



BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908

## **NOTICE OF ACCEPTANCE (NOA)**

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

**Ruskin Company**  
**3900 Dr. Greaves Road.**  
**Grandview, MO 64030**

### **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: EME6625D Louver with and without CD50 Damper**

**APPROVAL DOCUMENT:** Drawing No. **60-021563-00D through 30D**, with different titles, sheets 1 through 31 of 31, with different dates and last revision dated 05/23/07, prepared by Ruskin Manufacturing, signed and sealed by E. P. Hutson JR., P.E. on 06/27/07, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control 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 revises NOA # **06-1205.08** and consists of this page 1 and evidence pages E-1, as well as approval document mentioned above.

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



*Carlos M. Utrera*  
7/16/07

NOA No 07-0501.13  
Expiration Date: January 28, 2012  
Approval Date: August 9, 2007  
Page 1

**Ruskin Company**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Manufacturer's die drawings and sections.
2. Drawing No. **60-021563-00D through 30D**, with different titles, sheets 1 through 31 of 31, with different dates and last revision dated 05/23/07, prepared by Ruskin Manufacturing, signed and sealed by E. P. Hutson JR., P.E. on 06/27/07

**B. TESTS** (evidence submitted under NOA # 06-1205.08)

1. Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test "Aluminum Louver Assemblies with Damper", prepared by Construction Research Laboratories, Inc., report #6496, dated 05/13/98, signed and sealed by N.S. Balsara, P.E.
2. Test Report on Large Missile Impact Test, Cyclic Wind Pressure Test "Aluminum Louver Assembly with Damper", prepared by Construction Research Laboratories, Inc., report # 6550, dated 12/09/98, signed and sealed by N.S. Balsara PE.
3. Test Report on wind and wind driven rain resistance on vertical blade louver Model EME6625D with CD50 Damper, prepared by Architectural Testing Report No. 64940.01-109-44 dated 6/23/06 signed and sealed by Steven M. Urich, P.E.

**C. CALCULATIONS** (evidence submitted under NOA # 06-1205.08)

1. Louver/Damper Blade & Mullion Calculations, dated 05/11/98, pages 1 to 7 of 7 with appendix A, prepared by R. E. Beason II, signed and sealed by E. P. Hutson Jr. PE.
2. Louver/Damper Blade & Mullion Calculations, dated 10/20/98, pages 1 to 7 of 7, with appendix A, prepared by R. E. Beason II, signed and sealed by E. P. Hutson Jr. PE.
3. Letter from Ruskin confirming that the 4/3 stress increase was not used, dated June 24, 2005 signed & sealed by E.P. Hutson JR., P.E.

**D. QUALITY ASSURANCE**

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

**E. MATERIAL CERTIFICATIONS**

1. None

**F. STATEMENTS** (evidence submitted under NOA # 06-1205.08)

1. Letter from Ruskin Manufacturing certifying that louvers EME 6625D with and without damper CD50 conforms to the FBC, dated 08/10/06 and signed by J. Livingston.
3. Letter from Ruskin Manufacturing requesting renewal of file 06-0626.01 without change, dated 11/29/06 and signed by J. Livingston.

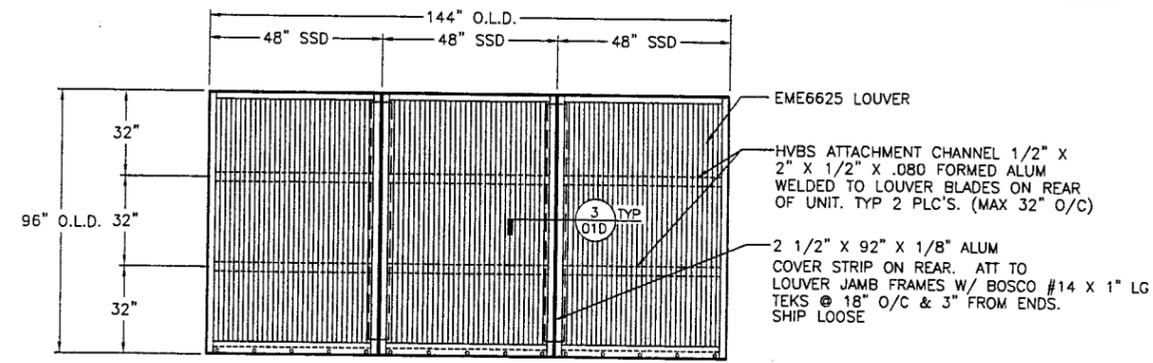
**G. OTHERS**

1. Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test on new shapes, prepared by National Certified Testing Laboratories, Report No. 210-3359-1, dated 11/27/06, signed and sealed by Gerard J. Ferrara, P.E.
2. Louver EME6625D Round and Round Top Wind Load Calculations, prepared by Ruskin Engineering, signed and sealed by E.P. Hutson Jr., P.E.
3. NOA revision request letter issued by Ruskin Company, dated 04/17/07, signed by James Livingston.
4. No financial interest and code compliance letters issued by Ruskin Company, dated 04/12/07, signed and sealed by D. J. Rau, P.E.

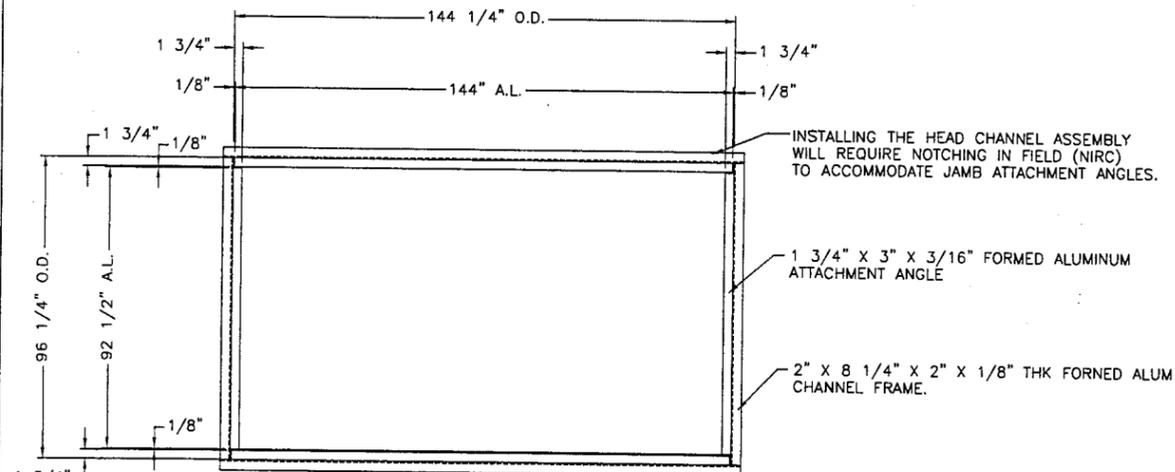


Carlos M. Utrera, P.E.  
Product Control Examiner  
NOA No 07-0501.13

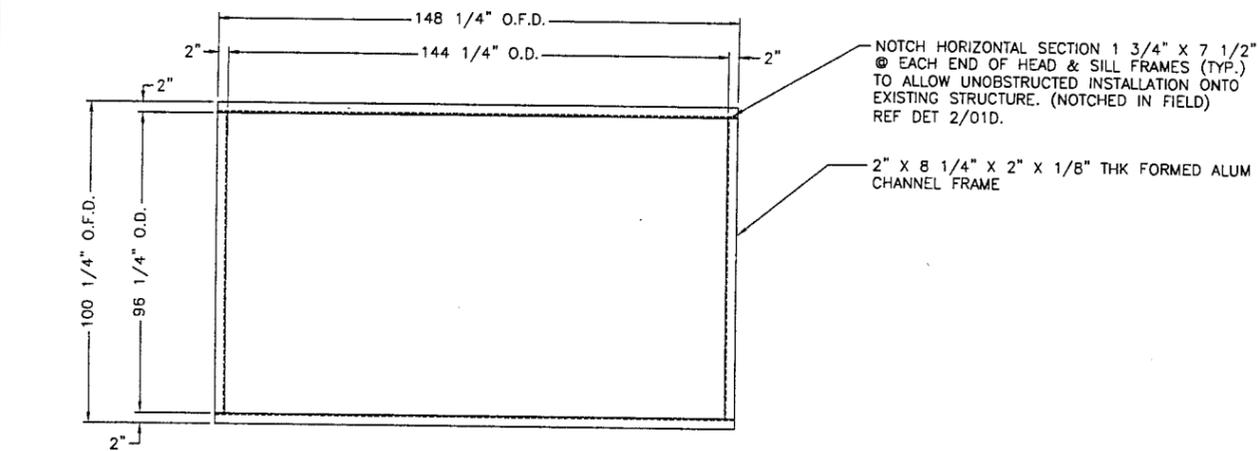
Expiration Date: January 28, 2012  
Approval Date: August 9, 2007



① EME6625 LOUVER ASSEMBLY "A"  
NTS  
DESIGN PRESSURE RATING: +160/ -140 PSF.  
② SEE SECTION DETAILS -06D FOR APPLICABILITY  
FRONT VIEW



② CHANNEL FRAME & ATT ANGLE ELEVATION  
REAR VIEW



③ CHANNEL FRAME ELEVATION  
FRONT VIEW

④ REAR & FRONT ELEVATIONS VIEW OF CHANNEL FRAME & ATT. ANGLE  
N.T.S.

**LEGEND:**

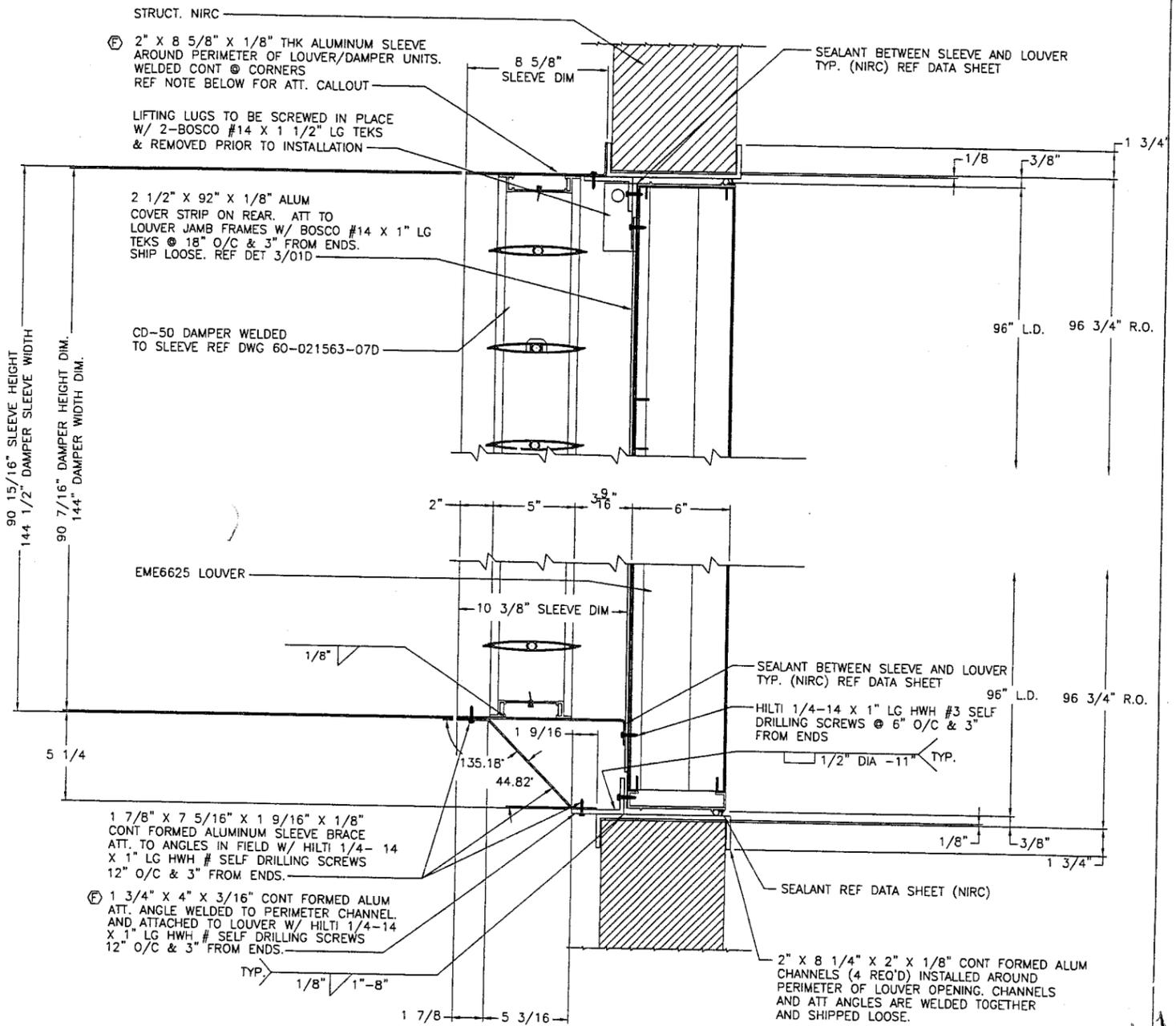
O.F.D. = OUTSIDE FRAME DIM.  
R.O. = ROUGH OPENING  
A.L. = ANGLE LENGTH  
O.D. = OPENING DIM.  
N.T.S. = NOT TO SCALE  
NIRC = NOT IN RUSKIN CONTRACT

HVBS = HIDDEN VERTICAL BLADE SUPPORT.  
SSD = SHIP SECTION DIM.  
L.D. = LOUVER DIM.  
DIM. = DIMENSION  
SIM = SIMILAR

**NOTES:**

- THE STRUCTURAL SUBSTRATE THAT HOLDS THE LOUVER IN PLACE, IS ASSUMED TO BE STRUCTURALLY SOUND AND STABLE TO TAKE THE LOADS DISPERSED BY THE LOUVER.

- LOUVER IS NONBEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEADLOADS.



⑦ EME6625/CD50 SLEEVED SECTION (JAMB SIM TO HEAD)  
3"=1'-0"

FOR OFFICE USE ONLY

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Adopted by 07-0501.13  
Effective Date 01/28/2012  
Product Control

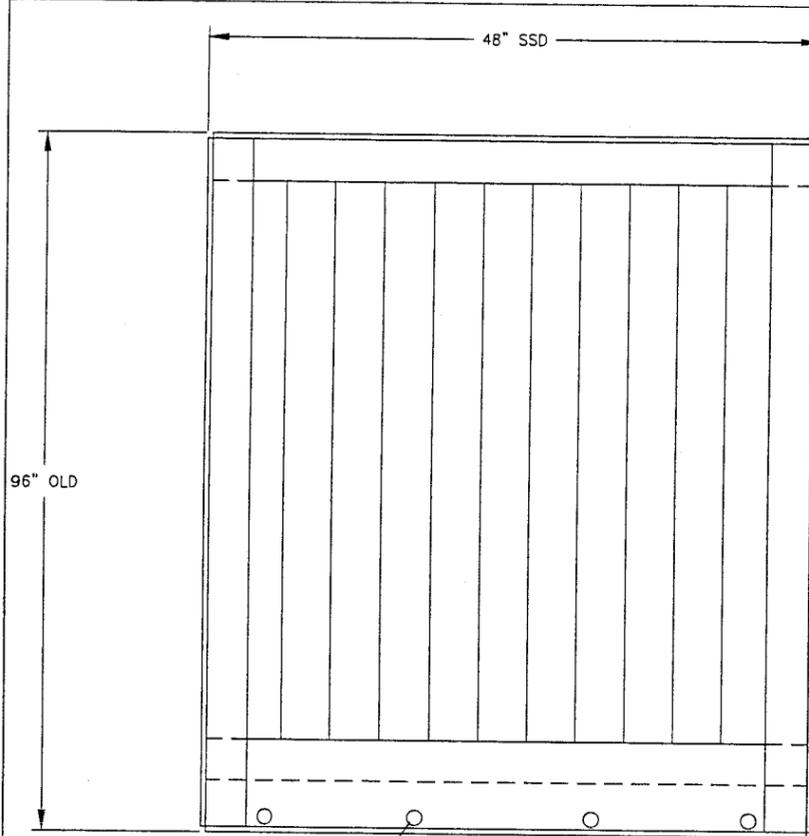
FOR FASTENER LOADS REF  
DWG. 60-021563-06D

SHEET 1 OF 31

①	ADDED SHEET NUMBER	DLC	WJG	5/23/7
②	REVISE TITLE, SLEEVE AND MOUNTING ANGLE	RFM		10-17-96
③	DADE CO. COMMENTS	GSL	VMA	10/15/98
④	DADE CO. COMMENTS	RM	VMA	7-31-98
⑤	ADDED NOTES	GSL	VMA	5/7/98
⑥	ADDED ENGINEERING DATA & REV'D DETAILS	GSL	VMA	5/1/98
⑦	REMOVED ENGINEERING DATA	JAL	VMA	4/17/98

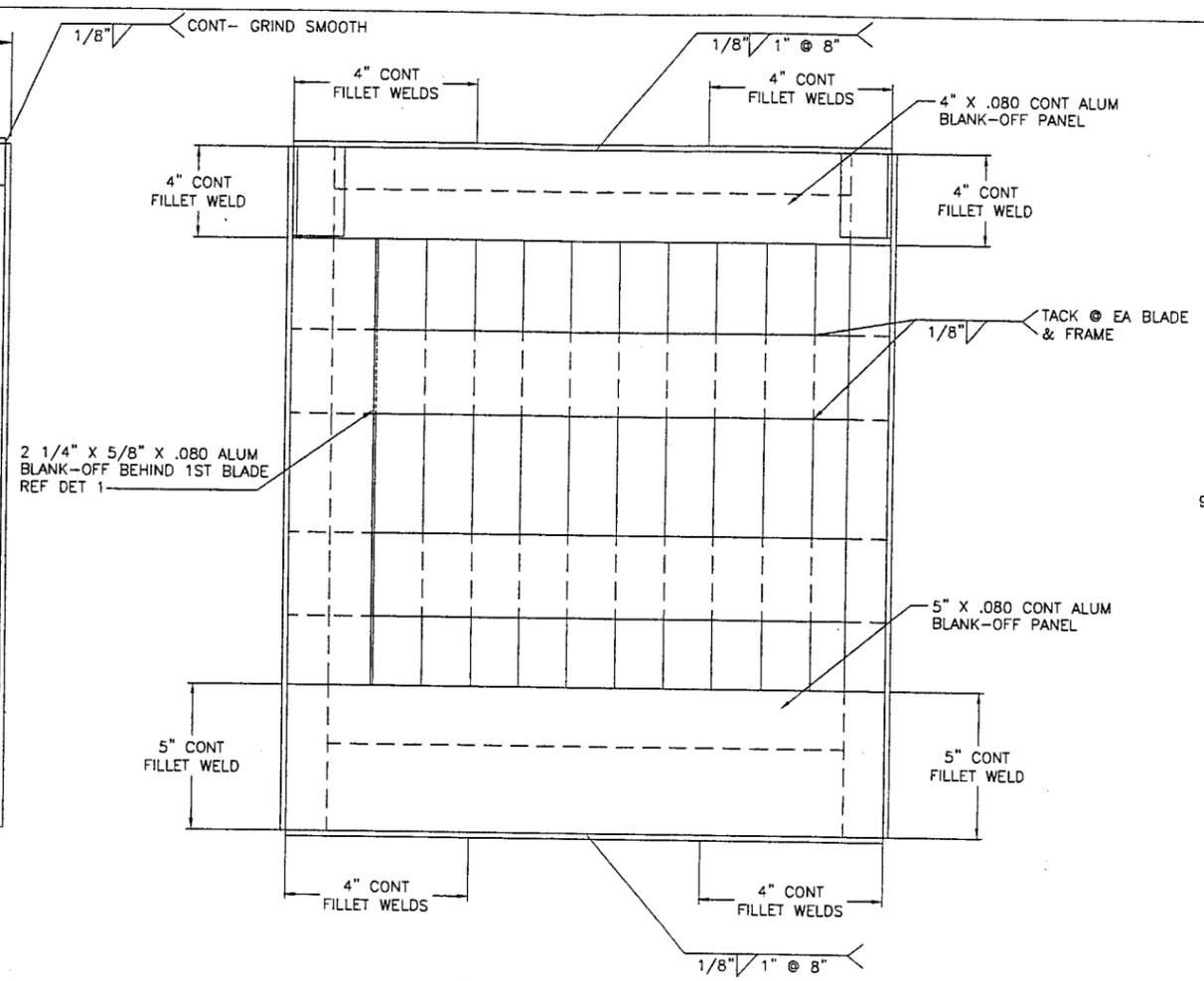
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.	REGISTERED PROFESSIONAL ENGINEER STRUCTURAL ENGINEER	STATE OF FLORIDA # 0052339	CHANGE LETTER	REVISION DESCRIPTION	DATE
DATE: 3-13-98	BY: VMA	DATE: 3-16-98		RUSKIN Mtg 3900 DR. Graves RD Grandview, MO 64030	
LOUVER DAMPER ASSY DADE CTY. FLORIDA			TITLE EME6625D & CD50 ASSEMBLIES & SECTIONS		
DWG. NO. 60-021563-00D			DATE:		

*Edward P. Hutson*  
6/27/2007

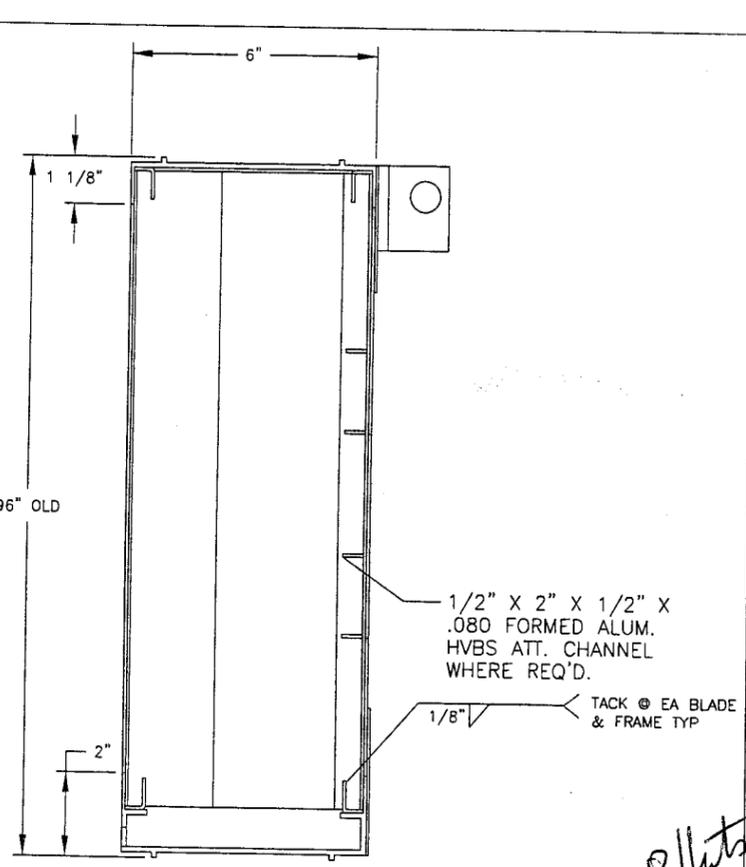


1/2" DIA WEEP HOLES  
@ 8" O/C & 2" FROM  
ENDS @ FRONT OF LOUVER  
SILL ONLY.

