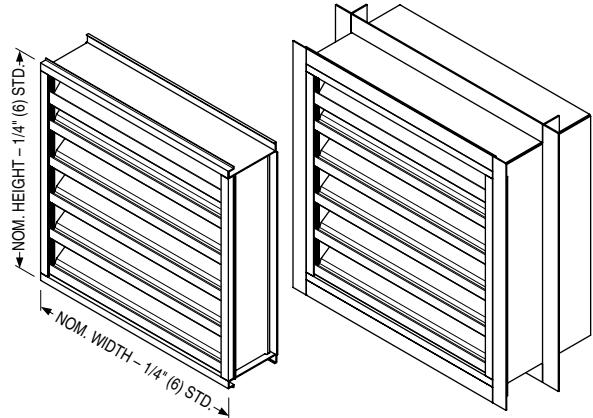




**EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH PERFORMANCE DRAINABLE BLADE
6" (152) DEEP • HORIZONTAL BLADE
MODEL: 1606DHPM**

QUALIFICATIONS:

- Miami-Dade County NOA No. : 24-0516.04
- Florida Product Approval No. : 28078.3
- 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 downspouts 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).

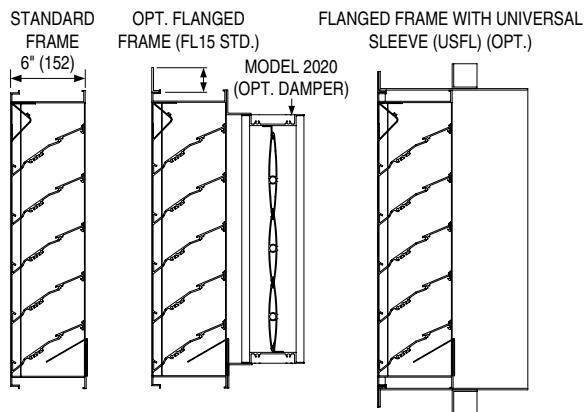
SCREEN: 3/4" x .050 (19 x 1.27) expanded, flattened aluminum bird screen in removable frame, inside (rear) mount (adds approx. 3/8" [10] to louver depth).

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).



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:

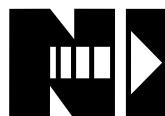
ENGINEER:

CONTRACTOR:

For Installation Instructions, see approved NOA.

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

DATE	B SERIES	SUPERSEDES	DRAWING NO.
8 - 23 - 24	1600F	5 - 23 - 24	1606DHPM



Nailor[®]
Industries Inc.

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 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
	12 0.30	0.31 0.03	0.51 0.05	0.70 0.07	0.89 0.08	1.09 0.10	1.28 0.12	1.48 0.14	1.67 0.16	1.87 0.17	2.06 0.19	2.25 0.21
	18 0.46	0.60 0.06	0.98 0.09	1.35 0.13	1.73 0.16	2.11 0.20	2.48 0.23	2.86 0.27	3.23 0.30	3.61 0.34	3.99 0.37	4.36 0.41
	24 0.61	0.90 0.08	1.47 0.14	2.03 0.19	2.60 0.24	3.16 0.29	3.73 0.35	4.29 0.40	4.85 0.45	5.42 0.50	5.98 0.56	6.55 0.61
	30 0.76	1.19 0.11	1.93 0.18	2.68 0.25	3.42 0.32	4.16 0.39	4.90 0.46	5.64 0.52	6.39 0.59	7.13 0.66	7.87 0.73	8.61 0.80
	36 0.36	1.33 0.12	2.16 0.20	3.00 0.28	3.83 0.36	4.66 0.43	5.49 0.51	6.32 0.59	7.15 0.66	7.98 0.74	8.81 0.82	9.65 0.90
	42 1.07	1.77 0.16	2.87 0.27	3.97 0.37	5.07 0.47	6.17 0.57	7.27 0.68	8.37 0.78	9.47 0.88	10.57 0.98	11.67 1.08	12.78 1.19
	48 1.22	2.05 0.19	3.33 0.31	4.61 0.43	5.89 0.55	7.17 0.67	8.45 0.79	9.65 0.90	11.01 1.02	12.29 1.14	13.57 1.26	14.85 1.38
	54 1.37	2.34 0.22	3.80 0.35	5.26 0.49	6.73 0.62	8.19 0.76	9.65 0.90	11.11 1.03	12.57 1.17	14.03 1.30	15.49 1.44	16.95 1.57
	60 1.52	2.64 0.24	4.28 0.40	5.92 0.55	7.57 0.70	9.21 0.86	10.86 1.01	12.50 1.16	14.14 1.31	15.79 1.47	17.43 1.62	19.07 1.77
	66 1.68	2.92 0.27	4.74 0.44	6.56 0.61	8.39 0.78	10.21 0.95	12.03 1.12	13.85 1.29	15.67 1.46	17.49 1.63	19.31 1.79	21.13 1.96
	72 1.83	3.21 0.30	5.22 0.48	7.22 0.67	9.22 0.86	11.23 1.04	13.23 1.23	15.24 1.42	17.24 1.60	19.24 1.79	21.25 1.97	23.25 2.16
	78 1.98	3.50 0.33	5.68 0.53	7.87 0.73	10.05 0.93	12.23 1.14	14.41 1.34	16.60 1.54	18.78 1.74	20.96 1.95	23.14 2.15	25.33 2.35
	84 2.13	3.79 0.35	6.16 0.57	8.52 0.79	10.89 1.01	13.25 1.23	15.61 1.45	17.98 1.67	20.34 1.89	22.71 2.11	25.07 2.33	27.43 2.55
	90 2.29	4.08 0.38	6.63 0.62	9.17 0.85	11.72 1.09	14.26 1.32	16.81 1.56	19.35 1.80	21.89 2.03	24.44 2.27	26.98 2.51	29.53 2.74
	96 2.44	4.37 0.41	7.09 0.66	9.82 0.91	12.54 1.17	15.27 1.42	17.99 1.67	20.71 1.92	23.44 2.18	26.16 2.43	28.89 2.68	31.61 2.94
	102 2.59	4.66 0.43	7.57 0.70	10.47 0.97	13.38 1.24	16.28 1.51	19.19 1.78	22.09 2.05	25.00 2.32	27.90 2.59	30.81 2.86	33.71 3.13
	108 2.74	4.95 0.46	8.04 0.75	11.12 1.03	14.21 1.32	17.29 1.61	20.38 1.89	23.46 2.18	26.55 2.47	29.63 2.75	32.72 3.04	35.80 3.33
	114 2.90	5.24 0.49	8.51 0.79	11.78 1.09	15.04 1.40	18.31 1.70	21.58 2.00	24.84 2.31	28.11 2.61	31.38 2.92	34.65 3.22	37.91 3.52
	120 3.05	5.53 0.51	8.98 0.83	12.42 1.15	15.87 1.47	19.31 1.79	22.76 2.11	26.21 2.43	29.65 2.75	33.10 3.07	36.54 3.40	39.99 3.72

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 3

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

8 - 23 - 24

1600F

5 - 23 - 24

1606DHPM



Nailor[®]
Industries Inc.

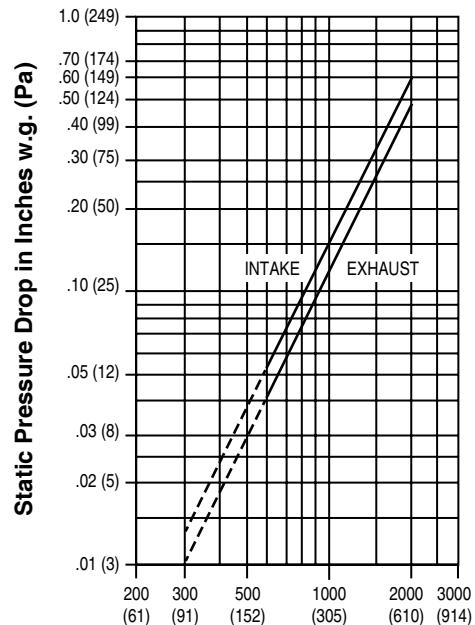
EXTRUDED ALUMINUM STATIONARY LOUVER
MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED
HIGH PERFORMANCE DRAINABLE BLADE
6" (152) DEEP • HORIZONTAL BLADE • PERFORMANCE DATA
MODEL: 1606DHPM

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
	.19 in. w.g. (47 Pa)
	Pressure Drop @ 1186 fpm

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.



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 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.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

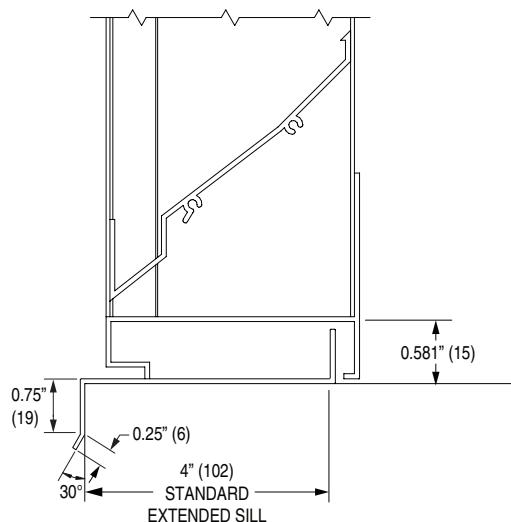
Page 3 of 3
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
8 - 23 - 24	1600F	5 - 23 - 24	1606DHPM

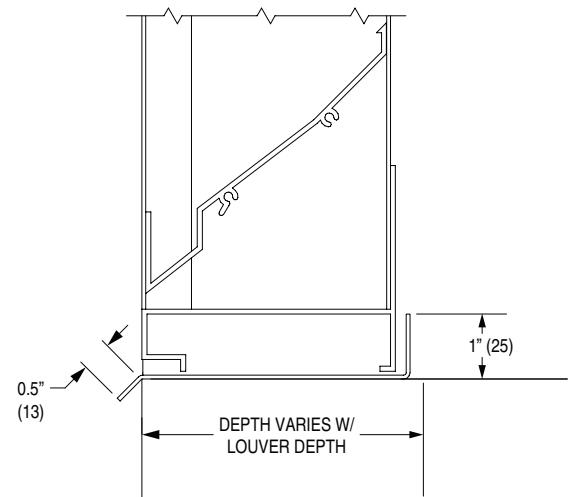


**LOUVER ACCESSORIES
MODEL SERIES: 1600 & 1700
ESI EXTENDED SILL & PASI SILL PAN**

ESI Extended Sill

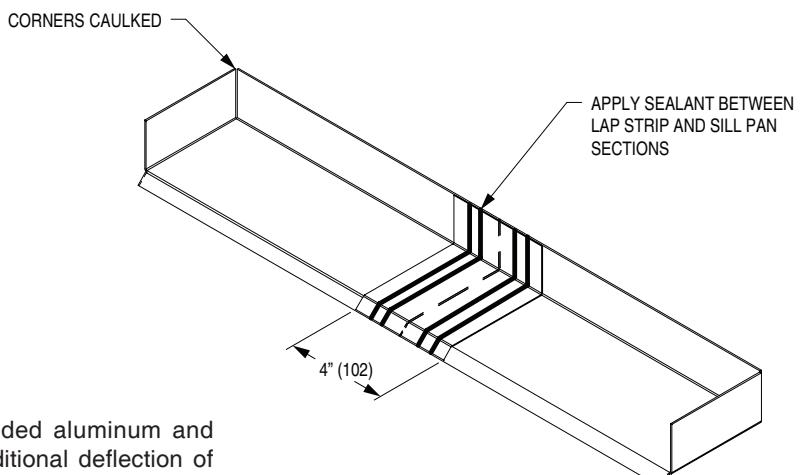


PASI Sill Pan (Extended Sill with End Dams)



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

SCHEDULE TYPE:

Dimensions are in inches (mm).

PROJECT:

ENGINEER:

CONTRACTOR:

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, Coraflon® 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.

Coraflon® 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 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.**

**MIAMI-DADE COUNTY
APPROVED**

08/15/24

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

Page 1

Nailor Industries Inc.

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

Nailor Industries Inc.

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

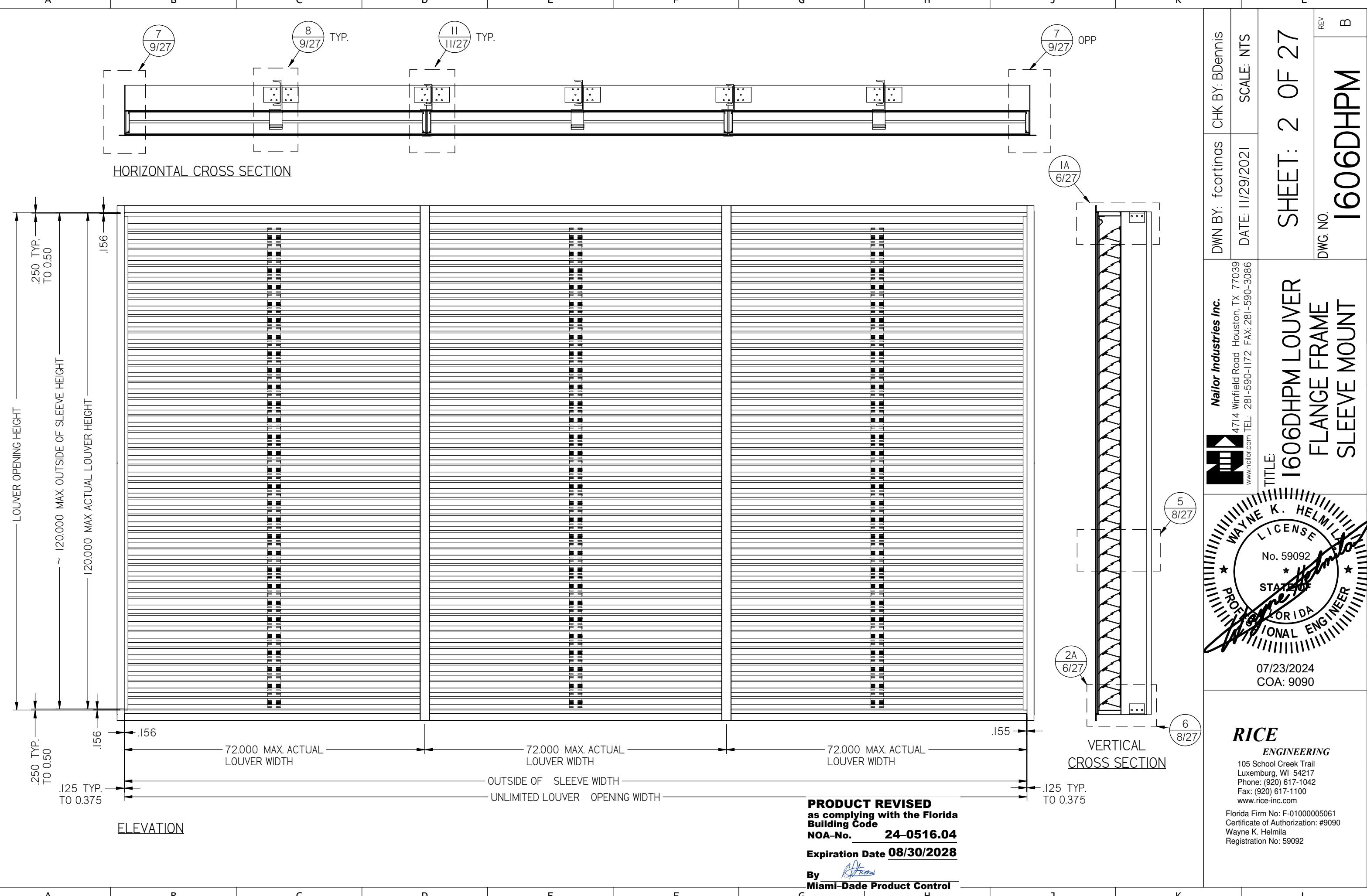
1. Statement letter of code conformance to the 8th edition (2023) of the FBC, issued by Rice Engineering, dated 07/22/2024, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 07/22/2024, signed and sealed by Wayne K. Helmila, P.E.

