



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
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

www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

American Shutter Products, Inc.
(CROCI North America)
11600 Adelmo Lane
Fort Myers, Florida 33966

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA- Product Control Section 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. PERA 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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: "Croci Extruded" Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 11-242, titled "Croci Extruded Aluminum Accordion Shutter", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated December 06, 2011, signed and sealed by Pedro De Figueiredo, P.E. on December 06, 2011, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the 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, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, 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 #11-0414.14 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
03/08/2012

NOA No. 12-0109.02
Expiration Date: 07/06/2016
Approval Date: 03/08/2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 06-0515.01

A. DRAWINGS

1. *Drawing No. 06-150, titled " Croci Extruded Accordion Shutter ", sheets 1 through 6 of 6, prepared by EngCo, Inc., dated May 11, 2006, signed and sealed by Pedro De Figueiredo, P.E. on May 31, 2006.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Construction Testing Corporation, Report No. 05-035 TAS, dated November 16, 2005, signed and sealed by Yamil G. Kuri, P.E.*

C. CALCULATIONS

1. *Comparative analysis and anchor calculations, dated May 11, 2006, pages 1 through 28 of 28, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 10-0120.05

A. DRAWINGS

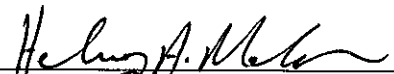
1. *Drawing No. 09-227, titled " Croci Extruded Accordion Shutter ", sheets 1 through 8 of 8, prepared by EngCo, Inc., dated December 04, 2009, signed and sealed by Pedro De Figueiredo, P.E. on May 24, 2010.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Fenestration Testing Laboratory, Inc., Report No. 09-468, dated December 01, 2009, signed and sealed by Michael R. Wenzel, P.E.*

C. CALCULATIONS

1. *Comparative analysis and anchor calculations, dated 12/05/09, 24 pages, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*
2. *Anchor calculations, dated 05/24/10, 2 pages, prepared by EngCo, Inc., signed and sealed by Pedro De Figueiredo, P.E.*



Helmy A. Makar, P.E., M.S.
PERA, Product Control Unit Supervisor
NOA No. 12-0109.02
Expiration Date: 07/06/2016
Approval Date: 03/08/2012

American Shutter Products, Inc.
(CROCI North America)

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0414.14

A. DRAWINGS

1. *Drawing No. 11-035, titled " Croci Extruded Aluminum Accordion Shutter ", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated April 11, 2011, signed and sealed by Pedro De Figueiredo, P.E. on April 11, 2011.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Static Wind Pressure Test of Aluminum Accordion Shutter, prepared by Fenestration Testing Laboratory, Inc., Report No. 6489, dated April 08, 2011, signed and sealed by Marlin D. Brinson, P.E.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building and Neighborhood Compliance Department.*

E. MATERIAL CERTIFICATIONS

1. *None.*

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

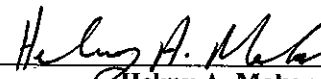
1. *Drawing No. 11-242, titled " Croci Extruded Aluminum Accordion Shutter ", sheets 1 through 9 of 9, prepared by EngCo, Inc., dated December 06, 2011, signed and sealed by Pedro De Figueiredo, P.E., on December 06, 2011.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
PERA, Product Control Unit Supervisor
NOA No. 12-0109.02
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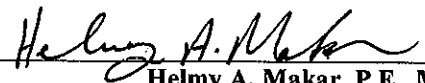
NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).*

E. MATERIAL CERTIFICATIONS

1. *None.*



Helmy A. Makar, P.E., M.S.
PERA, Product Control Unit Supervisor
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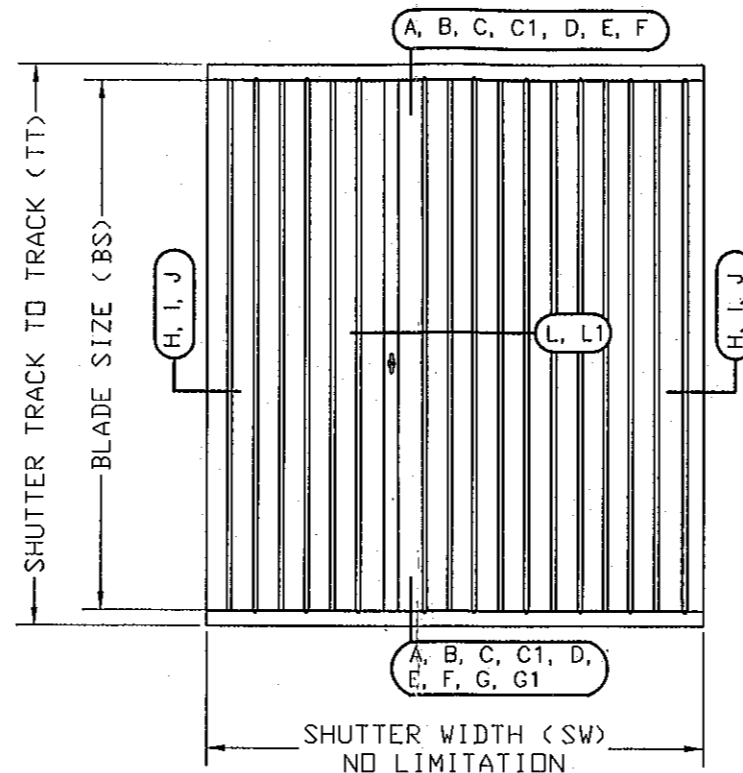
TABLE OF CONTENTS:

- SHEET 1- TABLE OF CONTENTS, GENERAL NOTES, TYPICAL ELEVATION, ALLOWABLE BLADE PRESSURE TABLE 1
- SHEET 2- SECTIONS A, B & C1 WITH ANCHORAGE TABLES
- SHEET 3- SECTIONS D, E, F & G WITH ANCHORAGE TABLES
- SHEET 4- SECTIONS C & G1 WITH ANCHORAGE TABLES
- SHEET 5- JAMB SECTIONS J, H, H1 & I
- SHEET 6- LOCK SECTION L, MALE & FEMALE STACK
- SHEET 7- LOCK SECTION L1, UNIMATE STACK
- SHEET 8- BILL OF MATERIALS, ANCHOR SCHEDULE & BLADE ASSEMBLY.
- SHEET 9- COMPONENTS

GENERAL NOTES: (FLORIDA BUILDING CODE 2010)

- 1- DEFINITION: THIS PRODUCT IS AN ACCORDION TYPE SHUTTER; DESIGNED, CONSTRUCTED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS (LARGE & SMALL MISSILE) WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 2- CODE: THIS PRODUCT HAS BEEN TESTED AND DESIGNED IN ACCORDANCE WITH THE 2010 FLORIDA BUILDING CODE UNDER TAS 201, 202 AND 203.
- 3- POSTING: A PERMANENT LEGIBLE DECAL SHALL BE PLACED AT A READILY VISIBLE LOCATION STATING THE FOLLOWING:
 *CROCI NORTH AMERICA - FT. MYERS - FLORIDA
 CROCI EXTRUDED ALUMINUM ACCORDION SHUTTER
 MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED*
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7 AND PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE CALCULATED DESIGNED PRESSURE MUST NOT EXCEED THE ALLOWABLE PRESSURES FOR EACH SHUTTER COMPONENT TO BE USED.
- 5- MATERIAL: ALL EXTRUDED ALUMINUM SHAPES SHALL BE MADE OF 6063-T6 OR AS NOTED.
- 6- FASTENERS: ASSEMBLY SCREWS AND ANCHORS SHALL BE AS SPECIFIED IN THE CURRENT SET OF DRAWINGS. INSTALLATION AND LOADS AS PER THIS APPROVAL.
- 7- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:
 - 7.1- THE STABILITY OF THE STRUCTURE WHERE THE SHUTTER IS TO BE ATTACHED INSURING PROPER ANCHORAGE.
 - 7.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, WINDLOADS, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.
 - 7.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.
- 8- 33 1/3% INCREASE IN ALLOWABLE LOADS HAVE NOT BEEN USED IN THE DESIGN OF THE ANCHORS FOR THIS PRODUCT APPROVAL. HOWEVER, WOOD ANCHORS WITH 1.6 LOAD DURATION INCREASE FOR WIND LOAD HAVE BEEN USED.

TYPICAL ELEVATION

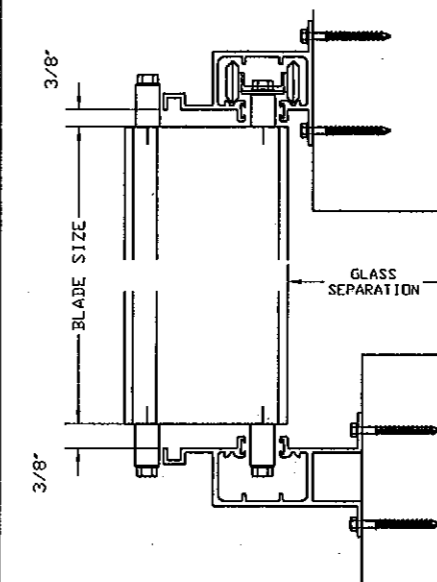


USER INSTRUCTIONS:

- 1- DETERMINE PROJECT DESIGN WIND LOAD PRESSURES AS PER ITEM 4 OF GENERAL NOTES, SHEET 1.
- 2- CHECK BLADE SIZE WITH TABLE 1 ON SHEET 1 FOR ALLOWABLE DESIGN PRESSURE.
- 3- SELECT MOUNT TYPE TO BE USED AS PER SHEETS 2, 3 & 4. MOUNT TYPES ARE INTERCHANGEABLE.
- 4- CALCULATE ANCHOR SPACING FUNCTION OF BLADE SIZE AND PRESSURE FOR EACH SPECIFIC MOUNT TYPE AS PER SHEETS 2, 3 & 4.

