



**EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER**  
**MIAMI-DADE QUALIFIED • FLORIDA PRODUCT APPROVED**  
**HIGH VELOCITY WIND-DRIVEN RAIN AND IMPACT RESISTANT**  
**6" (152) DEEP • DRAINABLE BLADE • OPERABLE AIRFOIL DAMPER**  
**MODEL: 1606CM**

**QUALIFICATIONS:**

- Miami-Dade County NOA No. 23-0823.04
- Florida Product Approval No. 41947.2.
- Tested in accordance with: TAS-101A (Wind-Driven Rain Test), TAS-201 (Large Missile Impact Test), TAS-202 (Uniform Static Air Pressure Test), TAS-203 (Cyclic Wind Pressure Loading Test).
- AMCA 500-L (Water Penetration, Air Performance).
- AMCA 540 (Wind-Borne Debris Impact Test [Basic "Level D" Protection]).
- AMCA 550 (High Velocity Wind-Driven Rain Resistance Test [with blades closed]).
- Wind load rating +/- 120 PSF.

**STANDARD CONSTRUCTION:**

**FRAME:** 6" (152) deep, Type 6063-T6 extruded aluminum, 0.120" (3.05) nominal wall thickness. Integral downspouts and caulking slot provided.

**BLADES:** Front Stationary Blades: Drainable style, Type 6063-T6 extruded aluminum, 0.080" (2.03) nominal wall thickness. Fixed at 37.5 degrees.  
Rear Operable Blades: Airfoil style, Type 6063-T6 extruded aluminum, 0.080" (2.03) nominal wall thickness.

**BLADE SPACING:** Approximately 4.84" (123) on centers.

**BLADE SEALS:** Santoprene. Mechanically locked in place.

**JAMB SEALS:** Cambered stainless steel.

**BEARINGS:** 1/2" (13) dia. Celcon®.

**AXLES:** 1/2" (13) dia. plated steel double bolted to blades.

**LINKAGE:** Concealed in frame.

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

**ACTUATOR:** Hand locking louver quadrant.

**FINISH:** Mill.

**MINIMUM SIZE:** 12" W x 16" H (305 x 406).

**MAX. SINGLE SECTION SIZE:** 60" W x 120" H (1524 x 3048). 50 sq. ft. (4.6 m<sup>2</sup>). Larger louvers will require field assembly of smaller sections.

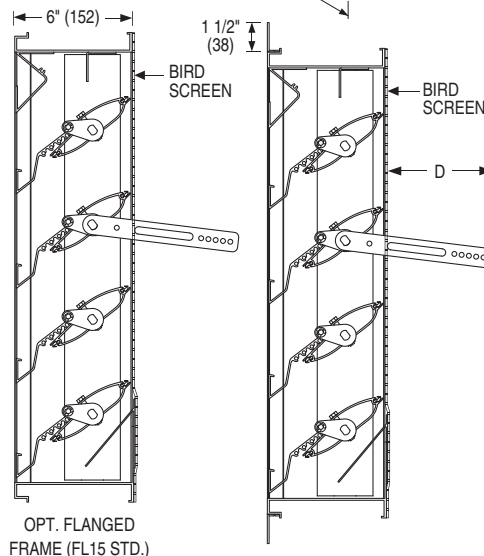
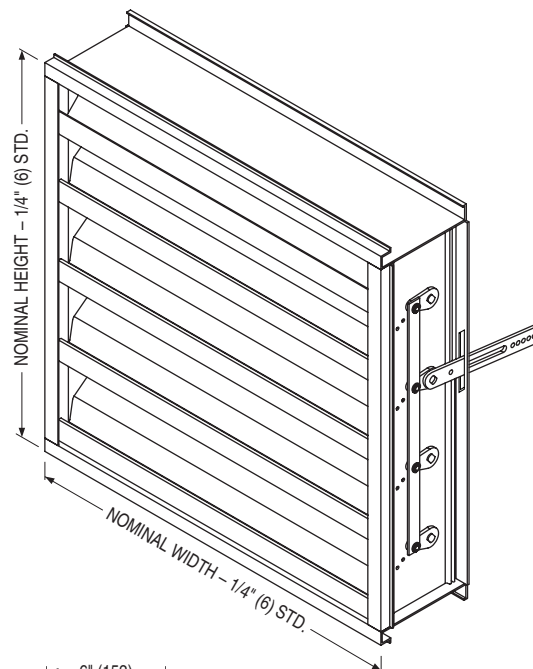
**MAXIMUM SIZE:** Unlimited Width x 120" H (3048).

**OPTIONS:**

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



D = 6" (152) with Manual HLLQ  
D = 9" (229) with Actuator

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Page 1 of 2  
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
6 - 10 - 25	1600M	10 - 22 - 24	1606CM

### FREE AREA in Square Feet and Square Meters

		Width in Inches and Meters									
		12	18	24	30	36	42	48	54	60	
		0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52	
Height in Inches and Meters	12	0.19	0.30	0.41	0.53	0.64	0.76	0.87	0.98	1.10	
	0.30	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	
	18	0.37	0.60	0.83	1.06	1.28	1.51	1.74	1.97	2.20	
	0.46	0.03	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20	
	24	0.85	1.36	1.88	2.40	2.91	3.43	3.94	4.46	4.98	
	0.61	0.08	0.13	0.17	0.22	0.27	0.32	0.37	0.41	0.46	
	30	1.03	1.66	2.29	2.92	3.55	4.18	4.81	5.44	6.07	
	0.76	0.10	0.15	0.21	0.27	0.33	0.39	0.45	0.51	0.56	
	36	1.22	1.96	2.71	3.45	4.20	4.94	5.68	6.43	7.17	
	0.36	0.11	0.18	0.25	0.32	0.39	0.46	0.53	0.60	0.67	
	42	1.41	2.26	3.12	3.98	4.84	5.70	6.55	7.41	8.27	
	1.07	0.13	0.21	0.29	0.37	0.45	0.53	0.61	0.69	0.77	
	48	1.59	2.56	3.53	4.50	5.47	6.44	7.40	8.38	9.35	
	1.22	0.15	0.24	0.33	0.42	0.51	0.60	0.69	0.78	0.87	
	54	1.94	3.12	4.30	5.49	6.67	7.85	9.04	10.22	11.40	
	1.37	0.18	0.29	0.40	0.51	0.62	0.73	0.84	0.95	1.06	
	60	2.15	3.47	4.78	6.09	7.41	8.72	10.03	11.35	12.66	
	1.52	0.20	0.32	0.44	0.57	0.69	0.81	0.93	1.05	1.18	
	66	2.34	3.77	5.19	6.62	8.05	9.48	10.90	12.33	13.76	
	1.68	0.22	0.35	0.48	0.62	0.75	0.88	1.01	1.15	1.28	
	72	2.53	4.07	5.61	7.15	8.69	10.23	11.77	13.32	14.86	
	1.83	0.23	0.38	0.52	0.66	0.81	0.95	1.09	1.24	1.38	
	78	2.90	4.67	6.44	8.21	9.98	11.75	13.51	15.28	17.05	
	1.98	0.27	0.43	0.60	0.76	0.93	1.09	1.26	1.42	1.58	
	84	3.09	4.97	6.85	8.74	10.62	12.50	14.38	16.27	18.15	
	2.13	0.29	0.46	0.64	0.81	0.99	1.16	1.34	1.51	1.69	
	90	3.27	5.27	7.27	9.26	11.26	13.26	15.25	17.25	19.25	
	2.29	0.30	0.49	0.68	0.86	1.05	1.23	1.42	1.60	1.79	
	96	3.46	5.57	7.68	9.79	11.90	14.01	16.12	18.23	20.34	
	2.44	0.32	0.52	0.71	0.91	1.11	1.30	1.50	1.69	1.89	
	102	3.65	5.87	8.10	10.32	12.54	14.77	16.99	19.22	21.44	
	2.59	0.34	0.55	0.75	0.96	1.17	1.37	1.58	1.79	1.99	
	108	4.02	6.47	8.93	11.38	13.83	16.28	18.73	21.19	23.64	
	2.74	0.37	0.60	0.83	1.06	1.28	1.51	1.74	1.97	2.20	
	114	4.21	6.77	9.34	11.91	14.47	17.04	19.60	22.17	24.74	
	2.90	0.39	0.63	0.87	1.11	1.34	1.58	1.82	2.06	2.30	
	120	4.39	7.07	9.75	12.43	15.11	17.79	20.47	23.15	25.83	
	3.05	0.41	0.66	0.91	1.16	1.40	1.65	1.90	2.15	2.40	

