



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
www.miamidade.gov/buildingcode

BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION
NOTICE OF ACCEPTANCE (NOA)

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 EA-22 4" Aluminum Louver System

APPROVAL DOCUMENT: Drawing No. 35972-4, titled "EA-22 Test Louver, Architectural & Non-Architectural Louver", sheets 1 through 7 of 7, dated 06/16/00, with revision "B1", dated 04/17/08, 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 Renewal 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 **renews** NOA # 03-0514.13 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.**



Handwritten signature
 7/2/08

NOA No. 08-0423.03
 Expiration Date: July 27, 2009
 Approval Date: July 24, 2008
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **35972-4**, titled "EA-22 Test Louver, Architectural & Non-Architectural Louver", sheets 1 through 7 of 7, dated 06/16/00, with revision "B1", dated 04/17/08, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.

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 "A.U.I. EA-32 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc., Report No. **0199-0518-99** and **0199-0615-99**, dated 12/06/99, signed and sealed by Vinu J. Abraham, P.E.
"Submitted under NOA No. 03-0514.13"

C. CALCULATIONS

1. Revision calculations prepared by W.W. Schaefer Engineering & Consulting, P.A., dated 04/17/08, signed and sealed by Warren W. Schaefer, P.E.
1. Allowable Load Calculations, dated 11/10/99, pages 1 to 3 of 3, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by W. W. Schaefer, P.E.
2. Allowable Load Calculations, dated 04/14/00, pages 1 to 6 of 6, prepared by W. W. Schaefer Engineering & Consulting, P.A. signed and sealed by W. W. Schaefer, P.E.
"Submitted under NOA No. 03-0514.13"

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO).

E. MATERIAL CERTIFICATIONS

1. Tensile Test report on 6 inch louver, prepared by Q. C. Metallurgical, Inc., No. **9LM-2586**, dated 12/27/99, signed and sealed by F. Grate, P.E.
"Submitted under NOA No. 03-0514.13"



Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 08-0423.03
Expiration Date: July 27, 2009
Approval Date: July 24, 2008

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F. STATEMENTS

1. Code compliance letter issued by W. W. Schaefer Engineering & Consulting, P.A., dated 04/17/08, signed and sealed by Warren W. Schaefer, P.E.
2. No change letter issued by Arrow United Industries, dated 02/20/08, signed by David Willet.

1. Test compliance letter issued by Hurricane Test Laboratory, Inc. on 12/08/99, signed and sealed by V. J. Abraham, P.E.
2. No financial interest letter issued by 11/15/99, signed and sealed by W. W. Schaefer, P.E.
"Submitted under NOA No. 03-0514.13"

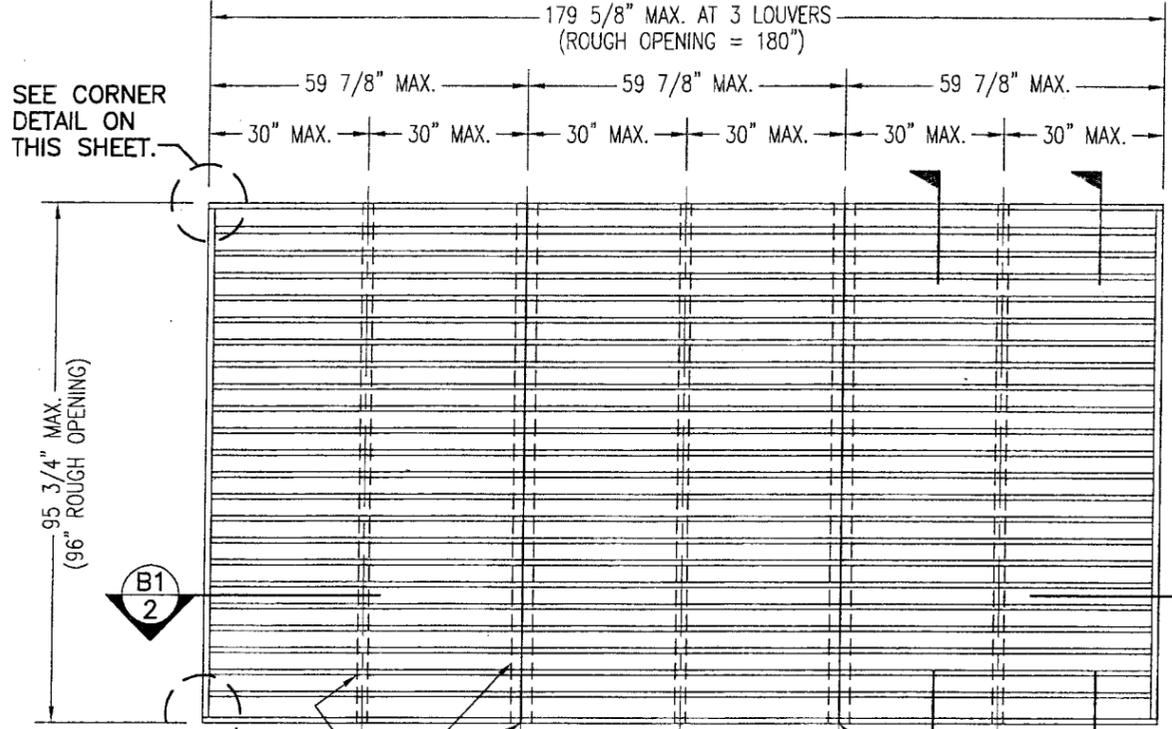
G. OTHER

1. Notice of Acceptance No. **03-0514.13**, issued to Arrow United Industries, approved on 11/20/03 and expiring on 07/27/08.



7/2/08

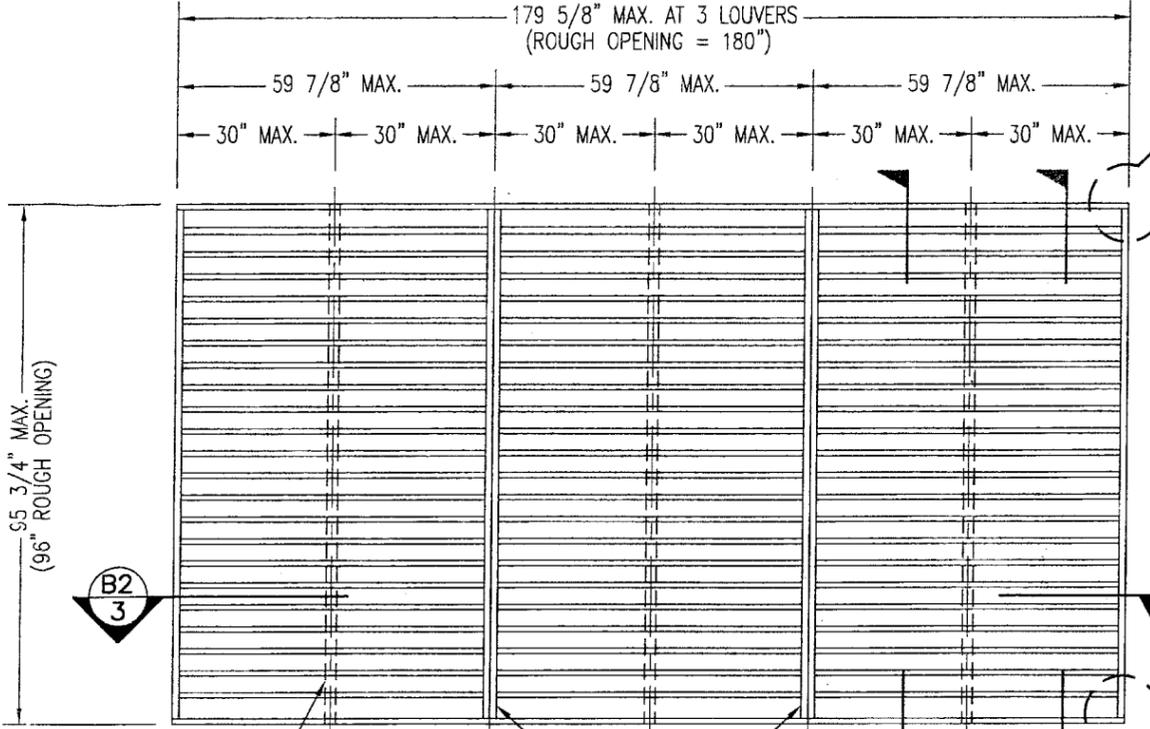
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 08-0423.03
Expiration Date: July 27, 2009
Approval Date: July 24, 2008



**EXTERIOR ELEVATION
ARCHITECTURAL 4" LOUVER**

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.



