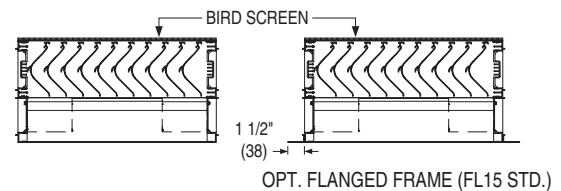
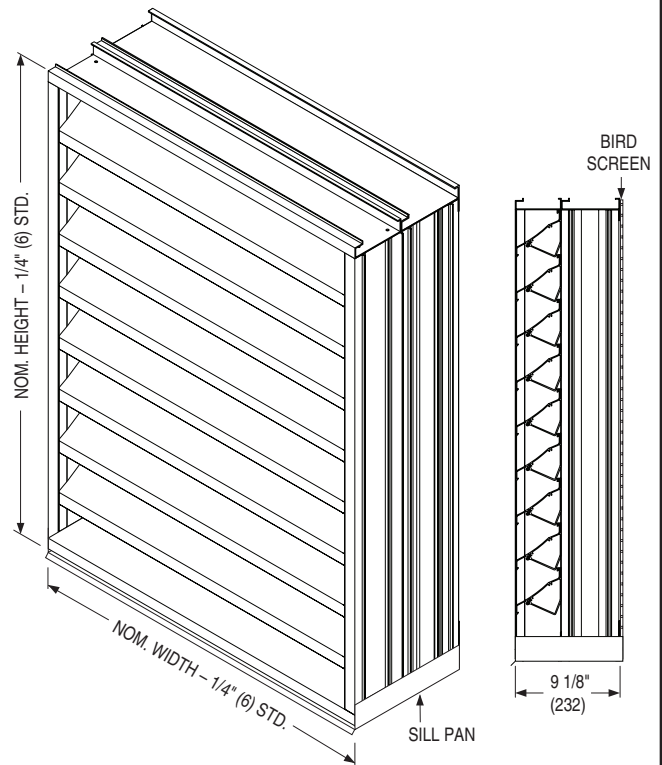
OPTIONS:

- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **PAAA** Perimeter Anchor Angles (Aluminum, Continuous).
- ☐ Other: _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.

- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 28 - 25	1600M	7 - 6 - 21	1609H



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609H

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters								
		12	18	24	30	36	42	48	54	60
Height in Inches and Meters	12	0.21	0.39	0.56	0.73	0.90	1.07	1.24	1.41	1.58
	0.30	0.02	0.04	0.05	0.07	0.08	0.10	0.12	0.13	0.15
	18	0.42	0.76	1.10	1.44	1.78	2.12	2.46	2.80	3.13
	0.46	0.04	0.07	0.10	0.13	0.17	0.20	0.23	0.26	0.29
	24	0.63	1.14	1.65	2.15	2.66	3.17	3.67	4.18	4.69
	0.61	0.06	0.11	0.15	0.20	0.25	0.29	0.34	0.39	0.44
	30	0.84	1.52	2.19	2.87	3.54	4.21	4.89	5.56	6.24
	0.76	0.08	0.14	0.20	0.27	0.33	0.39	0.45	0.52	0.58
	36	1.05	1.89	2.74	3.58	4.42	5.26	6.10	6.95	7.79
	0.36	0.10	0.18	0.25	0.33	0.41	0.49	0.57	0.65	0.72
	42	1.26	2.27	3.28	4.29	5.30	6.31	7.32	8.33	9.34
	1.07	0.12	0.21	0.30	0.40	0.49	0.59	0.68	0.77	0.87
	48	1.47	2.65	3.83	5.00	6.18	7.36	8.53	9.71	10.89
	1.22	0.14	0.25	0.36	0.46	0.57	0.68	0.79	0.90	1.01
	54	1.68	3.03	4.37	5.72	7.06	8.41	9.75	11.09	12.44
	1.37	0.16	0.28	0.41	0.53	0.66	0.78	0.91	1.03	1.16
	60	1.89	3.40	4.92	6.43	7.94	9.45	10.97	12.48	13.99
	1.52	0.18	0.32	0.46	0.60	0.74	0.88	1.02	1.16	1.30
	66	2.10	3.78	5.46	7.14	8.82	10.50	12.18	13.86	15.54
	1.68	0.20	0.35	0.51	0.66	0.82	0.98	1.13	1.29	1.44
	72	2.31	4.16	6.01	7.85	9.70	11.55	13.40	15.24	17.09
	1.83	0.21	0.39	0.56	0.73	0.90	1.07	1.24	1.42	1.59
	78	2.52	4.53	6.55	8.57	10.58	12.60	14.61	16.63	18.64
	1.98	0.23	0.42	0.61	0.80	0.98	1.17	1.36	1.54	1.73
	84	2.73	4.91	7.10	9.28	11.46	13.64	15.83	18.01	20.19
	2.13	0.25	0.46	0.66	0.86	1.06	1.27	1.47	1.67	1.88
	90	2.94	5.29	7.64	9.99	12.34	14.69	17.04	19.39	21.75
	2.29	0.27	0.49	0.71	0.93	1.15	1.36	1.58	1.80	2.02
	96	3.15	5.67	8.19	10.70	13.22	15.74	18.26	20.78	23.30
	2.44	0.29	0.53	0.76	0.99	1.23	1.46	1.70	1.93	2.16
	102	3.36	6.04	8.73	11.42	14.10	16.79	19.47	22.16	24.85
	2.59	0.31	0.56	0.81	1.06	1.31	1.56	1.81	2.06	2.31
	108	3.57	6.42	9.27	12.13	14.98	17.84	20.69	23.54	26.40
	2.74	0.33	0.60	0.86	1.13	1.39	1.66	1.92	2.19	2.45
	114	3.78	6.80	9.82	12.84	15.86	18.88	21.91	24.93	27.95
	2.90	0.35	0.63	0.91	1.19	1.47	1.75	2.04	2.32	2.60
	120	3.99	7.18	10.36	13.55	16.74	19.93	23.12	26.31	29.50
	3.05	0.37	0.67	0.96	1.26	1.56	1.85	2.15	2.44	2.74



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

5 - 28 - 25

1600M

7 - 6 - 21

1609H



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609H

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %	53%
Free Area sq. ft. (sq. m.)	8.53 (0.79)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1011 fpm (308 m/min.)
Air Volume at 1011 fpm	8,624 cfm (4070 l/s)
Free Area Velocity	
Pressure Drop @ 1011 fpm	.34 in. w.g. (85 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	99	198	297	393	494	590	690	789	889	985
Rate in fpm (m/s)	(0.00)	(0.50)	(1.01)	(1.51)	(2.00)	(2.51)	(3.00)	(3.51)	(4.01)	(4.52)	(5.00)
Free Area Ventilation	0	187	374	560	742	932	1113	1302	1489	1677	1858
Rate in fpm (m/s)	(0.00)	(0.95)	(1.90)	(2.84)	(3.77)	(4.73)	(5.65)	(6.61)	(7.56)	(8.52)	(9.44)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.9
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	96	197	288	396	482	593	691	793	894	988
Rate in fpm (m/s)	(0.00)	(0.49)	(1.00)	(1.46)	(2.01)	(2.45)	(3.01)	(3.51)	(4.03)	(4.54)	(5.02)
Free Area Ventilation	0	181	372	543	747	909	1119	1304	1496	1687	1864
Rate in fpm (m/s)	(0.00)	(0.92)	(1.89)	(2.76)	(3.79)	(4.62)	(5.68)	(6.62)	(7.60)	(8.57)	(9.47)
Effectiveness Ratio (%)	100	100	100	100	100	100	99.8	99.6	99.1	98.5	97.9
Penetration Class	A	A	A	A	A	A	A	A	A	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

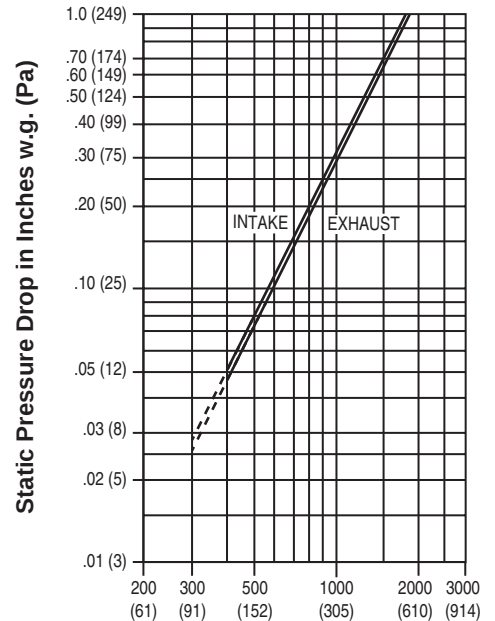


Nailor Industries Inc. certifies that the Model 1609H shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain, and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1609H shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for 'Enhanced Protection' and +/- 70PSF with a minimum blade span of 12 in. (305mm) and a maximum unsupported blade span of 59 in. (1499 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
5 - 28 - 25	1600M	7 - 6 - 21	1609H

QUALIFICATIONS:

- Miami-Dade County 23-0823.05
- Florida Product Approval 41947.1
- Tested in accordance with: TAS-100A (Wind-Driven Rain Test), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 160 PSF.

STANDARD CONSTRUCTION:
FRAME:

Front: 4" (102) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral caulking slot provided.

Rear: 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts provided.

BLADES:

Front: Horizontal Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness, with reinforcing bosses. J style. Fixed at 37 degrees.

Rear: Vertical Type 6063-T6 extruded aluminum, .060" (1.52) nominal wall thickness, with reinforcing bosses.

BLADE SPACING:

Front: Approx. 4" (102) on centers.
Rear: Approx. 1 1/2" (38) on centers.

BLADE SUPPORT:

Front: Concealed type, factory installed on rear of louver on maximum 60" (1524) centers.

Rear: 2.5" (64) strap every 60" (1524) or less in height.

SCREEN:

3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).

SILL PAN:

Aluminum sill pan with end dams. (louver width undersized an additional 1/4" (6) to accommodate sill pan).

FINISH:

Mill.

MINIMUM SIZE:

12" W x 12" H (305 x 305).

MAXIMUM SINGLE

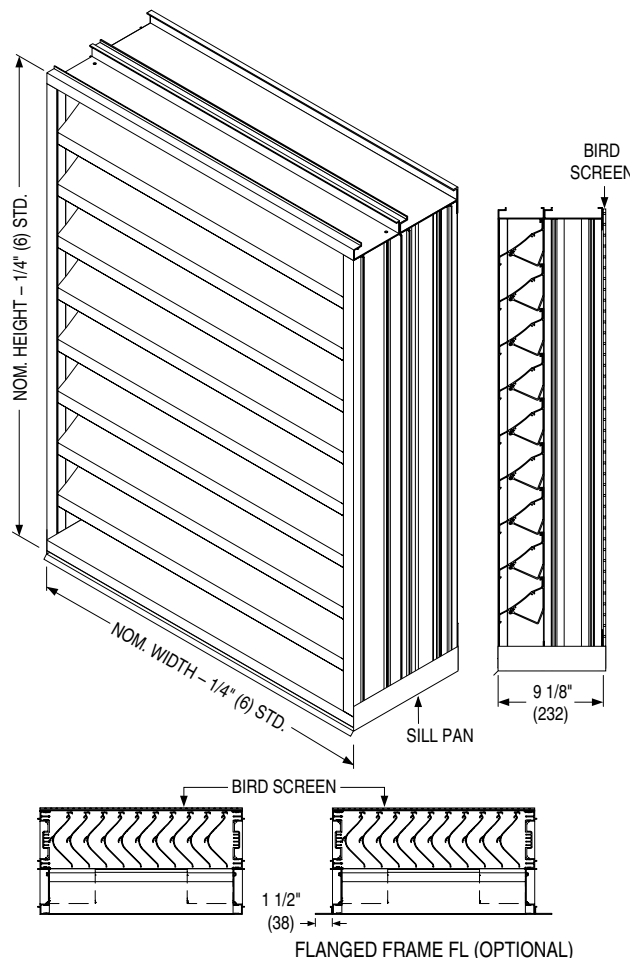
60" W x 120" H (1524 x 3048). 50 sq. ft.

SECTION SIZE:

(4.6 m²). Larger louvers will require field assembly of smaller sections.

MAXIMUM SIZE:

Unlimited Width x 120" H (3048).


OPTIONS:

- ☐ **BSSS** Type 304 S. S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISSS** Type 304 S. S. Insect Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **Other:** _____

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: _____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar[®]). Color: _____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar[®]). Color: _____.
- ☐ **PCC** Prime Coat.
- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 1 of 3
 Dimensions are in inches (mm).

DATE
B SERIES
SUPERSEDES
DRAWING NO.
4 - 12 - 24
1600M
NEW
1609HM



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609HM

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters								
		12	18	24	30	36	42	48	54	60
Height in Inches and Meters	12	0.21	0.39	0.56	0.73	0.90	1.07	1.24	1.41	1.58
	0.30	0.02	0.04	0.05	0.07	0.08	0.10	0.12	0.13	0.15
	18	0.42	0.76	1.10	1.44	1.78	2.12	2.46	2.80	3.13
	0.46	0.04	0.07	0.10	0.13	0.17	0.20	0.23	0.26	0.29
	24	0.63	1.14	1.65	2.15	2.66	3.17	3.67	4.18	4.69
	0.61	0.06	0.11	0.15	0.20	0.25	0.29	0.34	0.39	0.44
	30	0.84	1.52	2.19	2.87	3.54	4.21	4.89	5.56	6.24
	0.76	0.08	0.14	0.20	0.27	0.33	0.39	0.45	0.52	0.58
	36	1.05	1.89	2.74	3.58	4.42	5.26	6.10	6.95	7.79
	0.36	0.10	0.18	0.25	0.33	0.41	0.49	0.57	0.65	0.72
	42	1.26	2.27	3.28	4.29	5.30	6.31	7.32	8.33	9.34
	1.07	0.12	0.21	0.30	0.40	0.49	0.59	0.68	0.77	0.87
	48	1.47	2.65	3.83	5.00	6.18	7.36	8.53	9.71	10.89
	1.22	0.14	0.25	0.36	0.46	0.57	0.68	0.79	0.90	1.01
	54	1.68	3.03	4.37	5.72	7.06	8.41	9.75	11.09	12.44
	1.37	0.16	0.28	0.41	0.53	0.66	0.78	0.91	1.03	1.16
	60	1.89	3.40	4.92	6.43	7.94	9.45	10.97	12.48	13.99
	1.52	0.18	0.32	0.46	0.60	0.74	0.88	1.02	1.16	1.30
	66	2.10	3.78	5.46	7.14	8.82	10.50	12.18	13.86	15.54
	1.68	0.20	0.35	0.51	0.66	0.82	0.98	1.13	1.29	1.44
	72	2.31	4.16	6.01	7.85	9.70	11.55	13.40	15.24	17.09
	1.83	0.21	0.39	0.56	0.73	0.90	1.07	1.24	1.42	1.59
	78	2.52	4.53	6.55	8.57	10.58	12.60	14.61	16.63	18.64
	1.98	0.23	0.42	0.61	0.80	0.98	1.17	1.36	1.54	1.73
	84	2.73	4.91	7.10	9.28	11.46	13.64	15.83	18.01	20.19
	2.13	0.25	0.46	0.66	0.86	1.06	1.27	1.47	1.67	1.88
	90	2.94	5.29	7.64	9.99	12.34	14.69	17.04	19.39	21.75
	2.29	0.27	0.49	0.71	0.93	1.15	1.36	1.58	1.80	2.02
	96	3.15	5.67	8.19	10.70	13.22	15.74	18.26	20.78	23.30
	2.44	0.29	0.53	0.76	0.99	1.23	1.46	1.70	1.93	2.16
	102	3.36	6.04	8.73	11.42	14.10	16.79	19.47	22.16	24.85
	2.59	0.31	0.56	0.81	1.06	1.31	1.56	1.81	2.06	2.31
	108	3.57	6.42	9.27	12.13	14.98	17.84	20.69	23.54	26.40
	2.74	0.33	0.60	0.86	1.13	1.39	1.66	1.92	2.19	2.45
	114	3.78	6.80	9.82	12.84	15.86	18.88	21.91	24.93	27.95
	2.90	0.35	0.63	0.91	1.19	1.47	1.75	2.04	2.32	2.60
	120	3.99	7.18	10.36	13.55	16.74	19.93	23.12	26.31	29.50
	3.05	0.37	0.67	0.96	1.26	1.56	1.85	2.15	2.44	2.74

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

4 - 12 - 24

1600M

NEW

1609HM



EXTRUDED ALUMINUM STATIONARY HYBRID LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT
9" (229) DEEP • HORIZONTAL AND VERTICAL BLADE
PERFORMANCE DATA
MODEL: 1609HM

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %	53%
Free Area sq. ft. (sq. m.)	8.53 (0.79)
Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1011 fpm (308 m/min.)
Air Volume at 1011 fpm	8,624 cfm (4070 l/s)
Free Area Velocity	
Pressure Drop @ 1011 fpm	.34 in. w.g. (85 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	99	198	297	393	494	590	690	789	889	985
Rate in fpm (m/s)	(0.00)	(0.50)	(1.01)	(1.51)	(2.00)	(2.51)	(3.00)	(3.51)	(4.01)	(4.52)	(5.00)
Free Area Ventilation	0	174	348	522	690	868	1036	1212	1386	1561	1730
Rate in fpm (m/s)	(0.00)	(0.88)	(1.77)	(2.65)	(3.51)	(4.41)	(5.26)	(6.16)	(7.04)	(7.93)	(8.79)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	99.9
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	96	197	288	396	482	593	691	793	894	988
Rate in fpm (m/s)	(0.00)	(0.49)	(1.00)	(1.46)	(2.01)	(2.45)	(3.01)	(3.51)	(4.03)	(4.54)	(5.02)
Free Area Ventilation	0	169	346	506	696	847	1042	1214	1393	1570	1735
Rate in fpm (m/s)	(0.00)	(0.86)	(1.76)	(2.57)	(3.54)	(4.30)	(5.29)	(6.17)	(7.08)	(7.98)	(8.81)
Effectiveness Ratio (%)	100	100	100	100	100	100	99.8	99.6	99.1	98.5	97.9
Penetration Class	A	A	A	A	A	A	A	A	A	B	B

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

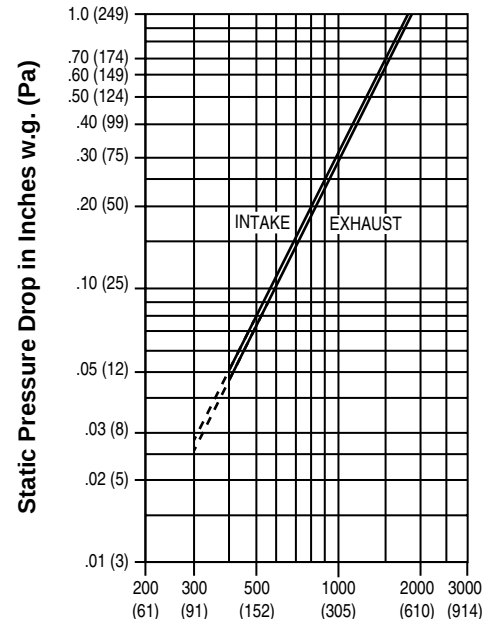


Nailor Industries Inc. certifies that the Model 1609HM shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to air performance, water penetration and wind driven rain performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER
Enhanced Protection Level E

See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1609HM shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for 'Enhanced Protection' and +/- 160PSF with a minimum blade span of 12 in. (305mm) and a maximum unsupported blade span of 59 in. (1499 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
4 - 12 - 24	1600M	NEW	1609HM



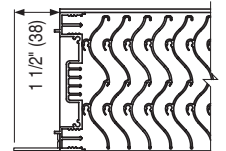
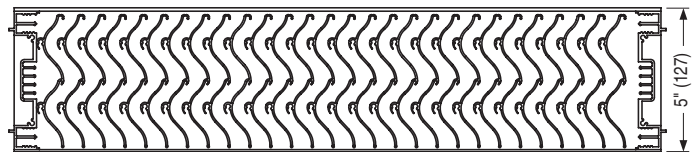
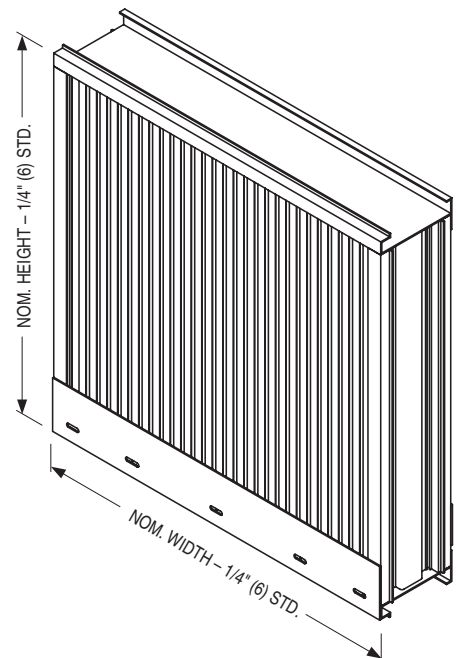
EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE
MODEL: 1675WDVM

QUALIFICATIONS:

- Miami-Dade County NOA No. : 24-0516.03
- Florida Product Approval No. : 28078.4
- Texas Department of Insurance Evaluation ID: LVR-26
- Tested in accordance with: TAS-100A (Wind-Driven Rain Test), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Wind-Driven Rain, Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Enhanced "Level E" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test).
- Wind load rating +/- 150 PSF.

STANDARD CONSTRUCTION:

- FRAME:** 5" (127) deep, Type 6063-T6 extruded aluminum, .080" (2.03) nominal wall thickness. Integral downspouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .063" (1.6) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 45 degrees.
- BLADE SPACING:** Approximately 3/4" (19) on centers.
- BLADE SUPPORT:** 2.5" (64) strap every 60" (1524) or less in height.
- SCREEN:** 3/4" x .050 (19 x 1.3) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approximately 3/8" [10] to louver depth).
- FINISH:** Mill.
- MINIMUM SIZE:** 12" W x 12" H (305 x 305).
- MAX. SINGLE SECTION SIZE:** 48" W x 120" H (1219 x 3048) or 120" W x 48" H (3048 x 1219). 40 sq. ft. (3.7 m²). Larger louvers will require field assembly of smaller sections.
- MAXIMUM SIZE:** Unlimited Width x 120" H (3048).



OPT. FLANGED FRAME (FL15 STD.)

OPTIONS:

- ☐ **FL15** Flanged Frame, 1 1/2" (38).
- ☐ **FL20** Flanged Frame, 2" (51).
- ☐ **BSSS** Type 304 S.S. Bird Screen.
- ☐ **BSN** No Bird Screen.
- ☐ **ISA** Aluminum Insect Screen.
- ☐ **ISSS** Type 304 S.S. Insect Screen.
- ☐ **ESI** Extended Sill.
- ☐ **PASI** Sill Pan.
- ☐ Other: _____.

OPTIONAL FINISHES:

- ☐ **PC3** Powder Coat AAMA 2603. Color: ____.
- ☐ **PC4** High Performance Powder Coat AAMA 2604 (Equivalent to 50% Kynar®). Color: ____.
- ☐ **PC5** Fluoropolymer Powder Coat AAMA 2605 (Equivalent to 70% Kynar®). Color: ____.
- ☐ **PCC** Prime Coat.

- ☐ **AN04** Clear Anodized 204-R1.
- ☐ **AN15** Clear Anodized 215-R1.
- ☐ **ANLB** Light Bronze.
- ☐ **ANMB** Medium Bronze.
- ☐ **ANDB** Dark Bronze.
- ☐ **ANBK** Black.

For Installation Instructions, see approved NOA.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
7 - 24 - 24	1600M	2 - 19 - 24	1675WDVM



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1675WDVM

FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters																		
		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120
Height in Inches and Meters	12	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	1.68	1.83	1.98	2.13	2.29	2.44	2.59	2.74	2.90	3.05
	0.30	0.30	0.50	0.70	0.89	1.09	1.29	1.49	1.69	1.89	2.09	2.28	2.48	2.68	2.88	3.08	3.28	3.48	3.67	3.87
	0.03	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.19	0.21	0.23	0.25	0.27	0.29	0.30	0.32	0.34	0.36
	18	0.52	0.86	1.21	1.55	1.90	2.24	2.59	2.93	3.28	3.63	3.97	4.32	4.66	5.01	5.35	5.70	6.04	6.39	6.73
	0.46	0.05	0.08	0.11	0.14	0.18	0.21	0.24	0.27	0.30	0.34	0.37	0.40	0.43	0.47	0.50	0.53	0.56	0.59	0.63
	24	0.63	1.06	1.48	1.90	2.33	2.75	3.17	3.60	4.02	4.44	4.87	5.29	5.71	6.14	6.56	6.98	7.41	7.83	8.25
	0.61	0.06	0.10	0.14	0.18	0.22	0.26	0.29	0.33	0.37	0.41	0.45	0.49	0.53	0.57	0.61	0.65	0.69	7.00	0.77
	30	0.85	1.42	1.99	2.56	3.13	3.70	4.27	4.84	5.41	5.98	6.55	7.12	7.69	8.26	8.83	9.40	9.97	10.54	11.11
	0.76	0.08	0.13	0.19	0.24	0.29	0.34	0.40	0.45	0.50	0.56	0.61	0.66	0.71	0.77	0.82	0.87	0.93	0.98	1.03
	36	1.07	1.79	2.51	3.22	3.94	4.66	5.37	6.09	6.81	7.52	8.24	8.96	9.67	10.39	11.11	11.82	12.54	13.26	13.97
	0.36	0.10	0.17	0.23	0.30	0.37	0.43	0.50	0.57	0.63	0.70	0.77	0.83	0.90	0.97	1.03	1.10	1.16	1.23	1.30
	42	1.29	2.16	3.02	3.88	4.75	5.61	6.47	7.34	8.20	9.06	9.93	10.79	11.65	12.52	13.38	14.24	15.11	15.97	16.83
	1.07	0.12	0.20	0.28	0.36	0.44	0.52	0.60	0.68	0.76	0.84	0.92	1.00	1.08	1.16	1.24	1.32	1.40	1.48	1.56
	48	1.51	2.52	3.53	4.54	5.55	6.56	7.57	8.58	9.59	10.60	11.61	12.62	13.63	14.64	15.65	16.66	17.67	18.68	19.69
	1.22	0.14	0.23	0.33	0.42	0.52	0.61	0.70	0.80	0.89	0.99	1.08	1.17	1.27	1.36	1.45	1.55	1.64	1.74	1.83
	54	1.73	2.89	4.05	5.20	6.36	7.52	8.67												
	1.37	0.16	0.27	0.38	0.48	0.59	0.70	0.81												
	60	1.95	3.26	4.56	5.86	7.17	8.47	9.77												
	1.52	0.18	0.30	0.42	0.54	0.67	0.79	0.91												
	66	2.17	3.62	5.07	6.52	7.97	9.42	10.87												
	1.68	0.20	0.34	0.47	0.61	0.74	0.88	1.01												
	72	2.39	3.99	5.59	7.18	8.78	10.38	11.97												
	1.83	0.22	0.37	0.52	0.67	0.82	0.96	1.11												
	78	2.61	4.36	6.10	7.84	9.59	11.33	13.07												
	1.98	0.24	0.40	0.57	0.73	0.89	1.05	1.21												
	84	2.83	4.72	6.61	8.50	10.39	12.28	14.17												
	2.13	0.26	0.44	0.61	0.79	0.97	1.14	1.32												
	90	3.05	5.09	7.13	9.16	11.20	13.24	15.27												
	2.29	0.28	0.47	0.66	0.85	1.04	1.23	1.42												
	96	3.27	5.46	7.64	9.82	12.01	14.19	16.37												
	2.44	0.30	0.51	0.71	0.91	1.12	1.32	1.52												
	102	3.49	5.82	8.15	10.48	12.81	15.14	17.47												
	2.59	0.32	0.54	0.76	0.97	1.19	1.41	1.62												
	108	3.71	6.19	8.67	11.14	13.62	16.10	18.57												
	2.74	0.35	0.58	0.81	1.04	1.27	1.50	1.73												
	114	3.93	6.56	9.18	11.80	14.43	17.05	19.67												
	2.90	0.37	0.61	0.85	1.10	1.34	1.58	1.83												
	120	4.15	6.92	9.69	12.46	15.23	18.00	20.77												
	3.05	0.39	0.64	0.90	1.16	1.42	1.67	1.93												

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

7 - 24 - 24

1600M

2 - 19 - 24

1675WDVM



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH VELOCITY WIND-DRIVEN RAIN RESISTANT
5" (127) DEEP • VERTICAL BLADE • PERFORMANCE DATA
MODEL: 1675WDVM

AIRFLOW/WATER PENETRATION DATA
for 48" x 48" (1219 x 1219) Louver Size

Free Area %		47%
Free Area sq. ft. (sq. m.)		7.57 (0.70)
I N T A K E	Free Area Velocity at Point of Beginning Water Penetration at .01 oz./sq. ft. (3 ml/sq. m) (15 min. test duration)	1250 fpm (381 m/min.)*
	Air Volume at 1250 fpm	9463 cfm (4466 l/s)
	Free Area Velocity	
	Pressure Drop @ 1250 fpm	.38 in. w.g. (95 Pa)

NOTE: To minimize water penetration when sizing intake louvers, select a Free Area Velocity that is **below** the beginning point of water penetration.*Maximum Free Area Velocity tested is 1250 fpm. Beginning point of water penetration for this model is above 1250 fpm.

WIND DRIVEN RAIN PERFORMANCE

Core Ventilation	0	110	195	279	396	497	588	701	781	891	981
Rate in fpm (m/s)	(0.00)	(0.56)	(0.99)	(1.42)	(2.01)	(2.52)	(2.99)	(3.56)	(3.97)	(4.53)	(4.98)
Free Area Ventilation	0	212	375	537	762	957	1132	1349	1503	1715	1888
Rate in fpm (m/s)	(0.00)	(1.08)	(1.91)	(2.73)	(3.87)	(4.86)	(5.75)	(6.85)	(7.63)	(8.71)	(9.59)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 3" per hour (76 mm/hour) with a wind velocity of **29 mph (13 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

Core Ventilation	0	88	199	301	400	485	590	687	787	883	987
Rate in fpm (m/s)	(0.00)	(0.45)	(1.01)	(1.53)	(2.03)	(2.46)	(3.00)	(3.49)	(4.00)	(4.49)	(5.01)
Free Area Ventilation	0	169	383	579	770	934	1136	1322	1515	1700	1900
Rate in fpm (m/s)	(0.00)	(0.86)	(1.95)	(2.94)	(3.91)	(4.74)	(5.77)	(6.72)	(7.70)	(8.64)	(9.65)
Effectiveness Ratio (%)	100	100	100	100	100	100	100	100	100	100	100
Penetration Class	A	A	A	A	A	A	A	A	A	A	A

Test was based on a 39.375" x 39.375" (1.0 m x 1.0 m) core area louver tested at a rainfall rate of 8" per hour (203 mm/hour) with a wind velocity of **50 mph (22 m/s)**.

DISCHARGE LOSS COEFFICIENT CLASS (INTAKE): 3. (Discharge Loss Coefficient Classification is as follows: 1=0.4 and above, 2=0.3 to 0.399, 3 = 0.2 to 0.299, 4 = 0.199 and below.)

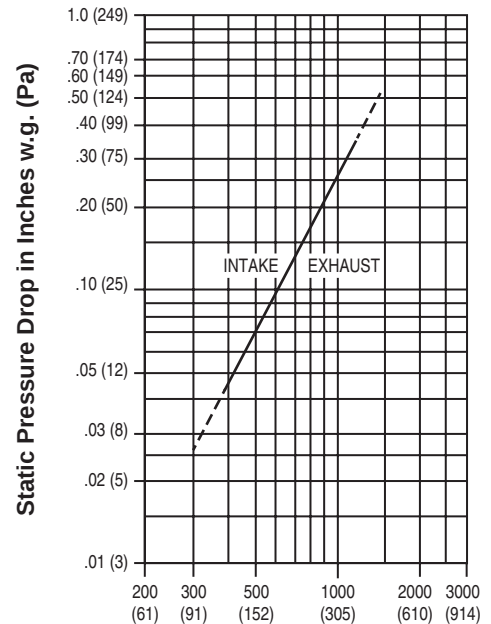


Nailor Industries Inc. certifies that the Model 1675WDVM shown herein is licensed to bear the AMCA Certified Ratings Program seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Program seal applies to Water Penetration, Wind Driven Rain and Air Performance ratings.

Louvers were tested in accordance with AMCA Standard 500-L.



PRESSURE DROP



Air Velocity in Feet (Meters) Per Minute
Through Free Area

Louver test size: 48" x 48" (1219 x 1219 mm).
Standard air density @ 0.075 lbs/ft³.
Tested to AMCA Fig. 5.5 – 6.5.



**HIGH VELOCITY RAIN
RESISTANT WITH BLADES
FULLY OPEN AND
IMPACT RESISTANT LOUVER**
Enhanced Protection Level E
See www.AMCA.org for all certified or listed products

This label does not signify
AMCA airflow performance
certification.

Nailor Industries Inc. certifies that the 1675WDVM louver shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested wind borne debris impact resistant louvers rated for Enhanced Protection and +/- 150PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully open position that permits airflow through a louver.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
7 - 24 - 24	1600M	2 - 19 - 24	1675WDVM

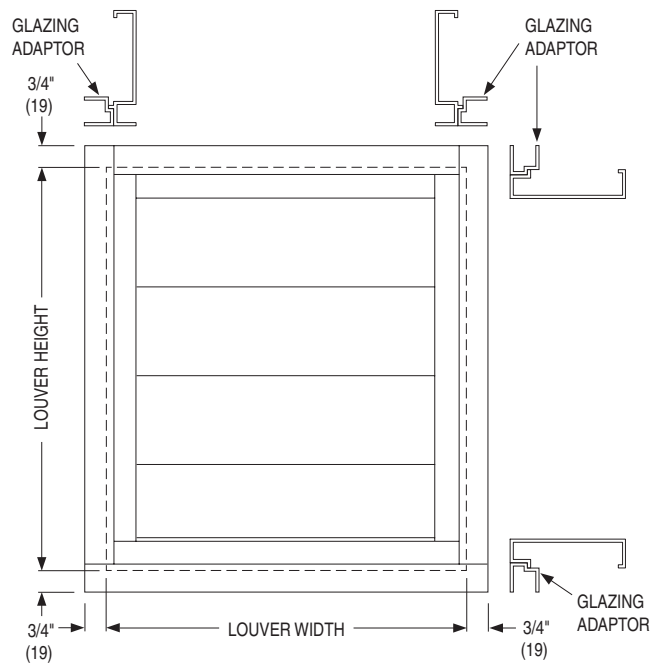
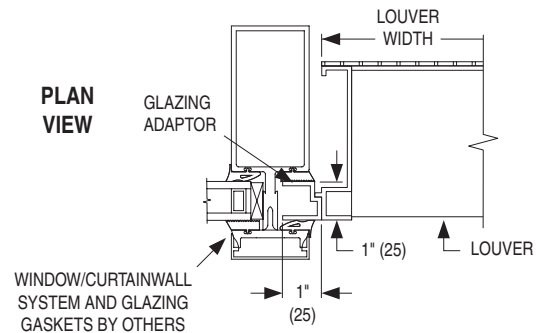
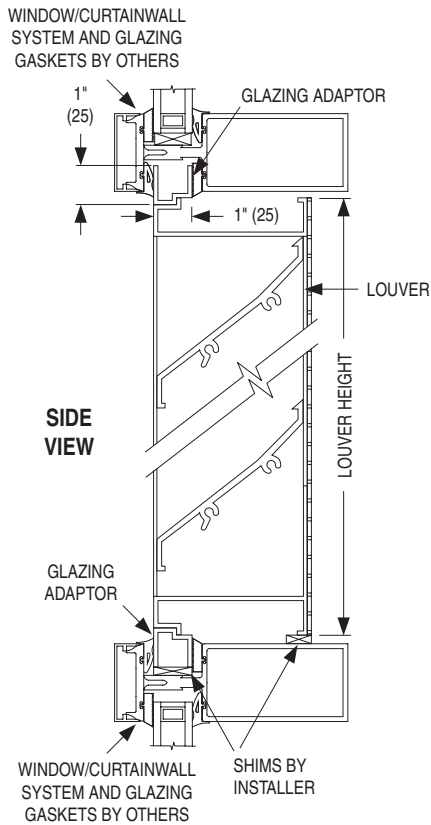
APPLICATION:

Glazing adaptor for louver installation in common curtainwall and window systems. The 1" (25) deep adaptor is factory installed onto louver frame and is suitable for use on 2" (51), 4" (102) and 6" (152) deep extruded aluminum louver models.

STANDARD CONSTRUCTION:

MATERIAL: Type 6063-T6 extruded aluminum, .081" (2.06) nominal thickness.

FINISH: Mill.

TYPICAL INSTALLATION:

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Dimensions are in inches (mm)

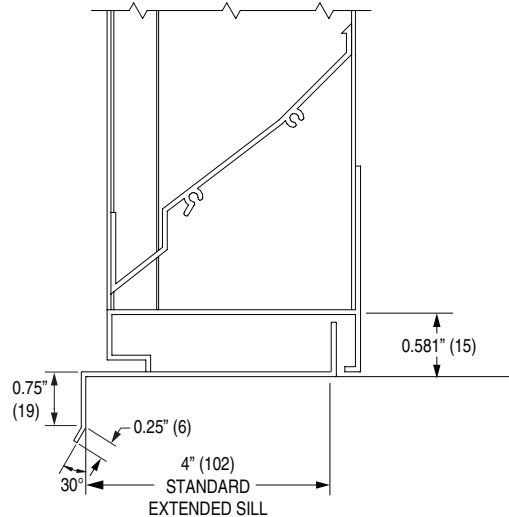
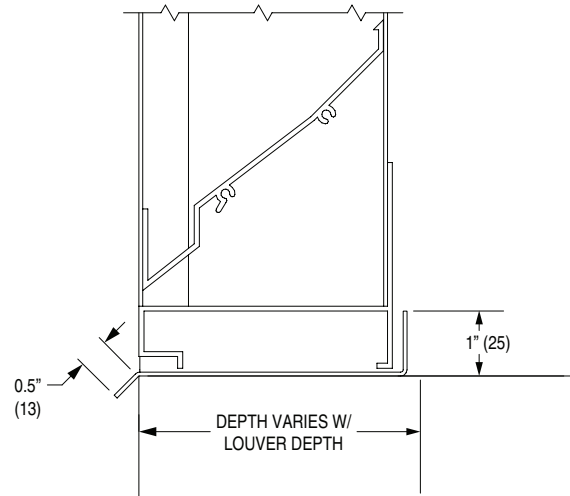
DATE
B SERIES
SUPERSEDES
DRAWING NO.

2 - 17 - 22

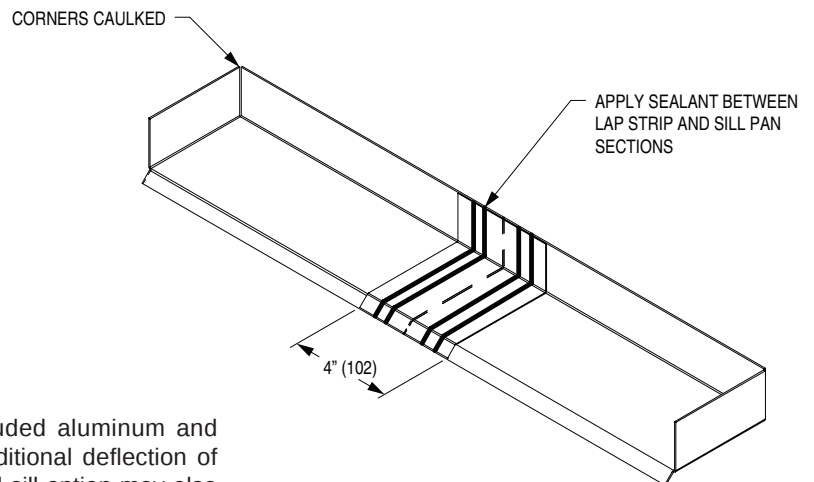
1600

7 - 11 - 13

1600GA

☐ **ESI** Extended Sill

☐ **PASI** Sill Pan (Extended Sill with End Dams)

SILL PAN (Side View)

*Shipped in sections for multiple section width louvers where necessary.


APPLICATION:

Sill extensions are available on all Nailor extruded aluminum and formed steel louver models and can provide additional deflection of water away from the louver opening. An extended sill option may also provide a transition between the louver and adjacent structures.

NOTES:

1. The finish will match the louver.
2. When ordered, sill extensions are shipped loose for field installation.
3. Customization available upon request.

MATERIALS:

1. **ESI** Extended Sill 6063-T6 0.081" (2.1) thick extruded aluminum.
2. **PASI** Extended Sill 5052-H32 0.060" (1.5) thick formed aluminum

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Dimensions are in inches (mm).

DATE
B SERIES
SUPERSEDES
DRAWING NO.

1 - 29 - 26

ACC-ESI

New

ACC-ESI


 Slate Blue **LF01**

 Medium Bronze **LF02**

 Sandstone **LF03**

 Light Gray **LF04**

 Charcoal **LF05**

 Bone White **LF06**

 Western Tan **LF07**

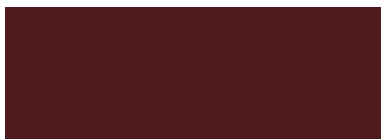
 Architectural Bronze **LF08**

 Regal Blue **LF09**

 Forest Green **LF10**

 Surrey Beige **LF11**

 Royal Brown **LF12**

 Barn Red **LF13**

 Burgundy **LF14**

 Clay **LF15**

 Almond **LF16**

 Coastal White **LF17**

 Vista Green **LF18**

 Black **LF19**

 Gloss Black **LF20**

 Campus Green **LF21**

Nailor offers 21 standard paint colors selected for architectural exterior use which meet or exceed AAMA specifications and performance requirements for color retention, chalk resistance, gloss retention, erosion, corrosion and chemical resistance as well as dry film thickness and hardness. Our state-of-the-art powder coat system provides an environment friendly finishing solution with more uniform coverage and coating thickness. The result is an exceptional finish that better resists scratching, fading and general wear. Additional liquid coat facilities for special requirements complete our ability to provide unmatched beauty and durability for any application.

Custom color matching is also available upon request. Contact your local Nailor representative.

Available Finishes

FINISH TYPE	DESCRIPTION	STANDARD WARRANTY
Fluoropolymer Powder Coat AAMA 2605-Superior Finish (AKA: Powdura® 5000, Corafalon® Powder, Interpon® D3000-Fluoromax, IFS 500FP)	"Ultimate" - A next generation hyper durable powder coating, based on FEVE fluoropolymer resins and ceramic pigmentation that the industry has acknowledged as the foundation for superior performance coatings. They provide a hard surface that is resistant to scratching and scuffing, with superior color and gloss retention, when applied to a variety of exterior architectural applications. This technology represents the "ultimate" in environmentally friendly finishes, with Zero-VOC emissions. A superior alternative to traditional 70% Kynar 500® / Hylar 500® PVDF fluoropolymer liquid coatings.	10 years (Consult Nailor for availability of extended warranty)
High Performance Powder Coat AAMA 2604 - High Performance Finish (AKA: Powdura® 4000, Envirocron® Ultra Durable Powder, Dynadure™ 400, Interpon® D2000, IFS 400SD)	"Better" - A high performance polyester powder coating, based on "super durable" resins that utilize infrared reflective pigments, which provides excellent resistance to outdoor weathering. A harder and more environmentally friendly coating than other liquid paint counterparts and with Zero-VOC emissions. A good alternative to 50% Kynar 500® / Hylar 5000® liquid coatings.	5 years
Durable Powder Coat AAMA 2603 - Pigmented Organic Coatings (AKA: Powdura® 3000, Envirocron® Durable Powder, Dynadure™ 300, Interpon® D1000, IFS 300SP)	"Good" - A durable powder coat based on thermosetting polyester resin technology. Provides a good economical combination of physical and chemical resistance properties. Environmentally superior to liquid spray paints and Zero – VOC emissions.	1 year
Clear Anodize 215-R1 AA-M10C22A41 (0.7 mil. min.)	Architectural Class I. Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. Recommended for severely corrosive and abrasive atmospheric exposure.	5 years
Clear Anodize 204-R1 AA-M10C22A31 (0.4 - 0.7 mil.)	Architectural Class II. Clear, colorless and hard oxide aluminum coating that resists weathering and chemical attack. Recommended for normal weather exposure.	1 year
Color Anodize AA-M10C22A44 (0.7 mil. min.)	Architectural Class I. "Two-step" aluminum coating process. Following a standard anodizing procedure, a second electrolytic process deposits colored metallic pigments which penetrate the aluminum oxide pores, producing a corrosion resistant, colorfast finish. Available in light, medium, dark bronze and black.	5 years
Prime Coat	Prime coat provides a stable base for painting of louvers in the field. Surface pretreatment includes degreasing and a chemical cleaning before an epoxy prime coat is applied. Finish coat should be field applied as soon as possible for best adhesion, after a thorough cleaning for dust etc. that can contaminate the final finish and cause premature flaking or peeling.	N/A

Paint finish warranties are not applicable to steel products.

Powdura® is a registered trademark of The Sherwin-Williams Company.

Corafalon® and Envirocron® are registered trademarks of PPG Industries Ohio, Inc.

Interpon® is a registered trademark of Akzo Nobel Powder Coatings Ltd.

Kynar 500® is a registered trademark of Arkema, Inc.

Hylar 5000® is a registered trademark of Solvay Solexis, Inc.



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/building

Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model 1609HM Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. **1609HM-NOA**, titled "BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles", sheets 1 through 7 of 7, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 03/07/2024, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Houston, TX, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

LIMITATION: This system is to be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water resistant/waterproof equipment, components, or supplies.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above. The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**




05/09/24

NOA No. 23-0823.05
Expiration Date: April 4, 2029
Approval Date: April 4, 2024
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1609HM-NOA**, titled “BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles”, sheets 1 through 7 of 7, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 03/07/2024.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model 1609HM Louver Systems, prepared by Intertek, Test Report No. **K4977.01-801-18-r1**, dated 02/04/2022, revised on 05/23/2022, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Test Method for Louvers Impacted by Wind Borne Debris per ANSI/AMCA 540-13 on a Model 1609HM Aluminum Louver Systems, prepared by Intertek, Test Report No. **K4975.01-801-18-R2**, dated 06/28/2021, revised on 01/04/2022, signed and sealed by Tyler Westerling, P.E.
3. Test Report on High Velocity Wind Driven Rain Resistance per ANSI/AMCA 550-15 on a Model 1609HM Aluminum Louver System, prepared by Intertek, Test Report No. **K4976.01-801-44-R2**, dated 05/06/2021, revised on 01/21/2022, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. Louver structural calculations, dated 08/09/2023, prepared by Turner Engineering Consulting, Inc., signed and sealed by Lucas A. Turner, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the **FBC, 7th Edition (2020)** and **FBC, 8th Edition (2023)**, issued by Turner Engineering Consulting, Inc., dated 08/09/2023, signed and sealed by Lucas A. Turner, P.E.
2. Statement letter of no financial interest issued by Turner Engineering Consulting, Inc., dated 08/09/2023, signed and sealed by Lucas A. Turner, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 23-0823.05
Expiration Date: April 4, 2029
Approval Date: April 4, 2024

1

2

3

4

5

6

7

GENERAL NOTES

1. THE 1609HM LOUVER SYSTEM SHOWN IN THE CONFIGURATIONS HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE REQUIREMENTS OF THE 8TH EDITION (2023) FLORIDA BUILDING CODE INCLUDING THE HIGH VELOCITY HURRICANE ZONE PROVISIONS, FOR APPLICATIONS WITH DESIGN PRESSURE (ASD) REQUIREMENTS OF 160 PSF OR LESS.

2. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A, TAS 201, TAS 202, TAS 203, AMCA 540 AND AMCA 550. FOR FULL PRODUCT TESTING DETAILS SEE INTERTEK TEST REPORTS K4975.01-801-18-R2, K4976.01-801-44-R2, AND K4977.01-801-18-R1.

