



BUILDING AND NEIGHBORHOOD COMPLIANCE DEPARTMENT (BNC)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

NOTICE OF ACCEPTANCE (NOA)

www.miamidadecounty.gov/building/home.asp

NCA Manufacturing, Inc. (FL)
1985 Carroll Street
Clearwater, FL 33765

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 Section 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 Section (In Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Model XAD-6-MD Aluminum Louver

APPROVAL DOCUMENT: Drawing No. 1312, titled "XAD-6-MD Louver System", sheets 1 through 9 of 9, prepared by W. W. Schaeffer Engineering & Consulting, P. A., dated 08/04/04, with last revision A1 dated 10/26/10, signed and sealed by Warren W. Schaeffer, 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 Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Marion, NC 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 # 05-0208.01 and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

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



[Handwritten Signature]
2/3/11

NOA No. 10-1101.06
Expiration Date: February 24, 2016
Approval Date: February 24, 2011
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Manufacturer's die drawings and sections.
2. Drawing No. **1312**, titled "XAD-6-MD Louver System", sheets 1 through 9 of 9, prepared by W. W. Schaeffer Engineering & Consulting, P. A., dated 08/04/04, with last revision A1 dated 10/26/10, signed and sealed by Warren W. Schaeffer, P. E.

B. TESTS "Submitted under NOA # 05-0208.01"

1. Test reports on 1) Air Infiltration Test, per FBC, TAS 202-94 (except sp# 7 louver)
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistant Test, per FBC, TAS 202-94 (Not Performed)
4) Large Missile Impact Test per FBC, TAS 201-94
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94

Along with marked-up drawings and installation diagram of aluminum louver system, prepared by Hurricane Testing Laboratory, LLC, Test Report No. **HTL0363-0718-04 & HTL-0363-1105-04 (HTL04056)** dated 01-14-2005, signed and sealed by Vinu J. Abraham, P.E.

(Note: The above test report has been revised with addendum letters dated April 29, 2005 and May 31, 2005, signed and sealed by Vinu J. Abraham, P.E.)

C. CALCULATIONS

1. Anchor verification calculations, system performance and comparative analysis, prepared by W. W. Schaefer Engineering & Consulting, P.A., dated 10/26/10, signed and sealed by Warren W. Schaeffer, P.E.
2. Anchor verification calculations, system performance and comparative analysis, dated Jan 27, 2005 and last revised on May 26, 2005, prepared, signed and sealed by Warren W. Schaeffer, P. E. "**Submitted under NOA # 05-0208.01**"

D. QUALITY ASSURANCE

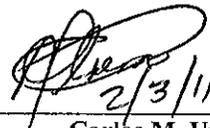
1. Miami-Dade Building and Neighborhood Compliance Department (BNC)

E. MATERIAL CERTIFICATIONS

1. None.

F. STATEMENTS

1. Statement letter of code conformance to 2007 FBC, issued by W. W. Schaefer Engineering & Consulting, P.A., dated 10/26/10, signed and sealed by Warren W. Schaeffer, P.E.
2. Statement letter of no financial interest issued by W. W. Schaefer Engineering & Consulting, P.A., dated 10/26/10, signed and sealed by Warren W. Schaeffer, P.E.



Carlos M. Utrera, P.E.

Product Control Examiner

NOA No. 10-1101.06

Expiration Date: February 24, 2016

Approval Date: February 24, 2011

FASTENER SCHEDULE

ANCHOR TYPE	(5) SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DIST.
(3) NO. 10 S.S. SCREW	WOOD	1 3/8"	3/4"
NO. 14 S.S. SCREW	WOOD	1 3/4"	3/4"
NO. 10-24 SELF DRILLING SCREW	METAL STUD OR STEEL	FULL	3/4"
1/4-20 SELF DRILLING SCREW	METAL STUD OR STEEL	FULL	3/4"
(1) 1/4" CONCRETE SCREW	C90 CONCR. BLOCK	1 1/4"	2 1/2"
(1) 1/4" CONCRETE SCREW	CONCRETE	1 1/2"	2"
(2) 1/4" BOLT	STEEL OR METAL STUD	FULL	3/4"
(4) 1/2" SLEEVE ANCHOR	CONCRETE	3 1/2"	3"
(2) 1/2" BOLT	STEEL	FULL	3/4"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.).
- (2) BOLT SHALL BE MIN. A307 GALVANIZED OR 304 S.S. (Fv = 10,000 PSI MIN.)
- (3) WOOD SCREWS SHALL HAVE MIN. YIELD STRENGTH OF Fyb = 80,000 PSI WITH #10 & 70,000 PSI WITH #14.
- (4) SLEEVE ANCHORS MAY BE GALVANIZED OR S.S. HILTI KWIK BOLT 3 EXPANSION ANCHORS
- (5) SEE GENERAL NOTES FOR SUBSTRATE REQUIREMENTS.

CORNER & BLADE END CONSTRUCTION

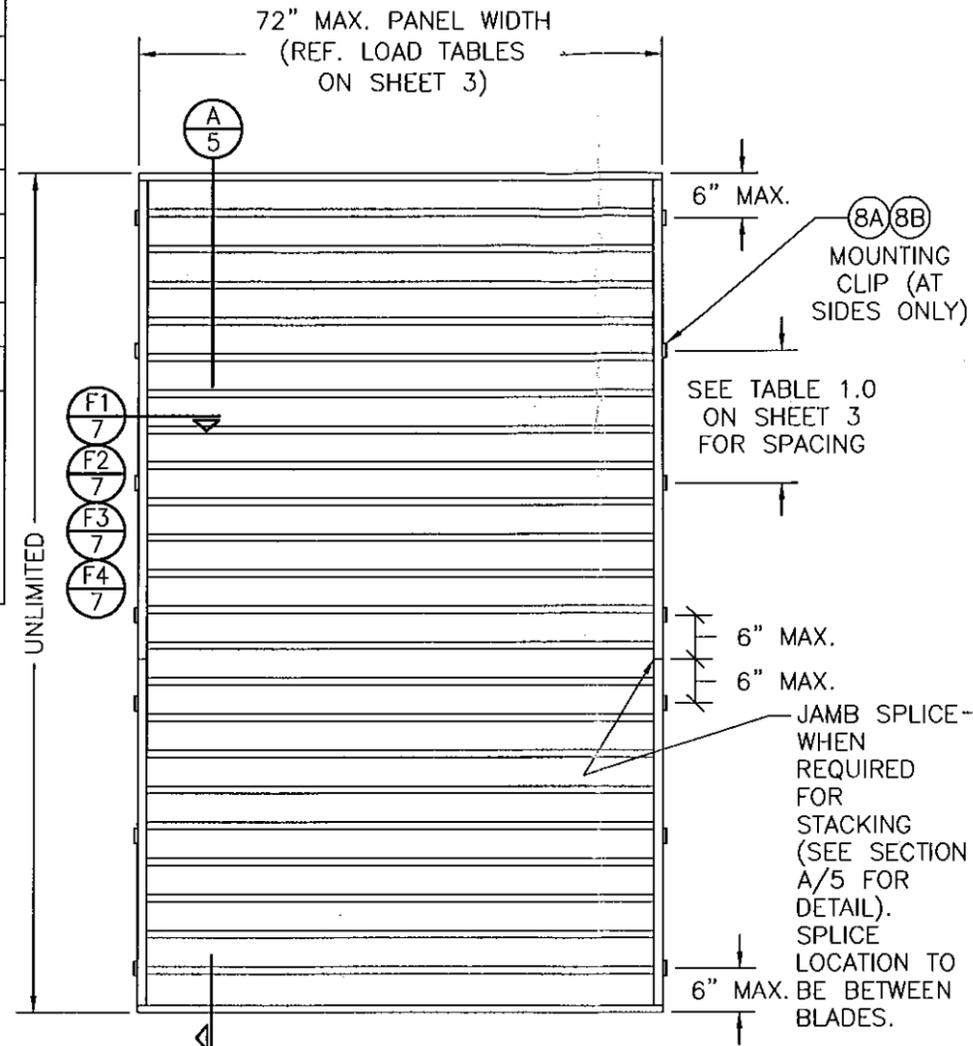
BLADE TO JAMB: BLADE END BUTTS TO JAMB, IS WELDED WITH ONE 1/8" X 3" WELD & ONE 1/8" X 1.5" WELD AND SCREWED TO JAMB WITH WITH 2 NO. 8 X 1" GALVANIZED SMS SCREWS THROUGH JAMB AND INTO BLADE SCREW SPLINES.

HEAD TO JAMB: SIDE JAMB BUTTS TO HEAD AND IS JOINED TO HEAD WITH ONE 1/8" X 4" WELD AND 2 NO. 8 X 1" GALVANIZED SMS SCREWS THROUGH HEAD AND INTO JAMB SCREW SPLINES.

SILL TO JAMB: SIDE JAMB BUTTS TO SILL AND IS JOINED TO SILL WITH ONE 1/8" X 4" WELD AND 2 NO. 8 X 1" GALVANIZED SMS SCREWS THROUGH SILL AND INTO JAMB SCREW SPLINES.

GENERAL NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PERMIT HOLDER TO VERIFY THE STRUCTURAL INTEGRITY OF THE EXISTING STRUCTURE TO SUPPORT THE LOADS SUPERIMPOSED BY THE LOUVERS.
- THESE LOUVER SYSTEMS HAVE BEEN DESIGNED & TESTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE (FBC) AND TAS-201, 202 & 203 FOR HIGH VELOCITY HURRICANE ZONE (HVHZ) AREAS.
- EACH LOUVER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS: NCA MANUFACTURING, INC. MARION, NC MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL CONCRETE SUBSTRATE SHALL BE MIN. 3000 PSI.
- ALL WOOD SUBSTRATE SHALL BE MIN. G = 0.55 DENSITY.
- ALL METAL STUD SUBSTRATE SHALL BE MIN. 16 GA. Fy = 33 ksi.
- ALL STRUCTURAL STEEL SUBSTRATE SHALL BE MIN. 12 GA. Fy = 36 ksi.
- PANEL WIDTHS & HEIGHTS ARE LIMITED AS SHOWN IN ELEVATIONS.
- MULLED PANELS MAY BE HORIZONTALLY INSTALLED TO AN UNLIMITED NUMBER. VERTICAL STACKING OF MULLED PANELS (UNDER SEPERATE APPROVAL) MAY OCCUR PROVIDING A STRUCTURAL SUPPORT IS DESIGNED & INSTALLED BY OTHERS TO SUPPORT ALL LOADS TRANSFERED FROM THE LOUVER ASSEMBLY (SINGLE NON-REINFORCED PANELS MAY RUN TO UNLIMITED HEIGHT PER ELEVATION IF NO MULLION EXISTS).
- MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- THIS SYSTEM HAS NOT BEEN TESTED FOR WATER INFILTRATION RESISTANCE AND IS NOT A WATER RESISTANT SYSTEM.
- THE LOUVER IS TO BE INSTALLED IN A LOCATION WHERE THE ROOM BEHIND THE LOUVER IS DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, AND THE ROOM WILL HOUSE WATER RESISTANT/WATER PROOF EQUIPMENT, COMPONENTS OR SUPPLIES.
- NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR Cd = 1.6 WAS USED FOR WOOD SCREW ANALYSIS ONLY.
- 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 Kd = 0.85 MAY BE APPLIED PER THE ASCE-7 STANDARD.
- ALL ANCHORS SECURING LOUVER FRAME OR MULLIONS TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.

