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## Product Approval

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[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

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FL #	FL16893-R8														
Application Type	Revision														
Code Version	2023														
Application Status	Approved														
Comments															
Archived	<input type="checkbox"/>														
Product Manufacturer	National Approved Shutter Association LLC														
Address/Phone/Email	604 Hillsboro Technology Dr. Deerfield Beach, FL 33441 (786) 621-6706 peter@amdaluminum.com														
Authorized Signature	Peter Loucks peter@amdaluminum.com														
Technical Representative															
Address/Phone/Email															
Quality Assurance Representative															
Address/Phone/Email															
Category	Shutters														
Subcategory	Accordion														
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input type="checkbox"/> Evaluation Report - Hardcopy Received														
Florida Engineer or Architect Name who developed the Evaluation Report	Pedro De Figueiredo														
Florida License	PE-52609														
Quality Assurance Entity	National Accreditation and Management Institute														
Quality Assurance Contract Expiration Date	12/31/2024														
Validated By	Jesus Gonzalez, P.E. <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received														
Certificate of Independence	<a href="#">FL16893_R8_COI_23-120_CI_ds.pdf</a>														
Referenced Standard and Year (of Standard)	<table> <thead> <tr> <th>Standard</th><th>Year</th></tr> </thead> <tbody> <tr> <td>ASTM E1886</td><td>2019</td></tr> <tr> <td>ASTM E1996</td><td>2017</td></tr> <tr> <td>ASTM E330</td><td>2014</td></tr> <tr> <td>TAS 201</td><td>1994</td></tr> <tr> <td>TAS 202</td><td>1994</td></tr> <tr> <td>TAS 203</td><td>1994</td></tr> </tbody> </table>	Standard	Year	ASTM E1886	2019	ASTM E1996	2017	ASTM E330	2014	TAS 201	1994	TAS 202	1994	TAS 203	1994
Standard	Year														
ASTM E1886	2019														
ASTM E1996	2017														
ASTM E330	2014														
TAS 201	1994														
TAS 202	1994														
TAS 203	1994														
Equivalence of Product Standards Certified By															

Sections from the Code

Product Approval Method

Method 1 Option D

Date Submitted

08/17/2023

Date Validated

08/20/2023

Date Pending FBC Approval

08/30/2023

Date Approved

10/17/2023

**Summary of Products**

FL #	Model, Number or Name	Description
16893.1	SUPERNOVA ACCORDION SHUTTER	ALUMINUM EXTRUDED ALUMINUM ACCORDION SHUTTER
<b>Limits of Use</b> <b>Approved for use in HVHZ:</b> Yes <b>Approved for use outside HVHZ:</b> Yes <b>Impact Resistant:</b> Yes <b>Design Pressure:</b> +160/-160 <b>Other:</b> PRODUCT TO BE MANUFACTURED, DESIGNED, AND INSTALLED PER DRAWING SPECIFICATIONS 23-120		<b>Installation Instructions</b> <a href="#">FL16893_R8_II_23-120 DWG ds.pdf</a> Verified By: Pedro de Fegueiredo PE 52609 Created by Independent Third Party: Yes <b>Evaluation Reports</b> <a href="#">FL16893_R8_AE_23-120 PER ds.pdf</a> Created by Independent Third Party: Yes

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[Contact Us](#) :: [2601 Blair Stone Road, Tallahassee FL 32399](#) Phone: 850-487-1824

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**Product Approval Accepts:**

SUPERNOVA ACCORDION SHUTTER

EXTRUDED ALUMINUM ACCORDION SHUTTER

FLORIDA STATE APPROVAL

CODE VERSION: FLORIDA BUILDING CODE 2020 - 7th EDITION  
APPROVED FOR USE IN HVHZ AND OUTSIDE HVHZ  
CATEGORY: SHUTTERS -- SUBCATEGORY: ACCORDION  
IMPACT RESISTANT: (LEVEL D) - LARGE & SMALL MISSILE

Pedro De Figueiredo  
Digitally signed by Pedro De Figueiredo  
Date: 2021.08.09 16:34:04 -04'00'

DIGITALLY SIGNED FOR 18 PAGES

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY PEDRO DE FIGUEIREDO, PE 52609 ON THE DATE INDICATED HERE. PRINTED COPIES OF THIS DOCUMENTS ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES



Pedro De Figueiredo  
08/09/2021



GENERAL NOTES: (FLORIDA BUILDING CODE 2020 - 7th ED. - HVHZ & non HVHZ )

- 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 (LEVEL D OR LARGE 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 2020 FLORIDA BUILDING CODE UNDER TAS 201, 202 AND 203, ASTM E330, ASTM E1886 & ASTM E1996.
- 3- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER FBC SECTION 1703.5. IT SHALL BE ONE LABEL PER OPENING LOCATED ON THE BOTTOM OF THE CENTER MATE FACING THE EXTERIOR SIDE.
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7-16. IN HVHZ OR AS REQUIRED BY THE BUILDING OFFICIAL, PRESSURES MUST BE PROVIDED BY A PROFESSIONAL ARCHITECT OR ENGINEER FOR EACH SPECIFIC PROJECT. THE 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, WIND LOADS, 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.

USER INSTRUCTIONS:

- 1- DETERMINE PROJECT DESIGN WIND LOAD PRESSURES AS PER ITEM 4 OF GENERAL NOTES.
- 2- CHECK BLADE SPAN ALLOWABLE DESIGN PRESSURE ON TABLE 1 OR TABLE 1A.
- 3- VERIFY GLASS SEPARATION ON TABLE 2 IF APPLICABLE.
- 4- DETERMINE MAXIMUM ANCHORAGE PRESSURE CAPACITY FUNCTION OF SECTION TYPE TO BE USED AS PER SHEET 13 AND 14.
- 5- THE LOWEST PRESSURE FROM ITEMS 2 AND 4 ABOVE MUST NOT EXCEED THE REQUIRED DESIGN PRESSURE FROM GENERAL NOTES 4

TABLE OF CONTENTS:

SHEET	DESCRIPTION
1	TABLE OF CONTENTS, GENERAL NOTES, USER INSTRUCTIONS
2	TYPICAL ELEVATION, ALLOWABLE BLADE PRESSURE TABLE 1, 1A AND GLASS SEPARATION TABLE 2
3	TYPICAL SECTIONS A, B, B1, B2, B3 & B4
4	TYPICAL SECTIONS C, D, E & GH
5	TYPICAL SECTIONS F, G & I
6	OPTIONAL CURVE TRACK DETAILS
7	JAMB AND CORNER SECTIONS "J"
8	LOCK MALE & FEMALE SECTIONS "L"
9	LOCK UNIMATE SECTIONS "M"
10	STANDARD LOCK SECTIONS "N"
11	COMPONENTS
12	BILL OF MATERIALS, BLADE ASSEMBLY & ANCHOR SCHEDULE.
13	ANCHORAGE SPACING SELECTION
14	ANCHORAGE SPACING SELECTION
15	SECTION "X" DETAILS
16	OVER COUNTER TOP INSTALLATION SECTION CT DETAILS
17	LOCK UNIMATE SECTION "M" WITH PUSH BUTTON OR HANDLE SCREW LOCK
18	LOCK HARDWARE SECTION "N" DETAIL, SPECIAL SHUTTER HEIGHT TRANSITION

