



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](http://www.miamidade.gov/buildingcode)

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

**American Warming and Ventilating  
 7301 International Drive  
 Holland, OH 43528**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed 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 LE-32 6" Aluminum Louver System**

**APPROVAL DOCUMENT:** Drawing No. 31604-6, titled "LE-32 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 # 03-1027.01** 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]*  
 7/7/08

**NOA No. 08-0423.06  
 Expiration Date: July 27, 2009  
 Approval Date: July 31, 2008  
 Page 1**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **31604-6**, titled "LE-32 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. LE-32 Architectural & Non-Architectural Fixed Louver", prepared by Hurricane Test Laboratory, Inc., Report No. **0198-0515-99**, dated 12/02/99, signed and sealed by Vinu J. Abraham, P.E.  
***"Submitted under NOA No. 03-1027.01"***

**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. 03-1027.01"***

**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. 03-1027.01"***



Carlos M. Utrera, P.E.

Product Control Examiner

NOA No. 08-0423.06

Expiration Date: July 27, 2009

Approval Date: July 31, 2008

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**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 02/29/08, signed by David Willet.
  3. Testing agreement letter issued by Hurricane Test Laboratory, LLC. dated 06/24/2008, signed by Vinu J. Abraham, P.E.
- 
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. 03-1027.01"*

**G. OTHER**

1. Notice of Acceptance No. **03-1027.01**, issued to American Warming and Ventilating, approved on 01/29/04 and expiring on 07/27/08.



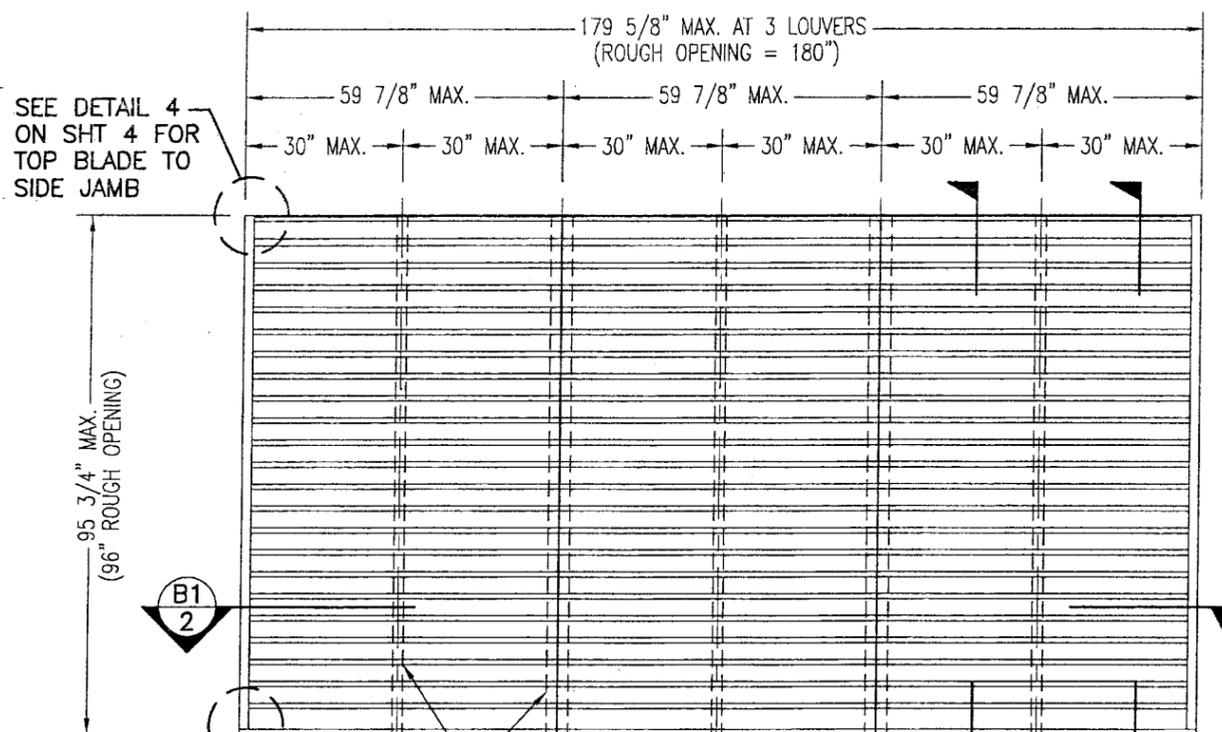
Carlos M. Útrera, P.E.

Product Control Examiner

NOA No. 08-0423.06

Expiration Date: July 27, 2009

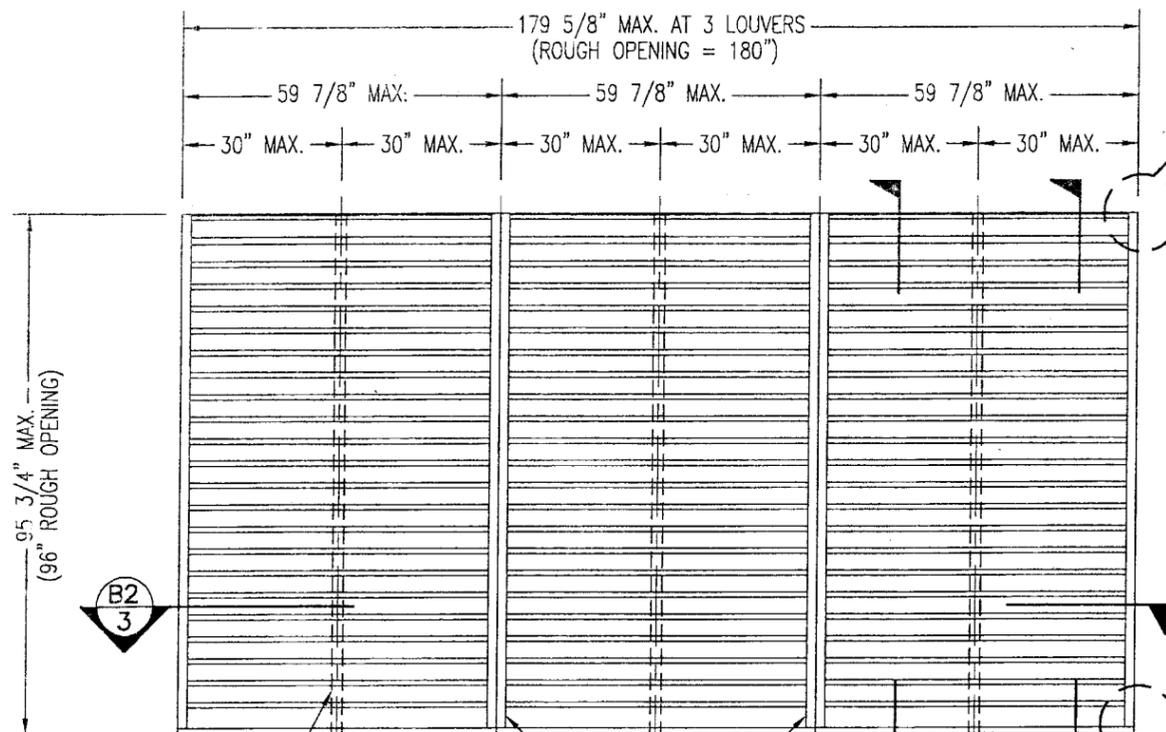
Approval Date: July 31, 2008



**EXTERIOR ELEVATION  
ARCHITECTURAL 6" 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 6" LOUVER**

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

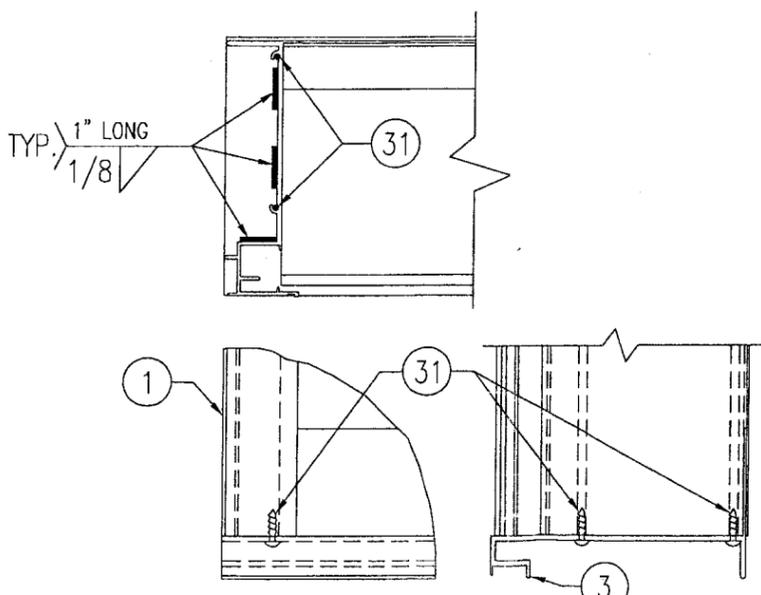
NOTE: THIS LOUVER SYSTEM MAY CONSIST OF AN UNLIMITED NUMBER OF SECTIONS PROVIDING EACH SECTION DOES NOT EXCEED 59 7/8" X 95 3/4" IN SIZE.

| 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.