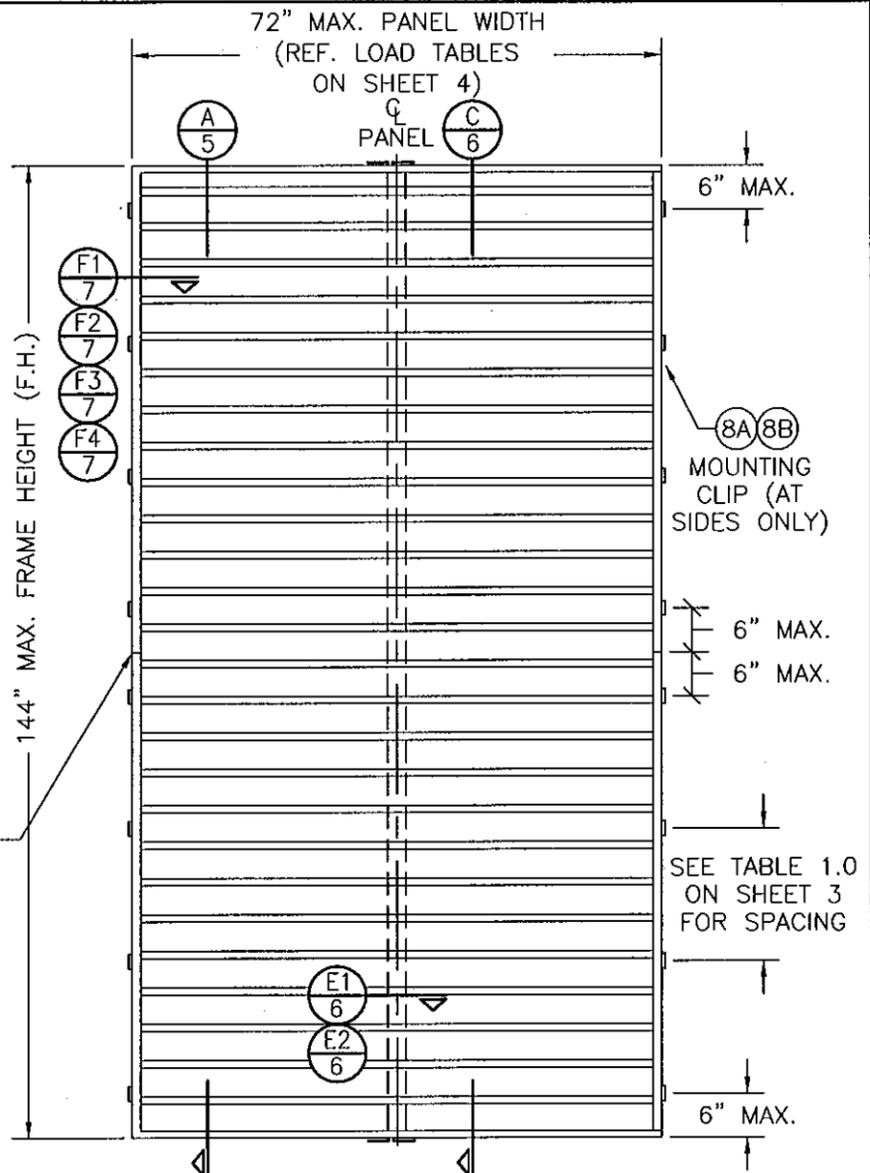


**EXTERIOR ELEVATION
SINGLE NON-REINFORCED LOUVER PANEL**

NOTE: LOUVER PANELS MAY BE STACKED/SPLICED VERTICALLY OR THE LOUVER PANEL MAY RUN VERTICALLY TO INFINITE HEIGHT PROVIDING OPENING IS PROPERLY DESIGNED BY OTHERS TO SUPPORT THE LOUVER PANELS.

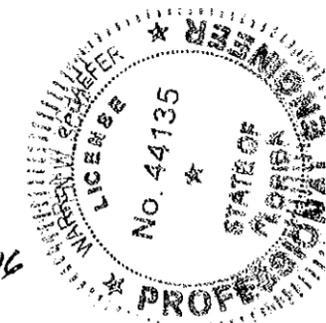
ALLOWABLE PRESSURES

PRESSURES VARY WITH PANEL SIZE & MULLION CONDITIONS & SHALL BE CONTROLLED BY THE LESSER OF THE ALLOWABLE PRESSURE FOR EACH OF THOSE APPLICABLE CONDITIONS. SEE LOAD TABLES ON SHEET 3 & 4 FOR ALLOWABLE PRESSURES.

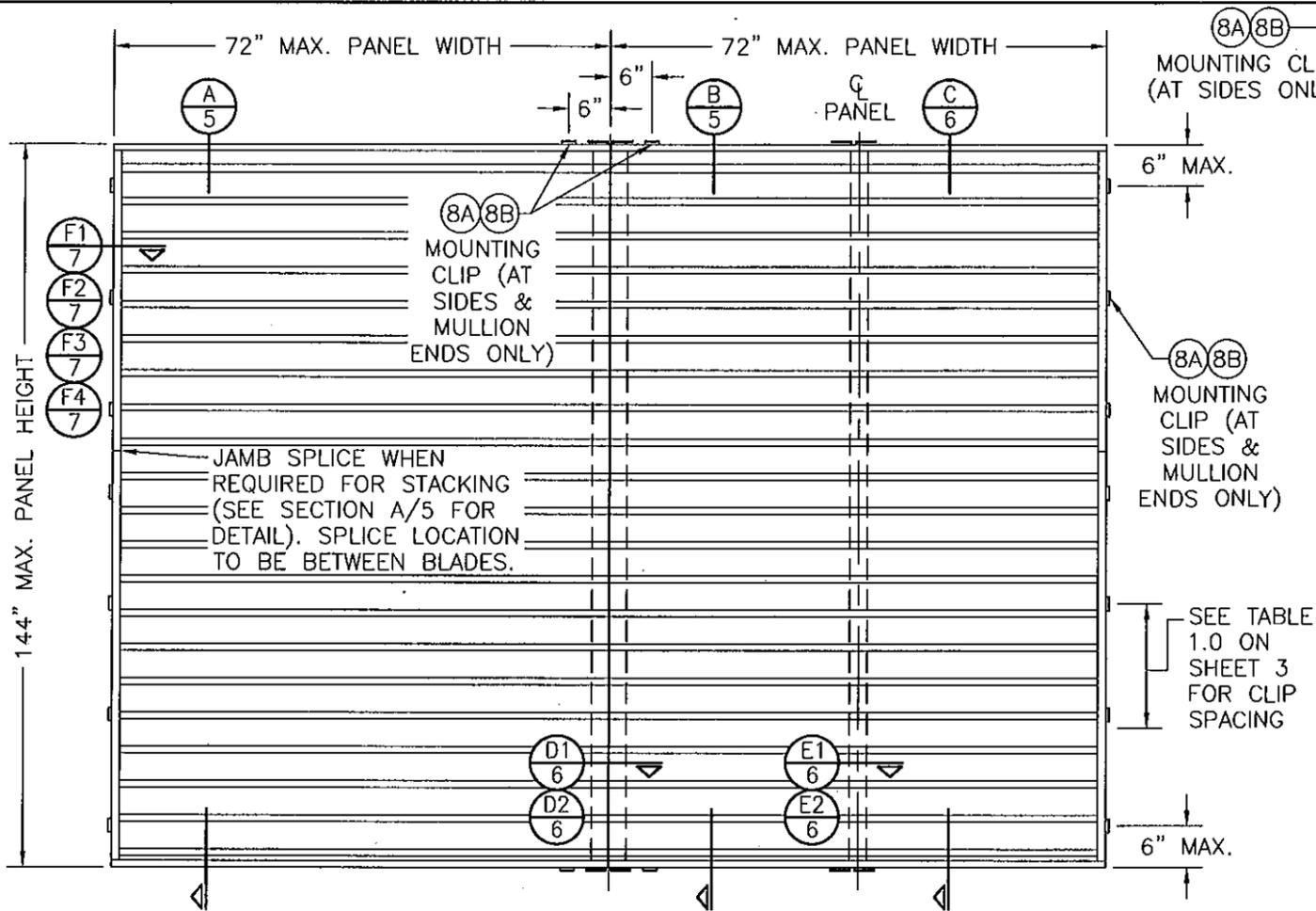


**EXTERIOR ELEVATION
SINGLE LOUVER PANEL WITH
BLADE SUPPORT CHANNEL**

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 10-1101.06
Expiration Date 02/24/2016
By [Signature]
Miami Dade Product Control

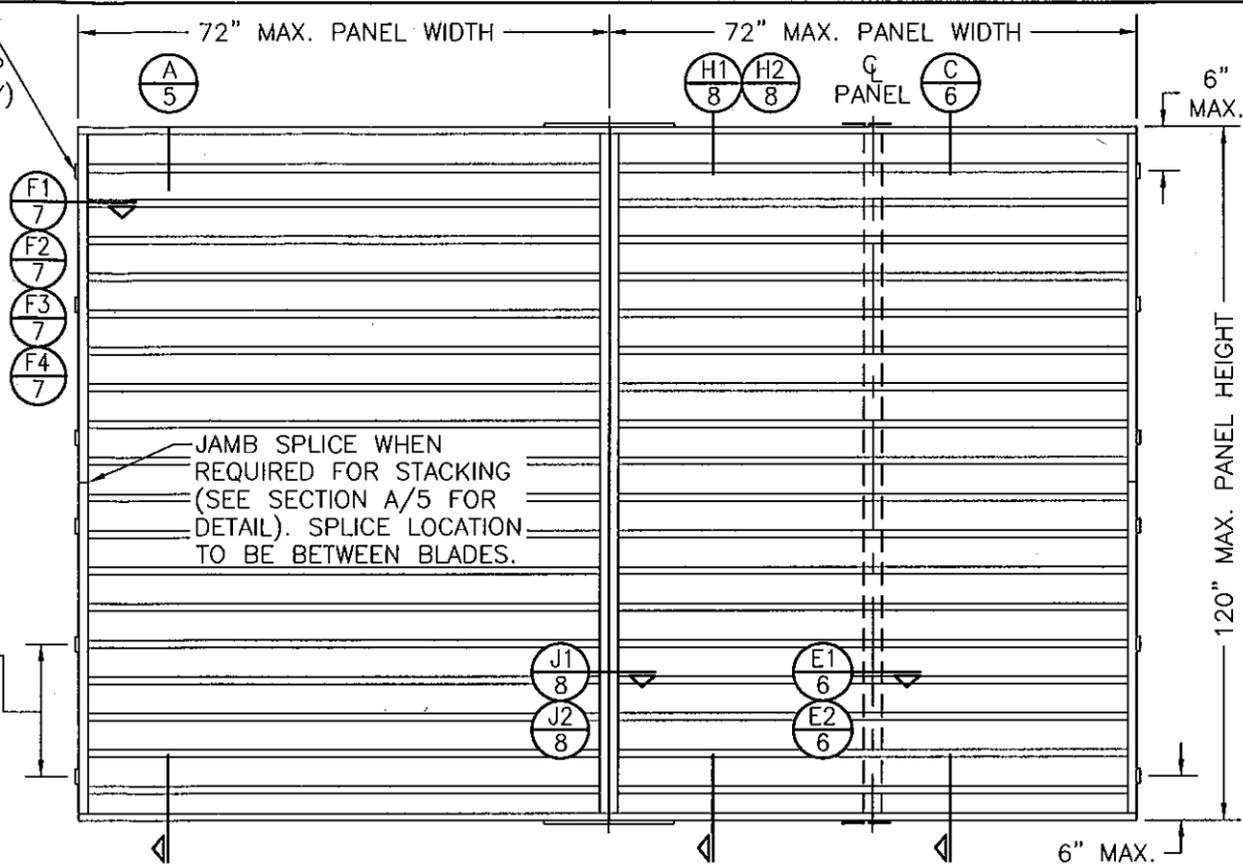


DRAWN BY: K.P.S.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 08/04/04	
NO.	REVISION DESCRIPTION	DATE	BY
A1	UPDATE TO CURRENT STANDARDS	10/26/10	W.W.S.
DRAWING TITLE XAD-6-MD LOUVER SYSTEM			
MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
CERTIFICATION I HEREBY CERTIFY THAT THE DESIGN AND CALCULATIONS ON THIS DRAWING WERE PREPARED BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA.		JAN 26 2011 W. W. SCHAEFER, P.E. P.E. NO. 44135	
DRAWING NO.	REV.	SHEET NO.	
1312	A	1 OF 9	



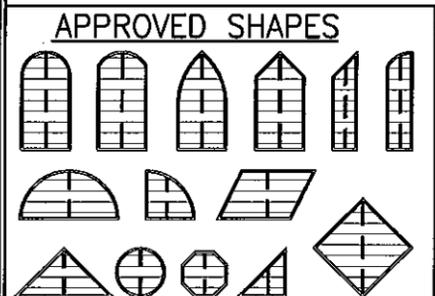
**EXTERIOR ELEVATION
MULTI-PANEL ARCHITECTURAL LOUVER WITH &
WITHOUT BLADE SINGLE SUPPORT CHANNEL**

RECTANGULAR PANELS SHOWN; SHAPED PANELS MAY ALSO BE MULLED PROVIDING THE MULLION END CONNECTIONS ARE AS DETAILED WITH THE ABOVE RECTANGULAR ELEVATION.

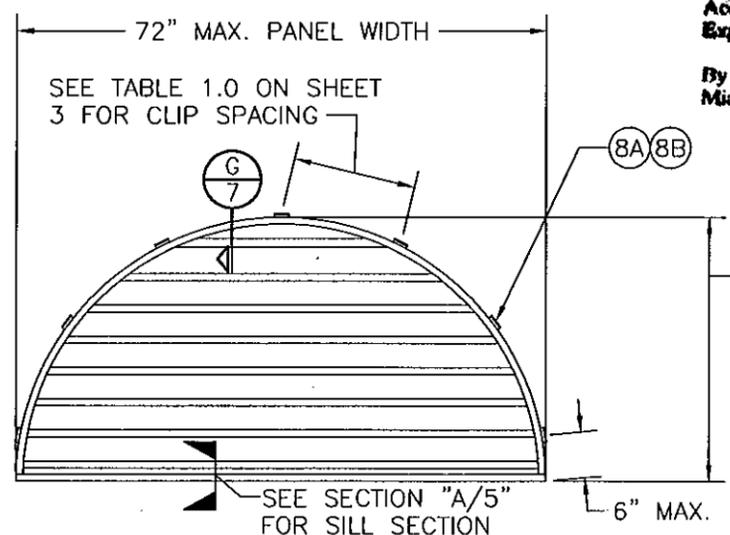


**EXTERIOR ELEVATION
MULTI-PANEL NON-ARCHITECTURAL LOUVER WITH
& WITHOUT BLADE SINGLE SUPPORT CHANNEL**

RECTANGULAR PANELS SHOWN; SHAPED PANELS MAY ALSO BE MULLED PROVIDING THE MULLION END CONNECTIONS ARE AS DETAILED WITH THE ABOVE RECTANGULAR ELEVATION.