**TABLE 1
ALLOWABLE DESIGNED LOADS
X
MAXIMUM BLADE SIZE**

BLADE (IN) INCHES	PRESSURE (PSF)	
	POSITIVE	NEGATIVE
60"	188	188
66"	170	170
72"	156	156
78"	144	144
84"	134	134
90"	125	125
96"	117	117
102"	110	110
108"	102	102
114"	92	92
120"	83	83
126"	75	75
132"	69	69
138"	59	63
144"	49	58
150"	42	52



GLASS SEPARATION		
INSTALLATION BELOW 30' ELEVATION	BLADE <=120" 3 1/2"	BLADE >120" 4 3/4"
INSTALLATION ABOVE 30' ELEVATION	BLADE <=120" 3"	BLADE >120" 3"

Manufacturer:

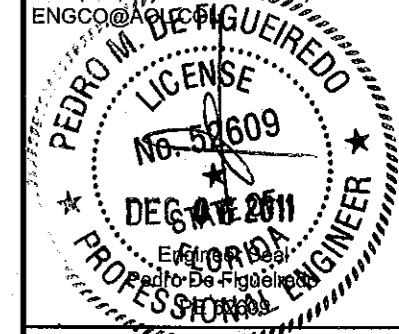
CROCI
 North America
 11600 ADELMO LANE
 FORT MYERS, FL 33966
 Tel.: (239) 278-3066
 Fax: (239) 278-5977
 EMAIL: INFO@CROCIUSA.COM

PRODUCT:

CROCI
 EXTRUDED ALUMINUM
 ACCORDION SHUTTER

Engineering:

EngCo Inc.
 CA 8116
 5595 Orange Dr. 201
 Davie, FL 33314
 Tel.: (954) 585-0304 Fax: (954) 585-0305
 ENGCO@AOL.COM



DRAFTING:

PK DRAFTING & MORE

MIAMI-DADE BCCO:

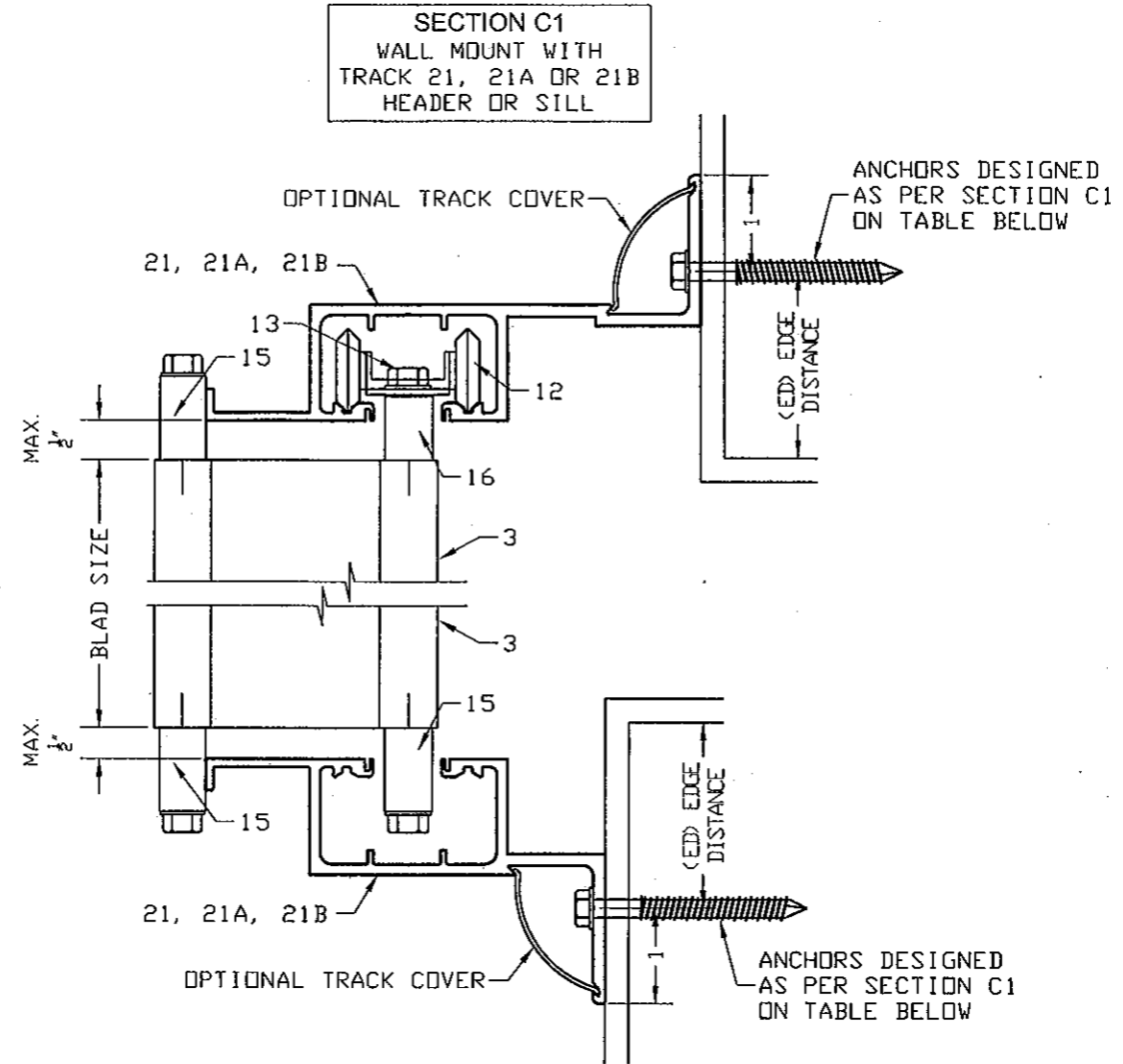
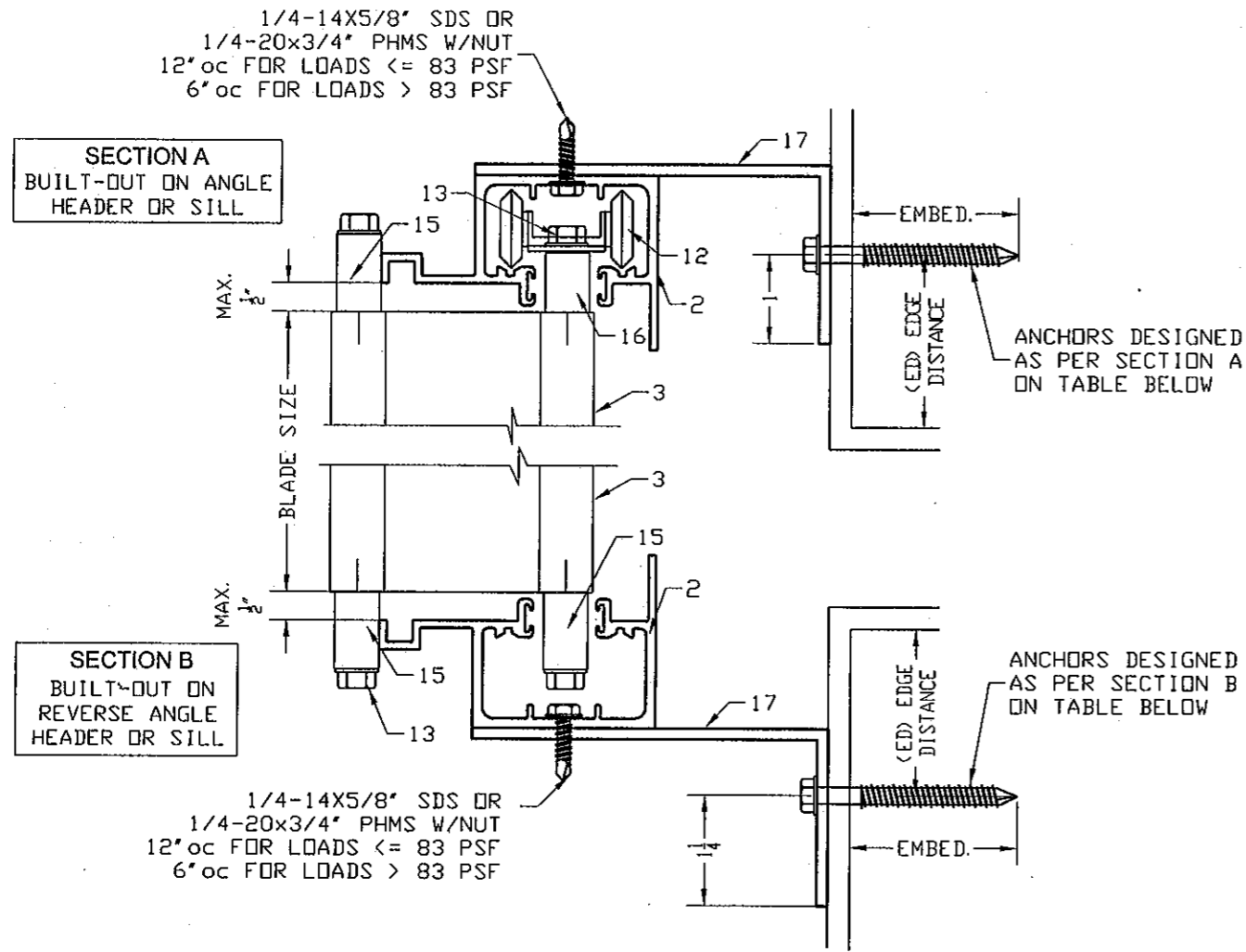
PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 12-0109.02
 Expiration Date 07/26/2016
 By *Helena A. M...*
 Miami Dade Product Control