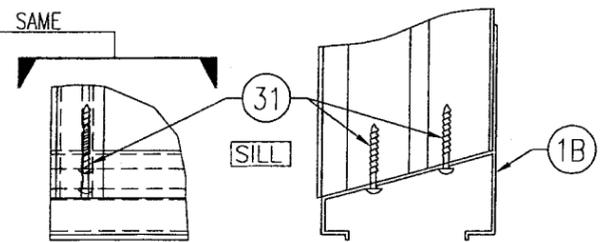
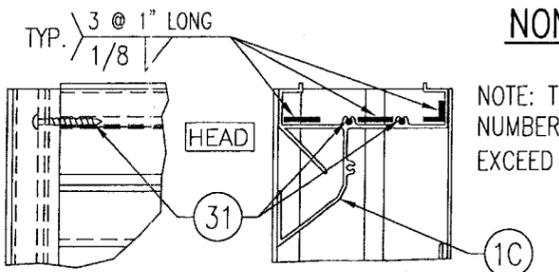
**EXTERIOR ELEVATION
NON-ARCHITECTURAL 4" LOUVER**

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

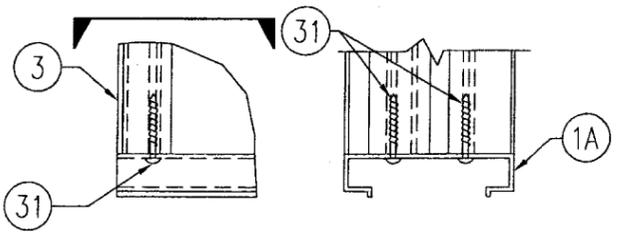
NOTE: THIS LOUVER SYSTEM MAY CONSIST OF AN UNLIMITED NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT EXCEED 59 7/8" X 95 3/4" IN SIZE.

GENERAL NOTES:

1. THESE LOUVER SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS MUST BE PROPERLY DESIGNED & CONSTRUCTED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCOLS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT LOUVERS.
5. THESE LOUVER SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
6. ALL ANCHORS SECURING LOUVER FRAME TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
7. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF $K_d = 0.85$ MAY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTION 2.0 OF THE ASCE 7 STANDARD.
8. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW ANALYSIS ONLY.
9. 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.
10. MAXIMUM ALLOWABLE INDIVIDUAL PANEL SIZE = 59 7/8" X 95 3/4".
11. MAXIMUM ASSEMBLY SIZE = UNLIMITED WIDTH; UP TO 95 3/4" HEIGHT.
12. ASSEMBLIES/SECTIONS MAY BE STACKED VERTICALLY PROVIDING A STRUCTURAL SUPPORT IS DESIGNED & INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERRED FROM THE LOUVER ASSEMBLY.
13. MAXIMUM UNSUPPORTED BLADE LENGTH SHALL NOT EXCEED 30"
14. ALL FASTENERS SHALL BE PLATED STEEL OR 304 STAINLESS STEEL.
15. SPECIFIED SUBSTRATES REQUIREMENTS:
 CONCRETE: MIN. 3000 PSI
 MASONRY: MIN. C90 CMU
 WOOD: MIN. GRADE 2; G = 0.55
 STEEL: MIN. 1/8" THICK A36 (36 KSI)
16. THIS SYSTEM HAS NOT BEEN TESTED FOR WATER INFILTRATION RESISTANCE & IS NOT A WATER RESISTANT SYSTEM.



CORNER DETAIL OPTION 2



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

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 08-0423.03
 Expiration Date 07/27/2009
 By: [Signature]
 Miami Dade Product Control Division

| 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.

| REVISION | DATE | DRN | CHK | APPD |
|----------|----------|--------|--------|------|
| A1 | 04/29/03 | K.P.S. | W.W.S. | |
| A2 | 04/29/03 | K.P.S. | W.W.S. | |
| B1 | 04/17/08 | W.R.M. | W.W.S. | |

APR 18 2008

WARREN W. SCHAEFER, P.E.
 STRUCTURAL ENGINEER
 P.E. No. 44135

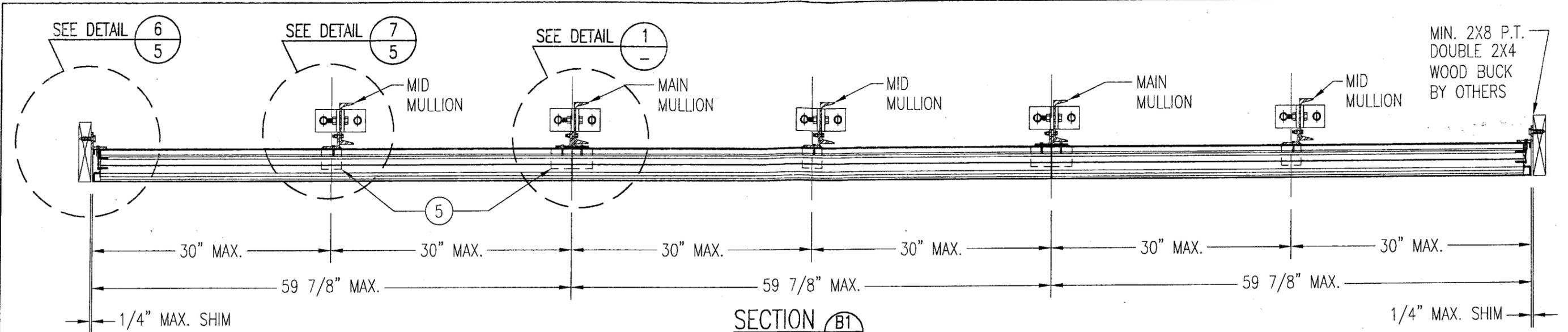
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 STRUCTURAL CONSULTING ENGINEERS
 8895 N. MILITARY TRAIL, SUITE C-204
 PALM BEACH GARDENS, FL 33410
 PHONE: 561-775-4902

ARROW UNITED INDUSTRIES
 A Division of Mestek, Inc.

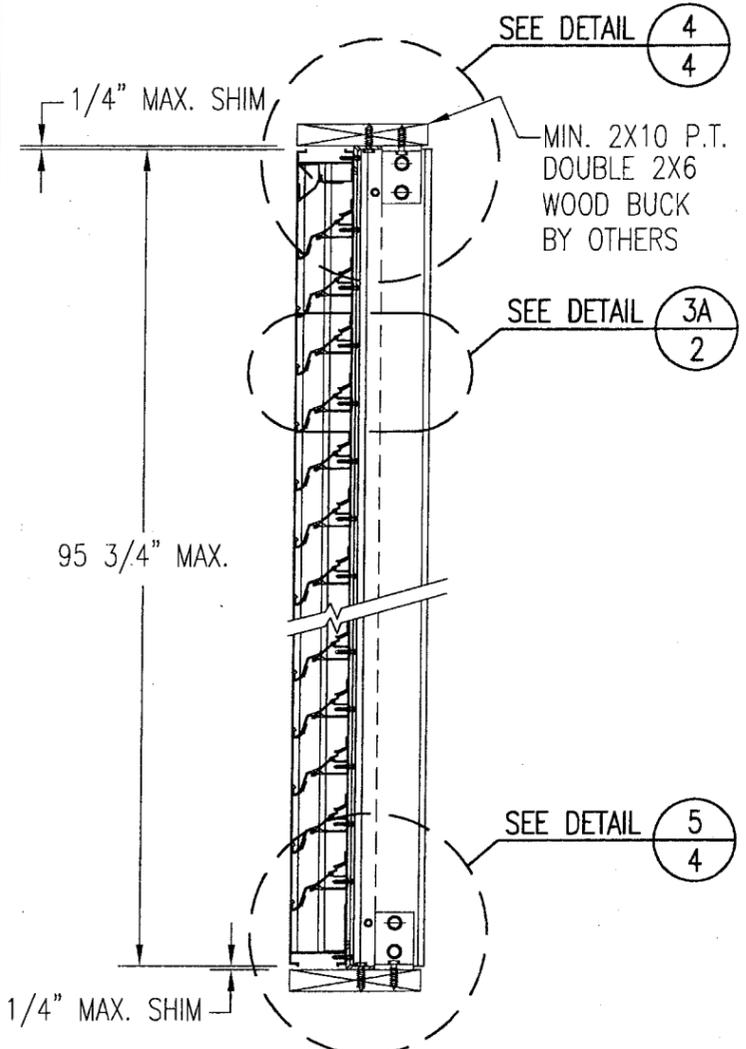
314 RIVERSIDE DRIVE - P.O. BOX 69
 WYALUSING, PA 18853
 PHONE 570-746-1888; FAX 570-746-9286

