

# 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/economy

Greenheck Fan Corporation P.O. Box 410 Schofield, WI 54476

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 EVH-302D Aluminum Louver**

**APPROVAL DOCUMENT:** Drawing No. **EVH-302D**, titled "EVH-302D Aluminum Louver", sheets 1 through 9 of 9, dated 05/16/2019, prepared by Greenheck Fan Corporation, signed and sealed by Wayne K. Helmila, P.E. on 09/09/2021, bearing the Miami-Dade County Product Control renewal 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, Schofield, WI or Shelby, NC, model/series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**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 & renews NOA # 21-0917.12,** consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by Ishaq I. Chanda, P.E.

Shang - Chande



NOA No. 23-1101.05 Expiration Date: June 06, 2029 Approval Date: November 22, 2023

iber 22, 2023

Page 1



# NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. Evidence submitted under NOA # 19-0708.12

#### A. DRAWINGS

1. Drawing No. **EVH-302D**, titled "EVH-302D ALUMINUM LOUVER", sheets 1 through 9 of 9, dated 05/16/2019, with revision date 06/21/2019, prepared by Greenheck Fan Corporation, signed and sealed by Wayne K. Helmila, P.E.

#### B. TESTS

- 1. Test report on 1) Uniform Static Air Pressure Test per FBC, TAS 202-94
  - 2) Large Missile Impact Test per FBC, TAS 201-94,
  - 3) Cyclic Wind Pressure Test per FBC, TAS 203-94,

along with marked-up drawings and installation diagram of Model EVH-302D aluminum louvers, prepared by Quast Consulting & Testing, Inc., Test Report No. **QCT18-5153.01**, dated 01/02/2019, signed and sealed by Brian M. Sasman, P.E.

2. Test report on AMCA 550 Performance Test Report along with marked-up drawings and installation diagram of Model EVH-302D aluminum louvers, prepared by Quast Consulting &Testing, Inc., Test Report No. QCT18-5093.01-R1, dated 10/23/2018, signed and sealed by Brian M. Sasman, P.E.

# C. CALCULATIONS

1. Structural and anchors calculations prepared by Rice Engineering, dated 04/02/2019, 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 compliance to the 6<sup>th</sup> edition (2017) FBC, and of no financial interest, issued by Rice Engineering, dated 04/02/2019, signed and sealed by Wayne K. Helmila, P.E.

# G. OTHERS

1. Notice of Acceptance No. 19-0409.02, issued to Greenheck Fan Corporation for their Model "EVH-302D" Aluminum Louver, approved on 06/06/2019 and expiring on 06/06/2024.

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No. 23-1101.05
Expiration Date: June 06, 2029
Approval Date: November 22, 2023

# NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

# 2. Evidence submitted under #21-0917.12

#### A. DRAWINGS

1. Drawing No. **EVH-302D**, titled "EVH-302D Aluminum Louver", sheets 1 through 9 of 9, dated 05/16/2019, prepared by Greenheck Fan Corporation, signed and sealed by Wayne K. Helmila, P.E. on 09/09/2021.

#### B. TESTS

1. None.

#### C. CALCULATIONS

1. Structural load calculations prepared by Rice Engineering, dated 09/09/2021, 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 compliance to 7<sup>th</sup> edition (2020) of the FBC and of no financial interest, dated 09/09/2021, issued by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.

Ishay I. Chanse

**Greenheck Fan Corporation** 

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No. 23-1101.05
Expiration Date: June 06, 2029
Approval Date: November 22, 2023

# **NOTICE OF ACCEPTANCE:** EVIDENCE SUBMITTED

#### 3. New Evidence submitted

- A. DRAWINGS (submitted under previous submittal)
  - Drawing No. **EVH-302D**, titled "EVH-302D Aluminum Louver", sheets 1 through 9 of 9, dated 05/16/2019, prepared by Greenheck Fan Corporation, signed and sealed by Wayne K. Helmila, P.E. on 09/09/2021.
- **B.** TESTS (submitted under previous submittal)
  - 1. None.
- C. CALCULATIONS (submitted under previous submittal)
  - 1. None.

#### D. **OUALITY ASSURANCE**

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

#### E. MATERIAL CERTIFICATIONS

1. None.

# F. STATEMENTS

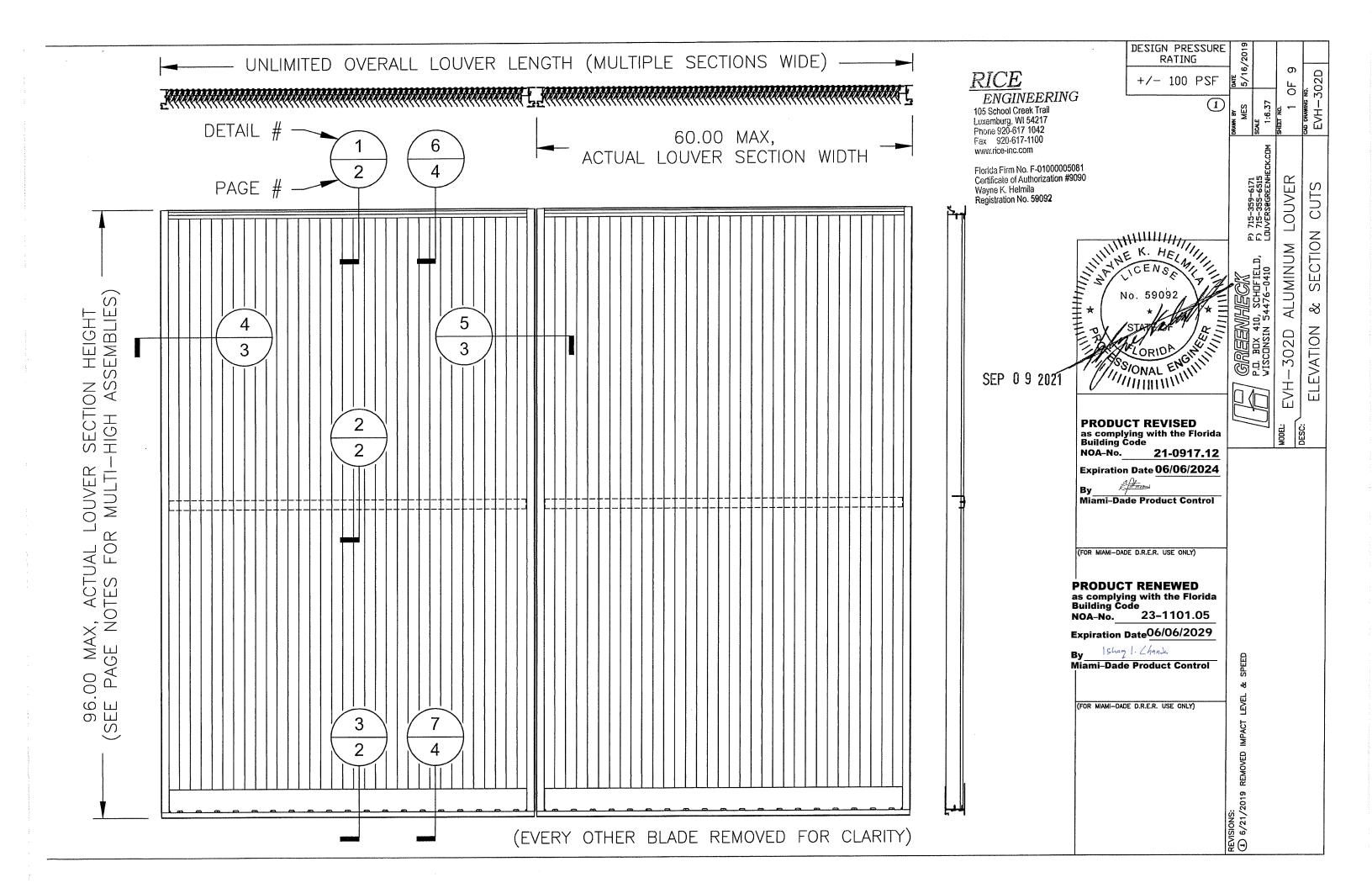
- 1. Statement letter dated 10/26/23 from Greenheck Corp./Aerolite, LLC requesting renewal with no changes, signed by Mike Steele, Product Development Engineer II.
- 2. Statement letter of code compliance to 8<sup>th</sup> edition (2023) of the FBC and of no financial interest, dated 10/26/2023, issued by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.
- 3. Statement letter of code compliance to 7<sup>th</sup> edition (2020) of the FBC and of no financial interest, dated 09/09/2021, issued by Rice Engineering, signed and sealed by Wayne K. Helmila, P.E.