DATE: 12/06/11
 SCALE: NA
 DESIGN BY: PPMF

Drawing Number
11-242

SHEET
 1 of 9

TYPICAL VERTICAL SECTIONS AND ANCHOR SCHEDULE



MAX. BLADE SPAN IN INCHES
SEE ANCHOR SCHEDULE ON SHEET 7 FOR ANCHOR TYPE

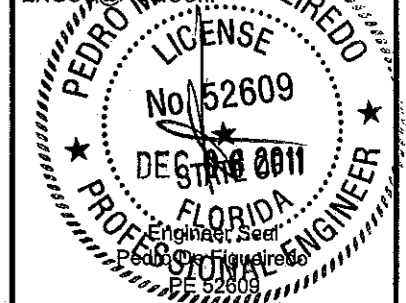
ANCHORAGE SPACING		MAXIMUM ANCHORAGE PRESSURE (PSF) BASED ON SPACING IN INCHES ON CENTER																									
		150					120					105					90					60					
	s	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	
SECTION A SILL / HEADER	12	59	51	21	19	53	74	65	26	24	68	86	75	30	28	78	101	88	36	33	92	153	134	55	50	140	
	9	80	70	28	26	72	101	88	36	33	92	116	101	41	38	106	136	119	48	44	124	206	181	74	67	189	
	6	122	107	43	39	111	153	134	55	50	140	176	154	63	57	161	206	181	74	67	189	---	---	273	112	101	---
	4	185	162	66	60	170	232	204	83	75	213	266	233	95	86	245	---	---	273	112	101	---	---	---	169	152	---
	3	---	---	89	---	228	---	---	112	---	---	---	---	128	---	---	---	---	150	---	---	---	---	---	226	---	---
SECTION B SILL / HEADER	12	31	27	11	10	28	39	34	14	13	36	45	40	16	15	41	53	47	19	17	49	81	71	29	26	74	
	9	42	37	15	14	38	53	47	19	17	49	61	54	22	20	56	72	63	26	23	66	109	95	39	35	100	
	6	64	56	23	21	59	81	71	29	26	74	93	81	33	30	85	109	95	39	35	100	164	144	59	53	151	
	4	98	86	35	32	90	123	108	44	40	113	141	123	50	46	129	164	144	59	53	151	248	218	89	80	228	
	3	131	---	47	---	120	164	---	59	---	151	188	---	68	---	173	220	---	79	---	203	---	---	119	---	---	
SECTION C1 SILL / HEADER	12	32	28	11	11	29	41	36	15	13	37	47	41	17	15	43	56	49	20	18	51	85	74	30	27	78	
	9	44	38	16	14	40	56	49	20	18	51	64	56	23	21	58	75	66	27	24	69	114	100	41	37	104	
	6	67	59	24	22	61	85	74	30	27	78	97	85	35	31	89	114	100	41	37	104	172	151	62	56	158	
	4	102	90	37	33	94	128	112	46	42	118	147	129	53	48	135	172	151	62	56	158	259	227	93	84	239	
	3	137	---	49	---	126	172	---	62	---	158	197	---	71	---	181	230	---	83	---	212	346	---	125	---	319	

NOTE: 1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

Manufacturer:
CROCI
North America
11600 ADELMO LANE
FORT MYERS, FL 33966
Tel.: (239) 278-3066
Fax: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

PRODUCT:
CROCI
EXTRUDED ALUMINUM
ACCORDION SHUTTER

Engineering:
EngCo Inc.
CA 8116
5595 Orange Dr. 201
Davie, FL 33314
Tel.: (954) 885-0201 Fax: (954) 885-0305
ENGCO.COM



DRAFTING:
PK DRAFTING & MORE

MIAMI-DADE BCCO:

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 12-0109.02
Expiration Date 07/06/2016
By *Helmy A. Maher*
Miami Dade Product Contr.

DATE: 12/06/11
SCALE: NA
DESIGN BY: PPMF

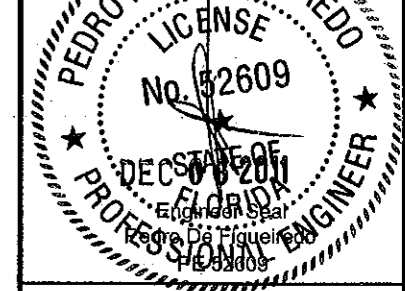
Drawing Number
11-242

Sheet
2 of 9

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 11600 ADELMO LANE
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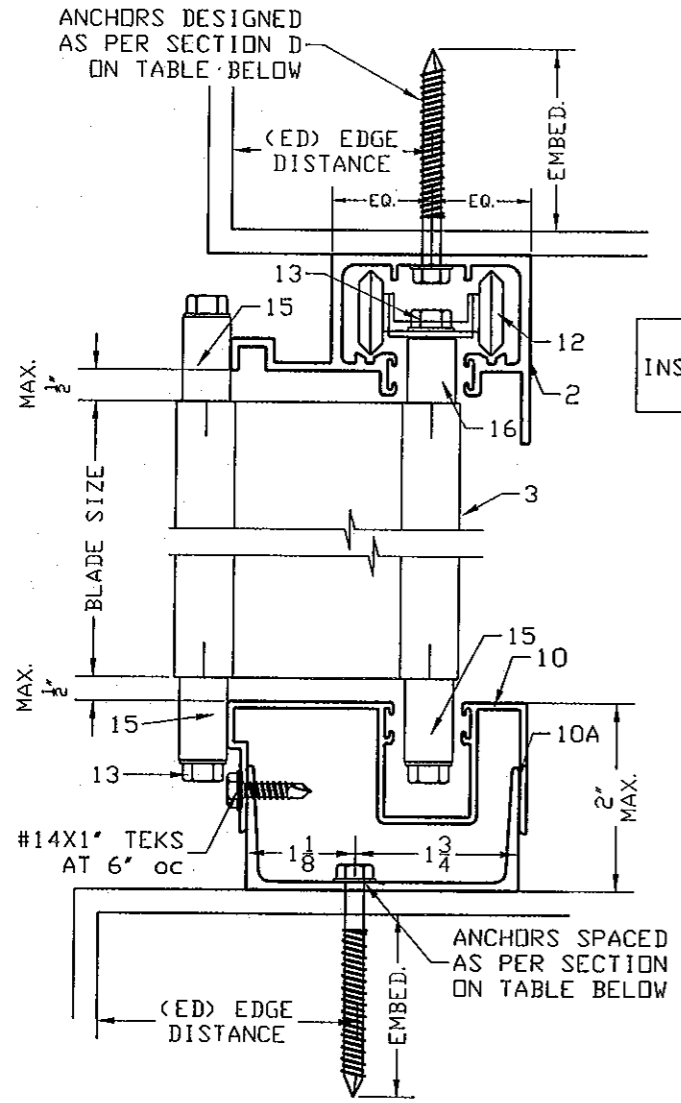
MIAMI-DADE BCCO:
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 By *Heidi A. ...*
 Miami Dade Product Contr.

DATE: 12/06/11
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 DESIGN BY: PPMF