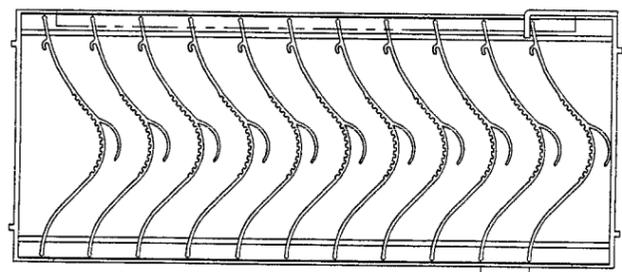
FRONT ELEVATION VIEW (PER SHIP SECTION)



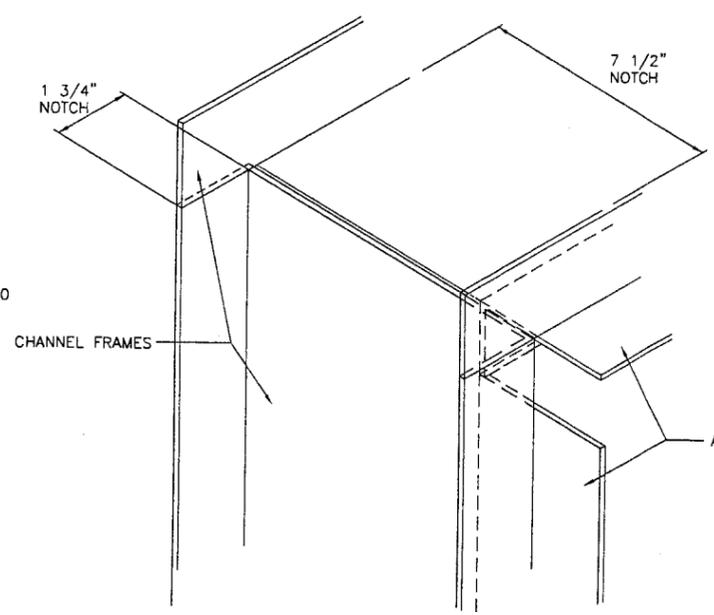
REAR ELEVATION VIEW



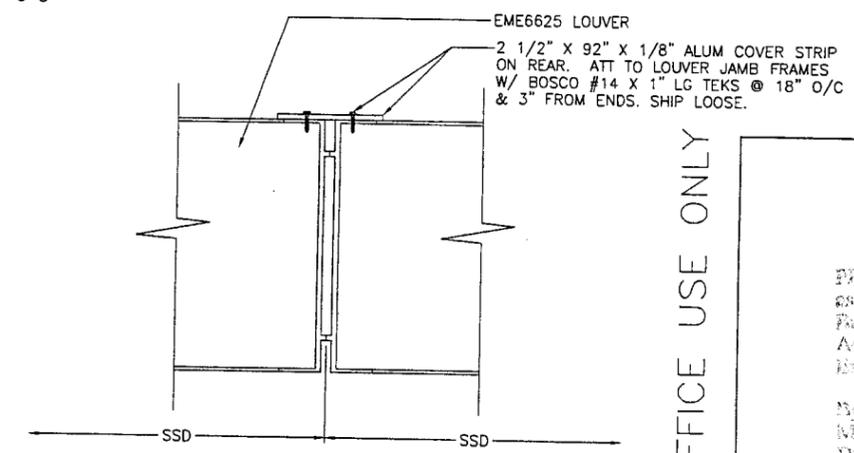
EME6625 SECTION



SECTION PLANVIEW



2 ISOMETRIC NOTCHING DETAIL  
N.T.S.



3 MULLION SPLICE DETAIL  
N.T.S.

1 1ST BLADE JAMB BLANKOFF DETAIL  
N.T.S.  
MAT'L: .080 CONT FORMED ALUMINUM

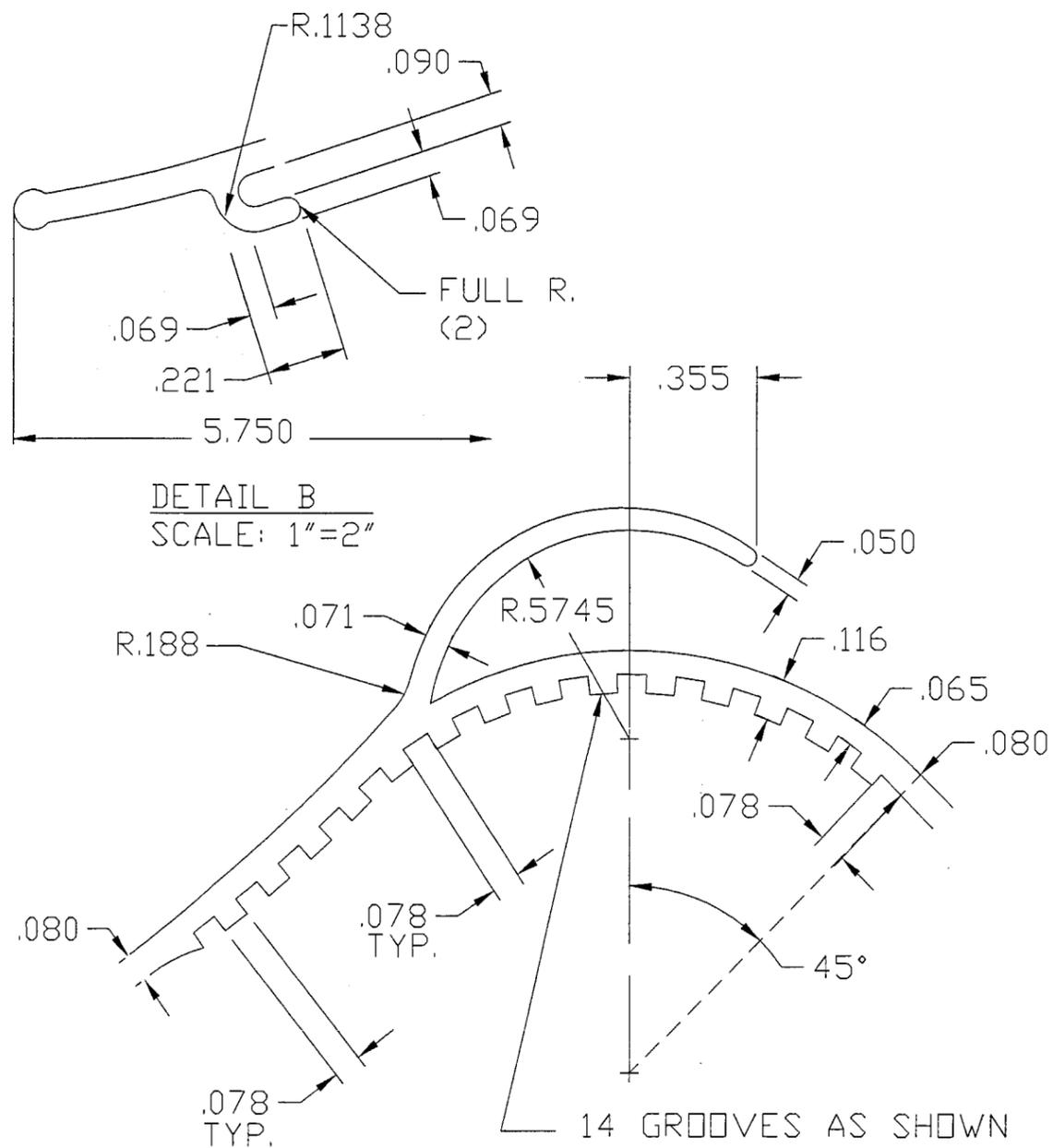
*Edward P. Hutson Jr.*  
6/27/2007

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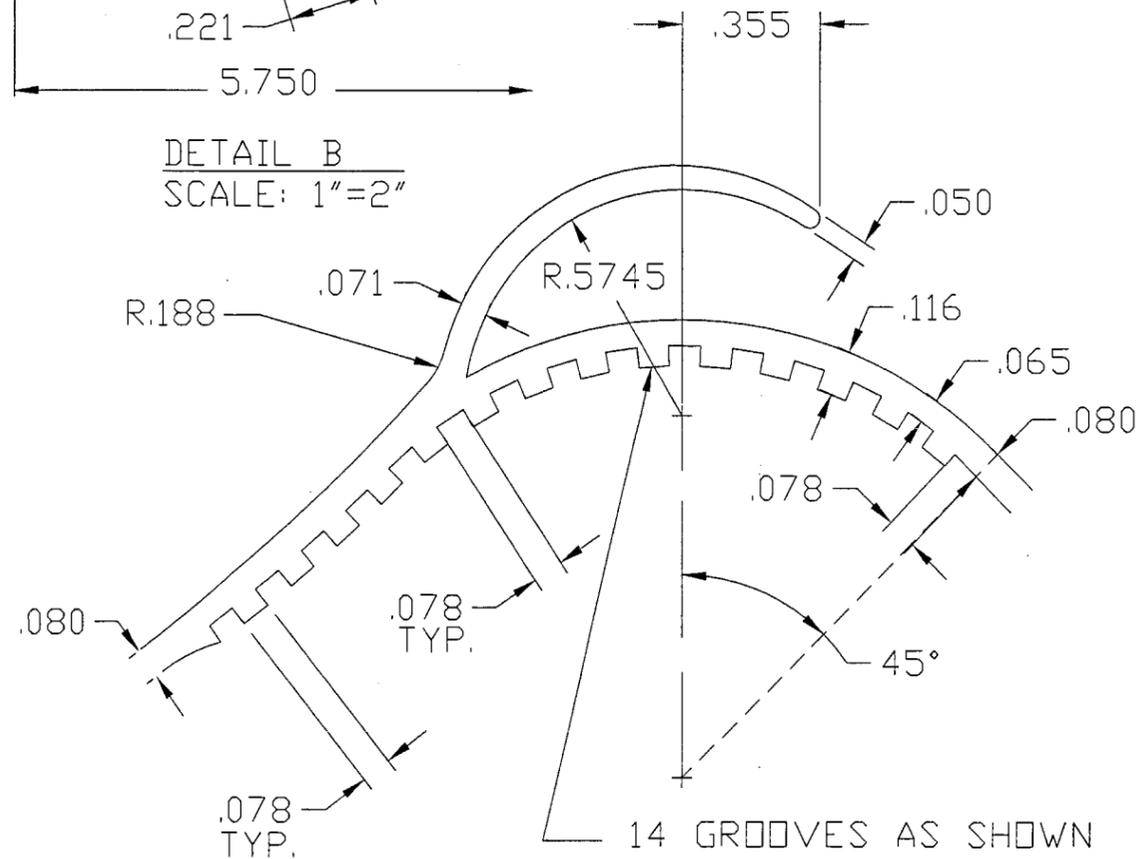
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 07-0501.13  
Expiration Date 01/28/2012  
By: *[Signature]*  
Miami-Dade Product Control  
Division

SHEET 2 OF 31

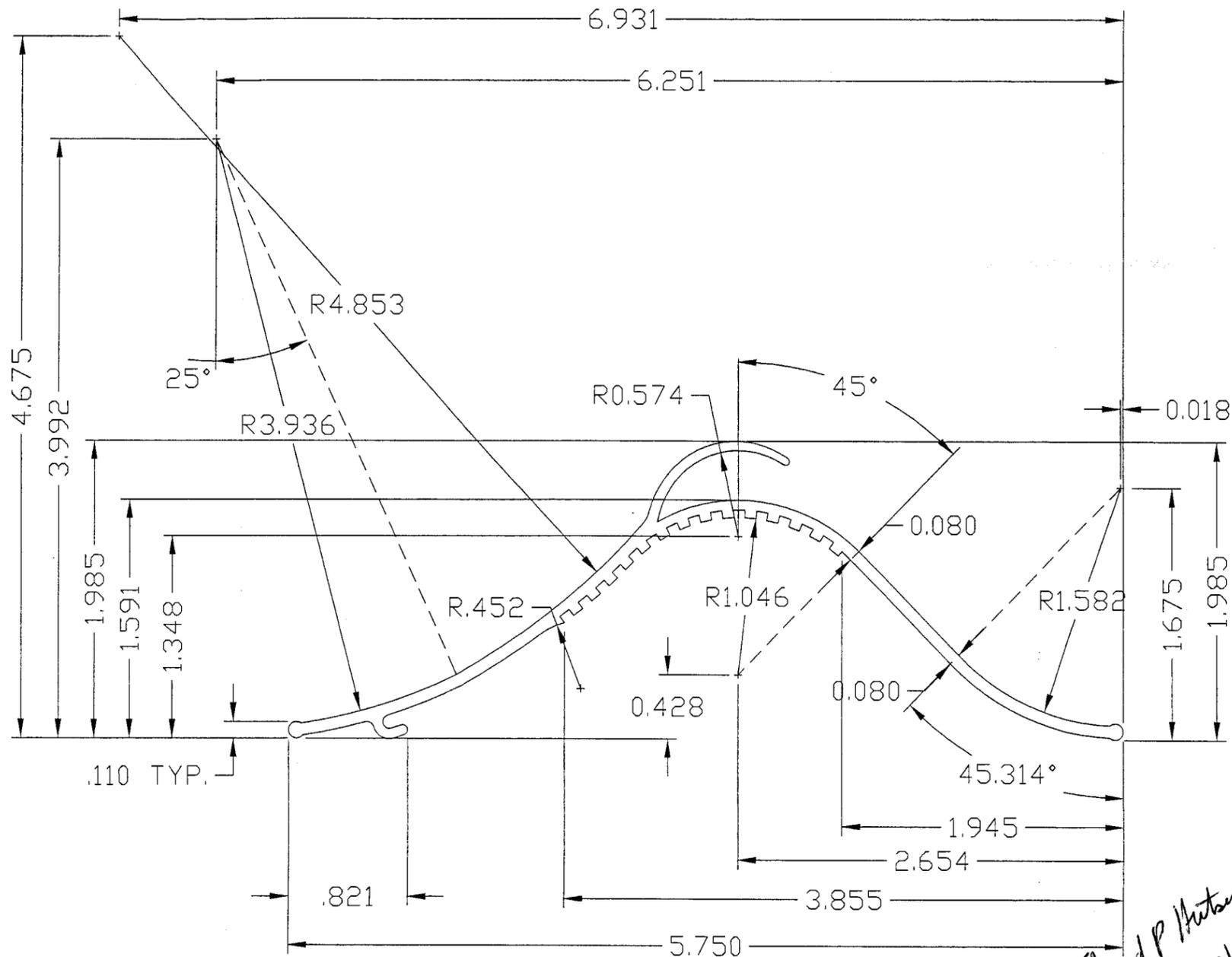
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.	REGISTRATION #: STATE OF FLORIDA #0052339	ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER	DATE: 3-13-98	ISSUED BY: GSL	DATE: 3-16-98	REVISION DESCRIPTION:	DATE:
⑥ ADDED SHEET NUMBER	DLC	DJR-DJR	5/23/7				
⑦ REVISED BLADE SPACING PER RETEST	DJR	VMA	7/11/06				
⑧ DADE CO. COMMENTS	RM	VMA	7-31-98				
⑨ REV'D DETAILS & ELEV.	GSL	VMA	5-7-98				
⑩ REV'D DETAILS & ADDED DETAILS 2 & 3	GSL	VMA	5-1-98				
⑪ REMOVED ENGINEERING DATA	JAL	VMA	4-17-98				
RUSKIN Mig 3900 DR. Greaves Rd Grandview, MD 64030		PLOT SCALE: NONE		DWC CERTIFIED:		DWC NO.:	
LOUVER DAMPER ASSY DADE CITY, FLORIDA		EME6625 & CD50 ASSEMBLIES & SECTIONS		60-021563-01D			



DETAIL B  
SCALE: 1"=2"



DETAIL A  
SCALE: 1"=2"



AREA= .673  
PERIMETER= 17.839  
WT. PER. FT.= .792

SHEET 3 OF 31

*Edward P. Hutson Jr.*  
6/27/2007

FOR OFFICE USE ONLY

PROJECT REVIEWED  
07-0501.13  
01/28/2012  
*[Signature]*

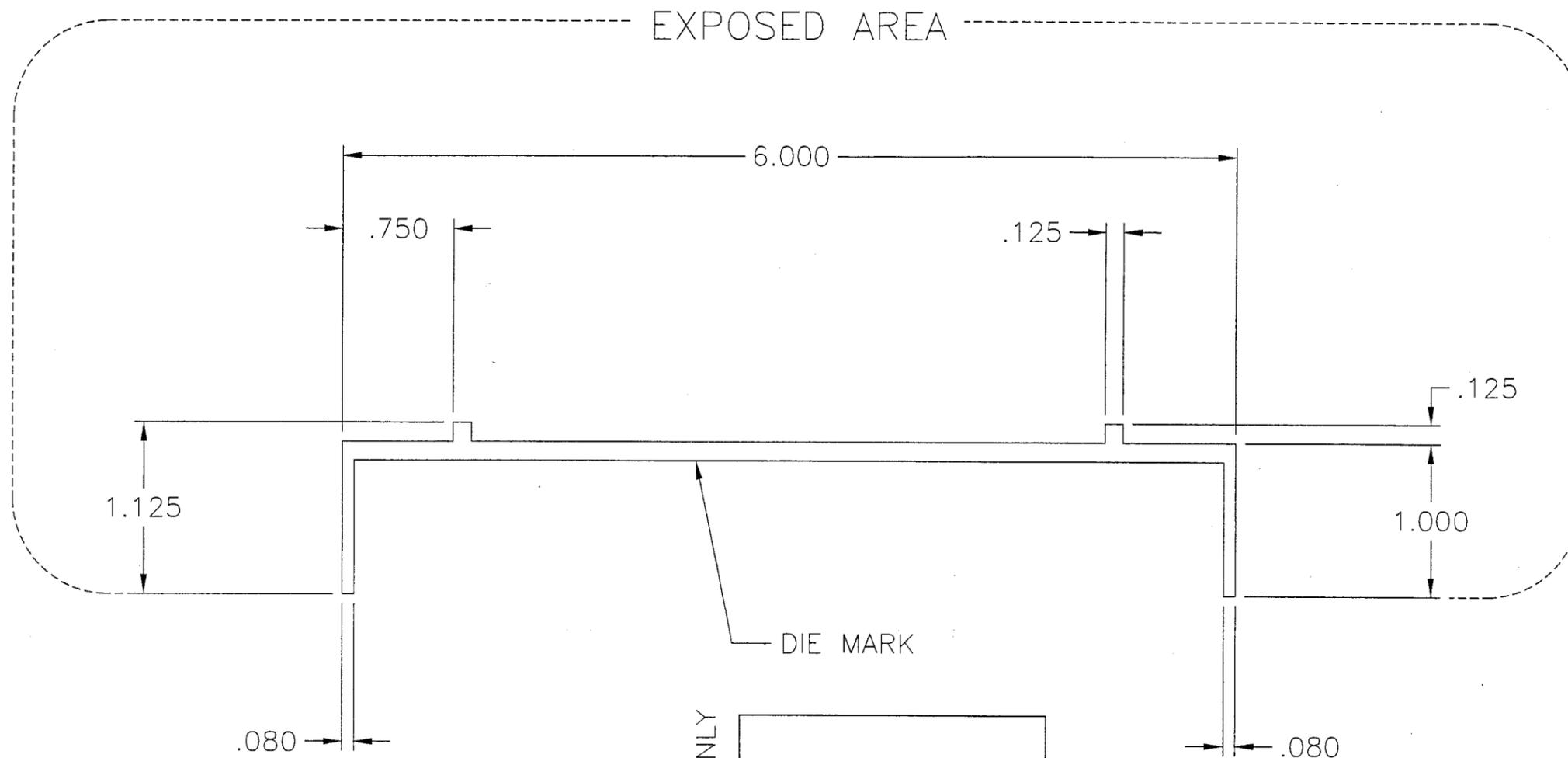
NOTES:

1. ALUMINUM ASSOCIATION TOLLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
2. 0.010" RADIUS AT ALL CORNERS UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE GIVEN IN INCHES.
4. INVENTORY NUMBER. 10790

DWN. BY: JKS	CHK. BY:	APPV'D. BY:	APPV'D. BY:
DATE: 3-13-98	DATE:	DATE:	DATE:

MATERIAL: 6063T5 EXTRUDED ALUMINUM. NOM. WALL THICKNESS = .080

<b>G</b>	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
<b>A</b>	REMOVED ENGINEERING DATA	JAL				
CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
	RUSKIN Mfg 3900 DR. Greaves RD. Grandview, MD 64030					
	PROPRIETARY INFORMATION	PLOT SCALE	1"=1"		DWG. CERTIFIED	
	TITLE	EME6625 MOISTURE BLADE		DATE:		
		DWG. NO.		60-021563-02B		



FOR OFFICE USE ONLY

ENGINEER OF RECORD  
 Edward Paul Hutson Jr.  
 Structural Engineer  
 Registration No. 07-0501.13  
 Expires 01/28/2012  
 State of Florida  
 Professional Seal Control  
 Division

*Edward P Hutson Jr*  
6/27/2007

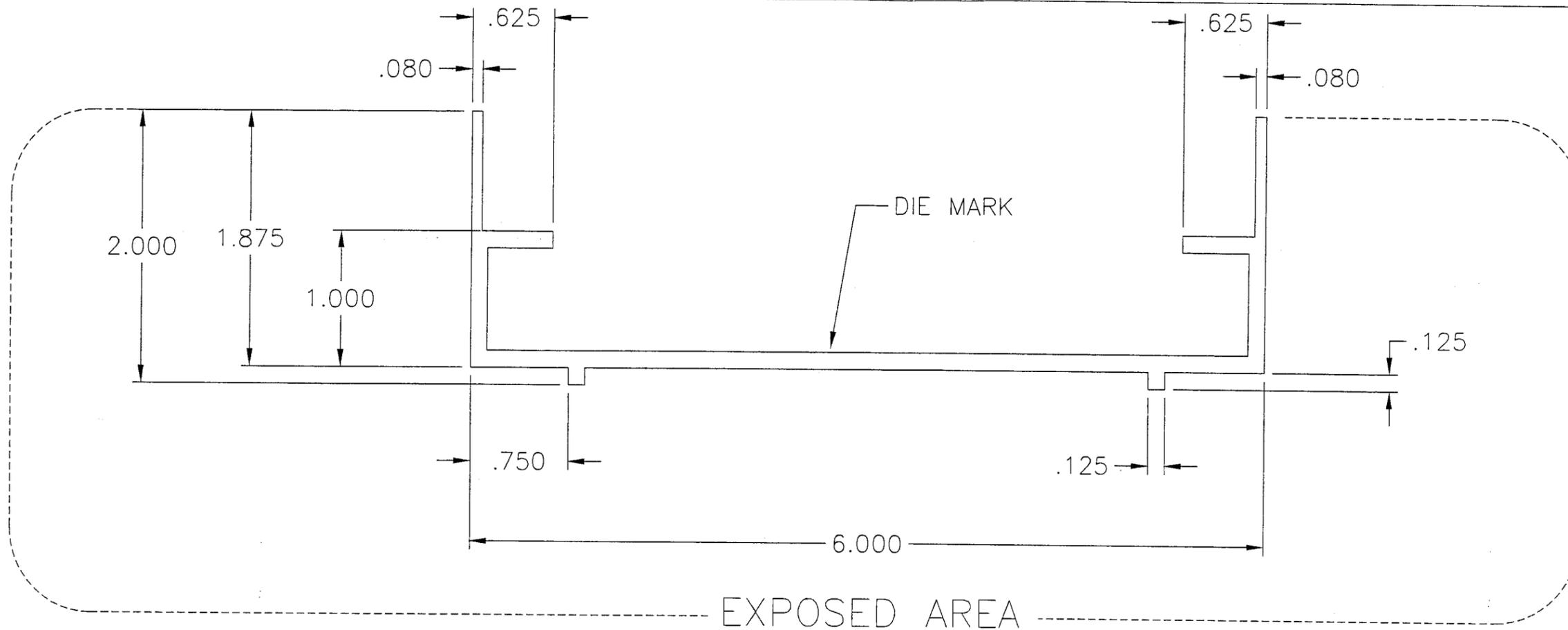
SHEET 4 OF 31

NOTES:

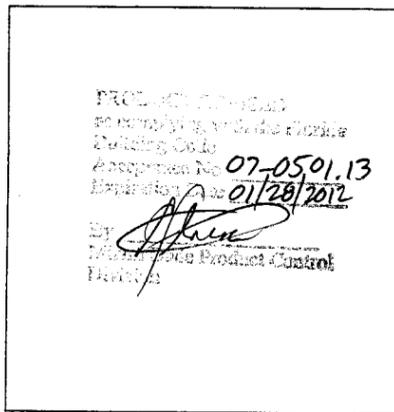
1. ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
2. 0.010" RADIUS AT ALL CORNERS UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE GIVEN IN INCHES.
4. INVENTORY NUMBER= 10830

AREA= .921 SQ. IN.  
 PERIMETER= 16.250 IN.  
 EST. WEIGHT= 1.083 LBS/FT.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				Ⓞ	ADDED SHEET NUMBER	DLC	DJR	DIR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				ⓐ	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: JKS	CHK. BY:	APPV'D. BY:	APPV'D. BY:	RUSKIN Mfg. 3900 DR. Greaves RD. Grandview, MD 64030		PLOT SCALE		DWG. CERTIFIED	
DATE: 3-13-98	DATE:	DATE:	DATE:	PROPRIETARY INFORMATION		NONE		BY: _____	
MATERIAL: 6063T5 EXTRUDED ALUMINUM NOM WALL THICKNESS = .125				TITLE EME6625 LOUVER HEAD AND JAMB FRAME		DWG. NO.		60-021563-03B	



FOR OFFICE USE ONLY



*Edward P Hutson Jr.*  
6/27/2007

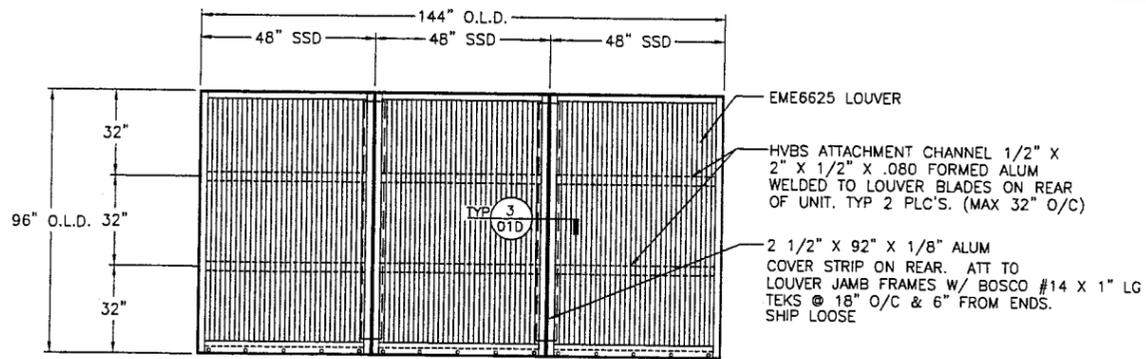
NOTES:

1. ALUMINUM ASSOCIATION TOLERANCES APPLY UNLESS OTHERWISE SPECIFIED.
2. 0.010" RADIUS AT ALL CORNERS UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE GIVEN IN INCHES.
4. INVENTORY NUMBER= 10820

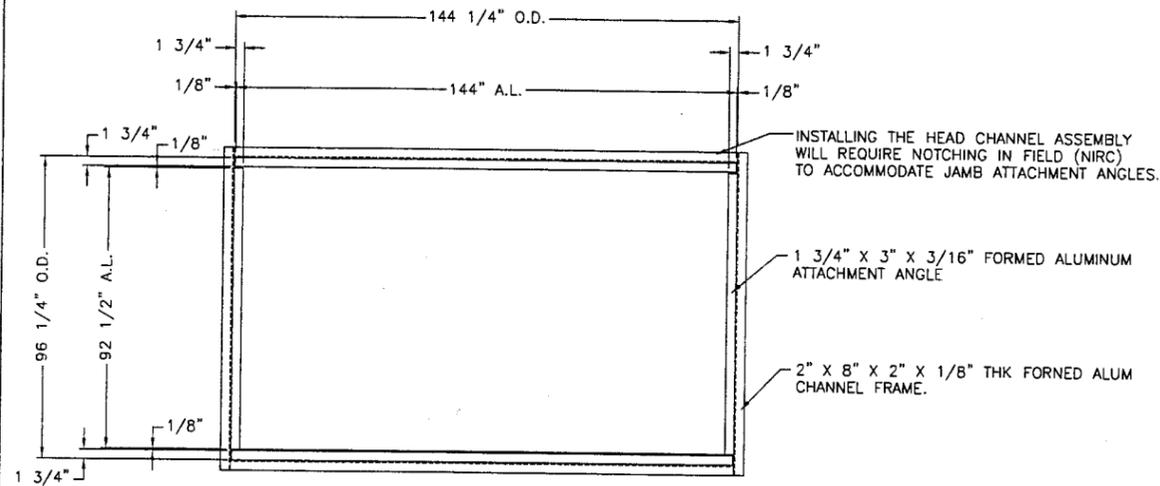
AREA= 1.265 SQ. IN.  
 PERIMETER= 21.750 IN.  
 EST. WEIGHT= 1.488 LBS/FT.