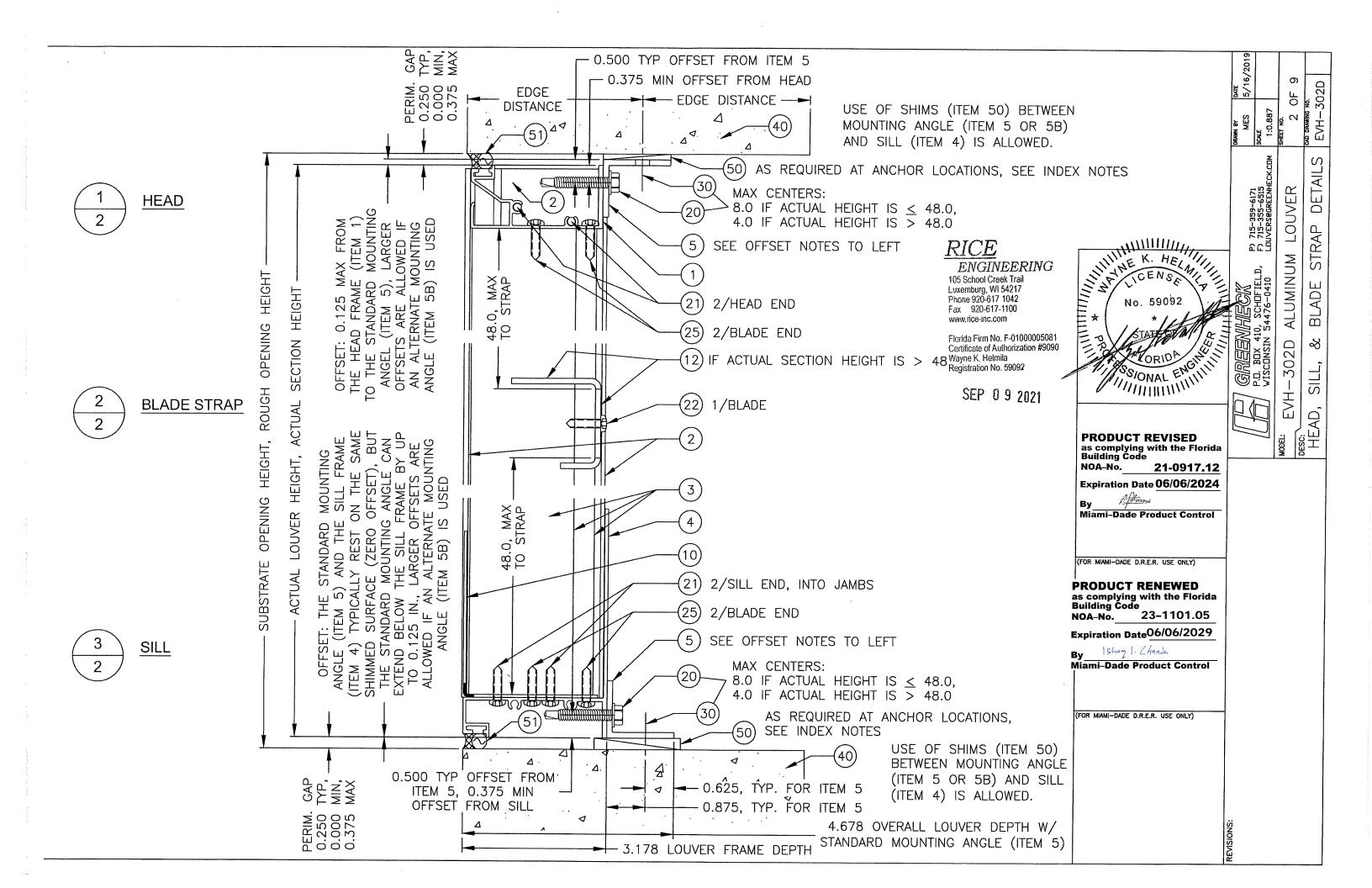
# E. OTHER

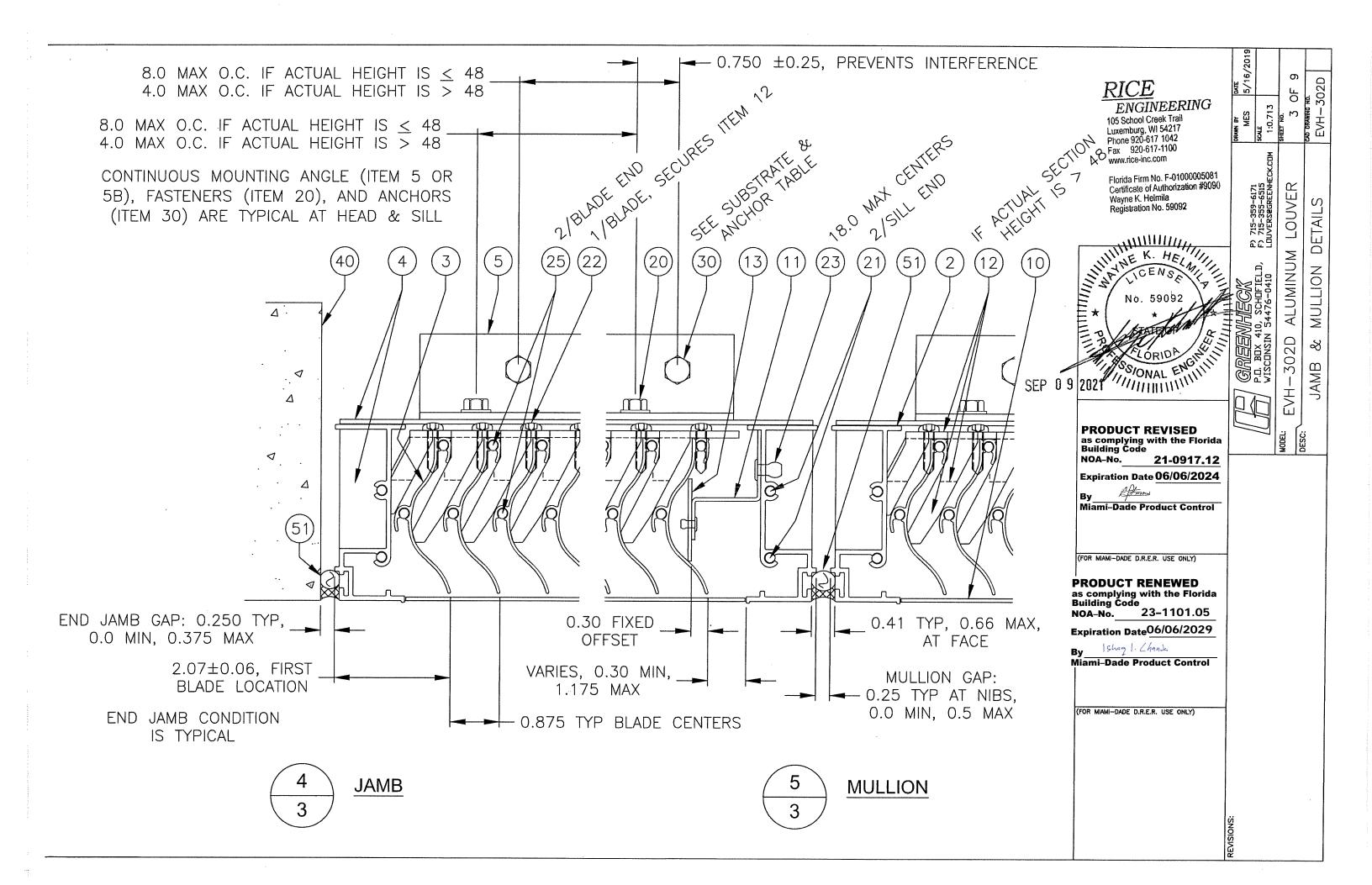
1. This NOA revises & renews NOA # 21-0917.12, expiring 06/06/29.

Ishaq I. Chanla

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No. 23-1101.05
Expiration Date: June 06, 2029