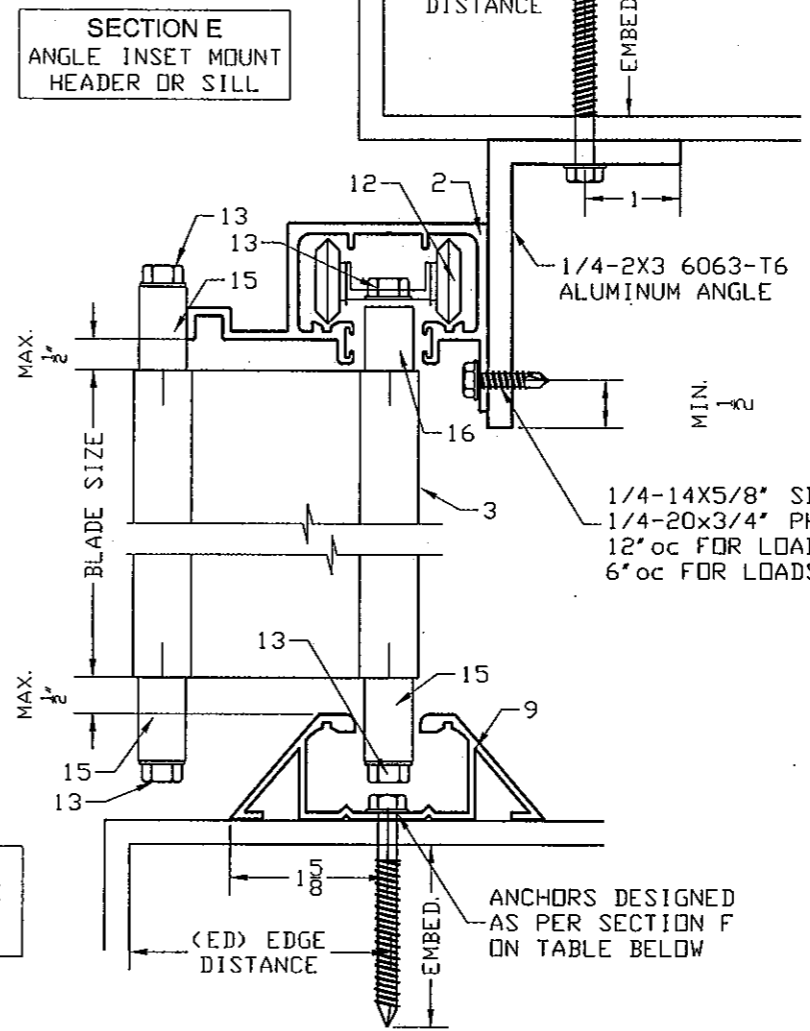
Drawing Number
11-242

Sheet
3 of 9

TYPICAL VERTICAL SECTIONS
 AND ANCHOR SCHEDULE



SECTION D
 INSET MOUNT W/ TRACK 2
 HEADER OR SILL



SECTION E
 ANGLE INSET MOUNT
 HEADER OR SILL

SECTION G
 ADJUSTABLE MOUNT
 SILL ONLY

SECTION F
 THRESHOLD TRACK
 INSET MOUNT
 HEADER OR SILL

MAX. BLADE SPAN IN INCHES
 SEE ANCHOR SCHEDULE ON
 SHEET 7 FOR ANCHOR TYPE
 ANCHORAGE SPACING

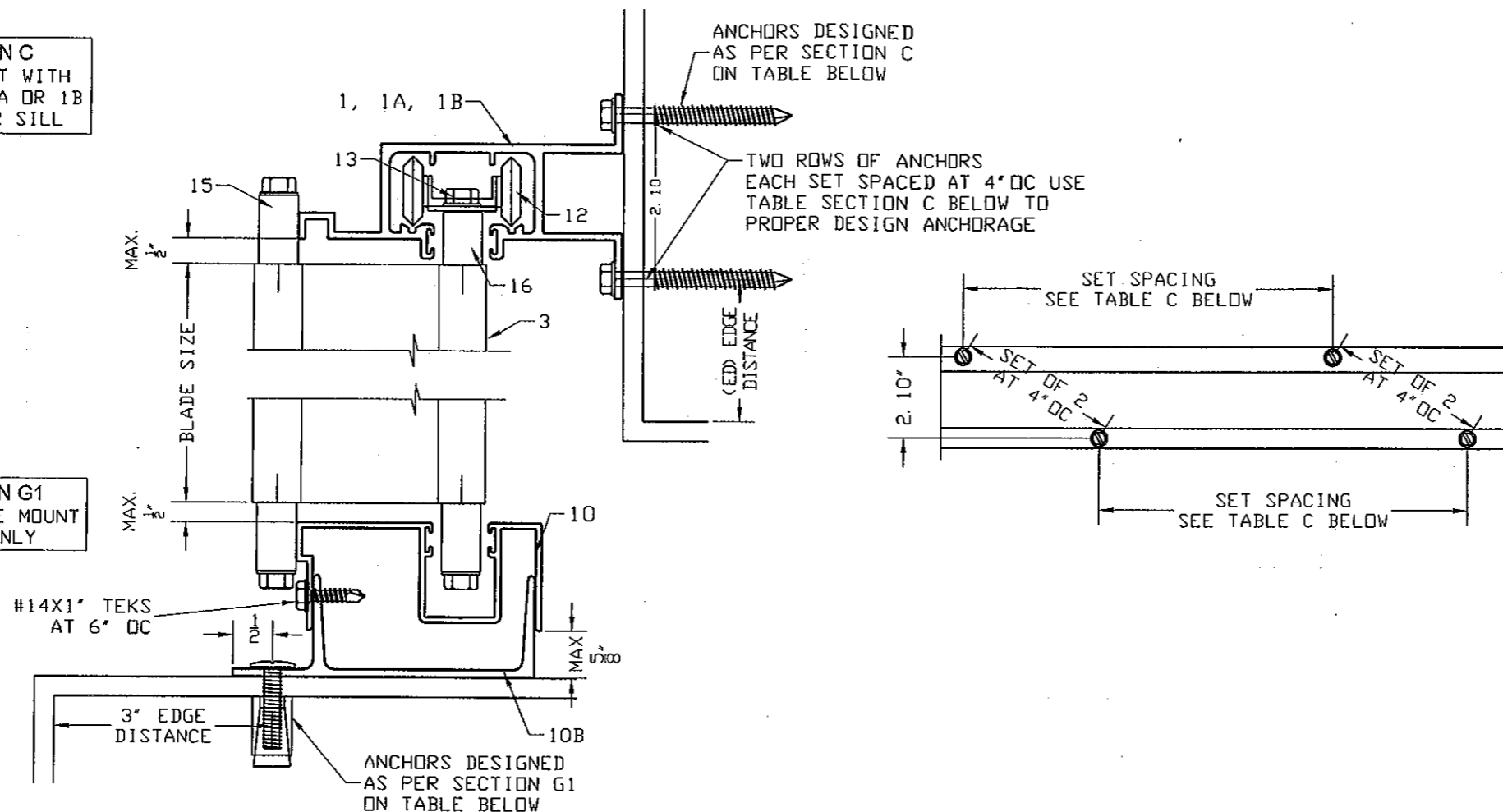
		MAXIMUM ANCHORAGE PRESSURE (PSF) BASED ON SPACING IN INCHES ON CENTER																				
		150				120				105				90				60				
		s	A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4
SECTION G SILL ONLY	12	28	29	24	35	35	36	30	43	41	41	34	49	47	48	40	58	71	73	60	87	87
	9	38	39	32	46	47	48	40	58	54	55	45	66	63	65	53	77	95	97	80	115	115
	6	57	58	48	69	71	73	60	87	81	83	68	99	95	97	80	115	142	145	119	173	173
	4	85	87	72	104	106	109	90	130	122	124	102	148	142	145	119	173	213	218	179	260	260
	3	113	---	95	139	142	---	119	173	162	---	136	198	189	---	159	231	---	---	239	---	---
SECTION D SILL ONLY	12	31	32	25	38	39	40	32	48	44	46	37	56	52	54	43	65	79	82	65	99	99
	9	41	43	34	52	52	54	43	65	60	62	49	75	70	73	58	88	105	110	88	132	132
	6	63	65	52	79	79	82	65	99	90	94	75	113	105	110	88	132	159	166	132	199	199
	4	95	99	79	119	119	124	99	149	136	142	113	171	159	166	132	199	239	250	199	---	---
	3	127	---	105	159	159	---	132	199	182	---	151	228	212	---	176	---	---	---	265	---	---
SECTION E SILL ONLY	12	21	21	18	25	27	27	23	33	32	31	27	38	38	37	32	45	58	58	49	69	69
	9	29	29	25	35	38	37	32	45	44	43	37	52	51	51	44	61	79	79	67	94	94
	6	46	46	39	55	58	58	49	69	67	67	57	80	79	79	67	94	120	120	102	143	143
	4	71	70	60	84	89	89	76	106	102	102	87	122	120	120	102	143	182	182	155	216	216
	3	95	---	81	113	120	---	102	143	138	---	117	164	161	---	137	192	244	---	207	---	---
SECTION F SILL ONLY	12	40	43	32	53	50	55	40	67	57	63	46	77	67	74	54	91	102	112	82	138	138
	9	53	59	43	72	67	74	54	91	77	85	62	104	90	99	73	122	136	150	110	184	184
	6	81	89	65	110	102	112	82	138	116	129	94	158	136	150	110	184	205	227	166	278	278
	4	122	135	99	166	153	170	124	208	176	194	142	238	205	227	166	278	---	---	249	---	---
	3	164	---	132	222	205	---	166	---	235	---	190	---	---	---	221	---	---	---	---	---	---

NOTE: 1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
 2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

TYPICAL VERTICAL SECTIONS AND ANCHOR SCHEDULE

SECTION C
WALL MOUNT WITH
TRACK 1, 1A OR 1B
HEADER OR SILL

SECTION G1
ADJUSTABLE MOUNT
SILL ONLY



MAX. BLADE SPAN IN INCHES

SEE ANCHOR SCHEDULE ON SHEET 7 FOR ANCHOR TYPE

ANCHORAGE SPACING

MAXIMUM ANCHORAGE PRESSURE (PSF) BASED ON SPACING IN INCHES ON CENTER

SECTION C SILL / HEADER	s	150					120					105					90					60				
		A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3	A1	B1	A2	B2	A3
	24	52	45	18	17	47	65	57	23	21	59	75	66	27	24	69	88	77	31	29	81	135	118	48	44	123
	16	79	69	28	26	72	100	87	36	32	91	115	101	41	37	105	135	118	48	44	123	204	179	73	66	187
	12	107	94	38	35	98	135	118	48	44	123	154	135	55	50	142	181	159	65	59	166	---	240	98	89	251
	8	162	142	58	53	149	204	179	73	66	187	234	205	84	76	215	273	240	98	89	251	---	---	148	133	---
	6	218	191	78	71	200	---	240	98	89	---	---	---	112	101	---	---	---	131	118	---	---	---	198	178	---

MAXIMUM ANCHORAGE PRESSURE (PSF) BASED ON SPACING IN INCHES ON CENTER

SECTION G1 SILL ONLY	s	150				120				105				90				60			
		A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4	A1	B1	A3	A4
	12	17	17	15	20	22	21	19	24	25	24	22	28	29	28	25	33	43	42	38	49
	9	23	22	20	26	29	28	25	33	33	32	29	37	38	37	34	43	58	55	50	65
	6	35	33	30	39	43	42	38	49	49	48	43	56	58	55	50	65	86	83	75	98
	4	52	50	45	59	65	62	57	73	74	71	65	84	86	83	75	98	130	125	113	146
	3	69	67	60	78	86	83	75	98	99	95	86	111	115	111	101	130	173	166	151	195

NOTE: 1- USE IN CONJUNCTION WITH TABLE 1, THE LOWER OF THE PRESSURE CONTROL DESIGN.
2- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES

Manufacturer:
CROCI
North America
11600 ADELMO LANE
FORT MYERS, FL 33966
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PRODUCT:
CROCI
EXTRUDED ALUMINUM
ACCORDION SHUTTER