3. THIS PRODUCT AS SHOWN IN THIS DRAWING IS MISSILE LEVEL E (9 LB 2X4, 80 FPS) LARGE MISSILE IMPACT RESISTANT, AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WINDBORNE DEBRIS REGIONS.

4. THIS LOUVER SYSTEM HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A TO PREVENT WIND-DRIVEN RAIN FROM PENETRATING THE SPACE BEHIND THE LOUVER FOR WIND SPEEDS UP TO 110 MPH AND INSTALLATION IN HEIGHTS UP TO 33 FT.

5. THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS.

6. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.

7. THE OPENING SUBSTRATE MATERIALS (FRAMING, MASONRY, BUCKS) AND ATTACHMENT OF BUCKS TO THE SUBSTRATE ARE BY OTHERS AND SHALL BE VERIFIED BY THE ARCHITECT OR ENGINEER OF RECORD OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE.

8. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED, WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH THIS PRODUCT.

9. ANCHORAGE NOTES: INSTALL PRODUCTS WITH MAXIMUM SHIM GAP, MINIMUM EDGE DISTANCE AND EMBEDMENT, AND WITH FASTENER TYPE AS SHOWN IN THE DETAILS AND AS INDICATED IN TABLE 1 FOR THE APPROPRIATE SUBSTRATE, OR AS APPROVED, SIGNED, AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE OPENING SUBSTRATE AND ALL OTHER LOUVER MATERIALS. INSTALL ONE ANCHOR AT EACH LOCATION SHOWN IN THE ELEVATION. INSTALL SHIMS AT EACH ANCHOR LOCATION WHERE A GAP OF 1/16" OR GREATER EXISTS BETWEEN PRODUCT FRAME AND SUBSTRATE. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING LOADS TO SUBSTRATE. SPECIFIED ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL FINISH OR STUCCO.

TABLE 1. INSTALLATION ANCHOR REQUIREMENTS (NOTE: THIS TABLE APPLIES TO ANCHORAGE OF BOTH 1.5X2 AND 5X6 ANGLES)

ANCHOR ID	OPENING SUBSTRATE	ANCHOR TO OPENING FASTENER TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE	MAX. O.C. DISTANCE, ATTACHMENT OF 1.5X2X1/8 ANGLE	MAX. O.C. DISTANCE, ATTACHMENT OF 5X6X3/8 ANGLE
A	SOLID UNCRACKED CONCRETE (4000 PSI MIN.)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	2 1/2"	1 1/2"	3 1/4"	9"
B	GROUT- FILLED CMU (ASTM C-90 WITH 1,500 PSI MIN. GROUT)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	3 1/4"	1 1/2"	3 1/4"	9"
C	1/4" THICK MIN. A36 MIN. STEEL	3/8"-16 BOLT, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	1/4"	9/16"	3 1/4"	9"
D	SOUTHERN PINE (SG = 0.55 MIN.)	3/8" LAG SCREW, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	3"	1 1/2"	3 1/4"	5"

TABLE OF CONTENTS

SHEET	DESCRIPTION
1	NOTES, ANCHOR TABLE 1, BOM
2	TYP. SINGLE LOUVER ASSEMBLY
3	TYP. MULLED LOUVER ASSEMBLY
4	VERT. SECTION / INSTALLATION
5	HORIZ. SECTION / INSTALLATION
6	PROFILES

BILL OF MATERIALS, MISCELLANEOUS COMPONENTS

1	C6-189	SCREW, MACHINE, HW, #10-24 X 1 1/2,
2	C6-192	SCREW, MACHINE, HEX, #10 X 1 1/2,
3	C6-193	SCREWM METAL, HEX, #14 X 1 1/2,
4	C6-198	SCREW, MTL, HEX, #8 X 3/4,
5	-	SEALANT & BACKER ROD
6	-	3/8 NYLON INSERT LOCKNUT
7	-	3/8 COMM'L FLAT WASHER
8	-	3/8-16 X 1 HEX CAP SCREW 18-8 SS
9	-	INSTALL ANCHOR, SEE TABLE 1, SHEET 1

BILL OF MATERIALS, 6063-T6 ALUMINUM COMPONENTS

ITEM	INTERNAL ID	DESCRIPTION
10	C6-144	1604 HD HEAD/SILL FRAME
20	C6-146	1604 HD JAMB FRAME
30	C6-215A	1604 J BLADE
40	C6-216A	BLADE BRACE
50	C6-119	1605WD HEAD/SILL
60	C6-199	1605WDF JAMB FRAME
70	C6-203	1605 WD BLADE
80	XX-XXX	BAFFLE
90	XX-XXX	JAMB BLOCK OFF
100	XX-XXX	SILL BLOCKOFF
110	C6-179	MULLION BAR
120	C6-133	4 in CHANNEL FRAME
130	XX-XXX	BLANK OFF (0.125" THICK 5052-H32 ALUM.)
140	C6-173	MULLION COVER
150	C6-161B	3 x 6 x 1/4 ALUM ANGLE (CONT)
160	C6-176	1 1/2 x 2 x 1/8 ANGLE (CONT)
170	XX-XXX	5 x 6 x 3/8 ALUM WALL ANGLE (CONT)

PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. 23-0823.05
Approval Date 04/04/2024
By 
Miami-Dade Product Control

LUCAS A. TURNER
LICENSE
No. 58201
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

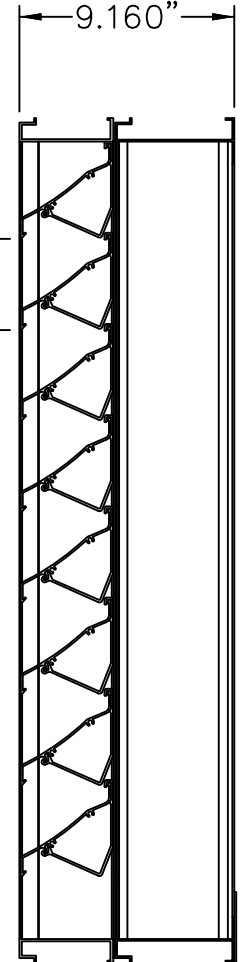
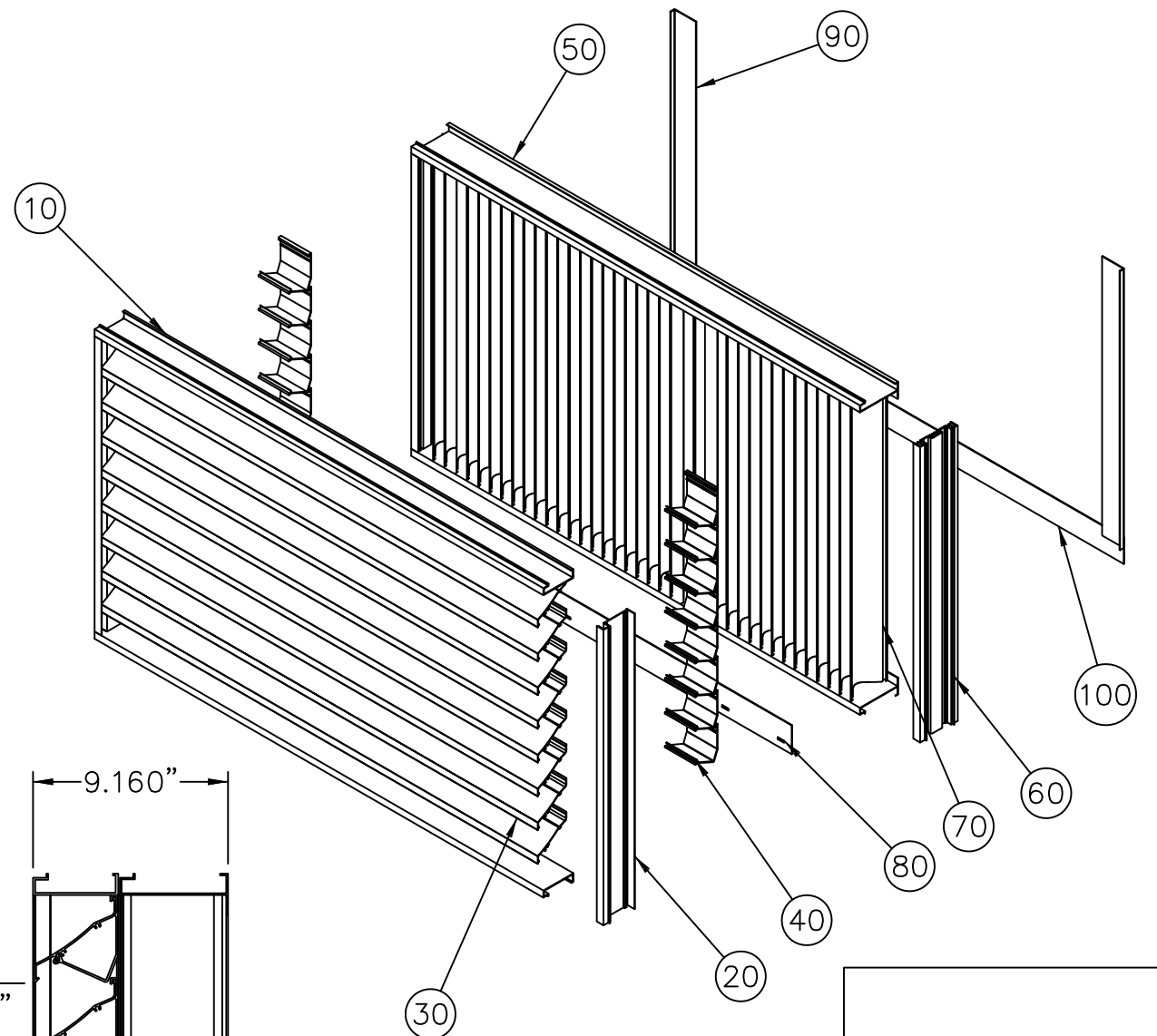
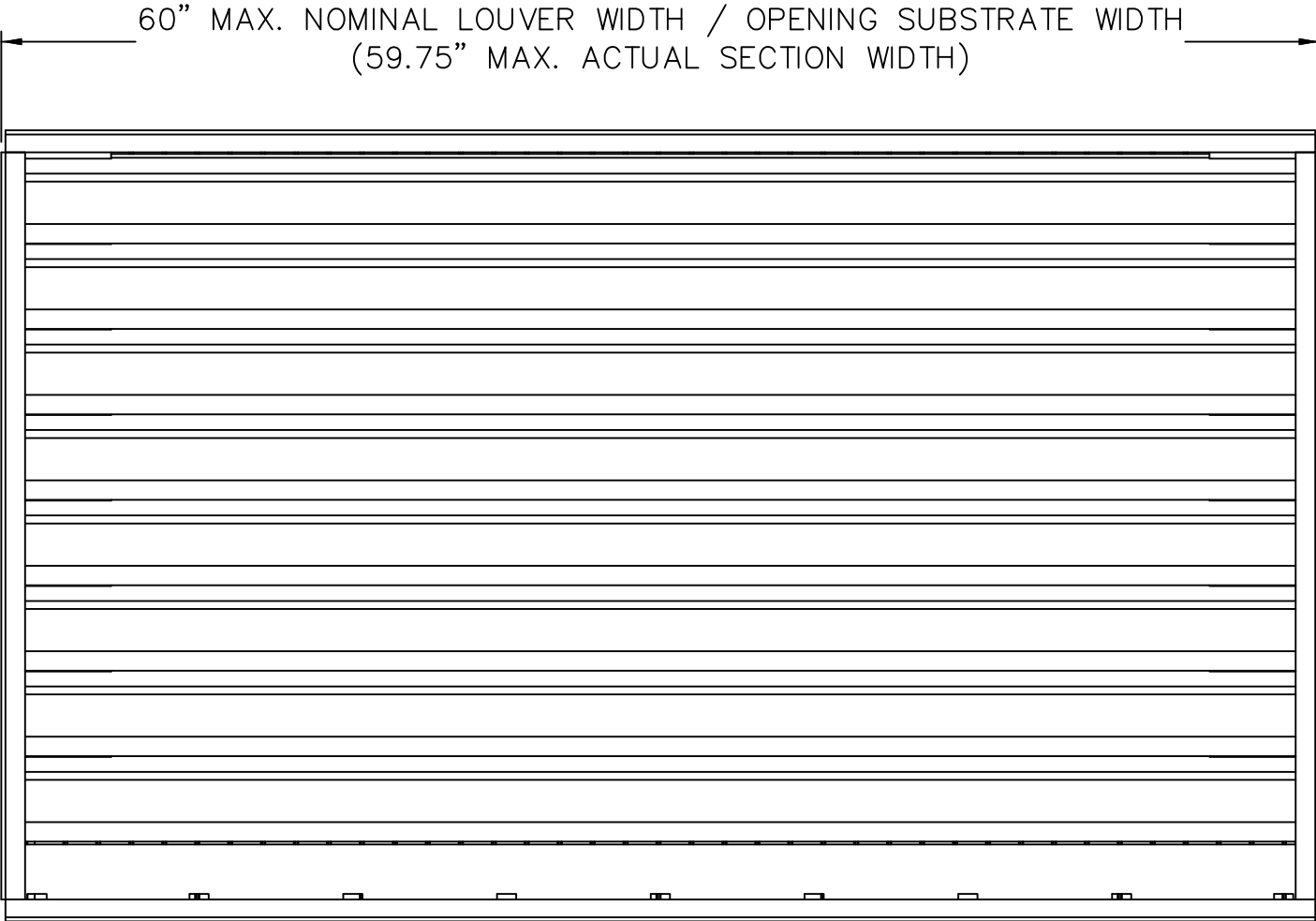
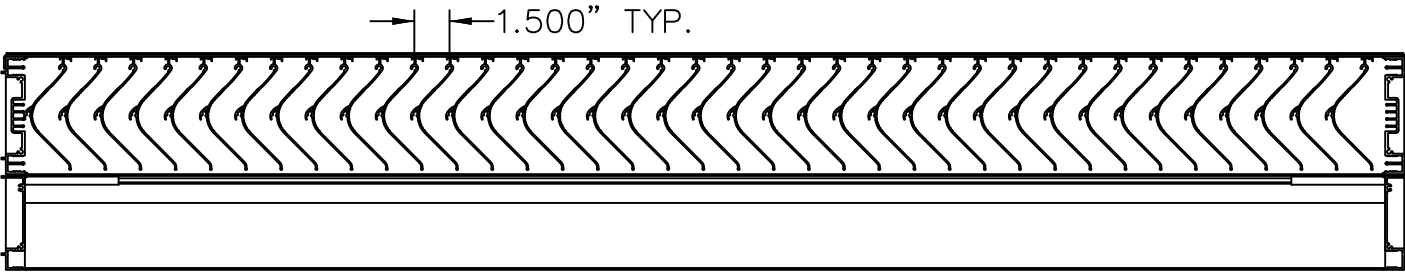
3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574


www.nailor.com

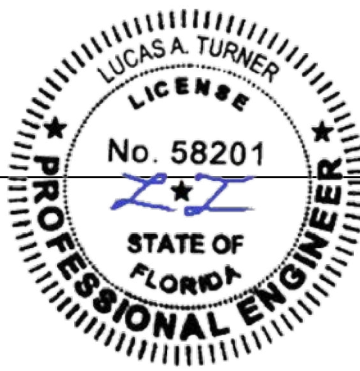
4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcortinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 1 OF 7	
SHEET DESCRIPTION: BOM, NOTES, ANCHORS			REV 0
DWG:		1609HM-NOA	

TYPICAL ASSEMBLY, SINGLE LOUVER SECTION



PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. **23-0823.05**
Approval Date **04/04/2024**
By *[Signature]*
Miami-Dade Product Control

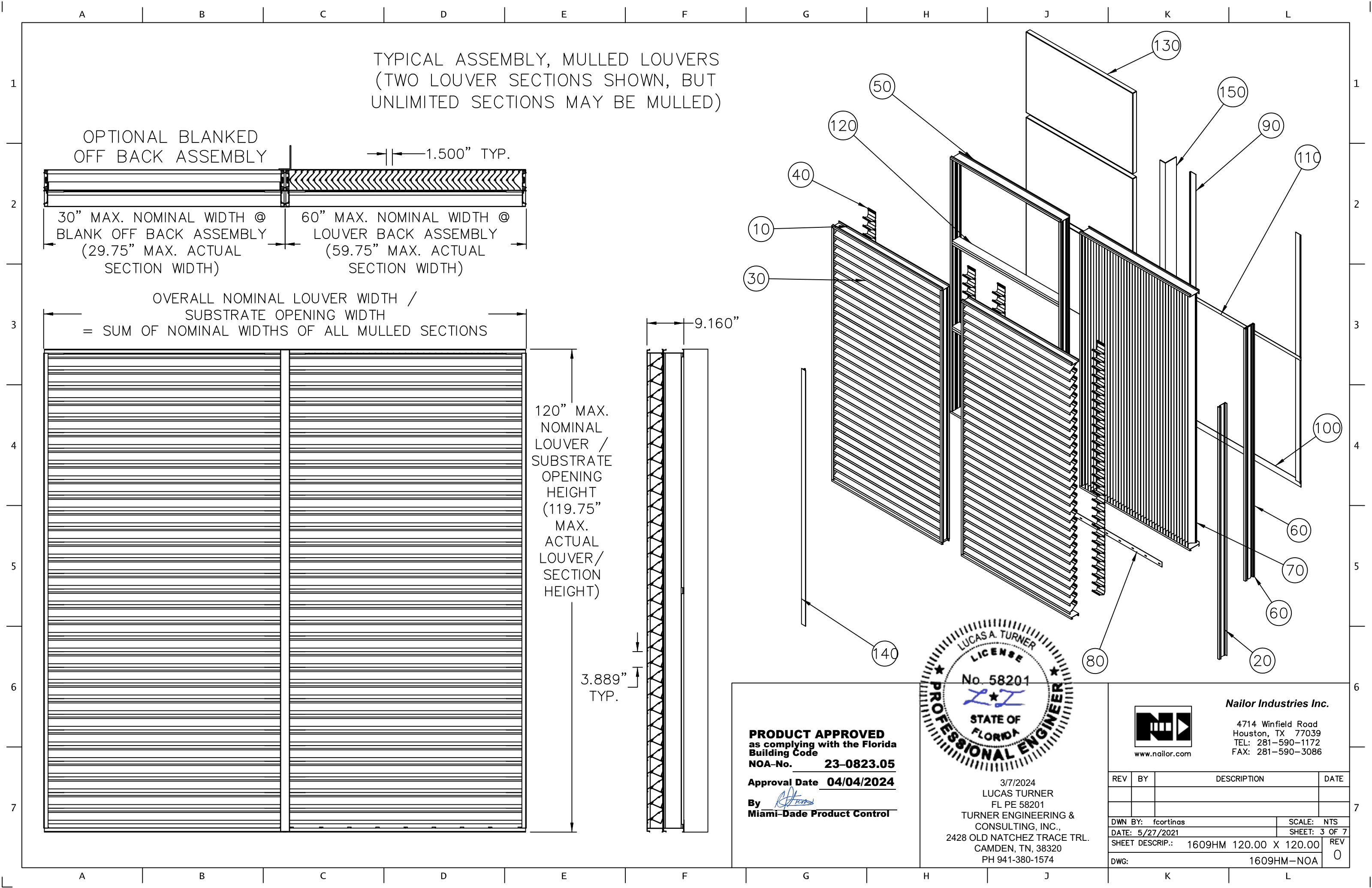


3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574



Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 2 OF 7	
SHEET DESCRIPTION: 1609HM 60.00 X 36.00			REV
DWG: 1609HM-NOA			0



TYPICAL ASSEMBLY, MULLED LOUVERS
(TWO LOUVER SECTIONS SHOWN, BUT
UNLIMITED SECTIONS MAY BE MULLED)

OPTIONAL BLANKED
OFF BACK ASSEMBLY

1.500" TYP.

30" MAX. NOMINAL WIDTH @
BLANK OFF BACK ASSEMBLY
(29.75" MAX. ACTUAL
SECTION WIDTH)

60" MAX. NOMINAL WIDTH @
LOUVER BACK ASSEMBLY
(59.75" MAX. ACTUAL
SECTION WIDTH)

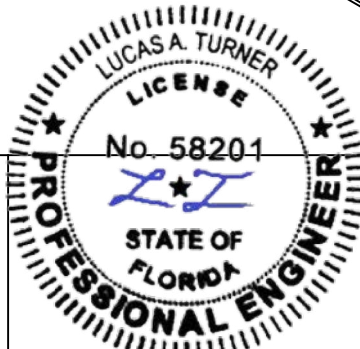
OVERALL NOMINAL LOUVER WIDTH /
SUBSTRATE OPENING WIDTH
= SUM OF NOMINAL WIDTHS OF ALL MULLED SECTIONS

120" MAX.
NOMINAL
LOUVER /
SUBSTRATE
OPENING
HEIGHT
(119.75"
MAX.
ACTUAL
LOUVER/
SECTION
HEIGHT)

3.889"
TYP.

9.160"

PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. **23-0823.05**
Approval Date **04/04/2024**
By *[Signature]*
Miami-Dade Product Control



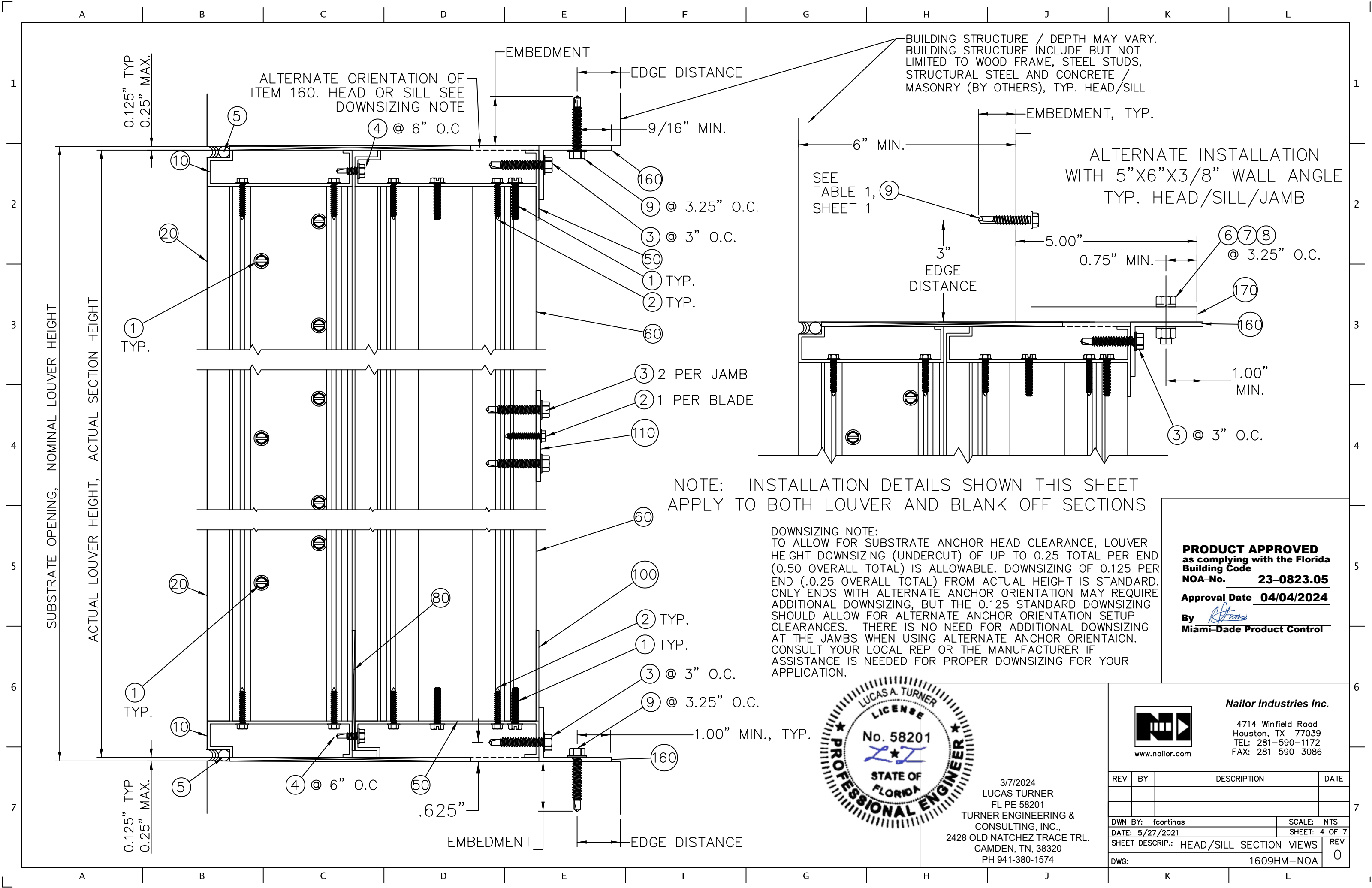
3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574



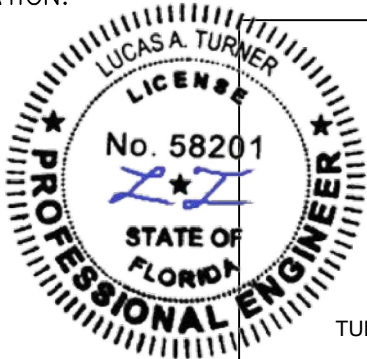
Nailor Industries Inc.

4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 3 OF 7	
SHEET DESCIP.: 1609HM 120.00 X 120.00		REV	
DWG: 1609HM-NOA		0	



PRODUCT APPROVED
as complying with the Florida
Building Code
NOA-No. **23-0823.05**
Approval Date **04/04/2024**
By *[Signature]*
Miami-Dade Product Control

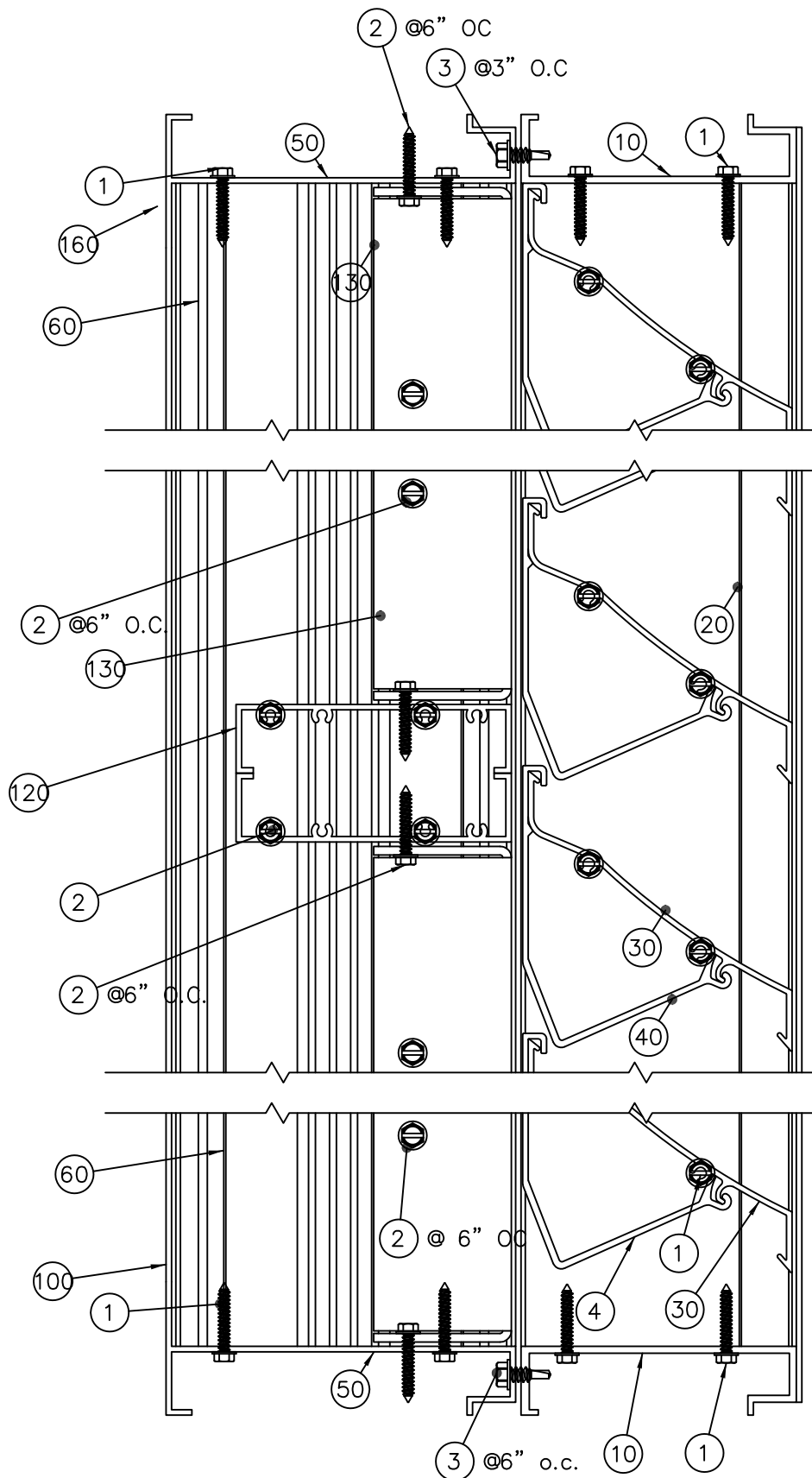


3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574



Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 4 OF 7	
SHEET DESCR.: HEAD/SILL SECTION VIEWS		REV	
DWG: 1609HM-NOA		0	



EXT.

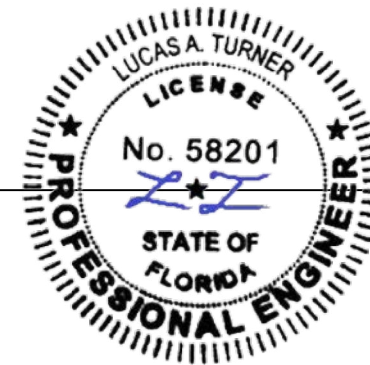
BLANK OFF VERTICAL SECTION
(FOR INSTALLATION DETAILS SEE SHEET 4)

PRODUCT APPROVED
as complying with the Florida
Building Code

NOA-No. **23-0823.05**

Approval Date **04/04/2024**

By *[Signature]*
Miami-Dade Product Control



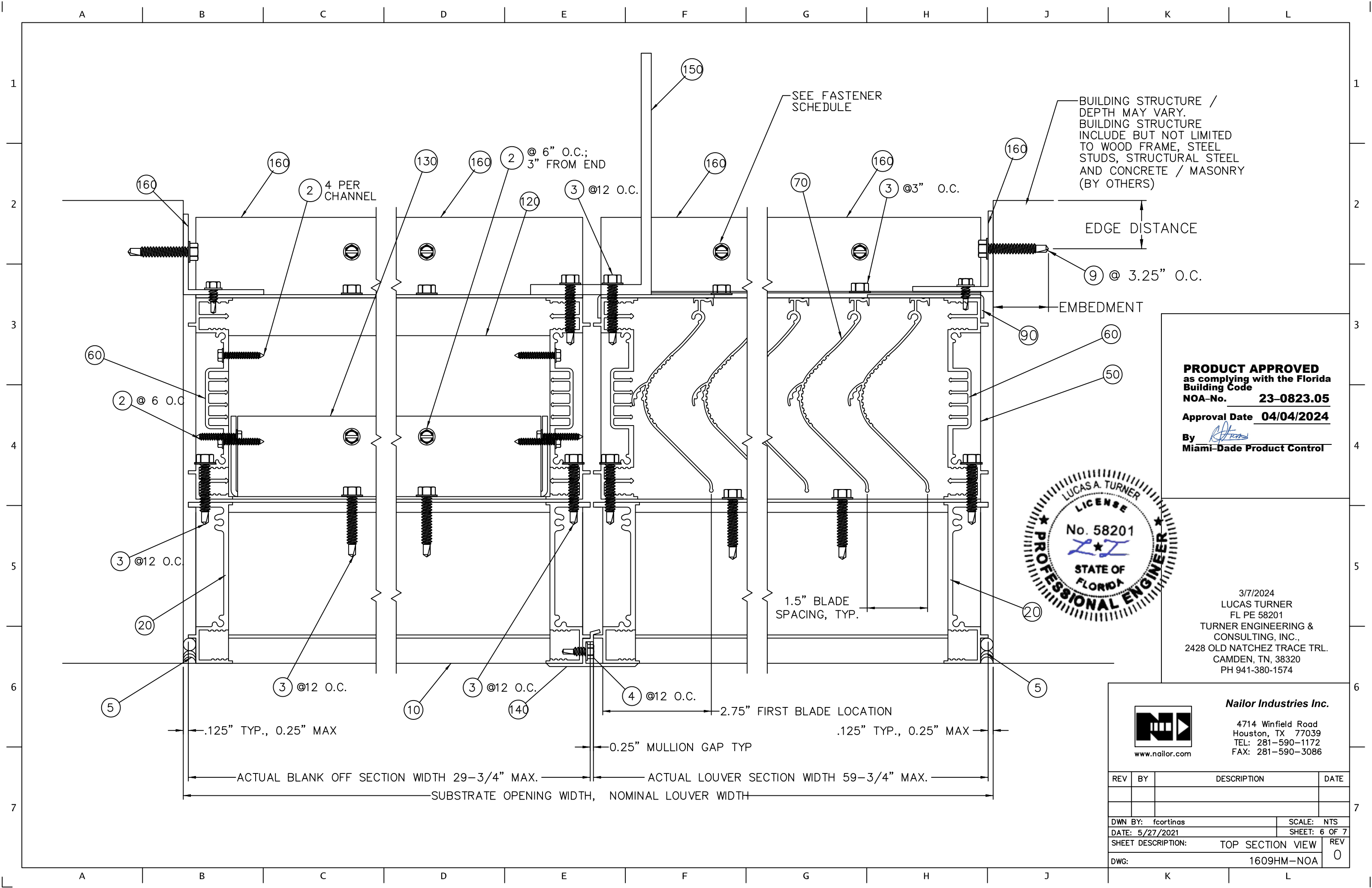
3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574



Nailor Industries Inc.

4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 5 OF 7	
SHEET DESCRIP.: HEAD/SILL SECTION VIEWS			REV
DWG: 1609HM-NOA			0

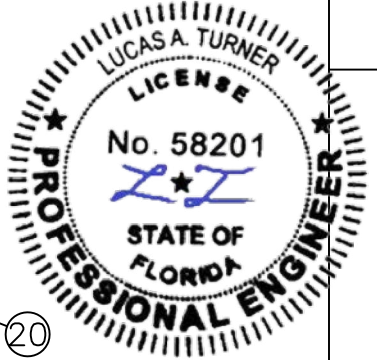


PRODUCT APPROVED
as complying with the Florida
Building Code

NOA-No. **23-0823.05**

Approval Date **04/04/2024**

By *[Signature]*
Miami-Dade Product Control



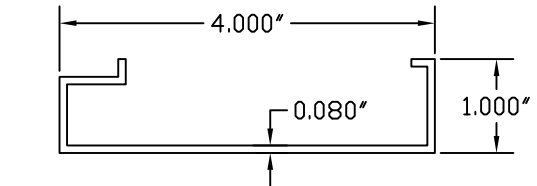
3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NATCHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574



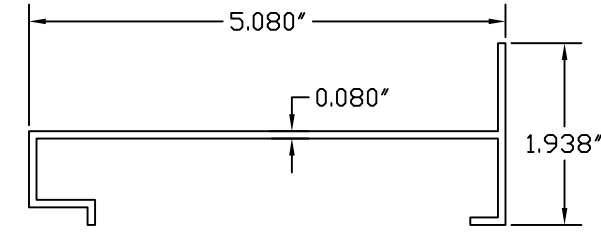
Nailor Industries Inc.

4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

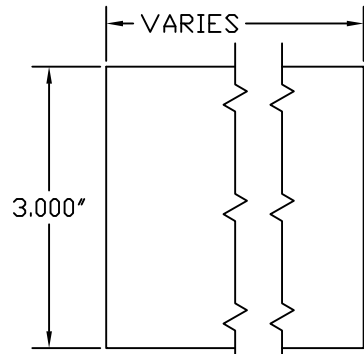
REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 6 OF 7	
SHEET DESCRIPTION: TOP SECTION VIEW			REV
DWG: 1609HM-NOA			0



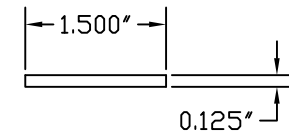
⑩ 1604 HD HEAD/SILL FRAME



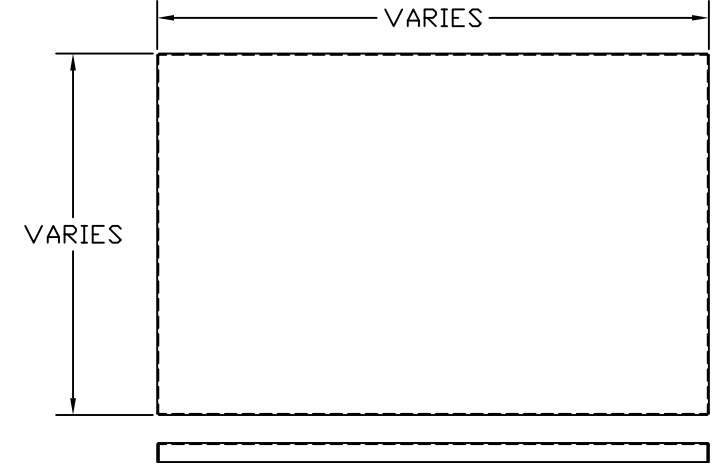
⑤① 1605WD HEAD/SILL



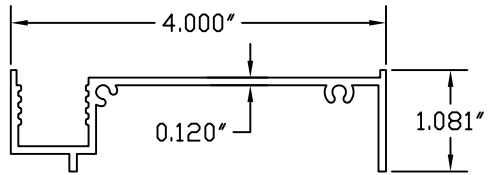
⑩① 100 SILL BLOCKOFF



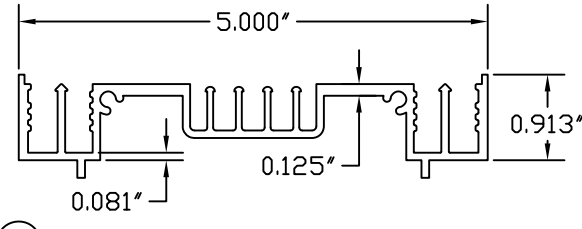
⑪① 110 MULLION BAR



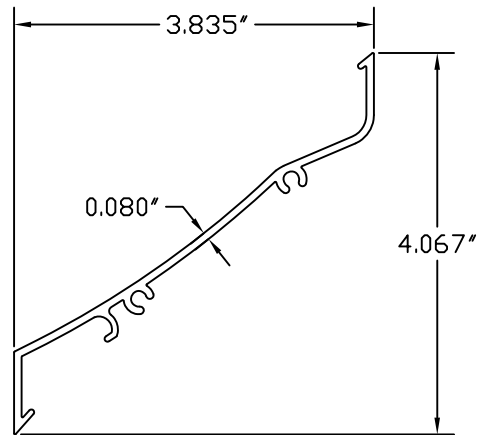
⑬① 130 BLANKOFF (0.125" THICK)



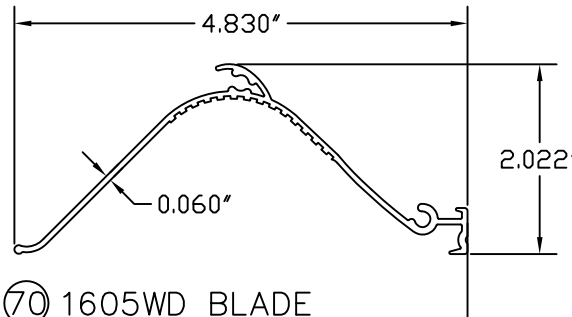
②① 1604 HD JAMB FRAME



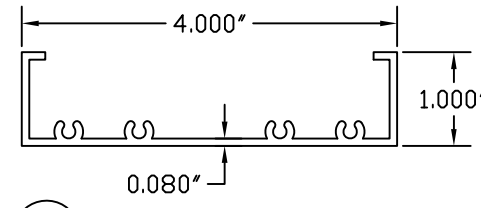
⑥① 1605WDF JAMB FRAME



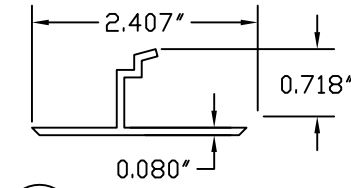
③① 1604J BLADE



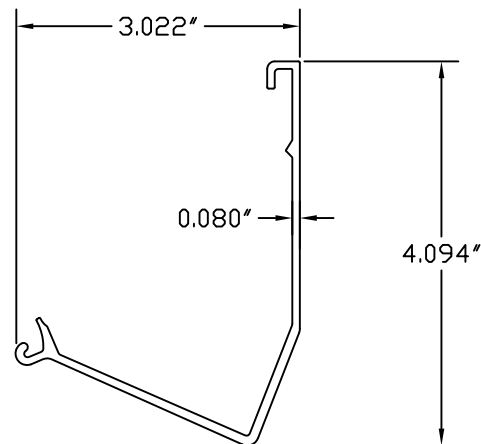
⑦① 1605WD BLADE



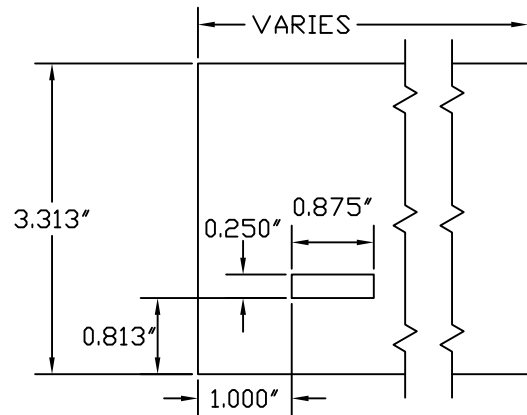
⑫① 4" CHANNEL FRAME



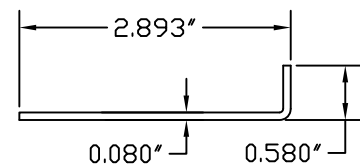
⑭① 140 MULLION COVER



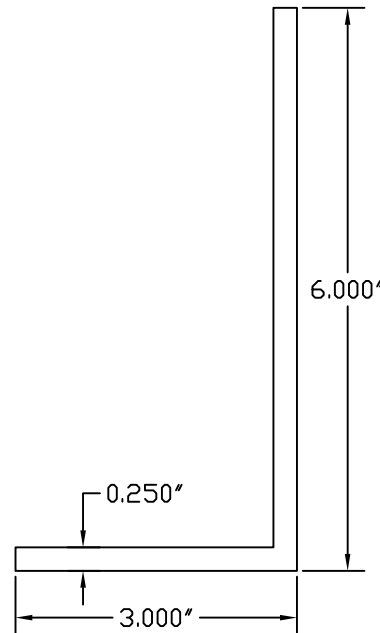
④① BLADE BRACE



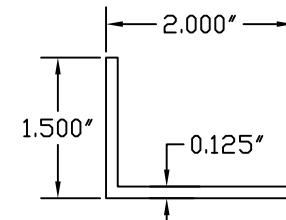
⑧① BAFFLE (0.093" THICK)



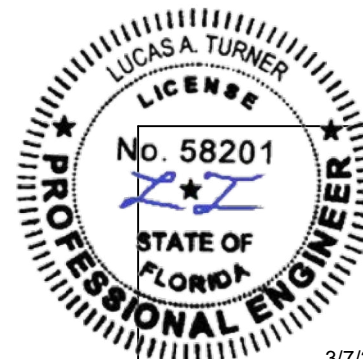
⑨① JAMB BLOCK OFF



⑮① 3X6 ALUM. ANGLE



⑯① 1.5X2X1/8 ANGLE MOUNT



3/7/2024
LUCAS TURNER
FL PE 58201
TURNER ENGINEERING &
CONSULTING, INC.,
2428 OLD NACHEZ TRACE TRL.
CAMDEN, TN, 38320
PH 941-380-1574

PRODUCT APPROVED
as complying with the Florida
Building Code

NOA-No. **23-0823.05**

Approval Date **04/04/2024**

By *[Signature]*
Miami-Dade Product Control



Nailor Industries Inc.

4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 7 OF 7	
SHEET DESCRIPTION: PROFILES		REV	
DWG: 1609HM-NOA		0	



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/building

Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model 1675WDVM Aluminum Louver – L.M.I.

APPROVAL DOCUMENT: Drawing No. **1675WDVM**, titled “1675WDVM Louver”, sheets 1 through 12 of 12, prepared by manufacturer, dated 09/25/2017, with revision C dated 05/10/2024, signed and sealed by Wayne K. Helmila, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Houston, TX, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

LIMITATION: This system is to be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water resistant/waterproof equipment, components, or supplies.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA **revises NOA No. 23-0724.22** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



07/08/24

NOA No. 24-0516.03
Expiration Date: August 30, 2028
Approval Date: July 18, 2024
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA # 18-0117.11

A. DRAWINGS

1. Drawing No. **1675WDVM**, titled “1675WDVM Louver”, sheets 1 through 11 of 11, dated 09/25/17, prepared by the manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS “Submitted under NOA No. 18-0117.11”

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model 1675 WDVM Louver System, prepared by Intertek, Test Report No. **H4890.01-801-18-R3**, dated 09/27/17 and revised on 05/18/18, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Wind Driven Rain Resistance per TAS 100(A)-95 on a Model 1675WDVM Vertical Aluminum Louver, prepared by Intertek, Test Report No. **H0051.02-801-18 R1**, dated 09/28/17, revised on 11/21/17, signed and sealed by Tyler Westerling, P.E.
3. Test Report on High Velocity Wind Driven Rain Resistance per AMCA 550-15 on a Model 1675WDVM Vertical Aluminum Louver, prepared by Intertek/ATI, Test Report No. **H0051.01-801-18-R3**, dated 04/20/2017, revised on 11/21/2017, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. Louver structural calculations dated 10/26/17, prepared by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the **FBC 6th Edition (2017)** issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.03
Expiration Date: August 30, 2028
Approval Date: July 18, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER NOA # 21-0630.09 AND NEW

A. DRAWINGS

1. Drawing No. **1675WDVM**, titled “1675WDVM Louver”, sheets 1 through 12 of 12, prepared by manufacturer, dated 09/25/2017, with revision C dated 05/10/2024, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Louver calculations, prepared by Rice Engineering, dated 05/10/2024, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the 8th edition (2023) of the FBC, issued by Rice Engineering, dated 05/10/2024, signed and sealed by Wayne K. Helmila, P.E.