SHEET 5 OF 31

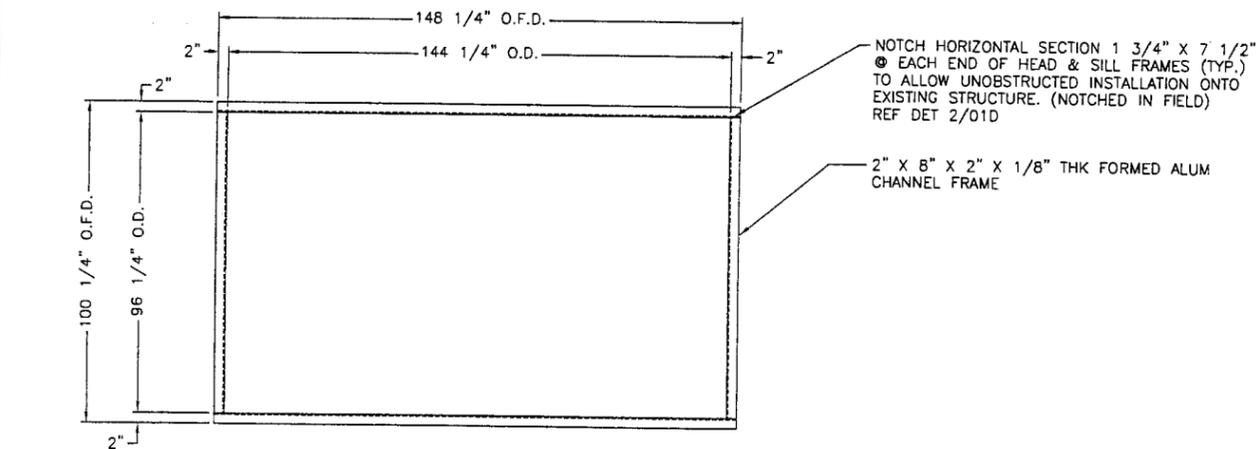
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY: DATE
DWN. BY: JKS	CHK. BY:	APPV'D. BY:	APPV'D. BY:	RUSKIN Mfg. 3900 DR. Greaves RD. Grandview, MD 64030		PLOT SCALE	
DATE: 3-13-98	DATE:	DATE:	DATE:	PROPRIETARY INFORMATION		NONE	
MATERIAL: 6063T5 EXTRUDED ALUMINUM NOM WALL THICKNESS = .125			TITLE EME6625 LOUVER SILL FRAME			DWG. NO. 60-021563-04B	



EME6625 LOUVER ASSEMBLY "B"  
 NTS DESIGN PRESSURE RATING: +160/ -140 PSF FRONT VIEW  
 SEE SECTION DETAILS FOR APPLICABILITY



CHANNEL FRAME & ATT ANGLE ELEVATION  
 REAR VIEW

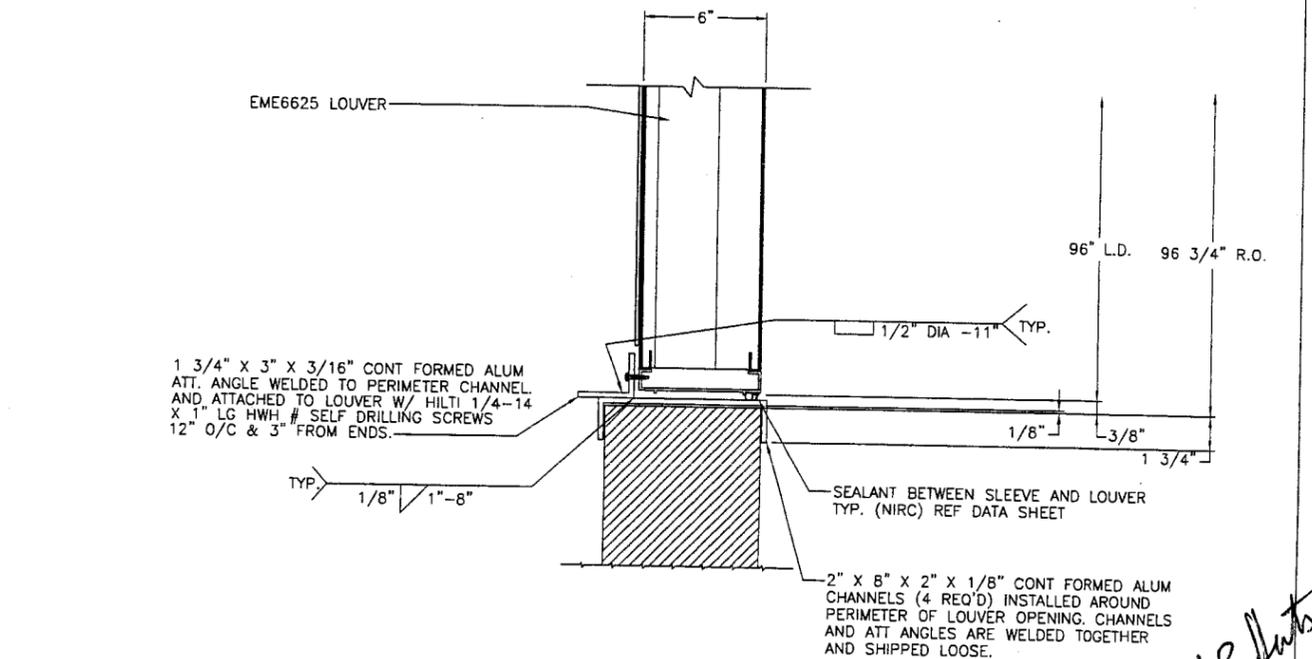
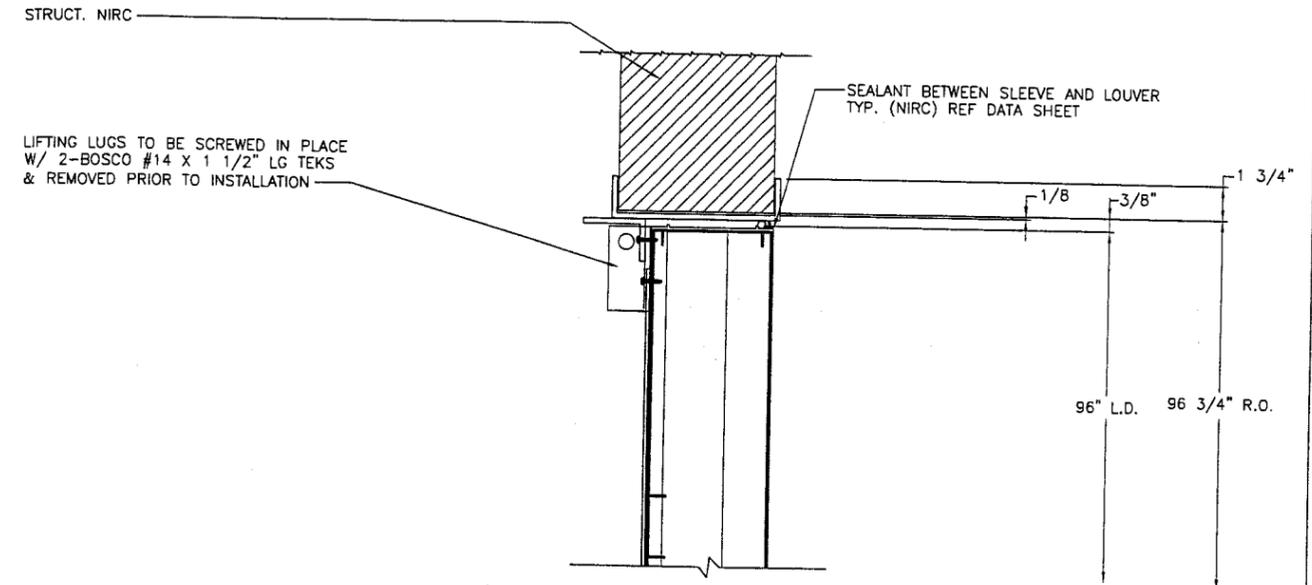


CHANNEL FRAME ELEVATION  
 FRONT VIEW

REAR & FRONT ELEVATIONS VIEW OF CHANNEL FRAME & ATT. ANGLE  
 N.T.S.

**LEGEND:**  
 O.F.D. = OUTSIDE FRAME DIM.    SSD = SHIP SECTION DIM.  
 R.O. = ROUGH OPENING    L.D. = LOUVER DIM.  
 A.L. = ANGLE LENGTH    DIM. = DIMENSION  
 O.D. = OPENING DIM.    SIM = SIMILAR  
 N.T.S. = NOT TO SCALE

**NOTES:**  
 - THE STRUCTURAL SUBSTRATE THAT HOLDS THE LOUVER IN PLACE, IS ASSUMED TO BE STRUCTURALLY SOUND AND STABLE TO TAKE THE LOADS DISPERSED BY THE LOUVER.  
 - LOUVER IS NONBEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEADLOADS.



EME6625/CD50 SLEEVED SECTION (JAMB SIM TO HEAD)  
 3'-1'-0"

*Edward P. Hutson Jr.*  
 6/27/2007

FOR OFFICE USE ONLY

PROVIDED BY:  
 Edward P. Hutson Jr.  
 07.0501.13  
 2/28/2012  
 Product Control

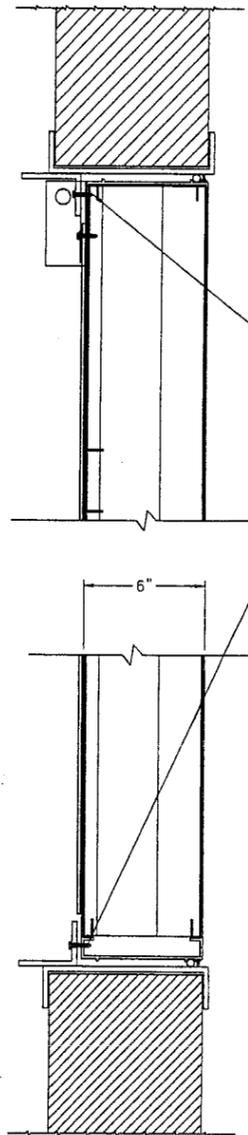
FOR FASTENER LOADS REF.  
 DWG. 60-021563-06D

SHEET 6 OF 31

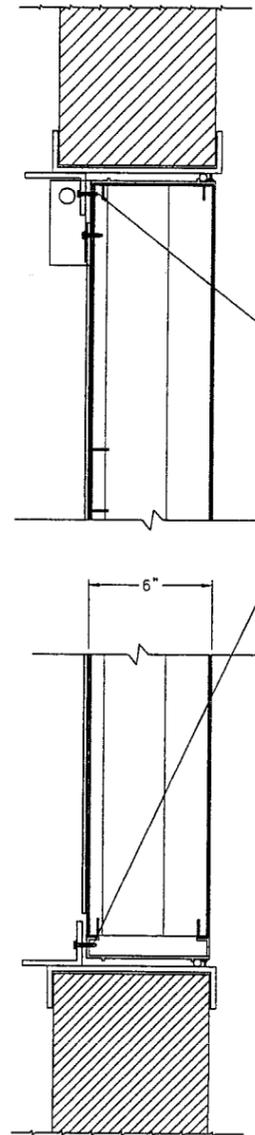
(C)	ADDED SHEET NUMBER	DLC	DDJ	5/23/7
(E)	DATE CO. COMMENTS	RM	VMA	10/15/98
(D)	DATE CO. COMMENTS	RM	VMA	7-31-98
(C)	REV'D DETAILS & ELEVATIONS ADDED NOTES	GSL	VMA	5-7-98
(B)	REV'D DETAILS & ELEVATIONS	GSL	VMA	5-1-98
(A)	REMOVED ENGINEERING DATA	JAL	VMA	4-17-98

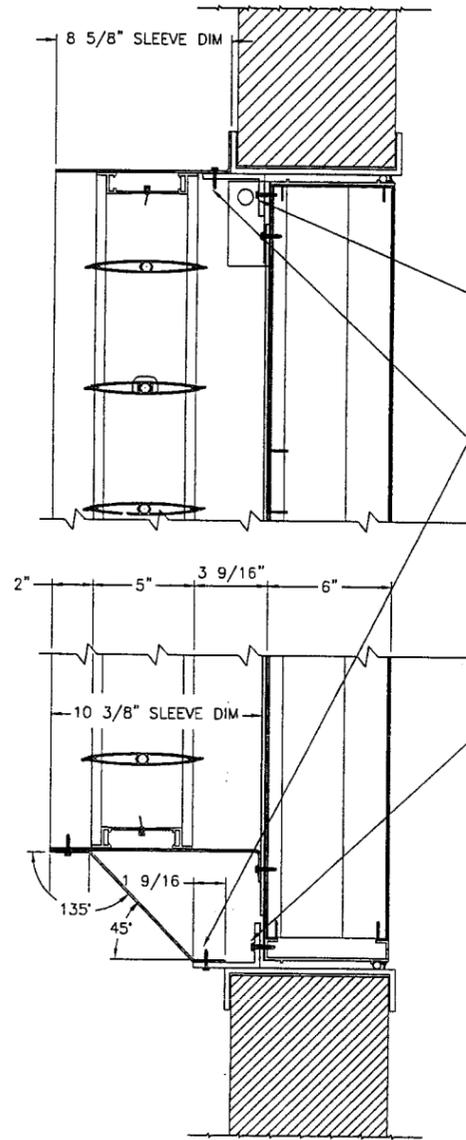
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.	REGISTRATION #: STATE OF FLORIDA #0052339	REVISION DESCRIPTION	DWG. NO.
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER	DATE: 3-13-98	BY: VMA	60-021563-05D
DATE: 3-16-98	DATE: 3-16-98	DATE: 3-16-98	
LOUVER DAMPER ASSY DADE CTY. FLORIDA	TITLE	EME6625 & CD50 ASSEMBLIES & SECTIONS	



42 FASTENERS USED  
TENSILE LOAD ON EACH  
FASTENER ATTACHING  
LOUVER TO SUBFRAME  
IS 320 LBS.



24 FASTENERS USED  
TENSILE LOAD ON EACH  
FASTENER ATTACHING  
LOUVER TO SUBFRAME  
IS 187 LBS.



42 FASTENERS USED  
TENSILE LOAD ON EACH  
FASTENER ATTACHING LOUVER  
TO SUBFRAME IS 320 LBS.

42 FASTENERS USED  
SHEAR LOAD ON EACH  
FASTENER ATTACHING SLEEVE  
TO SUBFRAME IS 345 LBS.

FOR OFFICE USE ONLY

PRODUCT REVISED  
to comply with the Florida  
Building Code  
Approval No. 07-0501.13  
Expiration Date 01/28/02  
*[Signature]*  
Product Control

*Edward P. Hutson Jr.*  
6/27/007

**LOUVER ONLY ASSEMBLIES "B" (+160/ -140 PSF)**  
N.T.S.

The EME6625D louver can be installed in locations where space behind the louver is not designed to drain or accept water if ductwork is attached to the rear of the louver. The ductwork must be designed to manage the 7.68 oz. of water penetration allowed during the TAS-100(A) Wind Driven Rain Test. This application is Rated For Water.  
If no ductwork is to be installed to the louver, the louver must be installed in locations where the area behind is designed to drain or accept water. This application is Not Rated For Water.

**LOUVER ONLY ASSEMBLIES "C" (+160/ -140 PSF)**  
N.T.S.

The EME6625D louver can be installed in locations where space behind the louver is not designed to drain or accept water if ductwork is attached to the rear of the louver. The ductwork must be designed to manage the 7.68 oz. of water penetration allowed during the TAS-100(A) Wind Driven Rain Test. This application is Rated For Water.  
If no ductwork is to be installed to the louver, the louver must be installed in locations where the area behind is designed to drain or accept water. This application is Not Rated For Water.

**LOUVER/DAMPER ASS'Y "A" (+160/ -140PSF)**  
N.T.S.

CAN BE INSTALLED IN LOCATIONS WHERE SPACE BEHIND LOUVER IS NOT DESIGNED TO ACCEPT WATER.  
MEETS WATER REQUIREMENTS

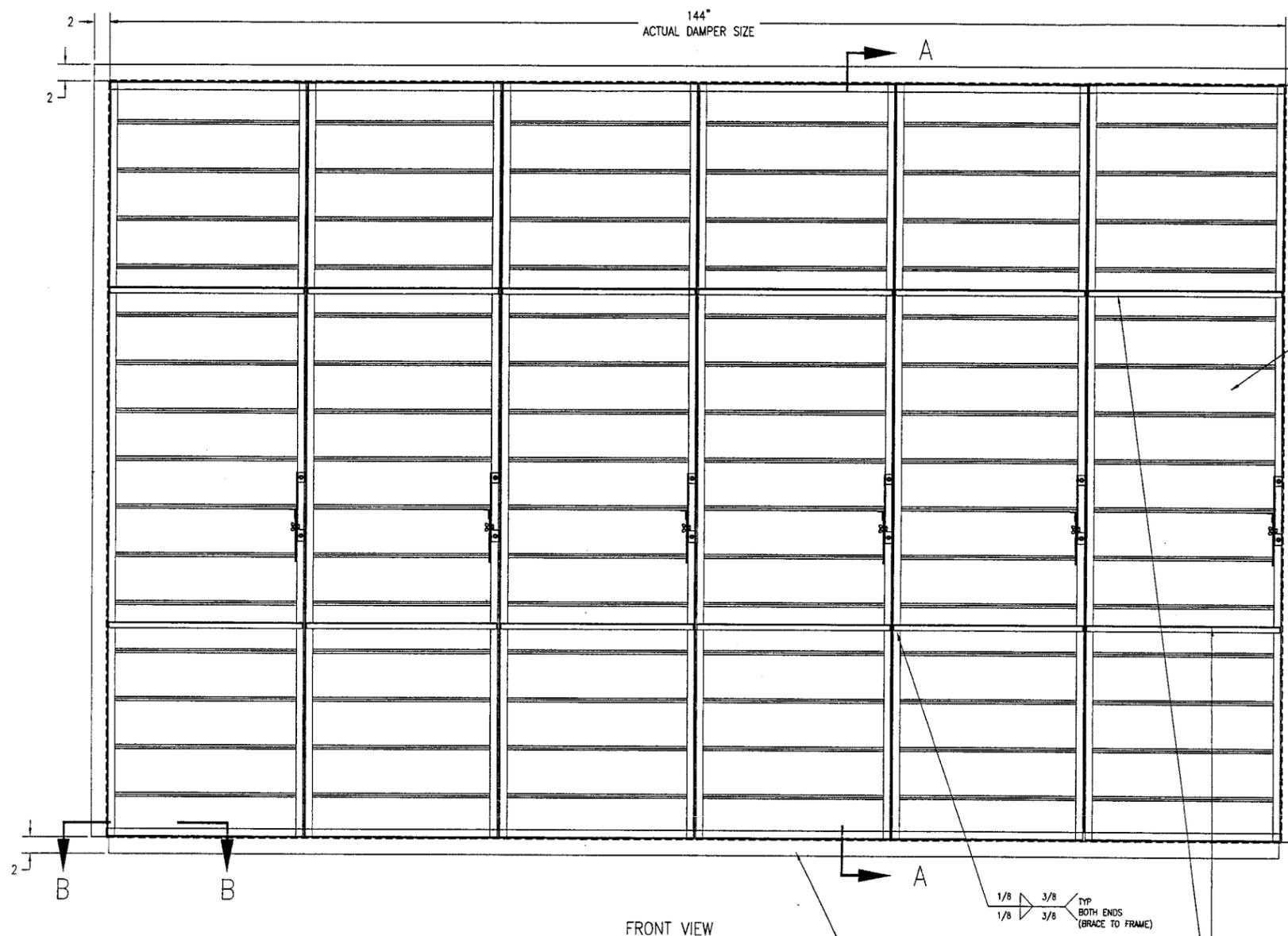
ULTIMATE PULL OUT VALUES FOR 1/4-14 SELF-TAPPING FASTENERS IN 1/8" ALUMINUM IS 825 LBS.(SAFETY FACTOR OF 3.) ALLOWABLE SHEAR LOAD IS 405 LBS., SEE HILTI PRODUCT TECHNICAL GUIDE 8/'96, P.136.

THE EME6625 AND THE EME6625 WITH CD50 DAMPER, FURNISHED BY RUSKIN MANUFACTURING, CONFORM TO THE CURRENT FLORIDA BUILDING CODE INCLUSIVE OF CHAPTER 16.