**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.



**SILL CORNER DETAIL**

**PRODUCT RENEWED**  
 as complying with the Florida  
 Building Code  
 Acceptance No. 08-0123.06  
 Expiration Date 07/27/2009  
 By *[Signature]*  
 Miami Dade Product Control  
 Division

| REVISION | DATE                         | DRN      | CK  | APPD |
|----------|------------------------------|----------|-----|------|
| B1       | UPDATE FOR CODE COMPLIANCE   | 04/17/08 | WRM | WWS  |
| A        | UPDATED NOTES 6, 12, 13 & 14 | 10/15/03 | KPS | WWS  |

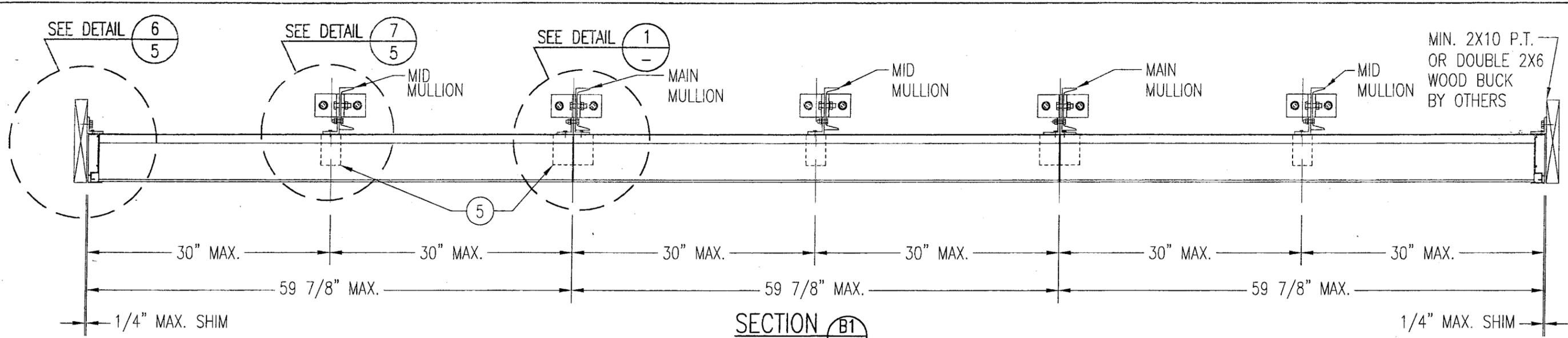
APR 18 2008

**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

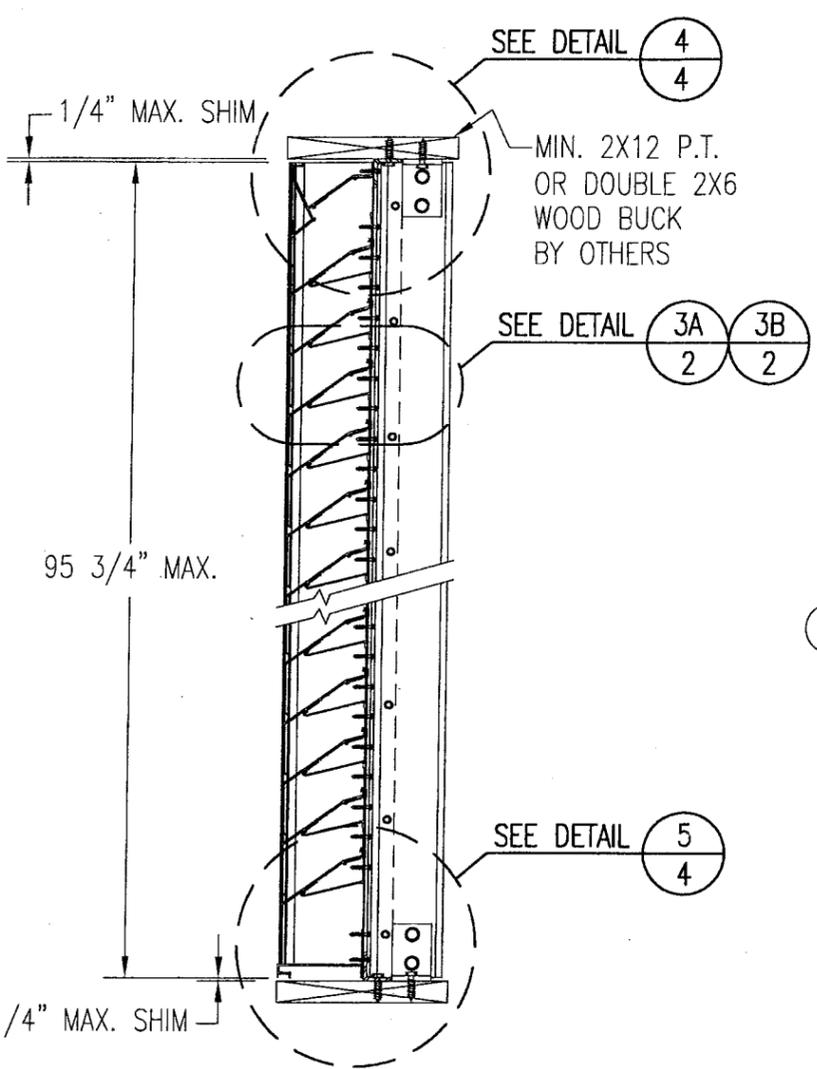
**awv** american warming and ventilating  
 A MESTEK COMPANY  
 7301 INTERNATIONAL DRIVE HOLLAND, OHIO  
 PHONE 419-865-5000; FAX 419-865-1375

**LE-32 TEST LOUVER**  
**ARCH. & NON-ARCH. LOUVER**  
**ELEVATIONS & NOTES**

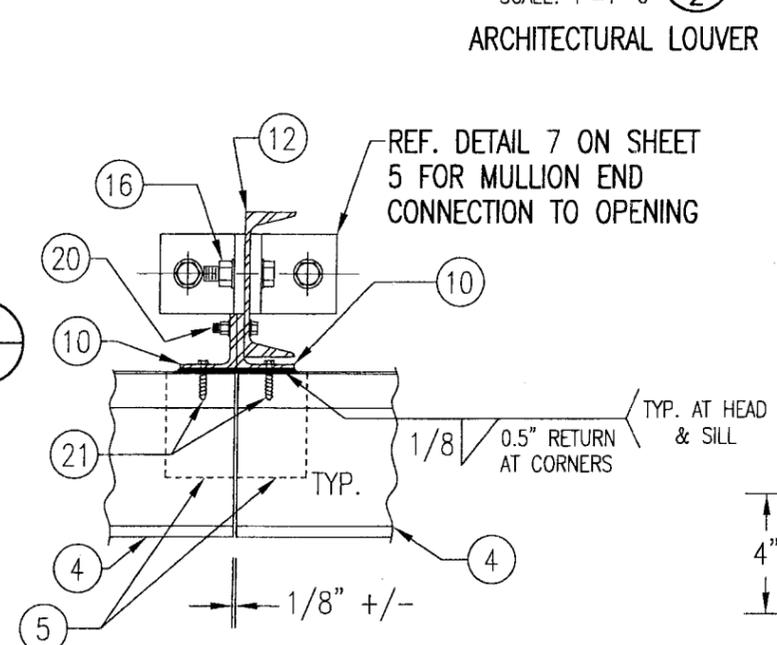
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|---------------|----------------|---------------|
| CKD.BY        | APPD.BY W.W.S. | SHEET: 1 of 7 |
| DRN.BY W.W.S. | DWG. NO.       | REV.          |
| DATE 06-16-00 | 31604-6        | B             |