STANDARD COMPLIANCE:  
ASTM E330, E1996 (LEVEL D MISSILE)  
TAS 201, 202, 203 (LARGE & SMALL MISSILE)  
ASCE 7-16, ADM-15, NDS-18



PRODUCT:  
SUPERNOVA  
EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
N.A.S.A.  
NATIONAL APPROVED SHUTTER ASSOCIATION L.L.C.  
MIRAMAR, FL 33027

SCALE:  
NA  
DATE:  
08/09/2021  
DRAWING #  
21-093  
SHEET  
01 OF 18



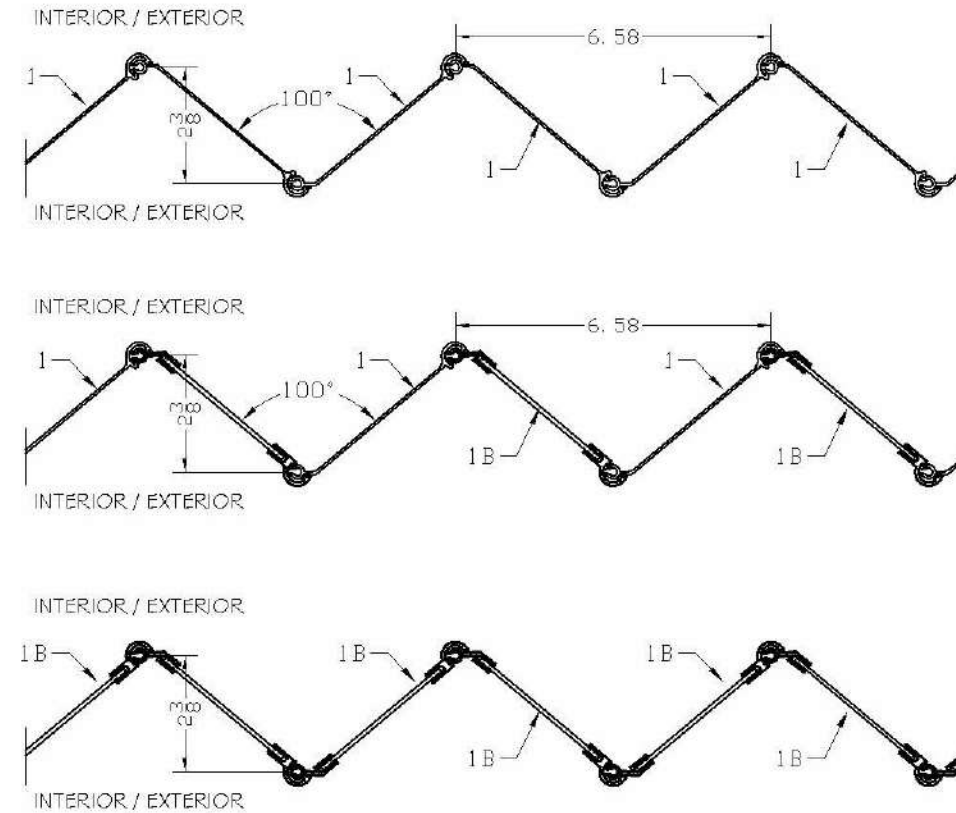
**TABLE I**  
MAXIMUM ALLOWABLE #1 BLADE  
SHUTTER SPAN X PRESSURE

BLADE SPAN INCHES	PRESSURE (PSF)	
	POS	NEG
60	160	160
66	158	158
72	144	144
78	133	133
84	124	124
90	116	116
96	108	108
104	100	100
108	93	93
114	83	83
120	75	75
126	68	68
132	62	62
138	57	57
144	48	52
150	41	48
162	30	40

NOTES:  
1- ACCORDION SHUTTER, BLADE SPAN (INCHES) FOR ALL CONDITIONS  
2- PRESSURE - DESIGN WIND LOAD (PSF)  
3- LINEAR INTERPOLATION IS ACCEPTABLE FOR DESIGN WIND LOADS AND BLADE SPAN BETWEEN TABULATED VALUES.  
4- USE TABLE 1A WHEN ONE OR MORE TYPE 1B BLADE IS USED  
5- BLADE REVERSED INSTALLATION IS ALLOWED FOR ALL MOUNTED CONDITIONS

**TABLE 1A**  
MAXIMUM ALLOWABLE #1 & #1B BLADES  
SHUTTER SPAN X PRESSURE

BLADE SPAN INCHES	PRESSURE (PSF)	
	POS	NEG
60	160	160
66	158	158
72	144	144
78	133	133
84	124	124
90	116	116
96	108	108
104	100	100
108	93	93
114	83	83
120	75	75
126	68	68
132	61	61
138	53	53
144	45	47
150	38	42
162	28	33



ALL ALUMINUM BLADES

COMBINATION  
ALUMINUM / LEXAN BLADES  
BLADES CAN BE ARRANGED IN MANY  
COMBINATIONS AS REQUIRED

ALL LEXAN BLADES



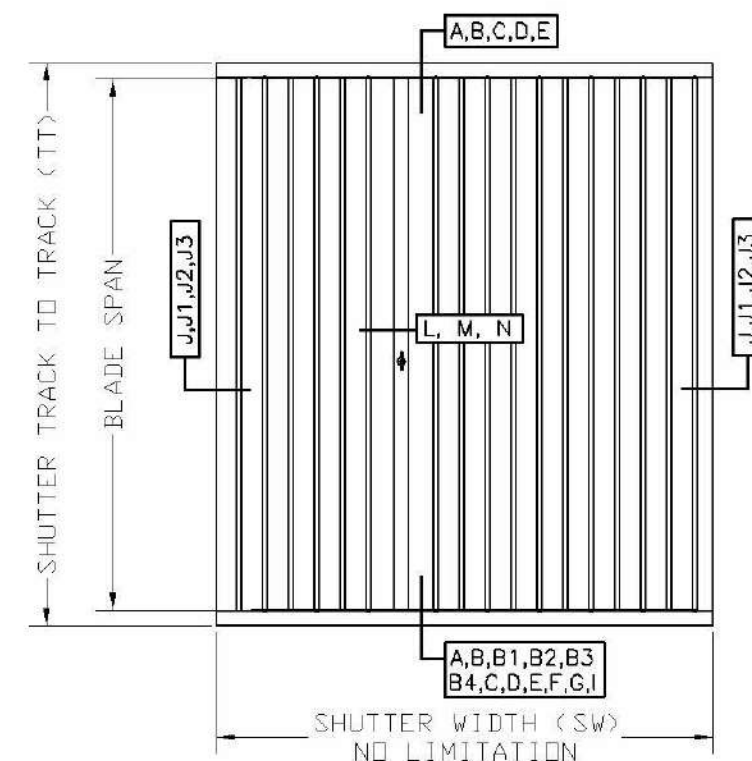
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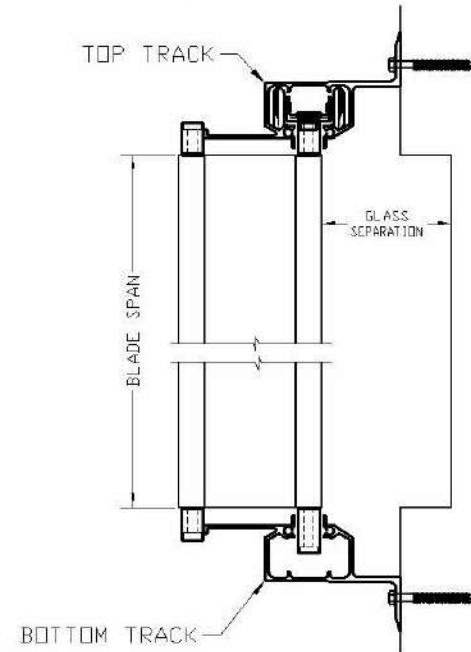
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**TYPICAL ELEVATION**