SHEET 7 OF 31

ⓐ	ADDED SHEET NUMBER REV'D APPLICATION INFO	DLC	<i>DJW</i>	5/23/7
ⓑ	REV'D PER DADE COUNTY COMMENTS	DJR	VMA	7/11/06
ⓒ	REV'D DETAILS	GSL	VMA	10-15-98
ⓓ	REV'D DETAILS & ADDED ENG DATA	GSL	VMA	5-1-98
ⓔ	REMOVED ENGINEERING DATA	JAL	VMA	4-17-98

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		REGISTRATION #: STATE OF FLORIDA #0052339		DATE: 3-13-98	
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		CHANGE LETTER		DATE: 3-16-98	
OWNER: DADE CITY, FLORIDA		DESIGNER: RUSKIN Mfg		DATE: 3-16-98	
PROJECT: LOUVER DAMPER ASSY		DRAWN BY: EPE		DATE: 3-16-98	
TITLE: EME6625 & CD50 FASTENER LOADS		CHECKED BY: VMA		DATE: 3-16-98	
PROJECT SCALE: NONE		APPROVED BY: VMA		DATE: 3-16-98	
DRAWING NO.:		PLOT SCALE:		DATE:	
60-021563-06D		NONE			



FRONT VIEW

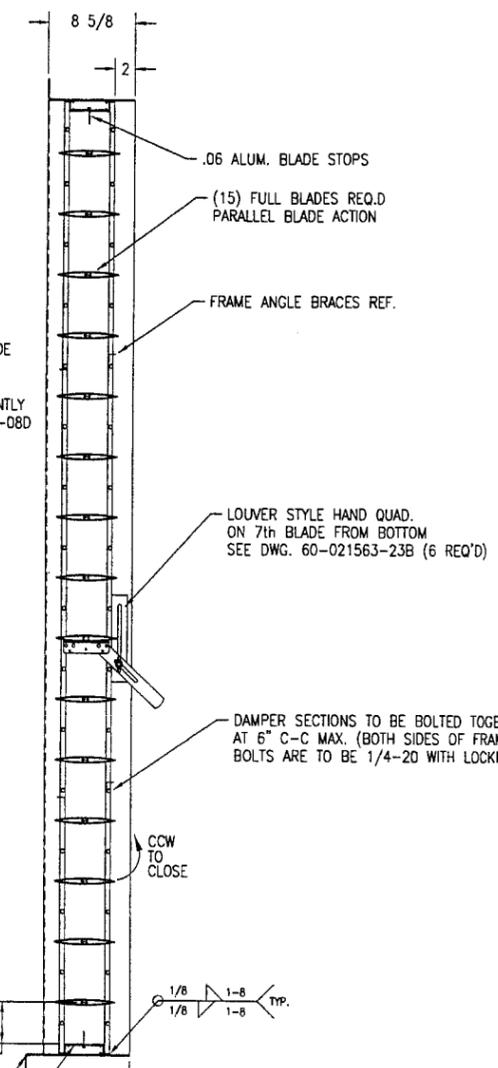
144" ACTUAL DAMPER SIZE

TOP CORNERS TO BE FULL

1/8" TYP.

NOTE: DAMPER TO BE BUILT 6 SECTIONS WIDE x 1 SECTION HIGH WITH EACH SECTION OPERATED INDEPENDENTLY SEE DWG 60-021563-D8D

90 7/16" ACTUAL DAMPER SIZE



SECTION A-A

.06 ALUM. BLADE STOPS

(15) FULL BLADES REQ'D PARALLEL BLADE ACTION

FRAME ANGLE BRACES REF.

LOUVER STYLE HAND QUAD ON 7th BLADE FROM BOTTOM SEE DWG. 60-021563-23B (6 REQ'D)

DAMPER SECTIONS TO BE BOLTED TOGETHER AT 6" C-C MAX. (BOTH SIDES OF FRAME) BOLTS ARE TO BE 1/4"-20 WITH LOCKNUTS

CCW TO CLOSE

1/8" 3/8" TYP BOTH ENDS (BRACE TO FRAME)

3 31/32

10 3/8

1/8" 1-1/2

1/8" 1-8 1-8 TYP.

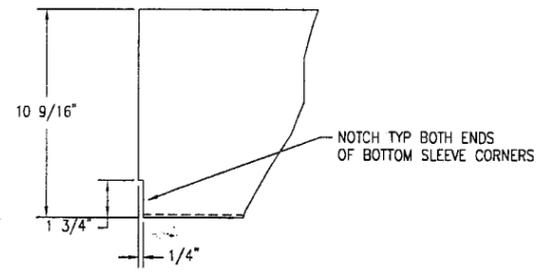
BOTTOM OF SLEEVE TO EXTEND AS SHOWN

TYP AT FRAME CORNERS

FRAMES TO BE WELDED TOGETHER AT CORNERS IN ADDITION TO USING CORNER CLIPS.

FRAME ANGLE BRACES: 3/4" X 3/4" X 1/8" ALUM. TOTAL OF (4) PER DAMPER SECTION (2 ON EACH SIDE) LOCATE NEAR POSITION SHOWN AND SO THAT NO INTERFERENCE TAKES PLACE WHEN BLADES ROTATE.

SLEEVE: 1/8" ALUM. WITH 2" FLANGE. NOTE THAT BOTTOM SLEEVE LENGTH IS LONGER THAN TOP & SIDES



SECTION B-B

NOTCH TYP BOTH ENDS OF BOTTOM SLEEVE CORNERS

REVISIONS

07-0501.13

01/22/2012

By: [Signature]

Mirac Data Product Control Division

*Edward P. Hartman Jr*

*6/27/07*

SHEET 8 OF 31

CHANGE LETTER	REVISION DESCRIPTION	DATE	BY
(C)	ADDED SHEET NUMBER	5/23/77	DJL
(B)	REMOVED ENGINEERING DATA	5-1-98	JAL VMA
(A)	REMOVED ENGINEERING DATA	4-17-98	JAL VMA

DATE	BY	DATE	BY	DATE	BY
4/2/98	DDM	4/13/98	JSB	4/13/97	DVC

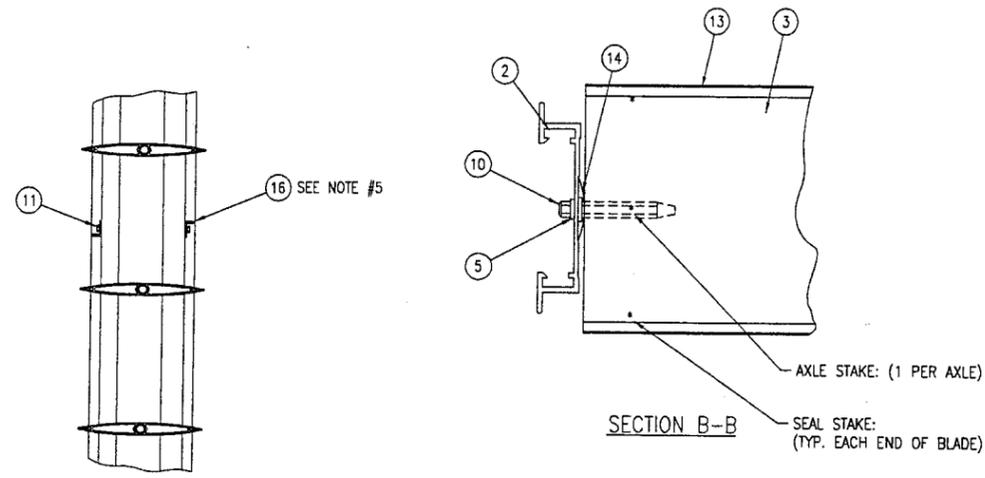
  

FLY SCALE	DWG. CERTIFIED	DATE
NONE	BY: [Signature]	

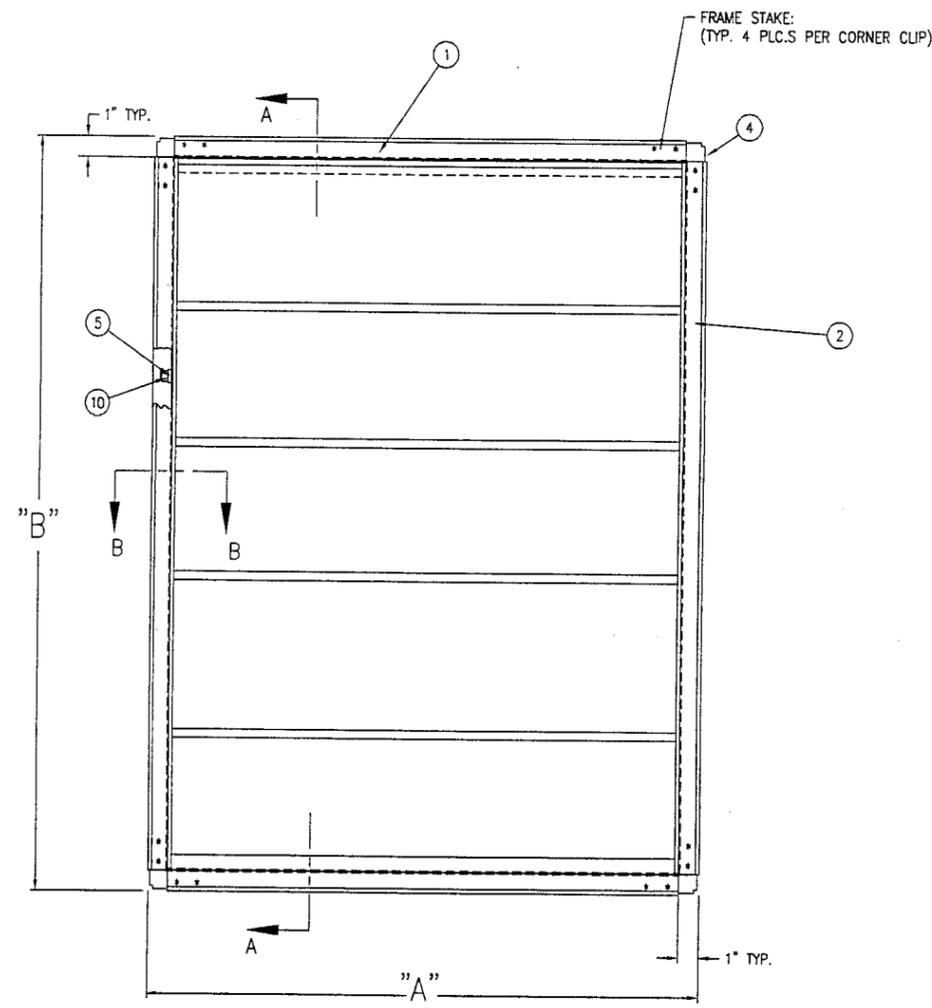
TITLE	DWG. NO.
LOUVER DAMPER ASSEMBLY DADE COUNTY, FLORIDA	60-021563-07D

UNLESS OTHERWISE SPECIFIED USE STANDARD ENGINEERING TOLERANCES

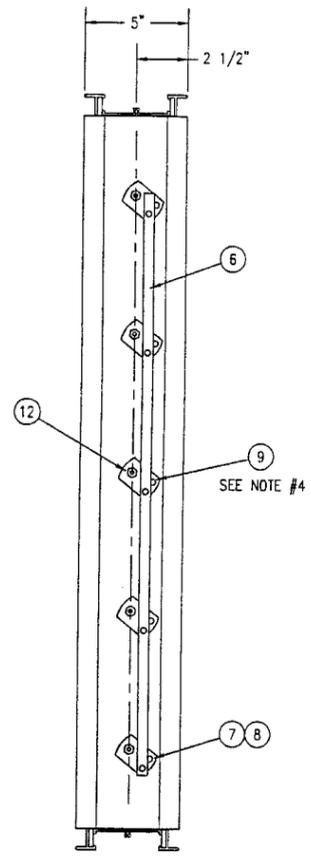


FRAME BRACE DETAIL  
UNITS OVER 48" "B" DIM.

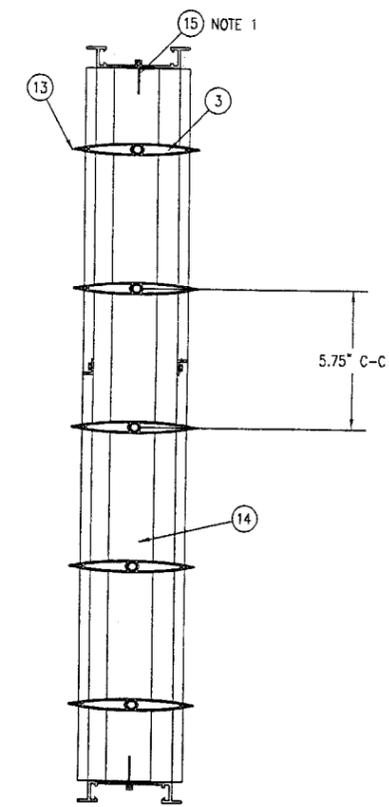
ITEM	DWG. NO.	DESCRIPTION
1	60-021563-09B	FRAME: TOP & BOTTOM
2	60-021563-10B	FRAME: SIDE
3	60-021563-11B	BLADE:
4	60-021563-12B	CORNER CLIP:
5	60-021563-14B	BEARING: SYNTHETIC
6	60-021563-20B	TIEBAR: 1/2" WIDE x 12 GA. GALV.
7		TRUARC RING: (PLTD.) E-25
8	60-021563-15B	"F" LINKAGE ASSEMBLY:
9	60-021563-21B	OVERTRAVEL STOP: 16 GA. GALV.
10	60-021563-18B	IDLER AXLE: (PLTD)
11		TEK SCREW: #10 x 3/4" LG. (PLTD)
12		TRUARC RING: (PLTD.) E-50
13	60-021563-13B	BLADE SEAL: SANTOPRENE
14	60-021563-19B	JAMB SEAL: STN. STL
15		TRAVEL STOP: 1 1/4" X 1" X 3/4" .06 ALUM.
16	Ⓞ	FRAME BRACE: 3/4" x 3/4" x 1/8" thk. ALUM. ANGLE
17		
18		
19		
20		
21		
22		
23		
24		
25		



FACE VIEW  
SHOWN CLOSED



RIGHT SIDE VIEW  
PARALLEL BLADE  
SHOWN CLOSED



SECTION A-A  
SHOWN OPEN

- NOTES:
- TRAVEL STOP (ITEM 15) TO BE CENTERED ALONG BLADE LENGTH WITH 1" LEG ATTACHED TO FRAME BY 1/16" WELDS, # 10 TEK SCREWS OR 3/16" RIVETS. 1 1/4" LEG TO BE 1/16" AWAY FROM BLADE IN FULLY CLOSED POSITION.
  - BLADE LENGTH TO BE 9/32" LESS THAN INSIDE FRAME DIM.
  - FRAMES TO BE CAULKED AT CORNERS.
  - ONE OVER TRAVEL STOP (ITEM 9) REQUIRED ON P.B. DAMPERS ONLY.
  - FRAME BRACE (ITEM #16) IS REQUIRED ON ALL UNITS ABOVE 48" "B" DIMENSION, LOCATED APPROXIMATELY CENTER OF DAMPER FRONT AND BACK SIDES.

07-0501.13  
01/28/2012  
By: [Signature]  
Title: [Signature]

Edward P. Hutson Jr.  
6/27/2007

SHEET 9 OF 31

ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98
DATE	BY	DATE	DATE	DATE
4/2/98	DDM	4/13/98	DVC	4/13/98

REVISION	DESCRIPTION	DATE
Ⓞ	ADDED SHEET NUMBER	5/23/77
Ⓛ	DADE CO. COMMENTS	7-31-98
Ⓚ	ADDED ENGINEERING DATA	5-1-98
Ⓜ	REMOVED ENGINEERING DATA	4-17-98

ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98

REVISION	DESCRIPTION	DATE
Ⓚ	REMOVED ENGINEERING DATA	4-17-98

DATE	BY	DATE	DATE	DATE
4/2/98	DDM	4/13/98	DVC	4/13/98

ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98

REVISION	DESCRIPTION	DATE
Ⓚ	REMOVED ENGINEERING DATA	4-17-98

ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98

REVISION	DESCRIPTION	DATE
Ⓚ	REMOVED ENGINEERING DATA	4-17-98

ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98

REVISION	DESCRIPTION	DATE
Ⓚ	REMOVED ENGINEERING DATA	4-17-98

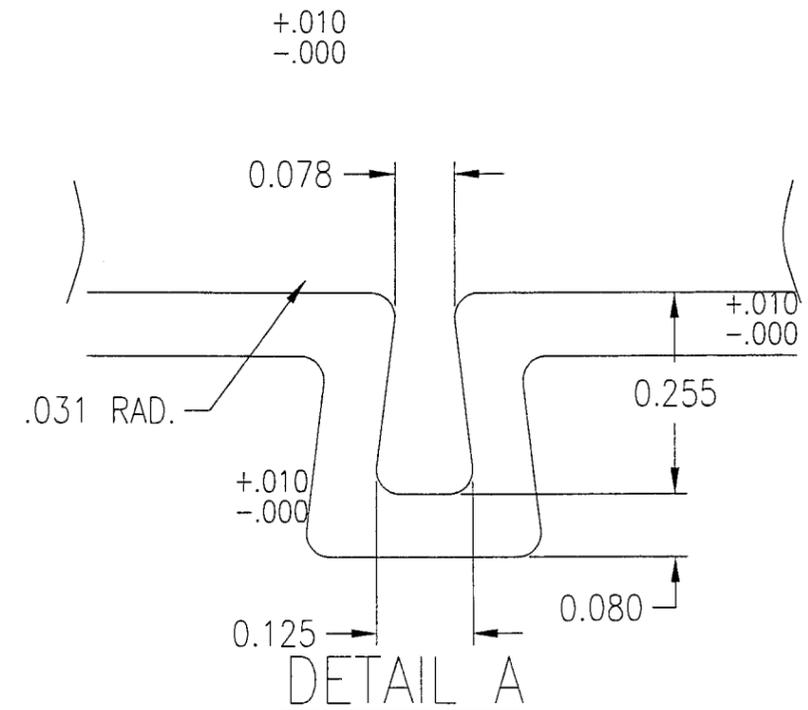
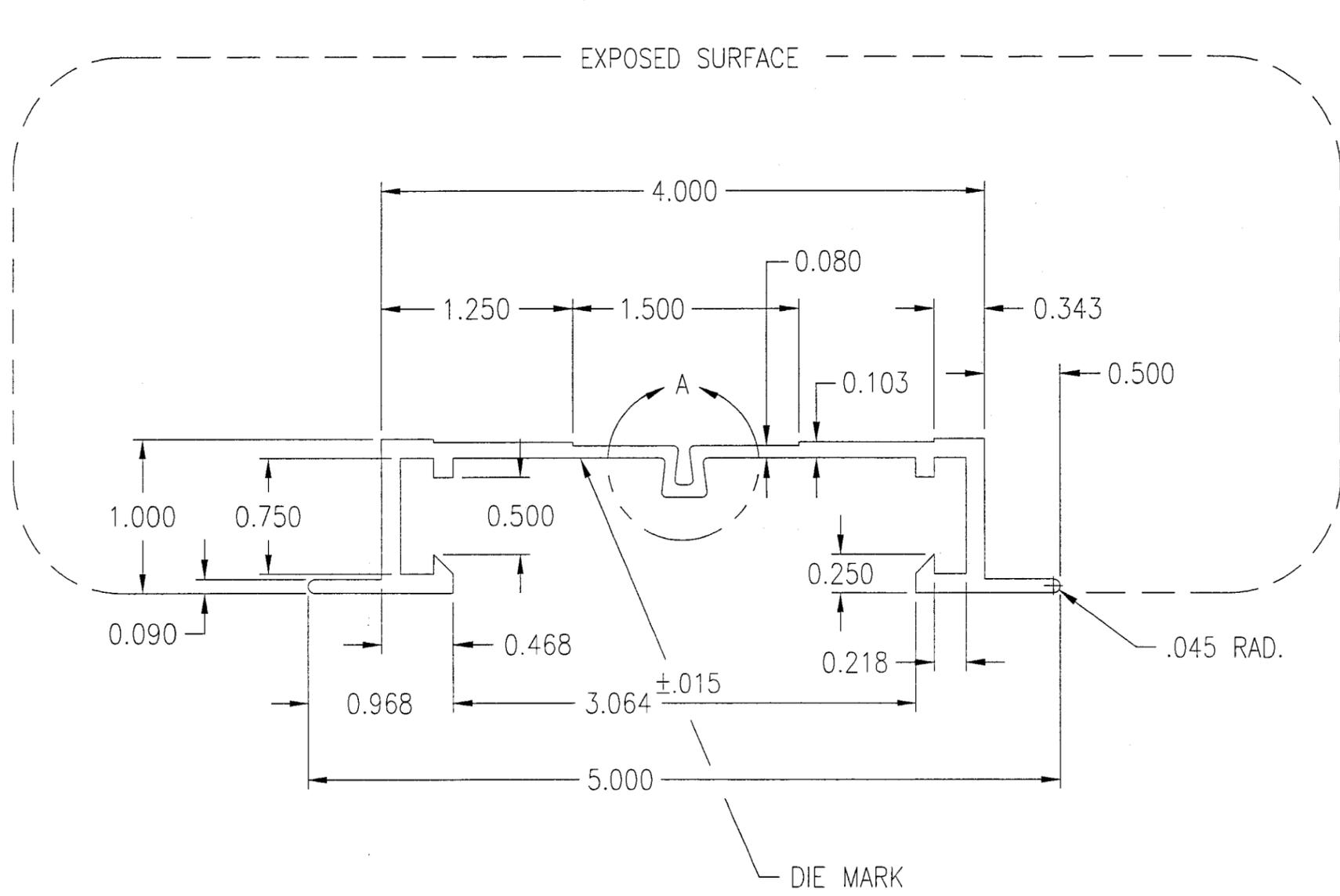
ENGINEER OF RECORD	REGISTRATION #	STATE OF FLORIDA	DISCIPLINE	DATE
EDWARD PAUL HUTSON JR.	#0052339	FLORIDA	STRUCTURAL ENGINEER	4/2/98

REVISION	DESCRIPTION	DATE
Ⓚ	REMOVED ENGINEERING DATA	4-17-98

UNLESS OTHERWISE SPECIFIED USE  
STANDARD ENGINEERING TOLERANCES

CD-50  
STANDARD DAMPER  
ASSEMBLY  
60-021563-08D



FOR OFFICE USE ONLY

PROJECT REVIEWED  
 as an engineering firm in Florida  
 License No. 07-0501-13  
 Expiration Date 01/20/2012  
 Signature: *[Signature]*  
 State of Florida  
 Board of Professional Engineers

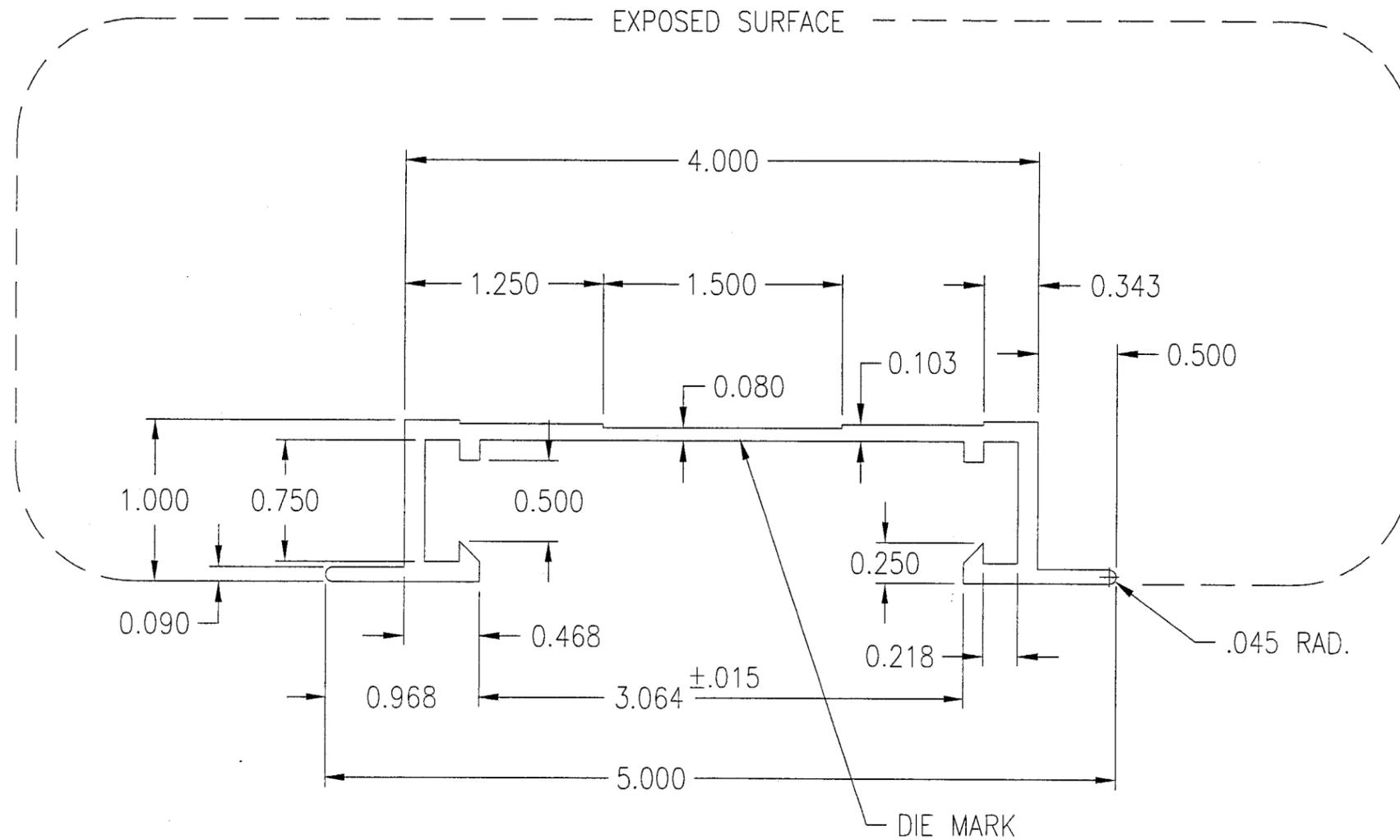
*Edward P. Hutson Jr.*  
 6/27/2007

NOTES:

