



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

Air Balance, a division of Mestek, Inc.
450 Riverside Drive
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 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 A320 6" Aluminum Louver System (Dp \pm 180.0 psf)

APPROVAL DOCUMENT: Drawing No. 1465, titled "A320 Louver System", sheets 1 through 15 of 15, dated 12/02/05, with revision D1 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 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 No. 23-0426.04 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. 23-0713.06
Expiration Date: 04/22/2029
Approval Date: 08/17/2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA's

A. DRAWINGS

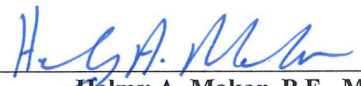
1. Manufacturer's die drawings and sections.
(Submitted under NOA No. 05-1206.03)
2. Drawing No. 1465, titled "A320 Louver System", sheets 1 through 15 of 15, dated 04/03/03, with revision C1 dated 02/26/19, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren. W. Schaefer, P.E.
(Submitted under NOA No. 19-0306.04)

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 02/26/19, signed and sealed by Daniel C. Culbert, P.E.
(Submitted under NOA No. 19-0306.04)

	<u>Test Report</u>	<u>Test Standard</u>	<u>Test Date</u>	<u>Signature</u>
2.	HTL 0198-0508-03	TAS 201,202 & 203	05/15-10/03	Vinu J. Abraham, P.E.
3.	HTL 0198-0618-03	TAS 201, 202 & 203	06/06-25/03	Vinu J. Abraham, P.E.
4.	HTL 0198-0804-03	TAS 201, 202 & 203	08/06-08/03	Vinu J. Abraham, P.E.
5.	HTL 0198-0508-03	TAS 201, 202 & 203	05/08-13/03	Vinu J. Abraham, P.E.
6.	HTL 0198-0804-03	TAS 201, 202 & 203	08/08-11/03	Vinu J. Abraham, P.E.
7.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-26/03	Vinu J. Abraham, P.E.
8.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-04/16	Vinu J. Abraham, P.E.
9.	HTL 0198-0324-03	TAS 201, 202 & 203	03/24-24/03	Vinu J. Abraham, P.E.
10.	HTL 0198-0324-03	TAS 201, 202 & 203	03/25-04/21	Vinu J. Abraham, P.E.
11.	HTL 0198-0128-03	TAS 201, 202 & 203	02/10-04/21	Vinu J. Abraham, P.E.
12.	HTL 0198-0508-03	TAS 202	05/13-13/03	Vinu J. Abraham, P.E.
13.	HTL 0198-0324-03	TAS 202	03/27-27/03	Vinu J. Abraham, P.E.
14.	HTL 0198-0324-03	TAS 201 & 203	03/24-04/21	Vinu J. Abraham, P.E.
15.	HTL G198-0101-05	TAS 201, 202 & 203	02/15/05	Vinu J. Abraham, P.E.
16.	AWV/AUI-011-02.01	TAS 100 (A)-95	05/13/08	Duc T. Nguyen, P.E.
17.	ATI 45720.03-122-18	TAS 100 (A)-95	01/16/09	Joseph A. Reed, P.E.

(Submitted under NOA No. 08-1224.01)


Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 23-0713.06
Expiration Date: 04/22/2029
Approval Date: 08/17/2023

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. 19-0306.04)

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 6th Edition (2017)** and **FBC 7th 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. 20-0622.23)
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. 19-0306.04)

G. OTHERS

1. Notice of Acceptance No. **19-0306.04**, issued to Air Balance, a division of Mestek, Inc. for their Model A320 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#23-0426.04

A. DRAWINGS

1. Drawing No. **1465** titled "A320 6" Louver System", sheets 1 through 15 of 15, dated 12/02/05, with revision **D1** 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)

E. MATERIAL CERTIFICATIONS

1. None.


Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No. 23-0713.06
Expiration Date: 04/22/2029
Approval Date: 08/17/2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS

1. None.

G. OTHERS

1. Notice of Acceptance No. **20-0622.23**, issued to Air Balance, a division of Mestek, Inc. for their Model A320 6" Aluminum Louver System (Dp \pm 180.0 psf) approved on 08/27/20 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 7th Edition (2020) and FBC 8th Edition (2023)**, dated 07/01/23, 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
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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

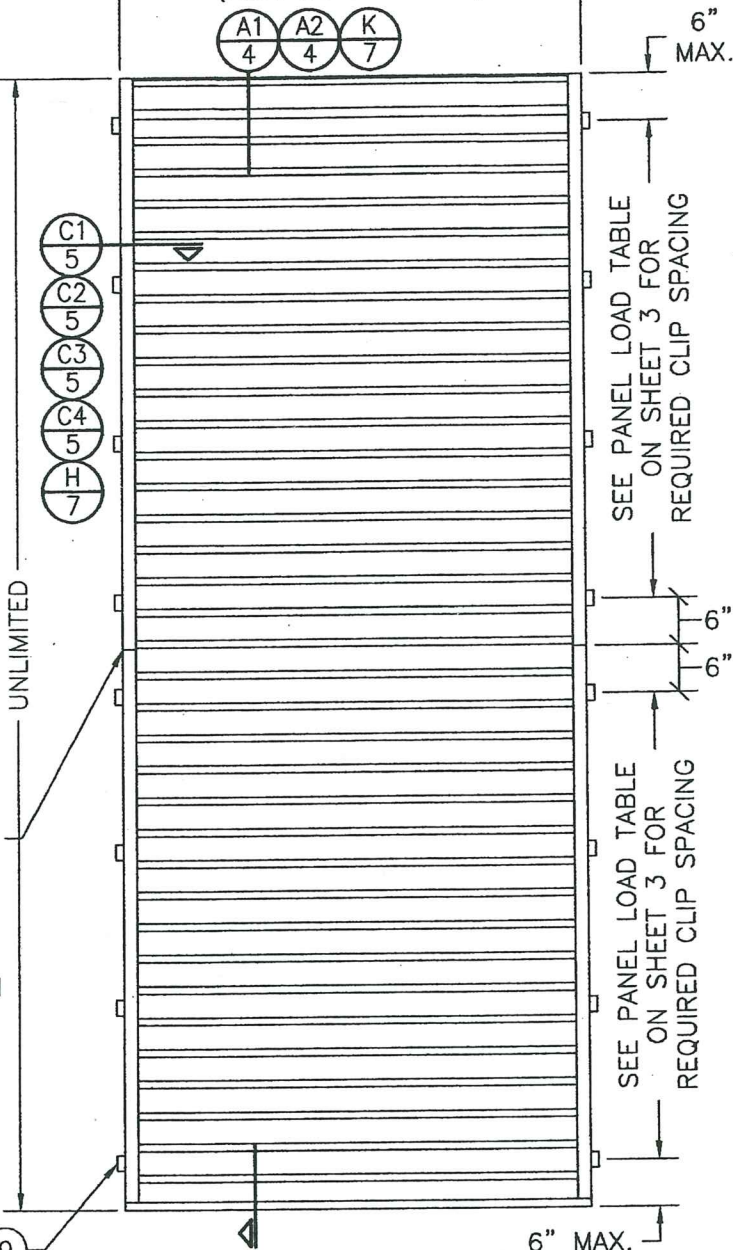
BLADE TO JAMB:
WELDED CONDITION: BLADE END BUTTS TO JAMB, IS WELDED WITH ONE 1/8" X 5" WELD AND SCREWED TO JAMB WITH WITH 2 NO. 8 X 3/4" S.S. SMS SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.
SCREWED CONDITION: BLADE END BUTTS TO JAMB & IS SCREWED TO JAMB WITH TWO (2) 1/4"-20 X 1 1/2" TYPE "F" SCREWS 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: AIR BALANCE INC. 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.
- 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)

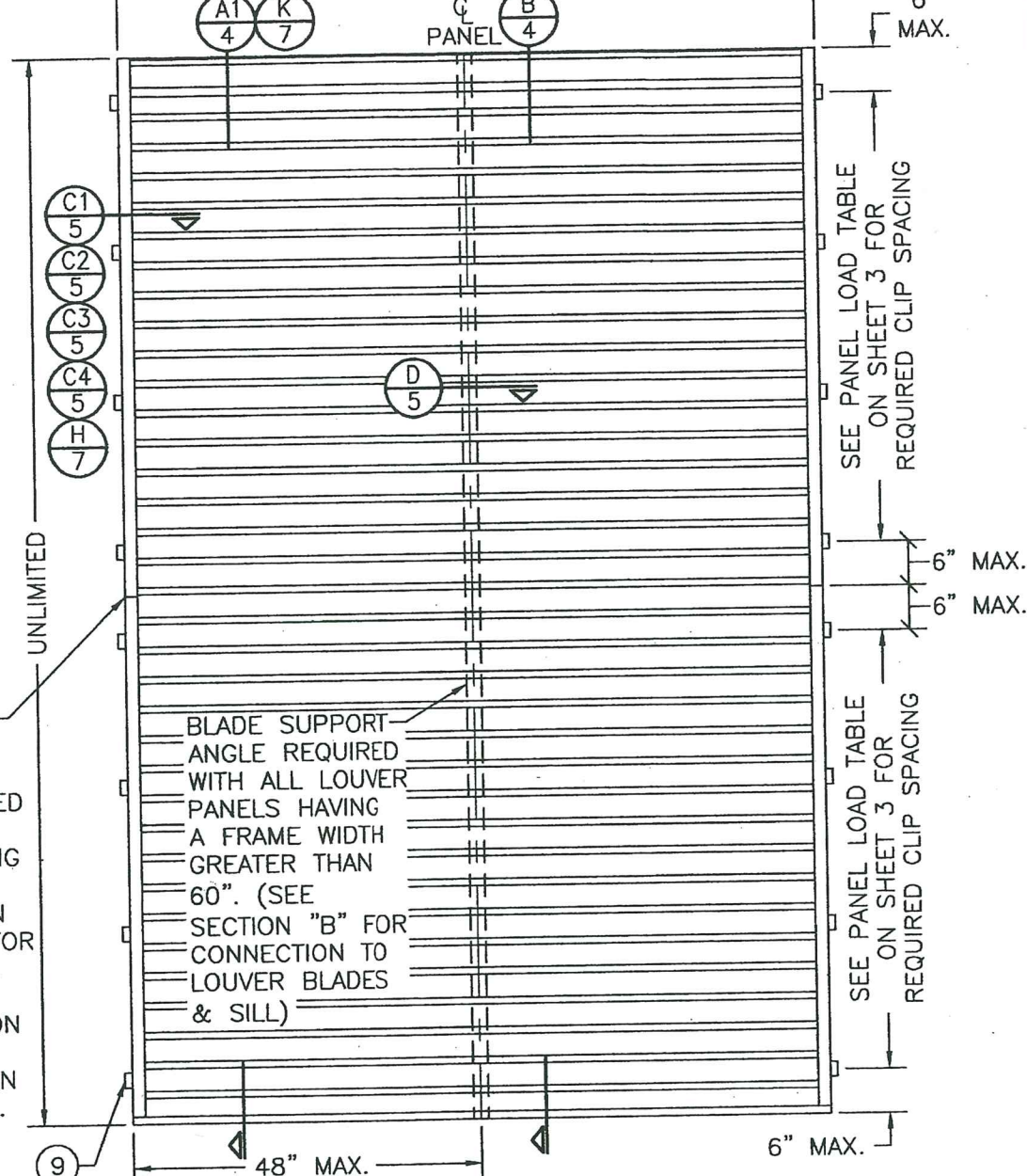


EXTERIOR ELEVATION
SINGLE LOUVER PANEL WITHOUT
BLADE SUPPORT ANGLE

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
NOA-No. **23-0426.04**
Expiration Date: **04/22/2029**
By: *Manuel Perez*
Miami-Dade Product Control



EXTERIOR ELEVATION
SINGLE LOUVER PANEL WITH
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 PANEL. BLADE SUPPORT ANGLE IS CONTINUOUS FROM HEAD TO SILL AND SPLICING OF THIS ANGLE IS NOT PART OF THIS APPROVAL.

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.

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. **23-0713.06**
Expiration Date **04/22/2029**
By: *Manuel Perez*
Miami-Dade Product Control

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: 12/02/05
DATE 11/08/11	BY W.W.S.
REVISION UPDATE TO CURRENT STANDARDS	DESCRIPTION W.W.S.
DATE 07/05/17	BY W.W.S.
REVISION MANUFACTURER NAME CHANGE	DESCRIPTION W.W.S.
DATE 02/28/19	BY W.W.S.
REVISION CHANGE CLIP SPACING	DESCRIPTION W.W.S.
DATE 04/18/23	BY W.W.S.
REVISION UPDATED NOTES	DESCRIPTION W.W.S.