**EA-22 TEST LOUVER
 ARCHITECTURAL & NON-ARCHITECTURAL LOUVER
 ELEVATIONS & NOTES**

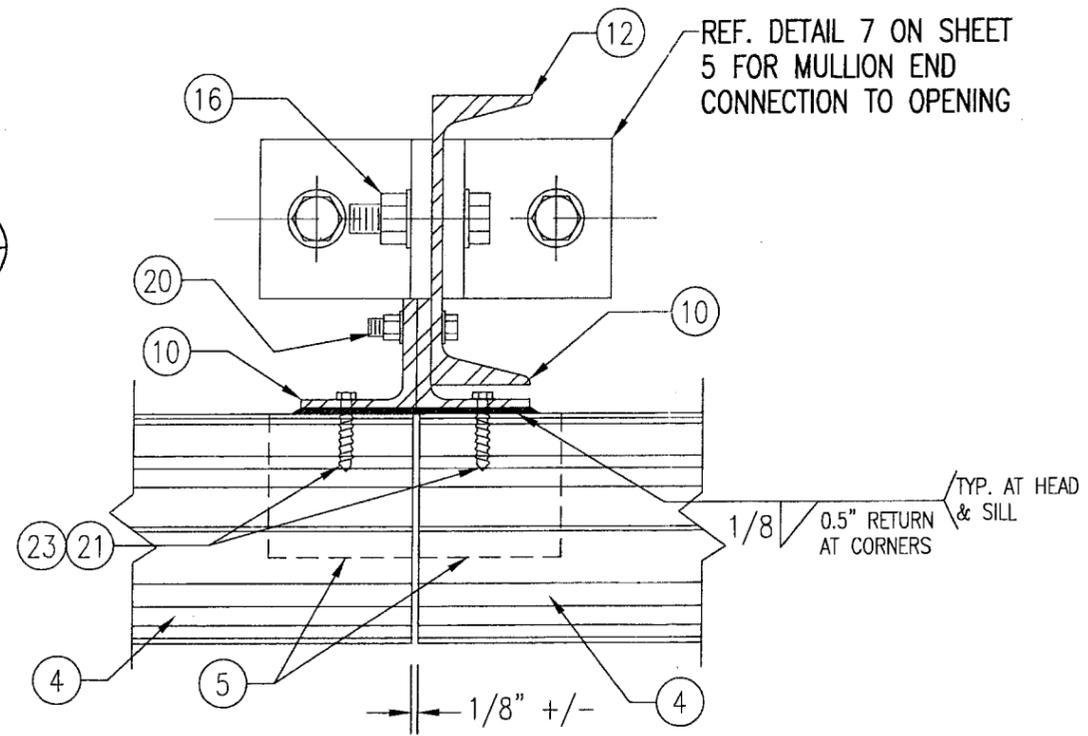
CKD.BY: [Blank] APPD.BY: W.W.S. SHEET: 1 of 7
 DRN.BY: W.W.S. DWG. NO.: 35972-4 REV.: B
 DATE: 06-16-00



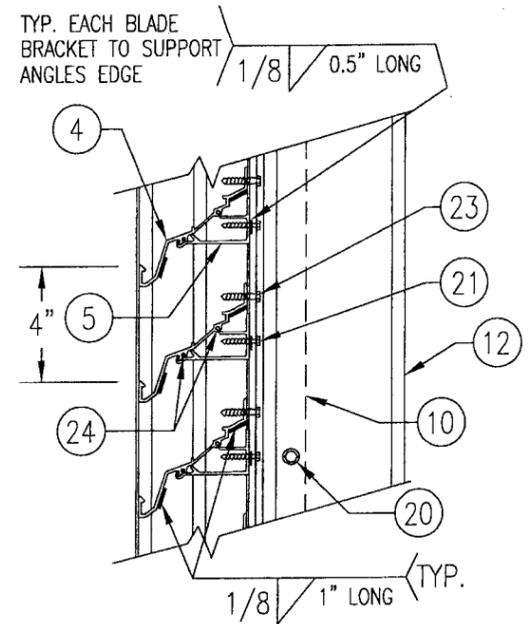
SECTION **B1**
SCALE: 1"=1'-0"
ARCHITECTURAL LOUVER



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



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

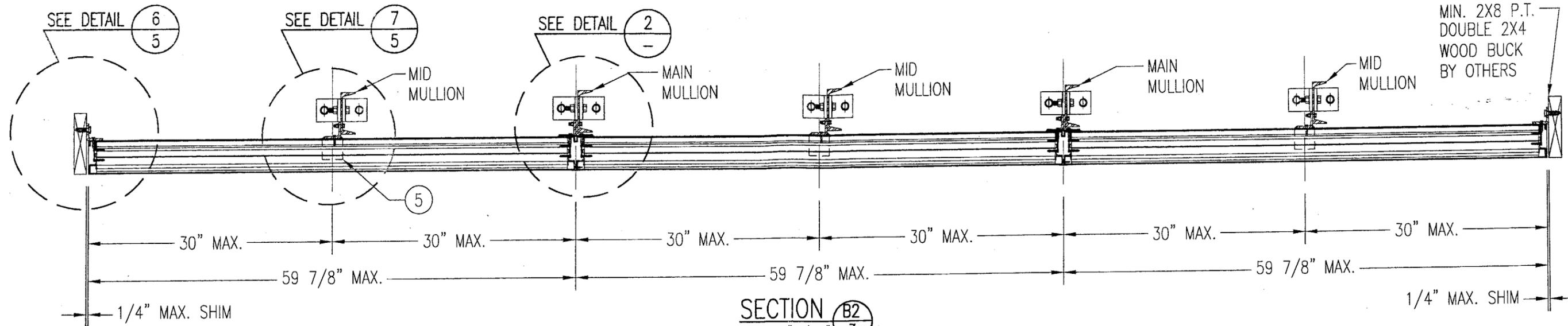


DETAIL **3A**
SCALE: 2"=1'-0"
TYP. AT ALL MULLIONS THIS SHEET

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 08-0423.03
Expiration Date 07/27/2009
By *[Signature]*
Miami Dade Product Control
Division

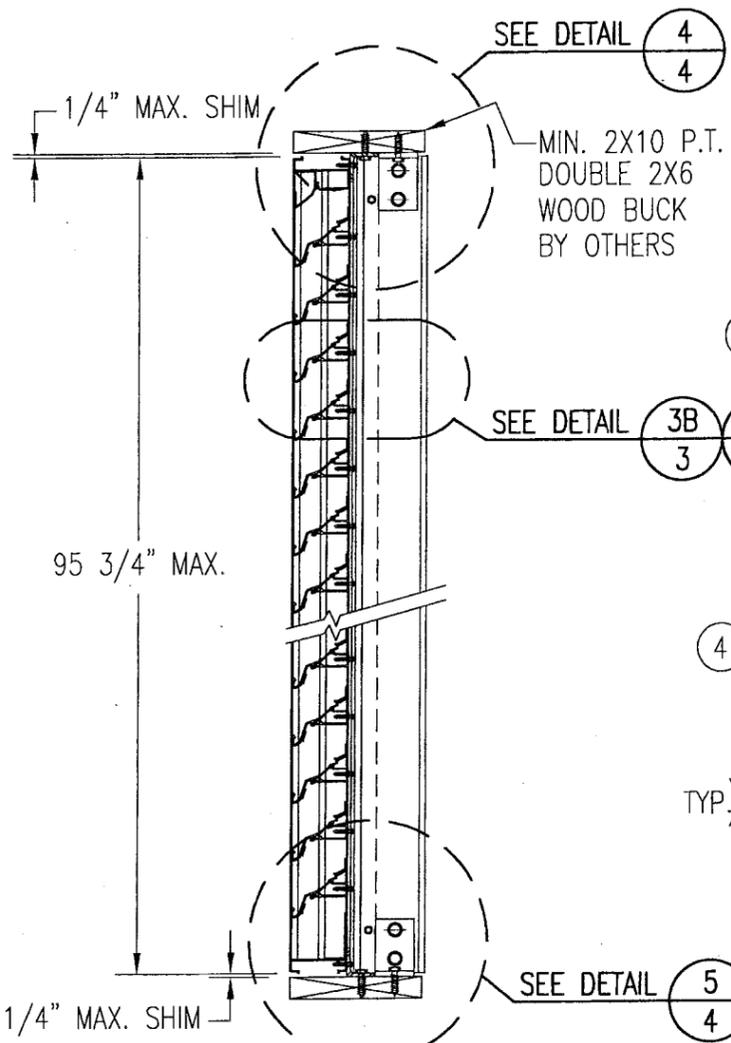
APR 18 2008
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902

| REVISION | DATE | DRN | CK | APPD |
|--|----------------|---------------|------|------|
| ARROW UNITED INDUSTRIES A Division of Mestek, Inc. | | | | |
| 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286 | | | | |
| EA-22 TEST LOUVER ARCHITECTURAL LOUVER SECTIONS & DETAILS | | | | |
| CKD.BY | APPD.BY W.W.S. | SHEET: 2 of 7 | | |
| DRN.BY W.W.S. | DWG. NO. | 35972-4 | REV. | B |
| DATE 06-16-00 | | | | |