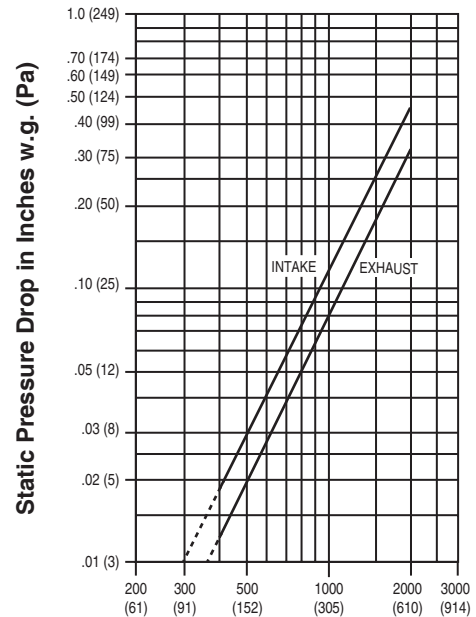
### AIRFLOW/WATER PENETRATION DATA for 48" x 48" (1219 x 1219) Louver Size

Free Area %		46 %
Free Area sq. ft. (sq. m.)		7.40 (0.69)
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)	1178 fpm (359 m/min.)
	Air Volume at 1178 fpm Free Area Velocity	8717 cfm (4114 l/s)
	Pressure Drop @ 1178 fpm	0.16 in. w.g. (40 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 1606CM 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**  
**Basic Protection Level D**

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

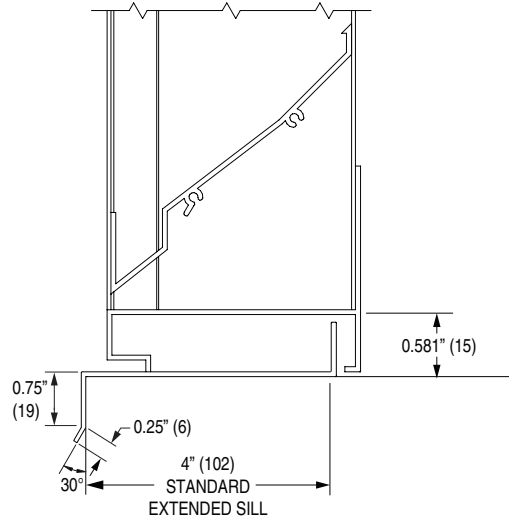
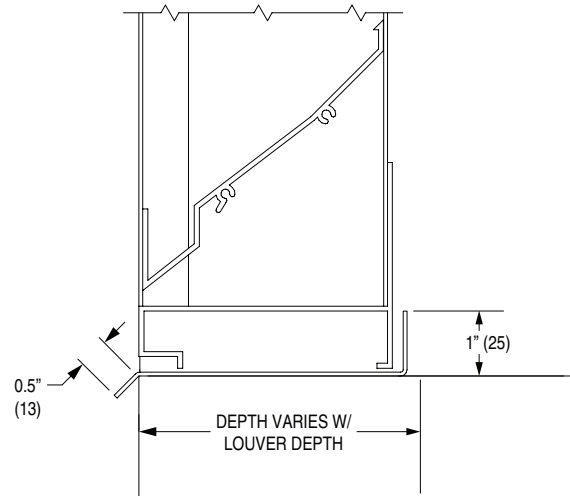
This label does not signify  
AMCA airflow performance  
certification.

Nailor Industries Inc. certifies that the 1606CM shown herein is approved to bear the AMCA International Listing Label. The ratings shown are based on tests and procedures performed in accordance with AMCA publications and comply with the requirements of the AMCA International Listing Label program. The AMCA International Listing Label applies to pressure cycle tested Wind Borne Debris impact resistant louvers rated for Basic Protection and +/- 120PSF with a minimum blade span of less than 12 in. (305mm) and a maximum unsupported blade span of 58 in. (1473 mm) and to High Velocity Wind-Driven Rain Resistant Louvers tested in the fully closed position that stops airflow through a louver.

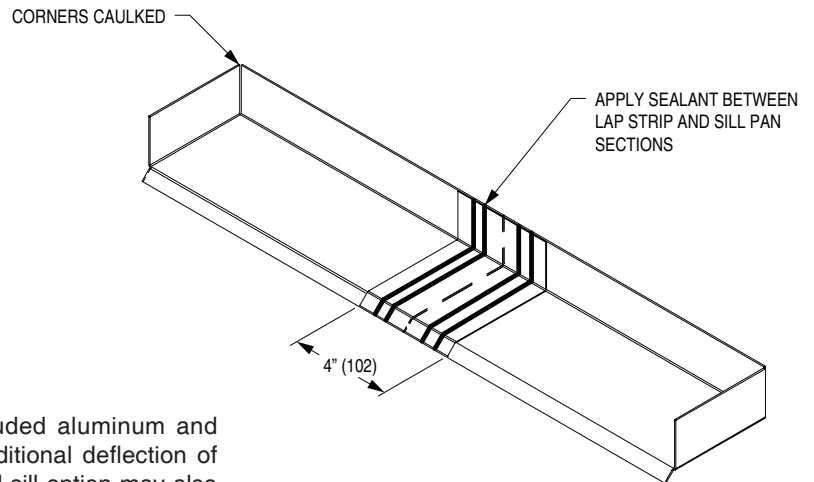
Page 2 of 2

Dimensions are in inches (mm).

<b>SCHEDULE TYPE:</b>				
<b>PROJECT:</b>				
<b>ENGINEER:</b>				
<b>CONTRACTOR:</b>				
	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
	6 - 10 - 25	1600M	10 - 22 - 24	1606CM

☐ **ESI** Extended Sill

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

**SILL PAN (Side View)**

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


**APPLICATION:**

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

**NOTES:**

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

**MATERIALS:**

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

**SCHEDULE TYPE:**
**PROJECT:**
**ENGINEER:**
**CONTRACTOR:**

Dimensions are in inches (mm).

**DATE**
**B SERIES**
**SUPERSEDES**
**DRAWING NO.**

1 - 29 - 26

ACC-ESI

New

ACC-ESI


 Slate Blue **LF01**

 Medium Bronze **LF02**

 Sandstone **LF03**

 Light Gray **LF04**

 Charcoal **LF05**

 Bone White **LF06**

 Western Tan **LF07**

 Architectural Bronze **LF08**

 Regal Blue **LF09**

 Forest Green **LF10**

 Surrey Beige **LF11**

 Royal Brown **LF12**

 Barn Red **LF13**

 Burgundy **LF14**

 Clay **LF15**

 Almond **LF16**

 Coastal White **LF17**

 Vista Green **LF18**

 Black **LF19**

 Gloss Black **LF20**

 Campus Green **LF21**

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

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

# Available Finishes

FINISH TYPE	DESCRIPTION	STANDARD WARRANTY
<b>Fluoropolymer Powder Coat</b> AAMA 2605-Superior Finish (AKA: Powdura® 5000, Corafalon® Powder, Interpon® D3000-Fluoromax, IFS 500FP)	<b>"Ultimate"</b> - 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)
<b>High Performance Powder Coat</b> AAMA 2604 - High Performance Finish (AKA: Powdura® 4000, Envirocron® Ultra Durable Powder, Dynadure™ 400, Interpon® D2000, IFS 400SD)	<b>"Better"</b> - 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
<b>Durable Powder Coat</b> AAMA 2603 - Pigmented Organic Coatings (AKA: Powdura® 3000, Envirocron® Durable Powder, Dynadure™ 300, Interpon® D1000, IFS 300SP)	<b>"Good"</b> - 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
<b>Clear Anodize 215-R1</b> 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
<b>Clear Anodize 204-R1</b> 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
<b>Color Anodize</b> 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
<b>Prime Coat</b>	Prime coat provides a stable base for painting of louvers in the field. Surface pretreatment includes degreasing and a chemical cleaning before an epoxy prime coat is applied. Finish coat should be field applied as soon as possible for best adhesion, after a thorough cleaning for dust etc. that can contaminate the final finish and cause premature flaking or peeling.	N/A

*Paint finish warranties are not applicable to steel products.*

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

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

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

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

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



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

## NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION

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

[www.miamidade.gov/building](http://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 1606CM Aluminum Louver System**

**APPROVAL DOCUMENT:** Drawing No. **1606CM-NOA**, titled "BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles", sheets 1 through 8 of 8, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 10/04/2023, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

### **MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

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

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

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

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

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

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

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



**NOA No. 23-0823.04**  
**Expiration Date: November 2, 2028**  
**Approval Date: November 2, 2023**  
**Page 1**



**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **1606CM-NOA**, titled “BOM, Notes, Anchors, Elevation, Mull Details, Assembly Details, Head/Sill, Jamb, Profiles”, sheets 1 through 8 of 8, prepared by manufacturer, dated 05/27/2021, signed and sealed by Lucas A. Turner, P.E. on 10/04/2023.