AIR BALANCE, INC.
A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

A320 6" LOUVER SYSTEM

MANUFACTURER
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. No. 44135
STATE OF FLORIDA
CERTIFICATION
PROFESSIONAL SEAL

DRAWING NO.
1465
REV.
D
SHEET NO.
1 OF 15

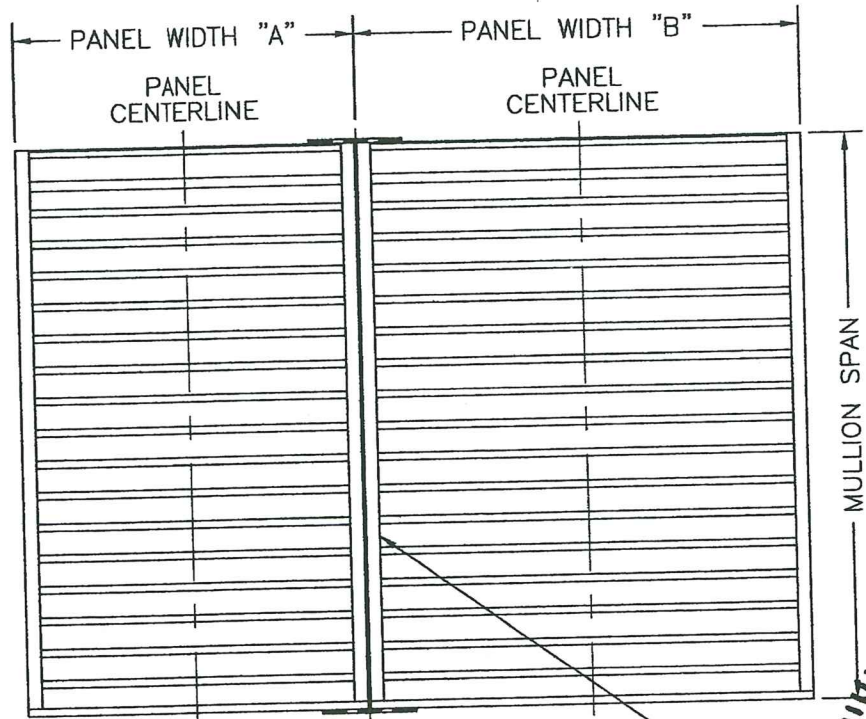
MULLION LOAD TABLE (SEE INSTRUCTIONS BELOW)								
MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)	MULLION SPAN (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)
18"	96"	180.0	60"	96"	65.7	84"	96"	47.0
24"	96"	164.3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

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.



MULLION "LOAD WIDTH" = (A + B) / 2
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. 23-0713.06
Expiration Date 04/22/2029
By: *Heidi A. McMan*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Ferrer*
Miami-Dade Product Control

DRAWN BY: W.R.M.
CHECKED BY: W.W.S.
PLOT: 1=24
DATE: 12/02/05

DATE:
BY:
REVISION DESCRIPTION:
NO.:

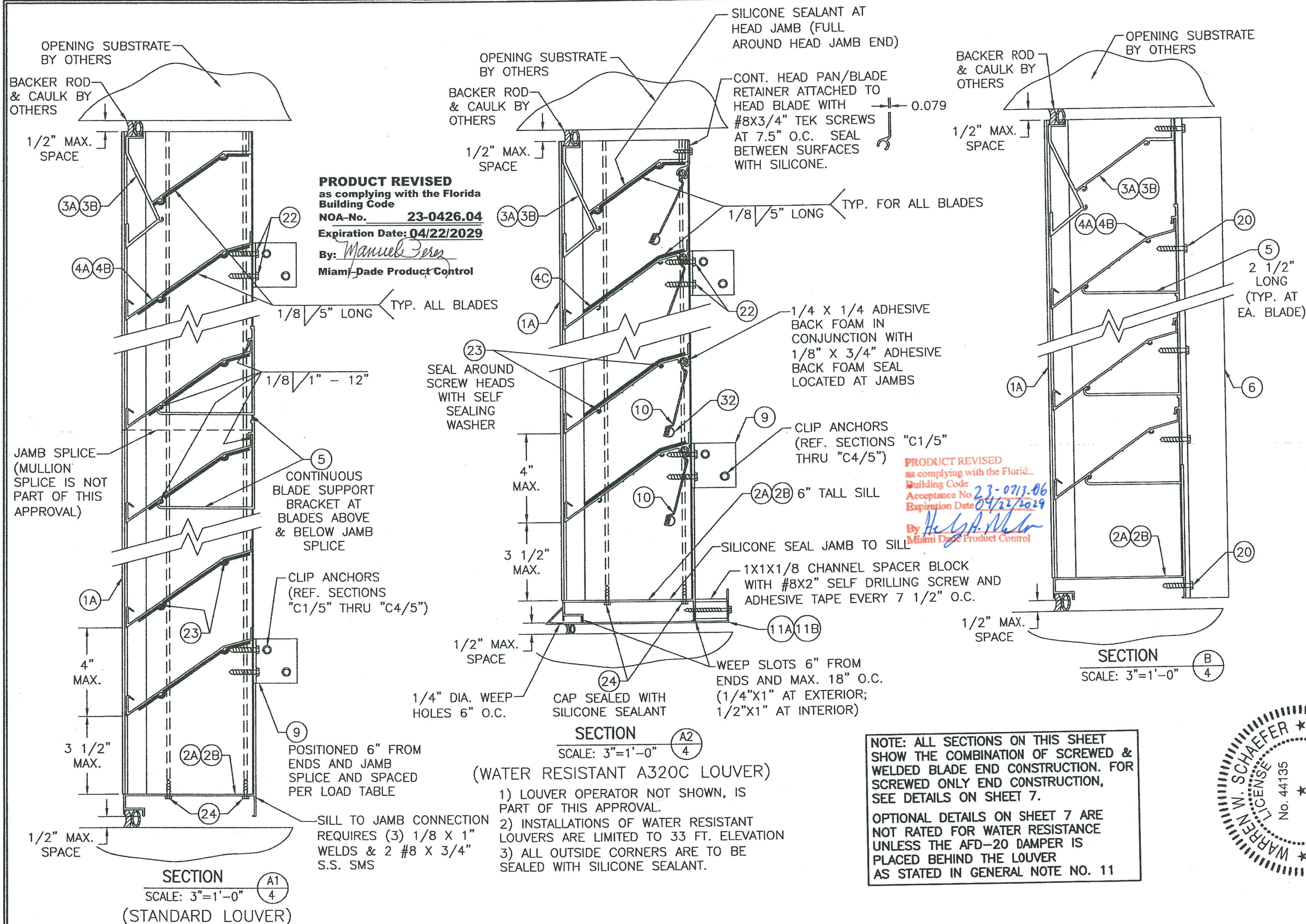
AIR BALANCE:
A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