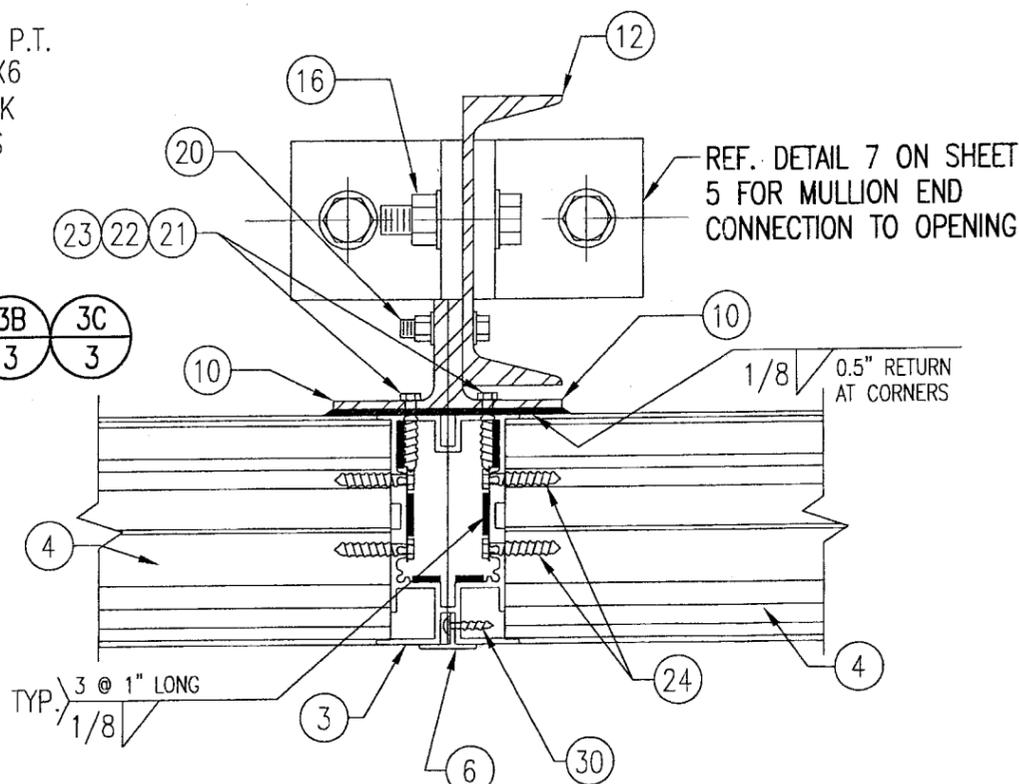
SECTION B2
SCALE: 1"=1'-0"

NON-ARCHITECTURAL LOUVER



SECTION A2
SCALE: 1"=1'-0"

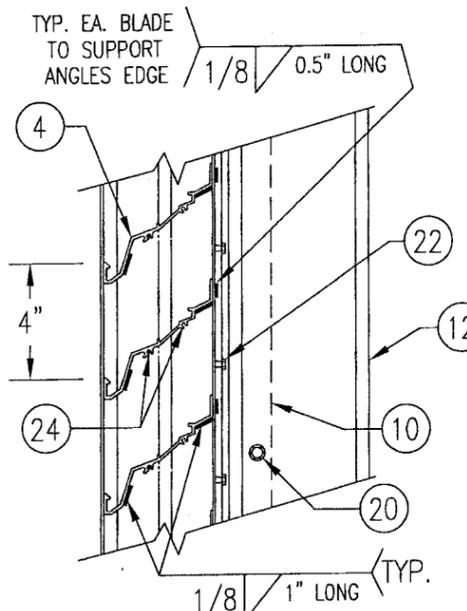
NON-ARCHITECTURAL LOUVER



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

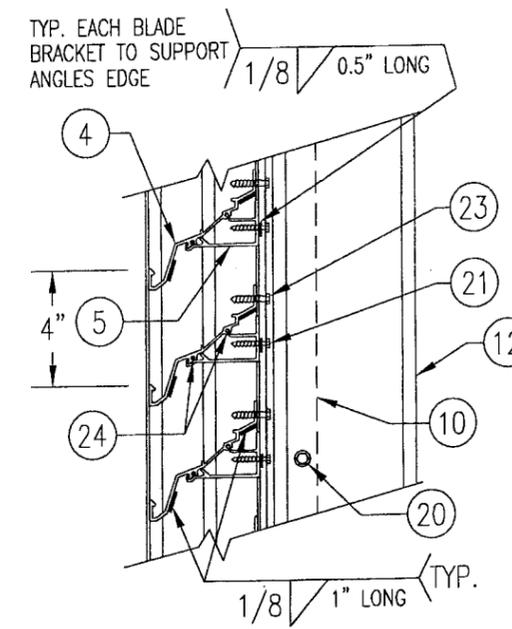
NON-ARCHITECTURAL LOUVER

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



DETAIL 3B
SCALE: 2"=1'-0"

TYP. AT MAIN MULLIONS THIS SHEET



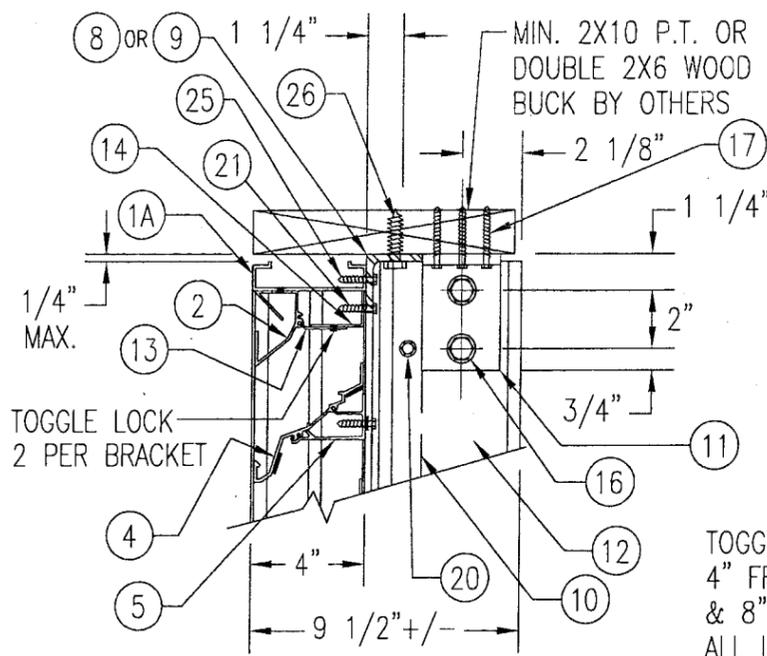
DETAIL 3C
SCALE: 2"=1'-0"

TYP. AT ALL MID-SPAN MULLIONS THIS SHEET

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No. 08-0123.03
Expiration Date 02/27/2009
By *[Signature]*
Miami Dade Product Control Division