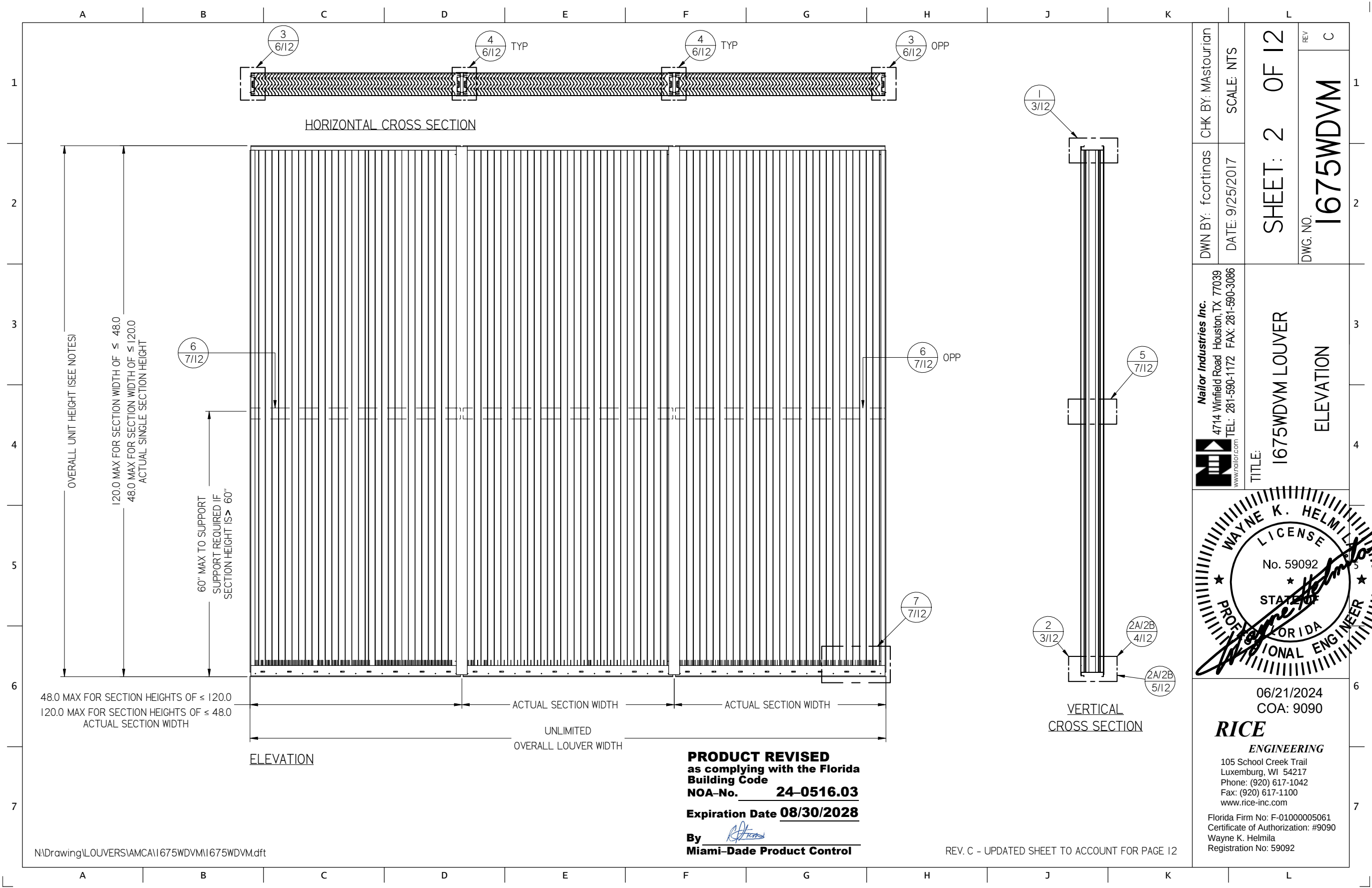
“Submitted under NOA # 21-0630.09”

2. Statement letter of code conformance to the **7th edition (2020) FBC**, issued by Rice Engineering, dated 08/16/21, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.03
Expiration Date: August 30, 2028
Approval Date: July 18, 2024

	A	B	C	D	E	F	G	H	J	K	L	I		
1	DRAWING INDEX 1. INDEX TO DRAWINGS AND NOTES 2. I675WDVM LOUVER - ELAVATION 3. I675WDVM LOUVER- HEAD AND SILL DETAIL 4. I675WDVM LOUVER- SKINNY WALL APPLICATION HEAD AND SILL DETAIL. 5. I675WDVM LOUVER- SKINNY WALL APPLICATION HEAD AND SILL DETAIL CONT. 6. I675WDVM LOUVER - JAMB AND MULLION DETAIL 7. I675WDVM LOUVER - BLADE STRAP DETAIL 8. I675WDVM LOUVER - BAFFLE/ WEEP DETAIL 9. I675WDVM LOUVER - SEALANT DETAIL 10. I675WDVM LOUVER - PART PROFILES 11. I675WDVM LOUVER - BILL OF MATERIAL AND GENERAL NOTES 12. I675WDVM LOUVER - FASTENER SCHEDULE										CHK BY: Mastourian	SCALE: NTS	SHEET: 1 OF 12	REV C
2											DWN BY: fcortinas	DATE: 9/25/2017		DWG. NO. I675WDVM
3	TESTS PREFORMED: TAS-100 (A) WIND DRIVEN RAIN RESISTANCE TAS-201 LARGE MISSILE IMPACT TAS-202 UNIFORM STATIC AIR PRESSURE TEST TAS-203 CYCLIC WIND PRESUSRE TEST DESIGN PRESSURE RATING 150 PSF										Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com	TITLE: I675WDVM LOUVER INDEX	3	
4													4	
5	NOTES: 1. THE I675WDVM HAS BEEN TESTED IN ACCORDANCE WITH THE MIAMI-DADE COUNTY PROTOCOLS: TAS-100 A, TAS-201, TAS-202, & TAS-203 FOR WIND DRIVEN RAIN, LARGE MISSILE IMPACE, UNIFORM PRESSURE, AND CYCLIC WIND PRESSURE. 2. THIS LOUVER SYSTEM IS APPROVED FOR APPLICATIONS WITH DESIGN PRESSURES OF +/- 150 PSF OR LESS. 3. THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS. 4. LOUVER ANCHORS ARE REVIEWED FOR ATTACHMENT INTO STEEL, CONCRETE, MASONRY, OR TIMBER STRUCTURE. MINIMUM EDGE DISTANCE AND EMBEDMENT REQUIREMENTS ARE SHOWN. NAILOR IND. DOES NOT DETERMINE THE STRUCTURE INTERGRITY OF THE SUBSTRUCTURE. 5. MAXIMUM SINGLE SECTION SIZE: 48" WIDE X 120" HIGH OR 120" WIDE X 48" HIGH. 6. MAXIMUM ASSEMBLED LOUVER SIZE UNLIMITED WIDE X 120" HIGH MAX. MULLION SPACING IS 48". 7. SECTIONS OR ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDED A SUITIBLE STRUCTURE STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FOR THE LOUVER.										Wayne K. Helmila PROFESSIONAL ENGINEER STATE OF FLORIDA No. 59092	5		
6												6		
7	REVISIONS: REV C: ADDED PAGE 5 AND RENUMBERED PAGES 6-12 - ADDED PAGE 5 SKINNY WALL APPLICATION HEAD AND SILL DETAIL CONT. - UPDATED ALL PAGES.										PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.03 Expiration Date 08/30/2028 By  Miami-Dade Product Control	06/21/2024 COA: 9090 RICE ENGINEERING 105 School Creek Trail Luxemburg, WI 54217 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com Florida Firm No: F-01000005061 Certificate of Authorization: #9090 Wayne K. Helmila Registration No: 59092	7	
												A	B	C



DWN BY: f.cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 2 OF 12	
DWG. NO. 1675WDVM	REV C



Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com

TITLE: I675WDVM LOUVER

ELEVATION



06/21/2024
COA: 9090

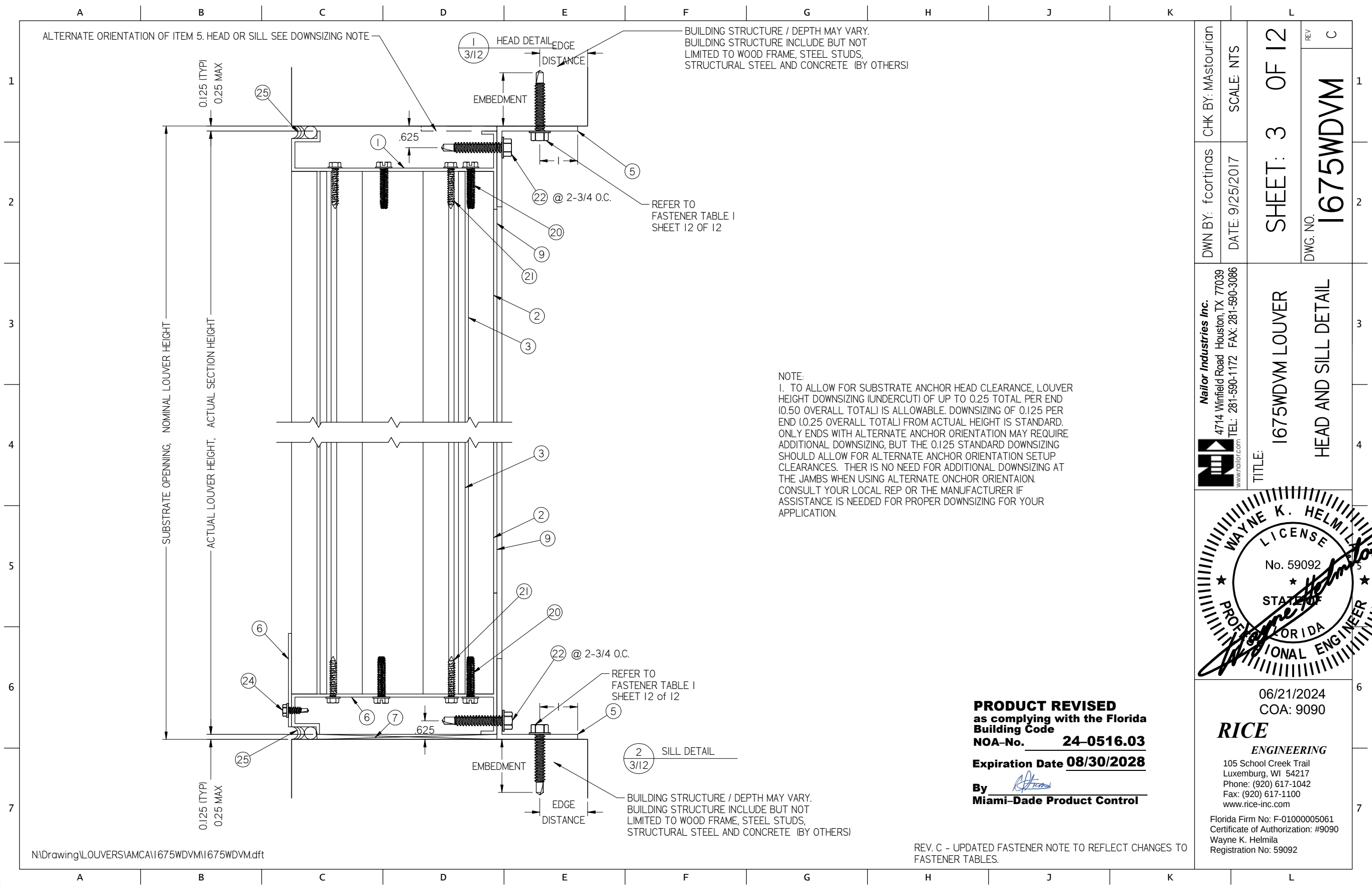
RICE
ENGINEERING

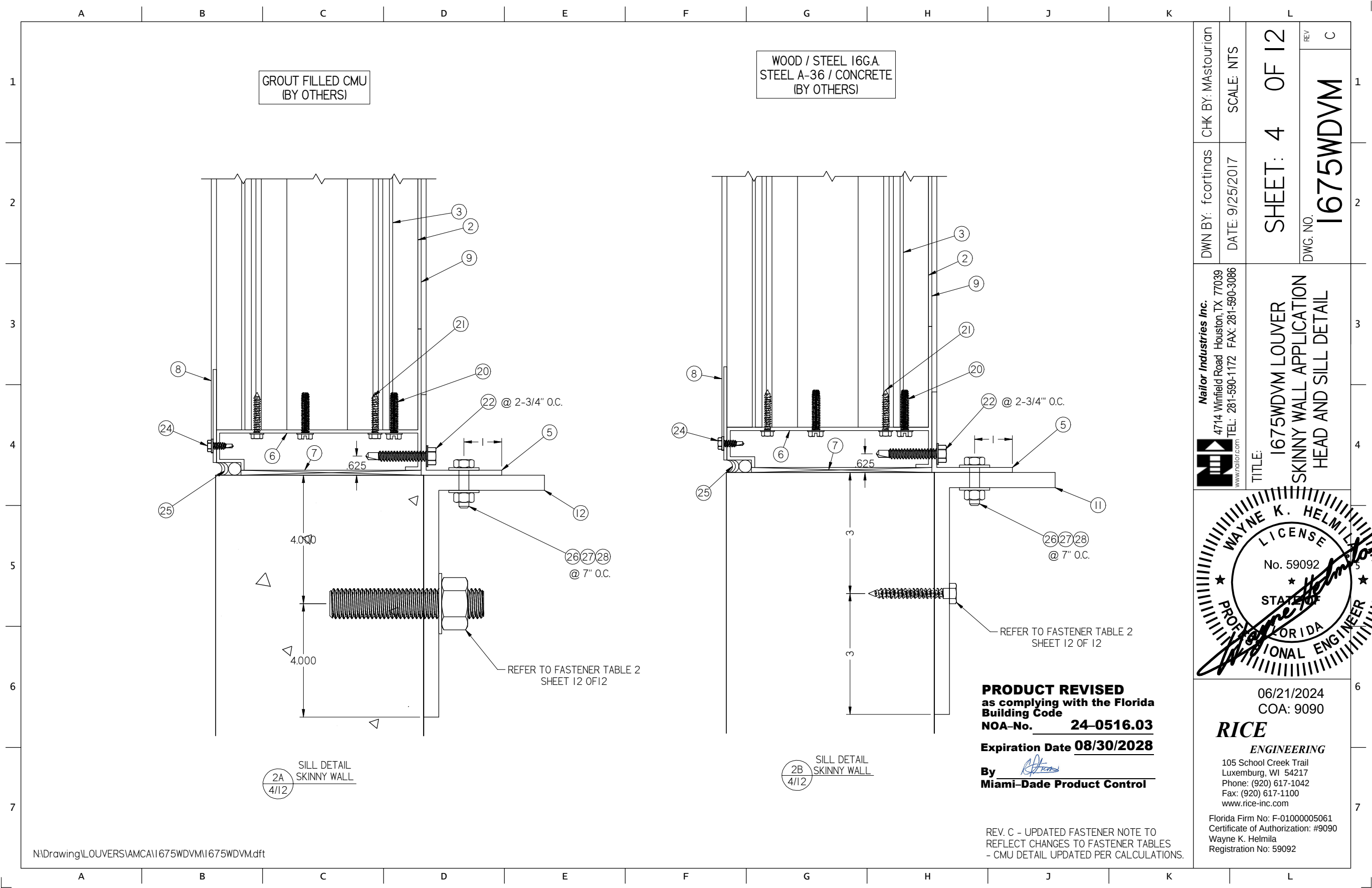
105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
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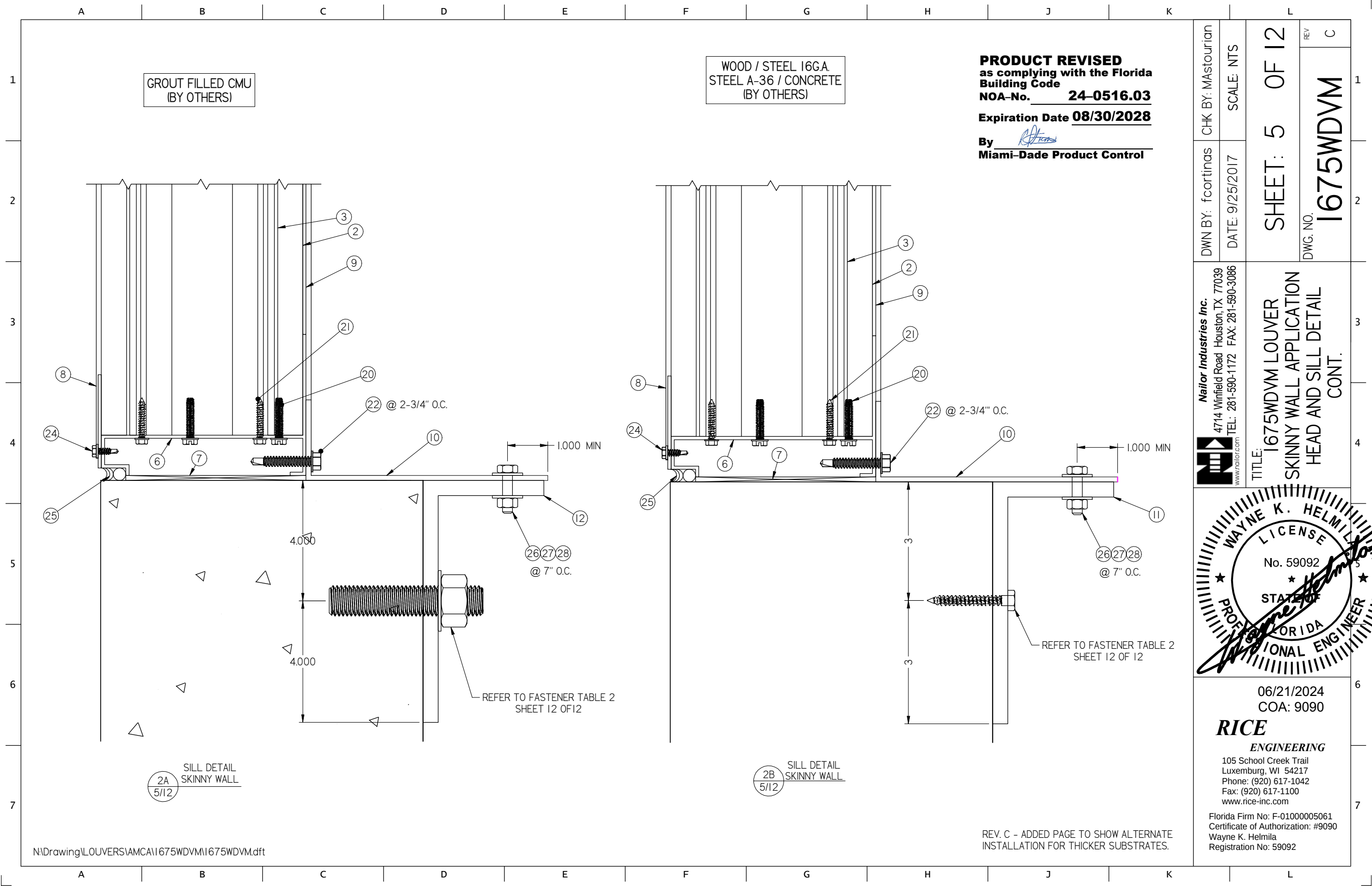
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

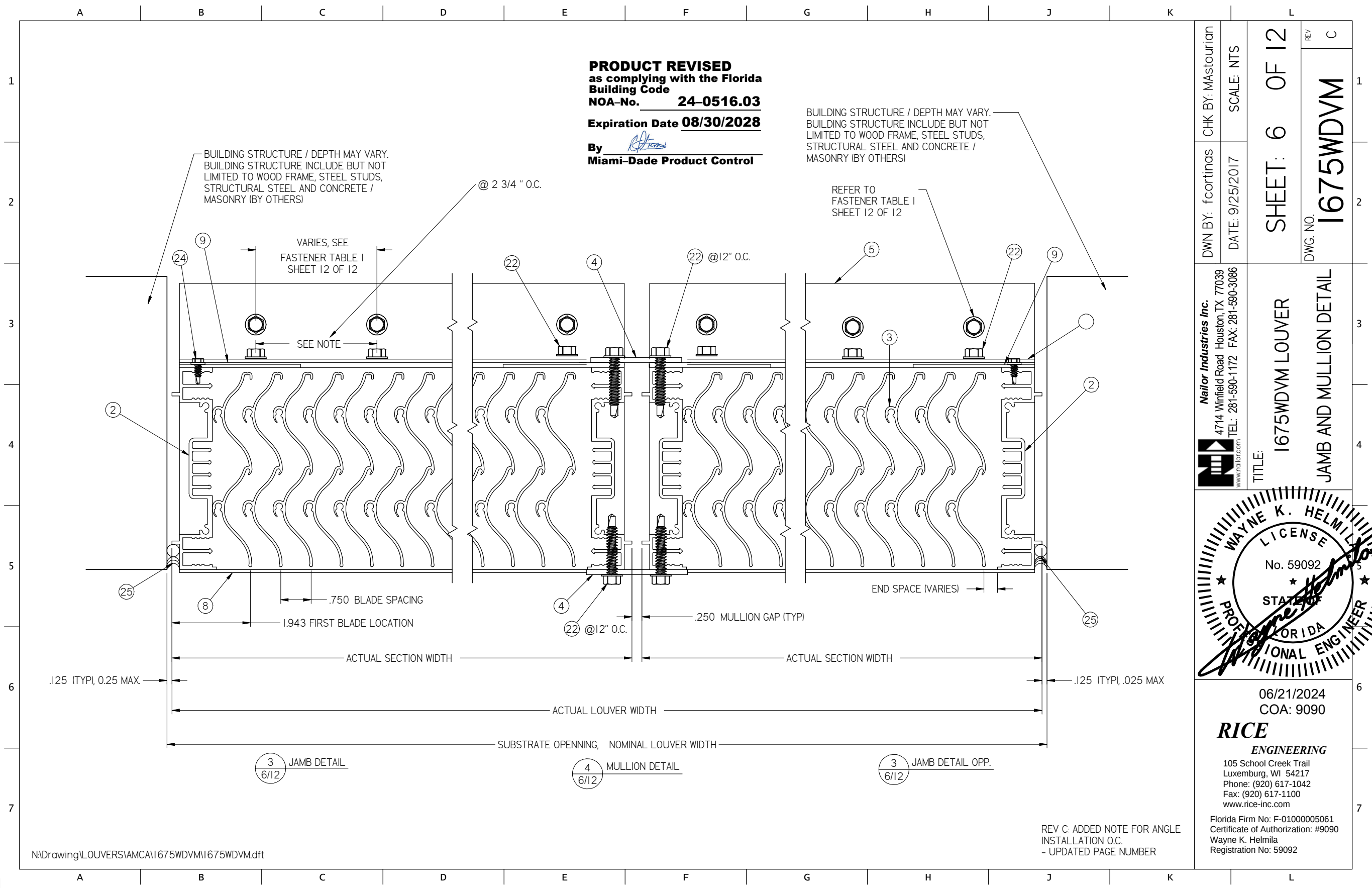
PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.03**
Expiration Date **08/30/2028**
By 
Miami-Dade Product Control

REV. C - UPDATED SHEET TO ACCOUNT FOR PAGE 12









DWN BY: f.cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 6 OF 12	
DWG. NO. 1675WDVM	REV C



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TITLE: 1675WDVM LOUVER
JAMB AND MULLION DETAIL

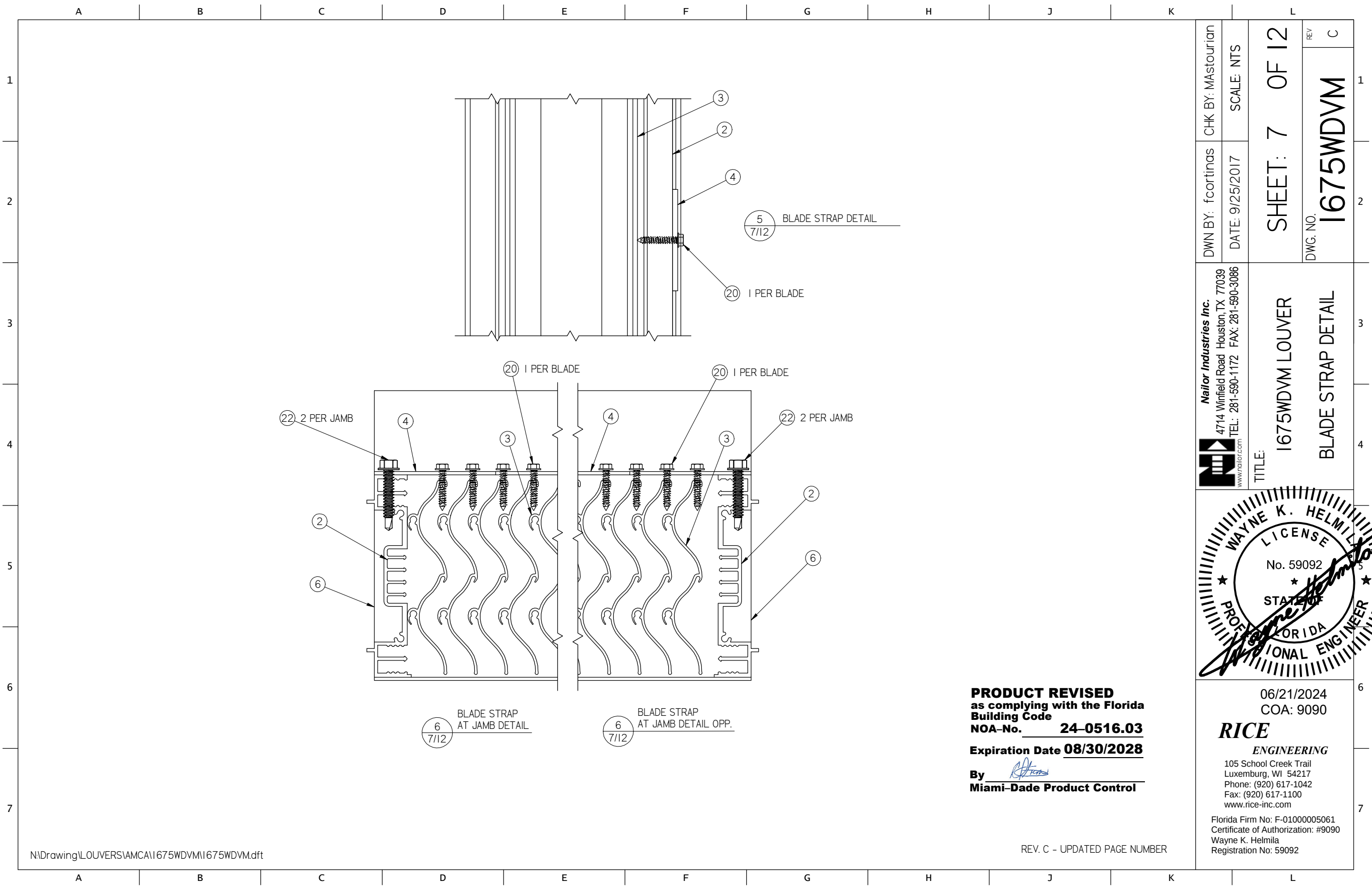


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Fax: (920) 617-1100
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 7 OF 12	
DWG. NO. 1675WDVM	REV C

Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com	1675WDVM LOUVER BLADE STRAP DETAIL
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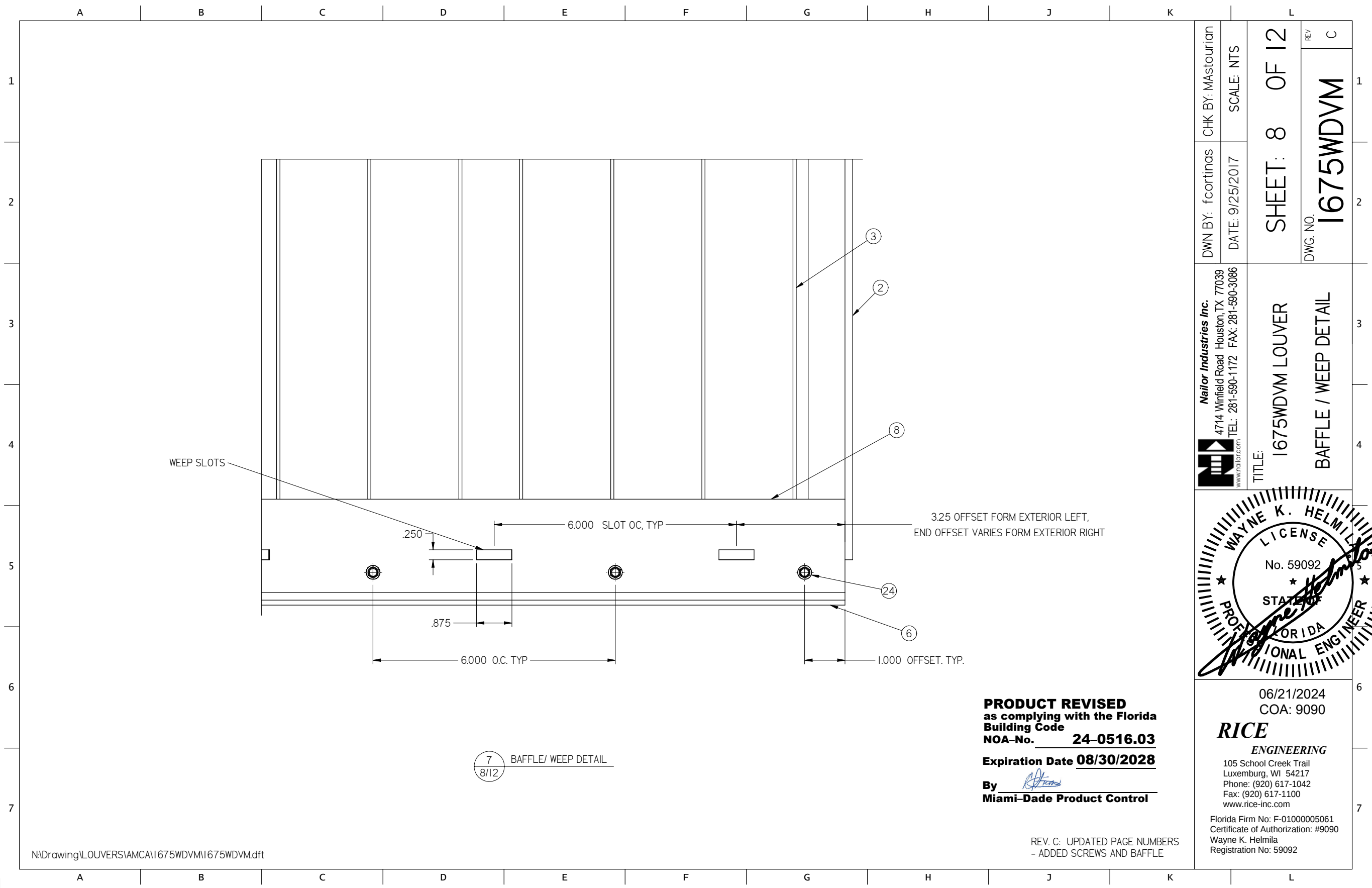


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Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 8 OF 12	
DWG. NO.	REV
1675WDVM	C



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TITLE:
1675WDVM LOUVER
BAFFLE / WEEP DETAIL



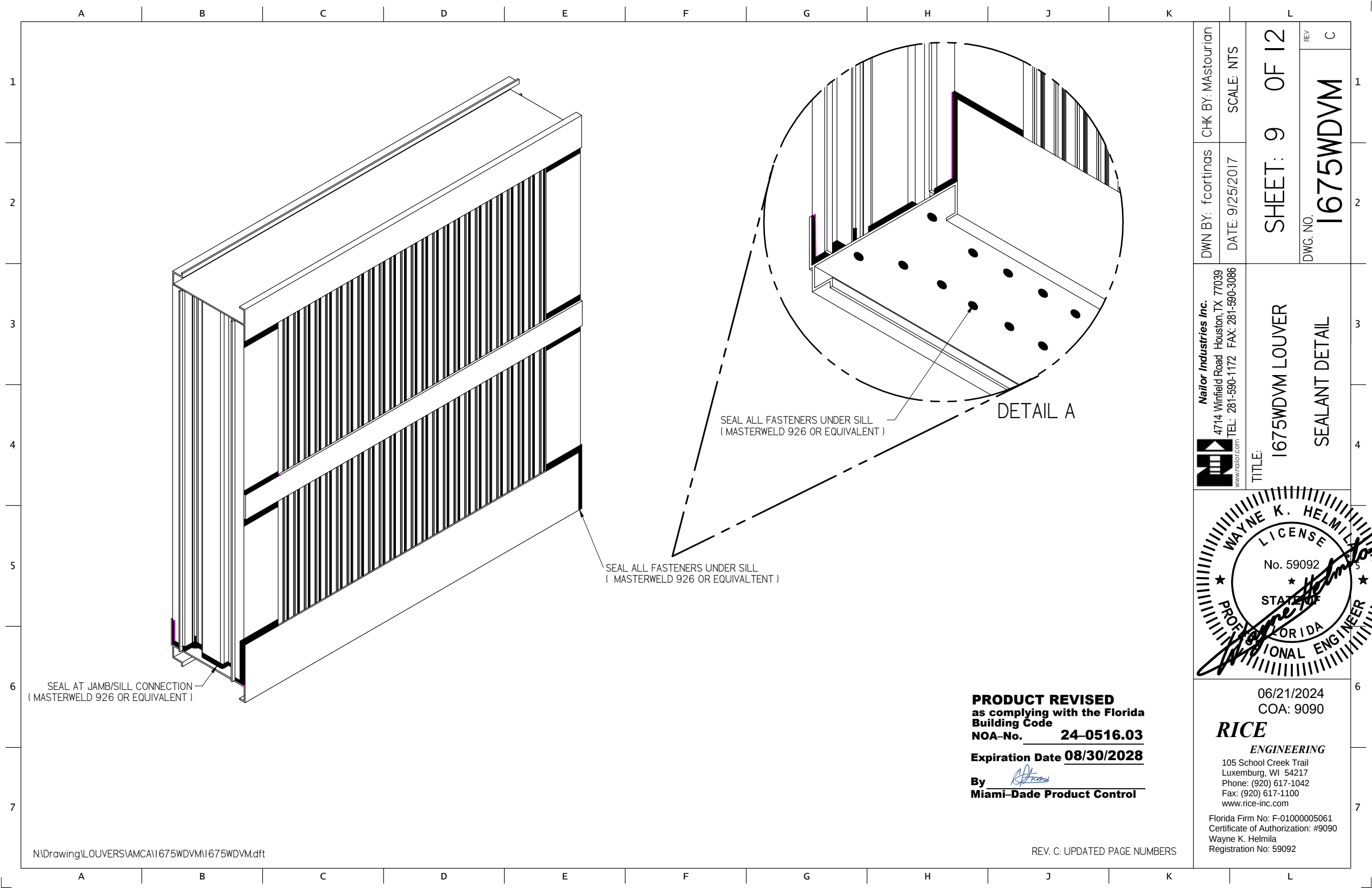
06/21/2024
COA: 9090

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105 School Creek Trail
Luxemburg, WI 54217
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.03**
Expiration Date **08/30/2028**
By 
Miami-Dade Product Control

REV. C: UPDATED PAGE NUMBERS
- ADDED SCREWS AND BAFFLE



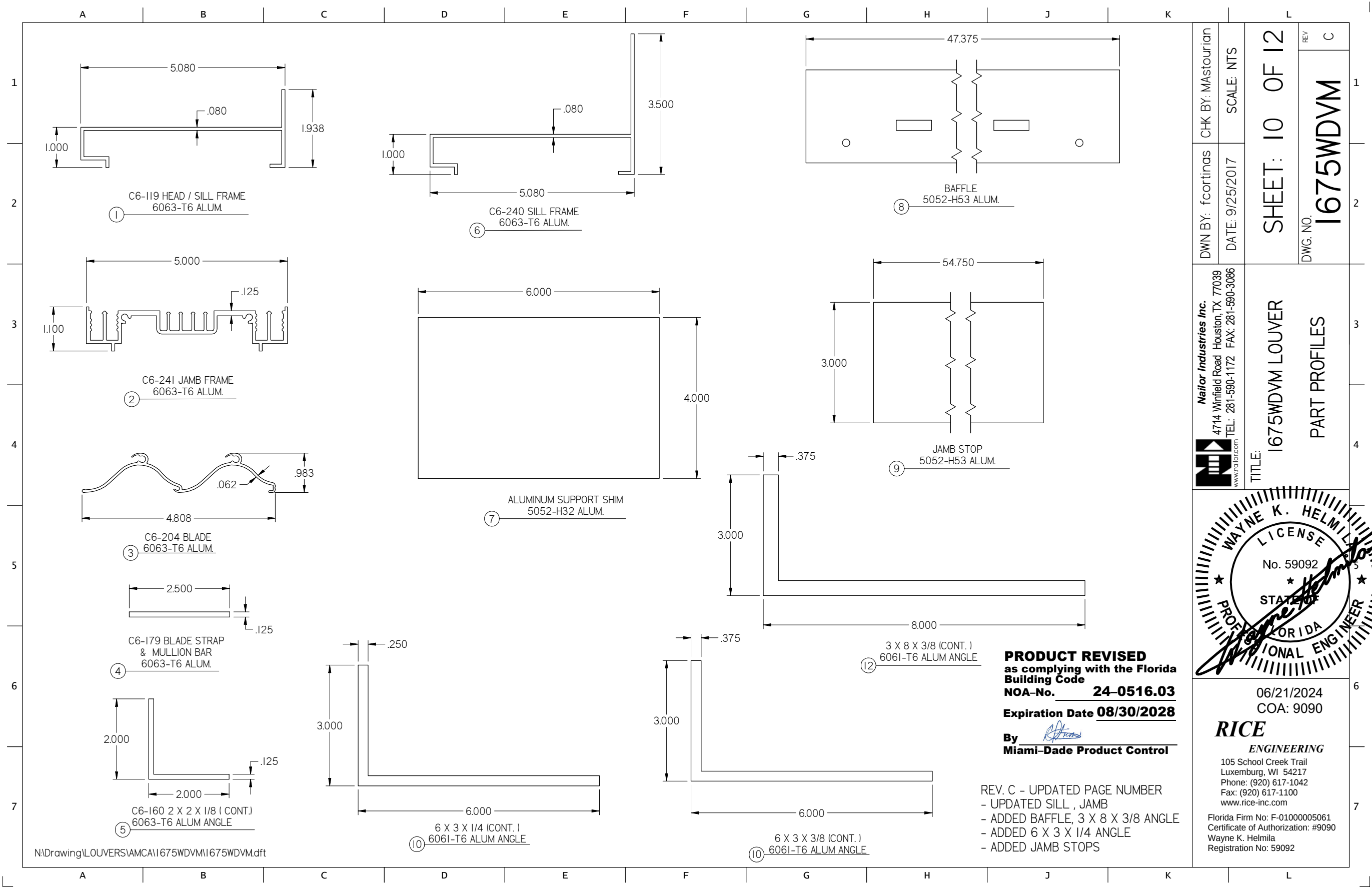
DWN BY: f.cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 9 OF 12	
DWG. NO.	REV
1675WDVM	C

 Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com	TITLE:	
	1675WDVM LOUVER	SEALANT DETAIL



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NOA-No. **24-0516.03**
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ENGINEERING
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Fax: (920) 617-1100
www.rice-inc.com
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DWN BY: f.cortinas	CHK BY: Mastourian
DATE: 9/25/2017	SCALE: NTS
SHEET: 10 OF 12	
DWG. NO.	REV
1675WDVM	C

 Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com	TITLE: 1675WDVM LOUVER	
	PART PROFILES	



PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.03**
Expiration Date **08/30/2028**
By 
Miami-Dade Product Control

REV. C - UPDATED PAGE NUMBER
- UPDATED SILL, JAMB
- ADDED BAFFLE, 3 X 8 X 3/8 ANGLE
- ADDED 6 X 3 X 1/4 ANGLE
- ADDED JAMB STOPS

06/21/2024
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ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

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TABLE 1: HEAD & SILL ANCHORS													
Wood	Steel Stud	Steel	Concrete	CMU	Skinny Wall	Min.	Fastener Type	Diameter	# Rqd	O.C. Spacing	Edge	End	Embedment
X						SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	1/4"	1	2-3/4"	2"		2-1/16
X						SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	3/8"	1	3-3/4"	2"		2-1/16
	X					16 Ga.	Elco Bi-Flex Screws (300 Series SS, FY = 65 ksi)	1/4"	1	2-1/4"	2"		3 THREADS BEYOND SUBSTRATE
		X				A-36	Elco Bi-Flex Screws (300 Series SS, FY = 65 ksi)	1/4"	1	8"	2"		1/4"
		X				A-36	Elco Drill-Flex Drilling Screws (Cond. CW - Fy= 65ksi) Sealed w/ Liquid Prosoco	5/16"	1	10"	2"		1/4"
			X- Cracked 6" Deep			4 ksi	Hilti Kwik HUS-EZ SS 316	3/8	1	10"	4"	4"	2-1/2

TABLE 2: SKINNY WALL ANCHORS													
Wood	Steel Stud	Steel	Concrete	CMU	Skinny Wall	Min.	Fastener Type	Diameter	# Rqd	O.C. Spacing	Edge	End	Embedment
X					X	SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	1/4"	1	3-1/4"	3"		2-3/16"
X					X	SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	3/8"	1	4-1/4"	3"		2-3/16"
	X				X	16 Ga.	Elco Bi-Flex Drilling Screws (300 Series SS, FY = 65 ksi)	1/4"	1	1"	3"		3 THREADS BEYOND SUBSTRATE
		X			X	A-36	Elco Bi-Flex Drilling Screws (300 Series SS, FY = 65 ksi)	1/4"	1	6"	3"		1/4"
		X			X	A-36	Elco Drill-Flex Drilling Screws (Cond. CW - Fy= 65ksi) Sealed w/ Liquid Prosoco	5/16"	1	6-3/4"	3"		1/4"
			X- Cracked 6" Deep		X	4 ksi	HILTI KWIK BOLT TZ2 SS 304	3/8"	1	8"	3"	3"	2-1/2"
			X- Cracked 6" Deep		X	4 ksi	HILTI KWIK BOLT TZ2 SS 304	1/2"	1	10"	3"	3"	3"
				X-Grout Filled	X	2 ksi	HILTI HIT-Hy 270 Threaded Rod 316/304 SS	3/4"	1	8"	4"		6-3/4"

NOTE 1: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING, 6" WIDE, CMU CONFORMING TO ASTM C-90 FILLED WITH 4,747 KSI GROUT.

NOTE 2: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING, 6" WIDE, GRADE N, TYPE II, LIGHT-WEIGHT / MEDIUM-WEIGHT / NORMAL-WEIGHT CMU CONFORMING TO ASTM C-90. MORTAR MUST BE TYPE N. CMU STRENGTH = 2000 psi

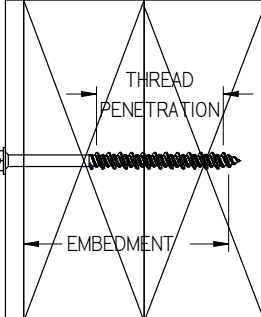
NOTE 3: CONCRETE, STEEL, WOOD, MASONRY, CURTAIN WALL, STOREFRONT, AND ALL OTHER BUILDING SUBSTRATES ARE DESIGNED BY OTHERS.

NOTE 4: ENGINEER OF RECORD TO VERIFY THAT BUILDING SUBSTRATE CAN SUPPORT THE LOUVER REACTIONS.

NOTE 5: THREAD PENETRATION LENGTH SIGNIFIES THE REQUIRED LENGTH OF THE THREADED PORTION OF THE FASTENER INTO THE WOOD SUBSTRATE PROVIDING FULL CONTACT WITH WOOD. LAG SCREW TIP CANNOT BE CONSIDERED PART OF THE TREADED PORTION FO THE SCREW. LAG SCREWS ARE NOT TO BE INSTALLED AT WOOD JOINTS / SPICES WHERE THE LAG SCREW COULD FALL BETWEEN MEMBERS.

NOTE 6: STEEL STUDS TO BE 16 GA. FY= 33ksi MIN.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.03**
Expiration Date **08/30/2028**
By 
Miami-Dade Product Control



REVISIONS:
REV. C: UPDATED FASTENER
SCHEDULE (2 TABLES)

N:\Drawing\LOUVERS\AMCA\1675WDVM\1675WDVM.dft

DWN BY: Mastourian
CHK BY: f cortinas

DATE: 9/25/2017

SCALE: NTS

SHEET: 12 OF 12

DWG. NO. 1675WDVM

REV C



Nailor Industries Inc.

4714 Winfield Road Houston, TX 77039

TEL: 281-590-1172 FAX: 281-590-3086

www.nailor.com

TITLE:

1675WDVM LOUVER

FASTENER SCHEDULE



06/21/2024

COA: 9090

RICE

ENGINEERING

105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/building

Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model 1605WDM Aluminum Louver w/ and w/o Damper – L.M.I.

APPROVAL DOCUMENT: Drawing No. **1605WDM**, titled "1605WDM Louver w/ and w/o Damper", sheets 1 through 21 of 21, dated 09/18/2017, with revision B dated 08/20/2024, prepared by manufacturer, signed and sealed by Wayne K. Helmila, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Houston, TX, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

LIMITATION: This system is to be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water resistant/waterproof equipment, components, or supplies.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **revises NOA No. 23-0724.24** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



09/03/24

NOA No. 24-0516.05
Expiration Date: August 30, 2028
Approval Date: September 12, 2024
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS “Submitted under NOA No. 18-0117.13”

1. Drawing No. **1605WDM**, titled “1605WDM Louver w/ and w/o Damper”, sheets 1 through 21 of 21, dated 09/18/17, prepared by the manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS “Submitted under NOA No. 18-0117.13”

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model 1605WDM Louver System, prepared by Intertek, Test Report No. **H3539.01-801-18-R2**, dated 09/20/17 and revised on 05/24/18, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Wind Driven Rain Resistance Test per TAS 100(A)-95 on a Model 1605 WDM Aluminum Louver with damper, prepared by Intertek, Test Report No. **H0223.04-801-18-R1**, dated 09/28/17 and revised on 11/21/17, signed and sealed by Tyler Westerling, P.E.
3. Test Report on High Velocity Wind Driven Rain Resistance Test per ANSI/AMCA 550-09 on a Model 1605WDM Aluminum Louver with damper, prepared by Intertek, Test Report No. **H0223.03-801-18-R1**, dated 09/28/17 and revised on 11/21/17, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS “Submitted under NOA No. 18-0117.13”

1. Louver structural calculations dated 11/02/17, prepared by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS “Submitted under NOA No. 18-0117.13”

1. Statement letter of code conformance to the FBC 6th Edition (2017) issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.05
Expiration Date: August 30, 2028
Approval Date: September 12, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER NOA # 21-0630.11 AND NEW

A. DRAWINGS

1. Drawing No. **1605WDM**, titled “1605WDM Louver w/ and w/o Damper”, sheets 1 through 21 of 21, dated 09/18/2017, with revision B dated 08/20/2024, prepared by the manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Louver calculations, prepared by Rice Engineering, dated 08/14/2024, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the 8th edition (2023) of the FBC, issued by Rice Engineering, dated 08/20/2024, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest, issued by Rice Engineering, dated 08/20/2024, signed and sealed by Wayne K. Helmila, P.E.