**B. TESTS**

1. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94  
2) Large Missile Impact Test per FBC, TAS 201-94  
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with installation diagram of Model 1606CM Louver Systems, prepared by Intertek, Test Report No. **K4982.01-801-18-R0**, dated 04/08/2022, signed and sealed by Tyler Westerling, P.E.
2. Test Report on Test Method for Louvers Impacted by Wind Borne Debris per ANSI/AMCA 540-13 on a Model 1606CM Aluminum Louver Systems, prepared by Intertek, Test Report No. **K4980.01-801-18-R1**, dated 10/20/2021, revised on 03/01/2022, signed and sealed by Tyler Westerling, P.E.
3. Test Report on High Velocity Wind Driven Rain Resistance per ANSI/AMCA 550-15 on a Model 1606CM Aluminum Louver System, prepared by Intertek, Test Report No. **K4981.01-801-44-R1**, dated 05/13/2021, revised on 05/17/2021, signed and sealed by Tyler Westerling, P.E.

**C. CALCULATIONS**

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

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**

1. None.


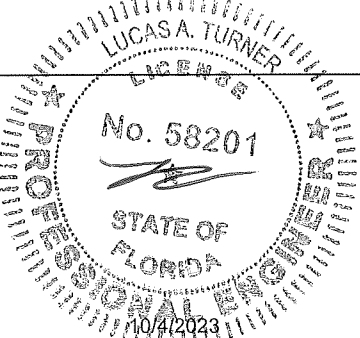

**F. STATEMENTS**

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



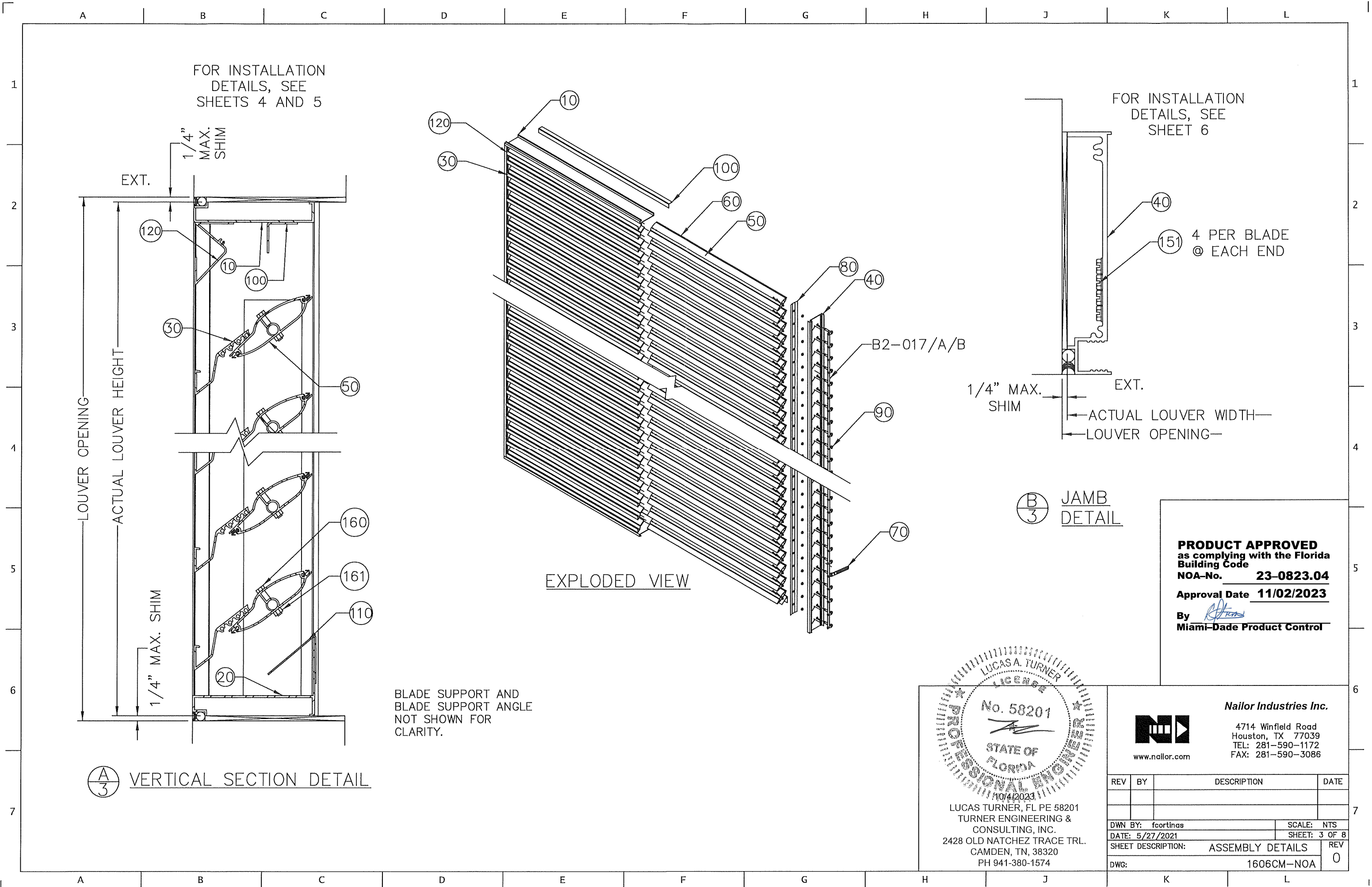
**Carlos M. Utrera, P.E.**  
**Product Control Examiner**  
**NOA No. 23-0823.04**

