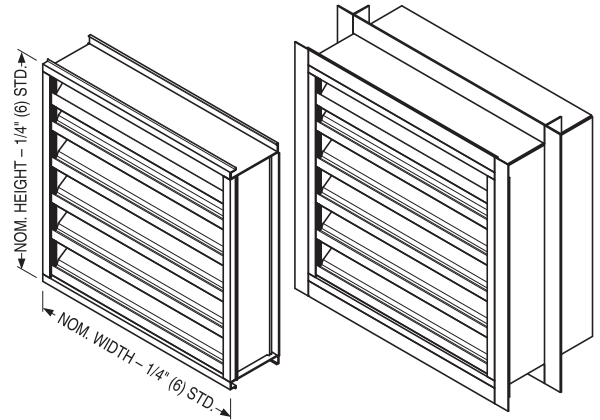




EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH PERFORMANCE DRAINABLE BLADE
6" (152) DEEP • HORIZONTAL BLADE
MODEL: 1606DHPM

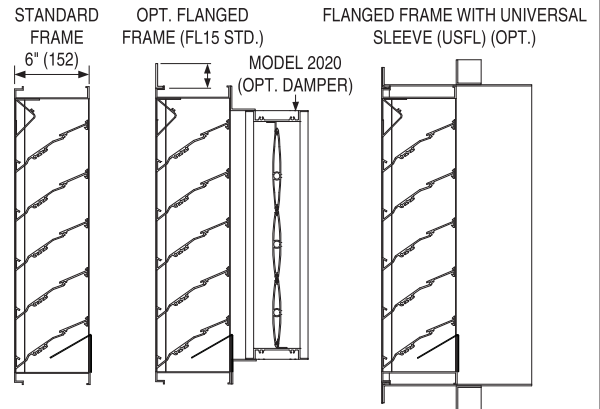
QUALIFICATIONS:

- Miami-Dade County NOA No. : 24-0516.04
- Florida Product Approval No. : 41441.3
- Texas Department of Insurance Evaluation ID : LVR-27
- Tested in accordance with: TAS-100A (Wind-Driven Rain [with optional Model 2020 damper in closed position]), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test) and TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (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:** 6" (152) deep, Type 6063-T6 extruded aluminum, .120" (3.05) nominal wall thickness. Integral downsouts and caulking slot provided.
- BLADES:** Type 6063-T6 extruded aluminum, .100" (2.54) nominal wall thickness, with reinforcing bosses.
- BLADE ANGLE:** Fixed at 37.5 degrees.
- BLADE SPACING:** Approximately 4" (102) 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 SECTION SIZE:** 72" W x 120" H (1829 x 3048). 60 sq. ft. (5.6 m²) (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).



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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:		For Installation Instructions, see approved NOA.			
PROJECT: T6040601 Louvers - PR		Page 1 of 3 Dimensions are in inches (mm).			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	3 - 30 - 26	1600F	8 - 26 - 24	1606DHPM	



EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH PERFORMANCE DRAINABLE BLADE
6" (152) DEEP • HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1606DHPM

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	0.31	0.51	0.70	0.89	1.09	1.28	1.48	1.67	1.87	2.06	2.25
	0.30	0.03	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.17	0.19	0.21
	18	0.60	0.98	1.35	1.73	2.11	2.48	2.86	3.23	3.61	3.99	4.36
	0.46	0.06	0.09	0.13	0.16	0.20	0.23	0.27	0.30	0.34	0.37	0.41
	24	0.90	1.47	2.03	2.60	3.16	3.73	4.29	4.85	5.42	5.98	6.55
	0.61	0.08	0.14	0.19	0.24	0.29	0.35	0.40	0.45	0.50	0.56	0.61
	30	1.19	1.93	2.68	3.42	4.16	4.90	5.64	6.39	7.13	7.87	8.61
	0.76	0.11	0.18	0.25	0.32	0.39	0.46	0.52	0.59	0.66	0.73	0.80
	36	1.33	2.16	3.00	3.83	4.66	5.49	6.32	7.15	7.98	8.81	9.65
	0.36	0.12	0.20	0.28	0.36	0.43	0.51	0.59	0.66	0.74	0.82	0.90
	42	1.77	2.87	3.97	5.07	6.17	7.27	8.37	9.47	10.57	11.67	12.78
	1.07	0.16	0.27	0.37	0.47	0.57	0.68	0.78	0.88	0.98	1.08	1.19
	48	2.05	3.33	4.61	5.89	7.17	8.45	9.65	11.01	12.29	13.57	14.85
	1.22	0.19	0.31	0.43	0.55	0.67	0.79	0.90	1.02	1.14	1.26	1.38
	54	2.34	3.80	5.26	6.73	8.19	9.65	11.11	12.57	14.03	15.49	16.95
	1.37	0.22	0.35	0.49	0.62	0.76	0.90	1.03	1.17	1.30	1.44	1.57
	60	2.64	4.28	5.92	7.57	9.21	10.86	12.50	14.14	15.79	17.43	19.07
	1.52	0.24	0.40	0.55	0.70	0.86	1.01	1.16	1.31	1.47	1.62	1.77
66	2.92	4.74	6.56	8.39	10.21	12.03	13.85	15.67	17.49	19.31	21.13	
1.68	0.27	0.44	0.61	0.78	0.95	1.12	1.29	1.46	1.63	1.79	1.96	
72	3.21	5.22	7.22	9.22	11.23	13.23	15.24	17.24	19.24	21.25	23.25	
1.83	0.30	0.48	0.67	0.86	1.04	1.23	1.42	1.60	1.79	1.97	2.16	
78	3.50	5.68	7.87	10.05	12.23	14.41	16.60	18.78	20.96	23.14	25.33	
1.98	0.33	0.53	0.73	0.93	1.14	1.34	1.54	1.74	1.95	2.15	2.35	
84	3.79	6.16	8.52	10.89	13.25	15.61	17.98	20.34	22.71	25.07	27.43	
2.13	0.35	0.57	0.79	1.01	1.23	1.45	1.67	1.89	2.11	2.33	2.55	
90	4.08	6.63	9.17	11.72	14.26	16.81	19.35	21.89	24.44	26.98	29.53	
2.29	0.38	0.62	0.85	1.09	1.32	1.56	1.80	2.03	2.27	2.51	2.74	
96	4.37	7.09	9.82	12.54	15.27	17.99	20.71	23.44	26.16	28.89	31.61	
2.44	0.41	0.66	0.91	1.17	1.42	1.67	1.92	2.18	2.43	2.68	2.94	
102	4.66	7.57	10.47	13.38	16.28	19.19	22.09	25.00	27.90	30.81	33.71	
2.59	0.43	0.70	0.97	1.24	1.51	1.78	2.05	2.32	2.59	2.86	3.13	
108	4.95	8.04	11.12	14.21	17.29	20.38	23.46	26.55	29.63	32.72	35.80	
2.74	0.46	0.75	1.03	1.32	1.61	1.89	2.18	2.47	2.75	3.04	3.33	
114	5.24	8.51	11.78	15.04	18.31	21.58	24.84	28.11	31.38	34.65	37.91	
2.90	0.49	0.79	1.09	1.40	1.70	2.00	2.31	2.61	2.92	3.22	3.52	
120	5.53	8.98	12.42	15.87	19.31	22.76	26.21	29.65	33.10	36.54	39.99	
3.05	0.51	0.83	1.15	1.47	1.79	2.11	2.43	2.75	3.07	3.40	3.72	



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SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

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

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 30 - 26	1600F	8 - 26 - 24	1606DHPM



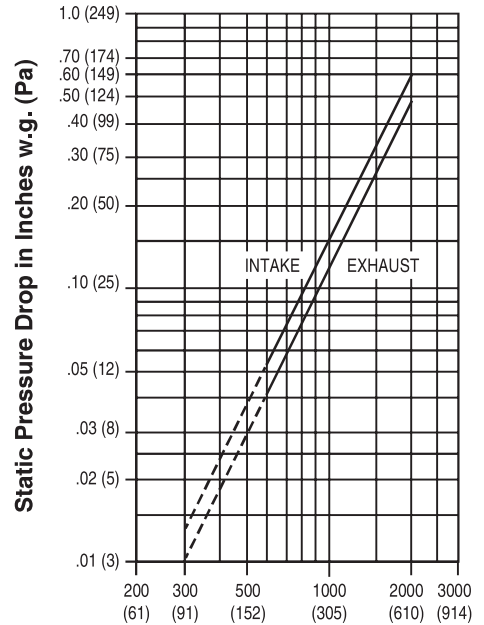
EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH PERFORMANCE DRAINABLE BLADE
6" (152) DEEP • HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1606DHPM

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

Free Area %		60%
Free Area sq. ft. (sq. m.)		9.65 (0.90)
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)	1186 fpm (361 m/min.)
	Air Volume at 1186 fpm	11,445 cfm (5401 l/s)
	Free Area Velocity	
	Pressure Drop @ 1186 fpm	.19 in. w.g. (47 Pa)

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

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 1606DHPM 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 and Water Penetration performance ratings.

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



Nailor Industries Inc. certifies that the 1606DHPM 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 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1346 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully closed position that stops airflow through the louver.



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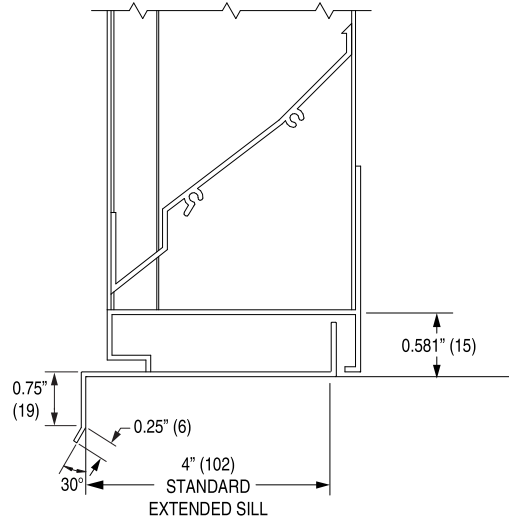


SCHEDULE TYPE:	Page 3 of 3			
PROJECT:	Dimensions are in inches (mm).			
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	3 - 30 - 26	1600F	8 - 26 - 24	1606DHPM

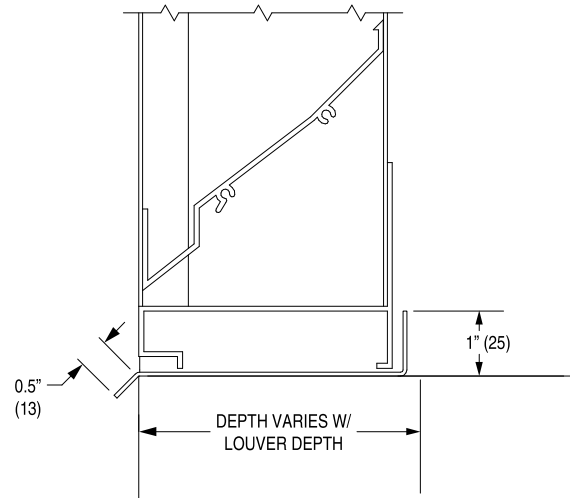


LOUVER ACCESSORIES
MODEL SERIES: 1600 & 1700
ESI EXTENDED SILL & PASI SILL PAN

❑ **ESI** Extended Sill

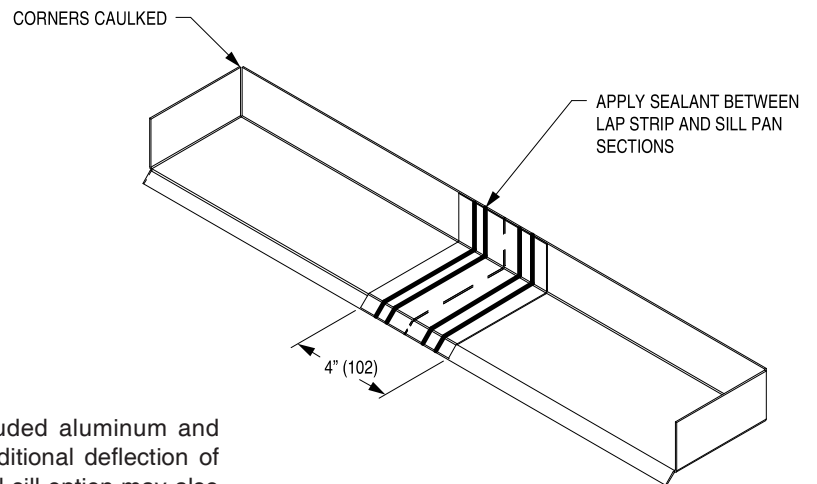


❑ **PASI** Sill Pan (Extended Sill with End Dams)



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



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Dimensions are in inches (mm).

SCHEDULE TYPE:					
PROJECT: T6040601 Louvers - PR					
ENGINEER:		DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:		1 - 29 - 26	ACC-ESI	New	ACC-ESI



**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 1606DHPM Aluminum Louver w/ and w/o Damper – L.M.I.

APPROVAL DOCUMENT: Drawing No. **1606DHPM**, titled “1606DHPM Louver w/ and w/o Damper”, sheets 1 through 27 of 27, prepared by manufacturer, dated 11/29/2021, with revision B dated 08/14/2024, 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. 23-0724.23** 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.**



08/15/24

**NOA No. 24-0516.04
Expiration Date: August 30, 2028
Approval Date: August 15, 2024**

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS “Submitted under NOA No. 18-0117.12”

1. Drawing No. **1606DHPM**, titled “1606DHPM Louver w/ and w/o Damper”, sheets 1 through 21 of 21, dated 06/14/17, prepared by the manufacturer, signed and sealed by Wayne K. Helmila, P.E.

B. TESTS “Submitted under NOA No. 18-0117.12”

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 1606 DHPM Louver System, prepared by Intertek, Test Report No. **H1900.01-801-18-R2**, dated 09/21/17 and revised on 05/23/18, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Wind Driven Rain Resistance per TAS 100(A)-95 on a Model 1606 DHPM Aluminum Louver with damper, prepared by Intertek, Test Report No. **H0222.04-801-18**, dated 09/27/17, 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 1606 DHPM Aluminum Louver, prepared by Intertek, Test Report No. **H0222.03-801-18**, dated 09/28/17, signed and sealed by Tyler Westerling, P.E.

C. CALCULATIONS “Submitted under NOA No. 18-0117.12”

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. 24-0516.04
Expiration Date: August 30, 2028
Approval Date: August 15, 2024

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER NOA # 21-0630.10 AND NEW

A. DRAWINGS

1. Drawing No. **1606DHPM**, titled “1606DHPM Louver w/ and w/o Damper”, sheets 1 through 27 of 27, prepared by manufacturer, dated 11/29/2021, with revision B dated 08/14/2024, 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 07/22/2024, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 07/22/2024, signed and sealed by Wayne K. Helmila, P.E.
“Submitted under NOA # 21-0630.10”
3. Statement letter of code conformance to the 7th edition (2020) FBC, issued by Rice Engineering, dated 08/16/2021, signed and sealed by Wayne K. Helmila, P.E.



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.04
Expiration Date: August 30, 2028
Approval Date: August 15, 2024

DRAWING INDEX:

1. INDEX TO DRAWINGS AND NOTES.
2. I606DHPM LOUVER- FLANGE FRAME SLEEVE MOUNT
3. I606DHPM LOUVER- CONTINUOUS ANGLE MOUNT
4. I606DHPM / DAMPER- FLANGE FRAME SLEEVE MOUNT
5. I606DHPM / DAMPER- CONTINUOUS ANGLE MOUNT
6. I606DHPM LOUVER- FLANGE FRAME SLEEVE MOUNT HEAD & SILL DETAIL
7. I606DHPM LOUVER- MULLION ANGLE MOUNT HEAD & SILL DETAIL.
8. I606DHPM LOUVER- BLADE SUPPORT DETAIL
9. I606DHPM LOUVER- FLANGE FRAME SLEEVE MOUNT JAMB AND SUPPORT DETAIL
10. I606DHPM LOUVER- CONTINUOUS ANGLE MOUNT JAMB AND SUPPORT DETAIL.
11. I606DHPM LOUVER- FLANGE FRAME SLEEVE MOUNT MULLION DETAIL.
12. I606DHPM LOUVER- CONTINUOUS ANGLE MOUNT MULLION DETAIL.
13. I606DHPM LOUVER / DAMPER FLANGE FRAME W/ SLEEVE & MULLION ANGLE MOUNT HEAD & SILL DETAIL.
14. I606DHPM / DAMPER- FLANGE FRAME SLEEVE MOUNT CMU SUBSTRATE HEAD & SILL DETAIL
15. I606DHPM / DAMPER- FLANGE FRAME SLEEVE MOUNT JAMB AND MULLION DETAIL
16. I606DHPM LOUVER / DAMPER FLANGE FRAME SLEEVE MOUNT 9 X 3 X 1/4 & 11 X 3 X 1/4 ANGLE MULLION DETAIL
17. I606DHPM LOUVER / DAMPER CONTINUOUS ANGLE MOUNT JAMB AND MULLION DETAIL.
18. I606DHPM LOUVER / DAMPER COUNTINUOUS ANGLE MOUNT 9 X 3 X 1/4 & 11 X 3 X 1/4 ANGLE MULLION DETAIL
19. I606DHPM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT PART PROFILES.
20. I606DHPM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT PART PROFILES CONT.
21. 16" MULLION ANGLES BACK OF THE WALL MOUNT
22. 20" MULLION ANGLES BACK OF THE WALL MOUNT.
23. 30" CMU MULLION ANGLES BACK OF THE WALL MOUNT.
24. I606DHPM LOUVER W/ AND W/O DAMPER AVAILBLE SHAPES
25. I606DHPM LOUVER W/ AND W/O DAMPER- SLEEVE / CONTINUOUS MOUNT BILL OF MATERIAL.
26. I606DHPM LOUVER W/ AND W/O DAMPER FASTENER TABLES
27. I606DHPM LOUVERW/ AND W/O DAMPER GENERAL NOTES.

NOTES:

- 1) THE I606DHPM HAS BEEN TESTED IN ACCORDANCE WITH THE MIAMI-DADE COUNTY PROTOCOLS TAS - 100 (A),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. MINIMUM EDGE DISTANCE AND EMBEDMENT REQUIREMENTS ARE SHOWN. NAIL OR IND. DOES NOT DETERMINE THE STURCTURE INTEGRITY OF THE SUBSTRUCTURE.
- 5) MAXIMUM 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.