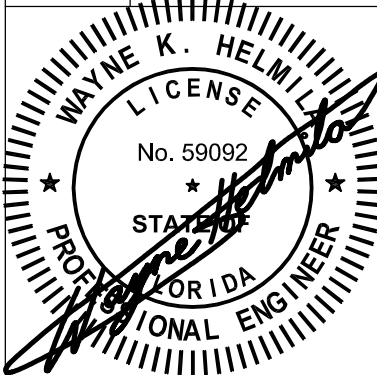
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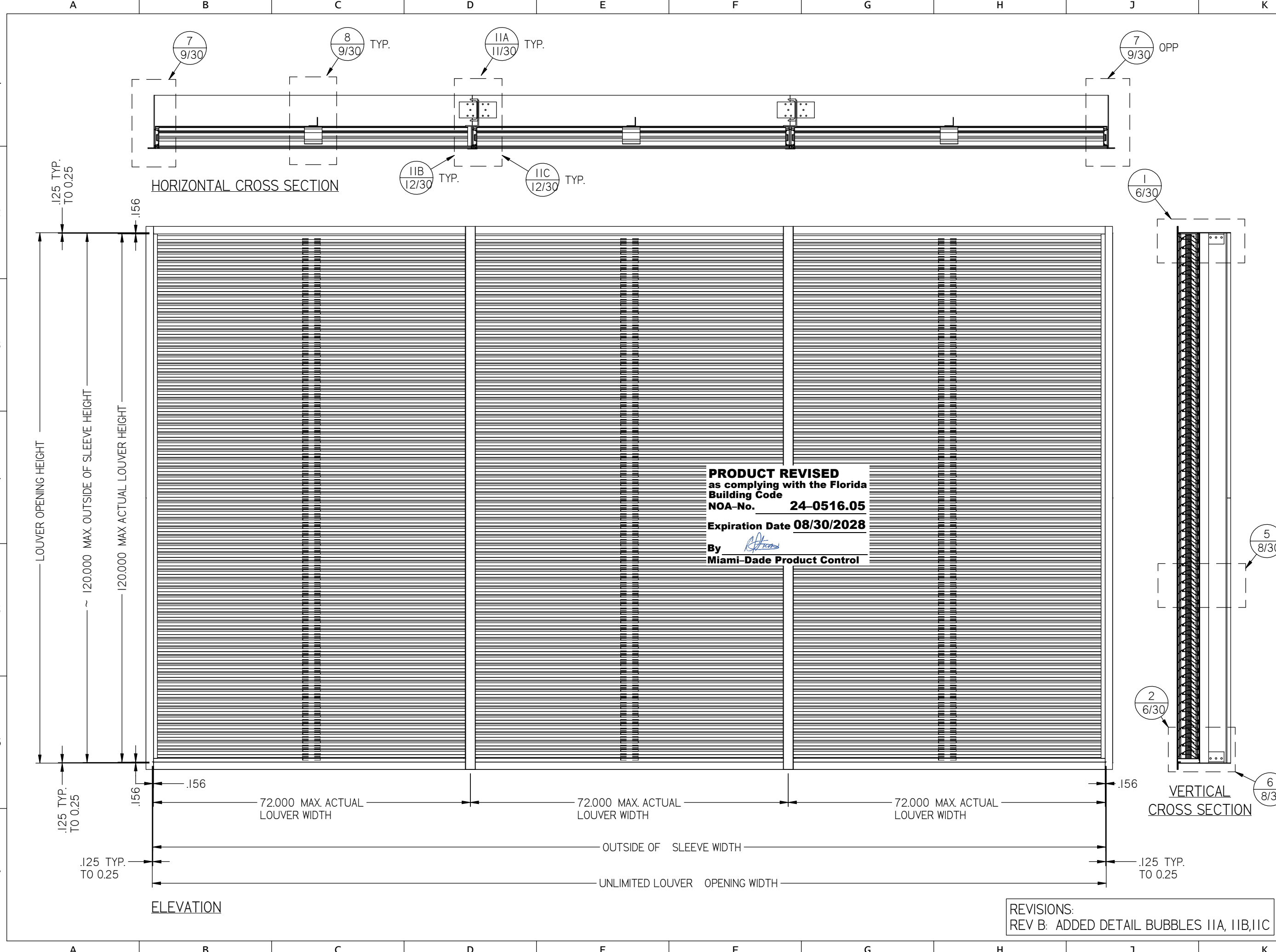
3. Statement letter of code conformance to the 7th edition (2020) FBC, issued by Rice Engineering, dated 05/19/21, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.05

Expiration Date: August 30, 2028
Approval Date: September 12, 2024

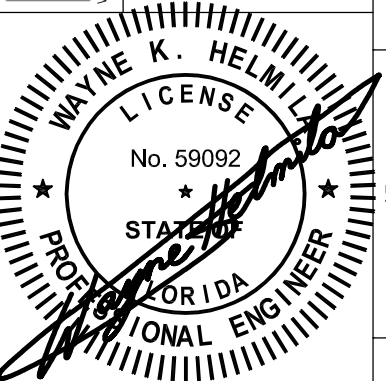
A	B	C	D	E	F	G	H	J	K	L						
DRAWING INDEX: 1. INDEX TO DRAWING AND NOTES. 2. I605WDM LOUVER- FLANGE FRAME SLEEVE MOUNT 3. I605WDM LOUVER- CONTINUOUS ANGLE MOUNT 4. I605WDM / DAMPER- FLANGE FRAME SLEEVE MOUNT 5. I605WDM / DAMPER- CONTINUOUS ANGLE MOUNT 6. I605WDM LOUVER- FLANGE FRAME SLEEVE MOUNT HEAD & SILL DETAIL 7. I605WDM LOUVER- CONTINUOUS ANGLE MOUNT & CMU MULLION ANGLE- HEAD & SILL DETAIL. 8. I605WDM LOUVER- BLADE SUPPORT DETAIL. 9. I605WDM LOUVER- FLANGE FRAME SLEEVE MOUNT JAMB & BLADE BRACE DETAIL 10. I605WDM LOUVER- CONTINUOUS ANGLE MOUNT JAMB & BLADE BRACE DETAIL 11. I605WDM LOUVER- FLANGE FRAME SLEEVE MOUNT MULLION DETAIL 12. I605WDM LOUVER- FLANGE FRAME SLEEVE MOUNT 72" BLADE MULLION DETAIL 13. I605WDM LOUVER- CONTINUOUS ANGLE MOUNT MULLION DETAIL. 14. I605WDM LOUVER- CONTINUOUS ANGLE MOUNT 72" BLADE MULLION DETAIL 15. I605WDM LOUVER / DAMPER FLANGE FRAME W/ SLEEVE & CONTINUOUS ANGLE HEAD & SILL DETAIL 16. I605WDM LOUVER-CONTINUOUS ANGLE MOUNT CMU MULLION ANGLE -HEAD & SILL DETAIL 17. I605WDM LOUVER / DAMPER- FLANGE FRAME SLEEVE MOUNT JAMB AND MULLION DETAIL 18. I605WDM LOUVER / DAMPER - FLANGE FRAME SLEEVE MOUNT 36" BLADE MULLION DETAIL 19. I605WDM LOUVER / DAMPER CONTINUOUS ANGLE MOUNT JAMB AND MULLION DETAIL 20. I605WDM LOUVER / DAMPER - CONTINUOUS ANGLE MOUNT 36" BLADE MULLION DETAIL 21. I605WDM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT PART PROFILES. 22. I605WDM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT PART PROFILES CONT. 23. 22" MULLION ANGLES BACK OF WALL MOUNT 24. 30" MULLION ANGLE - 22" MULLION ANGLES BACK OF THE WALL MOUNT 25. 16" MULLION ANGLES- BACK OF THE WALL MOUNTS 26. 30" CMU MULLION ANGLE- BACK OF THE WALL 27. I605WDM LOUVER W/ AND W/O DAMPER AVAILABLE SHAPES 28. I605WDM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT BILL OF MATERIAL. 29. I605WDM LOUVER W/ AND W/O DAMPER SLEEVE FASTENER SCHEDULE. 30. I605WDM LOUVER W/ AND W/O DAMPER SLEEVE GENERAL NOTES			NOTES: 1) THE I605WDM HAS BEEN TESTEDIN ACCORDANCE WITH THE MIAMI-DADE COUNTY PROTOCOLS TAS-201, 202, & 203 FOR LARGE MISSILE IMPACT, UNIFORM PRESSURE AND CYCLIC WIND PRESSURE. 2) THIS LOUVER SYSTEM IS APPROVED FOR APPLICATIONS WITH DESIGN PRESSURES OF +/- 150 PSF OR LESS 3) THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS. 4) LOUVER ANCHORS ARE REVIEWED FOR ATTACHMENT INTO STEEL, CONCRETE, MASONRY, OR TIMBER SUBSTRUCTURE. MIMIMUM EDGE DISTANCE AND EMBEDMENT REQUIREMENTS ARE SHOWN. NAILOR IND. DOES NOT DETERMINE THE STURCTURE INTEGRITY OF THE SUBSTRUCTURE. 5) MAXIMMUM SINGLE SECTION SIZE : 72" WIDE X 120" HIGH. 6) MAXIMUM ASSEMBLED LOUVER SIZE UNLIMITED WIDE X 120" HIGH. MAX. MULLION SPACING IS 72". 7) SECTIONS OR ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDING A SUITABLE STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER.			TESTS PREFORMED: TAS100 A WIND DRIVEN RAIN RESISTANCE W/ DAMPER TAS-201 LARGE MISSILE IMPACT TAS-202 UNIFORM STATIC AIR PRESSURE TEST TAS-203 CYCLIC WIND PRESUSRE TEST DESIGN PRESSURE RATING 150 PSF			CHK BY: Mastourian		SCALE: NTS		SHEET: 1 OF 30		REV B	
									DWN BY: fcortinas		DATE: 9/18/2017					
									Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com		TITLE: I605WDM LOUVER W/ AND W/O DAMPER INDEX					
											08/20/2024 COA: 9090					
									PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.05 Expiration Date 08/30/2028 By  Miami-Dade Product Control							
											RICE ENGINEERING 105 School Creek Trail Luxemburg, WI 54217 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com Florida Firm No: F-01000005061 Certificate of Authorization: #9090 Wayne K. Helmila Registration No: 59092					



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By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B: ADDED DETAIL BUBBLES 11A, 11B, 11C

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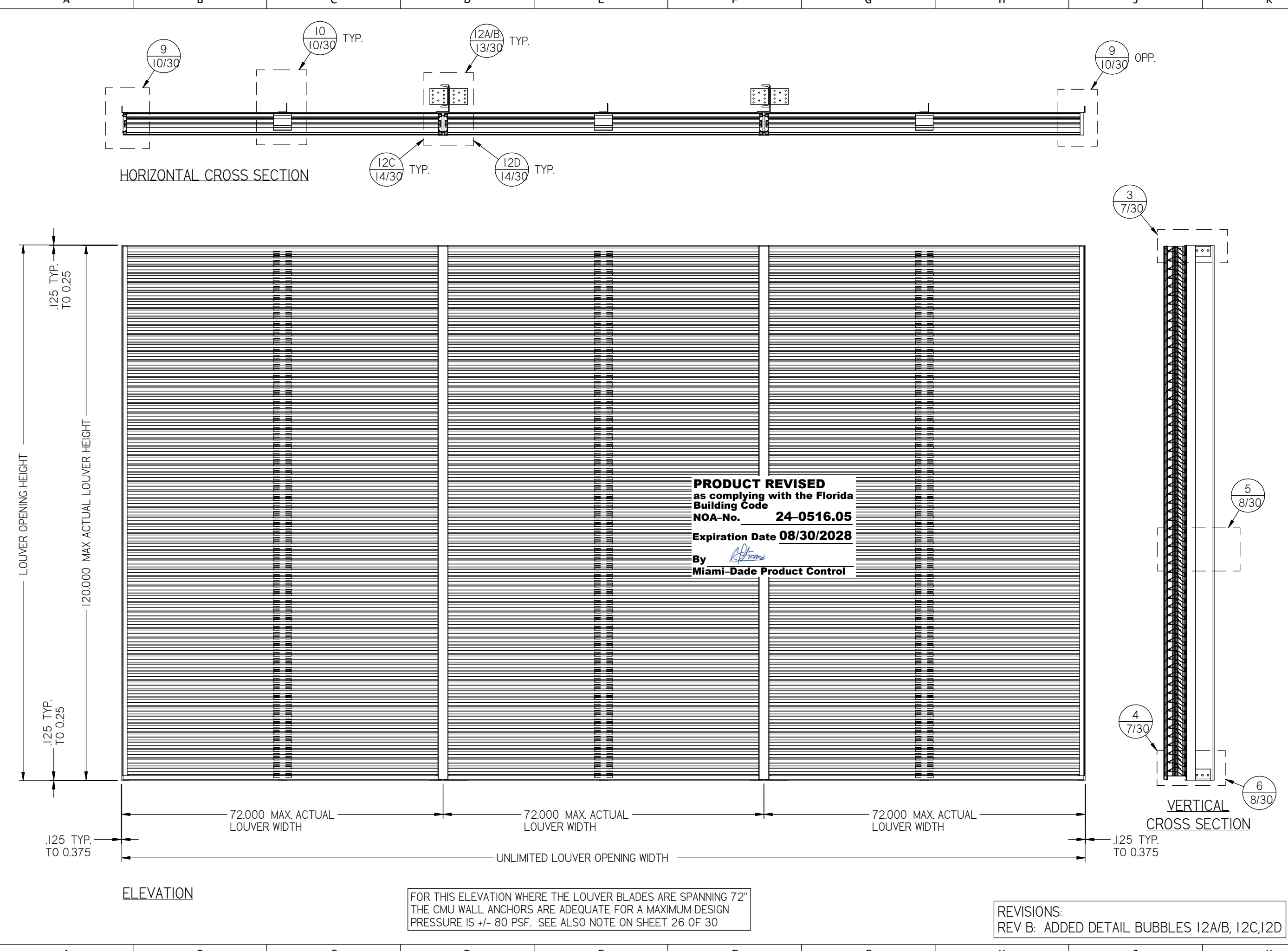


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Phone: (920) 617-1042
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Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas CHK BY: Mastourian
DATE: 9/18/2017 SCALE: NTS
SHEET: 2 OF 30
DWG. NO. **1605WDM** REV B



DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/18/2017	SCALE: NTS
SHEET: 3 OF 30	
DWG. NO. 1605WDM	REV B

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1605WDM LOUVER
COUNTINOUS ANGLE MOUNT

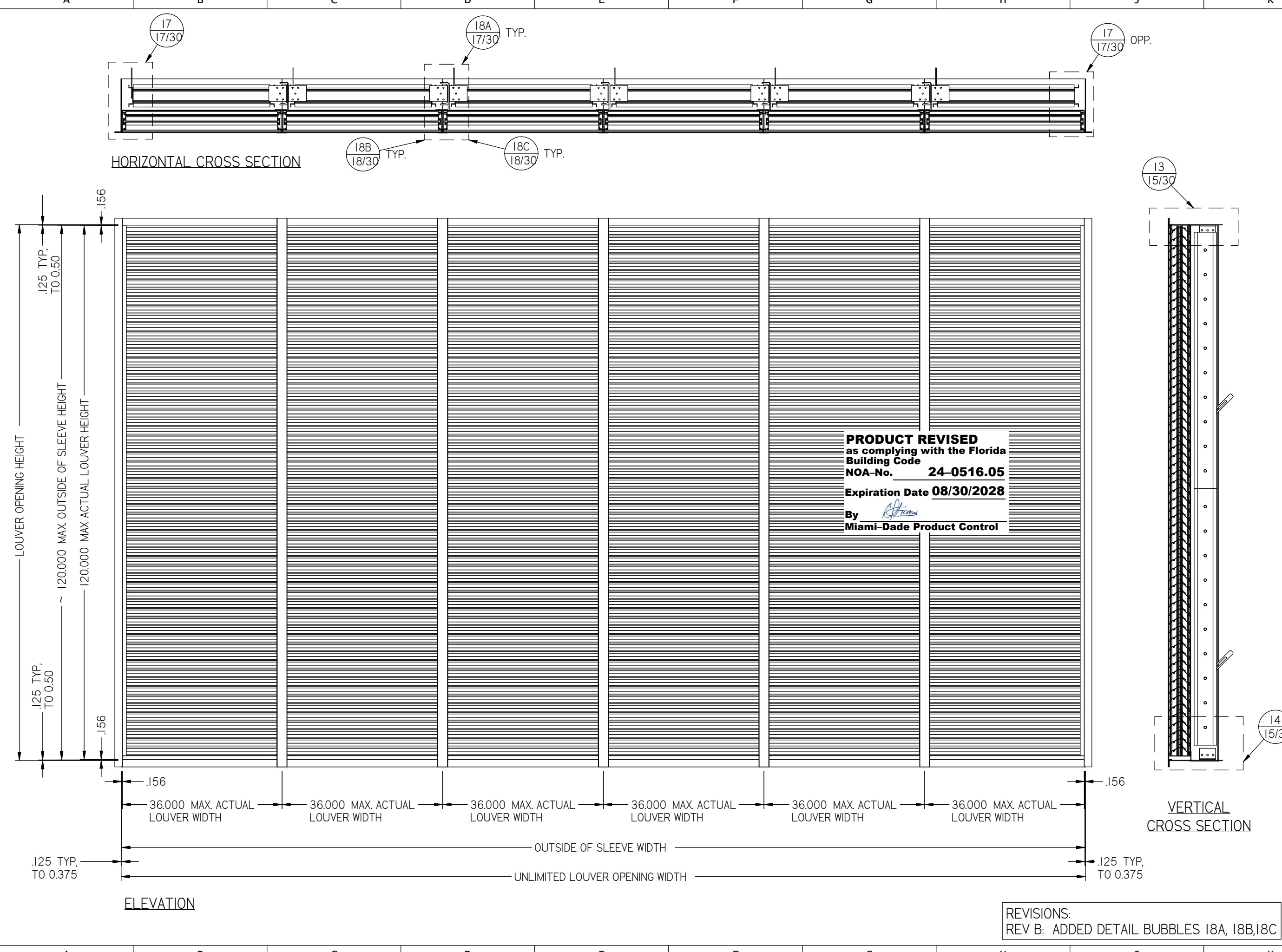
TITLE:

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER

08/20/2024
COA: 9090

RICE ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
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Fax: (920) 617-1100
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DWN BY: f cortinas		CHK BY: Mastourian	
DATE: 9/18/2017		SCALE: NTS	
SHEET: 4 OF 30			
DWG. NO.		REV B	
1605WDM			

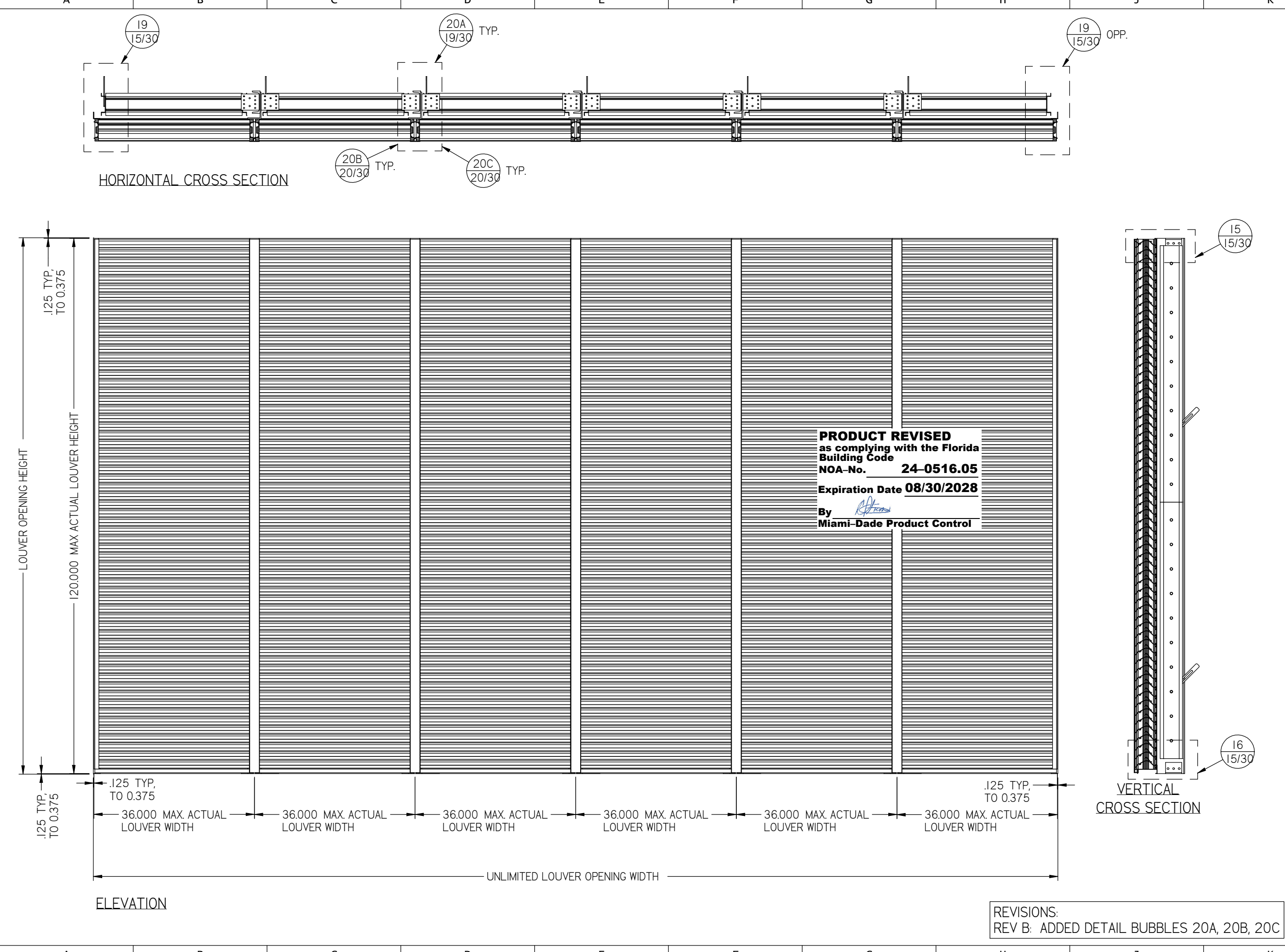
Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com

TITLE:
1605WDM / DAMPER
FLANGE FRAME
SLEEVE MOUNT

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/20/2024
COA: 9090

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105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

REVISIONS:
REV B: ADDED DETAIL BUBBLES 18A, 18B,18C



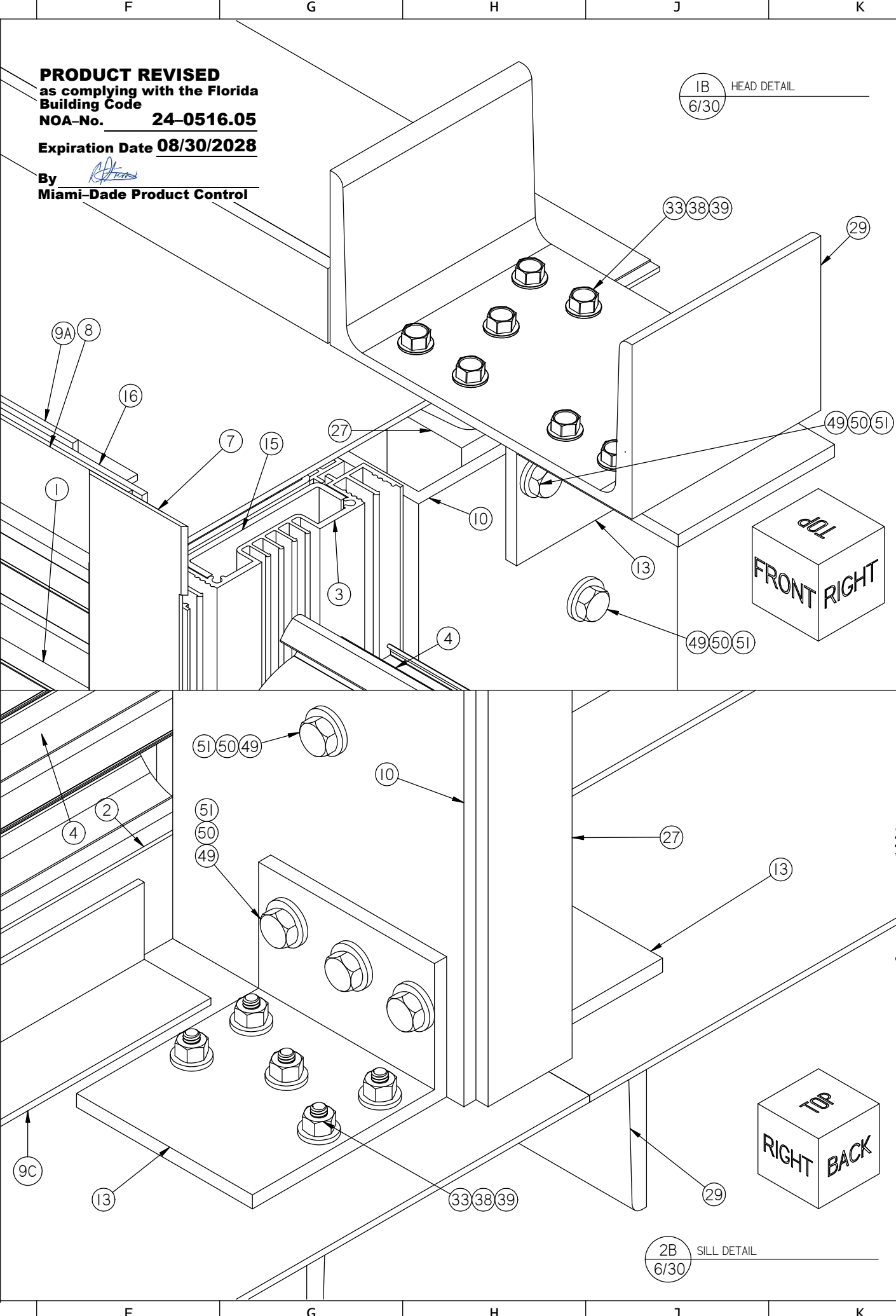
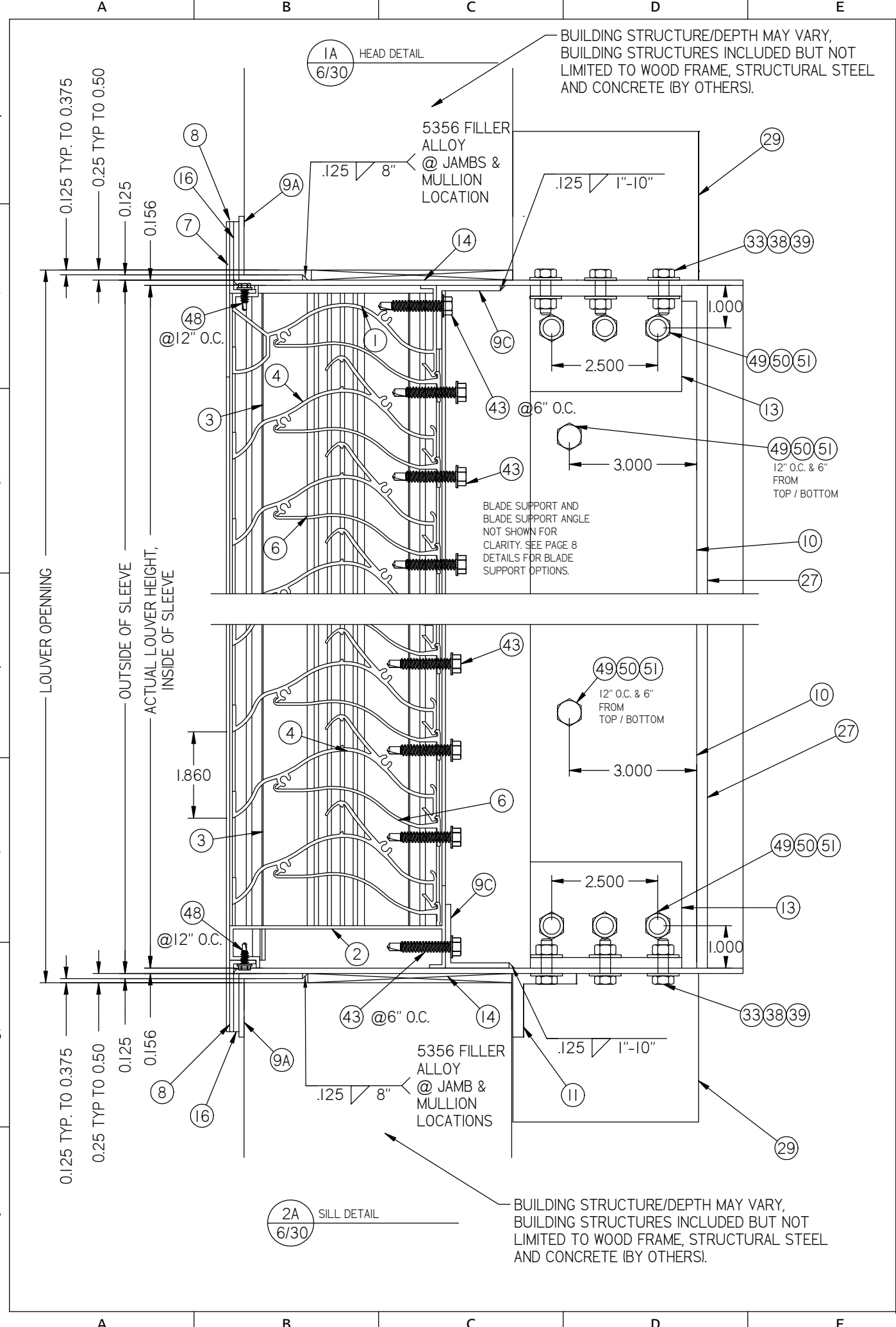
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DATE: 9/18/2017		SCALE: NTS
SHEET: 5 OF 30		
DWG. NO.	REV B	
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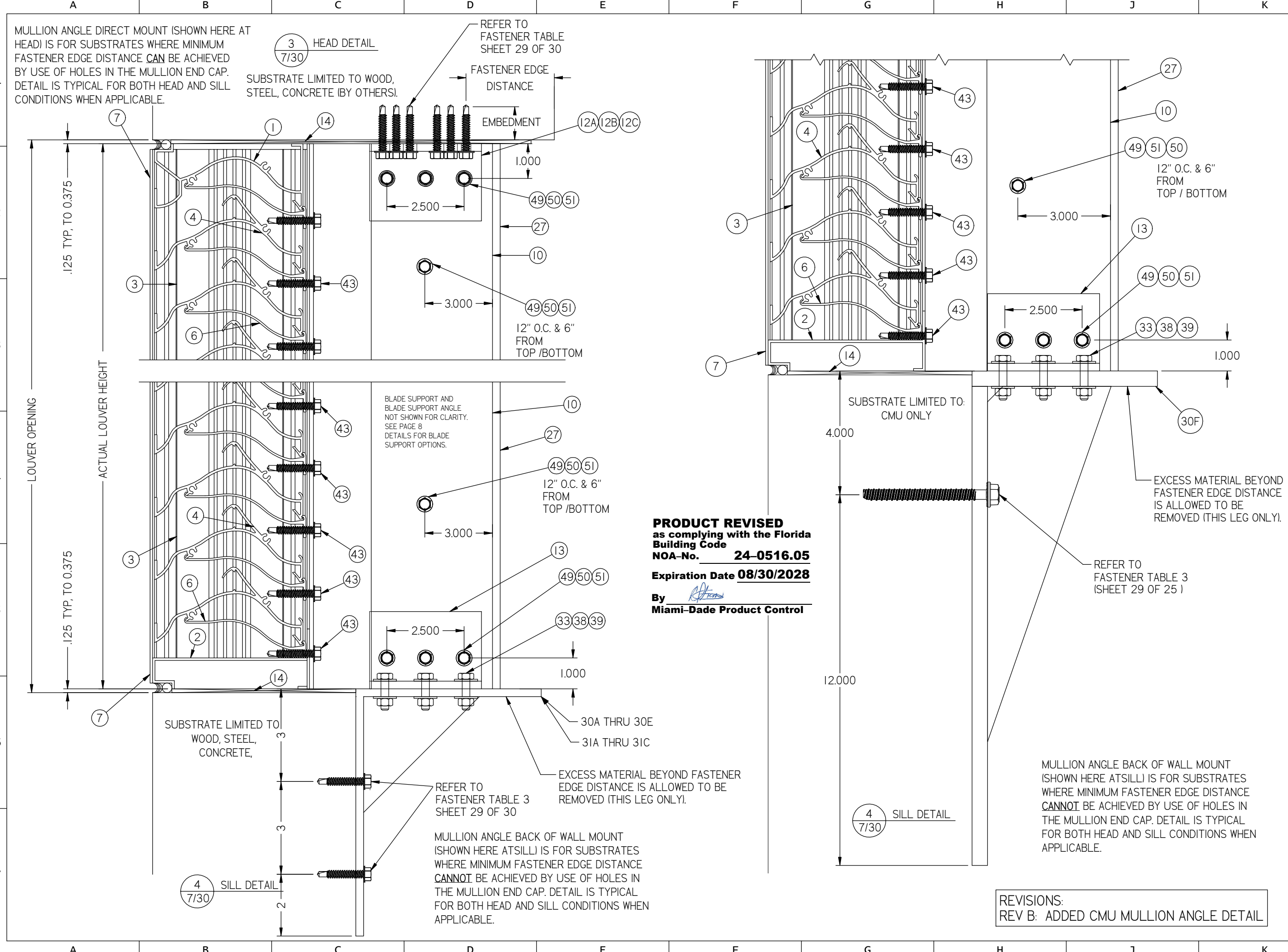
TITLE:
**1605WDM / DAMPER
CONTINUOUS ANGLE MOUNT**

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/20/2024
COA: 9090

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Fax: (920) 617-1100
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



DWN BY: f.cortinas		CHK BY: Mastourian	SHEET: 6 OF 30	REV B
DATE: 9/18/2017		SCALE: NTS		
Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com		TITLE: 1605WDM LOUVER FLANGE FRAME SLEEVE MOUNT HEAD & SILL DETAIL		
WAYNE K. HELMILIA LICENSE No. 59092 STATE OF FLORIDA PROFESSIONAL ENGINEER 08/20/2024 COA: 9090				
RICE ENGINEERING 105 School Creek Trail Luxemburg, WI 54217 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com Florida Firm No: F-01000005061 Certificate of Authorization: #9090 Wayne K. Helmila Registration No: 59092				



DWN BY: f cortinas

CHK BY: Mastourian

DATE: 9/18/2017

SCALE: NTS

SHEET: 7 OF 30

DWG. NO. 1605WDM

REV B

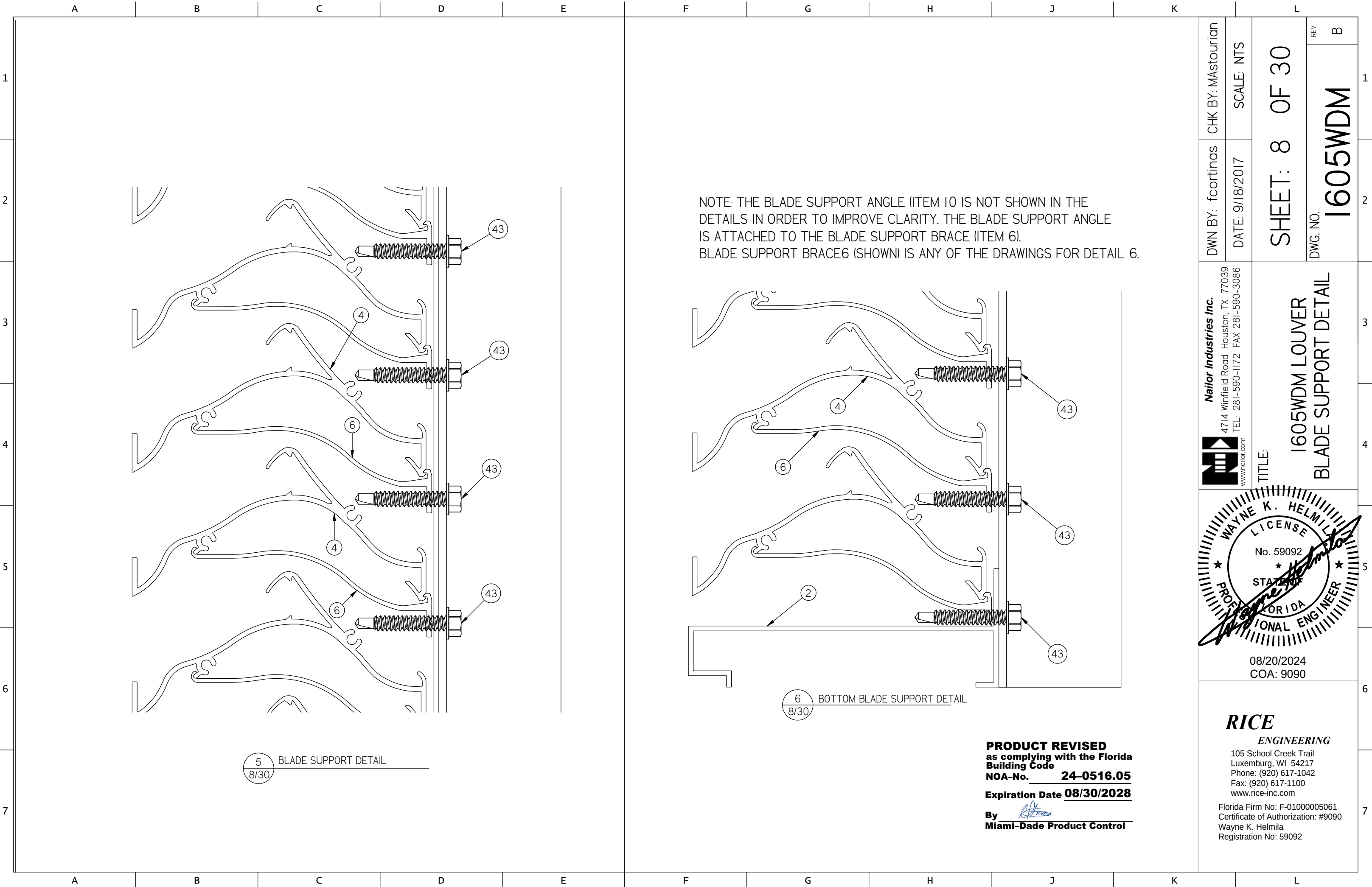
Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com

TITLE: 1605WDM LOUVER CONTINUOUS ANGLE MOUNT AND CMU MULLION ANGLE HEAD & SILL DETAILS

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/20/2024
COA: 9090

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Fax: (920) 617-1100
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

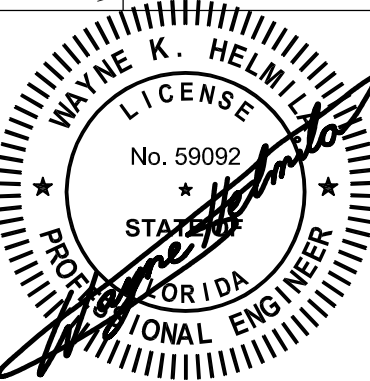
REVISIONS:
REV B: ADDED CMU MULLION ANGLE DETAIL



NOTE: THE BLADE SUPPORT ANGLE (ITEM 10 IS NOT SHOWN IN THE DETAILS IN ORDER TO IMPROVE CLARITY. THE BLADE SUPPORT ANGLE IS ATTACHED TO THE BLADE SUPPORT BRACE (ITEM 6).
BLADE SUPPORT BRACE6 (SHOWN) IS ANY OF THE DRAWINGS FOR DETAIL 6.

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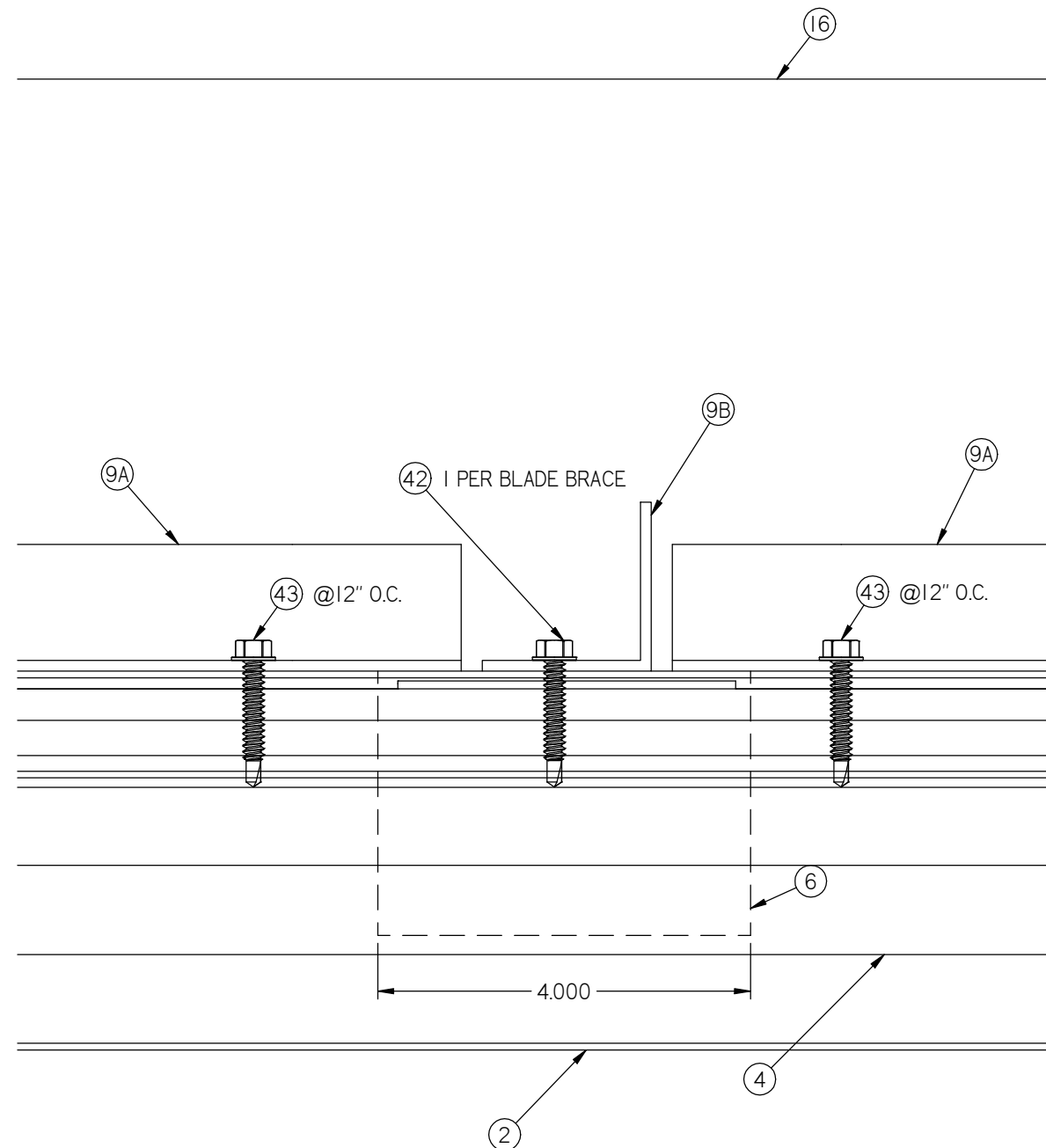
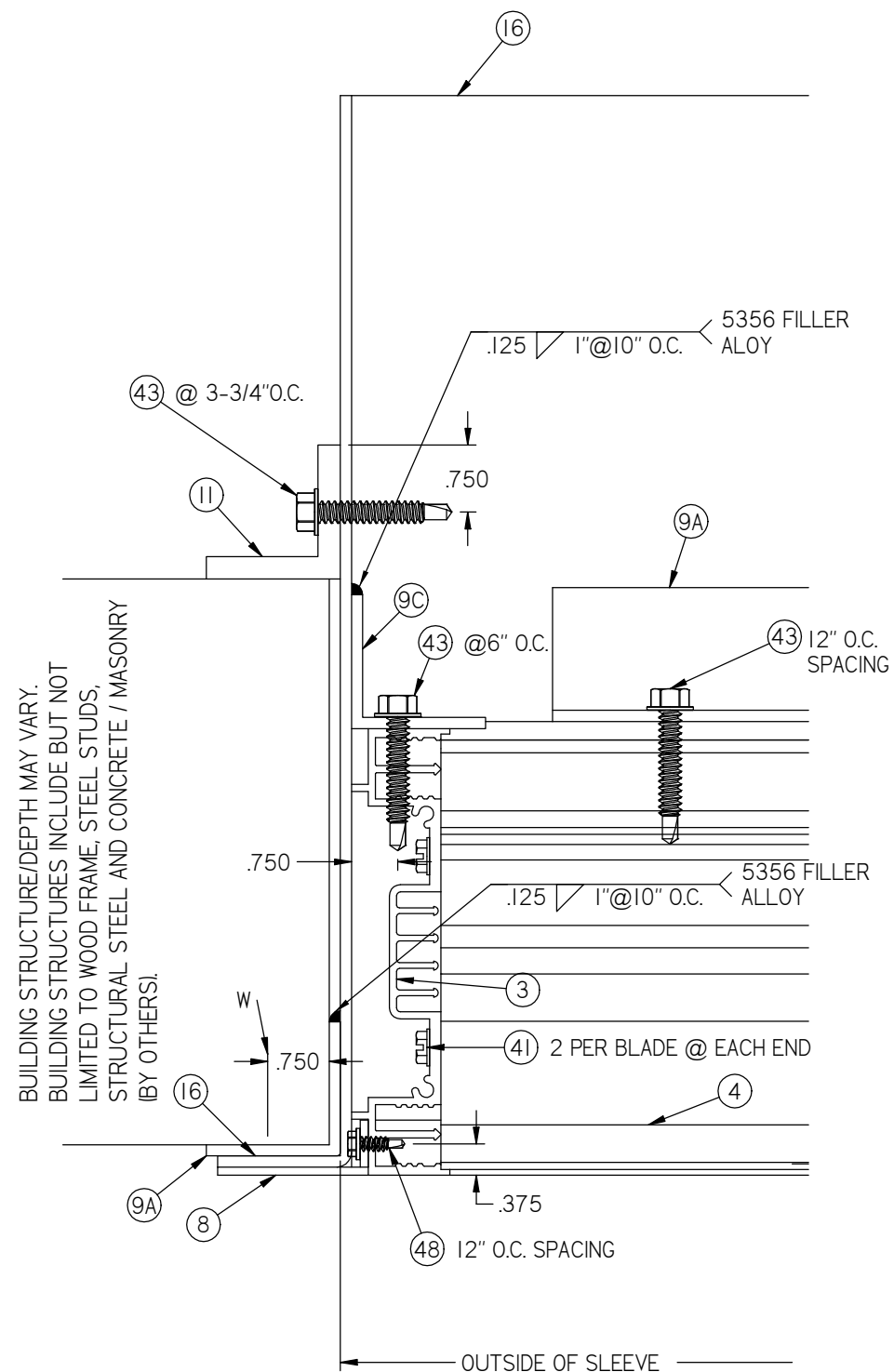


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DWN BY: fcortinas
CHK BY: Mastourian
DATE: 9/18/2017
SCALE: NTS
SHEET: 8 OF 30
DWG. NO. 1605WDM
REV. B



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NOA-No. 24-0516.05

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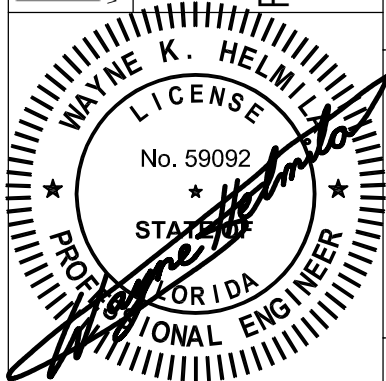
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TITLE:



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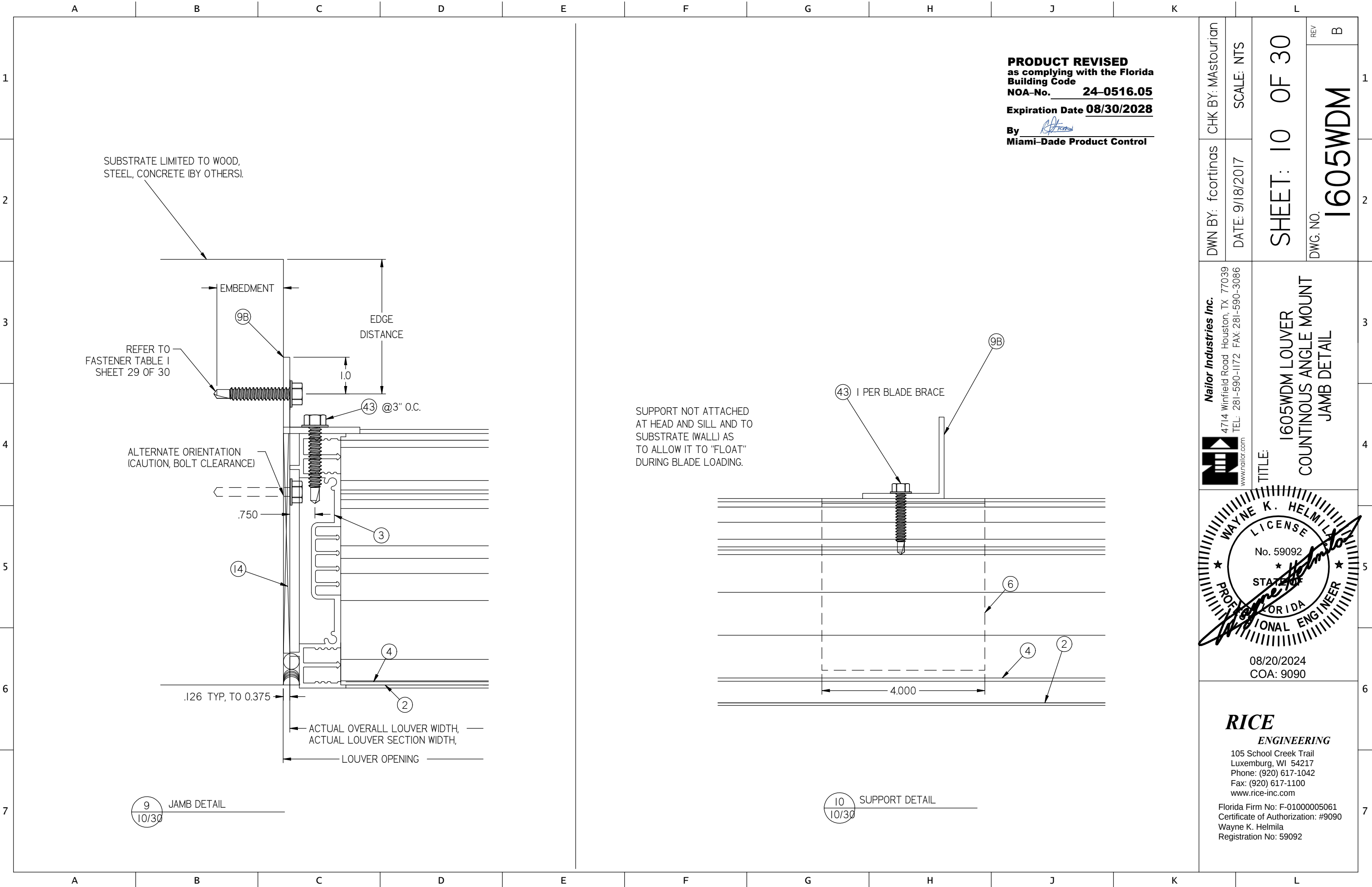
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DATE: 9/18/2017	SCALE: NTS
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SHEET: 9 OF 30