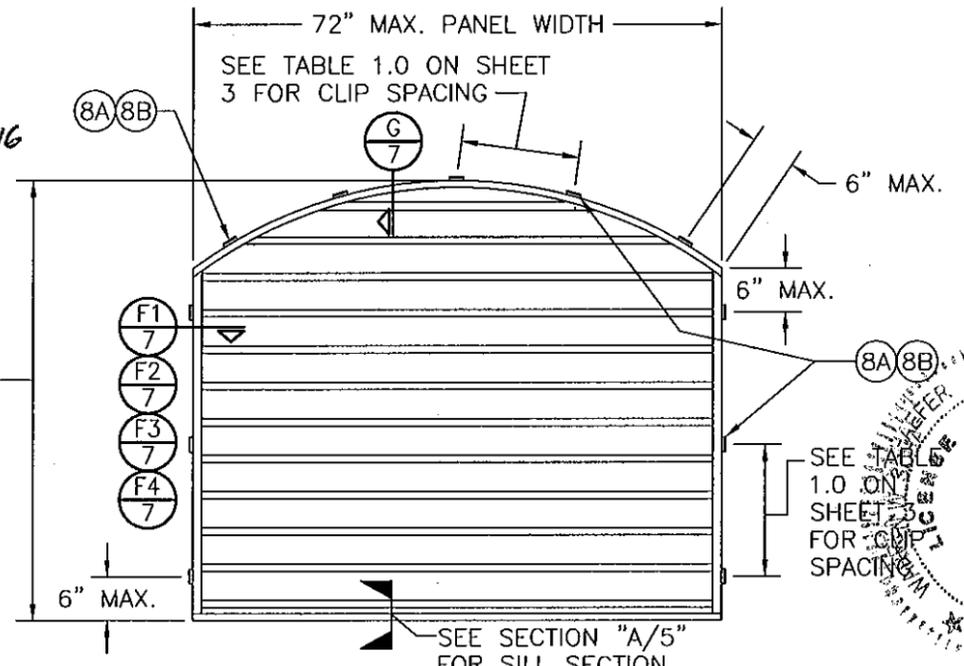
- NOTES:**
1. OTHER SHAPES MAY APPLY PROVIDING THEY ARE SIMILAR TO THOSE SHOWN & HAVE CORNER CONSTRUCTION AS DESCRIBED ON ALL SHEETS.
 2. ALL SHAPED LOUVER PANELS ARE RESTRICTED TO THE SAME PANEL WIDTHS, HEIGHTS & PRESSURE AS THE RECTANGULAR NON-REINFORCED SINGLE LOUVER PANELS & MAY BE STACKED VERTICALLY & MULLED HORIZONTALLY THE SAME AS THE RECTANGULAR PANELS.
 3. CLIP SPACING IS RESTRICTED TO 6" FROM ENDS & 18" MAX. O.C. FOR ALL SHAPED LOUVER PANELS.
 4. SPLICES MAY NOT EXIST ON BENT OR SLOPED JAMBS. ONLY STRAIGHT VERTICAL JAMBS MAY BE SPLICED.



**EXTERIOR ELEVATION
SINGLE HALF ROUND LOUVER PANEL
(OTHER SHAPES APPLICABLE PER
APPROVED SHAPE TABLE)**

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 10-1101.06
Expiration Date 02/24/2016
By [Signature]
Miami Trade Product Control

UNLIMITED WHEN
NO BLADE
SUPPORT
CHANNEL IS
USED. 144" IF
BLADE SUPPORT
CHANNEL IS
USED.



**EXTERIOR ELEVATION
SINGLE ARCH TOP LOUVER PANEL
(OTHER SHAPES APPLICABLE PER APPROVED SHAPE TABLE)**

DRAWN BY: K.P.S.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 08/04/04	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE XAD-6-MD LOUVER SYSTEM			
MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424			
REGISTRATION PROFESSIONAL ENGINEER No. 44135 JAN 26 2011 WARKEN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1312		REV. A	
SHEET NO. 2 OF 9			

LOAD TABLE INSTRUCTIONS

SINGLE NON-REINFORCED PANELS

1. DETERMINE REQUIRED DESIGN PRESSURE OF THE LOUVER & ITS REQUIRED SIZE.
2. GO TO "LOUVER PANEL SIZE & PRESSURE TABLE 1.0" ON THIS SHEET AND CHECK THE ALLOWABLE PRESSURE FOR THE PANEL IN SINGLE SPAN. IF THE ALLOWABLE PRESSURE IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE, YOU ARE DONE. IF THE ALLOWABLE PRESSURE IS LESS THAN THE REQUIRED PRESSURE, CONTINUE TO NO. 3 BELOW FOR CHOOSING A SINGLE SUPPORT CHANNEL (REINFORCEMENT CHANNEL).
3. GO TO TABLE 4.0 ON SHEET 4 AND CHOOSE A SINGLE CHANNEL WHOSE ALLOWABLE PRESSURE AT THE APPLICABLE SPAN & PANEL WIDTH IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE.

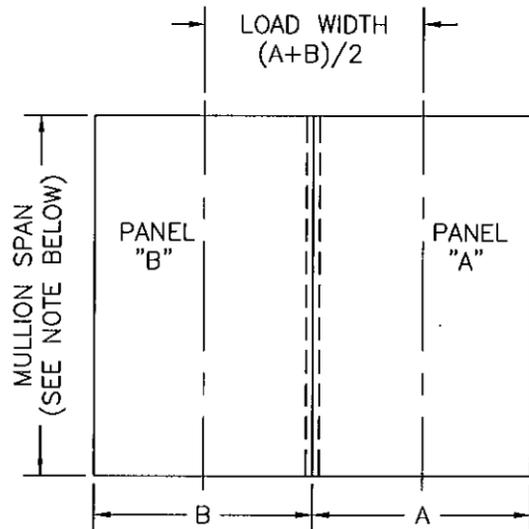
MULTIPLE PANELS (REINFORCED AND NON-REINFORCED)

1. GO TO "LOUVER PANEL SIZE & PRESSURE TABLE 1.0" ON THIS SHEET AND CHECK THE ALLOWABLE PRESSURE FOR NON-REINFORCED PANELS IN SINGLE SPAN. IF THE ALLOWABLE PRESSURE FOR THE PANEL IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE, NO REINFORCEMENT CHANNEL IS REQUIRED AND YOU MAY PROCEED TO NO. 3 BELOW FOR SIZING THE MULLIONS. IF A REINFORCEMENT CHANNEL IS REQUIRED, CONTINUE TO NO. 2 BELOW.
2. IF A SINGLE SPAN NON-REINFORCED PANEL WILL NOT MEET PRESSURE REQUIREMENTS, GO TO TABLE 4.0 ON SHEET 4 AND CHOOSE A REINFORCEMENT CHANNEL WHOSE ALLOWABLE PRESSURE AT THE APPLICABLE SPAN & PANEL WIDTH IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE AND THEN SKIP TO NO. 4 BELOW.
3. IF NO REINFORCEMENT CHANNEL IS REQUIRED, GO TO TABLE 2.0 AND CHOOSE A MULLION WHOSE ALLOWABLE PRESSURE IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE.
4. IF A REINFORCEMENT CHANNEL IS REQUIRED, GO TO TABLE 3.0 AND CHOOSE A MULLION WHOSE ALLOWABLE PRESSURE IS GREATER THAN OR EQUAL TO THE REQUIRED PRESSURE.

** IF THE MULLION WILL NOT SUPPORT THE REQUIRED DESIGN PRESSURE WHEN USING UN-REINFORCED PANELS, A REINFORCEMENT CHANNEL MUST BE USED & SIZED ACCORDING TO THESE INSTRUCTIONS.

NOTE: THE LESSER ALLOWABLE PRESSURE OF THE MULLION, SINGLE REINFORCEMENT CHANNEL OR SINGLE PANEL WILL CONTROL.

PANEL WIDTH	ALLOWABLE DESIGN PRESSURE (POS. & NEG. PSF)	
	FRAME CLIPS AT 14" O.C.	FRAME CLIPS AT 18" O.C.
36"	150.0	117.0
42"	128.5	100.3
48"	112.5	87.8
54"	100.0	78.0
60"	90.0	70.2
66"	81.9	63.8
72"	75.0	58.5



ELEVATION "A"

MULLION BETWEEN PANELS WITHOUT BLADE SINGLE SUPPORT CHANNELS (NON-REINFORCED PANELS)

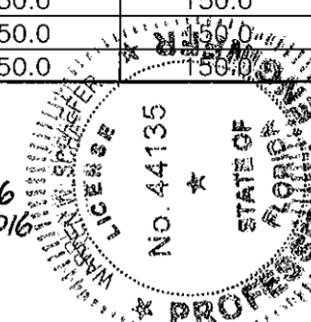
NOTE: PANEL WIDTHS MAY NOT EXCEED 72" & MULLION SPAN MAY NOT EXCEED 144"

MULLION PRESSURE TABLE 2.0 (APPLICABLE FOR MULLIONS BETWEEN NON-REINFORCED PANELS) (SEE ELEVATION "A" ON THIS SHEET)

MULLION SPAN (PANEL HEIGHT) (INCHES)	LOAD WIDTH (SEE ELEVATION) (INCHES)	ALLOWABLE PRESSURE (POSITIVE & NEGATIVE PSF)			
		JAMB TO JAMB	DOUBLE 4X2 CHANNEL	DOUBLE 5X2.25 CHANNEL	DOUBLE 6X2.5 CHANNEL
144	72	N/A	22.6	45.5	73.9
	60	N/A	27.1	54.6	88.7
	48	N/A	33.9	68.2	110.9
	36	N/A	45.1	91.0	147.9
	30	N/A	54.2	109.2	150.0
	24	N/A	67.7	136.5	150.0
132	72	N/A	29.3	59.1	80.7
	60	N/A	35.2	70.9	96.8
	48	N/A	44.0	88.6	121.0
	36	N/A	58.6	118.1	150.0
	30	N/A	70.3	141.7	150.0
	24	N/A	87.9	150.0	150.0
120	72	58.0	39.0	78.6	88.7
	60	69.6	46.8	94.3	106.5
	48	87.0	58.5	117.9	133.1
	36	116.0	78.0	150.0	150.0
	30	139.2	93.6	150.0	150.0
	24	150.0	117.0	150.0	150.0
108	72	71.6	53.5	98.6	98.6
	60	85.9	64.2	118.3	118.3
	48	107.4	80.3	147.9	147.9
	36	143.2	107.0	150.0	150.0
	30	150.0	128.4	150.0	150.0
	24	150.0	150.0	150.0	150.0
96	72	83.8	76.2	110.9	110.9
	60	100.5	91.4	133.1	133.1
	48	125.6	114.3	150.0	150.0
	36	150.0	150.0	150.0	150.0
84	72	95.7	113.7	126.8	126.8
	60	114.9	136.5	150.0	150.0
	48	143.6	150.0	150.0	150.0
	36	150.0	150.0	150.0	150.0
72	72	117.7	147.9	147.9	147.9
	60	134.0	150.0	150.0	150.0
	48	150.0	150.0	150.0	150.0
60	72	134.0	150.0	150.0	150.0
	60	150.0	150.0	150.0	150.0
54	72	148.9	150.0	150.0	150.0

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No 10-1101.06
Expiration Date 02/28/2016

By *[Signature]*
Miami Trade Product Control



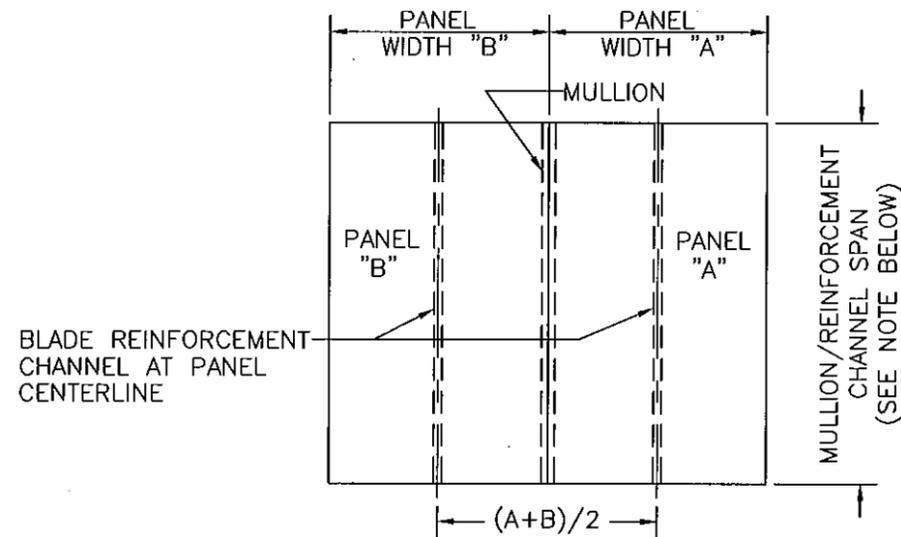
DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 08/04/04
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NO.	REVISION DESCRIPTION
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651	
CONSULTANTS W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO. 1312	
REV. A	
SHEET NO. 3 OF 9	