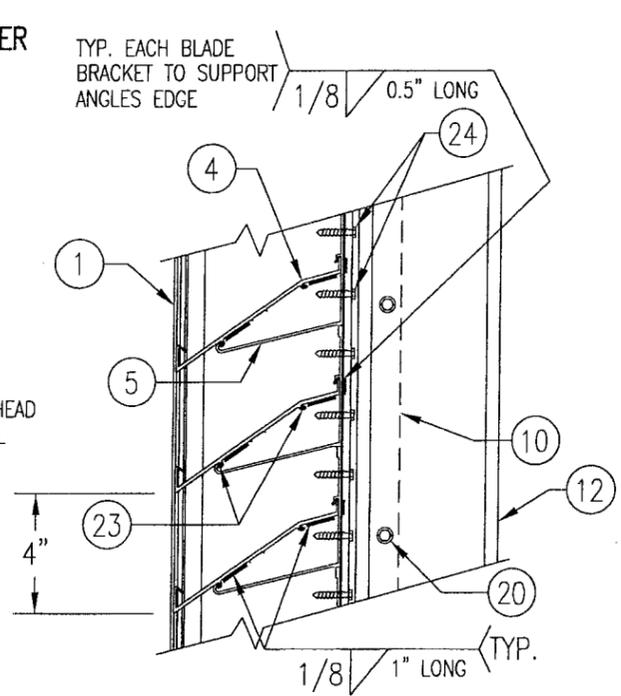
**SECTION B1**  
SCALE: 1"=1'-0"  
ARCHITECTURAL LOUVER



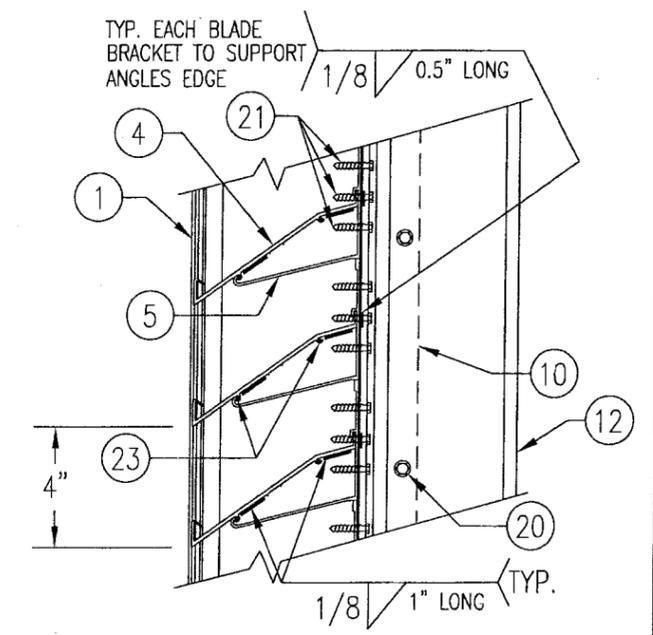
**SECTION A1**  
SCALE: 1"=1'-0"  
ARCHITECTURAL LOUVER



**DETAIL 1**  
SCALE: 2"=1'-0"  
ARCHITECTURAL LOUVER



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

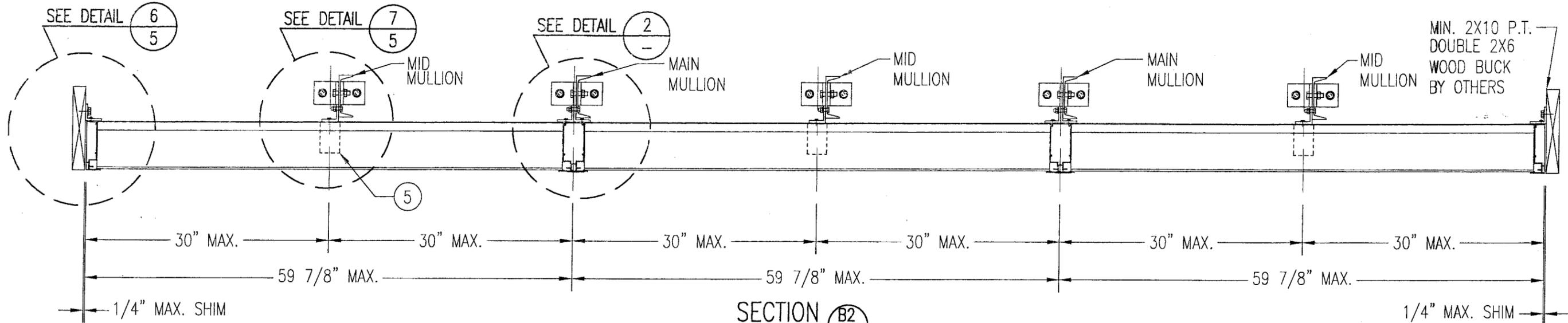


**DETAIL 3B**  
SCALE: 2"=1'-0"  
TYP. AT ALL MAIN ARCHITECTURAL MULLIONS

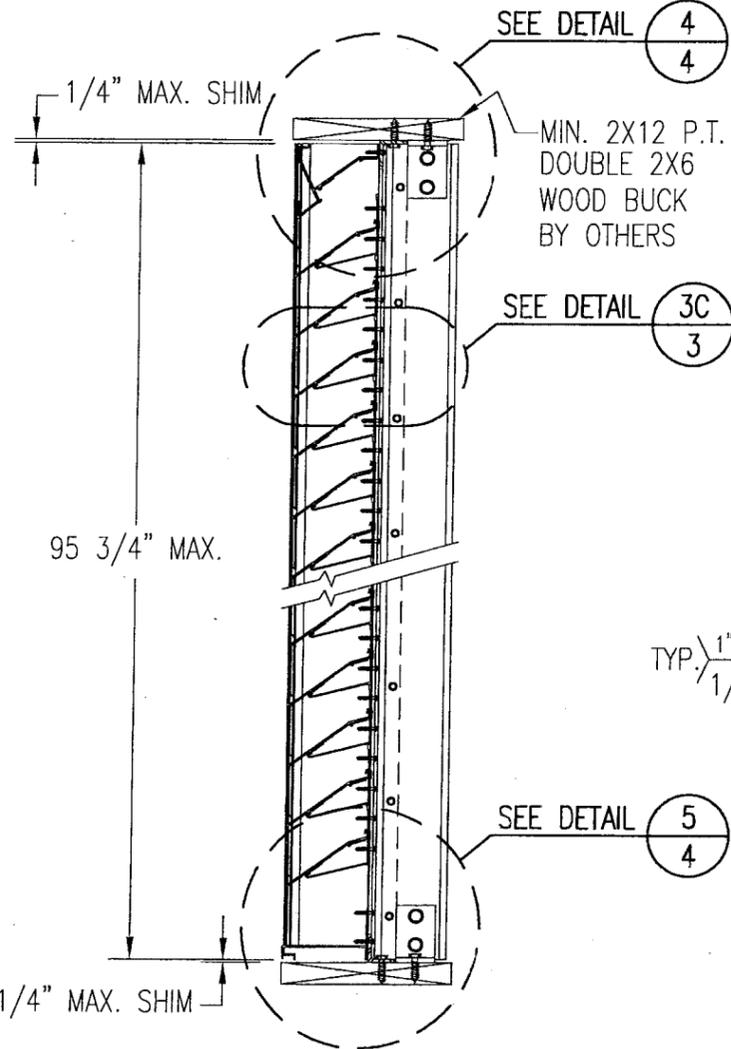
**PRODUCT RENEWED**  
as complying with the Florida  
Building Code  
Acceptance No. 08-0123-06  
Expiration Date 07/27/2009  
By *[Signature]*  
Miami/Dade Product Control  
Division