Engineering:
EngCo Inc.
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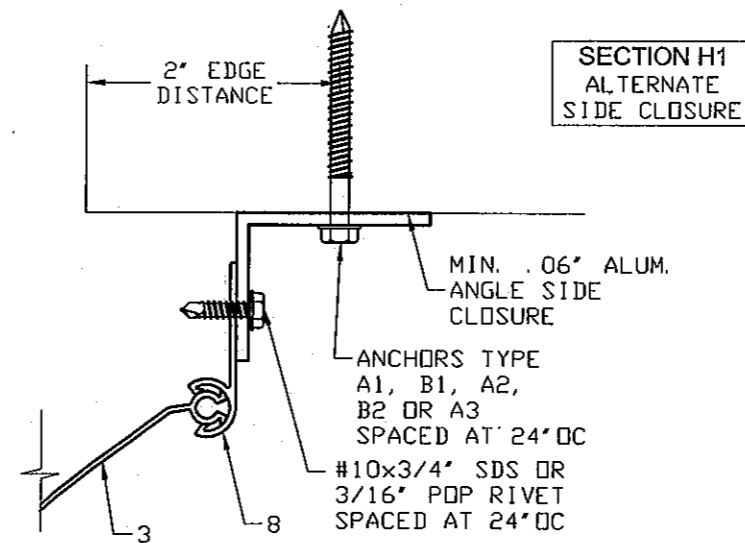
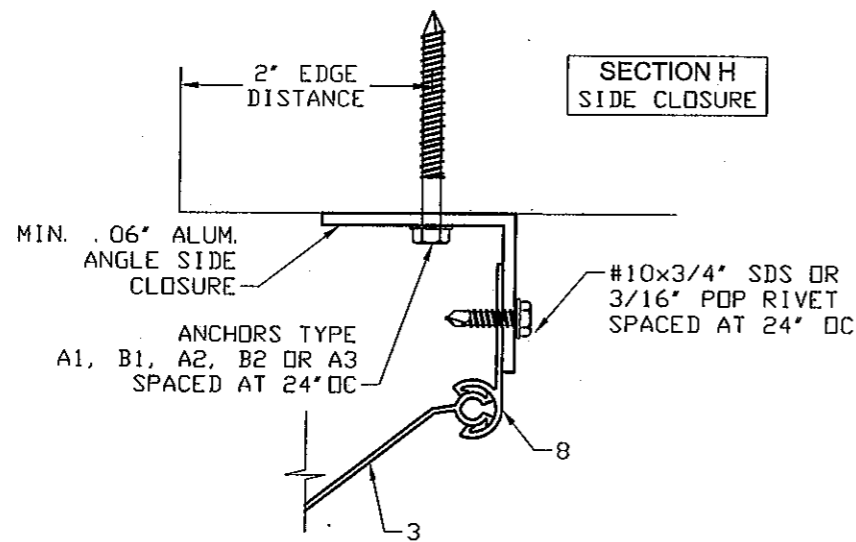
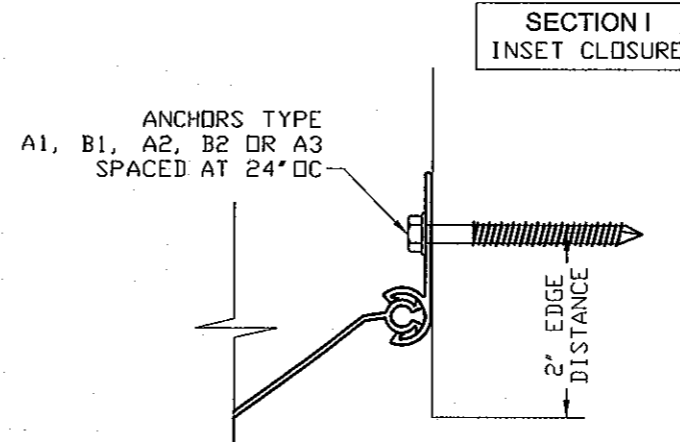
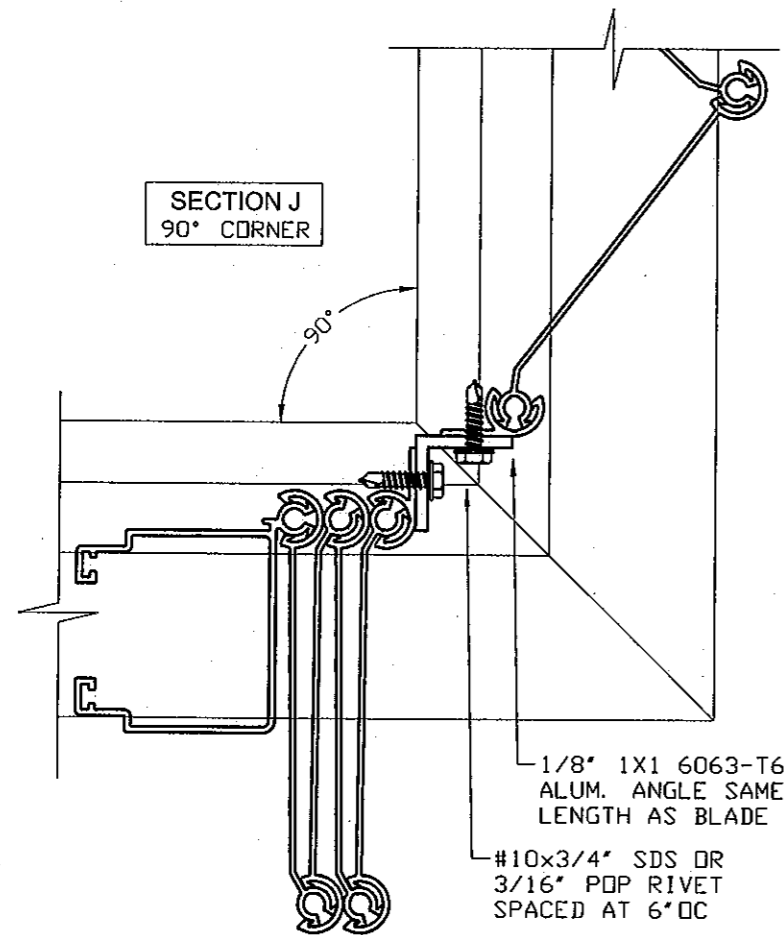
PRODUCT REVISED
as complying with the Florida
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Acceptance No 12-0109-02
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By *Helmut A. Mark*
Miami Dade Product Contr.

DATE: 12/06/11
SCALE: NA
DESIGN BY: PPMF

Drawing Number
11-242

Sheet
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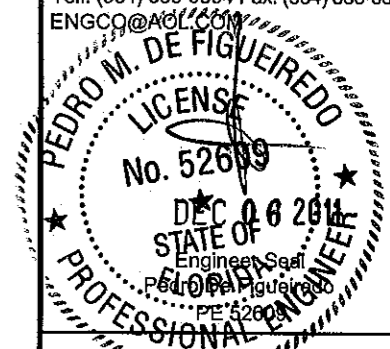
TYPICAL HORIZONTAL SECTIONS
JAMB & CORNER SECTIONS



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PK DRAFTING & MORE

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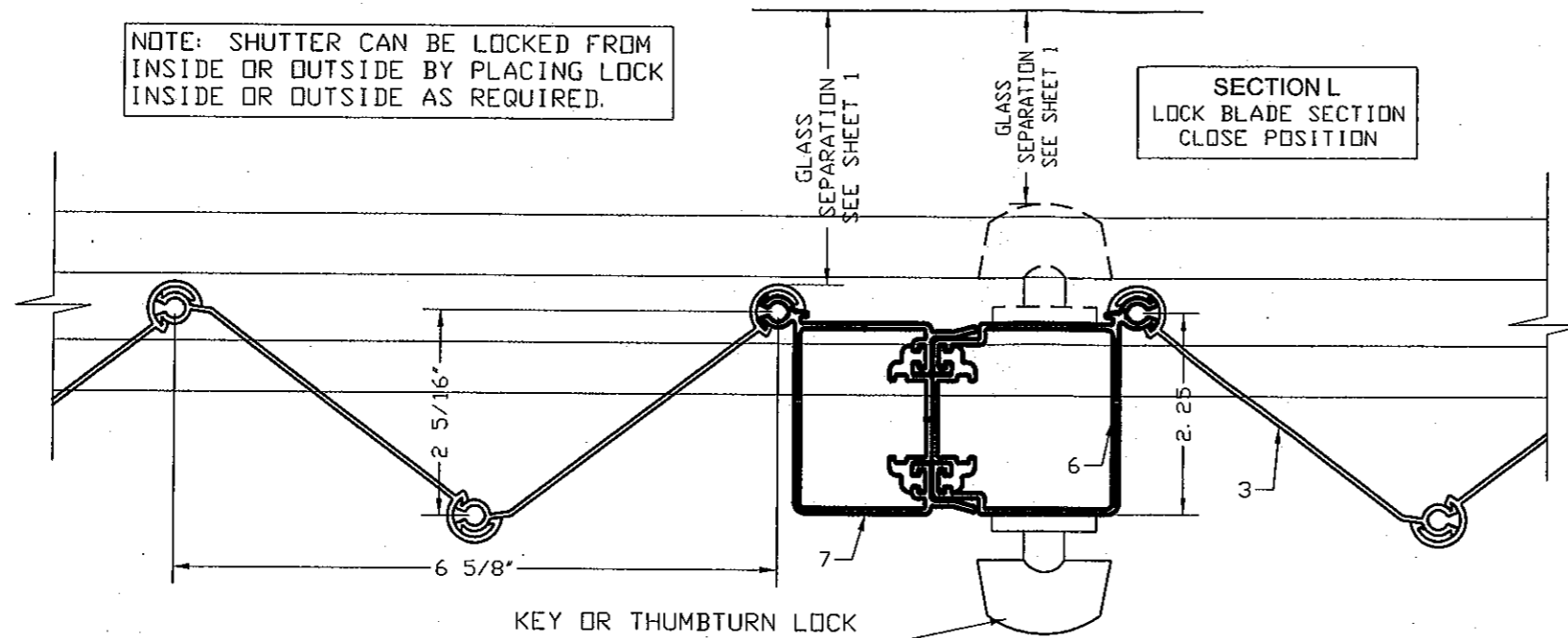
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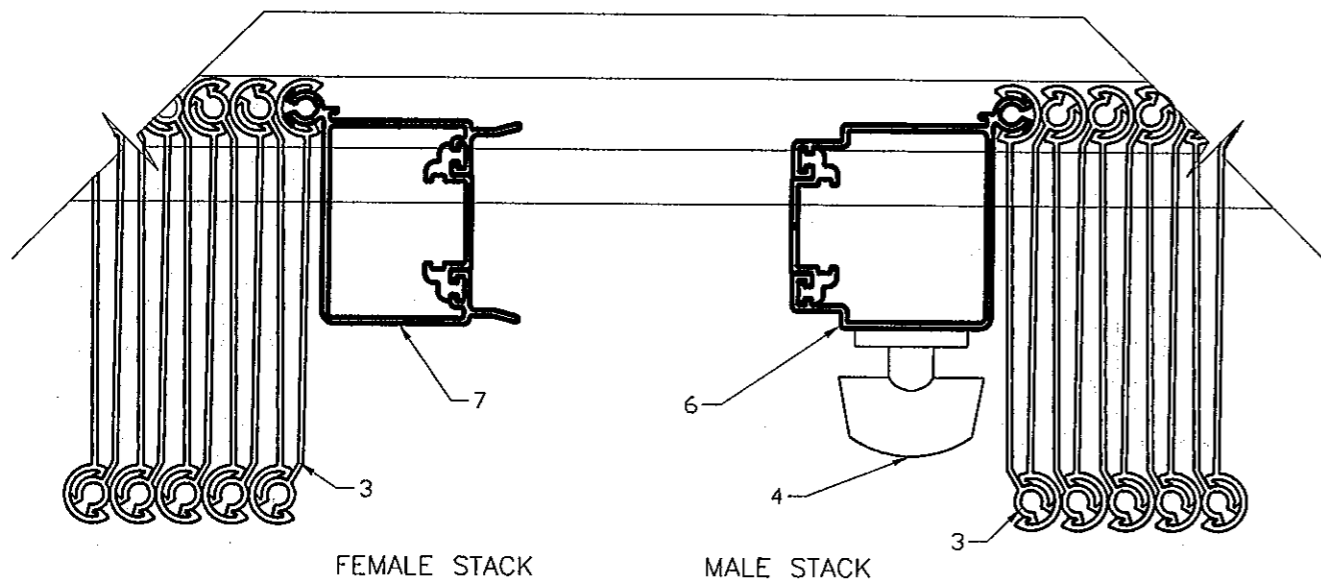
TYPICAL HORIZONTAL SECTIONS
LOCK SECTIONS

NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING LOCK
INSIDE OR OUTSIDE AS REQUIRED.