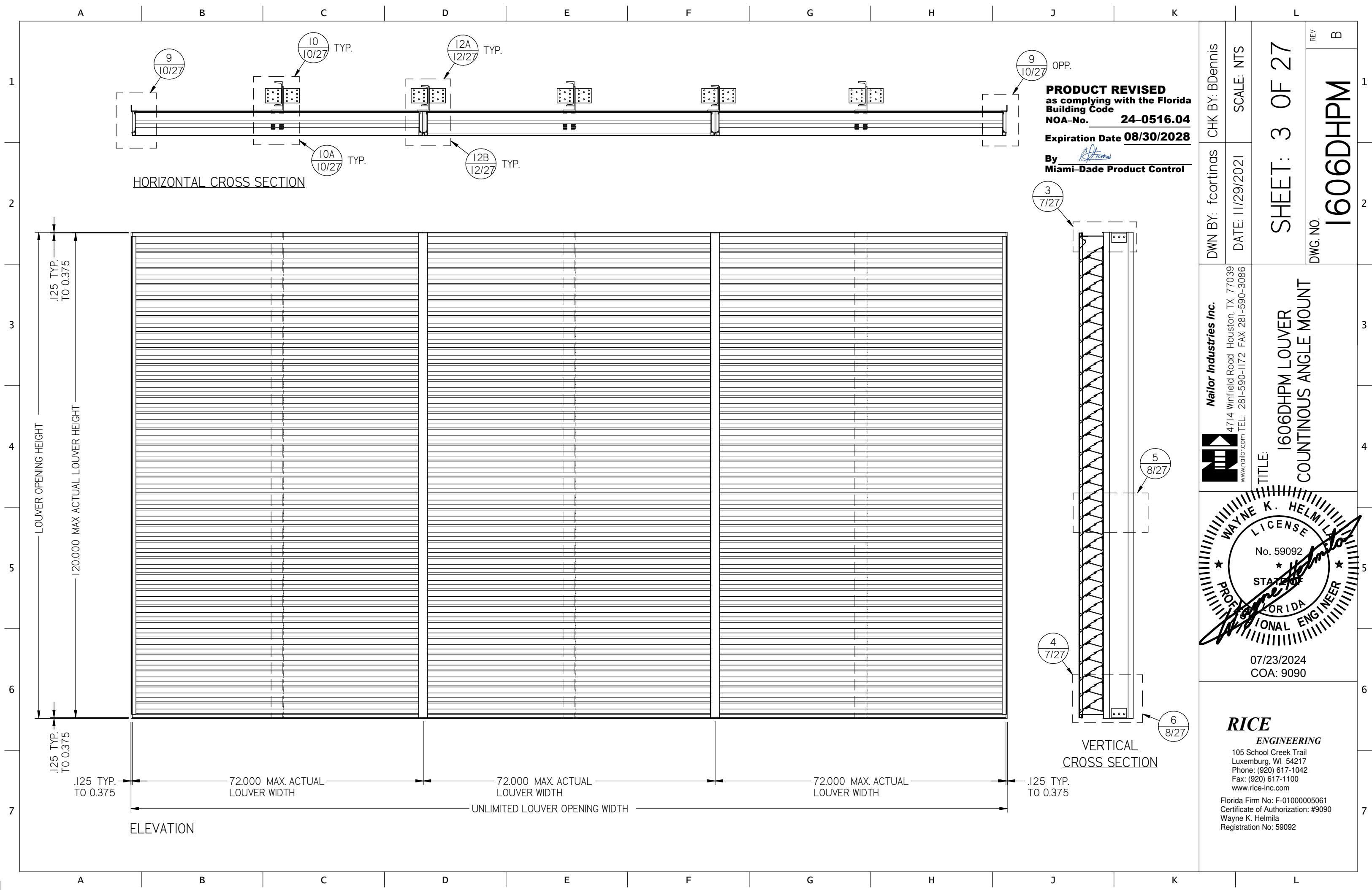
Submitted under NOA # 21-0630.10

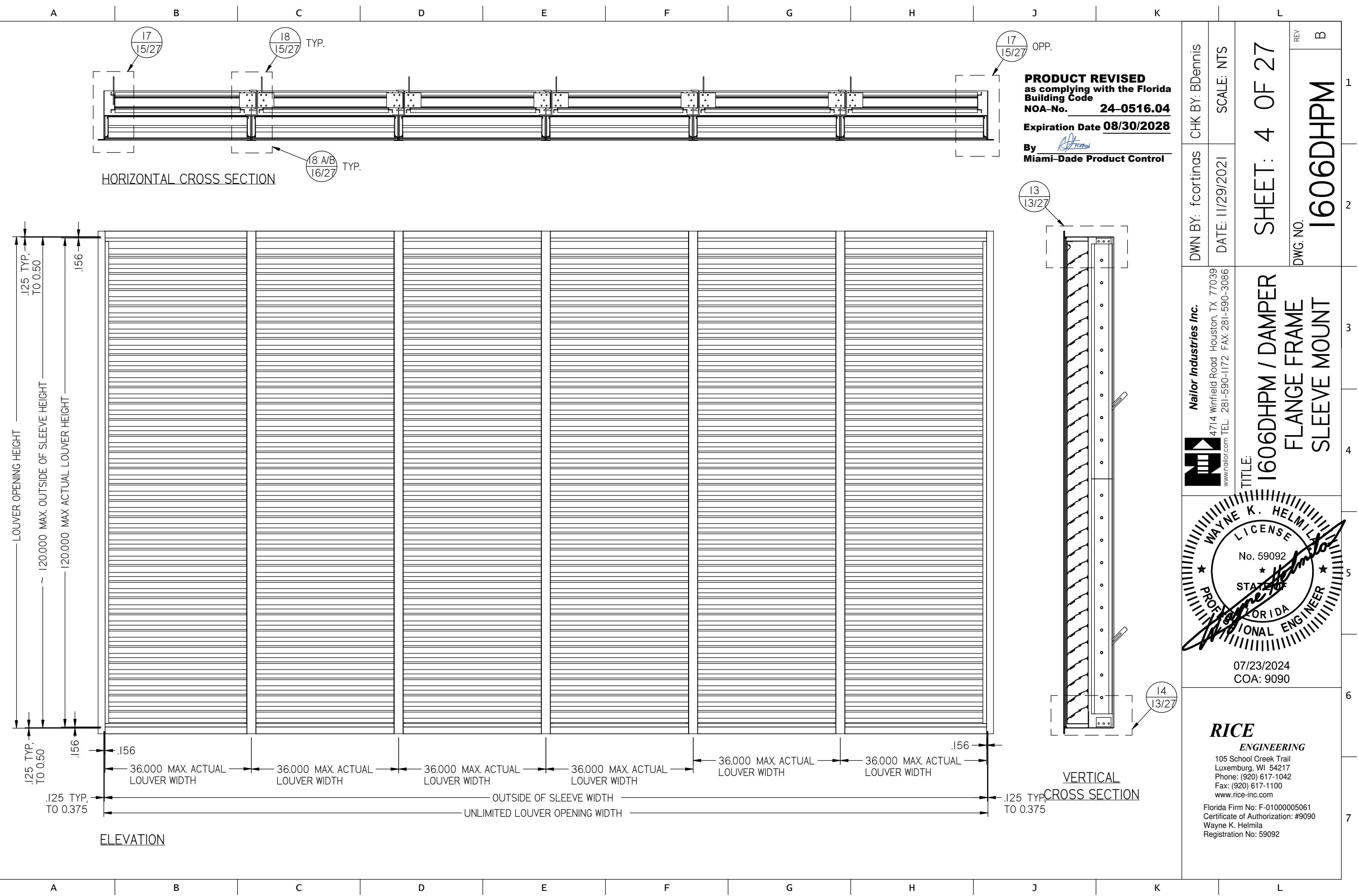
3. Statement letter of code conformance to the 7th edition (2020) FBC, issued by Rice Engineering, dated 08/16/2021, signed and sealed by Wayne K. Helmila, P.E.

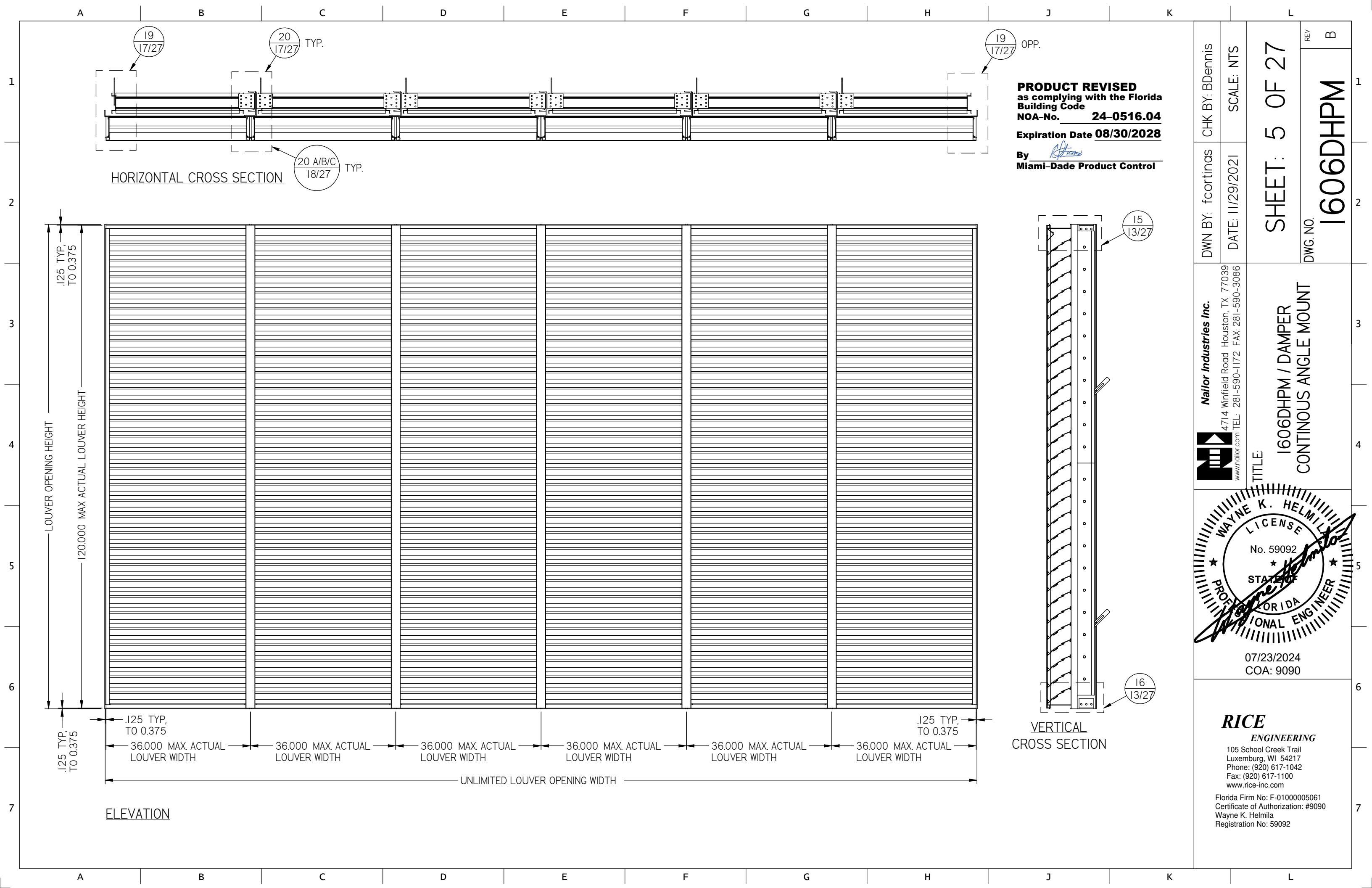


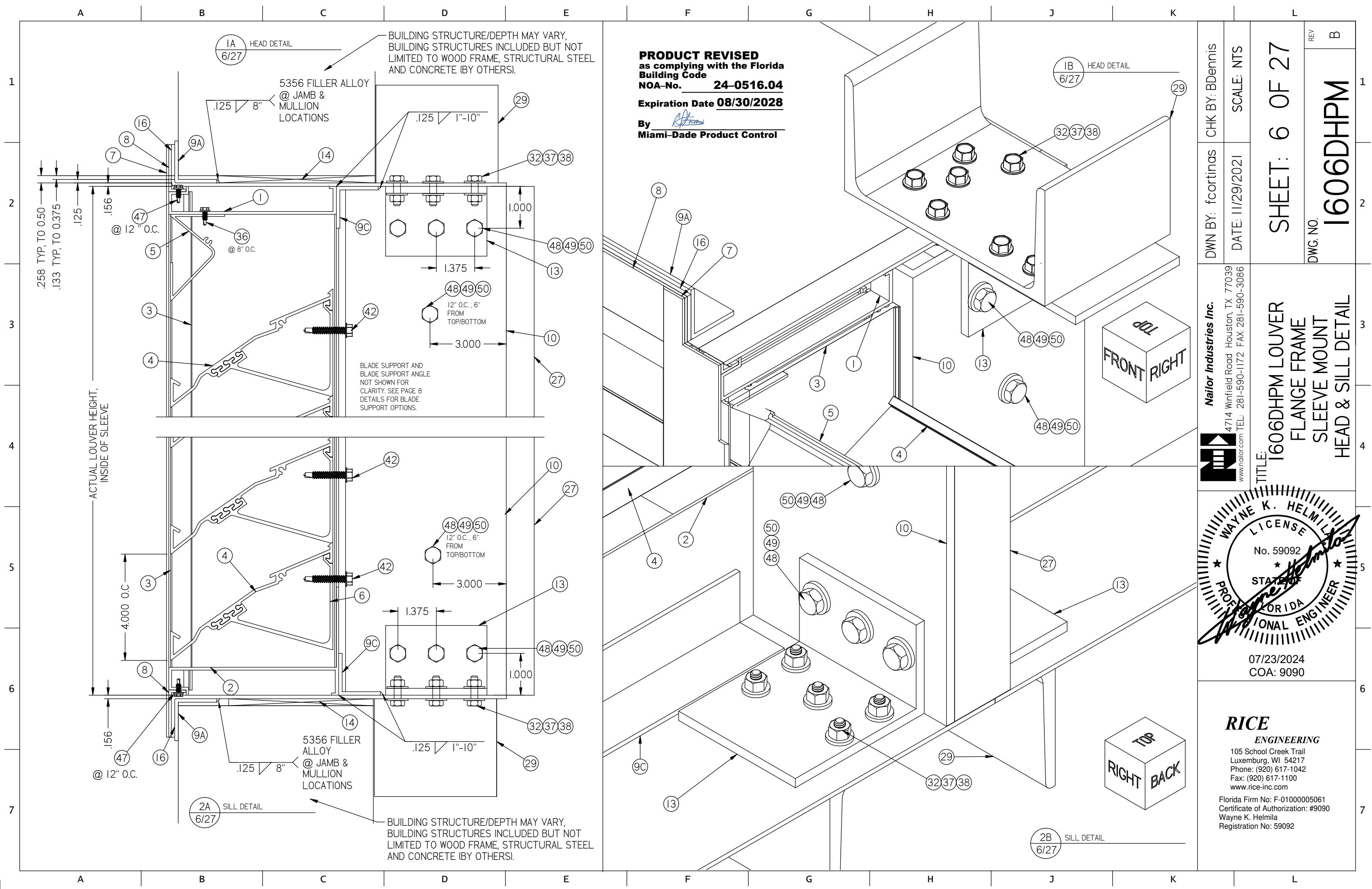
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 24-0516.04
Expiration Date: August 30, 2028
Approval Date: August 15, 2024

