



**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) 375-2908**

**NOTICE OF ACCEPTANCE (NOA)**

**American Warming & Ventilating  
7301 International Drive  
Holland, Ohio 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 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: Architectural & Non-Architectural Louver System.**

**APPROVAL DOCUMENT:** Drawing No.1261, titled "Model LE22 4" Louver System" dated 11/18/03 with no revisions, prepared by W.W. Schaefer Engineering & Consulting, PA, signed and sealed by W. W. Schaefer P.E., bearing the Miami-Dade County Product Control Approval stamp with the NOA number and approval 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 is a Private Label of NOA # 03-0514.13 consists of this page, evidence page as well as approval document mentioned above.

The submitted documentation was reviewed by **Candido F. Font PE.**

  
04/22/04



**NOA No: 04-0204.01  
Expiration Date: July 27, 2008  
Approval Date: April 22, 2004  
Page 1**

**American Warming & Ventilating.**

**NOTICE OF ACCEPTANCE: EVIDENCE PAGE**

**A. DRAWINGS.**

1. Drawing prepared by W. W. Schaefer Engineering & Consulting, P.A. titled "Model LE22 4" Louver System," Drawing No. 1261, dated 11/08/03 with no revision signed and sealed by W. W. Schaefer, PE.

**B. TESTS.**

1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of "AUI EA-22 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc., report No. 0199-0518-99, dated 05/26/99 to 06/11/99, signed and sealed by V. J. Abraham, PE
2. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of "AUI EA-22 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc, report No. 0199-0615-99, dated 06/24/99, signed and sealed by V. J. Abraham, PE.

**C. CALCULATIONS.**

1. Allowable Load Calculations, dated 11/12/99, pages 1 to 3 of 3, prepared by W. W. Schaefer Engineering & Consulting, PA, signed and sealed by W. W. Schaefer. PE.
2. Allowable Load Calculations, dated 04/14/00, pages 1 to 6 of 6, prepared by W. W. Schaefer Engineering & Consulting, PA signed and sealed by W. W. Schaefer. PE.

**D QUALITY ASSURANCE**

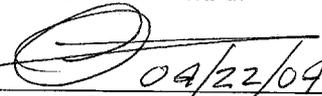
1. Miami-Dade Product Control Division.

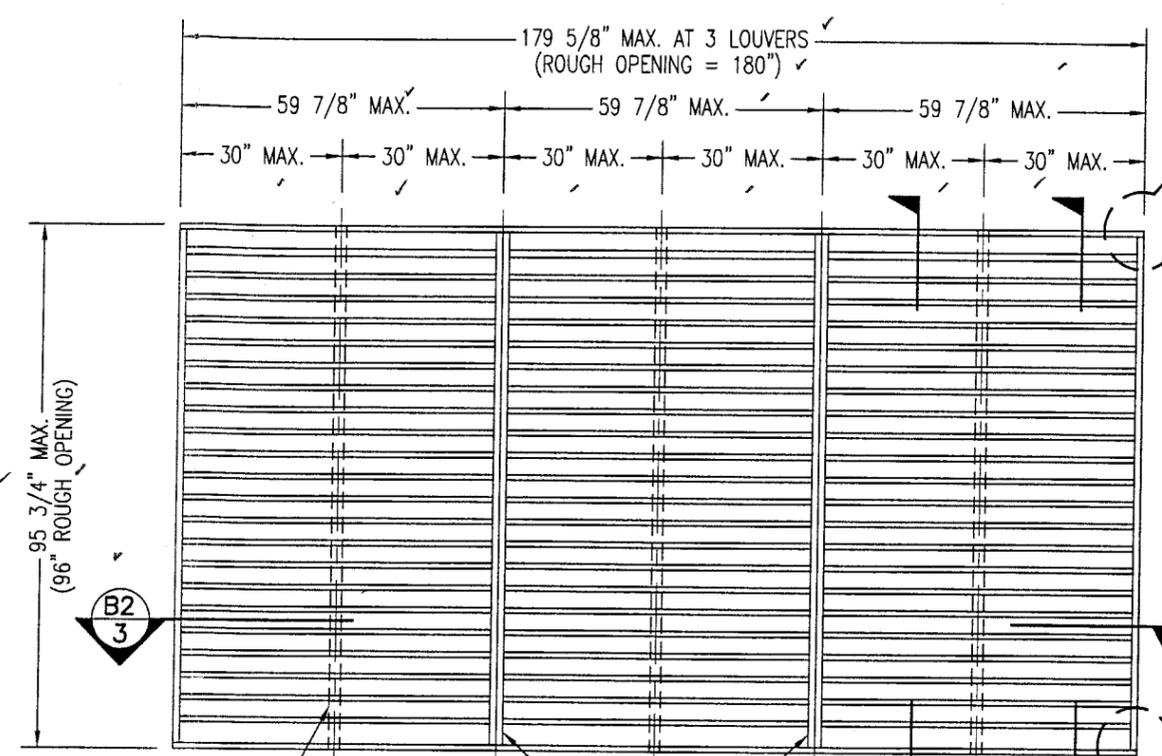
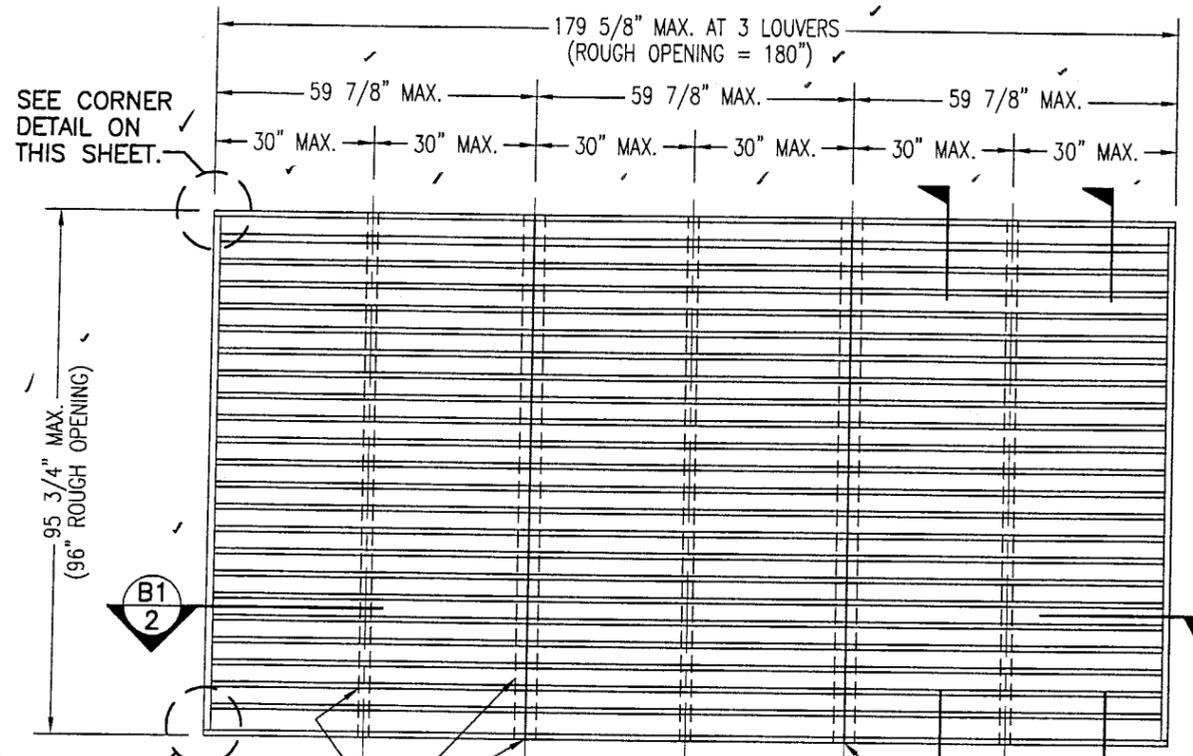
**E. MATERIAL CERTIFICATIONS.**

1. Tensile Test report on 4 inch louver, prepared by Q. C. Metallurgical, Inc., No. 9LM-2586, dated 12/27/99, signed and sealed by F. Grate, PE.
2. Arrow die drawings 11-2315 & 11-2313 issued on August 2002.

**F STATEMENTS**

1. Test compliance letter issued by Hurricane Test Laboratory, Inc. on 12/08/99, signed and sealed by V. J. Abraham, PE.
2. Code compliance letter issued by W. W. Schaefer Engineering & Consulting, PA. On 11/15/99, signed and sealed by W. W. Schaefer, PE.
3. No interest letter issued by W. W. Schaefer Engineering & Consulting, P.A. on 11/15/99, signed and sealed by W. W. Schaefer, PE.
4. No change letter issued by Arrow United Industries on 02/04/03 and signed by V. Kreglewicz.
5. Private Labeling Agreement prepared by NOA Holder Arrow United Industries and Private Labeler American Warming & Ventilating, signed by V. Kreglewicz and R. Lichtenwald.