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1605WDM



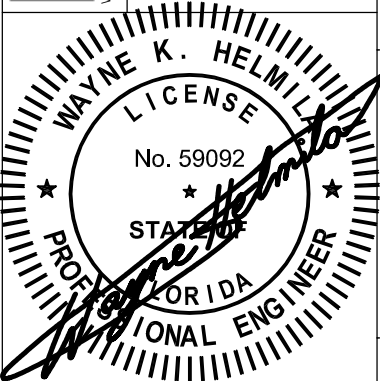
PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.05**
Expiration Date **08/30/2028**
By 
Miami-Dade Product Control

DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/18/2017	SCALE: NTS
SHEET: 10 OF 30	
DWG. NO.	REV B
1605WDM	

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TEL: 281-590-1172 FAX: 281-590-3086

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TITLE:
1605WDM LOUVER
COUNTINOUS ANGLE MOUNT
JAMB DETAIL

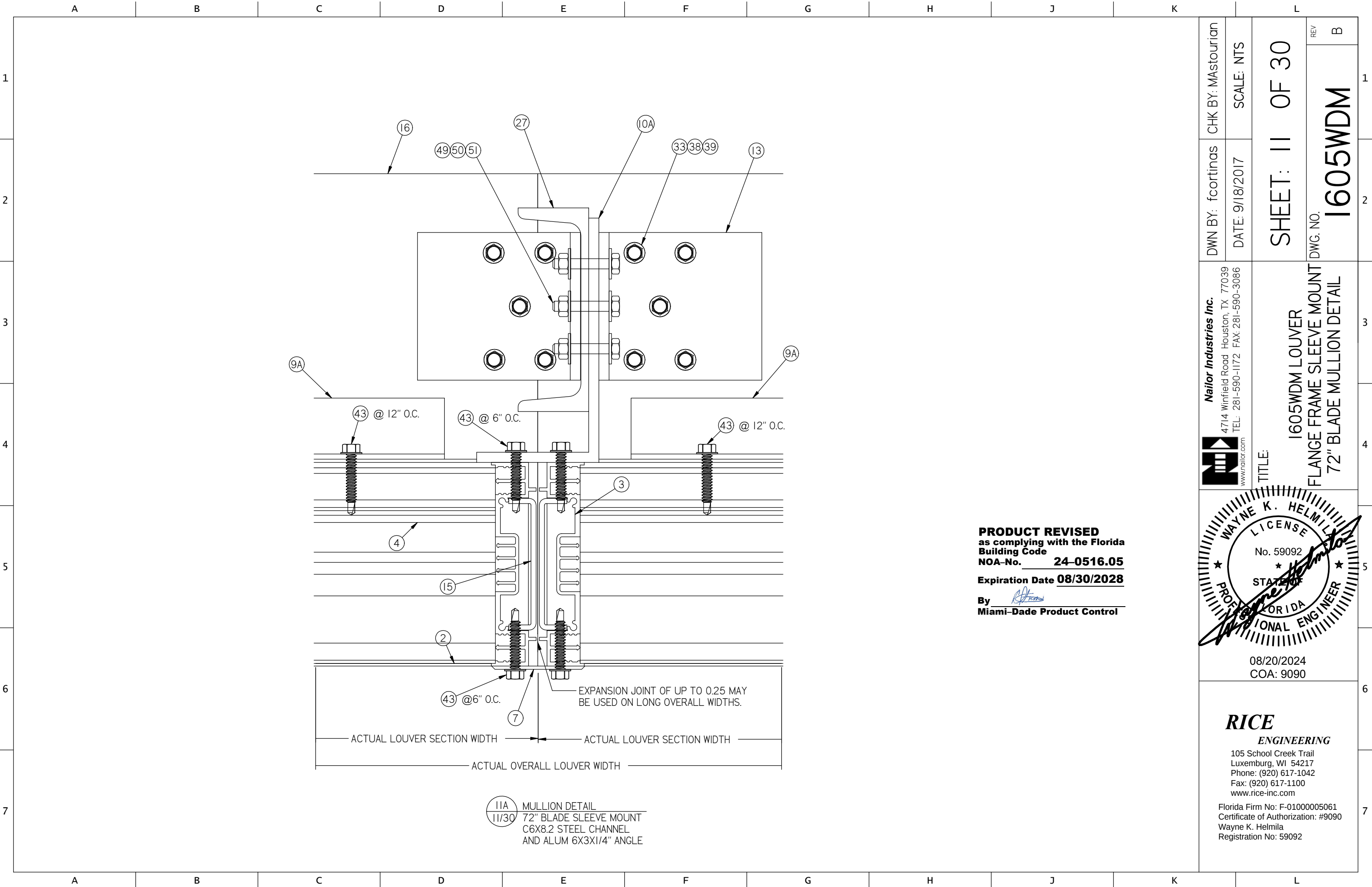


08/20/2024
COA: 9090

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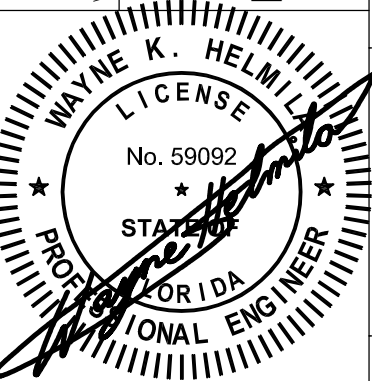
105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
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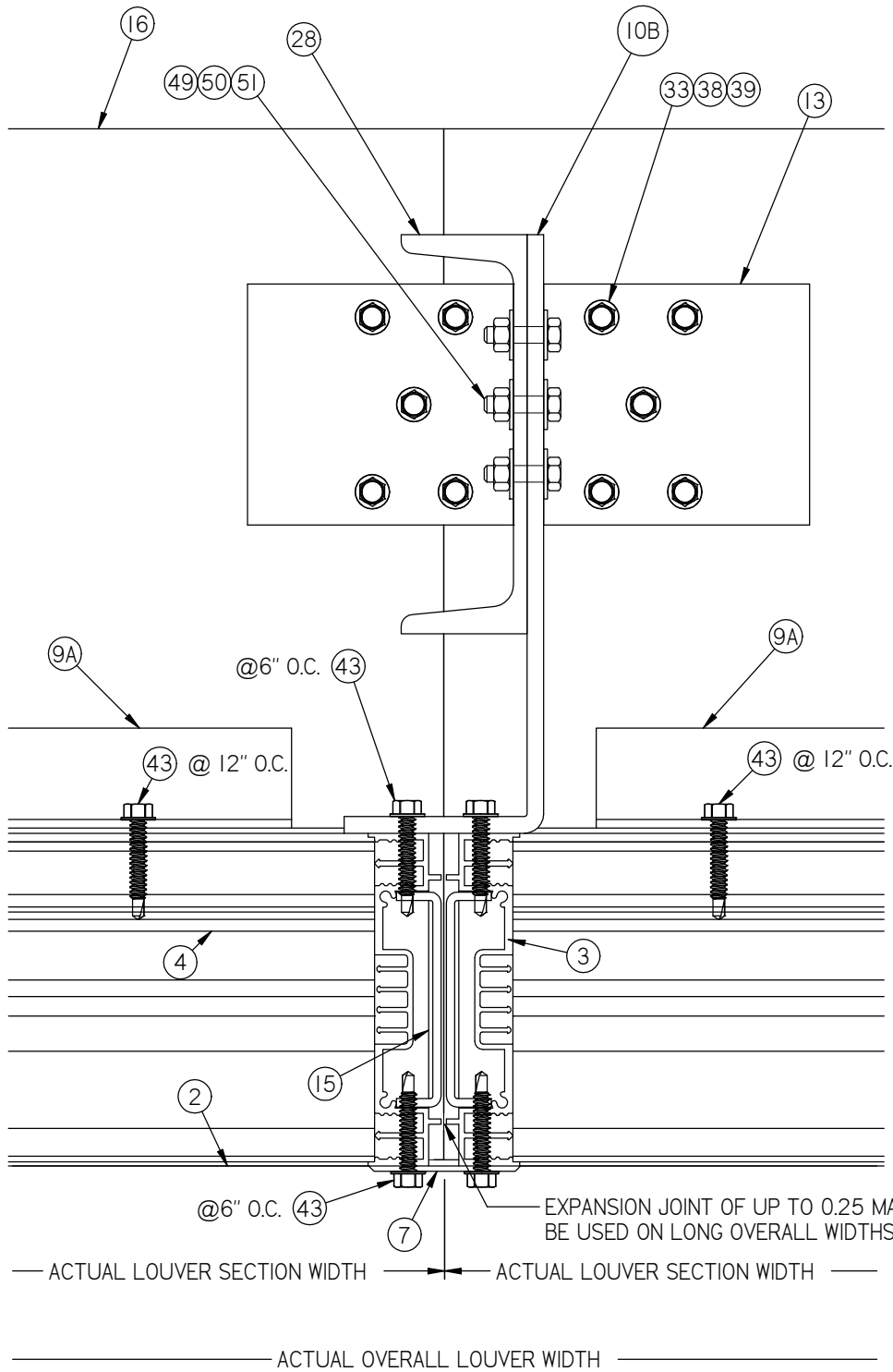


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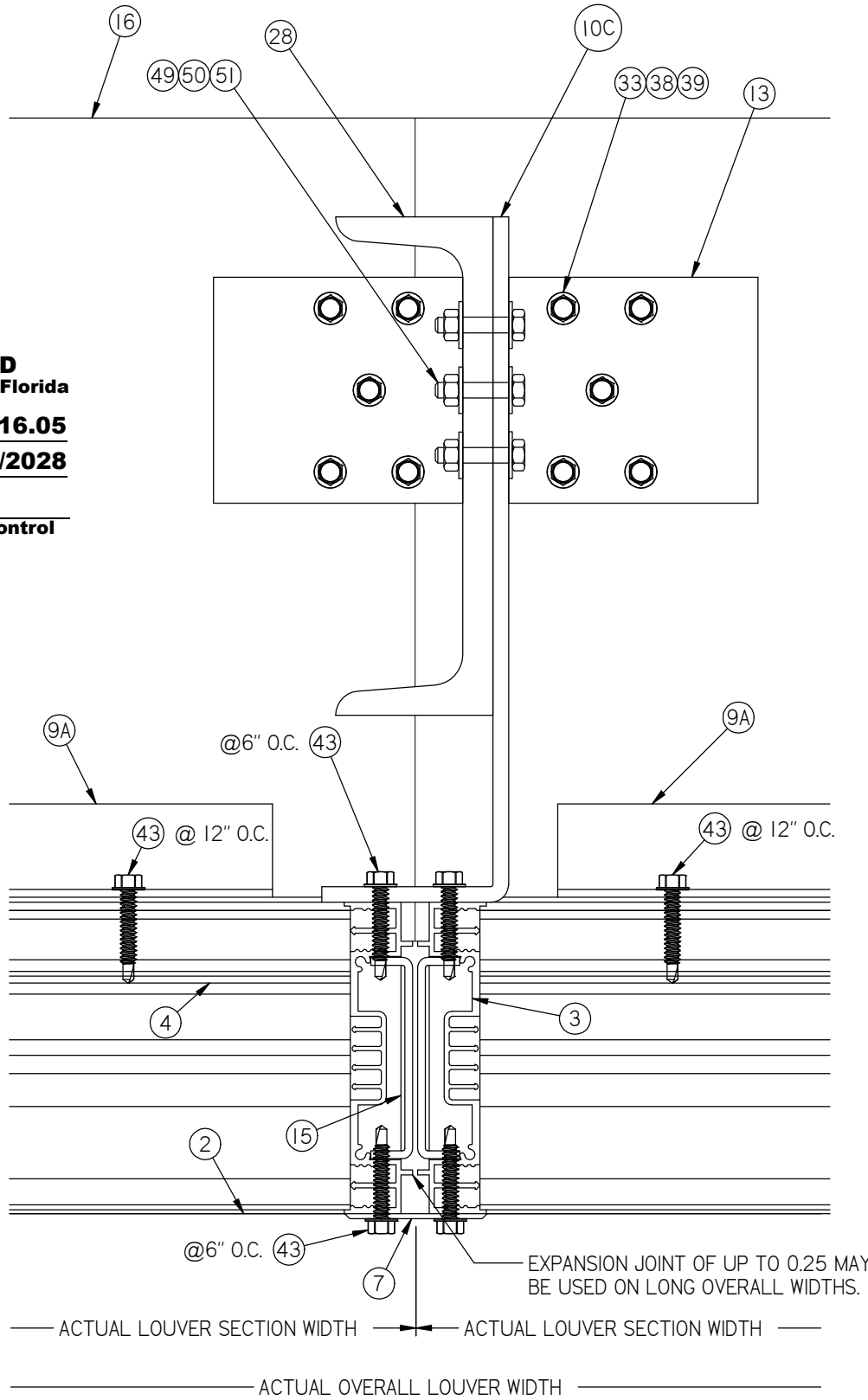
105 School Creek Trail
Luxemburg, WI 54217
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Fax: (920) 617-1100
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Florida Firm No: F-01000005061
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Wayne K. Helmila
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CHK BY: Mastourian
DATE: 9/18/2017
SCALE: NTS
SHEET: 11 OF 30
DWG. NO. 1605WDM
REV B



IIB MULLION DETAIL
12/30 72" BLADE SLEEVE MOUNT
C8X18.75 STEEL CHANNEL
AND ALUM 9X3X1/4" ANGLE

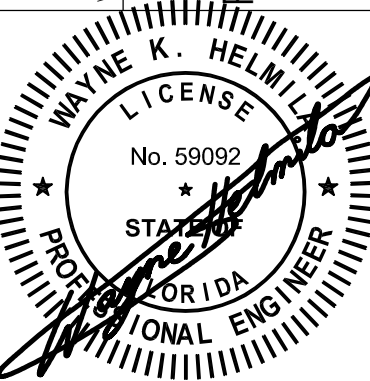
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Building Code
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Expiration Date **08/30/2028**
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IIC MULLION DETAIL
12/30 72" BLADE SLEEVE MOUNT
C8X18.75 STEEL CHANNEL
AND ALUM 11X3X1/4" ANGLE

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REV B: ADDED PAGE DETAIL IIB, IIC

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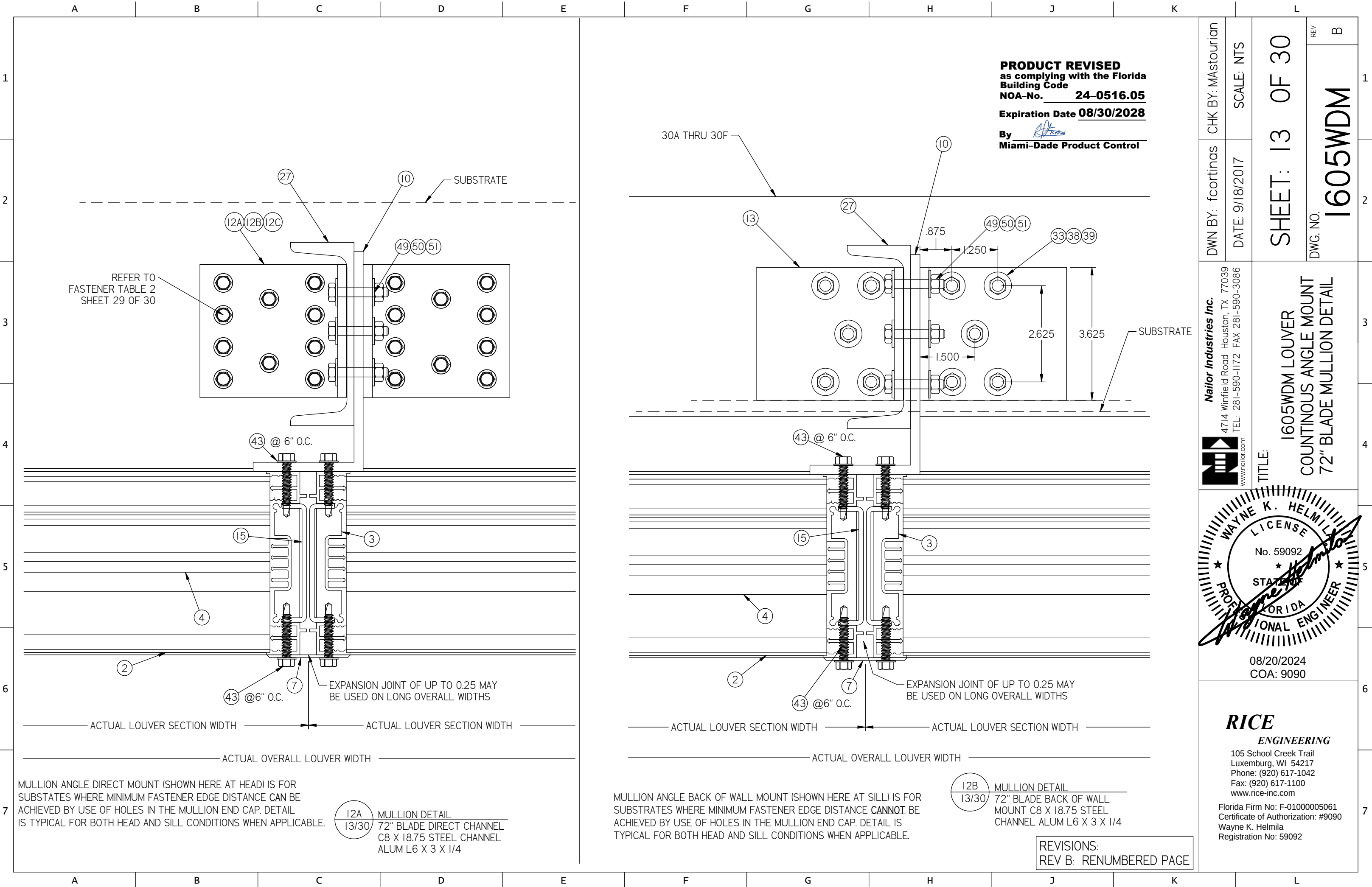
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COA: 9090

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Registration No: 59092

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DATE: 9/18/2017 SCALE: NTS
SHEET: 12 OF 30
DWG. NO. **1605WDM**



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DATE: 9/18/2017	SCALE: NTS	SHEET: 13 OF 30	
DWG. NO. 1605WDM			

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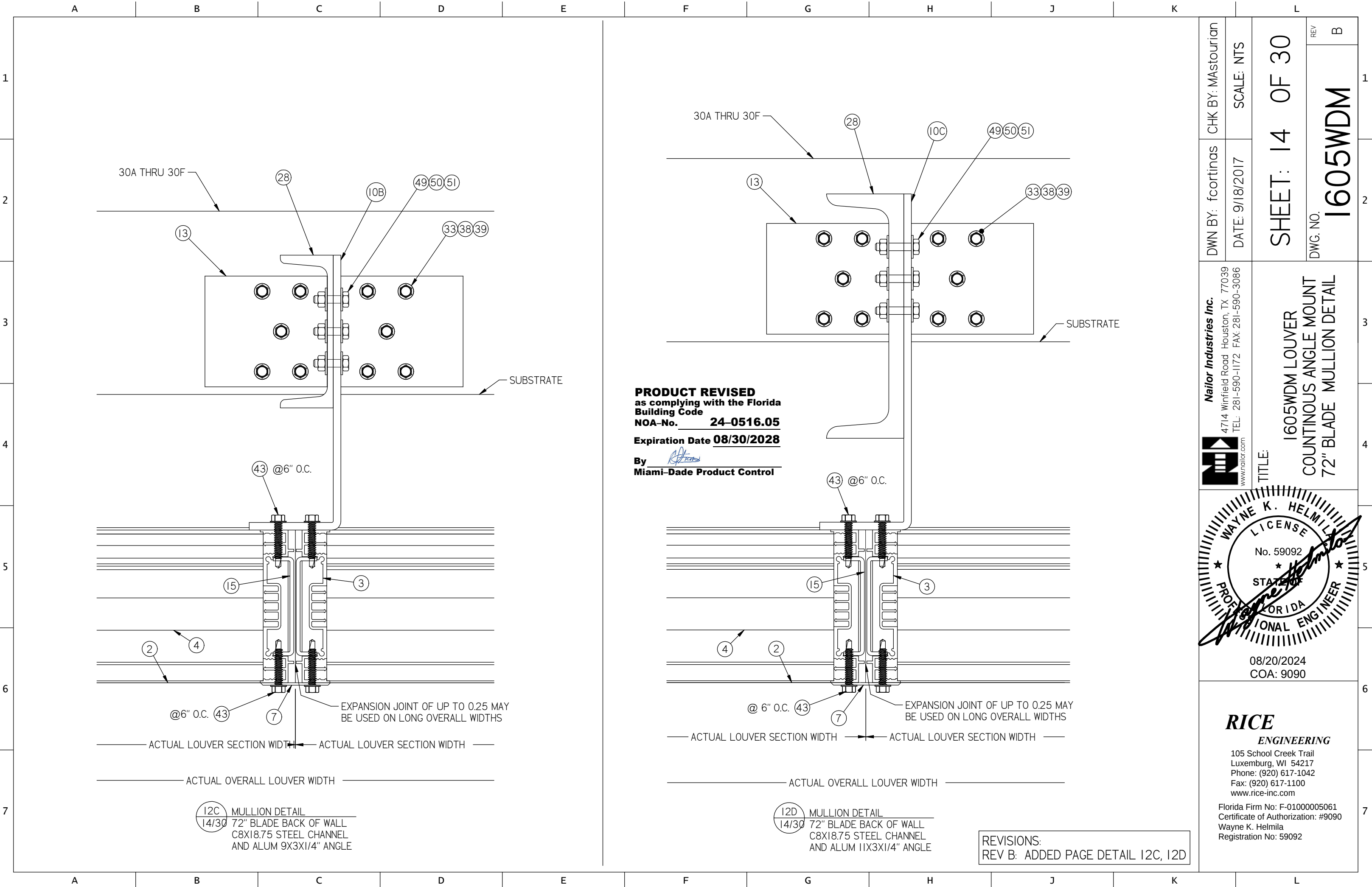
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Registration No: 59092

REVISIONS:
REV B: RENUMBERED PAGE



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Expiration Date 08/30/2028
By [Signature]
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REVISIONS:
REV B: ADDED PAGE DETAIL 12C, 12D

DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/18/2017	SCALE: NTS
SHEET: 14 OF 30	
DWG. NO.	REV B
1605WDM	

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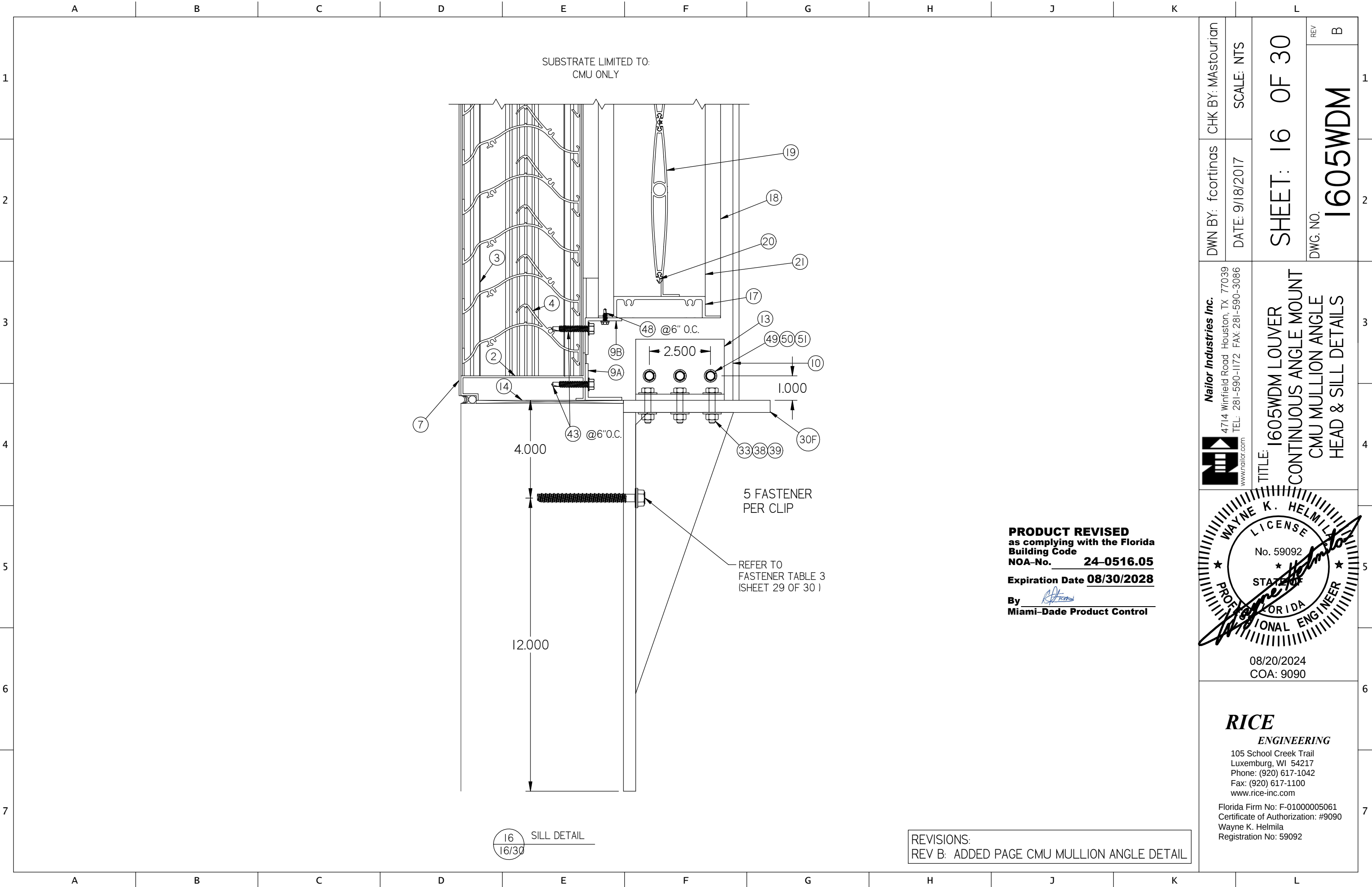
1605WDM LOUVER
COUNTINUOUS ANGLE MOUNT
72" BLADE MULLION DETAIL

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER

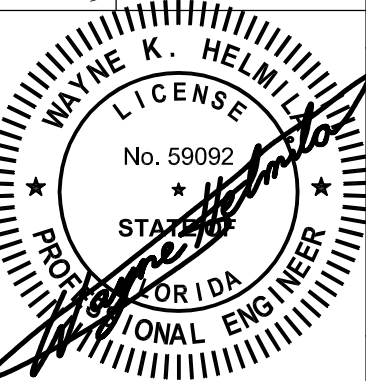
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COA: 9090

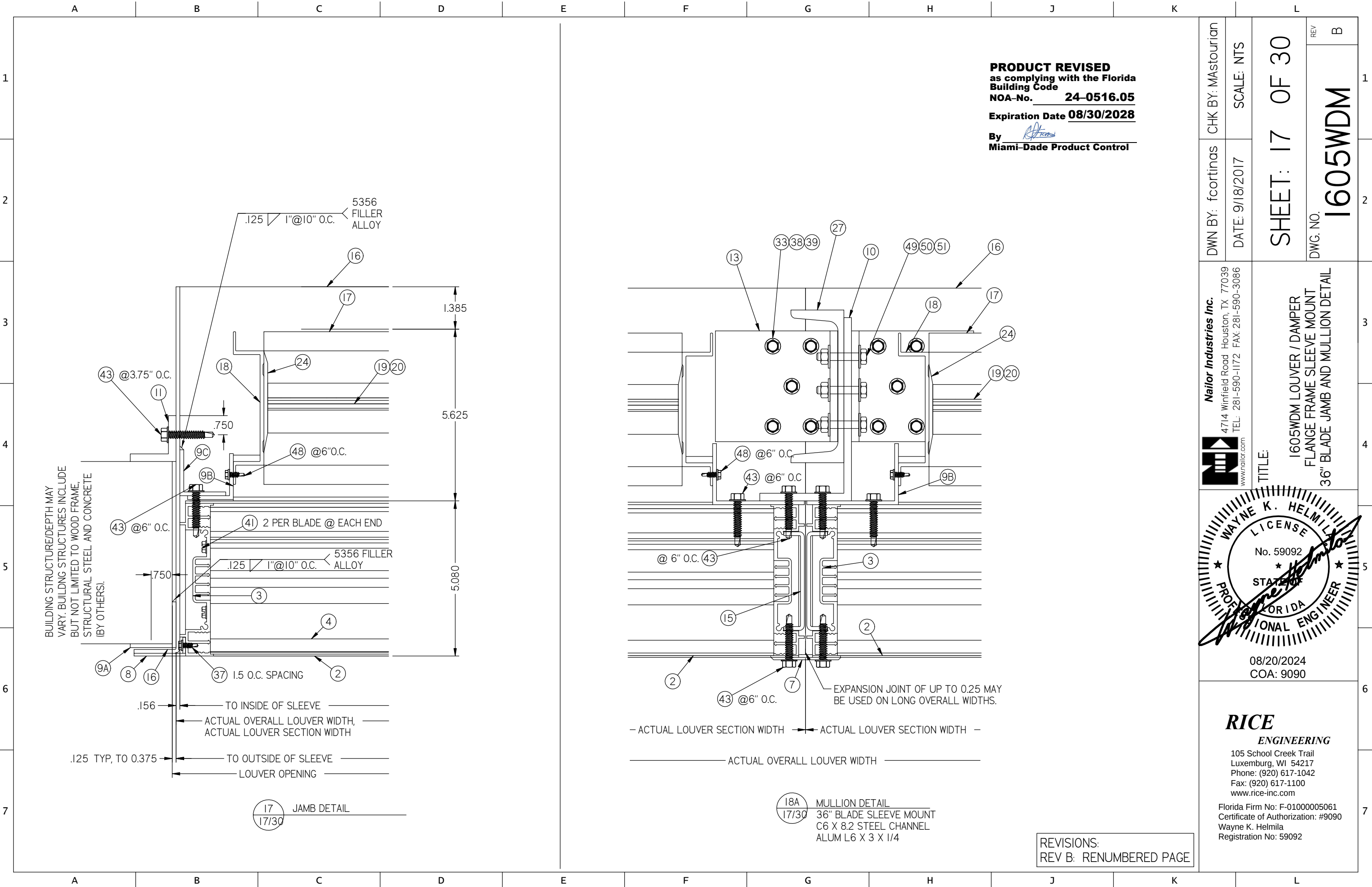
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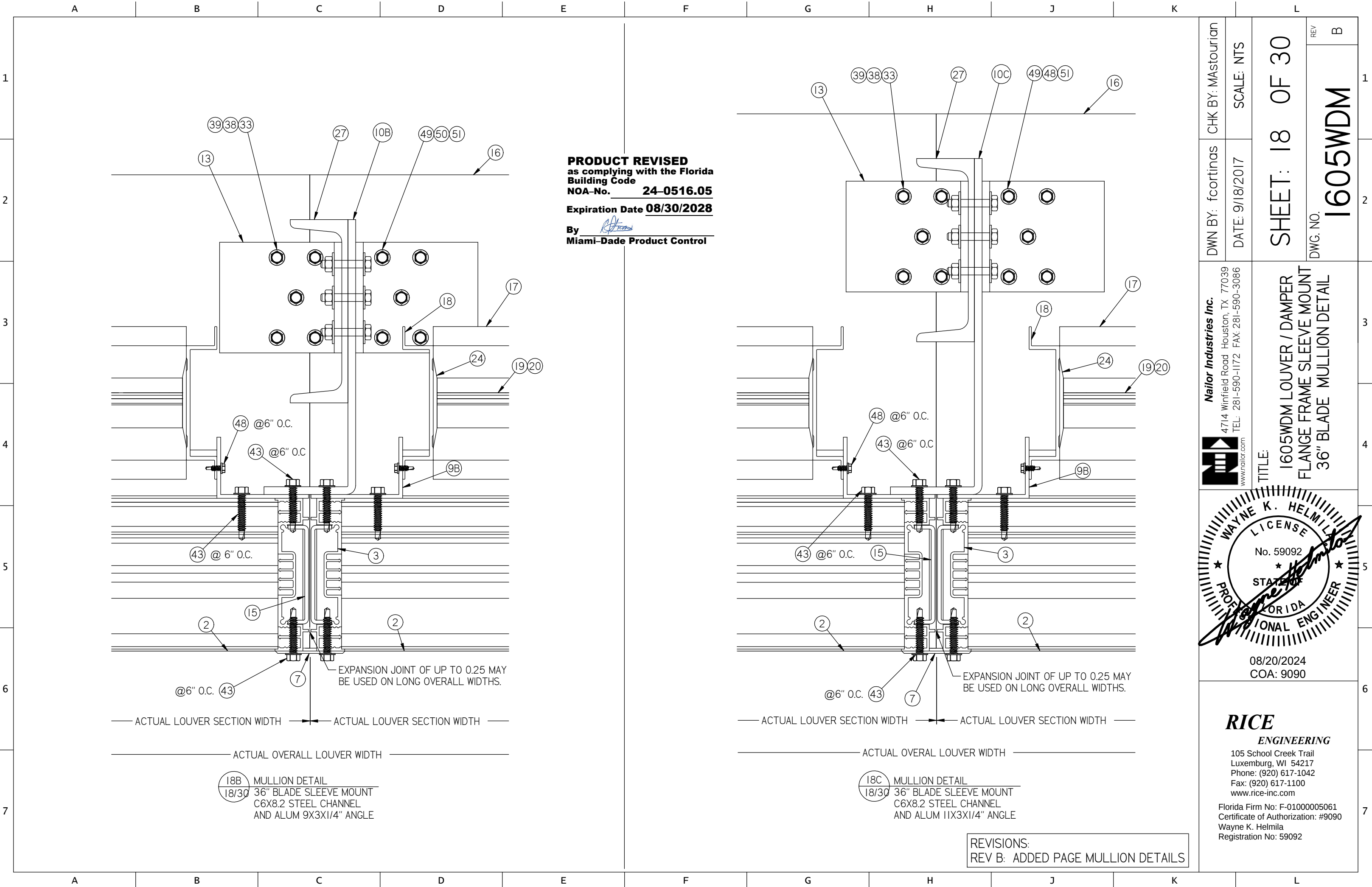
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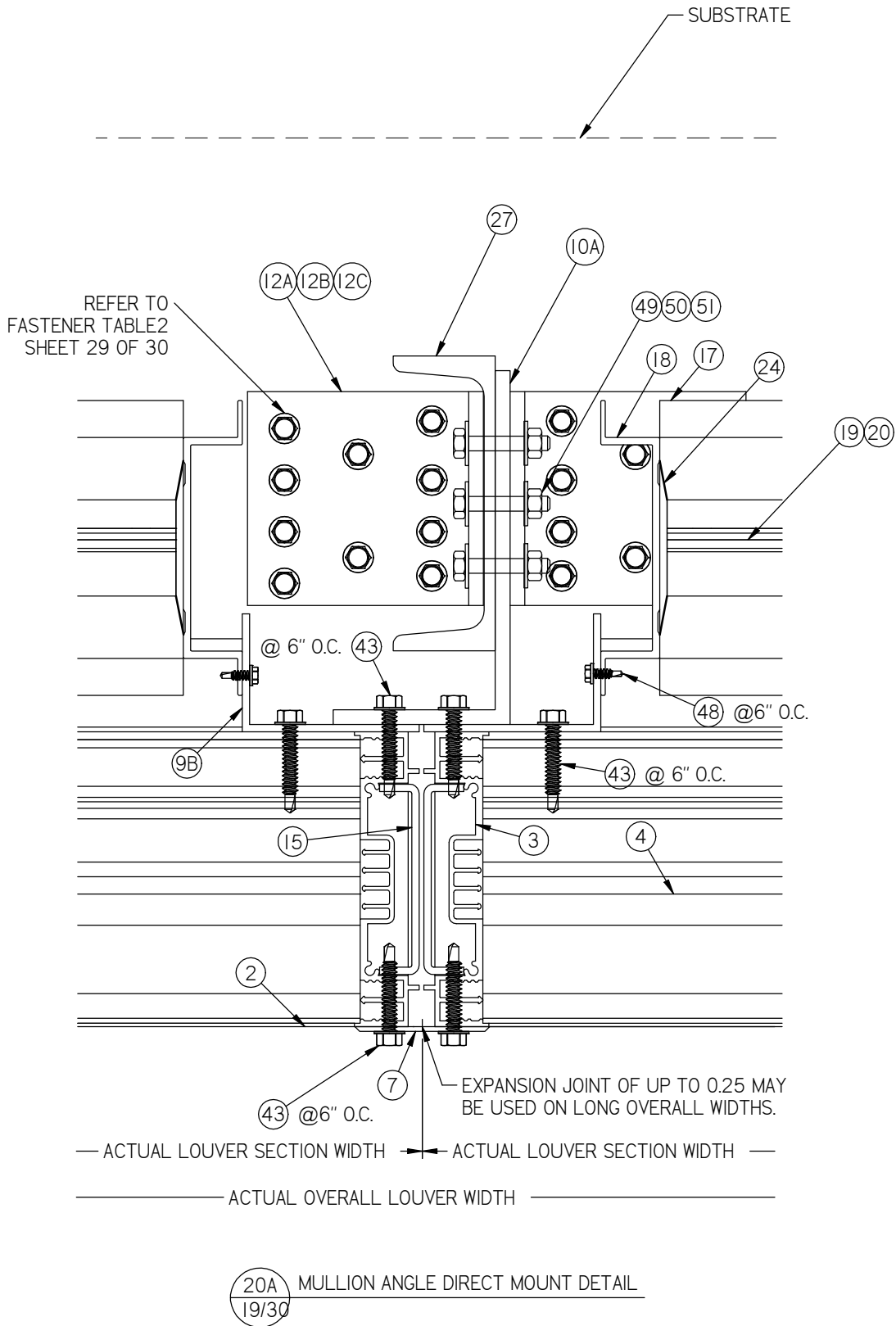
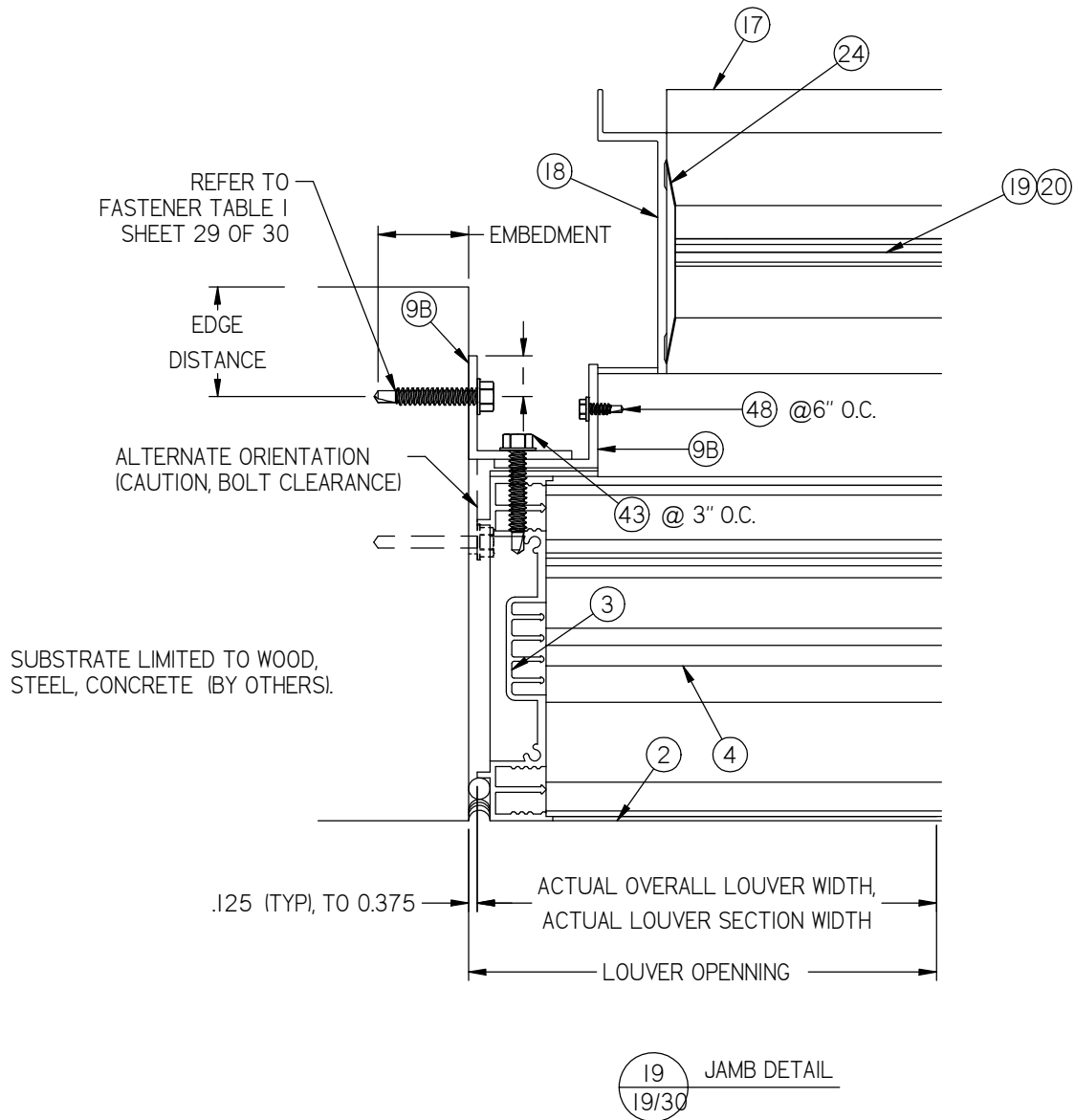




A B C D E F G H J K L

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7

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Expiration Date **08/30/2028**
By 
Miami-Dade Product Control



REVISIONS:
REV B: RENUMBERED PAGE

DWN BY: f cortinas	CHK BY: Mastourian	SCALE: NTS	SHEET: 19 OF 30	REV B
DATE: 9/18/2017				



Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com

TITLE:

1605WDM LOUVER / DAMPER
CONTINUOUS ANGLE MOUNT
JAMB AND MULLION DETAIL



08/20/2024
COA: 9090

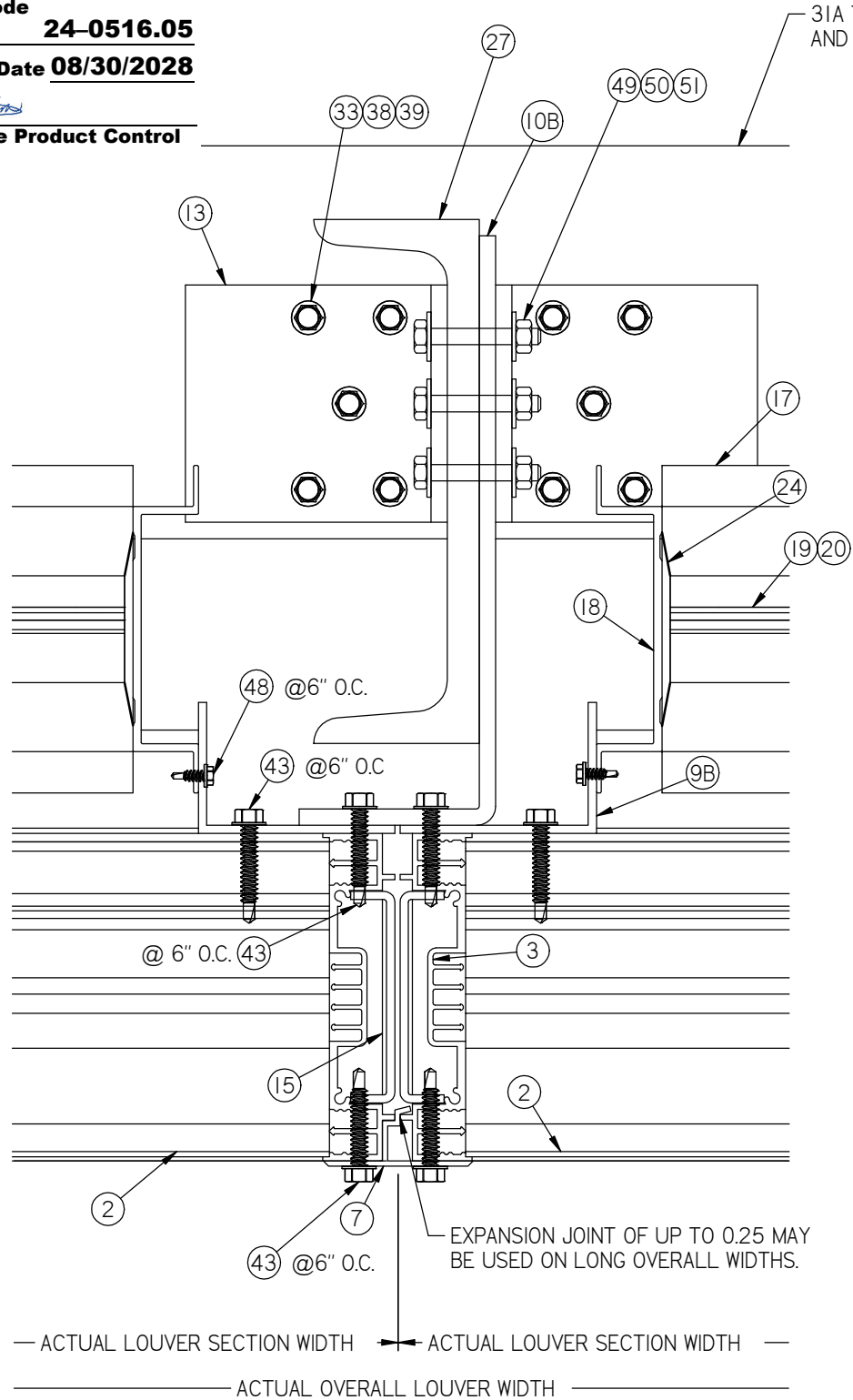
RICE
ENGINEERING

105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

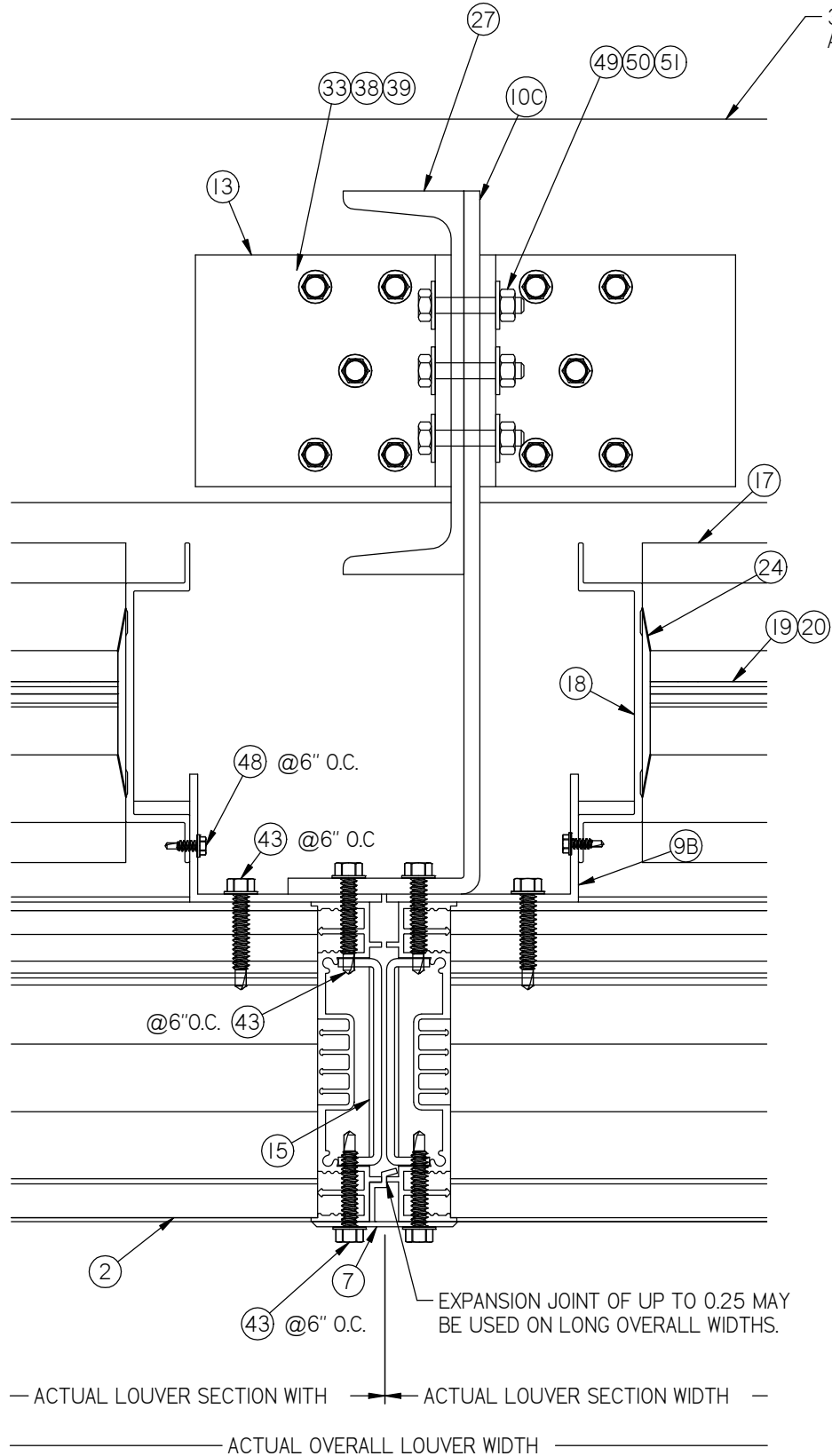
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.05**
Expiration Date **08/30/2028**

By 
Miami-Dade Product Control



20B
20/30 MULLION DETAIL
36" BLADE BACK OF WALL MOUNT
C6X8.2 STEEL CHANNEL
AND ALUM 9X3X1/4" ANGLE



20C
20/30 MULLION DETAIL
36" BLADE BACK OF WALL MOUNT
C6X8.2 STEEL CHANNEL
AND ALUM 11X3X1/4" ANGLE

REVISIONS:
REV B: ADDED PAGE MULLION DETAILS

Nailor Industries Inc.