MANUFACTURER
A320 6" LOUVER SYSTEM

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

W. W. SCHAEFER
P.E.
No. 44135
STATE OF FLORIDA
EXPIRATION DATE: MAY 11 2023

DRAWING NO. 1465
3 OF 15

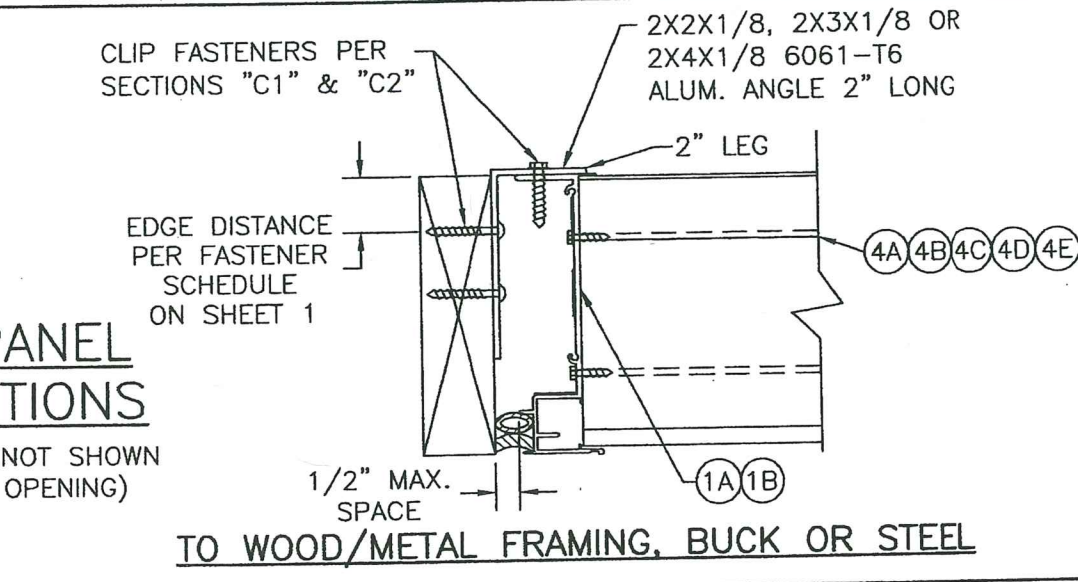
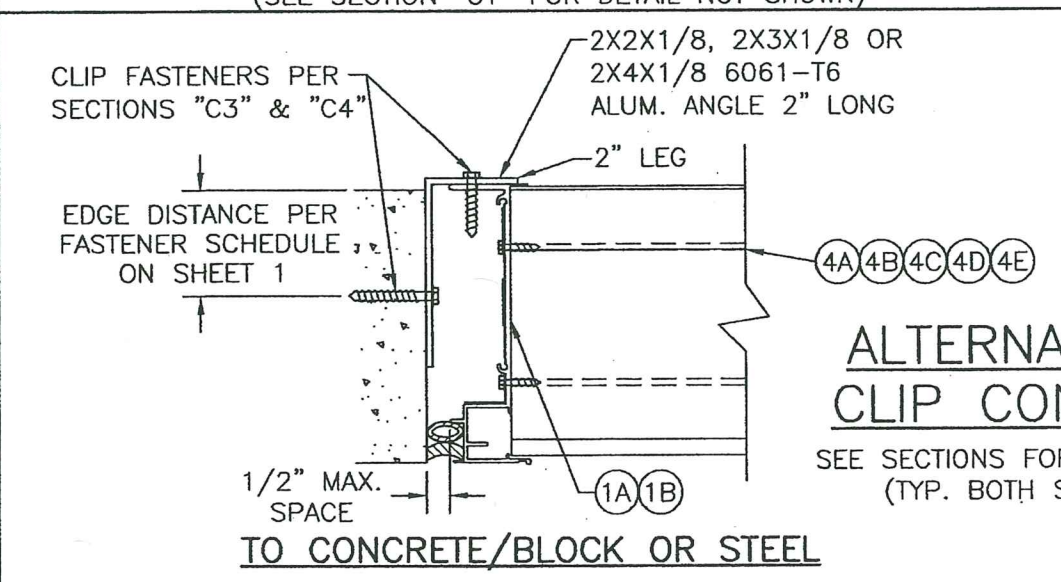
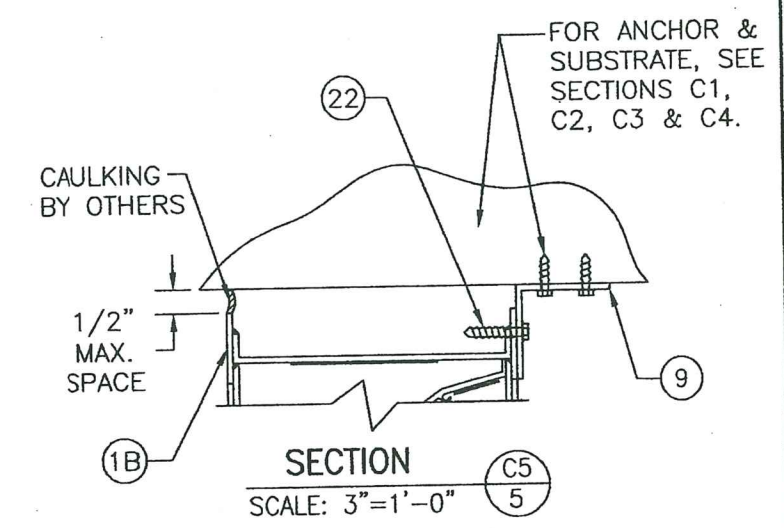
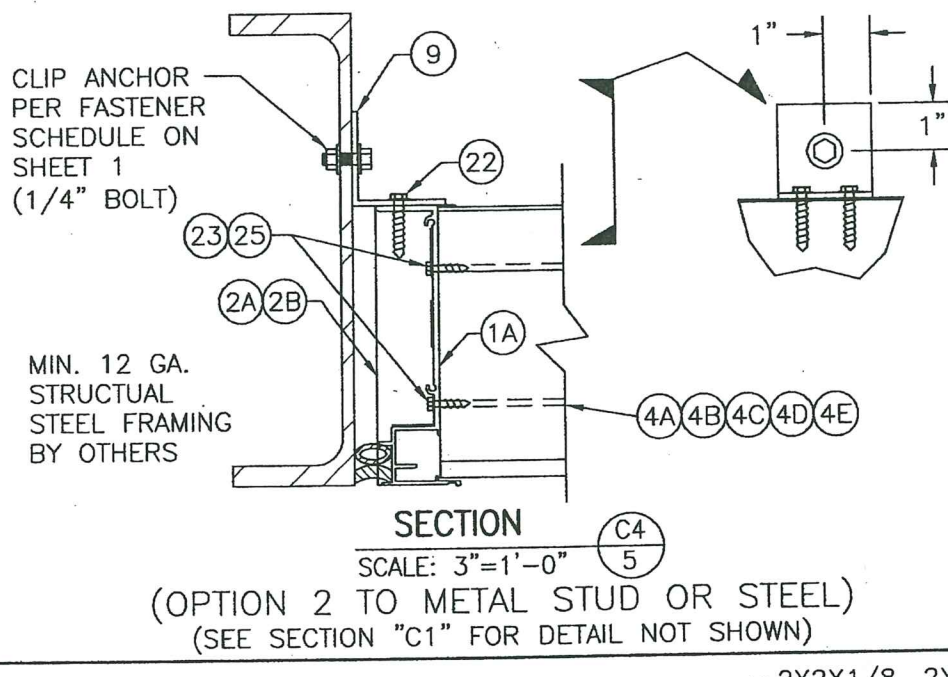
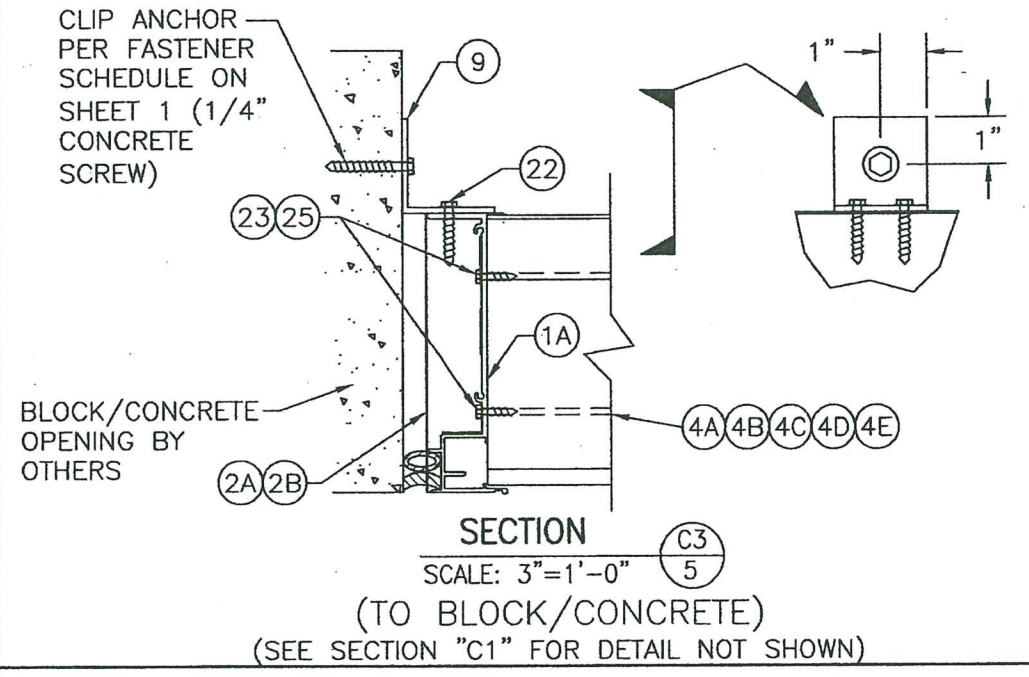
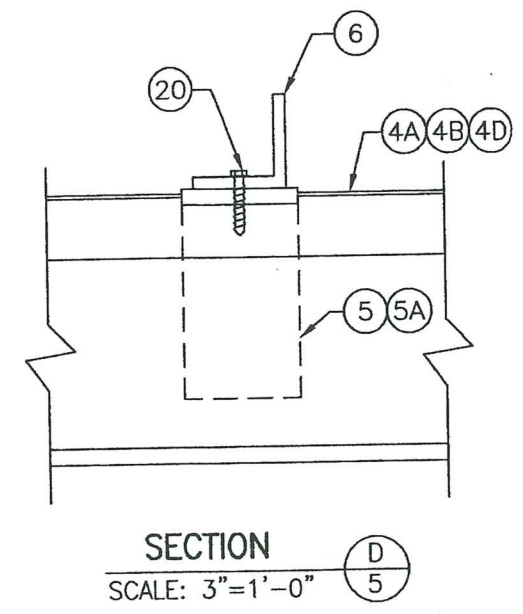
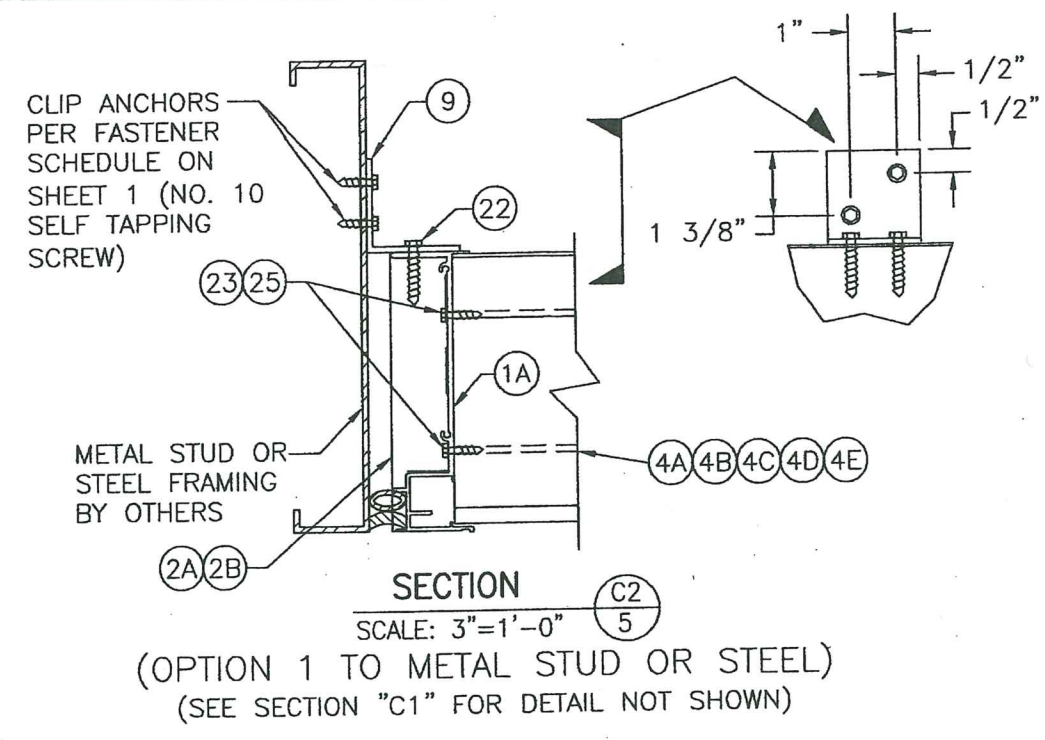
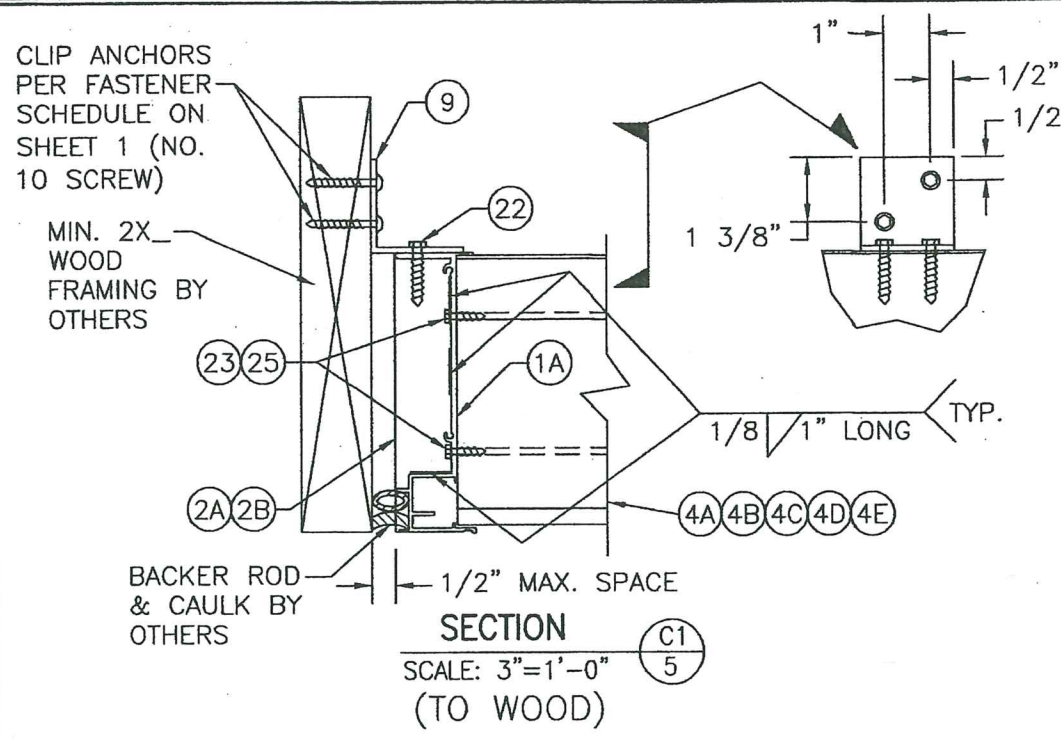


NOTE: ALL SECTIONS ON THIS SHEET SHOW THE COMBINATION OF SCREWED & WELDED BLADE END CONSTRUCTION. FOR SCREWED ONLY END CONSTRUCTION, SEE DETAILS ON SHEET 7.

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:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1=4	DATE:	12/02/05
DATE		BY	
REVISION DESCRIPTION			
NO.			
DRAWING TITLE	A320 LOUVER SYSTEM		
CONSULTANTS	W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		
MANUFACTURER	AIR BALANCE; A DIVISION OF MESTEK, INC.		
	450 RIVERSIDE DRIVE WYALUSING, PA 18853		
	570-746-1888		
	26376 NAHAR ROAD, UNIT 309 PUNTA GORDA, FL 33983		
	PHONE: 561-744-3424		
	MAY 10 2023		
	WARREN W. SCHAEFER, P.E.		
	P.E. NO. 44135		
DRAWING NO.	1465	REV.	D
SHEET NO.	4	OF	15

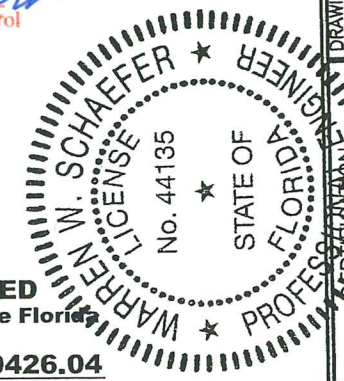


ALTERNATE PANEL CLIP CONNECTIONS

SEE SECTIONS FOR DETAIL NOT SHOWN (TYP. BOTH SIDES OF OPENING)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By *Heidi A. Miller*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Ferrer*
Miami-Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-4		DATE: 12/02/05	
NO.	REVISION	DESCRIPTION	DATE
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A320 LOUVER SYSTEM