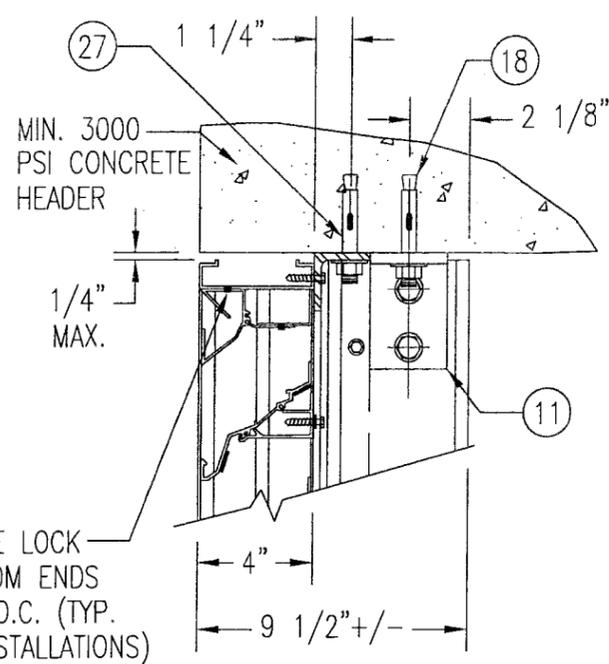
APR 18 2008
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902

| REVISION | DATE | DRN CK | APPD |
|--|------------------|---------------|------|
| ARROW UNITED INDUSTRIES A Division of Mestek, Inc. | | | |
| 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286 | | | |
| EA-22 TEST LOUVER NON-ARCHITECTURAL LOUVER SECTIONS & DETAILS | | | |
| CKD.BY | APPD.BY W.W.S. | SHEET: 3 of 7 | |
| DRN.BY W.W.S. | DWG. NO. 35972-4 | REV. | B |
| DATE 06-16-00 | | | |



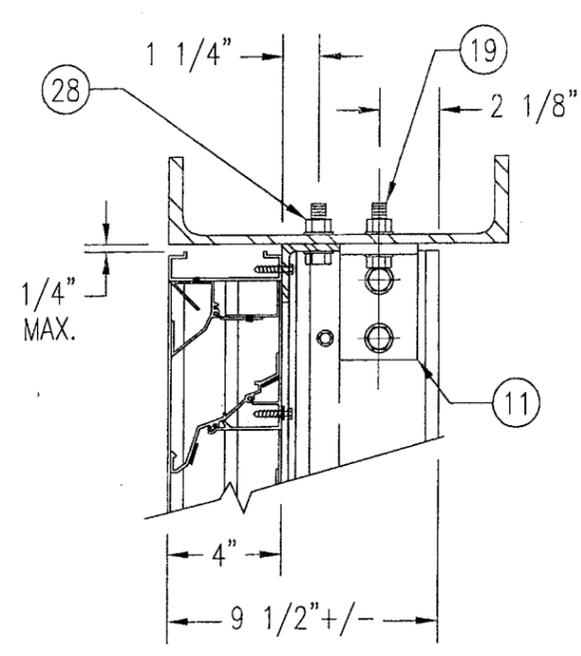
WOOD FRAMED OPENING

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.



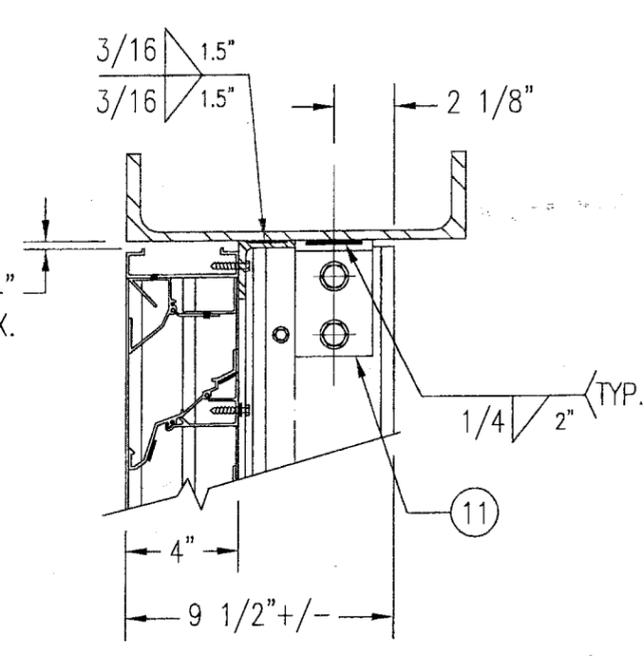
CONCRETE HEAD

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)

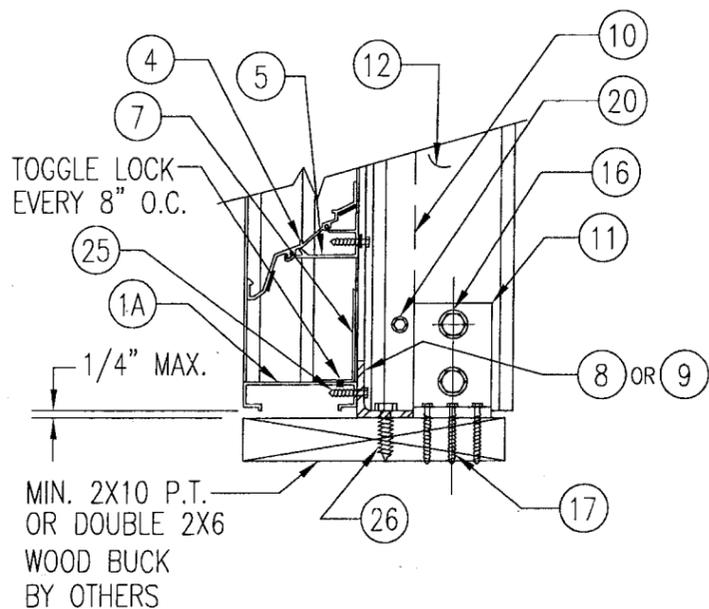
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



STEEL FRAME OPENING (WELDED)

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN

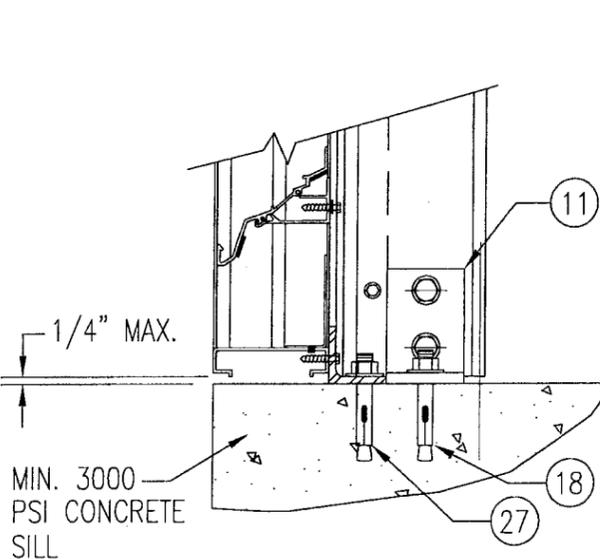
DETAIL 4
 SCALE: 2"=1'-0"



WOOD FRAMED OPENING

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

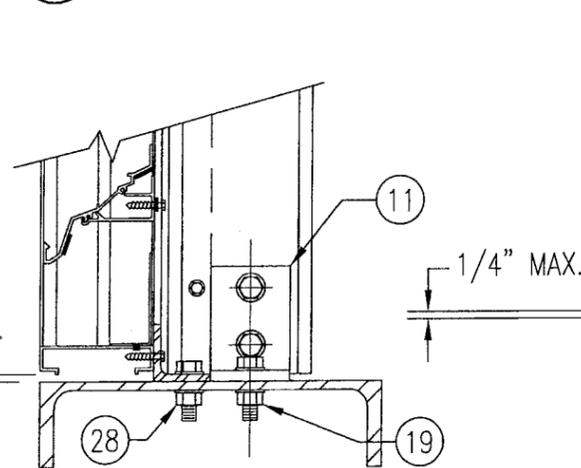
MASONRY MAY ONLY BE USED AT SIDES OF LOUVER PANELS & MAY NOT BE USED AT THE HEAD OR SILL.