4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
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08/20/2024
COA: 9090

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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

DWN BY: f cortinas

CHK BY: Mastourian

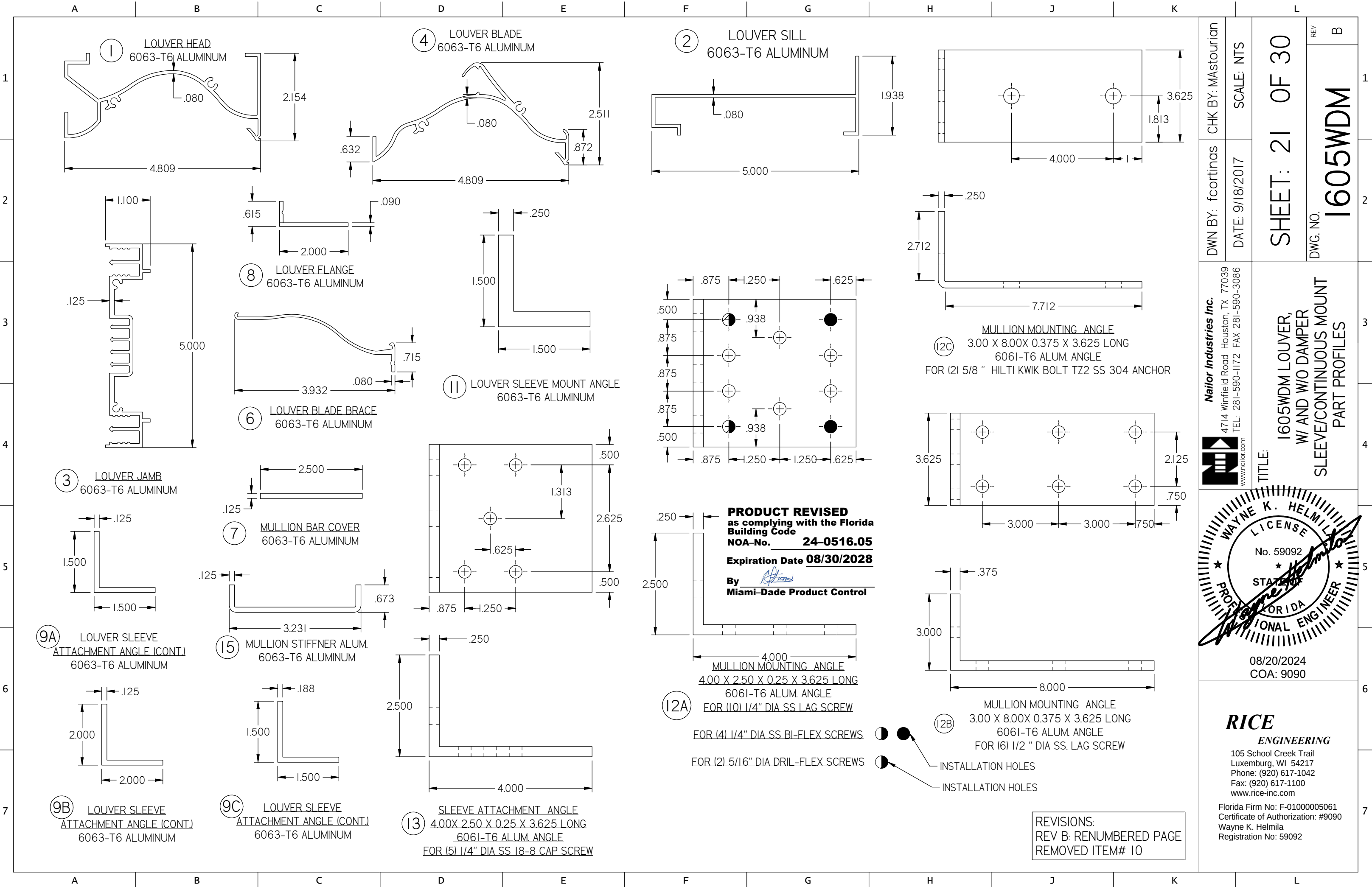
DATE: 9/18/2017

SCALE: NTS

SHEET: 20 OF 30

DWG. NO. 1605WDM

REV B



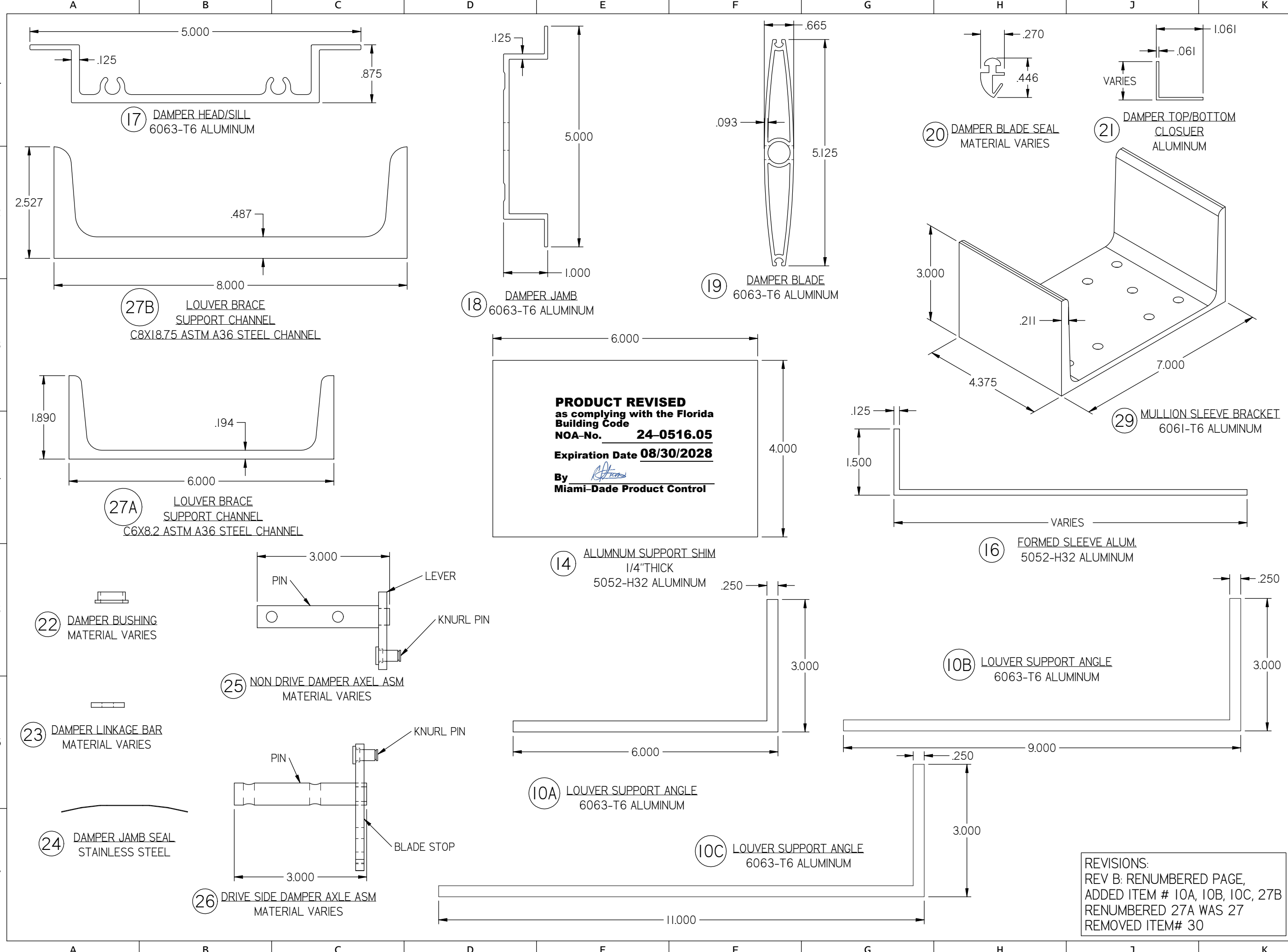
DWN BY: f cortinas
CHK BY: Mastourian
DATE: 9/18/2017
SCALE: NTS
SHEET: 21 OF 30
DWG. NO. 1605WDM
REV B

Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com
TITLE: 1605WDM LOUVER, W/ AND W/O DAMPER SLEEVE/CONTINUOUS MOUNT PART PROFILES

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
08/20/2024
COA: 9090

RICE
ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

REVISIONS:
REV B: RENUMBERED PAGE
REMOVED ITEM# 10



CHK BY: Mastourian

DATE: 9/18/2017

SCALE: NTS

SHEET: 22

OF 30

REV

B

Nailor Industries Inc.

4714 Winfield Road Houston, TX 77039

TEL: 281-590-1172 FAX: 281-590-3086

www.nailor.com

1605WDM LOUVER

W/ AND W/O DAMPER

SLEEVE/CONTINUOUS MOUNT

PART PROFILES CONT.

WAYNE K. HELMILIA

LICENSE

No. 59092

STATE OF FLORIDA

PROFESSIONAL ENGINEER

08/20/2024

COA: 9090

RICE

ENGINEERING

105 School Creek Trail

Luxemburg, WI 54217

Phone: (920) 617-1042

Fax: (920) 617-1100

www.rice-inc.com

Florida Firm No: F-01000005061

Certificate of Authorization: #9090

Wayne K. Helmila

Registration No: 59092

REVISIONS:
REV B: RENUMBERED PAGE,
ADDED ITEM # 10A, 10B, 10C, 27B
RENUMBERED 27A WAS 27
REMOVED ITEM# 30

MULLION MOUNTING BRACKET
FOR MULLION ANGLE BACK OF WALL MOUNT
ASTM A36

L8X6"X7/16" STEEL ANGLE X 22" LONG
(A36 OR BETTER) TYPICAL
w/ (2) 1/4" X4" GUSSET PLATES WELDED TO EACH END

GUSSET SUPPORT
4 X 4 TRIANGLE
ONE NEAR EACH END

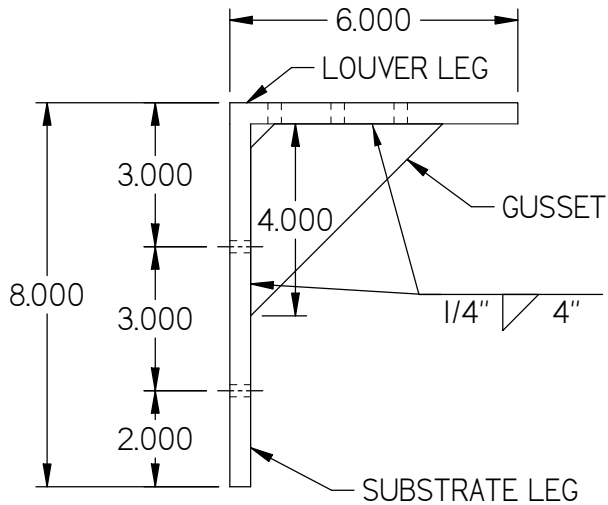
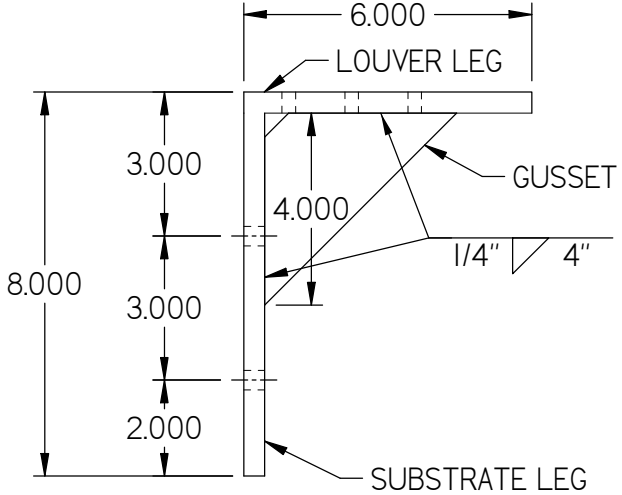
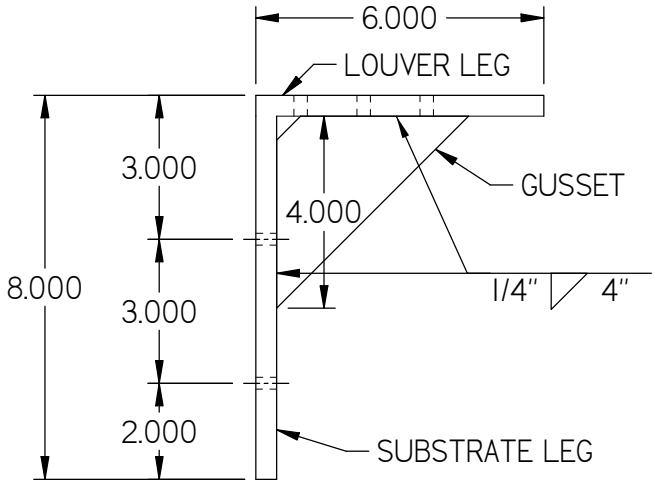
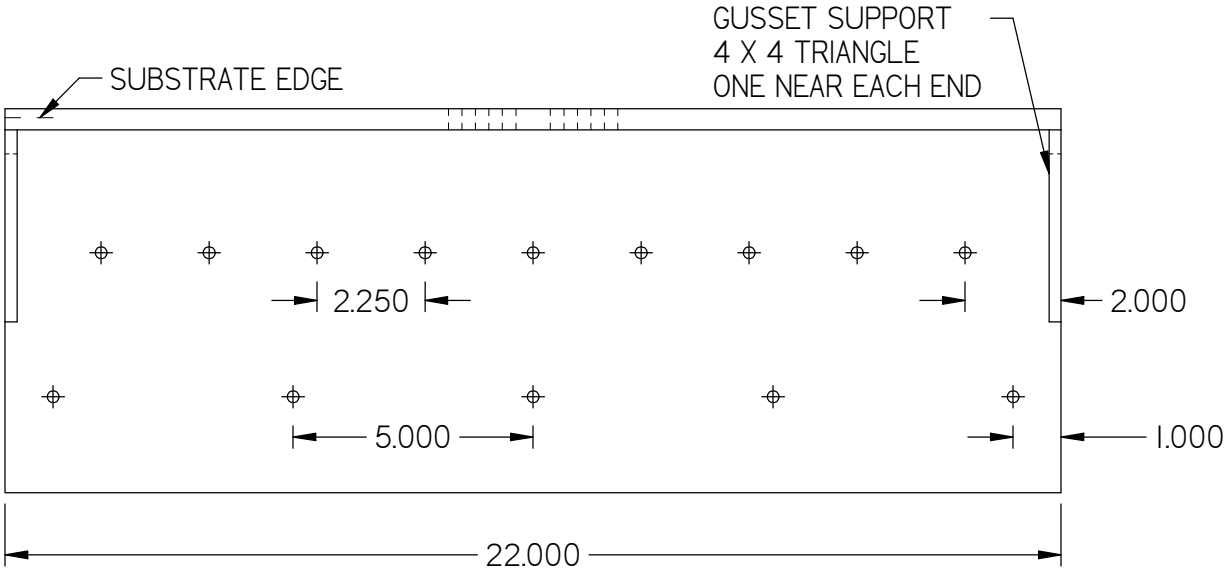
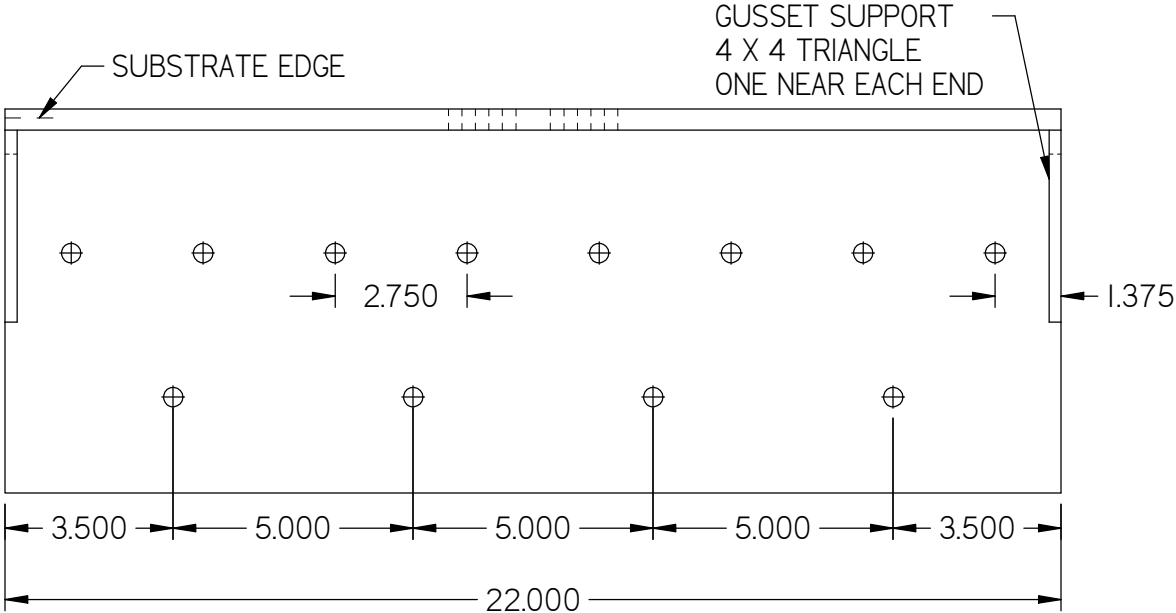
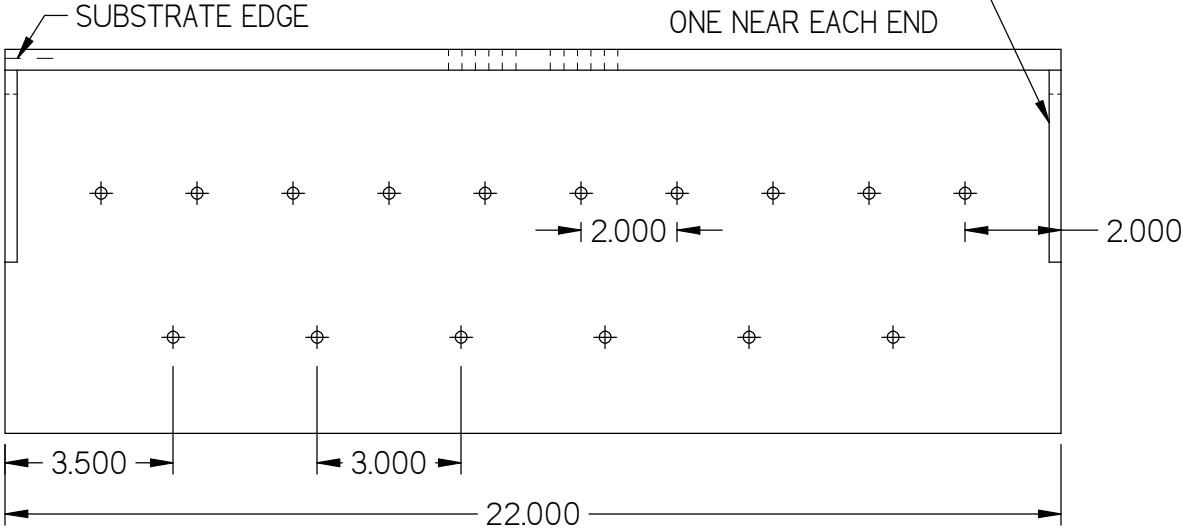
1/4" DIA LAG SCREWS ANCHORS:
USE (16) 1/4 " DIA X 6" LONG
STANDARD HEX S.S. SERIES 300
LAG SCREW
3-11/32" FULL THREAD ENGAGEMENT
1" MIN. EDGE/END DISTANCE
SPACING AS SHOWN
ASSUME: SPRUCE/PINE/FIR, SG=0.42

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.05**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

3/8" DIA. LAG SCREWS ANCHORS:
USE (12) 3/8"DIA. X 6 LONG
STANDARD HEX S.S. SERIES 300
LAG SCREW
3-9/32" FULL THREAD ENGAGEMENT
1-1/2" MIN. EDGE/END DISTANCE
SPACING AS SHOWN
ASSUME: SPRUCE/PINE/FIR, SG=0.42

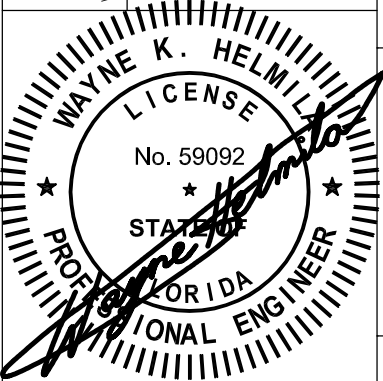
1/4-20 DIA S.S. ELCO BI-FLEX
AND DRIL FLEX ANCHORS:

USE (14) 1/4" DIA S.S. SERIES 300
ELCO DRIL-FLEX OR
ELCO DRIL-FLEX FASTENERS
FULL THREAD ENGAGEMENT
1" MIN. EDGE/END DISTANCE
SPACING AS SHOWN
ASSUME: 1/4" STEEL (A-36)
Seal Dril-Flex Fasteners with Liquid Prosoco
Flashing if exposed to Exterior Conditions.



REVISIONS:
REV B: RENUMBERED PAGE, UPDATED BRACKETS

Nailor Industries Inc.
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08/20/2024
COA: 9090

RICE
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

CHK BY: Mastourian

DWN BY: f.cortinas

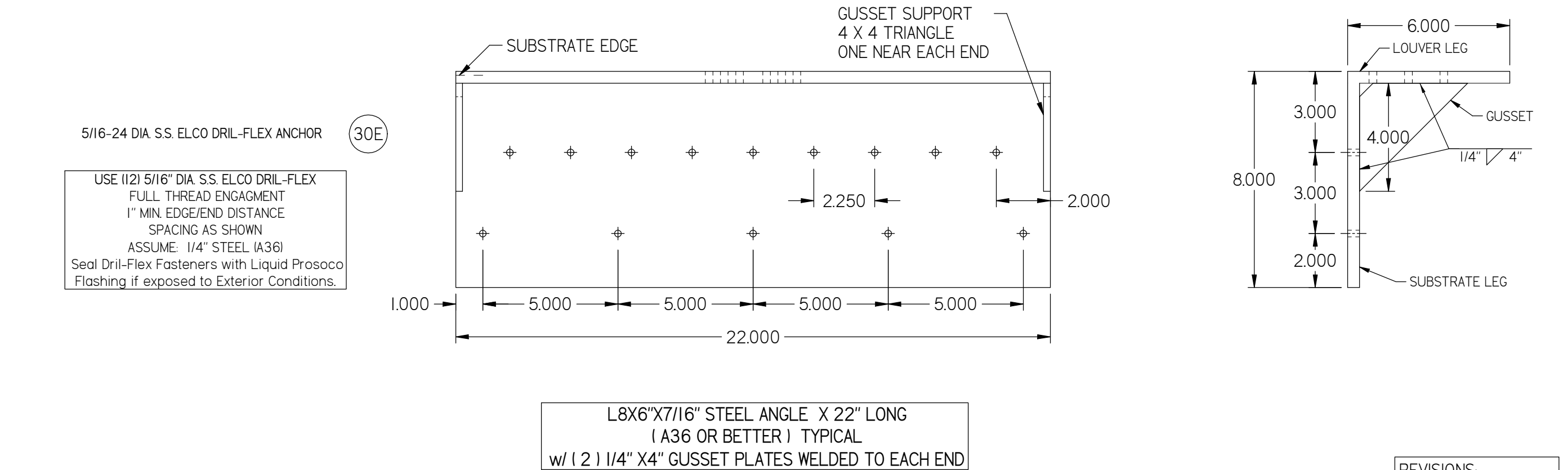
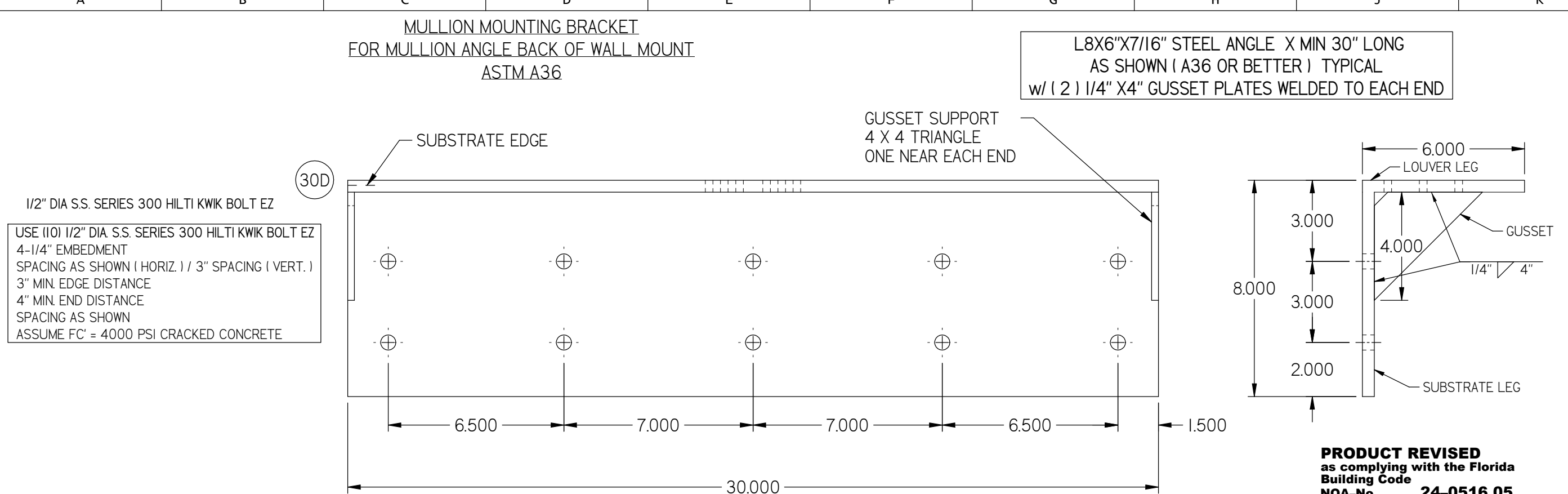
SCALE: NTS

DATE: 9/18/2017

SHEET: 23 OF 30

DWG. NO. **1605WDM**

TITLE:
22" MULLION ANGLES
BACK OF THE WALL MOUNT



REVISIONS:
REV B: ADDED PAGE,
ADDED 30" BRACKET
ADDED 22" BRACKET

CHK BY: Mastourian	SCALE: NTS	SHEET: 24 OF 30	REV B
DWN BY: fcortinas	DATE: 9/18/2017		

Nailor Industries Inc.
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www.nailor.com

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.05**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

TITLE:
30" MULLION ANGEL
22" MULLION ANGLE
BACK OF THE WALL MOUNT

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER

08/20/2024
COA: 9090

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ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
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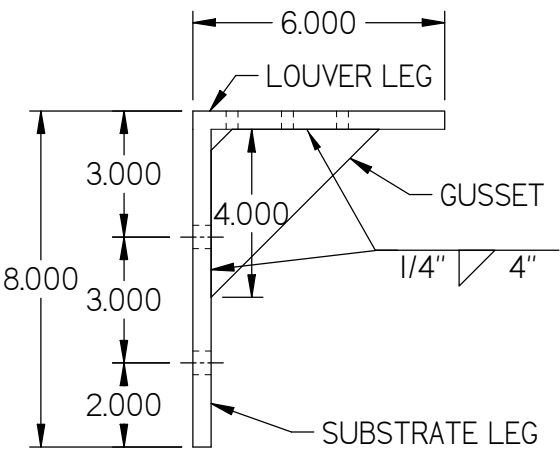
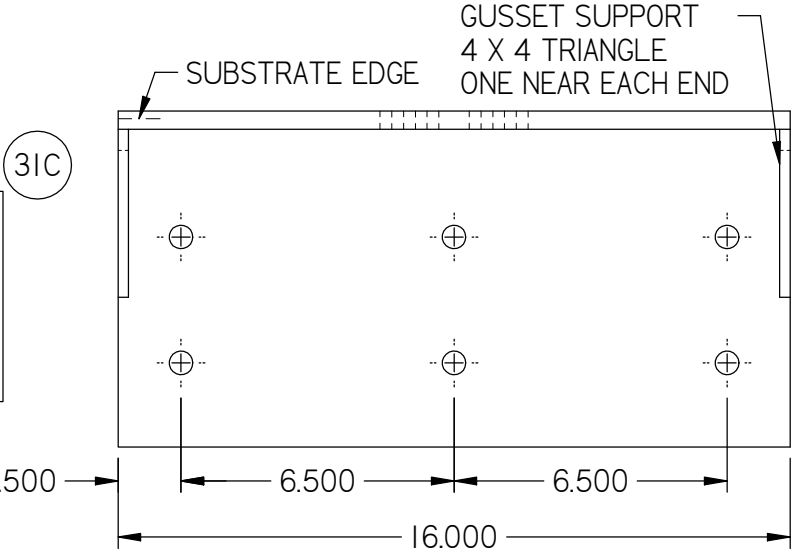
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

MULLION MOUNTING BRACKET
FOR MULLION ANGLE BACK OF WALL MOUNT
ASTM A36

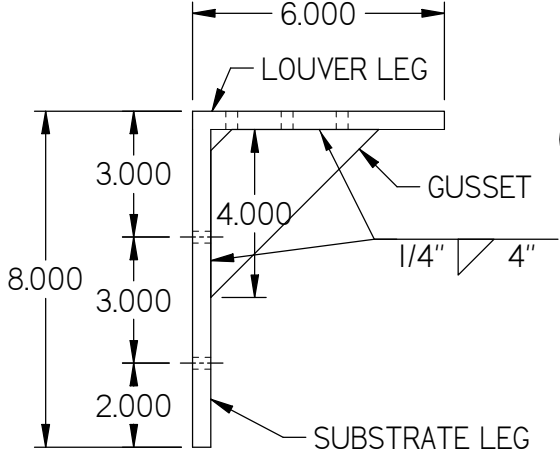
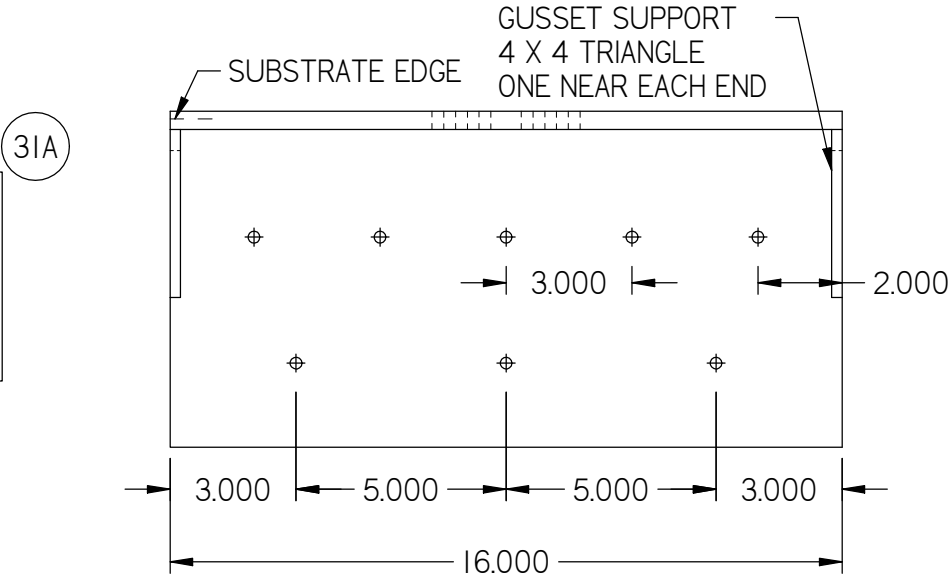
L8X6"X7/16" STEEL ANGLE
X 16" LONG AS SHOWN (A36 OR BETTER)
w/ (2) 1/4" X4" GUSSET PLATES WELDED TO EACH END

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.05
Expiration Date 08/30/2028
By 
Miami-Dade Product Control

1/2" DIA S.S. HILTI KWIK BOLT EZ
USE (6) 1/2" DIA. S.S. SERIES 300 HILTI KWIK BOLT EZ
3-5/8" EMBEDMENT
6.5" SPACING (HORIZ.) / 3" SPACING (VERT.)
3" MIN. EDGE DISTANCE
4" MIN. END DISTANCE
SPACING AS SHOWN
ASSUME FC' = 4000 PSI CRACKED CONCRETE

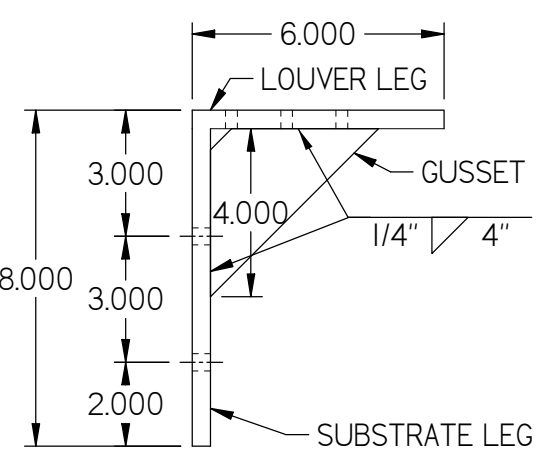
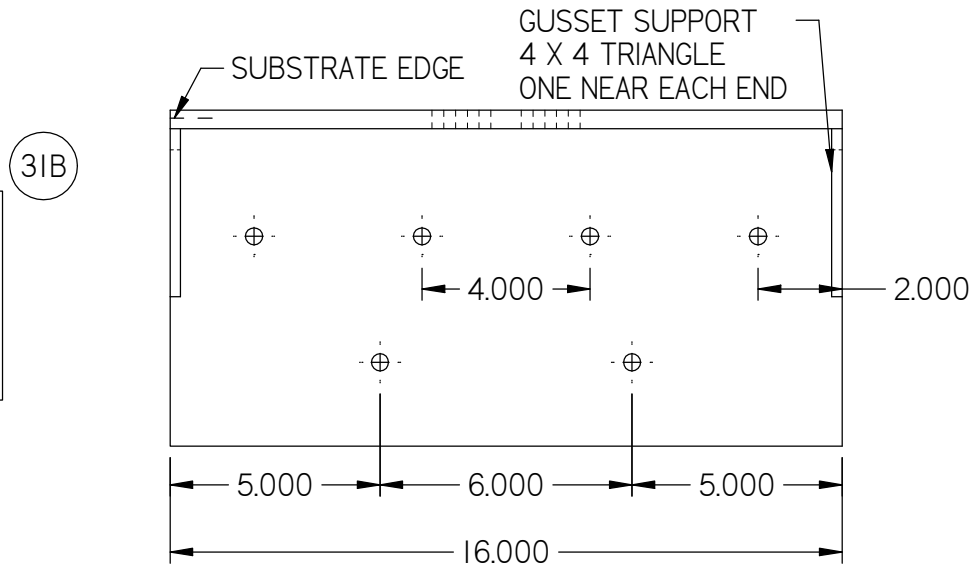


1/4" DIA LAG SCREWS ANCHORS
USE (8) 1/4" DIA. X 6" LONG
STANDARD HEX S.S. SERIES 300
LAG SCREW
3-11/32" FULL THREAD EMBEDMENT
1" MIN. EDGE / END DISTANCE
SPACING AS SHOWN
ASSUME= SPRUCE / PINE / FIR, SG= 0.42



1/4-20 DIA S.S. ELCO BI-FLEX AND DRIL FLEX ANCHOR
USE (8) 1/4" DIA. S.S. SERIES 300
ELCO BI-FLEX OR
ELCO DRIL-FLEX FASTENERS
FULL THREAD EMBEDMENT
1" MIN. EDGE / END DISTANCE
SPACING AS SHOWN
ASSUME: 1/4" STEEL (A-36)
Seal Dril-Flex Fasteners with Liquid Prosoco
Flashing if exposed to Exterior Conditions.

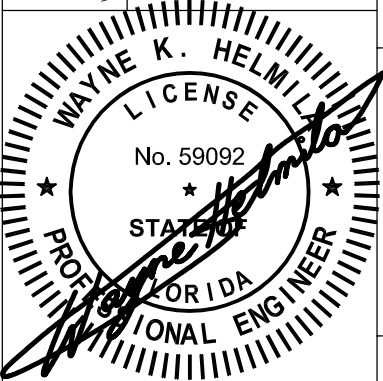
3/8" DIA LAG SCREWS ANCHORS
USE (6) 3/8" DIA X 6" LONG
STANDARD HEX S.S. SERIES 300
LAG SCREW
3-9/32" FULL THREAD EMBEDMENT
1-1/2" MIN. EDGE / END DISTANCE
SPACING AS SHOWN
ASSUME: SPRUCE / PINE / FIR, SG= 0.42



5/16-24 DIA DRIL-FLEX ANCHORS
USE (6) 5/16" DIA
ELCO DRIL-FLEX FASTENERS
FULL THREAD EMBEDMENT
1" MIN. EDGE / END DISTANCE
SPACING AS SHOWN
ASSUME: 1/4" STEEL (A-36)
Seal Dril-Flex Fasteners with Liquid Prosoco
Flashing if exposed to Exterior Conditions.

REVISIONS:
REV B: ADDED PAGE,
ADDED 16" BRACKET

Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
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08/20/2024
COA: 9090

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ENGINEERING

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Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com
Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

DWN BY: f.cortinas

CHK BY: Mastourian

DATE: 9/18/2017

SCALE: NTS

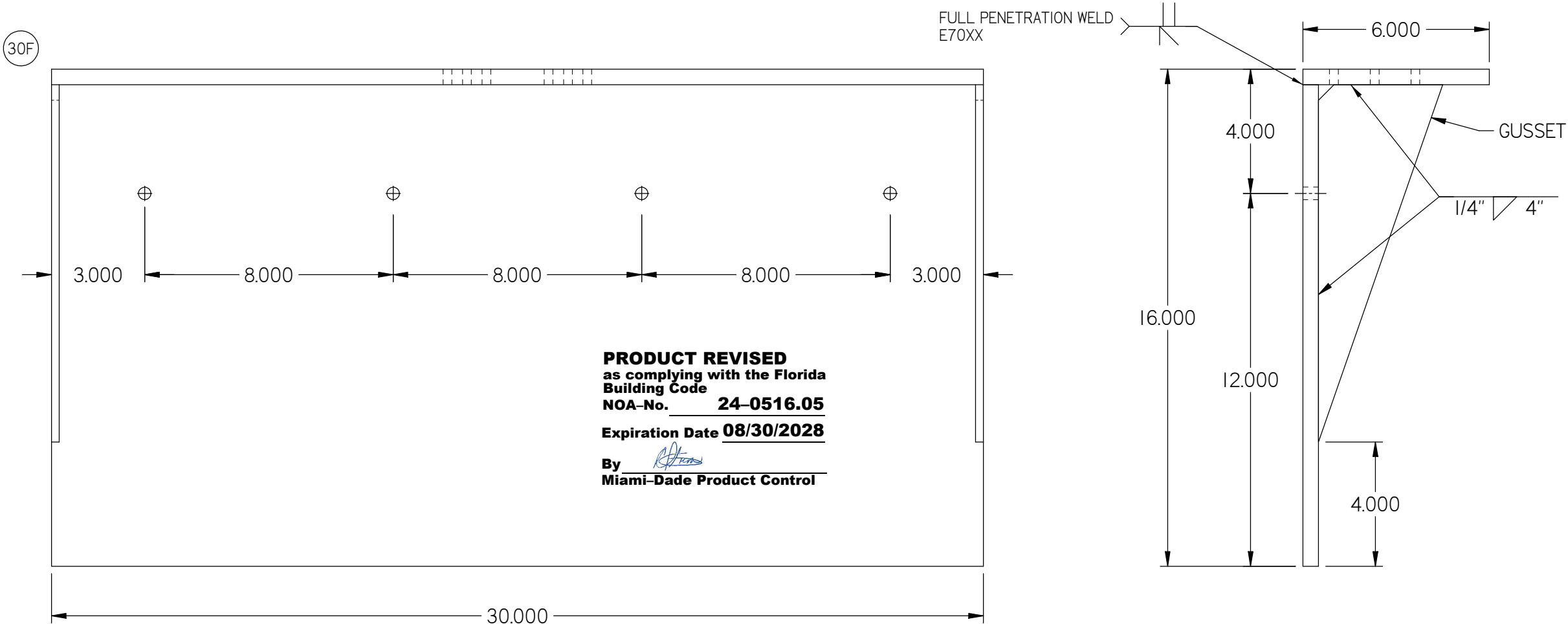
SHEET: 25 OF 30

DWG. NO. 1605WDM

16" MULLION ANGLES
BACK OF THE WALL MOUNT

MULLION MOUNTING BRACKET
FOR MULLION ANGLE BACK OF WALL MOUNT
ASTM A36

USE 16" X 6" 1/2" STEEL PLATE ANGLE
AT 30" LONG AS SHOWN (A36 OR BETTER)
WELD 1/2" STEEL PLATE ANGLE TOGETHER WITH FULL
PENETRATION BEVEL GROOVE WELD.
(2) 1/4" X 4" GUSSET PLATES AT 12" LONG WELDED TO
EACH END
WELD 1/4" GUSSET PLATES WITH FILLET WELDS.



NOTE:
THESE 3/8 " DIA HILTI HUS-EZ CMU ANCHORS
ARE ADEQUATE FOR DESIGN PRESSURE UP TO
150 PSF FOR 36" BLADE LOUVERS.

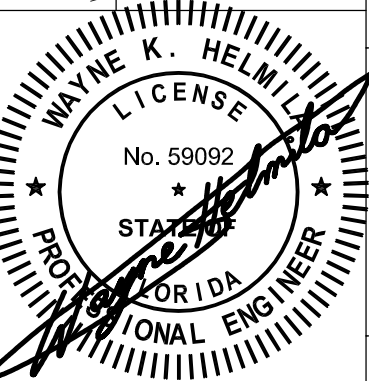
FOR LOUVER BLADES SPANNING 72" (SEE THE
ELEVATION SHOWN ON SHEET 3 OF 30) THE
MAXIMUM DESIGN PRESSURE IS +/- 80 PSF

USE (4) 3/8" DIA HILTI KWIK-HUS-EZ SCEW ANCHORS
3-1/4" EMBEDMENT
8" SPACING AS SHOWN. LOCATE (1) FASTENER IN THE CENTER OF EACH
MASONRY CELL. BRACKET CAN BE INSTALLED 4" LEFT OR RIGHT OF MULLION
CENTERLINE SO ANCHORS CAN BE INSTALLED AT CENTER OF MASONRY CELLS.
4" MIN. EDGE DISTANCE
4" MIN END DISTANCE
ASSUME GROUT FILLED MASONRY fm'= 2000 psi (DESIGN BY OTHERS)
SEAL FASTENERS WITH LIQUID PROSOCO FLASHING AT EXTERIOR CONDITIONS.