MANUFACTURER
AIR BALANCE, A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

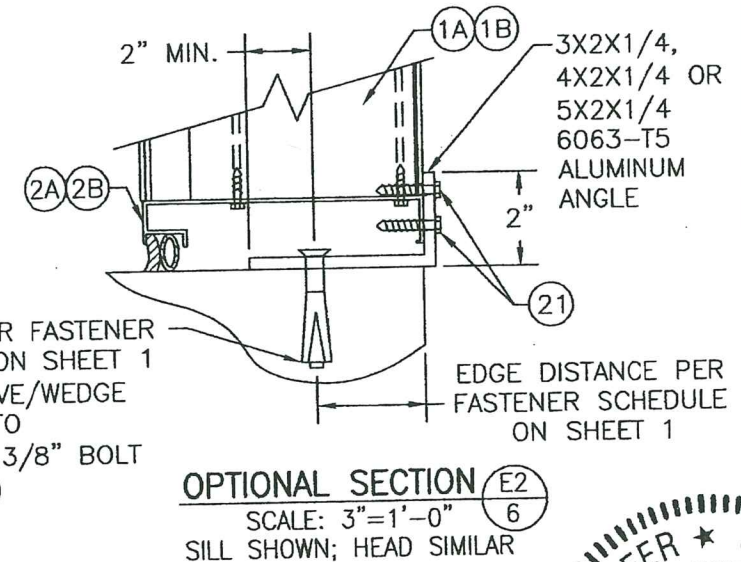
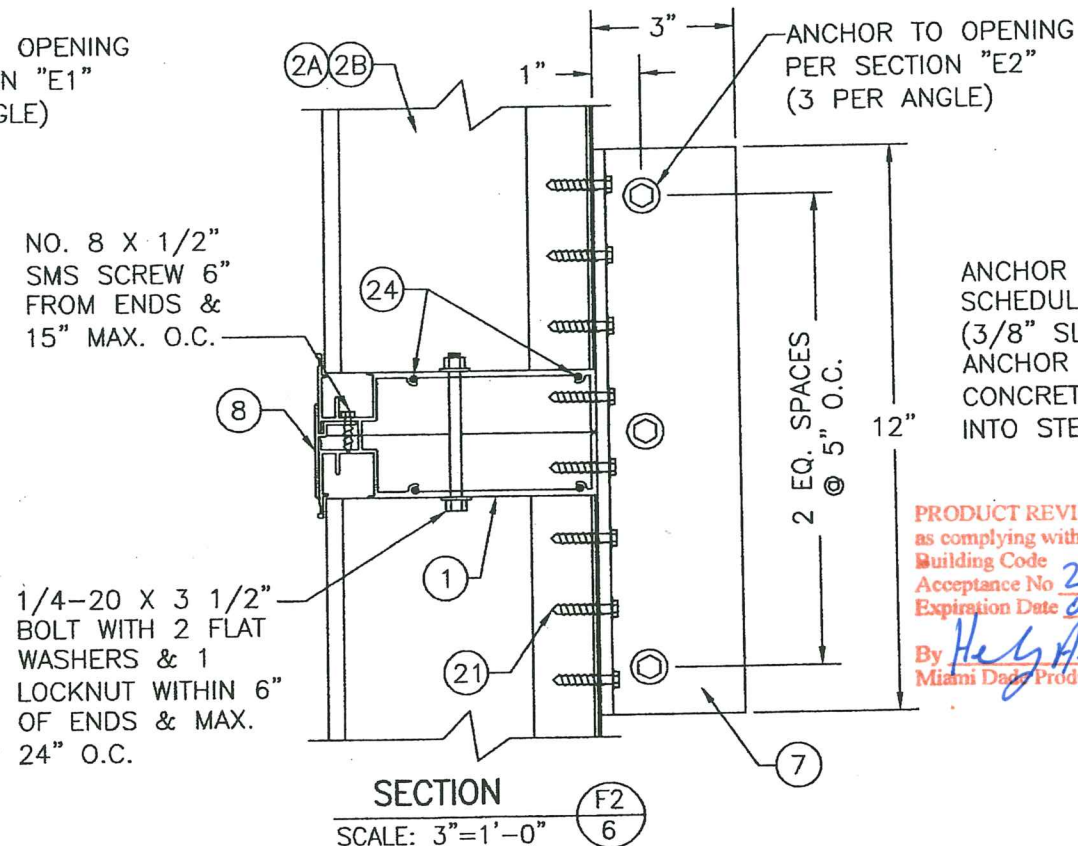
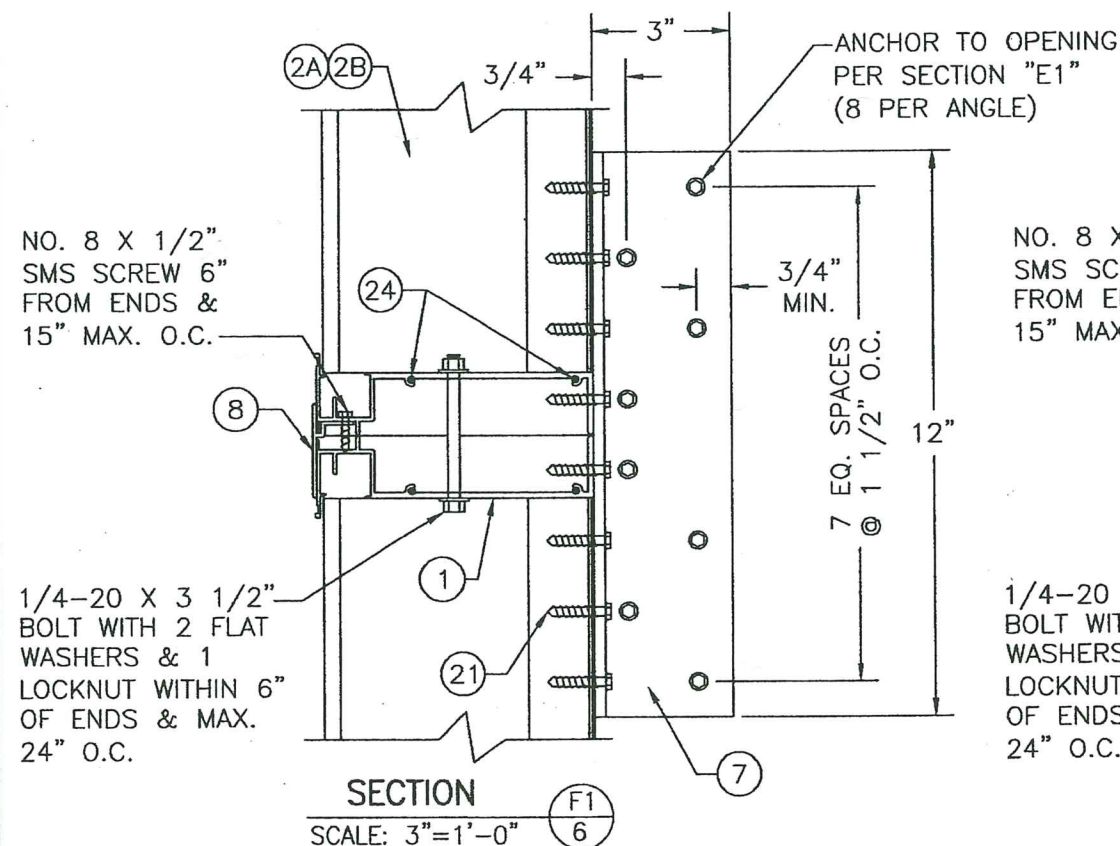
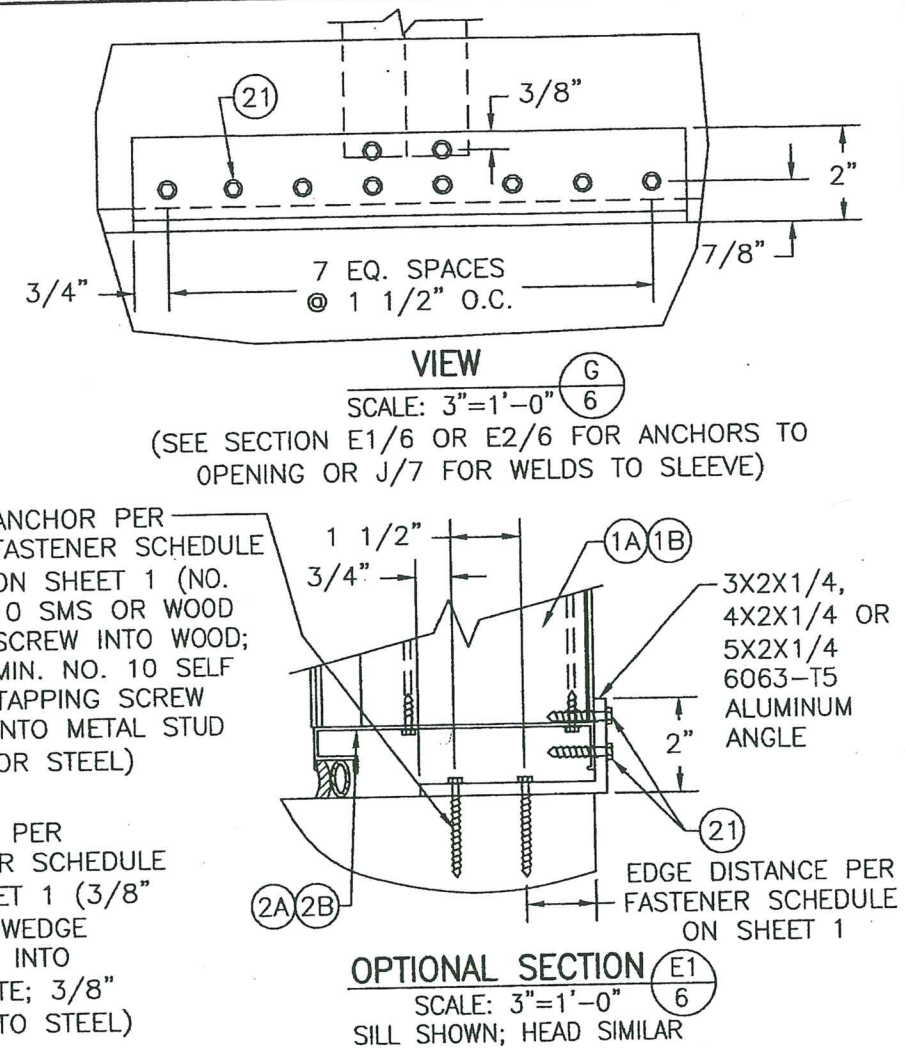
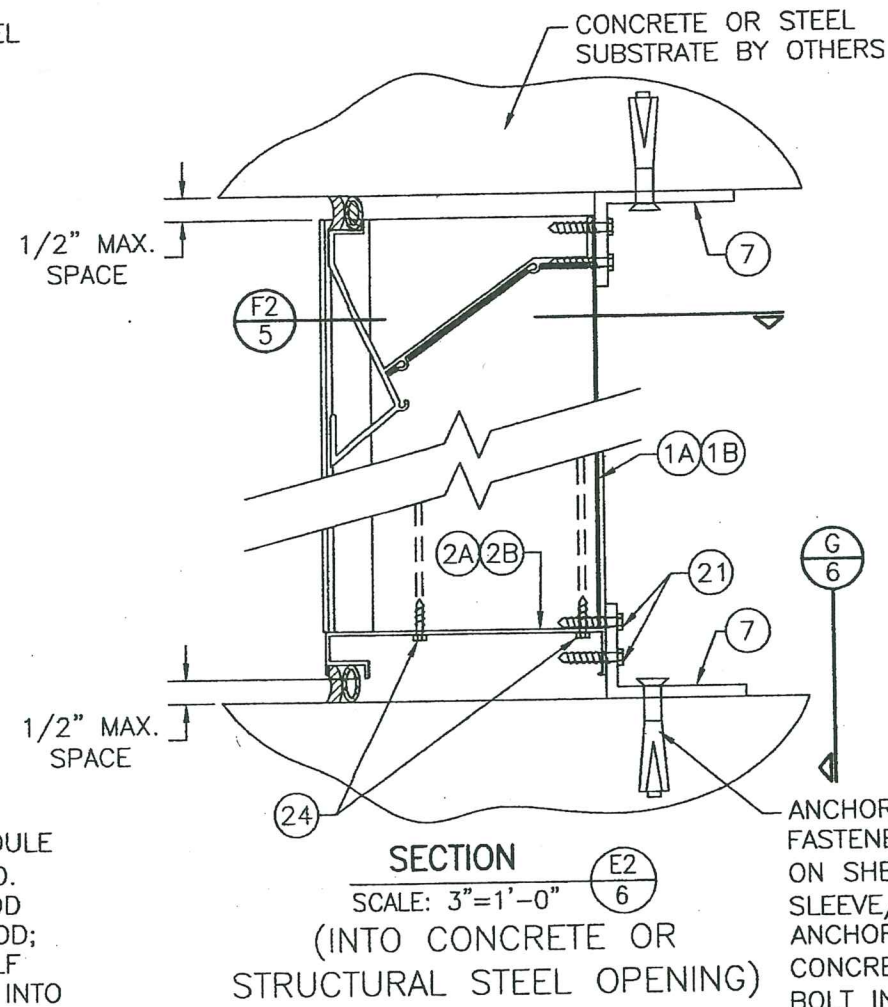
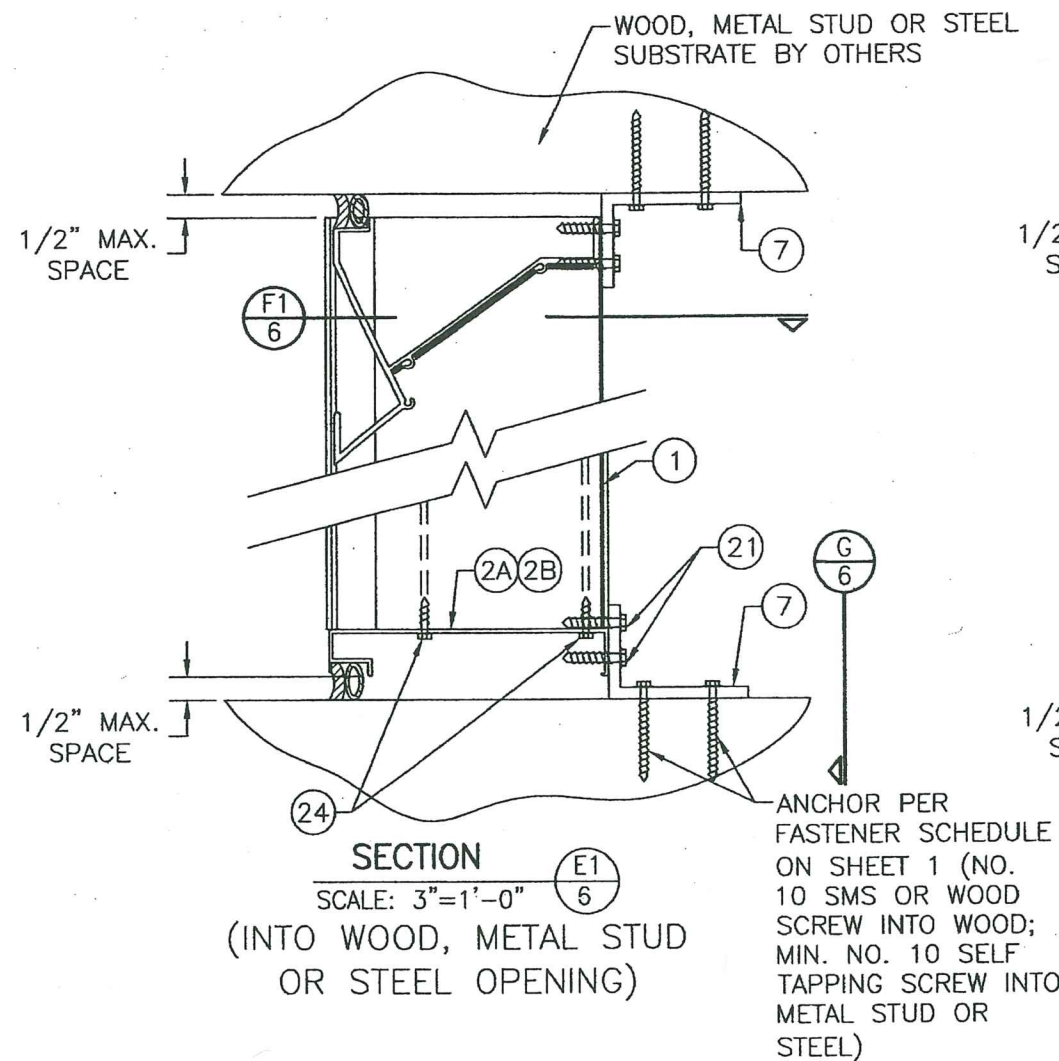
CONSULTANTS
W. W. SCHAEFFER ENGINEERING & CONSULTING, P.A.
26378 NADIR ROAD, UNIT 309
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

