



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 372-6339

NOTICE OF ACCEPTANCE (NOA)

www.maimidade.gov/buildingcode

Arrow United Industries
314 Riverside Drive P.O. Box 69
Wyalusing , PA 18853

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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 EAV-66, 6" Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. **1504**, titled "EAV-66 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/06, with last revision dated 07/14/08, prepared by W. W. Schaefer Engineering and 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 expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state 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 # 06-1211.03** and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



[Signature]
 10/14/08

NOA No. 08-0904.01
Expiration Date: March 15, 2012
Approval Date: November 6, 2008
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1504**, titled "EAV-66 Vertical Louver System", sheets 1 through 9 of 9, dated 10/18/06, with last revision dated 07/14/08, prepared by W. W. Schaefer Engineering and consulting, P.A., signed and sealed, by Warren W. Schaefer, P.E.

B. TESTS

1. Test report on Large Missile Impact Test per TAS 201, Cyclic Wind Pressure Test per TAS 203 and Uniform Static Air Pressure Test per TAS 202 of an EAV-66 Aluminum Louver System, prepared by Hurricane Test Laboratories, LLC, Report No. **0198-0712-06**, dated 11/07/06, signed and sealed by Vinu J. Abraham, P.E. *"Submitted under NOA # 06-1211.03"*
2. Test report on Large Missile Test (Level E) and on Cyclic Load Test per ASTM 1886/1996 of an **EAV-66 Aluminum Louver System**, prepared by Hurricane Test Laboratories LLC., Report # **0198-0109-07**, dated 03/08/07, signed and sealed by Vinu J. Abraham, P.E.
3. Test report on Wind Driven Rain Test per TAS 100(A) of an EAV-66 Aluminum Louver with AFD-20 Damper, prepared by PRI Construction Materials Technologies, LLC, Report No. **AWV-006-02-01**, dated 02/07/08, Duc T. Nguyen, P.E.
4. Test report on Wind Driven Rain Test per TAS 100(A) of an EAV-66 Aluminum Louver with AC-525, prepared by PRI Construction Materials Technologies, LLC, Report No. **AWV/AUI-006-02-01**, dated 02/14/08, Duc T. Nguyen, P.E.

C. CALCULATIONS

1. Anchorage calculations, 13 pages for Arrow United Industries, **Model EAV-66** Vertical Louver, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed on 11/07/06 by Warren W. Schaefer, P.E. *"Submitted under NOA # 06-1211.03"*
2. 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 07/22/08, prepared by W.W. Schaefer Engineering and Consulting P.A., signed and sealed by Warren W. Schaefer, P.E.

 10/14/08

Carlos M. Utrera, P.E.

Product Control Examiner
NOA No. 08-0904.01

Expiration Date: March 15, 2012
Approval Date: November 6, 2008

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Letter dated 11/06/2006 from W.W. Schaefer Engineering and Consulting P.A., stating that the product EAV-66 Vertical Louver System conforms to the 2004 Florida Building Code, signed and sealed by Warren W. Schaefer, P.E.
2. No financial interest letter from W.W. Schaefer Engineering and Consulting P.A., dated 11/08/06, signed and sealed by Warren W. Schaefer, P.E.
"Submitted under NOA # 06-1211.03"
1. Statement letter of code conformance issued by W.W. Schaefer Engineering and Consulting P.A., dated 07/23/08, signed and sealed by Warren W. Schaefer, P.E.

G. OTHER

1. Notice of Acceptance No. **06-1211.03**, issued to Arrow United Industries, approved on 03/15/07 and expiring on 03/15/12.



10/14/08

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 08-0904.01

Expiration Date: March 15, 2012
Approval Date: November 6, 2008

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: ARROW UNITED INDUSTRIES
WYALUSING, PA
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.
- INDIVIDUAL PANEL WIDTHS ARE UNLIMITED IN DIMENSION. PANEL HEIGHTS ARE LIMITED BY THE DIMENSIONS SHOWN IN THE ELEVATIONS.
- 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.
- 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.
- THESE LOUVERS ARE NOT TESTED FOR WATER INFILTRATION RESISTANCE, THEREFORE THE LOUVERS ARE 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.
- 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.
- 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.
- 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

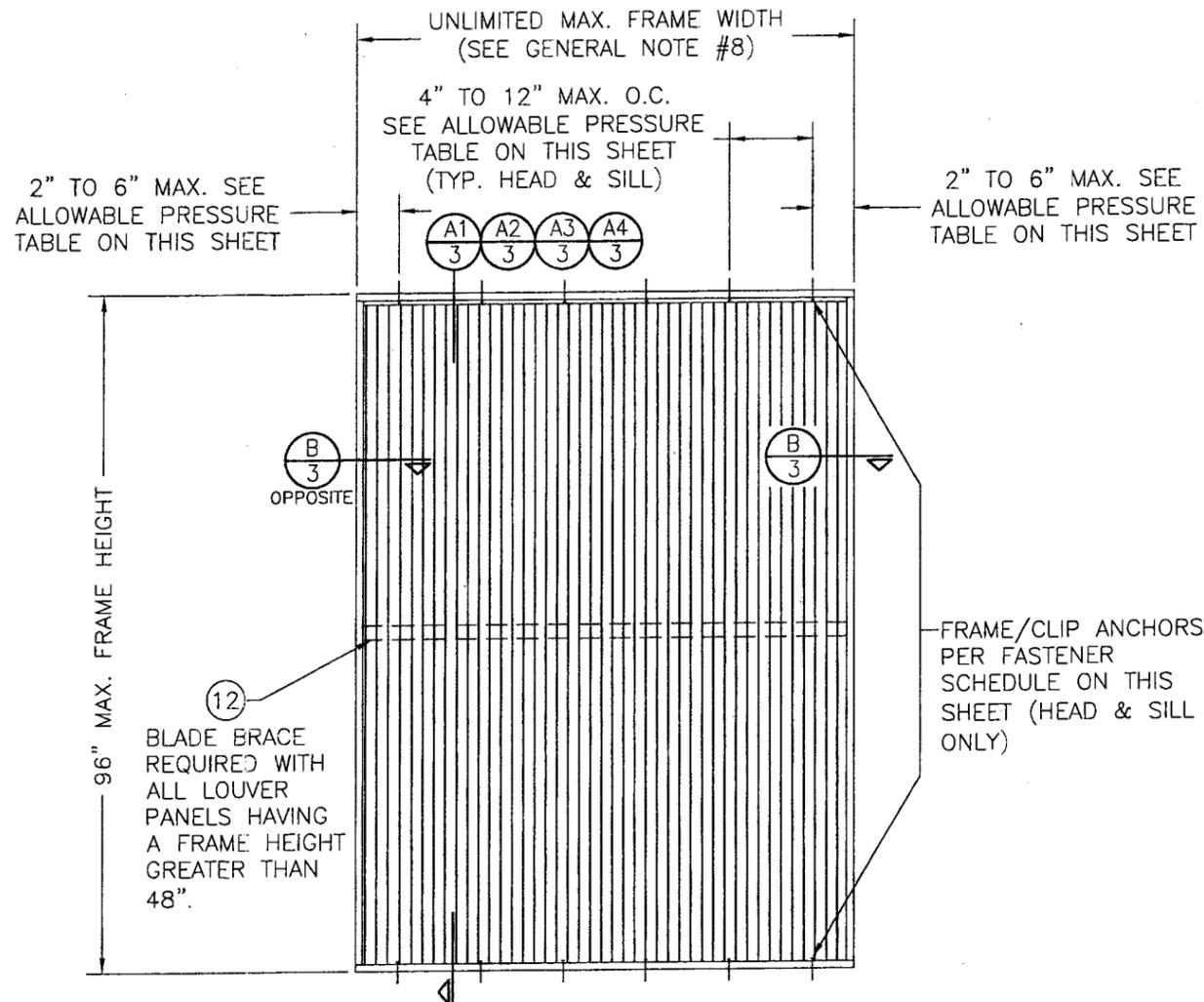
ANCHOR TYPE	(4) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 1/4"	3/4"
(5) NO. 10-16 SELF TAPPING/DRILLING SCREW	METAL STUD	FULL	3/4"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/4"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(5) 1/4-20 OR 1/4-14 SELF TAPPING/DRILLING SCREW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

- CONCRETE SCREWS SHALL BE ITW RAMSET RED HEAD, ELCO TAPCONS, POWERS RAWL TAPPER, OR HILTI KWIK-CON II. (HARDENED STEEL OR S.S. PER AISI 1021 & 410)
- BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- SMS WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI
- 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.

(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

- 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.
- FOR ALLOWABLE PRESSURE ON DAMPERS, SEE SHEET 5 OR 7.