1. ALUMINUM ASSOC. TOLERANCES APPLY UNLESS NOTED OTHERWISE
2. MAX. RISE AT CORNERS OF 4" WEB TO BE NO GREATER THAN .020

SHEET 10 OF 31

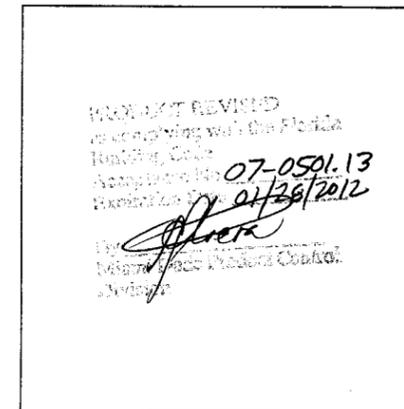
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	<b>RUSKIN Mfg.</b> air handling specialties 3900 DR. GREAVES RD. GRANDVIEW MD 64030	PLOT SCALE		DWG. CERTIFIED	
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98		NONE		BY: _____ DATE: _____	
MAT'L. 6063-T52 EXTRUDED ALUMINUM TYP. WALL THK. .125 UNLESS NOTED		TITLE CD-50 TOP AND BOTTOM FRAME		DWG. NO. 60-021563-09B			



NOTES:

1. ALUMINUM ASSOC. TOLERANCES APPLY UNLESS NOTED OTHERWISE
2. MAX. RISE AT CORNERS OF 4" WEB TO BE NO GREATER THAN .020

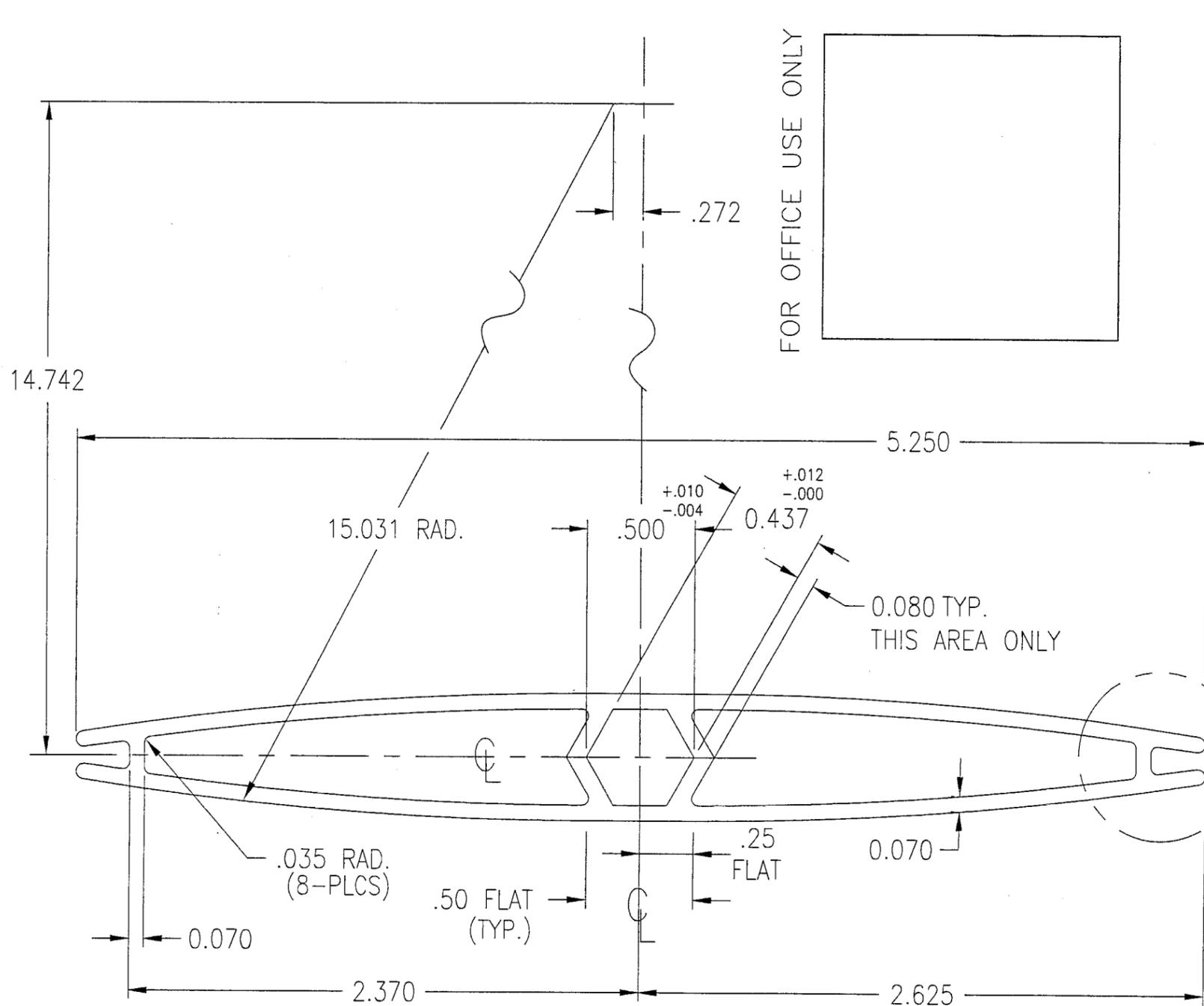
FOR OFFICE USE ONLY



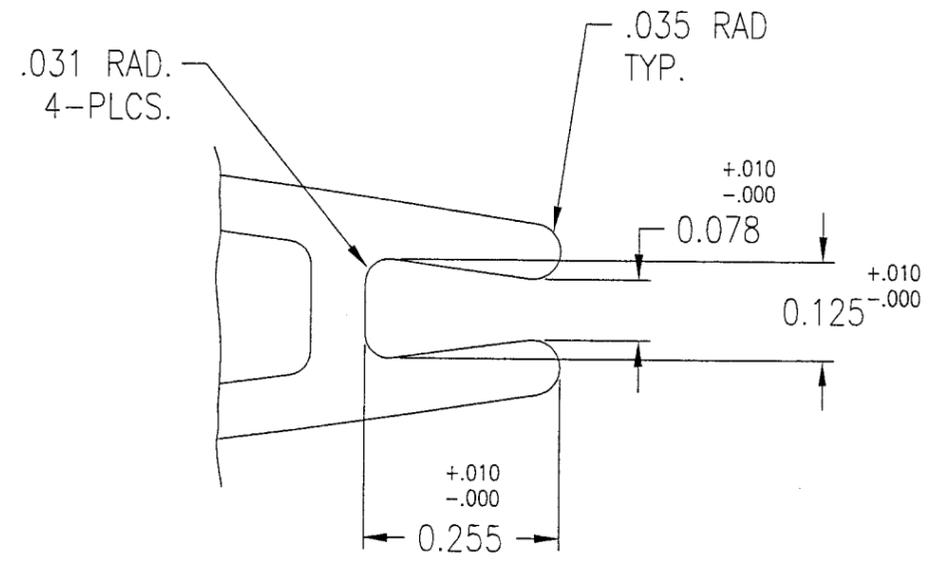
*Edward P. Hutson Jr.*  
6/27/2007

SHEET 11 OF 31

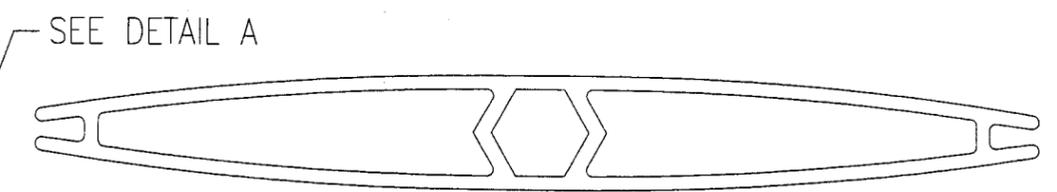
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7	
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				⊕	REMOVED ENGINEERING DATA	JAL					
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE	
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	<b>RUSKIN Mfg.</b>			PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	air handling specialties 3900 DR. GREAVES RD. GRANDVIEW MD 64030			NONE		BY: _____ DATE: _____		
MAT'L. 6063-T52 EXTRUDED ALUMINUM TYP. WALL THK. .125 UNLESS NOTED				TITLE CD-50 SIDE FRAME			DWG. NO. 60-021563-10B				



SCALE: 1.5X



DETAIL A  
SCALE: 4X



ACTUAL SIZE

PROJECT NO. 07-0501.13  
 APPROVED: 01/28/2012  
 BY: [Signature]

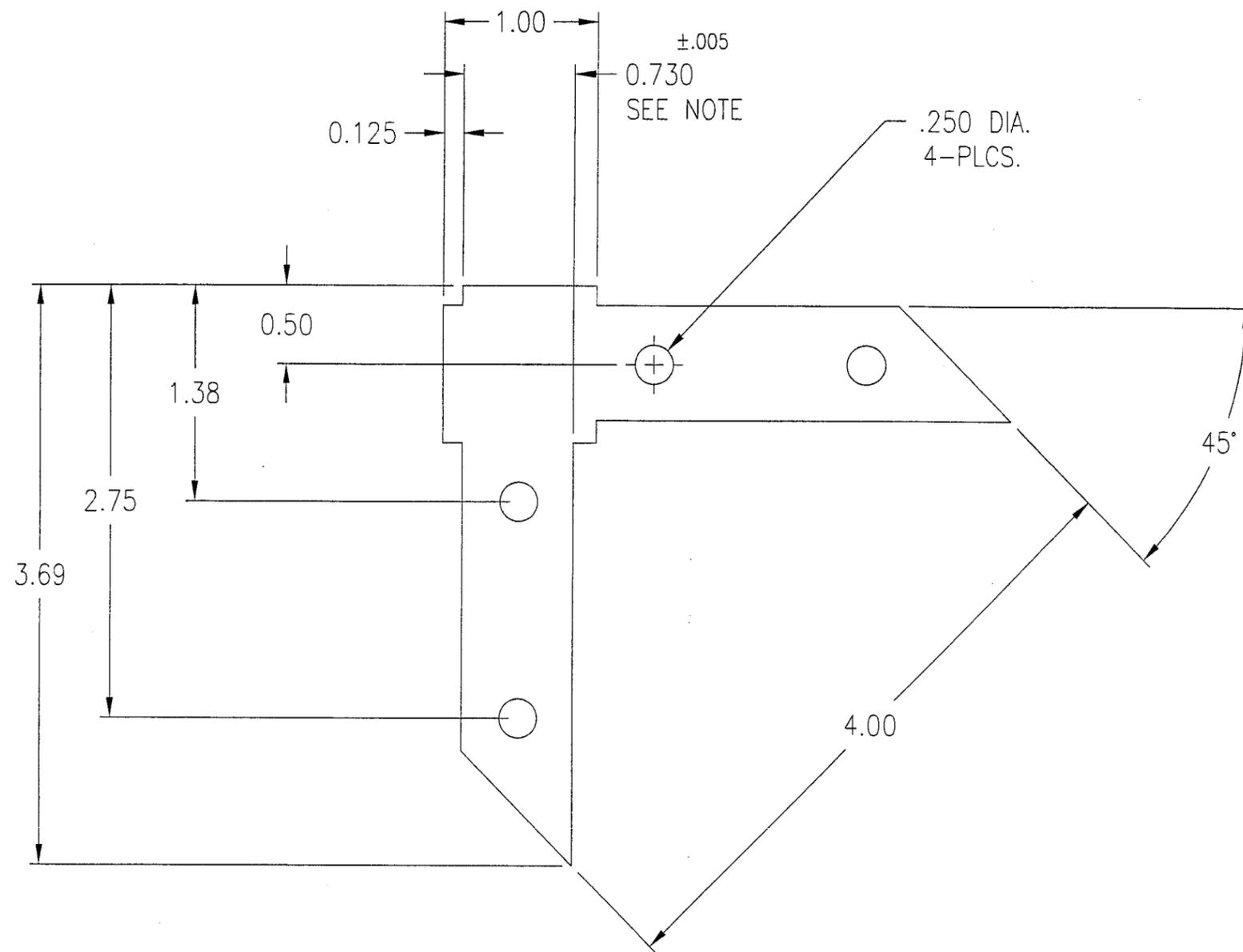
*Edward P. Hutson Jr.*  
 6/27/2007

SHEET 12 OF 31

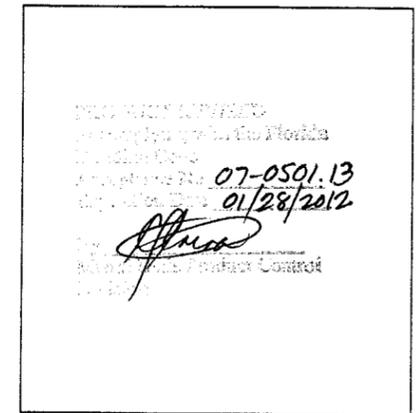
NOTE:  
 1. USE STANDARD ALUMINUM ASSOCIATION TOLERANCES WILL APPLY UNLESS OTHERWISE SPECIFIED.

TOLERANCES:  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS:  
 WITH 2 DECIMAL PLACES, ±.020  
 WITH 3 DECIMAL PLACES, ±.010  
 FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		G	ADDED SHEET NUMBER	DLC	DJR	DJR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		A	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED	
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____	
MAT'L. 6063-T5 EXTRUDED ALUMINUM			TITLE	CD-50 BLADE		DATE: _____	
				DWG. NO.		60-021563-11B	



FOR OFFICE USE ONLY



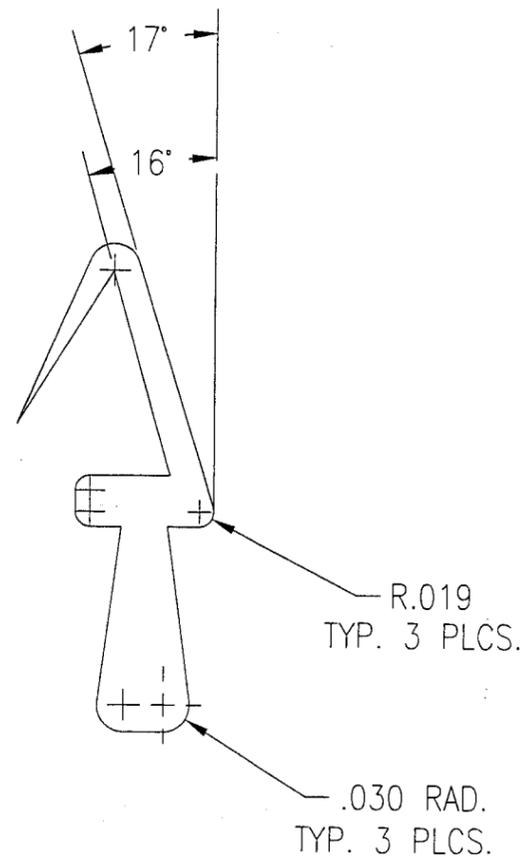
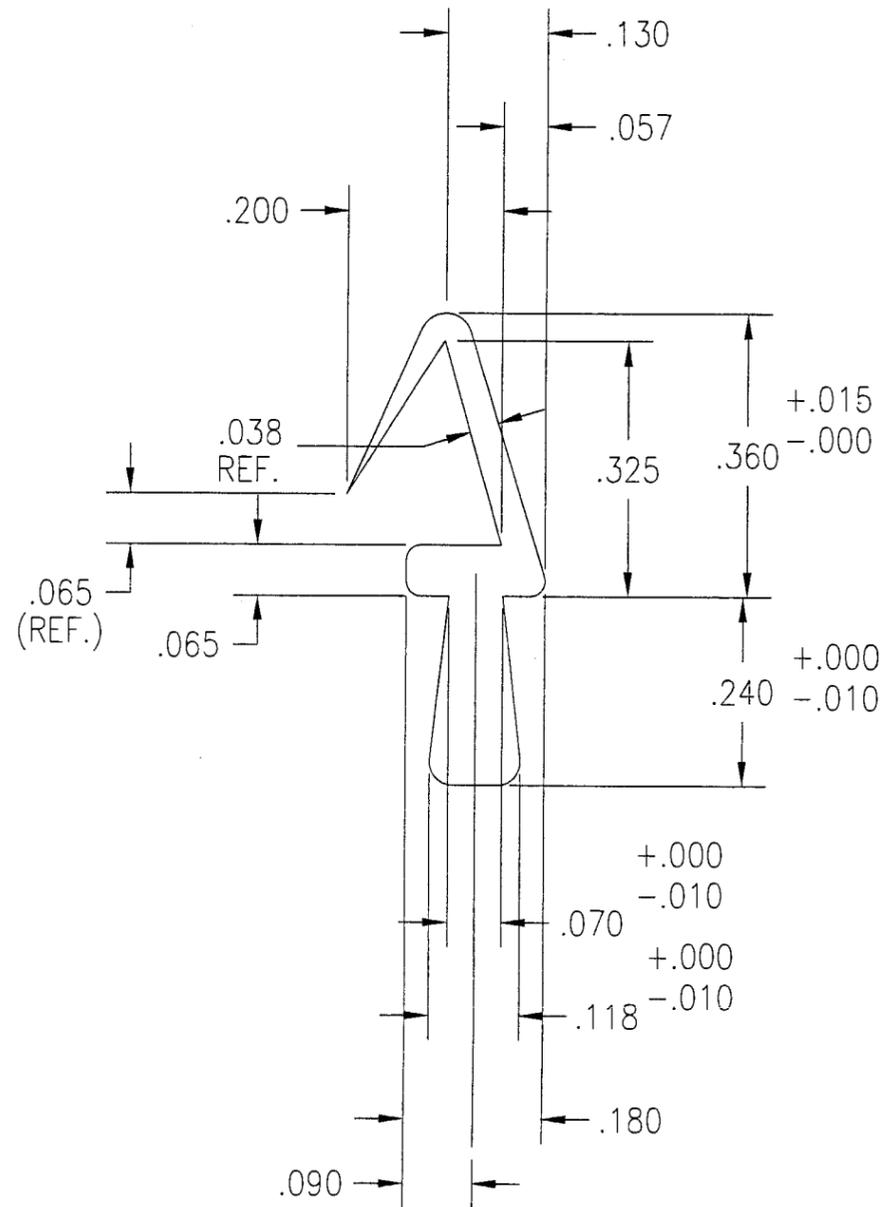
NOTE:  
1. .730 DIMENSION IS CRITICAL.

*Edward P. Hutson Jr.*  
6/27/2007

SHEET 13 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				Ⓞ	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				ⓐ	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	RUSKIN Mfg. Grandview, MD PROPRIETARY INFORMATION		PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:			NONE		BY: _____ DATE: _____		
MAT'L. .208 THK. ALUMINUM 6063-T52				TITLE ALUM. FRAME CORNER CLIP		DWG. NO. 60-021563-12B				



↑  
ACTUAL SIZE

FOR OFFICE USE ONLY

07-0501.13 01/28/2012 
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*Edward P. Hutson Jr.*  
6/27/2007

4 x SIZE

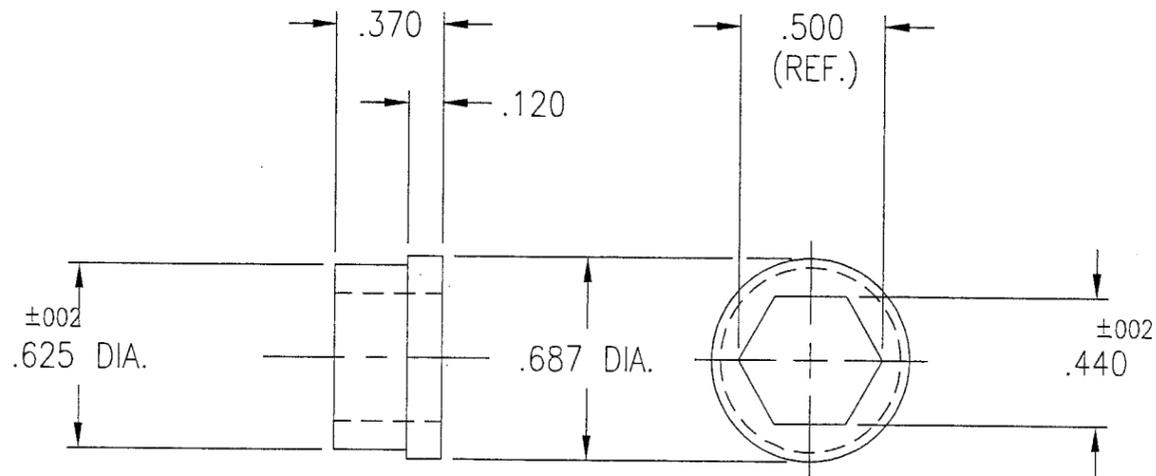
SHEET 14 OF 31

NOTE: 1. BLADE SEAL IS TO BE USED ON: CD-40, 403, 50 AND 504 DAMPERS.