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

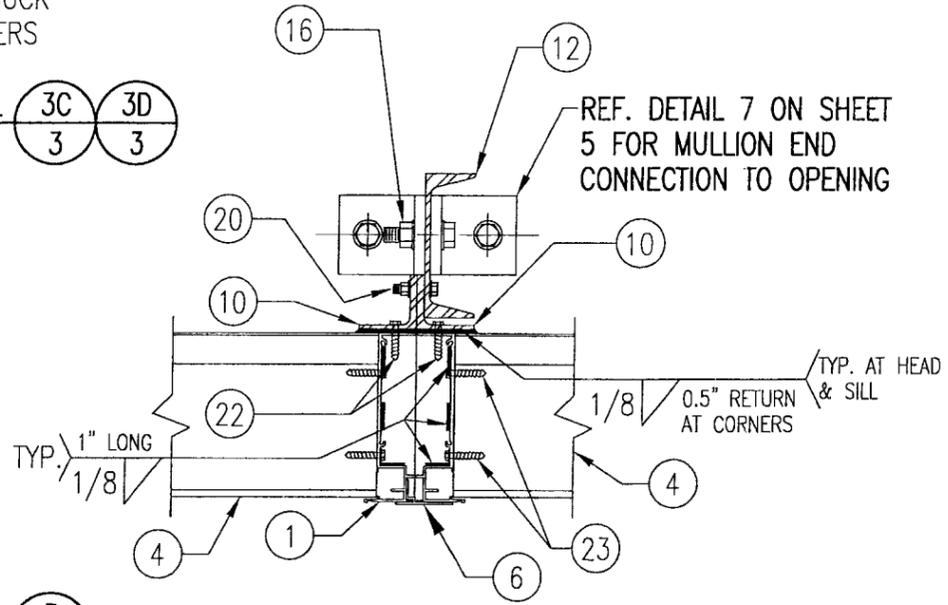
| REVISION   | DATE     | DRN      | CK            | APPD |
|--|----------|----------|---------------|------|
| <b>awv</b> american warming<br>and ventilating<br>A MESTEK COMPANY<br>7301 INTERNATIONAL DRIVE HOLLAND, OHIO<br>PHONE 419-865-5000; FAX 419-865-1375<br><b>LE-32 TEST LOUVER</b><br><b>ARCHITECTURAL LOUVER</b><br><b>SECTIONS &amp; DETAILS</b> |          |          |               |      |
| CKD.BY   | APPD.BY  | W.W.S.   | SHEET: 2 of 7 |      |
| DRN.BY   | W.W.S.   | DWG. NO. | REV.          |      |
| DATE   | 06-16-00 | 31604-6  | B             |      |



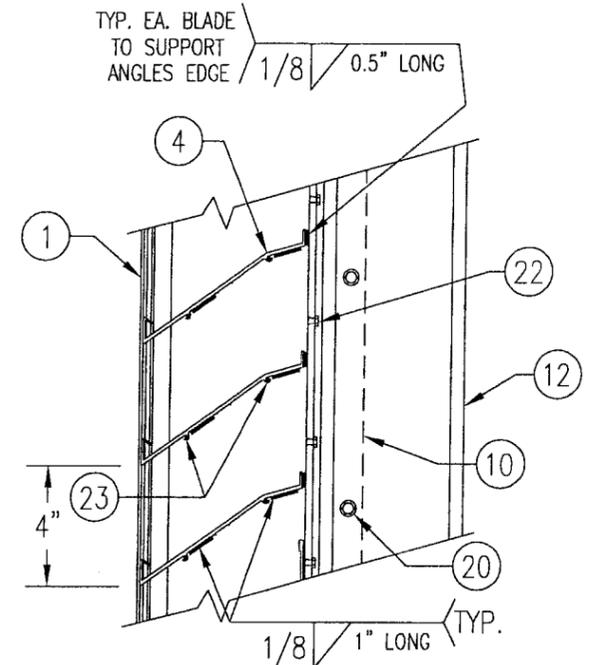
**SECTION B2**  
SCALE: 1"=1'-0"  
**NON-ARCHITECTURAL LOUVER**



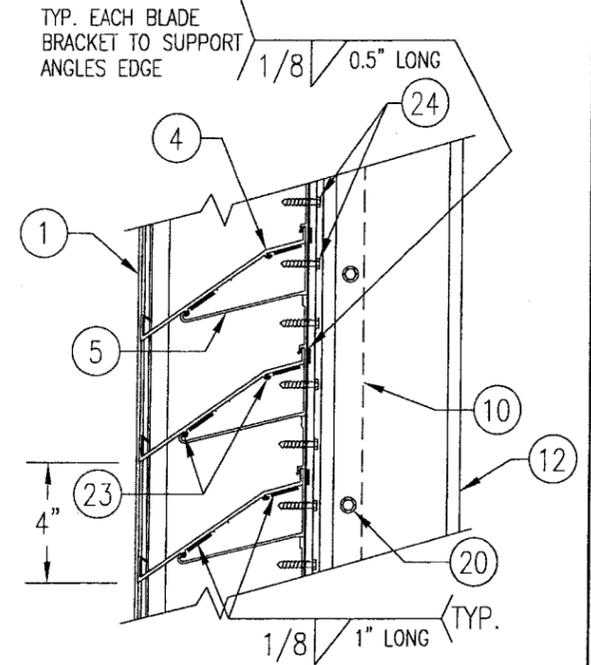
**SECTION A2**  
SCALE: 1"=1'-0"  
**NON-ARCHITECTURAL LOUVER**



**DETAIL 2**  
SCALE: 2"=1'-0"  
**NON-ARCHITECTURAL LOUVER**  
NOTE: SIDE JAMBS ARE ADDITIONALLY FASTENED TO THE SILL WITH 2 NO. 8 X 3/4 inch SMS THROUGH SILL & INTO JAMB SPLINES.



**DETAIL 3C**  
SCALE: 2"=1'-0"  
TYP. AT ALL MAIN NON-ARCHITECTURAL MULLIONS

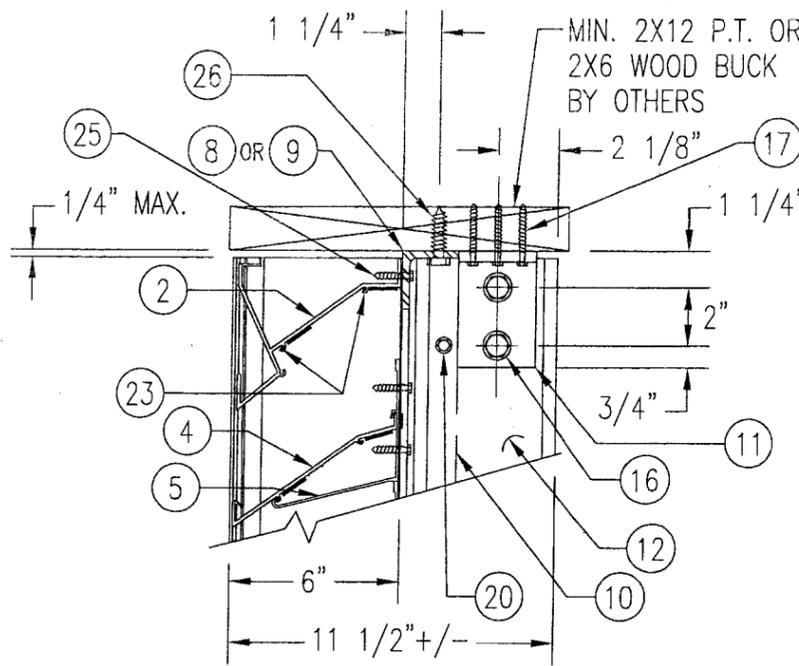


**DETAIL 3D**  
SCALE: 2"=1'-0"  
TYP. AT ALL MID SPAN MULLIONS

**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No. 08-0423.06  
Expiration Date 07/23/2029  
By *[Signature]*  
Miami Dade Product Control Division

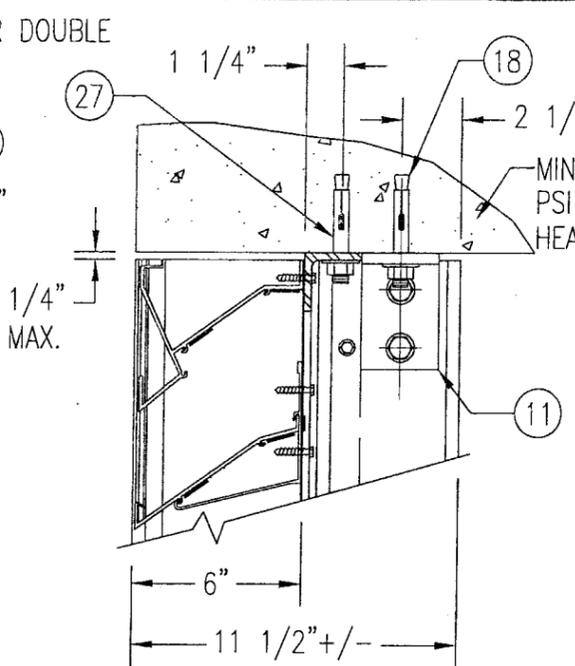
APR 18 2008  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
W.W. SCHAEFER ENGINEERING & CONSULTING, P.A.  
STRUCTURAL CONSULTING ENGINEERS  
8895 N. MILITARY TRAIL, SUITE C-204  
PALM BEACH GARDENS, FL 33410  
PHONE: 561-775-4902

| REVISION  | DATE           | DRN           | CK | APPO |
|---|----------------|---------------|----|------|
| <b>awv</b> american warming and ventilating<br>A MESTEK COMPANY<br>7301 INTERNATIONAL DRIVE HOLLAND, OHIO<br>PHONE 419-865-5000; FAX 419-865-1375<br><b>LE-32 TEST LOUVER</b><br><b>NON-ARCHITECTURAL LOUVER</b><br><b>SECTIONS &amp; DETAILS</b> |                |               |    |      |
| CKD.BY  | APPD.BY W.W.S. | SHEET: 3 of 7 |    |      |
| DRN.BY W.W.S.   | DWG. NO.       | REV.          |    |      |
| DATE 06-16-00   | 31604-6        | B             |    |      |