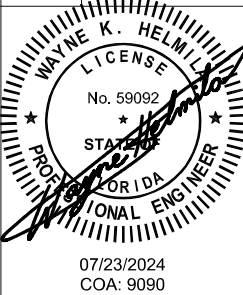
TESTS PERFORMED:

TAS-100 (A) WIND DRIVEN RAIN RESISTANCE
 TAS-201 LARGE MISSILE IMPACT
 TAS-202 UNIFORM STATIC AIR PRESSURE TEST
 TAS-203 CYCLIC WIND PRESURSE TEST
 DESIGN PRESSURE RATING 150 PSF

DWN BY: fcoortinas	CHK BY: Bbennis
DATE: 11/29/2021	SCALE: NTS
SHEET: 1 OF 27	
DWG. NO.	REV. B
I606DHPM	

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

TITLE:
**I606DHPM LOUVER
 W/ AND W/O DAMPER
 INDEX**



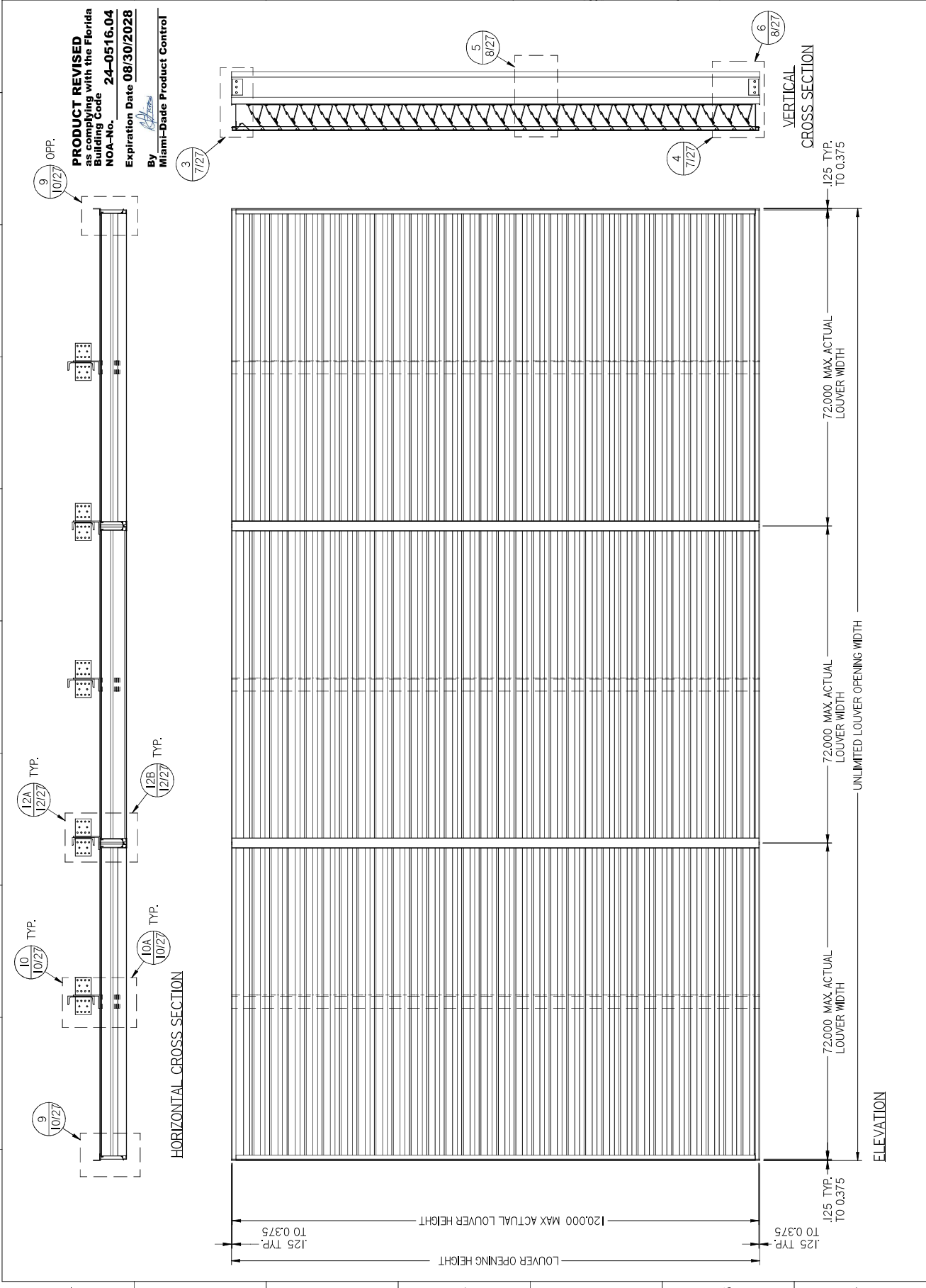
PRODUCT REVISED
 as complying with the Florida
 Building Code
NOA-No. 24-0516.04
 Expiration Date **08/30/2028**

By *[Signature]*
Miami-Dade Product Control

REVISIONS:
 REV B: UPDATED DRAWING INDEX
 REV B : PG 20,21,22,23,24,25,26,27

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. Helmla
 Registration No: 59092

REV	DB	1606DHPM
SHEET: 3 OF 27		DWG. NO.
CHK BY: Bennis	DATE: 11/29/2021	SCALE: NTS
DWN BY: fcornting		DATE: 11/29/2021
 Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com		TITLE 1606DHPM LOUVER COUNTERS ANGLE MOUNT
		07/23/2024 COA: 9090
RICE ENGINEERING 105 School Creek Trail Lubenburg, WI 54217 Phone: (608) 416-1042 Fax: (608) 417-1100 www.riceinc.com Florida Firm No: F4100005961 Certificate of Authorization: #8080 Wayne K. Helm Registration No: 59092		



1606DHPM
FLANGE FRAME
SLEEVE MOUNT

DATE: 11/29/2021
SCALE: NTS

CHK BY: Bdenis
DWN BY: fcorinas

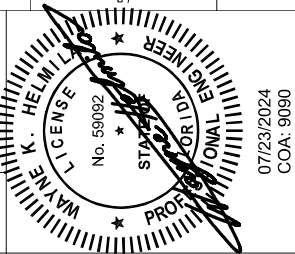
SHEET: 4 OF 27

DWG. NO. 1606DHPM

1606DHPM / DAMPER
FLANGE FRAME
SLEEVE MOUNT

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

Nailor Industries Inc.

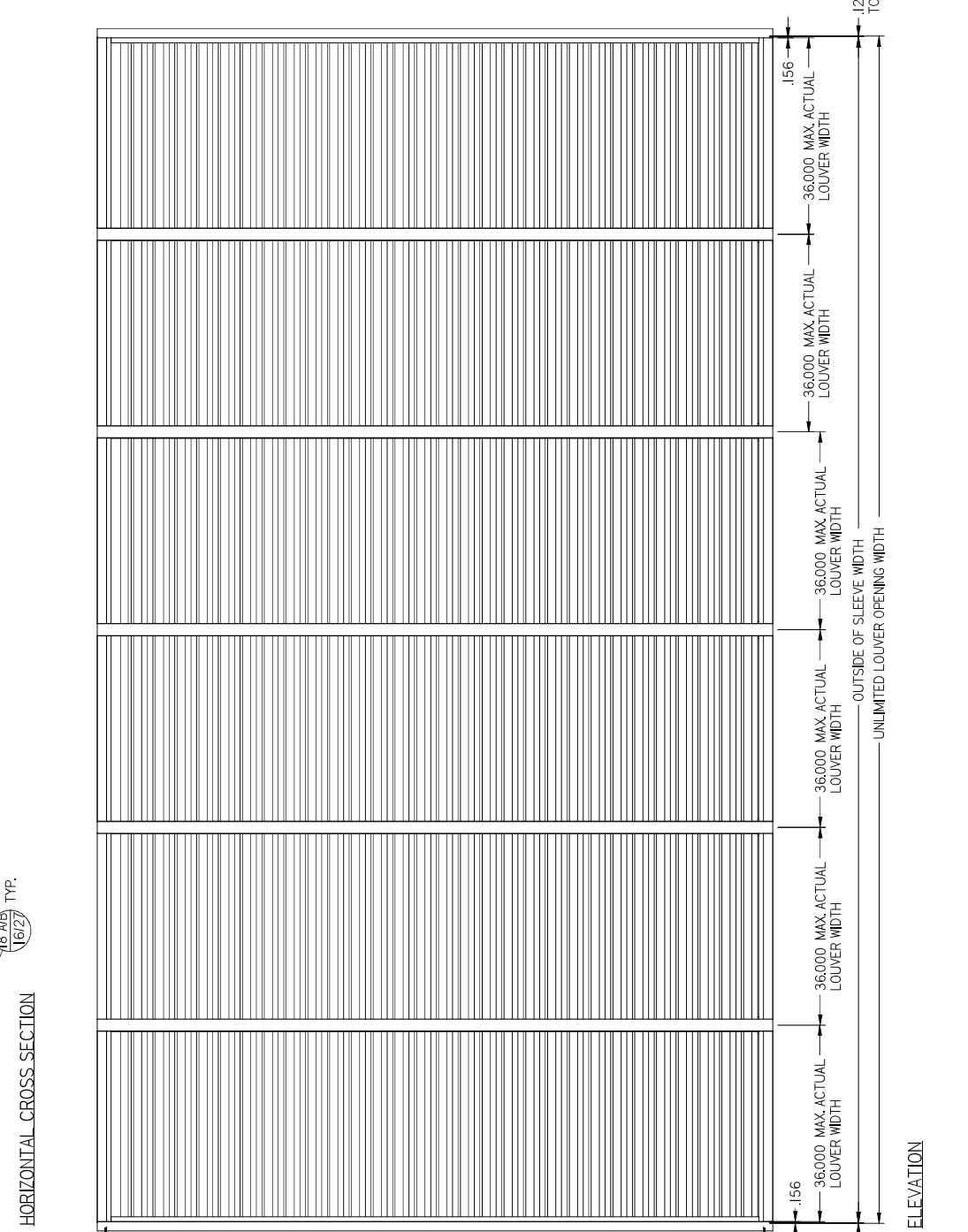
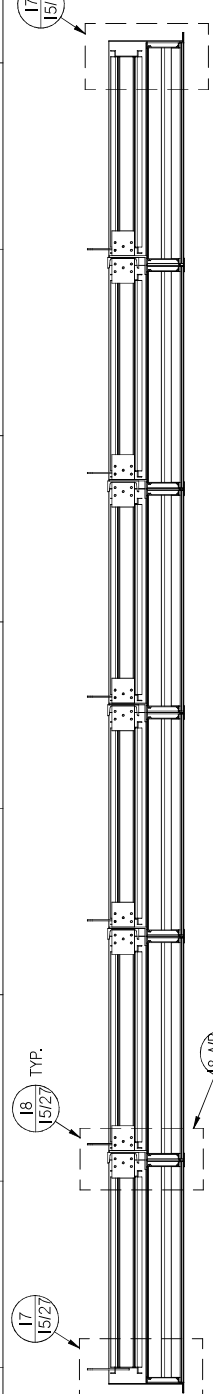


RICE
ENGINEERING
105 School Creek Trail
Lubbock, TX 79427
Phone: 806-812-1042
Fax: 806-812-1100
www.riceinc.com

Florida Firm No. EA1000059561
Certificate of Authorization: #9090
Wayne K. Helm
Registration No.: 59092

PRODUCT REVISED
as complying with the Florida
Building Code **24-0516.04**
NOA-No. **24-0516.04**
Expiration Date **08/30/2028**

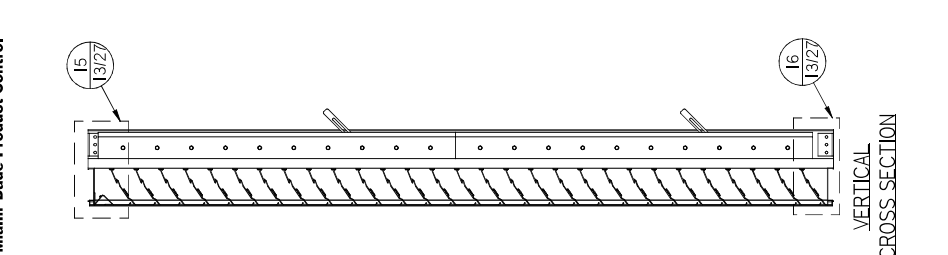
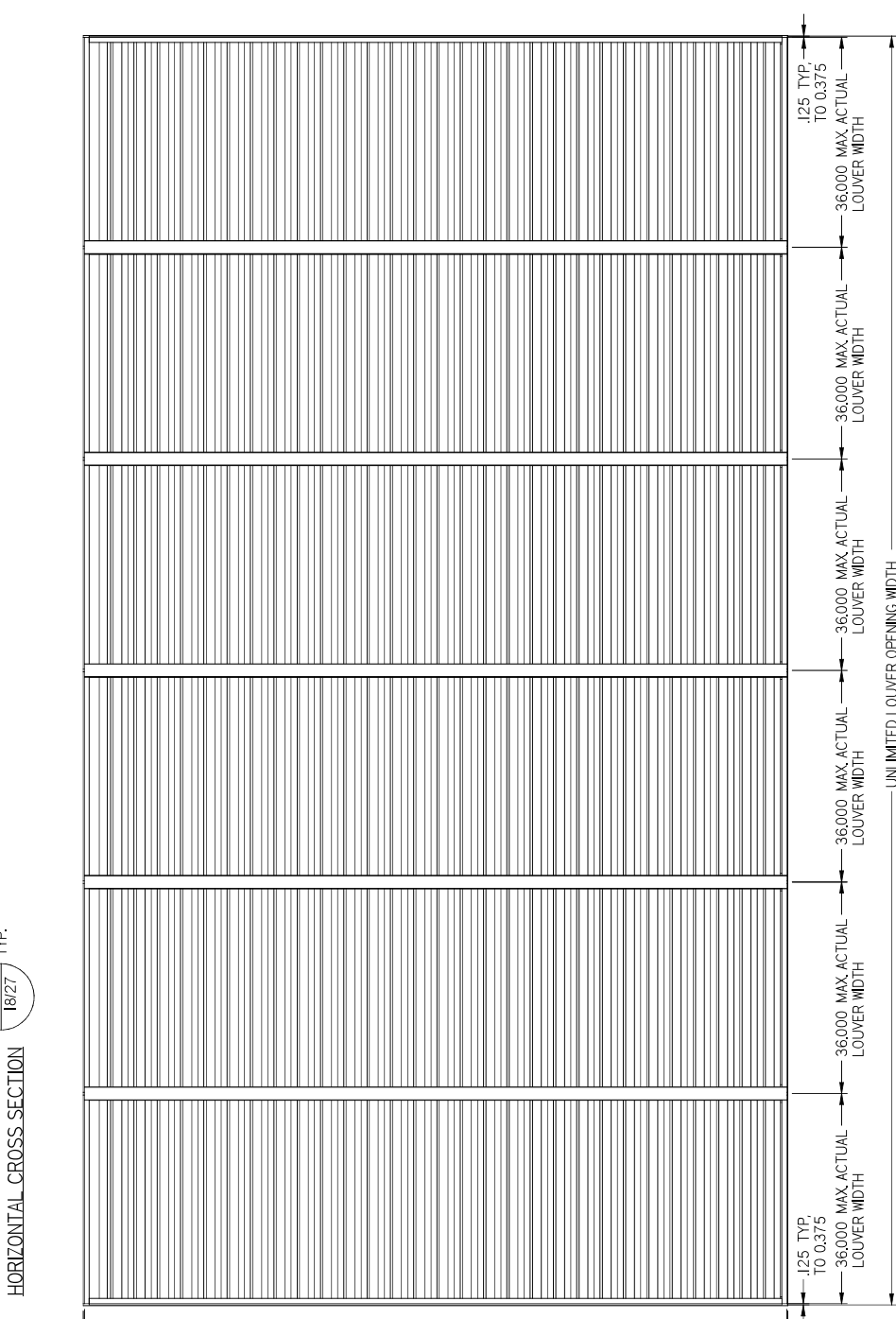
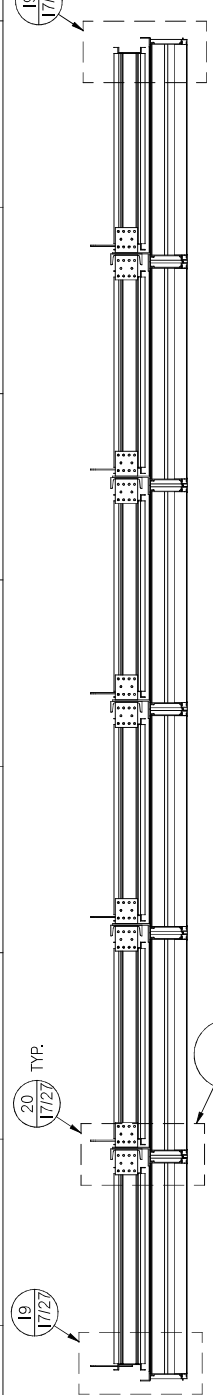
By *[Signature]*
Miami-Dade Product Control



125 TYP. LOUVER OPENING HEIGHT
120.00 MAX. ACTUAL LOUVER HEIGHT
156 MAX. ACTUAL LOUVER WIDTH
36.000 MAX. ACTUAL LOUVER WIDTH
125 TYP. TO 0.375
125 TYP. TO 0.375

1	2	3	4	5	6	7
REV	DWG. NO.	TITLE				RICE ENGINEERING 105 School Creek Trail Luemburg, WI 54217 Phone: (608) 714-1042 Fax: (608) 817-1100 www.riceinc.com Florida Firm No. F41000005061 Certificate of Authorization: #8080 Wayne K. Helm Registration No.: 59092
1606DHPM	1606DHPM	1606DHPM / DAMPER CONTINUOUS ANGLE MOUNT		07/23/2024 COA: 9090		
SHEET: 5 OF 27	DATE: 11/29/2021	4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.rice.com				
SCALE: NTS	DWN BY: fcorinas	CHK BY: Bdenis				

PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. 24-0516.04
 Expiration Date 08/30/2028
 By *[Signature]*
 Miami-Dade Product Control