**TYPICAL CROSS SECTION**



**TABLE 2**  
MINIMUM SHUTTER SEPARATION FROM GLAZING

BLADE TYPE	GLAZING SEPARATION (INCHES)		
	BLADE SPAN		
	<= 60"	<= 104"	<= 162"
ALUMINUM ALL ELEVATIONS	2"	2 3/4"	3"
LEXAN <= 30' ELEVATION	3"	3"	3"
LEXAN > 30' ELEVATION	2 1/8"	3"	3"

NOTES:  
1- SEPARATION FROM GLAZING AREAS SHALL BE MEASURED FROM GLAZING SURFACE TO THE INNER MOST BLADE OR LOCK SURFACE.  
2- GLASS SEPARATION IS APPLICABLE ONLY WITHIN THE HVHZ (BROWARD AND MIAMI-DADE COUNTIES), WIND ZONE 4 AS PER ASTM E1996 AND ESSENTIAL FACILITIES AS DEFINED ON ASCE 7-16.  
3- WHEN SHUTTER IS ASSEMBLED WITH BOTH TYPES OF BLADES THE LARGEST GLASS SEPARATION SHALL APPLY.

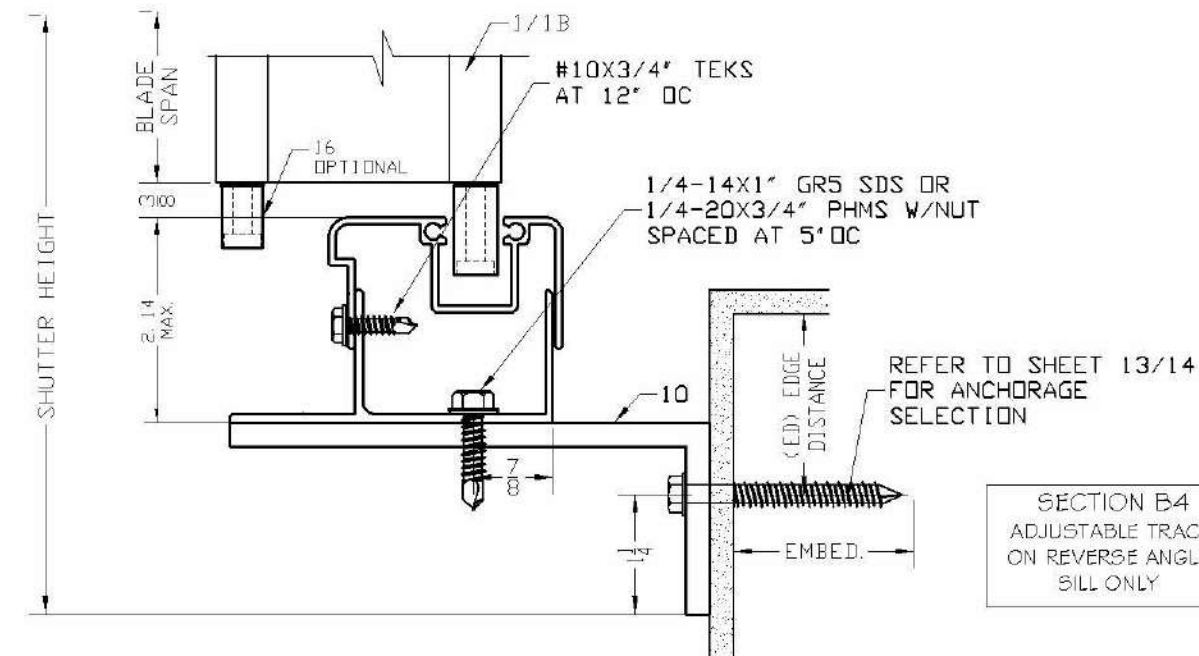
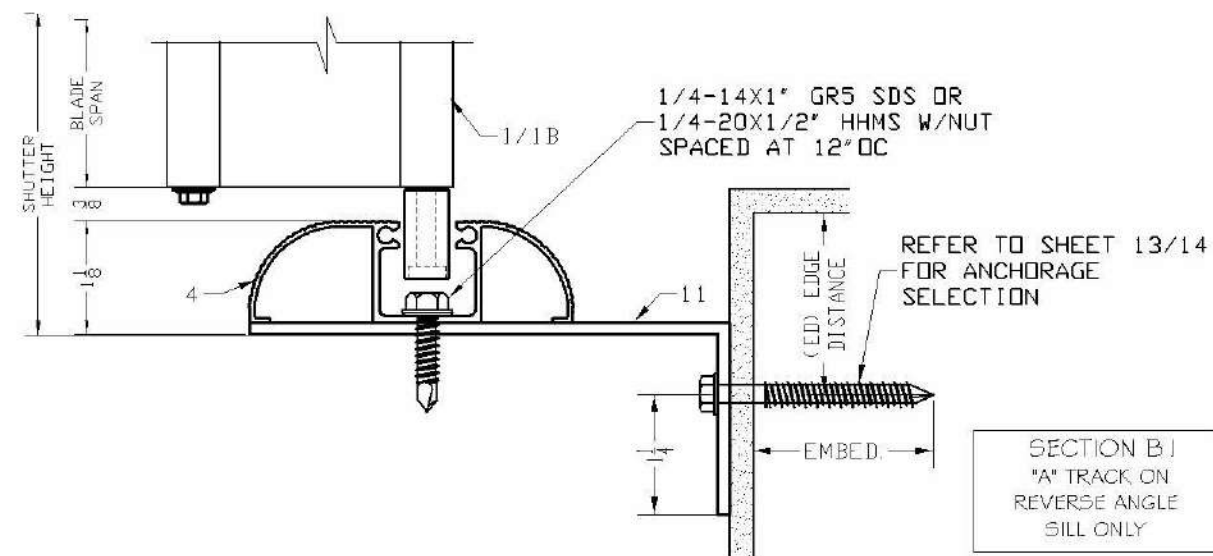
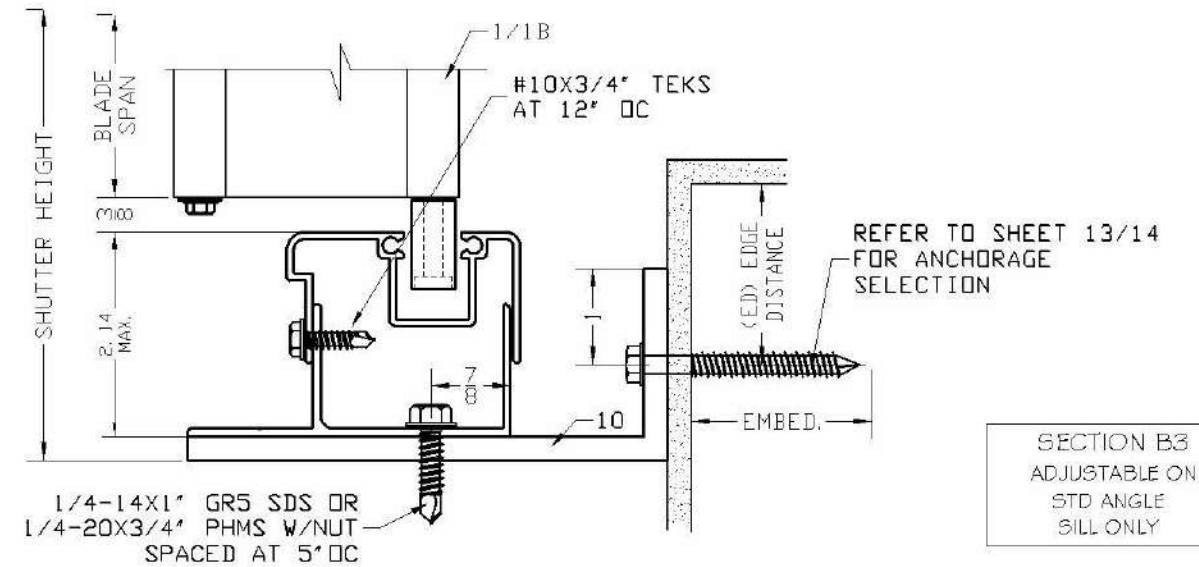
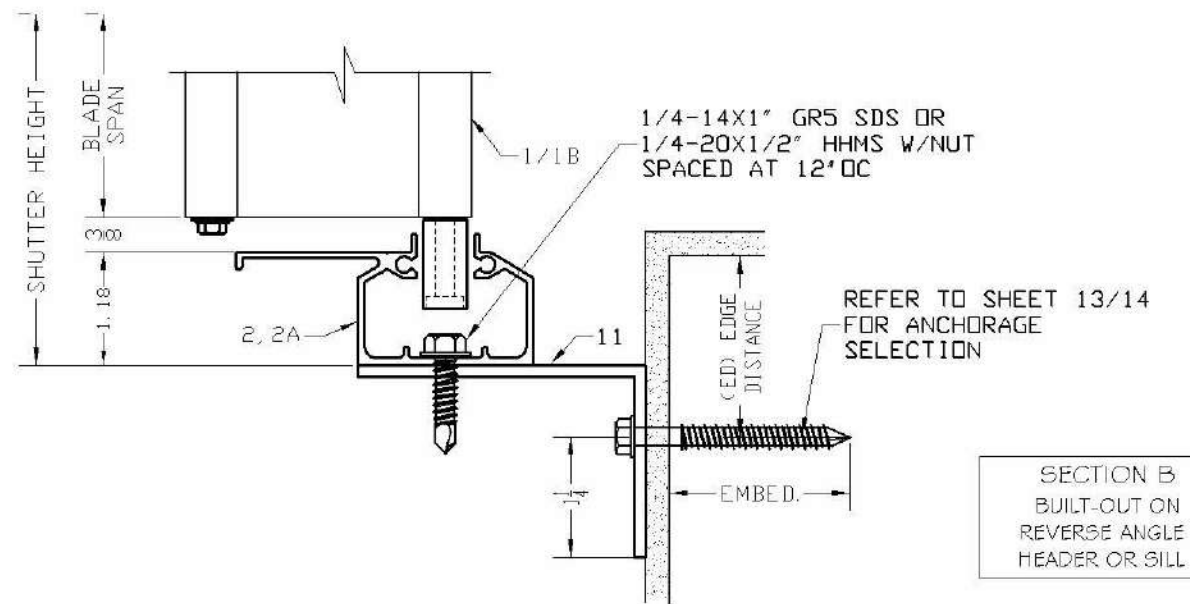
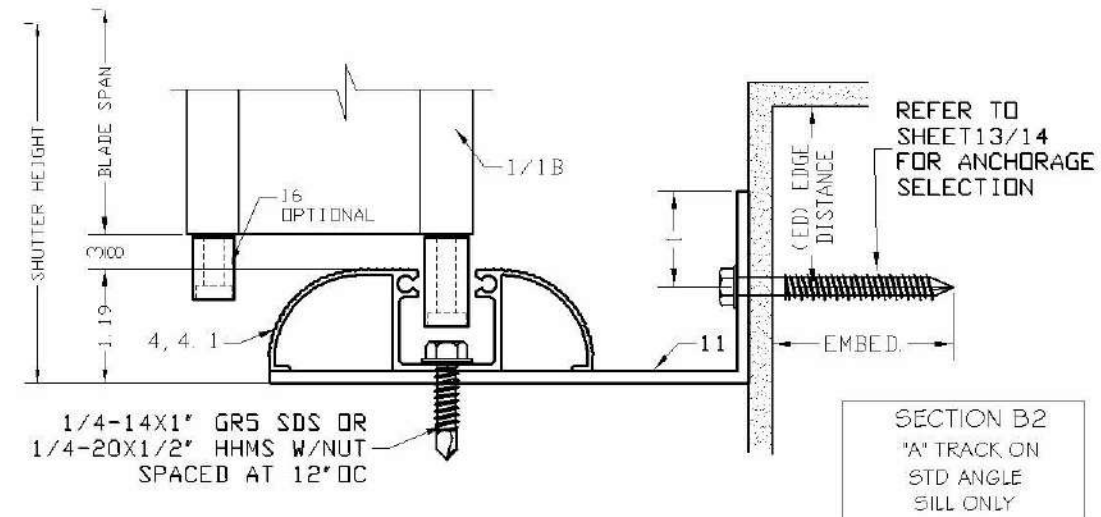
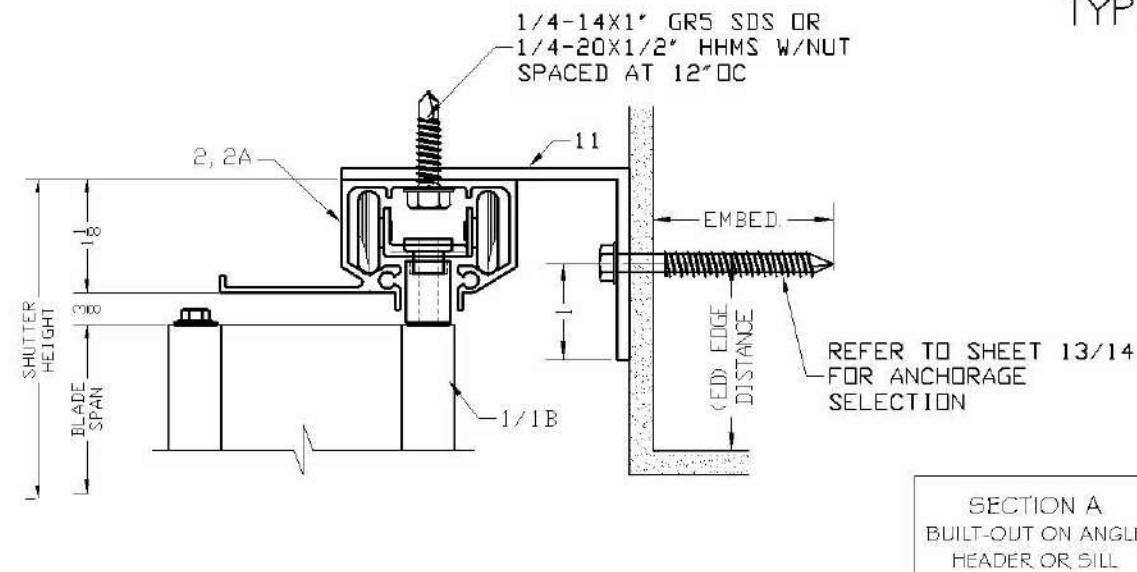
PRODUCT:  
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EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION LLC.  
MIRAMAR, FL 33027