DRAWING TITLE
A320 LOUVER SYSTEM

DATE
MAY 10 2023

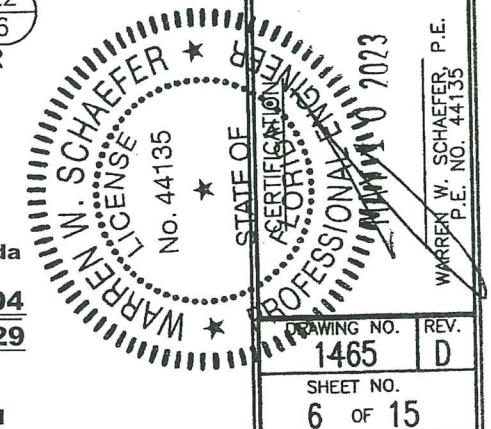
DRAWING NO.
1465

SHEET NO.
5 OF 15

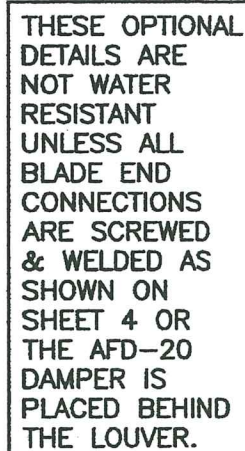


PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By *Hegh A. Miller*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By *Manuel Perez*
Miami-Dade Product Control



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
DATE	BY
REVISION	DESCRIPTION
NO.	
DRAWING TITLE A320 LOUVER SYSTEM	
MANUFACTURER AIR BALANCE; A DIVISION OF MESTEK, INC. 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 26376 NADIR ROAD; UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	
DRAWING NO. 1465	REV. D
SHEET NO. 6 OF 15	

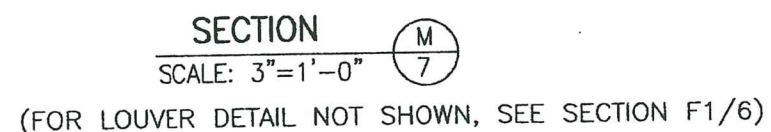
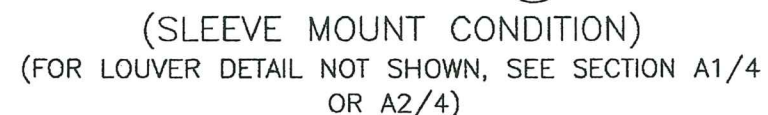


Technical drawing of a window assembly cross-section. The drawing shows a window frame with multiple panes. Key components and dimensions are labeled:

- 13**: Points to the top edge of the window frame.
- 28**: Points to a screw or fastener at the top of the frame.
- 12**: Points to the top edge of the window frame.
- 1/8" / 1" @ 4" O.C.**: Dimension indicating the spacing of the window frame members.
- 26**: Points to a screw or fastener in the middle of the frame.
- 15**: Points to the middle section of the window frame.
- 4A**: Points to the bottom edge of the window frame.
- 4**: Points to the bottom edge of the window frame.
- 1/2" MAX. SPACE**: Dimension indicating the maximum space between the window frame and the substrate.
- BACKER ROD & CAULK BY OTHERS**: Label for the backer rod and caulk applied to the bottom of the frame.
- OPENING SUBSTRATE BY OTHERS**: Label for the opening substrate.

[illegible]

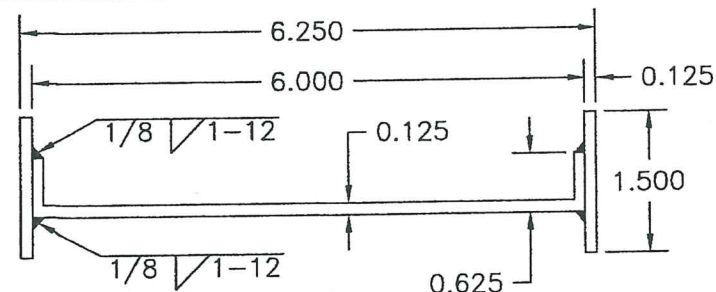
(SLEEVE MOUNT CONDITION AT RADIUS)
(FOR LOUVER DETAIL NOT SHOWN, SEE SECTION C5/5)



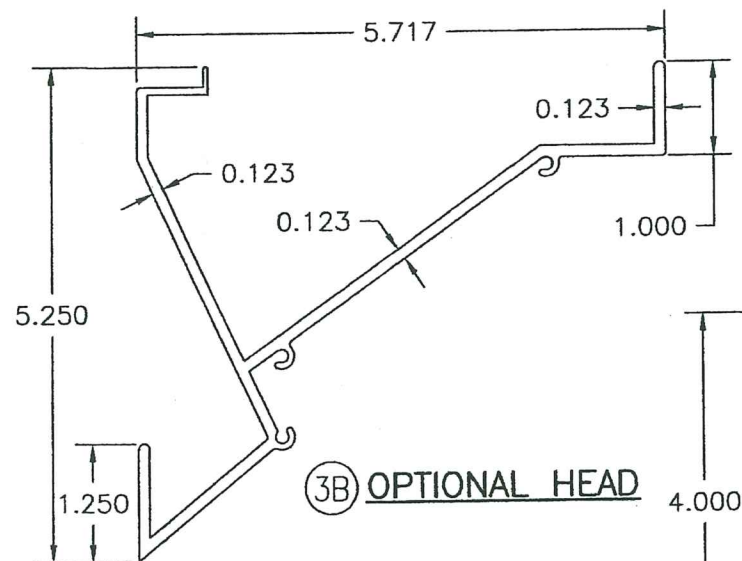
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By: Hely A. Nolasco
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: Manuel Perez
Miami-Dade Product Control

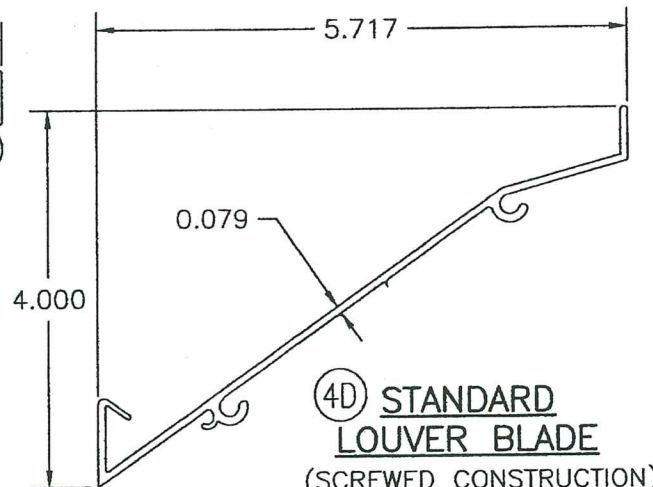
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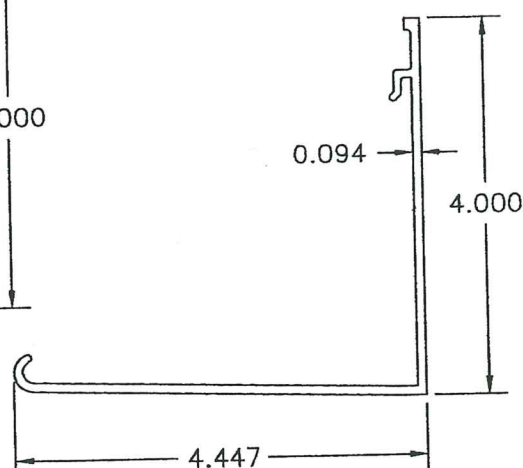
(1B) RADIUS JAMB



③B OPTIONAL HEAD



④D STANDARD
LOUVER BLADE
(SCREWED CONSTRUCTION)



⑤ BLADE SUPPORT
BRACKET
(SCREWED & WELDED CONSTRUCTION)

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: Manuel Perez
Miami-Dade Product Control

[illegible]

IRER **AIR BALANCE:**
A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
26376 NADIR ROAD; UNIT 309
PUNTA GORDA, FL 33983
PHONE: 561-744-1424