  
Candido F. Font PE.  
Sr. Product Control Examiner  
NOA No 04-0204.01  
Expiration Date: July 27, 2008  
Approval: Date: April 22, 2004



**EXTERIOR ELEVATION**  
**ARCHITECTURAL 4" LOUVER**

**EXTERIOR ELEVATION**  
**NON-ARCHITECTURAL 4" LOUVER**

SCALE: 3/8"=1'-0"

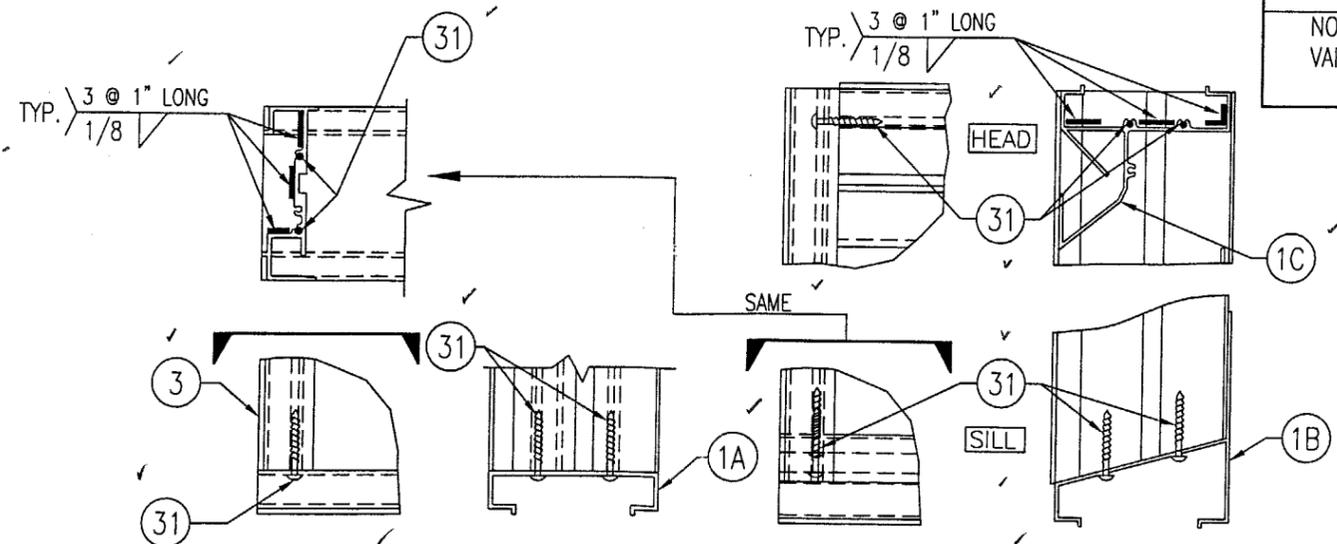
SCALE: 3/8"=1'-0"

NOTE: THIS LOUVER SYSTEM MAY CONSIST OF AN UNLIMITED NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT EXCEED 59 7/8" X 95 3/4" IN SIZE.

NOTE: THIS LOUVER SYSTEM MAY CONSIST OF AN UNLIMITED NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT EXCEED 59 7/8" X 95 3/4" IN SIZE.

**GENERAL NOTES:**

1. MAXIMUM ALLOWABLE INDIVIDUAL PANEL SIZE = 59 7/8" X 95 3/4"
2. MAXIMUM ASSEMBLY SIZE = UNLIMITED WIDTH, UP TO 95 3/4" HEIGHT.
3. ASSEMBLIES/SECTIONS MAY BE STACKED VERTICALLY PROVIDING A STRUCTURAL SUPPORT IS DESIGNED AND INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER ASSEMBLY.
4. MAXIMUM UNSUPPORTED BLADE LENGTH SHALL NOT EXCEED 30".
5. ALL FASTENERS SHALL BE PLATED STEEL OR 304 STAINLESS STEEL.
6. SEPARATION OF DISSIMILAR MATERIALS MUST BE MAINTAINED PER SECTION 2003.8.4 OF THE FLORIDA BUILDING CODE (FBC).
7. APPROVED TYPES OF OPENINGS: 3000 PSI CONCRETE/MASONRY, WOOD OR STEEL. SEE SHEETS 4 & 5 FOR ANCHORING DETAILS.
8. THESE LOUVER SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE LOAD TABLE ON SHEET 7.
9. THIS SYSTEM HAS NOT BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS NOT A WATER RESISTANT SYSTEM.
10. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EACH APPLICATION.
11. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THESE DRAWINGS.
12. THE DETAILS & SPECIFICATIONS HERE-IN REPRESENT THE PRODUCTS PROPOSED FOR IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR BOTH IMPACT & NON-IMPACT LOUVERS.
13. THESE LOUVER SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC).
14. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSLE IMPACT, STRUCTURAL & CYCLIC TESTING.
15. THESE LOUVERS ARE TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVERS IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.



**CORNER DETAIL OPTION 1**  
(SILL CORNER SHOWN; HEAD IS MIRRORED IMAGE)

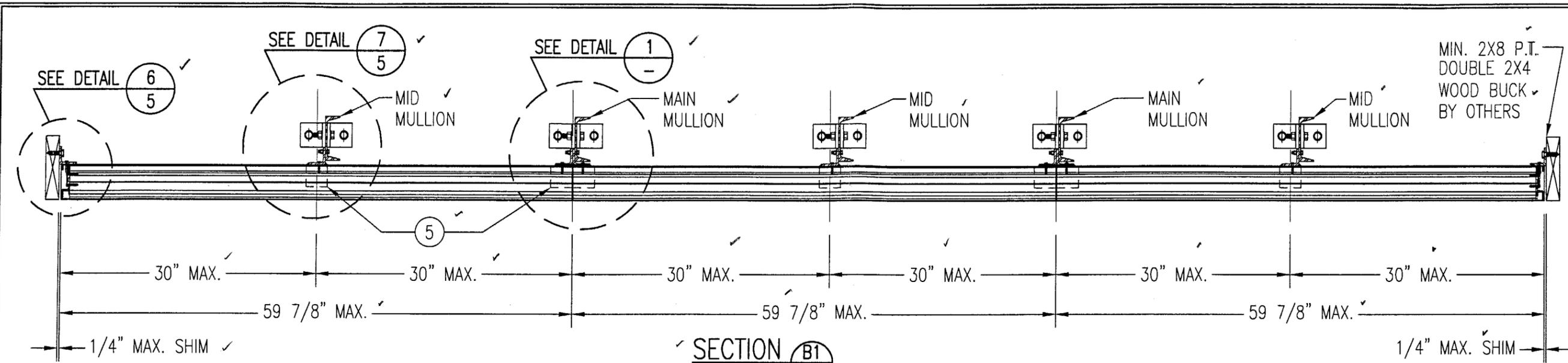
**CORNER DETAIL OPTION 2**

MAX. ALLOWABLE DESIGN WIND PRESSURE	
POSITIVE	NEGATIVE
150 PSF	150 PSF

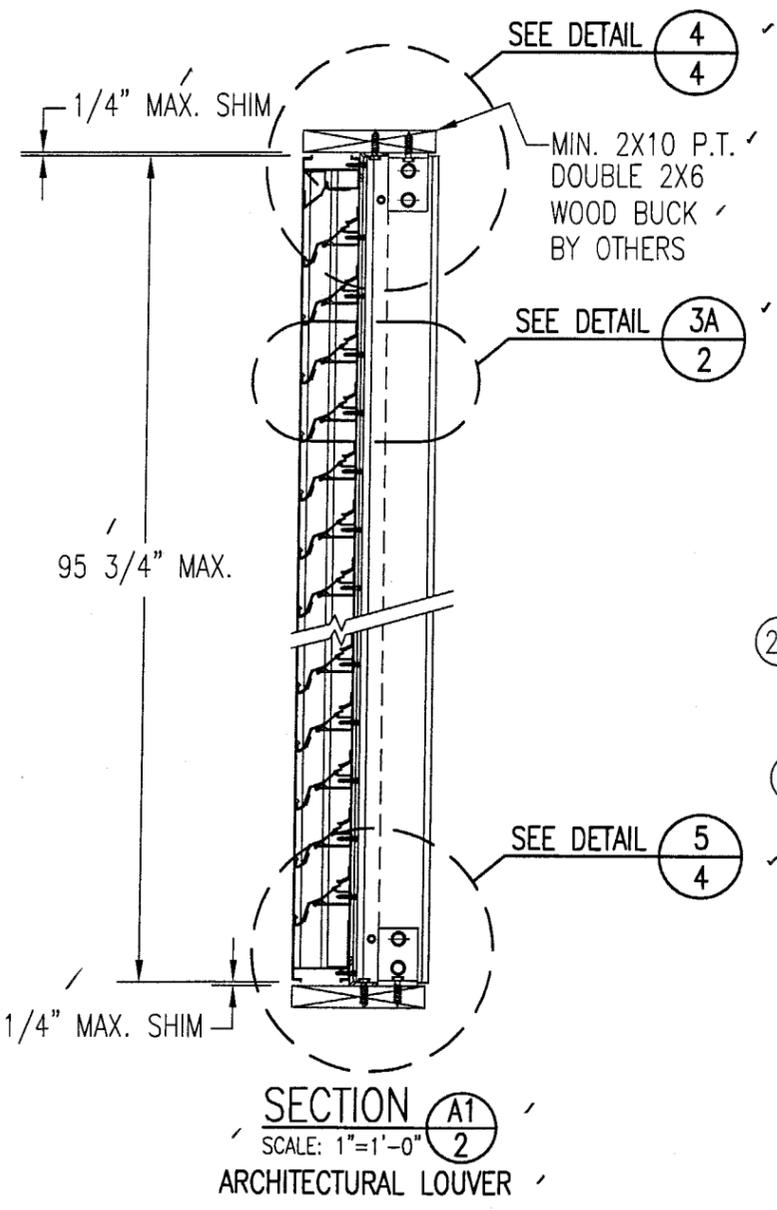
NOTE: SEE LOAD TABLE ON SHEET 7 FOR VARIATIONS OF PRESSURES WITH RESPECT TO PANEL WIDTH & CLIP SPACING.

