



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

American Warming and Ventilating a div. of Mestek, Inc.
7301 International Drive
Holland, OH 43528

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 LE-68 6" Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. 1503, titled "LE-68 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision C dated 08/01/2016, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed by Warren W. Schaefer, P.E. on 12/17/2021, bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and the 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, Bradner, OH, 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 NOA # 21-1217.10 and 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 **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
08/17/2023

NOA No. 23-0713.08
Expiration Date: 03/15/2027
Approval Date: 08/17/2023
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOAs

A. DRAWINGS *"Submitted under NOA # 16-0808.12"*

1. Drawing No. 1503, titled "LE-68 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/2006, with last revision C dated 08/01/2016, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E.

B. TESTS *"Submitted under NOA # 08-0904.02"*

1. Test report on Large Missile Test (Level E) and on Cyclic Load Test per ASTM 1886/1996 of an LE-68 Aluminum Louver System, prepared by Hurricane Test Laboratories LLC., Test Report # 0198-0109-07, dated 03/08/2007, signed and sealed by Vinu J. Abraham, P.E.
2. Test report on Wind Driven Rain Test per TAS 100(A) of an LE-68 Aluminum Louver with AFD-20 Damper, prepared by PRI Construction Materials Technologies, LLC, Test Report No. AWW-001-02-01, dated 01/02/2008, signed and sealed by Duc T. Nguyen, P.E.
3. Test report on Wind Driven Rain Test per TAS 100(A) of an LE-68 Aluminum Louver with AC-525, prepared by PRI Construction Materials Technologies, LLC, Test Report No. AWW-002-02-01, dated 01/02/2008, signed and sealed by Duc T. Nguyen, P.E.

"Submitted under NOA # 06-1211.04"

4. Test report on Large Missile Impact Test per FBC, TAS 201, Cyclic Wind Pressure Test per FBC, TAS 203 and Uniform Static Air Pressure Test per FBC, TAS 202 of a LE-68 Aluminum Louver System, prepared by Hurricane Test Laboratories, LLC, Test Report No. 0198-0712-06, dated 11/07/2006, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS *"Submitted under NOA # 16-0808.12"*

1. Anchor calculations prepared by W.W. Schaefer Engineering and Consulting P.A., dated 08/01/2016, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 12-0312.02"


2. Anchor calculations prepared by W.W. Schaefer Engineering and Consulting P.A., dated 11/07/2011, signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 08-0904.02"

3. Anchorage, stress and deflection calculations of the Louver System with AFD-20 Dampers, sheets 1 through 4 of 4 and with AC-525/526 Dampers, sheets 1 and 2 of 2, both dated 07/22/2008, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed by Warren W. Schaefer, P.E.

"Submitted under NOA # 06-1211.04"

4. Anchorage calculations, 13 pages for Arrow United Industries, Model LE-68 Vertical Louver, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed on 11/07/2006 by Warren W. Schaefer, P.E.


Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 23-0713.08
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS “Submitted under NOA # 16-0808.12”

1. Statement letter of code conformance to the 5th edition (2014) FBC issued by W.W. Schaefer Engineering and Consulting P.A., dated 08/01/2016, signed and sealed by Warren W. Schaefer, P.E.
2. Statement letter of no financial interest issued by W.W. Schaefer Engineering and Consulting P.A., dated 08/01/2016, signed and sealed by Warren W. Schaefer, P.E.

2. EVIDENCE SUBMITTED UNDER NOA # 20-0622.17

A. DRAWINGS

1. None.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.

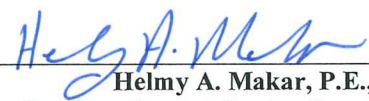
F. STATEMENTS

1. Statement letter of code conformance to the 6th Edition (2017) and 7th Edition (2020) FBC issued by W. W. Schaefer Engineering & Consulting, P.A., dated 06/03/2020, signed and sealed by Warren W. Schaefer, P.E.

3. EVIDENCE SUBMITTED UNDER NOA # 21-1217.10

A. DRAWINGS

1. Drawing No. **1503**, titled “LE-68 Vertical Louver System”, sheets 1 through 9 of 9, dated 10/18/2006, with last revision C dated 08/01/2016, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed by Warren W. Schaefer, P.E. on 12/17/2021.



Helmy A. Makar, P.E., M.S.
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NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

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 (Level E, 80 fps)
3) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with installation diagram of Model LE-68 Aluminum Louvers, prepared by Intertek, Test Report No. **M9248.02-109-18**, dated 12/16/2021, signed and sealed by Vinu J. Abraham, P.E.

C. CALCULATIONS

1. None.

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 7th Edition (2020) of the FBC, issued by W. W. Schaefer Engineering & Consulting, P.A., dated 12/17/2021, signed and sealed by Warren W. Schaefer, P.E.
2. Statement letter of no financial interest issued by W.W. Schaefer Engineering and Consulting P.A., dated 12/17/2021, signed and sealed by Warren W. Schaefer, P.E.

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. None.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

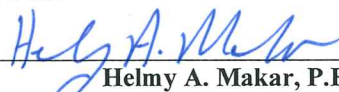
1. Miami-Dade County Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to the 7th Edition (2020) and 8th Edition (2023) of the FBC, issued by W. W. Schaefer Engineering & Consulting, P.A., dated 07/01/2023, signed and sealed by Warren W. Schaefer, P.E.


Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
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GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT PRODUCTS.
5. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
7. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
10. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
11. EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: "AMERICAN WARMING & VENTILATING, HOLLAND, OH, MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED".
12. ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
13. ALL WOOD SUBSTRATE SHALL BE MIN. $G = 0.55$ DENSITY.
14. ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. 50 KSI STUDS.
15. ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GAGE $F_y = 36$ KSI.
16. INDIVIDUAL PANEL WIDTHS ARE UNLIMITED IN DIMENSION. PANEL HEIGHTS ARE LIMITED BY THE DIMENSIONS SHOWN IN THE ELEVATIONS.
17. INDIVIDUAL PANELS MAY BE STACKED HORIZONTALLY IN AN UNLIMITED QUANTITY. IT IS THE RESPONSIBILITY OF THE SUPPORTING STRUCTURES DESIGN ENGINEER/ARCHITECT TO INSURE THE SUPPORTING STRUCTURE WILL SUPPORT ALL DESIGN LOADS TRANSFERRED BY THE LOUVERS.
18. THESE LOUVERS HAVE PASSED TESTING IN ACCORDANCE WITH ASTM E1886 & E1996 FOR ESSENTIAL FACILITIES LEVEL "E" 80 FT/S LARGE MISSILE IMPACT SPEED. THEREFORE, THESE LOUVER SYSTEMS ARE APPROVED FOR USE WITH ESSENTIAL FACILITIES.
19. THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN AN AFD-20 OR AC525/526 DAMPER IS INSTALLED WITH THE LOUVER PANEL.
20. UNLESS THE AFD-20 OR AC525/526 DAMPER IS ATTACHED TO THE LOUVER, THE LOUVER 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/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.

CORNER & BLADE END CONSTRUCTION

BLADE TO HEAD & SILL:

BLADE END IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO NO. 8 X 1" S.S. SMS SCREWS PER BLADE END. HEAD & SILL TO JAMB:

SIDE JAMB IS SQUARE CUT, BUTTED AND JOINED TO HEAD AND SILL WITH TWO 1/4" X 1" SELF TAPPING SCREWS.