**Expiration Date: November 2, 2028**  
**Approval Date: November 2, 2023**

A	B	C	D	E	F	G	H	J	K	L																												
<div>GENERAL NOTES</div> <div>1. THE 1606CM LOUVER SYSTEM SHOWN IN THE CONFIGURATIONS HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE REQUIREMENTS OF THE 7TH EDITION (2020) AND 8TH EDITION (2023) FLORIDA BUILDING CODES INCLUDING THE HIGH VELOCITY HURRICANE ZONE PROVISIONS, FOR APPLICATIONS WITH DESIGN PRESSURE (ASD) REQUIREMENTS OF 120 PSF OR LESS.</div> <div>2. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A, TAS 201, TAS 202, TAS 203, AMCA 540 AND AMCA 550. FOR FULL PRODUCT TESTING DETAILS SEE INTERTEK TEST REPORTS K4980.01-801-18-R1, K4981.01-801-44-R1, AND K4982.01-801-18-R0.</div> <div>3. THIS PRODUCT AS SHOWN IN THIS DRAWING IS MISSILE LEVEL D LARGE MISSILE IMPACT RESISTANT, AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WINDBORNE DEBRIS REGIONS.</div> <div>4. THIS LOUVER SYSTEM HAS BEEN TESTED IN ACCORDANCE WITH TAS 100A TO PREVENT WIND-DRIVEN RAIN FROM PENETRATING THE SPACE BEHIND THE LOUVER FOR WIND SPEEDS UP TO 110 MPH AND INSTALLATION IN HEIGHTS UP TO 33 FT.</div> <div>5. THIS LOUVER SYSTEM IS NON-BEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEAD LOADS.</div> <div>6. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.</div> <div>7. THE OPENING SUBSTRATE MATERIALS (FRAMING, MASONRY, BUCKS) AND ATTACHMENT OF BUCKS TO THE SUBSTRATE ARE BY OTHERS AND SHALL BE VERIFIED BY THE ARCHITECT OR ENGINEER OF RECORD OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (AHJ). BUCKING, OPENINGS, &amp; BUCKING FASTENERS MUST BE PROPERLY DESIGNED &amp; INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE.</div> <div>8. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED, WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH THIS PRODUCT.</div> <div>9. ANCHORAGE NOTES: INSTALL PRODUCTS WITH MAXIMUM SHIM GAP, MINIMUM EDGE DISTANCE AND EMBEDMENT, AND WITH FASTENER TYPE AS SHOWN IN THE DETAILS AND AS INDICATED IN TABLE 1 FOR THE APPROPRIATE SUBSTRATE, OR AS APPROVED, SIGNED, AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE OPENING SUBSTRATE AND ALL OTHER LOUVER MATERIALS. INSTALL ONE ANCHOR AT EACH LOCATION SHOWN IN THE ELEVATION. INSTALL SHIMS AT EACH ANCHOR LOCATION WHERE A GAP OF 1/16" OR GREATER EXISTS BETWEEN PRODUCT FRAME AND SUBSTRATE. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING LOADS TO SUBSTRATE. SPECIFIED ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL FINISH OR STUCCO.</div>				TABLE 2. 3X6X1/4 ALUMINUM MULL CLIP (ITEM 157) ATTACHMENT DIRECTLY TO SUBSTRATE, ANCHOR QUANTITY / CLIP LENGTH REQUIREMENTS (SEE TABLE 1 FOR FULL DESCRIPTION OF ANCHOR TYPES / SUBSTRATES)																																		
				MULLION DESIGN PRESSURE (PSF)	ANCHOR ID	MAX. LOUVER ACTUAL HEIGHT (IN.)																																
						72	84	96	108	120																												
				100	A (3/8" SCREW-BOLT+ / CONC.)	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP	QTY 8 / 15" CLIP	QTY 9 / 15" CLIP																												
					B (3/8" SCREW-BOLT+ / CMU)	QTY 8 / 15" CLIP	QTY 9 / 15" CLIP	QTY 10 / 18" CLIP	QTY 11 / 18" CLIP	QTY 13 / 21" CLIP																												
					C (3/8"-16 BOLT / STEEL)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP																												
					D (3/8" LAG / WOOD)	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP																												
					E (1/2" SCREW-BOLT+ / CONC.)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 5 / 9" CLIP	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP																												
					F (1/2" LAG / WOOD)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 5 / 9" CLIP																												
				110	A (3/8" SCREW-BOLT+ / CONC.)	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP	QTY 8 / 15" CLIP	QTY 9 / 15" CLIP	QTY 10 / 18" CLIP																												
B (3/8" SCREW-BOLT+ / CMU)	QTY 8 / 15" CLIP	QTY 10 / 18" CLIP	QTY 11 / 18" CLIP		QTY 12 / 21" CLIP	QTY 14 / 24" CLIP																																
C (3/8"-16 BOLT / STEEL)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP		QTY 4 / 9" CLIP	QTY 4 / 9" CLIP																																
D (3/8" LAG / WOOD)	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP		QTY 6 / 12" CLIP	QTY 8 / 15" CLIP																																
E (1/2" SCREW-BOLT+ / CONC.)	QTY 4 / 9" CLIP	QTY 5 / 9" CLIP	QTY 5 / 9" CLIP		QTY 6 / 12" CLIP	QTY 7 / 12" CLIP																																
F (1/2" LAG / WOOD)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP		QTY 5 / 9" CLIP	QTY 5 / 9" CLIP																																
120	A (3/8" SCREW-BOLT+ / CONC.)	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP	QTY 8 / 15" CLIP	QTY 9 / 15" CLIP	QTY 10 / 18" CLIP																																
	B (3/8" SCREW-BOLT+ / CMU)	QTY 9 / 15" CLIP	QTY 11 / 18" CLIP	QTY 12 / 21" CLIP	QTY 14 / 24" CLIP	QTY 14 / 24" CLIP																																
	C (3/8"-16 BOLT / STEEL)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP																																
	D (3/8" LAG / WOOD)	QTY 6 / 12" CLIP	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP	QTY 7 / 12" CLIP	QTY 9 / 15" CLIP																																
	E (1/2" SCREW-BOLT+ / CONC.)	QTY 4 / 9" CLIP	QTY 5 / 9" CLIP	QTY 6 / 12" CLIP	QTY 7 / 12" CLIP	QTY 7 / 12" CLIP																																
	F (1/2" LAG / WOOD)	QTY 4 / 9" CLIP	QTY 4 / 9" CLIP	QTY 5 / 9" CLIP	QTY 5 / 9" CLIP	QTY 6 / 12" CLIP																																
TABLE 1. INSTALLATION ANCHOR REQUIREMENTS (NOTE: THIS TABLE APPLIES TO ANCHORAGE OF 3X6X1/4 MULL AND JAMB CLIPS DIRECTLY TO SUBSTRATE, AS WELL AS 4X4X3/8 MOUNTING ANGLES TO SUBSTRATE)				TABLE OF CONTENTS SHEET DESCRIPTION 1 NOTES, ANCHOR TABLE 1 2 TYP. ELEVATION, MULLION DETAILS 3 LOUVER ASSEMBLY DETAILS 4 HEAD/SILL INSTALL. DIRECTLY TO SUBSTRATE 5 HEAD/SILL INSTALL. W/ ALUM. MOUNTING ANGLE, 6" WALL 6 HEAD/SILL INSTALL. W/ STEEL MOUNTING ANGLE 7 JAMB INSTALLATION 8 BILL OF MATERIALS, PROFILES																																		
ANCHOR ID	OPENING SUBSTRATE	ANCHOR TO OPENING FASTENER TYPE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE																																		
A	SOLID UNCRACKED CONCRETE (4000 PSI MIN.)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	2 1/2"	1 1/2"																																		
B	GROUT- FILLED CMU (ASTM C-90 WITH 1,500 PSI MIN. GROUT)	3/8" DEWALT COATED CARBON STEEL SCREW-BOLT+	3 1/4"	1 1/2"																																		
C	1/4" THICK MIN. A36 MIN. STEEL	3/8"-16 BOLT, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	1/4"	9/16"																																		
D	SOUTHERN PINE (SG = 0.55 MIN.)	3/8" LAG SCREW, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	3"	1 1/2"																																		
E	SOLID UNCRACKED CONCRETE (4000 PSI MIN.)	1/2" DEWALT COATED CARBON STEEL SCREW-BOLT+	2 1/2"	1 3/4"																																		
F	SOUTHERN PINE (SG = 0.55 MIN.)	1/2" LAG SCREW, 300 SERIES COND. CW SS (65ksi MIN. YIELD)	3"	2"																																		
				<div><div><div>PRODUCT APPROVED as complying with the Florida Building Code</div><div>NOA-No. 23-0823.04</div><div>Approval Date 11/02/2023</div><div>By  Miami-Dade Product Control</div></div><div><div>LUCAS A. TURNER No. 58201 STATE OF FLORIDA PROFESSIONAL ENGINEER 11/02/2023 LUCAS TURNER, FL PE 58201 TURNER ENGINEERING &amp; CONSULTING, INC. 2428 OLD NATCHEZ TRACE TRL. CAMDEN, TN, 38320 PH 941-380-1574</div></div><div><div>Nailor Industries Inc. 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com</div></div><div><table><tr><th>REV</th><th>BY</th><th>DESCRIPTION</th><th>DATE</th></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td colspan="2">DWN BY: fcartinas</td><td>SCALE: NTS</td><td></td></tr><tr><td colspan="2">DATE: 5/27/2021</td><td>SHEET: 1 OF 8</td><td></td></tr><tr><td colspan="3">SHEET DESCRIPTION: BOM, NOTES, ANCHORS</td><td>REV 0</td></tr><tr><td colspan="2">DWG:</td><td colspan="2">1606CM-NOA</td></tr></table></div></div>							REV	BY	DESCRIPTION	DATE									DWN BY: fcartinas		SCALE: NTS		DATE: 5/27/2021		SHEET: 1 OF 8		SHEET DESCRIPTION: BOM, NOTES, ANCHORS			REV 0	DWG:		1606CM-NOA	
REV	BY	DESCRIPTION	DATE																																			
DWN BY: fcartinas		SCALE: NTS																																				
DATE: 5/27/2021		SHEET: 1 OF 8																																				
SHEET DESCRIPTION: BOM, NOTES, ANCHORS			REV 0																																			
DWG:		1606CM-NOA																																				
A	B	C	D	E	F	G	H	J	K	L																												