MULLION PRESSURE TABLE 3.0
(APPLICABLE FOR MULLIONS WITH CHANNEL REINFORCED PANELS)
(SEE ELEVATION "B" ON THIS SHEET)

MULLION SPAN (PANEL HEIGHT) (INCHES)	(A+B)/2 (SEE ELEVATION) (INCHES)	ALLOWABLE PRESSURE (POSITIVE & NEGATIVE PSF)			
		JAMB TO JAMB	DOUBLE 4X2 CHANNEL	DOUBLE 5X2.25 CHANNEL	DOUBLE 6X2.5 CHANNEL
144	72	N/A	60.2	121.3	150.0
	60	N/A	72.2	145.6	150.0
	48	N/A	90.3	150.0	150.0
	36	N/A	120.4	150.0	150.0
	30	N/A	144.5	150.0	150.0
	24	N/A	150.0	150.0	150.0
132	72	N/A	78.1	150.0	150.0
	60	N/A	93.8	150.0	150.0
	48	N/A	117.2	150.0	150.0
	36	N/A	150.0	150.0	150.0
120	72	150.0	104.0	150.0	150.0
	60	150.0	124.8	150.0	150.0
	48	150.0	150.0	150.0	150.0
108	72	150.0	142.7	150.0	150.0
	60	150.0	150.0	150.0	150.0
96	72	150.0	150.0	150.0	150.0

BLADE REINF. CHANNEL PRESSURE TABLE 4.0
(APPLICABLE FOR SINGLE REINFORCEMENT CHANNELS)
(SEE ELEVATION "C" ON THIS SHEET)

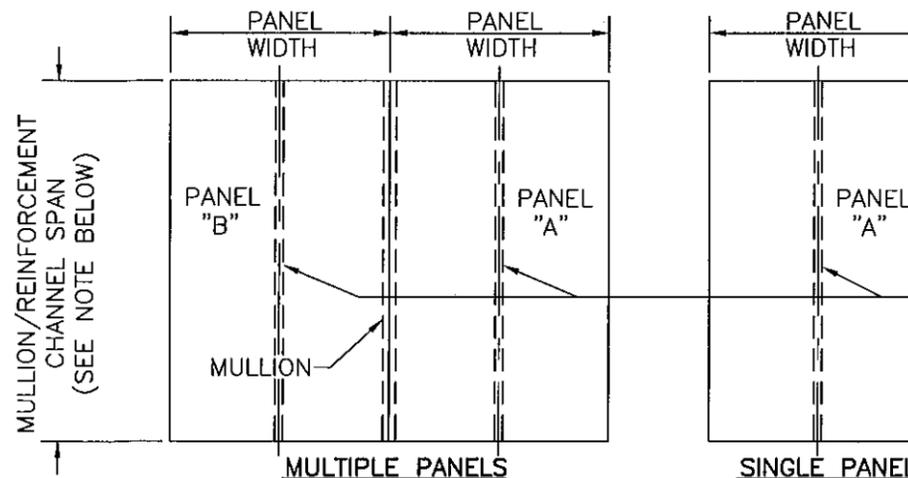
CHANNEL SPAN (PANEL HEIGHT) (INCHES)	PANEL WIDTH (SEE ELEVATION) (INCHES)	ALLOWABLE PRESSURE (POS. & NEG. PSF)		
		SINGLE 4X2 CHANNEL	SINGLE 5X2.25 CHANNEL	SINGLE 6X2.5 CHANNEL
144	72	36.1	72.8	83.3
	60	43.3	87.3	100.0
	54	48.2	97.0	111.1
	48	54.2	109.2	125.0
	42	61.9	124.8	142.9
	36	72.2	145.6	150.0
	72	46.9	87.9	90.9
132	60	56.3	105.5	109.1
	54	62.5	117.2	121.2
	48	70.3	131.9	136.4
	42	80.4	150.0	150.0
	36	93.8	150.0	150.0
	72	62.4	100.0	100.0
	60	74.9	120.0	120.0
120	54	83.2	133.3	133.3
	48	93.6	150.0	150.0
	42	107.0	150.0	150.0
	36	124.8	150.0	150.0
	72	81.3	111.1	111.1
	60	97.6	133.3	133.3
	54	108.4	148.1	148.1
108	48	122.0	150.0	150.0
	42	139.4	150.0	150.0
	36	150.0	150.0	150.0
	72	102.9	125.0	125.0
96	60	123.5	150.0	150.0
	54	137.2	150.0	150.0
	48	150.0	150.0	150.0
84	72	134.4	142.9	142.9
	60	150.0	150.0	150.0
72	72	150.0	150.0	150.0



ELEVATION "B"

MULLION AT CHANNEL
REINFORCED PANELS

NOTE: PANEL WIDTHS MAY NOT
EXCEED 72" & MULLION/REINF
CHANNEL MAY NOT EXCEED 144"



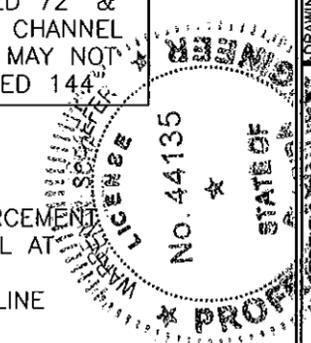
ELEVATION "C"

BLADE REINFORCEMENT CHANNEL
(DOUBLE SPAN PANELS)

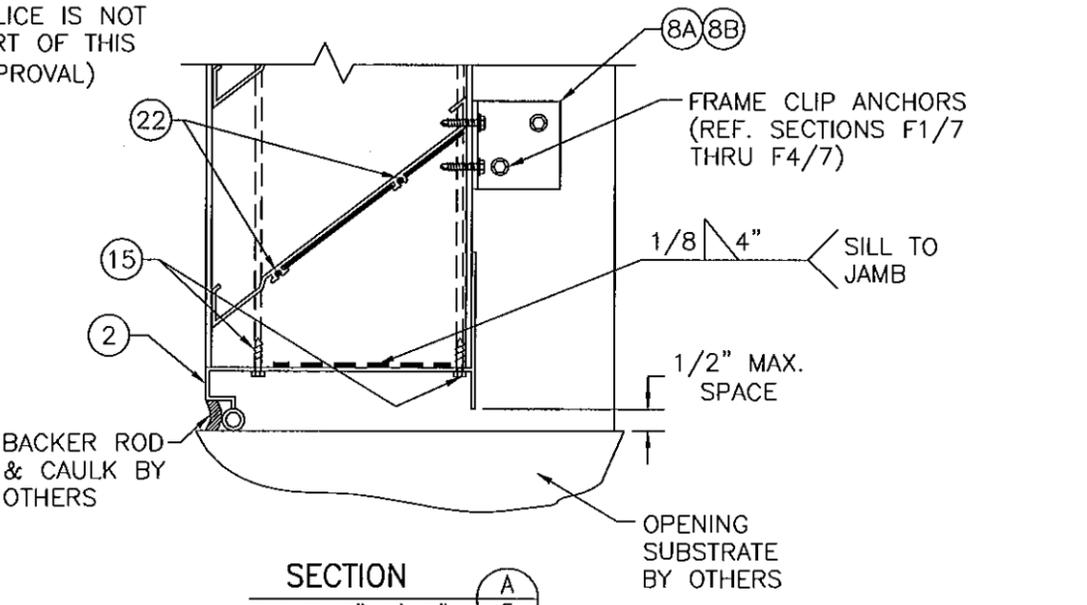
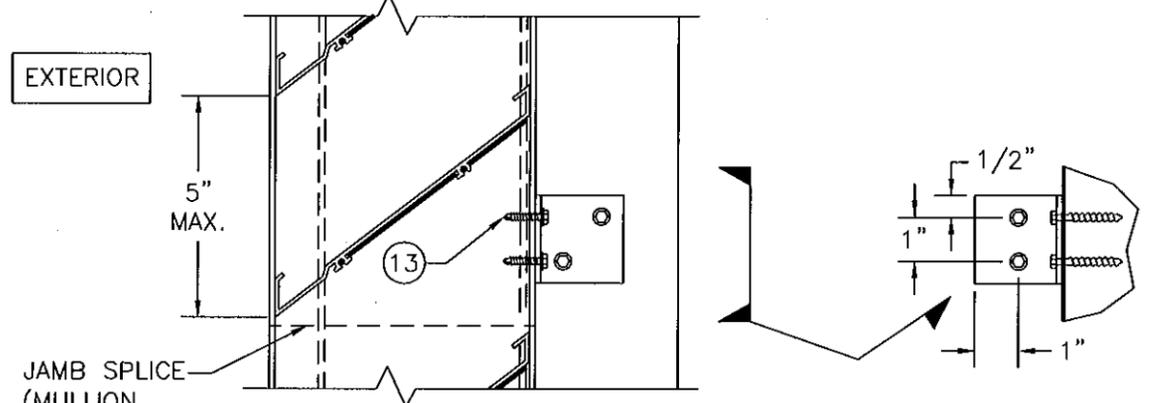
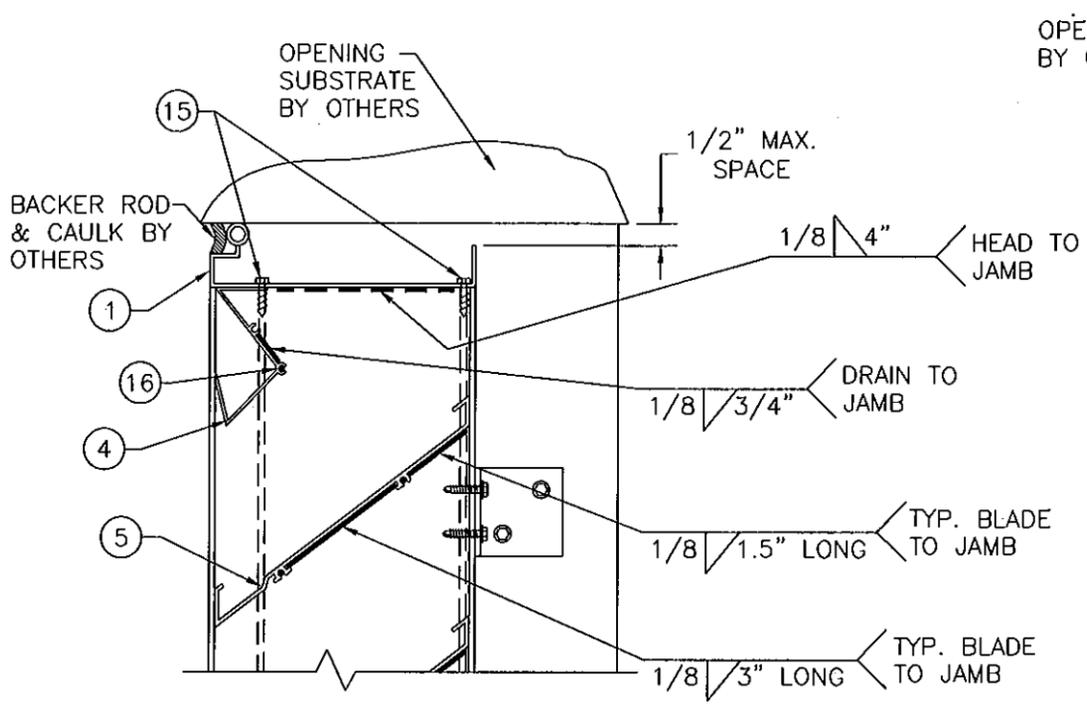
NOTE: PANEL
WIDTHS MAY NOT
EXCEED 72" &
REINF. CHANNEL
SPAN MAY NOT
EXCEED 144"

PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 10-1101.06
Expiration Date 02/24/2016
By *[Signature]*
Miami Dade Product Control