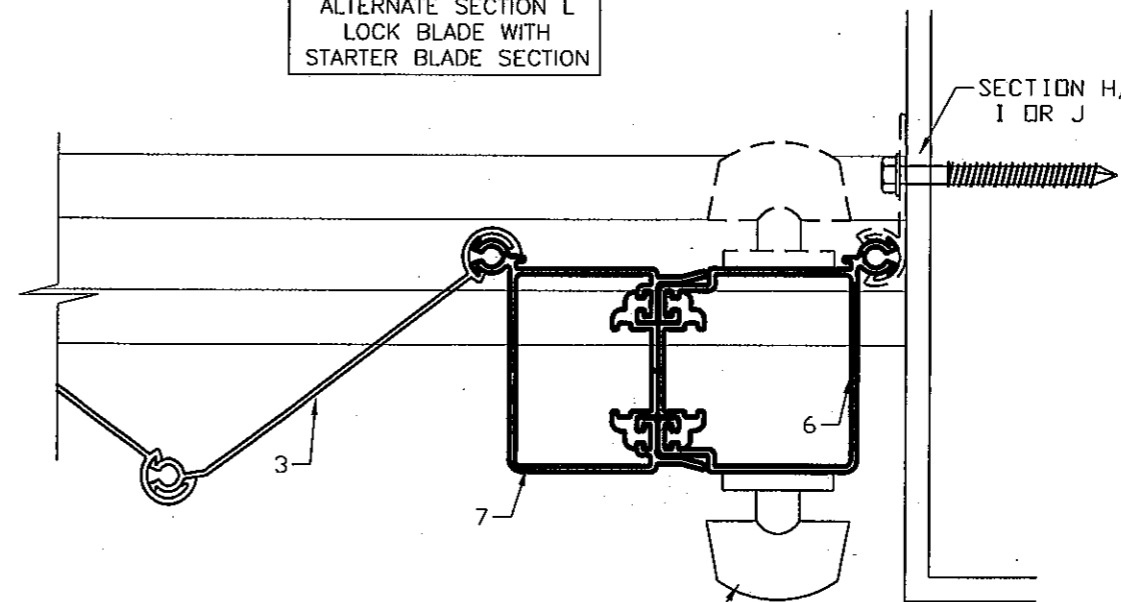


KEY OR THUMBTURN LOCK
LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

SECTION L
LOCK BLADE SECTION
OPEN POSITION



ALTERNATE SECTION L
ALTERNATE SECTION L
LOCK BLADE WITH
STARTER BLADE SECTION

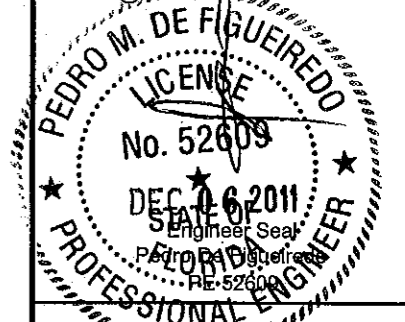


KEY OR THUMBTURN LOCK
LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

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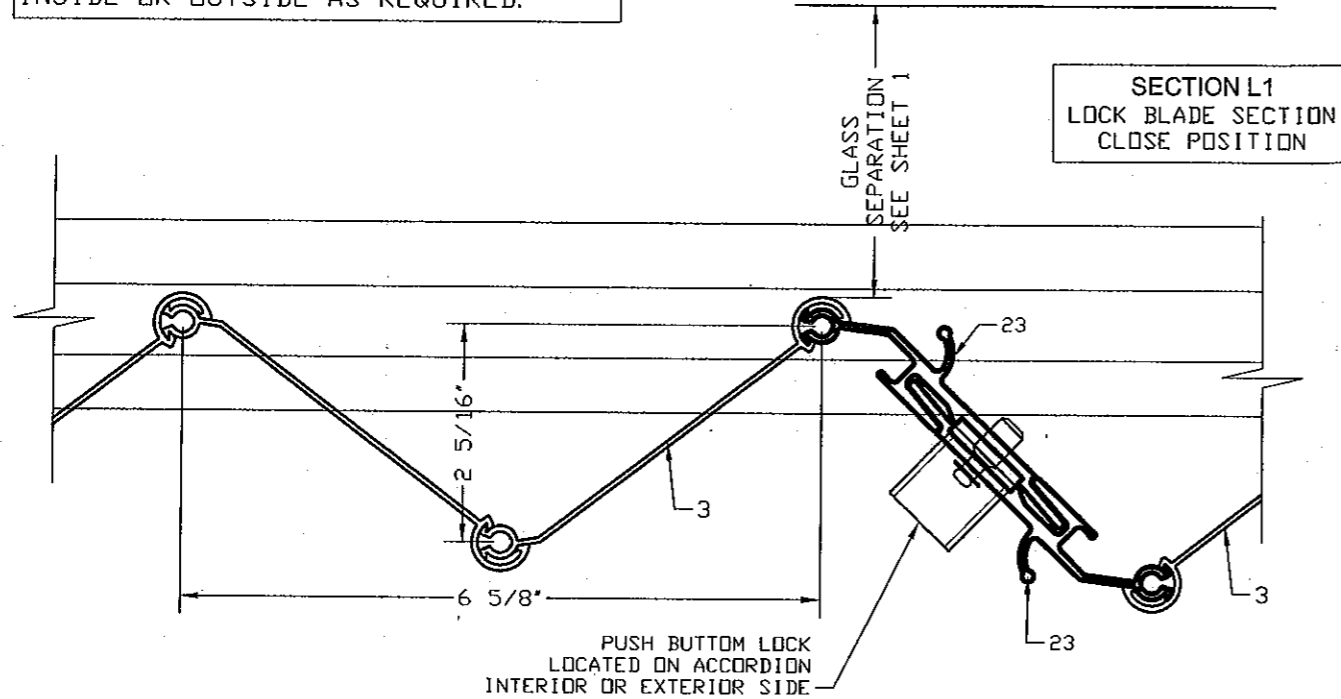
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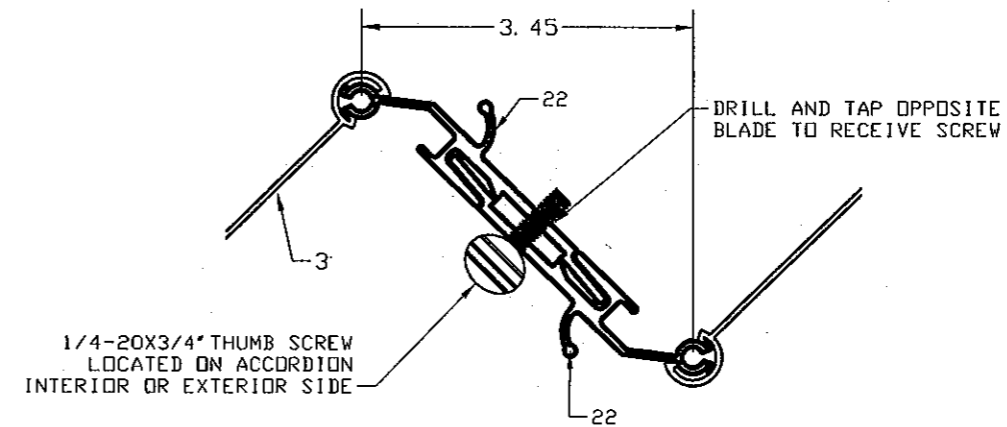
Sheet
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TYPICAL HORIZONTAL
UNIMATE LOCK SECTIONS

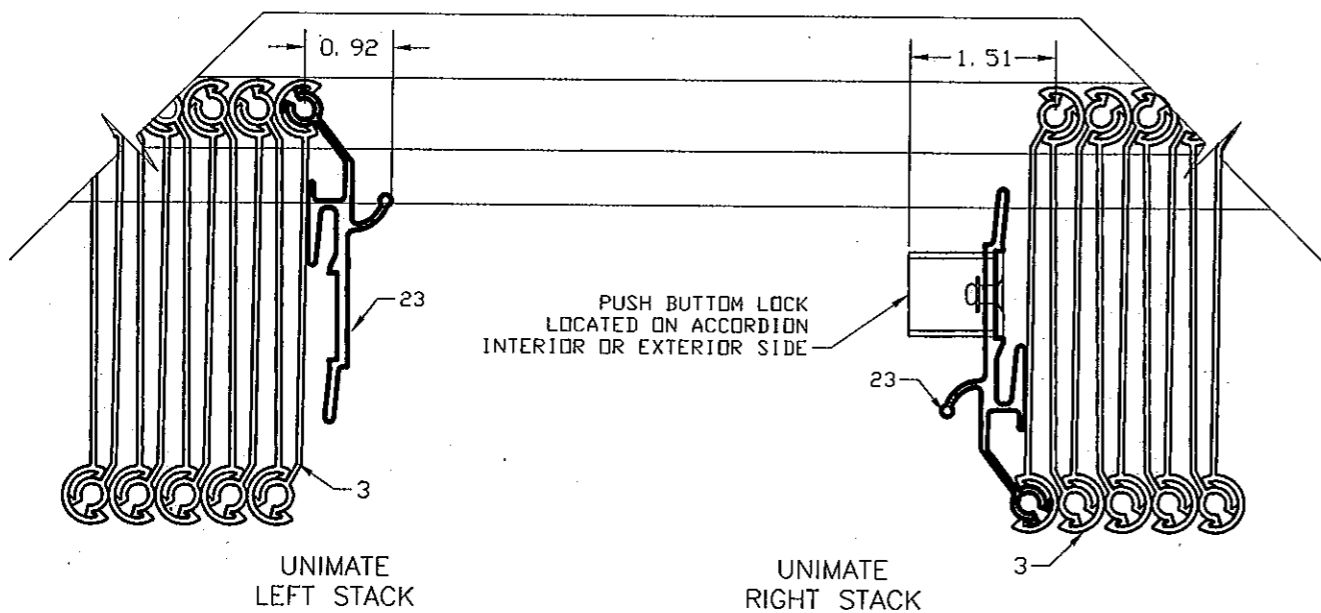
NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING
THE PUSH BUTTON LOCK OR THUMB SCREW
INSIDE OR OUTSIDE AS REQUIRED.