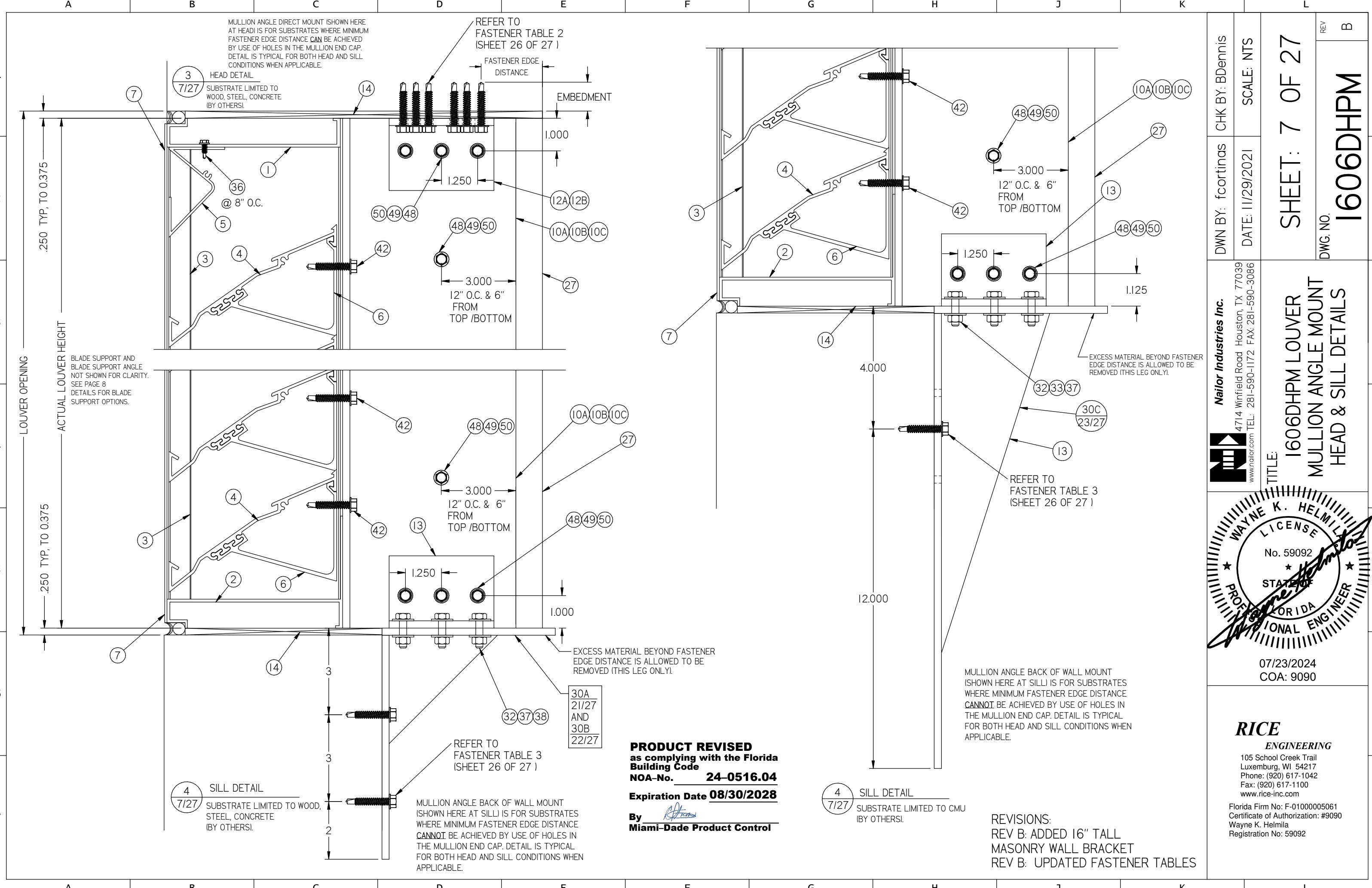


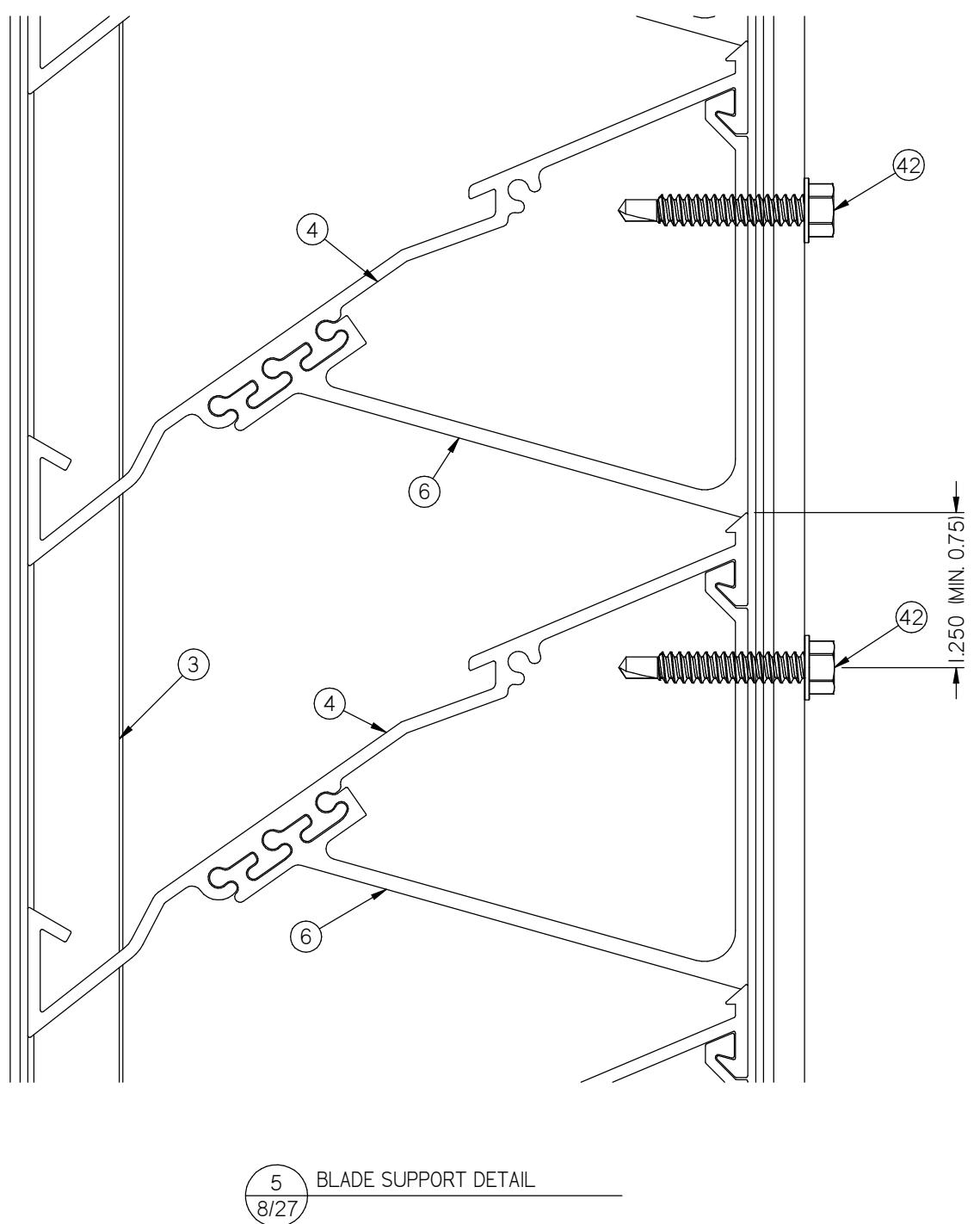




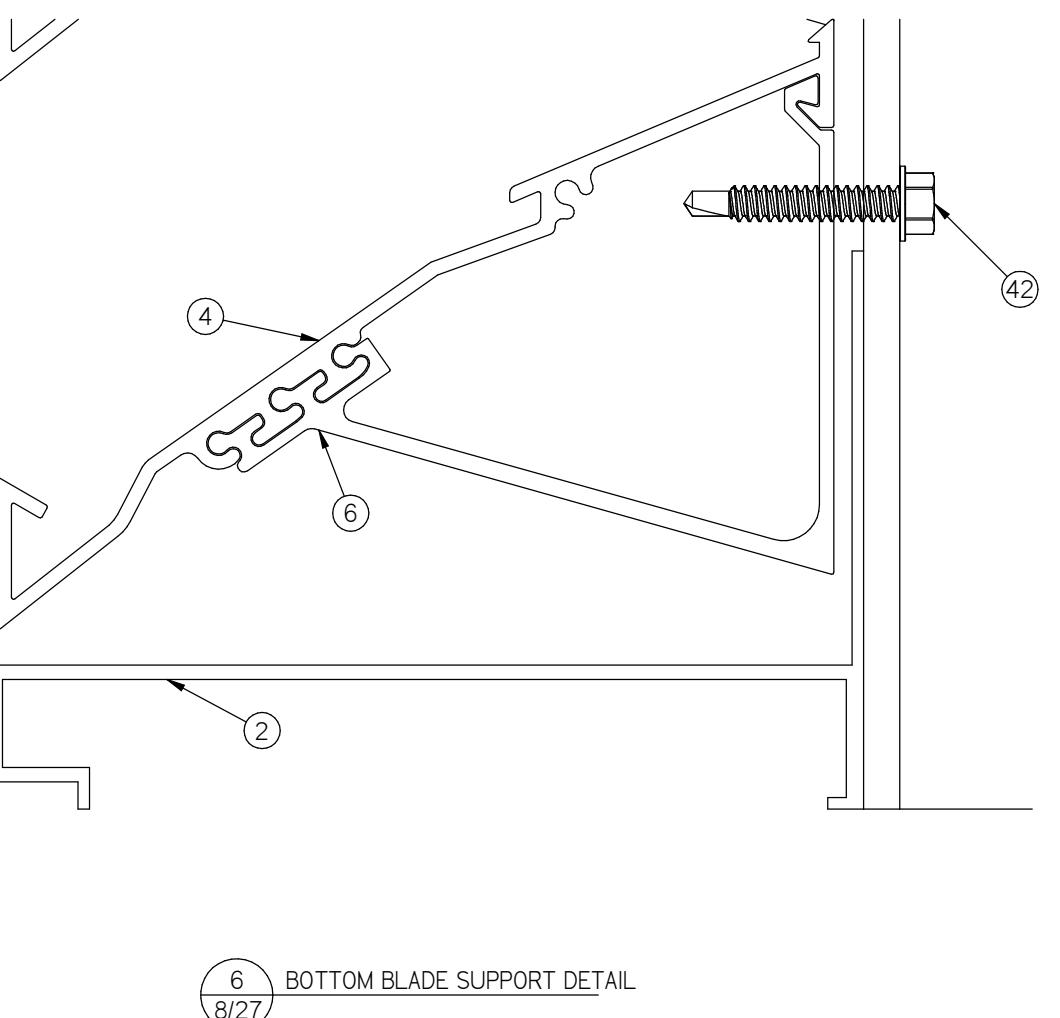




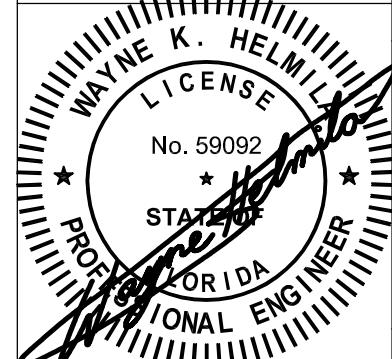




NOTE: THE BLADE SUPPORT ANGLE (ITEM 10 IS NOT SHOWN IN THE DETAILS IN ORDER TO IMPROVE CLARITY. THE BLADE SUPPORT ANGLE IS ATTACHED TO THE BLADE SUPPORT BRACE (ITEM 6).
BLADE SUPPORT BRACKET 6 (SHOWN) IS ANY OF THE DRAWINGS FOR DETAIL 6.



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

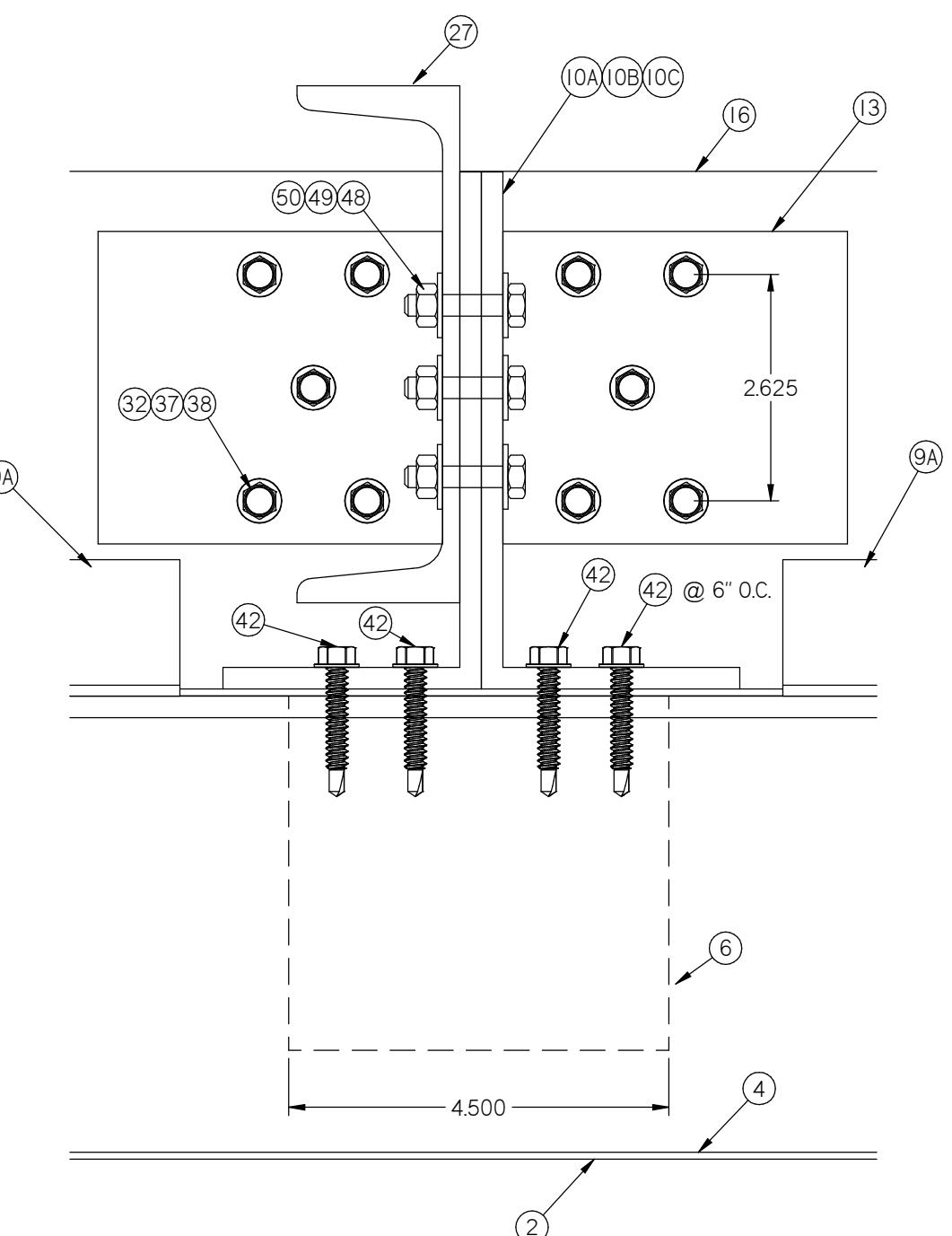
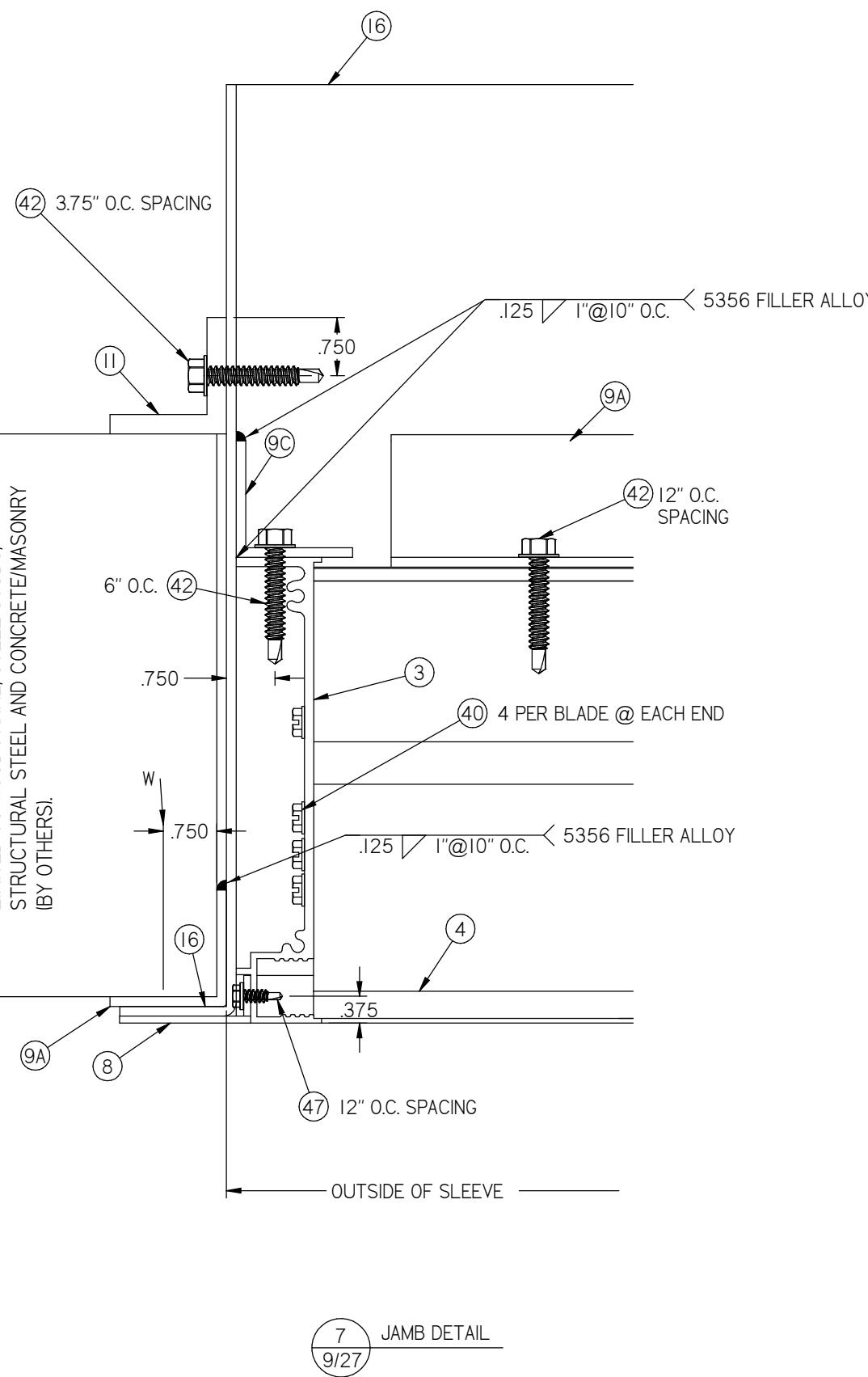
Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 www.nailor.com TEL: 281-590-1172 FAX: 281-590-3086	DWN BY: fcortinas CHK BY: BDennis
	DATE: 11/29/2021 SCALE: NTS
SHEET: 8 OF 27	
1606DHPM	
DWG. NO. 1606DHPM LOUVER	
TITLE: BLADE SUPPORT DETAIL	
 WAYNE K. HELMILA LICENSE No. 59092 STATE OF FLORIDA PROFESSIONAL ENGINEER 07/23/2024 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

BUILDING STRUCTURE/DEPTH MAY VARY.
BUILDING STRUCTURES INCLUDE BUT NOT
LIMITED TO WOOD FRAME, STEEL STUDS,
STRUCTURAL STEEL AND CONCRETE/MASONRY
(BY OTHERS).