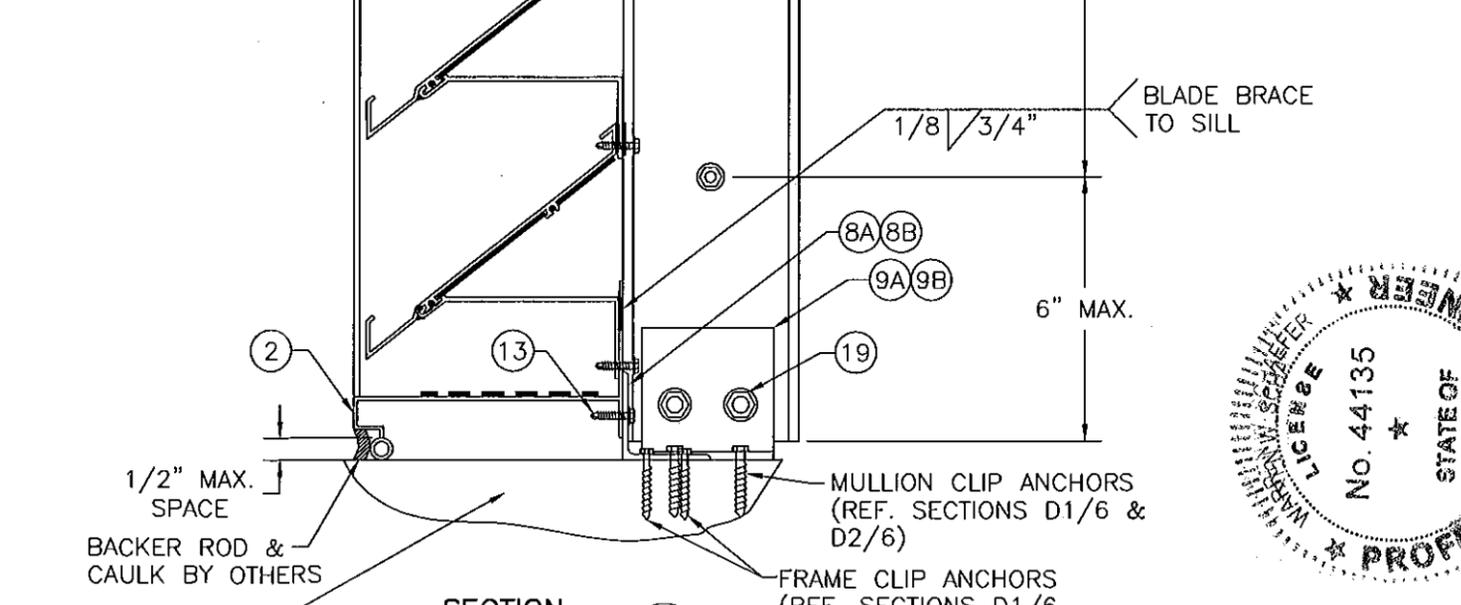
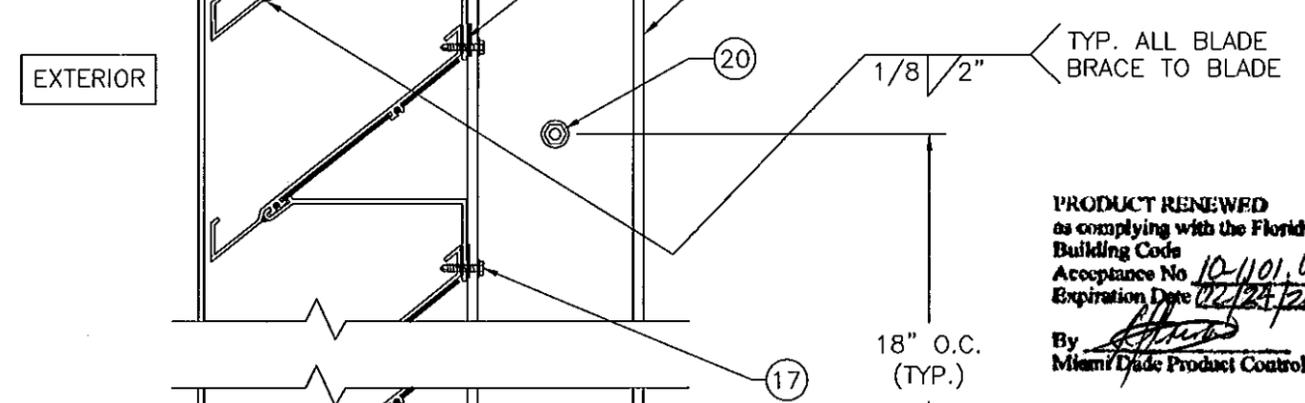
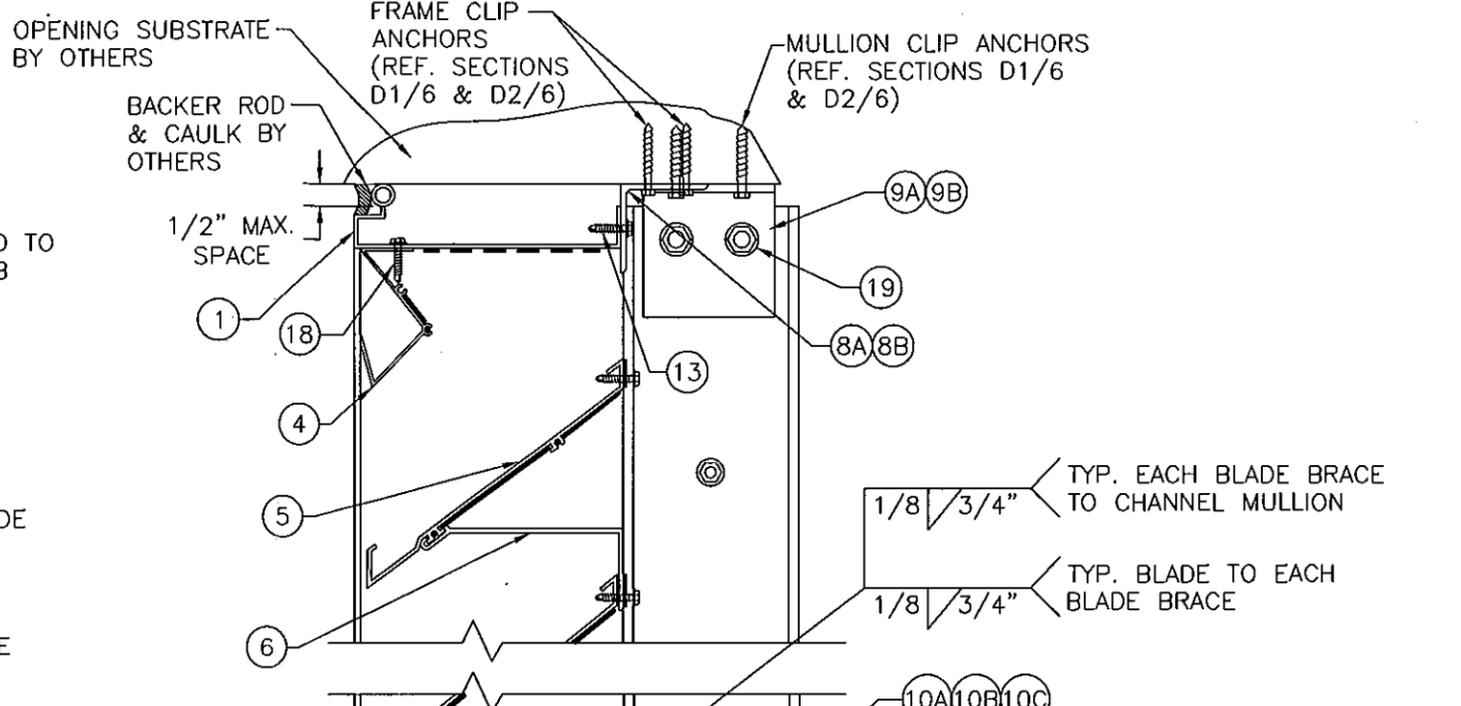
BLADE
REINFORCEMENT
CHANNEL AT
PANEL
CENTERLINE



DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 08/04/04
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER NCA MANUFACTURING, INC.
7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651
JAN 26 2011	WARREN W. SCHAEFER P.E. NO. 44135
DRAWING NO. 1312	REV. A
SHEET NO. 4	OF 9

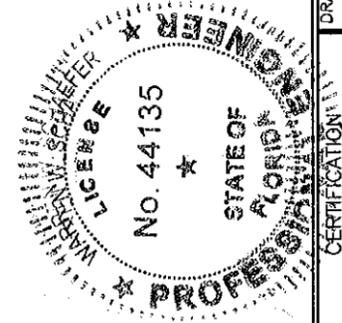


SECTION A
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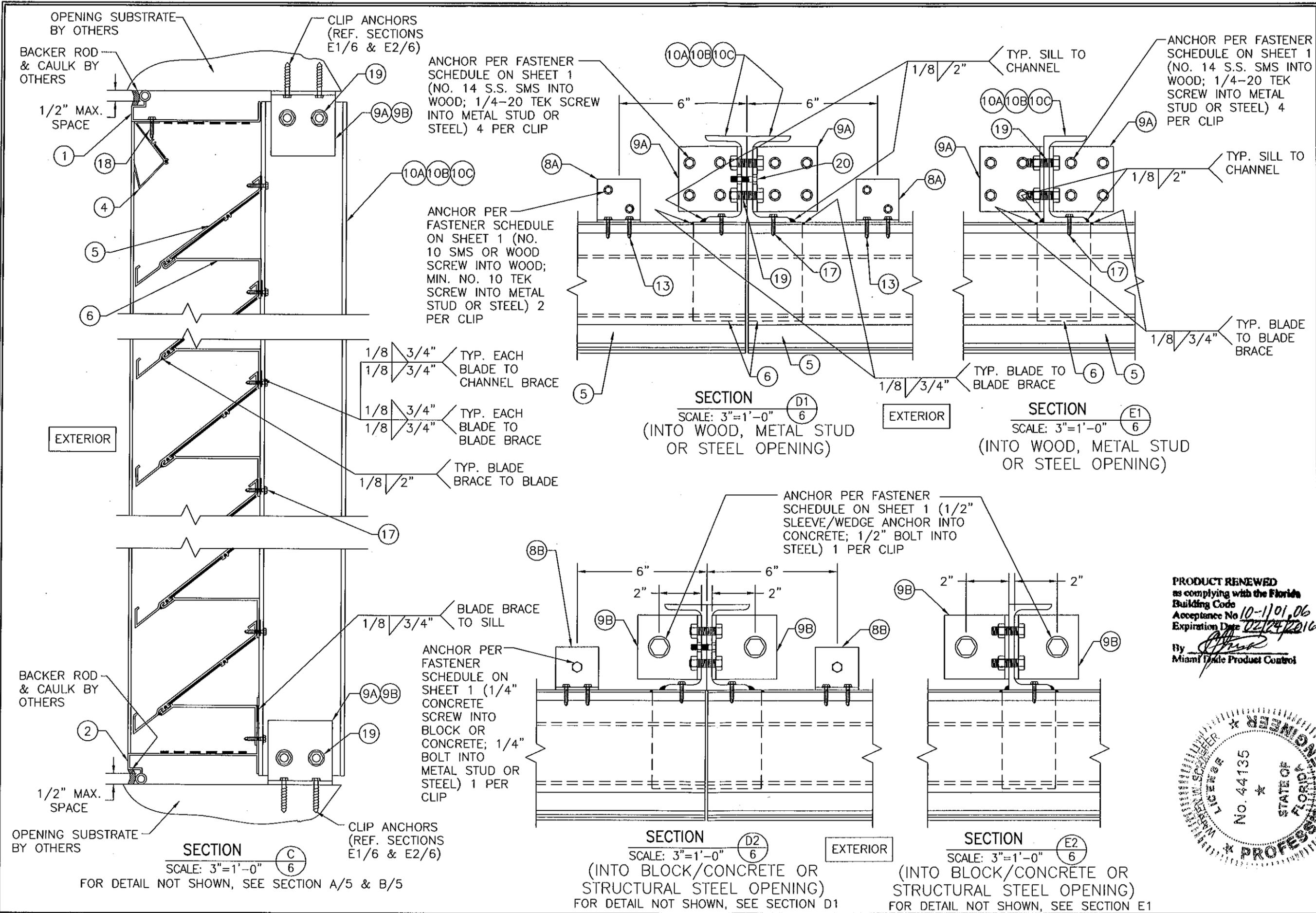


