



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)

American Warming & Ventilating, a division 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-32 6" Aluminum Louver System (Dp ± 180.0 psf)

**APPROVAL DOCUMENT:** Drawing No. 1217, titled "LE-32 Louver System", sheets 1 through 15 of 15, dated 04/03/03, with revision E1 dated 04/18/23, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren. W. Schaefer, P.E., 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:** A permanent label with the manufacturer's name or logo, manufacturing plant's city, state, model/ series, and the statement reading: "Miami-Dade County Product Control Approved", is to be located on each unit.

**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 #23-0426.03 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. 23-0713.09  
Expiration Date: 04/22/2029  
Approval Date: 08/17/2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's**

**A. DRAWINGS**

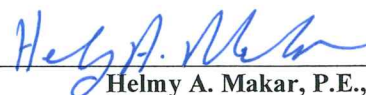
1. Manufacturer's die drawings and sections.  
*(Submitted under NOA No. 05-0328.01)*
2. Drawing No. **1217**, titled "LE-32 Louver System", sheets 1 through 15 of 15, dated 04/03/03, with revision **D1** dated 02/26/19, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren. W. Schaefer, P.E.  
*(Submitted under NOA No. 19-0306.03)*

**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 marked-up drawings and installation diagram of an EA-64 Louver, prepared by Intertek, Test Report No. **J3223.01-109-18**, dated 02/26/2019, signed and sealed by Daniel C. Culbert, P.E.  
*(Submitted under NOA No. 19-0306.03)*
2. Test report on Wind and Wind-Driven Rain Resistance per TAS 100(A)-95 of their LE-32 Louver, prepared by PRI Construction Materials Technologies, LLC, and Report No. **AWV-007-02-02**, dated 04/28/08, signed and sealed by Duc T. Nguyen, P.E.  
*(Submitted under NOA No. 08-1224.02)*

	<u>Test Report</u>	<u>Test Standard</u>	<u>Test Date</u>	<u>Signature</u>
3.	HTL 0198-0508-03	TAS 201,202 & 203	05/15-10/03	Vinu J. Abraham, P.E.
4.	HTL.0198-0618-03	TAS 201, 202 & 203	06/06-25/03	Vinu J. Abraham, P.E.
5.	HTL 0198-0804-03	TAS 201, 202 & 203	08/06-08/03	Vinu J. Abraham, P.E.
6.	HTL 0198-0508-03	TAS 201, 202 & 203	05/08-13/03	Vinu J. Abraham, P.E.
7.	HTL 0198-0804-03	TAS 201, 202 & 203	08/08-11/03	Vinu J. Abraham, P.E.
8.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-26/03	Vinu J. Abraham, P.E.
9.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-04/16	Vinu J. Abraham, P.E.
10.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-24/03	Vinu J. Abraham, P.E.
11.	HTL 0198-0324-03	TAS 201, 202 & 203	03/25-04/21	Vinu J. Abraham, P.E.
12.	HTL 0198-0128-03	TAS 201, 202 & 203	02/10-04/21	Vinu J. Abraham, P.E.
13.	HTL 0198-0508-03	TAS 202	05/13-13/03	Vinu J. Abraham, P.E.
14.	HTL 0198-0324-03	TAS 202	03/27-27/03	Vinu J. Abraham, P.E.
15.	HTL 0198-0324-03	TAS 201 & 203	03/24-04/21	Vinu J. Abraham, P.E.
16.	ATI 01-45720.01	TAS 100 (A)-95	06/16/03	Joseph A. Reed, P.E.

*(Submitted under NOA No. 05-0328.01)*



Helmy A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 23-0713.09  
Expiration Date: 04/22/2029  
Approval Date: 08/17/2023



American Warming & Ventilating, a division of Mestek, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's (CONTINUED)**

**C. CALCULATIONS**

1. Anchoring calculations dated 02/26/19, prepared by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.  
*(Submitted under NOA No. 19-0306.03)*

**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 6<sup>th</sup> Edition (2017)** and **FBC 7<sup>th</sup> Edition (2020)**, dated 06/03/20, issued by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.  
*(Submitted under NOA No. 20-0622.19)*
2. Statement letter of no financial interest, dated 02/26/19, issued by W.W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.  
*(Submitted under NOA No. 19-0306.03)*

**G. OTHERS**

1. Notice of Acceptance No. **19-0306.03**, issued to American Warming & Ventilating, a division of Mestek, Inc. for their Model LE-32 6" Aluminum Louver System (Dp  $\pm 180.0$  psf), approved on 04/25/19 and expiring on 04/22/24.

**2. EVIDENCE SUBMITTED UNDER PREVIOUS NOA #23-0426.03**

**A. DRAWINGS**

1. Drawing No. **1464**, titled "EA-64 Louver System", sheets 1 through 15 of 15, dated 12/02/05, with revision **E1** dated 04/18/23, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren. W. Schaefer, P.E.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. None.

**D. QUALITY ASSURANCE**

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



Helmy A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 23-0713.09  
Expiration Date: 04/22/2029  
Approval Date: 08/17/2023

American Warming & Ventilating, a division of Mestek, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**E. MATERIAL CERTIFICATIONS**

1. None.

**F. STATEMENTS**

1. None.

**G. OTHERS**

1. Notice of Acceptance No. **20-0622.19**, issued to American Warming & Ventilating, a division of Mestek, Inc. for their Model LE-32 6" Aluminum Louver System (Dp ± 180.0 psf) approved on 08/20/20 and expiring on 04/22/24.

**3. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. None.

**B. TESTS**

1. None.

**C. CALCULATIONS**

1. None.

**D. QUALITY ASSURANCE**

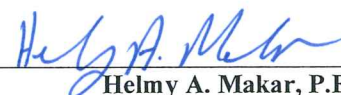
1. Miami-Dade County Department of Regulatory and Economic Resources (RER)

**E. MATERIAL CERTIFICATIONS**

1. None.

**F. STATEMENTS**

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



Helmy A. Makar, P.E., M.S.  
Product Control Section Supervisor  
NOA No. 23-0713.09  
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# FASTENER SCHEDULE

ANCHOR TYPE	(5) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 3/8"	3/4"
(6) NO. 10 SELF TAP SCREW	METAL STUD OR STEEL	FULL	3/4"
(1) 1/4" CONCRETE SCREW	C90 CONCR. BLOCK	1 1/4"	2 1/2"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(4) 3/8" SLEEVE ANCHOR	CONCRETE	2 1/2"	2 1/2"
(2) 3/8" BOLT	STEEL	FULL	3/4"

- CONCRETE SCREWS SHALL BE ELCO ULTRACONS (C.S.), ELCO CRETE-FLEX (S.S.) OR HILTI KWIK-CON II (C.S OR S.S.).
- BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- SLEEVE ANCHORS MAY BE GALVANIZED OR S.S. RAMSET RED HEAD DYNABOLTS OR POWERS RAWL POWER BOLT.
- SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.
- SELF TAPPING SCREWS SHALL BE CORROSION RESISTANT MIN. SAE GRADE 2 STEEL OR MIN. ALLOY GROUP 1, 2 & 3 CONDITION "A" STAINLESS STEEL.

## CORNER & BLADE END CONSTRUCTION

### BLADE TO JAMB:

WELDED CONDITION: BLADE END BUTTS TO JAMB, IS WELDED WITH ONE 1/8" X 5" WELD AND SCREWED TO JAMB WITH WITH 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.

SCREWED CONDITION: BLADE END BUTTS TO JAMB & IS SCREWED TO JAMB WITH TWO (2) 1/4-20 X 1 1/2" TYPE "F" SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.

HEAD TO JAMB: HEAD FRAME IS SQUARE CUT, BUTTED AND JOINED TO JAMB WITH ONE 1/8" X 5" WELD AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO HEADER SCREW SPLINES.

SILL TO JAMB: SIDE JAMB BUTTS TO SILL AND IS JOINED TO SILL WITH THREE(3) 1/8" X 1" WELDS AND 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH SILL AND INTO JAMB SCREW SPLINES.

### GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
- THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND PROTOCOLS TAS-100, 201, 202 & 203 INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: AMERICAN WARMING AND VENTILATING HOLLAND, OH MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
- ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
- PANEL WIDTHS & HEIGHTS ARE LIMITED AS SHOWN IN ELEVATIONS.
- MULLED PANELS MAY BE HORIZONTALLY INSTALLED TO AN UNLIMITED NUMBER. VERTICAL STACKING OF MULLED PANELS MAY OCCUR PROVIDING A STRUCTURAL SUPPORT IS DESIGNED & INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER ASSEMBLY (SINGLE PANELS MAY RUN TO UNLIMITED HEIGHT PER ELEVATION IF NO MULLION EXISTS).
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- THIS SYSTEM HAS BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS A WATER RESISTANT SYSTEM WHEN THE LOUVER BLADE ENDS ARE SCREWED & WELDED AND THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES AS SHOWN IN SECTION "A2/4" (NOT RATED FOR WATER RESISTANCE WHEN LOUVER BLADE ENDS ARE SCREW CONNECTED ONLY). THIS SYSTEM IS ALSO A WATER RESISTANT SYSTEM WHEN THE AFD-20 DAMPER IS PLACED BEHIND THE LOUVER.
- UNLESS THE DAMPER BLADE IS ATTACHED TO THE LOUVER BLADES OR THE AFD-20 DAMPER IS PLACED BEHIND 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.
- ALL DETAILS OF SHEETS 10 THRU 15 MUST COMPLY WITH THE LOUVER DETAILS SHOWN ON SHEETS 1 THRU 9. ANY DISCREPANCY IS CONTROLLED BY THE DETAILS ON SHEETS 1 THRU 9.

JAMB SPLICE WHEN REQUIRED FOR STACKING (SEE SECTION A1/4 FOR DETAIL). SPLICE LOCATION TO BE BETWEEN BLADES.

INSTALLATION CLIP (AT SIDES ONLY)

## EXTERIOR ELEVATION SINGLE LOUVER PANEL WITHOUT BLADE SUPPORT ANGLE

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS.

INSTALLATION CLIPS ARE NOT APPLICABLE WHEN LOUVER IS SLEEVE MOUNTED

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 23-0713.09 Expiration Date 04/22/2029 By Miami Dade Product Control

PRODUCT REVISED as complying with the Florida Building Code NOA-No. 23-0426.03 Expiration Date: 04/22/2029 By Manuel Perez Miami Dade Product Control

## ALLOWABLE PRESSURES

PRESSURES VARY WITH PANEL SIZE, CLIP SPACING & MULLION CONDITIONS & SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE PRESSURE FOR EACH OF THOSE APPLICABLE CONDITIONS. SEE LOAD TABLES ON SHEET 3 FOR ALLOWABLE PRESSURES.

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.

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

CONSULTANTS  
W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
26376 NADIR ROAD; UNIT 308  
PUNTA GORDA, FL 33985  
PHONE: 561-744-3424

CERTIFICATION  
MAY 10 2023  
PROFESSIONAL ENGINEER  
WARREN W. SCHAEFER P.E.  
P.E. NO. 44135

DRAWING NO. 1217 REV. E  
SHEET NO. 1 OF 15

DRAWN BY: K.P.S. CHECKED BY: W.W.S.  
PLOT: 1=24 DATE: 04/03/03  
DATE: 08/22/05 BY: W.W.S.  
REVISION DESCRIPTION NO. A2 UPDATE TO 2004 CODE COMPLIANT  
DATE: 11/07/11 BY: W.R.M. UPDATE TO CURRENT STANDARDS  
DATE: 07/05/17 BY: W.W.S. MANUFACTURER NAME CHANGE  
DATE: 02/28/19 BY: W.W.S. CHANGED CLIP SPACING  
DATE: 04/18/23 BY: W.W.S. UPDATED NOTES

DRAWING TITLE  
LE-32 LOUVER SYSTEM



DRAWING NO.	REV.
1217	E
SHEET NO.	
2 OF 15	



MULLION LOAD TABLE (SEE INSTRUCTIONS BELOW)

MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)
18"	96"	180.0	60"	96"	65.7	84"	96"	47.0	120"	96"	32.9
24"	96"	164.3		90"	70.1		90"	50.1		90"	35.1
	90"	175.3		84"	75.1		84"	53.7		84"	37.6
	84"	180.0		78"	80.9		78"	57.8		78"	40.4
30"	96"	131.5		72"	87.6		72"	62.6		72"	43.8
	90"	140.2		66"	95.6		66"	68.3		66"	47.8
	84"	150.2		60"	105.2		60"	75.1		60"	52.6
	78"	161.8		54"	116.9		54"	83.5		54"	58.4
	72"	175.3		48"	131.5		48"	93.9		48"	65.7
36"	66"	180.0	66"	42"	150.2	96"	42"	107.3	132"	42"	75.1
	96"	109.6		36"	175.3		36"	125.2		36"	87.6
	90"	116.9		30"	180.0		30"	150.2		30"	105.2
	84"	125.2		96"	59.8		24"	180.0		24"	131.5
	78"	134.8		90"	63.7	96"	96"	41.1		18"	175.3
	72"	146.1		84"	68.3		90"	43.8		96"	27.2
42"	66"	159.3	72"	78"	73.5		84"	47.0	144"	90"	29.0
	60"	175.3		72"	79.7		78"	50.6		84"	31.1
	54"	180.0		66"	86.9		72"	54.8		78"	33.5
	96"	93.9		60"	95.6		66"	59.8		72"	36.3
	90"	100.2		54"	106.2		60"	65.7		66"	39.6
	84"	107.3		48"	119.5		54"	73.0		60"	43.6
48"	78"	115.6	72"	42"	136.6	108"	48"	82.2		54"	48.4
	72"	125.2		36"	159.3		42"	93.9		48"	54.4
	66"	136.6		30"	180.0		36"	109.6		42"	62.2
	60"	150.2		96"	54.8		30"	131.5		36"	72.6
	54"	166.9		90"	58.4		24"	164.3		30"	87.1
	48"	180.0		84"	62.6		18"	180.0		24"	108.9
48"	96"	82.2	72"	78"	67.4	108"	96"	36.5		18"	145.2
	90"	87.6		72"	73.0		90"	39.0		72"	28.0
	84"	93.9		66"	79.7		84"	41.7		66"	30.5
	78"	101.1		60"	87.6		78"	44.9		60"	33.5
	72"	109.6		54"	97.4		72"	48.7		54"	37.3
	66"	119.5		48"	109.6		66"	53.1		48"	41.9
48"	60"	131.5	72"	42"	125.2		60"	58.4		42"	47.9
	54"	146.1		36"	146.1		54"	64.9		36"	55.9
	48"	164.3		30"	175.3		48"	73.0		30"	67.1
	42"	180.0		24"	180.0		42"	83.5		24"	83.9
							36"	97.4		18"	111.8
							30"	116.9			
							24"	146.1			
							18"	180.0			