Approval Date: November 22, 2023







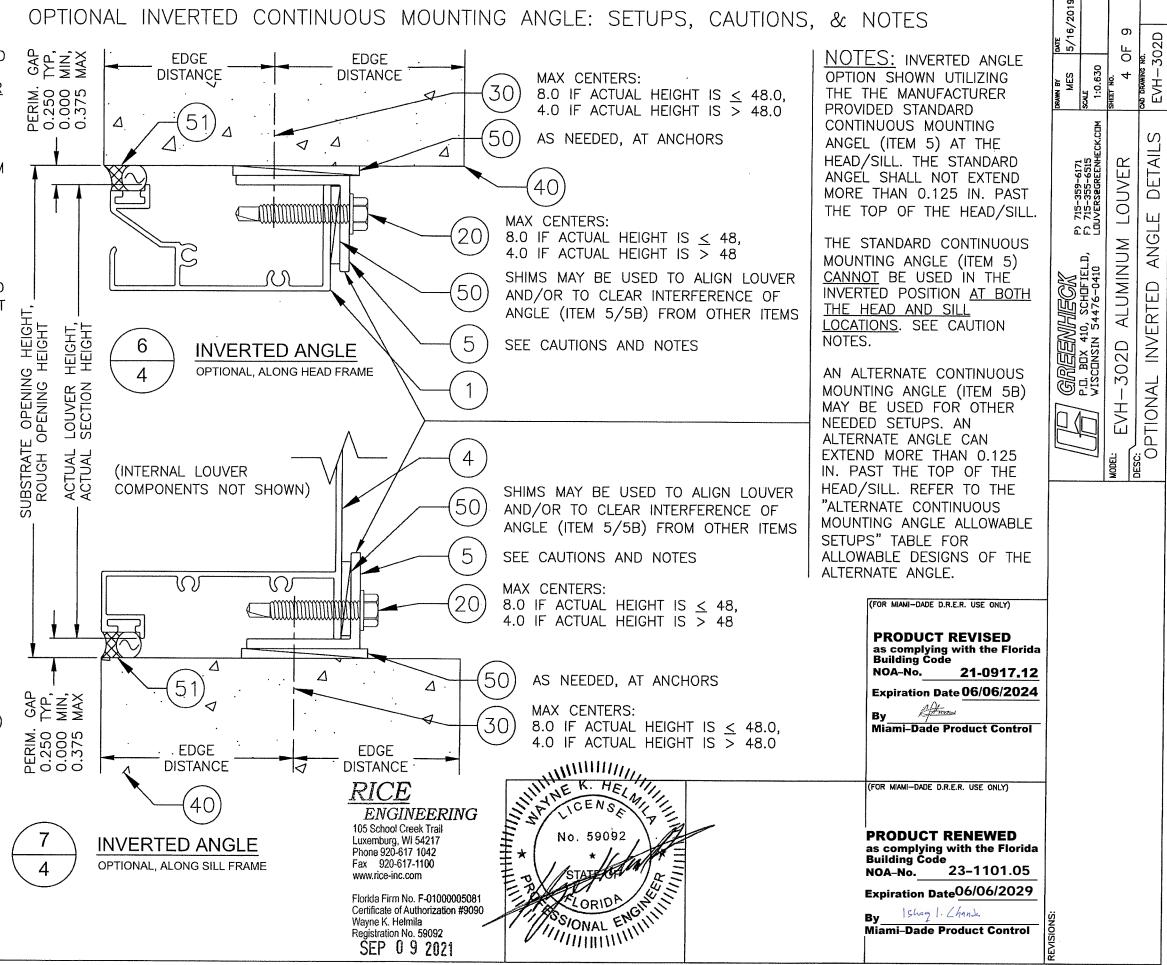
CAUTION! THE MANUFACTURER PROVIDED STANDARD CONTINUOUS MOUNTING ANGLES (ITEM 5) CAN ONLY BE USED IN THE INVERTED POSITION IF ONLY ONE OF THE STANDARD ANGLES IS INVERTED. EITHER AT THE HEAD OR AT THE SILL, NOT BOTH.