A320 I OLIVER SYSTEM

DRAWING TITLE

100

CARD EXAM

~~SIGNAL EXHAUST~~

11/11/11

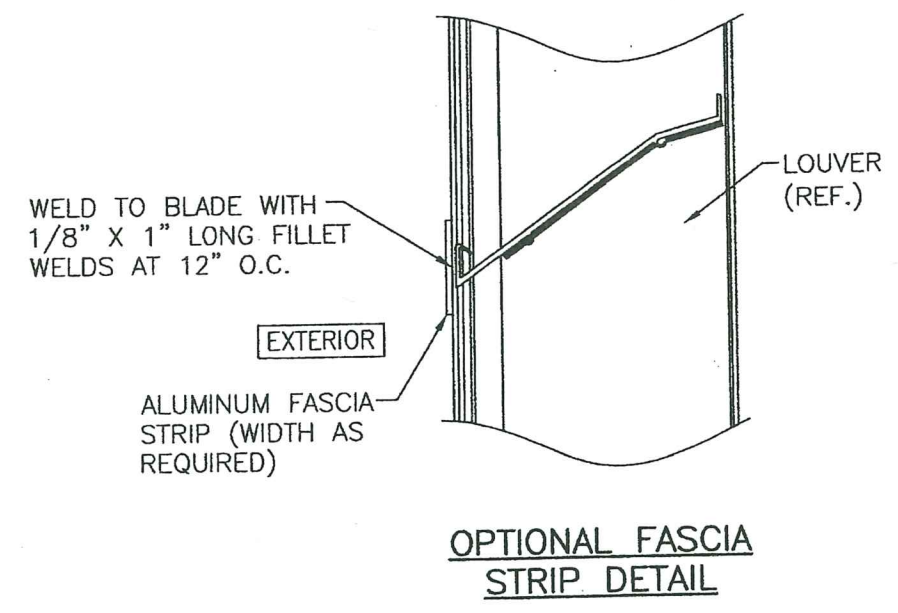
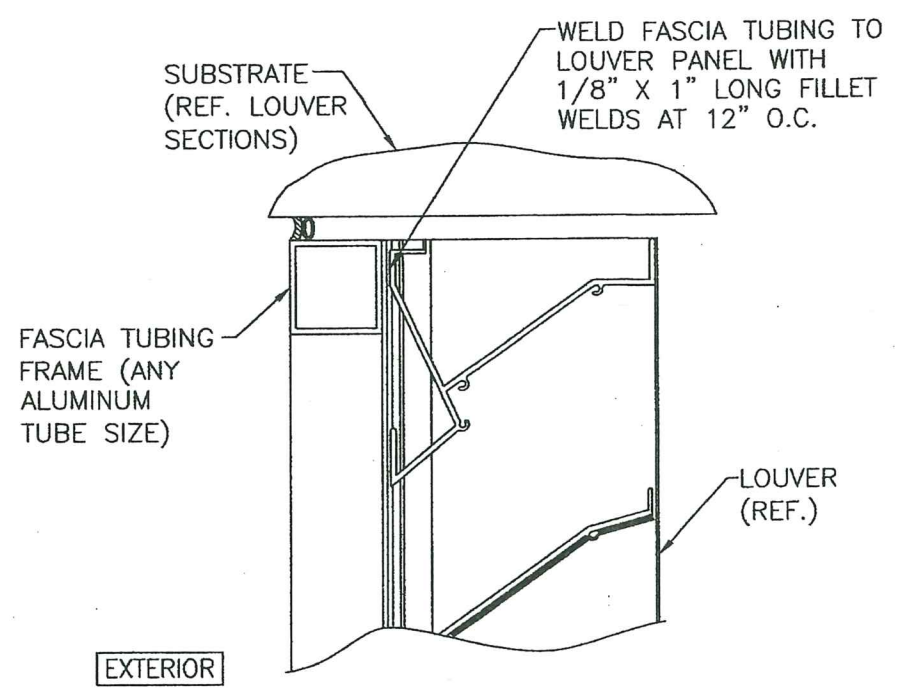
MAY 0 2023

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

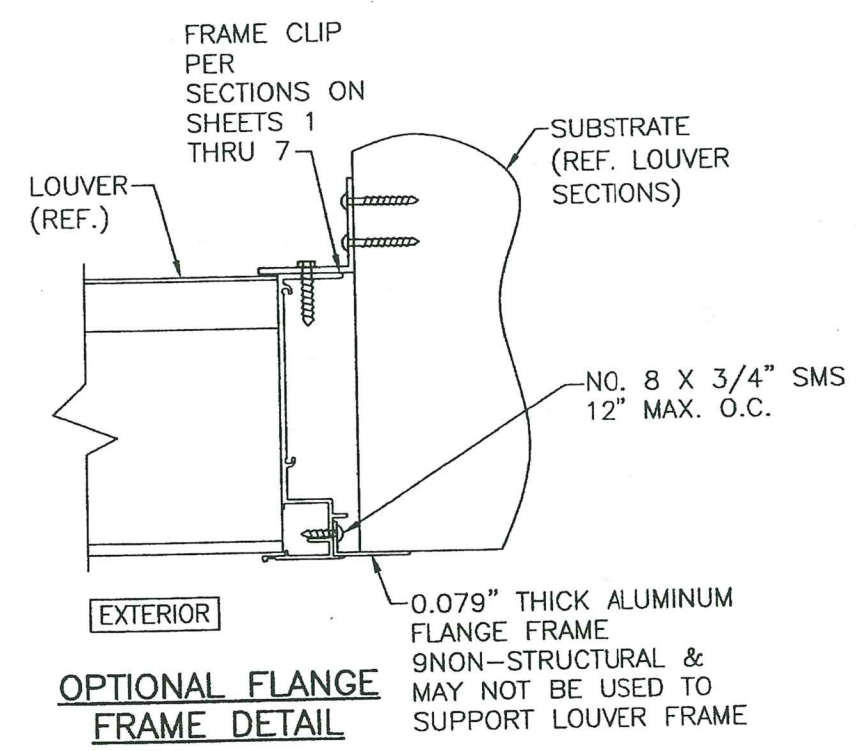
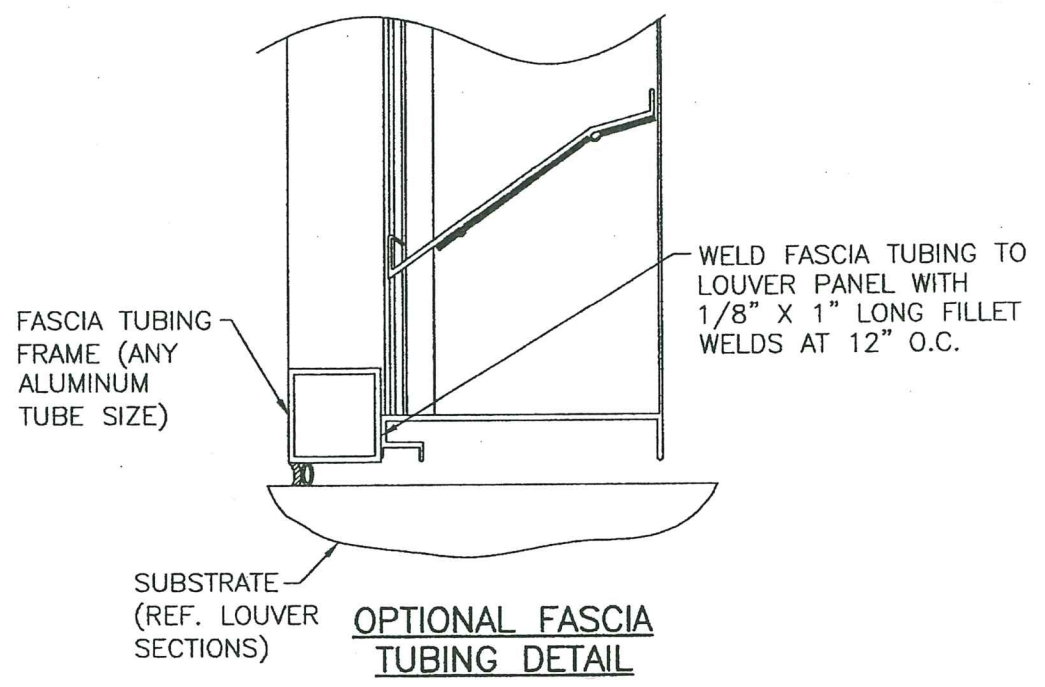
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DRAWN BY:	W.R.M.	CHECKED BY:	W.W.S.
PLOT:	1=4	DATE:	12/02/05
NO.		REVISION	DESCRIPTION
		BY	DATE

FOR LOUVER DETAILS,
SEE SHEETS 1-9



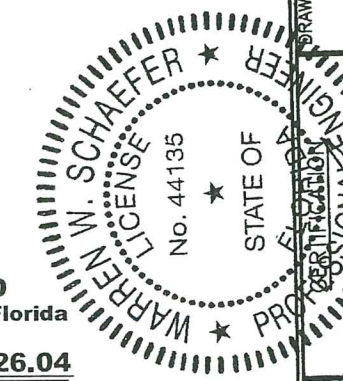
OPTIONAL FASCIA
STRIP DETAIL



OPTIONAL FLANGE
FRAME DETAIL

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By: *Heidi A. Miller*
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Perez*
Miami Dade Product Control