REVISIONS:
REV B: ADDED PAGE,
ADDED 30" CMU ONLY BRACKET

DWN BY: f cortinas	CHK BY: Mastourian
DATE: 9/18/2017	SCALE: NTS
SHEET: 26 OF 30	
DWG. NO.	REV B
1605WDM	

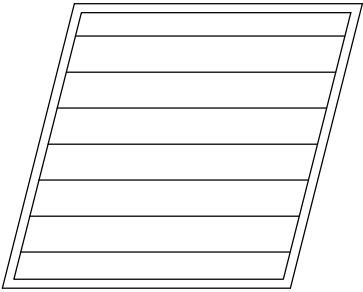
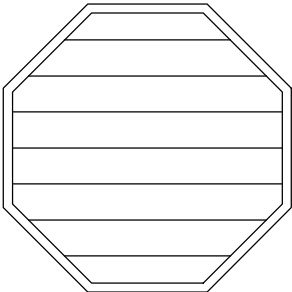
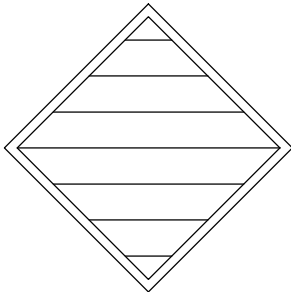
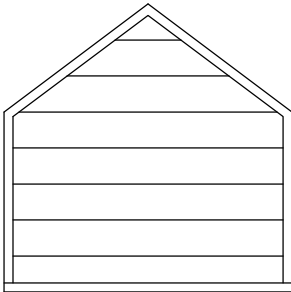
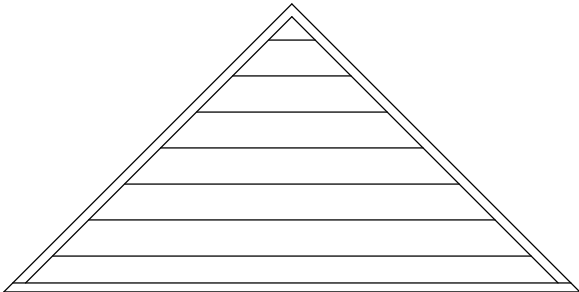
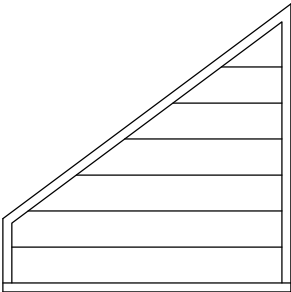
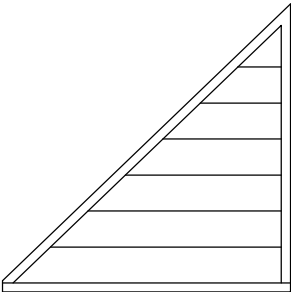
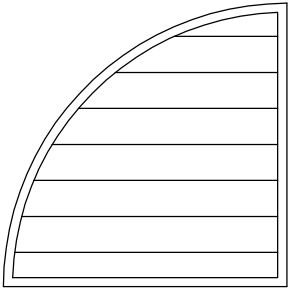
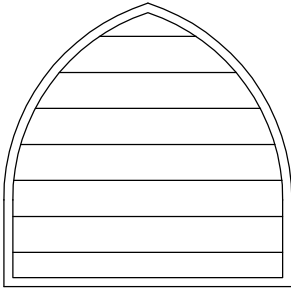
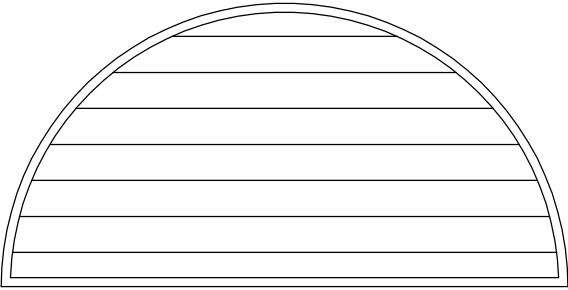
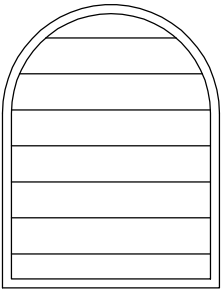
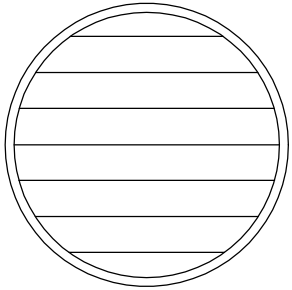
Nailor Industries Inc.
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08/20/2024
COA: 9090

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Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092



NOTES:

1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN AND HAVE CORNER CONSTRUCTION AS DESCRIBED ON ALL SHEETS.

2. ALL SHAPED LOUVER PANELS ARE RESTRICTED TO THE SAME PANEL WIDTH AND PRESSURE AS THE RECTANGULAR LOUVER PANELS AND BE STACKED VERTICALLY AND HORIZONTALLY THE SAME AS THE RECTANGULAR PANELS.

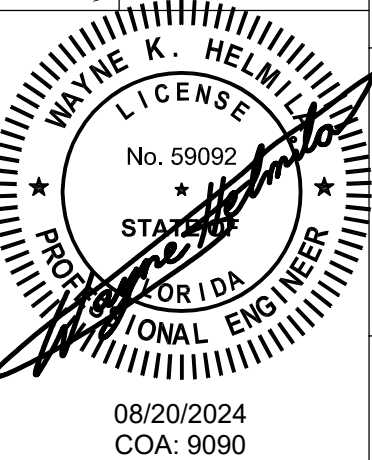
3. WHEN SECTION EXCEED 36" IN LENGTH BLADE SUPPORT ANGLES AND BRACKETS ARE REQUIRED.

4. USE CONTINUOUS ANGLES TO ANCHOR OTHER LOUVER SHAPES TO BUILDING SUBSTRATE. SEE ANCHOR SCHEDULE FOR SUBSTRATE-SPECIFIC LIMITATIONS.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.05
Expiration Date 08/30/2028
By 
Miami-Dade Product Control

REVISIONS:
REV B: RENUMBERED PAGE


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Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas CHK BY: Mastourian
DATE: 9/18/2017 SCALE: NTS
SHEET: 27 OF 30
DWG. NO. 1605WDM
REV B

TITLE:
1605WDM LOUVER
W/ AND W/O DAMPER
AVAILABLE SHAPES

A		B		C		D		E		F		G		H		J		K		L	
BILL OF MATERIAL																					
ITEM	INTERNAL ID	DESCRIPTION		MATERIAL		NOTES															
1	C6-201	LOUVER HEAD		6063-T6 ALUMINIUM																	
2	C6-119	LOUVER SILL		6063-T6 ALUMINIUM																	
3	C6-199	LOUVER JAMB		6063-T6 ALUMINIUM																	
4	C6-200	LOUVER BLADE		6063-T6 ALUMINIUM																	
5	-	-		-																	
6	C6-202	LOUVER BLADE BRACE		6063-T6 ALUMINIUM																	
7	C6-179	MULLION BAR COVER		6063-T6 ALUMINIUM																	
8	C6-169	LOUVER FLANGE		6063-T6 ALUMINIUM																	
9A	C6-176	1 1/2 X 1 1/2 X 1/8 ANGLE CONT.		6063-T6 ALUMINIUM		USED AT HEAD/SILL/JAMB, OF LOUVER AND SLEEVE															
9B	C6-160	2 X 2 X 1/8 ANGLE CONT.		6063-T6 ALUMINIUM		USED AS ATTACHMENT ANGLE															
9C		1 1/2 X 1 1/2 X 3/16 ANGLE CONT.		6063-T6 ALUMINIUM		USED AT HEAD/SILL/JAMB, OF LOUVER AND SLEEVE															
10A	C6-161B	6 X 3 X 1/4 ANGLE		6061-T6 ALUMINIUM		USED AT BLADE SUPPORT AND JAMB SUPPORT															
10B		9 X 3 X1/4 ANGLE		6063-T6 ALUMINIUM		USED AT BLADE SUPPORT AND JAMB SUPPORT															
10C		11 X 3 X 1/4 ANGLE		6063-T6 ALUMINIUM		USED AT BLADE SUPPORT AND JAMB SUPPORT															
11		1 1/2 X 1 1/2 X 1/4 ANGLE		6063-T6 ALUMINIUM		USED AT HEAD/SLILL/JAMB OF SLEEVE															
12A		4 X 2 1/2 X 1/4 X 3.625 LONG ANGLE		6061-T6 ALUMINIUM		USED AT HEAD/ SILL, OF MULLION ATTACHMENT															
12B		3.00 X 8.00 X .375 X 3.625 LONG		6061-T6 ALUMINIUM		FOR 1/2" DIA SS LAG SCREW															
12C		3.00 X 8.00 X .375 X 3.625 LONG		6061-T6 ALUMINIUM		FOR 5/8" HILTI KWIK BOLT TZ SS 304 ANCHOR															
13		4 X 2 1/2 X 1/4 X 3.625 LONG ANGLE		6061-T6 ALUMINIUM		USED AT HEAD/ SILL, OF LOUVER SLEEVE ATTACHMENT															
14		6 X 4 X 1/4 ALUMININM SUPPORT SHIM		5052-H3 ALUMINIUM		USED AT SILL FOR SUPPORT ANGLE															
15		MULLION STIFFENER ALUM		6063-T6 ALUMINIUM		1/8 FORMED ALUM CHANNEL USED AT MULLION															
16		FORMED SLEEVE		5052-H32 ALUMINIUM		1/8 FORMED SLEEVE - DEPTH VARIES															
17	B2-610	DAMPER HEAD/SILL		6063-T6 ALUMINIUM																	
18	B2-609	DAMPER JAMB		6063-T6 ALUMINIUM																	
19	B2-527	DAMPER BLADE		6063-T6 ALUMINIUM																	
20		DAMPER BLADE SEAL		SILICONE / RUBBER TYPE		MATERIAL VARIES															
21		DAMPER TOP/BOTTOM CLOSURE		ALUMINIUM																	
22		DAMPER BUSHING		BRONZE / SS																	
23		DAMPER LINKAGE BAR		STAINLESS																	
24		DAMPER JAMB SEAL		STAINLESS																	
25		NON DRIVE DAMPER AXEL ASM		STAINLESS																	
26		DRIVE SIDE DAMPER AXLE ASM		STAINLESS																	
27		C6X8.2 STEEL CHANNEL				USED AL MULLION															
28		CBX18.75 STEEL CHANNEL				USED AT MULLION															
29		7" X 21" ALUMINIUM SLEEVE BRACKET		6061-T6		MULLION SLEEVE BRACKET															
30	A,B,C,D,E,F	MULLION MOUNTING ANGLE BRACKET		ASTM A-36		MULLION MOUNTING															
31	A,B,C	MULLION MOUNTING ANGLE BRACKET		ASTM A-36		16" MOUNTING ANGLE															
32	C6-180	SCREW,MTL,10-24X1,HEX																			
33	C6-181	1/4 NYLON INSERT LOCKNUT																			
34	C6-182	1/4-20x2-1/2 HEX CAP SCREW		STAINLESS																	
35	C6-183	WASHER,BONDED,10X1/2		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
36	C6-184	SCREW,MTL,12-24-1-1/4,HEX				300 SERIES, SS COND. CW FY - 65 KSI															
37	C6-185	1/4-20x1 HEX SCREW		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
38	C6-186	1/4 COMM'L FLAT WASHER				300 SERIES, SS COND. CW FY - 65 KSI															
39	C6-187	1/4-20x1 HEX CAP SCREW 18-8		STAINLESS																	
40	C6-188	SCREW, MTL,HEX, 8-32 X 1				300 SERIES, SS COND. CW FY - 65 KSI															
41	C6-189	SCREW, METAL, HW, 10-24 X 1-1/2				300 SERIES, SS COND. CW FY - 65 KSI															
42	C6-192	SCREW, MTL, HEX, 8 X 1-1/2		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
43	C6-193	SCREW, METAL, HEX, 14 X 1-1/2		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
44	C6-194	SCREW, METAL, HEX, 12 X 1-1/2		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
45	C6-195	1/4-20 X 1 1/4 HEX CAP SCREW 18-8		STAINLESS																	
46	C6-196	1/4-20 FIN. HEX NUT 18-8		STAINLESS																	
47	C6-197	1/4 LOCKWASHER 18-8		STAINLESS																	
48	C6-198	SCREW, MTL, HEX, 8 X 3/4		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
49		3/8"-16 X 2 18-6 HEX HEAD BOLT		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
50		3/8-16 HEX LOCK NUT		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
51		3/8-FLAT WASHER		STAINLESS		300 SERIES, SS COND. CW FY - 65 KSI															
A		B		C		D		E		F		G		H		J		K		L	

CHK BY: Mastourian

DWN BY: fcartinas

DATE: 9/18/2017

SCALE: NTS

SHEET: 28 OF 30

DWG. NO. 1605WDM

REV B

Nailor Industries Inc.

4714 Winfield Road Houston, TX 77039

TEL: 281-590-1172 FAX: 281-590-3086

www.nailor.com

TITLE:

1605WDM LOUVER
W/ AND W/O DAMPER
SLEEVE / CONTINUOUS MOUNT
BILL OF MATERIAL

WAYNE K. HELMILA

LICENSE

No. 59092

STATE OF FLORIDA

PROFESSIONAL ENGINEER

08/20/2024
COA: 9090

RICE

ENGINEERING

105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

REVISIONS:
REV B: RENUMBERED PAGE
ADDED ITEM #: 10A, 10B,10C, 28

CHK BY: Mastourian

DWN BY: f cortinas

SCALE: NTS

DATE: 9/18/2017

SHEET: 28 OF 30

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REV B: RENUMBERED PAGE
ADDED ITEM #: 10A, 10B,10C, 28

A	B	C	D	E	F	G	H	J	K	L				
GENERAL NOTES: 1. IT SHALL BE THE RESPONISBILITY OF THE ENGINEER OF RECORD TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS IMPOSED BY THE LOUVER(S). 2. THE I605WDM WITH AND WITHOUT 2020 DAMPER HAVE BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND TEST PROTOCOLS tas 100 A (WIND DRIVEN RAIN), TAS-201 (IMPACT), TAS-202 (UNIFORM STATIC PRESSURE), AND TAS-203 (CYCLIC FATIGUE). 3. MAXIMUM SINGLE SECTION SIXE IS 72" WIDE X 120" HIGH. 4. MAXIMUM ASSEMBLED LOUVER SIZE IS UNLIMITED WIDE X 120" HIGH. 5. SECTIONS OR ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDING A SUITABLE STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER. 6. CMU SHALL BE ASTM C90, TYPE II, 2,000 MIN PSI GROUT-FILLED, STEEL STUDS TO BE I6 GA. FY= 50ksi MIN. 7. THE SLEEVE MOUNT STYLE LOUVER UTILIZES AN ANCHORLESS INSTALLATION METHOD THAT DOES NOT REQUIRE THE USE OF FASTENERS INTO THE SUBSTRATE. IT MAY BE INSTALLED IN ANY SUBSTRATE THAT WILL WITHSTAND THE LOADS TRANSFERRED TO IT BY THE LOUVER. NAILOR IND. DOES NOT DETERMINE THE STRUCTURAL INTEGRITY OF THE SUBSTRATE STRUCTURE. 8. THE CONTINUOUS ANGLE MOUNT STYLE UTILIZES A CONTINUOUS JAMB ANGLETHAT IS ATTACHED TO THE SUBSTRATE BY FASTENERS. IT MAY BE INSTALLED IN CONCRETE, CMU, STEEL, OR WOOD ACCORDING TO THE FASTENER SCHEDULE. NAILOR IND. DOES NOT DETERMINE THE STRUCTUAL INTEGRITY OF THE SUBSTRATE STRUCTURE. 9. LOUVER ASSEMBLY IS QUALIFIEDFOR A MAXIMUM DESIGN LOAD OF $\pm$ 150 PSF, WITH THE EXCEPTION OF THE GROUT FILLED CMU BACK OF WALL MOUNTING BRACKET ANCHORS FOR THE 72" BLADES WHERE THE MAXIMUM DESIGN LOAD IS $\pm$ 80 PSF. 10. LOUVER ASSEMBLY WITH AND WITHOUT 2020 DAMPER SHALL ONLY BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM AND THE ROOM WILL HOUSE WATER RESISTANT / WATER PROOF EQUIPMENT, COMPONENTS, AND / OR SUPPLIES. 11. INSTALLER TO PROVIDE SEPERATION OF DISSIMILAR MATERIALS AS REQUIRED. 12. THE DAMPER MAY BE OPERATED BY A MANUAL QUADRANT OR BY AN ELECTRIC OR PNEUMATIC ACTUALTOR, THE DAMPER'S ACTUATOR IS NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY. 13. FRAME CONSTRUCTION, HEAD AND SILL ARE SQUARE CUT, JAMBS ARE SQUARE CUT @ HEAD AND SILL. CORNERS ARE SECURED WITH (2) #10-24 x 1 1/2 HW, BLADES ARE SECURED TO JAMBS WITH (2) #10-24 X 1 1/2 HW, @ EACH END. 14. STEEL / STAINLESS-STEEL/ ALUMINIUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOY THA HAS EQUAL OR GREATER YIELD STRENGTH. 15. BLADE SUPPORT ANGLE AND BLADE SUPPORT BRACE ONLY REQUIRED WHEN ACTUAL LOUVER SECTION WIDTH IS GREATER THAN 36 INCHES. 16. THREAD PENETRATION LENGTH SIGNIFIES THE REQUIRED LENGTH OF THE THREADED PORTION OF THE FASTENER INTO THE WOOD SUBSTRATE PROVINDING FULL CONTACT WITH WOOD. LAG SCREW TIO CANNOT BE CONSIDERED PART OF THE TREADED PORTION OF THE SCREW. LAG SCREWS ARE NOT TO BE INSTALLED AT WOOD JOINTS / SPLICES WHERE THE LAG SCREW COULD FALL BETWEEN MEMBERS. ** NOTE ENGINEER OF RECORD (EOR) IS RESPONSIBLE FOR DETERMINING IF CONCRETE IS TO BE CONSIDERED CRACKED OR UNCRACKED.										CHK BY: Mastourian DWN BY: fcortinas SCALE: NTS DATE: 9/18/2017 SHEET: 30 OF 30 DWG. NO. I605WDM REV B	Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com I605WDM LOUVER W/ AND W/O DAMPER SLEEVE GENERAL NOTES TITLE:	WAYNE K. HELMILA LICENSE No. 59092 STATE OF FLORIDA PROFESSIONAL ENGINEER 08/20/2024 COA: 9090	PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.05 Expiration Date 08/30/2028 By Miami-Dade Product Control REVISIONS: REV B: ADDED PAGE, ADDED GENERAL NOTES	RICE ENGINEERING 105 School Creek Trail Luxemburg, WI 54217 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com Florida Firm No: F-01000005061 Certificate of Authorization: #9090 Wayne K. Helmila Registration No: 59092



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039

SCOPE: This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model 1605WDVM Aluminum Louver - L.M.I.

APPROVAL DOCUMENT: Drawing No. **1605WDVM**, titled "1605WDVM Louver", sheets 1 through 12 of 12, dated 10/12/2017, with revision B dated 05/28/2024, prepared by manufacturer, signed and sealed by Wayne K. Helmila, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Houston, TX, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

LIMITATION: This system is to be installed in a location where the room behind the louver is designed to drain water penetrating into the room, and the room will house water resistant/waterproof equipment, components, or supplies.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official. This NOA **revises NOA No. 23-0724.25** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



07/09/24

NOA No. 24-0516.06
Expiration Date: August 30, 2028
Approval Date: July 18, 2024
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER NOA # 18-0117.14

A. DRAWINGS

1. Drawing No. **1605WDVM**, titled “1605WDVM Louver”, sheets 1 through 11 of 11, dated 10/12/17, prepared by the manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
2) Large Missile Impact Test per FBC, TAS 201-94
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model 1605 WDVM Louver System, prepared by Intertek, Test Report No. **H4892.01-801-18-R4**, dated 09/25/17 and revised on 05/18/18, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Wind Driven Rain Resistance per TAS 100(A)-95 on a Model 1605WDVM Vertical Aluminum Louver, prepared by Intertek, Test Report No. **H0211.02-801-18 R1**, dated 09/27/17 and revised on 11/21/17, signed and sealed by Tyler Westerling, P.E.
3. Test Report on High Velocity Wind Driven Rain Resistance per ANSI/AMCA 550-09 on a Model 1605WDVM Vertical Aluminum Louver, prepared by Intertek/ATI, Test Report No. **H0211.01-801-18-R3**, dated 04/20/17 and revised on 11/21/17, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS

1. Louver structural calculations dated 11/03/17, prepared by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the **FBC 6th Edition (2017)** issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 04/16/18, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.06
Expiration Date: August 30, 2028
Approval Date: July 18, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER NOA # 21-0630.12 AND NEW

A. DRAWINGS

1. Drawing No. **1605WDVM**, titled “1605WDVM Louver”, sheets 1 through 12 of 12, dated 10/12/2017, with revision B dated 05/28/2024, prepared by manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Louver calculations, prepared by Rice Engineering, dated 04/29/2024, signed and sealed by Wayne K. Helmila, P.E.

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the 8th edition (2023) of the FBC, issued by Rice Engineering, dated 04/29/2024, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest, issued by Rice Engineering, dated 04/29/2024, signed and sealed by Wayne K. Helmila, P.E.

“Submitted under NOA # 21-0630.12”

3. Statement letter of code conformance to the **7th edition (2020) FBC**, issued by Rice Engineering, dated 08/16/21, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.06
Expiration Date: August 30, 2028
Approval Date: July 18, 2024

DRAWING INDEX:

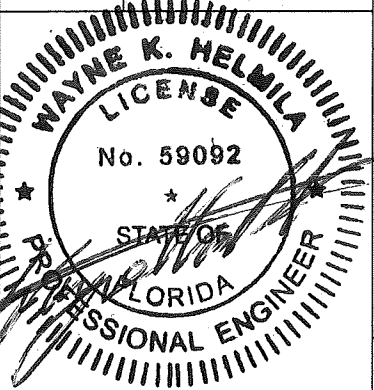
- 1. INDEX TO DRAWINGS AND NOTES
- 2. 1605WDVM LOUVER - ELEVATION
- 3. 1605WDVM LOUVER - HEAD AND SILL DETAIL
- 4. 1605WDVM LOUVER - SKINNY WALL APPLICATION HEAD AND SILL DETAIL
- 5. 1605WDVM LOUVER - SKINNY WALL APPLICATION HEAD AND SILL DETAIL CONT.
- 6. 1605WDVM LOUVER - JAMB AND MULLION DETAIL
- 7. 1605WDVM LOUVER - BLADE STRAP DETAIL
- 8. 1605WDVM LOUVER - BAFFLE/ WEEP DETAIL
- 9. 1605WDVM LOUVER - SEALANT DETAIL
- 10. 1605WDVM LOUVER - PART PROFILES
- 11. 1605WDVM LOUVER - BILL OF MATERIAL AND GENERAL NOTES
- 12. 1605WDVM LOUVER - FASTENER SCHEDULE

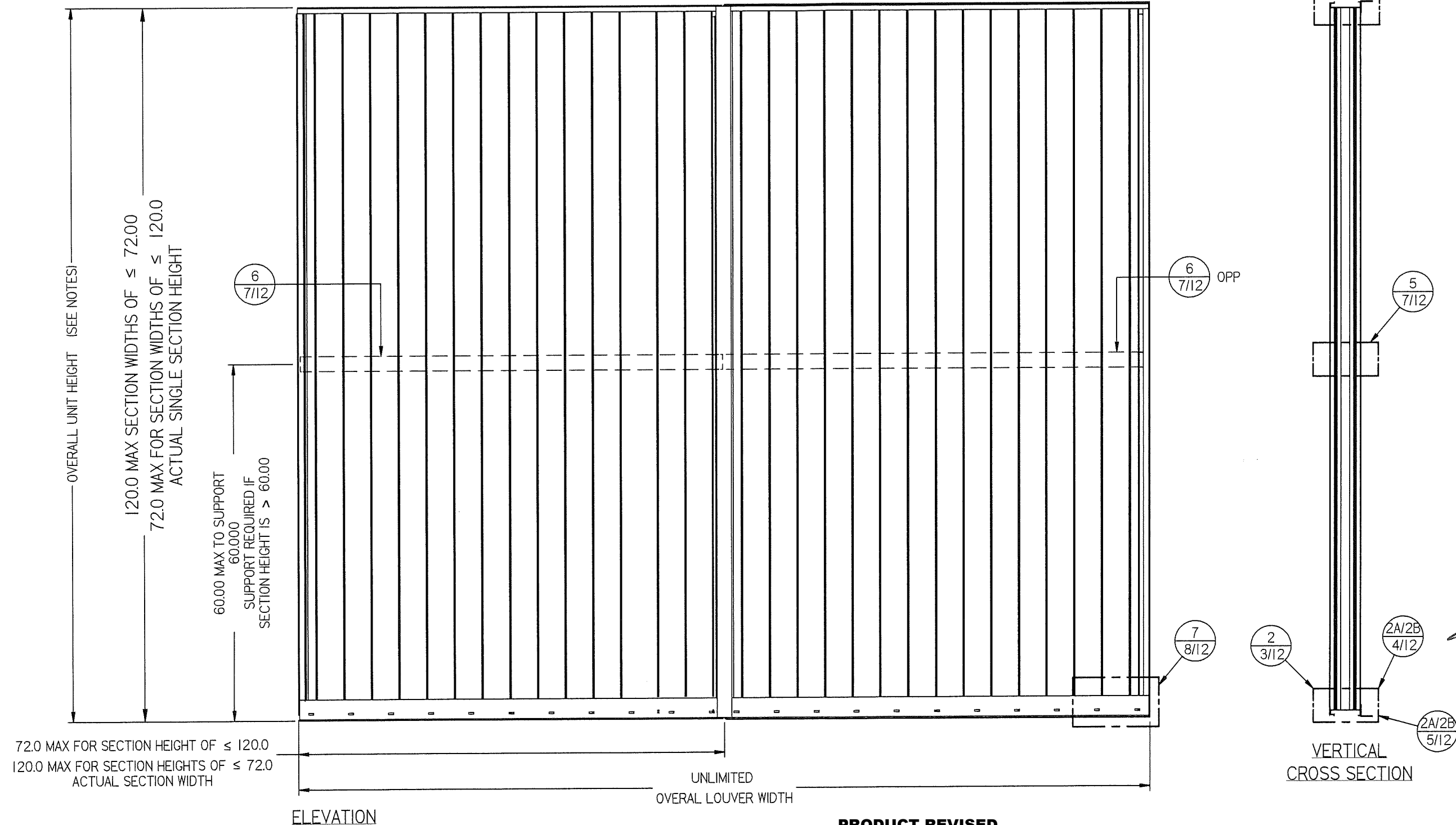
NOTES:

- 1. THE 1605WDVM HAS BEEN TESTED IN ACCORDANCE WITH THE MIAMI-DADE COUNTY PROTOCOLS: TAS-100 A, TAS-201, TAS-202, & TAS-203 FOR WIND DRIVEN RAIN, LARGE MISSILE IMPACE, UNIFORM PRESSURE, AND CYCLIC WIND PRESSURE.
- 2. THIS LOUVER SYSTEM IS APPROVED FOR APPLICATIONS WITH DESIGN PRESSURES OF +/- 130 PSF OR LESS.
- 3. THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS.
- 4. LOUVER ANCHORS ARE REVIEWED FOR ATTACHMENT INTO STEEL, CONCRETE, MASONRY, OR TIMBER STRUCTURE. MINIMUM EDGE DISTANCE AND EMBEDMENT REQUIREMENTS ARE SHOWN. NAILOR IND. DOES NOT DETERMINE THE STRUCTURE INTERGRITY OF THE SUBSTRUCTURE.
- 5. MAXIMUM SINGLE SECTION SIZE: 72" WIDE X 120" HIGH OR 120" WIDE X 72" HIGH.
- 6. MAXIMUM ASSEMBLED LOUVER SIZE UNLIMITED WIDE X 120" HIGH MAX. MULLION SPACING IS 72".
- 7. SECTIONS OR ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDED A SUITIBLE STRUCTURE STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FOR THE LOUVER.

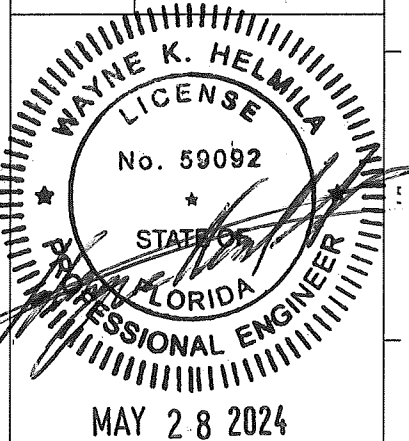
TESTS PREFORMED:
TAS-100 (A) WIND DRIVEN RAIN RESISTANCE
TAS-201 LARGE MISSILE IMPACT
TAS-202 UNIFORM STATIC AIR PRESSURE TEST
TAS-203 CYCLIC WIND PRESUSRE TEST
DESIGN PRESSURE RATING 130 PSF

REVISIONS:
REV B: ADDED PAGE 5 AND RENUMBERED PAGES 6-12
- ADDED PAGE 5 SKINNY WALL APPLICATION HEAD AND SILL DETAIL CONT.
-UPDATED ALL PAGES.

DWN BY: fcortinas	CHK BY: BDennis	SCALE: NTS	SHEET: 1 OF 12	REV B
DATE: 10/12/2017				
PRIVATE & CONFIDENTIAL DO NOT REPRODUCE WITHOUT THE PERMISSION OF Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com			DWG. NO. 1605WDVM	
TITLE: 1605WDVM LOUVER INDEX				
				
MAY 28 2024				
PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.06 Expiration Date 08/30/2028 By  Miami-Dade Product Control			RICE ENGINEERING 105 School Creek Trail Luxemburg, WI 54217 Phone: (920) 617-1042 Fax: (920) 617-1100 www.rice-inc.com Florida Firm No: F-01000005061 Certificate of Authorization: #9090 Wayne K. Helmila Registration No: 59092	



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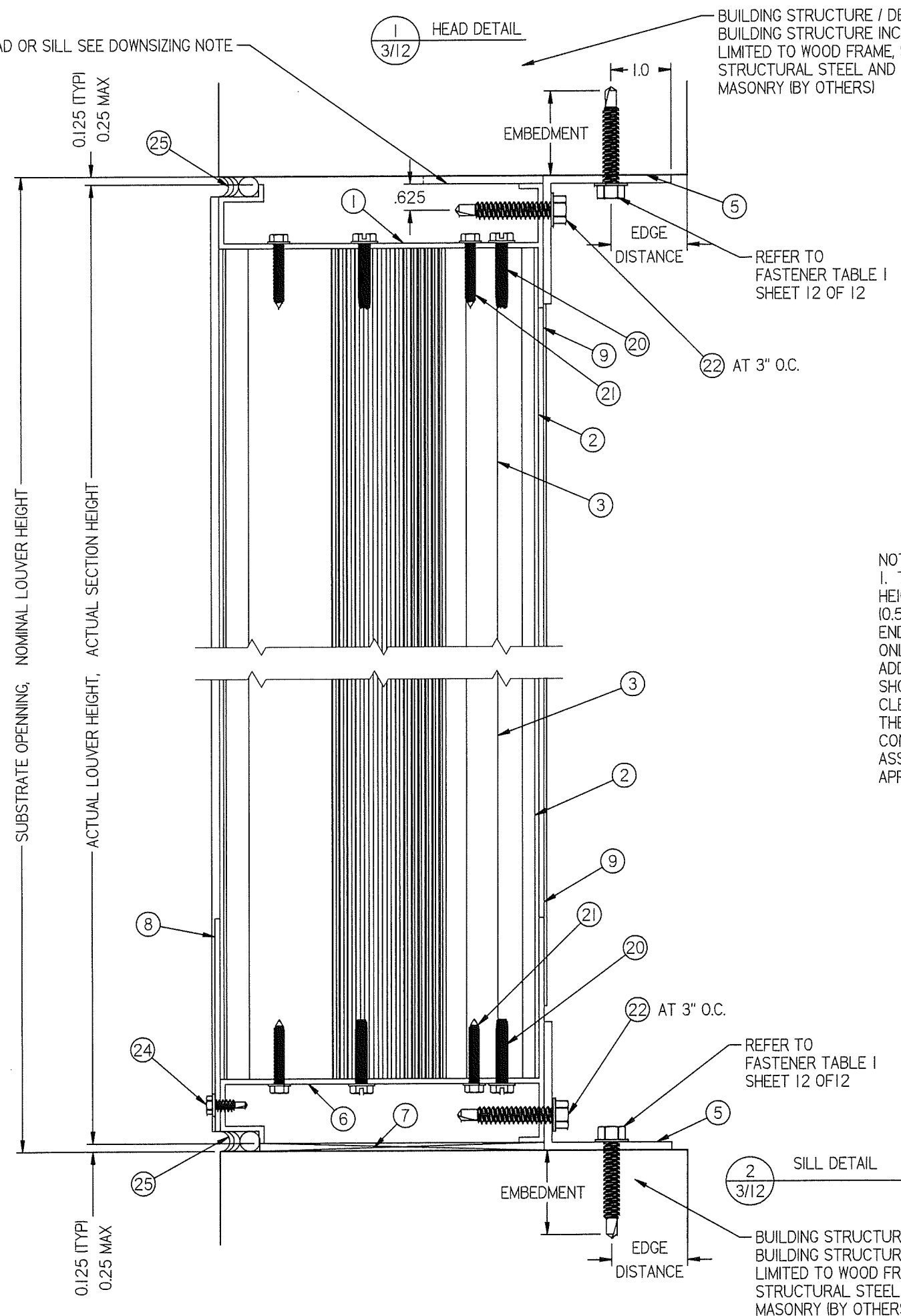
RICE
ENGINEERING
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas	CHK BY: BDennis
DATE: 10/12/2017	SCALE: NTS
SHEET: 2 OF 12	
DWG. NO. 1605WDVM	REV B

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.06
Expiration Date 08/30/2028
By **Wayne K. Helmila**
Miami-Dade Product Control

REV. B- UPDATED SHEET TO ACCOUNT FOR PAGE 12

ALTERNATE ORIENTATION OF ITEM 5. HEAD OR SILL. SEE DOWNSIZING NOTE

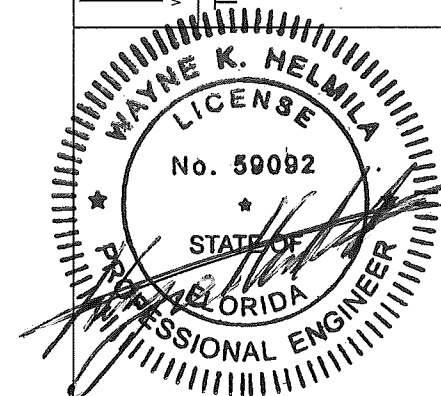


NOTE:
1. TO ALLOW FOR SUBSTRATE ANCHOR HEAD CLEARANCE, LOUVER HEIGHT DOWNSIZING (UNDERCUT) OF UP TO 0.25 TOTAL PER END (0.50 OVERALL TOTAL) IS ALLOWABLE. DOWNSIZING OF 0.125 PER END (0.25 OVERALL TOTAL) FROM ACTUAL HEIGHT IS STANDARD. ONLY ENDS WITH ALTERNATE ANCHOR ORIENTATION MAY REQUIRE ADDITIONAL DOWNSIZING, BUT THE 0.125 STANDARD DOWNSIZING SHOULD ALLOW FOR ALTERNATE ANCHOR ORIENTATION SETUP CLEARANCES. THERE IS NO NEED FOR ADDITIONAL DOWNSIZING AT THE JAMBS WHEN USING ALTERNATE ANCHOR ORIENTATION. CONSULT YOUR LOCAL REP OR THE MANUFACTURER IF ASSISTANCE IS NEEDED FOR PROPER DOWNSIZING FOR YOUR APPLICATION.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.06**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

REV. B- UPDATED ADDED NOTE #2 TO REFLECT CALC.
-UPDATED FASTENER NOTE TO REFLECT CHANGES TO
FASTENER TABLES.

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MAY 28 2024

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105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
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Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas

DATE: 10/12/2017

CHK BY: BDennis

SCALE: NTS

SHEET: 3 OF 12

DWG. NO.

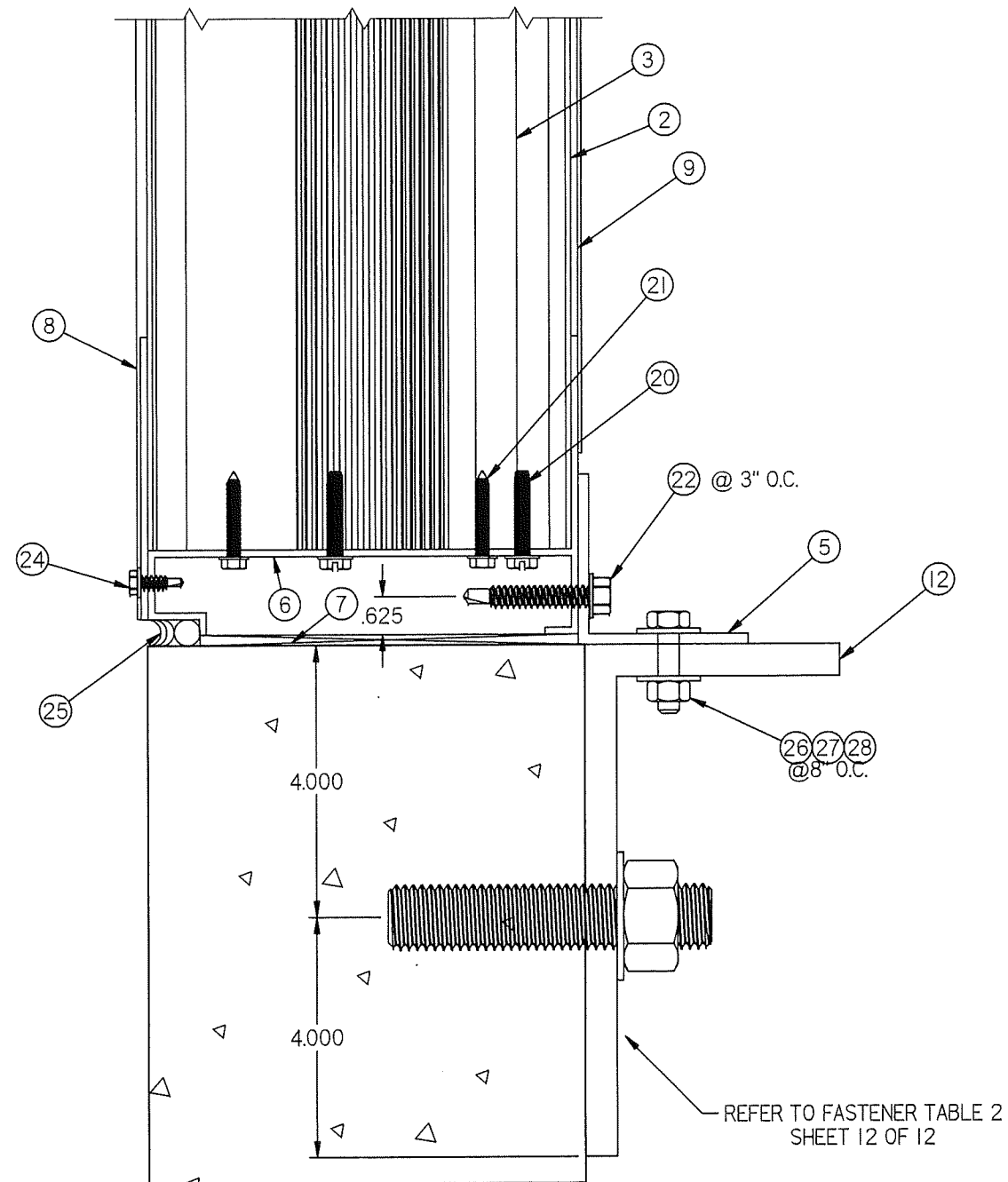
1605WDVM

1605WDVM LOUVER
HEAD AND SILL DETAIL

REV

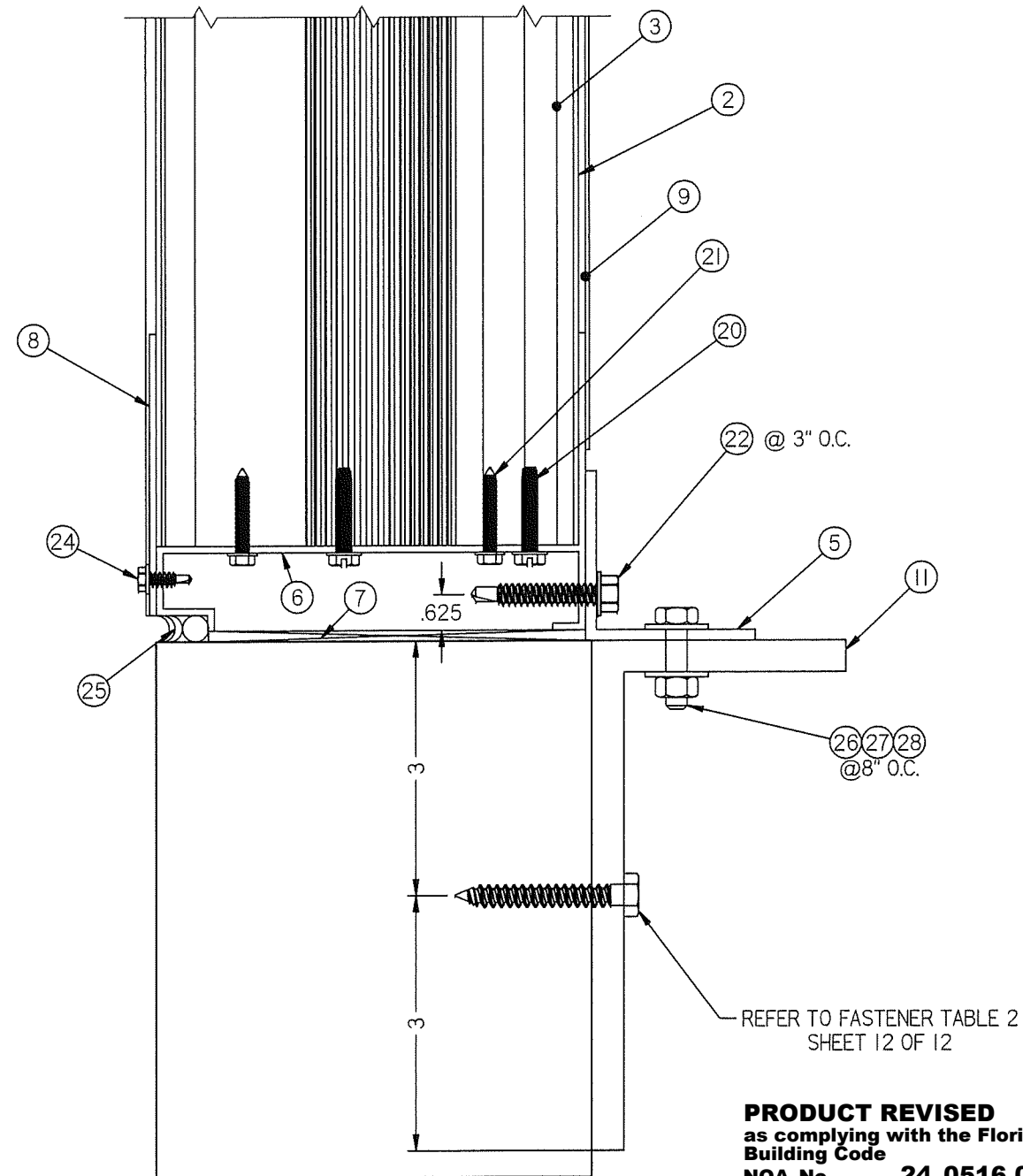
B

GROUT FILLED CMU
(BY OTHERS)



2A
4/12
SILL DETAIL
SKINNY WALL

WOOD / STEEL 16GA.
STEEL A-36 / CONCRETE
(BY OTHERS)

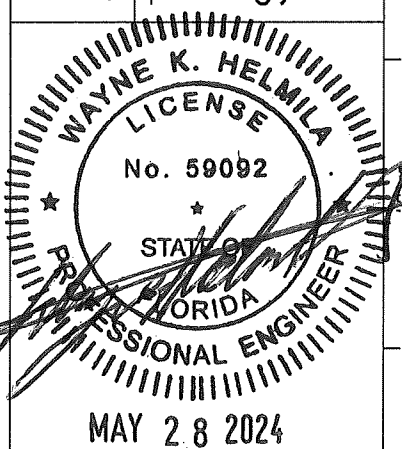


2B
4/12
SILL DETAIL
SKINNY WALL

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.06**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

REV. B - UPDATED FASTENER NOTE TO
REFLECT CHANGES TO FASTENER TABLES
- CMU DETAIL UPDATED PER CALCUTATIONS

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Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas
DATE: 10/12/2017
CHK BY: BDennis
SCALE: NTS

TITLE:
**1605WDVM LOUVER
SKINNY WALL APPLICATION
HEAD AND SILL DETAIL**

SHEET: 4 OF 12

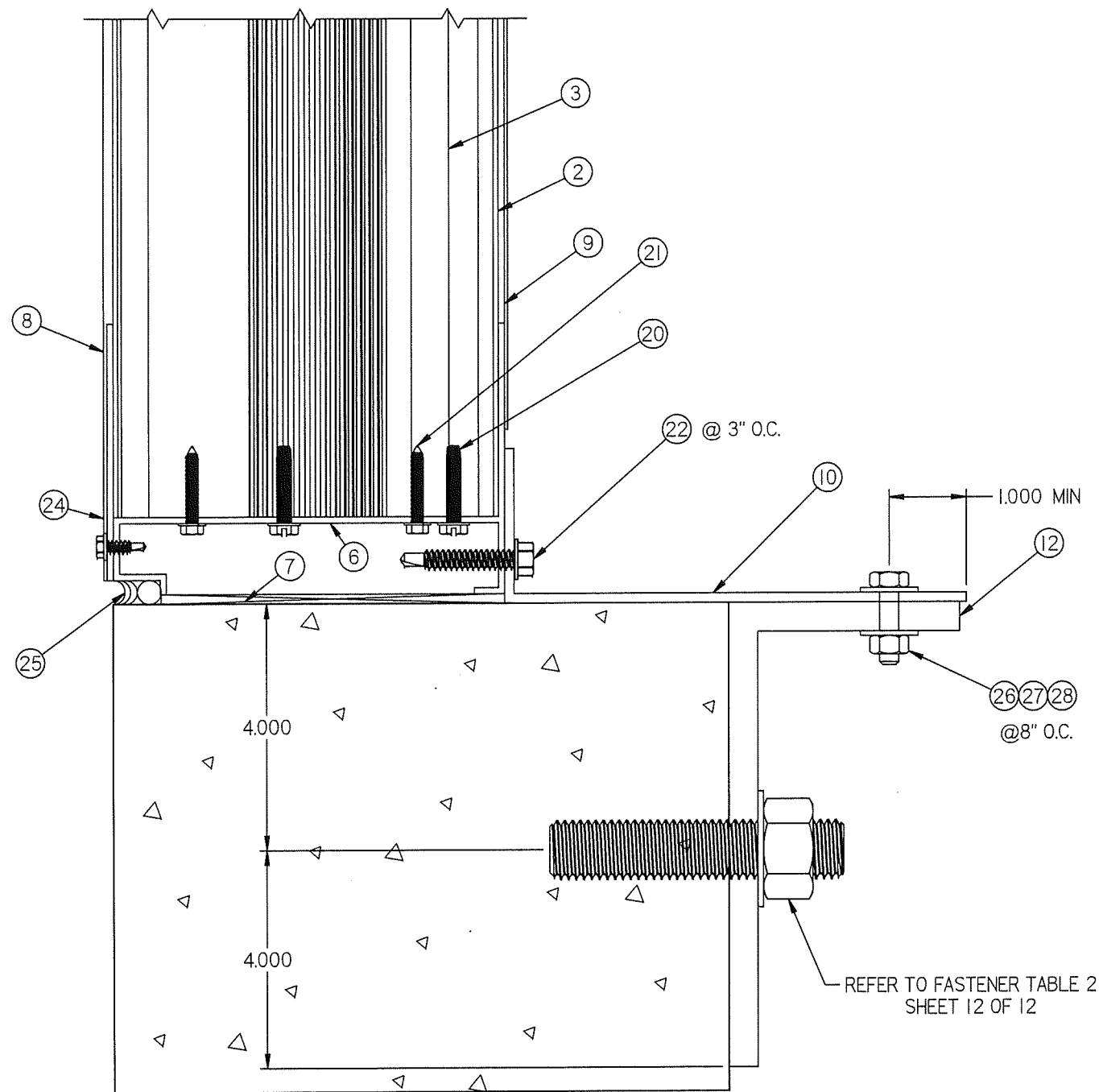
DWG. NO.