WHY: DUE TO REQUIRED OFFSETS, USE OF THE FACTORY PUNCHED HOLES IN THE STANDARD CONTINUOUS MOUNTING ANGLE (ITEM 5) WILL POSITION THE HORIZONTAL LEG OF THE STANDARD ANGLE UP AGAINST THE HEAD/SILL FRAME MEMBER (AS SHOWN ON THIS PAGE). THEREFORE, IT IS IMPOSSIBLE TO PRE—MOUNT BOTH STANDARD ANGLES TO THE SUBSTRATE IN THE INVERTED POSITION AND STILL HAVE CLEARANCE FOR THE LOUVER HEAD AND/OR SILL FRAME TO SLIDE OVER AND PAST THE ANCHOR HEADS (ITEM 30) ON THE INVERTED ANGLES.

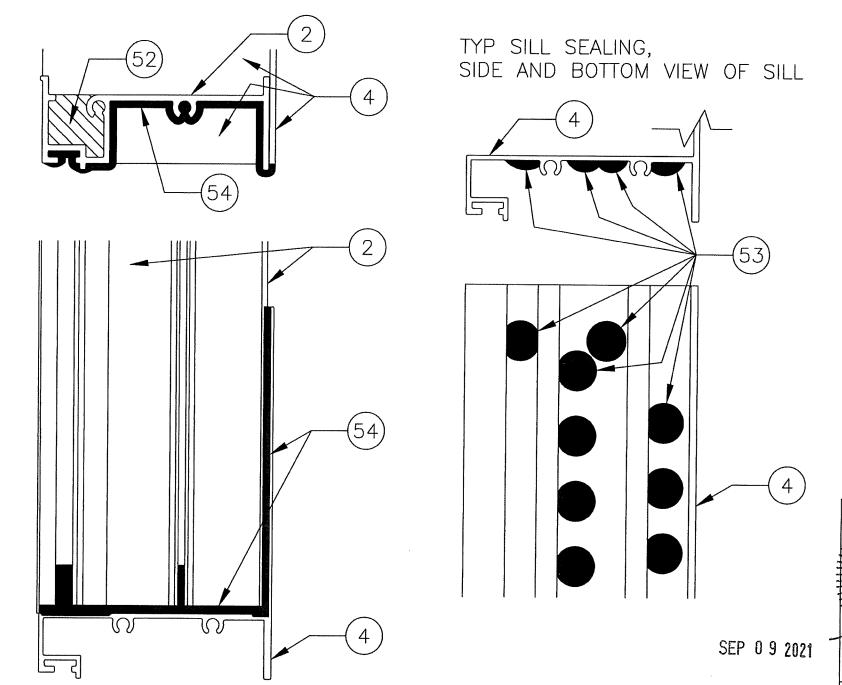
SOLUTION: TO OVERCOME THE ABOVE ISSUE, AN ALTERNATE CONTINUOUS MOUNTING ANGLE (ITEM 5B, NOT BY MANUFACTURER) MUST BE USED AT EITHER THE HEAD AND/OR SILL. THE ALTERNATE ANGLE CAN SPAN A LARGER GAP BETWEEN THE LOUVER FRAME AND THE SUBSTRATE, WHICH ALLOWS FOR MORE CLEARANCE BETWEEN THE LOUVER FRAME AND THE ANCHOR. REFER TO THE "ALTERNATE CONTINUOUS MOUNTING ANGLE ALLOWABLE SETUPS" TABLE FOR DESIGN INFORMATION. NOTE THAT THE STANDARD CONTINUOUS MOUNTING ANGLE (ITEM 5) CAN HAVE ITS FRAME FASTENER (ITEM 20) HOLES DRILLED IN A NEW LOCATION OF UP TO 0.75 IN. AWAY FROM THE OUTSIDE CORNER OF THE STANDARD ANGLE (SEE NOTES 1 & 2 ON THE "ALTERNATE CONTINUOUS MOUNTING ANGLE ALLOWABLE SETUPS" TABLE).

CAUTION! NO MATTER WHAT TYPE OF CONTINUOUS MOUNTING ANGLE (ITEM 5 OR 5B) IS USED IN AN INVERTED SETUP, A LARGER THAN TYPICAL HEAD/SILL SUBSTRATE GAP CLEARANCE SHOULD BE CONSIDERED WHEN SIZING THE LOUVER IN ORDER TO MAKE SURE THE HEAD/SILL FRAME CAN SLIDE OVER AND PAST THE ANCHOR HEADS (ITEM 30) ON THE INVERTED MOUNTING ANGLE(S).

ANGLE PROVIDER: THE MANUFACTURER PROVIDES STANDARD CONTINUOUS MOUNTING ANGLES (ITEM 5) ONLY. ANY NEEDED ALTERNATE CONTINUOUS MOUNTING ANGLE (ITEM 5B) IS BY OTHERS.







THIS PAGE: ALL SHOWN SEALING IS BY MANUFACTURER, AND IS REQUIRED (ALONG WITH PERIMETER SEALING, BY OTHERS) TO PASS ANSI/AMCA 550.

# 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-01000005081 Certificate of Authorization #9090 Wayne K. Helmila Registration No. 59092

No. 59092

PRODUCT REVISED as complying with the Florida Building Code NOA-No. 21-0917.12

Expiration Date 06/06/2024

By Miami-Dade Product Control

(FOR MIAMI-DADE D.R.E.R. USE ONLY)