Approved as complying with the Florida Building Code  
Date 04/22/04  
NOA# 04-0264-01  
Miami Dade Product Control  
By [Signature]

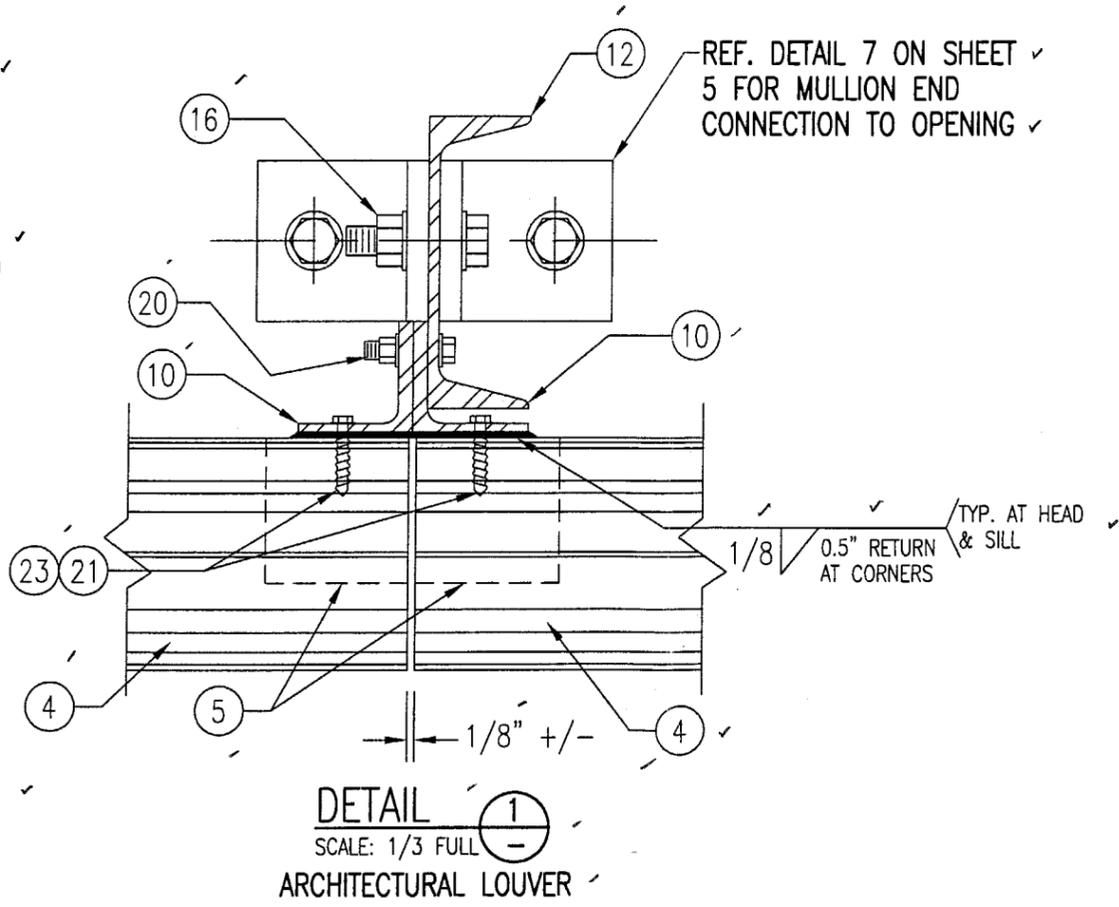
DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1-32	DATE: 11/18/03
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE <b>MODEL LE22 4" LOUVER SYSTEM</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	MANUFACTURER <b>AMERICAN WARMING &amp; VENTILATING</b> 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000
CERTIFICATION <b>FEB 02 2004</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1261</b>	REV.
SHEET NO. <b>1</b>	OF <b>7</b>



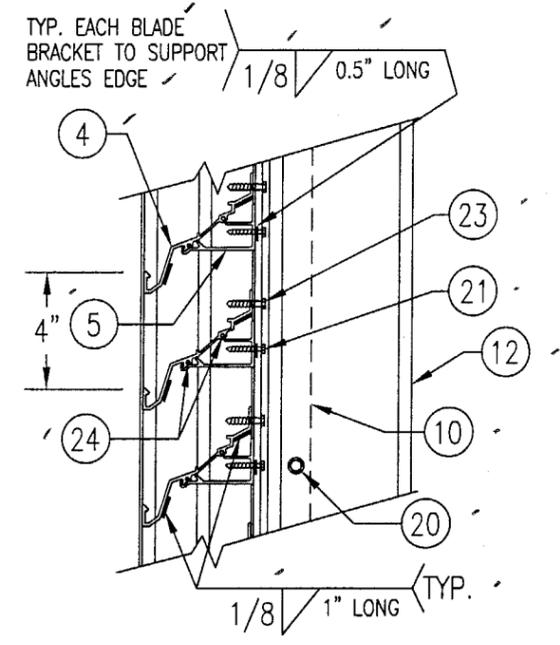
**SECTION B1**  
SCALE: 1"=1'-0"  
ARCHITECTURAL LOUVER



**SECTION A1**  
SCALE: 1"=1'-0"  
ARCHITECTURAL LOUVER



**DETAIL 1**  
SCALE: 1/3 FULL  
ARCHITECTURAL LOUVER



**DETAIL 3A**  
SCALE: 2"=1'-0"  
TYP. AT ALL MULLIONS THIS SHEET

MIN. 2X8 P.T.  
DOUBLE 2X4  
WOOD BUCK  
BY OTHERS

DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=12	DATE: 11/18/03
DATE	
BY	
REVISION DESCRIPTION	
NO.	