FASTENER SCHEDULE

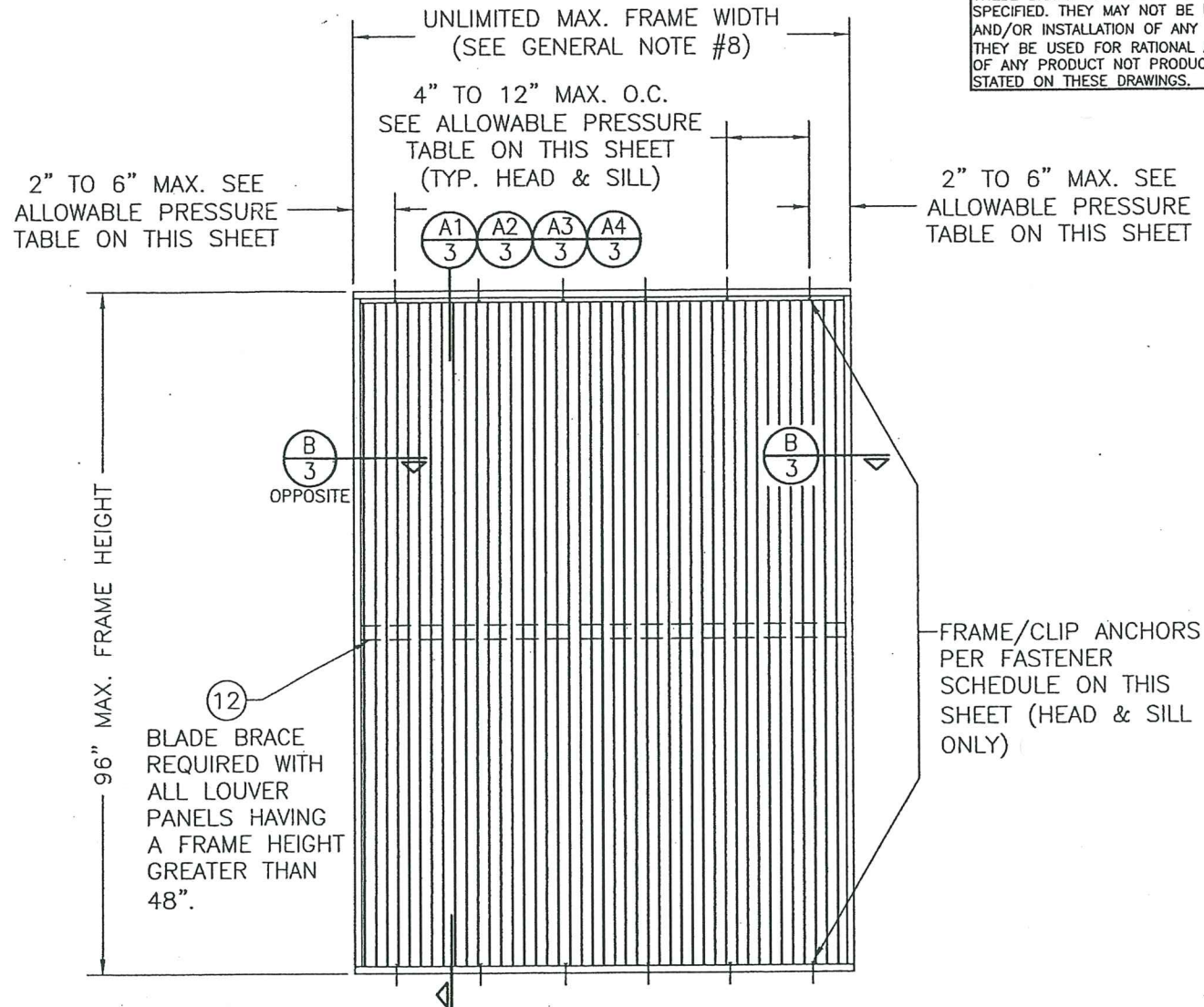
ANCHOR TYPE	(4) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 1/4"	3/4"
(5) NO. 10-16 SELF TAPPING/DRILLING SCREW	METAL STUD	FULL	3/4"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(5) 1/4-20 OR 1/4-14 SELF TAPPING/DRILLING SCREW	STEEL	FULL	3/4"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).
- (2) BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. ($F_v = 10,000$ PSI MIN.)
- (3) SMS WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF $F_y = 80,000$ PSI
- (4) SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- (5) SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

(2) ALLOWABLE DESIGN PRESSURE & ANCHOR SPACING REQUIREMENTS (LOUVER PANELS)

(1) MAX. ANCHOR SPACING	(1) MAX. ANCHOR END DISTANCE	ALLOWABLE PRESSURE
4"	2"	+/-150 PSF
8"	4"	+/-75 PSF
12"	6"	+/-50 PSF

- (1) WHEN LOUVERS ARE USED TO PROTECT ESSENTIAL FACILITIES, MAX. ANCHOR SPACING SHALL NOT EXCEED 4" & MAX. ANCHOR END DISTANCE SHALL NOT EXCEED 2" REGARDLESS OF PRESSURE REQUIRED.
- (2) FOR ALLOWABLE PRESSURE ON DAMPERS, SEE SHEET 5 OR 7.



EXTERIOR ELEVATION
SINGLE LOUVER PANEL
(ARCHITECTURAL & NON-ARCHITECTURAL)

SCALE: 1/2" = 1'-0"