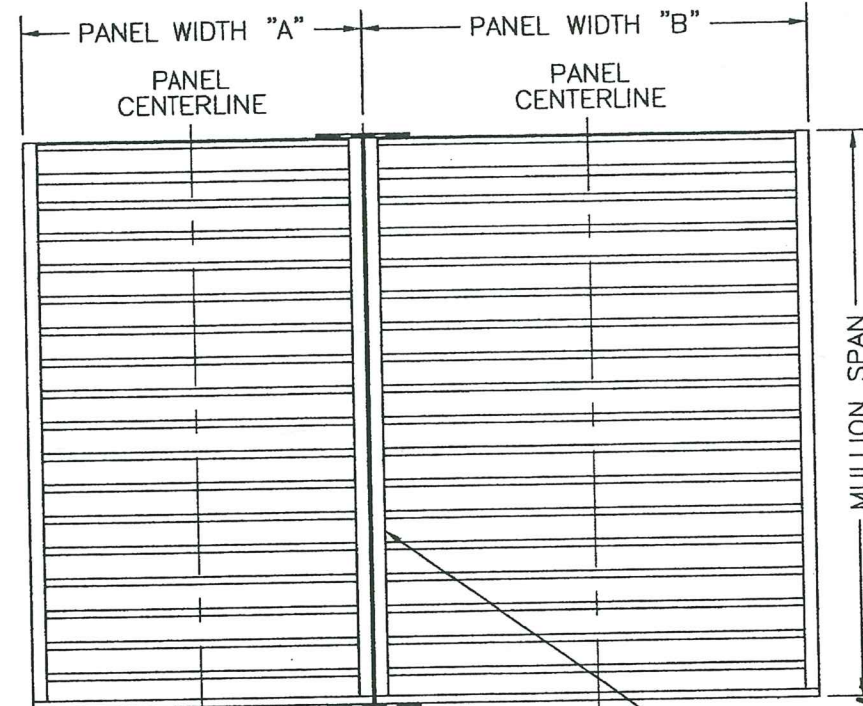
NOTE: CLIP SPACING SHOWN SHALL BE REDUCED TO 9.5" & 15" RESPECTFULLY WHEN SUBSTRATE IS CMU.

PANEL LOAD TABLE

PANEL WIDTH (IN.)	(1) CLIP SPACING (IN.)	(2) ALLOWABLE PRESSURE (+/- PSF)	PANEL WIDTH (IN.)	(1) CLIP SPACING (IN.)	(2) ALLOWABLE PRESSURE (+/- PSF)
36"	12.5"	180.0	72"	12.5"	100.0
	20"	127.3		20"	63.6
42"	12.5"	154.3	78"	12.5"	92.3
	20"	109.1		20"	58.7
48"	12.5"	120.0	84"	12.5"	85.0
	20"	95.5		20"	54.5
54"	12.5"	106.7	90"	12.5"	80.0
	20"	84.8		20"	50.9
60"	12.5"	90.0	96"	12.5"	75.0
	20"	76.4		20"	47.7
66"	12.5"	109.1			
	20"	69.4			

(1) ALL SHAPED LOUVER PANELS ARE RESTRICTED TO A FRAME CLIP SPACING OF 12.5" OR 9.5" O.C. 20" & 15" CLIP SPACING IS ONLY ALLOWED ON RECTANGULAR & SQUARE SHAPE LOUVERS.  
(2) PRESSURES RELATING TO 12.5" & 9.5" CLIP SPACINGS SHALL BE APPLICABLE TO ALL SLEEVE MOUNTED LOUVERS

LOAD TABLE NOTE  
(APPLICABLE TO MULLION & PANEL LOAD TABLES):  
THE LESSER LOAD FROM THE MULLION LOAD TABLE & THE PANEL LOAD TABLE SHALL CONTROL AS THE ALLOWABLE FOR THE ENTIRE MULLED UNIT.



LOUVER ASSEMBLY

## MULLION LOAD TABLE INSTRUCTIONS:

1. DETERMINE REQUIRED DESIGN PRESSURE OF THE LOUVER ASSEMBLY.
2. DETERMINE THE REQUIRED MULLION SPAN OF THE LOUVER ASSEMBLY.
3. DETERMINE THE PANEL WIDTH "A" & "B" AND THE MULLION LOAD WIDTH.
4. GO TO THE MULLION LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR THE RESPECTIVE MULLION SPAN/LOAD WIDTH.
5. GO TO THE PANEL LOAD TABLE AND CHECK THE ALLOWABLE PRESSURE FOR EACH PANEL WIDTH.
6. IF ALL THE ALLOWABLE PRESSURES OF INSTRUCTIONS 4 & 5 ARE GREATER THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS ACCEPTABLE.
7. IF ANY ALLOWABLE PRESSURE OF INSTRUCTIONS 4 & 5 ARE LESS THAN THE REQUIRED DESIGN PRESSURE, THE ASSEMBLY IS NOT ACCEPTABLE UNLESS THE ASSEMBLY SIZE OR PRESSURE IS REDUCED AND INSTRUCTIONS FROM 1 TO 7 ARE FOLLOWED AGAIN.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 23-0713.09  
Expiration Date 09/22/2029  
By: *Heidi A. Miller*  
Miami-Dade Product Control

PRODUCT REVISED  
as complying with the Florida  
Building Code  
NOA-No. 23-0426.03  
Expiration Date: 04/22/2029  
By: *Manuel Perez*  
Miami-Dade Product Control

DRAWN BY: K.P.S.  
CHECKED BY: W.W.S.  
PLOT: 1-24  
DATE: 04/03/03

NO.      DATE      BY      REVISION DESCRIPTION

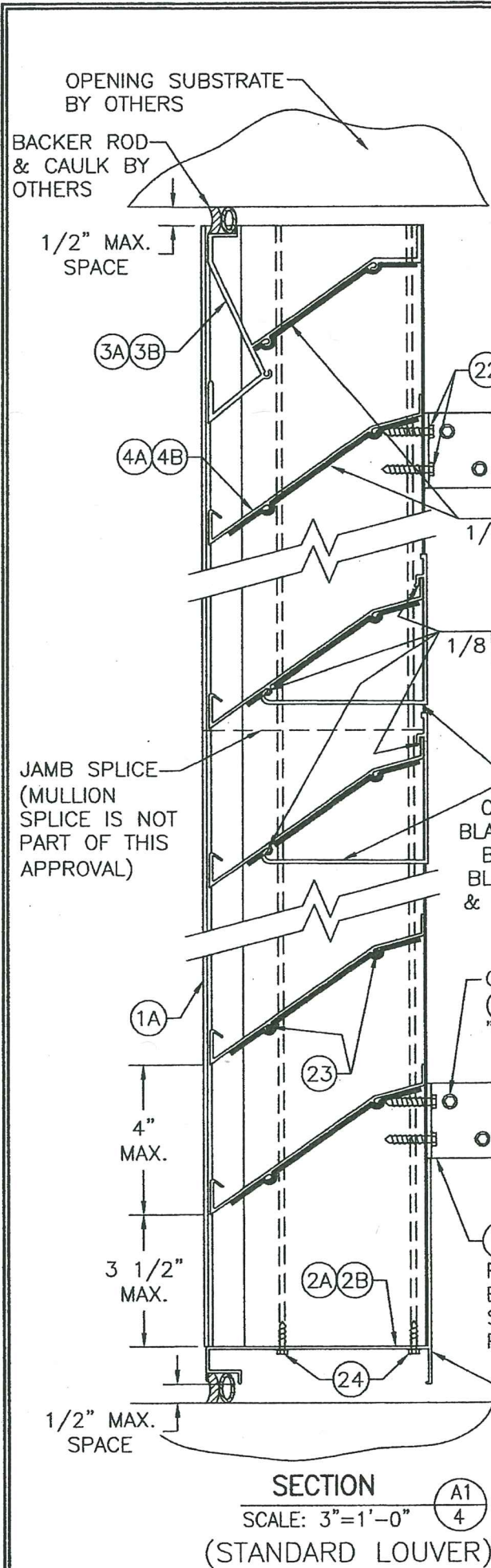
MANUFACTURER  
AMERICAN WARMING & VENTILATING;  
A DIVISION OF MESTEK, INC.  
7301 INTERNATIONAL DRIVE  
HOLLAND, OHIO 43528  
419-865-5000

DRAWING TITLE  
LE-32 LOUVER SYSTEM

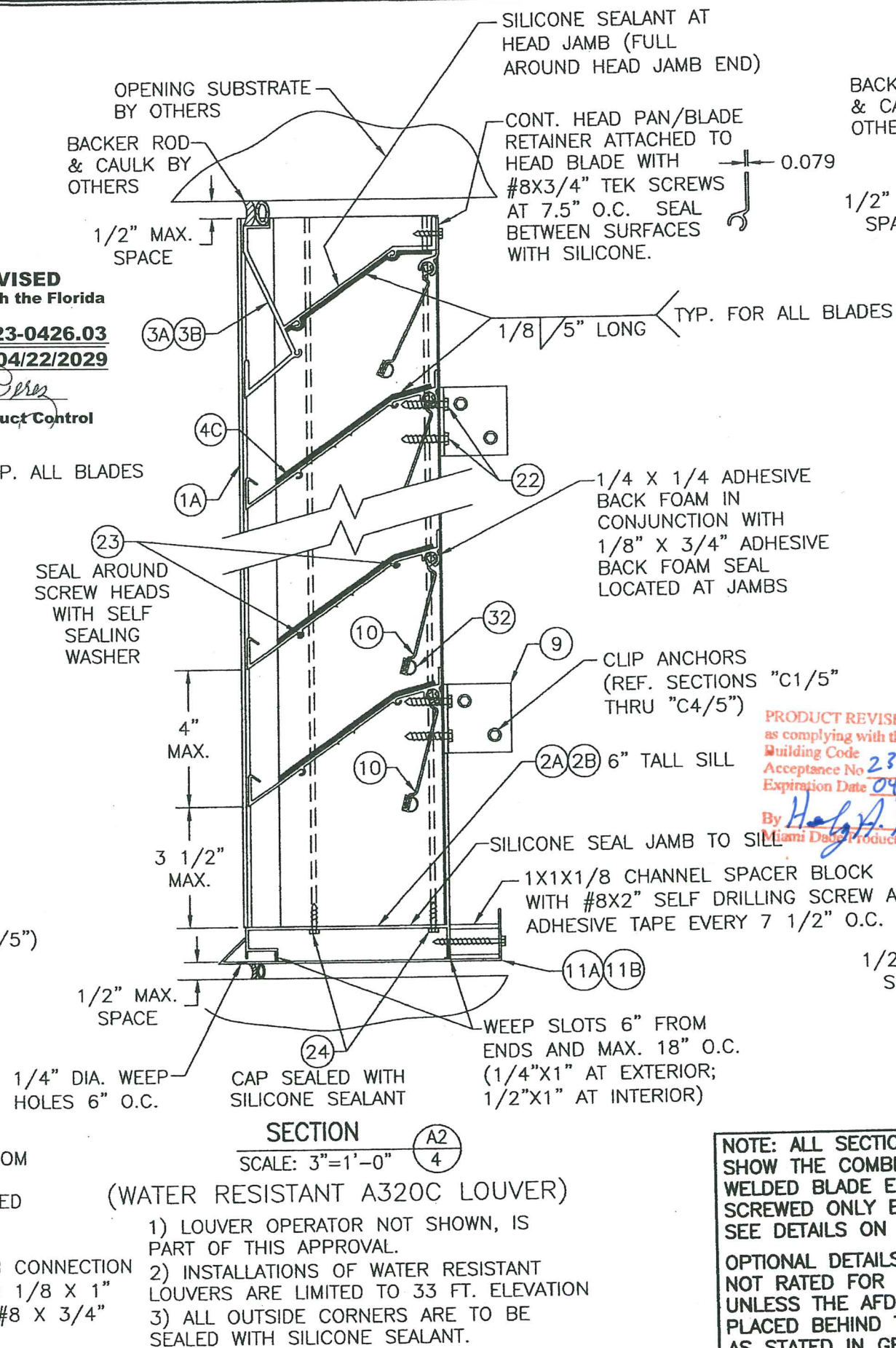
CONSULTANTS  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
26376 NADIR ROAD, UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