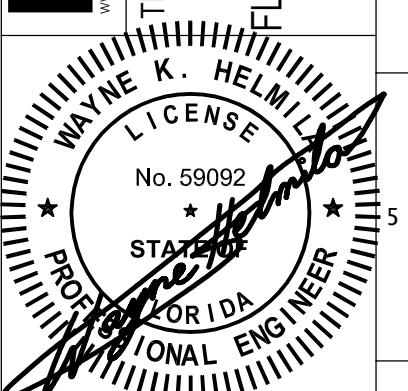


PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 24-0516.04
Expiration Date 08/30/2028
By 
Miami-Dade Product Control

RICE
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 Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 www.nailor.com TEL: 281-590-1172 FAX: 281-590-3086		DWN BY: fcortinas CHK BY: BDennis DATE: 11/29/2021 SCALE: NTS	SHEET: 9 OF 27 REV: B 1606DHPM DWG. NO.
 1606DHPM LOUVER FLANGE FRAME SLEEVE MOUNT JAMB DETAILS			

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

Miami-Dade Product Control

SUBSTRATE LIMITED TO WOOD,
STEEL, CONCRETE AND MASONRY
(CMU) (BY OTHERS).

REFER TO
FASTENER TABLE 2
(SHEET 26 OF 27)

EACH END

SUPPORT NOT ATTACHED
AT HEAD AND SILL AS
TO ALLOW IT TO "FLOAT"
DURING BLADE LOADING.

12A 12B

48 49 50

42

42 @ 6" O.C.

6

4

2

4.500

BLADE SUPPORT DIRECT MOUNT

PORT NOT ATTACHED TO HEAD AND SILL ASSEMBLY. ALLOW IT TO "FLOAT" DURING BLADE LOADING.

4.500

LADE SUPPORT DETAIL
ACK OF OF WALL MOUNT
OR CONT. ANGLE

EVISIONS:
EV B: UPDATED FASTENER TABLES

RICE ENGINEERING

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

ida Firm No: F-01000005061
ertificate of Authorization: #9090
ayne K. Helmila
iistration No: 59092

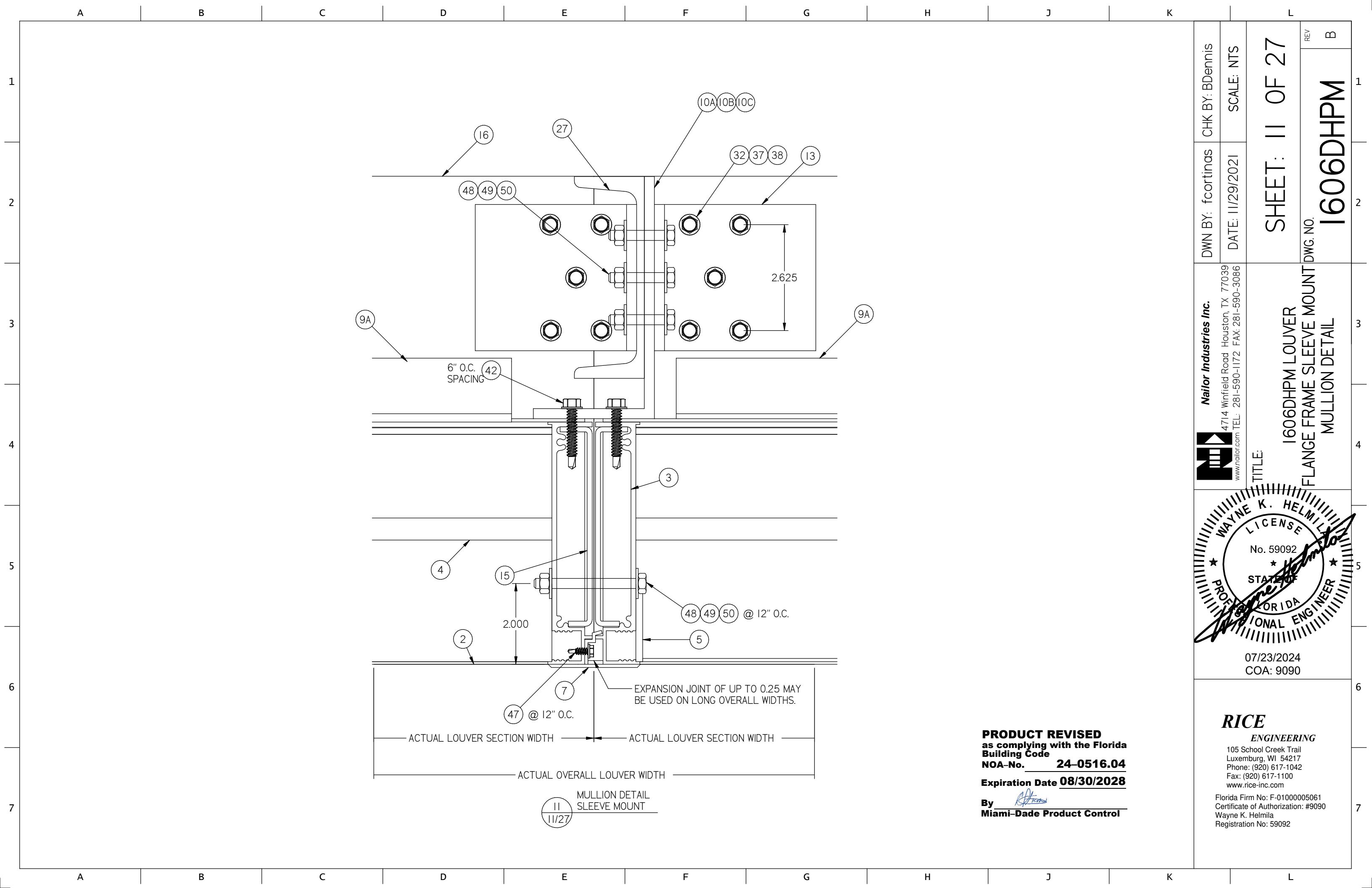
4
www.nailor.com

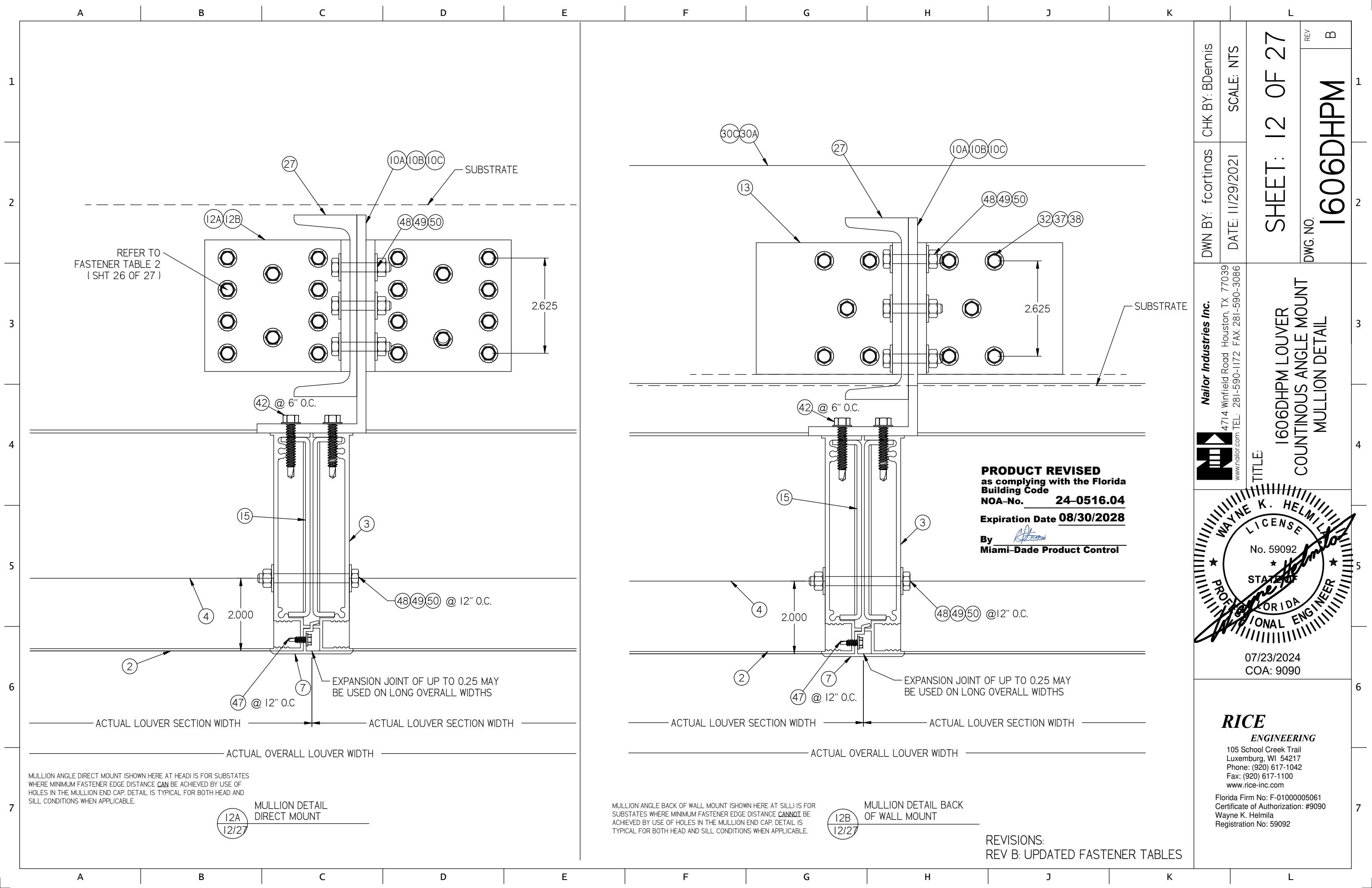
NAILOR
4714 Winfield Road Houston, TX 77080
www.nailor.com TEL: 281-590-1172 FAX: 281-590-3081

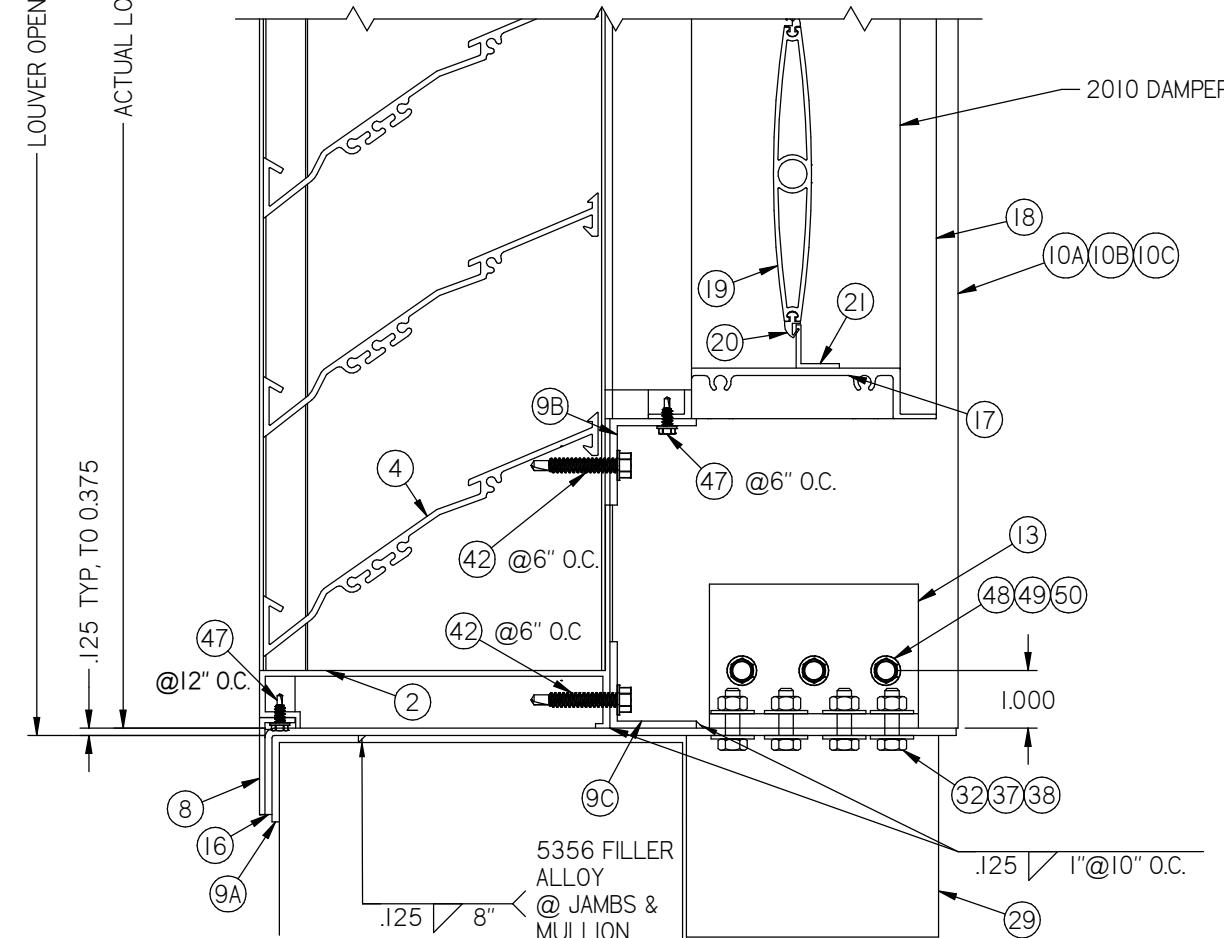
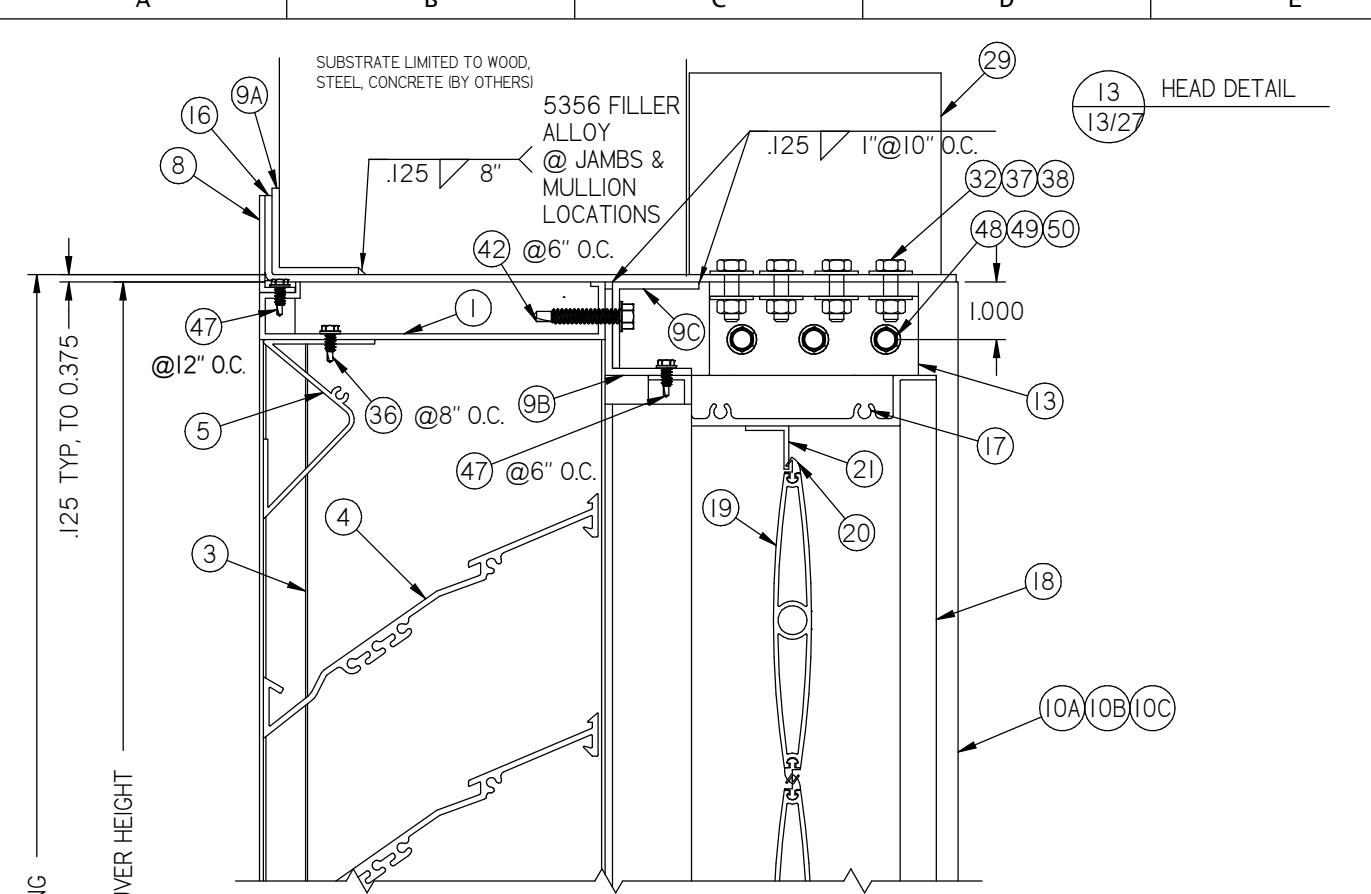
DATE: 11/29/2021 SCALE: NTS