SCALE:  
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# TYPICAL SECTIONS



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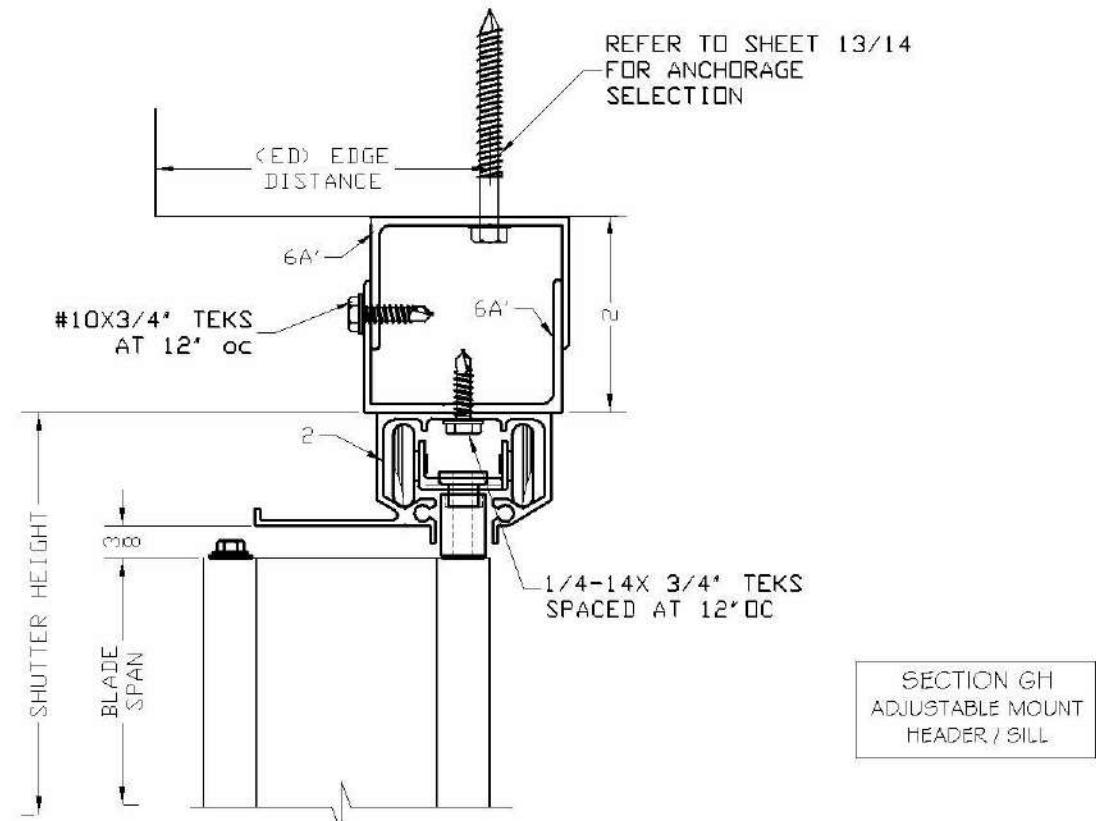
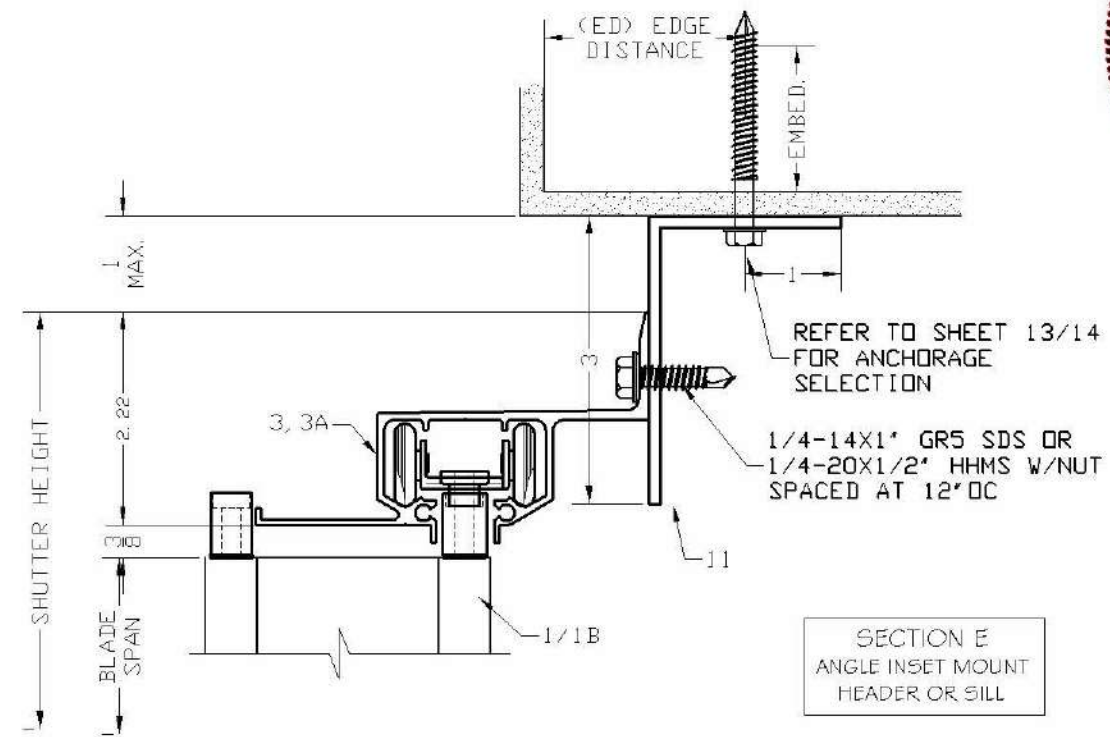
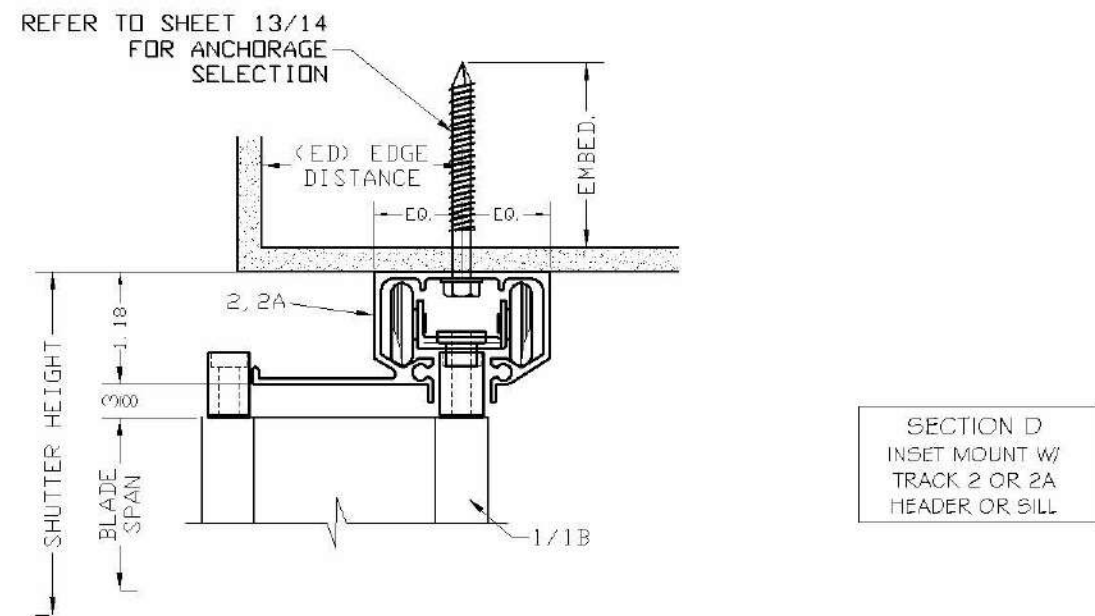