DATE OF ISSUE  
MAY 10 2023  
DRAWING NO. 23-0426.03  
SHEET NO. 3 OF 15



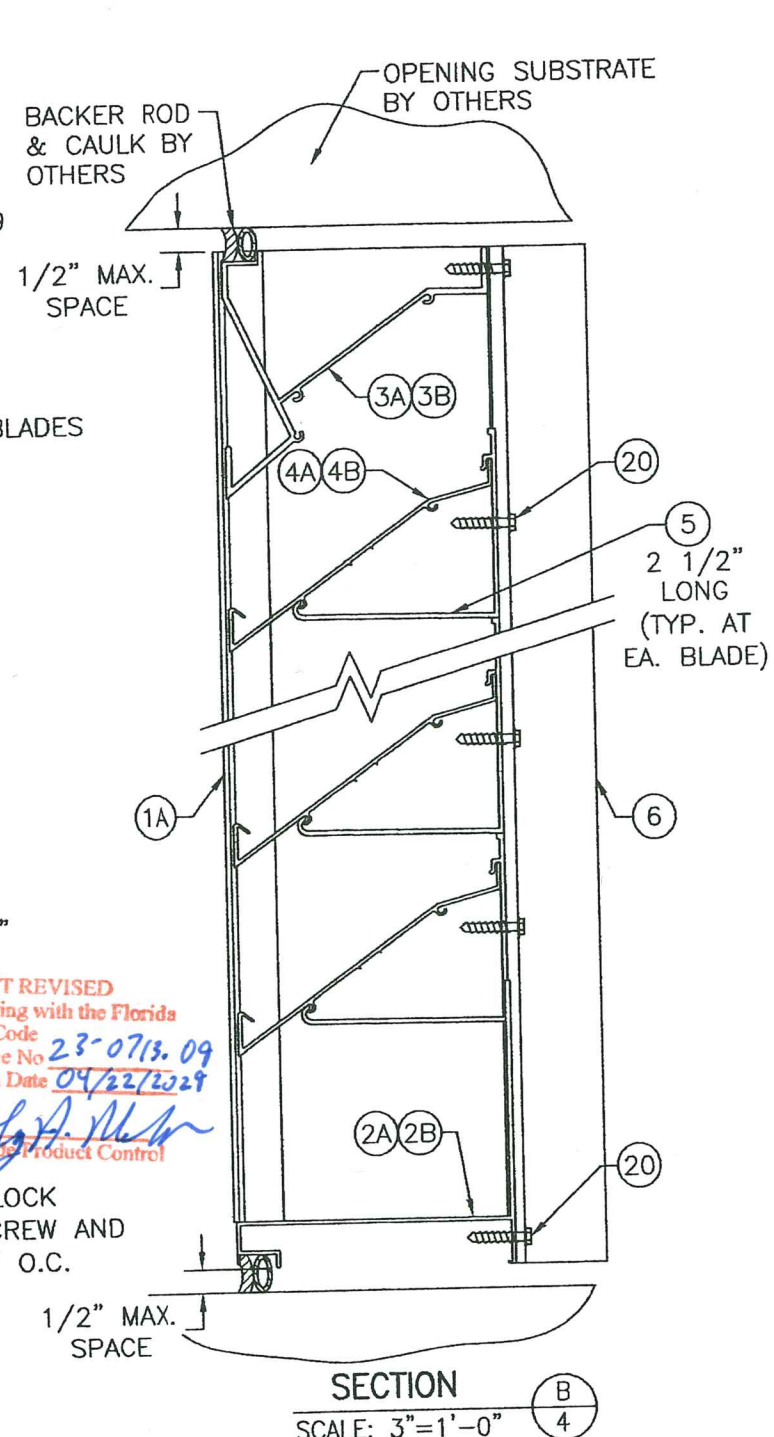


**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
NOA-No. **23-0426.03**  
Expiration Date: **04/22/2029**  
By: *Manuel Fern*  
Miami-Dade Product Control



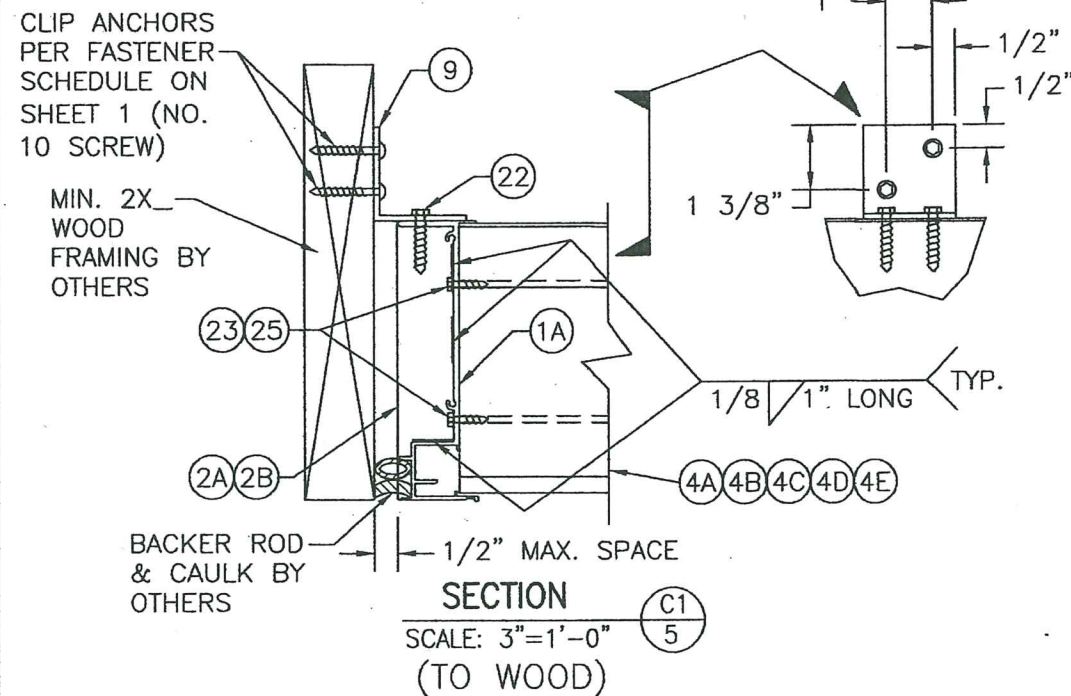
**NOTE: ALL SECTIONS ON THIS SHEET SHOW THE COMBINATION OF SCREWED & WELDED BLADE END CONSTRUCTION. FOR SCREWED ONLY END CONSTRUCTION, SEE DETAILS ON SHEET 7.**

OPTIONAL DETAILS ON SHEET 7 ARE NOT RATED FOR WATER RESISTANCE UNLESS THE AFD-20 DAMPER IS PLACED BEHIND THE LOUVER AS STATED IN GENERAL NOTE NO. 11

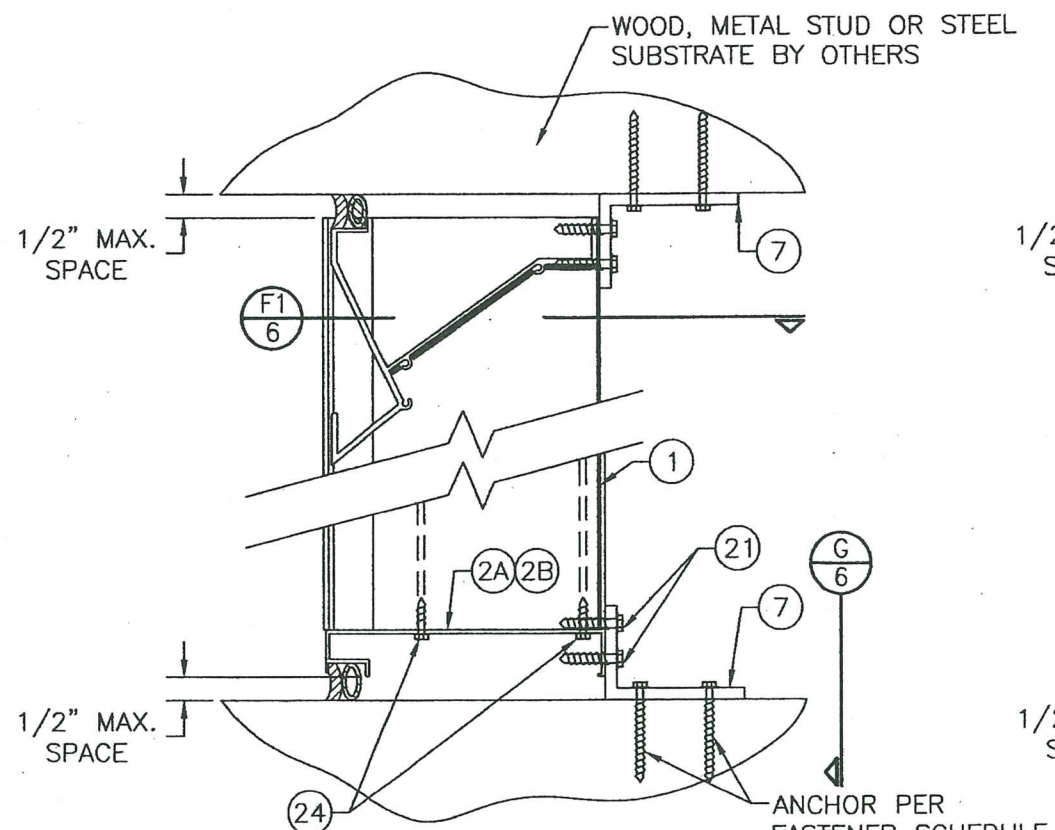


DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 04/03/03
DATE	BY
REVISION DESCRIPTION	NO.
MANUFACTURER <b>AMERICAN WARMING &amp; VENTILATING;</b> <b>A DIVISION OF MESTEK, INC.</b> 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	
DRAWING TITLE <b>LE-32 LOUVER SYSTEM</b>	
DRAWING NO.	REV.
1217	F
SHEET NO.	4 OF 15



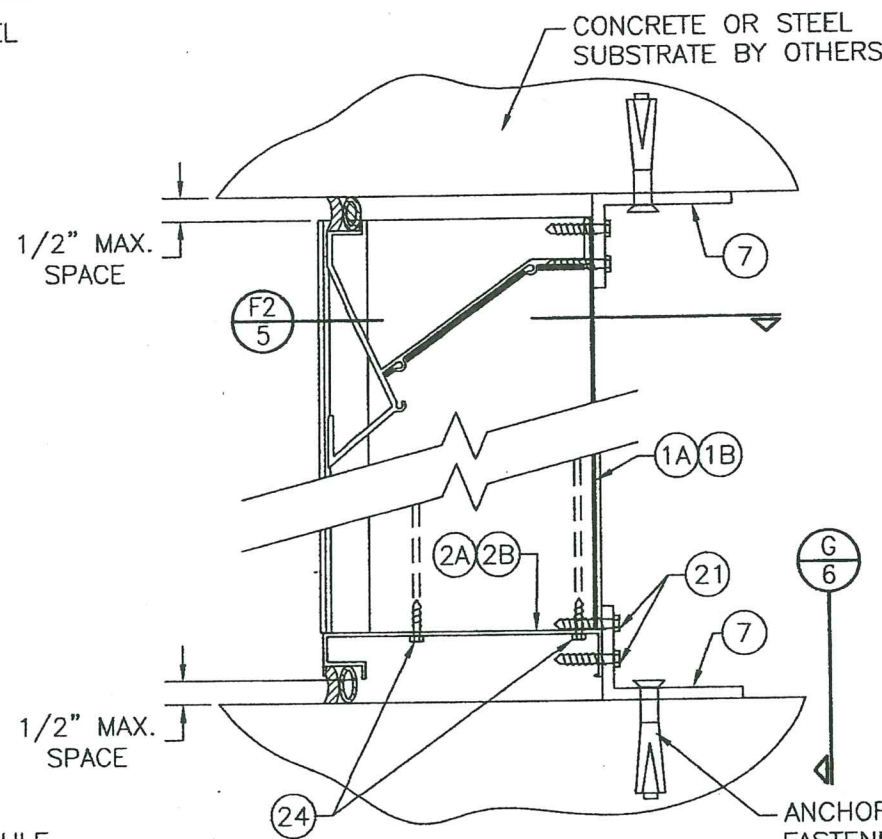






**SECTION E1**  
SCALE: 3"=1'-0"  
(INTO WOOD, METAL STUD OR STEEL OPENING)

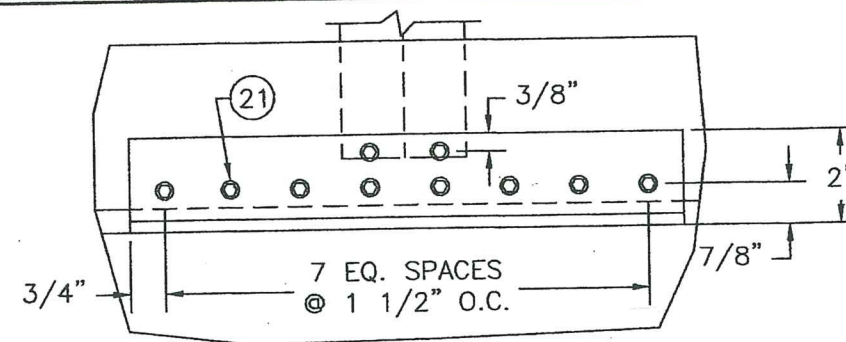
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 SELF TAPPING SCREW INTO METAL STUD OR STEEL)