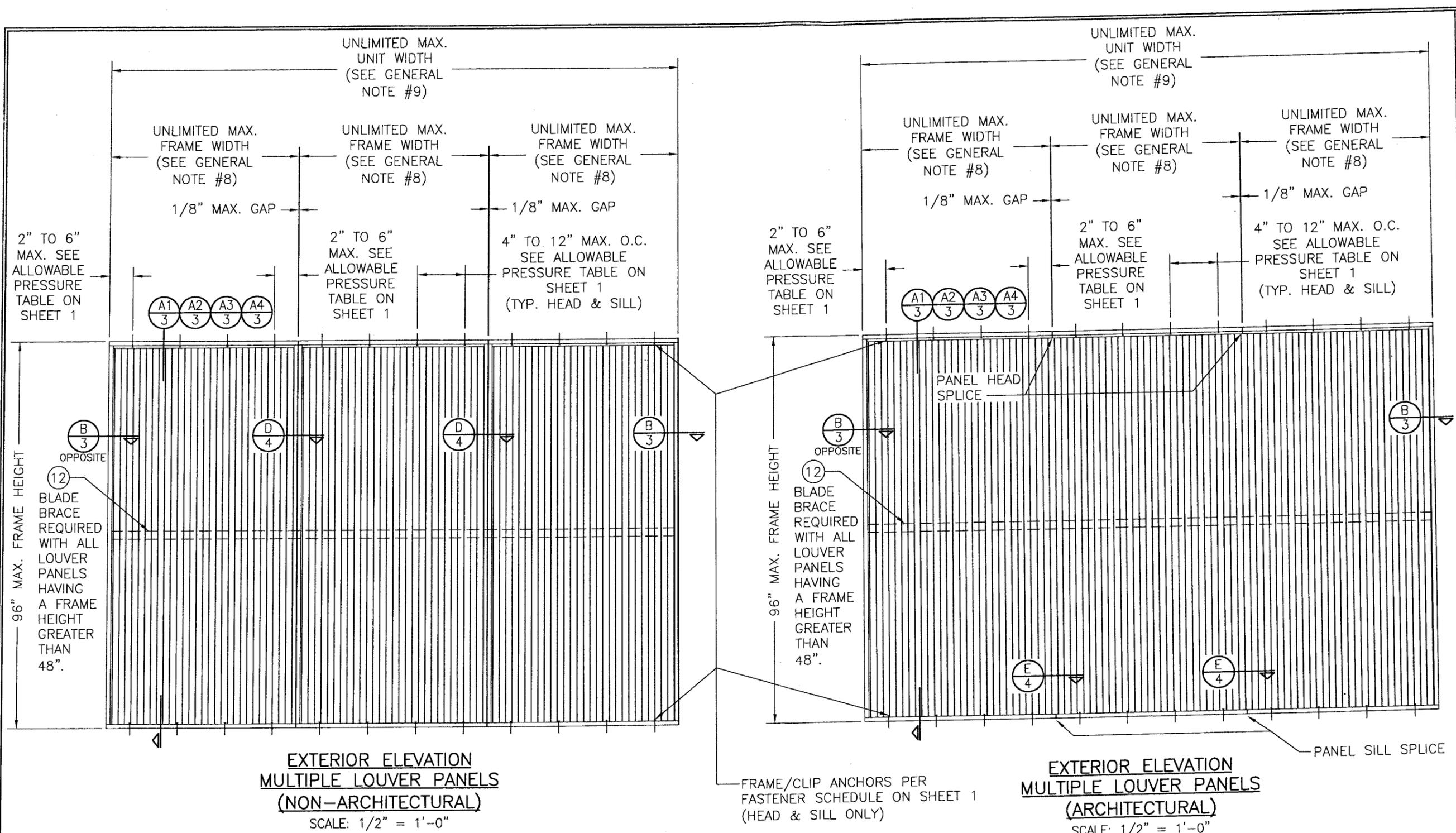


**EXTERIOR ELEVATION
SINGLE LOUVER PANEL
(ARCHITECTURAL & NON-ARCHITECTURAL)**

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

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/06	
NO.	REVISION DESCRIPTION	DATE	BY
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	07/14/08	W.W.S.
DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM			
MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. NO. 44135			
DRAWING NO. 1504		REV. A	
SHEET NO. 1 OF 9			

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No **08-0904-01**
Expiration Date **03/13/2012**
By *[Signature]*
Miami Dade Product Control Division



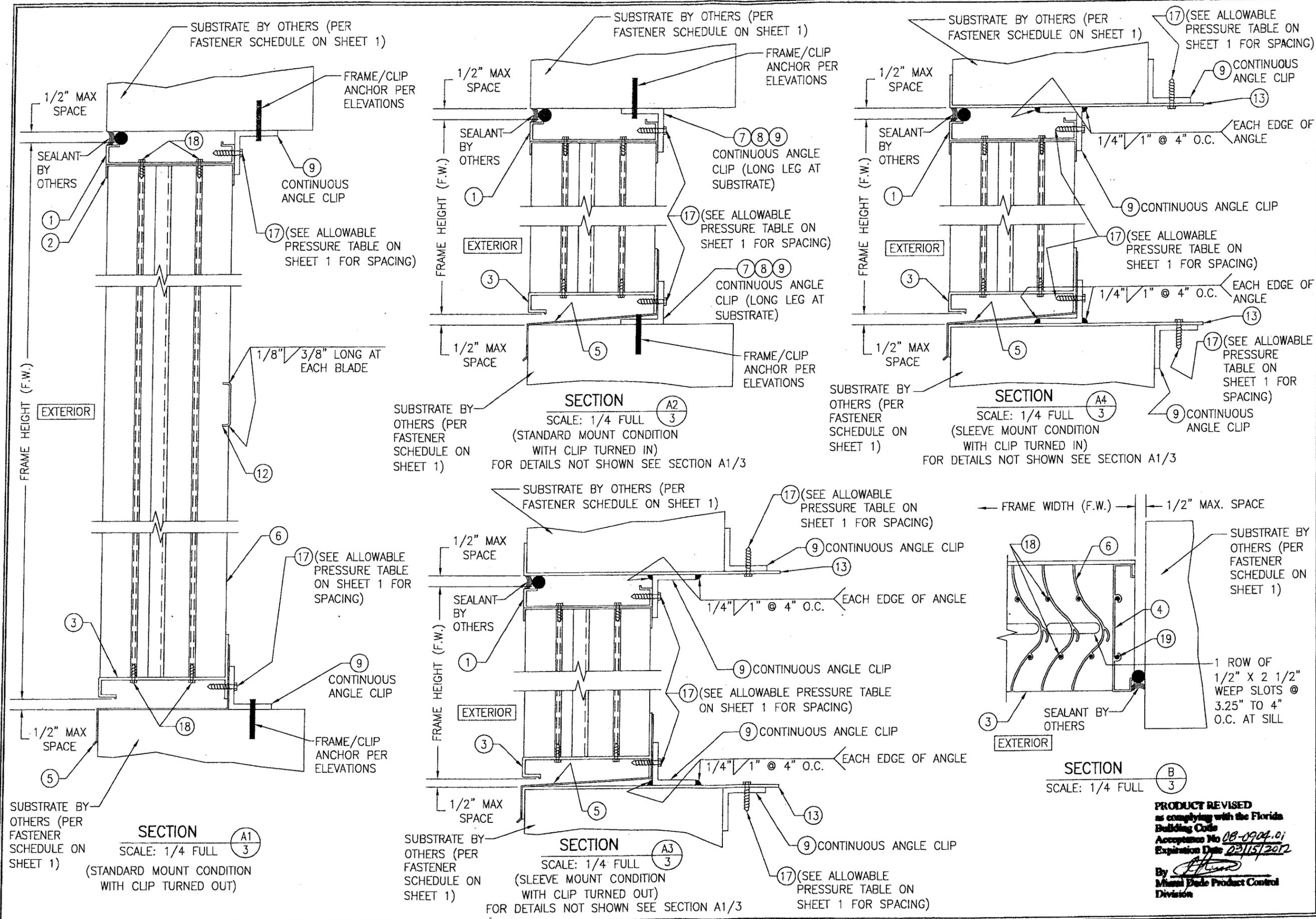
**EXTERIOR ELEVATION
MULTIPLE LOUVER PANELS
(NON-ARCHITECTURAL)**
SCALE: 1/2" = 1'-0"

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

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

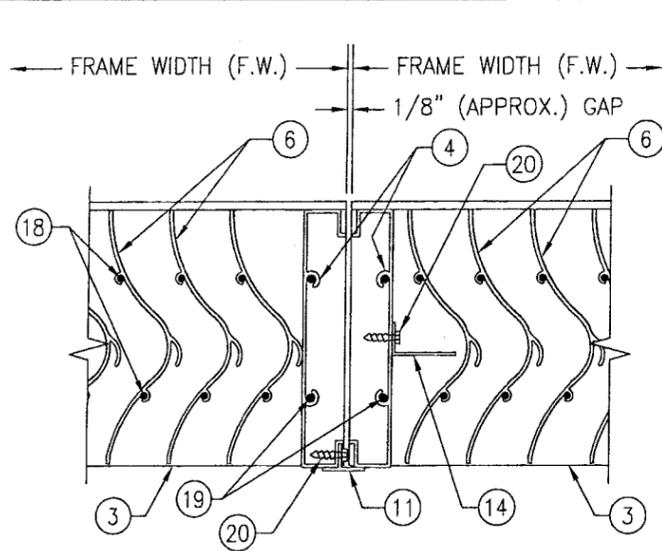
PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No *DB-0904.01*
Expiration Date *03/15/2012*
By *[Signature]*
Miami Dade Product Control Division