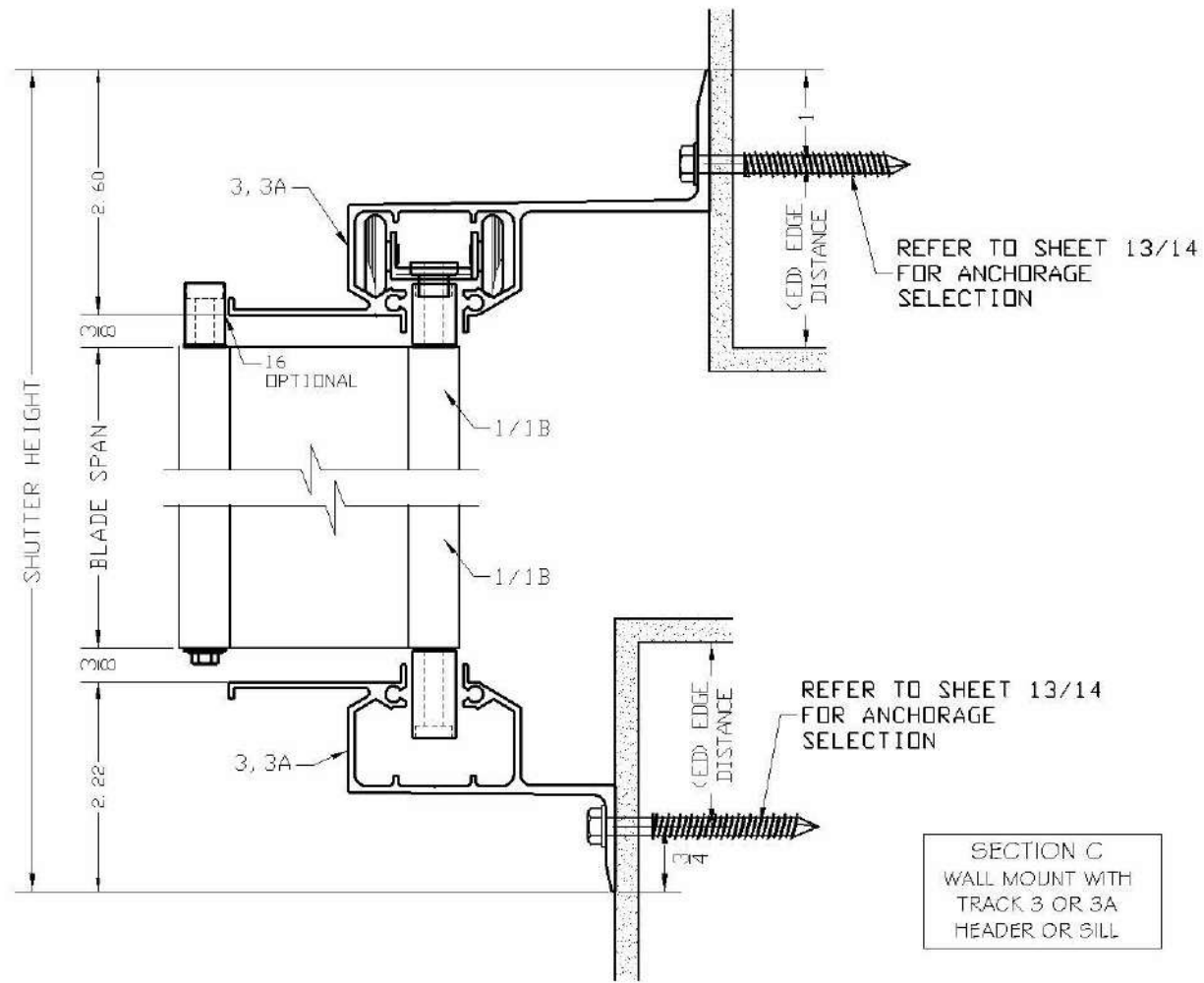
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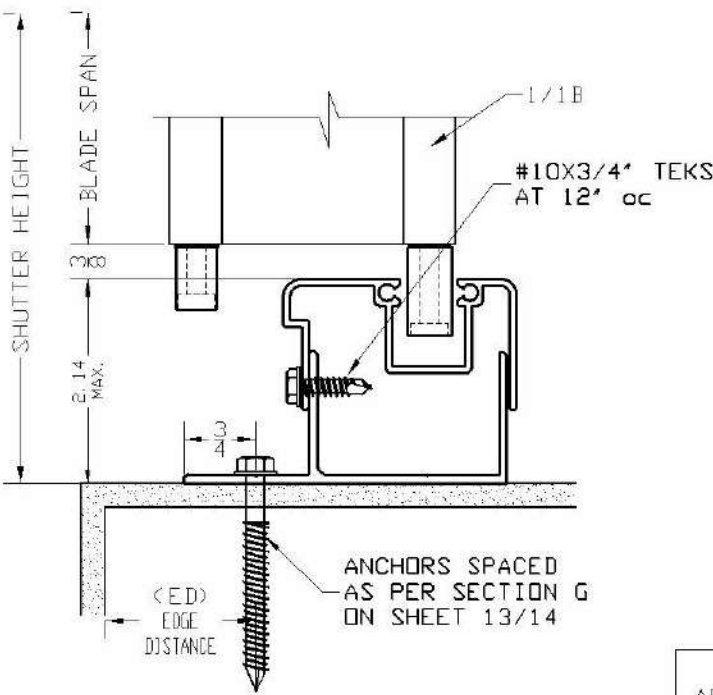
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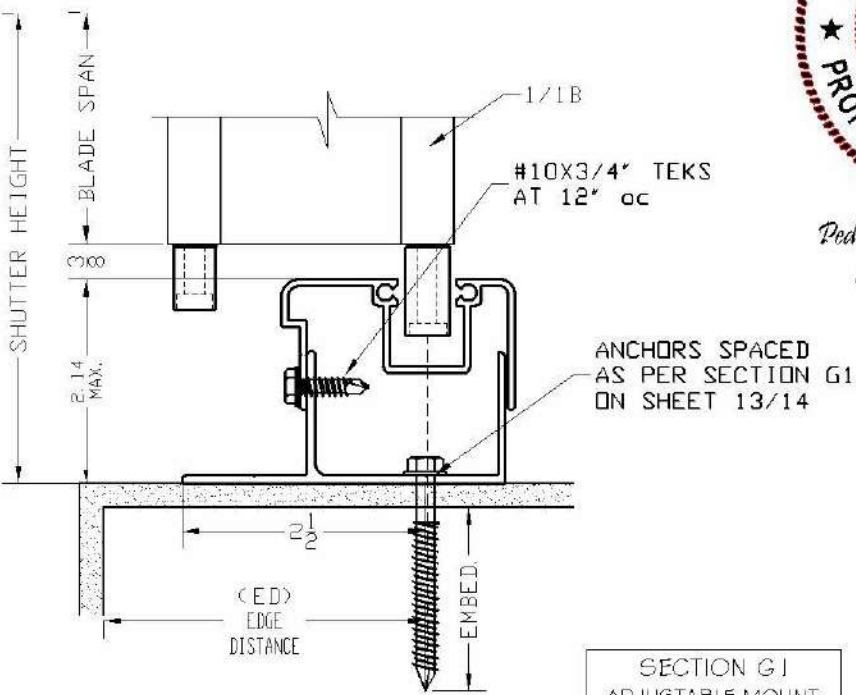