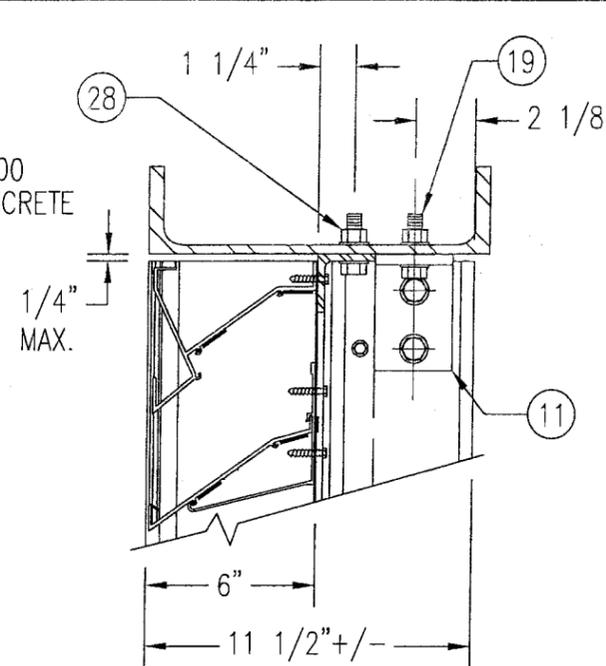
**WOOD FRAMED OPENING**

SEE "DETAIL 3A & 3B" FOR LOUVER BLADE DETAILS



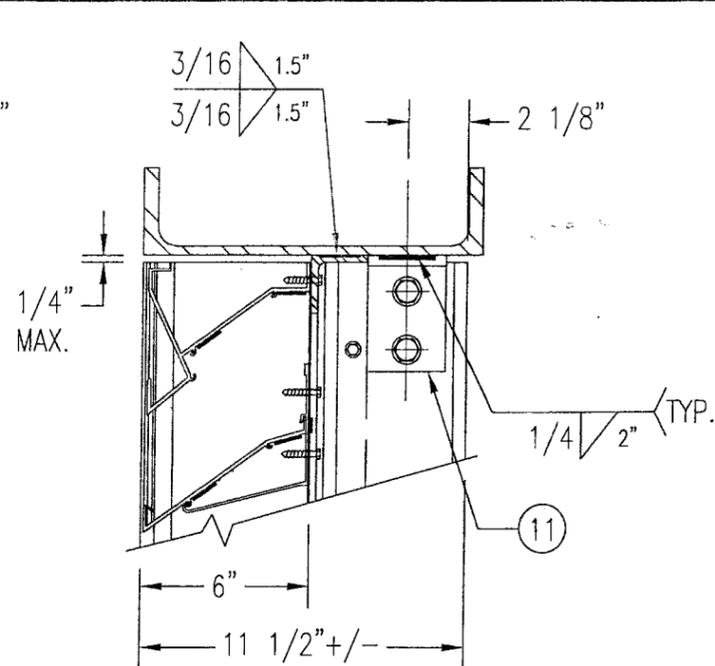
**CONCRETE HEAD**

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)**

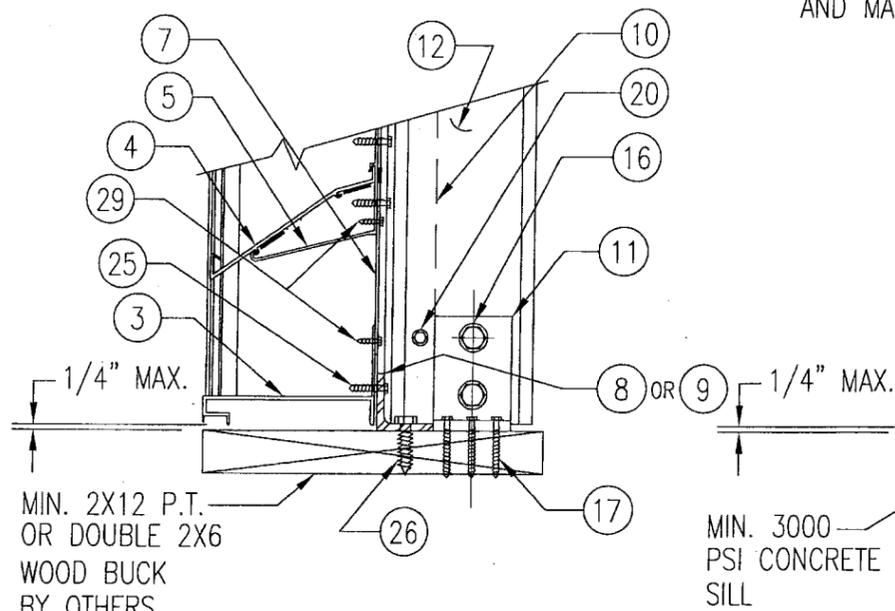
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