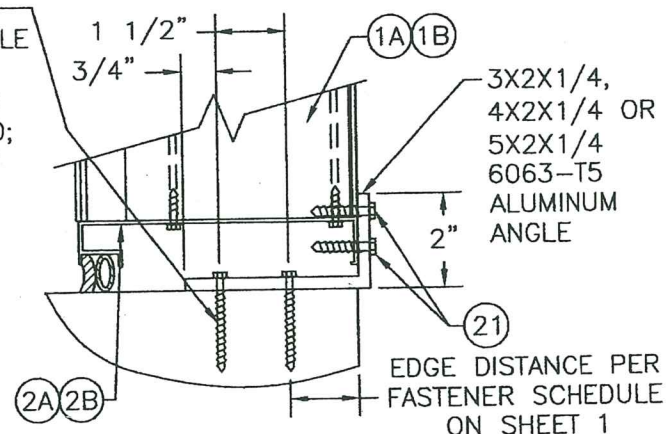
**SECTION E2**  
SCALE: 3"=1'-0"  
(INTO CONCRETE OR STRUCTURAL STEEL OPENING)

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (3/8" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 3/8" BOLT INTO STEEL)

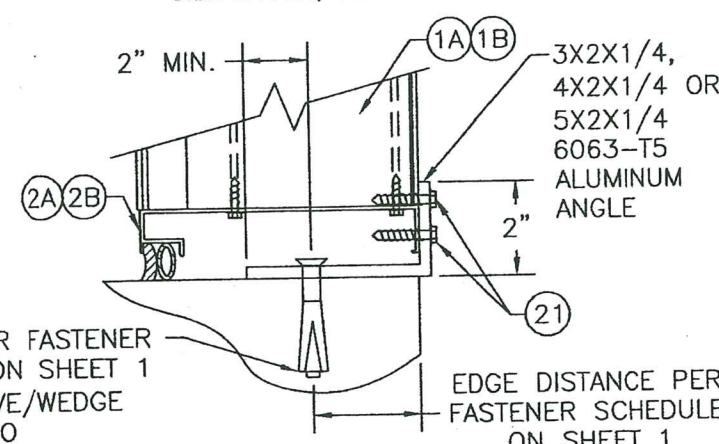
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 SELF TAPPING SCREW INTO METAL STUD OR STEEL)



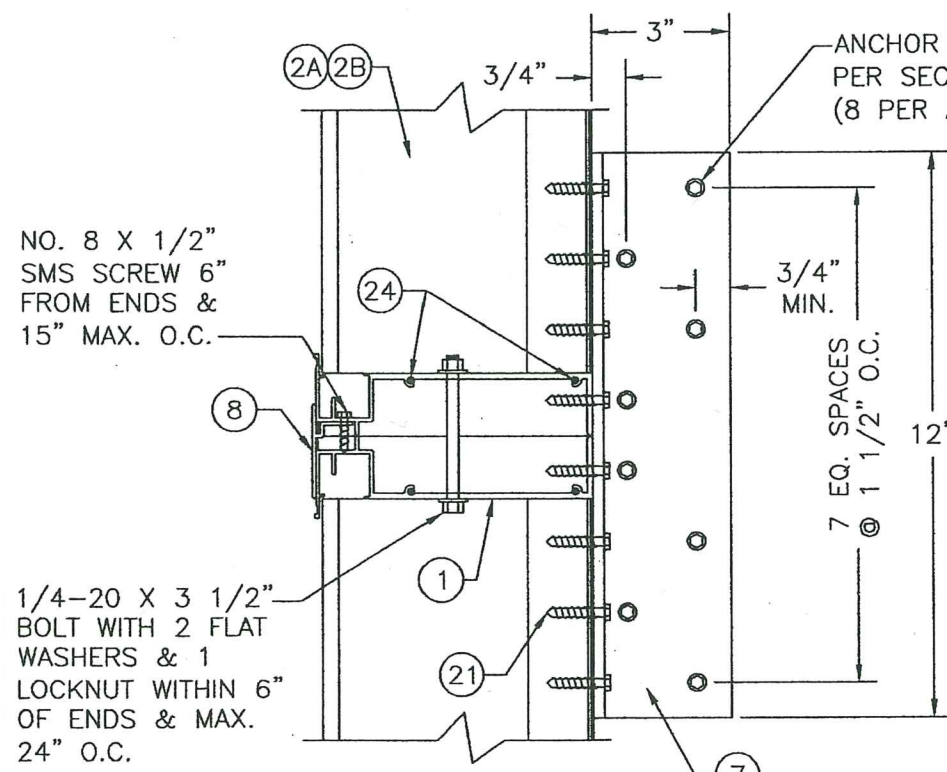
**VIEW G**  
SCALE: 3"=1'-0"  
(SEE SECTION E1/6 OR E2/6 FOR ANCHORS TO OPENING OR J/7 FOR WELDS TO SLEEVE)



**OPTIONAL SECTION E1**  
SCALE: 3"=1'-0"  
SILL SHOWN; HEAD SIMILAR



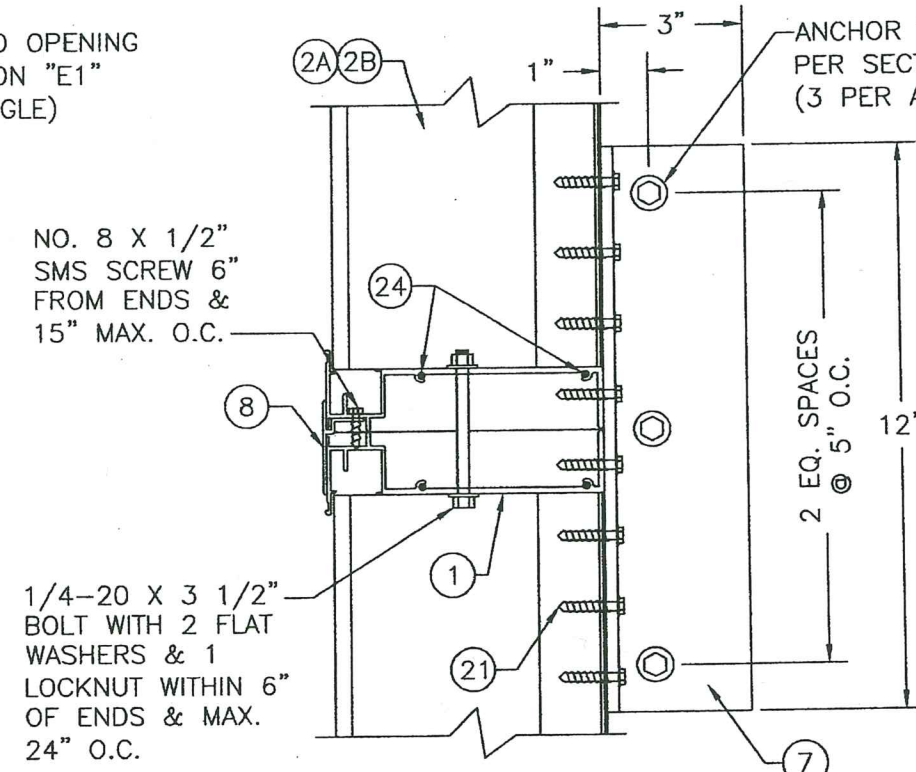
**OPTIONAL SECTION E2**  
SCALE: 3"=1'-0"  
SILL SHOWN; HEAD SIMILAR



**SECTION F1**  
SCALE: 3"=1'-0"

NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.

1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.



**SECTION F2**  
SCALE: 3"=1'-0"

NO. 8 X 1/2" SMS SCREW 6" FROM ENDS & 15" MAX. O.C.

1/4-20 X 3 1/2" BOLT WITH 2 FLAT WASHERS & 1 LOCKNUT WITHIN 6" OF ENDS & MAX. 24" O.C.

ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (3/8" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 3/8" BOLT INTO STEEL)

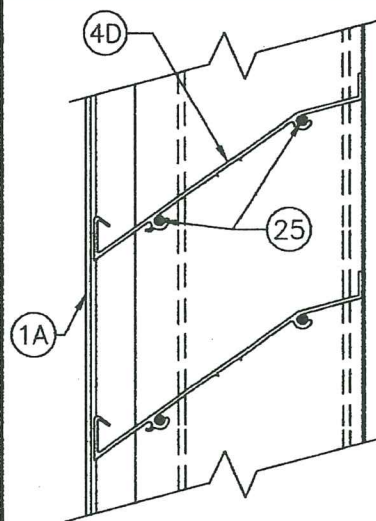
PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 23-0713.09  
Expiration Date 04/22/2029  
By *Heidi A. Miller*  
Miami Dade Product Control

PRODUCT REVISED as complying with the Florida Building Code  
NOA-No. 23-0426.03  
Expiration Date: 04/22/2029  
By: *Manuel Perez*  
Miami Dade Product Control



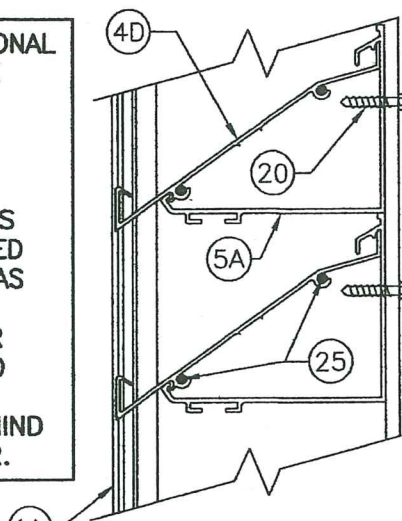
DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 04/03/03
DATE	BY
REVISION DESCRIPTION	NO.
<p><b>MANUFACTURER</b> AMERICAN WARMING &amp; VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000</p> <p><b>CONSULTANTS</b> W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424</p>	
<p><b>DRAWING TITLE</b> LE-32 LOUVER SYSTEM</p>	
DRAWING NO.	REV.
1217	E
SHEET NO.	
6 OF 15	



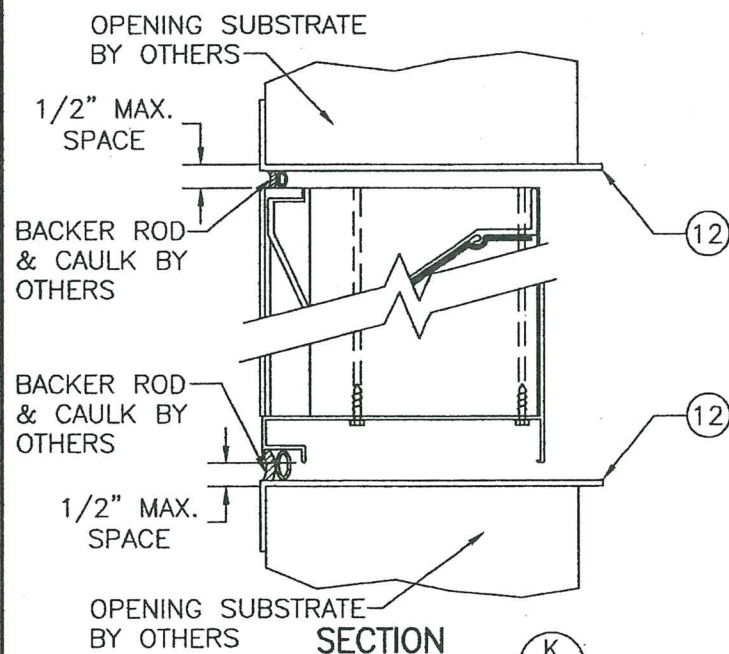


THESE OPTIONAL DETAILS ARE NOT WATER RESISTANT UNLESS ALL BLADE END CONNECTIONS ARE SCREWED & WELDED AS SHOWN ON SHEET 4 OR THE AFD-20 DAMPER IS PLACED BEHIND THE LOUVER.