**DRAWING TITLE**  
MODEL LE22 4" LOUVER SYSTEM

**MANUFACTURER**  
AMERICAN WARMING & VENTILATING  
7301 INTERNATIONAL DRIVE  
HOLLAND, OHIO 43528  
419-865-5000

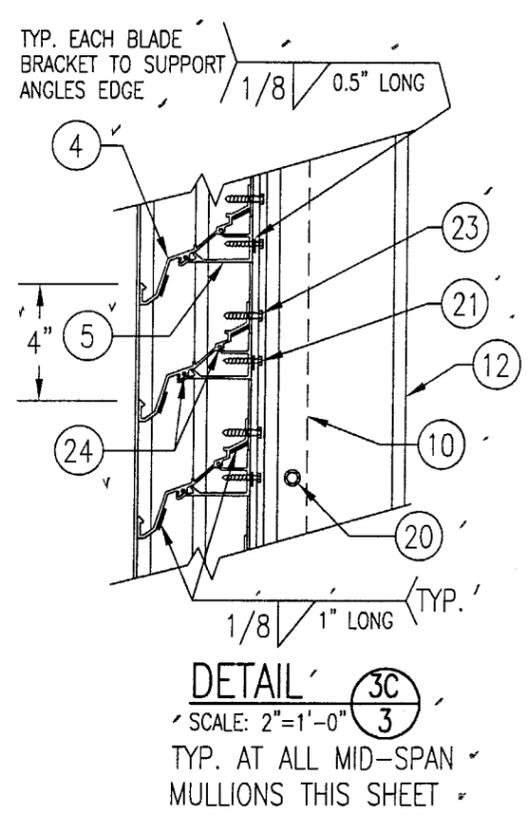
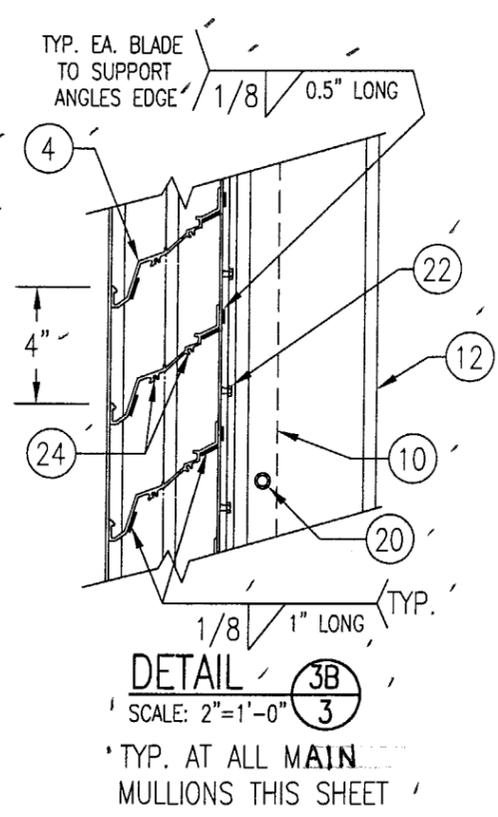
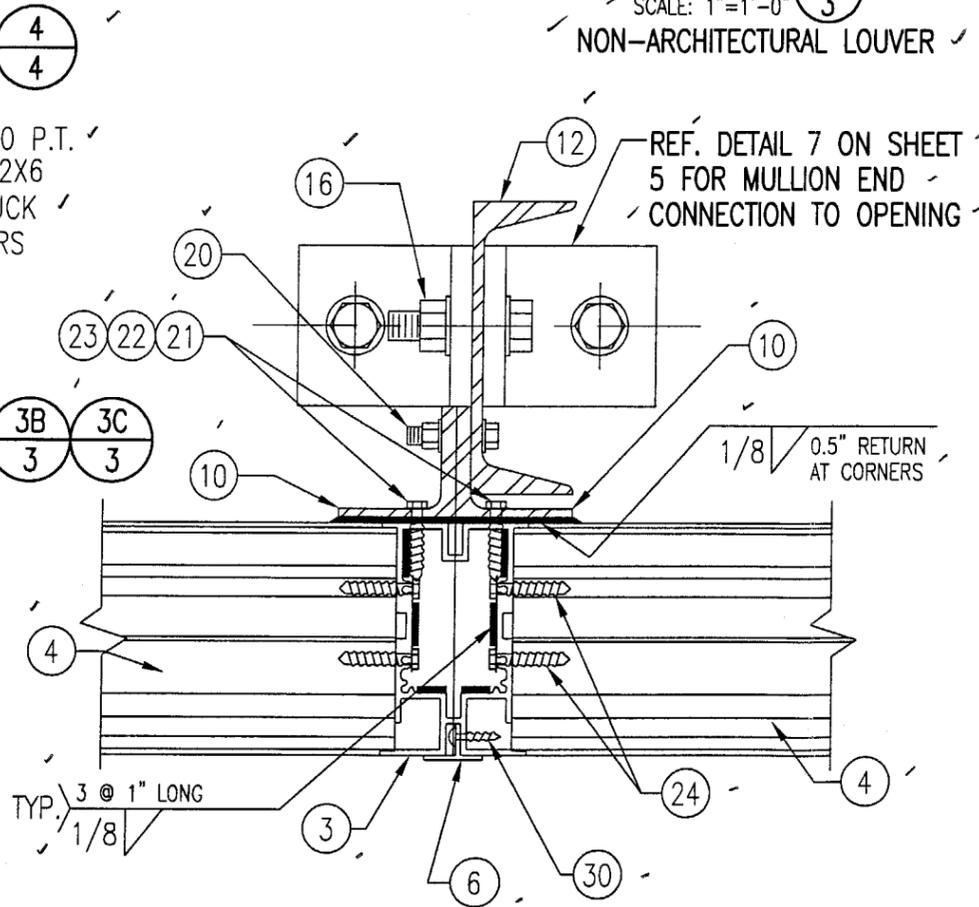
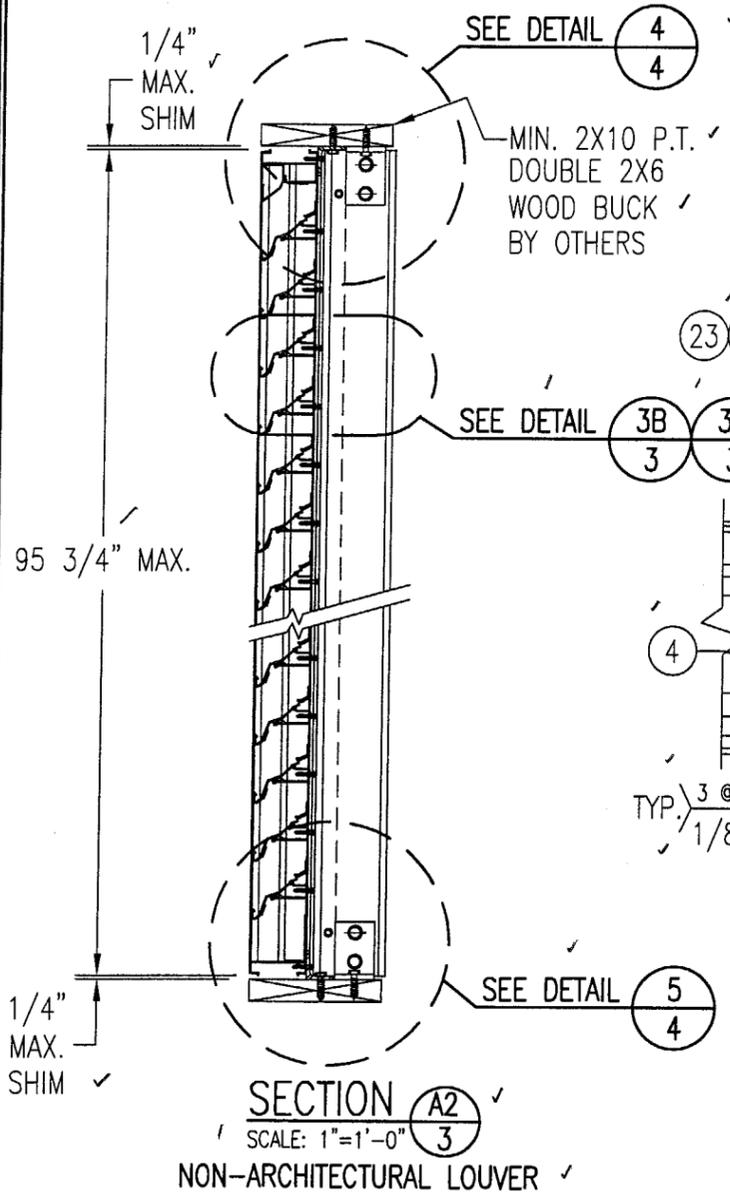
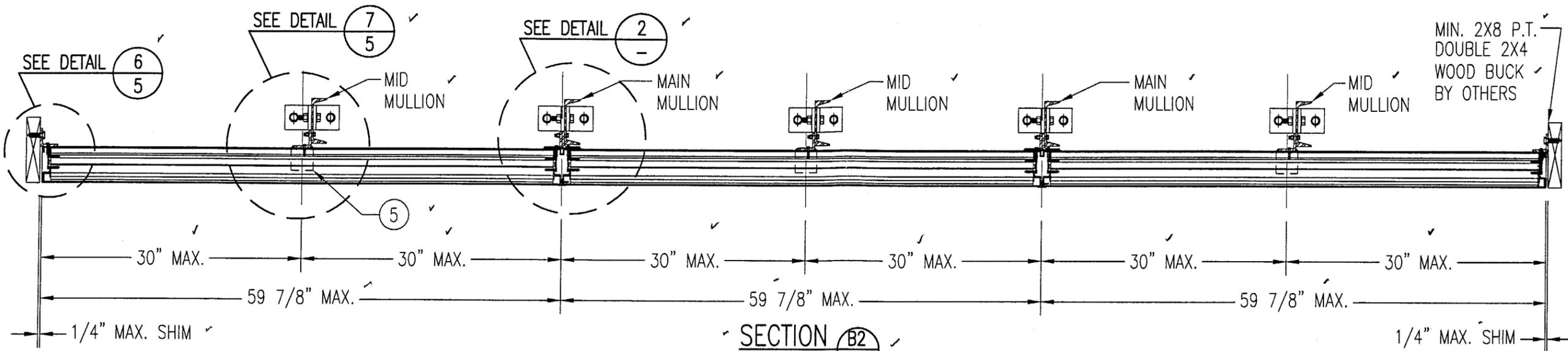
**CONSULTANTS**  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902 FAX: 561-775-4903

**CERTIFICATION**  
FEB 02 2004

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

DRAWING NO.	REV.
1261	
SHEET NO.	
2	OF 7

Approved as complying with the  
Florida Building Code  
Date 04/22/04  
NOA# 04-0204.01  
Miami Dade Product Control  
Division