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/18/06	
NO.	REVISION DESCRIPTION	BY	DATE
DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888			
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1504		REV. A	
SHEET NO. 2 OF 9			

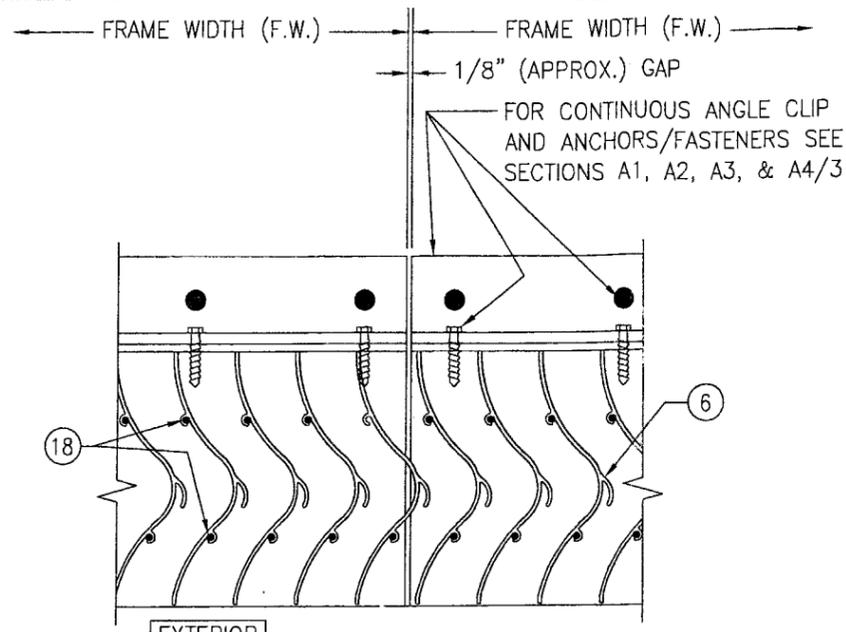


DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 10/18/06
BY	DATE
REVISION DESCRIPTION	
NO.	
DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM	
MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8885 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1504	REV. A
SHEET NO. 3 OF 9	

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No **08-0904.01**
Expiration Date **02/15/2012**
By *[Signature]*
Miami Dade Product Control
Division

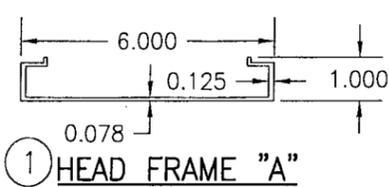


SECTION D
SCALE: 1/4 FULL

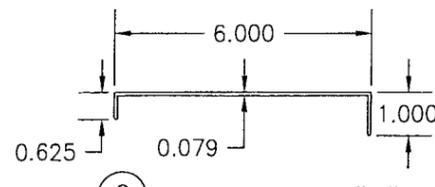


SECTION E
SCALE: 1/4 FULL

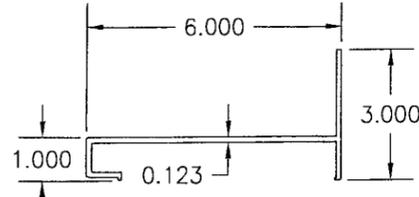
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD FRAME "A"	6063-T6 ALUMINUM
2	HEAD FRAME "B"	6063-T5 ALUMINUM
3	SILL FRAME	6063-T6 ALUMINUM
4	JAMB	6063-T6 ALUMINUM
5	SILL PAN	5052-H32 ALUMINUM
6	VERTICAL BLADE	6063-T6 ALUMINUM
7	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
8	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
9	CONTINUOUS MOUNTING CLIP	6063-T5 ALUMINUM
10	OPTIONAL FRAME FLANGE	6063-T52/T6 ALUMINUM
11	MULLION COVER	6063-T52/T6 ALUMINUM
12	BLADE RETAINER CHANNEL	5052-H32 ALUMINUM
13	MOUNTING SLEEVE	5052-H32 ALUMINUM
14	SIGHT-PROOF ANGLE	6063-T5 ALUMINUM
MISC. FASTENERS		
17	NO. 14 X 1 1/4" 410 SS TEK SCREW	FOR SPACING REQUIREMENTS SEE ALLOWABLE PRESSURE TABLE ON SHEET 1
18	NO. 8 X 1" 18-8 SS SMS SCREW	2 PER BLADE END
19	1/4" X 1" 410 S.S. SELF TAPPING SCREW	2 PER FRAME CORNER
20	NO. 8 X 3/4" 18-8 SS SMS SCREW	2" FROM ENDS & 15" O.C.



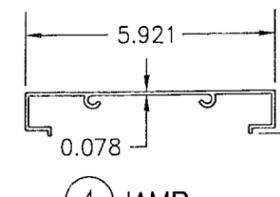
1 HEAD FRAME "A"



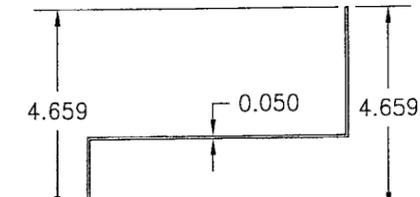
2 HEAD FRAME "B"



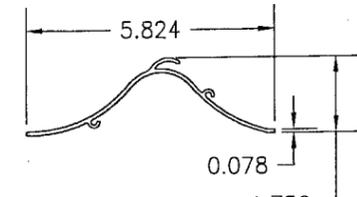
3 SILL FRAME



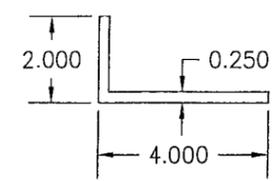
4 JAMB



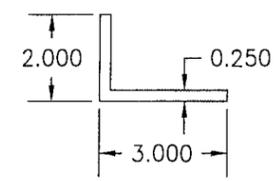
5 SILL PAN



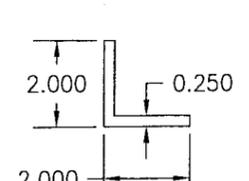
6 VERTICAL BLADE



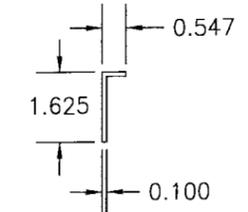
7 CONTINUOUS MOUNTING CLIP



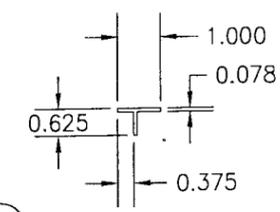
8 CONTINUOUS MOUNTING CLIP



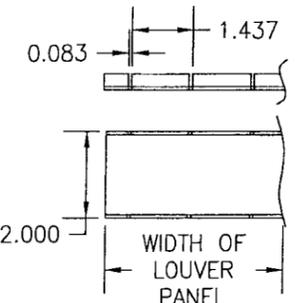
9 CONTINUOUS MOUNTING CLIP



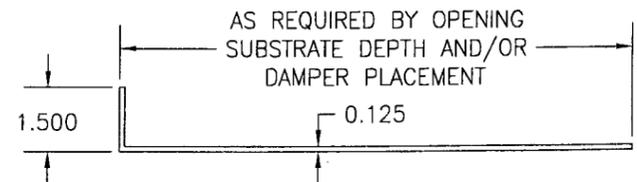
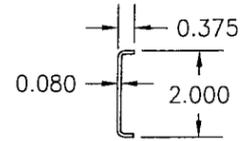
10 OPTIONAL FRAME FLANGE