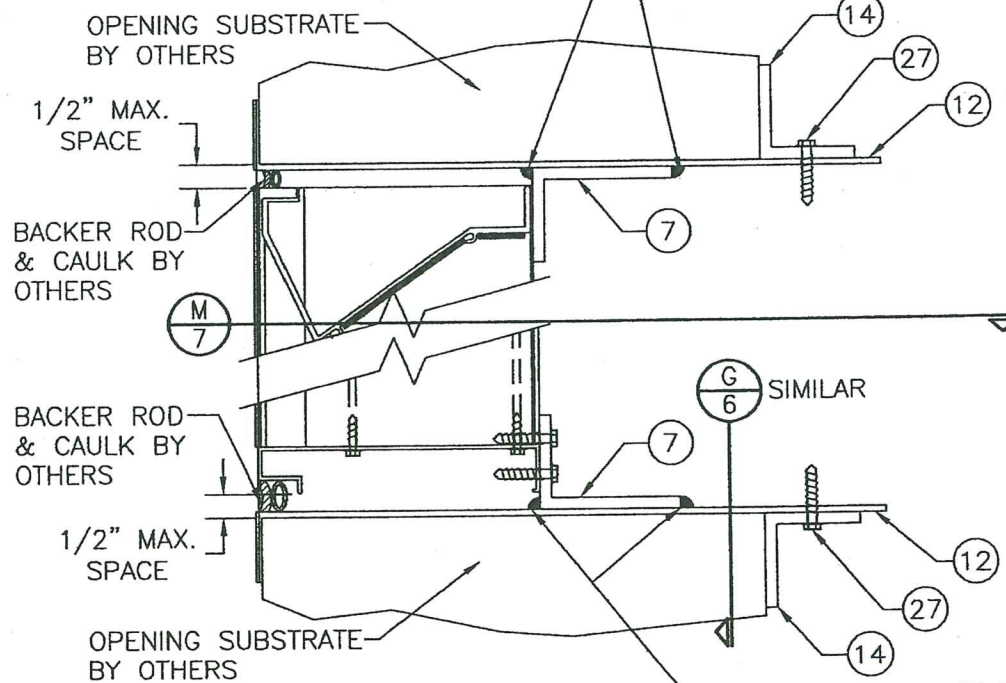
**OPTIONAL BLADE DETAIL WITH SCREWED END CONSTRUCTION (STANDARD LOUVER)**



**OPTIONAL BLADE SUPPORT BRACKET DETAIL WITH SCREWED END CONSTRUCTION**

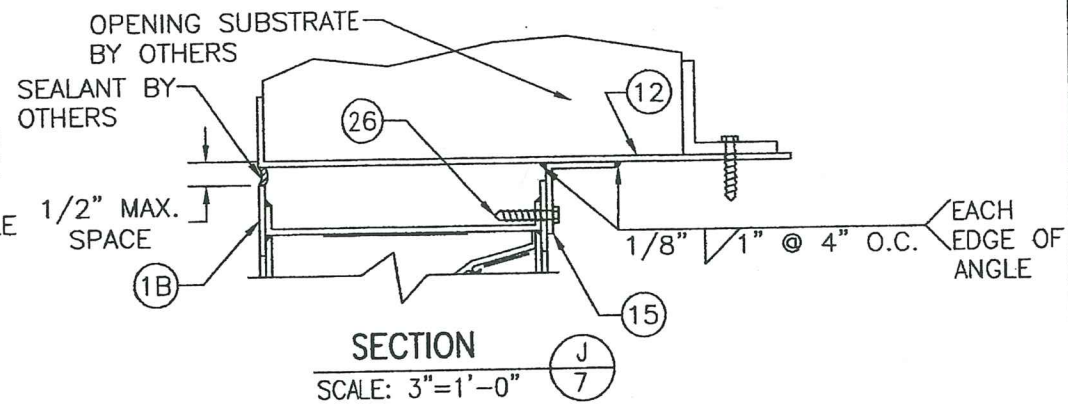
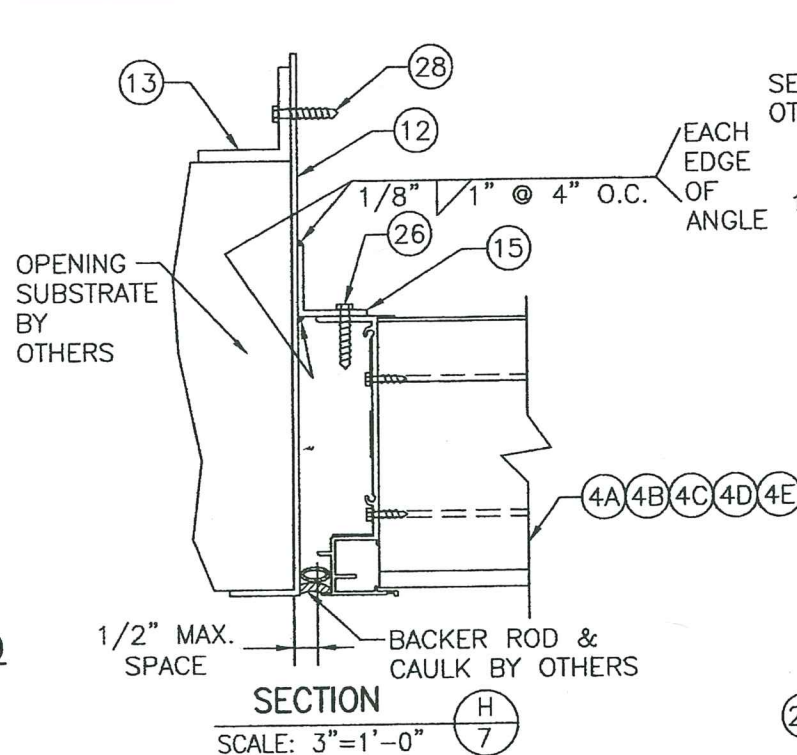


**SECTION K**  
SCALE: 3"=1'-0"  
(SLEEVE MOUNT CONDITION)  
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION A1/4 OR A2/4)

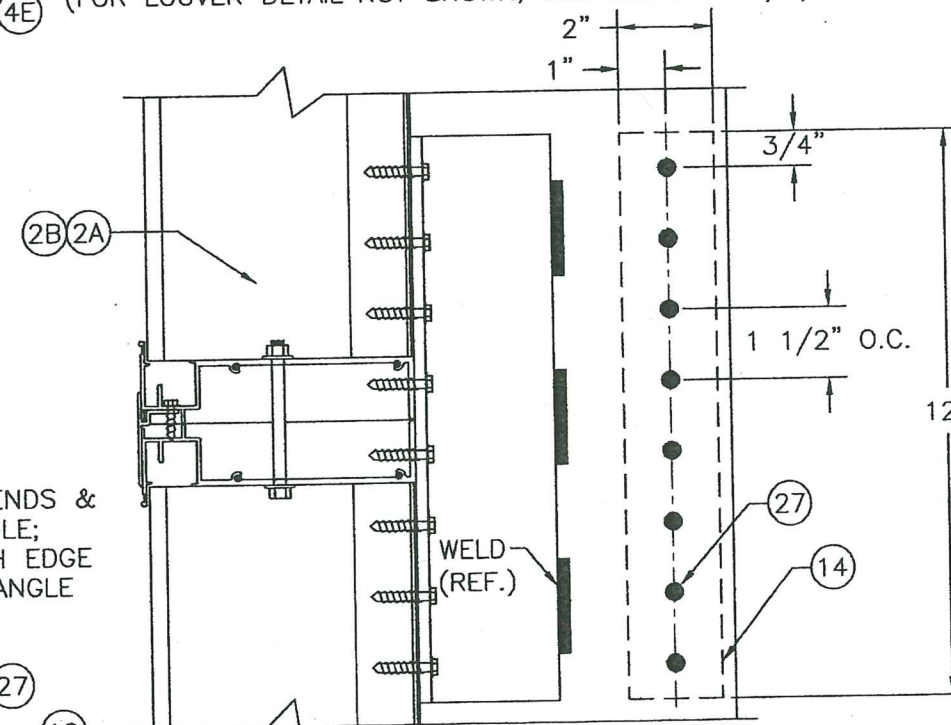


**SECTION M**  
SCALE: 3"=1'-0"  
(SLEEVE MOUNT CONDITION)  
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION E1/6)

**SECTION H**  
SCALE: 3"=1'-0"  
(SLEEVE MOUNT CONDITION)  
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION C1/5)



**SECTION J**  
SCALE: 3"=1'-0"  
(SLEEVE MOUNT CONDITION AT RADIUS)  
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION C5/5)



**SECTION M**  
SCALE: 3"=1'-0"  
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION F1/6)

PART 7 & 15 MAY BE POSITIONED WITH LEG TURNED OUT AS SHOWN IN THESE SECTIONS OR WITH LEG TURNED UNDER THE LOUVER

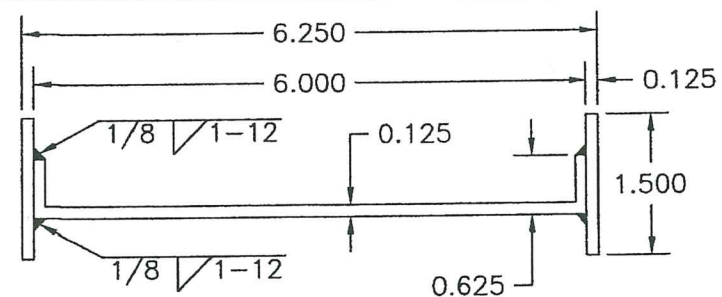
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 23-0713.09  
Expiration Date 04/22/2029  
By *Heidi A. Miller*  
Miami-Dade Product Control

PRODUCT REVISED  
as complying with the Florida  
Building Code  
NOA-No. 23-0426.03  
Expiration Date: 04/22/2029  
By: *Manuel Ferrer*  
Miami-Dade Product Control



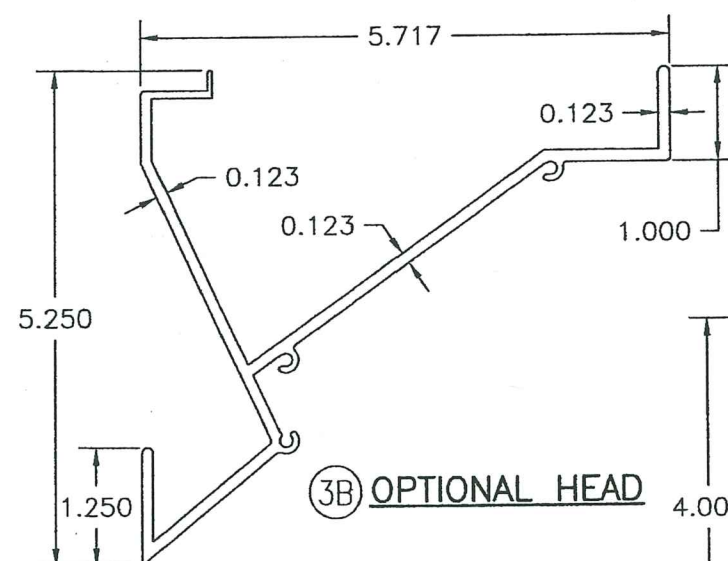
DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 04/03/03
DATE	BY
REVISION DESCRIPTION	NO.
<p><b>LE-32 LOUVER SYSTEM</b></p> <p>MANUFACTURER <b>AMERICAN WARMING &amp; VENTILATING; A DIVISION OF MESTEK, INC.</b> 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000</p> <p>CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424</p>	
DRAWING TITLE	REV.
1217	E
SHEET NO.	7 OF 15





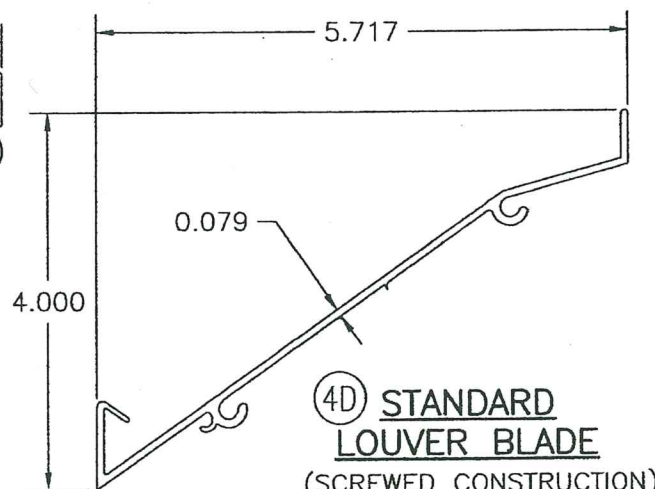
1A STANDARD  
STRAIGHT JAMB

①B RADIUS JAMB



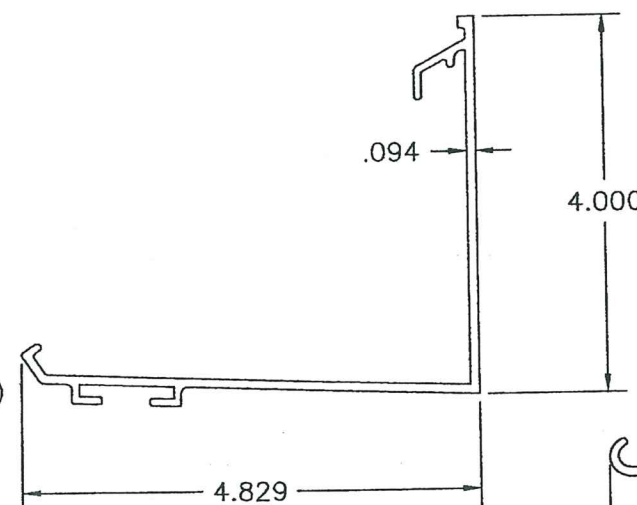
③A HEAD

③B OPTIONAL HEAD

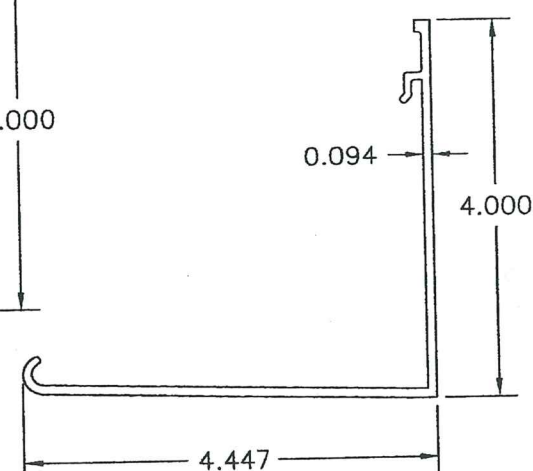


④D STANDARD  
LOUVER BLADE  
(SCREWED CONSTRUCTION)

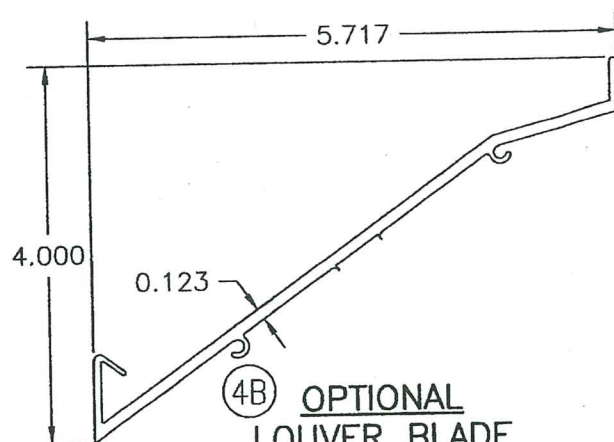
4C WATER RESISTANT  
LOUVER BLADE  
(SCREWED & WELDED CONSTRUCTION)