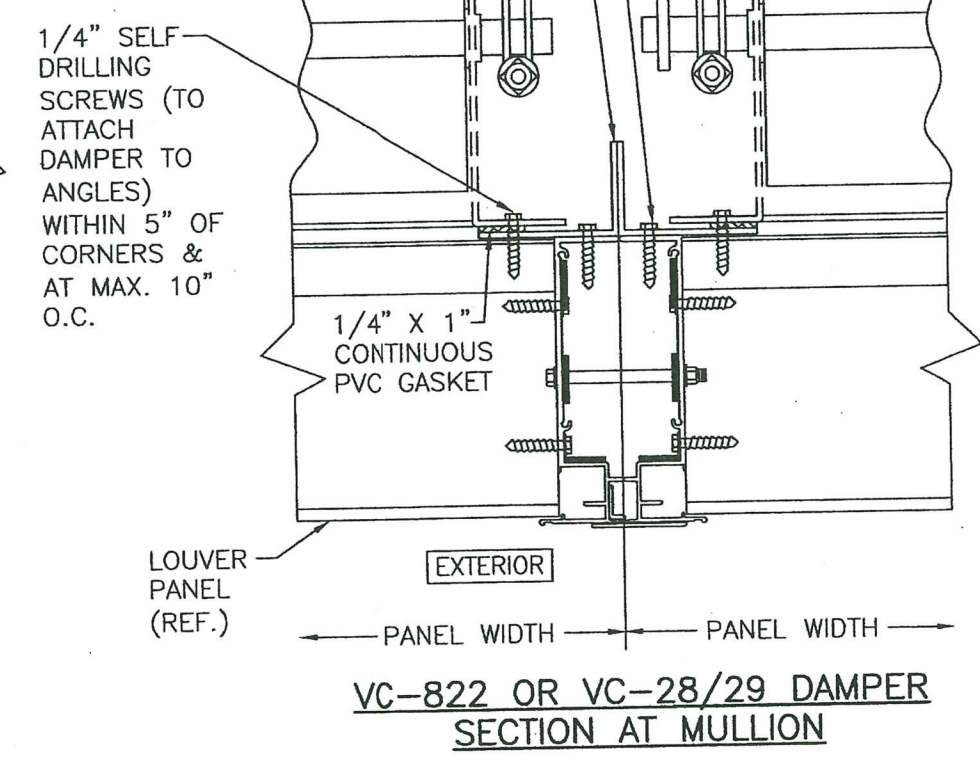
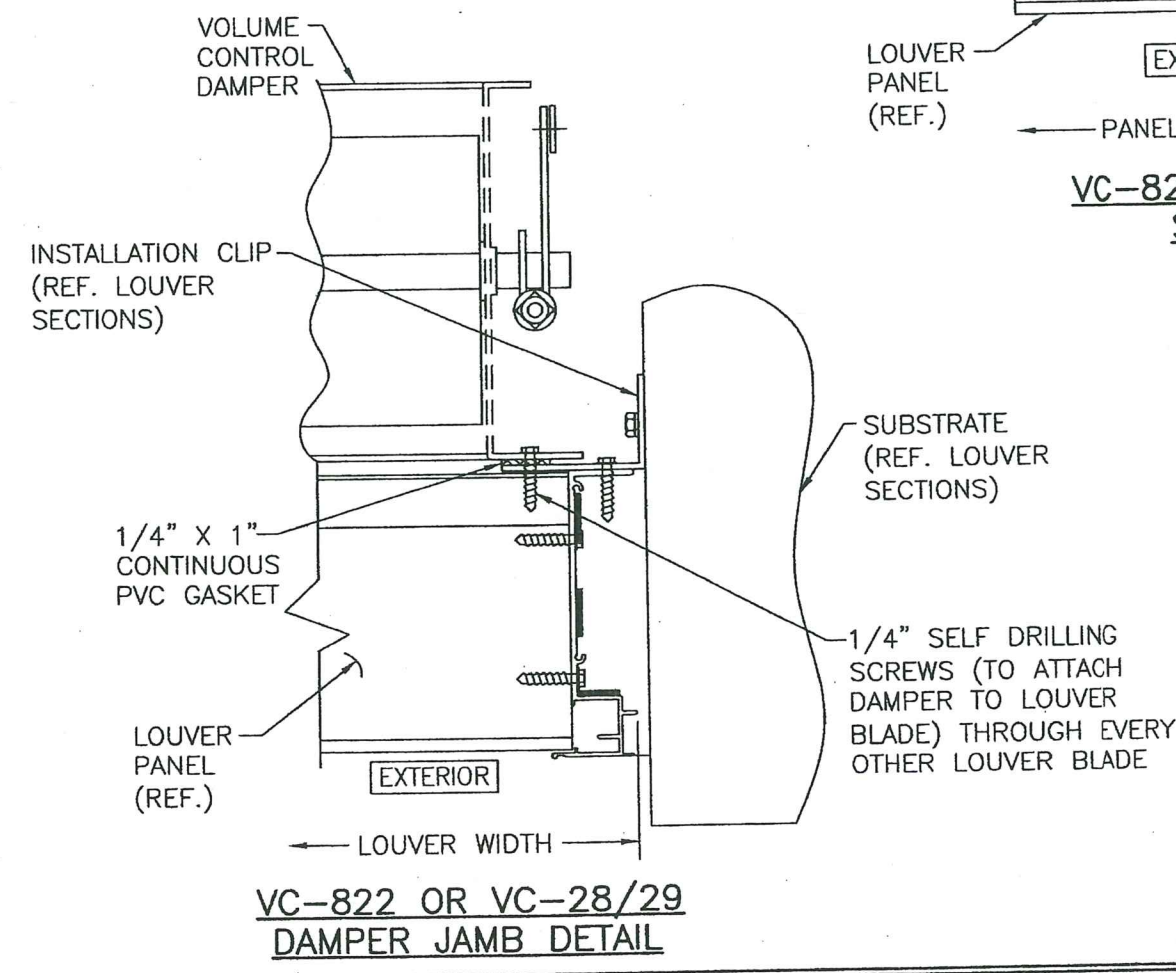
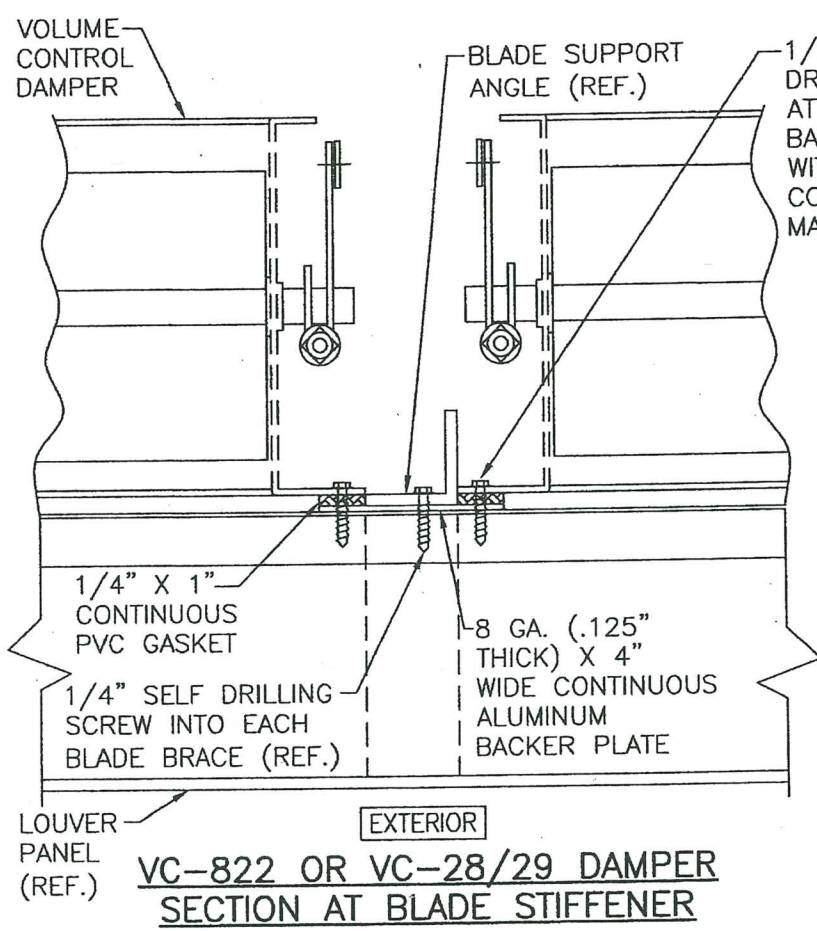
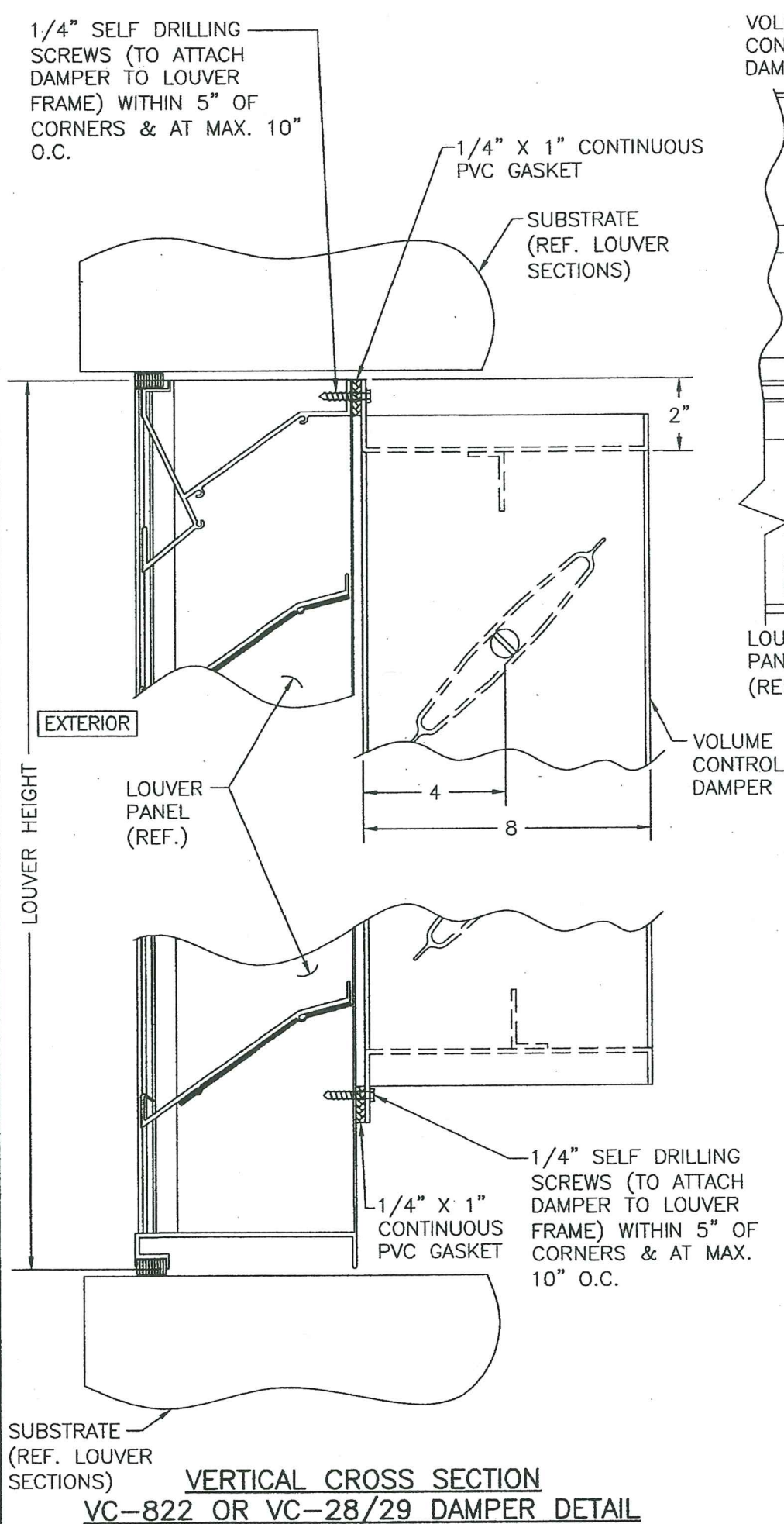


DRAWING TITLE
A320 LOUVER SYSTEM

MANUFACTURER
AIR BALANCE;
A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

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

DRAWING NO. 1465
SHEET NO. 10 OF 15
REV. D



FOR LOUVER DETAILS,
SEE SHEETS 1-9

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By: *Heidi A. Melton*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Perez*
Miami-Dade Product Control



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE A320 LOUVER SYSTEM	
MANUFACTURER AIR BALANCE, A DIVISION OF MESTEK, INC. 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424	
DRAFTSMAN WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1465	REV. D
SHEET NO. 11 OF 15	

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

SUBSTRATE
(REF. LOUVER
SECTIONS)

1/4" X 1"
CONTINUOUS
PVC GASKET

LE42V
STORM
LOUVER

EXTERIOR

LOUVER
PANEL
(REF.)

LOUVER HEIGHT

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

1/4" X 1"
CONTINUOUS
PVC GASKET

SUBSTRATE
(REF. LOUVER
SECTIONS)

**VERTICAL CROSS SECTION
LE42V STORM LOUVER DETAIL**

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

3 x 2 x 1/8
CONTINUOUS ANGLE
SHIP ATTACHED

LE42V STORM
LOUVER

1/4" X 1"
CONTINUOUS
PVC GASKET

LOUVER
PANEL
(REF.)

EXTERIOR

PANEL WIDTH

PANEL WIDTH

**LE42V STORM LOUVER
SECTION AT MULLION**

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

2 x 2 x 1/4
MULLION ANGLE

LE42V
STORM
LOUVER

1/4" X 1"
CONTINUOUS
PVC GASKET

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

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

LOUVER
PANEL
(REF.)

EXTERIOR

**LE42V STORM LOUVER
SECTION AT BLADE STIFFENER**

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

LE42V STORM
LOUVER

1/4" X 1"
CONTINUOUS
PVC GASKET

LOUVER
PANEL
(REF.)

EXTERIOR

LOUVER WIDTH

**LE42V STORM LOUVER
JAMB DETAIL**

INSTALLATION CLIP
(REF. LOUVER
SECTIONS)

SUBSTRATE
(REF.
LOUVER
SECTIONS)

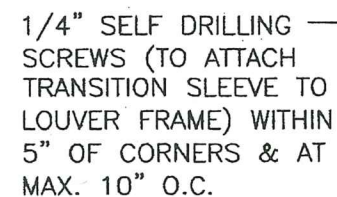
FOR LOUVER DETAILS,
SEE SHEETS 1-9

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By: *Heidi A. Miller*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Perez*
Miami-Dade Product Control



DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 12/02/05
NO.	REVISION DESCRIPTION
BY	DATE
<p>DRAWING TITLE: A320 LOUVER SYSTEM</p> <p>MANUFACTURER: AIR BALANCE: A DIVISION OF MESTEK, INC. 450 RIVERSIDE DRIVE WYALUSING, PA 18853 570-746-1888</p> <p>CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 26376 NAIR ROAD, UNIT 309 PUNTA GORDA, FL 33983 PHONE: 561-744-3424</p>	
DRAWING NO.	REV.
1465	D
SHEET NO.	12 OF 15



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
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
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By H. G. A. Miller
Miami Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: Manuel Perez
Miami-Dade Product Control