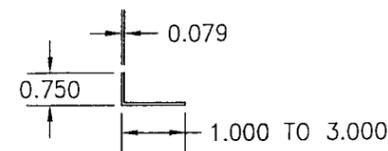
11 MULLION COVER



12 BLADE RETAINER CHANNEL



13 MOUNTING SLEEVE

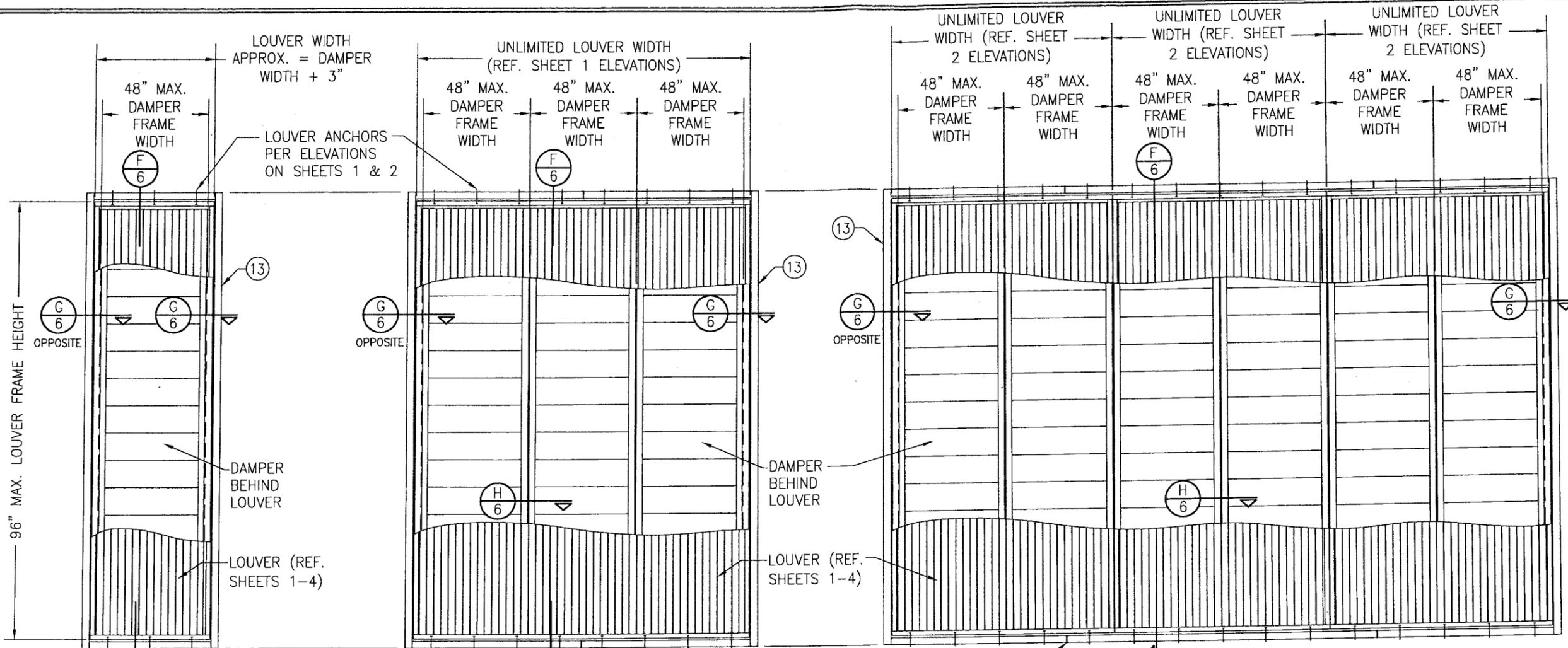


14 SIGHT-PROOF ANGLE

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. *DR-0904-01*
Expiration Date *03/15/2012*
By *[Signature]*
Miami Dade Product Control Division

DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM	DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
	DATE	DATE
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	REVISION DESCRIPTION	NO.
	NO.	NO.
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING NO.	REV.
	SHEET NO.	SHEET NO.

MANUFACTURER
ARROW UNITED INDUSTRIES
314 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888



**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH A
SINGLE AFD-20 DAMPER**

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

**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH
MULTIPLE AFD-20 DAMPERS**

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

- 1) NUMBER OF DAMPERS BEHIND A LOUVER PANEL IS UNLIMITED.
- 2) EACH INDIVIDUAL DAMPER PANEL IS LIMITED TO A 48" FRAME WIDTH.

SUPPORT SLEEVE SPLICE MAY OCCUR MID-WAY BETWEEN ANCHORS AT ANY LOCATION PROVIDING NO SLEEVE SECTION LENGTH IS LESS THAN THE DAMPER PANEL FRAME WIDTHS. SPLICING OF SLEEVES SHALL BE DONE IN A MANNER THAT DOES NOT ALLOW WATER LEAKAGE THROUGH THE SPLICE.

**EXTERIOR ELEVATION:
MULTIPLE LOUVER PANELS WITH
MULTIPLE AFD-20 DAMPERS**

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 48" FRAME WIDTH.

ALLOWABLE DESIGN PRESSURE (AFD-20 DAMPERS)

MAX. DAMPER FRAME HEIGHT (IN.)	MAX. DAMPER FRAME WIDTH (1) (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MAX. DAMPER FRAME HEIGHT (IN.)	MAX. DAMPER FRAME WIDTH (1) (IN.)	ALLOWABLE PRESSURE (+/- PSF)	
90.5	48	90.1	72.5	48	122.3	
	42	103.0		42	139.8	
	36	120.1		38	150.0	
	30	144.2		48	133.4	
	28	150.0		42	150.0	
84.5	48	104.2	60.5	48	146.6	
	42	119.0		46	150.0	
	36	138.9		(1) DAMPER FRAME HEIGHT IS APPROXIMATELY 5.5" LESS THAN THE LOUVER FRAME HEIGHT.		
	33	150.0				
78.5	48	113.0				
	42	129.1				
	36	150.0				

DAMPER CORNER CONSTRUCTION (AFD-20): HEAD AND SILL ARE BUTTED TO THE SIDE JAMBS, SECURED WITH 4 NO. 7 X 1" SELF TAPPING 410 S.S. SCREWS AND SEALED WITH SEALANT.

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

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 08-0704.01
Expiration Date 03/15/2012
By *[Signature]*
Miami Dade Product Control Division

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 10/18/06
DATE	
BY	
REVISION DESCRIPTION	
NO.	

DRAWING TITLE
EAV-66 VERTICAL LOUVER SYSTEM

CONSULTANTS
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902 FAX: 561-775-4903

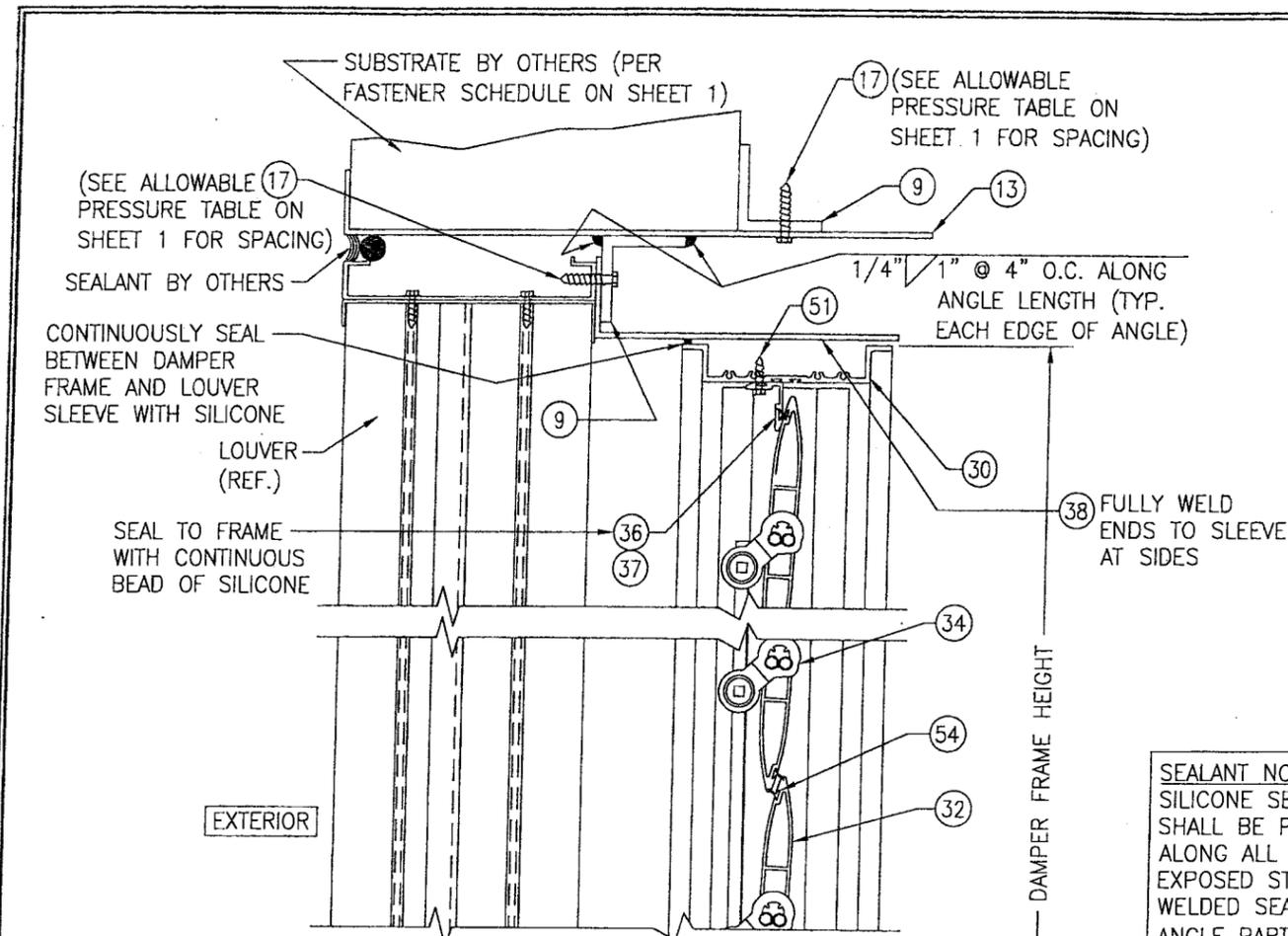
MANUFACTURER
ARROW UNITED INDUSTRIES
314 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