5A BLADE SUPPORT  
BRACKET  
(SCREWED CONSTRUCTION)

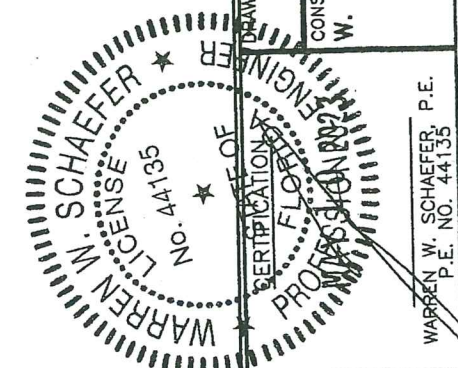


⑤ BLADE SUPPORT  
BRACKET  
(SCREWED & WELDED CONSTRUCTION)



4B OPTIONAL  
LOUVER BLADE  
(SCREWED & WELDED CONSTRUCTION)

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
NOA-No. 23-0426.03  
Expiration Date: 04/22/2029  
By: Manuel Perez  
Miami-Dade Product Control

[illegible]

**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.**  
26376 NADIR ROAD; UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

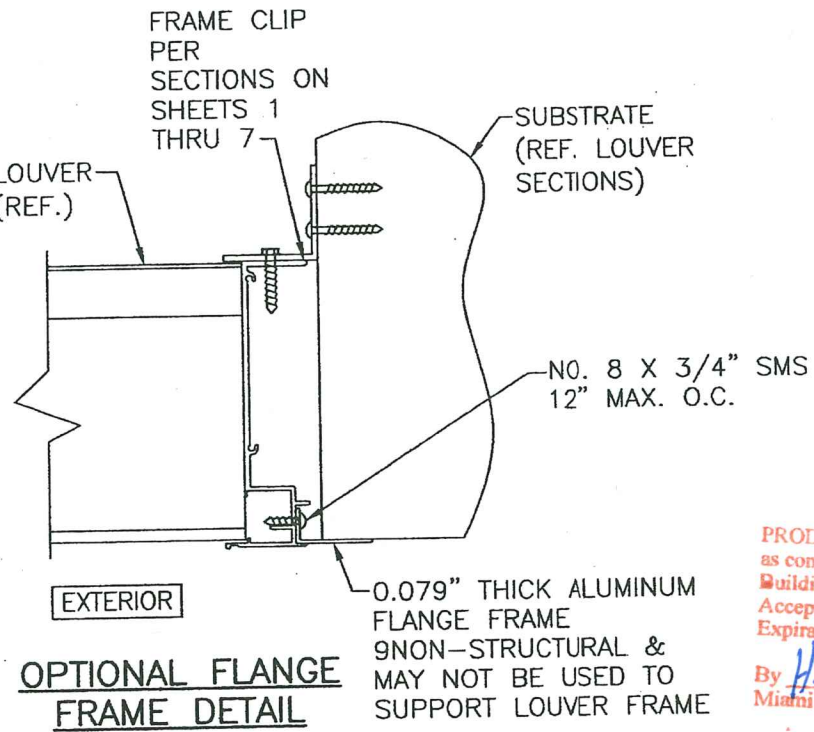
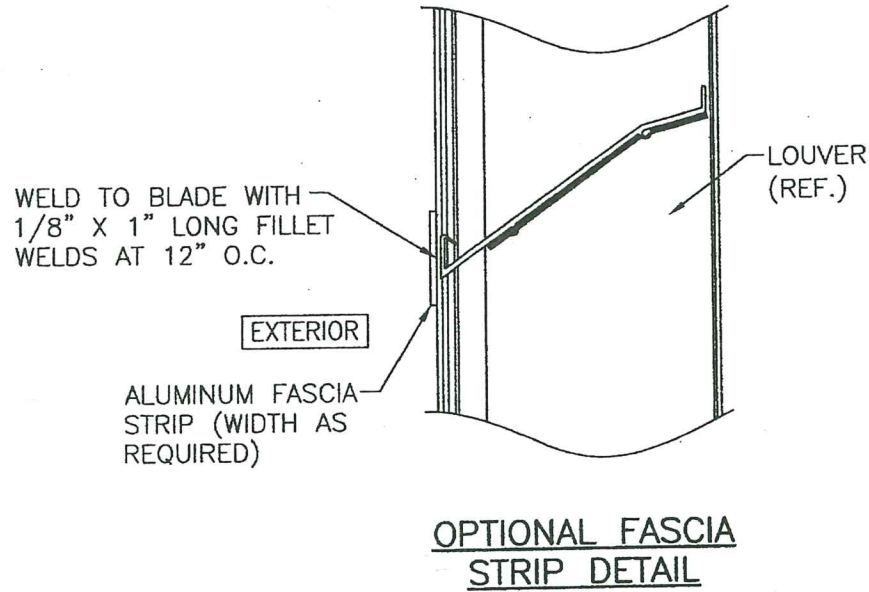
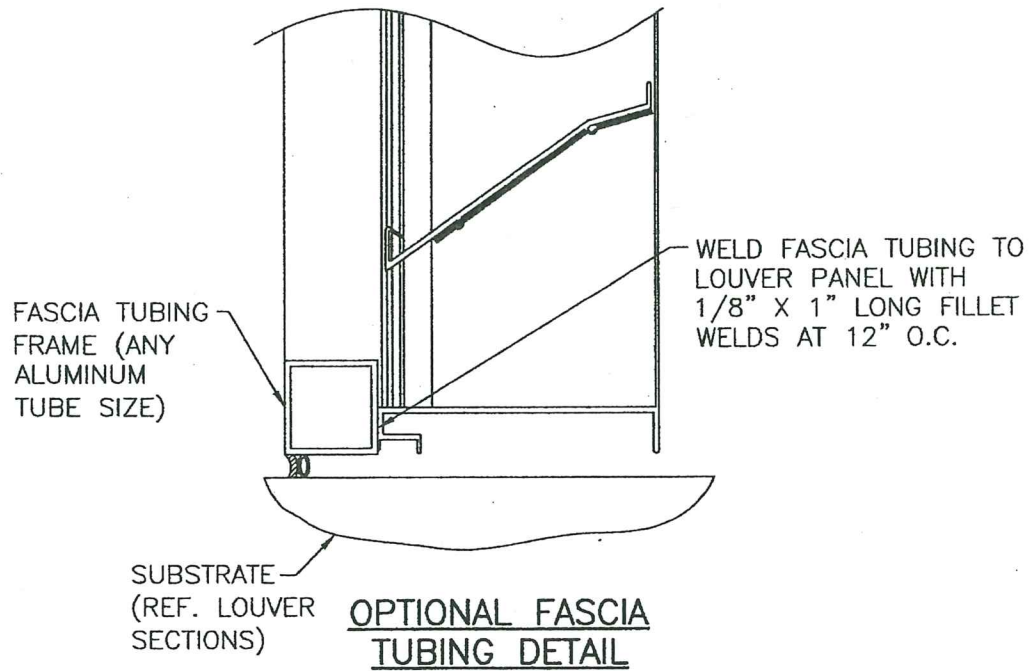
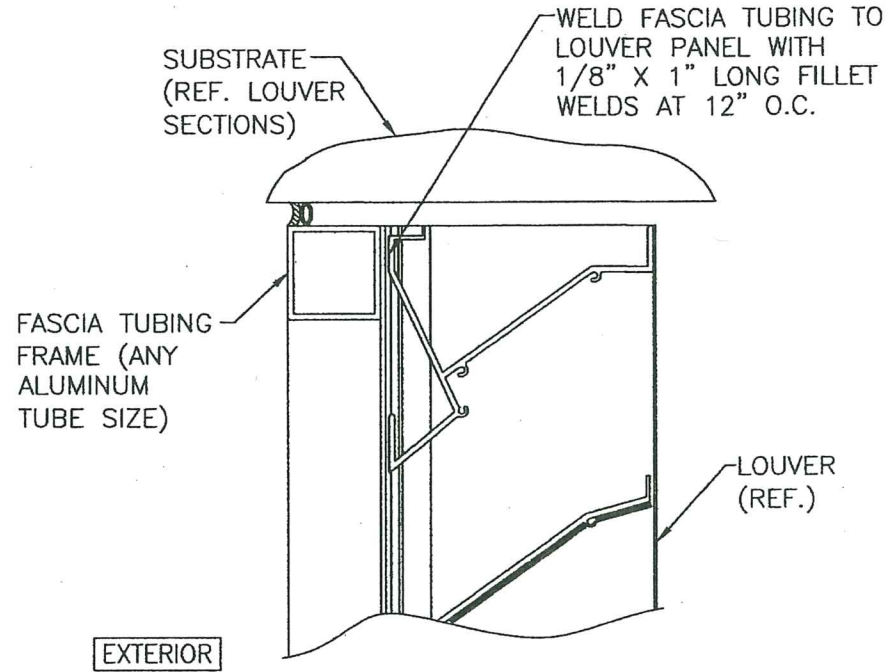
~~WARREN W. SCHAEFER, P.E.~~