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

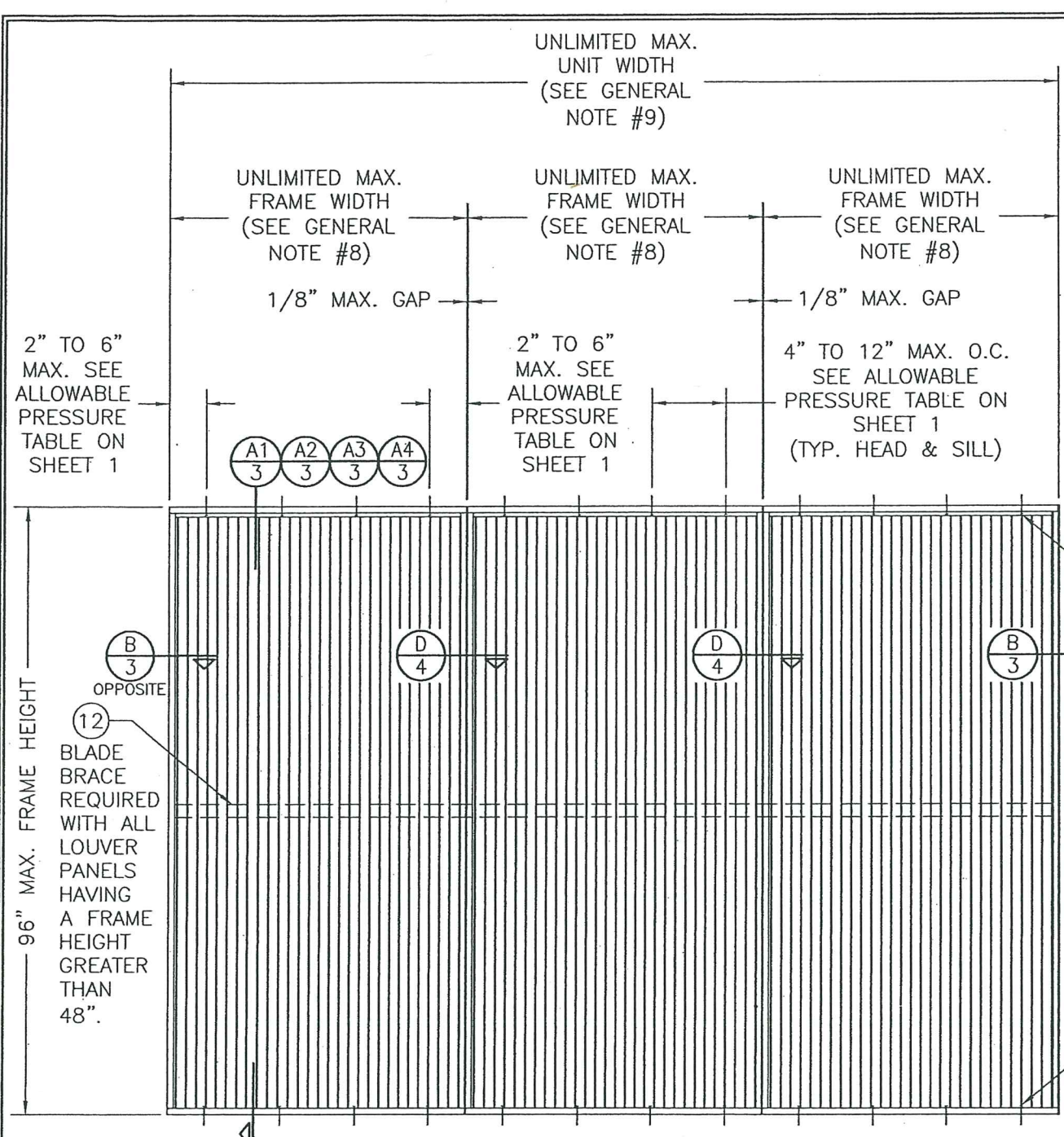
DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/06	
DATE	BY	REVISION	DESCRIPTION
07/14/08	W.W.S.	A1	UPDATE TO PRESENT STANDARDS
07/14/08	W.W.S.	A2	ADDED DAMPER CONDITIONS
07/14/08	W.W.S.	A3	ADDED ESSENTIAL FACILITIES USE
11/17/11	W.R.M.	B1	UPDATE TO PRESENT STANDARDS
08/01/16	W.W.S.	C	UPDATE TO CURRENT STANDARDS
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM			
MANUFACTURER AMERICAN WARMING & VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION WARREN W. SCHAEFER LICENSE No. 44135 PROFESSIONAL ENGINEER EXP. 12/31/2021			
DRAWING NO. 1503			
SHEET NO. 1 OF 9			
REV. C			

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. 21-1217.10

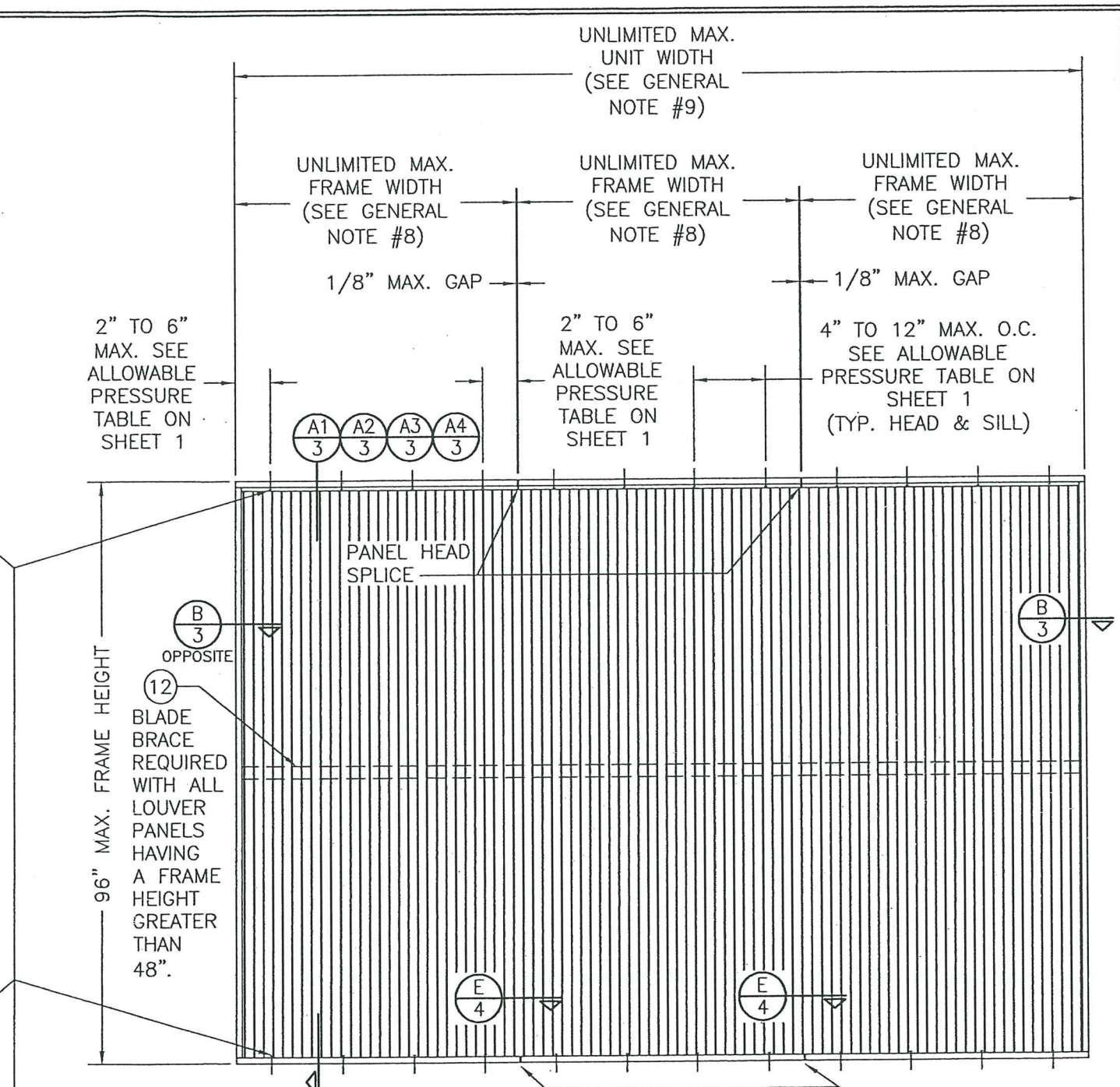
Expiration Date 03/15/2027

By *[Signature]*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 13-0713.08
Expiration Date 03/15/2027
By *[Signature]*
Miami-Dade Product Control



EXTERIOR ELEVATION
MULTIPLE LOUVER PANELS
(NON-ARCHITECTURAL)
SCALE: 1/2" = 1'-0"