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. 23-1101.05

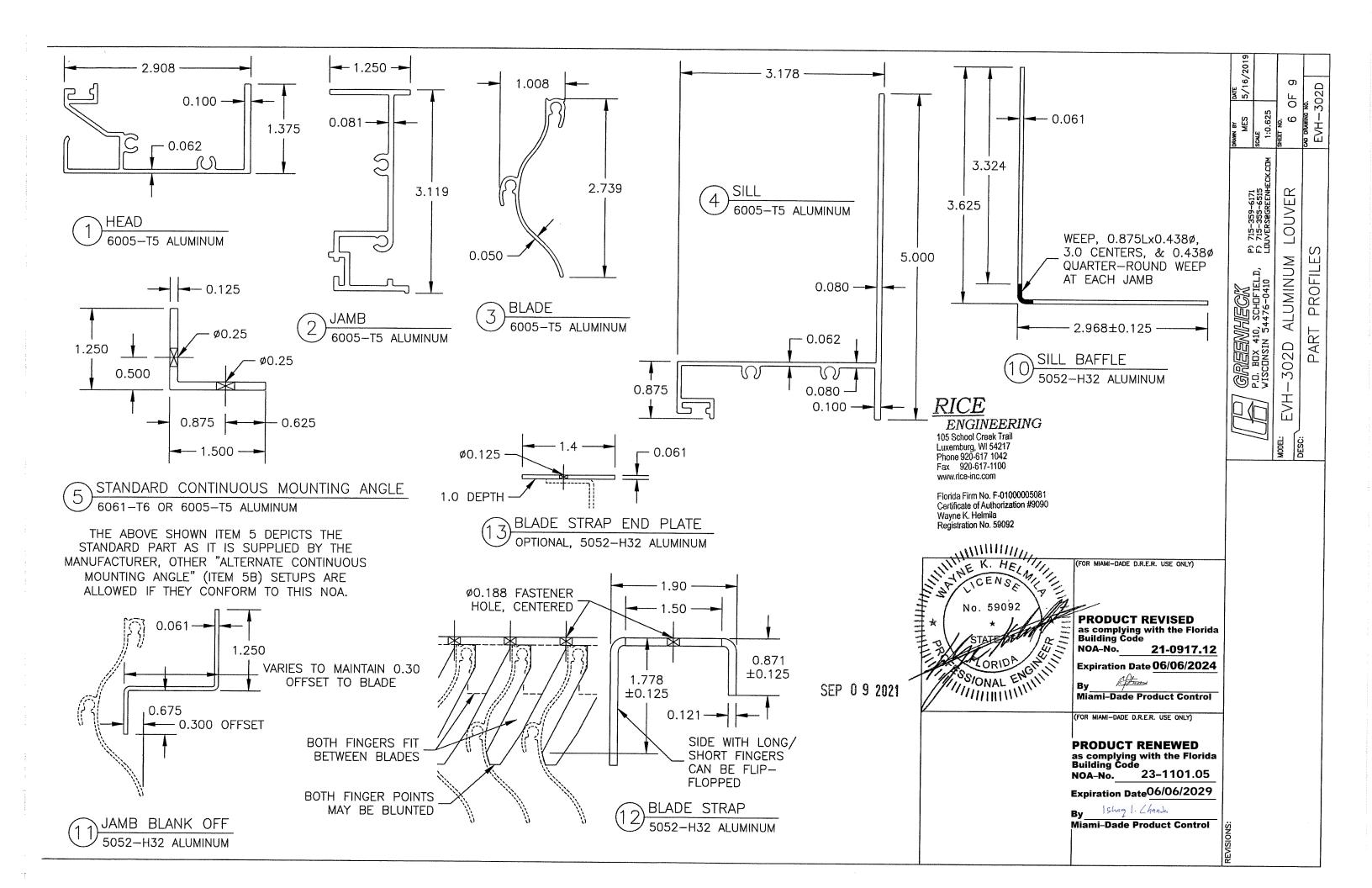
LOUVER

FACTORY

302D

Expiration Date 06/06/2029

By Shang I. Chanke Miami-Dade Product Control



& ANCHI	OR TABLE	MAX. ANCHOR SPACING IS BASED ON ACTUAL HEIGHT: 8.0	IN. FOR	≤ 48.0 IN.,	& 4.0 IN. F	- □R > 48	8.0 IN.		
RATE (ITEM	40)			ANCHOR MINIMUMS					
THICKNESS MIN. (IN.)	PROPERTY MINIMUM	ANCHOR (ITEM 30)	LENGTH (IN.)	THREADED LENGTH (IN.)	EMBEDMENT (IN.)	TO EDGE (IN.)	Fy, Fu (KSI)		
3	SG 0.42	1/4 IN. LAG SCREW, COATED STEEL (6)		2 1/2	2 1/2	1 1/2 -	70, 105		
		1/4 IN, LAG SCREW, 300 SERIES STAINLESS (1)	3				65, 100		
		1/4 IN. SPAX POWERLAG, HEX OR T-STAR WASHER HEAD, COATED STEEL (6) (1)		1 3/4					
		6 MM SPAX TIMBER SCREW, WASHER HEAD, 300 SERIES STAINLESS	80 MM 61 MM		2 11/16		_		
16 GA	Fy 33 KSI	1/4-14 DEWALT/ELCO BI-FLEX SCREW OR EQUAL 1/4-14 18-8 SS SCREW (1)	VARIES	VARIES (2)	FULL	1/2	65, -		
		1/4-20 BOLT, 300 SERIES STAINLESS (1)	(2)		BOLTED				
1/8	Fy 25 KSI (6063-T6)	1/4-20 DEWALT/ELCO BI-FLEX SCREW OR EQUAL 1/4-20 18-8 SS SCREW (1)	VARIES	VARIES	FULL	- 1/2	65, -		
		1/4-20 SCREW OR THRU BOLT, 300 SERIES STAINLESS (1)	(2)	(2)	FULL/BOLTED				
4	Fc 2.5 KSI	3/8 IN. HILTI KWIK BOLT TZ EXPANSION, 304 OR 316 STAINLESS (5)	VARIES (2)	VARIES (2)	2 5/16 N□M.	3	-		
4×4×16	fm 1.5 KSI	3/8 IN. DEWALT SCREW-BOLT+, COATED STEEL (5) (6)	VARIES	VARIES	3 1/4 N□M.	1 1/2			
		1/2 IN. THREADED ROD W/ HIT-HY 270 ADHESIVE, 300 SERIES STAINLESS (5)	(2)	(2)	4 1/2 EFF.	1 3/4	65, -		
	THICKNESS MIN. (IN.)  3  16 GA  1/8	MIN. (IN.) MINIMUM  3 SG 0.42  16 GA Fy 33 KSI  1/8 Fy 25 KSI (6063-T6)  4 Fc 2.5 KSI	ANCHOR (ITEM 30)  THICKNESS PROPERTY MINIMUM   THICKNESS PROPERTY MINIMUM  THICKNESS PROPERTY MINIMUM  THICKNESS PROPERTY MINIMUM  THICKNESS PROPERTY MINIMUM  THICKNESS PROPERTY MINIMUM  THICKNESS PROPERTY  THICKNESS (1)  THICKNESS PROPERTY  THE THIC	ANCHOR (ITEM 30)  THICKNESS   PROPERTY   ANCHOR (ITEM 30)  BY 1/4 IN. LAG SCREW, COATED STEEL (6)	ANCHOR (ITEM 40)  THICKNESS PROPERTY ANCHOR (ITEM 30)  ANCHOR (ITEM 30)  ANCHOR (ITEM 30)  THICKNESS PROPERTY ANCHOR (ITEM 30)  BENEFIT ANCHOR (ITEM 30)  THEADED LENGTH (IN.)  1/4 IN. LAG SCREW, COATED STEEL (6)  1/4 IN. LAG SCREW, 300 SERIES STAINLESS (1)  1/4 IN. SPAX POWERLAG, HEX OR T-STAR WASHER HEAD, COATED STEEL (6) (1)  1/4 IN. SPAX POWERLAG, HEX OR T-STAR WASHER HEAD, COATED STEEL (6) (1)  6 MM SPAX TIMBER SCREW, WASHER HEAD, 300 SERIES STAINLESS  80 MM 61 MM  61 MM  1/4-20 BOLT, 300 SERIES STAINLESS (1)  1/4-20 BOLT, 300 SERIES STAINLESS (1)  4 FC 2.5 KSI 3/8 IN. HILTI KWIK BOLT TZ EXPANSION, 304 OR 316 STAINLESS (5) (1)  VARIES (2)  VARIES (2)	ANCHOR (ITEM 30)  THICKNESS PROPERTY MINIMUM  3 PROPERTY MINIMUM  3 PROPERTY MINIMUM  ANCHOR (ITEM 30)  ANCHOR (ITEM 40)  ANCHOR (ITEM 30)  ANCHOR (ITEM 30)	ANCHOR (ITEM 40)  THICKNESS PROPERTY MINIMUM  3		

1) ANCHOR MANUFACTURING PROCESS IS COLD-WORKED.