CERTIFICATION

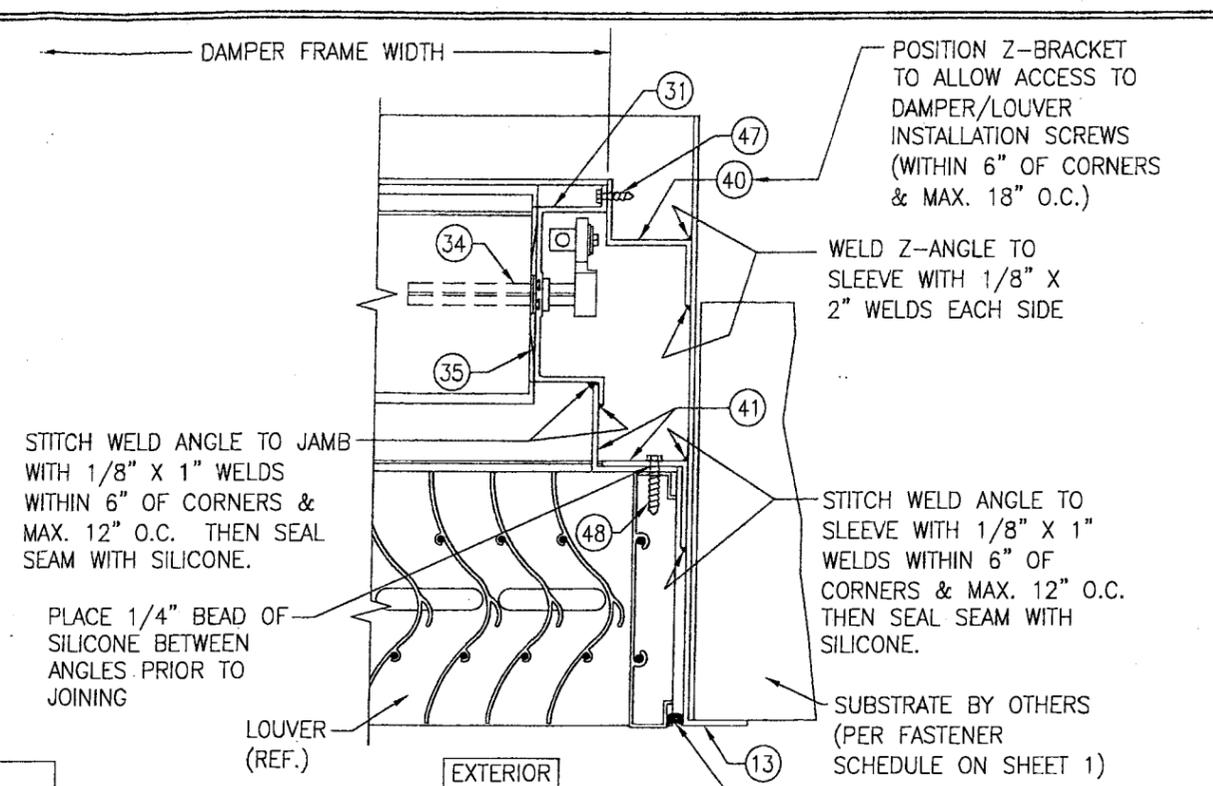
SEP 03 2008

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

DRAWING NO.	REV.
1504	A
SHEET NO.	
5	OF 9



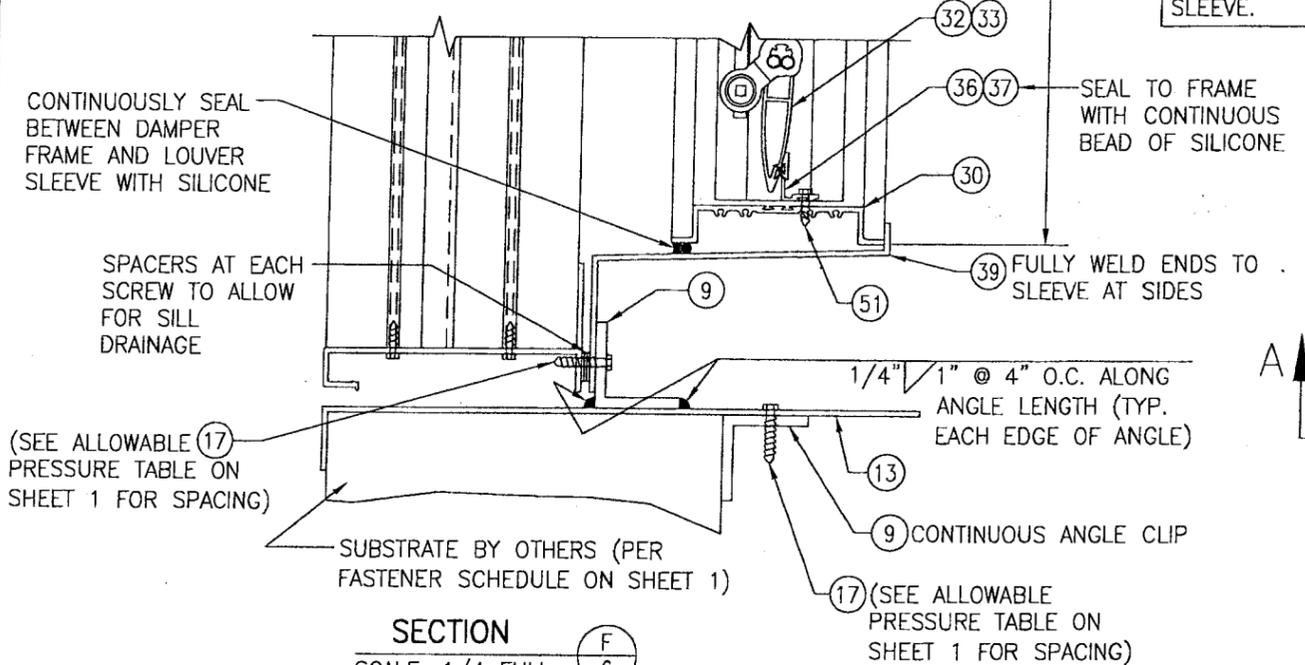
SECTION F
SCALE: 1/4 FULL



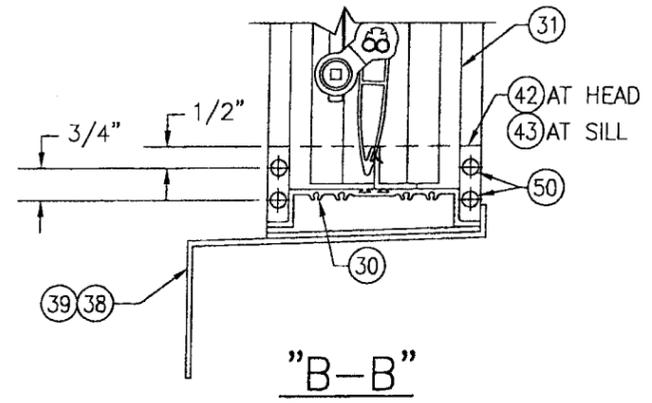
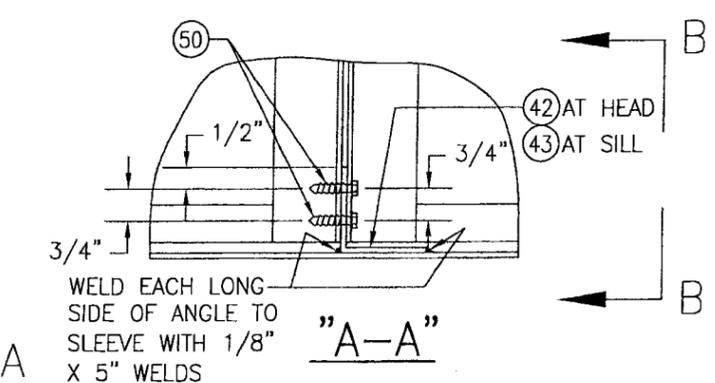
SECTION G
SCALE: 1/4 FULL