CONCRETE SILL

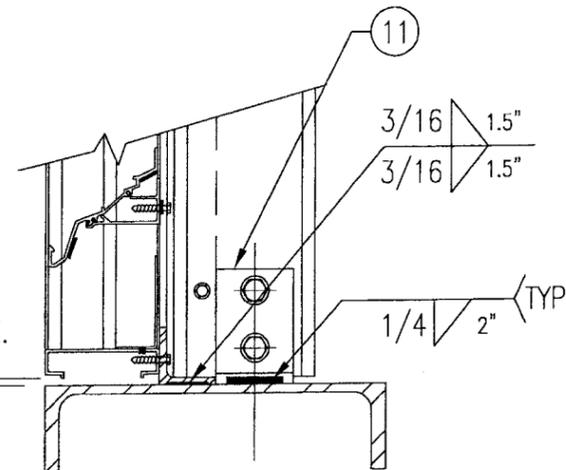
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN (MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)

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



STEEL FRAME OPENING (BOLTED)

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



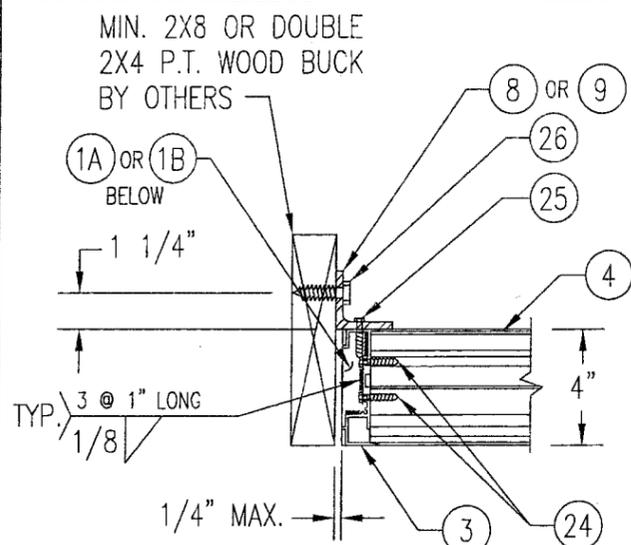
STEEL FRAME OPENING (WELDED)

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN

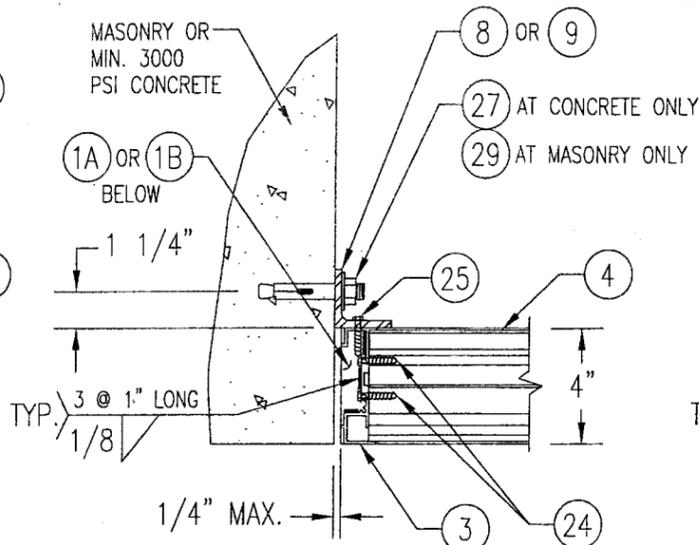
PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 08-023,03
 Expiration Date 01/27/2009
 By *[Signature]*
 Miami Dade Product Control Division

APR 18 2008
 WARREN W. SCHAEFER, P.E.
 STRUCTURAL ENGINEER
 P.E. No. 44135
 W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.
 STRUCTURAL CONSULTING ENGINEERS
 8895 N. MILITARY TRAIL, SUITE C-204
 PALM BEACH GARDENS, FL 33410
 PHONE: 561-775-4902

| | | | | |
|--|---|----------|---------------|--------|
| A1 | BUBBLE "1A" WAS "1"; ADDED NOTES TO "WOOD FRAMED OPENING" | 04/29/03 | K.P.S. | W.W.S. |
| | REVISION | DATE | DRN | APPD |
| ARROW UNITED INDUSTRIES A Division of Mestek, Inc. | | | | |
| 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286 | | | | |
| EA-22 TEST LOUVER ARCHITECTURAL & NON-ARCHITECTURAL LOUVER DETAILS | | | | |
| CKD. BY | APPD. BY | W.W.S. | SHEET: 4 of 7 | |
| DRN. BY | W.W.S. | DWG. NO. | 35972-4 | |
| DATE | 06-16-00 | | REV. | B |

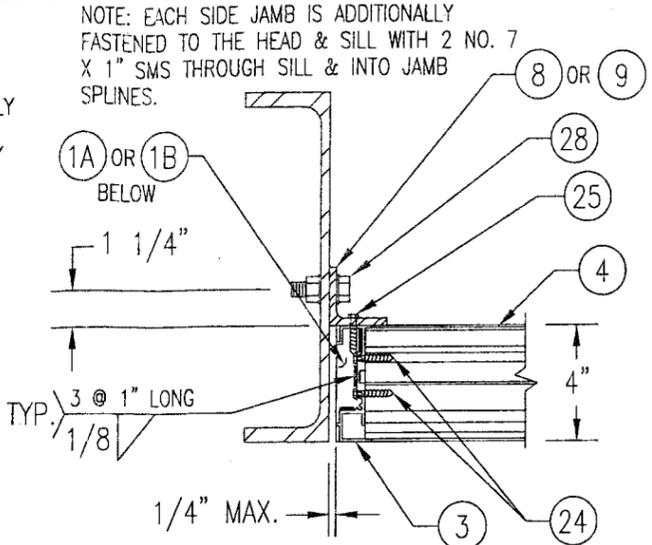


WOOD FRAMED OPENING

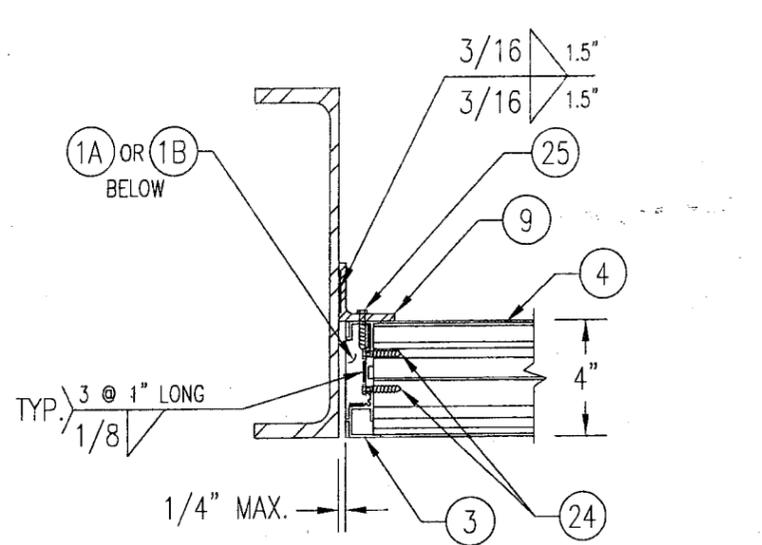


CONCRETE/MASONRY OPENING

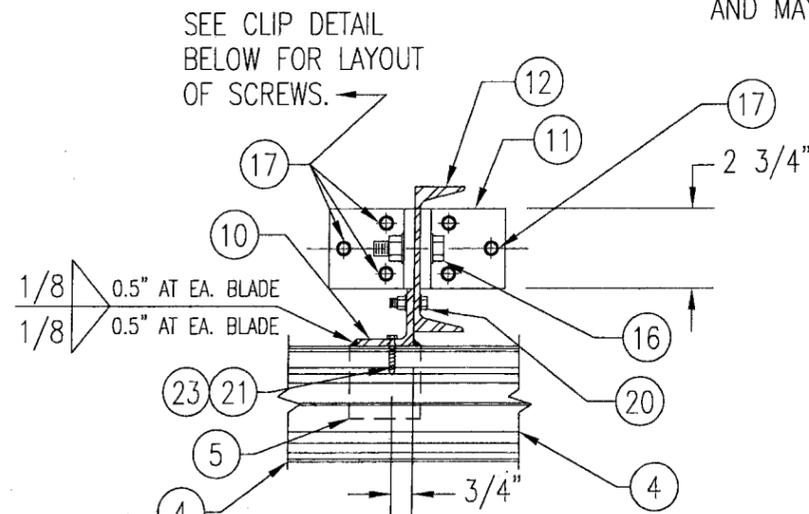
(MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)