SECTION B
SCALE: 3"=1'-0"
FOR DETAIL NOT SHOWN, SEE SECTION A

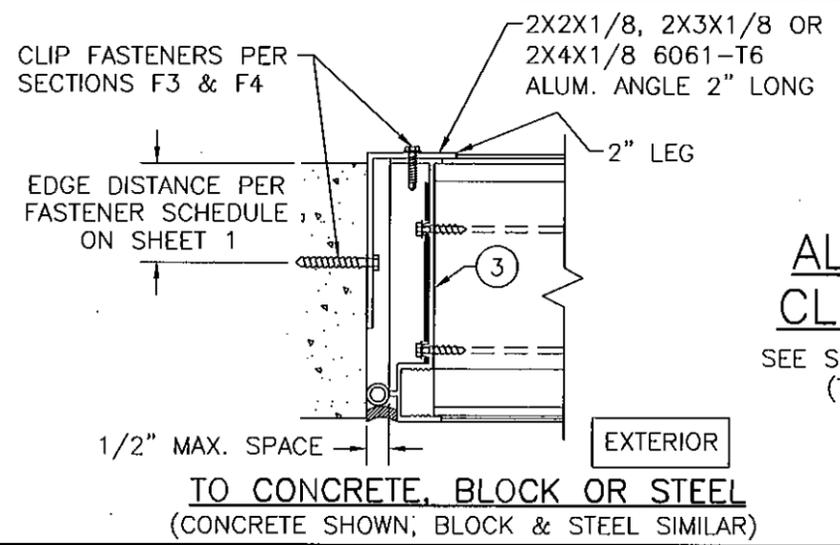
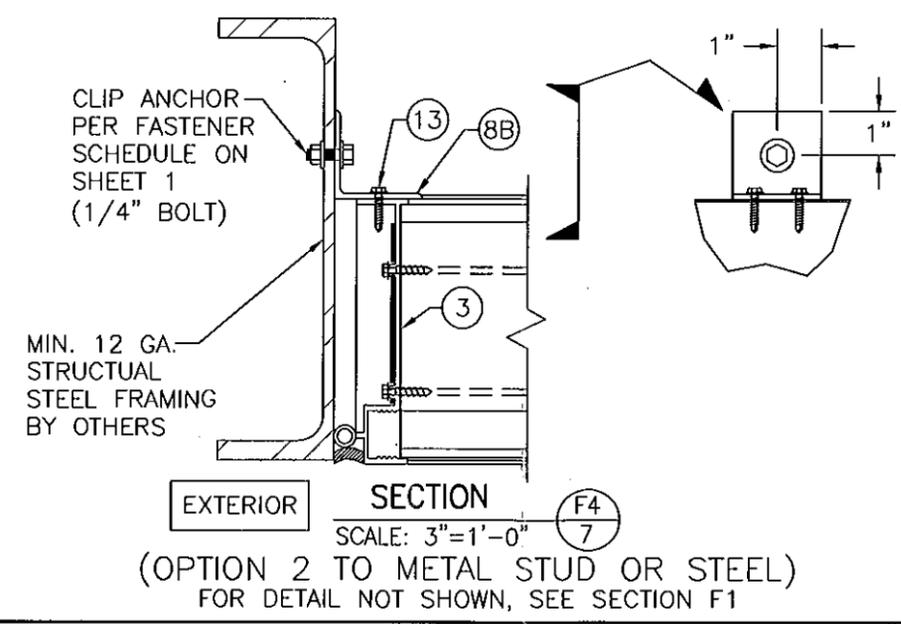
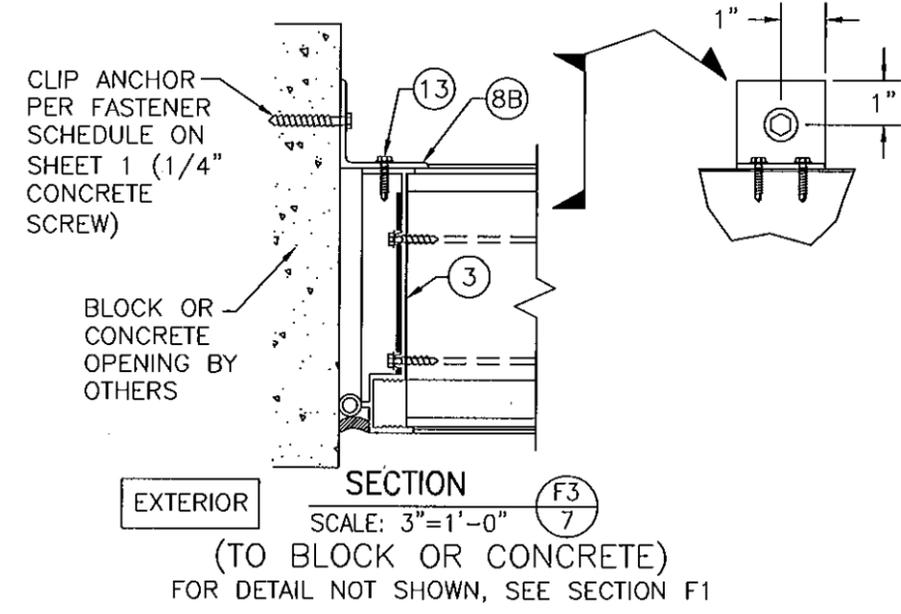
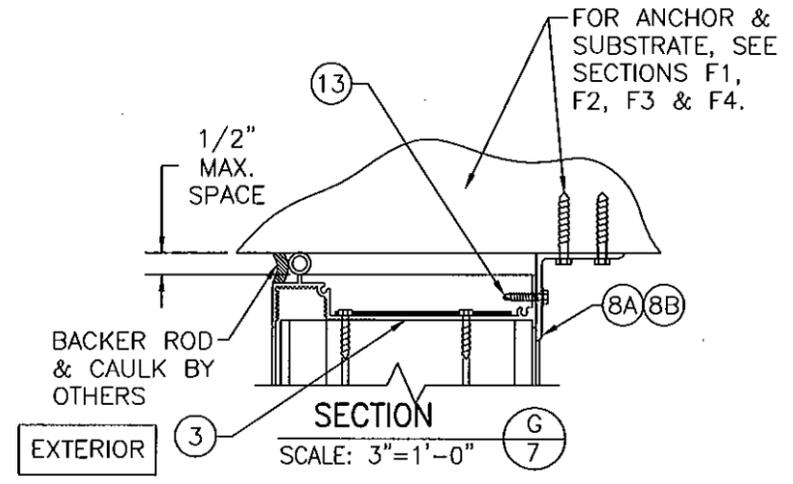
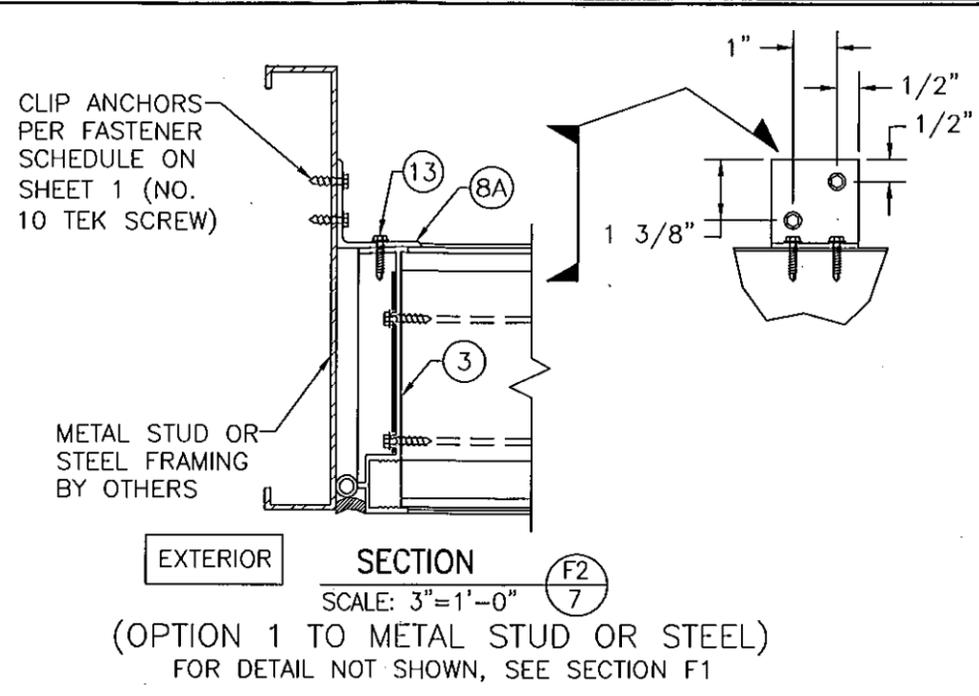
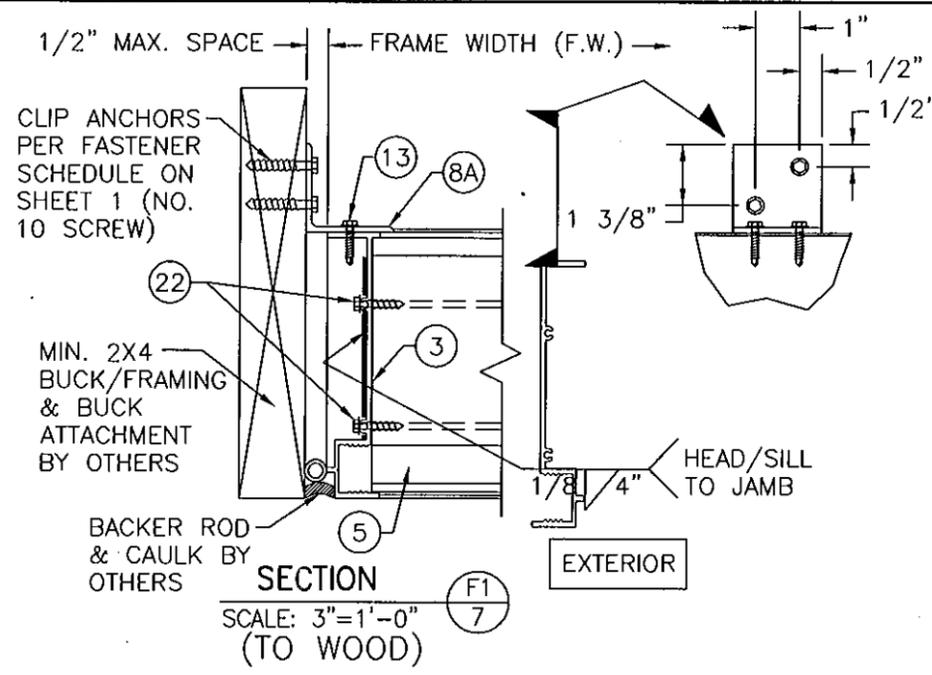
PRODUCT RENEWED
as complying with the Florida
Building Code
Acceptance No. 10-1101.06
Expiration Date 12/24/2016
By *[Signature]*
Miami Data Product Control



DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 08/04/04
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651
CERTIFICATION WARREN W. SCHAEFER LICENSE No. 44135 STATE OF FLORIDA PROFESSIONAL ENGINEER	JAN 26 2011 WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1312	REV. A
SHEET NO. 5 OF 9	

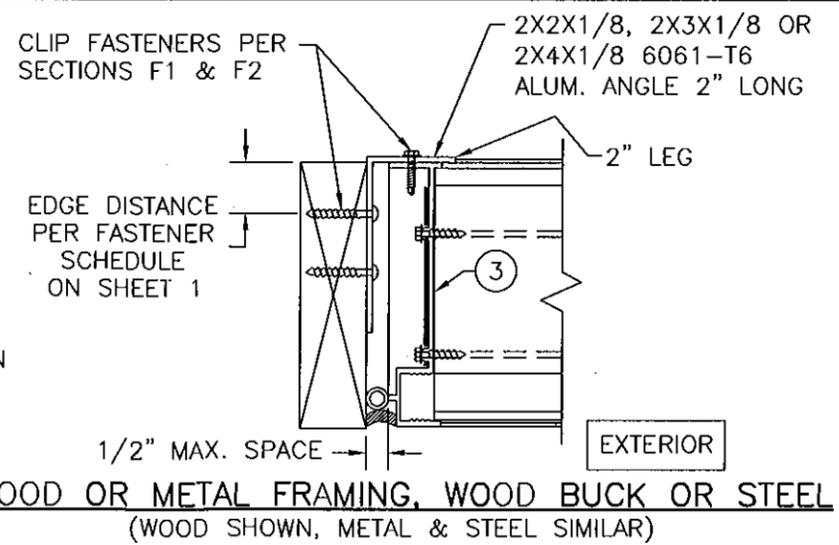


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DATE: 1=4	DATE: 08/04/04
NO.	REVISION DESCRIPTION
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651
PRODUCT RENEWED as complying with the Florida Building Code Acceptance No. 10-1101.06 Expiration Date 02/24/2016 By <i>[Signature]</i> Miami Trade Product Control	
PROFESSIONAL SEAL No. 44135 STATE OF FLORIDA PROFESSIONAL ENGINEER W. W. SCHAEFER, P.E. 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
DRAWING NO. 1312	REV. A
SHEET NO. 6 OF 9	