FOR INSTALLATION  
DETAILS, SEE  
SHEETS 4 AND 5

FOR INSTALLATION  
DETAILS, SEE  
SHEET 6

EXPLODED VIEW

VERTICAL SECTION DETAIL

JAMB  
DETAIL

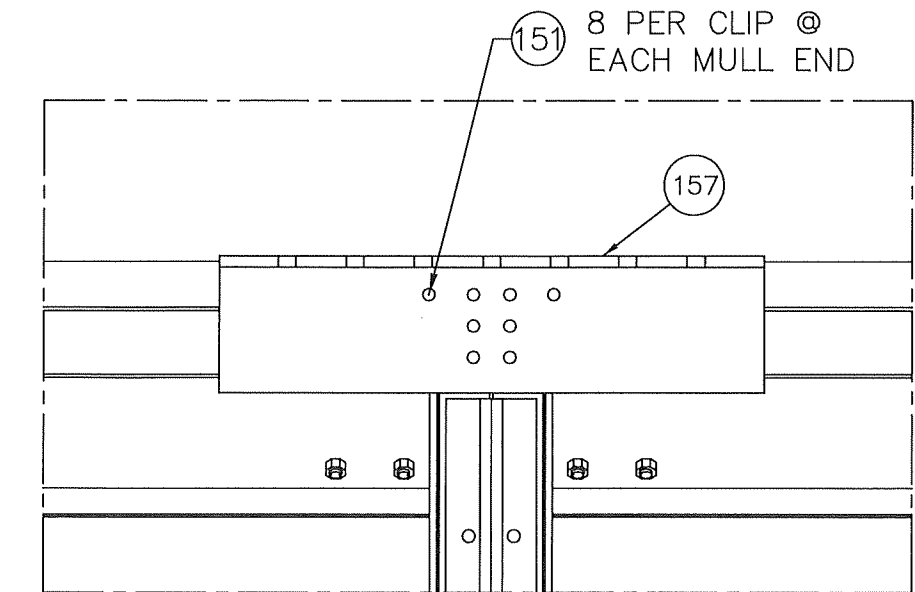
BLADE SUPPORT AND  
BLADE SUPPORT ANGLE  
NOT SHOWN FOR  
CLARITY.

**PRODUCT APPROVED**  
as complying with the Florida  
Building Code  
NOA-No. **23-0823.04**  
Approval Date **11/02/2023**  
By *[Signature]*  
**Miami-Dade Product Control**

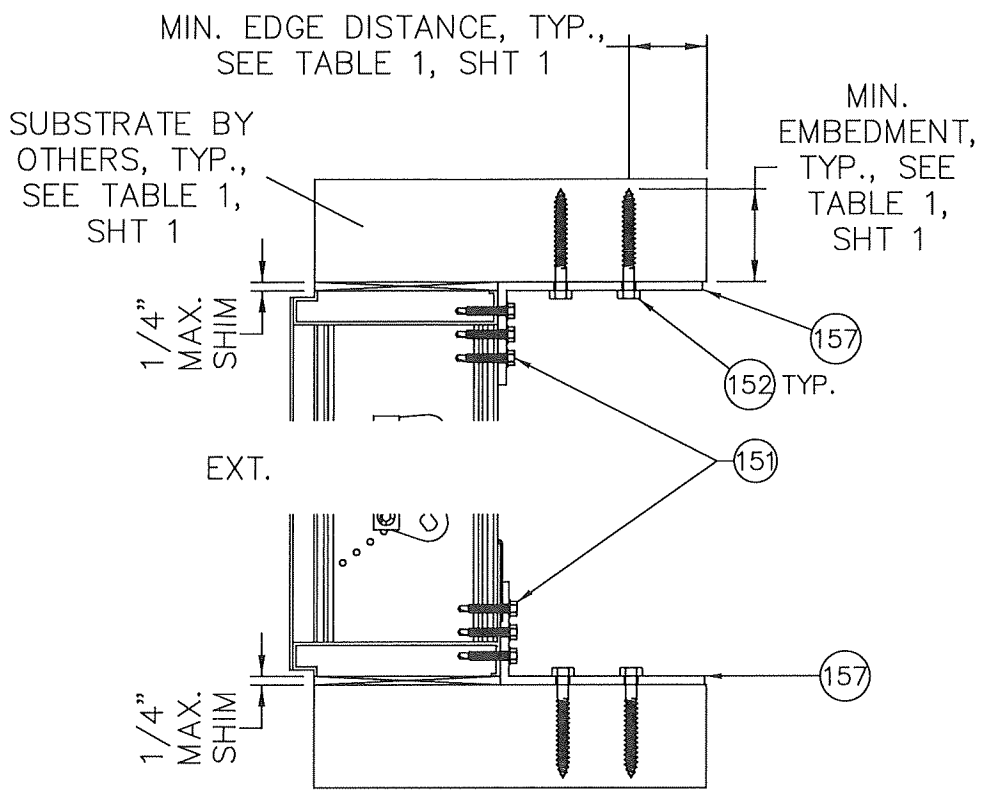
**PROFESSIONAL ENGINEER**  
LUCAS A. TURNER  
LICENSE  
No. 58201  
STATE OF  
FLORIDA  
10/4/2023  
LUCAS TURNER, FL PE 58201  
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN, 38320  
PH 941-380-1574

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

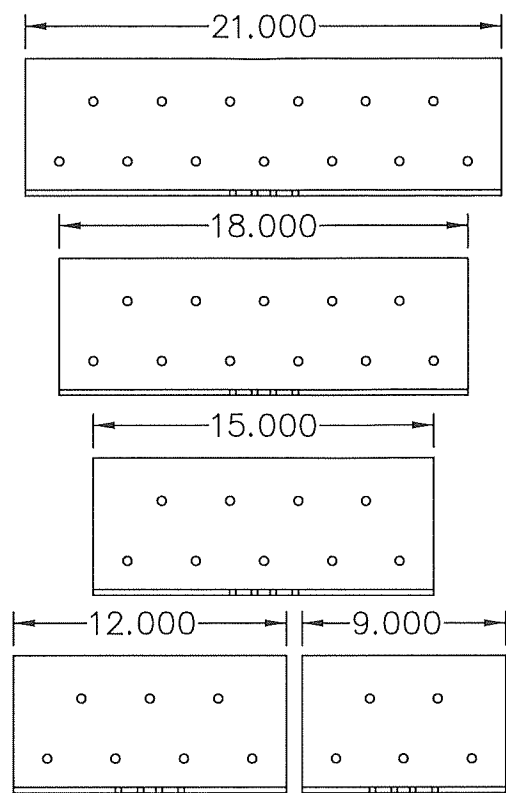
REV	BY	DESCRIPTION	DATE
DWN BY: fcoartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 3 OF 8	
SHEET DESCRIPTION: ASSEMBLY DETAILS			REV 0
DWG:		1606CM-NOA	