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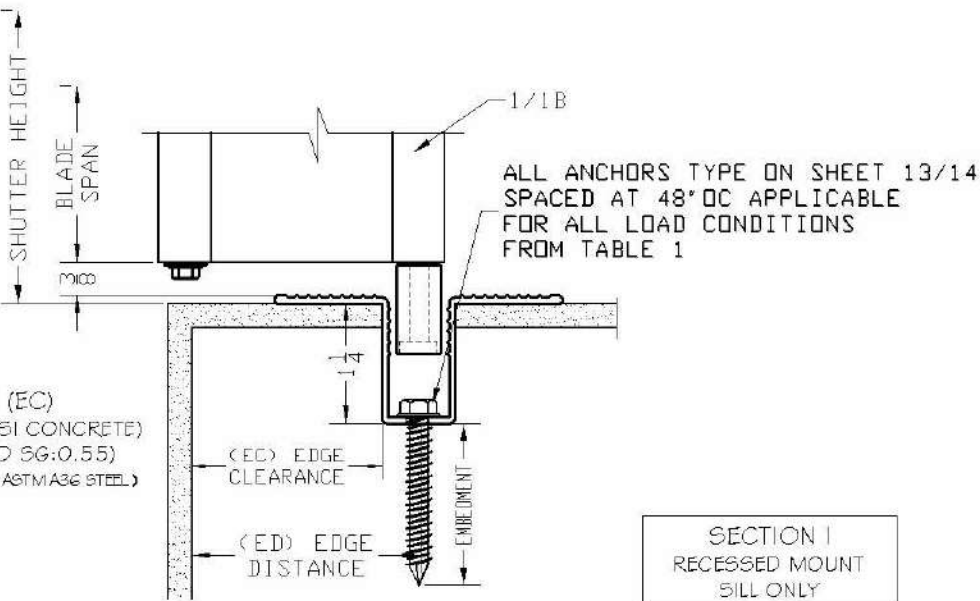
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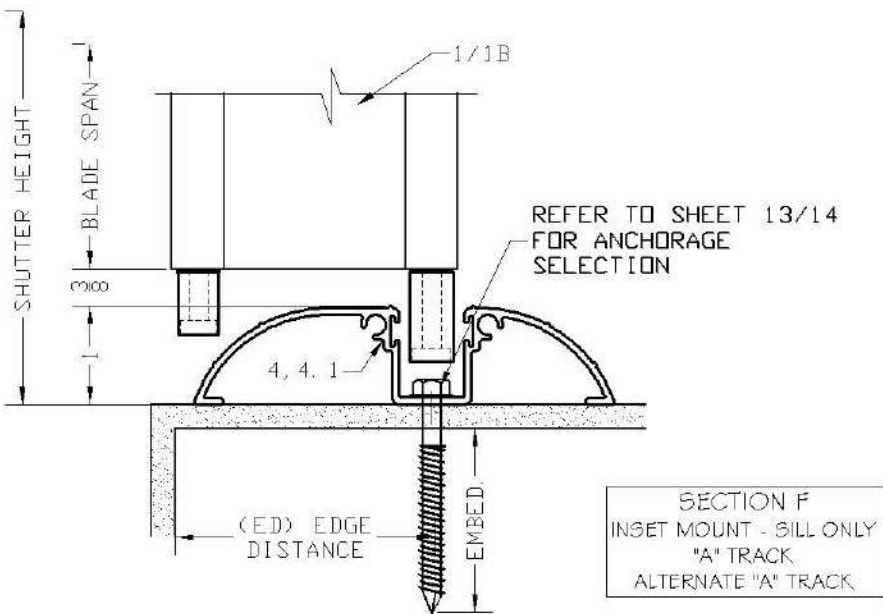
SECTION G  
ADJUSTABLE MOUNT  
SILL ONLY