HORIZONTAL CROSS SECTION

VERTICAL CROSS SECTION

ELEVATION

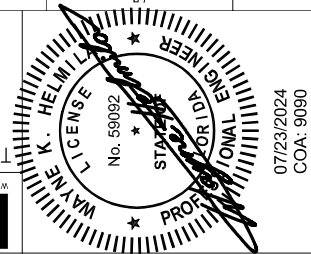
1606DHPM LOUVER
FLANGE FRAME
SLEEVE MOUNT
HEAD & SILL DETAIL

DATE: 11/29/2021
DWN BY: feortinas
CHK BY: Bdenms
SCALE: NTS

SHEET: 6 OF 27

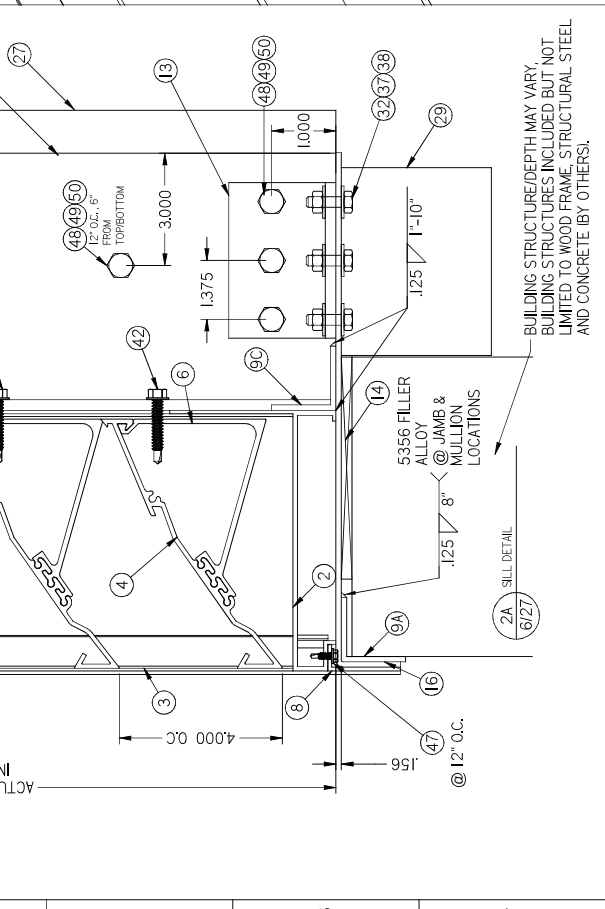
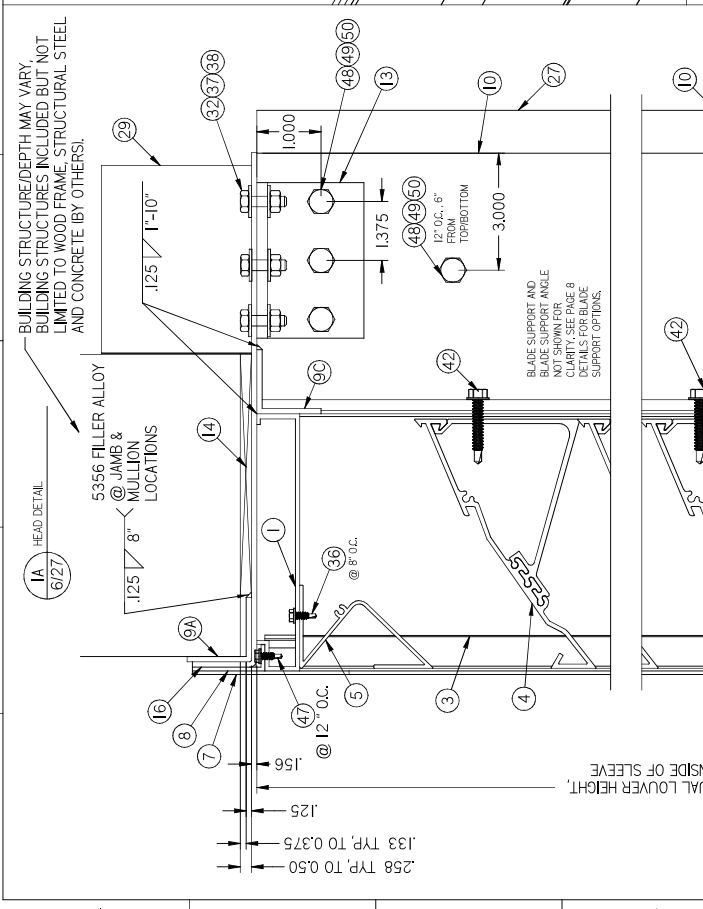
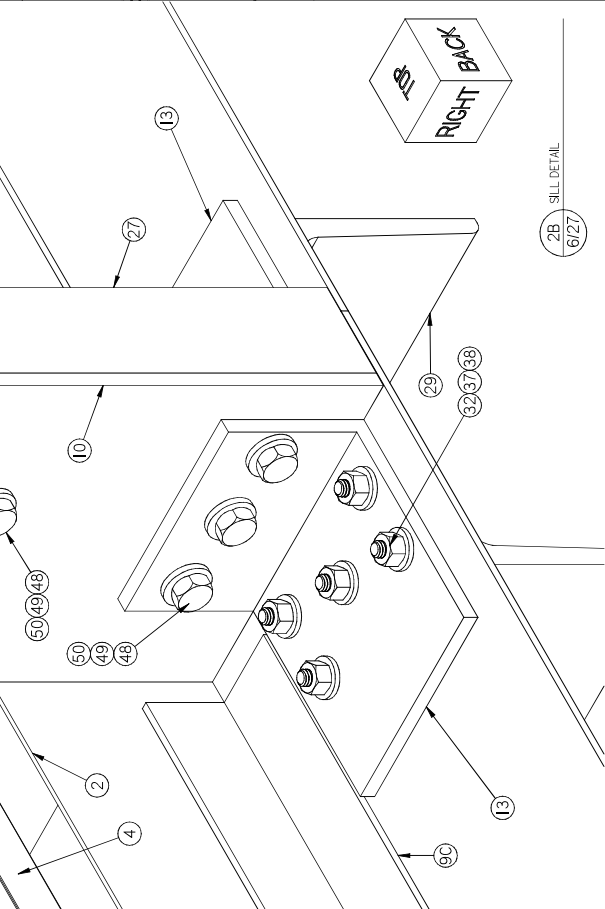
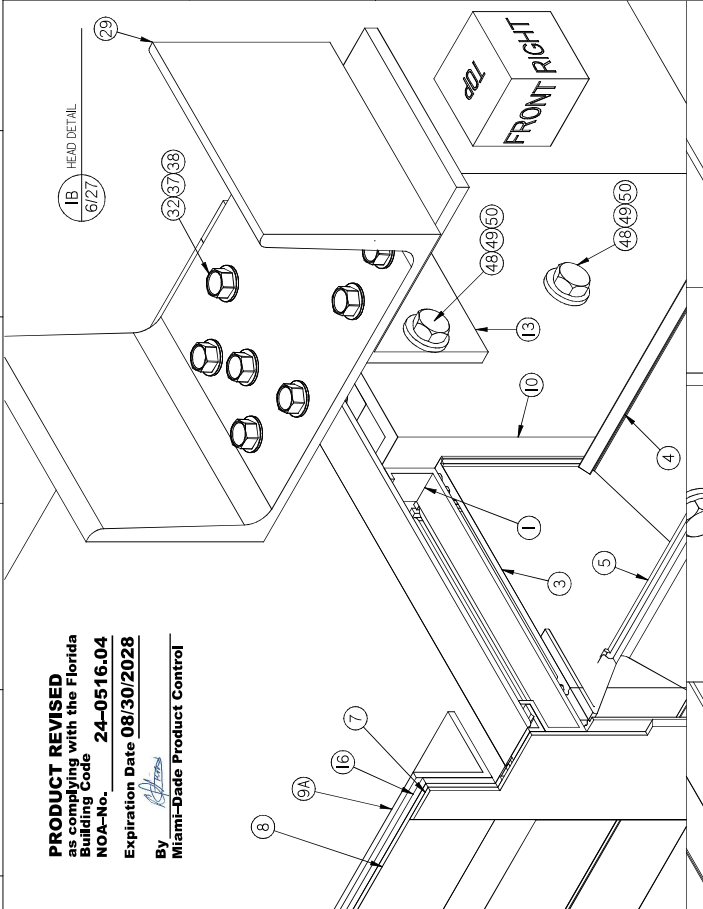
DWG. NO. 1606DHPM

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

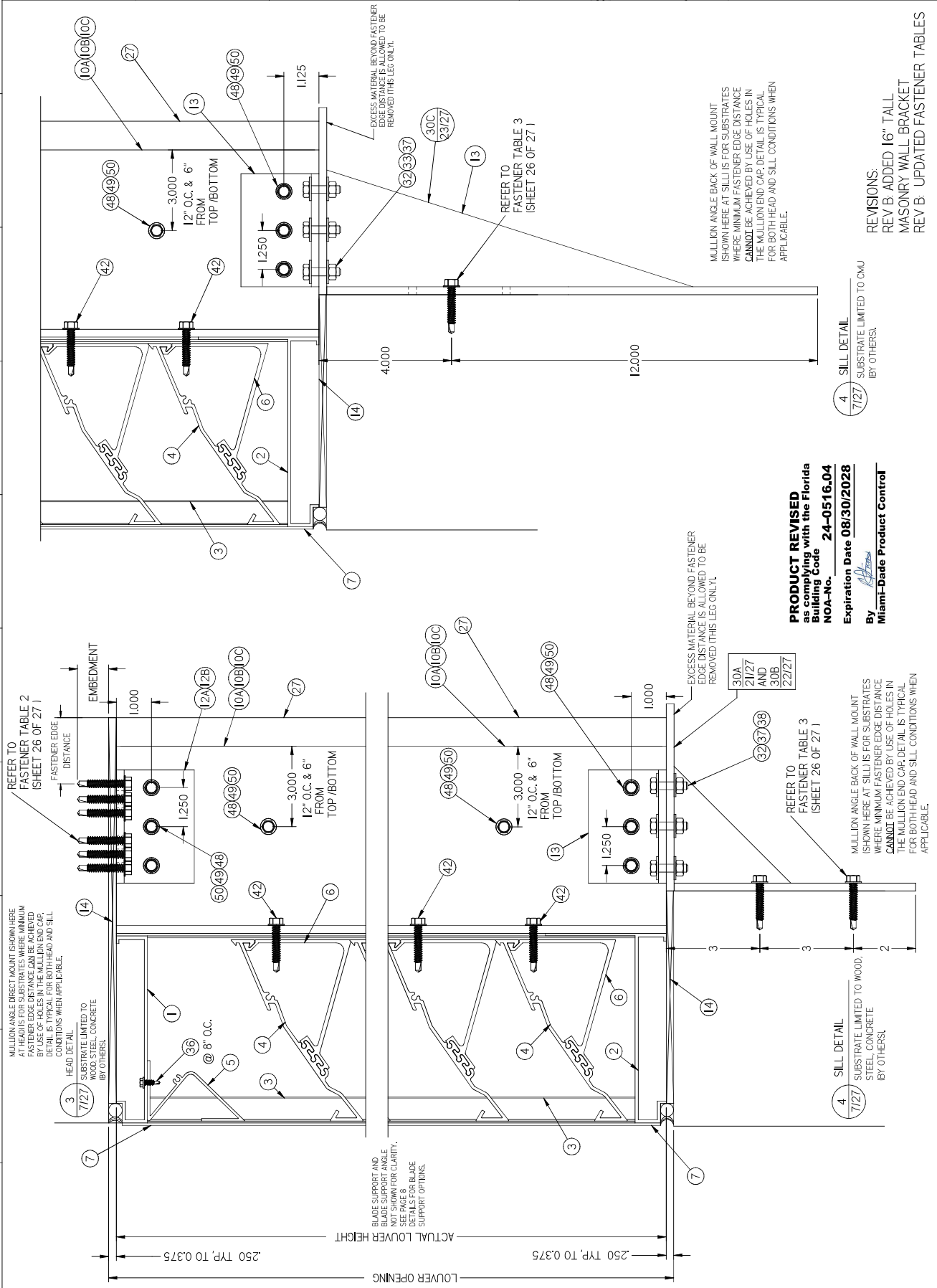


RICE ENGINEERING
105 School Creek Trail
Lubbock, TX 79427
Phone: 806.741.1042
Fax: 806.741.1100
www.riceinc.com

Florida Firm No. F4100005961
Certificate of Authorization: #9890
Wayne K. Helm
Registration No: 59092



258 TYP. TO 0.50
133 TYP. TO 0.375
125
INSIDE LOUVER HEIGHT,
ACTUAL LOUVER HEIGHT,
@ 12" O.C.
@ 12" O.C.
@ 8" O.C.
@ 8" O.C.



MULLION ANGLE DIRECT MOUNT (SHOWN HERE) IS FOR SUBSTRATES WHERE FASTENER EDGE DISTANCE CAN BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. DETAIL IS TYPICAL FOR BOTH HEAD AND SILL CONDITIONS WHEN APPLICABLE.

3 HEAD DETAIL
7/27 SUBSTRATE LIMITED TO WOOD, STEEL, CONCRETE (BY OTHERS).

REFER TO FASTENER TABLE 2 (SHEET 26 OF 27)

4 SILL DETAIL
7/27 SUBSTRATE LIMITED TO WOOD, STEEL, CONCRETE (BY OTHERS).

EXCESS MATERIAL BEYOND FASTENER EDGE DISTANCE IS ALLOWED TO BE REMOVED (THIS LEG ONLY).

EXCESS MATERIAL BEYOND FASTENER EDGE DISTANCE IS ALLOWED TO BE REMOVED (THIS LEG ONLY).

MULLION ANGLE BACK OF WALL MOUNT (SHOWN HERE AT SILL) IS FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE CANNOT BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. DETAIL IS TYPICAL FOR BOTH HEAD AND SILL CONDITIONS WHEN APPLICABLE.

MULLION ANGLE BACK OF WALL MOUNT (SHOWN HERE AT SILL) IS FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE CANNOT BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. DETAIL IS TYPICAL FOR BOTH HEAD AND SILL CONDITIONS WHEN APPLICABLE.

REFER TO FASTENER TABLE 3 (SHEET 26 OF 27)

REFER TO FASTENER TABLE 3 (SHEET 26 OF 27)

30A
21/27
AND
30B
22/27

30A
21/27
AND
30B
22/27

PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.04 Expiration Date 08/30/2028

PRODUCT REVISED as complying with the Florida Building Code NOA-No. 24-0516.04 Expiration Date 08/30/2028

By Miami-Dade Product Control

By Miami-Dade Product Control

REVISIONS:
REV B: ADDED 16" TALL MASONRY WALL BRACKET
REV B: UPDATED FASTENER TABLES

REVISIONS:
REV B: ADDED 16" TALL MASONRY WALL BRACKET
REV B: UPDATED FASTENER TABLES

ACTUAL LOUVER HEIGHT

ACTUAL LOUVER HEIGHT

2.50 TYP. TO 0.375

2.50 TYP. TO 0.375

LOUVER OPENING

LOUVER OPENING

BLADE SUPPORT AND BLADE SUPPORT ANGLE NOT SHOWN FOR CLARITY. SEE PAGE B FOR FAST BLADE SUPPORT OPTIONS.

BLADE SUPPORT AND BLADE SUPPORT ANGLE NOT SHOWN FOR CLARITY. SEE PAGE B FOR FAST BLADE SUPPORT OPTIONS.

11.25

11.25

1.250

1.250

3.000

3.000

12" O.C. & 6" FROM TOP/BOTTOM

12" O.C. & 6" FROM TOP/BOTTOM

4.000

4.000

12.000

12.000

1.000

1.000

EMBEDMENT

EMBEDMENT

1.000

1.000

1.250

1.250

3.000

3.000

12" O.C. & 6" FROM TOP/BOTTOM

12" O.C. & 6" FROM TOP/BOTTOM

1.250

1.250

11.25

11.25

1.000

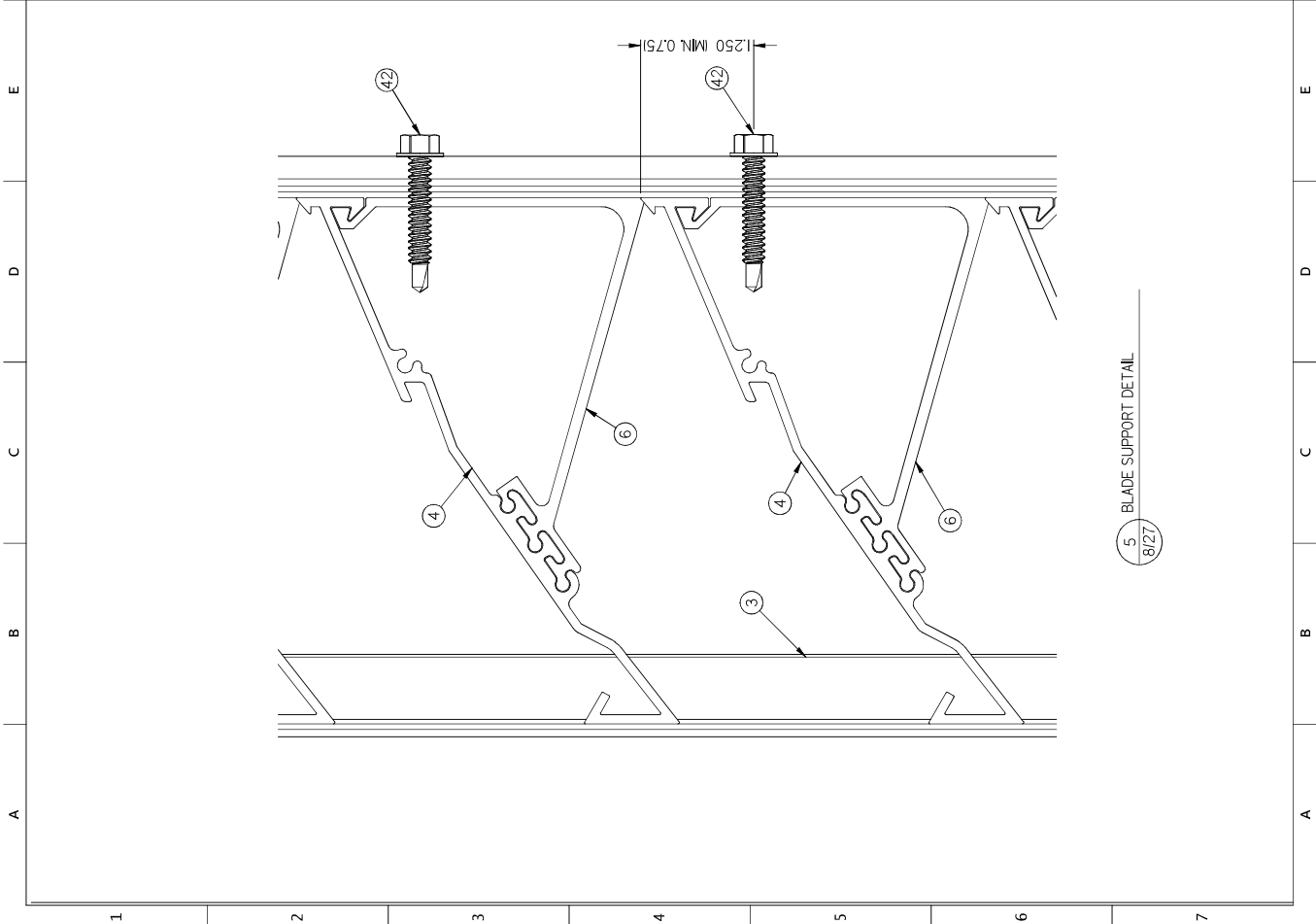
1.000

EMBEDMENT

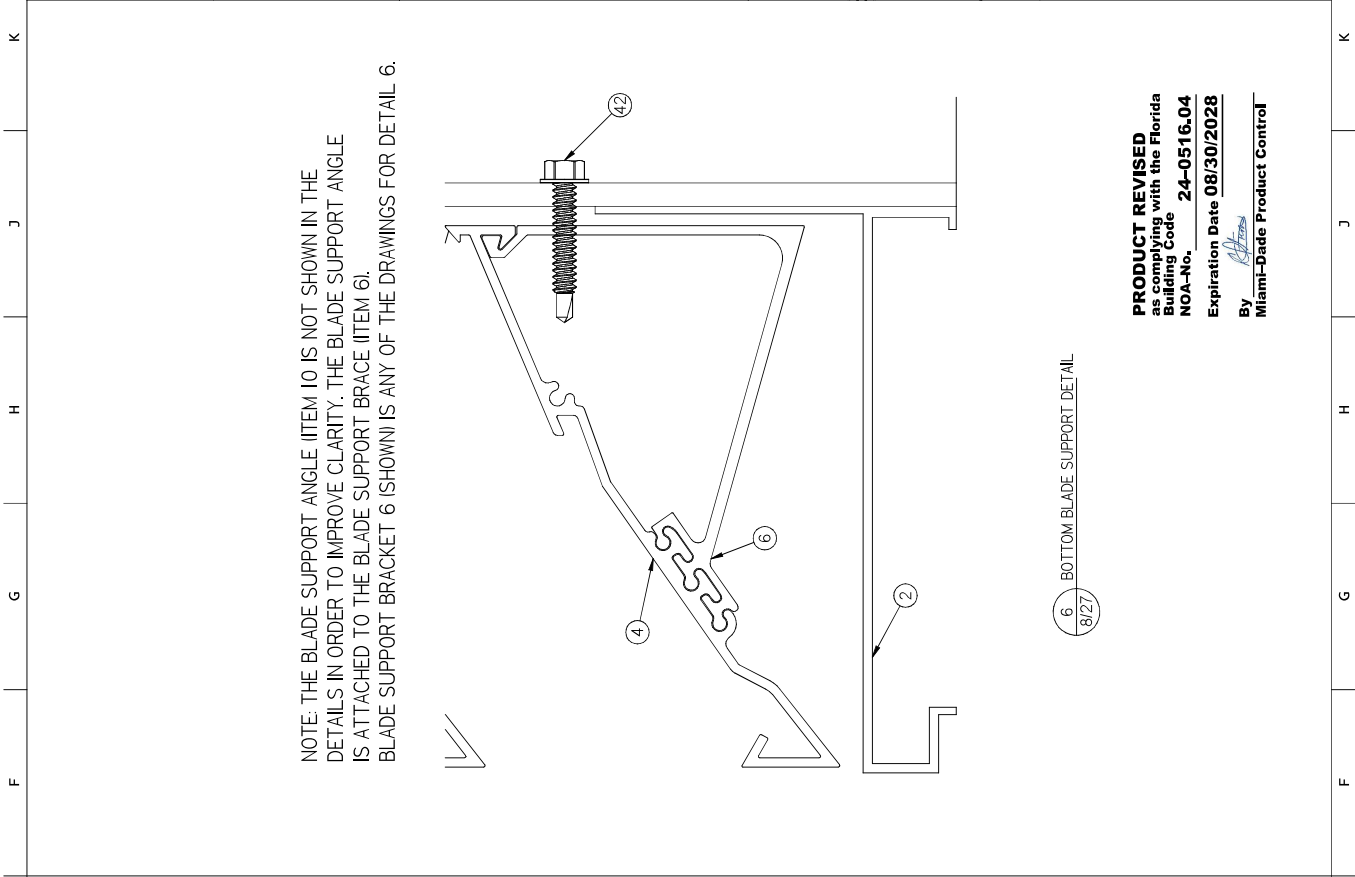
EMBEDMENT

1.000

1.000



5 BLADE SUPPORT DETAIL
8/27



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 BRACKET 6 (SHOWN) IS ANY OF THE DRAWINGS FOR DETAIL 6.