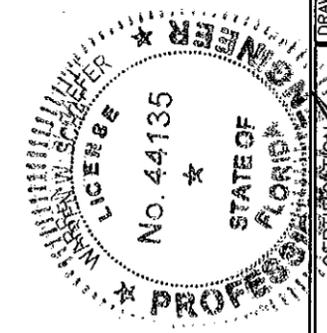


ALTERNATE PANEL CLIP CONNECTIONS

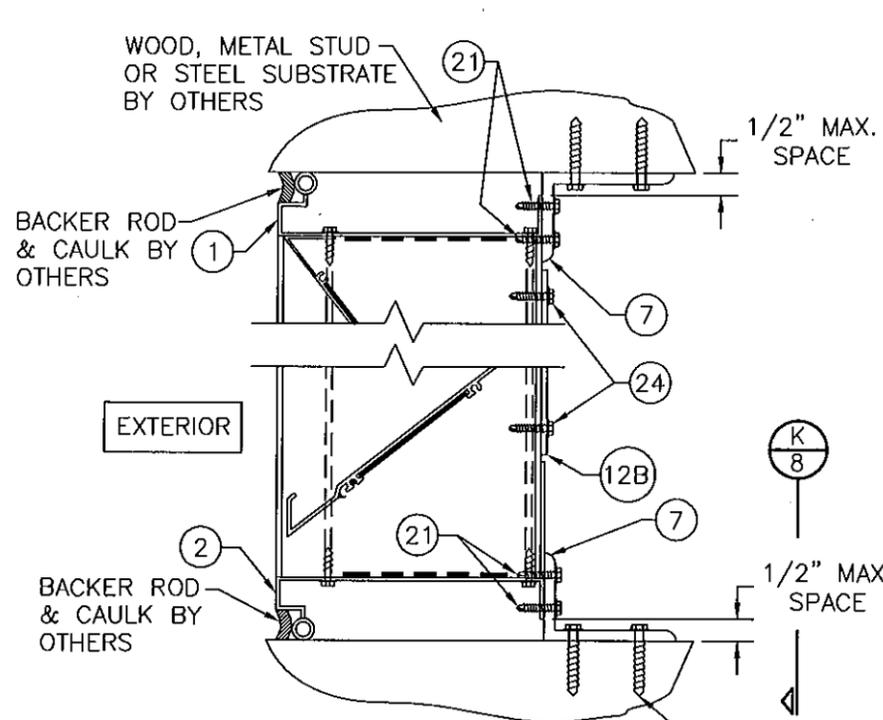
SEE SECTIONS FOR DETAIL NOT SHOWN (TYP. BOTH SIDES OF OPENING)



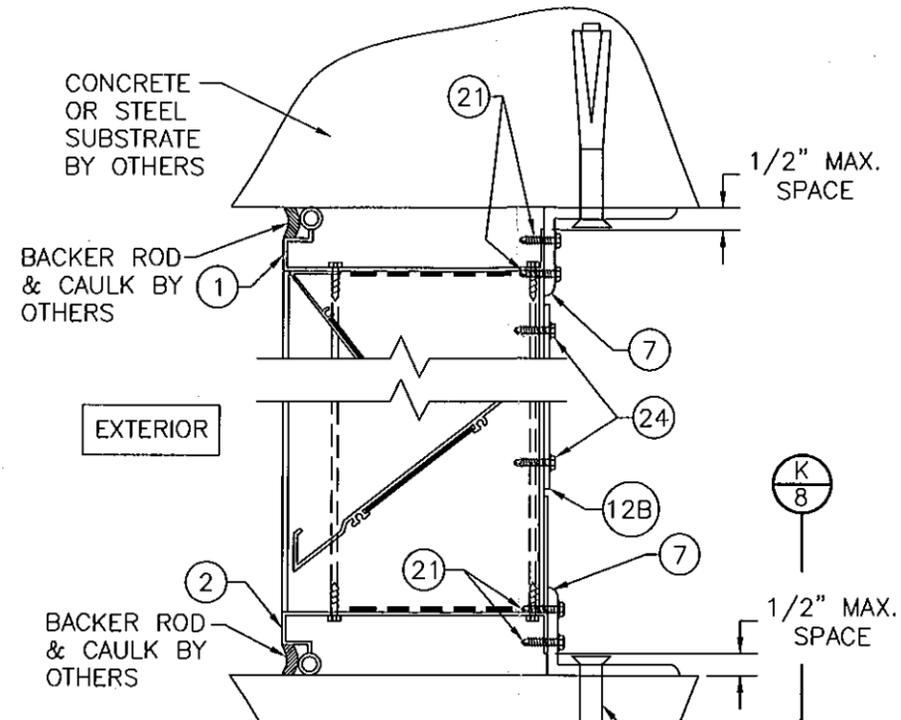
PRODUCT REVIEWED
 as complying with the Florida Building Code
 Acceptance No 10-110106
 Expiration Date 02/24/2016
 By *[Signature]*
 Miami Dade Product Control



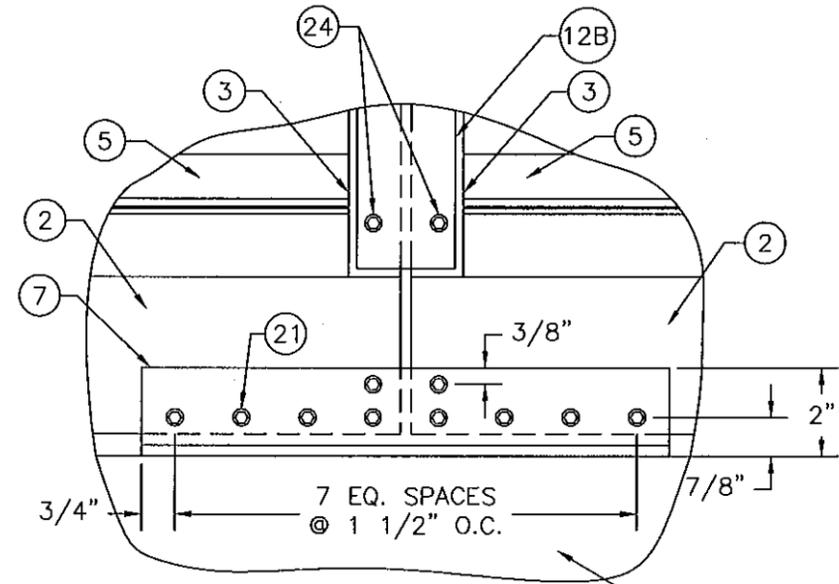
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PLOT: 1-4	DATE: 08/04/04
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651
JAN 26 2011	WARREN A. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1312	REV. A
SHEET NO. 7	OF 9



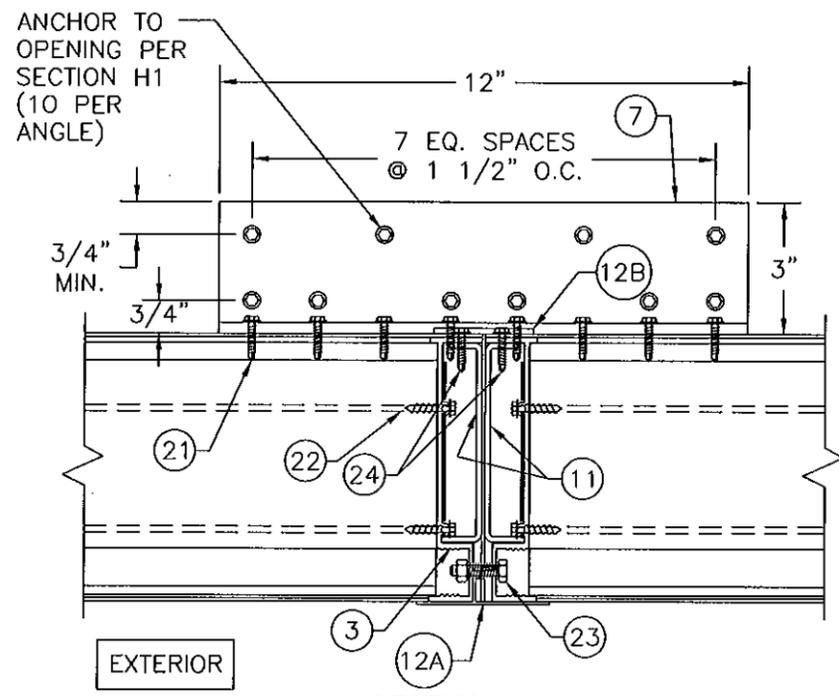
SECTION H1
SCALE: 3"=1'-0"
(INTO WOOD, METAL STUD OR STEEL OPENING)
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (NO. 10 SMS OR WOOD SCREW INTO WOOD; MIN. NO. 10 TEK SCREW INTO METAL STUD OR STEEL)



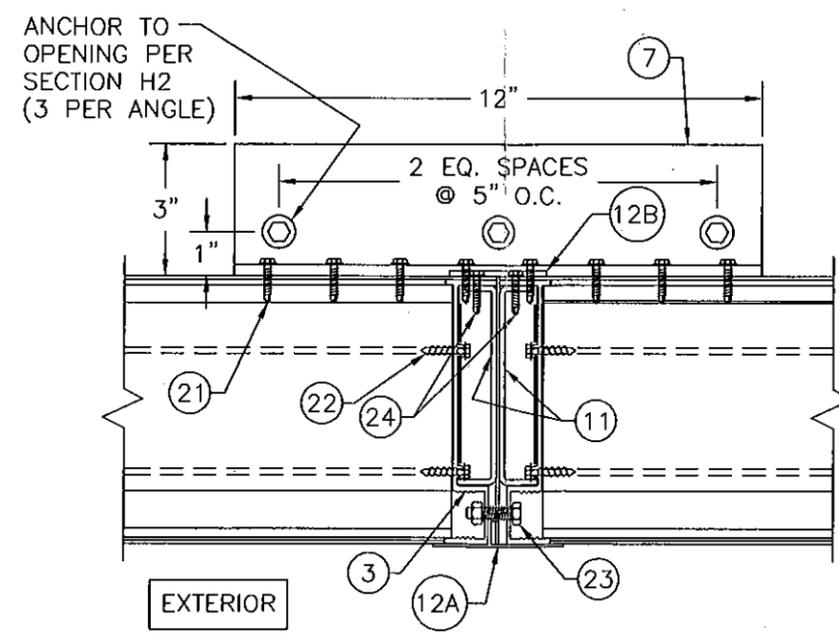
SECTION H2
SCALE: 3"=1'-0"
(INTO BLOCK/CONCRETE OR STRUCTURAL STEEL OPENING)
ANCHOR PER FASTENER SCHEDULE ON SHEET 1 (1/2" SLEEVE/WEDGE ANCHOR INTO CONCRETE; 1/2" BOLT TO STEEL)