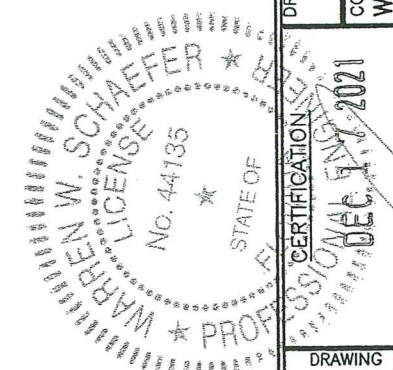


EXTERIOR ELEVATION
MULTIPLE LOUVER PANELS
(ARCHITECTURAL)
SCALE: 1/2" = 1'-0"

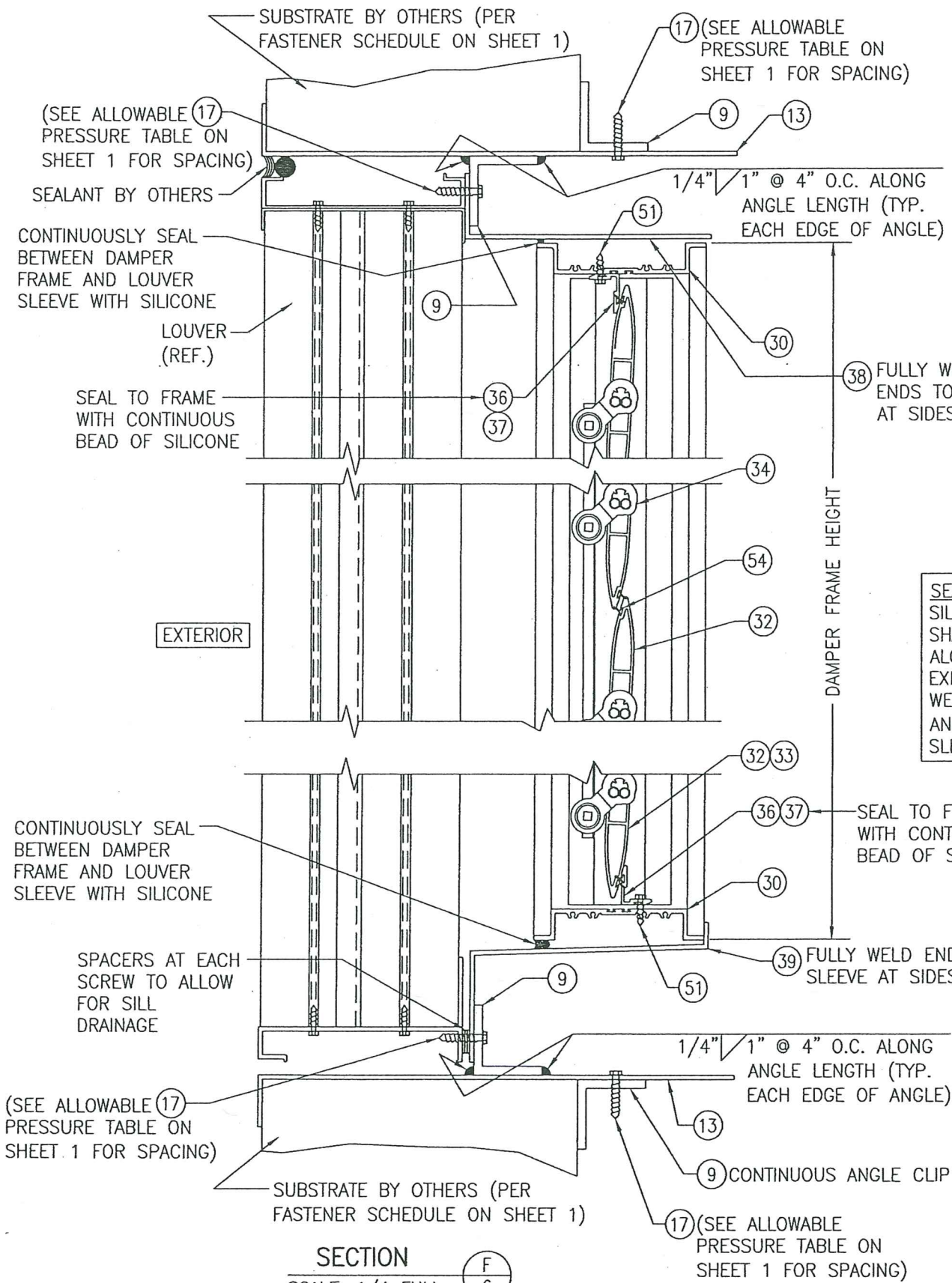
FRAME/CLIP ANCHORS PER
FASTENER SCHEDULE ON SHEET 1
(HEAD & SILL ONLY)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.08
Expiration Date 03/15/2027
By *Heidi A. Albin*
Miami-Dade Product Control

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. 21-1217.10
Expiration Date 03/15/2027
By *[Signature]*
Miami-Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/06	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM			
MANUFACTURER AMERICAN WARMING & VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
DRAWING NO. 1503		REV. C	
SHEET NO. 2		OF 9	



SECTION F
SCALE: 1/4 FULL

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. **21-1217.10**

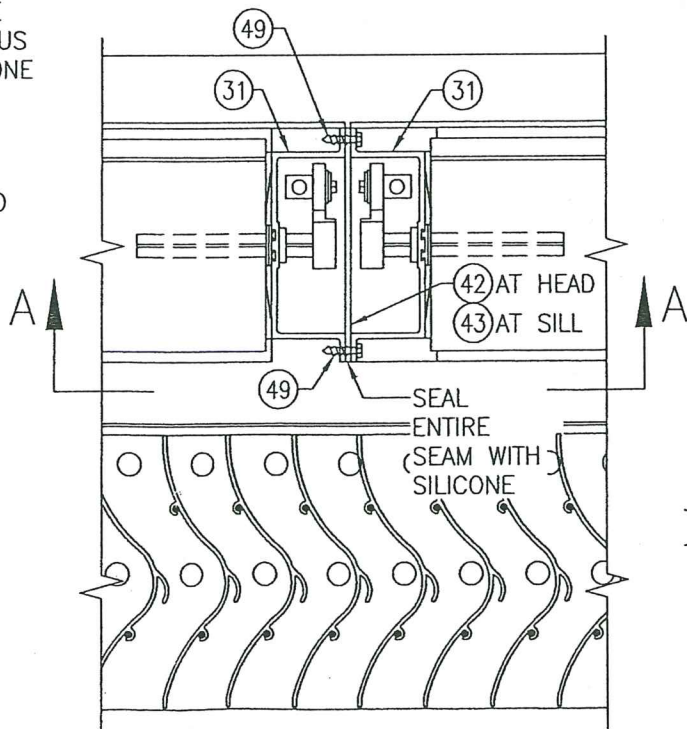
Expiration Date **03/15/2027**

By **Miami-Dade Product Control**

STITCH WELD ANGLE TO JAMB
WITH 1/8" X 1" WELDS
WITHIN 6" OF CORNERS &
MAX. 12" O.C. THEN SEAL
SEAM WITH SILICONE.

PLACE 1/4" BEAD OF
SILICONE BETWEEN
ANGLES PRIOR TO
JOINING

SEALANT NOTE:
SILICONE SEALANT
SHALL BE PLACED
ALONG ALL EXTERIOR
EXPOSED STITCH
WELDED SEAMS JOINING
ANGLE PART #9 TO
SLEEVE.