SHEET: 10 OF 27

REV





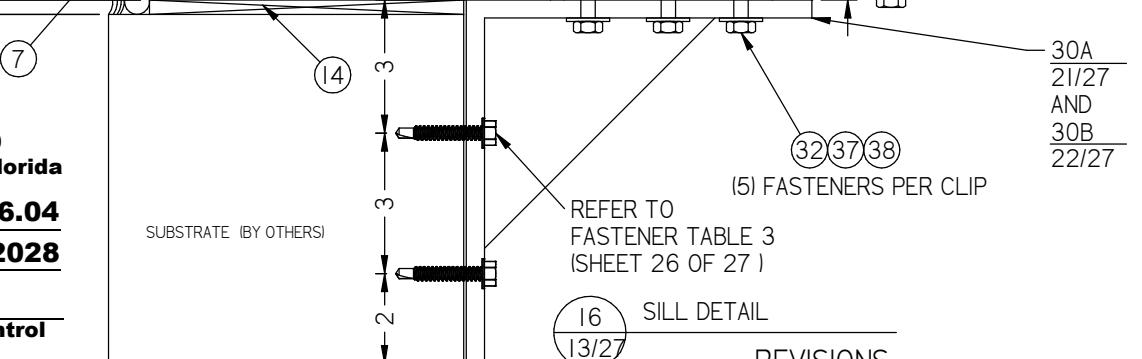
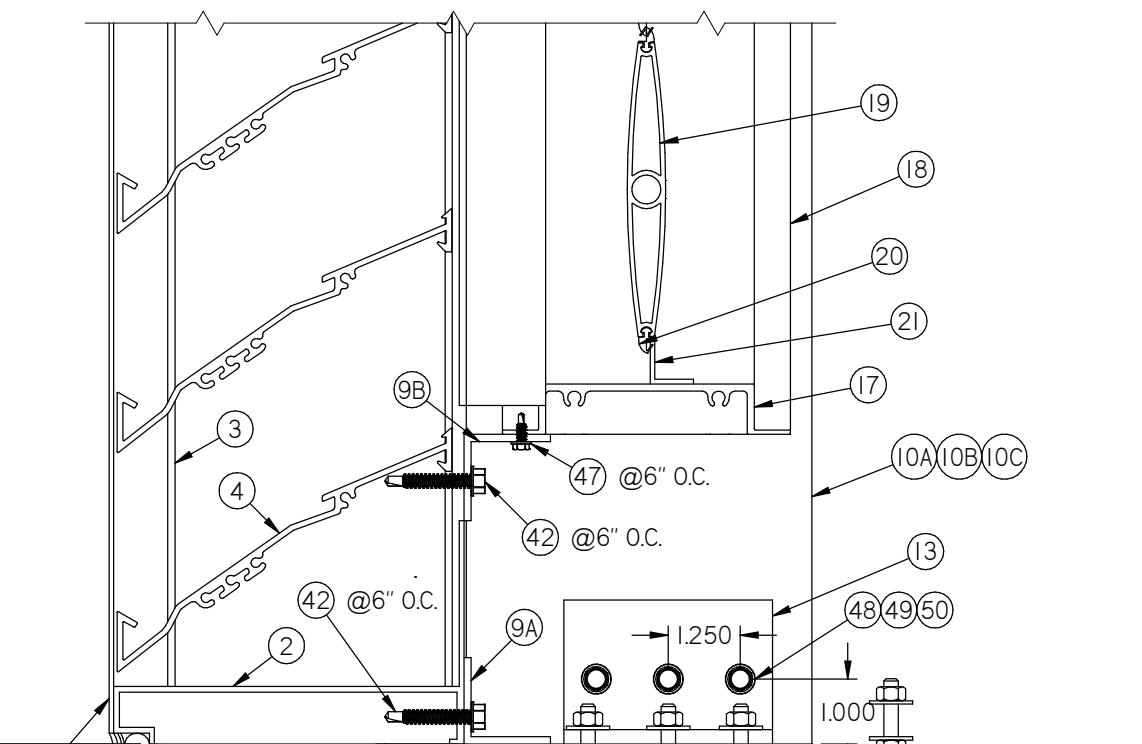
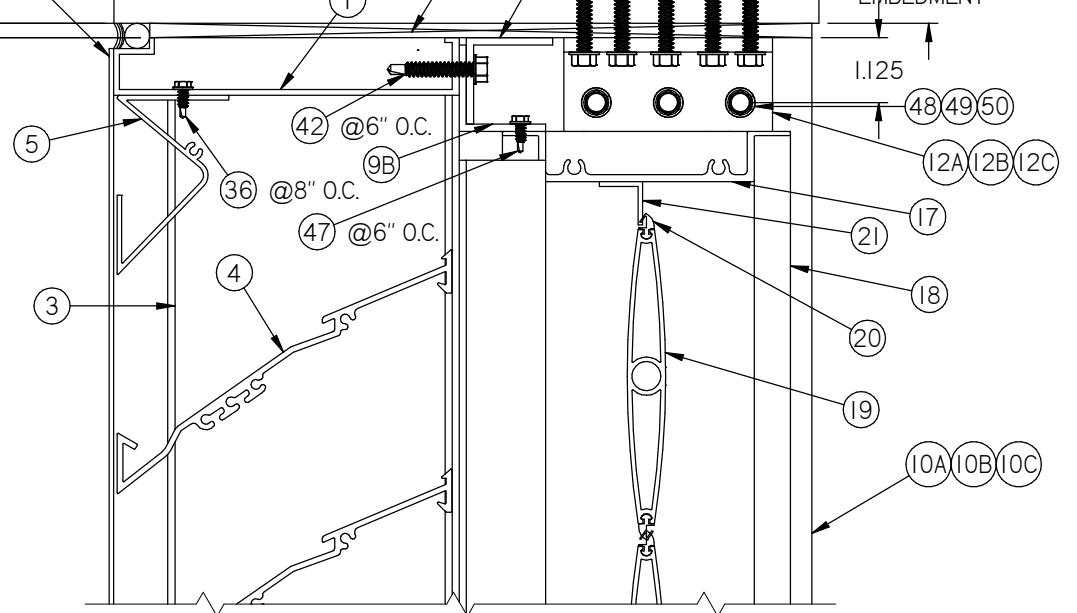


SILL DETAIL
14
13/27

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

By 
Miami-Dade Product Control

0.25 TYP TO 0.375
ACTUAL LOUVER HEIGHT



REVISIONS:
REV B: UPDATED FASTENER TABLES

REFER TO
FASTENER TABLE 2
(SHT 26 OF 27)