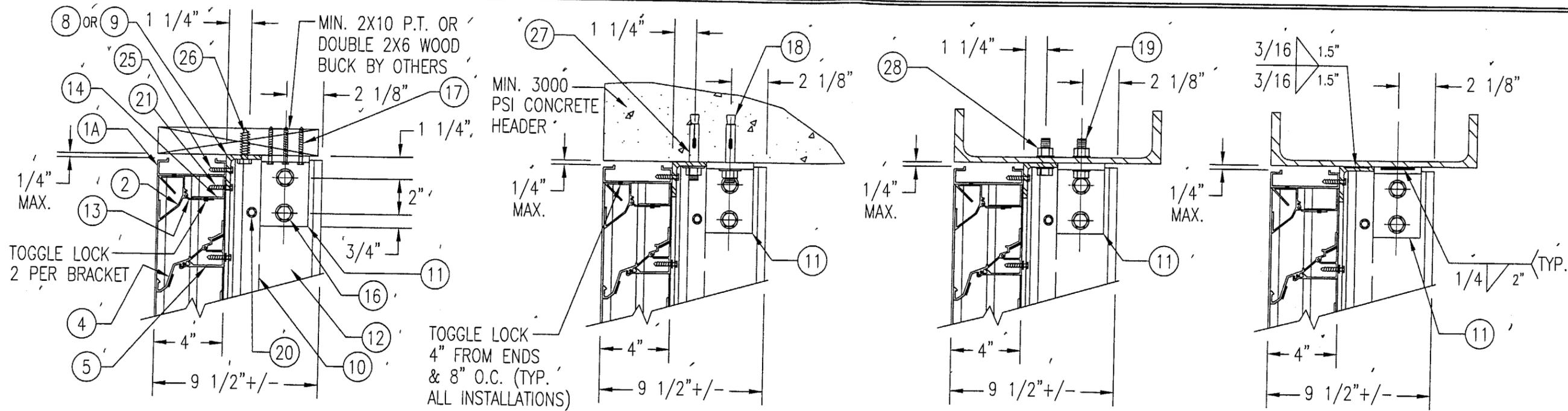
**DETAIL 2**  
SCALE: 2"=1'-0"  
NON-ARCHITECTURAL LOUVER  
NOTE: SIDE JAMBS ARE ADDITIONALLY FASTENED TO THE SILL & HEAD WITH 2 NO. 7 X 1" SMS THROUGH SILL & INTO JAMB SPLINES.

Approved as complying with the Florida Building Code  
Date: 04/22/04  
NOA# 04-0204.01  
Miami Dade Product Control Division  
By: [Signature]

DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=12	DATE: 11/18/03
NO.	REVISION DESCRIPTION

DRAWING TITLE: MODEL LE22 4" LOUVER SYSTEM  
MANUFACTURER: AMERICAN WARMING & VENTILATING  
7301 INTERNATIONAL DRIVE  
HOLLAND, OHIO 43528  
419-865-5000  
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: FEB 02 2004  
DRAWING NO.: 1261  
SHEET NO.: 3 OF 7  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135



NO.	REVISION DESCRIPTION	BY	DATE
1-8			

DRAWN BY: K.P.S.  
CHECKED BY: W.W.S.  
DATE: 11/18/03

MANUFACTURER  
**AMERICAN WARMING & VENTILATING**  
7301 INTERNATIONAL DRIVE  
HOLLAND, OHIO 43528  
419-865-5000

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  
FEB 07 2004  
WARREN W. SCHAEFER, P.E.  
P.E. NO. 44135

DRAWING NO. 1261  
SHEET NO. 4 OF 7

**WOOD FRAMED OPENING**

**CONCRETE HEAD**

**STEEL FRAME OPENING (BOLTED)**

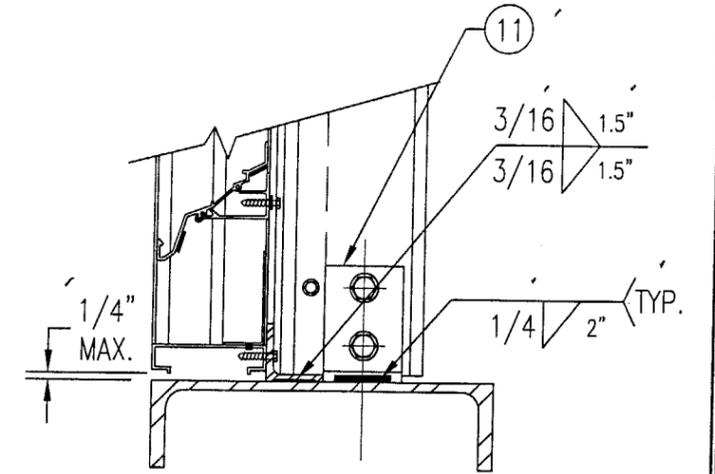
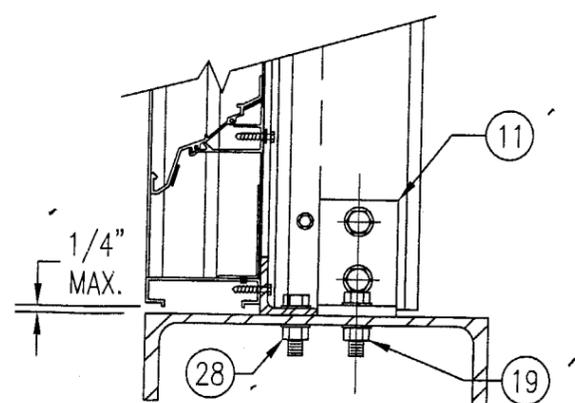
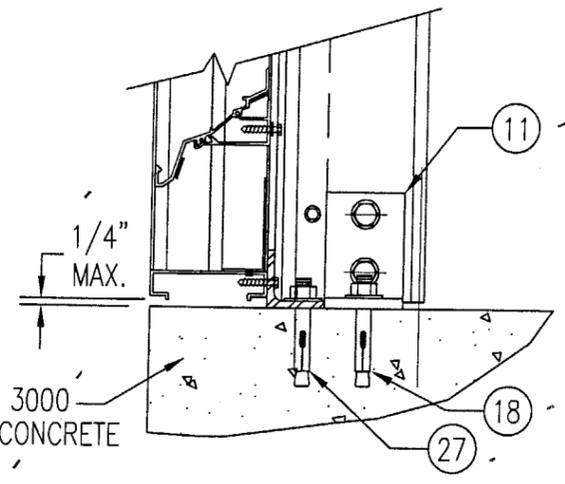
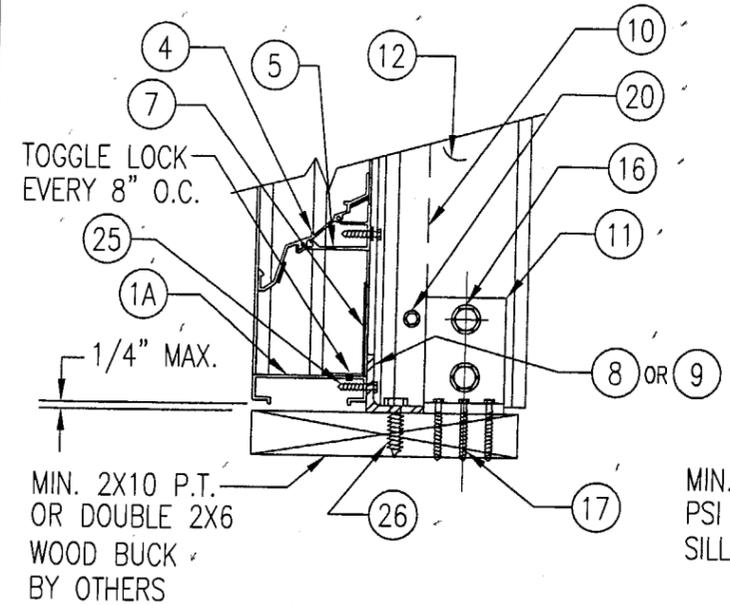
**STEEL FRAME OPENING (WELDED)**

SEE "DETAIL 3A & 3B" FOR LOUVER BLADE DETAILS  
NOTE: STANDARD HEADER (ITEMS #1A & 2) IS SHOWN IN THIS VIEW. 1-PIECE HEADER (ITEM 1C) ALSO APPLIES.

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN (MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)

DETAIL 4  
SCALE: 2"=1'-0"

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



**WOOD FRAMED OPENING**

**CONCRETE SILL**

**STEEL FRAME OPENING (BOLTED)**

**STEEL FRAME OPENING (WELDED)**

SEE "DETAIL 3A & 3B" FOR LOUVER BLADE DETAILS  
NOTE: STANDARD SILL (ITEM #1A) IS SHOWN IN THIS VIEW. SLOPED SILL (ITEM 1B) ALSO APPLIES.

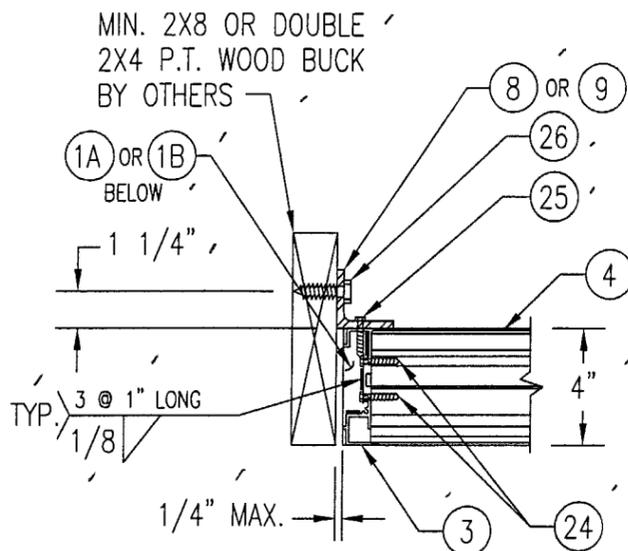
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN (MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)

DETAIL 5  
SCALE: 2"=1'-0"

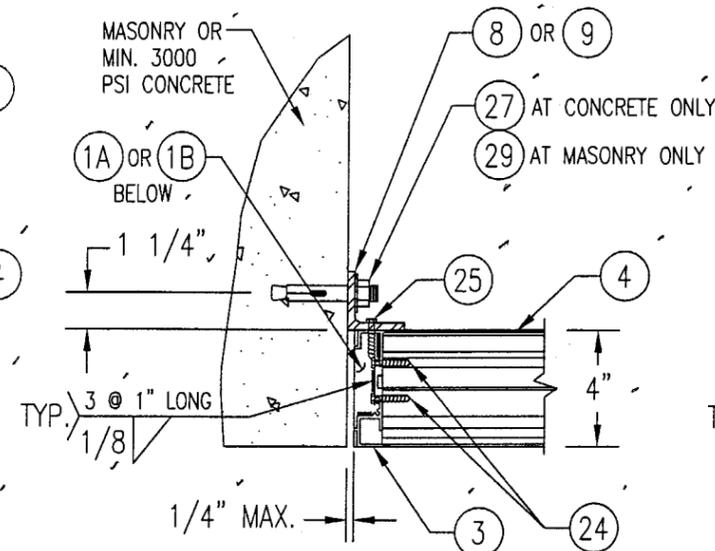
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN

MASONRY MAY ONLY BE USED AT SIDES OF LOUVER PANELS & MAY NOT BE USED AT THE HEAD OR SILL.