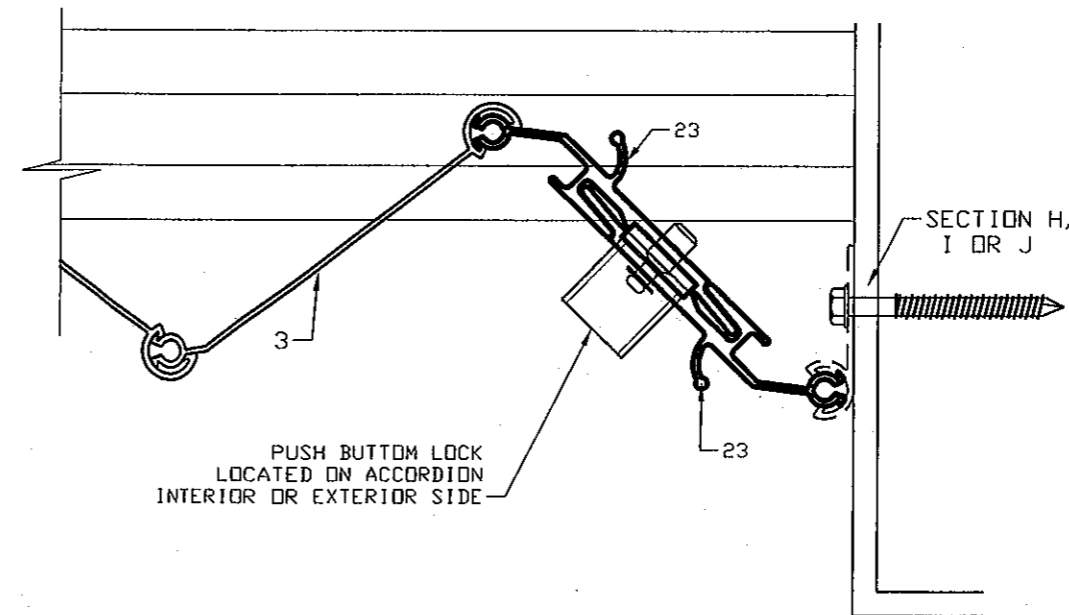
SECTION L1
LOCK BLADE SECTION
CLOSE POSITION
W/ THUMB SCREW



SECTION L1
LOCK BLADE SECTION
OPEN POSITION



ALTERNATE SECTION L1
UNIMATE LOCK BLADE WITH
STARTER BLADE SECTION



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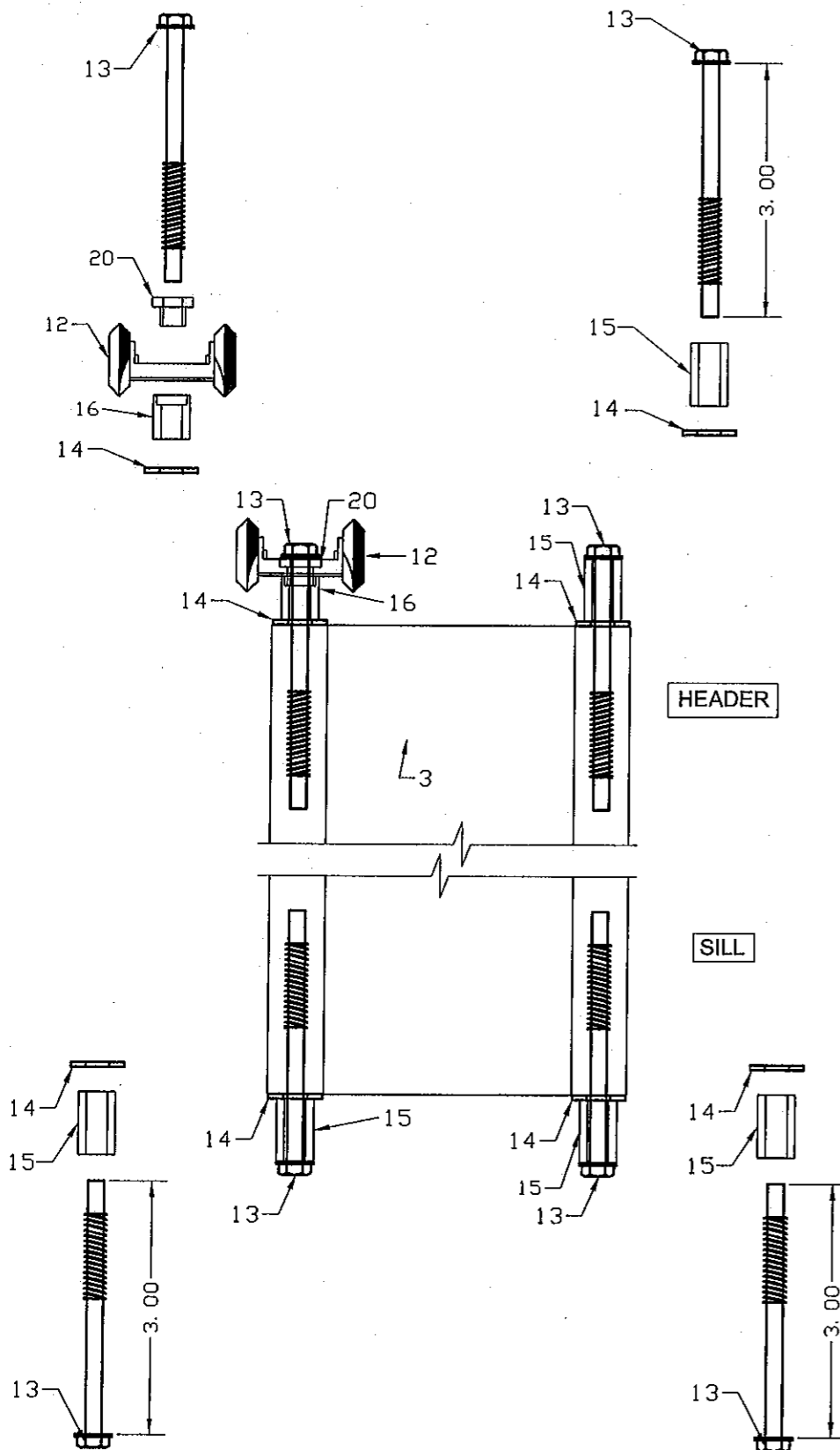
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11-242

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TYPICAL BLADE ASSEMBLY



BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL	MANUFACTURER
1	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
1A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
1B	3" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
2	CEILING TRACK	6063-T6 ALUMINUM	CROCI
3	ACCORDION BLADE	6063-T6 ALUMINUM	CROCI
4	LOCK		
5	LOCK BLADE INSERT	6063-T6 ALUMINUM	CROCI
6	MALE LOCK BLADE	6063-T6 ALUMINUM	CROCI
7	FEMALE LOCK BLADE	6063-T6 ALUMINUM	CROCI
8	STARTER BLADE	6063-T6 ALUMINUM	CROCI
9	*A* TRACK	6063-T6 ALUMINUM	CROCI
10	ADJUSTABLE TRACK	6063-T6 ALUMINUM	CROCI
10A	ADJUST. CHANNEL	6063-T6 ALUMINUM	CROCI
10B	ADJUST. CHANNEL W/ FLANGE	6063-T6 ALUMINUM	CROCI
11			
12	WHEEL CARRIER	PLATED STEEL/ NYLON	CROCI
13	1/4"X3" SCREW BLADE	410 STAINLESS STEEL	CROCI
14	1/2" SS FLAT WASHER	STAINLESS STEEL	CROCI
15	1"x7/16" BUSHING	NYLON	CROCI
16	1/2"x7/8" WHEEL BUSHING	NYLON	CROCI
17	1/8 BUILT-OUT ANGLE'S	6063-T6 ALUMINUM	CROCI
18	1/4"-2X3 ANGLE	6063-T6 ALUMINUM	CROCI
19	PUSH-BUTTON LOCK		
20	1/2"x 1/4" WHEEL SPACER	NYLON	CROCI
21	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
21A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
21B	3" WALL MOUNT TRACK	6063-T6 ALUMINUM	CROCI
22	0.04" OPTIONAL COVER	ALUMINUM BREAK METAL	CROCI
23	UNIMATE LOCK BLADE	6063-T6 ALUMINUM	CROCI

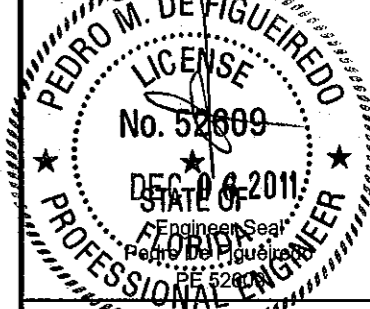
ANCHOR SCHEDULE

ANCHOR	DESCRIPTION	EMBED.	ED	MANUFACTURER
A1	1/4" TAPCON INTO MIN. 3000 PSI CONCRETE	1-3/4"	2-1/2"	ITW
B1	1/4" ULTRACON INTO MIN. 2700 PSI CONCRETE	1-3/4"	2-1/2"	ELCO
	1/4" ULTRACON INTO GF C90- BLOCK	2-1/4"	2-1/2"	ELCO
A2	1/4" TAPCON INTO C-90 HOLLOW BLOCK	1-1/4"	2-1/2"	ITW
B2	1/4" ULTRACON INTO C90- HOLLOW BLOCK	1-1/4"	2-1/2"	ELCO
A3	1/4" TAPCONS/ ULTRACON TO WOOD (SG)=.55)	1-1/2"	1.0	ITW / ELCO
	#14 WOOD SCREWS (SG)=.55)	1-1/2"	1.0	GENERIC
A4	1/4-20 SOLID-SET INTO MIN. 3000 PSI CONCRETE	7/8"	3.0	ALL POINTS

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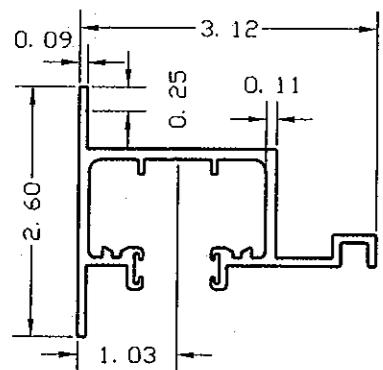
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 By *Heather A. Miller*
 Miami Dade Product Control