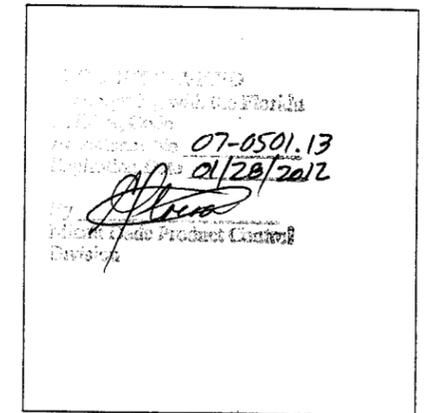
TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		Ⓞ	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		ⓐ	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
MATERIAL: SANTOPRENE (65 DURO) REED MATERIAL XSA65-591		TITLE CONTROL DAMPER BLADE SEAL		DWG. NO. 60-021563-13B				

**RUSKIN Mfg.** Grandview, MD  
PROPRIETARY INFORMATION



FOR OFFICE USE ONLY



*Edward P. Hutson Jr.*  
6/27/2007

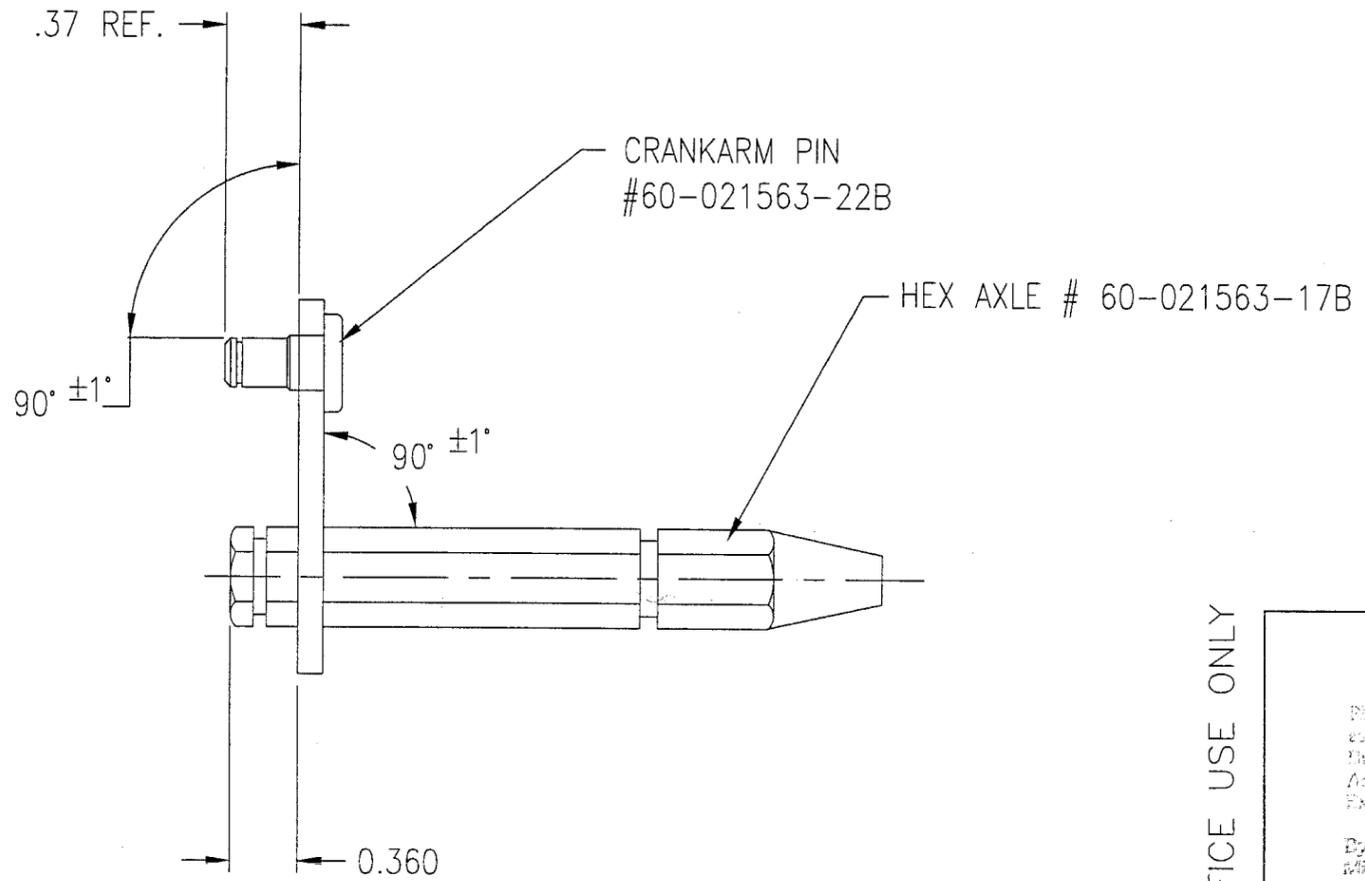
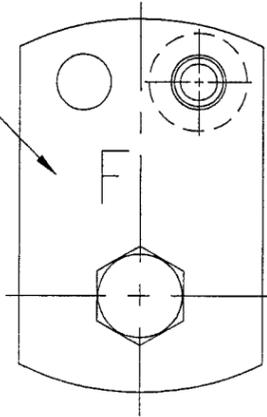
SHEET 15 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
MAT'L. LEXAN GE141		TITLE BEARING, AXLE .370 LG W/.120 FLANGE		DWG. NO.		60-021563-14B		

**RUSKIN Mfg.** Grandview, MO  
PROPRIETARY INFORMATION

CRANKARM PLATE  
#60-021563-16B



FOR OFFICE USE ONLY

PART LOCATED AND  
 ASSEMBLED WITH THE PROPER  
 TOOLS AND  
 EQUIPMENT. 07-0501.13  
 ENGINEERED BY: 01/28/2012  
 [Signature]  
 Division

NOTE:

1. "F" INDICATES PIN IS IN RIGHT HAND HOLE.

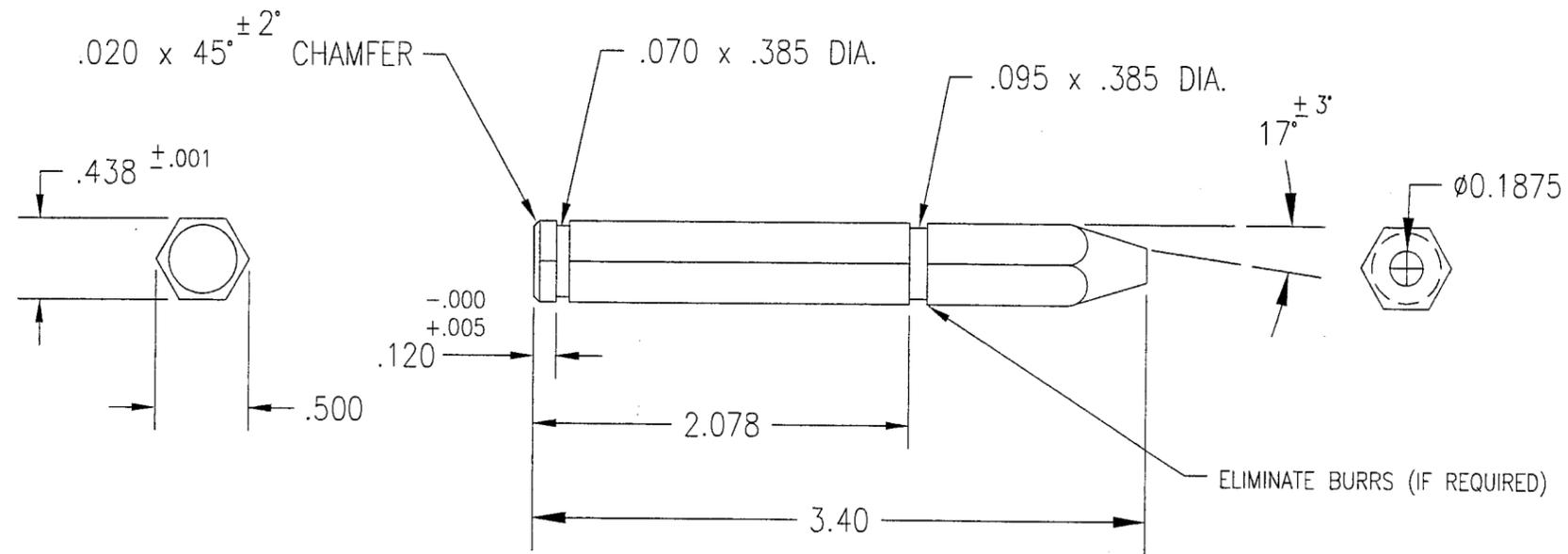
SHEET 16 OF 31

*Edward P. Hutson Jr.*  
6/27/2007

TOLERANCES:  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS:  
 WITH 2 DECIMAL PLACES, ±.020  
 WITH 3 DECIMAL PLACES, ±.010  
 FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
PLTD. STL.		TITLE "F" SIDE LINKAGE CRANK-ARM ASSY		DWG. NO. 60-021563-15B				
		RUSKIN Mfg. Grandview, MD PROPRIETARY INFORMATION						





*Edward P. Hutson Jr.*  
 6/27/2007

FOR OFFICE USE ONLY

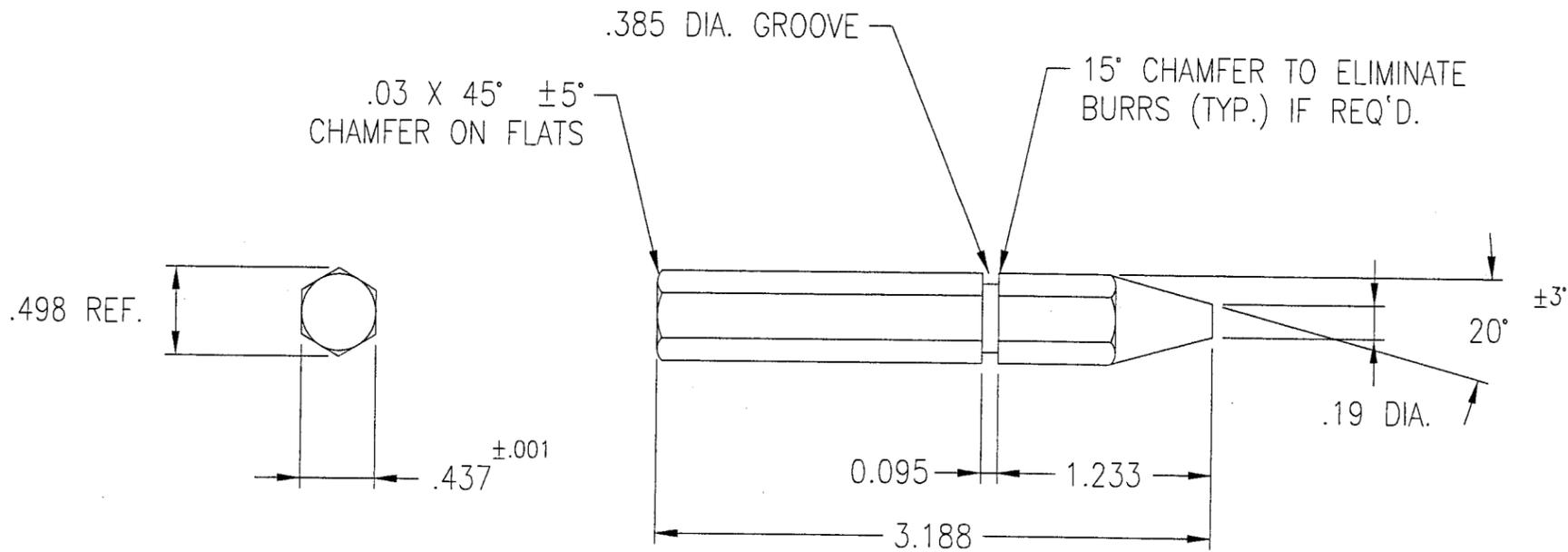
PRODUCT REVIEW  
 07-0501.13  
 01/28/2012  
 [Signature]

SHEET 18 OF 31

TOLERANCES:  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS:  
 WITH 2 DECIMAL PLACES, ±.020  
 WITH 3 DECIMAL PLACES, ±.010  
 FRACTION DIMENSIONS AS MARKED.

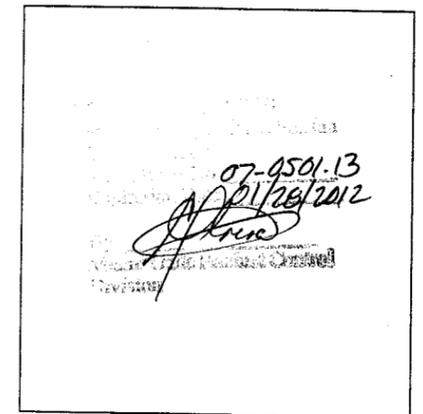
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
7/16" HEX STL. ZINC PLTD			TITLE	7/6" HEX AXLE		DWG. NO. 60-021563-17B		

RUSKIN Mfg. Grandview, MD  
 PROPRIETARY INFORMATION



*Edward P. Hutson Jr.*  
6/27/2007

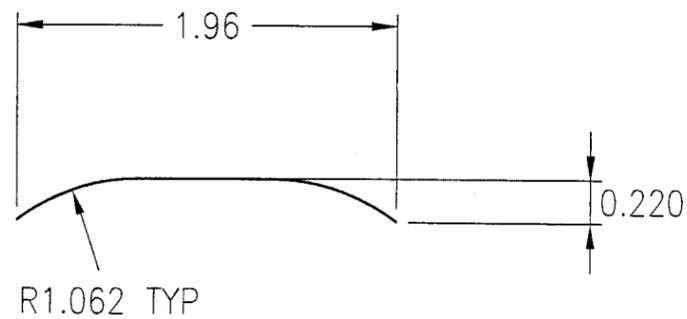
FOR OFFICE USE ONLY



SHEET 19 OF 31

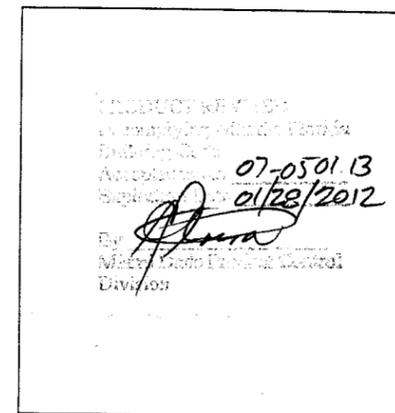
TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				⊕	ADDED SHEET NUMBER	DLC	DJR	DJR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				⊕	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JBS	APPV'D. BY: DVC	APPV'D. BY:	<b>RUSKIN Mfg.</b> Grandview, MD PROPRIETARY INFORMATION		PLOT SCALE		DWG. CERTIFIED	
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:			NONE		BY: _____ DATE: _____	
7/16" HEX STL. ZINC PLTD				TITLE 7/16" HEX IDLER AXLE		DWG. NO. 60-021563-18B			



*Edward P. Hutson Jr.*  
6/27/2007

FOR OFFICE USE ONLY

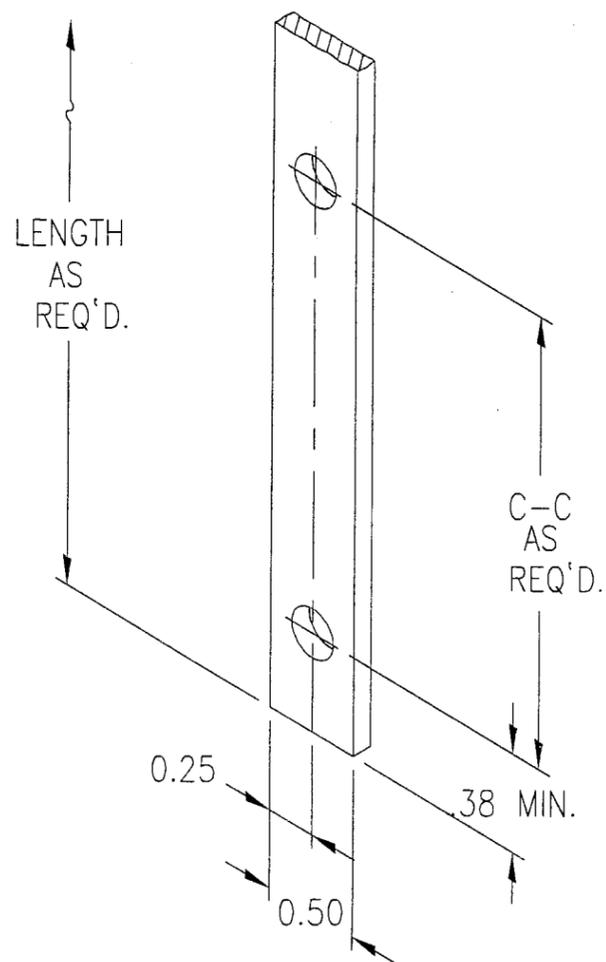


SHEET 20 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

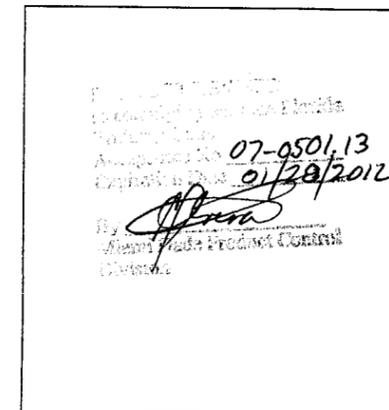
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		Ⓞ	ADDED SHEET NUMBER	DLC	DSR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		Ⓐ	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/97	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
MAT'L. .007" THK. TYPE 301 STN. STL. SPRING			TITLE JAMB SEAL	DWG. NO. 60-021563-19B				

**RUSKIN Mfg.** Grandview, MD  
PROPRIETARY INFORMATION



*Edward P. Hutson Jr.*  
6/27/2007

FOR OFFICE USE ONLY

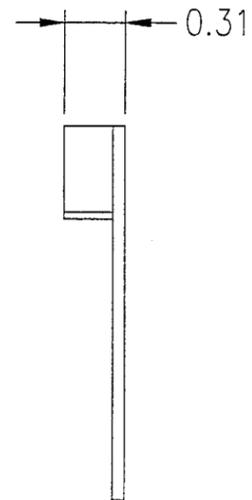
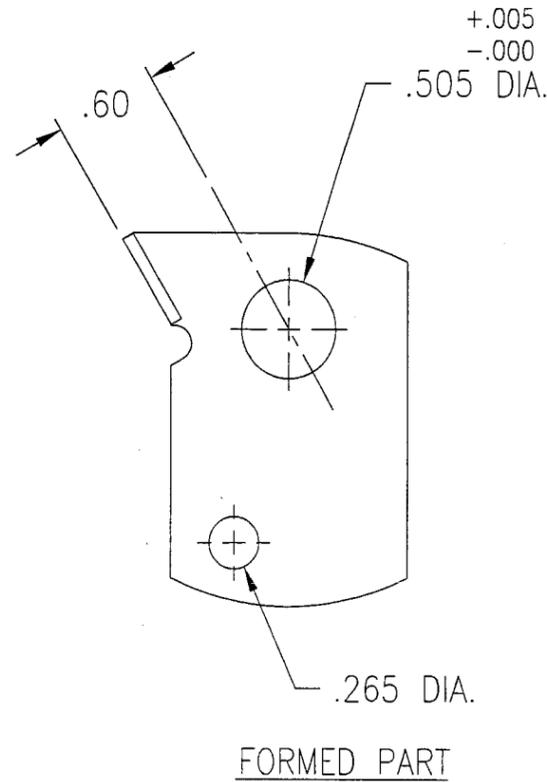
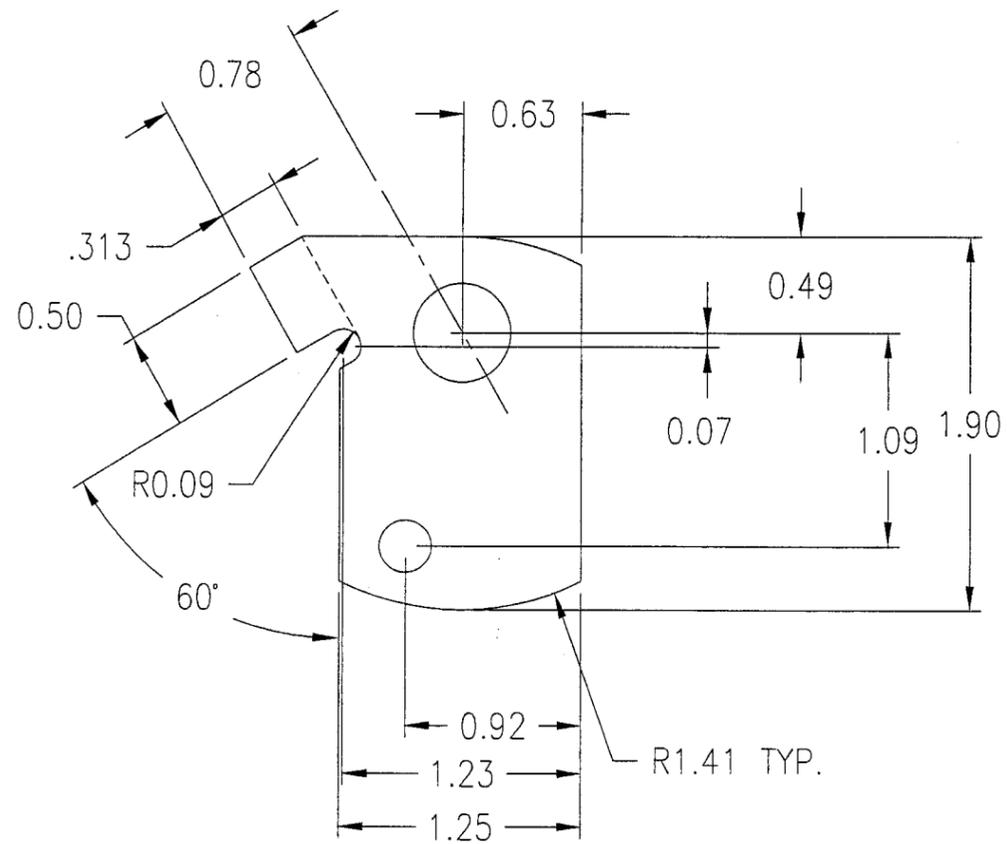


SHEET 21 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

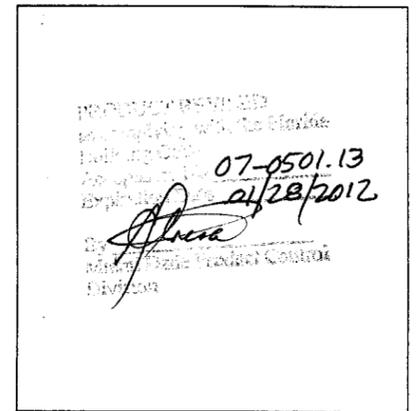
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERING DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
MATL: 12 GA GALV.		TITLE LINKAGE TIEBAR		DWG. NO. 60-021563-20B				

**RUSKIN Mfg.** Grandview, MO  
PROPRIETARY INFORMATION



*Edward P. Hutson Jr.*  
6/27/2007

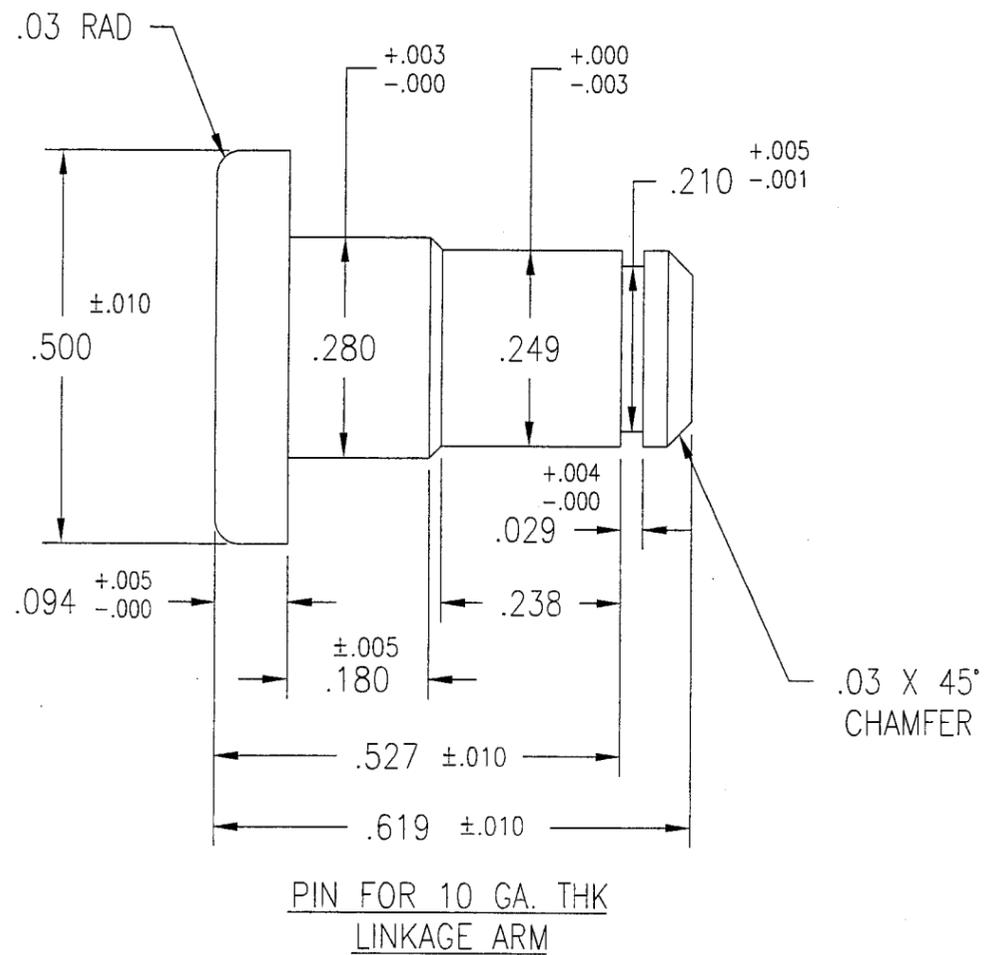
FOR OFFICE USE ONLY



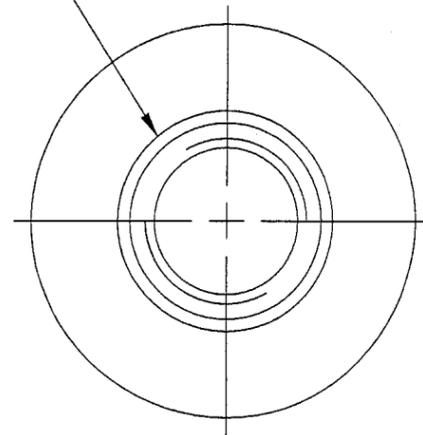
SHEET 22 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				G	ADDED SHEET NUMBER	DLC	DJR	DIR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				A	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	RUSKIN Mfg. Grandview, MD		PLOT SCALE		DWG. CERTIFIED	
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	PROPRIETARY INFORMATION		NONE		BY: _____	
MAT'L. 16 GA. GALV.				TITLE		CONCEALED LINKAGE OVER-TRAVEL STOP		DATE: _____	
				DWG. NO.		60-021563-21B			



HEAD TO SHANK TOLERANCE  
.006 T.I.R.