1605WDVM

REV

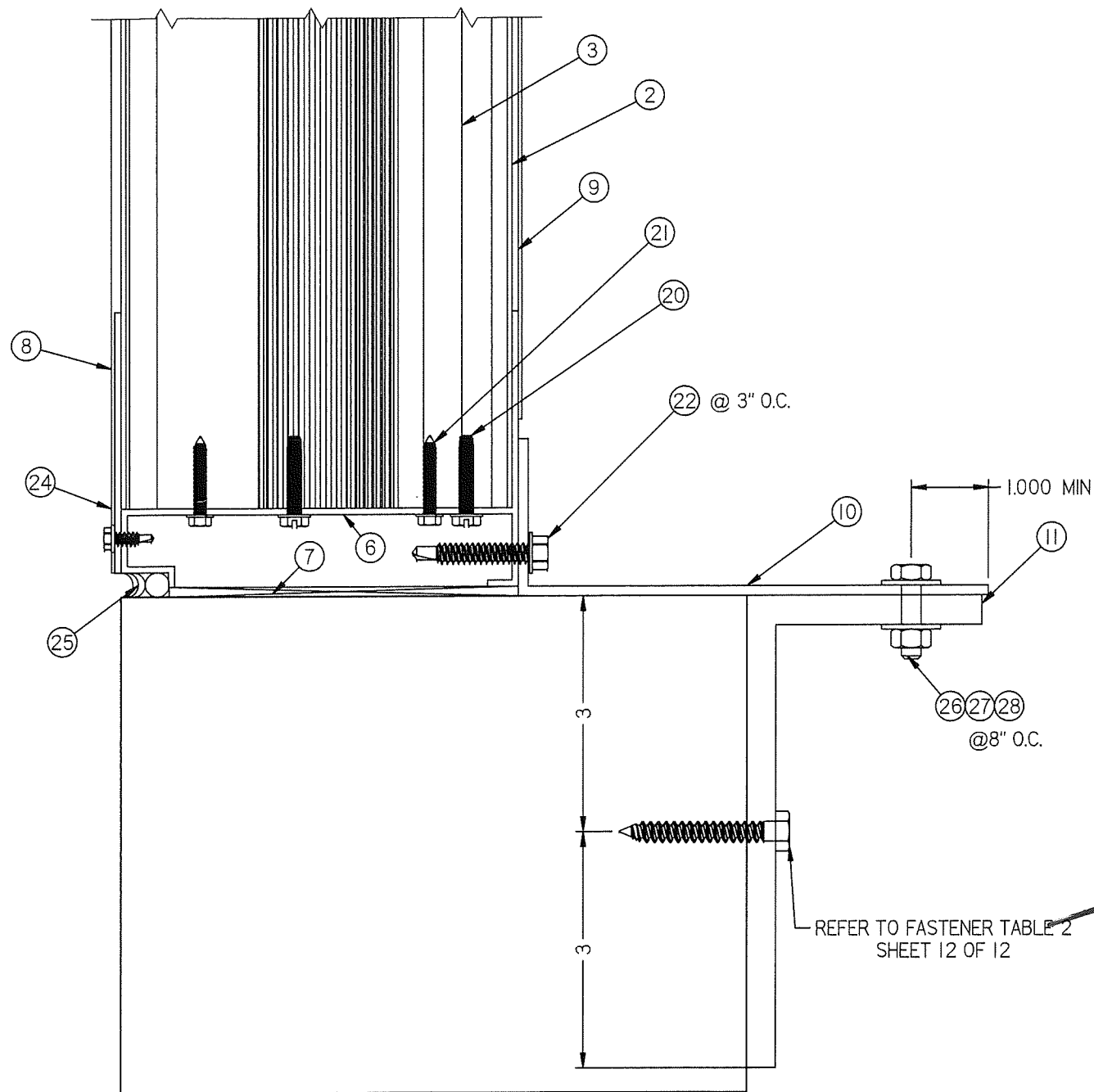
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GROUT FILLED CMU
(BY OTHERS)



SILL DETAIL
2A
5/12
SKINNY WALL

WOOD / STEEL I6GA.
STEEL A-36 / CONCRETE
(BY OTHERS)



SILL DETAIL
2B
5/12
SKINNY WALL

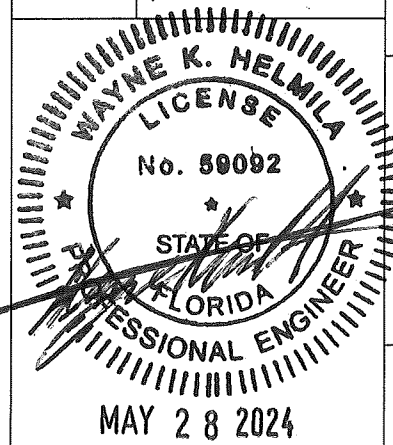
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NOA-No. **24-0516.06**

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REV. B- ADDED PAGE TO SHOW ALTERNATE
INSTALLATION FOR THICKER SUBSTRATES.

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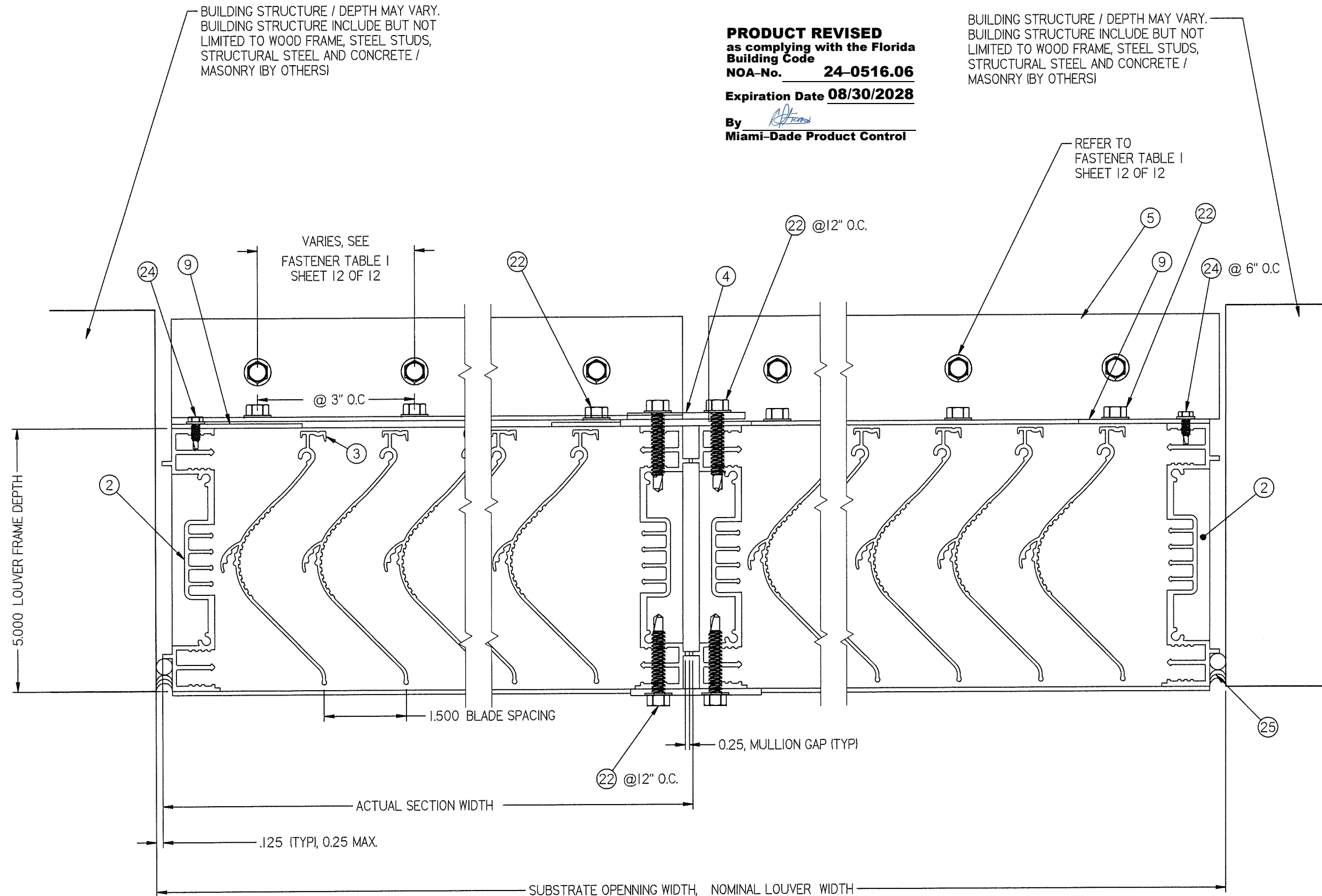
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DATE: 10/12/2017
CHK BY: BDennis
SCALE: NTS

SHEET: 5 OF 12
DWG. NO. **1605WDM**
REV. B

TITLE:
**1605WDM LOUVER
SKINNY WALL APPLICATION
HEAD AND SILL DETAIL
CONT.**



3
6/12 JAMB DETAIL

4
6/12 MULLION DETAIL

3
6/12 JAMB DETAIL OPP.

REVISIONS:
REV B: ADDED NOTE FOR ANGLE
INSTALLATION O.C.
- UPDATED PAGE NUMBERS

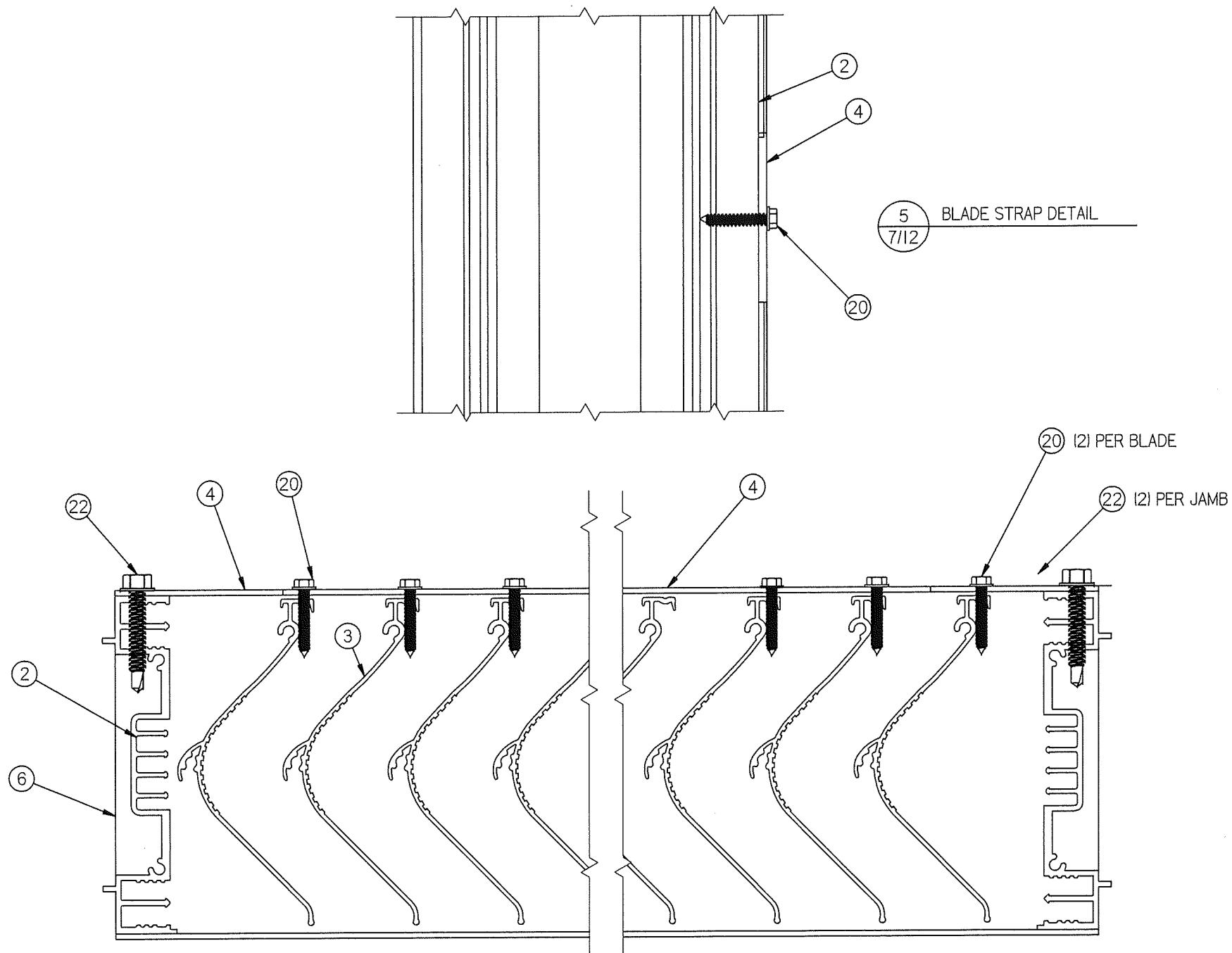
DWN BY: fcortinas		CHK BY: BDennis
DATE: 10/12/2017		SCALE: NTS
SHEET: 6 OF 12		
DWG. NO. 1605WDVM		
REV B		

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TITLE:
1605WDVM LOUVER
JAMB AND MULLION DETAIL

WAYNE K. HELMILA
LICENSE
No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
MAY 28 2024

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ENGINEERING
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Luxemburg, WI 54217
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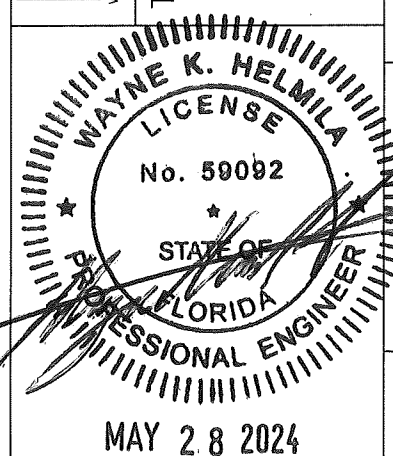
6
7/12
BLADE STRAP
AT JAMB DETAIL

6
7/12
BLADE STRAP
AT JAMB DETAIL OPP.

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REV. B- UPDATED PAGE NUMBERS

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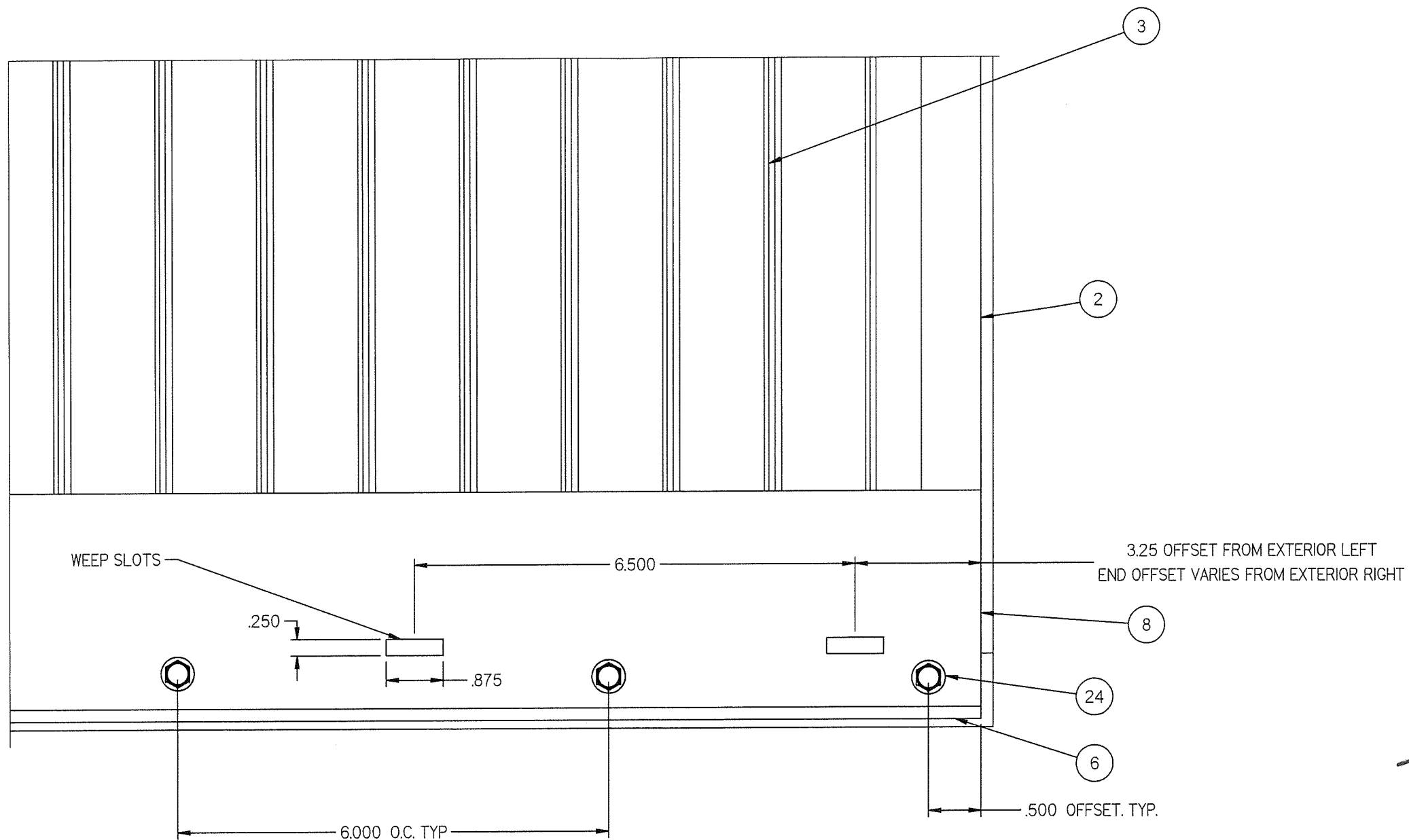
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DWN BY: fcortinas
DATE: 10/12/2017
CHK BY: BDennis
SCALE: NTS

TITLE:
1605WDVM LOUVER
BLADE STRAP DETAIL

SHEET: 7 OF 12

DWG. NO.
1605WDVM
REV
B

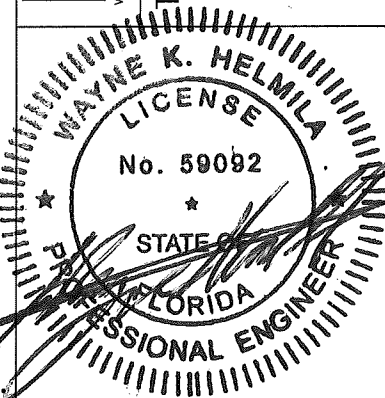


7 BAFFLE/ WEEP DETAIL
8/12

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as complying with the Florida
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NOA-No. **24-0516.06**
Expiration Date **08/30/2028**
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REV. B - UPDATED PAGE NUMBERS
- ADDED SCREW AND BAFFLE

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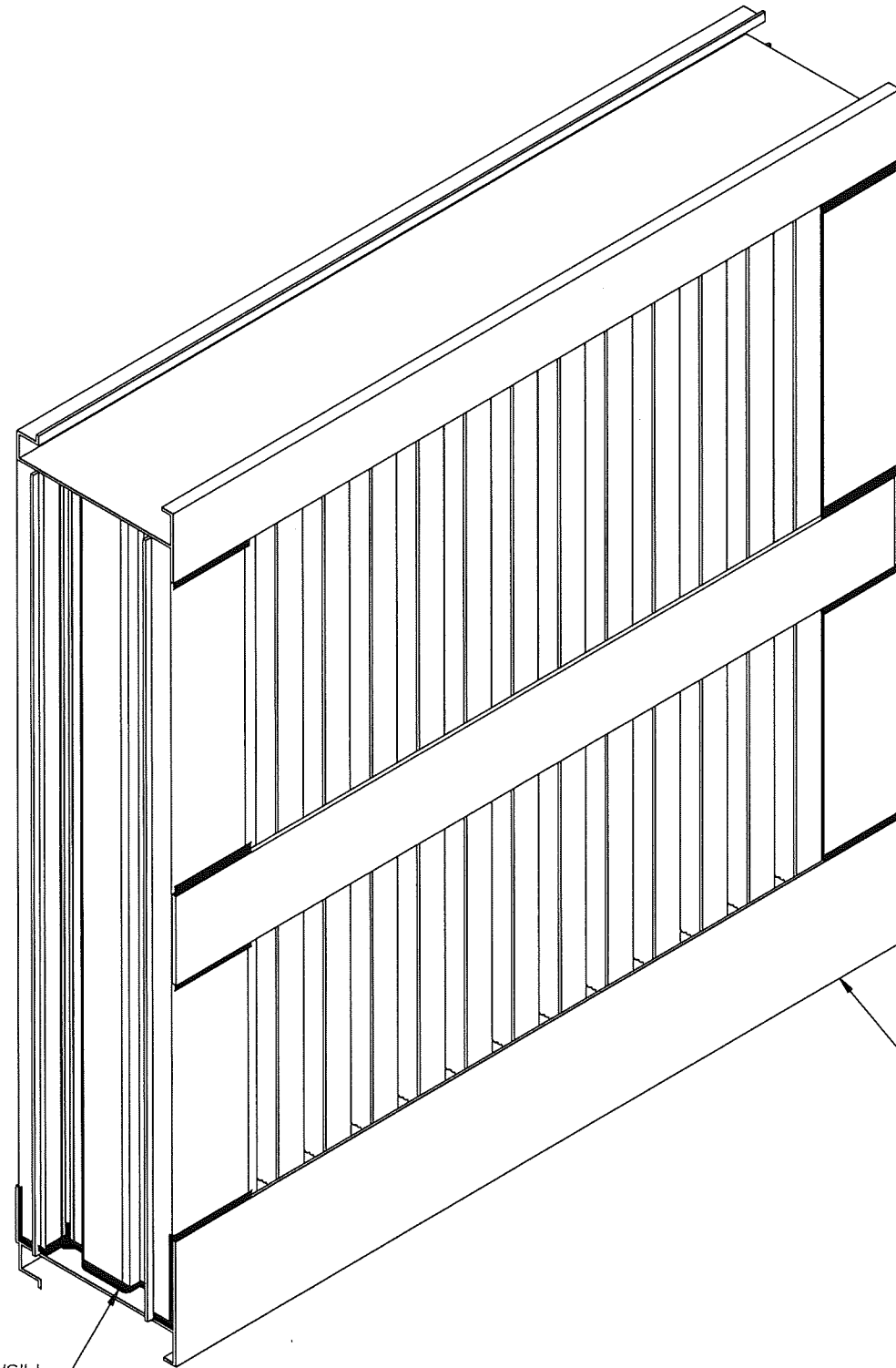


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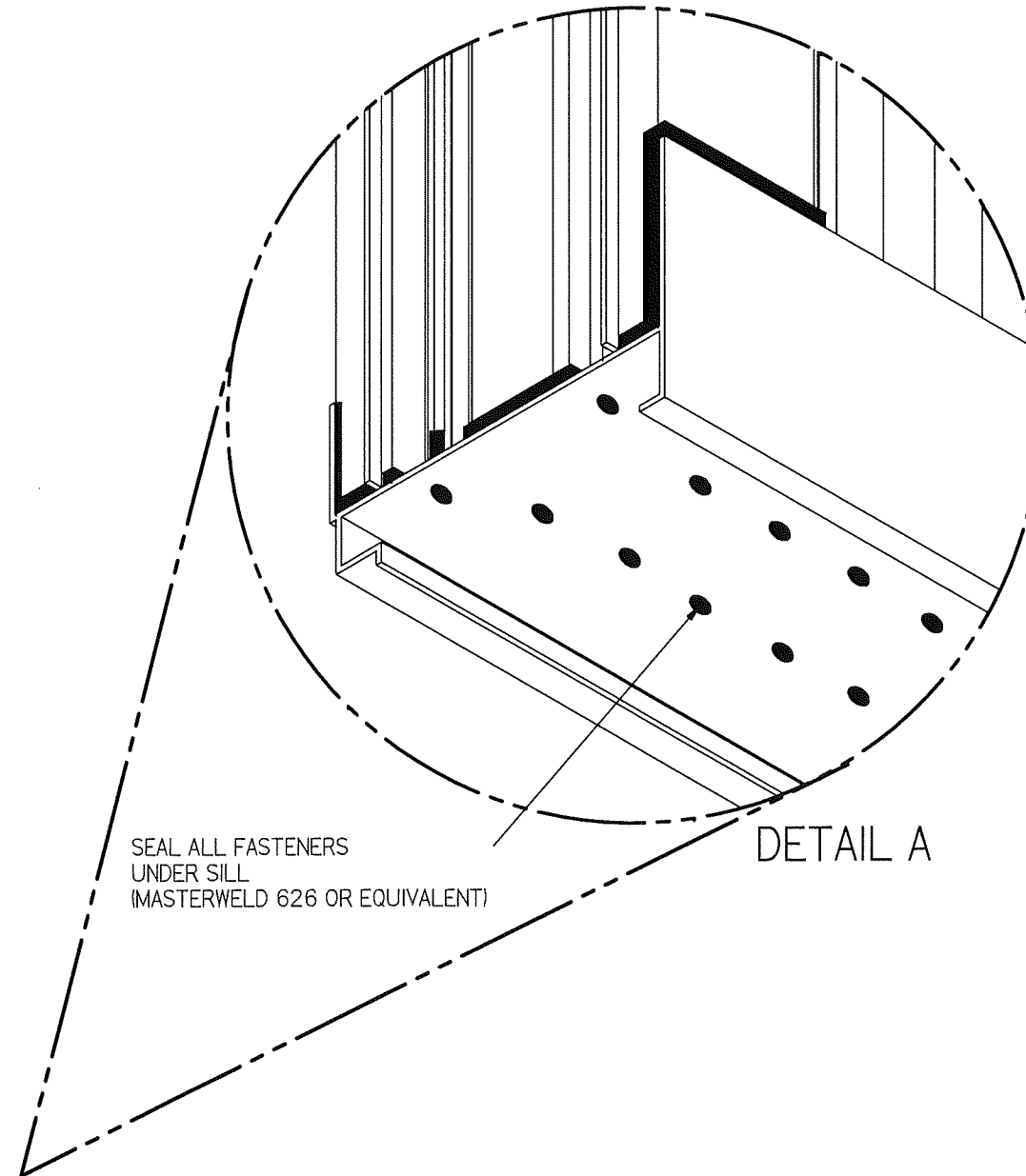
DWN BY: fcortinas CHK BY: BDennis
DATE: 10/12/2017 SCALE: NTS
SHEET: 8 OF 12
DWG. NO. **1605WDVM** REV. B

TITLE:
1605WDVM LOUVER
BAFFLE / WEEP DETAIL



STANDARD SEAL AT JAMB/SILL
CONNECTION
(MASTERWELD 626 OR EQUIVALENT)

SEAL ALL FASTENERS
UNDER SILL
(MASTERWELD 626 OR EQUIVALENT)

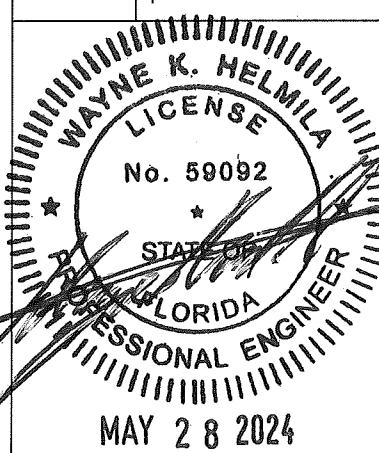


SEAL ALL FASTENERS
UNDER SILL
(MASTERWELD 626 OR EQUIVALENT)

DETAIL A

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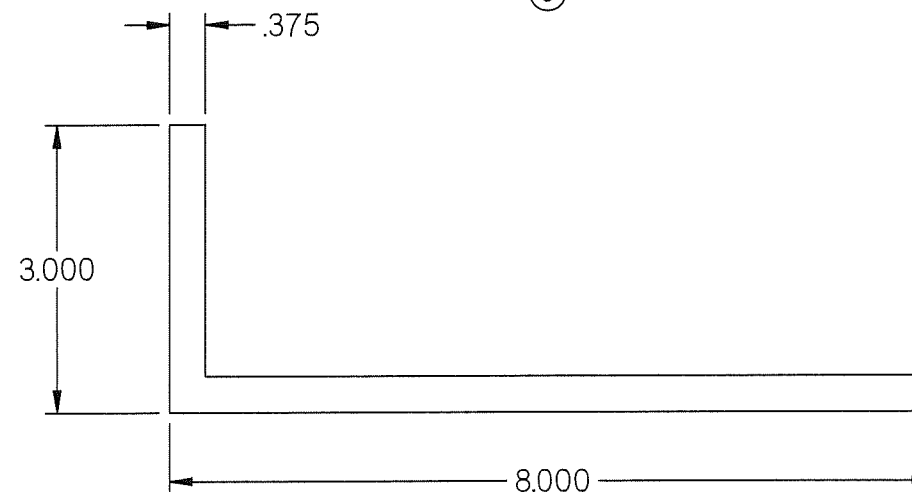
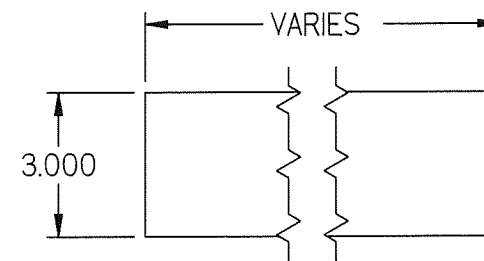
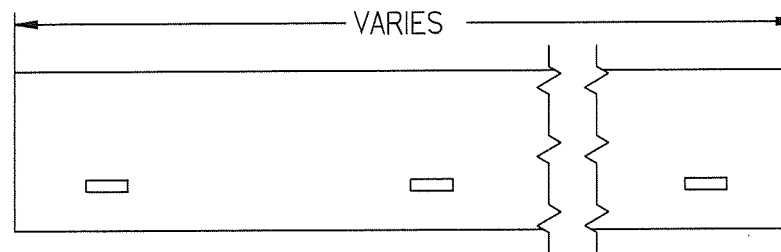
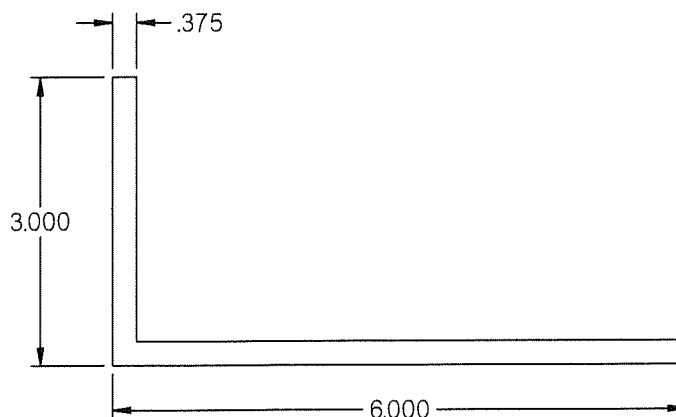
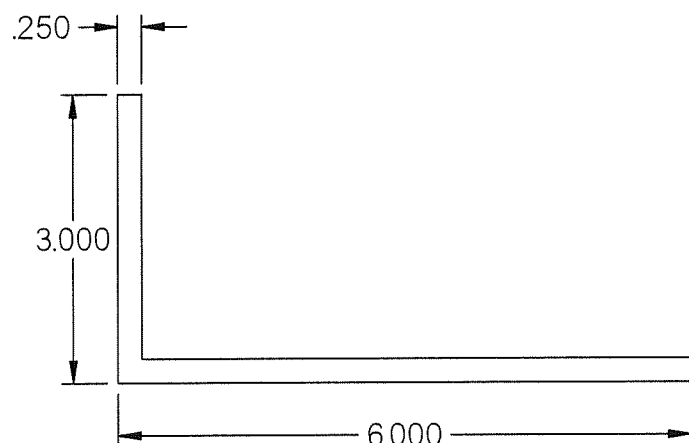
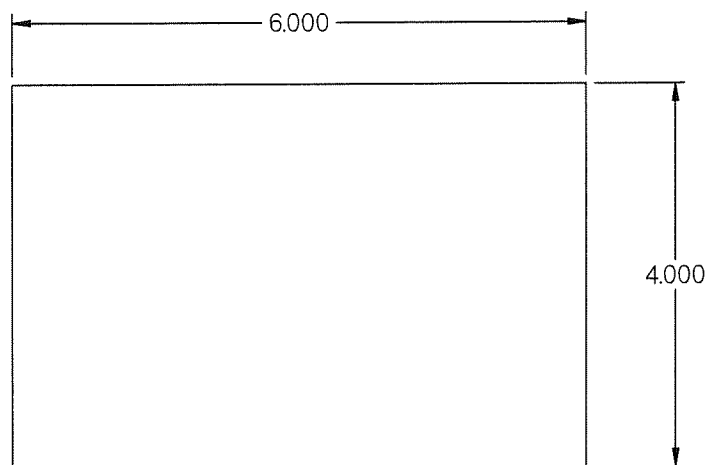
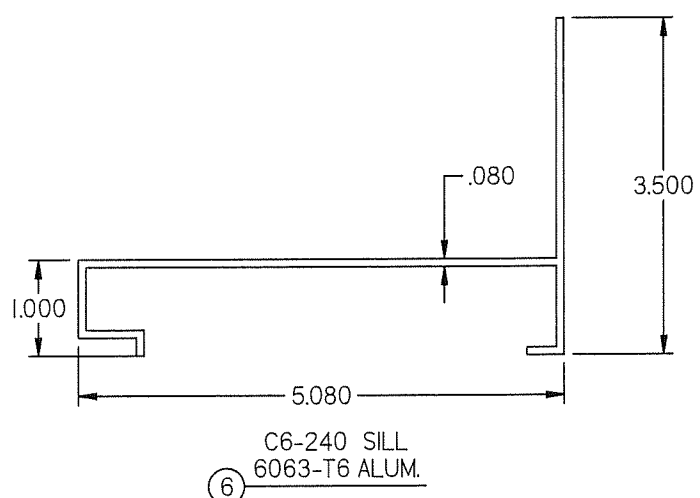
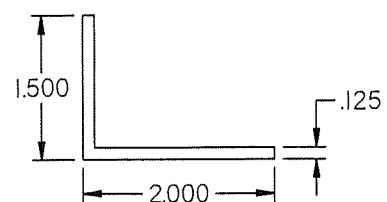
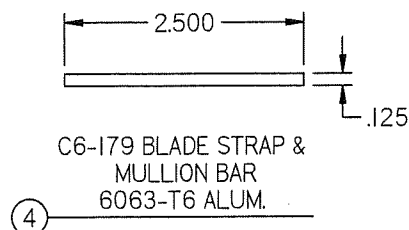
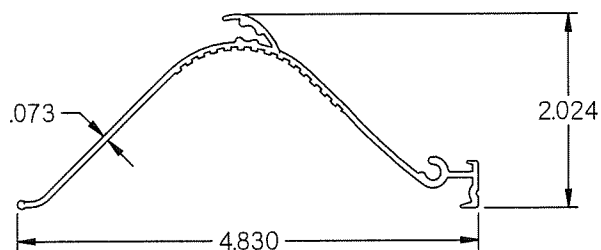
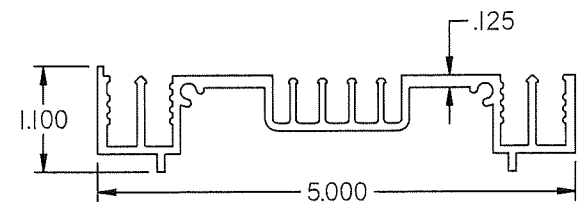
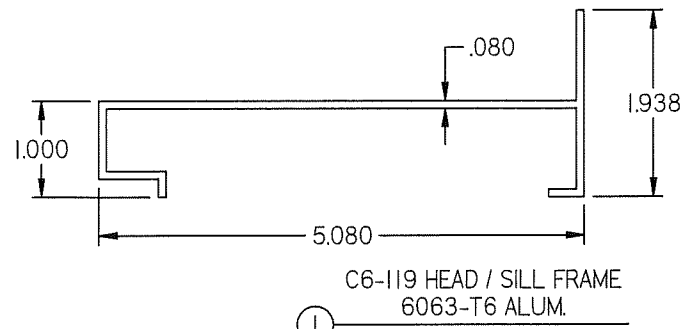
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Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
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Wayne K. Helmila
Registration No: 59092

DWN BY: fcortinas CHK BY: BDennis
DATE: 10/12/2017 SCALE: NTS

TITLE:
1605WDVM LOUVER
SEALANT DETAIL

SHEET: 9 OF 12

DWG. NO. **1605WDVM**
REV B



PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.06**
Expiration Date **08/30/2028**
By **Wayne K. Helmila**
Miami-Dade Product Control

REV. B- UPDATED PAGE NUMBER
- UPDATED SILL, JAMB,
- ADDED BAFFLE, 3 X 8 X 3/8 ANGLE
- ADDED 3 X 6 X 1/4 ANGLE
- ADDED JAMB STOPS

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No. 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
MAY 28 2024

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ENGINEERING
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DATE: 10/12/2017
SCALE: NTS

SHEET: 10 OF 12

DWG. NO. **1605WDVM**
REV B

1605WDVM LOUVER

PART PROFILES

BILL OF MATERIALS

ITEM	INTERNAL ID	DESCRIPTION	MATERIAL	NOTES
1	C6-119	HEAD / SILL FRAME	6063-T6	ONLY AT HEAD
2	C6-241	JAMB FRAME	6063-T6	
3	C6-203	BLADE	6063-T6	1.5" CENTERS/SPACING
4	C6-179	BLADE STRAP / MULLION BAR	6063-T6	REQUIRED IF SECTION HEIGHT IS 60.0"
5	C6-160	2 X 2 X 1/8 ANGLE (CONT.)	6063-T6	AT HEAD AND SILL ONLY
6	C6-240	SILL	6063-T6	ONLY AT SILL
7	-	ALUMINIUM SUPPORT SHIM	5052-H32	BY OTHERS , OPTIONAL, AS NEEDED
8	-	BAFFLE	5052-H32	FRONT DRAIN
9	-	JAMB STOP	5052-H32	SIZE VARIES AS NEEDED
10	-	6 x 3 x 1/4 ANGLE (CONT.)	6061-T6	USED FOR SKINNY WALL APPLICATIONS
11	-	6 X 3 X 3/8 ANGLE (CONT.)	6061-T6	USED IN SKINNY WALL APPLICATION
12	-	3 X 8 X 3/8 ANGLE (CONT.)	6061-T6	USED IN SKINNY WALL APPLICATION FOR CMU
--				
20	C6-189	SCREW, MACHINE, HW, #10-24 X 1 1/2,	300 SERIES, SS CON. CW	2 @ BLADE ENDS, AND BLADE STRAP ONE PER BLADE
21	C6-192	SCREW, MACHINE, HEX, #10 X 1 1/2,	300 SERIES, SS CON. CW	2 @ FRAME CORNERS
22	C6-193	SCREWM METAL, HEX, #14 X 1 1/2,	300 SERIES, SS CON. CW	@ HEAD AND SILL, AND 2 AT BLADE STRAP AT JAMBS
24	C6-198	SCREW, MTL, HEX, #8 X 3/4,	300 SERIES, SS CON. CW	@ SILL AT BAFFLE AND JAMB STOPS @ 6" O.C.
25	-	SEALANT & BACKER ROD	VARIOUS	BY OTHERS
26	C6-181	1/4 NYLON INSERT LOCKNUT	STAINLESS	
27	C6-186	1/4 COMM'L FLAT WASHER	STAINLESS	
28	C6-187	1/4-20 X 1 HEX CAP SCREW 18-8 SS	STAINLESS	

GENERAL NOTES:

1. DUE TO PASSING TAS-100A, THE LOUVER IS DESIGNED TO PREVENT WIND DRIVEN RAIN FROM PENETRATING THE SPACE BEHIND THE LOUVER. AS SUCH, THE LOUVER MAY BE INSTALLED IN A LOCATION WHERE THE SPACE/ROOM BEHIND THE LOUVER IS NOT DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM OR THE ROOM WILL HOUSE NON-WATER RESISTANT/ PROOF EQUIPMENT, COMPONENTS, OR SUPPLIES.
2. THE MAXIMUM SINGLE SECTION SIZE IS 120 WIDE BY 72 HIGH OR 72 WIDE BY 120 HIGH. THE MAXIMUM OVERALL/ ASSEMBLED SIZE IS UNLIMITED WIDE BY USE OF MULTIPLE SECTIONS. SECTIONS/ ASSEMBLIES MAY BE STACKED VERTICALLY PROVIDED THERE IS SUITABLE STRUCTURAL SUPPORT (DESIGNED AND INSTALLED BY OTHERS) TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER HEAD AND / OR SILL MOUNTING ANGLES TO THE SUBSTRATE.
3. GENERAL LOUVER CONSTRUCTION: HEAD, SILL, JAMBS, AND BLADES ARE EXTRUDED ALUMINIUM. BLADE SPACING IS 1.5 INCHES. BLADES ARE SECURED WITH (2) #10 X 1 1/2" MACHINE SCREWS PER BLADE END. HEAD IS SECURED TO THE JAMB WITH (2) #10 X 1 1/2" MACHINE SCREWS PER HEAD END, SILL IS SECURED TO JAMBS WITH (2) #10 X 1 1/2" MACHINE SCREWS PER SILL END. BLADE SUPPORT STRAP IS SECURED TO BLADES BY (2) SCREW PER BLADE AND SECURED TO JAMB BY (2) SCREWS AT STRAP END. BLADE SUPPORT STRAP IS REQUIRED IF ACTUAL LOUVER HEIGHT IS > 60 INCHES.
4. INSTALLER TO PROVIDE SEPARATION OF DISSIMILAR MATERIALS AS REQUIRED. SEE ALUMINUM DESIGN MANUAL (CHAPTER F) FOR DETAILS.
5. ALL ALUMINIUM, STAINLESS STEEL (SS), AND PLATED / COATED STEEL PARTS PROVIDED BY MANUFACTURER ARE INHERENTLY CORROSION RESISTANT OR HAVE A CORROSION RESISTANT COATING.
6. STEEL / STAINLESS, STEEL / ALUMINIUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOY THAT HAS EQUAL OR GREATER YIELD STRENGTH. PART DIMENSIONS ARE MINIMUMS UNLESS DEFINED OTHER WISE.
7. THE INTERNAL ID# SHOWN ON PAGE 9 IS FOR FACTORY USE AND TRACKING PURPOSES ONLY AND MAY BE UPDATED AT ANY TIME. ANY UPDATES WILL NOT ALTER THE ITEM AS DESCRIBED HEREIN.

CHK BY: BDennis

SCALE: NTS

DWN BY: fcortinas

DATE: 10/12/2017

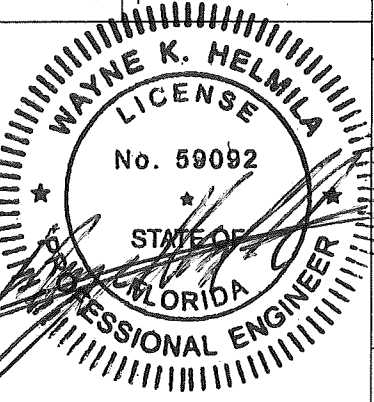
SHEET: 11 OF 12

REV B

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1605WDVM LOUVER
BILL OF MATERIAL
GENERAL NOTES



MAY 28 2024

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REV B - UPDATED PAGE NO.
ADDED ITEM# 8- BAFFLE
ADDED ITEM# 9- JAMB STOP
ADDED ITEM #10- 6 X 3 X 1/4 ANGLE (CONT)
ADDED ITEM#11- 6 X 3 X 3/8 ANGLE (CONT)
ADDED ITEM # 12 -8 X 3 X 3/8 ANGLE (CONT)

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TABLE 1: HEAD & SILL ANCHORS													
Wood	Steel Stud	Steel	Concrete	CMU	Skinny Wall	Min.	Fastener Type	Diameter	# Rqd	O.C. Spacing	Edge	End	Embedment
X						SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	1/4"	1	3-1/4"	2"		2-1/16
X						SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	3/8"	1	3-3/4"	2"		2-1/16
	X					16 Ga.	Elco Bi-Flex Screws (300 Series SS, FY = 65 ksi)	1/4"	1	3"	2"		3 THREADS BEYOND SUBSTRATE
		X				A-36	Elco Bi-Flex Screws (300 Series SS, FY = 65 ksi)	1/4"	1	9"	2"		1/4"
		X				A-36	Elco Drill-Flex Drilling Screws (Cond. CW - Fy= 65ksi) Sealed w/ Liquid Prosoco	5/16"	1	12"	2"		1/4"
			X- Cracked 6" Deep			4 ksi	Hilti Kwik HUS-EZ SS 316	3/8	1	12"	4"	4"	2-1/2

TABLE 2: SKINNY WALL ANCHORS													
Wood	Steel Stud	Steel	Concrete	CMU	Skinny Wall	Min.	Fastener Type	Diameter	# Rqd	O.C. Spacing	Edge	End	Embedment
X					X	SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	1/4"	1	3-3/4"	3"		2-3/16"
X					X	SG 0.42	LAG BOLT (300 SERIES SS - COND. CW - Fy = 65 ksi)	3/8"	1	5"	3"		2-3/16"
	X				X	16 Ga.	Elco Bi-Flex Drilling Screws (300 Series SS, FY = 65 ksi)	1/4"	1	1"	3"		3 THREADS BEYOND SUBSTRATE
		X			X	A-36	Elco Bi-Flex Drilling Screws (300 Series SS, FY = 65 ksi)	1/4"	1	7"	3"		1/4"
		X			X	A-36	Elco Drill-Flex Drilling Screws (Cond. CW - Fy= 65ksi) Sealed w/ Liquid Prosoco	5/16"	1	8"	3"		1/4"
			X- Cracked 6" Deep		X	4 ksi	HILTI KWIK BOLT TZ2 SS 304	3/8"	1	8"	3"	3"	2-1/2"
			X- Cracked 6" Deep		X	4 ksi	HILTI KWIK BOLT TZ2 SS 304	1/2"	1	10"	3"	3"	3"
				X-Grout Filled	X	2 ksi	HILTI HIT-Hy 270 Threaded Rod 3/16/304 SS	3/4"	1	8"	4"		6-3/4"

NOTE 1: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING, 6" WIDE, CMU CONFORMING TO ASTM C-90 FILLED WITH 4,747 KSI GROUT.

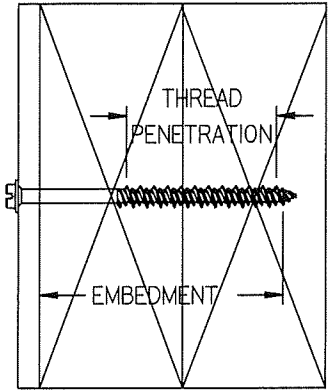
NOTE 2: CONCRETE MASONRY (CMU) SHALL BE > THE FOLLOWING, 6" WIDE, GRADE N, TYPE II, LIGHT-WEIGHT / MEDIUM-WEIGHT / NORMAL-WEIGHT CMU CONFORMING TO ASTM C-90. MORTAR MUST BE TYPE N. CMU STRENGTH = 2000 psi

NOTE 3: CONCRETE, STEEL, WOOD, MASONRY, CURTAIN WALL, STOREFRONT, AND ALL OTHER BUILDING SUBSTRATES ARE DESIGNED BY OTHERS.

NOTE 4: ENGINEER OF RECORD TO VERIFY THAT BUILDING SUBSTRATE CAN SUPPORT THE LOUVER REACTIONS.

NOTE 5: THREAD PENETRATION LENGTH SIGNIFIES THE REQUIRED LENGTH OF THE THREADED PORTION OF THE FASTENER INTO THE WOOD SUBSTRATE PROVIDING FULL CONTACT WITH WOOD. LAG SCREW TIP CANNOT BE CONSIDERED PART OF THE TREADED PORTION FO THE SCREW. LAG SCREWS ARE NOT TO BE INSTALLED AT WOOD JOINTS / SPICES WHERE THE LAG SCREW COULD FALL BETWEEN MEMBERS.

NOTE 6: STEEL STUDS TO BE 16 GA. FY= 33ksi MIN.



PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.06**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B: UPDATED FASTENER
SCHEDULE (2 TABLES).

DWN BY: fcortinas

DATE: 10/12/2017

CHK BY: BDennis

SCALE: NTS

REV

B

SHEET: 12 OF 12

DWG. NO. 1605WDVM

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Nailor Industries Inc.
4714 Winfield Road
Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086
www.nailor.com

TITLE:

1605WDVM LOUVER
FASTENER SCHEDULE

WAYNE K. HELMILA

LICENSE

No. 59092

STATE OF FLORIDA

PROFESSIONAL ENGINEER

MAY 28 2024

RICE

ENGINEERING

105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

Florida Firm No: F-01000005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092