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

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



SECTION H
SCALE: 1/4 FULL

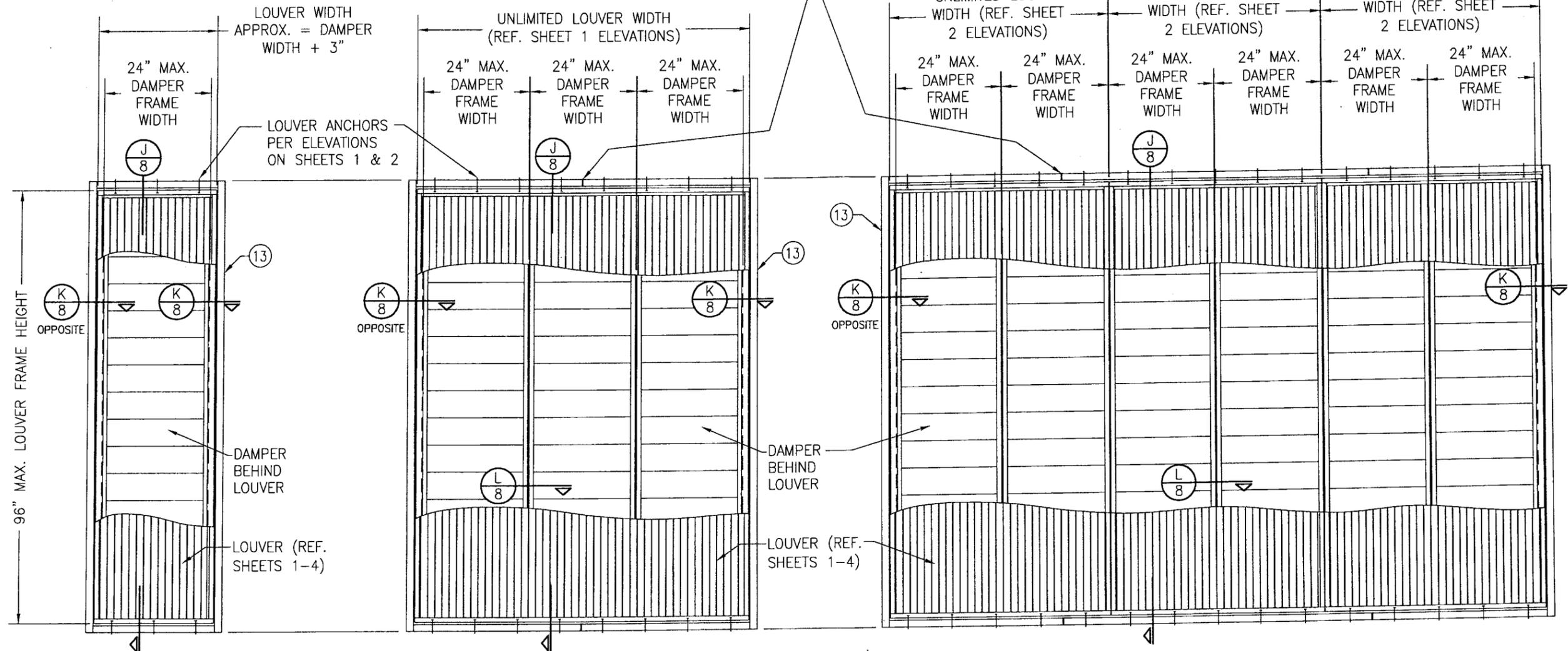


(SILL SECTION SHOWN, HEAD IS SIMILAR)

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 08-0704.01
Expiration Date 12/15/2012
By *[Signature]*
Miami Dade Product Control
Division

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1-4	DATE: 10/18/06
NO.	DATE
BY	
REVISION DESCRIPTION	
DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM	
MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	DRAWING NO. 1504
	REV. A
	SHEET NO. 6 OF 9

SUPPORT SLEEVE SPLICE MAY OCCUR MID-WAY BETWEEN ANCHORS AT ANY LOCATION PROVIDING NO SLEEVE SECTION LENGTH IS LESS THAN THE DAMPER PANEL FRAME WIDTHS. SPLICING OF SLEEVES SHALL BE DONE IN A MANNER THAT DOES NOT ALLOW WATER LEAKAGE THROUGH THE SPLICE.



**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH A
SINGLE AC-525/526 DAMPER**
SCALE: 1/2" = 1'-0"

**EXTERIOR ELEVATION:
SINGLE LOUVER PANEL WITH
MULTIPLE AC-525/526 DAMPERS**
SCALE: 1/2" = 1'-0"

**EXTERIOR ELEVATION:
MULTIPLE LOUVER PANELS WITH
MULTIPLE AC-525/526 DAMPERS**
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.

- 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.

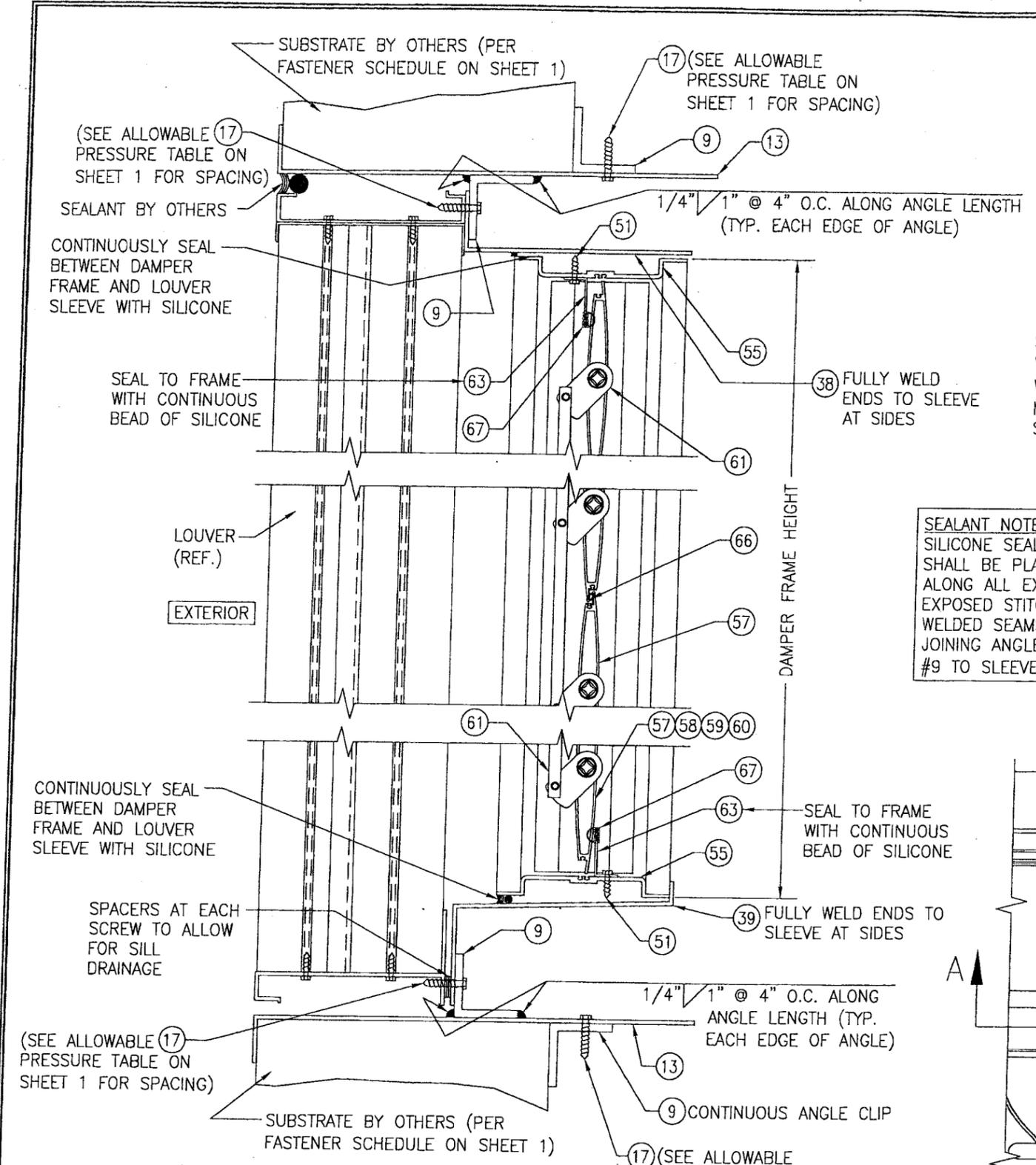
**ALLOWABLE DESIGN PRESSURE
(AC-525/526 DAMPERS)**
+150/-150 PSF

DAMPER CORNER CONSTRUCTION (AC-525/526): HEAD AND SILL ARE BUTTED TO THE SIDE JAMBS, SECURED WITH 4 NO. 8 X 3/4" 410 S.S. SHEET METAL SCREWS AND SEALED WITH SEALANT.

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

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Expiration Date 03/15/2012
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Miami/Dade Product Control
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PLOT: 1=24		DATE: 10/18/06	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8695 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CERTIFICATION SEP 03 2008 W. W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO.	REV.		
1504	A		
SHEET NO.			
7 OF 9			



SECTION J
SCALE: 1/4 FULL

(SEE ALLOWABLE PRESSURE TABLE ON SHEET 1 FOR SPACING)

17 (SEE ALLOWABLE PRESSURE TABLE ON SHEET 1 FOR SPACING)

9 CONTINUOUS ANGLE CLIP

13

38 FULLY WELD ENDS TO SLEEVE AT SIDES

39 FULLY WELD ENDS TO SLEEVE AT SIDES

SEAL TO FRAME WITH CONTINUOUS BEAD OF SILICONE

SPACERS AT EACH SCREW TO ALLOW FOR SILL DRAINAGE

CONTINUOUSLY SEAL BETWEEN DAMPER FRAME AND LOUVER SLEEVE WITH SILICONE

LOUVER (REF.)