SECTION K
SCALE: 3"=1'-0"
OPENING SUBSTRATE BY OTHERS

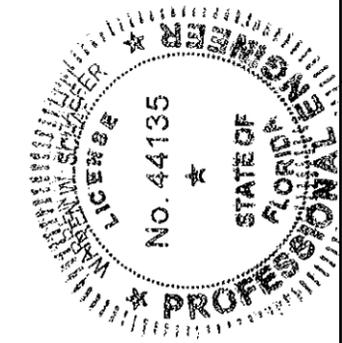


SECTION J1
SCALE: 3"=1'-0"
(JAMB TO JAMB MULLION DETAIL)
FOR DETAIL NOT SHOWN, SEE SECTION K

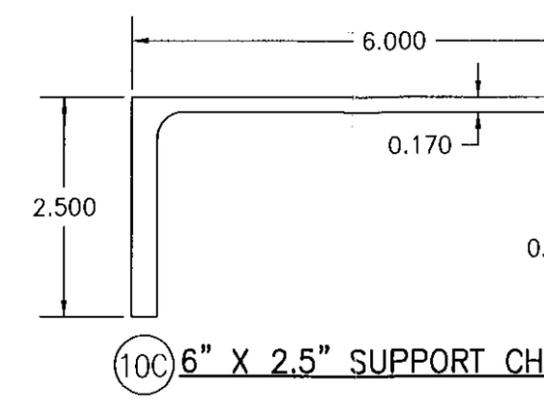
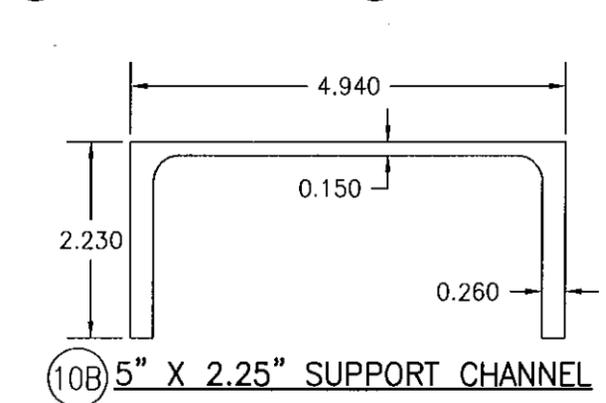
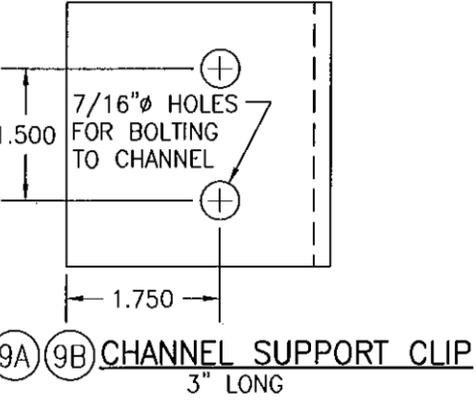
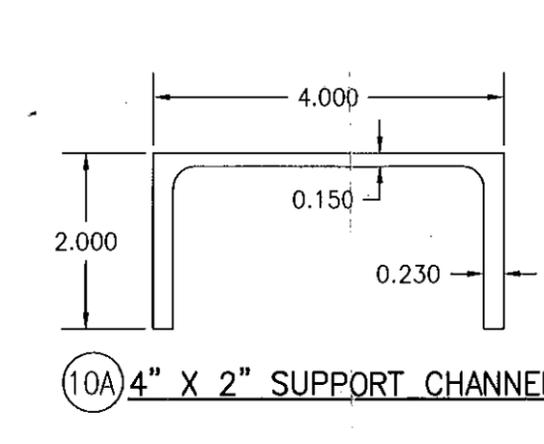
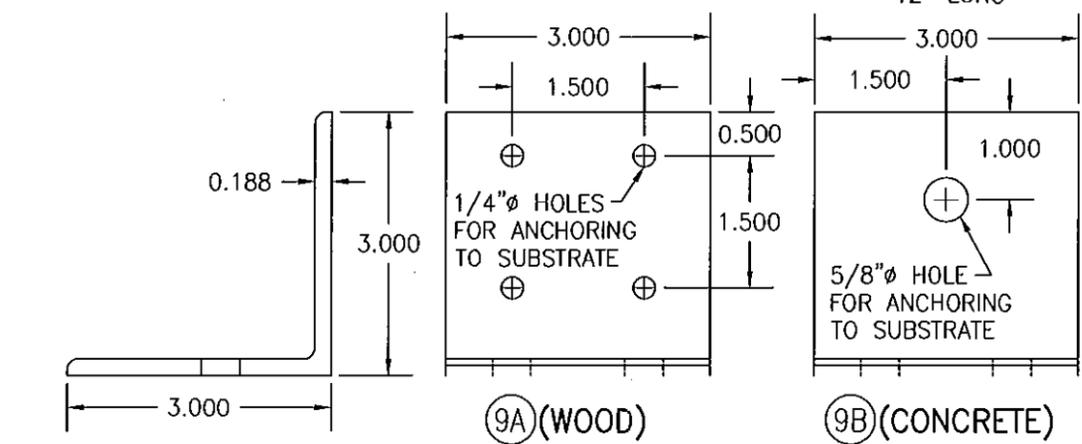
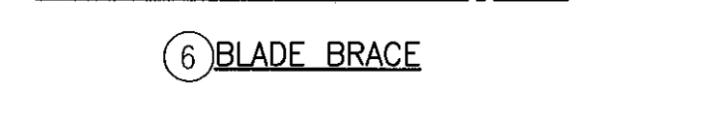
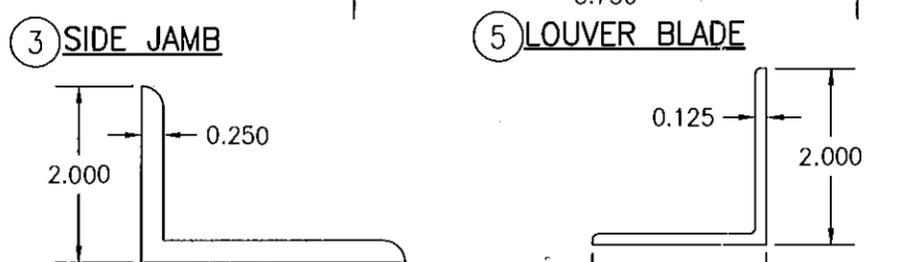
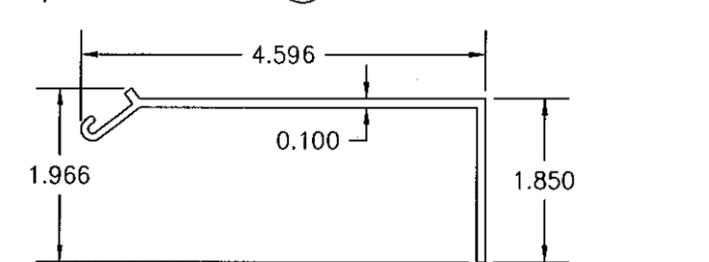
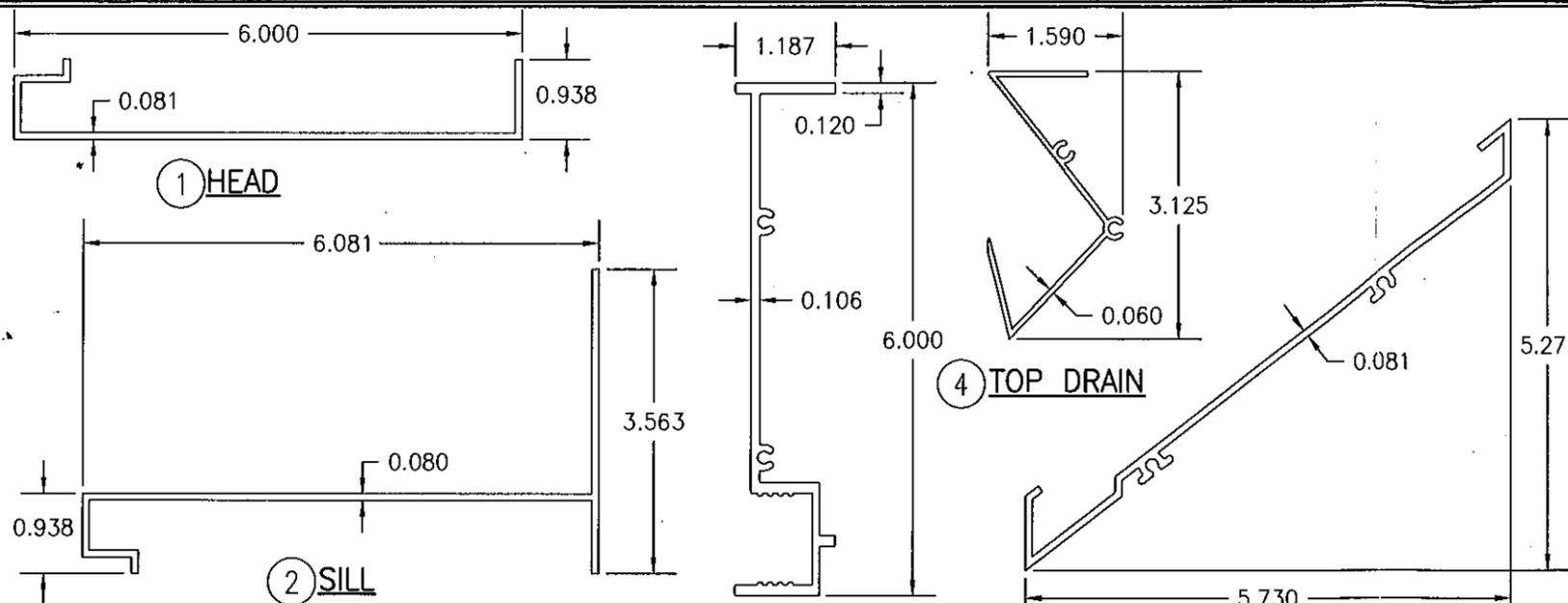


SECTION J2
SCALE: 3"=1'-0"
(JAMB TO JAMB MULLION DETAIL)
FOR DETAIL NOT SHOWN, SEE SECTION K

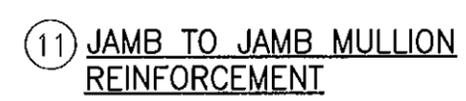
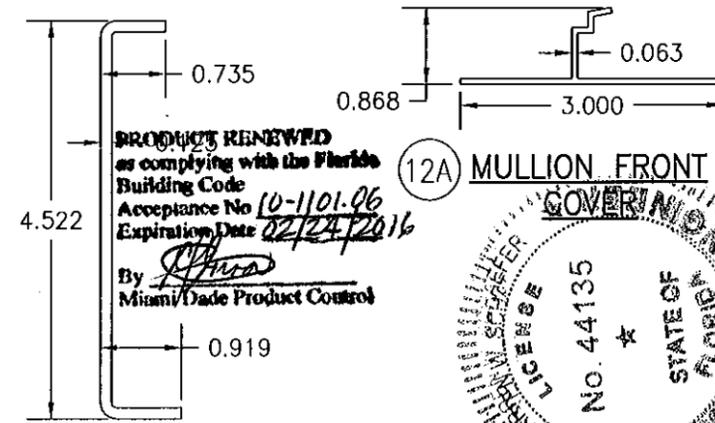
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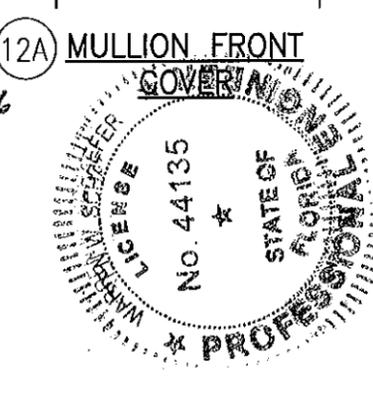
DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=4	DATE: 08/04/04
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651
DRAWING NO. 1312	
SHEET NO. 8 OF 9	
DATE: JAN 26 2011	
DRAWN BY: WARREN W. SCHAEFER, P.E. NO. 44135	



ITEM #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS		
1	HEAD	6063-T6 ALUMINUM
2	SILL	6063-T6 ALUMINUM
3	SIDE JAMB	6063-T6 ALUMINUM
4	TOP DRAIN	6063-T5 OR T6 ALUMINUM
5	LOUVER BLADE	6063-T5 OR T6 ALUMINUM
6	BLADE BRACE	6063-T5 OR T6 ALUMINUM
7	MULLION SUPPORT ANGLE	6061-T6 ALUMINUM
8A	MOUNTING CLIP (WOOD)	6061-T6 ALUMINUM
8B	MOUNTING CLIP (CONCRETE)	6061-T6 ALUMINUM
9A	CHANNEL SUPPORT CLIP (WOOD)	6061-T6 ALUMINUM
9B	CHANNEL SUPPORT CLIP (CONCRETE)	6061-T6 ALUMINUM
10A	4" X 2" ALUMINUM ASSOCIATION SUPPORT CHANNEL	6061-T6 ALUMINUM
10B	5" X 2.25" ALUMINUM ASSOCIATION SUPPORT CHANNEL	6061-T6 ALUMINUM
10C	6" X 2.5" ALUMINUM ASSOCIATION SUPPORT CHANNEL	6061-T6 ALUMINUM
11	JAMB TO JAMB MULLION REINF.	5052 ALUMINUM (2 PER MULLION)
12A	MULLION FRONT COVER	6063-T5 ALUMINUM (CONTINUOUS)
12B	MULLION REAR COVER	1/8" X 2.25" CONT. 5052 ALUMINUM
MISC. FASTENERS		
13	NO. 14 X 1" TEK SCREW (1/4-20)	INTERCORP #H-1416 (2 PER CLIP)
15	NO. 8 X 1" GALVANIZED SMS	2 PER CORNER INTO SIDE JAMB
16	NO. 8 X 1" GALVANIZED SMS	1 PER TOP DRAIN AT EACH SIDE JAMB
17	NO. 14 X 1" TEK SCREW	INTERCORP #H-1416 (1 PER BRACE)
18	NO. 8 X 1" GALVANIZED SMS	18" O.C.
19	3/8" X 1 1/2" HOT DIPPED GALVANIZED OR S.S. BOLT & NUT	2 PER MULLION END
20	1/4" X 1" HOT DIPPED GALVANIZED OR S.S. BOLT & NUT	6" FROM MULL ENDS & 18" O.C. AT DOUBLE CHANNEL MULLION
21	NO. 14 X 1" INTERCORP #H-1416 TEK SCREW	10 PER MULLION SUPPORT ANGLE INTO FRAME
22	NO. 8 X 1" GALVANIZED SMS	2 PER BLADE AT EACH SIDE JAMB
23	1/4" X 1" HOT DIP GALV. OR S.S. BOLT & NUT	6" FROM ENDS & 12" O.C.
24	NO. 14 X 1" TEK SCREW	1" FROM BAR ENDS & 12" O.C.



PRODUCT RENEWED
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Miami/Dade Product Control



DRAWN BY: K.P.S.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 08/04/04
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE XAD-6-MD LOUVER SYSTEM	
MANUFACTURER NCA MANUFACTURING, INC. 1985 CARROLL STREET CLEARWATER, FL 33765 727-441-2651	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424	
CERTIFICATION	JAN 26 2011 WARREN W. SCHAEFER P.E. NO. 44135
DRAWING NO. 1312	REV. A
SHEET NO. 9 OF 9	