DRAWING NO.	REV
1217	E
SHEET NO.	
8 OF 15	









FOR LOUVER DETAILS,  
SEE SHEETS 1-9

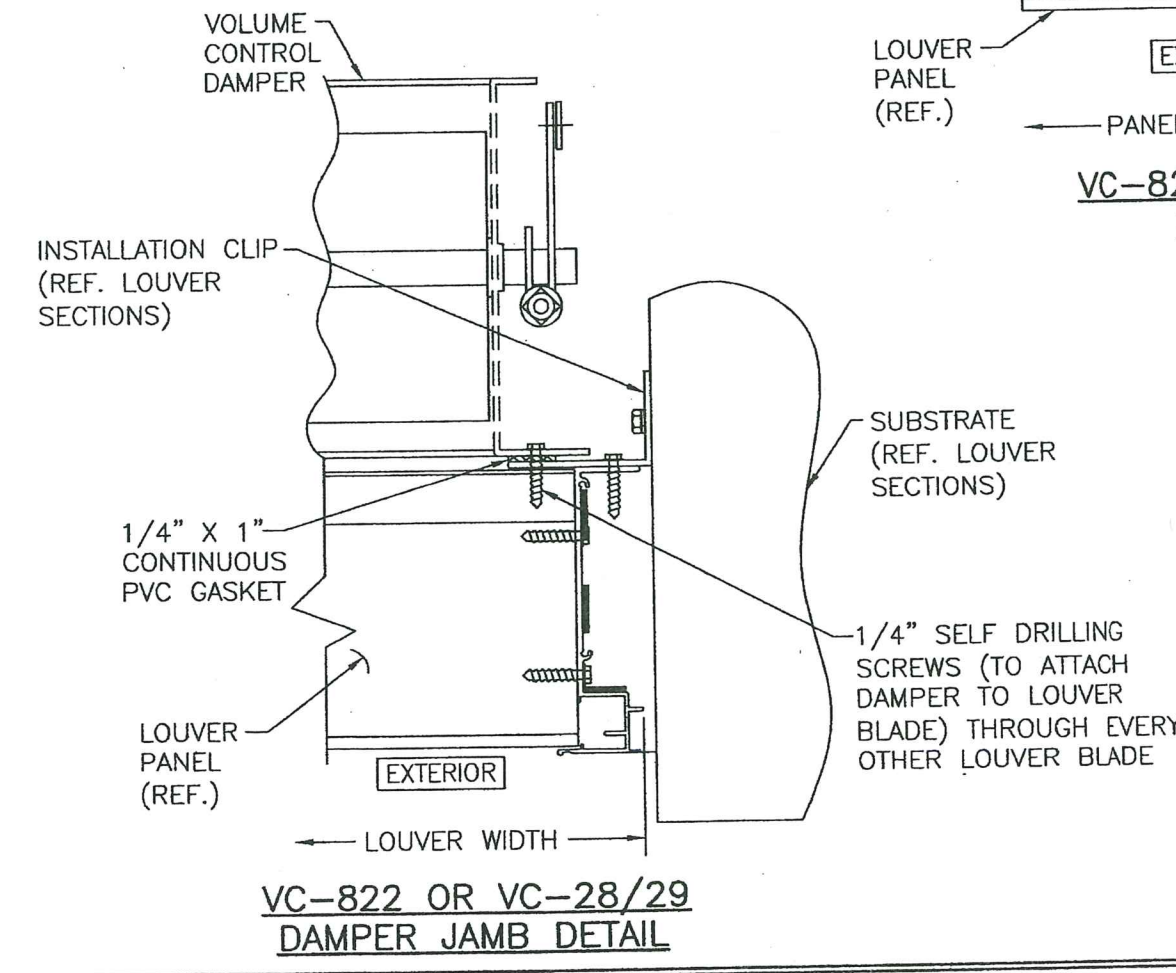
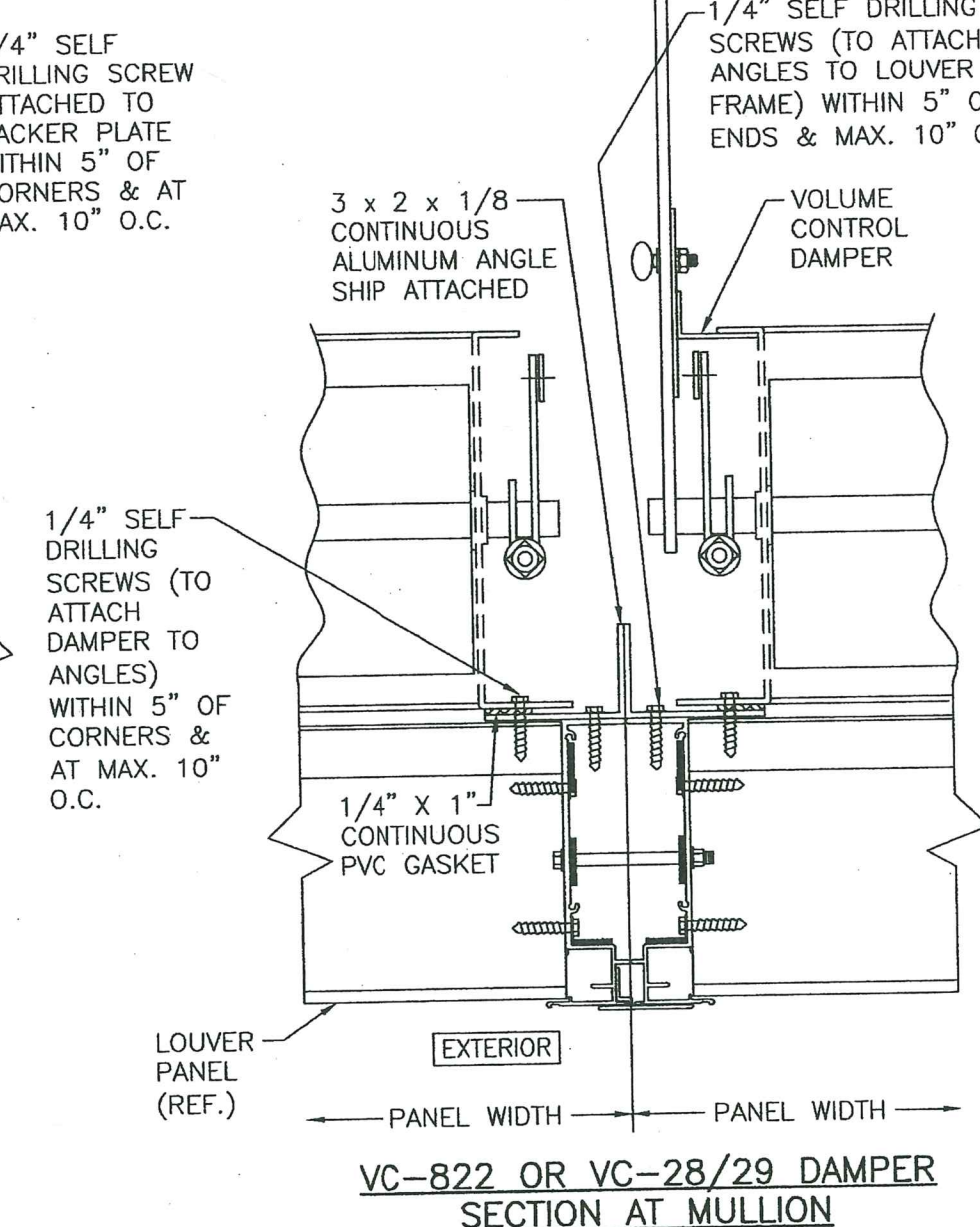
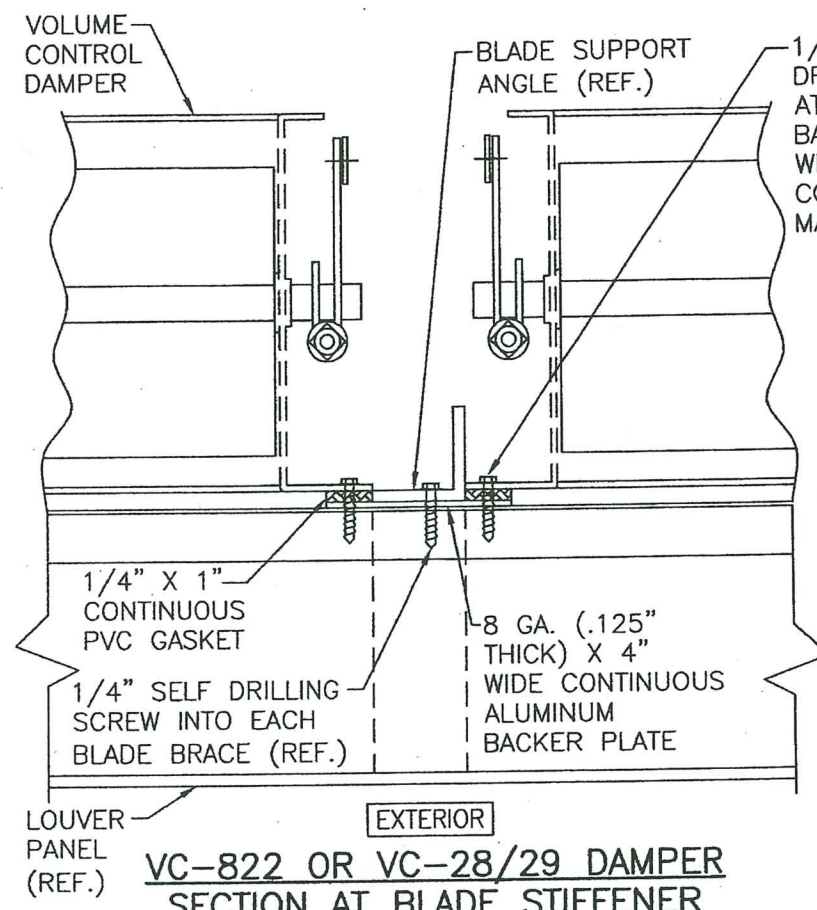
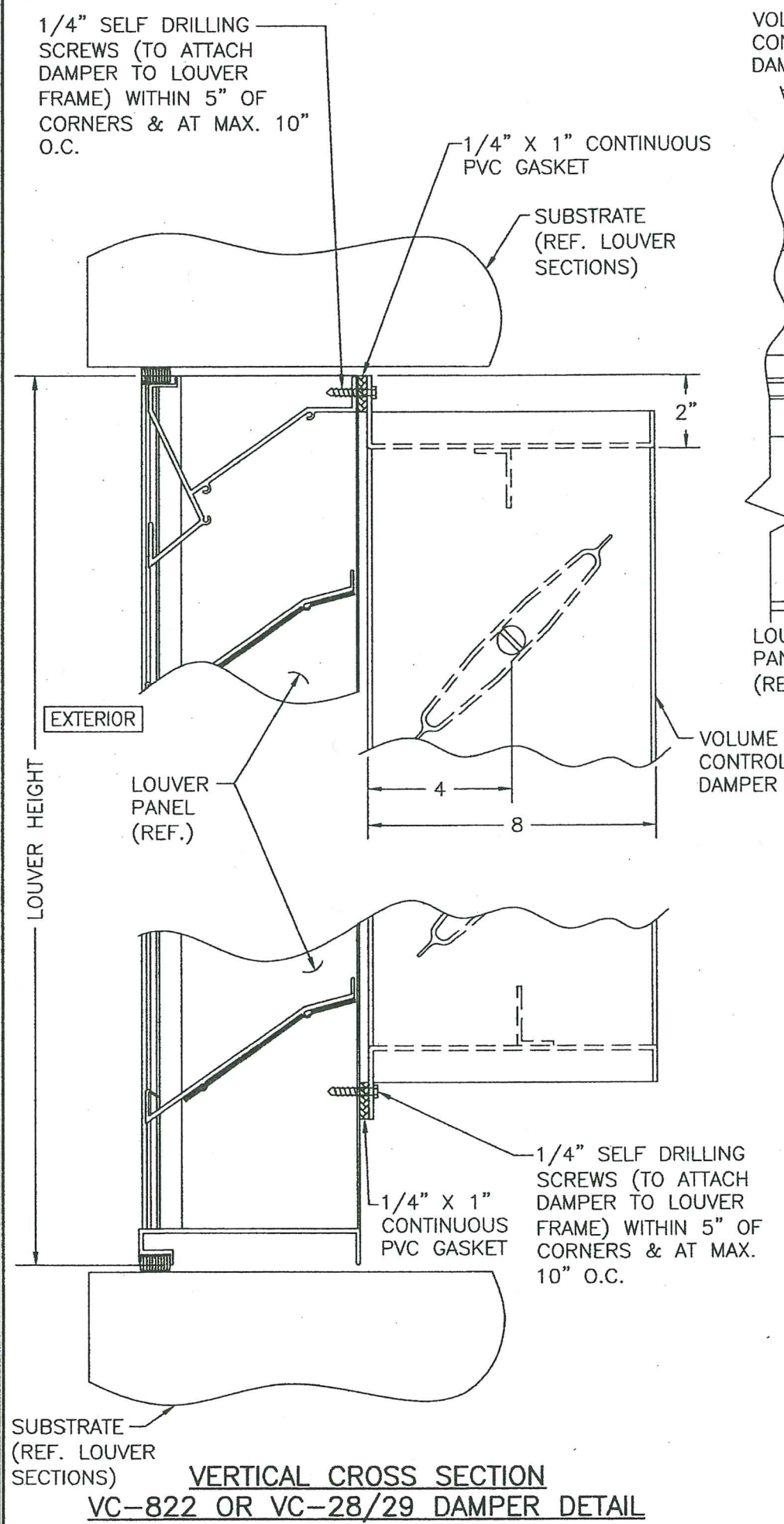
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 23-0713.09  
Expiration Date 04/22/2029  
By: *Heidi A. Miller*  
Miami Dade Product Control

PRODUCT REVISED  
as complying with the Florida  
Building Code  
NOA-No. 23-0426.03  
Expiration Date: 04/22/2029  
By: *Manuel Perez*  
Miami Dade Product Control



DRAWN BY: K.P.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 04/03/03	
DATE	BY	REVISION DESCRIPTION	NO.
<p>DRAWING TITLE: LE-32 LOUVER SYSTEM</p> <p>MANUFACTURER: AMERICAN WARMING &amp; VENTILATING; A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000</p> <p>CONSULTANTS: W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A. 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424</p> <p>PROFESSIONAL ENGINEER: WARREN W. SCHAEFER, P.E. No. 14135</p>			
DRAWING NO. 1217		REV. E	
SHEET NO. 10 OF 15			