2) AS NEEDED TO COMPLY WITH THE EMBEDMENT WHILE ACCOUNTING FOR THE THICKNESS OF THE CONTINUOUS MOUNTING ANGLE, SHIM(S), ETC.

3) ANCHOR QUALIFIED FOR NON-CRACKED AND CRACKED CONCRETE SUBSTRATES, NORMAL WEIGHT CONCRETE, INCLUDING PRE-CAST.

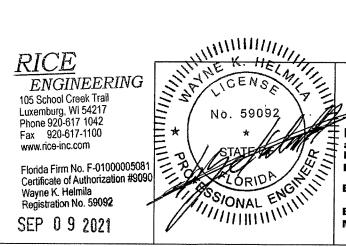
4) LIGHT/MEDIUM/NORMAL-WEIGHT CMU CONFORMING TO ASTM C90, TYPE II, GROUT FILLED CONFORMING TO C476.

5) THE 1/4 IN, DIAMETER ANCHOR CLEARANCE HOLES IN THE MANUFACTURER PROVIDED STANDARD CONTINUOUS MOUNTING ANGLE (ITEM 5) WILL NEED TO BE FIELD ENLARGED TO ACCEPT THE ANCHOR.

6) WITH GALVANIZED COATING OR FIELD SEALED POST INSTALLATION WITH LIQUID PROSOCO FLASHING.

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(FOR MIAMI-DADE D.R.E.R. USE ONLY)

(FOR MIAMI-DADE D.R.E.R. USE ONLY)

**PRODUCT RENEWED** as complying with the Florida Building Code 23-1101.05 NOA-No.

Expiration Date 06/06/2029

Ishag 1. Chands Miami-Dade Product Control

OF

LOUVER

ALUMINUM

302D

**PRODUCT REVISED** as complying with the Florida Building Code 21-0917.12 Expiration Date 06/06/2024 Strong

NOA-No.

Miami-Dade Product Control

# ALTERNATE CONTINUOUS MOUNTING ANGLE ALLOWABLE SETUPS

USE OF AN AN ALTERNATE CONTINUOUS MOUNTING ANGLE (ITEM 5B) OTHER THAN THAT PROVIDED BY THE MANUFACTURE (ITEM 5) IS PERMITTED BUT SHALL ALSO CONFORM TO THIS TABLE. AT MINIMUM, THE PROVIDER OF THE ALTERNATE CONTINUOUS MOUNTING ANGLE SHALL: 1) BE AWARE THAT THE SUBSTRATE (ITEM 40) AND/OR ANCHOR (ITEM 30) BEING USED MAY ADDITIONALLY LIMIT THE BELOW ALLOWANCES (SEE TABLE: "ALLOWABLE OFFSETS OF THE LOUVER FRAME FASTENER ON THE ALTERNATE CONTINUOUS MOUNTING ANGLE"), 2) ENSURE THAT THE CHOSEN LOCATION OF THE LOUVER FASTENER (ITEM 20), FALLS WITHIN THE "ACCEPTABLE INSTALLATION ZONE" ON THE LOUVER FRAME MEMBER (ITEM 1 AND/OR 4), AND 3) TAKE INTO CONSIDERATION ANY LOUVER ACCESSORY (SCREEN, BLANK OFF, ETC.) THAT MAY INTERFERE WITH THE PLACEMENT OF THE ALTERNATE CONTINUOUS MOUNTING ANGLE.

ALTERNATE CONTINUOUS MOUNTING ANGLE (ITEM 5B)			AT THE HEAD OR SILL (IN.)		AT THE HEAD ONLY (IN.)			AT THE SILL ONLY (IN.)			
MATERIAL TYPE	MINIMUM MATERIAL PROPERTIES	"T" MINIMUM THICKNESS	'L' MINIMUM  UVERALL  SUBSTRATE  LEG LENGTH	"L1" MIN. TO SUBSTRATE HOLE, FROM CORNER OR FREE EDGE	"H1" MIN. TO LOUVER FASTENER FROM CORNER	"H1" MAX. TO LOUVER FASTENER FROM CORNER	'H2' MIN. TO LOUVER FASTENER FROM FREE EDGE	'S1' MIN. TO LOUVER FASTENER FROM CORNER	"S1" MAX. TO LOUVER FASTENER FROM CORNER	"S2" MIN. TO LOUVER FASTENER FROM FREE EDGE	
ALUMINUM (1)	6061-T6 DR 6005-T5	1/8	1 1/2	5/8	13/32	3/4	1/2	13/32	3/4	1/2	
ALUMINUM	5052-H32 □R 6063-T6	1/8	2	1	13/32	1 1/8	1/2	13/32	1 1/8	1/2	
ALOMINOM	6061-T6	17.6				1 3/8			1 3/8		
	A36	1/8		1	13/32	1 3/8	- 1/2	13/32	1 3/8		
STEEL	1008 HOT ROLLED	12 GA	2			3/4			3/4		
		1 11 1545				1 3/32			1 3/32	1/2	
		10 GA				1 3/8			1 3/8		

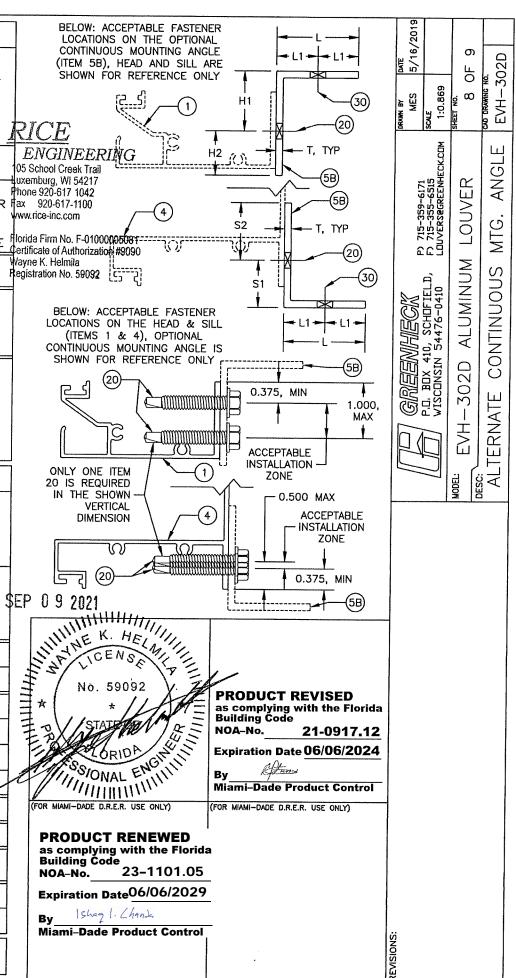
# ALLOWABLE OFFSETS OF THE LOUVER FRAME FASTENER ON THE ALTERNATE CONTINUOUS MOUNTING ANGLE