Approved as complying with the Florida Building Code  
Date: 04/22/04  
NOA# 04-0264-01  
Miami Code Product Control  
Division

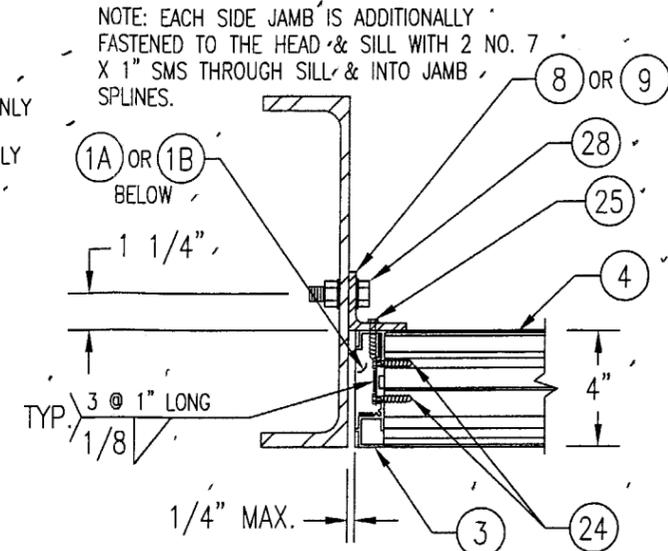


**WOOD FRAMED OPENING**



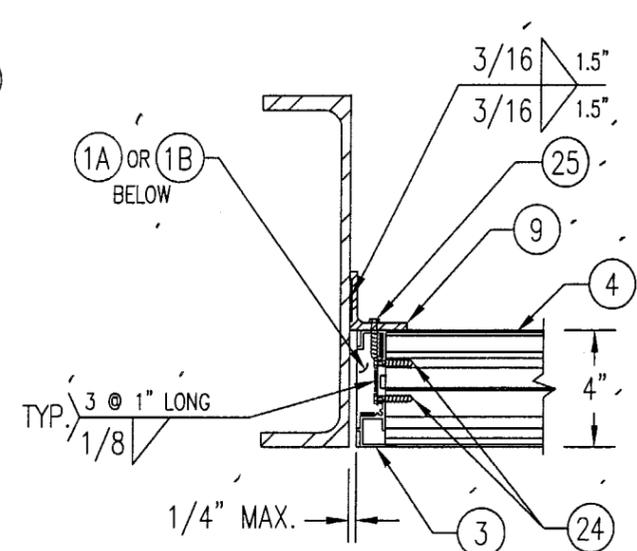
**CONCRETE/MASONRY OPENING**

(MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)

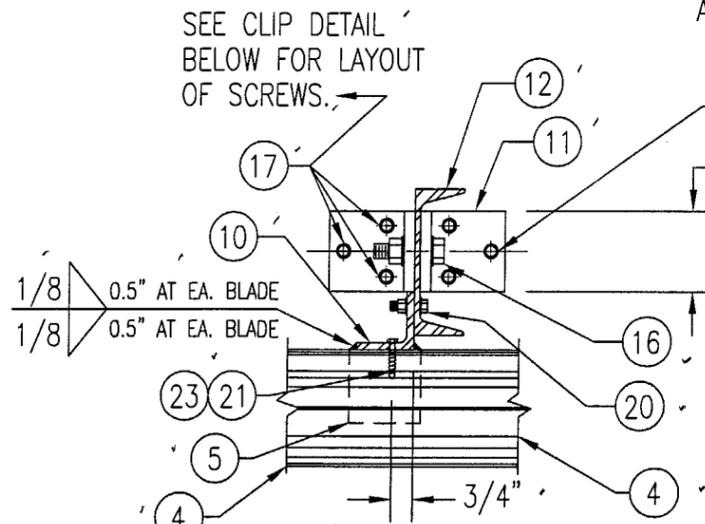


**STEEL FRAME OPENING (BOLTED)**

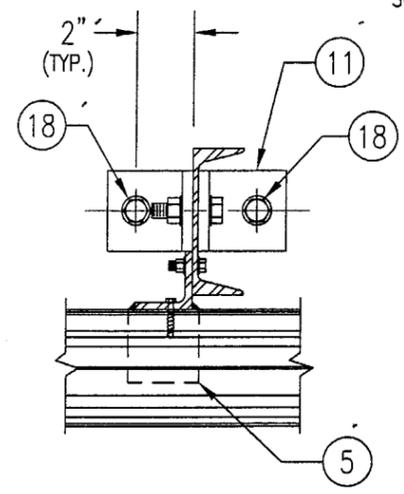
NOTE: EACH SIDE JAMB IS ADDITIONALLY FASTENED TO THE HEAD & SILL WITH 2 NO. 7 X 1" SMS THROUGH SILL & INTO JAMB SPLINES.



**STEEL FRAME OPENING (WELDED)**

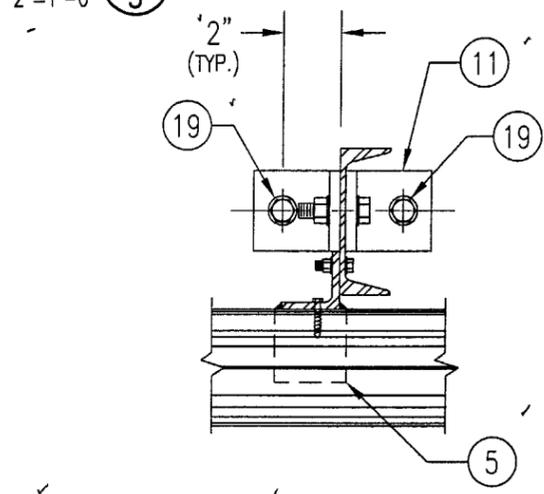


**WOOD FRAMED OPENING**



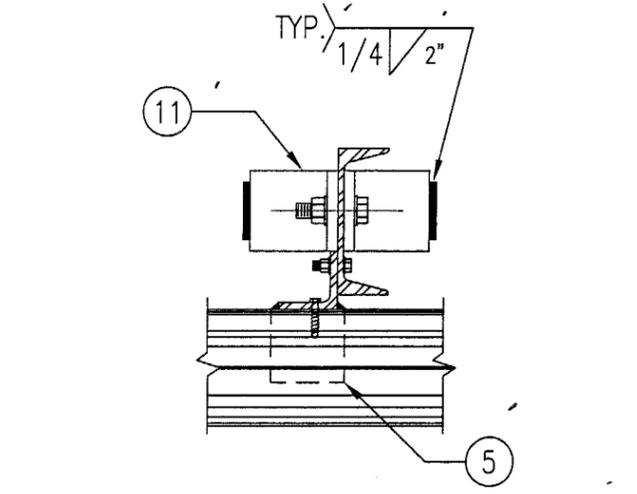
**CONCRETE SILL & HEAD**

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN (MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)



**STEEL FRAME OPENING (BOLTED)**

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



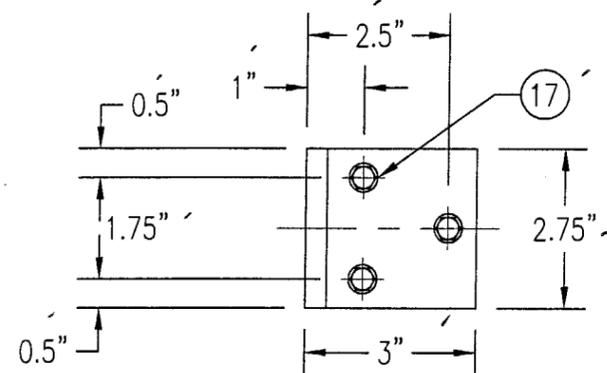
**STEEL FRAME OPENING (WELDED)**

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN

DETAIL 6/5 SCALE: 2"=1'-0"

DETAIL 7/5 SCALE: 2"=1'-0"

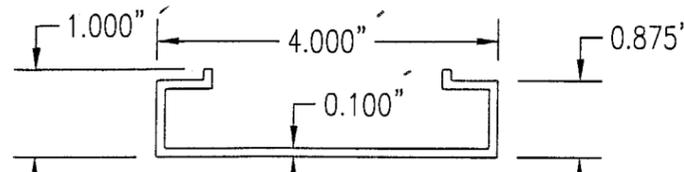
MASONRY MAY ONLY BE USED AT SIDES OF LOUVER PANELS & MAY NOT BE USED AT THE HEAD OR SILL.