6 BOTTOM BLADE SUPPORT DETAIL
8/27

PRODUCT REVISED
as complying with the Florida
Building Code **24-0516.04**
NOA-No. **24-0516.04**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

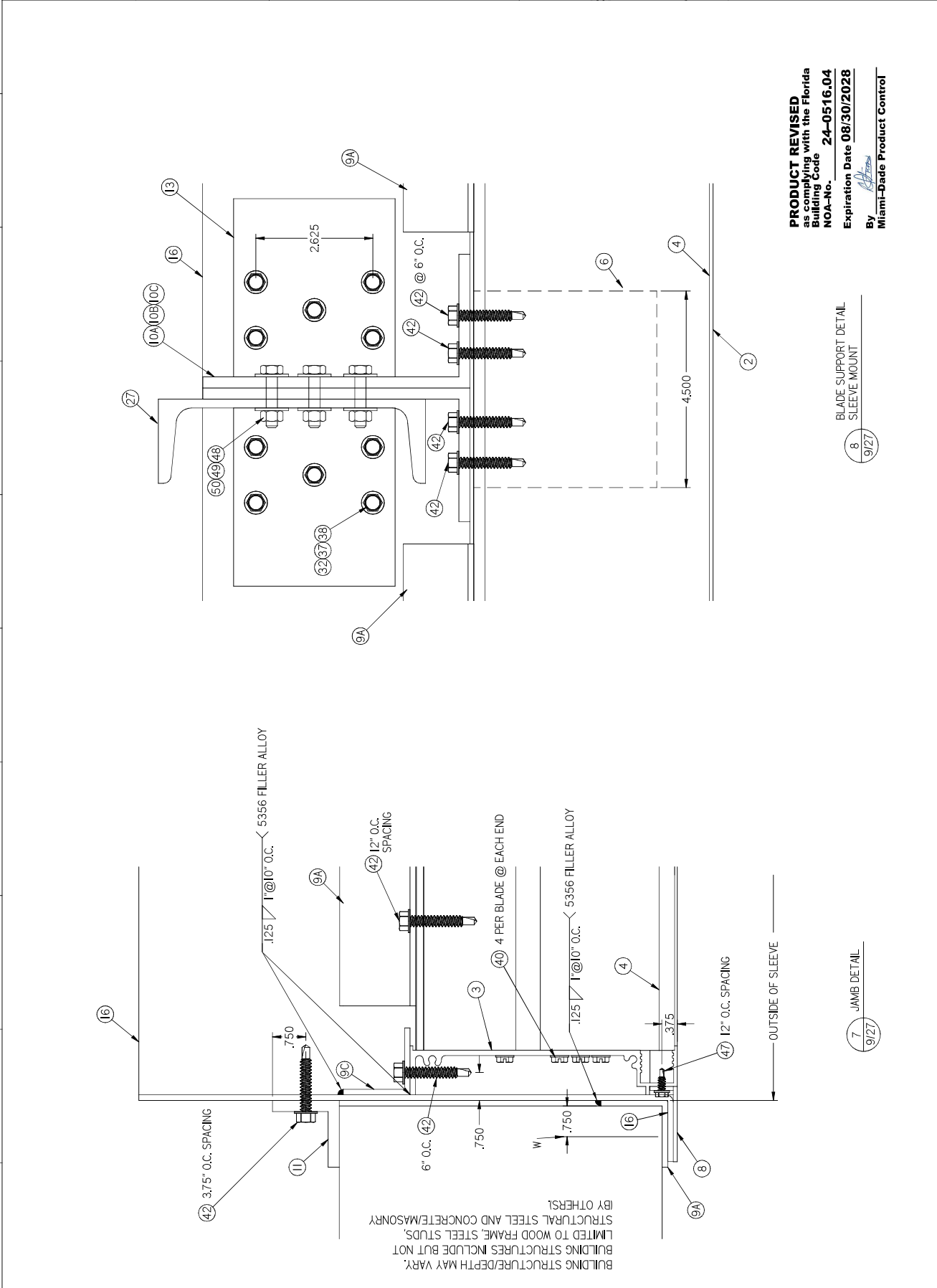
DWN BY: fcorinas		DATE: 11/29/2021		CHK BY: Bennis		SCALE: NTS		SHEET: 8 OF 27		REV: DB	
DWC. NO. 1606DHPM		4714 Winfield Road Houston, TX 77039		TEL: 281-590-1172 FAX: 281-590-3086		www.nailor.com		Nailor Industries Inc.			
07/23/2024		COA: 9090		1606DHPM LOUVER		BLADE SUPPORT DETAIL		RICE ENGINEERING		105 School Creek Trail Luverburg, WI 54217 Phone: (920) 871-1042 Fax: (920) 871-1100 www.riceinc.com Florida Firm No: F4100005961 Certificate of Authorization: #8080 Wayne K. Helmli Registration No.: 59092	

1606DHPM LAMINATED GLASS WINDOW
 JAMB DETAILS
 FLANGE FRAME SLEEVE MOUNT
 1606DHPM LOUVER
 TITLE

DATE: 11/29/2021
 SCALE: NTS
 DWG. NO. 1606DHPM

07/23/2024
 COA: 9090

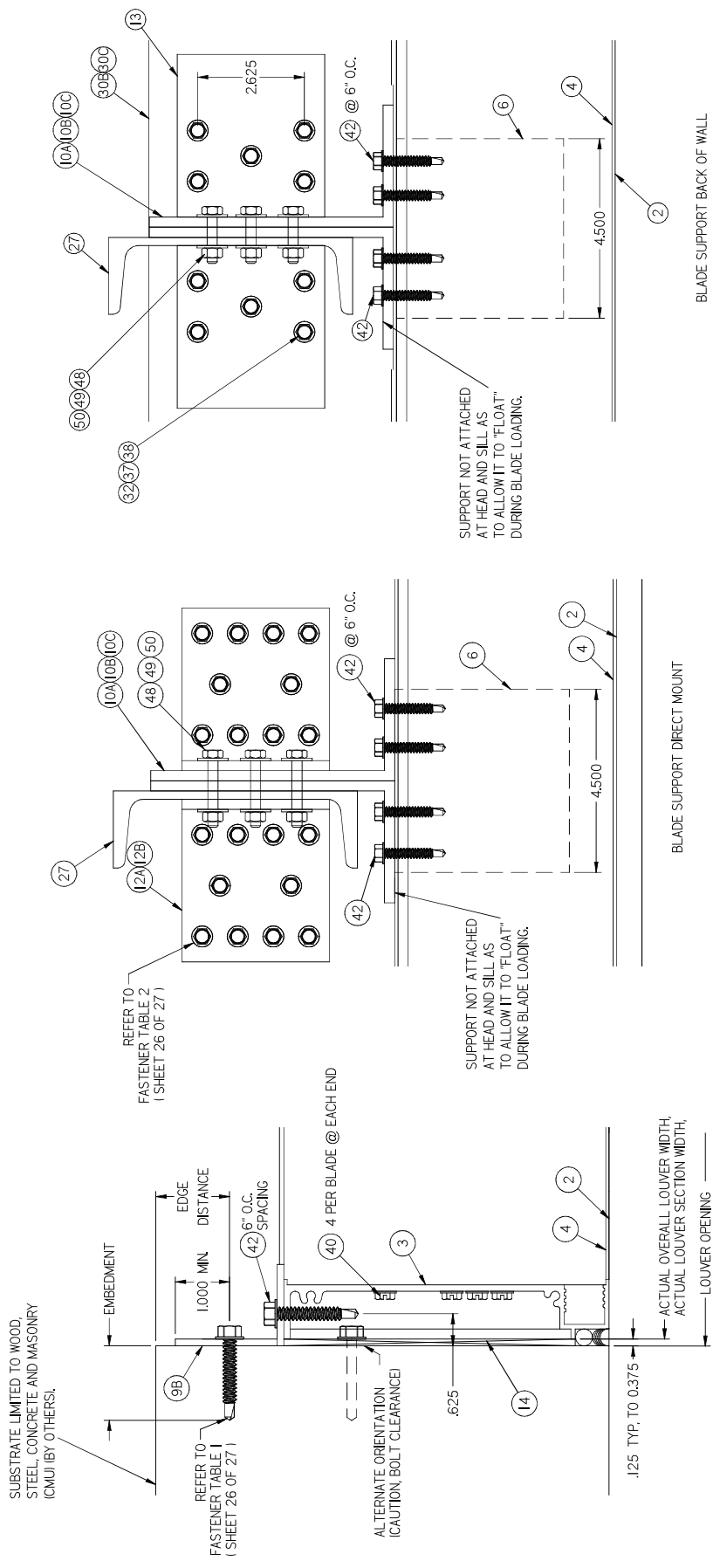
RICE
 ENGINEERING
 105 School Creek Trail
 Lubenburg, WI 54217
 Phone: (608) 741-1042
 Fax: (608) 741-1100
 www.riceinc.com
 Florida Firm No. F41000005961
 Certificate of Authorization: #8080
 Wayne K. Helmli
 Registration No.: 59092



1 2 3 4 5 6 7

1	2	3	4	5	6	7
REV	1606DHPM	DWG. NO.	1606DHPM LOUVER COUNTINOUS ANGLE MOUNT JAMB DETAIL	STA. 1000 No. 59092 WAYNE K. HELM FLORIDA ENGINEER	07/23/2024 COA: 9090	RICE ENGINEERING 105 School Creek Trail Lumburg, WI 54217 Phone: (608) 711-1042 Fax: (608) 711-1100 www.riceinc.com Florida Firm No: F4100005961 Certificate of Authorization: #9090 Wayne K. Helm Registration No: 59092
L	SHEET: 10 OF 27	DATE: 11/29/2021	4714 Winfield Road Houston, TX 77039 TEL 281-590-1172 FAX 281-590-3086 www.nalor.com			
L	SCALE: NTS	DWN BY: fcorinas	Nalor Industries Inc.			
K	CHK BY: Bennis					

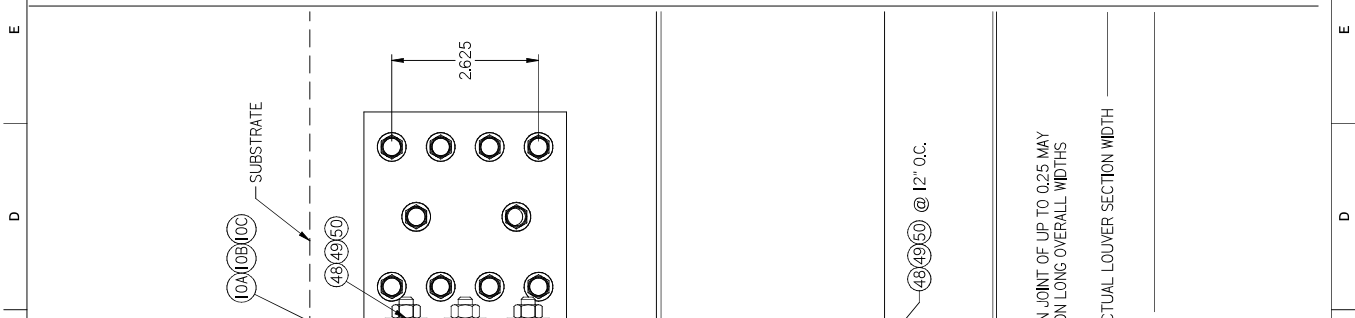
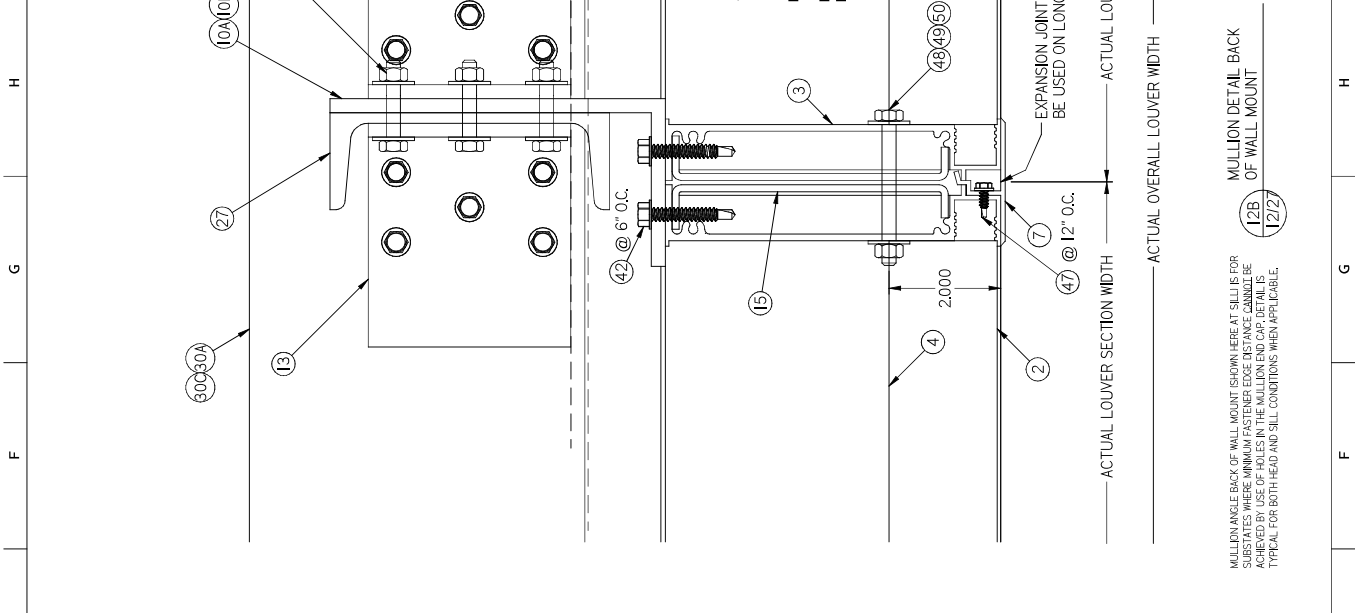
PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.04
Expiration Date 08/30/2028
By *[Signature]*
Miami-Dade Product Control



REVISIONS:
REV B: UPDATED FASTENER TABLES

9	JAMB DETAIL	10/27
10	BLADE SUPPORT DETAIL DIRECT MOUNT	10/27
10A	BLADE SUPPORT DETAIL BACK OF WALL MOUNT FOR CONT. ANGLE	10/27

RICE ENGINEERING
 105 School Creek Trail
 Lubenburg, WI 54217
 Phone: 608-785-1042
 Fax: 608-785-1100
 www.riceinc.com
 Florida Firm No. F4100005961
 Certificate of Authorization: #9890
 Wayne K. Helm
 Registration No. 59092



MULLION ANGLE BACK OF WALL MOUNT SHOWN HERE AT SILL IS FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE CANNOT BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. DETAIL IS TYPICAL FOR BOTH HEAD AND SILL CONDITIONS WHEN APPLICABLE. (12B) (12/2)

MULLION DETAIL - BACK OF WALL MOUNT (12B) (12/2)

MULLION DETAIL - DIRECT MOUNT (12A) (12/2)

MULLION ANGLE DIRECT MOUNT SHOWN HERE AT HEAD IS FOR SUBSTRATES WHERE MINIMUM FASTENER EDGE DISTANCE CAN BE ACHIEVED BY USE OF HOLES IN THE MULLION END CAP. DETAIL IS TYPICAL FOR BOTH HEAD AND SILL CONDITIONS WHEN APPLICABLE. (12A) (12/2)

ACTUAL OVERALL LOUVER WIDTH

ACTUAL LOUVER SECTION WIDTH

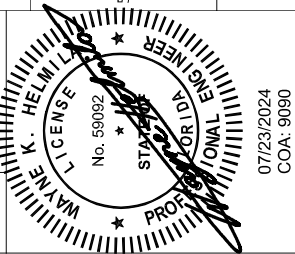
EXPANSION JOINT OF UP TO 0.25 MAY BE USED ON LONG OVERALL WIDTHS

ACTUAL LOUVER SECTION WIDTH

ACTUAL OVERALL LOUVER WIDTH

1606DHPM
SHEET: 13 OF 27
DWG. NO. 1606DHPM
DATE: 11/29/2021
SCALE: NTS
CHK BY: Bdeinis
DWN BY: fcorinas

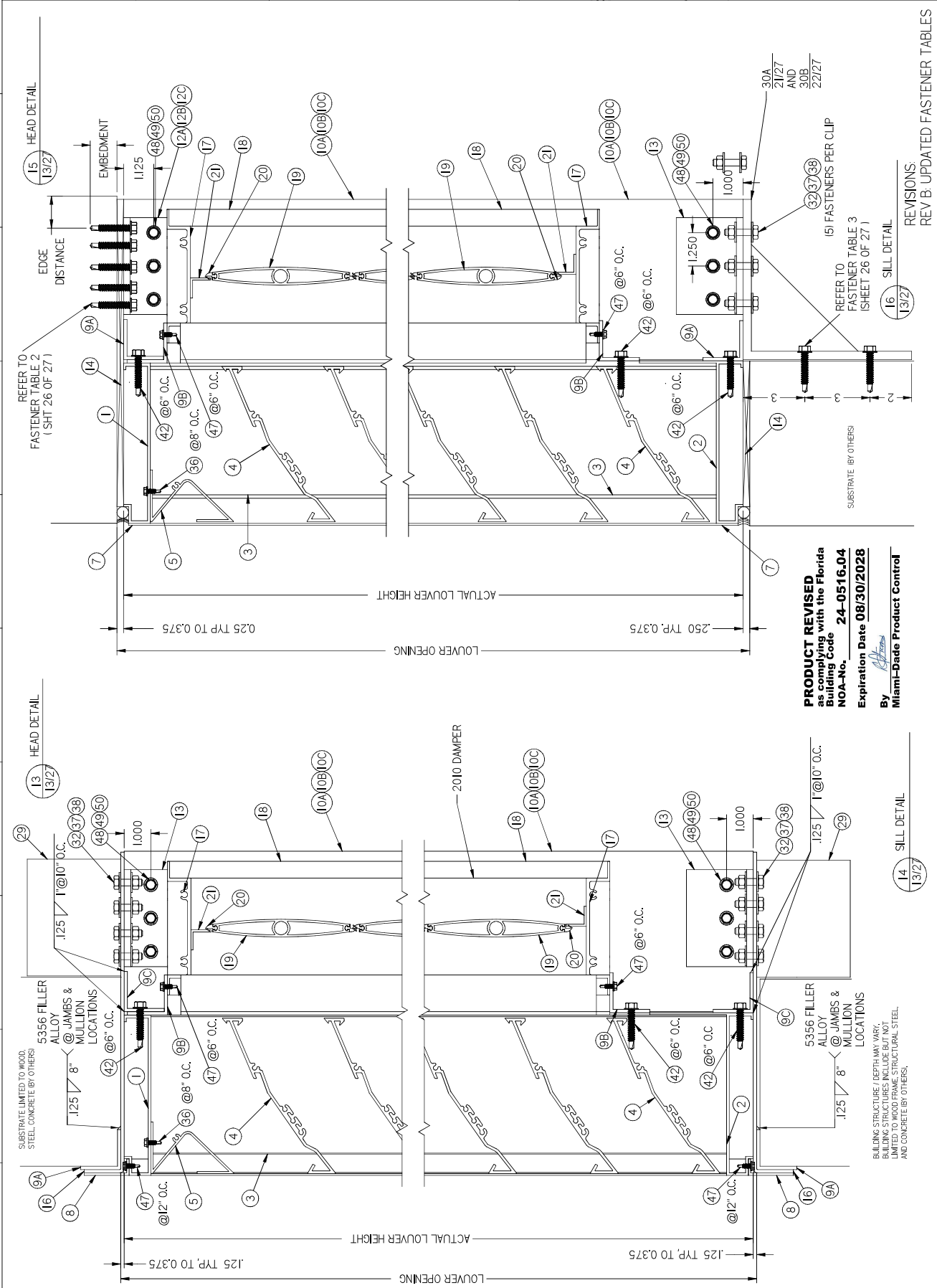
Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL 281-590-1172 FAX 281-590-3086
www.nailor.com



07/23/2024
COA: 9090

RICE
ENGINEERING
105 School Creek Trail
Lumburg, WI 54277
Phone: 262-817-1042
Fax: 262-817-1100
www.riceinc.com

Florida Firm No. F4100005961
Certificate of Authorization: #9890
Wayne K. Helm
Registration No. 59092