SECTION H
SCALE: 1/4 FULL

DAMPER FRAME WIDTH

POSITION Z-BRACKET
TO ALLOW ACCESS TO
DAMPER/LOUVER
INSTALLATION SCREWS
(WITHIN 6" OF CORNERS
& MAX. 18" O.C.)

WELD Z-ANGLE TO
SLEEVE WITH 1/8" X
2" WELDS EACH SIDE

STITCH WELD ANGLE TO
SLEEVE WITH 1/8" X 1"
WELDS WITHIN 6" OF
CORNERS & MAX. 12" O.C.
THEN SEAL SEAM WITH
SILICONE.

SUBSTRATE BY OTHERS
(PER FASTENER
SCHEDULE ON SHEET 1)

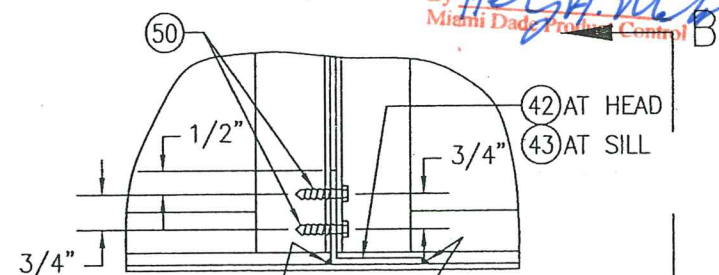
SEALANT BY OTHERS

SECTION G

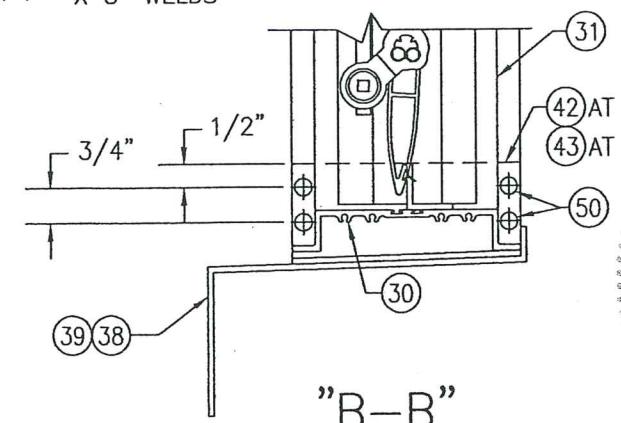
SCALE: 1/4 FULL

NOTE: Z-BRACKET PART #40 AND DAMPER SUPPORT
ANGLE PART #41 MAY BE TURNED IN AS SHOWN OR
TURNED OUT.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. **23-0713.04**
Expiration Date **03/15/2027**
By **H. A. Miller**
Miami-Dade Product Control



WELD EACH LONG
SIDE OF ANGLE TO
SLEEVE WITH 1/8"
X 5" WELDS



(SILL SECTION SHOWN, HEAD IS SIMILAR)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/18/06
DATE	BY
REVISION	DESCRIPTION
NO.	
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM	
MANUFACTURER AMERICAN WARMING & VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION STATE OF FLORIDA PROFESSIONAL ENGINEER WARREN W. SCHAEFER P.E. NO. 44135	
DRAWING NO. 1503	REV. C
SHEET NO. 6	OF 9

The image displays three architectural elevations of a louver system, labeled 1, 2, and 3. Each elevation shows a vertical section of the louver with horizontal louvers and a vertical damper behind them. The drawings include various dimensions and annotations:

- Elevation 1 (Left):**
 - Overall height: 96" MAX. LOUVER FRAME HEIGHT.
 - Top width: 24" MAX. DAMPER FRAME WIDTH.
 - Top annotation: LOUVER WIDTH APPROX. = DAMPER WIDTH + 3".
 - Grid line J/8 at the top.
 - Grid line K/8 on the left, labeled "OPPOSITE".
 - Grid line K/8 on the right.
 - Annotation: DAMPER BEHIND LOUVER.
 - Annotation: LOUVER (REF. SHEETS 1-4).
- Elevation 2 (Middle):**
 - Top width: UNLIMITED LOUVER WIDTH (REF. SHEET 1 ELEVATIONS).
 - Top width segments: 24" MAX. DAMPER FRAME WIDTH (three segments).
 - Grid line J/8 at the top.
 - Grid line K/8 on the left, labeled "OPPOSITE".
 - Grid line K/8 on the right.
 - Grid line L/8 at the bottom.
 - Annotation: DAMPER BEHIND LOUVER.
 - Annotation: LOUVER (REF. SHEETS 1-4).
- Elevation 3 (Right):**
 - Top width: UNLIMITED LOUVER WIDTH (REF. SHEET 2 ELEVATIONS).
 - Top width segments: 24" MAX. DAMPER FRAME WIDTH (six segments).
 - Grid line J/8 at the top.
 - Grid line K/8 on the left, labeled "OPPOSITE".
 - Grid line K/8 on the right.
 - Grid line L/8 at the bottom.
 - Annotation: DAMPER BEHIND LOUVER.
 - Annotation: LOUVER (REF. SHEETS 1-4).

Common annotations across all elevations include "LOUVER ANCHORS PER ELEVATIONS ON SHEETS 1 & 2" and "DAMPER BEHIND LOUVER". The drawings use vertical lines to represent the louvers and horizontal lines to represent the damper.

SCALE: $1/2'' = 1'-0''$

SCALE: $1/2'' = 1'-0''$

- 1) NUMBER OF DAMPERS BEHIND A LOUVER PANEL IS UNLIMITED.
- 2) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 24" FRAME WIDTH.

SCALE: $1/2" = 1'-0"$

- 1) NON-ARCHITECTURAL LOUVERS SHOWN. ARCHITECTURAL LOUVERS ALSO APPLY.
- 2) MORE THAN 1 DAMPER MAY BE PLACED BEHIND EACH LOUVER PANEL.
- 3) DAMPER MULLIONS/SEAMS DO NOT HAVE TO ALIGN WITH LOUVER PANEL SEAMS.
- 4) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 24" FRAME WIDTH.