EDGE
DISTANCE

EMBEDMENT

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

48 49 50

12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

HEAD DETAIL

1.125

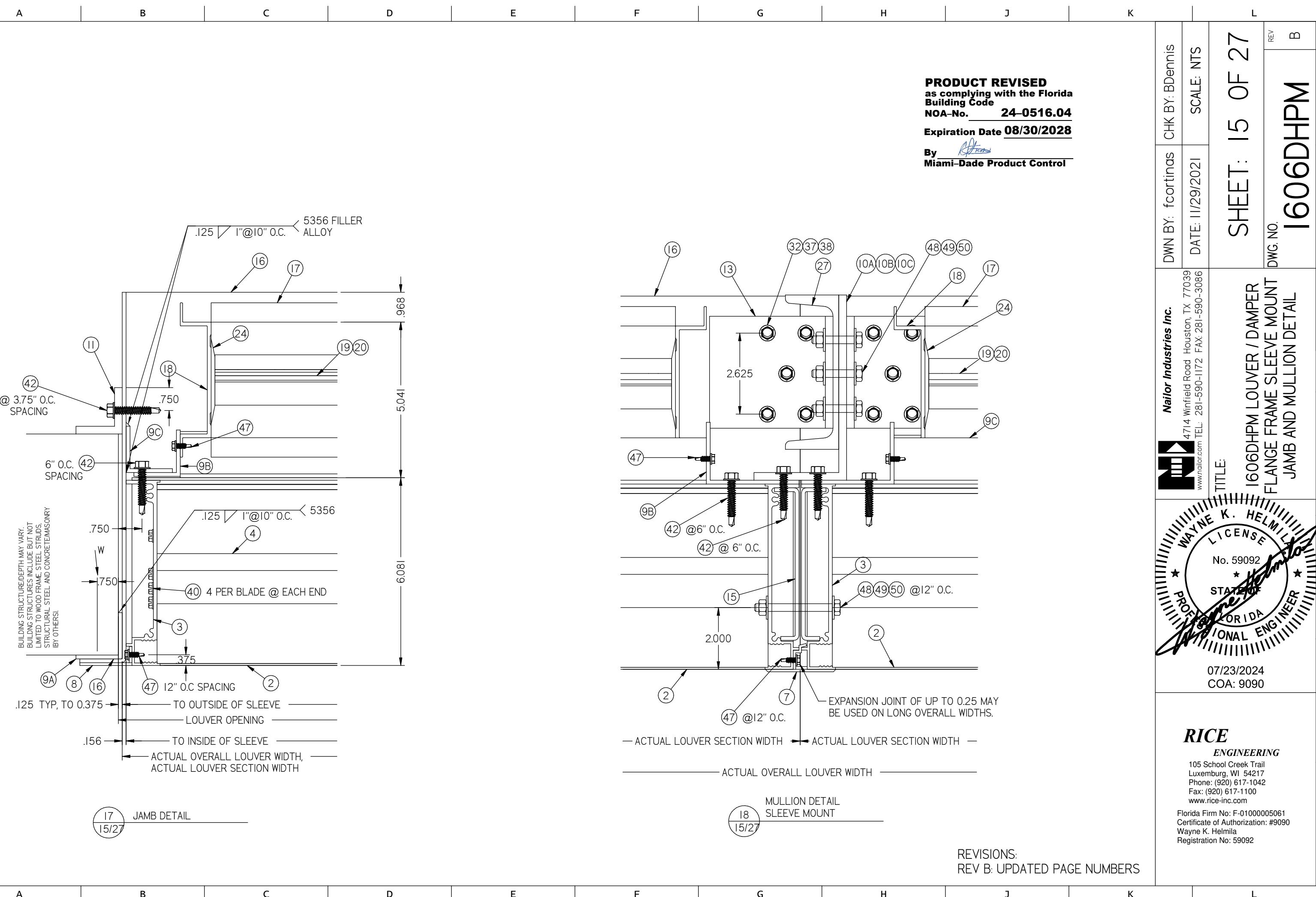
48 49 50

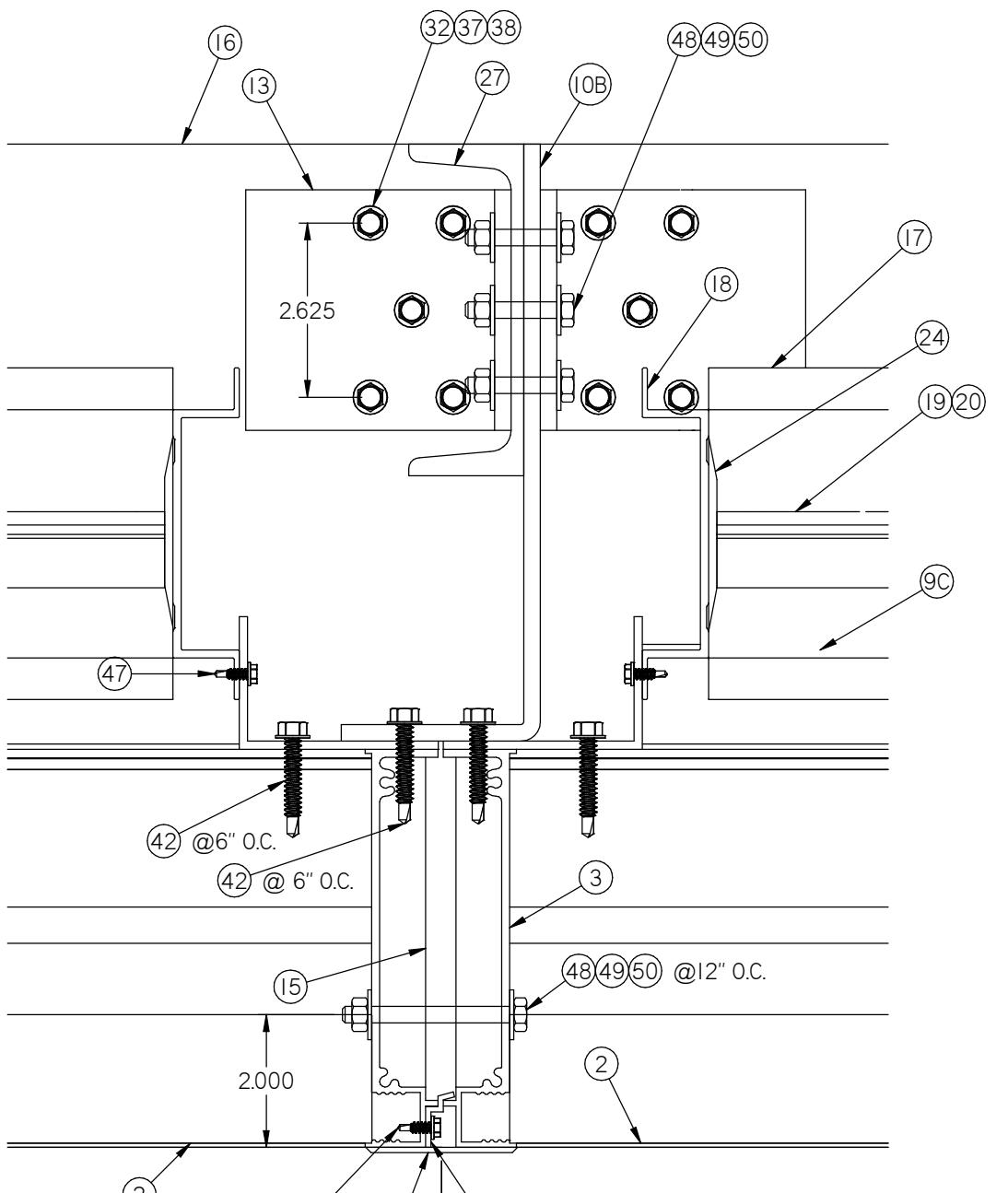
12A 12B 12C

17 21 18 19 10A 10B 10C

15 13/27

<p



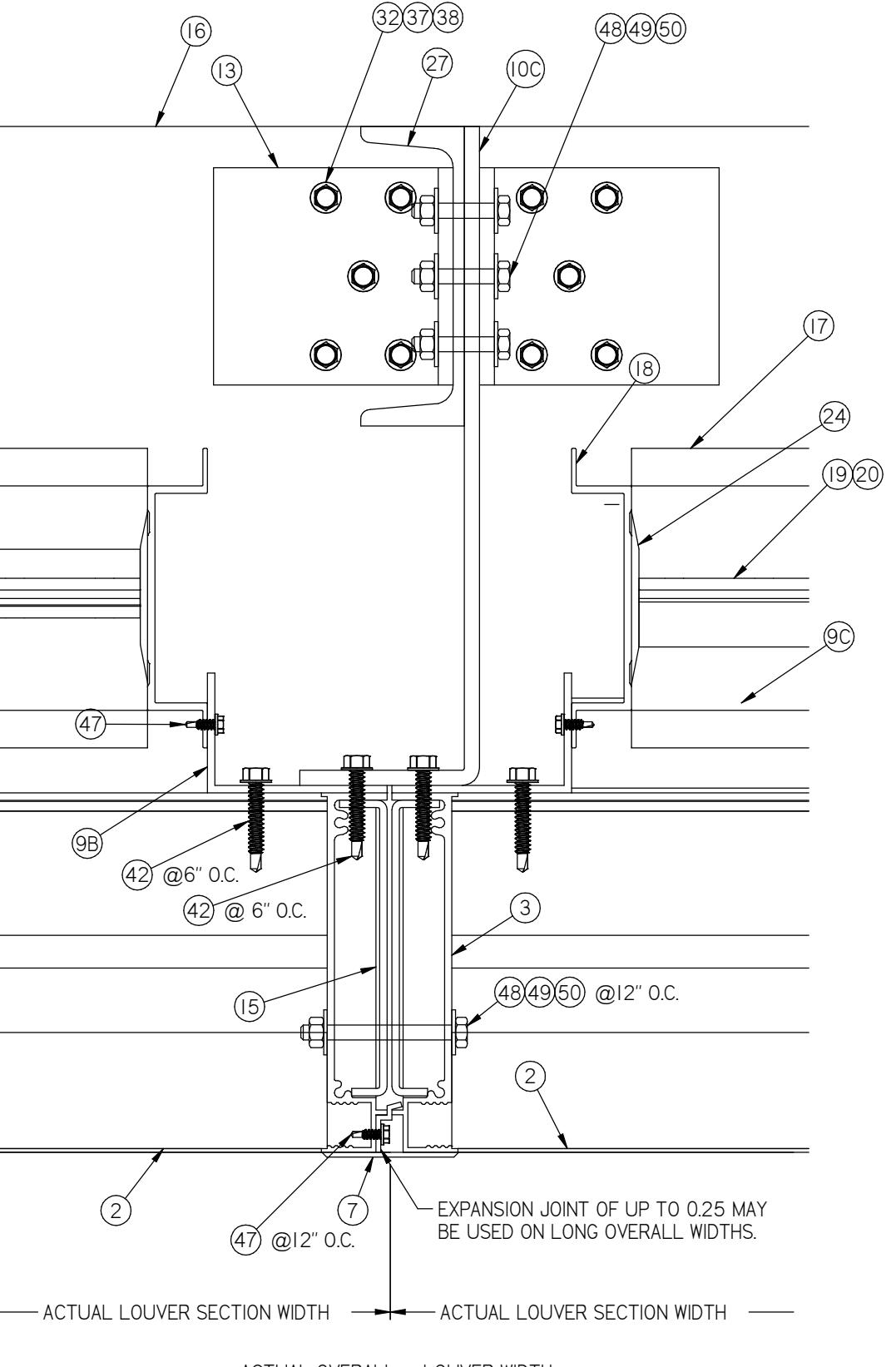


MULLION DETAIL
SLEEVE MOUNT

18A
16/27

FOR 36" BLADE SLEEVE MOUNT
STEEL C6X8.2 & ALUM 9X3 X 1

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



MULLION DETAIL
SLEEVE MOUNT

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

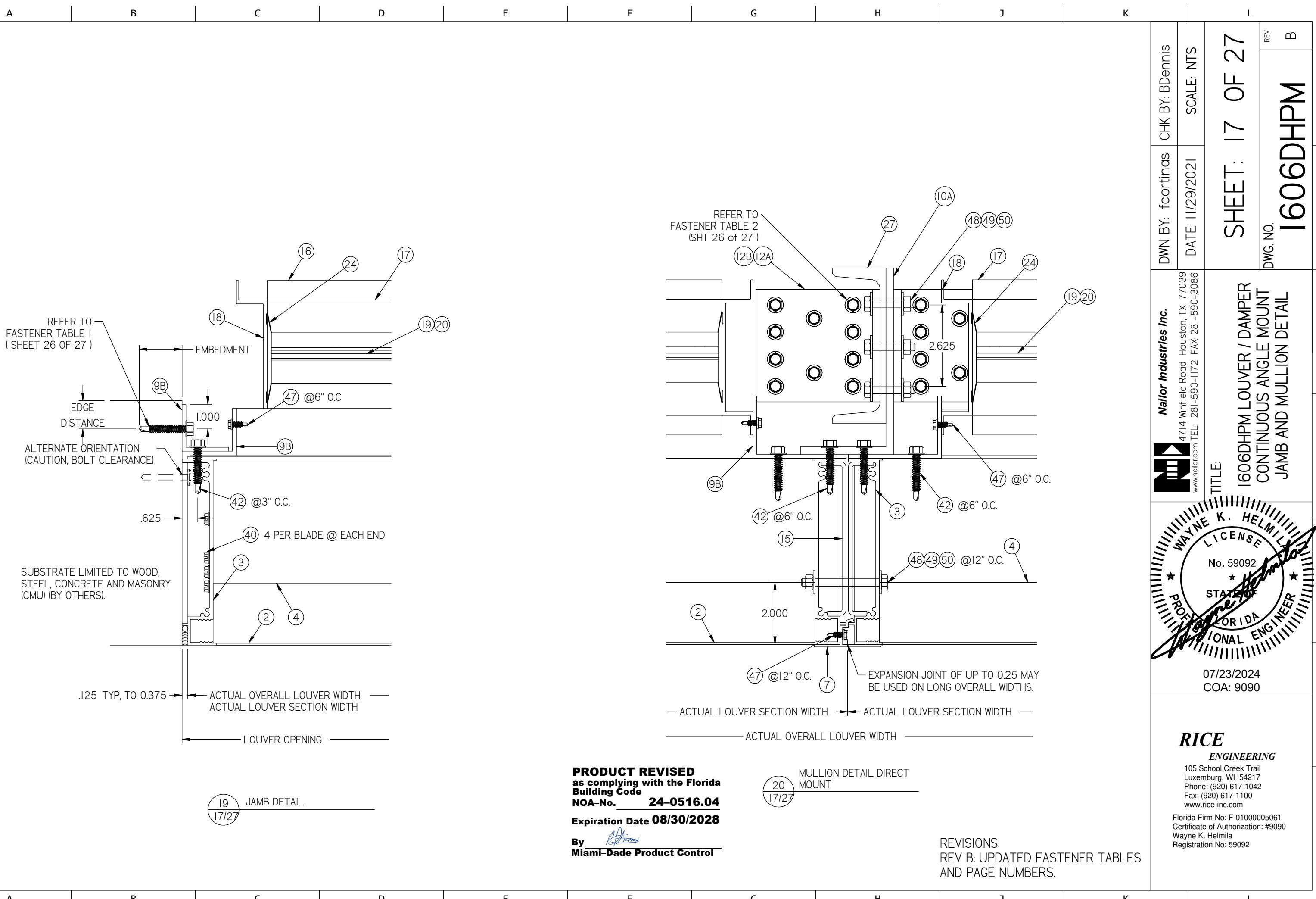
RICE
ENGINEERING

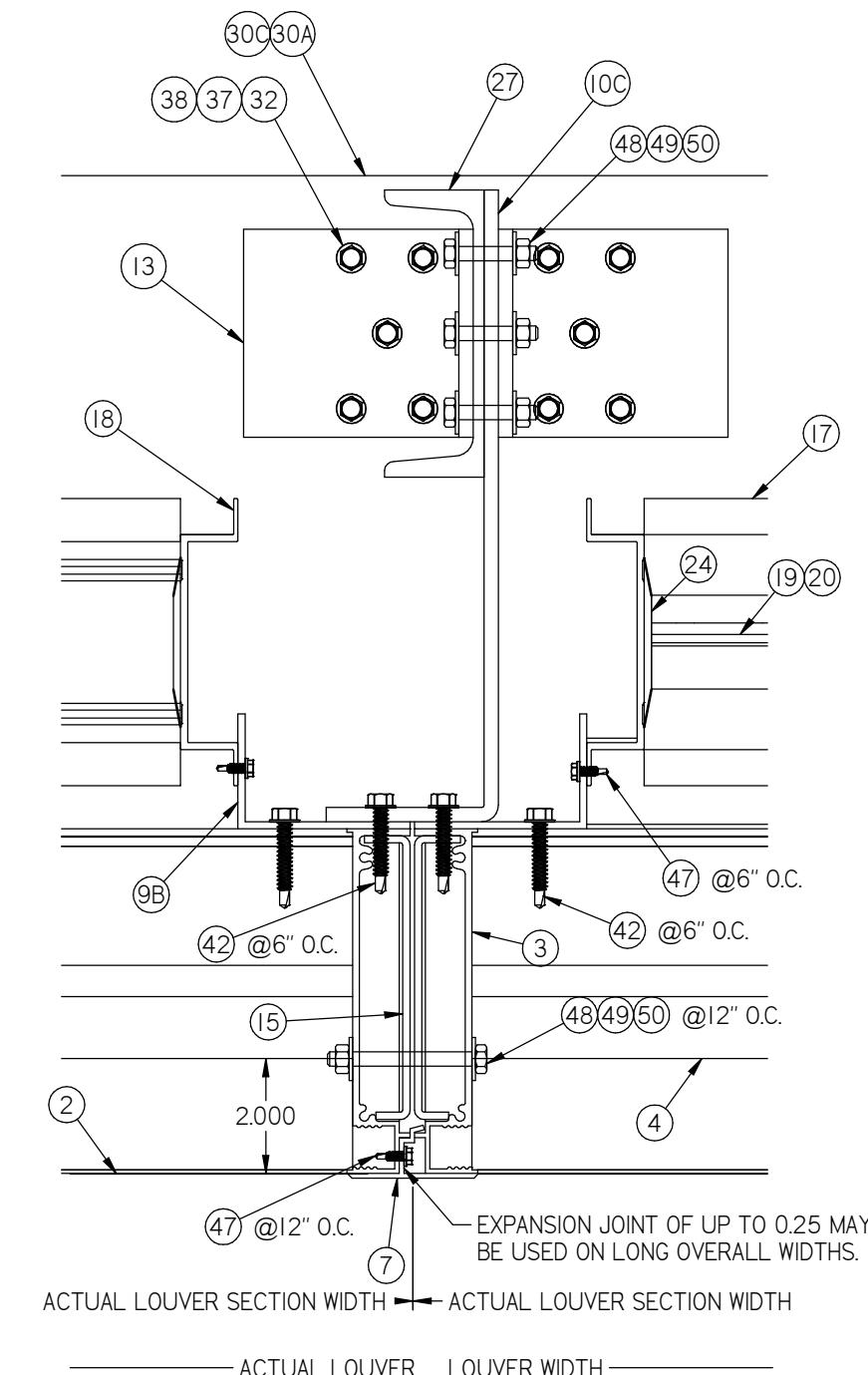
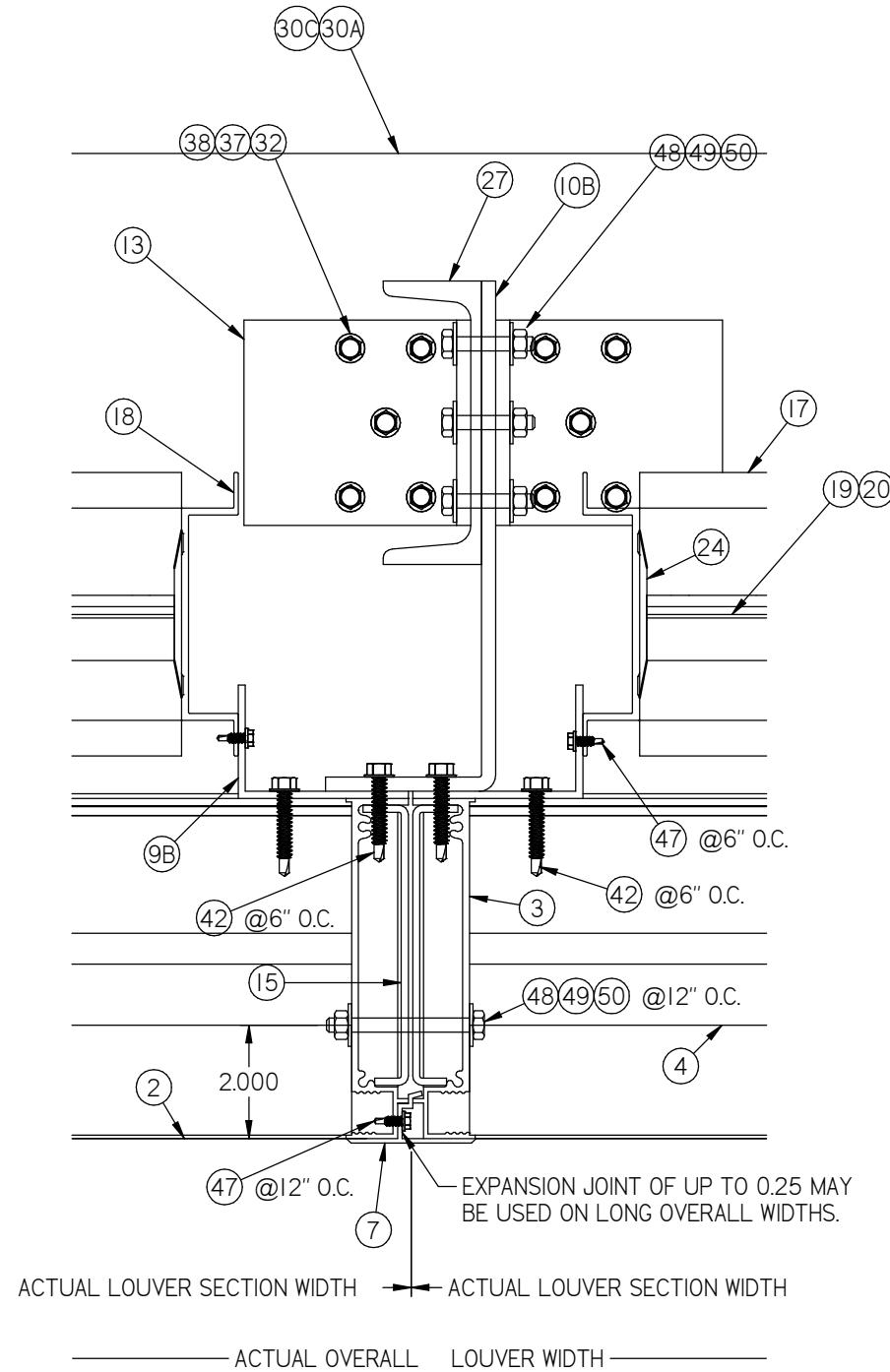
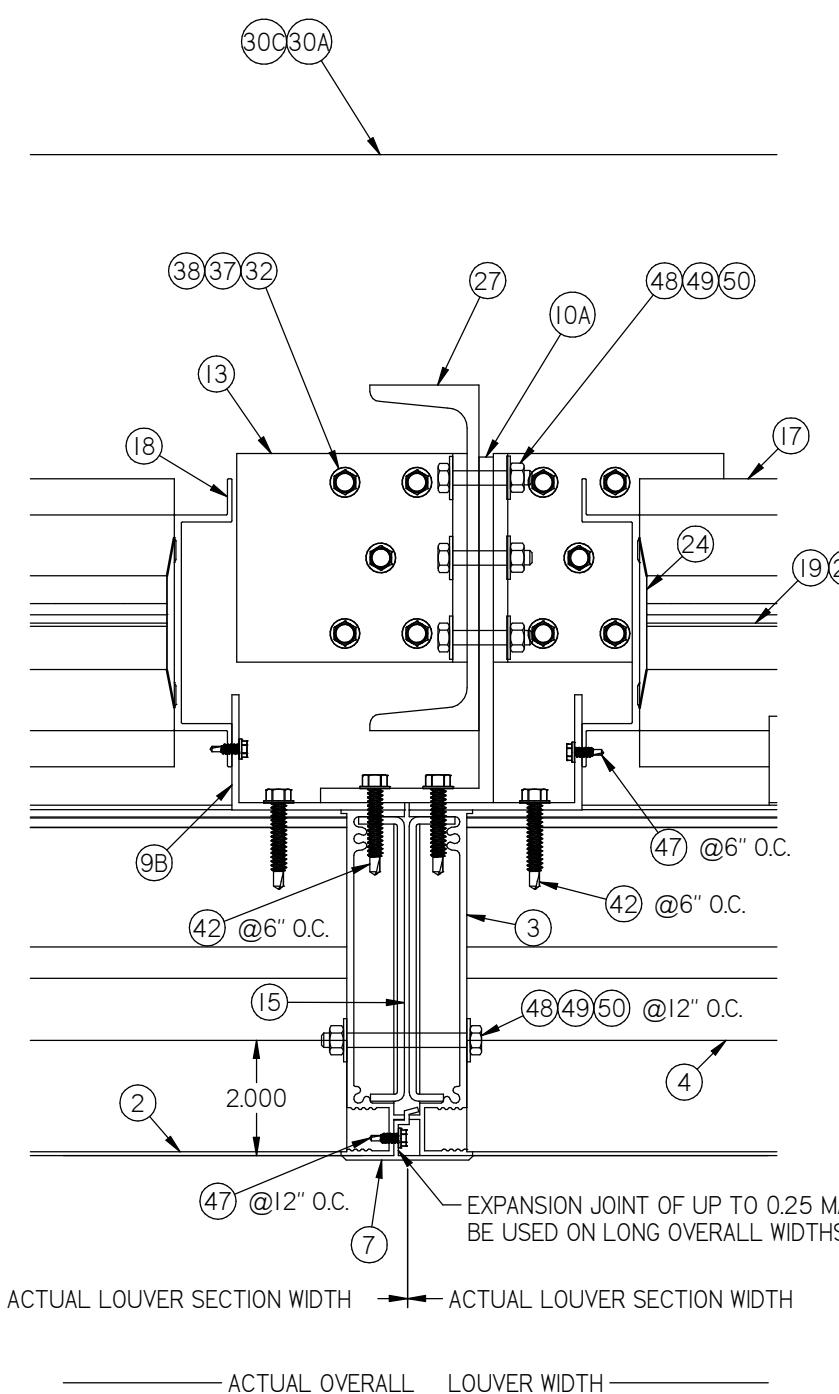
ENGINEERING
105 School Creek Trail
Luxemburg, WI 54217
Phone: (920) 617-1042
Fax: (920) 617-1100
www.rice-inc.com

ida Firm No: F-01000005061
ertificate of Authorization: #9090
ayne K. Helmila
istration No: 59092

ida Firm No: F-01000005061
tificate of Authorization: #9090
yne K. Helmlia
istration No: 59092

Nailor Industries Inc.  4714 Winfield Road Houston, TX 77039 www.nailor.com TEL: 281-590-1172 FAX: 281-590-3086		SHEET: 16 OF 27 DWN BY: fcortinas CHK BY: BDennis DATE: 11/29/2021 SCALE: NTS	DWG. NO. 1606DHPM MULLION DETAIL	1 2 3 4
TITLE: 1606DHPM LOUVER / DAMPER LLANGE FRAME SLEEVE MOUNT X3 X 1/4 & 9 X 11 X 1/4 ANGLE MULLION DETAIL				





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

MULLION DETAIL BACK
OF WALL MOUNT

20 A
18/27

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

MULLION DETAIL BACK
OF WALL MOUNT

20 B
18/27

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

MULLION DETAIL BACK
OF WAL MOUNT

20C
18/27

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.