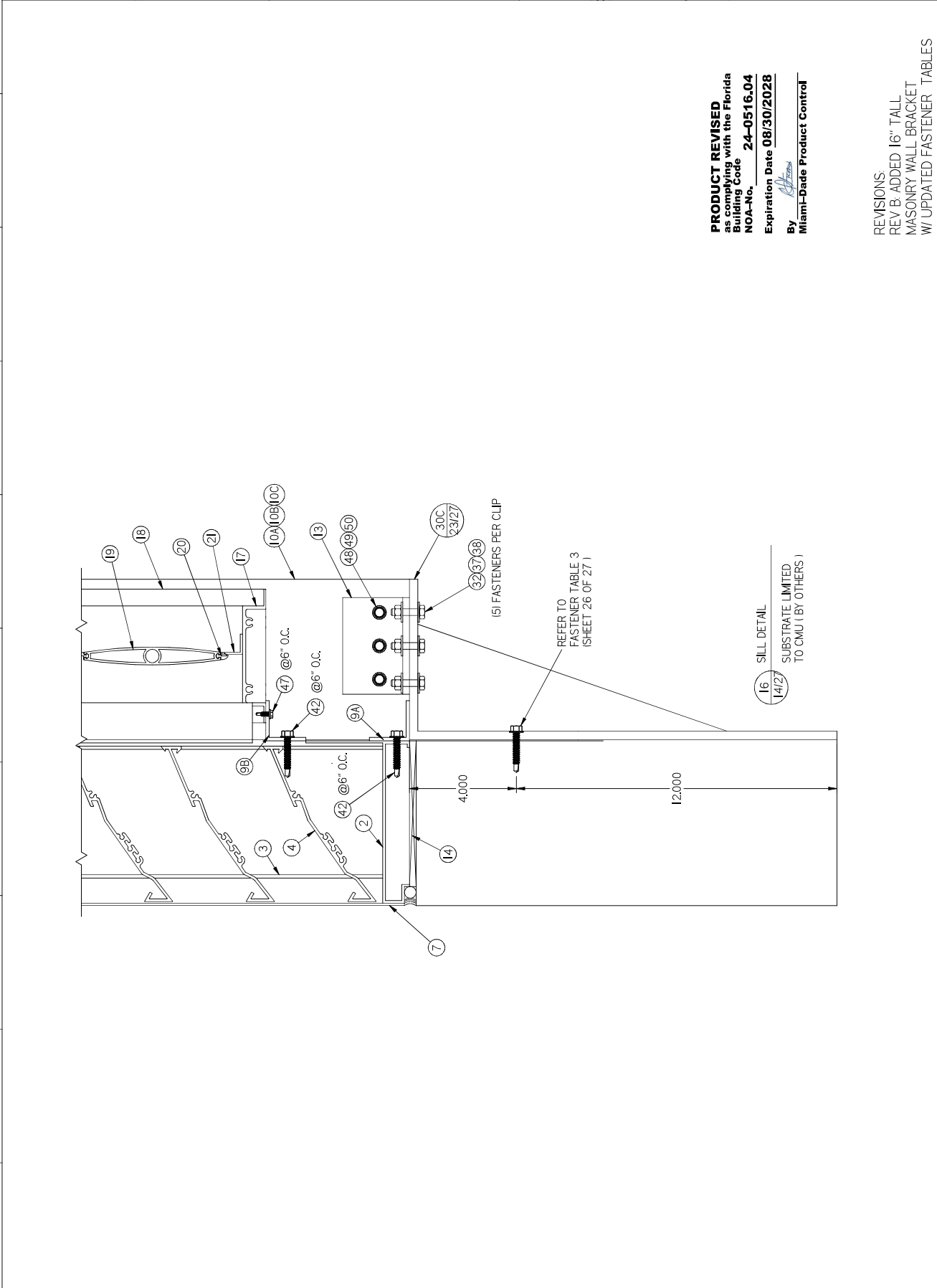


PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.04
Expiration Date 08/30/2028

By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B: UPDATED FASTENER TABLES

REV	1606DHPM	DWC. NO.	TITLE: 1606DHPM LOUVER / DAMPER MULLION ANGLE MOUNT CMU SUBSTRATE HEAD & SILL DETAIL
	B		
DATE: 11/29/2021	CHK BY: Bdenis	DWN BY: fcorinas	SCALE: NTS
4714 Winfield Road Houston, TX 77039 www.nailor.com TEL 281-590-1172 FAX 281-590-3086		Nailor Industries Inc.	
07/23/2024 COA: 9090			
RICE ENGINEERING 105 School Creek Trail Lubenburg, WI 54217 Phone: (262) 817-1042 Fax: (262) 817-1100 www.riceinc.com Florida Firm No: F43100005961 Certificate of Authorization: #9090 Wayne K. Helmli Registration No: 59092			

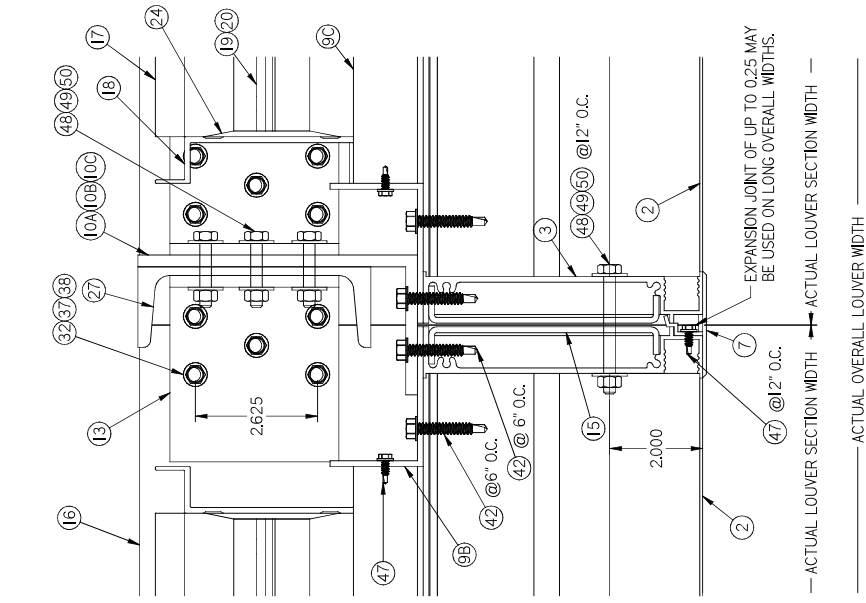


PRODUCT REVISED
 as complying with the Florida
 Building Code
NOA-No. 24-0516.04
 Expiration Date **08/30/2028**
 By *[Signature]*
Miami-Dade Product Control

REVISIONS:
 REV B: ADDED 16" TALL
 MASONRY WALL BRACKET
 W/ UPDATED FASTENER TABLES

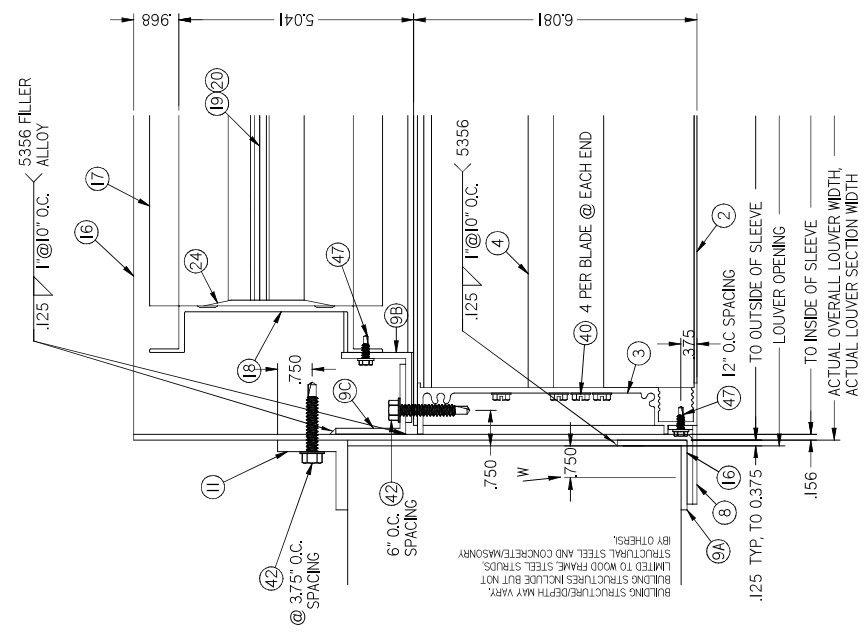
REV: B	1606DHPM	DATE: 11/29/2021	SCALE: NTS	SHEET: 15 OF 27
DWG. NO.		DWN BY: fcornting		CHK BY: Bdenis
1606DHPM LOUVER / DAMPER FLANGE FRAME SLEEVE MOUNT JAMB AND MULLION DETAIL		4714 Winfield Road Houston, TX 77039 TEL 281-590-1172 FAX 281-590-3086 www.nalor.com		Nalor Industries Inc.
WAYNE K. HELM FLORIDA ENGINEER LICENSE No. 59092		07/23/2024 COA: 9090		RICE ENGINEERING 105 School Creek Trail Lubbock, TX 79427 www.riceinc.com Phone: 817-711-1042 Fax: 817-711-1100 www.riceinc.com Florida Firm No: F4100005961 Certificate of Authorization: #9090 Wayne K. Helm Registration No.: 59092

PRODUCT REVISED
as complying with the Florida
Building Code **24-0516.04**
NOA-No. _____
Expiration Date **08/30/2028**
By _____
Miami-Dade Product Control



MULLION DETAIL
SLEEVE MOUNT
18 15/27

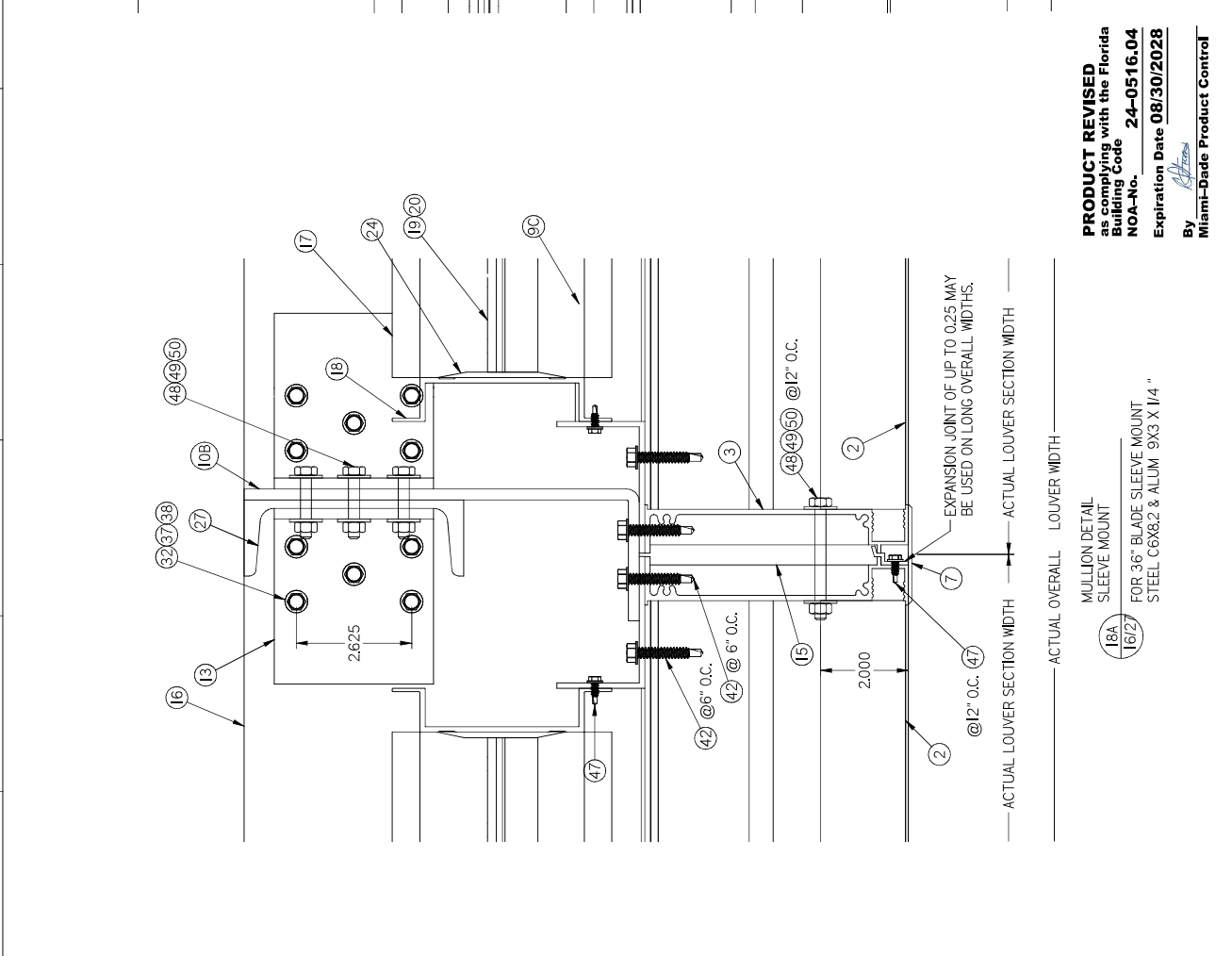
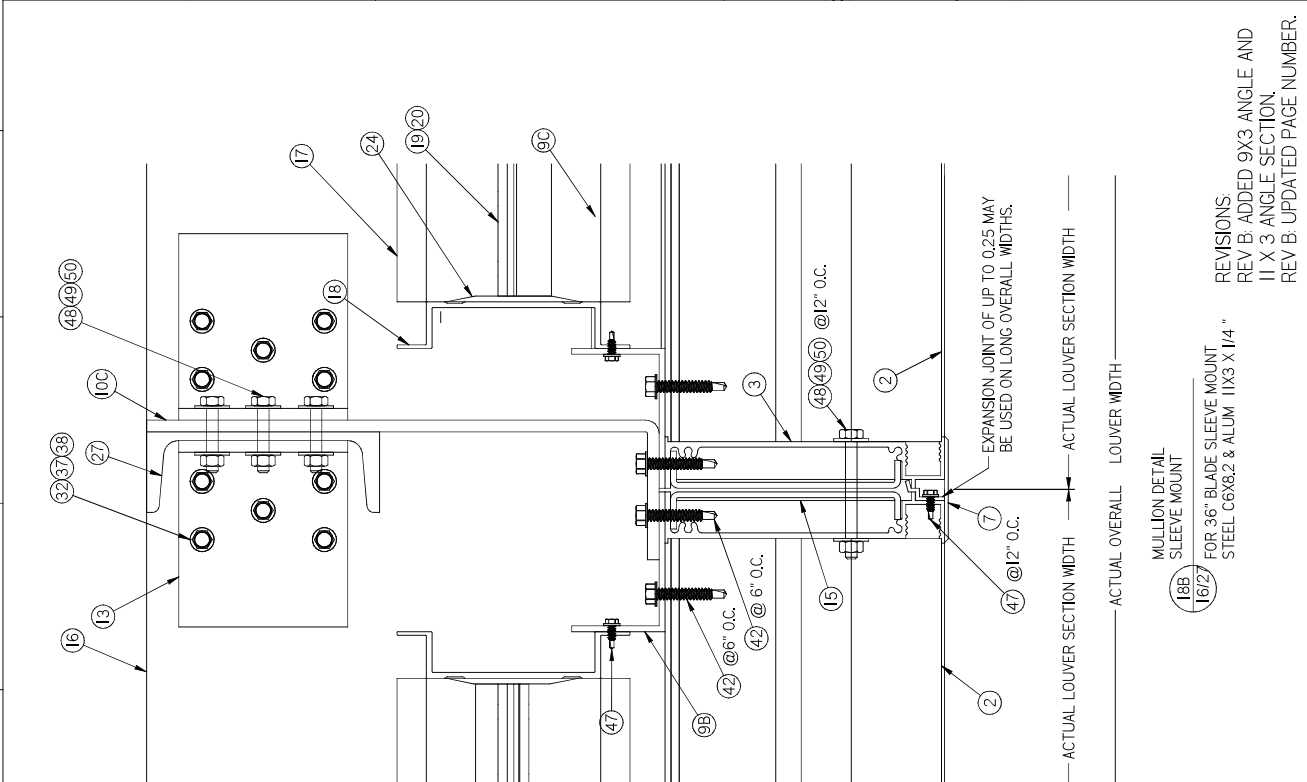
REVISIONS:
REV B: UPDATED PAGE NUMBERS




JAMB DETAIL
17 15/27

BUILDING STRUCTURE DEPTH MAY VARY.
LIMITED TO WOOD FRAME, STEEL STRUOS.
STRUCTURAL STEEL AND CONCRETE/MASSMRY
BY OTHERS.

REV	1606DHPM	DWC. NO.	MULLION DETAIL	9 X3 X 1/4 & 9 X 11 X 1/4 ANGLE	FLANGE FRAME SLEEVE MOUNT	TITLE: 1606DHPM LOUVER / DAMPER		07/23/2024 COA: 9090	RICE ENGINEERING 105 School Creek Trail Lumburg, WI 54277 Phone: (608) 711-1042 Fax: (608) 711-1100 www.riceinc.com Florida Firm No. F4100005961 Certificate of Authorization: #6980 Wayne K. Helm Registration No. 59092
	B								
DATE: 11/29/2021	SCALE: NTS	CHK BY: Bdenis	DWN BY: fcorinas	4714 Winfield Road Houston, TX 77039 TEL 281-590-1172 FAX 281-590-3086 www.nailor.com		SHEET: 16 OF 27 1606DHPM			



ACTUAL LOUVER SECTION WIDTH ACTUAL LOUVER SECTION WIDTH
 ACTUAL OVERALL LOUVER WIDTH ACTUAL OVERALL LOUVER WIDTH
 MULLION DETAIL SLEEVE MOUNT MULLION DETAIL SLEEVE MOUNT
 FOR 36" BLADE SLEEVE MOUNT FOR 36" BLADE SLEEVE MOUNT
 STEEL C6X8.2 & ALUM 11X3 X 1/4" STEEL C6X8.2 & ALUM 11X3 X 1/4"

PRODUCT REVISED
 as complying with the Florida
 Building Code **24-0516.04**
 NOA-No. **Expiration Date 08/30/2028**
 By: 
 Miami-Dade Product Control

(18A) (16/27)
 MULLION DETAIL SLEEVE MOUNT
 FOR 36" BLADE SLEEVE MOUNT
 STEEL C6X8.2 & ALUM 9X3 X 1/4"

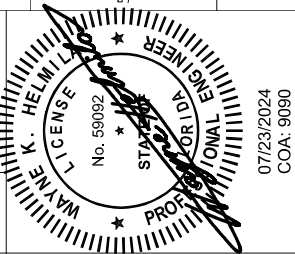
(18B) (16/27)
 MULLION DETAIL SLEEVE MOUNT
 FOR 36" BLADE SLEEVE MOUNT
 STEEL C6X8.2 & ALUM 11X3 X 1/4"

REVISIONS:
 REV B: ADDED 9X3 ANGLE AND
 11 X 3 ANGLE SECTION.
 REV B: UPDATED PAGE NUMBER.