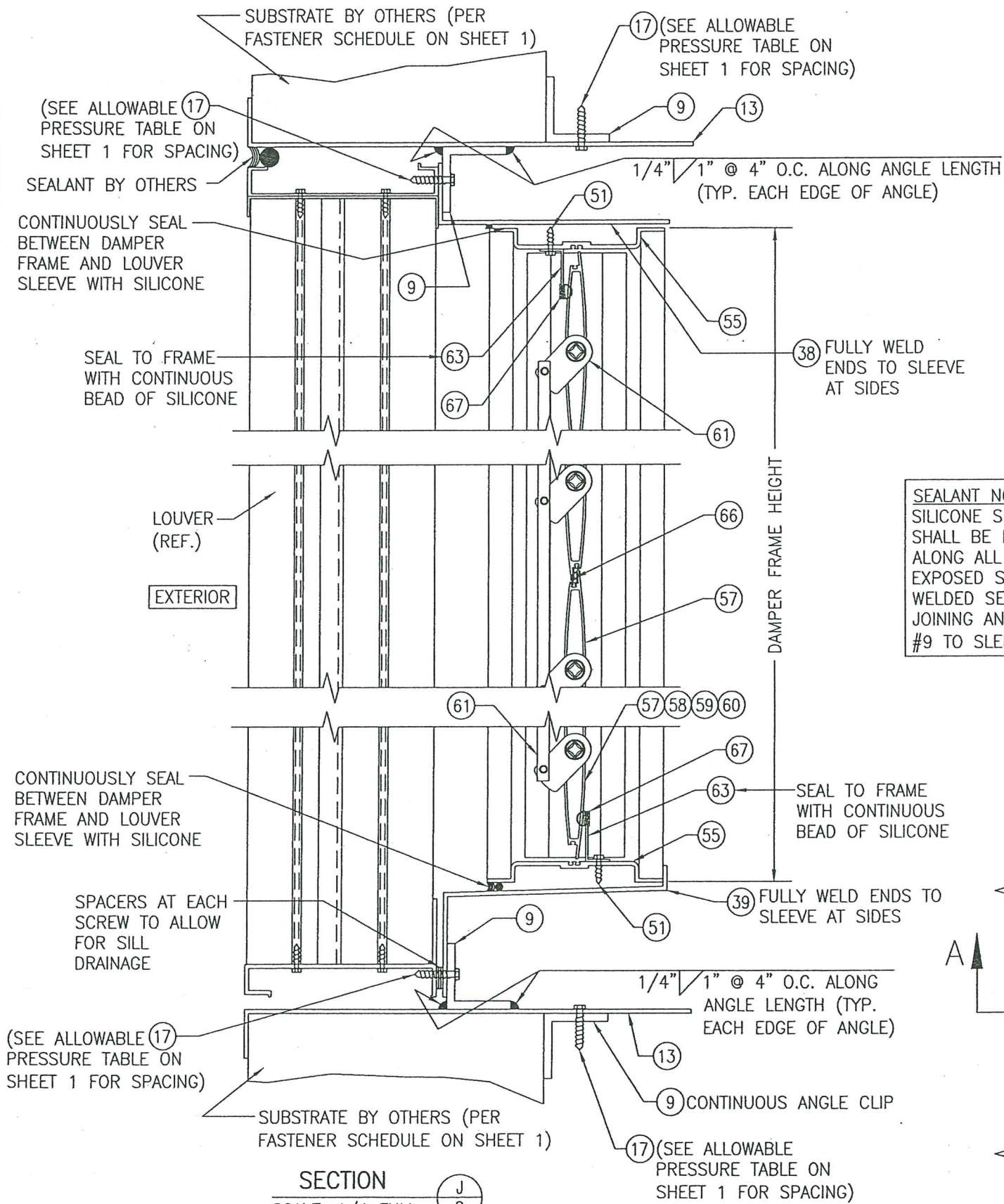
SLEEVE CORNER CONSTRUCTION: SIDE MEMBERS ARE JOINED & FULLY WELDED TO HEAD & SILL MEMBERS

ALLOWABLE DESIGN PRESSURE (AC-525/526 DAMPERS)
+150/-150 PSF

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.08
Expiration Date 03/15/2027
By Herz A. Maw
Miami Dade Product Control

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. 21-1217.10
Expiration Date 03/15/2027
By 
Miami-Dade Product Control

[illegible]

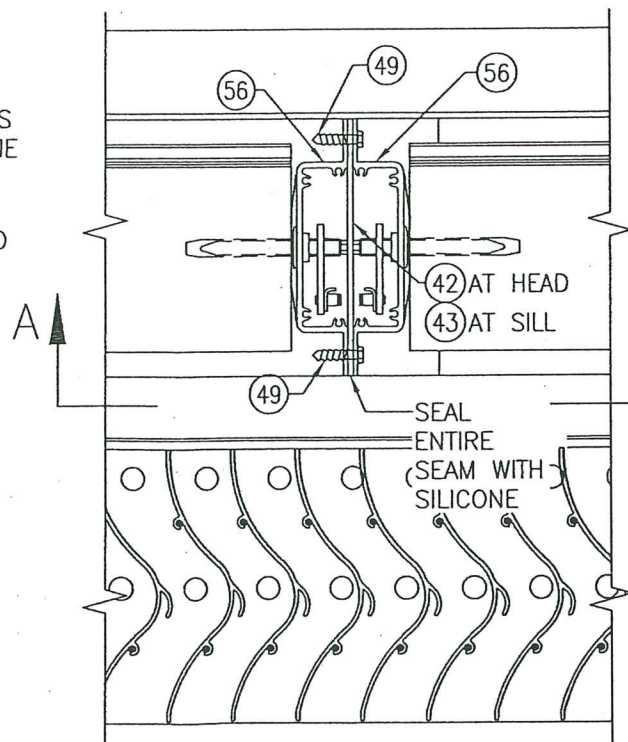


SECTION J
SCALE: 1/4 FULL

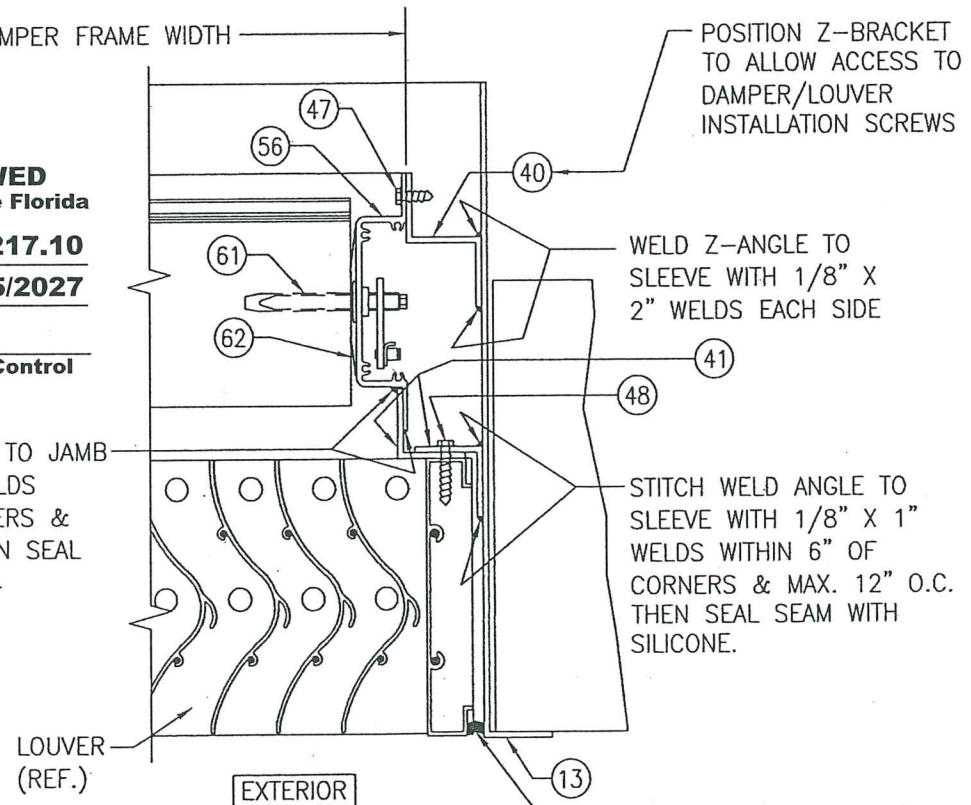
PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. **21-1217.10**
Expiration Date **03/15/2027**
By *[Signature]*
Miami-Dade Product Control

STITCH WELD ANGLE TO JAMB
WITH 1/8" X 1" WELDS
WITHIN 6" OF CORNERS &
MAX. 12" O.C. THEN SEAL
SEAM WITH SILICONE.