RICE ENGINEERING

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

orida Firm No: F-01000005061
ertificate of Authorization: #9090
ayne K. Helmila
egistration No: 59092

SHEET: 18 OF 27		NO. 1606DHPM	1
DATE: 11/29/2021	SCALE: NTS	REV B	2
CMM BT: BDE/MS			

DWG. DA

77039
0-30866

33
L

1000 2nd Street, Suite 1000
Sacramento, CA 95814
(916) 445-1000 FAX: (916) 445-1001

1000 West 12th Street
Vancouver, BC V5J 4S2
604-542-4444
1-800-663-3535
Fax: 604-542-4445
E-mail: info@vancity.com

4 Winfield
281-5

471
com TEL
6DHF
NTINI
X 1/4
MI

www.nailor
TITLE:
160 CON
X3

—>  100

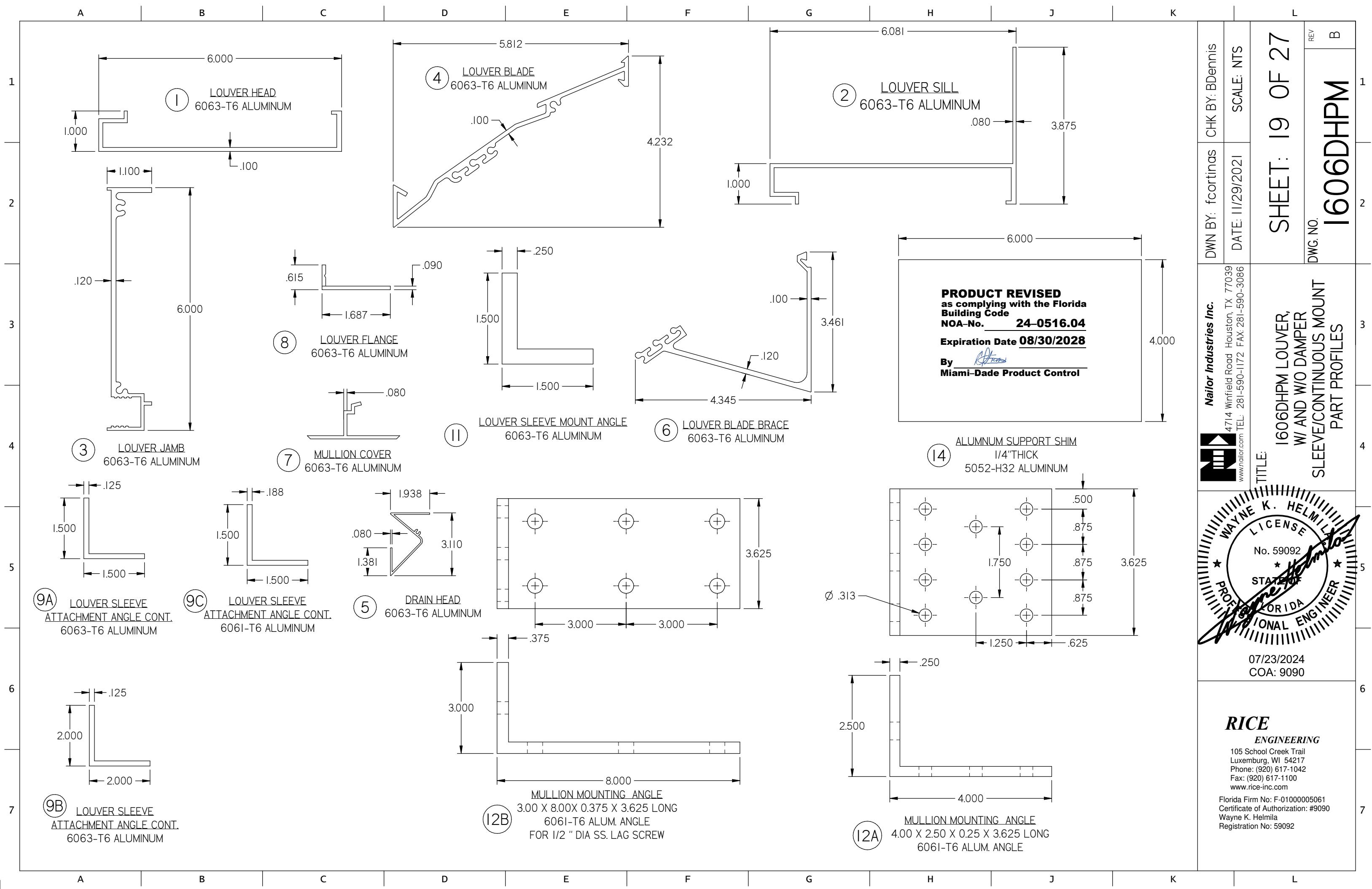
A close-up photograph of a vintage-style license plate. The plate is black with white lettering. At the top, it says "WAYNE T. HELMICK" in a curved, all-caps font. Below that, in a larger, bold, all-caps font, it says "LICENSE". The plate is mounted on a dark, textured background.

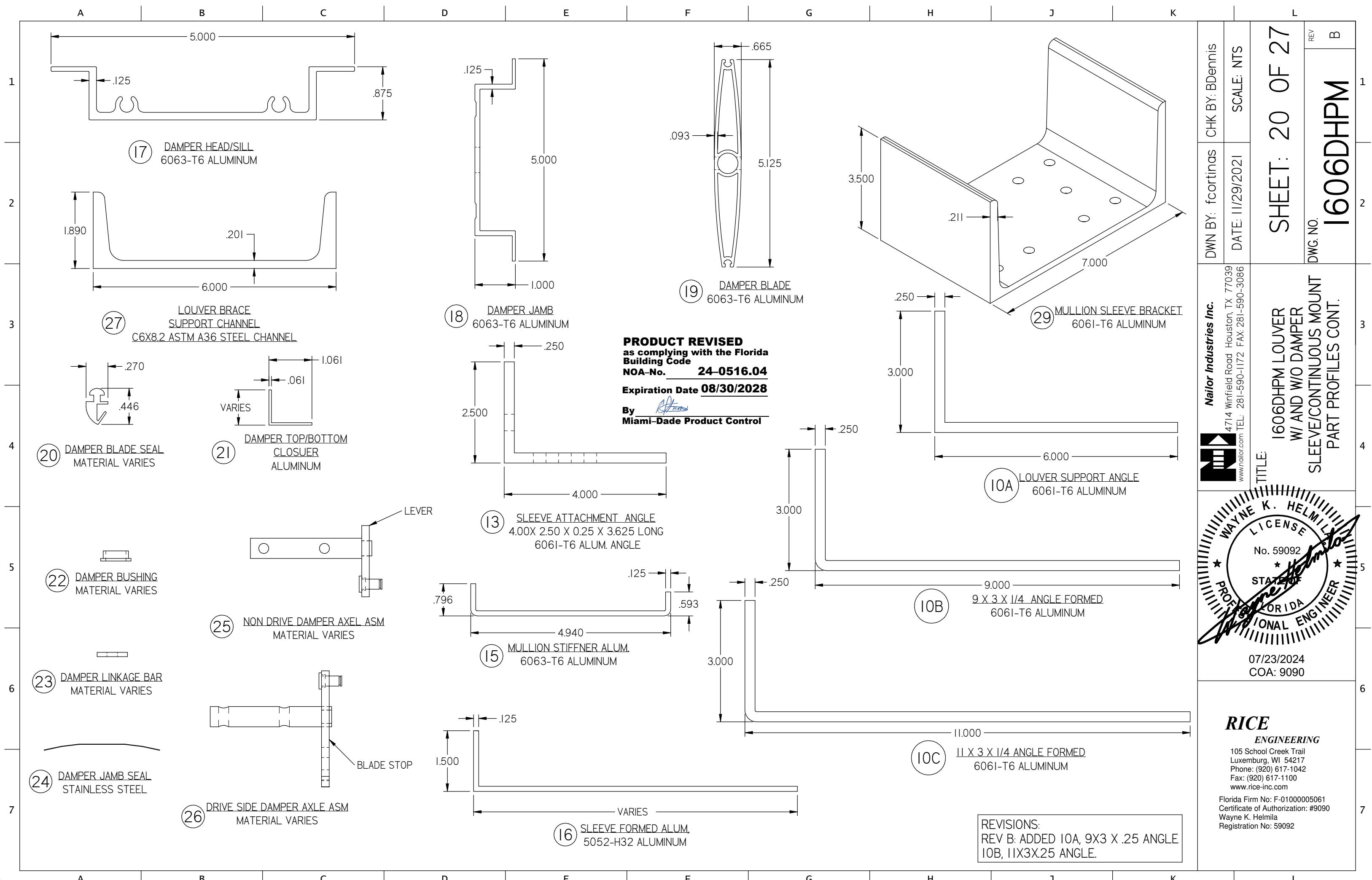
No. 59092
★ *Holmillo* ★ 5

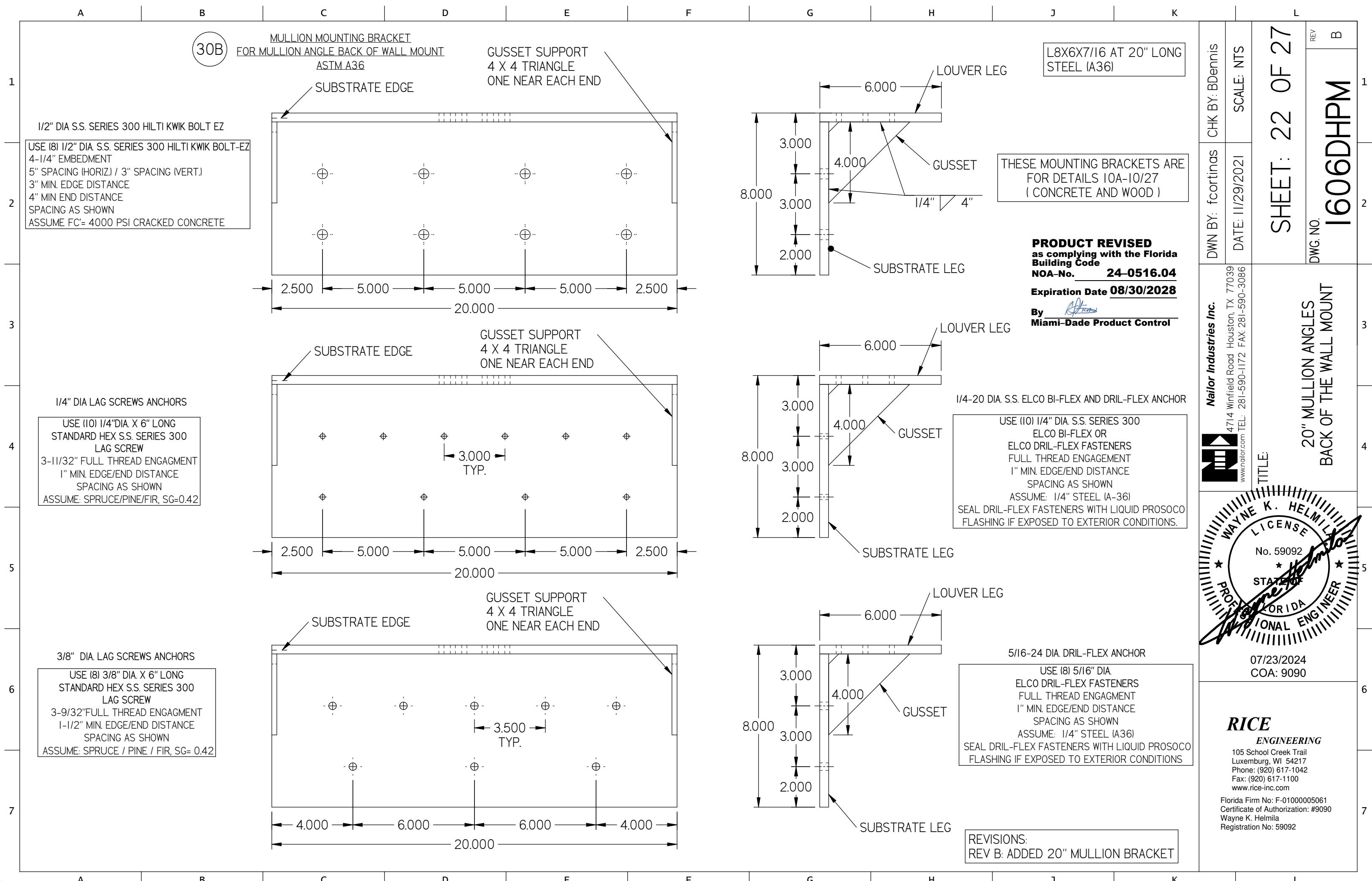
STATE OF
IOWA

~~FLORIDA
NATIONAL ENGINE~~

07/23/2024







A

B

C

D

E

F

G

H

I

J

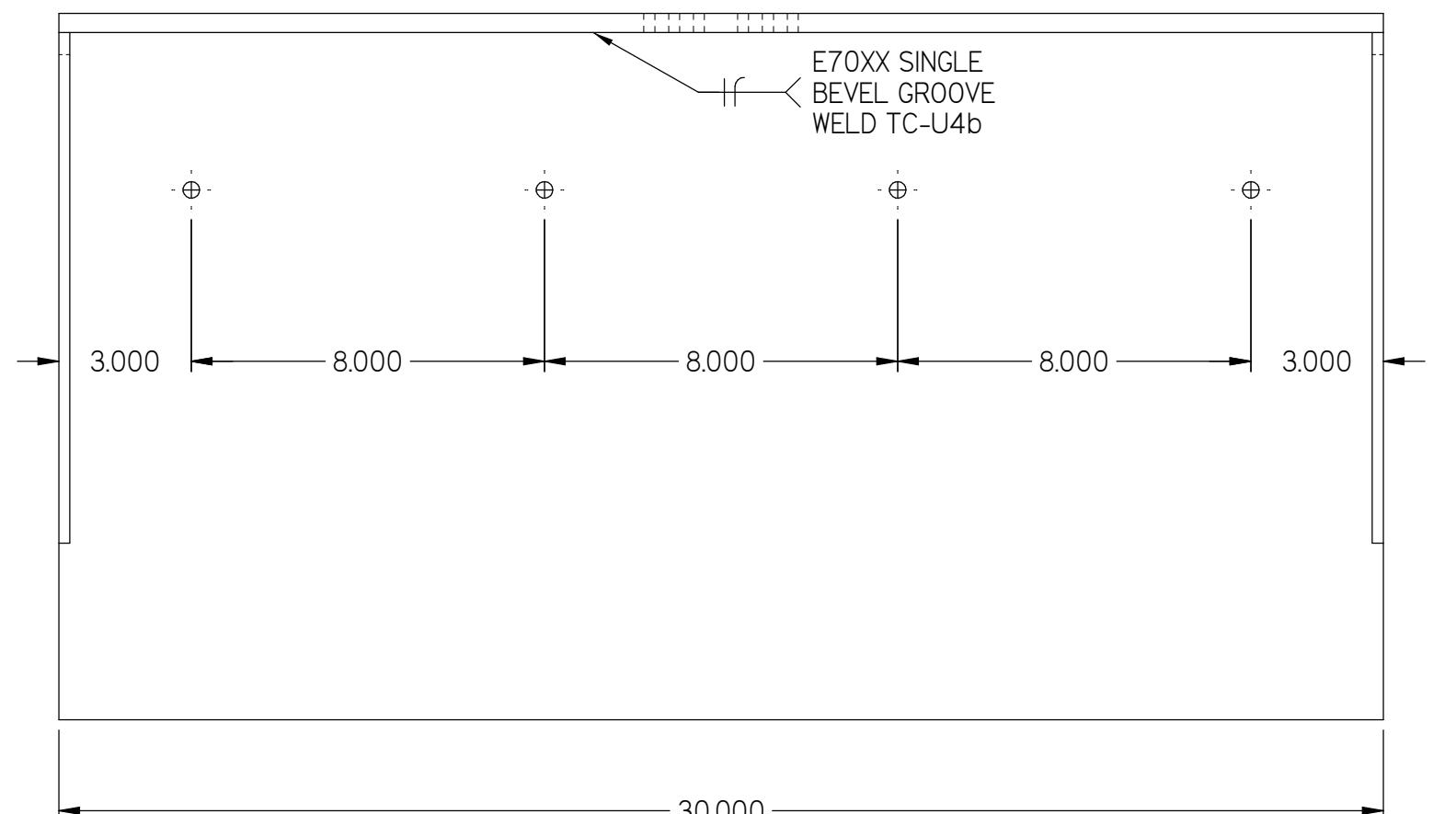
K

L

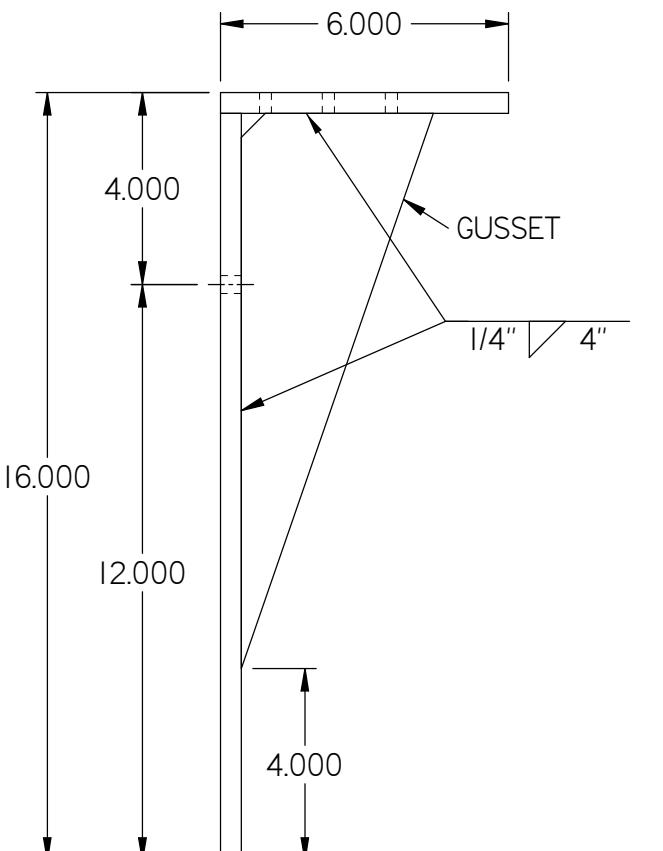
30C

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

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.
(2) 1/4" X 4" GUSSET PLATES AT 12" LONG WELDED TO
EACH END
WELD 1/4" GUSSET PLATES WITH FILLET WELDS.