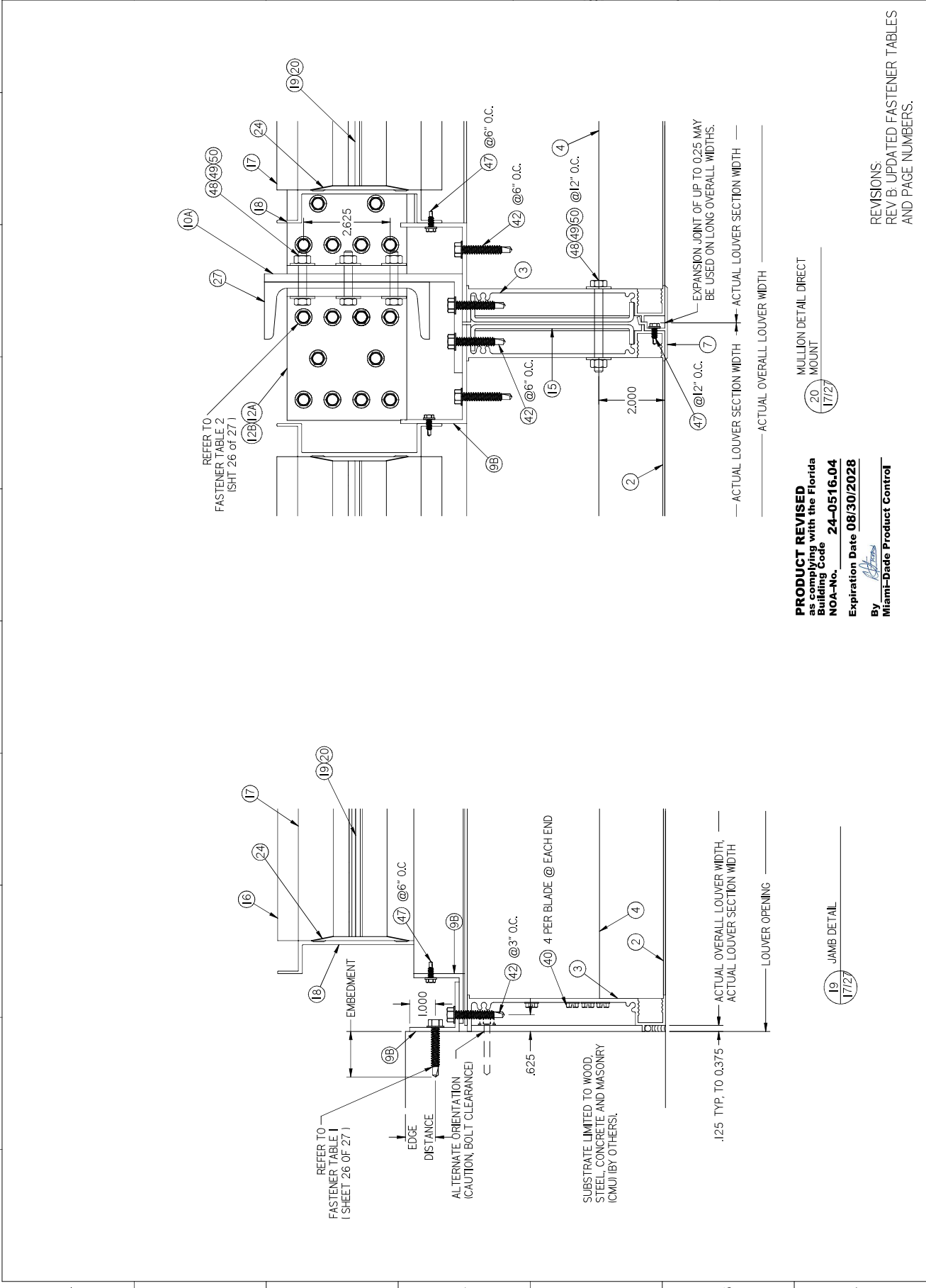
1 2 3 4 5 6 7

1606DHPM
 DWG. NO.
 SHEET: 17 OF 27
 SCALE: NTS
 DATE: 11/29/2021
 CHK BY: Bdenis
 DWN BY: fcorinas

1606DHPM LOUVER / DAMPER
 CONTINUOUS ANGLE MOUNT
 JAMB AND MULLION DETAIL
 TITLE
 4714 Winfield Road Houston, TX 77039
 TEL 281-590-1172 FAX 281-590-3086
 www.nalor.com
Nalor Industries Inc.



07/23/2024
 COA: 9090
RICE
 ENGINEERING
 105 School Creek Trail
 Lubbock, TX 79427
 Phone: (806) 791-1042
 Fax: (806) 791-1100
 www.riceinc.com
 Florida Firm No: F4100005961
 Certificate of Authorization: #9890
 Wayne K. Helmli
 Registration No: 59092



A B C D E F G H J K L

1606DHPM
CONTINUOUS ANGLE MOUNT
9 X3 X 1/4 & 9 X 11 X 1/4 ANGLE
MULLION DETAIL

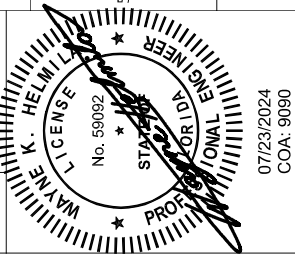
1606DHPM LOUVER / DAMPER
CONTINUOUS ANGLE MOUNT
9 X3 X 1/4 & 9 X 11 X 1/4 ANGLE
MULLION DETAIL

DATE: 11/29/2021
SCALE: NTS

DWN BY: fcorinas
CHK BY: Bdenis

4714 Winfield Road Houston, TX 77039
TEL 281-590-1172 FAX 281-590-3086
www.nalor.com

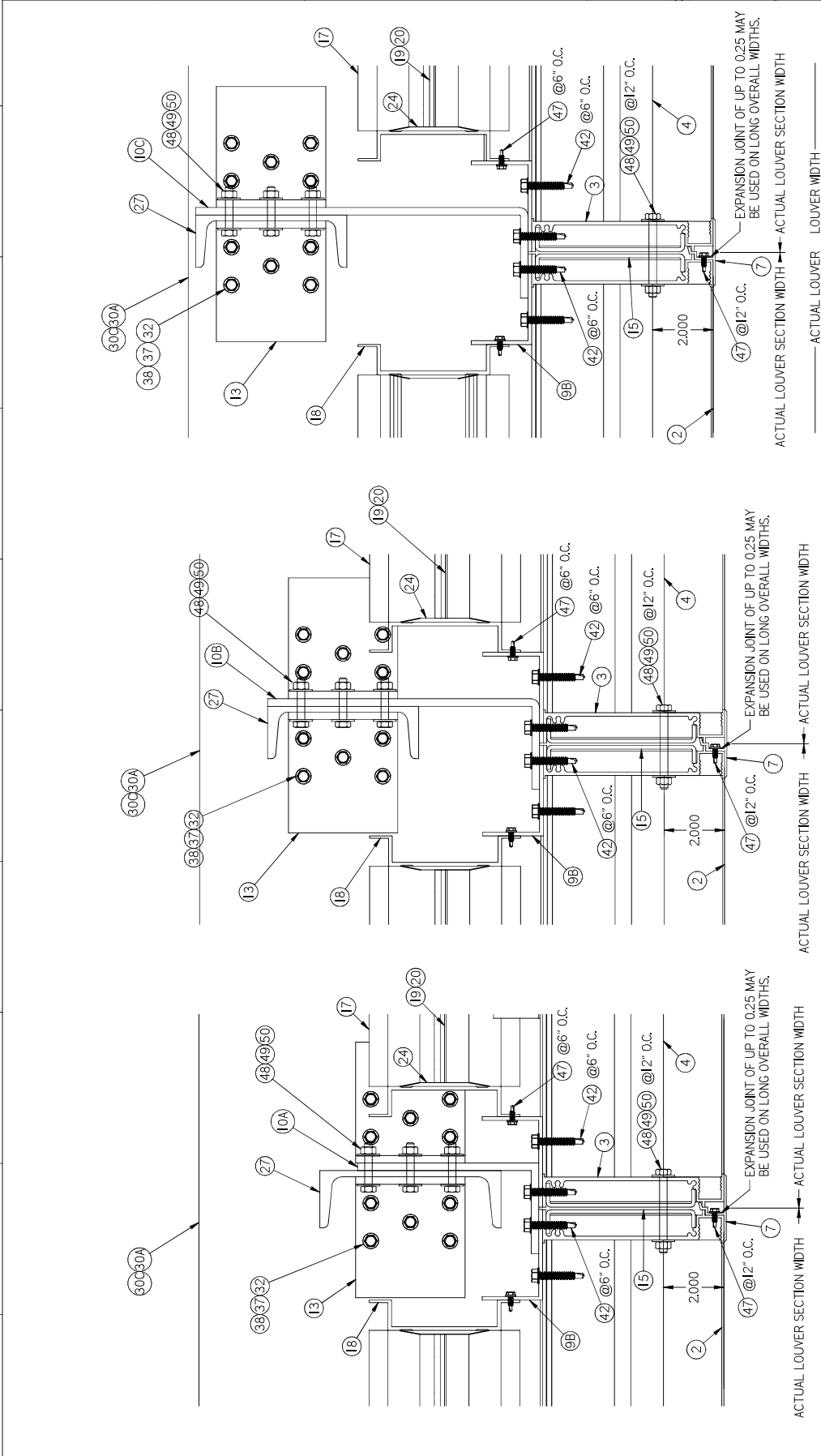
Nalor Industries Inc.



07/23/2024
COA: 9090

RICE ENGINEERING
105 School Creek Trail
Lumburg, WI 54277
Engineering: 608.711.1042
Fax: 608.711.1100
www.riceinc.com

Florida Firm No: F4100005951
Certificate of Authorization: #9890
Wayne K. Helm
Registration No: 59092



EXPANSION JOINT OF UP TO 0.25 MAY BE USED ON LONG OVERALL WIDTHS.

ACTUAL LOUVER SECTION WIDTH → ACTUAL LOUVER SECTION WIDTH

————— ACTUAL OVERALL LOUVER WIDTH —————

MULLION DETAIL BACK OF WALL MOUNT

20 A / 18/27 FOR 36" BLADE SLEEVE MOUNT STEEL C6X8.2 & ALUM 6X3 X 1/4"

20 B / 18/27 FOR 36" BLADE SLEEVE MOUNT STEEL C6X8.2 & ALUM 9X3 X 1/4"

20 C / 18/27 FOR 36" BLADE SLEEVE MOUNT STEEL C6X8.2 & ALUM 11X3 X 1/4"

PRODUCT REVISED
Supplying with the Florida Building Code
NOA-N6, 24-0516.04
Expiration Date 08/30/2028

By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B ADDED 9X3 ANGLE AND 11 X 3 ANGLE SECTION.
REV B: UPDATED PAGE NUMBER.

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 24-0516.04
Expiration Date 08/30/2028

By: *[Signature]*
Miami-Dade Product Control

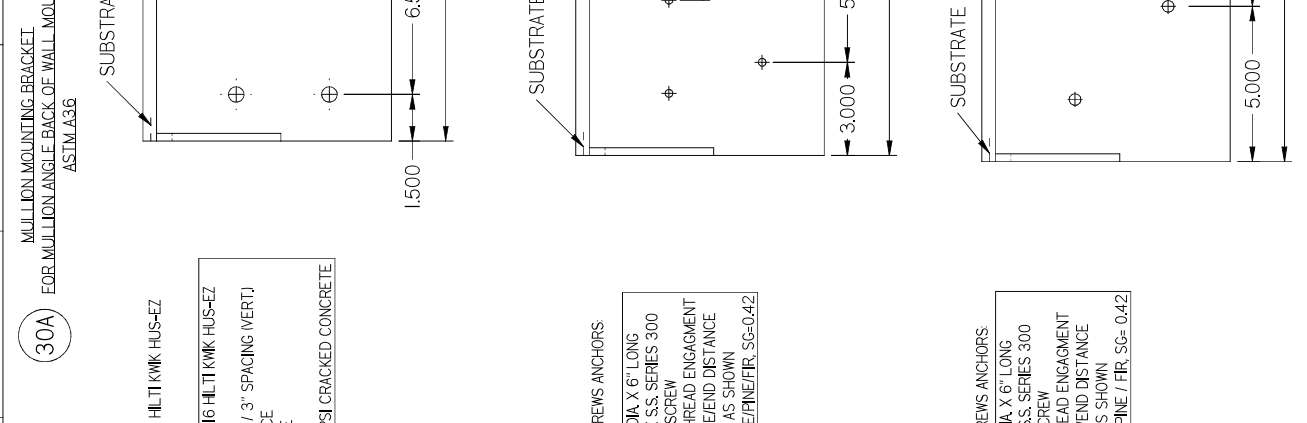
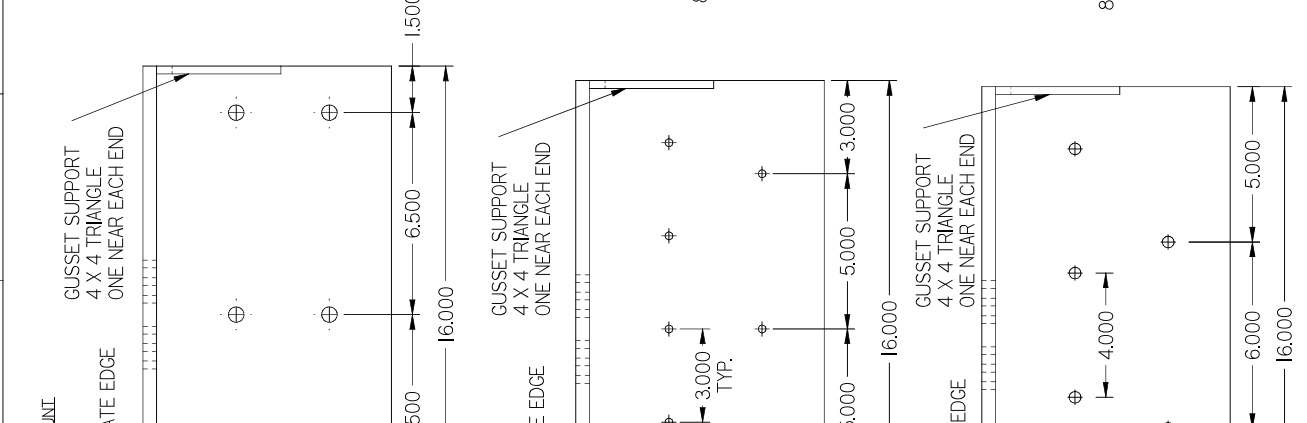
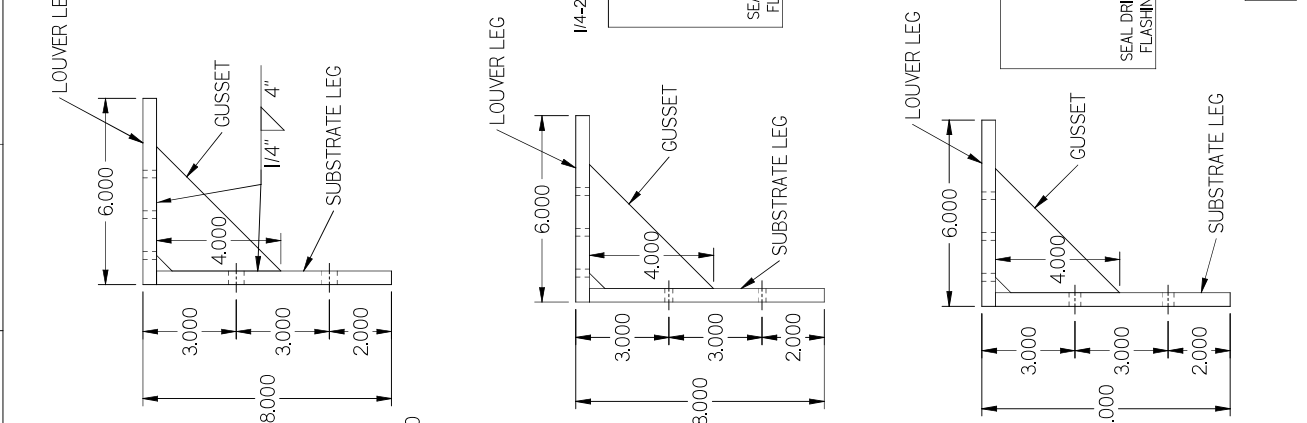
USE (8) 1/4" DIA. S.S. SERIES 300 ELCO BI-FLEX OR ELCO DRILL-FLEX FASTENERS FULL THREAD ENGAGEMENT 1" MIN. EDGE/END DISTANCE SPACING AS SHOWN ASSUME: 1/4" STEEL (A-36)

SEAL DRILL-FLEX FASTENERS WITH LIQUID PROSOCCO FLASHING IF EXPOSED TO EXTERIOR CONDITIONS.

USE (6) 5/16" DIA. S.S. ELCO DRILL-FLEX FASTENERS FULL THREAD ENGAGEMENT 1" MIN. EDGE/END DISTANCE SPACING AS SHOWN ASSUME: 1/4" STEEL (A36)

SEAL DRILL-FLEX FASTENERS WITH LIQUID PROSOCCO FLASHING IF EXPOSED TO EXTERIOR CONDITIONS.

REVISIONS:
REV B-UPDATED 16" MULLION BRACKET



1/2" DIA. S.S. 316 HL TI KWK HUS-EZ

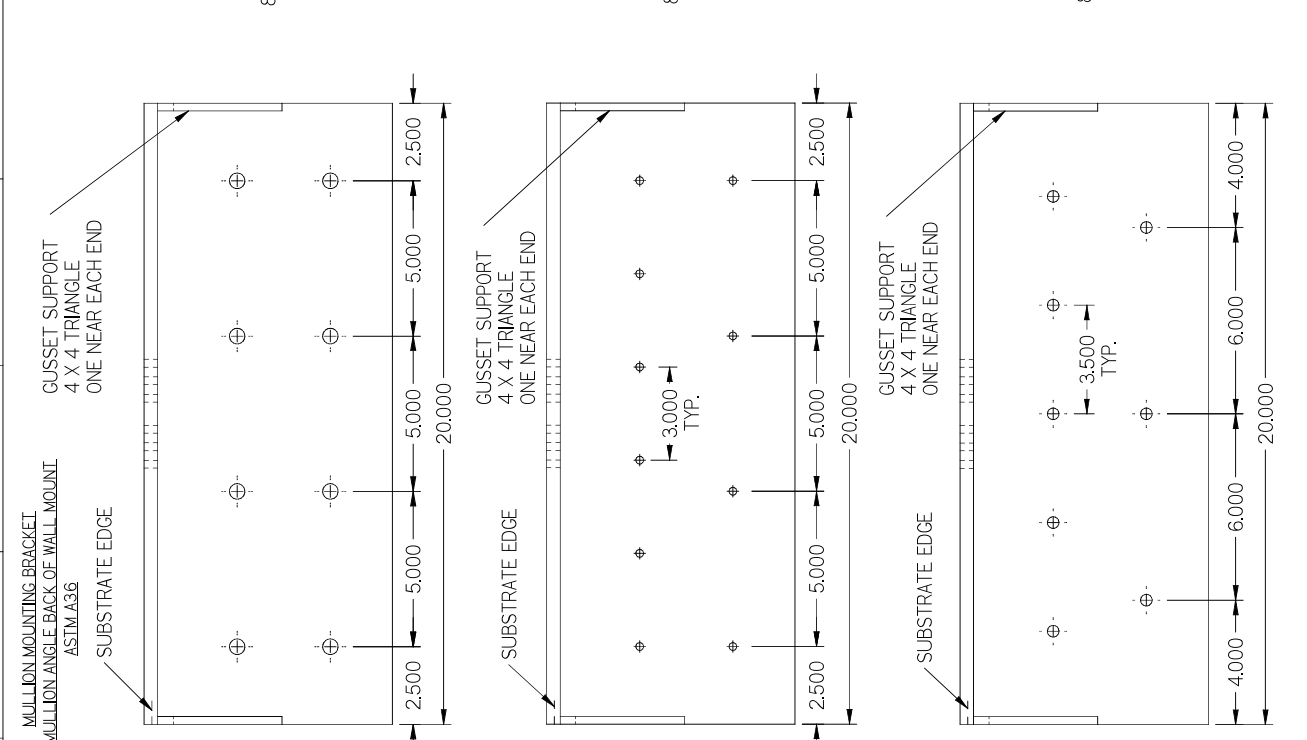
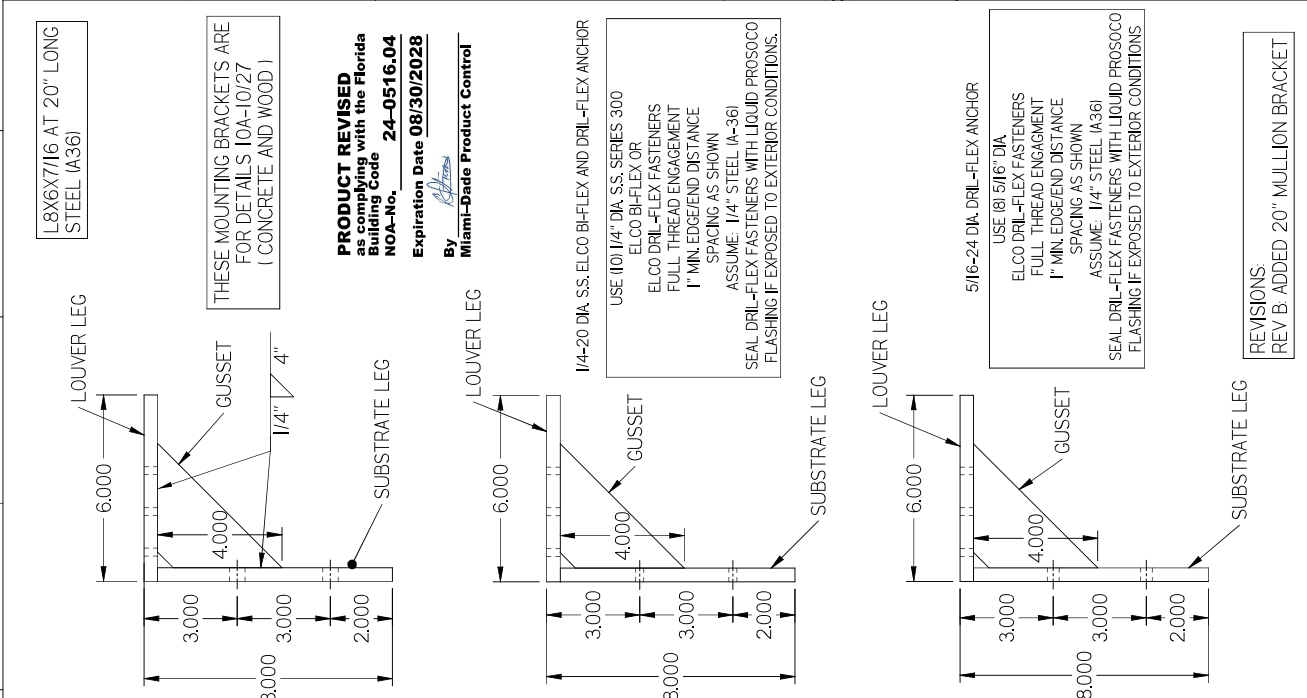
USE (6) 1/2" DIA. S.S. 316 HL TI KWK HUS-EZ
3" EMBEDMENT
6.5" SPACING (HORZI / 3" SPACING VERTJ)
3" MIN. EDGE DISTANCE
4" MIN. END DISTANCE
SPACING AS SHOWN
ASSUME FC= 4000 PSI CRACKED CONCRETE