SEALANT NOTE:
SILICONE SEALANT
SHALL BE PLACED
ALONG ALL EXTERIOR
EXPOSED STITCH
WELDED SEAMS
JOINING ANGLE PART
#9 TO SLEEVE.

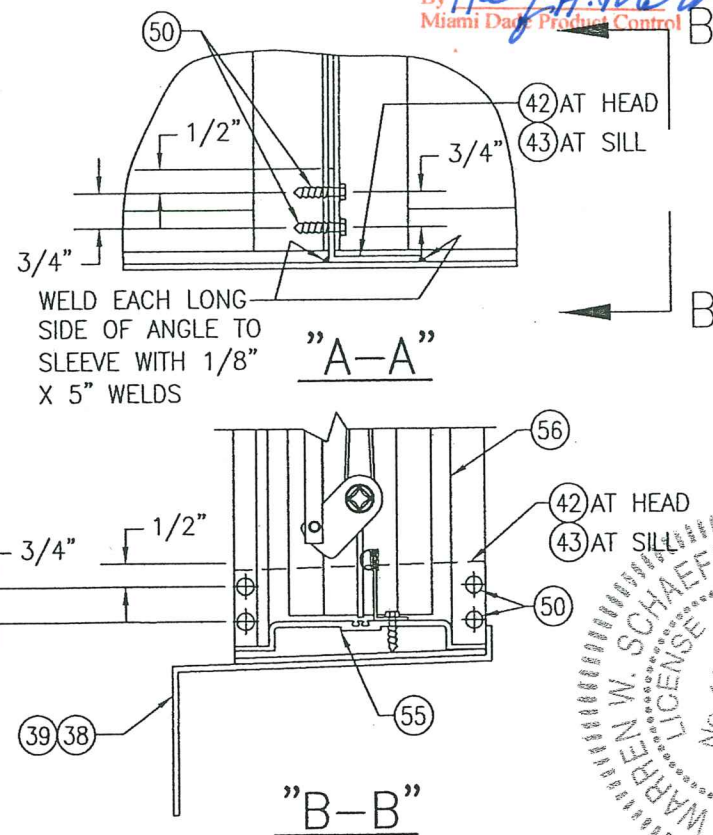


SECTION L
SCALE: 1/4 FULL



SECTION K
SCALE: 1/4 FULL

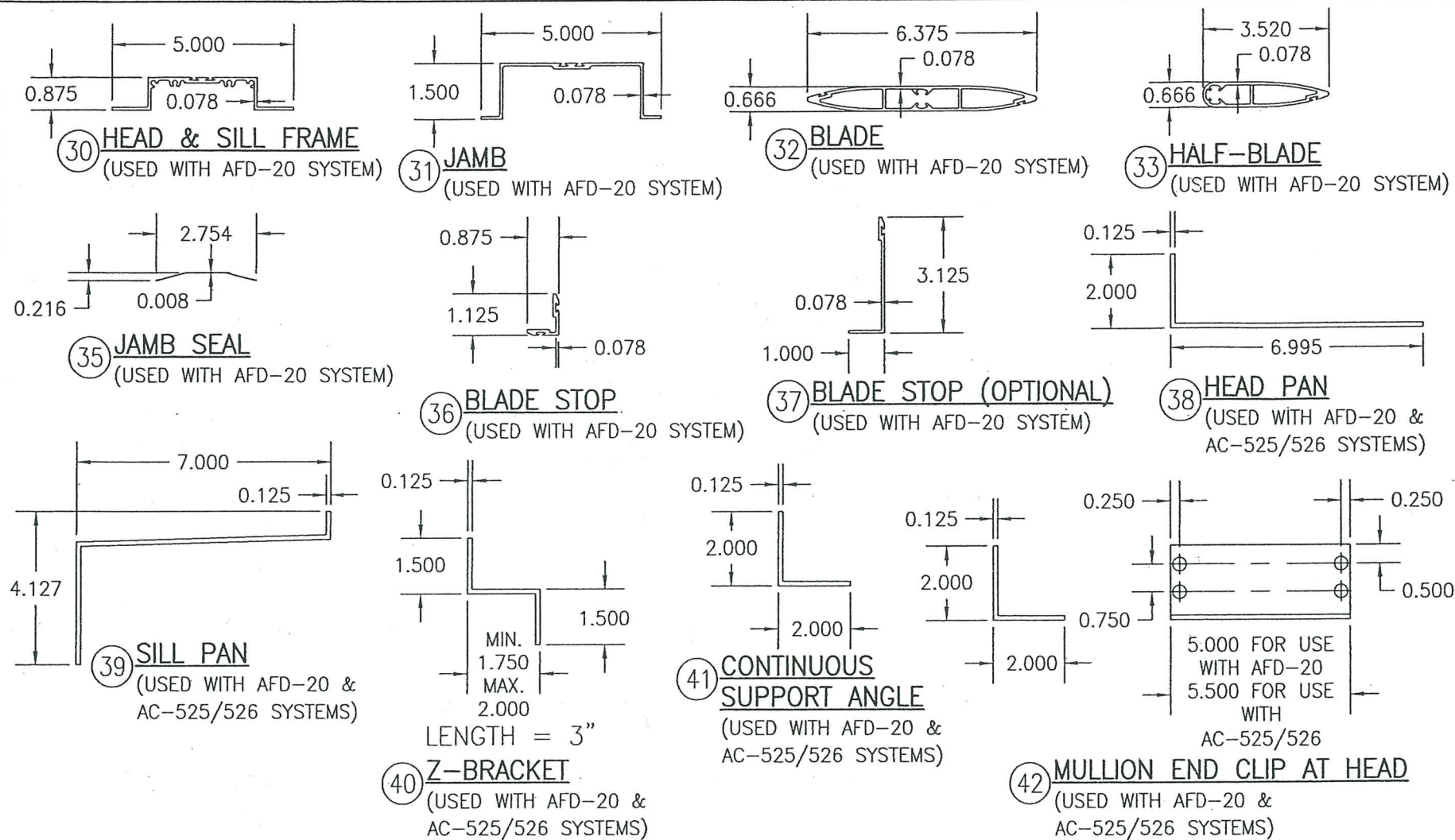
NOTE: Z-BRACKET PART #40 AND DAMPER SUPPORT
ANGLE PART #41 MAY BE TURNED IN AS SHOWN OR
TURNED OUT.