SUBSTRATE (ITEM 40), SEE "SUBSTRATE & ANCHOR TABLE" FOR SPECIFIC REQUIREMENTS

MAXIMUM "H1" AND "S1" OFFSET (IN INCHES) OF THE LOUVER FRAME FASTENER (ITEM 20) ON THE ALTERNATE CONTINUOUS MOUNTING ANGLE (ITEM 5B) BASED ON: 1) THE MINIMUM THICKNESS AND MINIMUM ALLOY OF THE ALTERNATE CONTINUOUS MOUNTING ANGLE, 2) THE SUBSTRATE (ITEM 40), AND 3) THE ANCHOR TYPE (ITEM 30)

					<u> </u>				
TYPE	THICKNESS MIN. (IN.)	ANCHOR TYPE (ITEM 30), SEE 'SUBSTRATE & ANCHOR TABLE' FOR SPECIFIC REQUIREMENTS	1/8 IN, 6061-T6 OR 6005-T5 ALUM, W/ L < 2 IN, (2)	1/8 IN, 6061-T6 OR 6005-T5 ALUM, W/ L <u>&gt;</u> 2 IN,	1/8 IN. 5052-H32 DR 6063-T6 ALUM.	1/8 IN. A36 STEEL	12 GA 1008 HR STEEL	11 GA 1008 HR STEEL	10 GA 1008 HR STEEL
WOOD	3	LAG SCREW	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
WUGD		SPAX ANCHOR	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 1/4
	16 GA		1/2	13/16	13/16	13/16	3/4	13/16	13/16
STEEL	14 GA	SCREW	11/16	1 1/8	1 1/8	1 1/8	3/4	1 3/32	1 1/8
31222	12 GA		3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
	16 GA	BOLT	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
ALUMINUM	1/8	SCREW OR BOLT	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
CONCRETE	3 🗆 R 4	SCREW-BOLT+ OR TZ EXPANSION ANCHOR	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
CRACKED CONCRETE	4 TZ EXPANSION ANCHOR		3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8
GROUT	4×4×16	SCREW-BOLT+	5/8	1	1	1	3/4	1	1
FILLED CMU		THREADED ROD W/ 270 ADHESIVE	3/4	1 3/8	1 1/8	1 3/8	3/4	1 3/32	1 3/8

1) & 2) IS THE BASIS OF DESIGN FOR THE MANUFACTURER PROVIDED STANDARD CONTINUOUS MOUNTING ANGLE (ITEM 5). AT THE DISCRETION OF THE MANUFACTURER, THE MANUFACTURER MAY CHOOSE TO PROVIDE ANY ANGLE SETUP THAT MEETS THE ABOVE REQUIREMENTS.



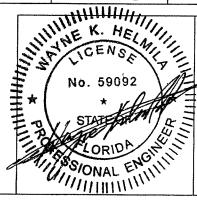
- 1. IT IS THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS IMPOSED BY THE LOUVER ASSEMBLY. THE LOUVER MANUFACTURER DOES NOT DETERMINE THE STRUCTURAL INTEGRITY OF THE SUBSTRATE STRUCTURE.
- 2. THIS LOUVER HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH MIAMI-DADE COUNTY PROTOCOLS (AND QUALIFIED IN ACCORDANCE WITH THE CURRENT FLORIDA BUILDING CODE AND TEST PROTOCOLS/ STANDARDS THEREIN): TAS 201 (LARGE MISSILE IMPACT, 50 FT/S IMPACT SPEED), TAS 202 (UNIFORM STATIC WIND PRESSURE), TAS 203 (UNIFORM CYCLIC WIND PRESSURE), AND ANSI/AMCA STANDARD 550-15 [REV. 09-18] (HIGH VELOCITY WIND DRIVEN RAIN). (2)
- 3. THE LOUVER HAS BEEN DESIGNED, TESTED, AND APPROVED TO WITHSTAND DESIGN PRESSURES OF UP TO AND INCLUDING  $\pm/-100$  PSF.
- 4. THE MAXIMUM SINGLE SECTION SIZE IS 60.0 IN. WIDE BY 96.0 IN. HIGH. SECTIONS MAY BE MOUNTED TO CREATE A MULTI-WIDE ASSEMBLY WITHOUT ANY ADDITIONAL FIELD SUPPORT. SINGLE OR MULTI-WIDE ASSEMBLIES MAY BE STACKED VERTICALLY TO CREATE A MULTI-HIGH ASSEMBLY ONLY IF THERE IS ADEQUATE SUBSTRATE (DESIGNED AND BY OTHERS) AT THE HEAD AND SILL OF EACH LOUVER PANEL SECTION TO SECURE THE HEAD AND SILL MOUNTING ANGLES TO THE SUBSTRATE AS NOTED HEREIN.
- 5. GENERAL LOUVER CONSTRUCTION: HEAD, SILL, JAMBS, AND BLADES ARE EXTRUDED ALUMINUM, BLADE SPACING IS 0.875 IN., BLADES, HEADS, JAMBS, AND SILLS ARE SECURED WITH TWO SCREWS PER END.
- 6. THIS LOUVER PASSED ANSI/AMCA STANDARD 550. AND IS DESIGNED TO SIGNIFICANTLY DETER RAIN FROM PENETRATING THE SPACE BEHIND THE LOUVER. PER MIAMI-DADE D.R.E.R.: THE LOUVER MAY BE INSTALLED IN A LOCATION WHERE THE SPACE BEHIND THE LOUVER IS NOT DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM OR THE ROOM WILL HOUSE NON-WATER RESISTANT/PROOF EQUIPMENT, COMPONENTS, OR SUPPLIES.
- 7. INSTALLER TO PROVIDE SEPARATION OF DIS-SIMILAR MATERIALS AS REQUIRED (SEE CURRENT FLORIDA BUILDING CODE). SEE OLDER 2010 FL BUILDING CODE, BUILDING, CHAPTER 20, SECTION 2003.8.4, FOR ADDITIONAL INFORMATION ON SEPARATION OF DIS-SIMILAR MATERIALS.
- 8. ALL ALUMINUM, STAINLESS STEEL (SS), AND PLATED/ COATED STEEL PARTS PROVIDED BY MANUFACTURER ARE INHERENTLY CORROSION RESISTANT OR HAVE A CORROSION RESISTANT COATING.
- STEEL, STAINLESS STEEL, AND ALUMINUM PARTS MAY BE MADE OUT OF ALTERNATE ALLOYS THAT HAVE EQUAL OR GREATER YIELD STRENGTH, PART DIMENSIONS ARE MINIMUMS UNLESS DEFINED OTHERWISE.
- 10. THE ITEM ID NUMBERS SHOWN ON THIS PAGE ARE FOR FACTORY USE AND INTERNAL TRACKING PURPOSES AND MAY BE UPDATED AT ANY TIME. ANY UPDATES WILL NOT ALTER THE ITEM AS DESCRIBED HEREIN. ALL DIMENSIONS ARE IMPERIAL/USCS UNLESS NOTED OTHERWISE.