TYPICAL  
END VIEW

.03 X 45°  
CHAMFER

*Edward P. Hutson Jr.*  
6/27/2007

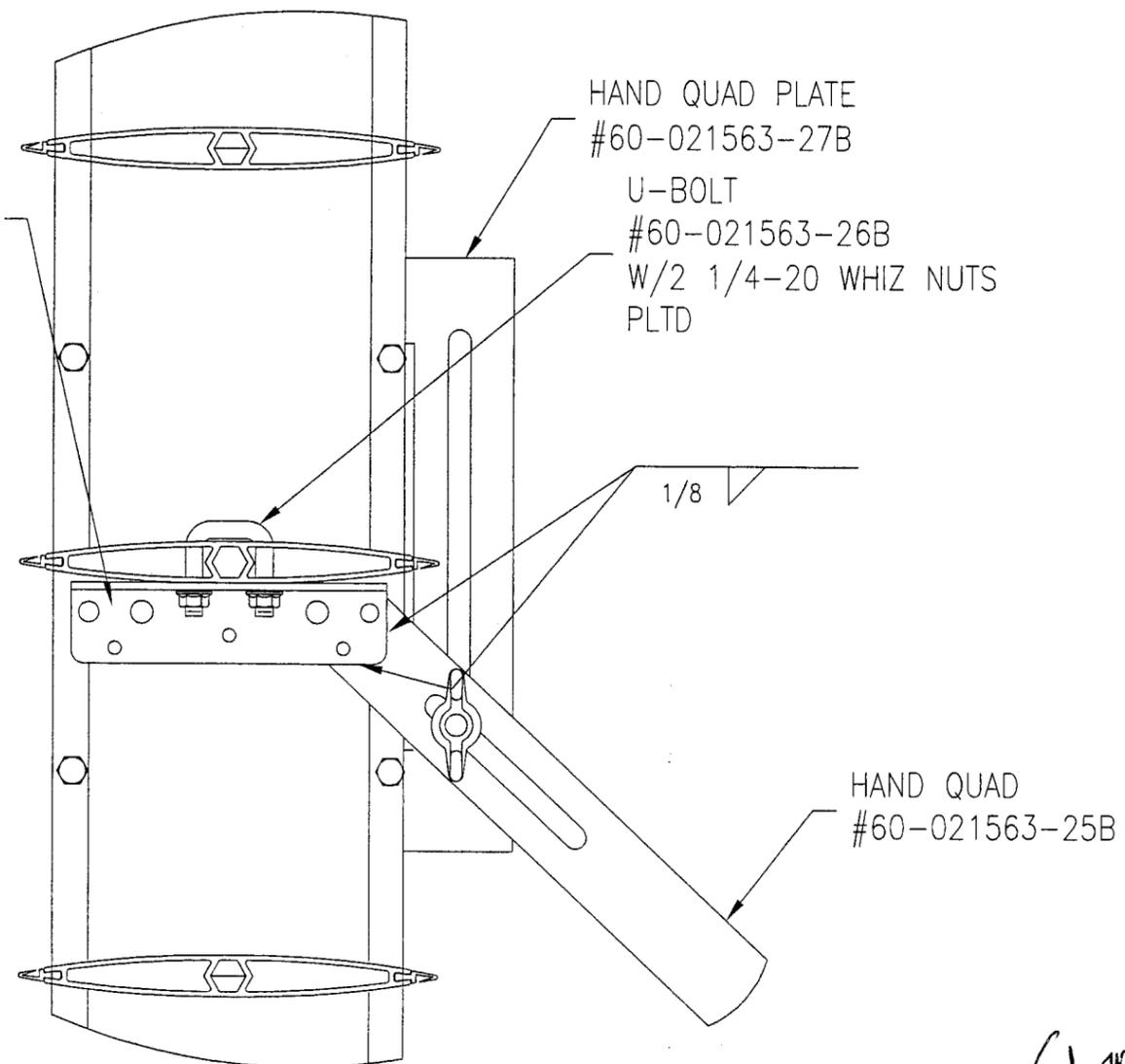
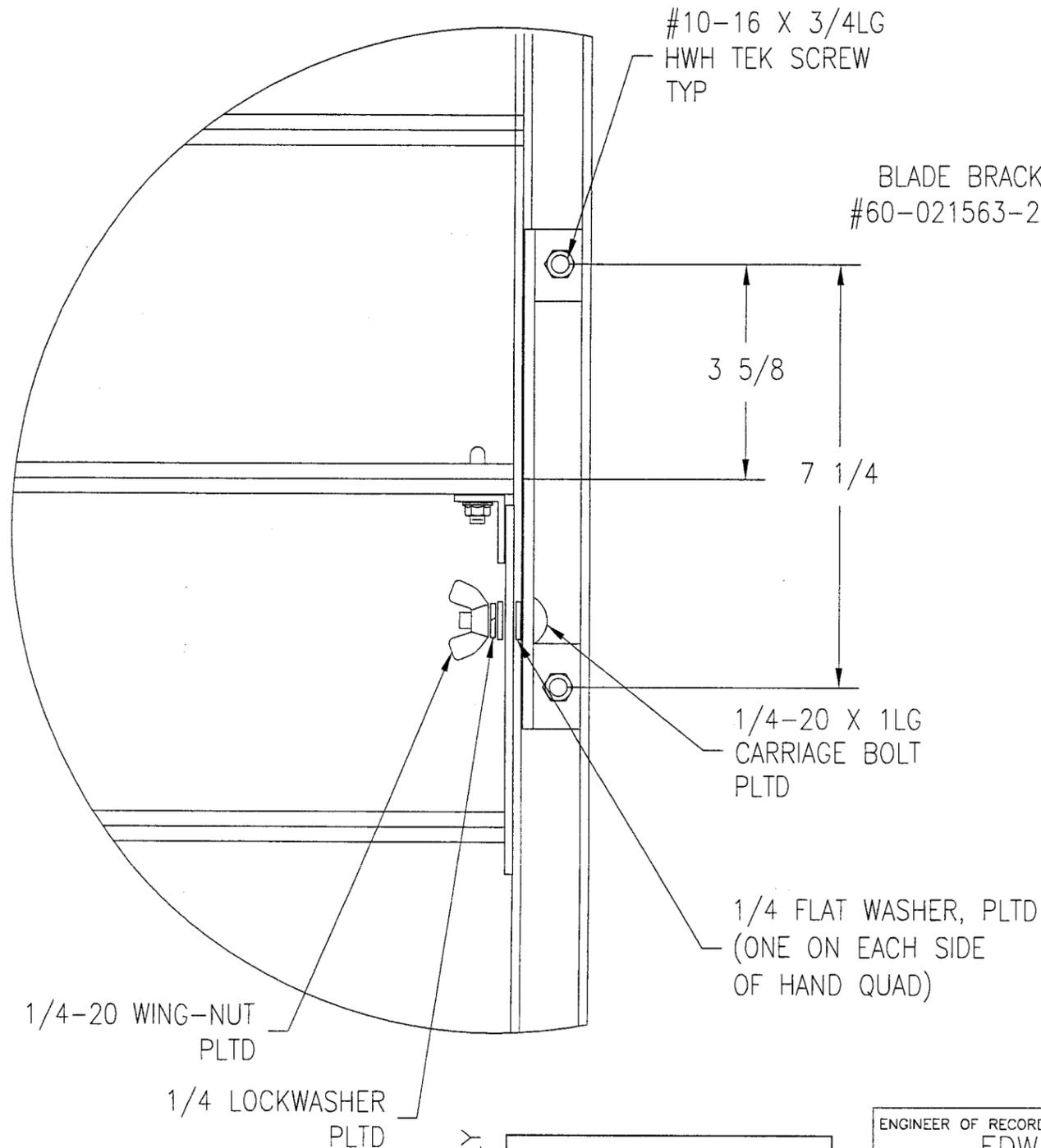
FOR OFFICE USE ONLY

PRODUCT REVISED  
as complying with the Florida  
Building Code  
According to 07-0501.13  
Expiration Date 01/28/2012  
By *[Signature]*  
Miami Dade Product Control  
Division

SHEET 23 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				G	ADDED SHEET NUMBER	DLC	DJR	DJR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				A	REMOVED ENGINEERING DATA	JAL			
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	RUSKIN Mfg. Grandview, MD		PLOT SCALE		DWG. CERTIFIED	
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	PROPRIETARY INFORMATION		NONE		BY: _____ DATE: _____	
MATERIAL: 305 SS				TITLE CRANK PIN		DWG. NO. 60-021563-22B			



*Edward P Hutson Jr*  
6/27/2007

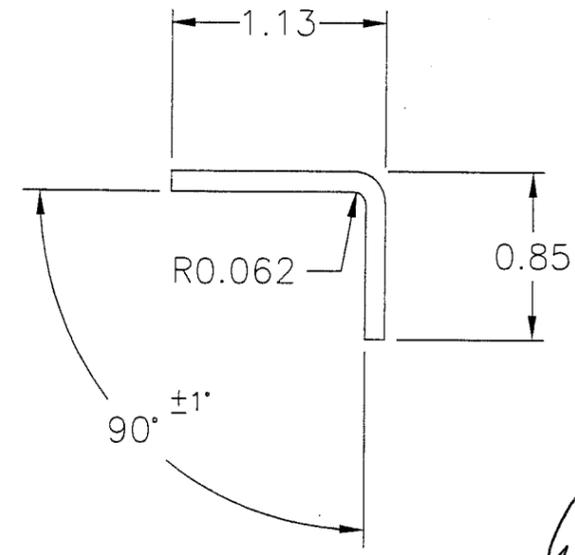
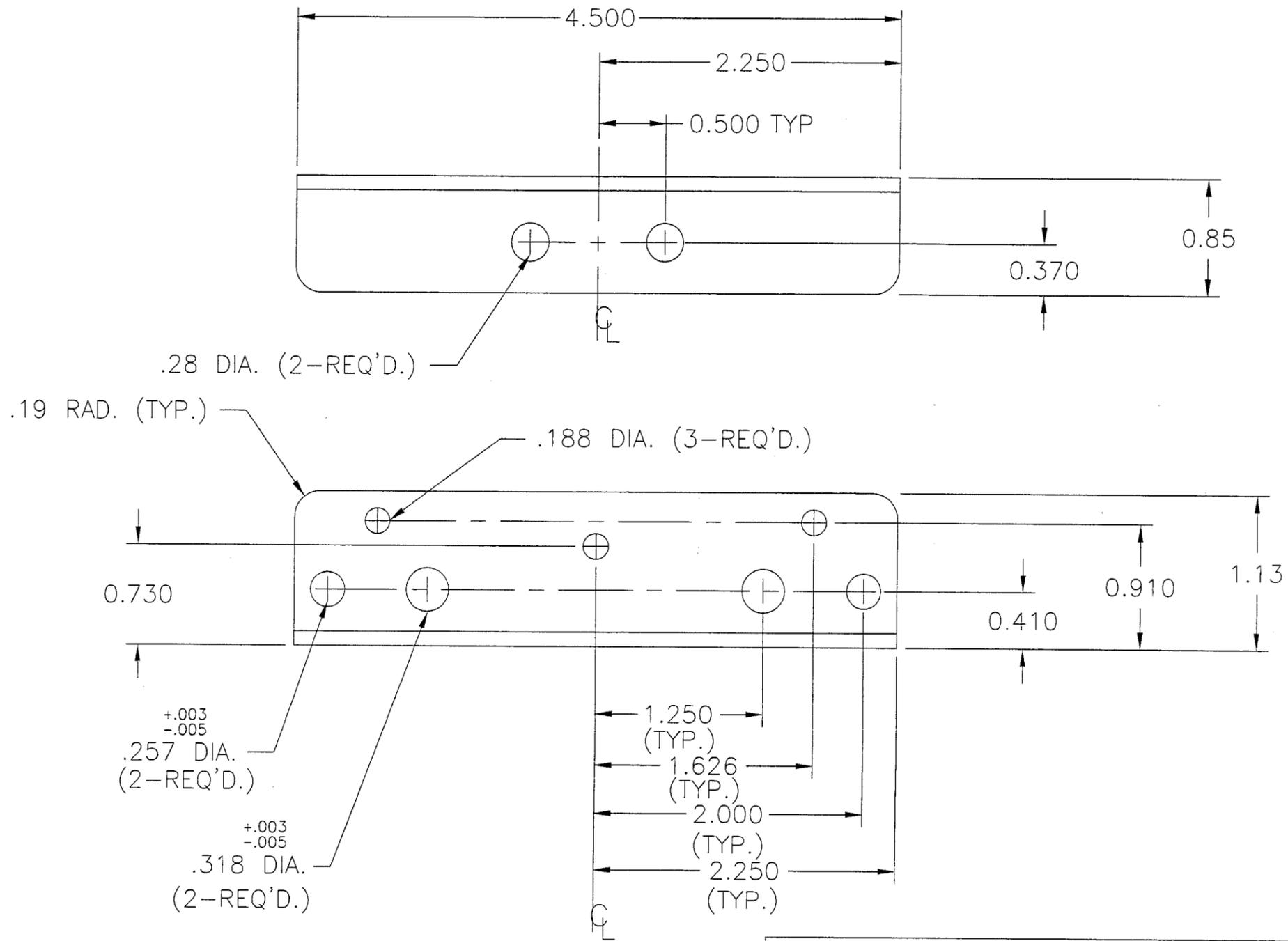
SHEET 24 OF 31

FOR OFFICE USE ONLY

PRODUCT PROVIDED:  
in compliance with the Florida  
Building Code  
License No. 07-0501-13  
Date: 01/26/2012  
By: *[Signature]*  
Military Type Products Company

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		G	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		A	REMOVED ENGINEERS DATA	JAL	VMA			4-17-98
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
TITLE HAND QUAD CD-50 DAMPER			DWG. NO. 60-021563-23B					

**RUSKIN Mfg.** Grandview, MD  
PROPRIETARY INFORMATION



*Edward P. Hutson Jr.*  
4/27/2007

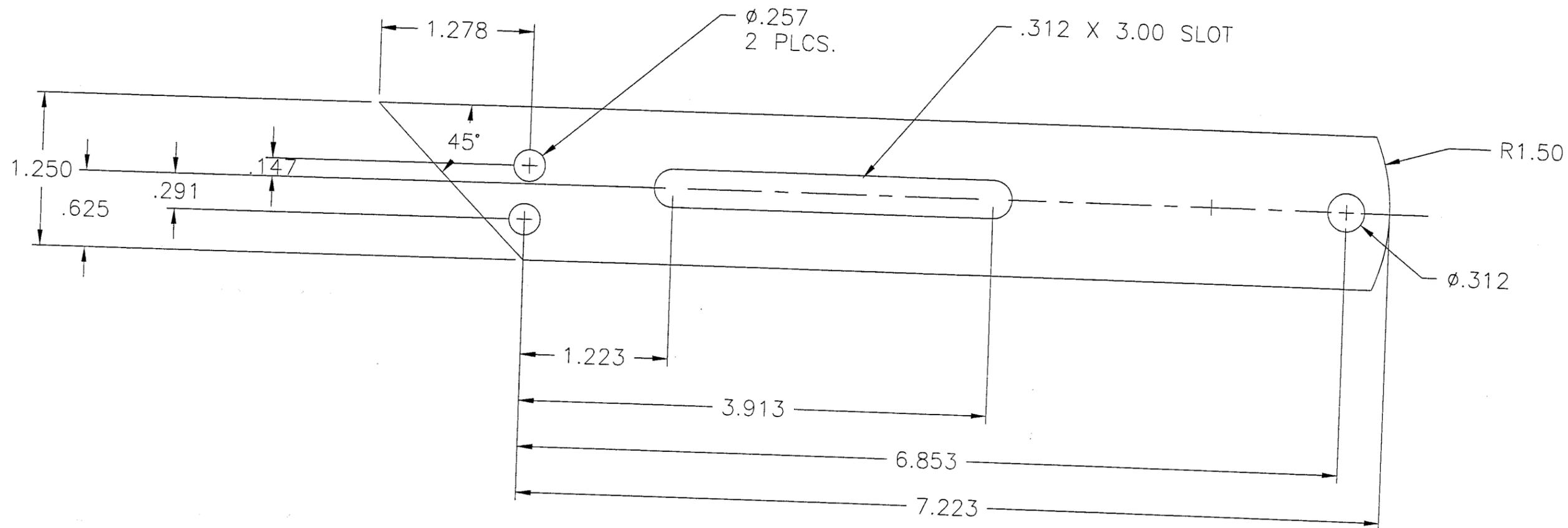
FOR OFFICE USE ONLY

07-0501.13  
 4/27/2007  
 By: *[Signature]*  
 Division:

SHEET 25 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

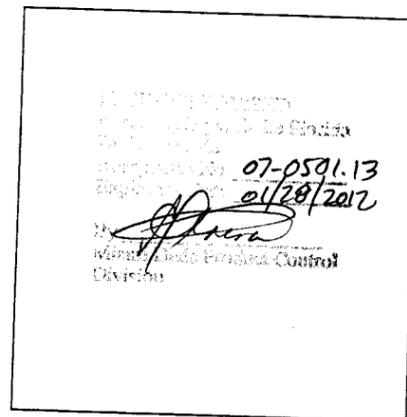
ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				⊕	ADDED SHEET NUMBER	DLC	DIR DIR	5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				⊕	REMOVED ENGINEERS DATA	JAL		
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	RUSKIN Mfg. Grandview, MD		PLOT SCALE		DWG. CERTIFIED
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	PROPRIETARY INFORMATION		NONE		BY: _____
MATL: 12 GA. GALV.				TITLE	AIRFOIL BLADE BRKT	DWG. NO.		
						60-021563-24B		



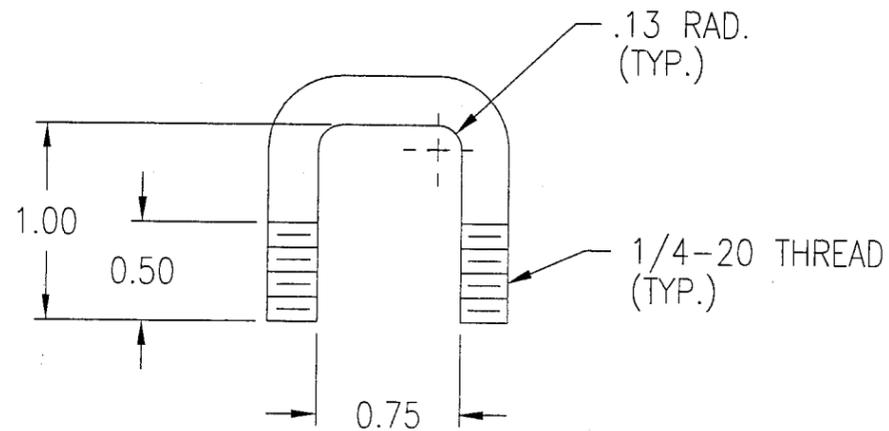
*Edward P Hutson Jr*  
6/27/2007

SHEET 26 OF 31

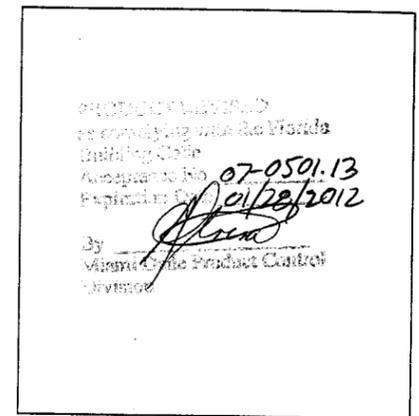
FOR OFFICE USE ONLY



ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		Ⓞ	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		ⓐ	REMOVED ENGINEERS DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	RUSKIN Mfg. Grandview, MD		PLOT SCALE		DWG. CERTIFIED
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	PROPRIETARY INFORMATION		NONE		BY: _____
10 GA GALV STL		TITLE		HAND QUAD ARM		DWG. NO.		60-021563-25B



FOR OFFICE USE ONLY



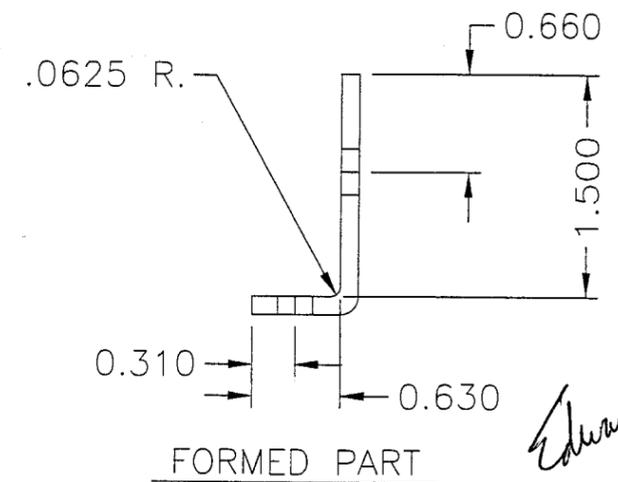
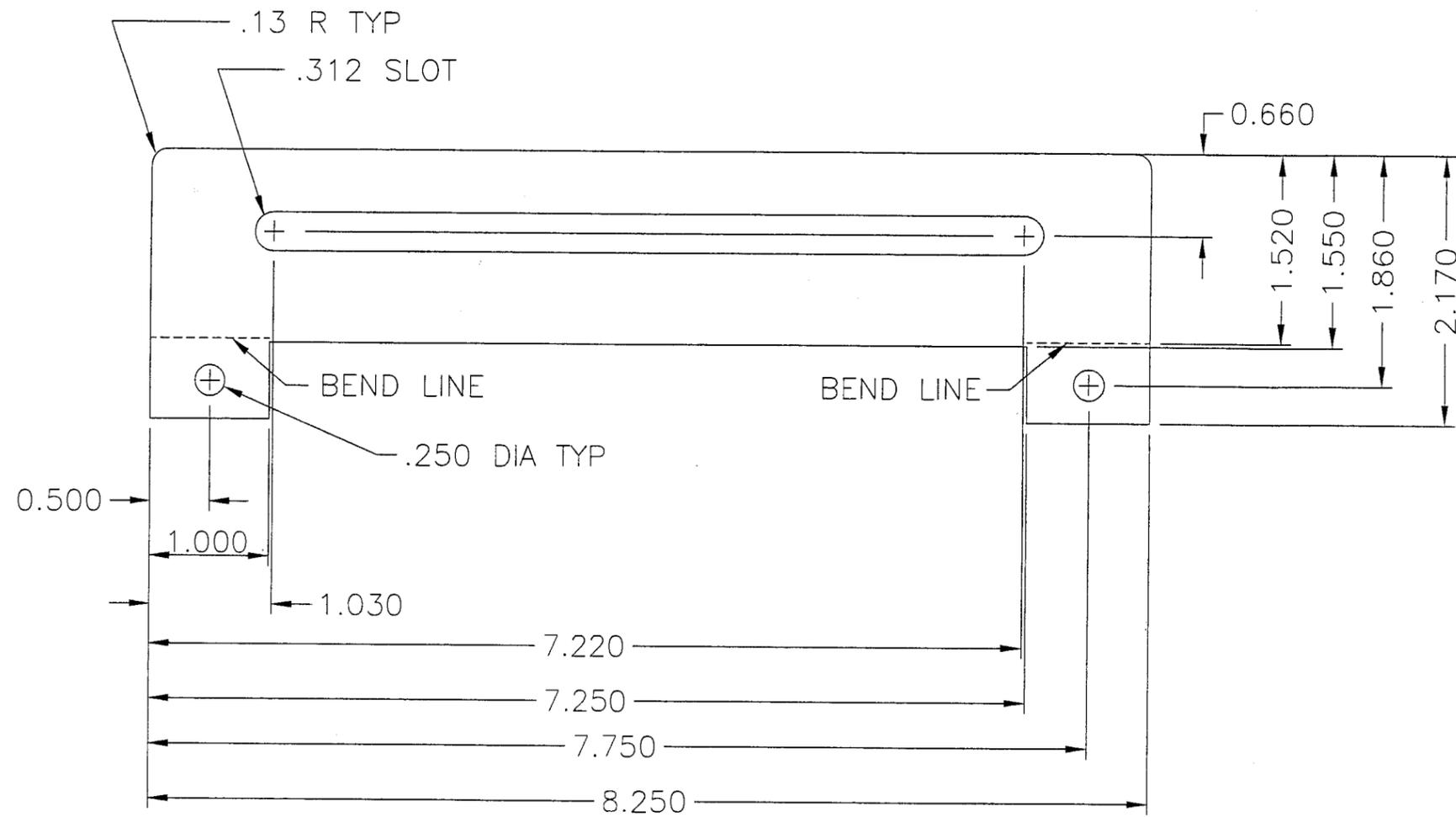
*Edward P Hutson Jr*  
6/27/2007