**STEEL FRAME OPENING (WELDED)**

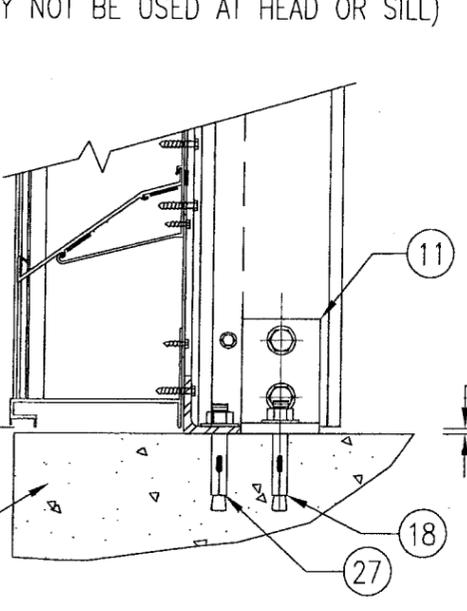
SEE "WOOD OPENING" FOR DETAIL NOT SHOWN

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



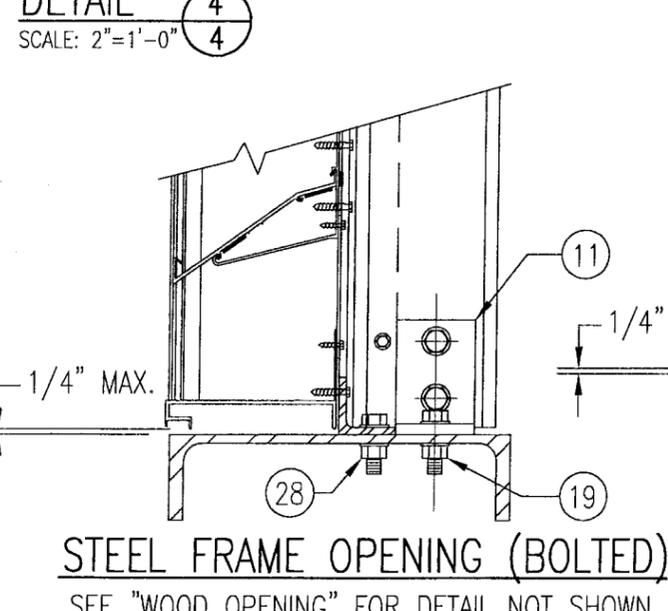
**WOOD FRAMED OPENING**

SEE "DETAIL 3A & 3B" FOR LOUVER BLADE DETAILS



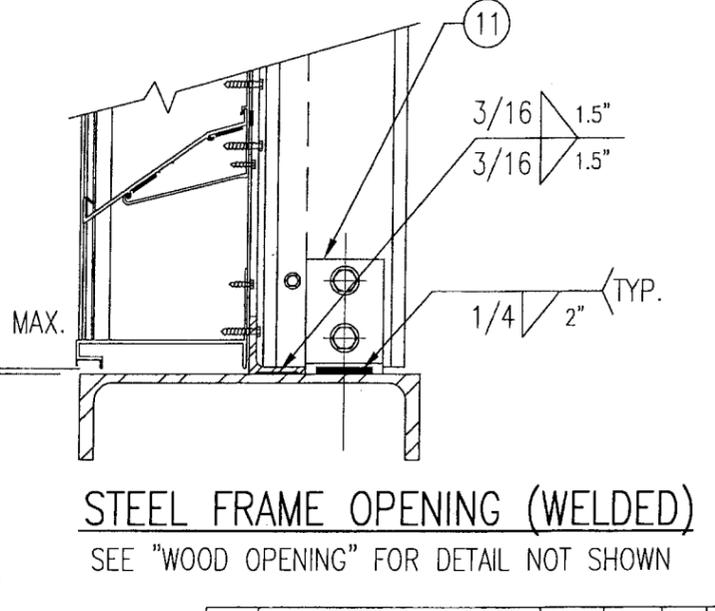
**CONCRETE SILL**

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

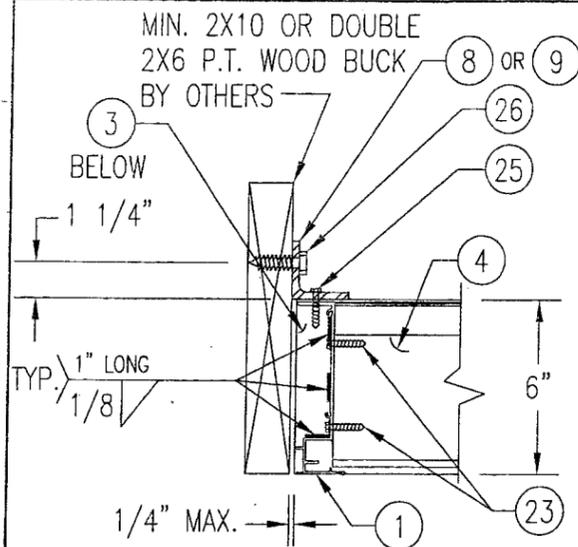
**DETAIL 5**  
SCALE: 2"=1'-0"

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

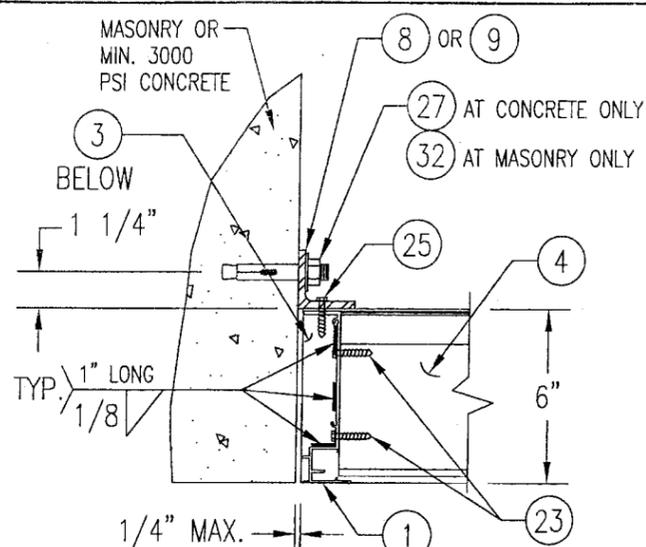
PRODUCT RENEWED  
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Building Code  
Acceptance No 08-0423-06  
Expiration Date 07/27/2009  
By *[Signature]*  
Miami Trade Product Control  
Division

APR 18 2000  
WARREN W. SCHAEFER, P.E.  
STRUCTURAL ENGINEER  
P.E. No. 44135  
W. W. SCHAEFER ENGINEERING  
& CONSULTING, P.A.  
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PHONE: 561-775-4902

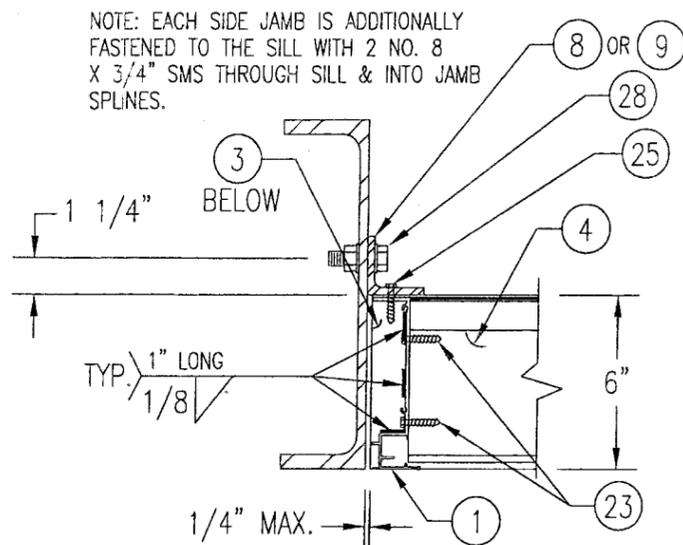
| REVISION   | DATE     | DRN      | CK            | APPD |
|--|----------|----------|---------------|------|
| <b>awv</b> american warming<br>and ventilating<br>A MESTEK COMPANY<br>7301 INTERNATIONAL DRIVE HOLLAND, OHIO<br>PHONE 419-865-5000; FAX 419-865-1375<br>LE-32 TEST LOUVER<br>ARCH. & NON-ARCH. LOUVER<br>DETAILS |          |          |               |      |
| CKD.BY   | APPD.BY  | W.W.S.   | SHEET: 4 of 7 |      |
| DRN.BY   | W.W.S.   | DWG. NO. | REV.          |      |
| DATE   | 06-16-00 | 31604-6  | B             |      |



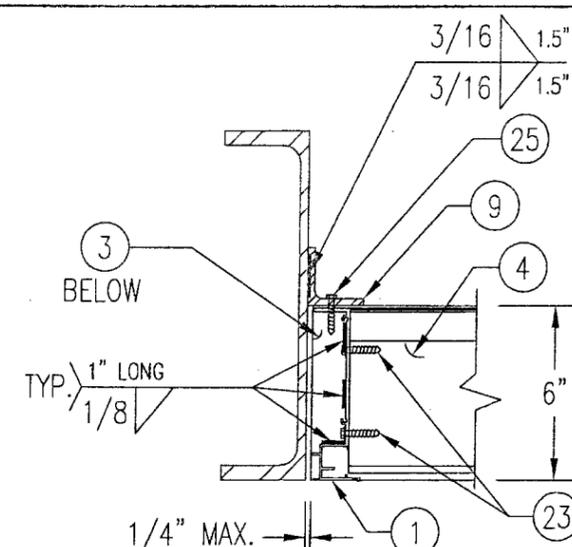
**WOOD FRAMED OPENING**



**CONCRETE/MASONRY OPENING**



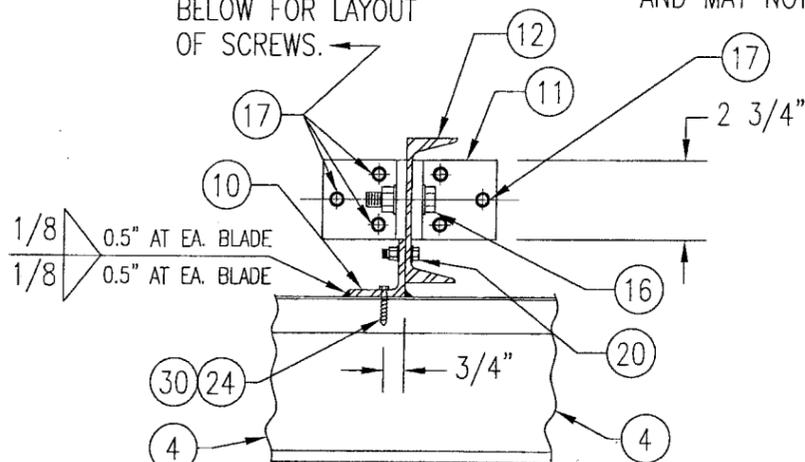
**STEEL FRAME OPENING (BOLTED)**



**STEEL FRAME OPENING (WELDED)**

NOTE: EACH SIDE JAMB IS ADDITIONALLY FASTENED TO THE SILL WITH 2 NO. 8 X 3/4\"

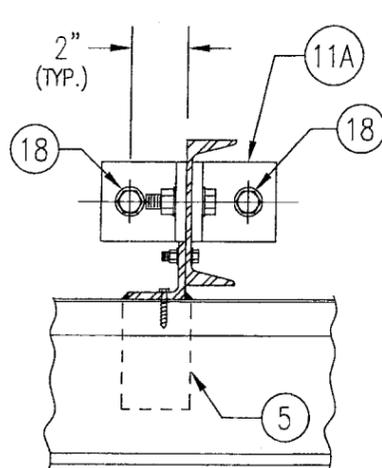
SEE CLIP DETAIL BELOW FOR LAYOUT OF SCREWS.