EXTERIOR

DAMPER FRAME HEIGHT

1/4" x 1" @ 4" O.C. ALONG ANGLE LENGTH (TYP. EACH EDGE OF ANGLE)

1/4" x 1" @ 4" O.C. ALONG ANGLE LENGTH (TYP. EACH EDGE OF ANGLE)

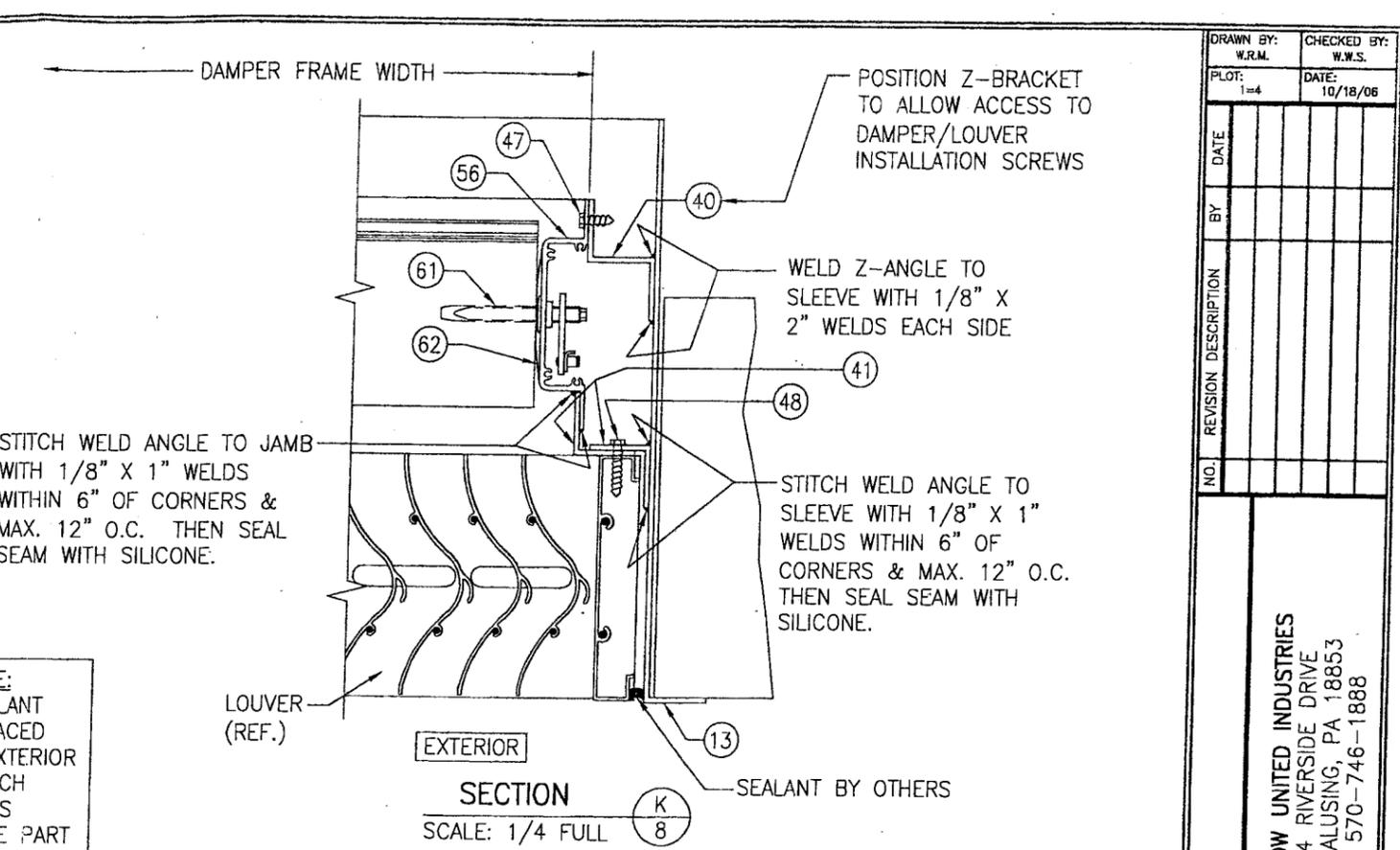
SEALANT BY OTHERS

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

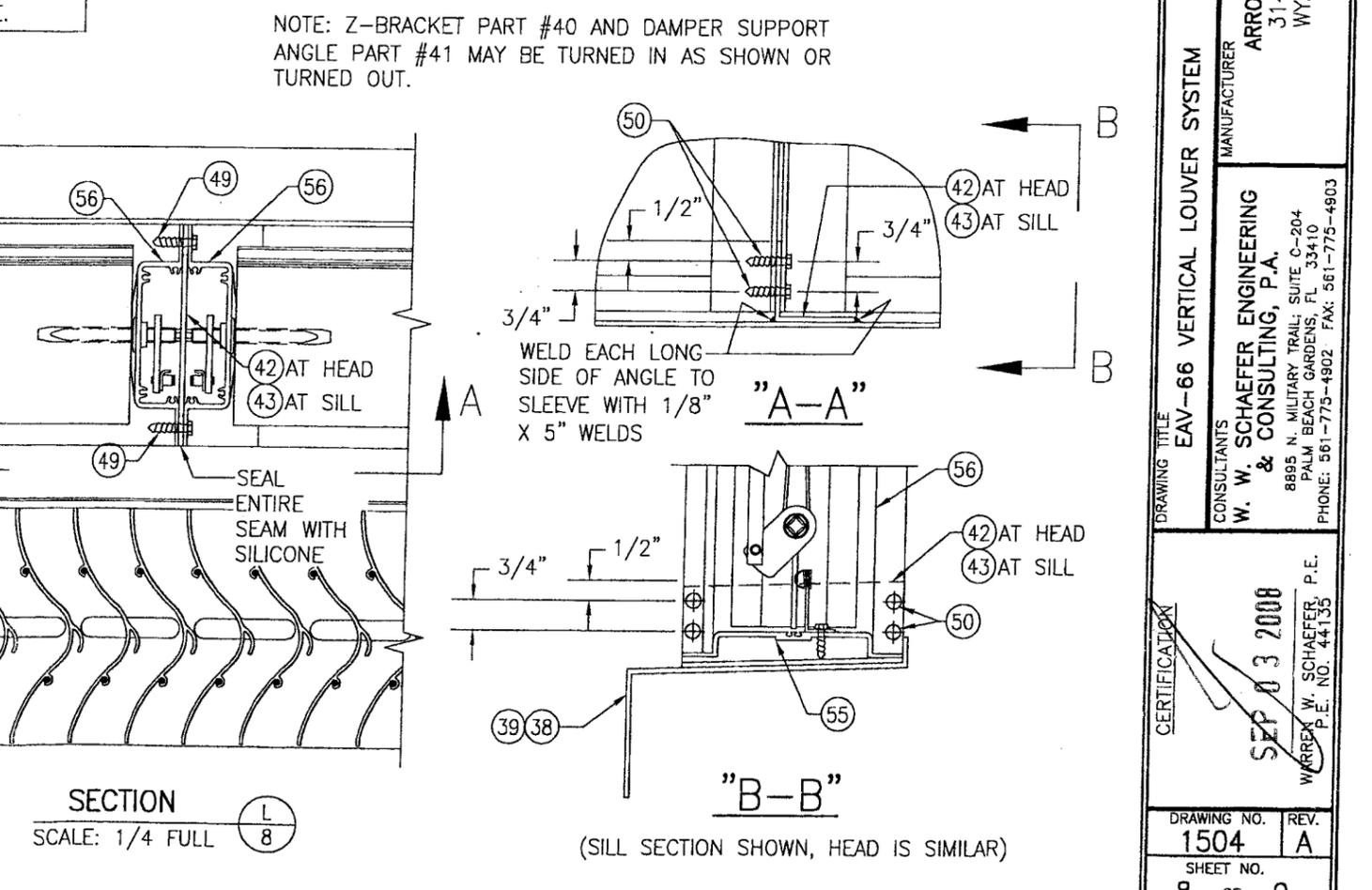
STITCH WELD ANGLE TO SLEEVE WITH 1/8" X 1" WELDS WITHIN 6" OF CORNERS & MAX. 12" O.C. THEN SEAL SEAM WITH SILICONE.