SHEET 27 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.		⊕	ADDED SHEET NUMBER	DLC	DJR	DJR		5/23/7
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER		⊕	REMOVED ENGINEERS DATA	JAL				
REGISTRATION #: STATE OF FLORIDA #0052339		CHANGE LETTER	REVISION DESCRIPTION	DWN. BY:	CHK'D. BY:	APPV'D. BY:	APPV'D. BY:	DATE
DWN. BY: DDM	CHK. BY: JSB	APPV'D. BY: DVC	APPV'D. BY:	PLOT SCALE		DWG. CERTIFIED		
DATE: 4/2/98	DATE: 4/6/98	DATE: 4/13/98	DATE:	NONE		BY: _____ DATE: _____		
1/4" DIA. PLTD. STL.			TITLE	U-BOLT		DWG. NO. 60-021563-26B		

**RUSKIN Mfg.** Grandview, MO  
PROPRIETARY INFORMATION



*Edward P. Hutson Jr.*  
6/27/2007

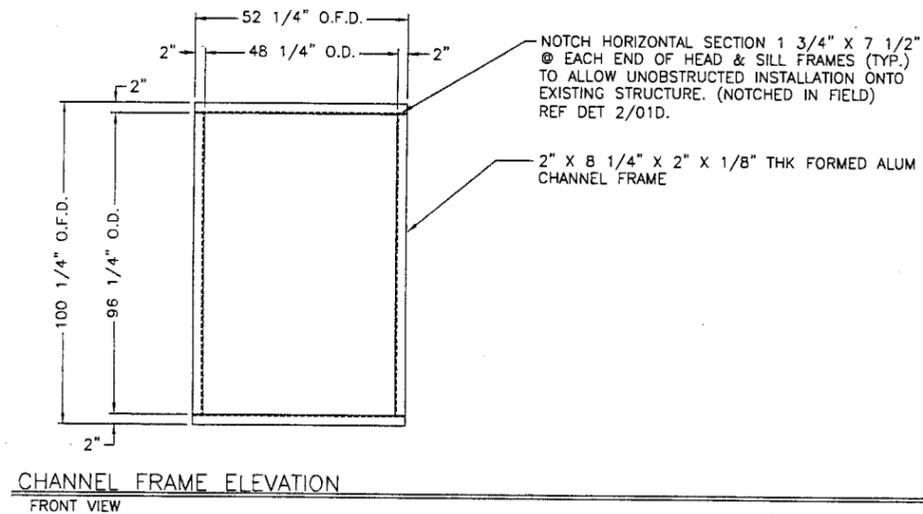
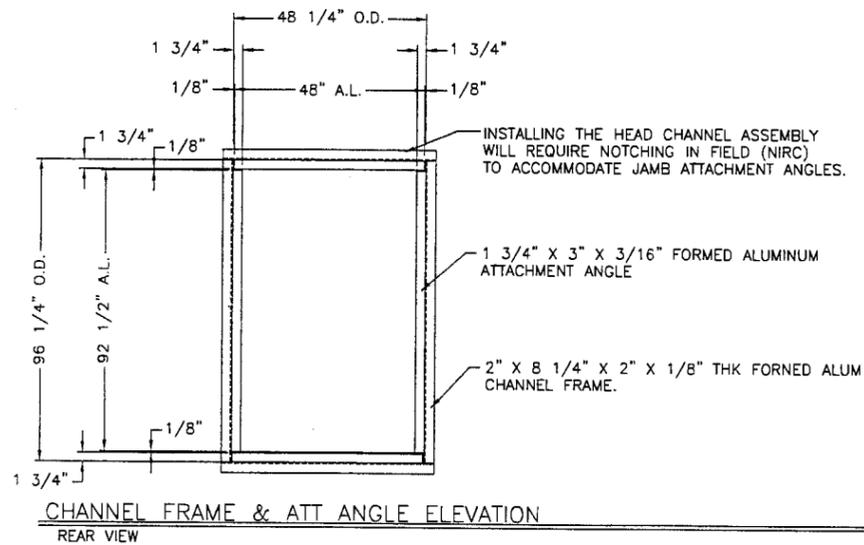
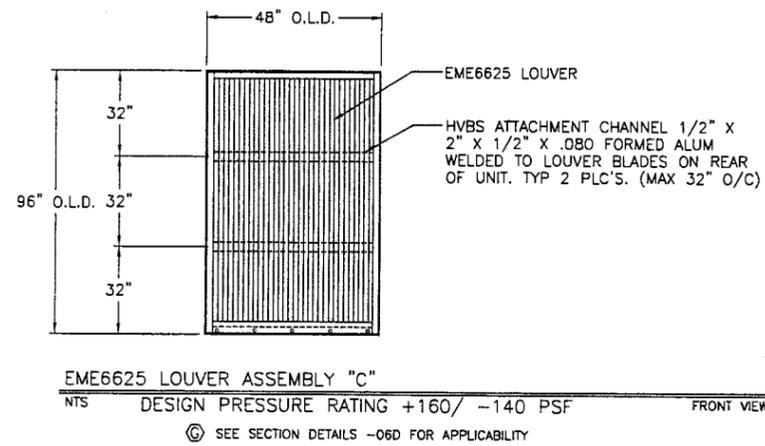
FOR OFFICE USE ONLY

REGISTERED PROFESSIONAL ENGINEER  
in the State of Florida  
Registration No. 07-0501.13  
Expiration Date 01/28/2012  
By *[Signature]*  
Micro-Date Product Control  
Division

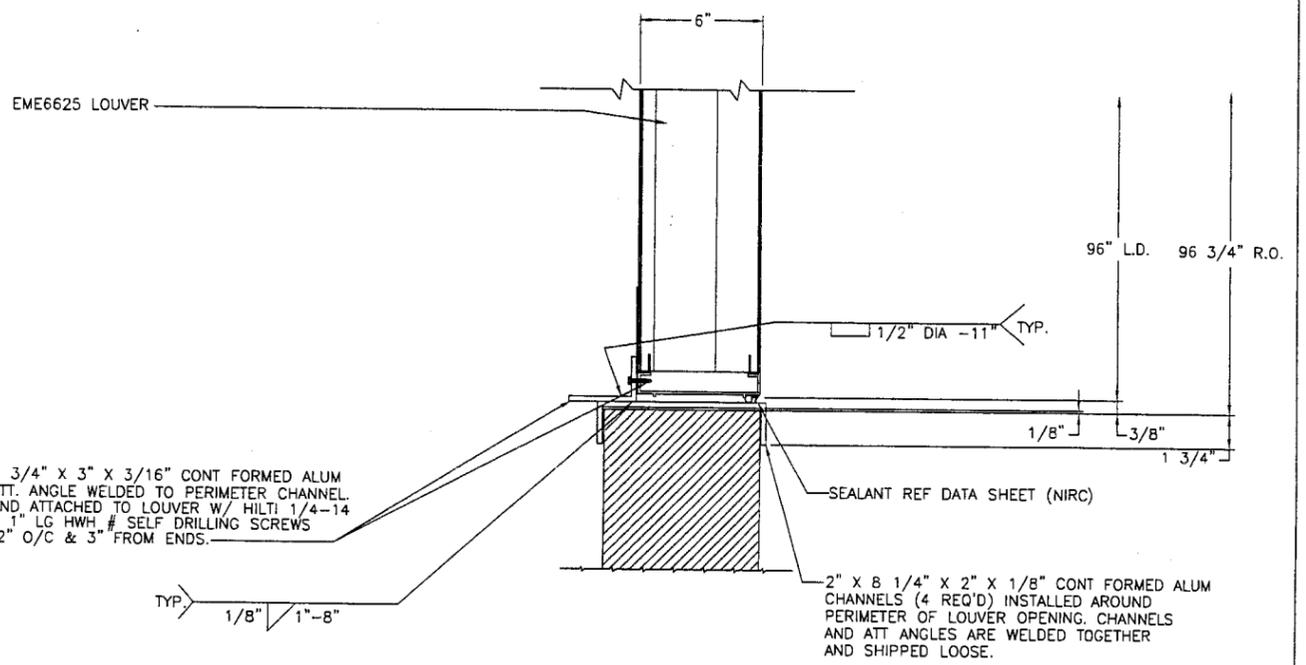
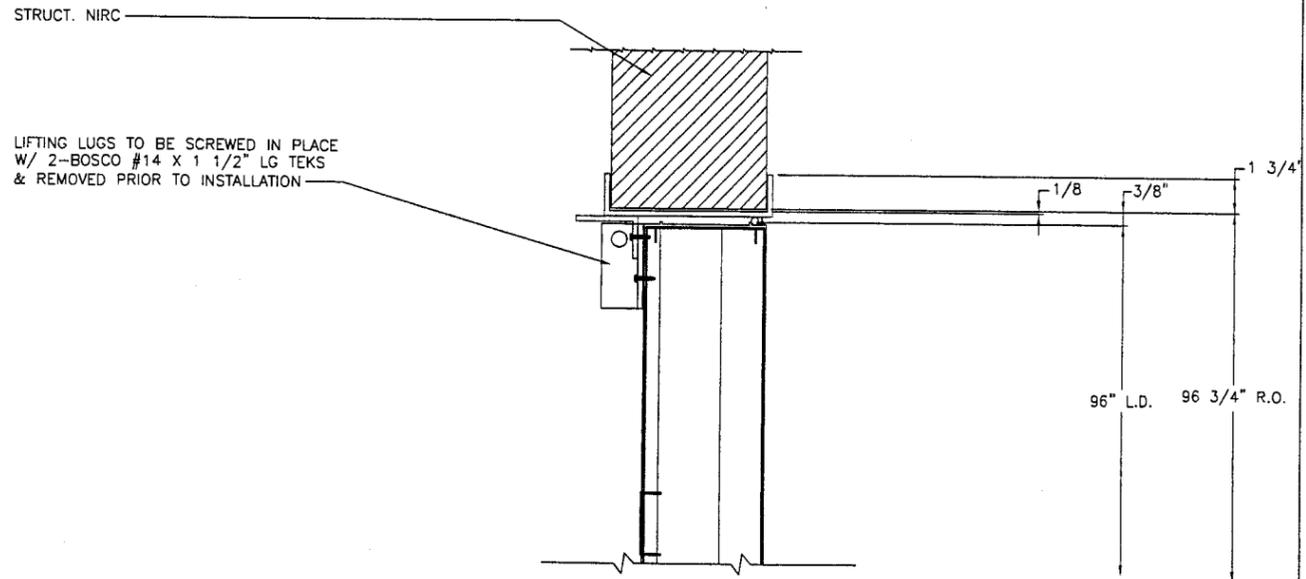
SHEET 28 OF 31

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED  
DIMENSIONS:  
WITH 2 DECIMAL PLACES, ±.020  
WITH 3 DECIMAL PLACES, ±.010  
FRACTION DIMENSIONS AS MARKED.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.				ADDED SHEET NUMBER		DLC		DJR DJR		5/23/7	
ENGINEERING DISCIPLINE: STRUCTURAL ENGINEER				REMOVED ENGINEERS DATA		JAL					
REGISTRATION #: STATE OF FLORIDA #0052339				CHANGE LETTER		REVISION DESCRIPTION		DWN. BY:		CHK'D. BY:	
DWN. BY: DDM		CHK. BY: JSB		APPV'D. BY: DVC		APPV'D. BY:		DATE: 4/2/98		DATE: 4/6/98	
DATE: 4/2/98				DATE: 4/6/98		DATE: 4/13/98		DATE:		DATE:	
MAT'L 12 GA GALV. STEEL				RUSKIN Mfg. Grandview, MO		PROPRIETARY INFORMATION		PLOT SCALE 3/4=1		DWG. CERTIFIED BY: _____ DATE: _____	
TITLE HAND QUADRANT PLATE				DWG. NO. 60-021563-27B							



1 REAR & FRONT ELEVATION VIEW OF CHANNEL FRAME & ATT. ANGLE  
 N.T.S.



EME6625 SECTION (JAMB SIM TO HEAD)  
 3"=1'-0"

FOR OFFICE USE ONLY

PRODUCTION CONTROL  
 07-0501.13  
 01/28/2012  
 [Signature]

FOR FASTENER LOADS REF  
 DWG. 60-021617-06D.

*Edward P. Hutson Jr.*  
 6/27/2007

- LEGEND:**
- O.F.D. = OUTSIDE FRAME DIM.
  - R.O. = ROUGH OPENING
  - A.L. = ANGLE LENGTH
  - O.D. = OPENING DIM.
  - N.T.S. = NOT TO SCALE
  - NIRC = NOT IN RUSKIN CONTRACT
  - HVBS = HIDDEN VERTICAL BLADE SUPPORT.
  - SSD = SHIP SECTION DIM.
  - L.D. = LOUVER DIM.
  - DIM. = DIMENSION
  - SIM = SIMILAR

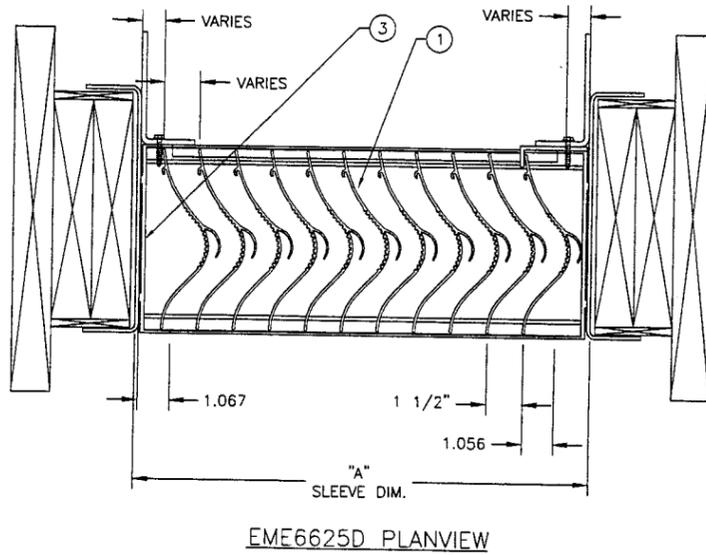
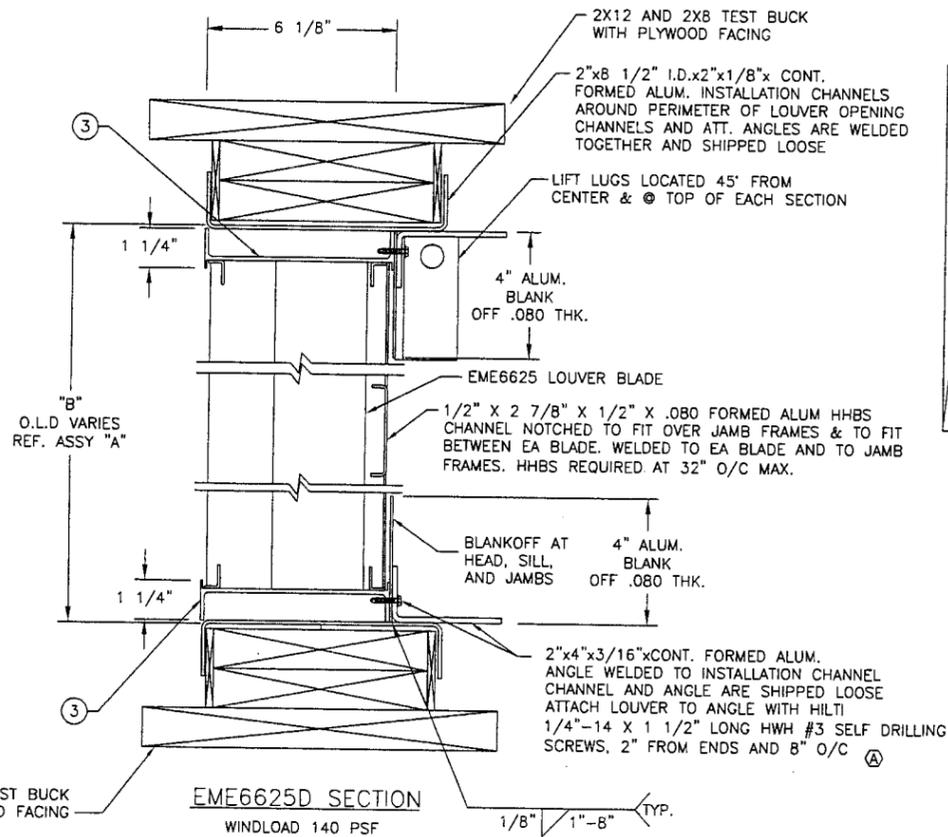
- NOTES:**
- THE STRUCTURAL SUBSTRATE THAT HOLDS THE LOUVER IN PLACE, IS ASSUMED TO BE STRUCTURALLY SOUND AND STABLE TO TAKE THE LOADS DISPERSED BY THE LOUVER.
  - LOUVER IS NONBEARING AND IS NOT DESIGNED TO WITHSTAND BUILDING DEADLOADS.

ENGINEER OF RECORD: EDWARD PAUL HUTSON JR.  
 STATE OF FLORIDA # 0052339  
 STRUCTURAL ENGINEER

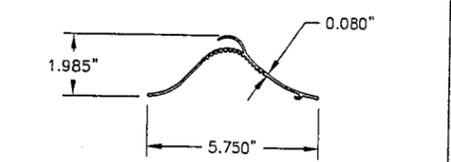
SHEET 29 OF 31

REGISTRATION #	STATE OF FLORIDA # 0052339	CHANGE LETTER	ADDED SHEET NUMBER	DLC	5/23/7
DATE	10-13-98	DATE	10-15-98	NONE	
LOUVER DAMPER ASSY DADE CTY. FLORIDA		EME6625 LOUVER ASSEMBLIES & SECTIONS		60-021563-28D	

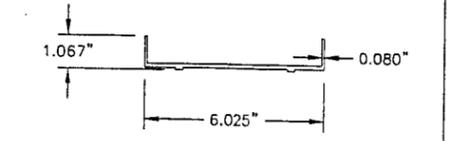
<b>FRAME</b>	
6063-T5 extruded aluminum with .125 nominal wall thickness.	
Flange frame is same material and thickness as above.	
<b>BLADES</b>	
6063-T5 extruded aluminum with .091 nominal wall thickness. (Blades are mounted vertically)	
<b>SCREEN</b>	
5/8" x .040" expanded flat-tened aluminum bird screen.	
1/2" mesh x .063" aluminum bird screen.	
18-16 mesh al. insect screen.	
No Screen	
<b>FINISH</b>	
Mill.	
Kynar (opt).	
Baked enamel (modified fluoropolymer, 50% Kynar, opt).	
Color anodize (opt).	
Clear anodize (opt).	
Color: Ref. Note 15	
<b>INSTALLATION CHANNELS</b>	
Install. channel 1/8" formed alum.	
Installation angles, 3/16" formed alum.	
<b>ACCESSORIES (opt)</b>	
Clip angles.	
Blankoff panel.	



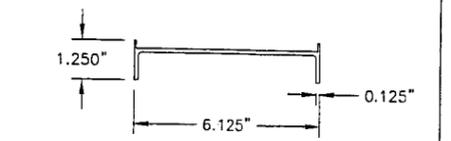
PART LIST		
ITEM	DESCRIPTION	MATERIAL
1	BLADE	6063-T5
2	JAMB FRAME	6063-T5
3	HEAD FRAME	6063-T5
4	SILL FRAME	6063-T5



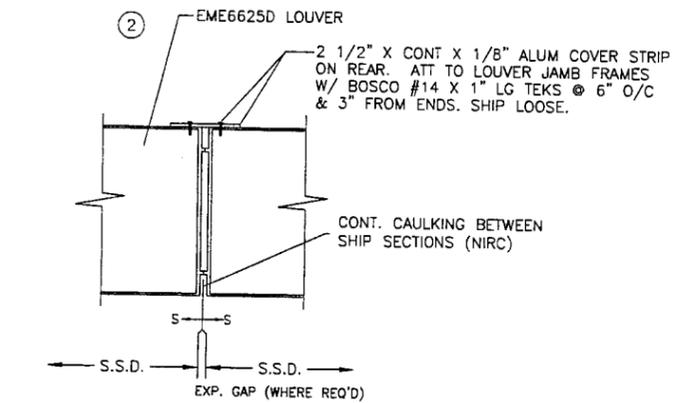
1 BLADE DETAIL  
N.T.S.  
REF: 70-020748-00B



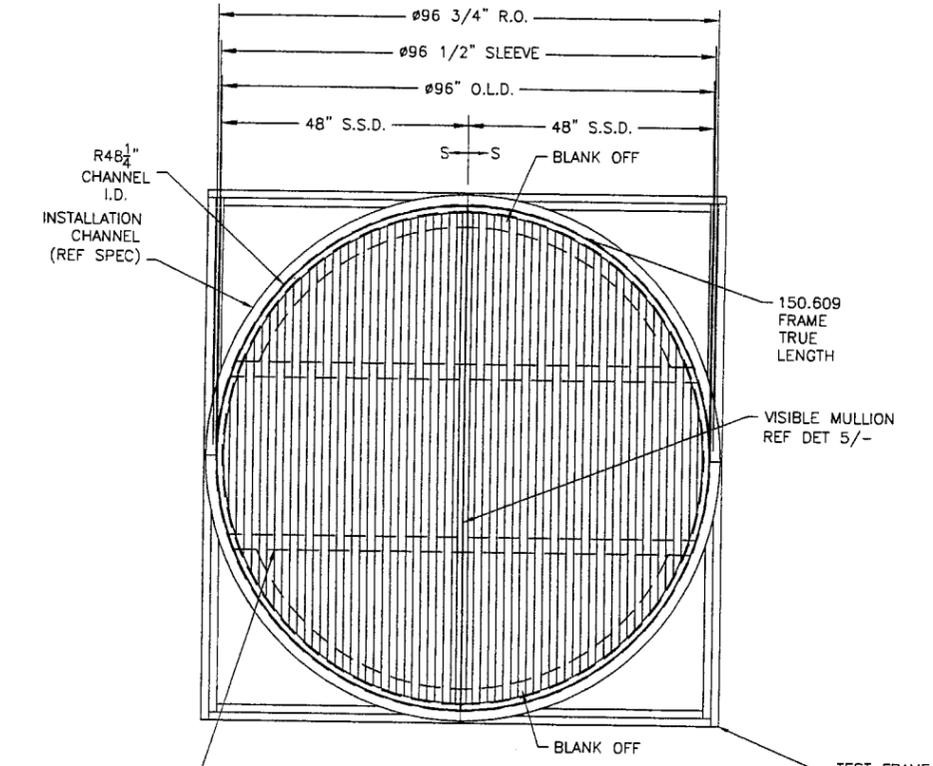
2 JAMB FRAME DETAIL  
N.T.S.  
REF: 70-020750-00B



3 HEAD FRAME DETAIL  
N.T.S.  
REF: 70-020750-00B

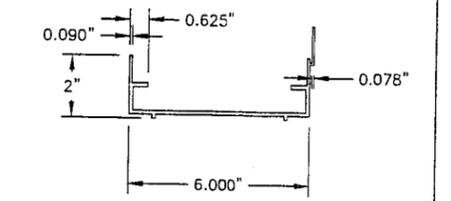


5 MULLION SPLICE DETAIL  
N.T.S.  
DESIGN PRESSURE RATING: +160/ -140 PSF.



FRONT VIEW  
ASSEMBLY "D"  
N.T.S.  
QTY: 3 REQUIRED W/ 2 SHIP SECTIONS EACH  
INSTALLATION CHANNEL SHIPPED LOOSE IN 4 PIECES

TESTS PERFORMED  
TAS-201 LARGE MISSILE IMPACT  
TAS-202 UNIFORM STATIC AIR PRESSURE TEST  
TAS-203 CYCLIC WIND PRESSURE TEST  
DESIGN PRESSURE RATING +160 PSF POS., -140 PSF NEG.



4 SILL FRAME DETAIL  
N.T.S.  
REF: 70-020749-00B

FOR OFFICE USE ONLY

07-0501.13  
01/28/2012  
Edward P. Hutton  
6/27/2007

ENGINEER OF RECORD DANIEL J. RAU		SHEET 30 OF 31	
ENGINEERING DISCIPLINE CIVIL ENGINEER	ADDED SHEET NUMBER DLC	DLC	5/23/7
REGISTRATION NUMBER STATE OF FLORIDA #0063636	REVISED FASTENER SPACING DWG	DJR	4/12/07
DATE: 10/2/8	DATE: 3/2/07	DATE: 3/2/07	DATE:
RUSKIN SWARTWOUT		2000 DRG. CREATES NO CONFLICTS, NO BUBBLES	PLDT SCALE NONE
TITLE EME6625D TEST LOUVERS		DWG. NO. 60-021563-29D	