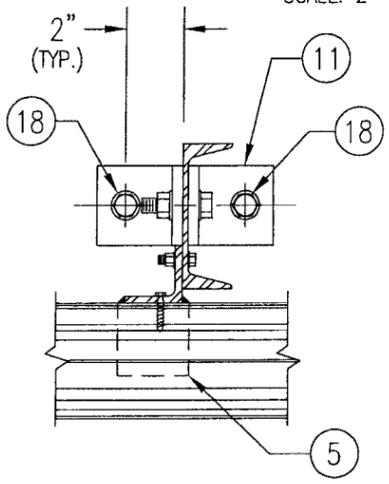
STEEL FRAME OPENING (BOLTED)



STEEL FRAME OPENING (WELDED)

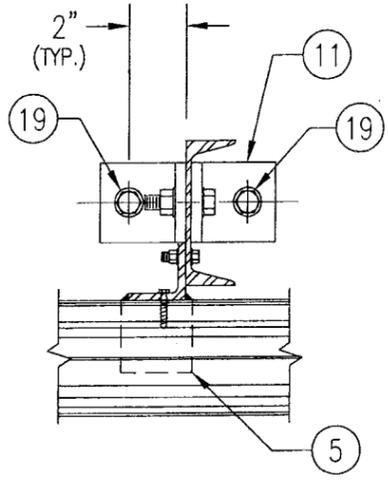


WOOD FRAMED OPENING



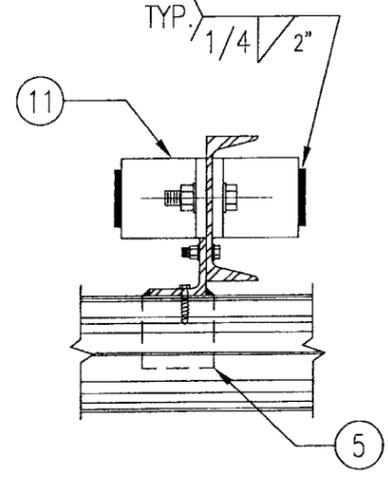
CONCRETE SILL & HEAD

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



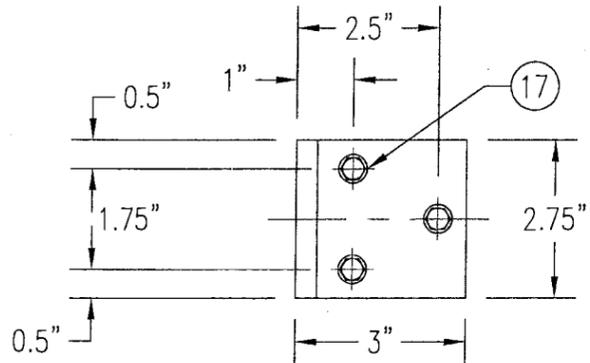
STEEL FRAME OPENING (WELDED)

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.

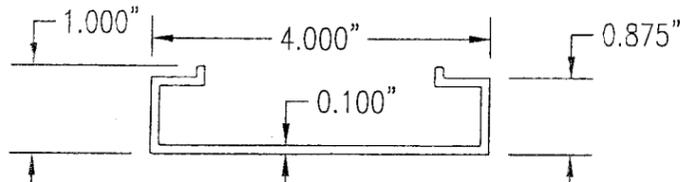


MULLION CLIP DETAIL @ WOOD INSTALLATION

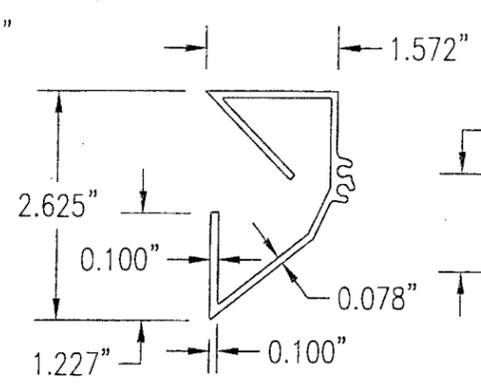
PRODUCT RENEWED as complying with the Florida Building Code Acceptance No 03-0423.03 Expiration Date 07/27/2007 By Miami Trade Product Control Division

APR 18 2008
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No. 44135
W.W. SCHAEFER ENGINEERING & CONSULTING, P.A.
STRUCTURAL CONSULTING ENGINEERS
8895 N. MILITARY TRAIL, SUITE C-204
PALM BEACH GARDENS, FL 33410
PHONE: 561-775-4902

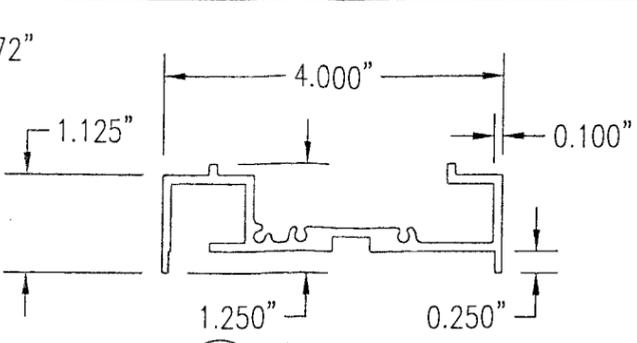
| | | | |
|---|----------------|---------------|--------|
| A1 BUBBLE "1A" WAS "1" | 04/29/03 | K.P.S. | W.W.S. |
| REVISION | DATE | DRN | APPD |
| ARROW UNITED INDUSTRIES A Division of Mestek, Inc. | | | |
| 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286 | | | |
| EA-22 TEST LOUVER ARCHITECTURAL & NON-ARCHITECTURAL LOUVER DETAILS | | | |
| CKD.BY | APPD.BY W.W.S. | SHEET: 5 of 7 | |
| DRN.BY W.W.S. | DWG. NO. | 35972-4 | REV. B |
| DATE 06-16-00 | | | |



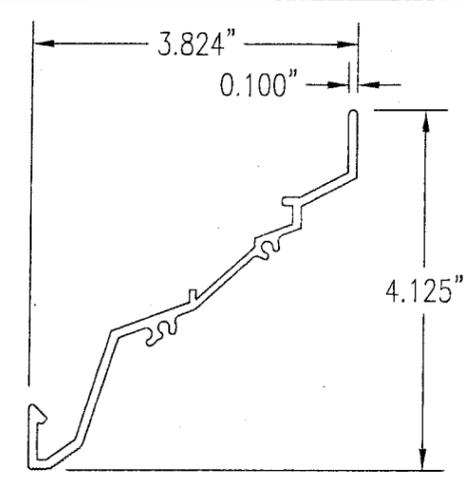
1A STANDARD HEADER & SILL JAMB
6063-T5 ALUMINUM
SCALE: 1/2 FULL



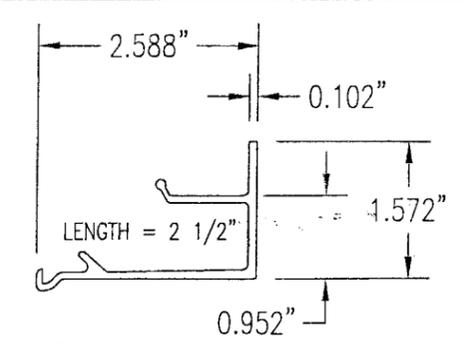
2 PARTIAL BLADE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



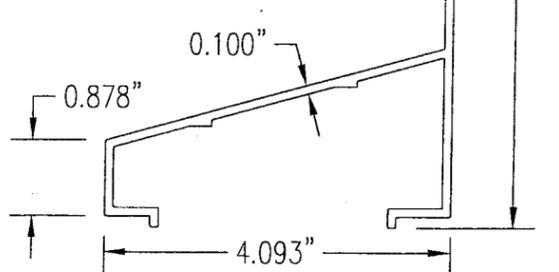
3 SIDE JAMB
6063-T5 ALUMINUM
SCALE: 1/2 FULL



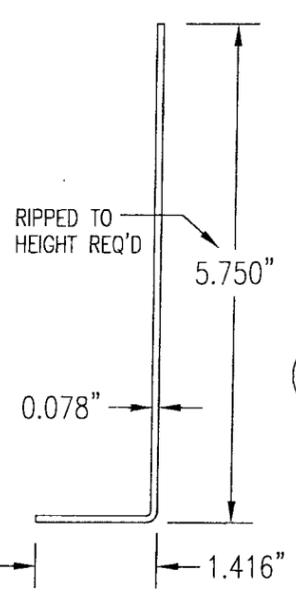
4 LOUVER BLADE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