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

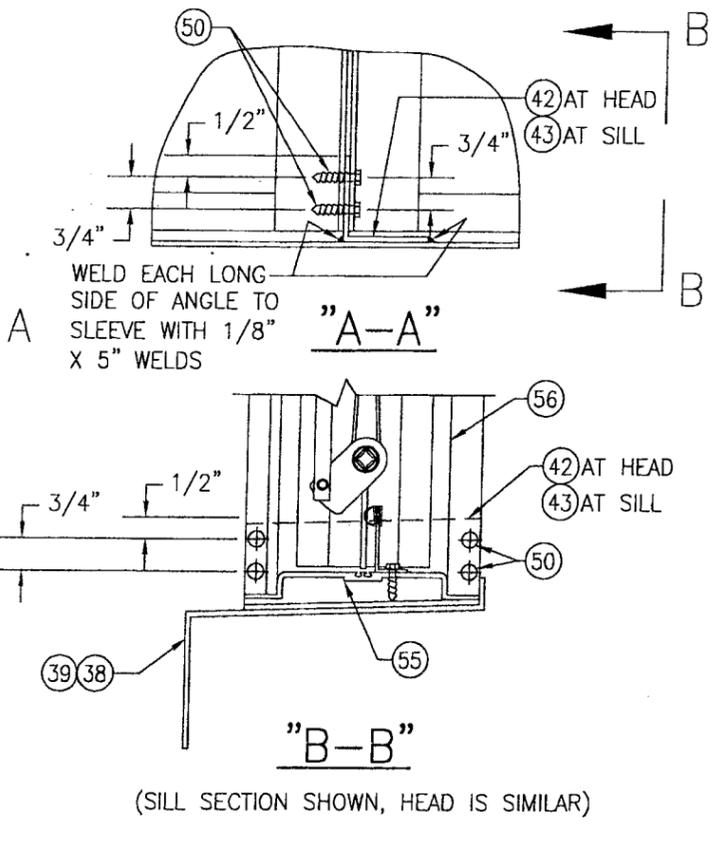
NOTE: Z-BRACKET PART #40 AND DAMPER SUPPORT ANGLE PART #41 MAY BE TURNED IN AS SHOWN OR TURNED OUT.



SECTION K
SCALE: 1/4 FULL



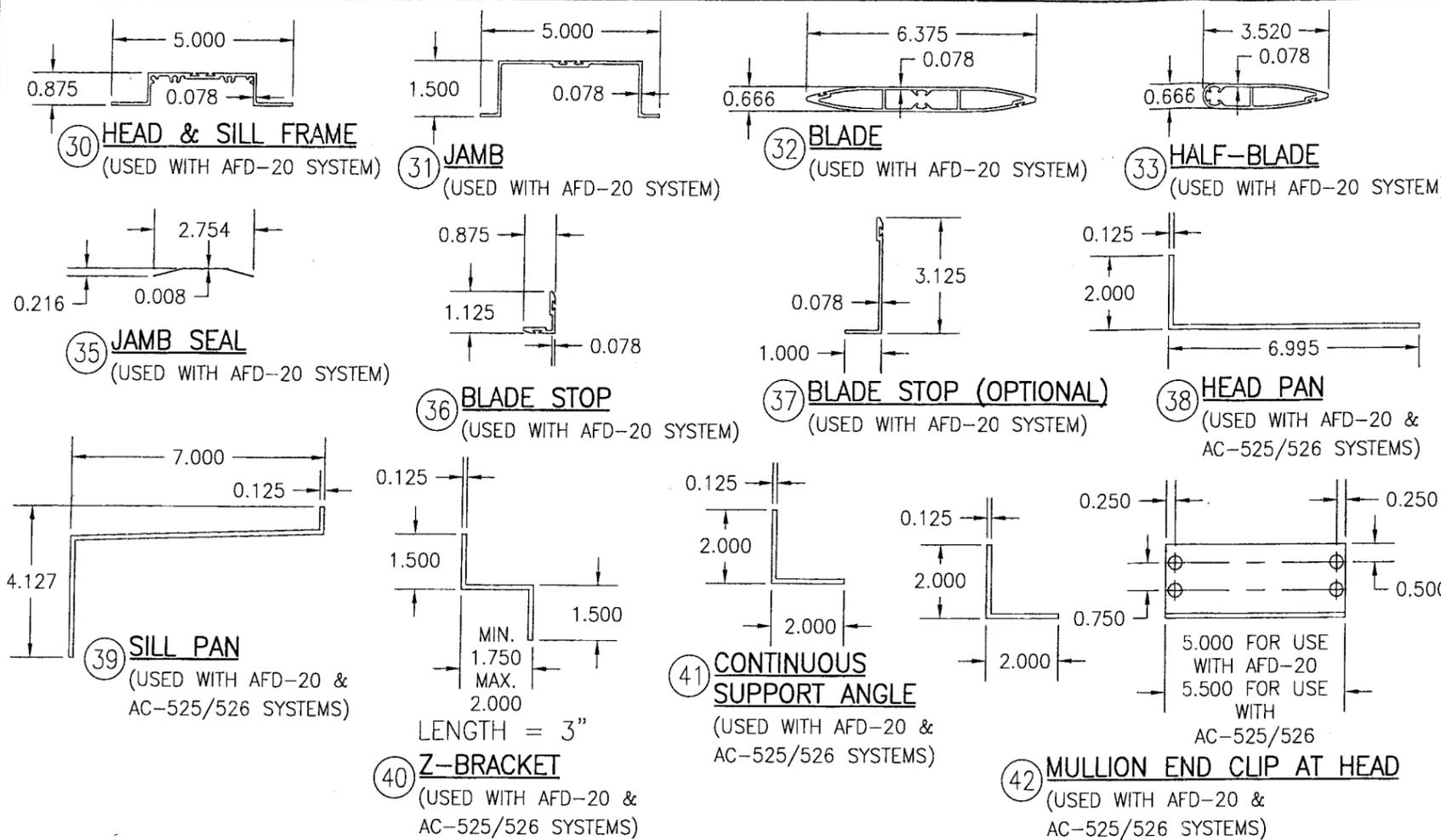
SECTION L
SCALE: 1/4 FULL



(SILL SECTION SHOWN, HEAD IS SIMILAR)

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REVISION DESCRIPTION	
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DRAWING TITLE EAV-66 VERTICAL LOUVER SYSTEM	
MANUFACTURER ARROW UNITED INDUSTRIES 314 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-773-4902 FAX: 561-775-4903	
CERTIFICATION SEP 03 2008 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1504	REV. A
SHEET NO. 8 OF 9	

PRODUCT REVISED
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Acceptance No. 09-0504.01
Expiration Date 03/15/2012
By: *[Signature]*
Miami Trade Product Control Division

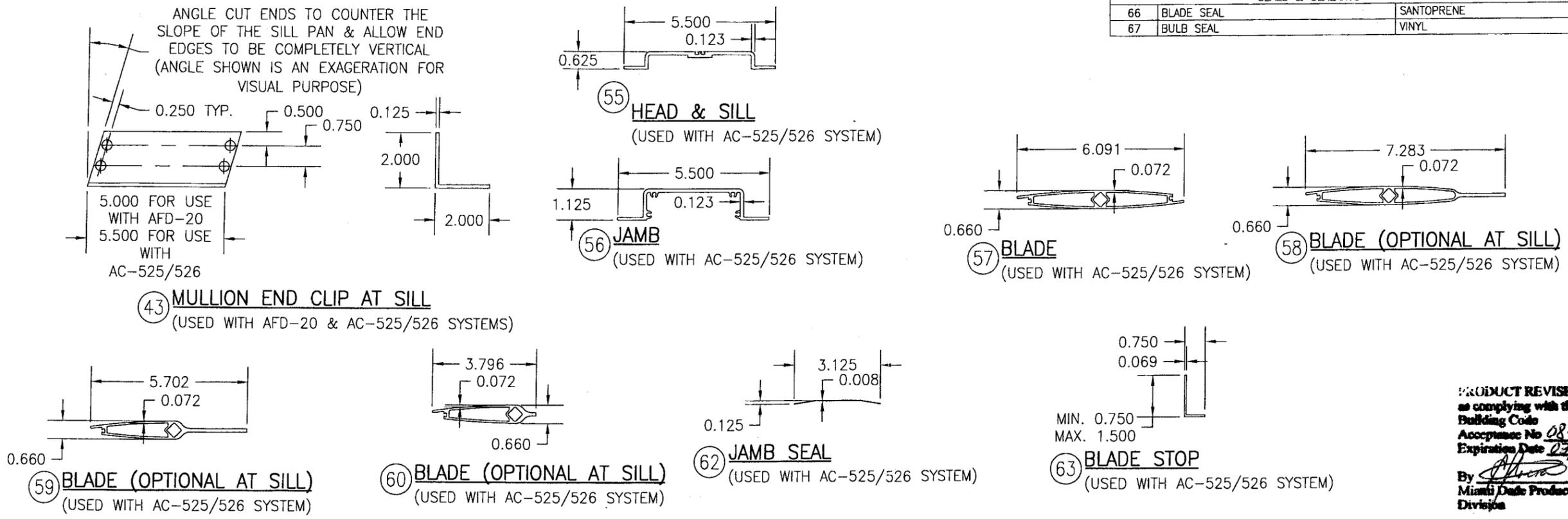


AFD-20 DAMPER (ALL PARTS BY ARROW UNITED INDUSTRIES)

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



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

DATE BY REVISION DESCRIPTION NO.

DRAWING TITLE: EAV-66 VERTICAL LOUVER SYSTEM

MANUFACTURER: ARROW UNITED INDUSTRIES
 314 RIVERSIDE DRIVE
 WYALUSING, PA 18853
 570-746-1888

CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 8895 N. MILITARY TRAIL, SUITE C-204
 PALM BEACH GARDENS, FL 33410
 PHONE: 561-775-4902 FAX: 561-775-4903

CERTIFICATION: SEP 03 2008
 WARREN W. SCHAEFER, P.E.
 P.E. NO. 44135

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DRAWING NO. 1504 REV. A
 SHEET NO. 9 OF 9