DATE: 12/06/11
 SCALE: NA
 DESIGN BY: PPMF

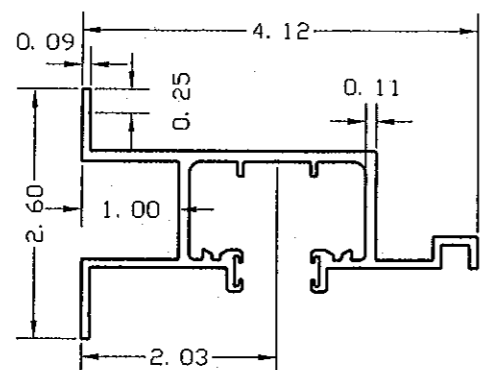
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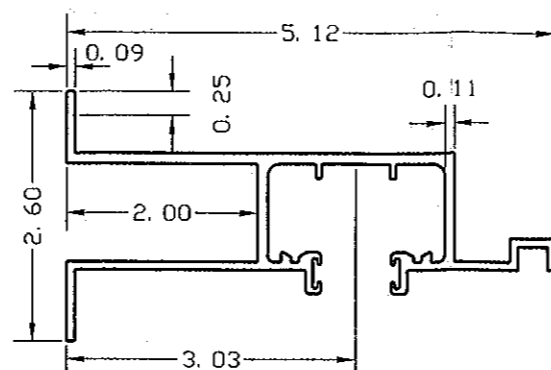
COMPONENTS



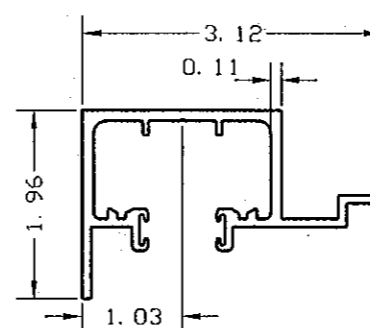
1- 1" WALL MOUNT TRACK



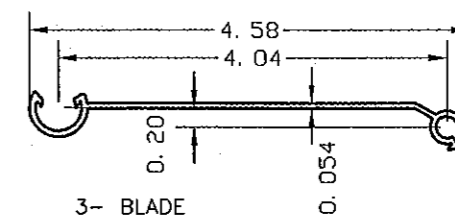
1A- 2" WALL MOUNT TRACK



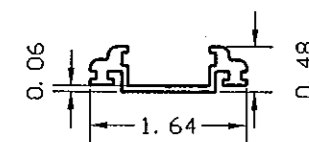
1B- 3" WALL MOUNT TRACK



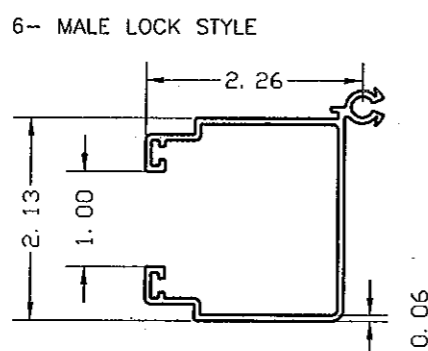
2- CEILING TRACK



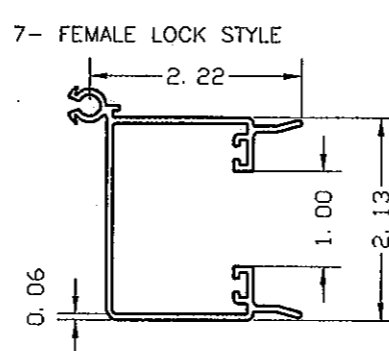
3- BLADE



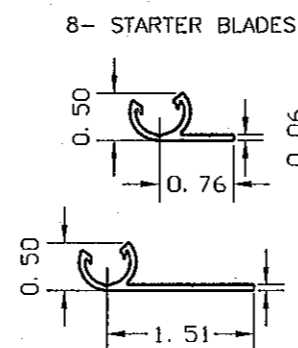
5- LOCK BLADE INSERT



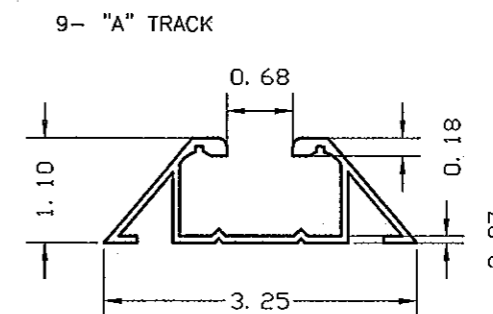
6- MALE LOCK STYLE



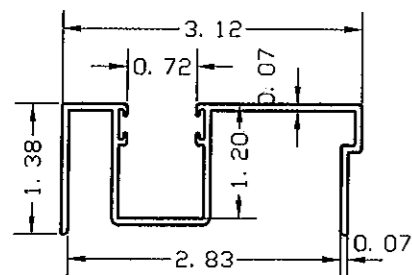
7- FEMALE LOCK STYLE



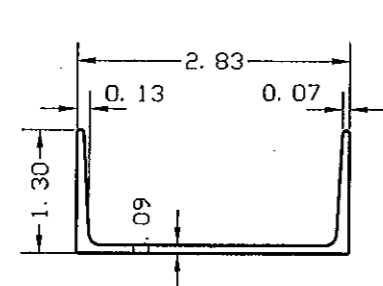
8- STARTER BLADES



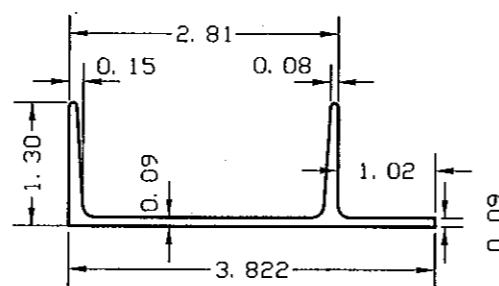
9- "A" TRACK



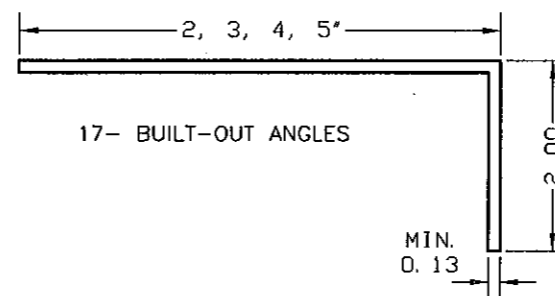
10-ADJUSTABLE SILL TRACK



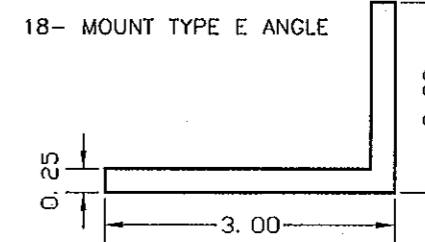
10A- ADJUSTABLE SILL CHANNEL



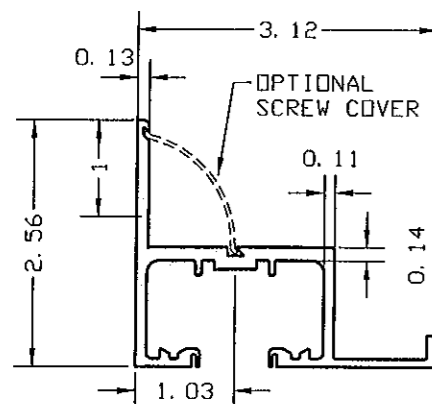
10B- ADJUSTABLE SILL CHANNEL W/ FLANGE



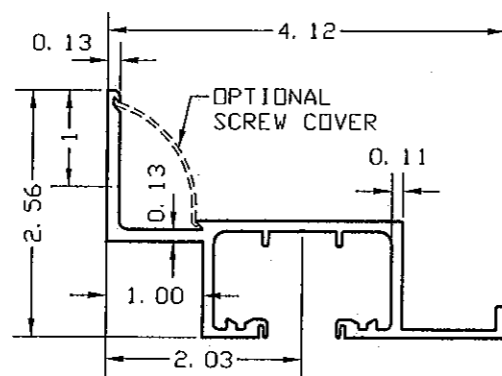
17- BUILT-OUT ANGLES



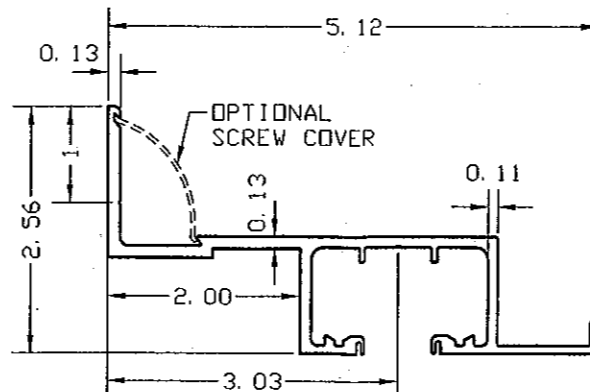
18- MOUNT TYPE E ANGLE



21- 1" WALL MOUNT TRACK



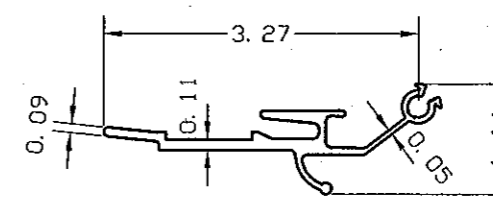
21A- 2" WALL MOUNT TRACK



21B- 3" WALL MOUNT TRACK



22- 0.04" BREAK METAL
OPTIONAL SCREW COVER

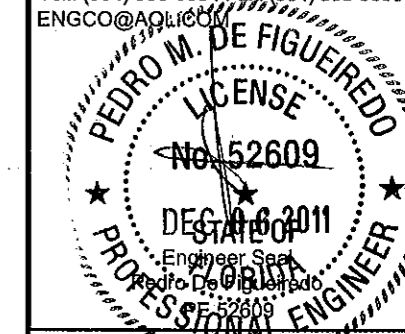


23- UNIMATE LOCK STYLE

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