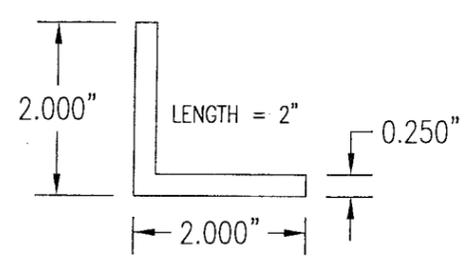
5 BLADE BRACE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



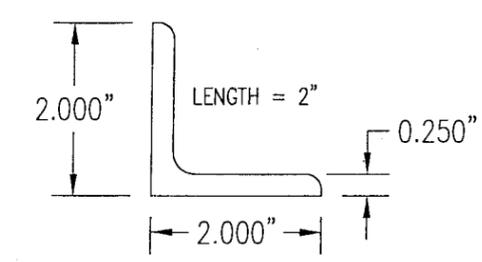
1B OPTIONAL SLOPED SILL
6063-T5 ALUMINUM
SCALE: 1/2 FULL



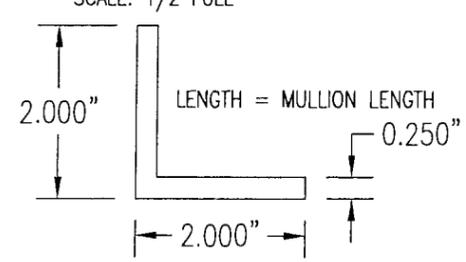
7 SILL ANGLE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



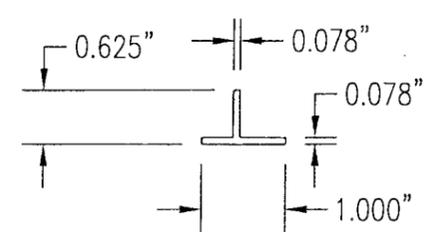
8 CONNECTION ANGLE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



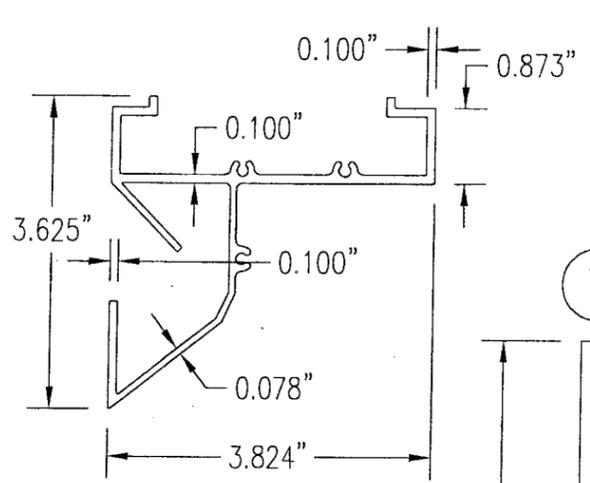
9 CONNECTION ANGLE
A36 STEEL
SCALE: 1/2 FULL



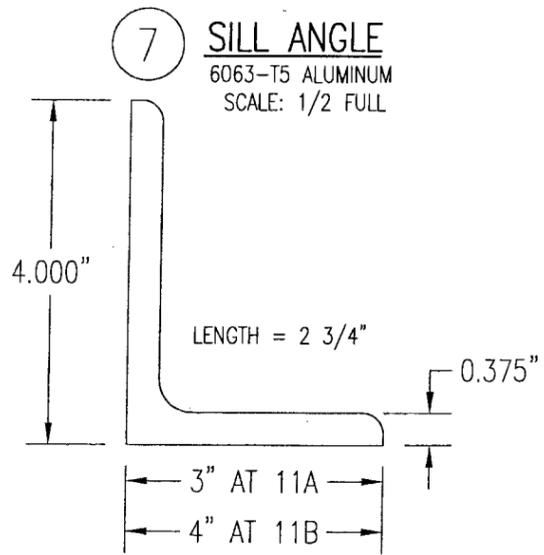
10 MULLION ANGLE
6063-T5 ALUMINUM
SCALE: 1/2 FULL



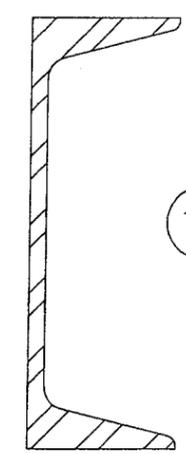
6 MULLION CAP
6063-T5 ALUMINUM
SCALE: 1/2 FULL



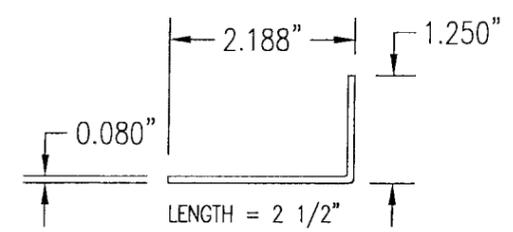
1C OPTIONAL 1-PIECE HEADER
6063-T5 ALUMINUM
SCALE: 1/2 FULL



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

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

| | | | | |
|----|--|----------|--------|--------|
| A1 | ITEM "1A" WAS "1"; ADDED ITEMS "1B" & "1C" | 04/29/03 | K.P.S. | W.W.S. |
| | REVISION | DATE | DRN | APPD |

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 02-0423.03
Expiration Date 01/27/2009
By *[Signature]*
Miami Dade Product Control
Division

APR 18 2008
WARREN W. SCHAEFER, P.E.
STRUCTURAL ENGINEER
P.E. No: 44135
W. W. SCHAEFER ENGINEERING
& CONSULTING, P.A.
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314 RIVERSIDE DRIVE - P.O. BOX 69
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PHONE 570-746-1888; FAX 570-746-9286

EA-22 TEST LOUVER
ARCHITECTURAL & NON-ARCHITECTURAL LOUVER
PARTS & EXTRUSIONS

| | | |
|---------------|----------------|---------------|
| CKD.BY | APPD.BY W.W.S. | SHEET: 6 of 7 |
| DRN.BY W.W.S. | DWG. NO. | REV. |
| DATE 06-16-00 | 35972-4 | 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 |
| 30 | 24 | 107 | 27 |
| | 8 | 150 | 62 |
| | 12 | 150 | 52 |
| | 16 | 150 | 41 |
| 36 | 20 | 140 | 31 |
| | 24 | 93 | - |
| | 8 | 150 | - |
| | 12 | 150 | - |
| | 16 | 150 | - |
| 42 | 20 | 125 | - |
| | 24 | 83 | - |
| | 8 | 150 | - |
| | 12 | 150 | - |
| 48 | 16 | 142 | - |
| | 20 | 107 | - |
| | 24 | 71 | - |
| | 8 | 150 | - |
| 54 | 12 | 150 | - |
| | 16 | 125 | - |
| | 20 | 93 | - |
| | 24 | 62 | - |
| 60 | 8 | 150 | - |
| | 12 | 138 | - |
| | 16 | 111 | - |
| | 20 | 83 | - |
| 60 | 24 | 55 | - |
| | 8 | 150 | - |
| | 12 | 125 | - |
| | 16 | 100 | - |
| 60 | 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.

PRODUCT RENEWED
 as complying with the Florida Building Code
 Acceptance No. 08-0423-03
 Expiration Date 07/27/2009
 By *[Signature]*
 Miami Dade Product Control Division

APR 18 2008

WARREN W. SCHAEFER, P.E.
 STRUCTURAL ENGINEER
 P.E. No. 44135

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 PALM BEACH GARDENS, FL 33410
 PHONE: 561-775-4902

| | | | | |
|--|--|----------|---------|---------------|
| A1 | ITEM "1A" WAS "1"; ADDED ITEMS "1B" & "1C" | 04/29/03 | K.P.S. | W.W.S. |
| REVISION | | DATE | DRN CK | APPD |
| ARROW UNITED INDUSTRIES A Division of Mestek, Inc. | | | | |
| 314 RIVERSIDE DRIVE - P.O. BOX 69 WYALUSING, PA 18853 PHONE 570-746-1888; FAX 570-746-9286 | | | | |
| EA-22 TEST LOUVER ARCHITECTURAL & NON-ARCHITECTURAL LOUVER MATERIAL LIST & LOAD TABLE | | | | |
| CKD BY | W.W.S. | APPD BY | W.W.S. | SHEET: 7 of 7 |
| DRN BY | W.W.S. | DWG. NO. | 35972-4 | REV. B |
| DATE | 06-16-00 | | | |