1/4" DIA LAG SCREWS ANCHORS

USE (8) 1/4" DIA. X 6" LONG STANDARD HEX S.S. SERIES 300 LAG SCREW
3-9/32" FULL THREAD ENGAGEMENT
1-1/2" MIN. EDGE/END DISTANCE
SPACING AS SHOWN
ASSUME: SPRUCE/PINE/FR. SG=0.42

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 ENGAGEMENT
1-1/2" MIN. EDGE/END DISTANCE
SPACING AS SHOWN
ASSUME: SPRUCE / PINE / FR. SG= 0.42



1/2" DIA S.S. SERIES 300 HILTI KWIK BOLT EZ
 USE (B) 1/2" DIA. S.S. SERIES 300 HILTI KWIK BOLT-EZ
 4-1/4" EMBEDMENT
 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 (D) 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

3/8" DIA. LAG SCREWS ANCHORS
 USE (B) 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 / FR. SG- 0.42

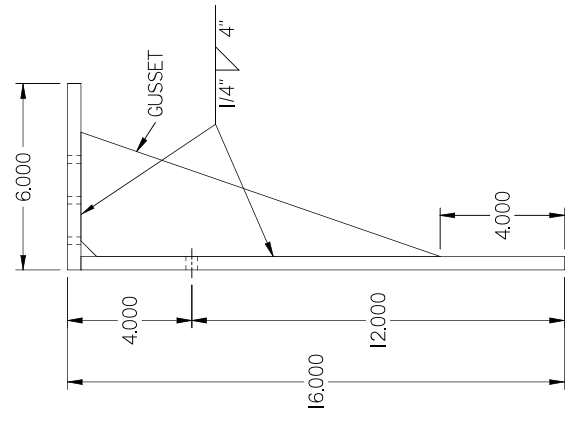
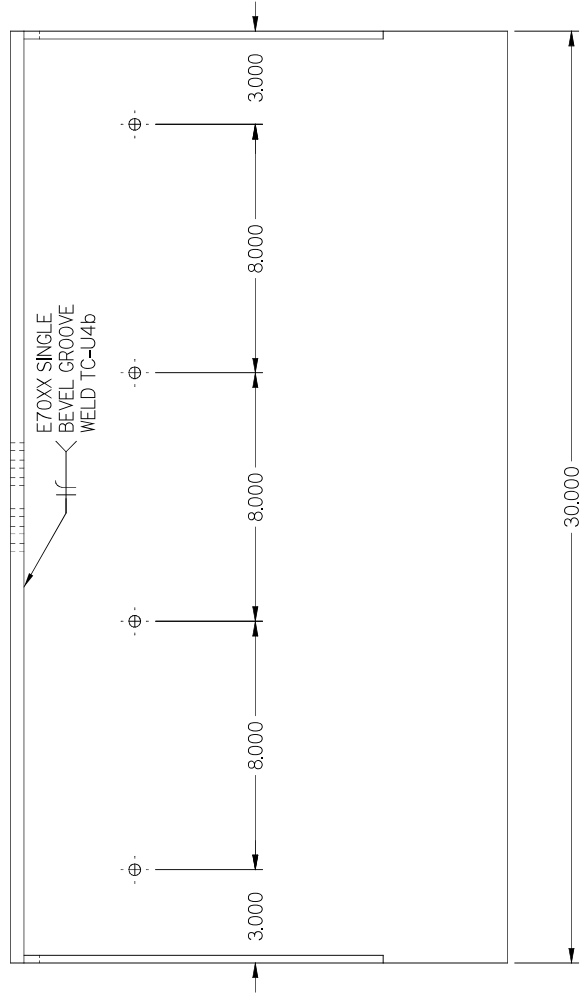
PRODUCT REVISED
 as complying with the Florida
 Building Code
 NOA-No. 24-0516.04
 Expiration Date 08/30/2028
 By *[Signature]*
 Miami-Dade Product Control

THESE MOUNTING BRACKETS ARE FOR DETAILS 10A-10/27 (CONCRETE AND WOOD)

REVISIONS:
 REV B. ADDED 20" MULLION BRACKET

30C MULLION MOUNTING BRACKET
FOR MULLION ANGLE BACK OF WALL MOUNT.
ASTM A336

USE 16" X 6" X 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.
12 1/4" X 4" GUSSET PLATES AT 12" LONG WELDED TO
EACH END
WELD 1/4" GUSSET PLATES WITH FILLET WELDS.



USE 1/2" DIA. HLT/KWK HUZ-EZ SCREW ANCHORS
4-1/4" EMBEDMENT
8" SPACING AS SHOWN. LOCATE III FASTENER IN THE CENTER OF EACH
MASONRY CELL. BRACKET CAN BE INSTALL 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 (DESIGNED BY OTHERS)
SEAL FASTENERS WITH LIQUID PROSOFO FLASHING AT EXTERIOR CONDITIONS.

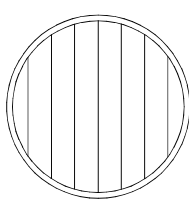
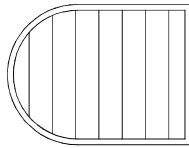
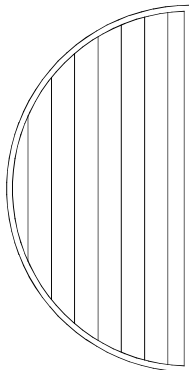
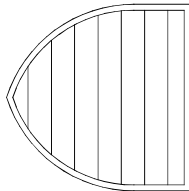
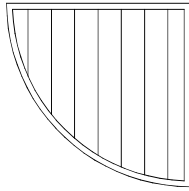
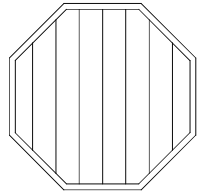
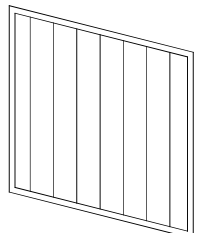
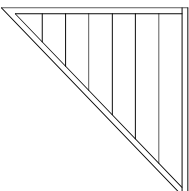
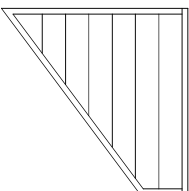
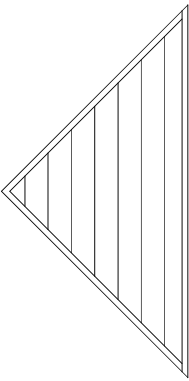
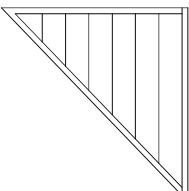
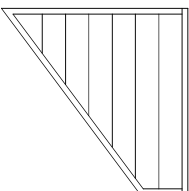
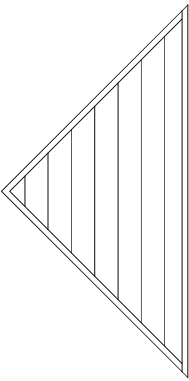
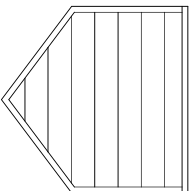
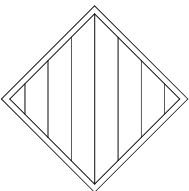
THESE MOUNTING BRACKETS ARE
FOR DETAILS 10A-10/27,
12B-12/27, 20A-18/27/
20B-18/27, AND 20C-18/27
(GROUT FILLED CMU)

PRODUCT REVISED
Manufactured with the Florida
Building Code **24-0516.04**
NCA-No. **24-0516.04**
Expiration Date **08/30/2028**
By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B: ADDED 30" MULLION BRACKET


DWG. NO. 1606DHPM REV. DB	SHEET: 23 OF 27	DATE: 11/29/2021	DWG. NO. 1606DHPM
	SCALE: NTS	CHK BY: Bdennis	DATE: 11/29/2021
Nalor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL 281-590-1172 FAX 281-590-3086 WWW.NALOR.COM		TITLE: 30" CMU MULLION ANGLES BACK OF THE WALL MOUNT	
		07/23/2024 COA: 9090	
RICE ENGINEERING 105 School Creek Trail Lubenburg, WI 54217 Phone: (262) 561-1042 Fax: (262) 561-1100 www.riceinc.com Florida Firm No: F4100005061 Certificate of Authorization: #9090 Wayne K. Helmli Registration No.: 59092			

DWG. NO. 1606DHPM REV. DB		SHEET: 24 OF 27 SCALE: NTS	
DWN BY: fcorinas DATE: 11/29/2021		CHK BY: Bdenis	
TITLE: 1606DHPM LOUVER W/ AND W/O DAMPER AVAILABLE SHAPES		4714 Winfield Road Houston, TX 77039 WWW.NAILOR.COM TEL: 281-590-1172 FAX: 281-590-3086 Nailor Industries Inc.	
07/23/2024 COA: 9090			
RICE ENGINEERING 105 School Creek Trail Lubenburg, WI 54217 Phone: (262) 710-042 Fax: (262) 817-1100 www.riceinc.com Florida Firm No: FA100005061 Certificate of Authorization: #9090 Wayne K. Helm Registration No: 59092			

NOTES:

- OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN AND HAVE CORNER CONSTRUCTION AS DESCRIBED ON ALL SHEETS.
- 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.
- WHEN SECTION EXCEED 36" IN LENGTH BLADE SUPPORT ANGLES AND BRACKETS ARE REQUIRED.
- 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. **24-0516.04**
 Expiration Date **08/30/2028**
 By 
Miami-Dade Product Control

ITEM	DESCRIPTION	MATERIAL	NOTES
1	C6-139 LOUVER HEAD	6063-T6 ALUMINUM	
2	C6-140 LOUVER SILL	6063-T6 ALUMINUM	
3	C6-141 LOUVER JAMB	6063-T6 ALUMINUM	
4	C6-142 LOUVER BLADE	6063-T6 ALUMINUM	
5	C6-168 LOUVER DRAIN	6063-T6 ALUMINUM	
6	C6-143 LOUVER BLADE BRACE	6063-T6 ALUMINUM	
7	C6-104 MULLION COVER	6063-T6 ALUMINUM	
8	C6-096 LOUVER FLANGE	6063-T6 ALUMINUM	
9A	C6-176 1 1/2 X 1 1/2 X 1/8 ANGLE CONT.	6063-T6 ALUMINUM	USED AT HEAD/SILL/JAMB OF LOUVER AND SLEEVE USE AS ATTACHMENT ANGLE
9B	C6-160 2 X 2 X 1/8 ANGLE CONT.	6063-T6 ALUMINUM	USE AS ATTACHMENT ANGLE
9C	1 1/2 X 1 1/2 X 3/16 ANGLE CONT.	6063-T6 ALUMINUM	USE AT BLADE SUPPORT AND JAMB SUPPORT
10A	C6-161B 6 X 3 X 1/4 ANGLE	6061-T6 ALUMINUM	FORMED ALUM ANGLE
10B	9 X 3 X 1/4 ANGLE	6061-T6 ALUMINUM	FORMED ALUM ANGLE
10C	1 1/2 X 3 X 1/4 ANGLE	6061-T6 ALUMINUM	FORMED ALUM ANGLE
11	1 1/2 X 1 1/2 X 1/4 ANGLE	6063-T6 ALUMINUM	USED AT HEAD/SILL/JAMB OF SLEEVE
12A	4 X 2.50 X 1/4 X 3 5/8 LONG ANGLE	6063-T6 ALUMINUM	USED AT HEAD/SILL OF MULLION ATTACHMENT
12B	8 X 3 X 3-5/8 LONG ANGLE	6063-T6 ALUMINUM	USED AT HEAD/SILL OF MULLION ATTACHMENT W/ 1/2" LAG
13	4 X 2.50 X 1/4 X 3 5/8 LONG ANGLE	6061-T6 ALUMINUM	USED AT HEAD/SILL OF LOUVER SLEEVE ATTACHMENT
14	6 X 4 X 1/4 ALUMINUM SUPPORT SHIM	6063-T6 ALUMINUM	USED AT SILL FOR SUPPORT ANGLE
15	MULLION STIFFENER ALUM	6063-T6 ALUMINUM	1/8 FORMED ALUM CHANNEL USED AT MULLION
16	FORMED SLEEVE 1/8 THK	5052-H32 ALUMINUM	1/8 FORMED SLEEVE - DEPTH VARIES
17	B2-610 DAMPER HEAD/SILL	6063-T6 ALUMINUM	
18	B2-609 DAMPER JAMB	6063-T6 ALUMINUM	
19	B2-527 DAMPER BLADE	6063-T6 ALUMINUM	
20	DAMPER BLADE SEAL	SILICONE / RUBBER TYPE	MATERIAL VARIES
21	DAMPER TOP/BOTTOM CLOSURE	ALUMINUM	
22	DAMPER BUSHING	BRONZE / SS	
23	DAMPER LINKAGE BAR	SS	
24	DAMPER JAMB SEAL	SS	
25	NON DRIVE DAMPER AXEL ASM	SS	
26	DRIVE SIDE DAMPER AXEL ASM	SS	
27	C6 X 8.2 STEEL CHANNEL	ASTM A36	USED AT BLADE BLACE & MULLION
29	7" X 21" ALUMINUM SLEEVE BRACKET	6061-T6	MULLION SLEEVE BRACKET
30	MULLION MOUNTING ANGLE BRACKET	ASTM A36	MULLION MOUNTING
31	C6-180	SCREWMTL 10-24X1/2	
32	C6-181	1/4 NYLON INSERT LOCKNUT	
33	C6-182	1/4-20X1/2 HEX CAP SCREW	
34	C6-183	WASHER BONDED 10X1/2 SS	300 SERIES SS COND. CW FT = 65 KSI
35	C6-184	SCREWMTL 12-24-1-1/4 HEX	300 SERIES SS COND. CW FT = 65 KSI
36	C6-185	1/4-20X1 HEX SCREW	300 SERIES SS COND. CW FT = 65 KSI
37	C6-186	1/4 COMM L FLAT WASHER	300 SERIES SS COND. CW FT = 65 KSI
38	C6-187	1/4-20X1 HEX CAP SCREW 18-8 SS	300 SERIES SS COND. CW FT = 65 KSI
39	C6-188	SCREW MTL HEX 8-32 X 1	300 SERIES SS COND. CW FT = 65 KSI
40	C6-189	SCREW METAL HW 10-24 X 1-1/2	300 SERIES SS COND. CW FT = 65 KSI
41	C6-192	SCREW MTL HEX 8 X 1-1/2	300 SERIES SS COND. CW FT = 65 KSI
42	C6-193	SCREW METAL HEX 1/4-20 X 1-1/2	300 SERIES SS COND. CW FT = 65 KSI
43	C6-194	SCREW METAL HEX 12 X 1-1/2 SS	300 SERIES SS COND. CW FT = 65 KSI
44	C6-195	1/4-20 X 1 1/4 HEX CAP SCREW 18-8 S/S	300 SERIES SS COND. CW FT = 65 KSI
45	C6-196	1/4-20 FN HEX NUT 18-8 S/S	
46	C6-197	1/4 LOCK WASHER 18-8 S/S	
47	C6-198	SCREW MTL HEX 8 X 3/4	300 SERIES SS COND. CW FT = 65 KSI
48		3/8 X 2 1/2 18-6 HEX HEAD BOLT SS	300 SERIES SS COND. CW FT = 65 KSI
49		3/8-16 X 2 HEX LOCK NUT SS	300 SERIES SS COND. CW FT = 65 KSI
50		3/8-FLAT WASHER SS	300 SERIES SS COND. CW FT = 65 KSI

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. **24-0516.04**
Expiration Date **08/30/2028**

By *[Signature]*
Miami-Dade Product Control

REVISIONS:
REV B: UPDATED BILL OF MATERIAL

DWG. NO. 1606DHPM SHEET: 25 OF 27 SCALE: NTS CHK BY: Bdenis DATE: 11/29/2021	DWG. NO. 1606DHPM TITLE: 1606DHPM LOUVER W/ AND W/O DAMPER SLEEVE / CONTINUOUS MOUNT Naylor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL 281-590-1172 FAX 281-590-3086 WWW.NAYLOR.COM		07/23/2024 COA: 9090
RICE ENGINEERING 105 School Creek Trail Luverburg, GA 30077 Phone: (770) 834-1042 Fax: (770) 834-1100 www.riceinc.com Florida Firm No: F43100005961 Certificate of Authorization: #9890 Wayne K. Helmli Registration No: 59092		REVISIONS: REV B: UPDATED BILL OF MATERIAL	

LOUVER MODEL 1606DHPM FASTENER TABLES

JAMB ANGLE MOUNT FASTENER WIDTH <= 72 INCHES (TABLE 1)

WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MIN.	CMU	MIN.	FASTENER TYPE	DIAMETER	# Rqd	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	1	3"	2"	2"	2"
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	3/8"	1	5"	2"	2"	2"
	X				16 Ga.			ELCO BI-FLEX DRILLING SCREWS (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	1	4-1/2"	2"	2"	3 THREAD BEYOND SUBSTRATE
		X			A-36			ELCO BI-FLEX DRILLING SCREWS (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	1	13-1/2"	2"	2"	1/4"
			X		A-36			ELCO DRILL-FLEX DRILLING SCREWS (COND, CW- FV = 6Kksi) SEALED w/ PROSOCCO SEALANT	5/16"	1	20"	2"	2"	1/4"
			X-CRACKED 6" DEEP		4ksi			HILTI KWIK HUS-EZ SS316 ANCHOR	1/4"	1	7"	4"	4"	2"
			X-CRACKED 6" DEEP		4ksi			HILTI KWIK HUS-EZ SS316 ANCHOR	3/8"	1	12"	4"	4"	2"
				X	2ksi			HILTI KWIK HUS-EZ SS316 ANCHOR	3/8"	1	12"	4"	4"	3-1/4"
				X	2ksi			DEWALT GALVANIZED SCREW-BOLT + ANCHOR	3/8"	1	4-1/2"	1-1/2"	1-1/2"	3-1/4"

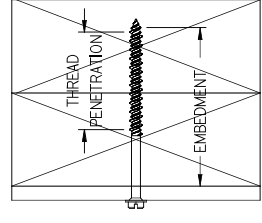
MULLION ANGLE MOUNT FASTENERS HEIGHT <= 120 INCHES (TABLE 2)

WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MIN.	CMU	MIN.	FASTENER TYPE	DIAMETER	# Rqd / CLIP	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	10	1-1/4 X 7/8	2"	2"	2-5/8"
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	3/8"	6	2-1/8 X 3	2"	2"	1-5/8"
	X				A-36			ELCO BI-FLEX DRILLING SCREWS (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	4	2-1/2 X 2-5/8"	2"	2"	1/4"
		X			A-36			ELCO DRILL-FLEX DRILLING SCREWS (COND, CW- FV = 6Kksi) SEALED w/ PROSOCCO SEALANT	5/16"	4	2-1/2" X 2-5/8"	2"	2"	1/4"

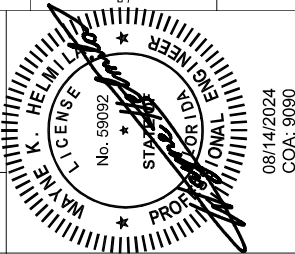
MULLION ANGLE MOUNT BACK OF WALL FASTENERS HEIGHT <= 120 INCHES (TABLE 3)

WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MIN.	CMU	MIN.	FASTENER TYPE	DIAMETER	# Rqd	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	8	VARIES	1"	1"	3-11/32"
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	10	VARIES	1"	1"	3-11/32"
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	3/8"	6	VARIES	1-1/2"	1-1/2"	3-9/32"
X					SG 0.42			LAG SCREW (300 SERIES SS- COND, CW- FV = 6Kksi)	3/8"	8	VARIES	1-1/2"	1-1/2"	3-9/32"
	X				A-36			ELCO BI-FLEX DRILLING SCREWS (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	8	VARIES	1"	1"	FULL THREAD ENGAGEMENT
	X				A-36			ELCO BI-FLEX DRILLING SCREWS (300 SERIES SS- COND, CW- FV = 6Kksi)	1/4"	10	VARIES	1"	1"	FULL THREAD ENGAGEMENT
	X				A-36			ELCO DRILL-FLEX DRILLING SCREWS (COND, CW- FV = 6Kksi) SEALED w/ PROSOCCO SEALANT	5/16"	6	VARIES	1"	1"	FULL THREAD ENGAGEMENT
		X			4ksi			ELCO DRILL-FLEX DRILLING SCREWS (COND, CW- FV = 6Kksi) SEALED w/ PROSOCCO SEALANT	5/16"	8	VARIES	1"	1"	FULL THREAD ENGAGEMENT
			X-CRACKED 8" DEEP		4ksi			HILTI KWIK HUS-EZ SS316 **	1/2"	6	6-1/2 X 3	3"	4"	3"
			X-CRACKED 8" DEEP		4ksi			HILTI KWIK BOLT EZ SS 300 SERIES **	1/2"	8	5 X 3	3"	4"	4-1/4"
				X	2ksi			HILTI KWIK HUS-EZ SCREW ANCHORS - SEAL w/ LIQUID PROSOCCO @ EXTERIOR CONDITIONS	1/2"	4	8"	4"	4"	4-1/4"

PRODUCT REVISED
 as complying with the Florida
 Building Code **24-0516.04**
 NOA-No. **24-0516.04**
 Expiration Date **08/30/2028**
 By *[Signature]*
 Miami-Dade Product Control



REVISIONS:
 REV B: UPDATED FASTENER TABLES



08/14/2024
 COA: 9090
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 Certificate of Authorization: #6990
 Wayne K. Helms
 Registration No: 59092

GENERAL NOTES.