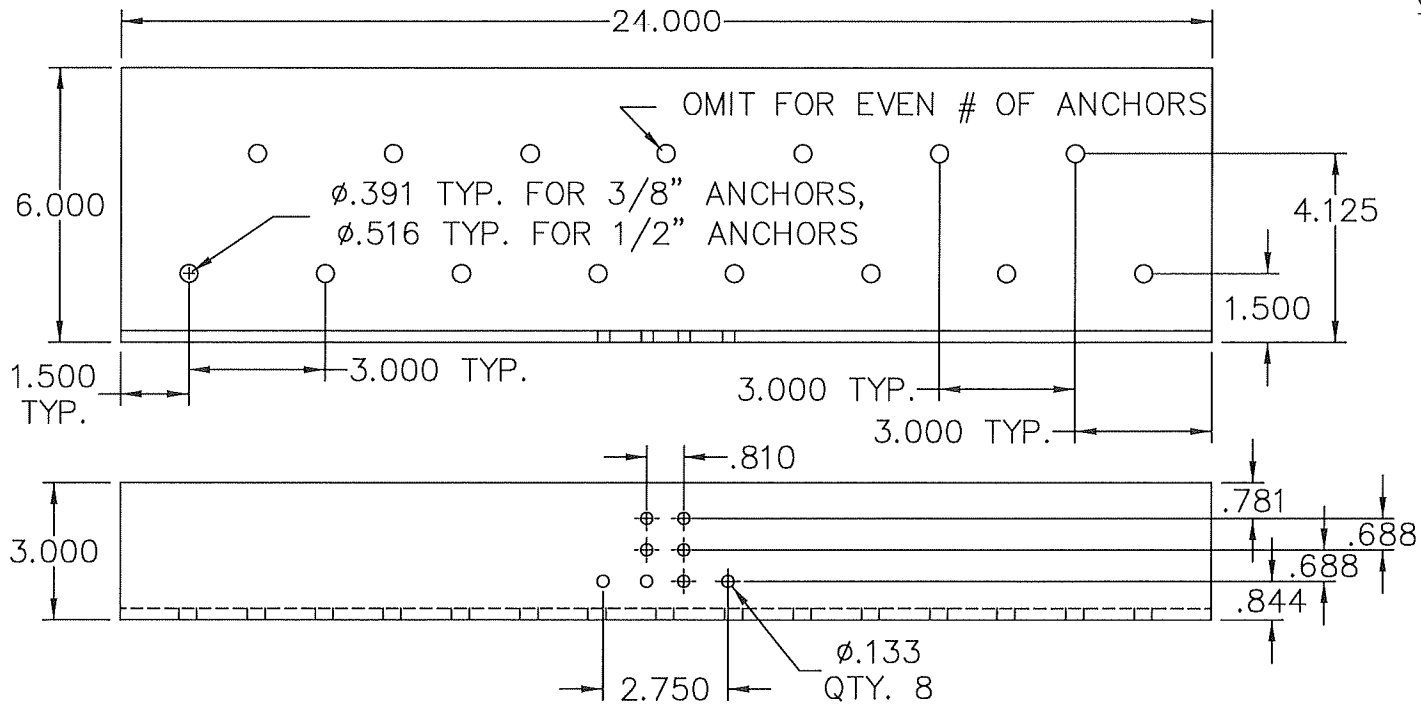
Ⓐ 3x6x1/4" ATTACHMENT TO LOUVER WITH MULL CLIP DIRECT TO SUBSTRATE



3x6x1/4" ALUMINUM MULL CLIP HEAD/SILL ATTACHMENT TO SUBSTRATE



157 MULL CLIP TO SUBSTRATE ALTERNATE SIZE LAYOUTS (FOLLOW SAME EDGE / HOLE SPACING AS 24")



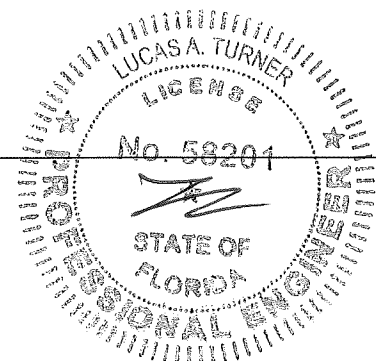
157 3x6x1/4" ALUMINUM MULL CLIP FOR ATTACHMENT TO SUBSTRATE

(9" TO 24" LENGTHS, 24" LAYOUT SHOWN ABOVE, SEE ALTERNATE MULL CLIP TO SUBSTRATE SIZE LAYOUTS THIS SHEET FOR SMALLER WIDTHS)

NOTE: THE WEIGHT OF THE LOUVER ASSEMBLY MUST BE SUPPORTED BY THE SUBSTRATE, NOT THE MULL CLIPS.

SEE TABLE 2, SHEET 1 FOR MULL CLIP LENGTH AND ANCHOR QUANTITY REQUIREMENTS BY LOUVER SIZE / DP. IF TABLE 2 REQUIRES AN EVEN NUMBER OF ANCHORS, DO NOT USE ANCHOR IN THE CENTER HOLE OF THE CLIP

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NOA-No. **23-0823.04**  
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Miami-Dade Product Control



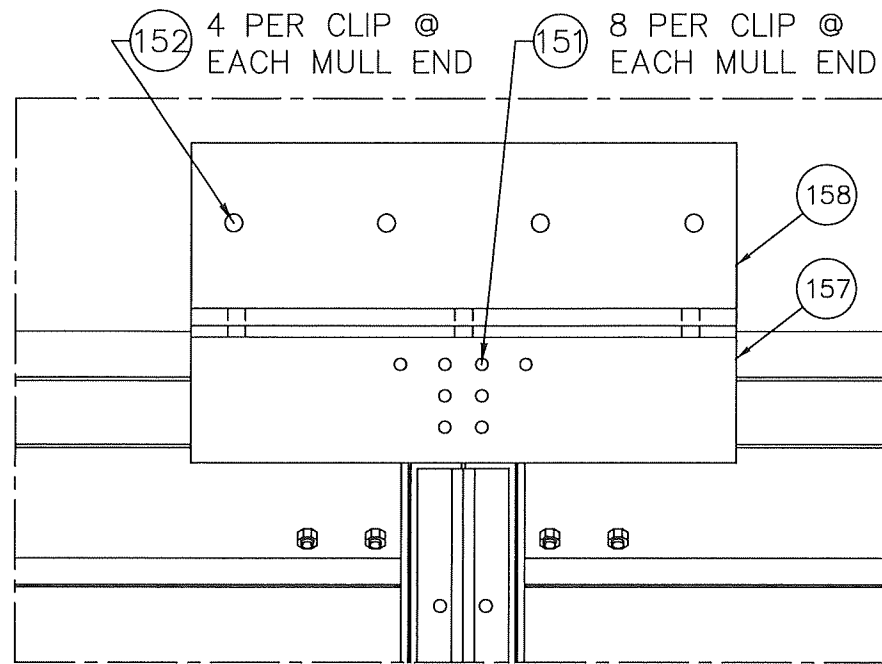
10/4/2023  
LUCAS TURNER, FL PE 58201  
TURNER ENGINEERING & CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN, 38320  
PH 941-380-1574



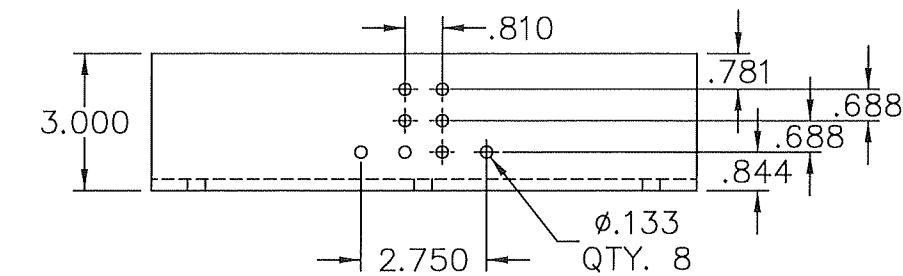
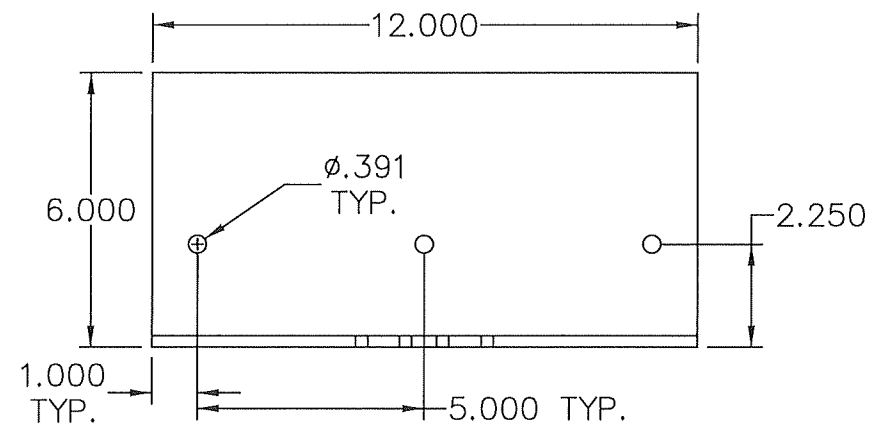
**Nailor Industries Inc.**  
4714 Winfield Road  
Houston, TX 77039  
TEL: 281-590-1172  
FAX: 281-590-3086