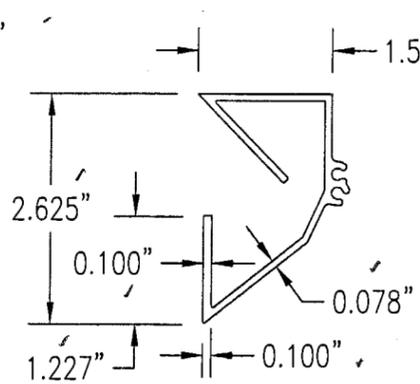
**MULLION CLIP DETAIL @ WOOD INSTALLATION**

Approved as complying with the Florida Building Code  
 Date 04/22/04  
 NOAH 04-6204.01  
 Miami Date Product Control  
 Division  
 By

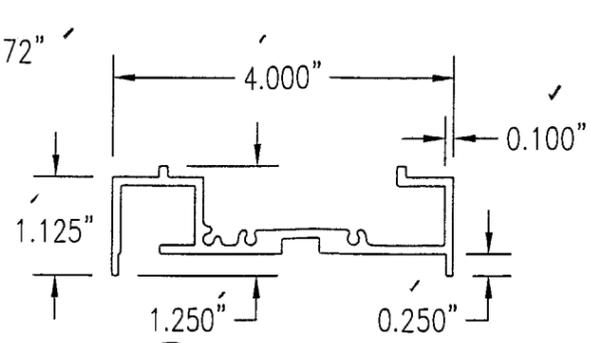
DRAWN BY: K.P.S.		CHECKED BY: W.W.S.	
PLOT: 1-6		DATE: 11/18/03	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: MODEL LE22 4" LOUVER SYSTEM			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.			
MANUFACTURER: AMERICAN WARMING & VENTILATING			
7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000			
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.			
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4802 FAX: 561-775-4903			
CERTIFICATION: FEB 02 2004			
WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1261		REV.	
SHEET NO. 5		OF 7	



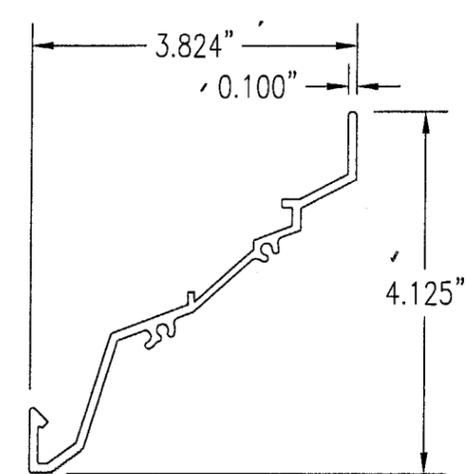
**1A STANDARD HEADER & SILL JAMB**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



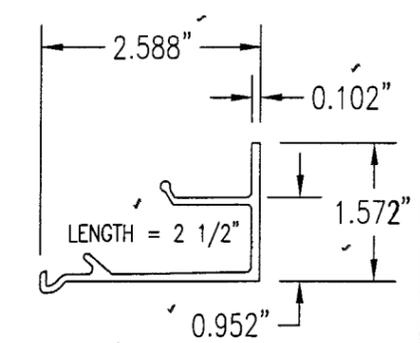
**2 PARTIAL BLADE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



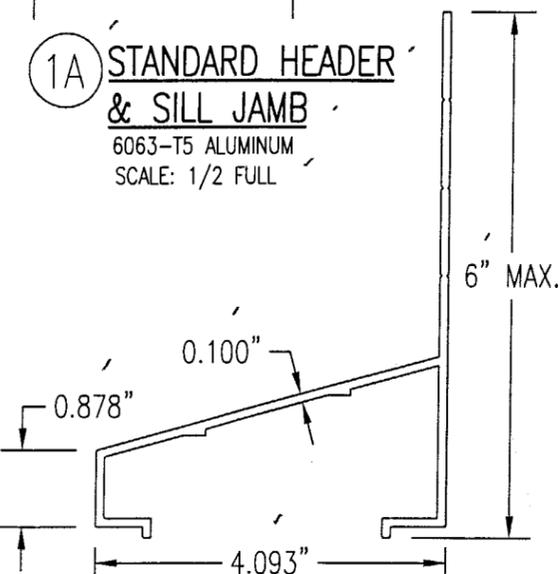
**3 SIDE JAMB**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



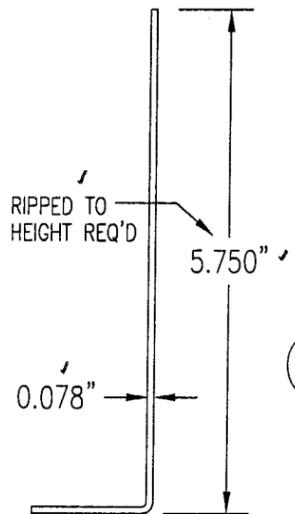
**4 LOUVER BLADE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



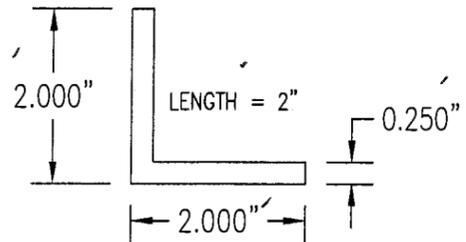
**5 BLADE BRACE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL  
LENGTH = 2 1/2"



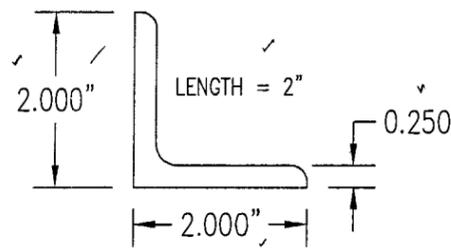
**1B OPTIONAL SLOPED SILL**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



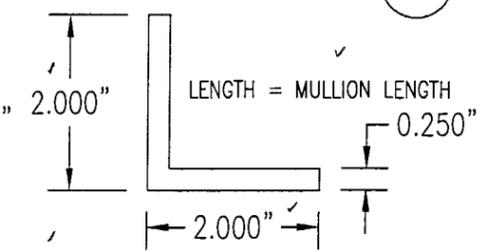
**7 SILL ANGLE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



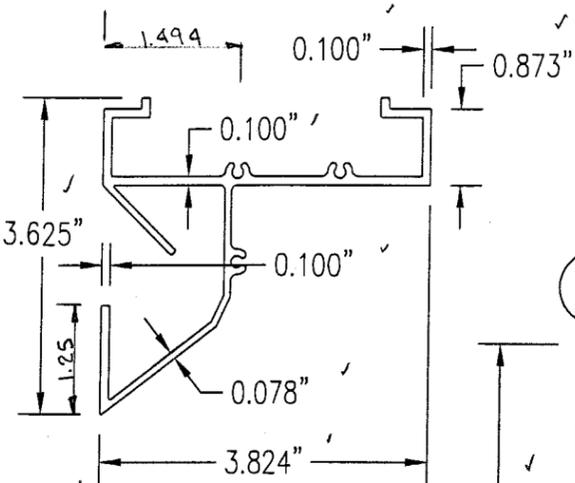
**8 CONNECTION ANGLE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



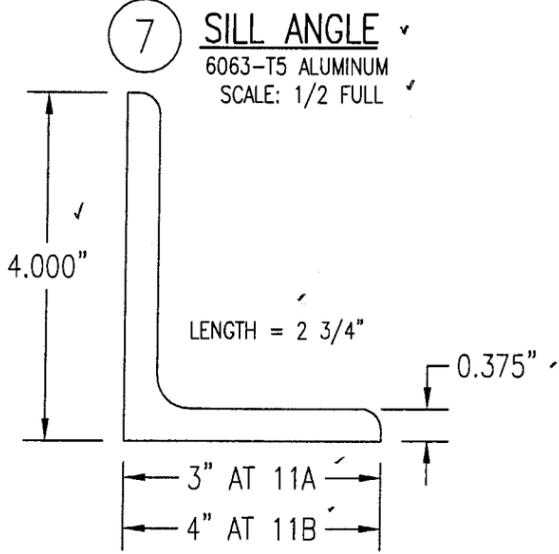
**9 CONNECTION ANGLE**  
A36 STEEL  
SCALE: 1/2 FULL



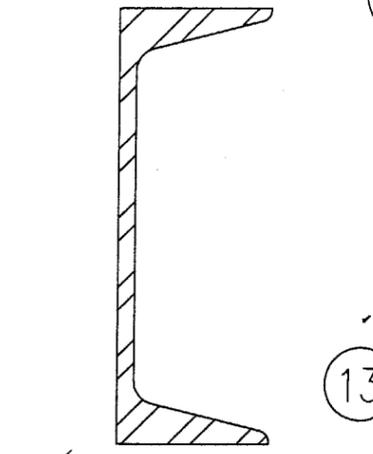
**10 MULLION ANGLE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