USE (4) 1/2" DIA. HILTI KWIK HUZ-EZ SCREW ANCHORS
4-1/4" EMBEDMENT
8" SPACING AS SHOWN. LOCATE (2) 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 (DESIGNED BY OTHERS)
SEAL FASTENERS WITH LIQUID PROSOCO 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
as complying with the Florida
Building Code
NOA-No. 24-0516.04
Expiration Date 08/30/2028
By 
Miami-Dade Product Control

REVISIONS:
REV B: ADDED 30" MULLION BRACKET

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-0100005061
Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

SHEET: 23 OF 27
DWG. NO. **1606DHPM**
REV B

**30" CMU MULLION ANGLES
BACK OF THE WALL MOUNT**
DWG. NO. **1606DHPM**
REV B

Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
www.nailor.com TEL: 281-590-1172 FAX: 281-590-3086
DATE: 11/29/2021 SCALE: NTS

NAILOR
www.nailor.com



NAILOR
www.nailor.com

WAYNE K. HELMILA
LIC# 59092
STATE OF FLORIDA
PROFESSIONAL ENGINEER
07/23/2024
COA: 9090

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
complying with the Florida
Building Code
DA-No. 24-0516.04
Expiration Date 08/30/2028

Miami-Dade Product Control

RICE ENGINEERING

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Luxemburg, WI 54217
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Florida Firm No: F-01000005061
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Wayne K. Helmila
Registration No: 59092

 Trans. measures inc. 4714 Winfield Road Houston, TX 77039 www.tailor.com TEL: 281-590-1172 FAX: 281-590-3086	DWN BT: 1C01103 CHK BT: BBellinis	SHEET: 24 OF 2 DATE: 11/29/2021 SCALE: NTS	DWG. NO. 1606DHPM
TITLE: 1606DHPM LOUVER W/ AND W/O DAMPER AVAILABLE SHAPES			

A circular Florida Professional Engineer license seal. The outer ring contains the words "PROFESSIONAL ENGINEER" at the top and "FLORIDA" at the bottom. The inner circle contains "LICENSING BOARD" at the top, "STATE OF" in the center, and "FLORIDA" at the bottom. The license number "No. 59092" is in the center. The name "Wayne K. Helmling" is handwritten across the center. The seal is marked with stars at the 12 and 6 o'clock positions and has a "5" at the 9 o'clock position.

A	B	C	D	E	F	G	H	J	K	L
BILL OF MATERIALS										
ITEM	DESCRIPTION	MATERIAL	NOTES							
1	C6-139 LOUVER HEAD	6063-T6 ALUMINIUM								1
2	C6-140 LOUVER SILL	6063-T6 ALUMINIUM								
3	C6-141 LOUVER JAMB	6063-T6 ALUMINIUM								
4	C6-142 LOUVER BLADE	6063-T6 ALUMINIUM								
5	C6-168 LOUVER DRAIN	6063-T6 ALUMINIUM								
6	C6-143 LOUVER BLADE BRACE	6063-T6 ALUMINIUM								
7	C6-104 MULLION COVER	6063-T6 ALUMINIUM								
8	C6-096 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	USE AS ATTACHMENT ANGLE							
9C	1 1/2 X 1 1/2 X 3/16 ANGLE CONT.	6063-T6 ALUMINIUM	USE AS ATTACHMENT ANGLE							
10A	C6-161B 6 X 3 X 1/4 ANGLE	6061-T6 ALUMINIUM	USED AT BLADE SUPPORT AND JAMB SUPPORT							
10B	9 X 3 X 1/4 ANGLE	6061-T6 ALUMINIUM	FORMED ALUM ANGLE							
10C	11/ X 3 X 1/4 ANGLE	6061-T6 ALUMINIUM	FORMED ALUM ANGLE							
11	1 1/2 X 1 1/2 X 1/4 ANGLE	6063-T6 ALUMINIUM	USED AT HEAD/SILL/JAMB OF SLEEVE							
12A	4 X 2.50 X 1/4 X 3 5/8 LONG ANGLE	6063-T6 ALUMINIUM	USED AT HEAD/ SILL OF MULLION ATTACHMENT							
12B	8 X 3 X 3-5/8 LONG ANGLE	6063-T6 ALUMINIUM	USED AT HEAD/ SILL OF MULLION ATTACHMENT W/ 1/2" LAG							
13	4 X 2.50 X 1/4 3 5/8 LONG ANGLE	6061-T6 ALUMINIUM	USED AT HEAD/ SILL OF LOUVER SLEEVE ATTACHMENT							
14	6 X 4 X 1/4 ALUMINUM SUPPORT SHIM	6063-T6 ALUMINIUM	USED AT SILL FOR SUPPORT ANGLE							
15	MULLION STIFFENER ALUM	6063-T6 ALUMINIUM	I/8 FORMED ALUM CHANNEL USED AT MULLION							
16	FORMED SLEEVE I/8 THK	5052-H32 ALUMINIUM	I/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	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" ALUMINIUM SLEEVE BRACKET	6061-T6	MULLION SLEEVE BRACKET							
30	MULLION MOUNTING ANGLE BRACKET	ASTM A36	MULLION MOUNTING							
31	C6-180	SCREW,MTL,10-24X1,HEX								
32	C6-181	I/4 NYLON INSERT LOCKNUT								
33	C6-182	I/4-20x2-I/2 HEX CAP SCREW								
34	C6-183	WASHER,BONDED,10X1/2,SS	300 SERIES, SS COND. CW FY = 65 KSI							
35	C6-184	SCREW,MTL,12-24-1-I/4,HEX	300 SERIES, SS COND. CW FY = 65 KSI							
36	C6-185	I/4-20x1 HEX SCREW	300 SERIES, SS COND. CW FY = 65 KSI							
37	C6-186	I/4 COMM'L FLAT WASHER	300 SERIES, SS COND. CW FY = 65 KSI							
38	C6-187	I/4-20x1 HEX CAP SCREW I8-8 SS								
39	C6-188	SCREW, MTL,HEX, 8-32 X 1,	300 SERIES, SS COND. CW FY = 65 KSI							
40	C6-189	SCREW, METAL, HW, 10-24 X 1-I/2,	300 SERIES, SS COND. CW FY = 65 KSI							
41	C6-192	SCREW, MTL, HEX, 8 X 1-I/2,	300 SERIES, SS COND. CW FY = 65 KSI							
42	C6-193	SCREW, METAL, HEX, I/4-20 X 1-I/2	300 SERIES, SS COND. CW FY = 65 KSI							
43	C6-194	SCREW, METAL, HEX, I2 X 1-I/2, SS	300 SERIES, SS COND. CW FY = 65 KSI							
44	C6-195	I/4-20 X 1 I/4 HEX CAP SCREW I8-8 S/S								
45	C6-196	I/4-20 FIN. HEX NUT I8-8 S/S								
46	C6-197	I/4 LOCKWASHER I8-8 S/S								
47	C6-198	SCREW, MTL, HEX, 8 X 3/4,	300 SERIES, SS COND. CW FY = 65 KSI							
48		3/8"-16 X 2 18-6 HEX HEAD BOLT SS	300 SERIES, SS COND. CW FY = 65 KSI							
49		3/8-16 HEX LOCK NUT SS	300 SERIES, SS COND. CW FY = 65 KSI							
50		3/8-FLAT WASHER SS	300 SERIES, SS COND. CW FY = 65 KSI							

REVISIONS:
REV B: UPDATED BILL OF MATERIAL

Nailor Industries Inc.	DWN BY: fcontinas	CHK BY: BDennis
4714 Winfield Road Houston, TX 77039	DATE: 11/29/2021	SCALE: NTS
www.nailor.com TEL: 281-590-1172 FAX: 281-590-3086	DWG. NO. 1606DHPM	
SHEET: 25 OF 27		
TITLE: 1606DHPM LOUVER W/ AND W/O DAMPER SLEEVE / CONTINUOUS MOUNT BILL OF MATERIAL		



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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. **24-0516.04**
Expiration Date **08/30/2028**

By 
Miami-Dade Product Control

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*EMBEDMENT DEPTH IS EQUAL TO OVERALL LENGTH FOR CONCRETE /CMU FASTENERS. IF SHIMS ARE USED, FASTENER LENGTH MUST BE INCREASED BY THICKNESS OF SHIMS

LOUVER MODEL I606DHPM FASTENER TABLES
JAMB ANGLE MOUNT FASTENER, WIDTH <= 72 INCHES (TABLE 1)

WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MIN.	FASTENER TYPE	DIAMETER	# Rqd	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	1/4"	1	3"	2"		2"
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	3/8"	1	5"	2"		2"
X	X				I6 Ga.	ELCO BI-FLEX DRILLING SCREWS I300 SERIES SS- COND. CW- Fy= 65ksi	1/4"	1	4-1/2"	2"		3 THREAD BEYOND SUBSTRATE
	X				A-36	ELCO BI-FLEX DRILLING SCREWS I300 SERIES SS- COND. CW- Fy= 65ksi	1/4"	1	13-1/2"	2"		1/4"
	X				A-36	ELCO DRILL-FLEX DRILLING SCREWS (COND. CW- Fy= 65ksi) SEALED w/ PROSOCO SEALANT	5/16"	1	20"	2"		1/4"
			X-CRACKED 6" DEEP		4ksi	HILTI KWIK HUS-EZ SS316 ANCHOR	1/4"	1	7"	4"		2"
			X-CRACKED 6" DEEP		4ksi	HILTI KWIK HUS-EZ SS316 ANCHOR	3/8"	1	12"	4"		2"
			X		2ksi	HILTI KWIK HUS-EZ SS316 ANCHOR	3/8"	1	12"	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.	FASTENER TYPE	DIAMETER	# Rqd / CLIP	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	1/4"	10	1-1/4 X 7/8	2"		2-5/8 "
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	3/8"	6	2-1/2 X 3	2"		1-5/8"
	X				A-36	ELCO BI-FLEX DRILLING SCREWS I300 SERIES SS- COND. CW- Fy= 65ksi	1/4"	4	2-1/2" X 2-5/8"	2"		1/4"
	X				A-36	ELCO DRILL-FLEX DRILLING SCREWS (COND. CW- Fy= 65ksi) SEALED w/ PROSOCO SEALANT	5/16"	4	2-1/2" X 2-5/8"	2"		1/4"

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

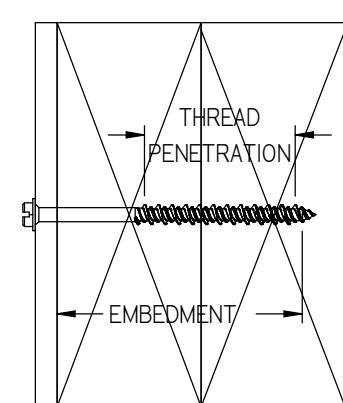
WOOD	STEEL STUD	STEEL	CONCRETE	CMU	MIN.	FASTENER TYPE	DIAMETER	# Rqd	CENTERS	EDGE	END	EMBEDMENT
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	1/4"	8	VARIABLE	1"		3-11/32"
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	1/4"	10	VARIABLE	1"		3-11/32"
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	3/8"	6	VARIABLE	1-1/2"		3-9/32"
X					SG 0.42	LAG SCREW I300 SERIES SS- COND. CW- Fy = 65ksi	3/8"	8	VARIABLE	1-1/2"		3-9/32"
	X				A-36	ELCO BI-FLEX DRILLING SCREWS I300 SERIES SS- COND. CW- Fy= 65ksi	1/4"	8	VARIABLE	1"		FULL THREAD ENGAGEMENT
	X				A-36	ELCO BI-FLEX DRILLING SCREWS I300 SERIES SS- COND. CW- Fy= 65ksi	1/4"	10	VARIABLE	1"		FULL THREAD ENGAGEMENT
	X				A-36	ELCO DRILL-FLEX DRILLING SCREWS (COND. CW- Fy= 65ksi) SEALED w/ PROSOCO SEALANT	5/16"	6	VARIABLE	1"		FULL THREAD ENGAGEMENT
	X				A-36	ELCO DRILL-FLEX DRILLING SCREWS (COND. CW- Fy= 65ksi) SEALED w/ PROSOCO SEALANT	5/16"	8	VARIABLE	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 PROSOCO @ EXTERIOR CONDITIONS	1/2"	4	8"	4"	4"	4-1/4"

PRODUCT REVISED
as complying with the Florida
Building Code

NOA-No. 24-0516.04

Expiration Date 08/30/2028

By 
Miami-Dade Product Control



REVISIONS:
REV B: UPDATED FASTENER TABLES

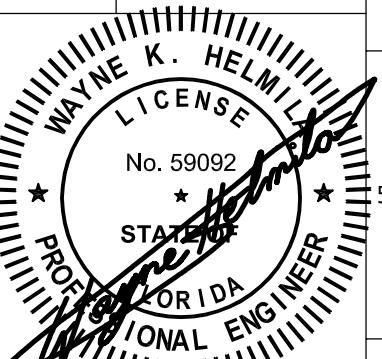
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Certificate of Authorization: #9090
Wayne K. Helmila
Registration No: 59092

1606DHPM
SHEET: 26 OF 27
DWG. NO. **1606DHPM** W/ AND W/O DAMPER
FASTENER TABLES
TITLE: 
Nailor Industries Inc.
4714 Winfield Road Houston, TX 77039
TEL: 281-590-1172 FAX: 281-590-3086

REV B



A	B	C	D	E	F	G	H	J	K	L
1	<u>GENERAL NOTES:</u>									
2	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 LOUVER(S).									1
3	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).									1
4	3. MAXIMUM SINGLE SECTION SIZE IS 72" WIDE X 120" HIGH.									2
5	4. MAXIMUM ASSEMBLED LOUVER SIZE IS UNLIMITED WIDE X 120" HIGH.									2
6	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.									3
7	6. CMU SHALL BE ASTM C90, TYPE II, 2,000 MIN PSI GROUT-FILLED, STEEL STUDS TO BE I6 G.A. FY=50ksi MIN.									3
8	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.									4
9	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 STRUCTRAL INTEGRITY OF THE SUBSTRATE STUCTURE.									4
10	9. LOUVER ASSEMBLY IS QUALIFIEDFOR A MAXIMUM DESIGN LOAD OF +/- 150 PSF.									5
11	10. LOUVER ASSEMBLY WITH AND WITHOUT 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.									5
12	II. INSTALLER TO PROVIDE SEPERATION OF DISSIMILAR MATERIALS AS REQUIRED.									6
13	12. THE 2020 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.									6
14	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.									7
15	14. STEEL / STAINLESS-STEEL/ ALUMINUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOY THA HAS EQUAL OR GREATER YIELD STRENGTH.									7
16	15. BLADE SUPPORT ANGLE AND BLADE SUPPORT BRACE ONLY REQUIRED WHEN ACTUAL LOUVER SECTION WIDTH IS GREATER THAN 36 INCHES.									7
17	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 TIP 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.									7
18	** NOTE ENGINEER OF RECORD (EOR) IS RESPONSIBLE FOR DETERMINING IF CONCRETE IS TO BE CONSIDERED CRACKED OR UNCRACKED.									7
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