1. IT SHALL BE THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS IMPOSED BY THE LOUVERS(S).
2. THE 1606DHPM WITH/ WITHOUT 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 SIZE 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, 2000 MIN PSI GROUT-FILLED, STEEL STUDS TO BE 16 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. NAIL OR IND. DOES NOT DETERMINE THE STRUCTURAL INTERGRITY OF THE SUBSTRATE STRUCTURE.
8. THE CONTINUOUS ANGLE MOUNT STYLE UTILIZES A CONTINUOUS JAMB ANGLE THAT IS ATTACHED TO THE SUBSTRATE BY FASTENERS. IT MAY BE INSTALLED IN CONCRETE, CMU, STEEL, OR WOOD ACCORDING TO THE FASTENER SCHEDULE. NAIL OR IND. DOES NOT DETERMINE THE STRUCTURAL INTERGRITY OF THE SUBSTRATE STRUCTURE.
9. LOUVER ASSEMBLY IS QUALIFIED FOR A MAXIMUM DESIGN LOAD OF +/- 150 PSF.
10. LOUVER ASSEMBLY WITH AND WITHOUT DAMPER SHALL ONLY BE INSTALLED IN A LOCATION WHERE 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 2020 DAMPER MAY BE OPERATED BY A MANUAL QUADRANT OR BY AN ELECTRIC OR PNEUMATIC ACTUATOR, THE DAMPERS 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 (4) #10-24 X 1 1/2 HW, @ EACH END.
14. STEEL / STAINLESS-STEEL / ALUMINUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOY THAT 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 PROVIDING FULL CONTACT WITH WOOD. LAG SCREW TP CANNOT BE CONSIDERED PART OF THE THREADED PORTION OF THE SCREW. LAG SCREWS ARE NOT TO BE INSTALLED AT WOOD JOINTS/SPLICES WHERE THE LAG SCREW COULD FALL BETWEEN MEMEBERS.

** NOTE ENGINEER OF RECORD (EOR) IS RESPONSIBLE FOR DETERMINING IF CONCRETE IS TO BE CONSIDERED CRACKED OR UNCRACKED.

PRODUCT REVISED
as complying with the Florida
Building Code **24-0516.04**
NOA-No. **24-0516.04**
Expiration Date **08/30/2028**

By 
Miami-Dade Product Control

REVISIONS
REV B: ADDED GENERAL NOTES PAGE

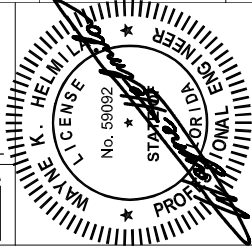
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DWN BY: feortinas	DATE: 11/29/2021		

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1606DHPM LOUVER
W/ AND W/O DAMPER
GENERAL NOTES

FILE



07/23/2024
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I. General Notes

1. The following guidelines provide basic caulking instruction for Nailor Industries' Florida Product Approved and Miami-Dade Qualified Hurricane Louvers.
2. Hurricane louvers have been designed and tested to meet the stringent criteria established by the Florida Building Code and protocols called for use in Miami-Dade and Broward counties. Our louvers are certified to AMCA 500-L, AMCA 540 and AMCA 550, and have been tested to TAS 100-A, TAS-201, TAS-202 and TAS-203.
3. Maximum louver sizes are unlimited width x 120" (3048) high. However, louvers larger than the maximum single section size require field assembly from smaller louver sections to meet the overall louver width requirements.

II. General Installation Requirements

1. Structural members, mounting angles, clips, fasteners, and some installation hardware will be provided by the manufacturer. Other necessary installation hardware shall be provided by the installing contractor.
2. Refer to the model specific installation instructions and drawings for FL19273, for Florida Product and FL28078, for the Miami-Dade Qualified Hurricane Louvers.

II. REFERENCE TABLE

NAILOR LOUVER MODEL	FLORIDA APPLICATION #	MIAMI-DADE NOA #
1604DHPF	FL19273.1	Not Applicable
1605WDF	FL19273.2	Not Applicable
1605WDVF	FL19273.3	Not Applicable
1606DHPF	FL19273.4	Not Applicable
1606WDF	FL19273.5	Not Applicable
1605WDM	FL28078.1	21-0630.11
1605WDVM	FL28078.2	21-0630.12
1606DHPM	FL28078.3	21-0630.10
1675WDVM	FL28078.4	21-0630.09
1609HM	FL41947.1	23-0823.05
1606CM	FL41947.2	23-0823.04
1605WDV	Not Applicable	Not Applicable
1609H	Not Applicable	Not Applicable
1606C	Not Applicable	Not Applicable



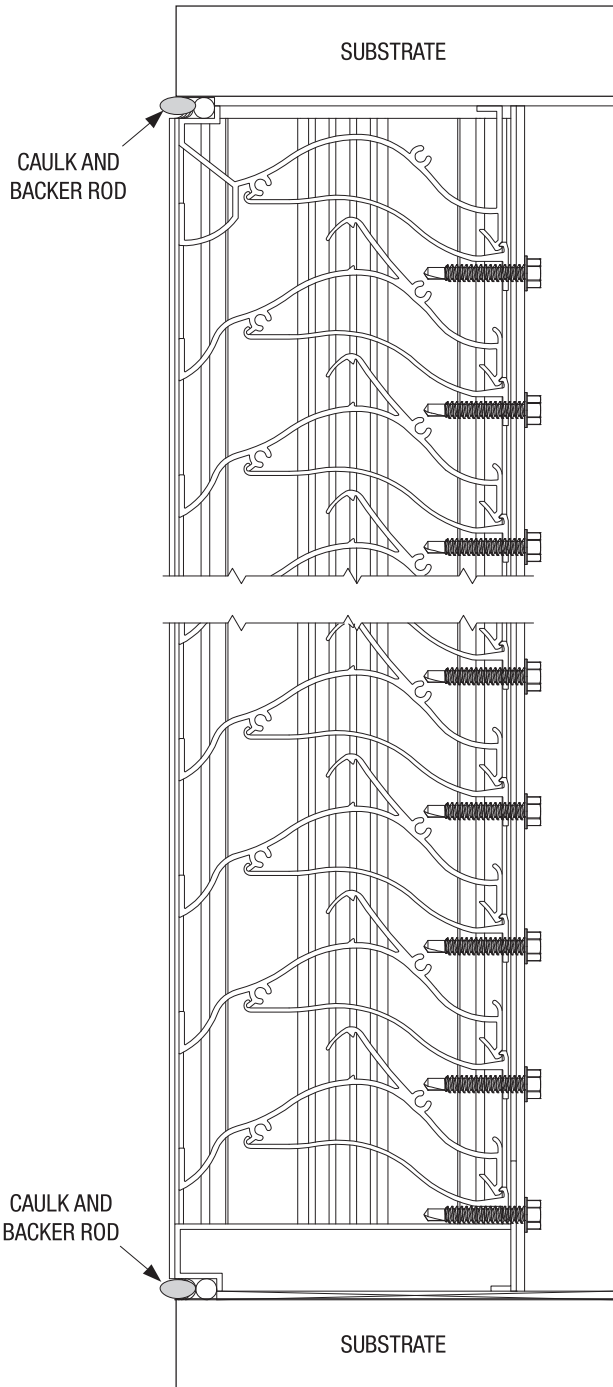
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III. Perimeter Caulking Requirements

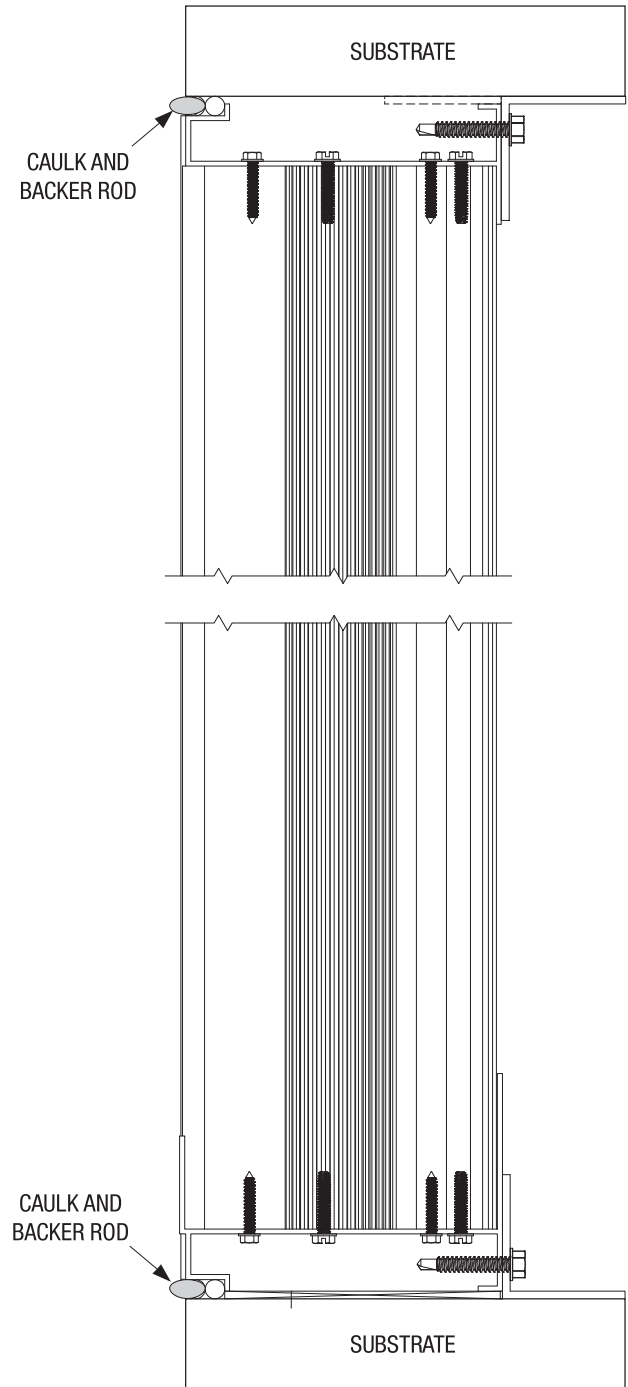
1. Install backer rod and caulk around the entire perimeter of the louver, as required. (Backer rod and caulk are by others). This is required for all single section and multiple section units. Refer to Section IV for multiple section caulking at the mullion covers.

FIGURE 1 - HORIZONTAL SINGLE SECTION



TYPICAL HORIZONTAL BLADE LOUVER

FIGURE 2 - VERTICAL SINGLE SECTION



TYPICAL VERTICAL BLADE LOUVER



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IV. Multiple Section Louver/Mullion Cover Caulking Requirements

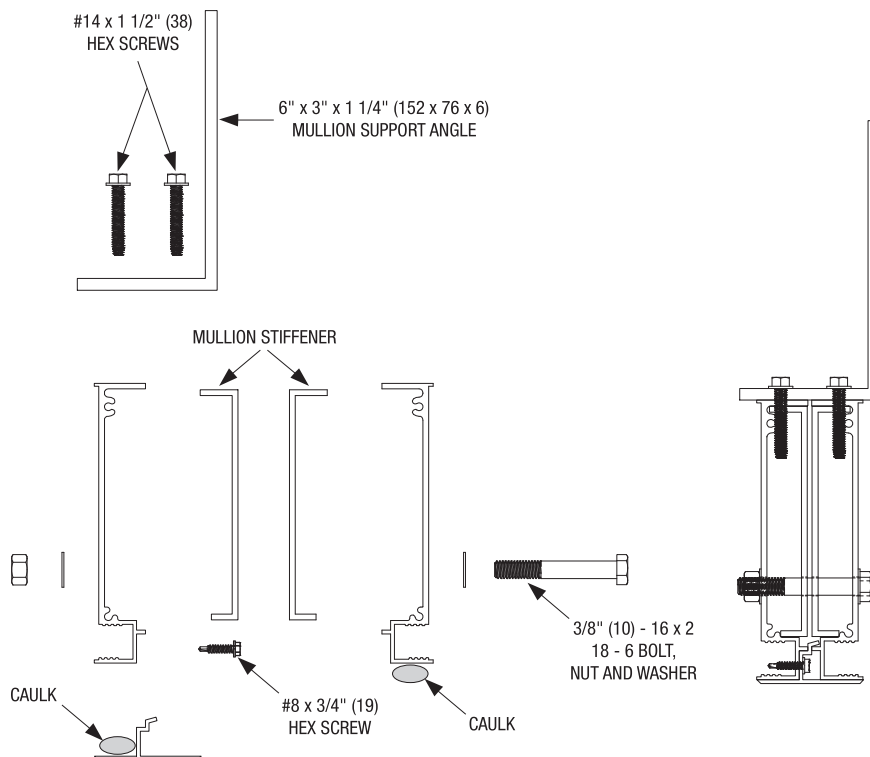
- Nailor Hurricane Louvers have two different types of mullion covers, depending on the era of the original design. Each detail will be demonstrated in the figures below. Type A is an extruded "T" shape that is fastened to the inside of the louver frame. Type B is a flat bar that is fastened to the front of the louver frame. **WARNING:** Identify your mullion covers prior to multiple section installation.
- MULLION COVER REFERENCE TABLE:** The table below identifies which type of mullion cover is required by model.

MULLION COVER REFERENCE TABLE

NAILOR LOUVER MODEL	FIGURE # TYPE
1604DHPF	Figure 3 - Type A
1605WDF	Figure 3 - Type A
1606DHPF	Figure 3 - Type A
1606WDF	Figure 3 - Type A
1606DHPM	Figure 3 - Type A
1609HM	Figure 3 - Type A
1606CM	Figure 3 - Type A
1609H	Figure 3 - Type A
1606C	Figure 3 - Type A
1605WDFV	Figure 4 – Type B
1605WDM	Figure 4 – Type B
1605WDVM	Figure 4 – Type B
1675WDVM	Figure 4 – Type B
1605WDV	Figure 4 – Type B
1605WDV	Figure 4 – Type B

- Type A:** Apply a bead of caulk to rear of the mullion cover and apply caulk to the pre-punched holes on the mullion cover. Install mullion to the left side of the louver using #8 x 3/4" (19) metal hex screws. This will be the rightmost section of the louver.
- Apply a bead of caulk to the exposed surface of the next louver panel frame prior to installation.
- Continue installing louver panels using the same procedure. The leftmost louver panel has no mullion cover.
- Ensure that the entire perimeter is caulked as referenced in **Section III PERIMETER CAULKING REQUIREMENTS.**

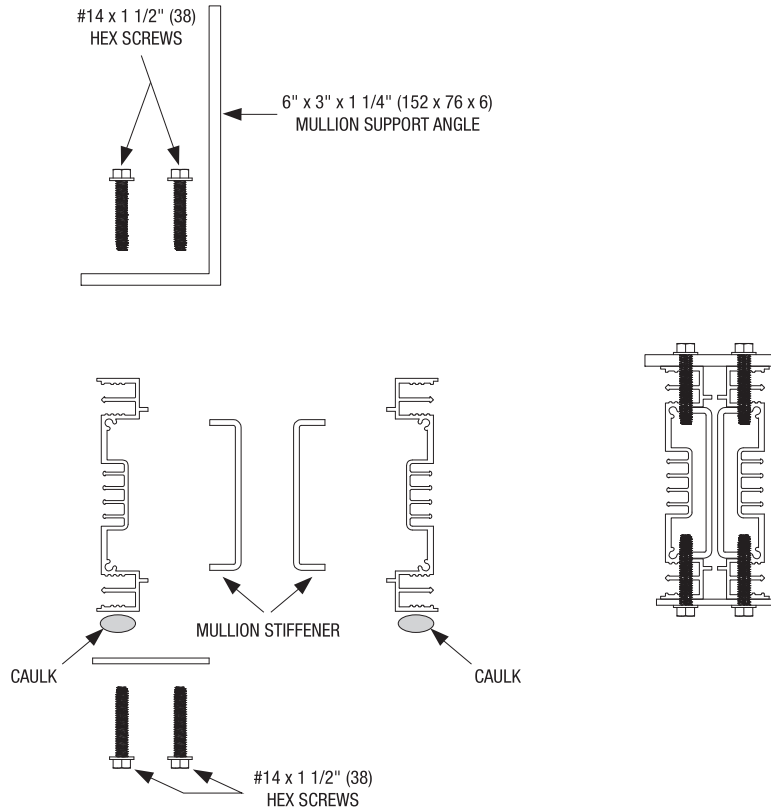
FIGURE 3 - TYPE A MULLION COVER CAULKING



IV. Multiple Section Louver/Mullion Cover Caulking Requirements (continued)

8. **Type B:** Apply a bead of caulk to exterior surface of each louver panel frame prior to installing the mullion cover. The mullion cover shall be attached in accordance with the installation instructions referenced in **Section II General Installation Instructions**.
9. Apply a bead of caulk to the interior surface of each louver panel frame prior to installing the louver support angle.
10. Continue installing louver panels using the same procedure. The leftmost louver panel has no mullion cover.
11. Ensure that the entire perimeter is caulked as referenced in **Section III PERIMETER CAULKING REQUIREMENTS**.

FIGURE 4 - TYPE B MULLION COVER CAULKING



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Dimensions are in inches (mm).



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Fax: 416-744-3360

Calgary, Canada
Tel: 403-279-8619
Fax: 403-279-5035


 Slate Blue **LF01**

 Medium Bronze **LF02**

 Sandstone **LF03**

 Light Gray **LF04**

 Charcoal **LF05**

 Bone White **LF06**

 Western Tan **LF07**

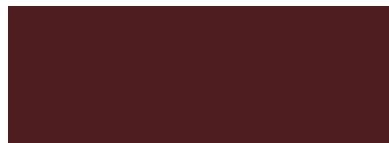
 Architectural Bronze **LF08**

 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)	"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 new 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)	"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)	"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.

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