**WOOD FRAMED OPENING**

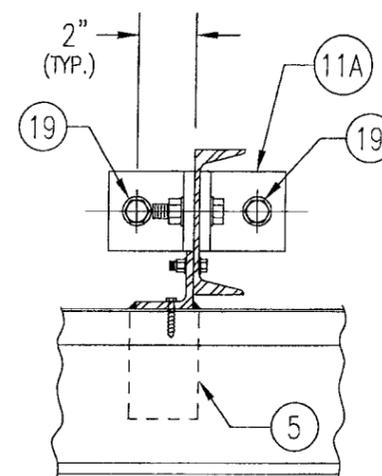
(MASONRY ACCEPTABLE AT SIDES ONLY AND MAY NOT BE USED AT HEAD OR SILL)

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



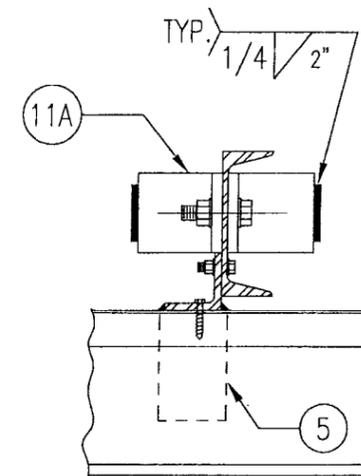
**CONCRETE HEAD & SILL**

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



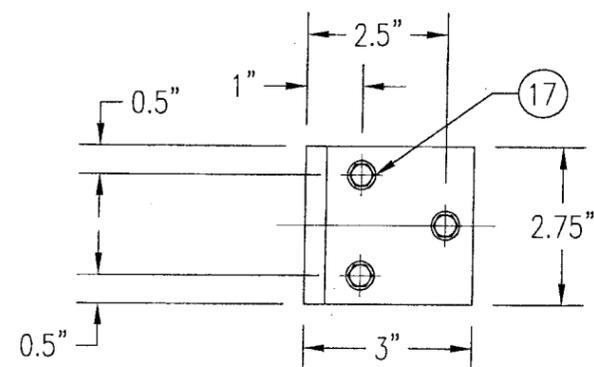
**STEEL FRAME OPENING (BOLTED)**

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



**STEEL FRAME OPENING (WELDED)**

SEE "WOOD OPENING" FOR DETAIL NOT SHOWN



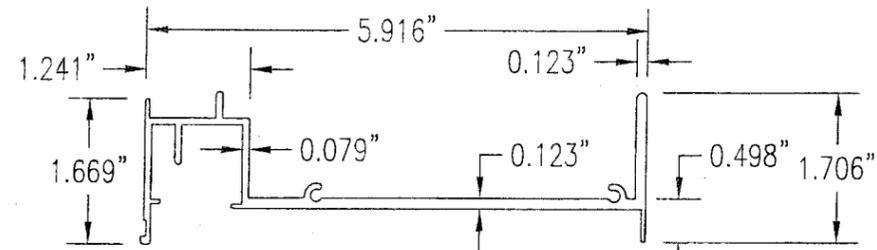
**MULLION CLIP DETAIL @ WOOD INSTALLATION**

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

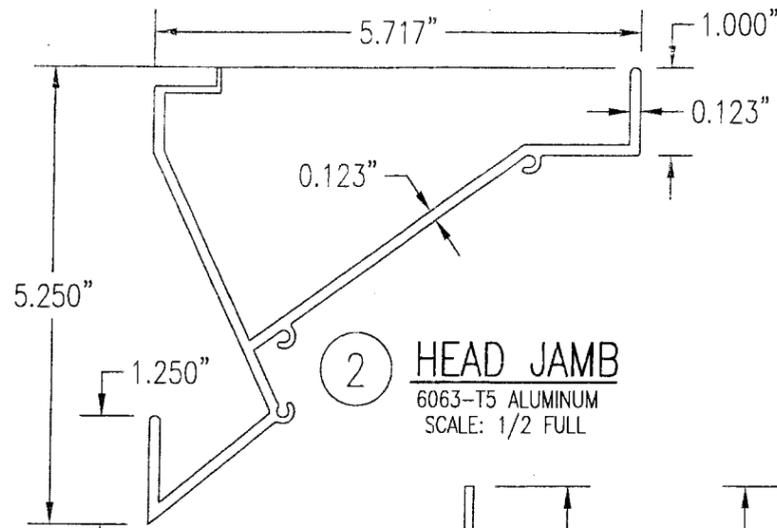
DETAIL **7**  
SCALE: 2"=1'-0" **5**

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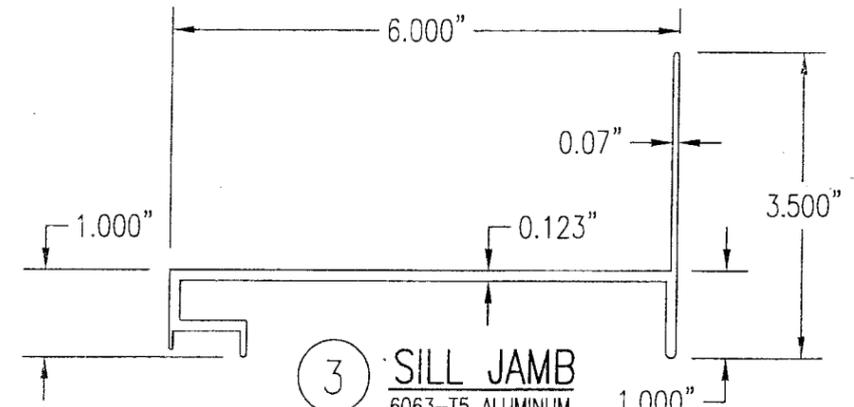
|  |  |  |  |  |     |               |      |
|--|--|--|--|--|-----|---------------|------|
| APR 18 2000  |  | REVISION   |  | DATE   | DRN | CK            | APPD |
| WARREN W. SCHAEFER, P.E.<br>STRUCTURAL ENGINEER<br>P.E. No. 44135  |  | awv american warming and ventilating<br>A MESTEK COMPANY<br>7301 INTERNATIONAL DRIVE HOLLAND, OHIO<br>PHONE 419-865-5000; FAX 419-865-1375 |  | LE-32 TEST LOUVER<br>ARCH. & NON-ARCH. LOUVER<br>DETAILS |     |               |      |
| W. W. SCHAEFER ENGINEERING & CONSULTING, P.A.<br>STRUCTURAL CONSULTING ENGINEERS<br>8895 N. MILITARY TRAIL, SUITE C-204<br>PALM BEACH GARDENS, FL 33410<br>PHONE: 561-775-4902 |  | CKD.BY   |  | APPD.BY W.W.S.   |     | SHEET: 5 of 7 |      |
| By <i>[Signature]</i>  |  | DRN.BY W.W.S.  |  | DWG. NO.   |     | REV.          |      |
| DATE 06-16-00  |  | 31604-6  |  | B  |     |               |      |



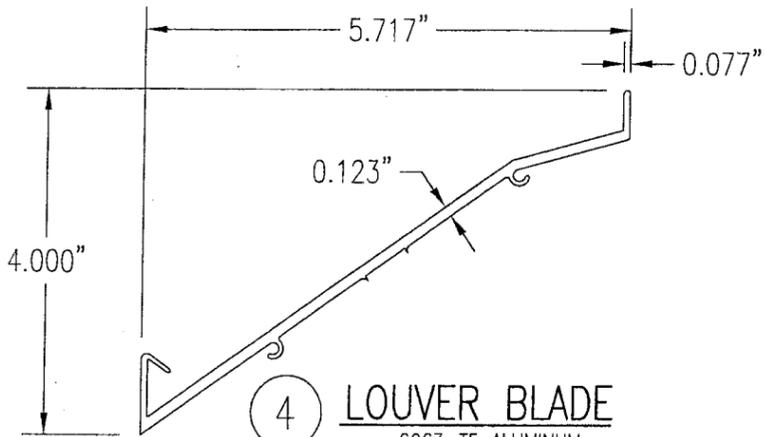
1 JAMB EXTRUSION  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