	BILL OF MATERIALS							
ITEM	DESCRIPTION	MATERIAL	ID #	NOTES				
1	LOUVER HEAD	6005-T5 ALUM	126145					
2	LOUVER JAMB	6005-T5 ALUM	126147					
3	LOUVER BLADE	6005-T5 ALUM	126200	0.875 BLADE SPACING				
4	LOUVER SILL	6005-T5 ALUM	126204					
5	STANDARD CONTINUOUS MOUNTING ANGLE, TYPICAL AS PROVIDED BY MANUFACTURER	6061-T6 OR 6005-T5 ALUM	125811	ALONG HEAD AND SILL ONLY, MINIMUM LENGTH IS SECTION WIDTH MINUS 3.0, 0.125 MAX OFFSET FROM FRAME AT HEAD/SILL				
5B	ALTERNATE CONTINUOUS MOUNTING ANGLE, NOT PROVIDED BY MANUFACTURER	VARIES	N/A	ALONG HEAD AND/OR SILL ONLY, AS AN ALTERNATE TO ITEM 5, MINIMUM LENGTH IS SECTION WIDTH MINUS 3.0, SEE "ALTERNATE CONTINUOUS MOUNTING ANGLE ALLOWABLE SETUPS" TABLE				
	<del></del>							
10	LOUVER SILL BAFFLE	5052-H32 ALUM	100172	CONTINUOUS ALONG SILL, BETWEEN JAMBS				
11	LOUVER JAMB BLANK OFF	5052-H32 ALUM	100172	CONTINUOUS ALONG ONE JAMB, BETWEEN HEAD AND SILL				
12	LOUVER BLADE STRAP	5052-H32 ALUM	100172	48.0 MAX OFFSET FROM EITHER CUT END OF BLADE, STRAP IS APPROXIMATELY CENTERED AND NOT CONNECTED TO EITHER JAMB				
13	LOUVER BLADE STRAP END PLATE	5052-H32 ALUM	100172	OPTIONAL BY MANUFACTURER, MAY BE PRESENT WITH BLADE STRAP, DESIGN MAY VARY, SECURED WITH 1/8 DIA. ALUM RIVET				
				WF 440				
20	ANGLE TO LOUVER FASTENER, 1/4-20, DEWALT/ELCO BI-FLEX OR EQUAL	18-8 SS HÉAD & SHANK	②	8.0 MAX □.C. IF ACTUAL HEIGHT IS ≤ 48.0, 4.0 MAX □.C. IF ACTUAL HEIGHT IS > 48.0, FIRST AND LAST END SPACE VARIES				
21	LOUVER FRAME CORNER SCREW, #10×3/4	300 SERIES SS	416108	2 PER FRAME CURNER				
22	LOUVER BLADE STRAP SCREW, #10×3/4	300 SERIES SS	416108	1 PER BLADE, SCREWS ARE PINCHED BETWEEN THE BLADE STRAP AND BLADE (EXCEPT FOR THE LAST BLADE WHERE SCREW GOES THROUGH THE BLADE)				
23	LOUVER BLANK OFF RIVET, Ø3/16	ALUM	415224	18.0 MAX O.C., 10.875 MAX TO FIRST HOLE (FROM EACH END)				
25	LOUVER BLADE SCREW, #10×3/4	300 SERIES SS	416108	2 PER BLADE END				
				<b>1</b>				
30	ANCHOR, TYPE VARIES BY SUBSTRATE, SEE "SUBSTRATE & ANCHOR TABLE"	VARIES	N/A	8.0 MAX □.C. IF ACTUAL HEIGHT IS ≤ 48.0, 4.0 MAX □.C. IF ACTUAL HEIGHT IS > 48.0, FIRST AND LAST END SPACE VARIES				
40	SUBSTRATE: WOOD, STEEL, ALUMINUM, CONCRETE, CRACKED CONCRETE, GROUT FILLED CMU	VARIES	N/A	BY OTHERS, MORE THAN ONE SUBSTRATE TYPE CAN BE USED, ONLY REQUIRED ALONG THE HEAD AND SILL, JAMB SUBSTRATE CAN BE ANY APPROPRIATE SUBSTRATE DEEMED SUITABLE PER AUTHORITY HAVING JURISDICTION, SEE "SUBSTRATE & ANCHOR TABLE" FOR REQUIREMENTS.				
	NON-COMPRESSIBLE SHIM	VARIES	N/A	BY OTHERS, SHALL BE USED TO TAKE UP GAP (IF ANY) BETWEEN ANGLE AND SUBSTRATE. "U" SHAPED SHIMS AT ANCHORS ONLY IS ACCEPTABLE (SHIM NEED NOT BE CONTINUOUS). THE ALTERNATE ANGEL (ITEM 5B) DOES NOT REQUIRE THE USE OF SHIMS IF THE ANGLE CAN SPAN THE HEAD/SILL GAP TO THE SUBSTRATE.				
	PERIMETER SEALANT / BACKER ROD	VARIES	N/A	BY OTHERS, REQUIRED TO PASS ANSI/AMCA 550				
52	JAMB DRAIN SEALANT	SILICONE	N/A	AT HEAD-JAMB CORNERS ONLY, CLOSES OFF TOP OF JAMB DRAIN				
	BLADE SCREW SEALANT	SILICONE	N/A	ON ALL BLADE/JAMB SCREW HEADS UNDER SILL				
54	FRAME JOINT SEALANT	SILICONE	N/A	ON JAMB-SILL JOINTS ONLY				

**ENGINEERING** 105 School Creek Trail Luxemburg, WI 54217 Phone 920-617 1042 Fax 920-617-1100

Florida Firm No. F-01000005081 Certificate of Authorization #9090 Wayne K. Helmila Registration No. 59092

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PRODUCT REVISED NOA-No. 21-0917.12

Expiration Date 06/06/2024

Stem Miami-Dade Product Control

**PRODUCT RENEWED** as complying with the Florida
Building Code
Building Code

Expiration Date 06/06/2029

FOR MIAMI-DADE D.R.E.R. USE ONLY)

Ishag 1. Chands Miami-Dade Product Control

550 EQUIVALENCY FROM --FLEX TO BI-FLEX, 8/20/2021 REMOVED AMCA UPDATED ITEM 20 FROM DRII

(FOR MIAMI-DADE D.R.E.R. USE ONLY)

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