REV	BY	DESCRIPTION	DATE
DWN BY: fcoartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 4 OF 8	
SHEET DESCRIPTION: HEAD/SILL TO SUBSTRATE			REV 0
DWG:		1606CM-NOA	

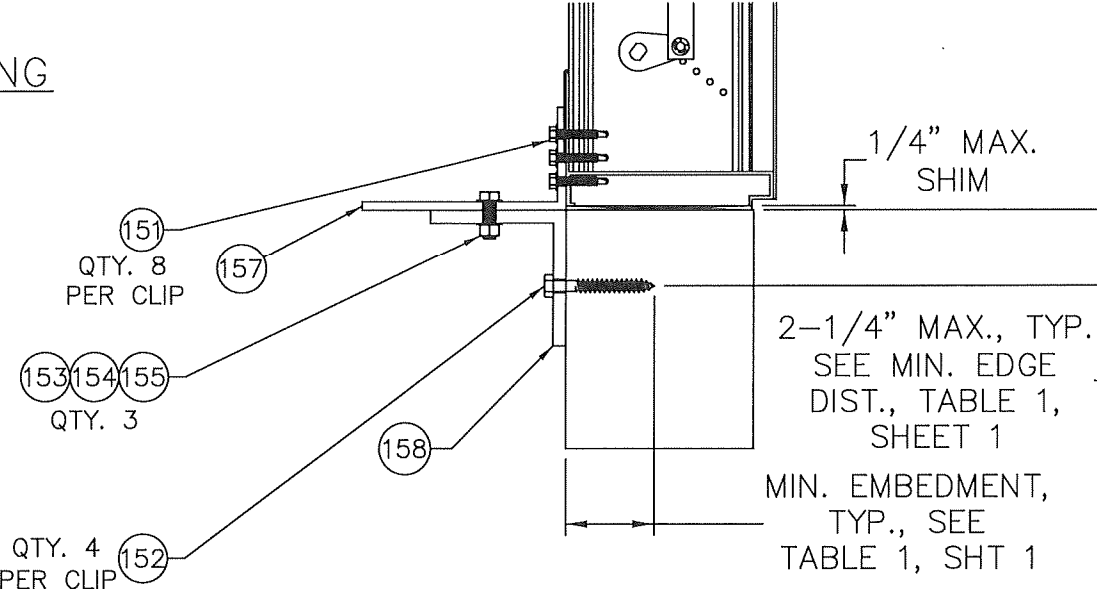
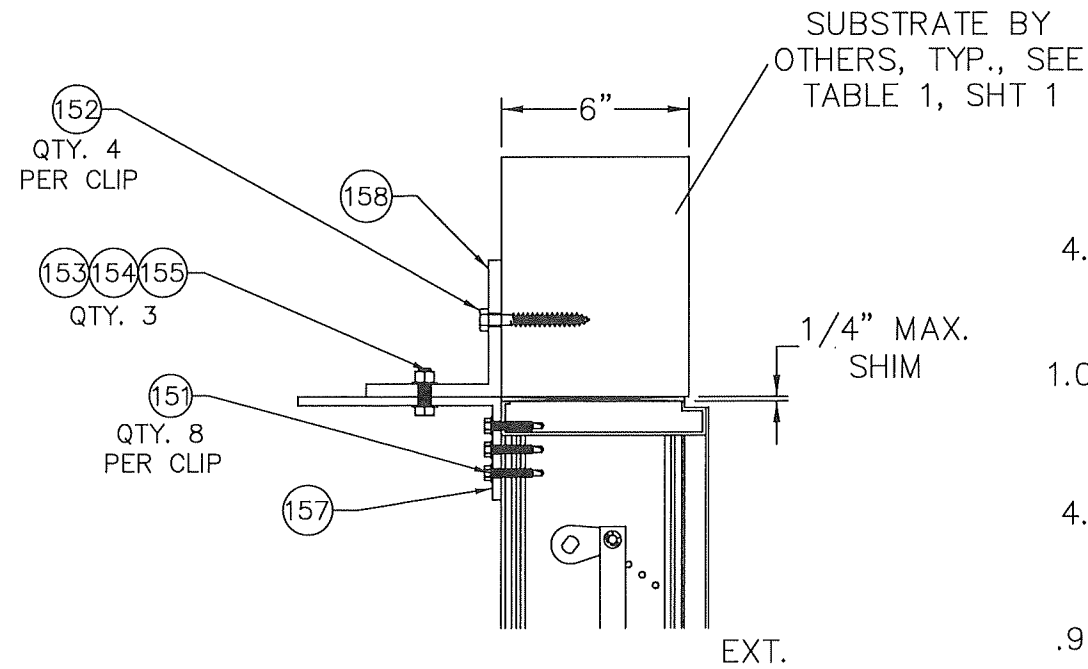




**(A/5)** MULL ATTACHMENT WITH 3x6x1/4" MOUNTING CLIP AND 4x4x3/8" MOUNTING ANGLE

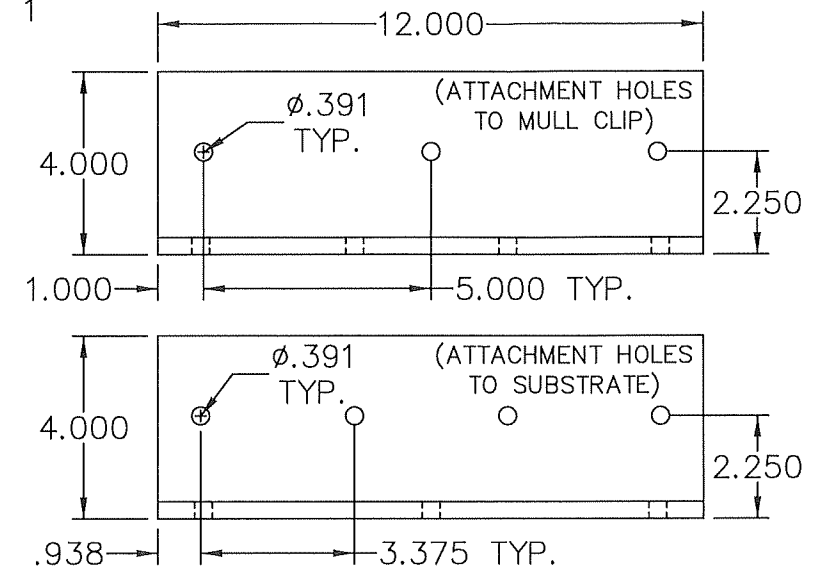


**(157)** 3x6x1/4" ALUMINUM MULL CLIP FOR ATTACHMENT TO MOUNTING ANGLE, 6" WALL



3x6x1/4" ALUMINUM MULL CLIP HEAD/SILL OPTIONAL ATTACHMENT TO 6" WALL WITH 4X4X3/8" ALUMINUM MOUNTING ANGLE


NOTE: THE WEIGHT OF THE LOUVER ASSEMBLY MUST BE SUPPORTED BY THE SUBSTRATE, NOT THE MULL CLIPS OR MOUNTING ANGLES.