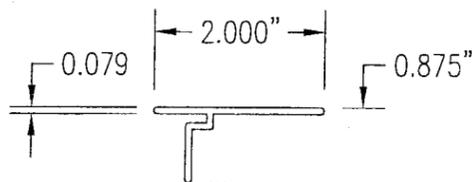
2 HEAD JAMB  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



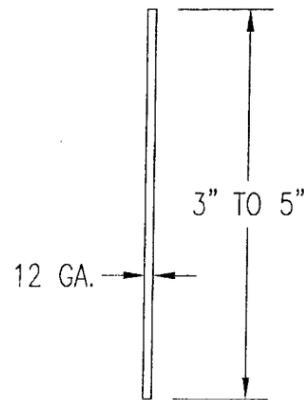
3 SILL JAMB  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



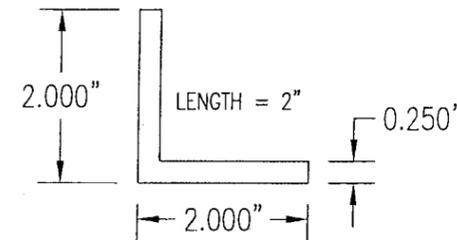
4 LOUVER BLADE  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



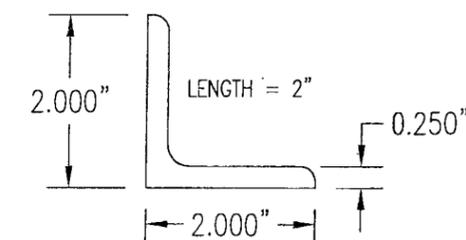
6 MULLION CAP  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



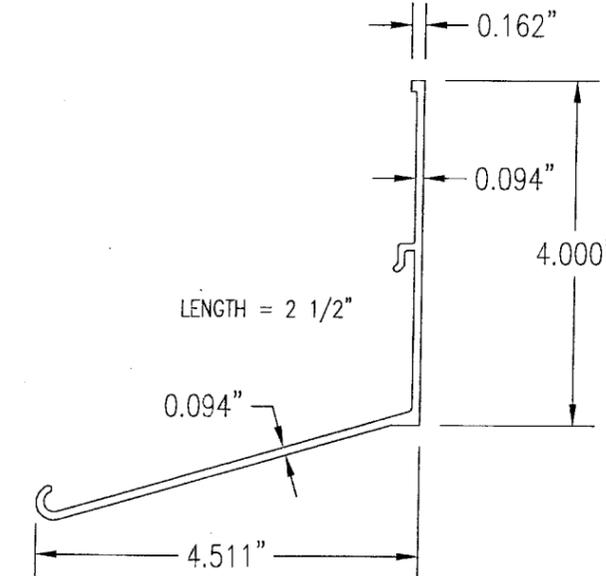
7 SILL PLATE  
3003/5005 ALUMINUM  
SCALE: 1/2 FULL



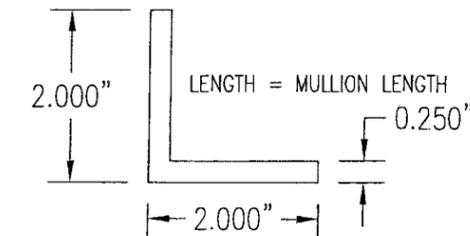
8 CONNECTION ANGLE  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



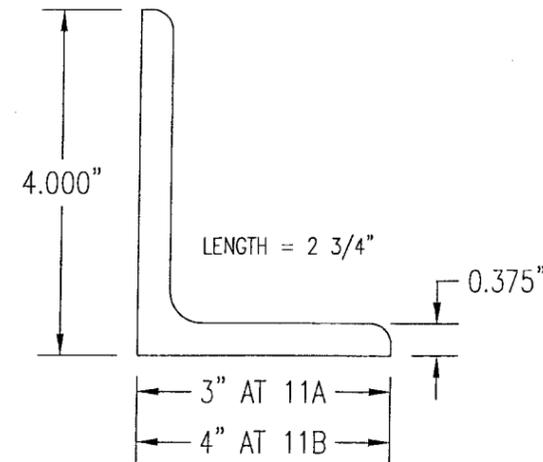
9 CONNECTION ANGLE  
A36 STEEL  
SCALE: 1/2 FULL



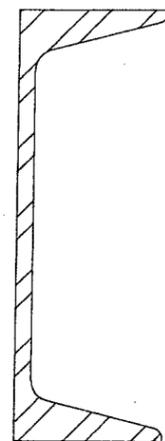
5 BLADE SUPPORT BRACKET  
6063-T5 ALUMINUM  
SCALE: 1/2 FULL



10 MULLION ANGLE  
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

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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 |
|--|------|-----|----|------|
| <b>awv</b> american warming<br>and ventilating<br>A MESTEK COMPANY<br>7301 INTERNATIONAL DRIVE HOLLAND, OHIO<br>PHONE 419-865-5000; FAX 419-865-1375<br>LE-32 TEST LOUVER<br>ARCH. & NON-ARCH. LOUVER<br>PARTS & EXTRUSIONS<br>CKD.BY _____ APPD.BY W.W.S. SHEET: 6 of 7<br>DRN.BY W.W.S. DWG. NO. 31604-6 REV. _____<br>DATE 06-16-00 |      |     |    |      |

**ALLOWABLE WIND PRESSURE VS. JAMB CLIP SPACING  
AND PANEL WIDTH**

| PANEL WIDTH<br>(INCHES) | CLIP SPACING<br>(INCHES) | ALLOWABLE PRESSURE<br>WITH MID SPAN MULLION<br>(PSF) | ALLOWABLE PRESSURE<br>WITHOUT MID SPAN MULLION<br>(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 |  |  |
| 1                | SIDE JAMB FRAME/MULLION                            | 6063-T5 ALUMINUM   |
| 2                | HEAD FRAME   | 6063-T5 ALUMINUM   |
| 3                | SILL FRAME   | 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 PLATE   | 3003/5005 ALUMINUM; FULL LENGTH OF PANEL SILL  |
| 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               | OPEN   |  |
| 14               | OPEN   |  |
| 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. 14 X 1 1/4" HILTI TEK SCREW                    | 3 AT EACH LOUVER BLADE SUPPORT BRACKET AT ARCHITECTURAL MAIN MULLIONS                                  |
| 22               | NO. 14 X 1 1/4" HILTI TEK SCREW                    | WITHIN 1 1/4" OF MULLION ENDS & MAX. 4" O.C. INTO FRAME  |
| 23               | NO. 8 X 3/4" SMS                                   | 2 PER EACH LOUVER BLADE END THROUGH JAMB & INTO BLADE SPLINES  |
| 24               | NO. 14 X 1 1/4" HILTI TEK SCREW                    | 2 AT EACH LOUVER BLADE SUPPORT BRACKET AT ALL MIDSPAN MULLIONS   |
| 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               | NO. 8 X 3/4" SMS                                   | 2 SCREWS WITHIN 4" OF SILL PLATE ENDS & MAX. 12" O.C. (SILL PLATE TO SILL JAMB AND FIRST LOUVER BLADE) |
| 30               | NO. 14 X 1 1/4" HILTI TEK SCREW                    | 1 AT EACH MULLION ANGLE INTO HEAD & SILL JAMB  |
| 31               | NO. 8 X 3/4" SMS SCREWS                            | 2 PER FRAME SILL CORNER THROUGH SILL & INTO JAMB SPLINES   |
| 32               | 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)                     |

**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.

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 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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**awv** american warming  
and ventilating  
A MESTEK COMPANY

7301 INTERNATIONAL DRIVE HOLLAND, OHIO  
PHONE 419-865-5000; FAX 419-865-1375

**LE-32 TEST LOUVER  
ARCH. & NON-ARCH. LOUVER  
MATERIAL LIST & LOAD TABLE**

|               |                |               |
|---------------|----------------|---------------|
| CKD.BY        | APPD.BY W.W.S. | SHEET: 7 of 7 |
| DRN.BY W.W.S. | DWG. NO.       | REV.          |
| DATE 06-16-00 | <b>31604-6</b> | <b>B</b>      |