04
29

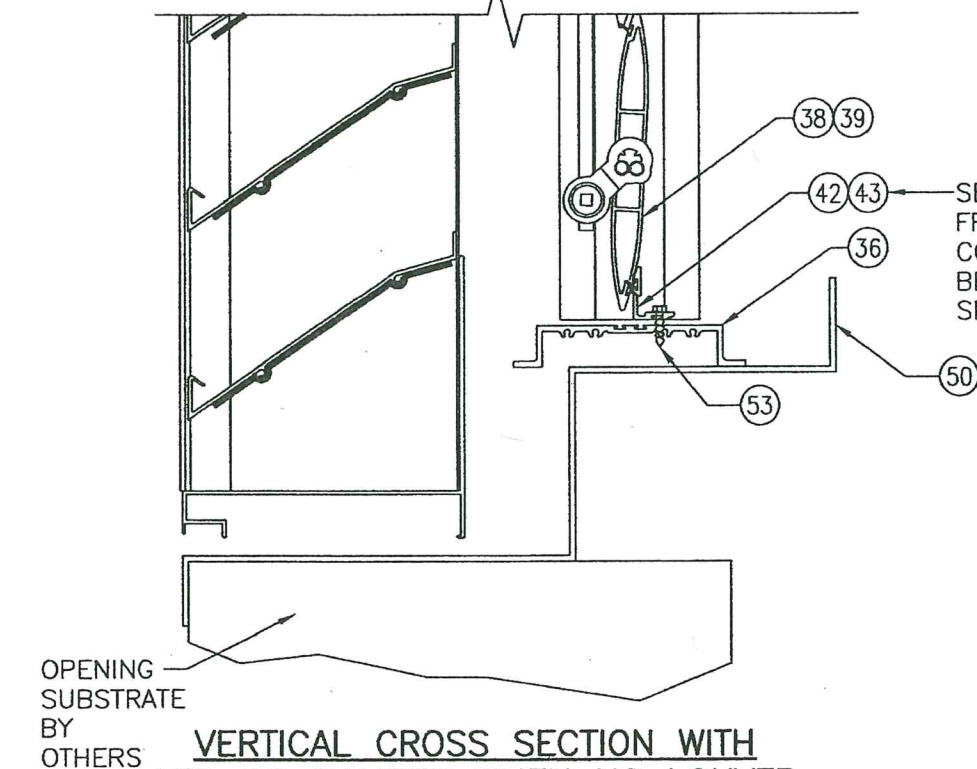
DRAWING NO. 1465	REV D
SHEET NO. 13 OF 15	

DRAWING TITLE
A320 LOUVER SYSTEM

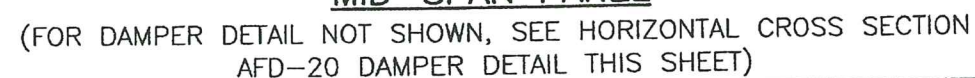
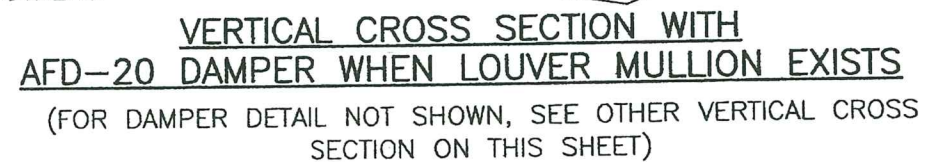
CONSULTANTS
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
26376 NADIR ROAD; UNIT 309
PUNTA GORDA, FL 33983
PHONE: 561-744-3424

MANUFACTURER **AIR BALANCE;**
A DIVISION OF MESTEK, INC.
450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

[illegible]



(DAMPER OPERATOR NOT SHOWN, IS PART OF THIS
APPROVAL)



FOR LOUVER DETAILS,
SEE SHEETS 1-9

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 23-0713.06
Expiration Date 04/22/2029
By Hedy A. M. [Signature]
Miami Dade Product Control

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[illegible]

AIR BALANCE:
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450 RIVERSIDE DRIVE
WYALUSING, PA 18853
570-746-1888

A320 LOUVER SYSTEM

CONSULTANTS
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& CONSULTING, P.A.
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PUNTA GORDA, FL 33983
PHONE: 561-744-3424

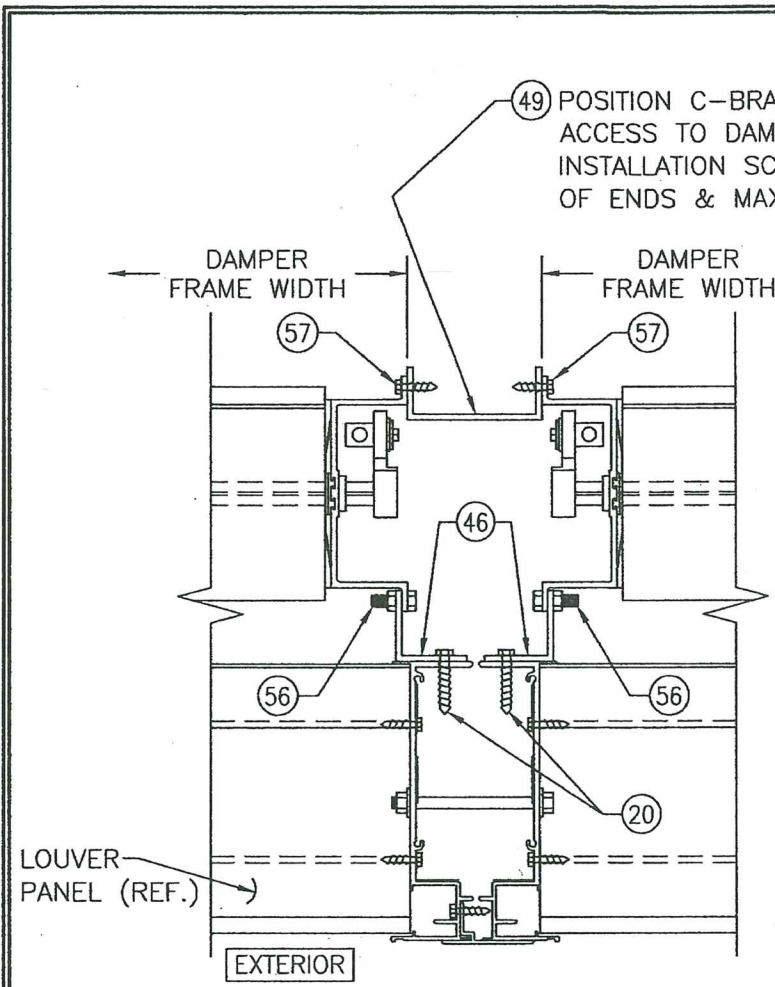
PAWING TITLE

No. 44135

CERTIFICATION

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

DRAWING NO. 1465	REV. D
SHEET NO. 14 OF 15	

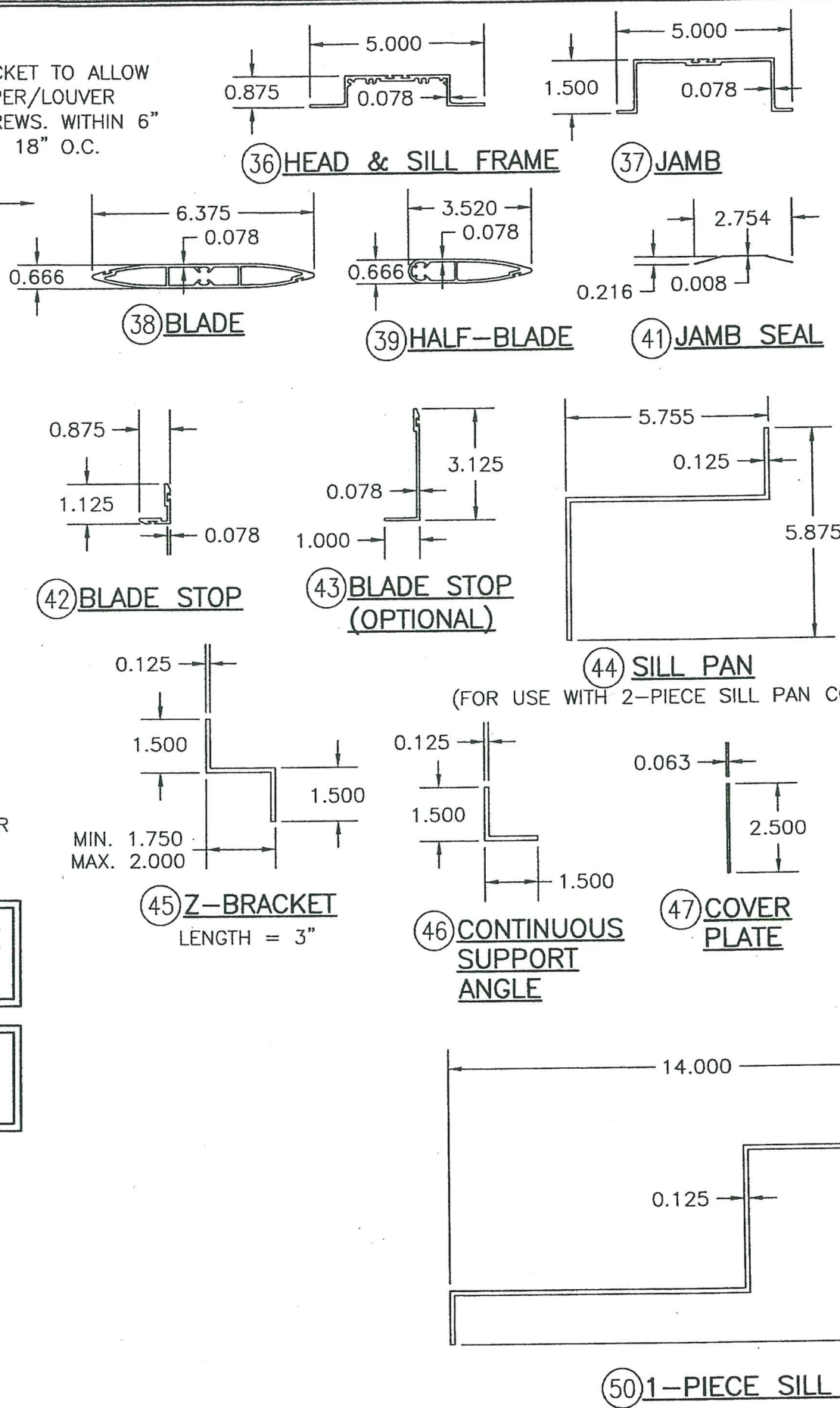


AFD-20 DAMPER MULLION SECTION AT LOUVER MULLION
(FOR DAMPER DETAIL NOT SHOWN, SEE OTHER DAMPER MULLION SECTION ON SHEET 14)

MAX. FRAME WIDTH OF ANY SINGLE AFD-20 DAMPER PANEL IS 48"

SEAL ALL STITCH WELDED SEAMS WITH SILICONE SEALANT

FOR LOUVER DETAILS, SEE SHEETS 1-9



AFD-20 DAMPER (ALL PARTS BY ARROW UNITED INDUSTRIES)		
ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
36	HEAD & SILL FRAME	6063-T5 ALUMINUM
37	JAMB	6063-T6 ALUMINUM
38	BLADE	6063-T5 ALUMINUM
39	HALF-BLADE	6063-T5 ALUMINUM
40	BLADE LINKAGE ASSEMBLY	BY AWV
41	JAMB SEAL	304 STAINLESS STEEL
42	BLADE STOP	6063-T5 ALUMINUM
43	BLADE STOP (OPTIONAL)	6063-T5 ALUMINUM
44	SILL PAN	5052-H32 ALUMINUM
45	Z-BRACKET	5052-H32 ALUMINUM
46	CONTINUOUS SUPPORT ANGLE	6063-T5 ALUMINUM
47	C-BRACKET	5052-H32 ALUMINUM
48	CHANNEL BRACKET	5052-H32 ALUMINUM
49	C-BRACKET	5052-H32 ALUMINUM
50	1-PIECE SILL PAN	5052-H32 ALUMINUM
MISC. FASTENERS		
53	NO. 8 X 3/4" SELF DRILLING SCREW	WITHIN 2" OF CORNERS & MAX. 12" O.C.
54	NO. 8 X 1/2" SELF DRILLING SCREW	4 PER PLATE
55	NO. 8 X 3/4" SELF DRILLING SCREW	2 PER Z-BRACKET
56	1/4-20 X 3/4" BOLT & NUT	WITHIN 1 1/2" FROM ENDS & MAX. 4" O.C.
57	NO. 8 X 3/4" SELF DRILLING SCREW	2 PER CHANNEL BRACKET
SEALS & SEALANTS		
61	BLADE SEAL	SOLID SILICONE

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 23-0713.06
Expiration Date 04/22/2029
By: *Heidi A. Miller*
Miami-Dade Product Control

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 23-0426.04
Expiration Date: 04/22/2029
By: *Manuel Perez*
Miami-Dade Product Control



DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=4		DATE: 12/02/05	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: A320 LOUVER SYSTEM			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.		MANUFACTURER: AIR BALANCE: A DIVISION OF MESTEK, INC.	
26376 NADIR ROAD, UNIT 309 PUNTA GORDA, FL 33983		450 RIVERSIDE DRIVE WYALUSING, PA 18853	
PHONE: 561-744-3424		570-746-1888	
DRAWING NO. 1465		REV. D	
SHEET NO. 15		OF 15	