**(158)** 4x4x3/8" ALUMINUM MOUNTING ANGLE @ MULLS

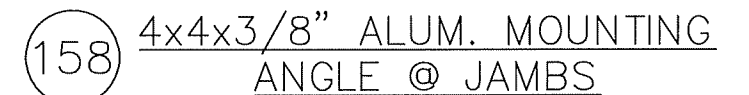
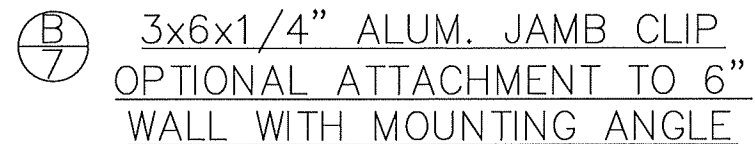
**PRODUCT APPROVED**  
as complying with the Florida Building Code  
NOA-No. **23-0823.04**  
Approval Date **11/02/2023**  
By *[Signature]*  
Miami-Dade Product Control

LUCAS A. TURNER  
LICENSE  
No. 58201  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
10/4/2023  
LUCAS TURNER, FL PE 58201  
TURNER ENGINEERING & CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN, 38320  
PH 941-380-1574

Nailor Industries Inc.			
 4714 Winfield Road Houston, TX 77039 TEL: 281-590-1172 FAX: 281-590-3086 www.nailor.com			
REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 5 OF 8	
SHEET DESCRIPTION: HEAD/SILL, 6" WALL		REV	
DWG: 1606CM-NOA		0	

REV	BY	DESCRIPTION	DATE
DWN BY: fcoirtinas			SCALE: NTS
DATE: 5/27/2021			SHEET: 6 OF 8
SHEET DESCRIPTION: HEAD/SILL ANCHORAGE			REV
DWG: 1606CM-NOA			0





## JAMB CLIPS FOR ATTACHMENT DIRECTLY TO SUBSTRATE OR TO MOUNTING ANGLE

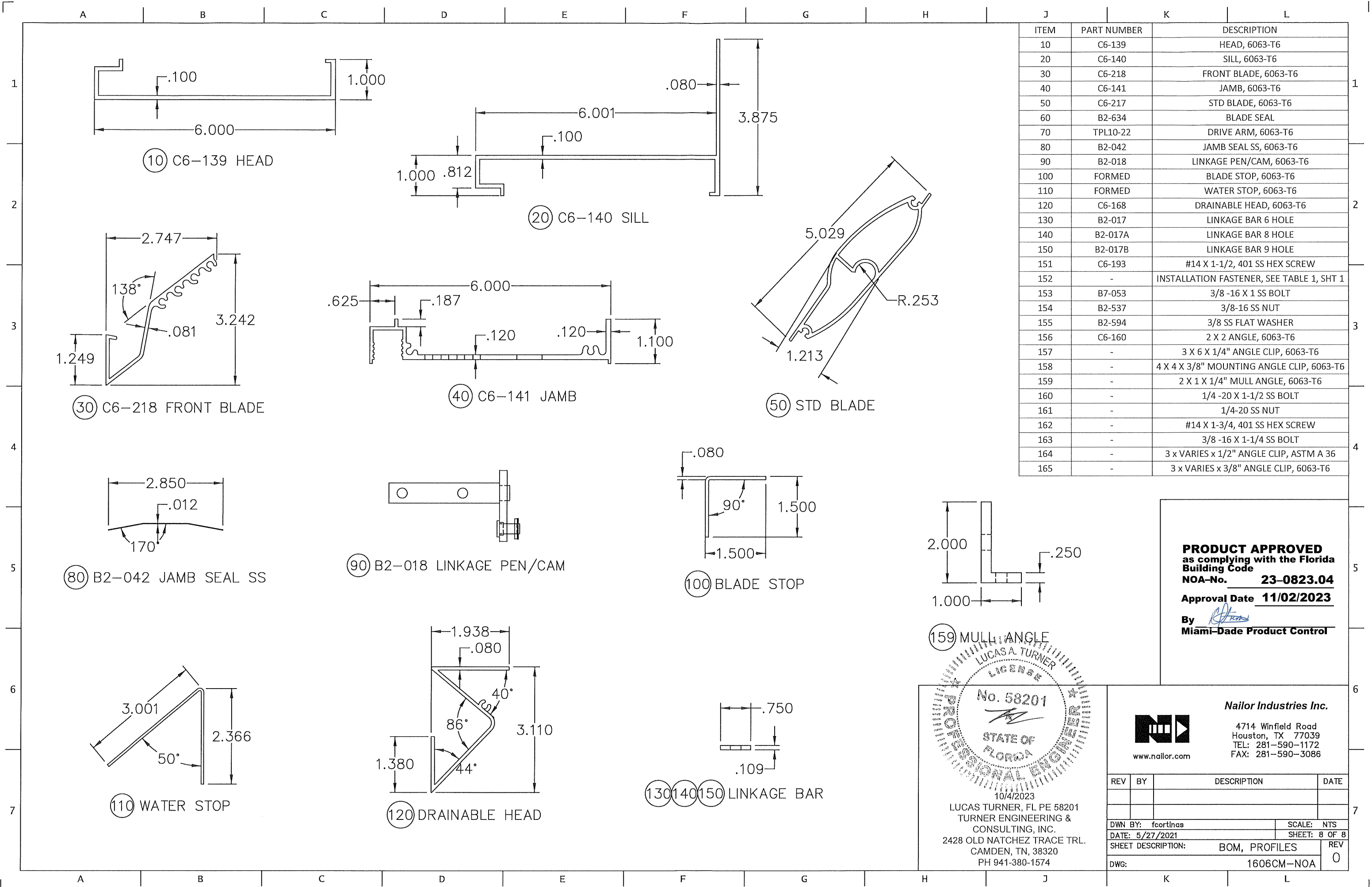


10/4/2023  
LUCAS TURNER, FL PE 58201  
TURNER ENGINEERING &  
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2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN, 38320  
PH 941-380-1574

By *R. F. [Signature]*  
Miami-Dade Product Control

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

REV	BY	DESCRIPTION	DATE
DWN BY: fcoertinas			SCALE: NTS
DATE: 5/27/2021			SHEET: 7 OF 8
SHEET DESCRIPTION: JAMB ANCHORAGE			REV
DWG: 1606CM-NOA			0



ITEM	PART NUMBER	DESCRIPTION
10	C6-139	HEAD, 6063-T6
20	C6-140	SILL, 6063-T6
30	C6-218	FRONT BLADE, 6063-T6
40	C6-141	JAMB, 6063-T6
50	C6-217	STD BLADE, 6063-T6
60	B2-634	BLADE SEAL
70	TPL10-22	DRIVE ARM, 6063-T6
80	B2-042	JAMB SEAL SS, 6063-T6
90	B2-018	LINKAGE PEN/CAM, 6063-T6
100	FORMED	BLADE STOP, 6063-T6
110	FORMED	WATER STOP, 6063-T6
120	C6-168	DRAINABLE HEAD, 6063-T6
130	B2-017	LINKAGE BAR 6 HOLE
140	B2-017A	LINKAGE BAR 8 HOLE
150	B2-017B	LINKAGE BAR 9 HOLE
151	C6-193	#14 X 1-1/2, 401 SS HEX SCREW
152	-	INSTALLATION FASTENER, SEE TABLE 1, SHT 1
153	B7-053	3/8 -16 X 1 SS BOLT
154	B2-537	3/8-16 SS NUT
155	B2-594	3/8 SS FLAT WASHER
156	C6-160	2 X 2 ANGLE, 6063-T6
157	-	3 X 6 X 1/4" ANGLE CLIP, 6063-T6
158	-	4 X 4 X 3/8" MOUNTING ANGLE CLIP, 6063-T6
159	-	2 X 1 X 1/4" MULL ANGLE, 6063-T6
160	-	1/4 -20 X 1-1/2 SS BOLT
161	-	1/4-20 SS NUT
162	-	#14 X 1-3/4, 401 SS HEX SCREW
163	-	3/8 -16 X 1-1/4 SS BOLT
164	-	3 x VARIES x 1/2" ANGLE CLIP, ASTM A 36
165	-	3 x VARIES x 3/8" ANGLE CLIP, 6063-T6

**PRODUCT APPROVED**  
as complying with the Florida  
Building Code  
NOA-No. **23-0823.04**  
Approval Date **11/02/2023**  
By *[Signature]*  
**Miami-Dade Product Control**

159 MULL ANGLE  
LUCAS A. TURNER  
LICENSE  
No. 58201  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
10/4/2023  
LUCAS TURNER, FL PE 58201  
TURNER ENGINEERING &  
CONSULTING, INC.  
2428 OLD NATCHEZ TRACE TRL.  
CAMDEN, TN, 38320  
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**Nailor Industries Inc.**  
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FAX: 281-590-3086  
www.nailor.com

REV	BY	DESCRIPTION	DATE
DWN BY: fcartinas		SCALE: NTS	
DATE: 5/27/2021		SHEET: 8 OF 8	
SHEET DESCRIPTION: BOM, PROFILES			REV 0
DWG: 1606CM-NOA			