FOR LOUVER DETAILS, SEE SHEETS 1-9

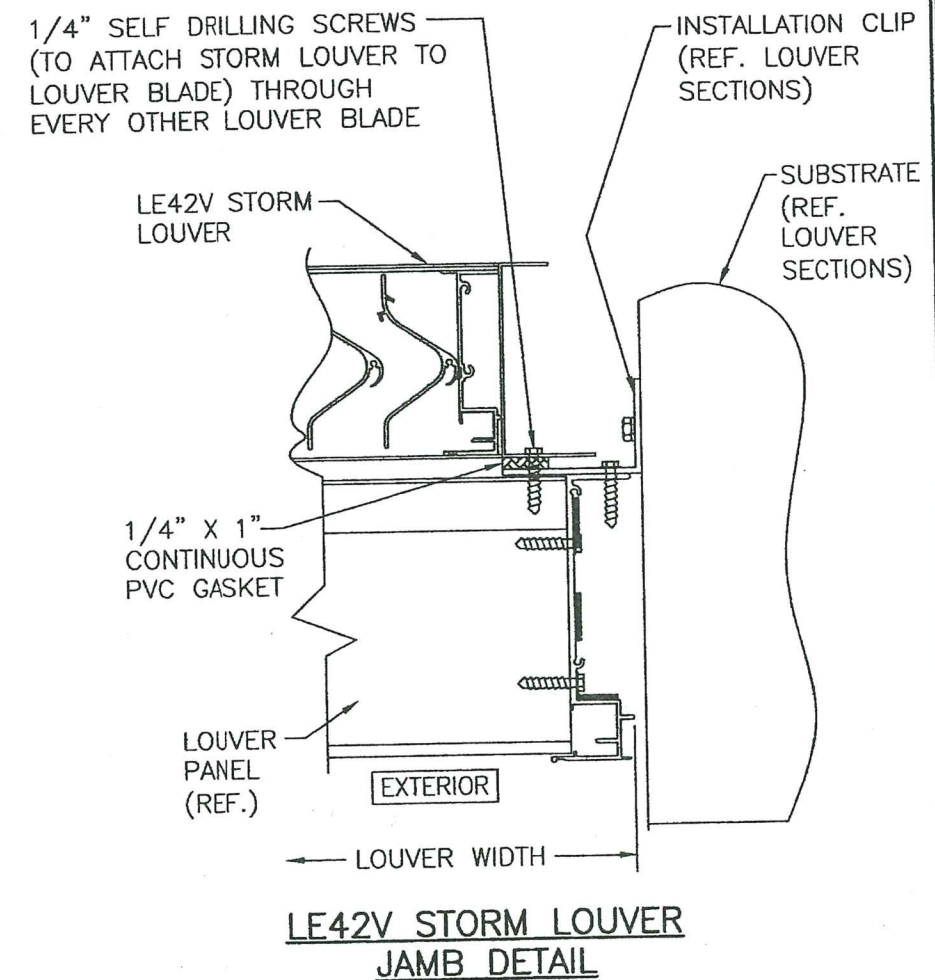
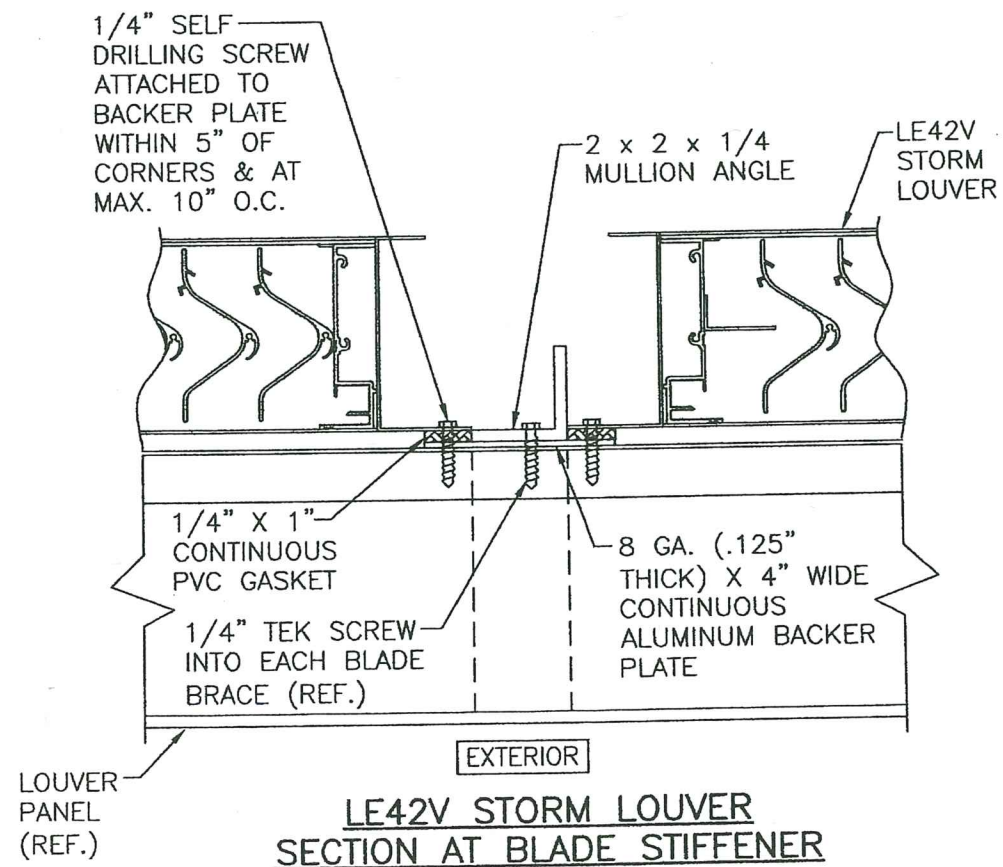
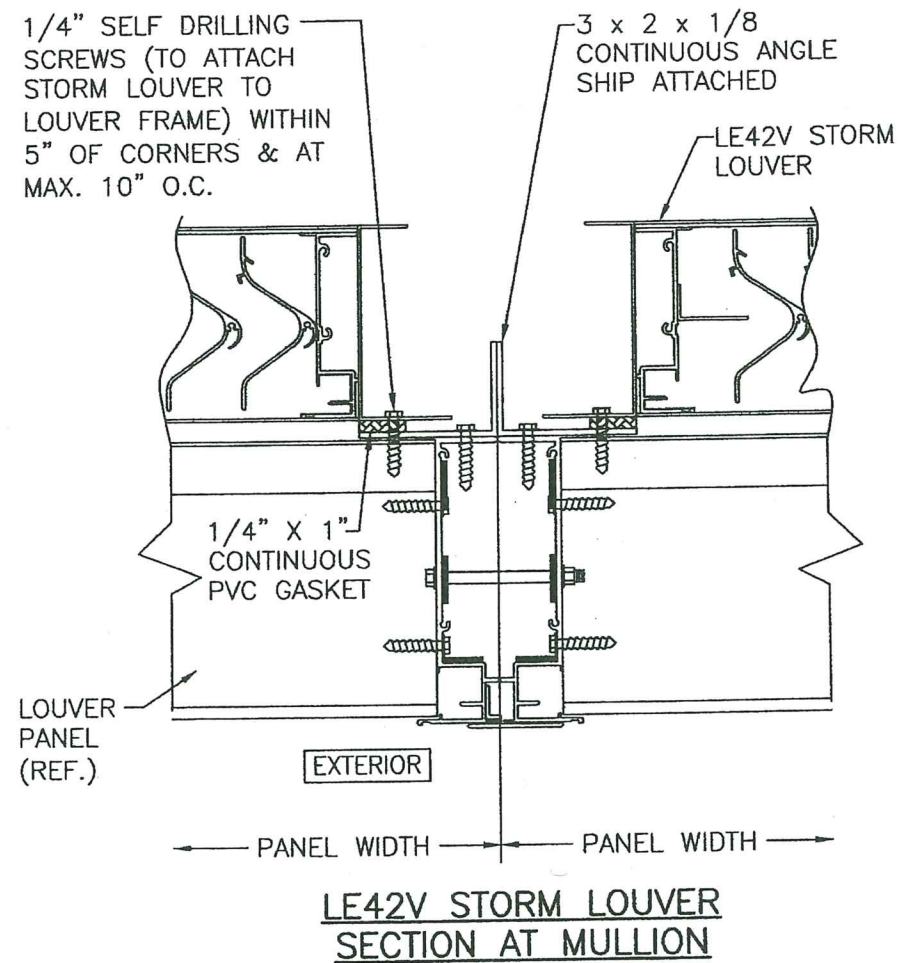
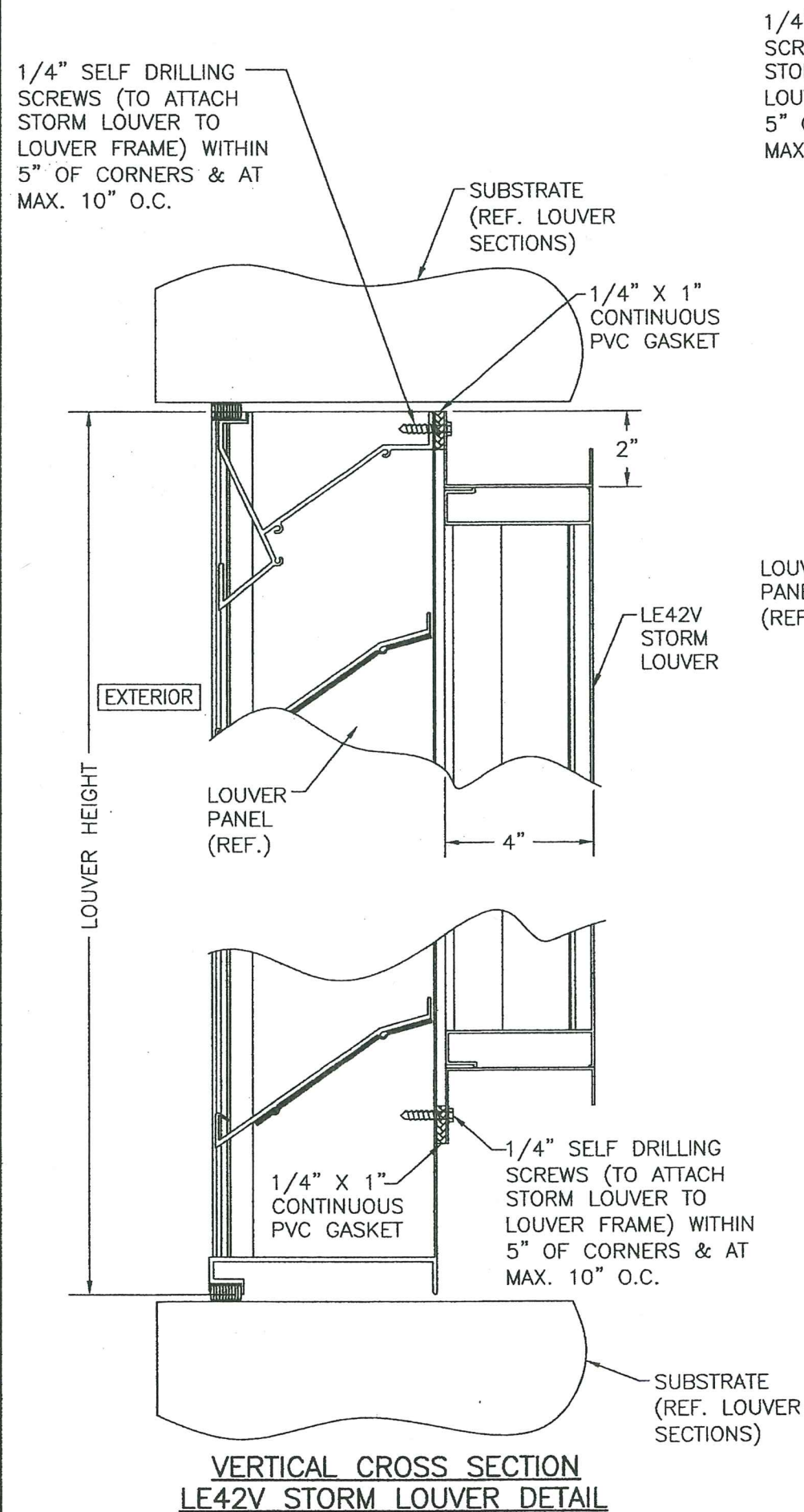
PRODUCT REVISED as complying with the Florida Building Code  
 Building Code 23-0713.09  
 Acceptance No. 04/22/2029  
 Expiration Date 04/22/2029  
 By: *Heidi Miller*  
 Miami-Dade Product Control

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 NOA-No. 23-0426.03  
 Expiration Date: 04/22/2029  
 By: *Manuel Torres*  
 Miami-Dade Product Control



DRAWN BY:	K.P.S.	CHECKED BY:	W.W.S.
PLOT:	1-24	DATE:	04/03/03
NO.		REVISION DESCRIPTION	
DATE		BY	
MANUFACTURER <b>AMERICAN WARMING &amp; VENTILATING;</b> A DIVISION OF MESTEK, INC. 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424			
DRAWING TITLE <b>LE-32 LOUVER SYSTEM</b>			
DRAWING NO.	1217	REV.	E
SHEET NO.	11	OF	15





FOR LOUVER DETAILS,  
SEE SHEETS 1-9

PRODUCT REVISED  
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Building Code  
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Expiration Date 04/22/2029  
By: Hels A. M. W.  
Miami-Dade Product Control

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Expiration Date: 04/22/2029  
By: Manuel Perez  
Miami-Dade Product Control

DRAWING NO.		REV.	
1217		E	
SHEET NO.			
12 OF 15			



1/4" SELF DRILLING  
SCREWS (TO ATTACH  
TRANSITION SLEEVE TO  
LOUVER FRAME) WITHIN  
5" OF CORNERS & AT  
MAX. 10" O.C.

SUBSTRATE  
(REF. LOUVER  
SECTIONS)

1/4" X 1"  
CONTINUOUS  
PVC GASKET

1/4" SELF DRILLING  
SCREWS (TO ATTACH  
TRANSITION SLEEVE TO  
LOUVER FRAME) WITHIN  
5" OF CORNERS & AT  
MAX. 10" O.C.

3 x 2 x 1/8  
CONTINUOUS ANGLE  
SHIP ATTACHED

DUCT TRANSITION  
SLEEVE FOR  
CONNECTION OF  
DUCTS TO  
LOUVER FRAME

1/4" SELF DRILLING SCREWS  
(TO ATTACH TRANSITION  
SLEEVE TO LOUVER BLADE)  
THROUGH EVERY OTHER  
LOUVER BLADE

DUCT TRANSITION SLEEVE  
FOR CONNECTION OF DUCTS  
TO LOUVER FRAME

INSTALLATION  
CLIP (REF.  
LOUVER  
SECTIONS)

SUBSTRATE  
(REF.  
LOUVER  
SECTIONS)

1/4" X 1"  
CONTINUOUS  
PVC GASKET

LOUVER  
PANEL  
(REF.)

EXTERIOR

LOUVER WIDTH

DUCT TRANSITION  
SLEEVE JAMB DETAIL

FOR LOUVER DETAILS,  
SEE SHEETS 1-9

PRODUCT REVISED  
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Building Code  
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By *H. G. A. Miller*  
Miami-Dade Product Control

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CONSULTANTS  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
26376 NADIR ROAD, UNIT 309  
PUNTA GORDA, FL 33983  
PHONE: 561-744-3424

WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. 1217  
SHEET NO. 13 OF 15

LOUVER HEIGHT

EXTERIOR

LOUVER  
PANEL  
(REF.)

VARIES

DUCT TRANSITION  
SLEEVE FOR  
CONNECTION OF  
DUCTS TO  
LOUVER FRAME

LOUVER  
PANEL  
(REF.)

PANEL WIDTH

PANEL WIDTH

DUCT TRANSITION SLEEVE  
SECTION AT MULLION

2 x 2 x 1/4  
MULLION ANGLE

DUCT TRANSITION  
SLEEVE FOR  
CONNECTION OF  
DUCTS TO  
LOUVER FRAME

1/4" SELF DRILLING  
SCREW ATTACHED TO  
BACKER PLATE WITHIN  
5" OF CORNERS &  
AT MAX. 10" O.C.

1/4" X 1"  
CONTINUOUS  
PVC GASKET

1/4" SELF DRILLING  
SCREW INTO EACH  
BLADE BRACE (REF.)

8 GA. (.125"  
THICK) X 4" WIDE  
CONTINUOUS  
ALUMINUM BACKER  
PLATE

EXTERIOR

LOUVER  
PANEL  
(REF.)

DUCT TRANSITION SLEEVE  
SECTION AT BLADE STIFFENER

VERTICAL CROSS SECTION  
DUCT TRANSITION SLEEVE DETAIL

SUBSTRATE  
(REF.  
LOUVER  
SECTIONS)

1/4" X 1"  
CONTINUOUS  
PVC GASKET

1/4" SELF DRILLING  
SCREWS (TO ATTACH  
TRANSITION SLEEVE TO  
LOUVER FRAME) WITHIN 5"  
OF CORNERS & AT MAX.  
10" O.C.