(SILL SECTION SHOWN, HEAD IS SIMILAR)

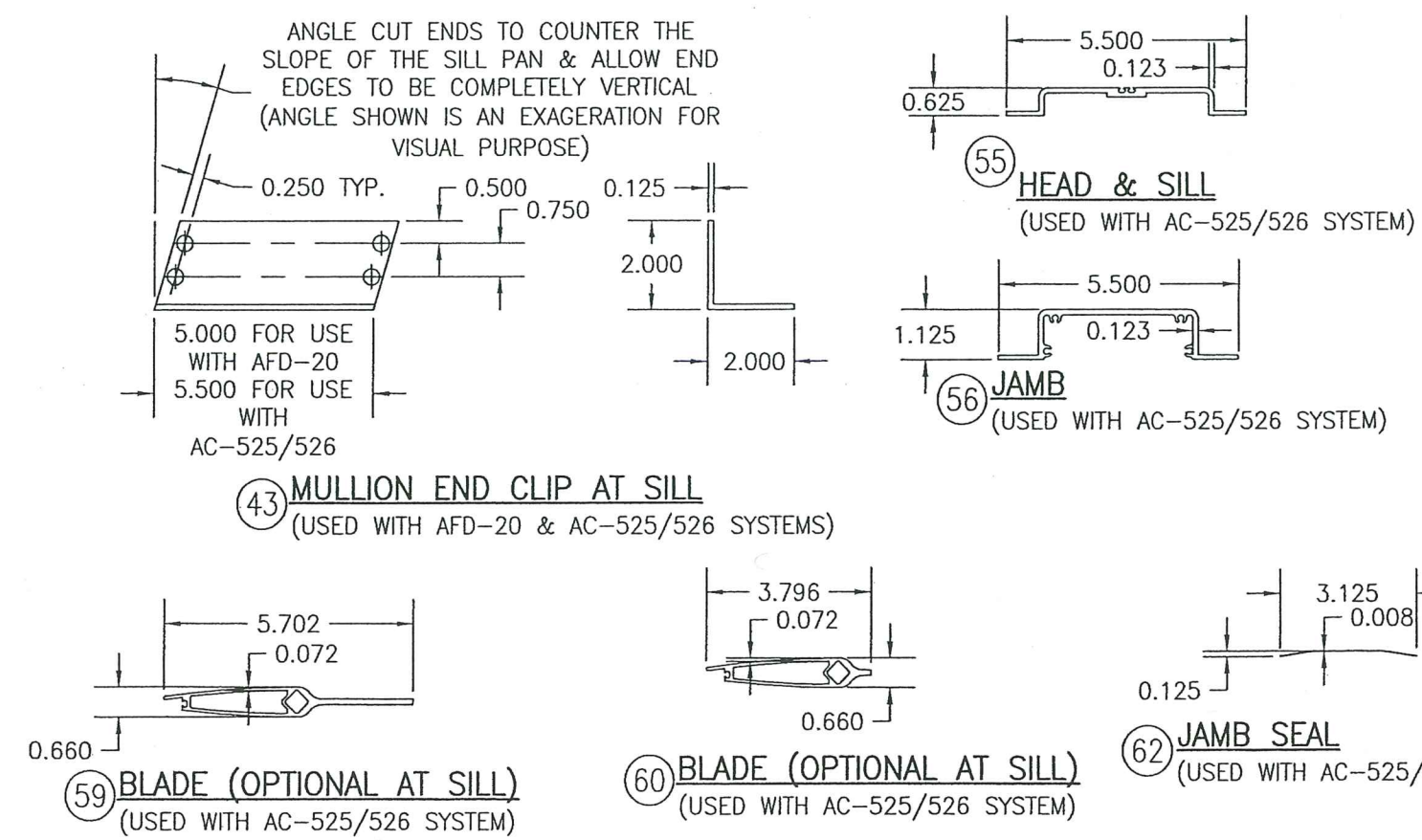
PRODUCT REVISED
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Acceptance No. **23-0713.08**
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By *[Signature]*
Miami-Dade Product Control

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/18/06
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE LE-68 VERTICAL LOUVER SYSTEM	
MANUFACTURER AMERICAN WARMING & VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION WARREN W. SCHAEFER P.E. No. 44135 FLORIDA PROFESSIONAL ENGINEER EXPIRATION DATE 12/31/2021	
DRAWING NO. 1503	REV. C
SHEET NO. 8 OF 9	



AFD-20 DAMPER (ALL PARTS BY ARROW UNITED INDUSTRIES)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
30	HEAD & SILL FRAME	6063-T5 ALUMINUM
31	JAMB	6063-T6 ALUMINUM
32	BLADE	6063-T5 ALUMINUM
33	HALF-BLADE	6063-T5 ALUMINUM
34	BLADE LINKAGE ASSEMBLY	BY AWV
35	JAMB SEAL	304 STAINLESS STEEL
36	BLADE STOP	6063-T5 ALUMINUM
37	BLADE STOP (OPTIONAL)	6063-T5 ALUMINUM
38	HEAD PAN	5052-H32 ALUMINUM
39	SILL PAN	5052-H32 ALUMINUM
40	Z-BRACKET	5052-H32 ALUMINUM
41	CONTINUOUS SUPPORT ANGLE	6063-T5 ALUMINUM
42	MULLION END CLIP AT HEAD	6063-T5 ALUMINUM
43	MULLION END CLIP AT SILL	6063-T5 ALUMINUM
MISC. FASTENERS		
47	NO. 8 X 3/4" 18-8 SS SMS SCREW	2 PER Z-BRACKET
48	1/4" X 1" 410 S.S. SELF TAPPING SCREW	WITHIN 6" OF ENDS & MAX. 12" O.C.
49	NO. 8 X 3/4" 18-8 SS SMS SCREW	WITHIN 6" OF ENDS & MAX. 12" O.C.
50	1/4" X 1" 410 S.S. SELF TAPPING SCREW	4 PER MULLION END CLIP
51	NO. 8 X 3/4" 18-8 SS SMS SCREW	WITHIN 2" OF CORNERS & MAX. 12" O.C.
SEALS & SEALANTS		
54	BLADE SEAL	SOLID SILICONE

AC-525/526 DAMPER (ALL PARTS BY AIR BALANCE, INC.)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
55	HEAD & SILL FRAME	6063-T5 ALUMINUM
56	JAMB	6063-T6 ALUMINUM
57	BLADE	6063-T5 ALUMINUM
58	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
59	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
60	BLADE (OPTIONAL AT SILL)	6063-T5 ALUMINUM
61	BLADE LINKAGE ASSEMBLY	BY AWV
62	JAMB SEAL	304 STAINLESS STEEL
63	BLADE STOP	6063-T5 ALUMINUM
SEALS & SEALANTS		
66	BLADE SEAL	SANTOPRENE
67	BULB SEAL	VINYL



PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.08
Expiration Date 03/15/2027
By *Heidi A. N. N.*
Miami-Dade Product Control

PRODUCT RENEWED
as complying with the Florida
Building Code
NOA-No. 21-1217.10
Expiration Date 03/15/2027
By *W. Schaefer*
Miami-Dade Product Control

DRAWN BY: W.R.M.
CHECKED BY: W.W.S.
PLOT: 1=4
DATE: 10/18/06

DATE
BY
REVISION DESCRIPTION
NO.

DRAWING TITLE
LE-68 VERTICAL LOUVER SYSTEM

MANUFACTURER
AMERICAN WARMING & VENTILATING;
A DIVISION OF MESTEK, INC.
7301 INTERNATIONAL DRIVE
HOLLAND, OHIO 43528
419-865-5000

CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A. (CA 6809)
7480 150TH COURT NORTH
PALM BEACH GARDENS, FL 33418
PHONE: 561-744-3424

CERTIFICATION
FLORIDA
PROFESSIONAL ENGINEER
WARREN W. SCHAEFER
No. 44135
P.E. No. 44135

DRAWING NO.
1503
REV.
C
SHEET NO.
9 OF 9