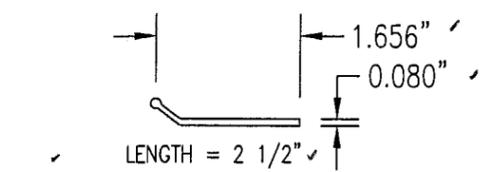
**1C OPTIONAL 1-PIECE HEADER**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



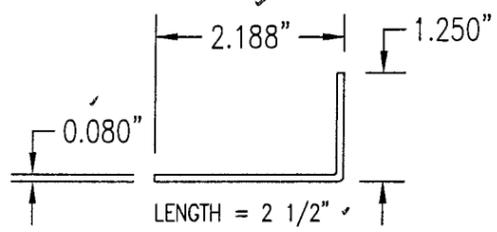
**11A 11B MULLION END CONNECTION ANGLE**  
A36 STEEL  
SCALE: 1/2 FULL



**12 C5X6.7 MULLION**  
A36 STEEL  
SCALE: 1/2 FULL



**13 PARTIAL BLADE REINFORCEMENT PLATE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



**14 PARTIAL BLADE REINFORCEMENT ANGLE**  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL

Approved as complying with the  
Florida Building Code  
Date 04/22/04  
NCA# 04-0204.01  
Miami Date Product Control  
Division  
By [Signature]

DRAWN BY: K.P.S.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 11/18/03	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE <b>MODEL LE22 4" LOUVER SYSTEM</b>			
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER <b>AMERICAN WARMING &amp; VENTILATING</b> 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
CERTIFICATION <b>FEB 02 2004</b>			
DRAWING NO. <b>1261</b>		REV.	
SHEET NO. <b>6</b>		OF <b>7</b>	

ALLOWABLE WIND PRESSURE VS. JAMB CLIP SPACING AND PANEL WIDTH

PANEL WIDTH (INCHES)	CLIP SPACING (INCHES)	ALLOWABLE PRESSURE WITH MID SPAN MULLION (PSF)	ALLOWABLE PRESSURE WITHOUT MID SPAN MULLION (PSF)
16	8	150	150
	12	150	150
	16	150	140
	20	150	105
	24	150	70
20	8	150	150
	12	150	140
	16	150	112
	20	150	84
	24	150	56
24	8	150	140
	12	150	117
	16	150	93
	20	150	70
	24	125	47
28	8	150	82
	12	150	68
	16	150	54
	20	150	41
	24	107	27
30	8	150	62
	12	150	52
	16	150	41
	20	140	31
	24	93	-
36	8	150	-
	12	150	-
	16	150	-
	20	125	-
	24	83	-
42	8	150	-
	12	150	-
	16	142	-
	20	107	-
	24	71	-
48	8	150	-
	12	150	-
	16	125	-
	20	93	-
	24	62	-
54	8	150	-
	12	138	-
	16	111	-
	20	83	-
	24	55	-
60	8	150	-
	12	125	-
	16	100	-
	20	75	-
	24	50	-

MATERIAL LIST

NO.	DESCRIPTION	NOTES/SPECIFICATIONS
PARTS/EXTRUSIONS		
1A	STANDARD HEADER & SILL JAMB	6063-T5 ALUMINUM
1B	OPTIONAL SLOPED SILL	6063-T5 ALUMINUM
1C	OPTIONAL 1-PIECE HEADER	6063-T5 ALUMINUM
2	PARTIAL BLADE & HEAD	6063-T5 ALUMINUM
3	SIDE JAMB	6063-T5 ALUMINUM
4	LOUVER BLADE	6063-T5 ALUMINUM
5	BLADE SUPPORT BRACKET (2 1/2" LONG)	6063-T5 ALUMINUM
6	MULLION CAP	6063-T5 ALUMINUM; FULL LENGTH OF MULLION JAMBS
7	SILL ANGLE	6063-T5 ALUMINUM; FULL WIDTH OF PANEL
8	L2X2X1/4 JAMB CONNECTION ANGLE 2" LONG	6063-T5 ALUMINUM; WITHIN 4" OF JAMB ENDS & SPACED PER LOAD TABLE ON SHT. 2
9	L2X2X1/4 OPTIONAL JAMB CONNECTION ANGLE 2" LONG	A36 STEEL; WITHIN 4" OF JAMB ENDS & SPACED PER LOAD TABLE ON SHT. 2
10	L2X2X1/4 CONTINUOUS MULLION CONNECTION ANGLE	6063-T5 ALUMINUM; FULL LENGTH OF CHANNEL MULLION
11	L4X3X3/8 MULLION END CONNECTION ANGLE 2 3/4" LONG	A36 STEEL; 2 PER MULLION END
12	C5X6.7 MULLION	A36 STEEL; FULL HEIGHT OF PANELS
13	PARTIAL BLADE REINFORCEMENT PLATE (2 1/2" LONG)	6063-T5 ALUMINUM
14	PARTIAL BLADE REINFORCEMENT ANGLE (2 1/2" LONG)	6063-T5 ALUMINUM
15	OPEN	
FASTENERS		
16	1/2" X 2" A307 HEX HEAD PLATED STEEL OR S/STL BOLT	WITH FLAT WASHERS, LOCK WASHER & NUT; 2 PER MULLION END
17	NO. 14 S.S. SMS SCREWS	3 PER MULLION END CLIP WITH MIN. 1 1/2" WOOD EMBED
18	5/8" X 2 1/4" SLEEVE ANCHOR WITH FLAT WASHER	USA KINGPIN ANCHOR; 1 PER CHANNEL END CONNECTION ANGLE INTO CONCRETE ONLY
19	1/2" X 2" A307 HEX HEAD PLATED STEEL OR S/STL BOLT	WITH FLAT WASHERS, LOCK WASHER & NUT; 1 PER CHANNEL END CONNECTION ANGLE INTO STEEL FRAME
20	5/16-18 UNC X 1 1/2" HEX HEAD STEEL OR S/STL BOLT	WITH FLAT WASHER, LOCK WASHER & NUT; WITHIN 4" OF MULLION ENDS & MAX. 8" O.C.
21	NO. 8 X 3/4" SMS SCREW	1 AT EACH LOUVER BLADE SUPPORT BRACKET AT ARCHITECTURAL MAIN MULLIONS & ALL MID-SPAN MULLIONS
22	NO. 14 X 1 1/4" HILTI TEK SCREW	WITHIN 3/4" OF MULLION ENDS & MAX. 4" O.C. INTO FRAME
23	NO. 14 X 1" SMS SCREW	1 AT EACH LOUVER BLADE AT ALL ARCHITECTURAL MAIN MULLIONS & ALL MID-SPAN MULLIONS
24	NO. 7 X 1" SMS SCREW	2 PER EACH LOUVER BLADE END THROUGH JAMB & INTO BLADE SPLINES
25	NO. 14 X 1 1/4" HILTI TEK SCREW	2 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE
26	1/2" X 2" LAG SCREW WITH FLAT WASHER	1 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE INTO WOOD FRAME
27	5/8" X 2 1/4" SLEEVE ANCHOR WITH FLAT WASHER	USA KINGPIN ANCHOR; 1 PER EACH HEAD, SILL & SIDE JAMB CONNECTION ANGLE INTO CONCRETE ONLY
28	1/2" X 2" HEX HEAD A307 PLATED STEEL OR S/STL BOLT	WITH FLAT WASHERS, LOCK WASHER & NUT; 1 PER EA. JAMB CONNECTION ANGLE INTO STEEL FRAME
29	3/8" X 1 7/8" SLEEVE ANCHOR WITH FLAT WASHER	RED HEAD DYNABOLT WITH MIN 1 1/2" BLOCK/CONCRETE EMBED (1 PER FRAME SUPPORT CLIP)
30	NO. 8 X 1/2" SMS SCREW	WITHIN 2" OF MULLION ENDS & MAX. 12" O.C. (MULLION CAP TO MULLION)
31	NO. 7 X 1" SMS SCREWS	2 PER FRAME CORNER THROUGH SILL/HEAD FRAME & INTO JAMB SPLINES

PRESSURE TABLE NOTES:

1. WHEN THE PANEL WIDTH IS 30" OR LESS, NO MID SPAN MULLION IS REQUIRED PROVIDING COMPLIANCE WITH THE TABLE.
2. ALL PRESSURES IN THIS TABLE ARE FOR BOTH POSITIVE & NEGATIVE WIND PRESSURE.

Approved as complying with the Florida Building Code  
 Date: 09/22/04  
 NO. 04-0204-01  
 Miami Dade Product Control  
 Division  
 By: [Signature]

DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=1	DATE: 11/18/03
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE: MODEL LE22 4" LOUVER SYSTEM	
MANUFACTURER: AMERICAN WARMING & VENTILATING 7301 INTERNATIONAL DRIVE HOLLAND, OHIO 43528 419-865-5000	
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: FEB 02 2004 WARREN W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO. 1261	REV.
SHEET NO. 7 OF 7	