SECTION G1  
ADJUSTABLE MOUNT  
SILL ONLY



SECTION I  
RECESSED MOUNT  
SILL ONLY



SECTION F  
INSET MOUNT - SILL ONLY  
"A" TRACK  
ALTERNATE "A" TRACK



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OPTIONAL CURVED TRACK  
BENT TRACK OR SEGMENTED TRACK OPTIONS



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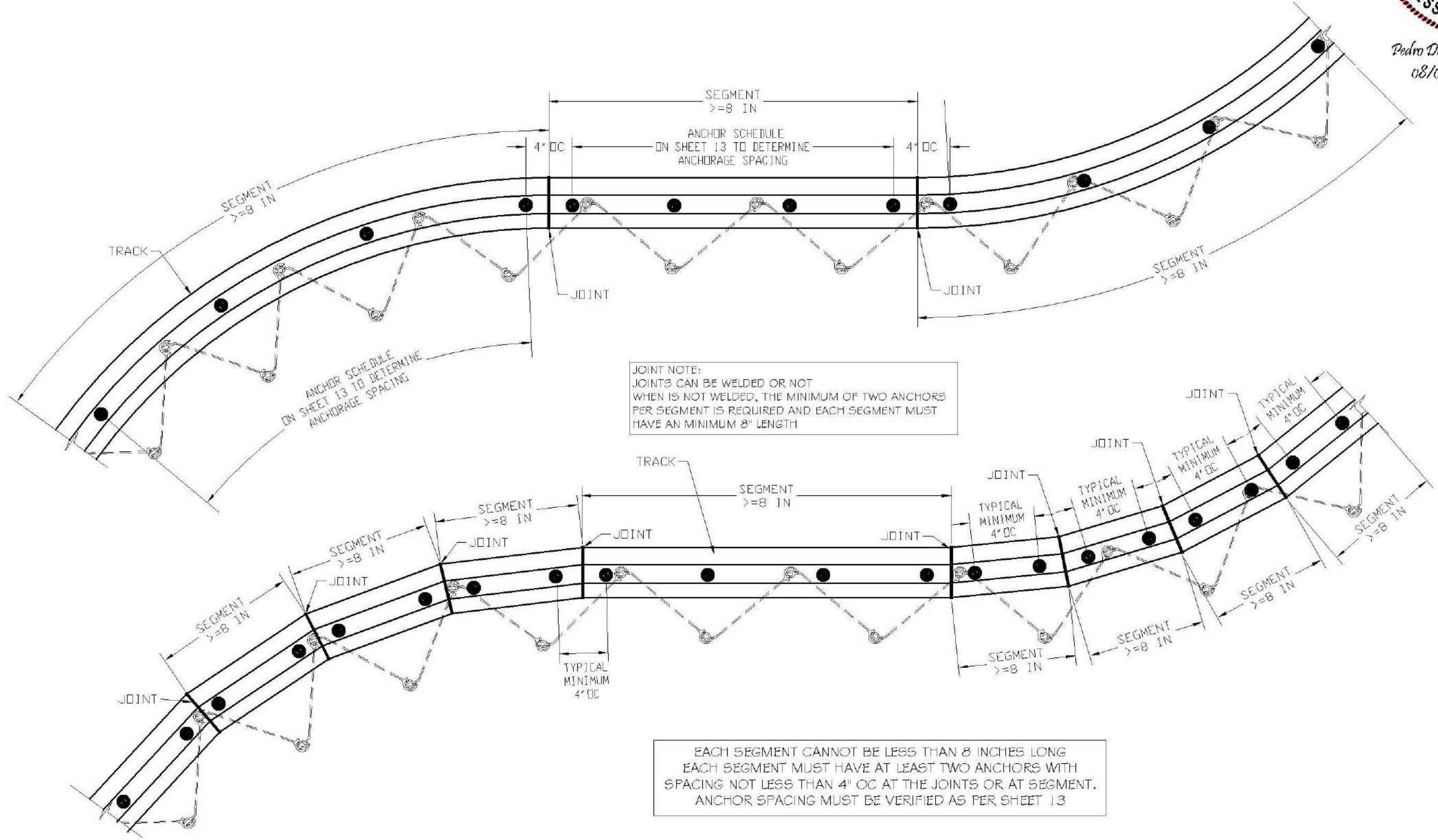


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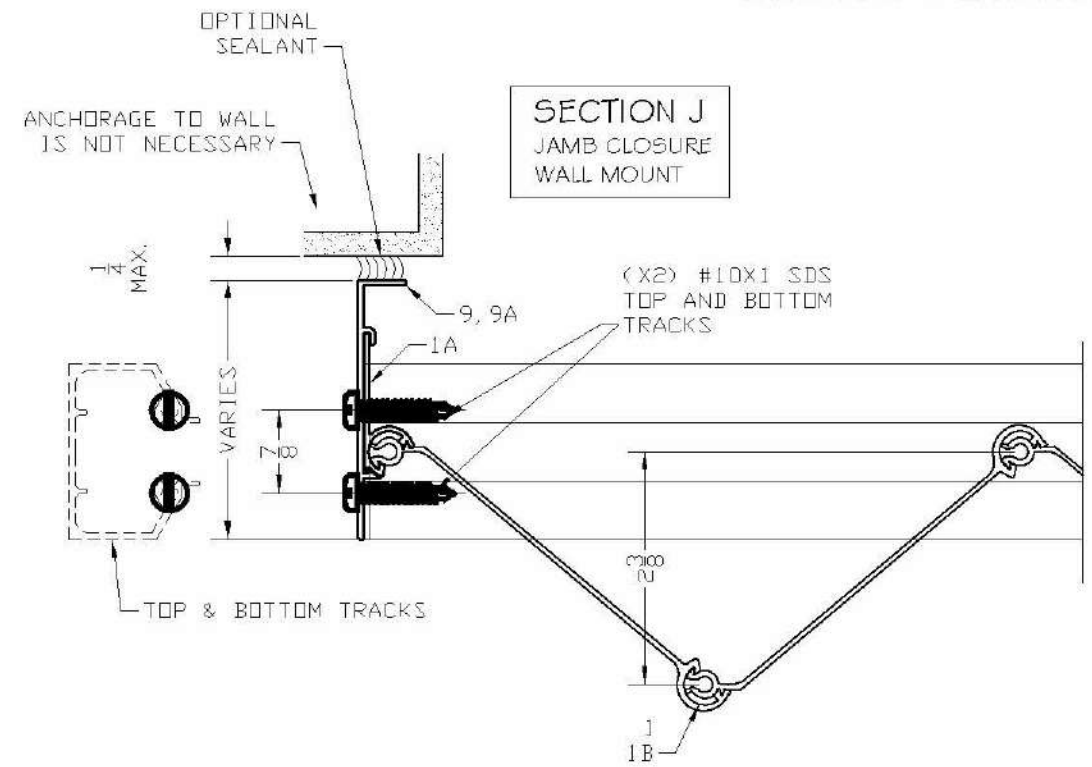


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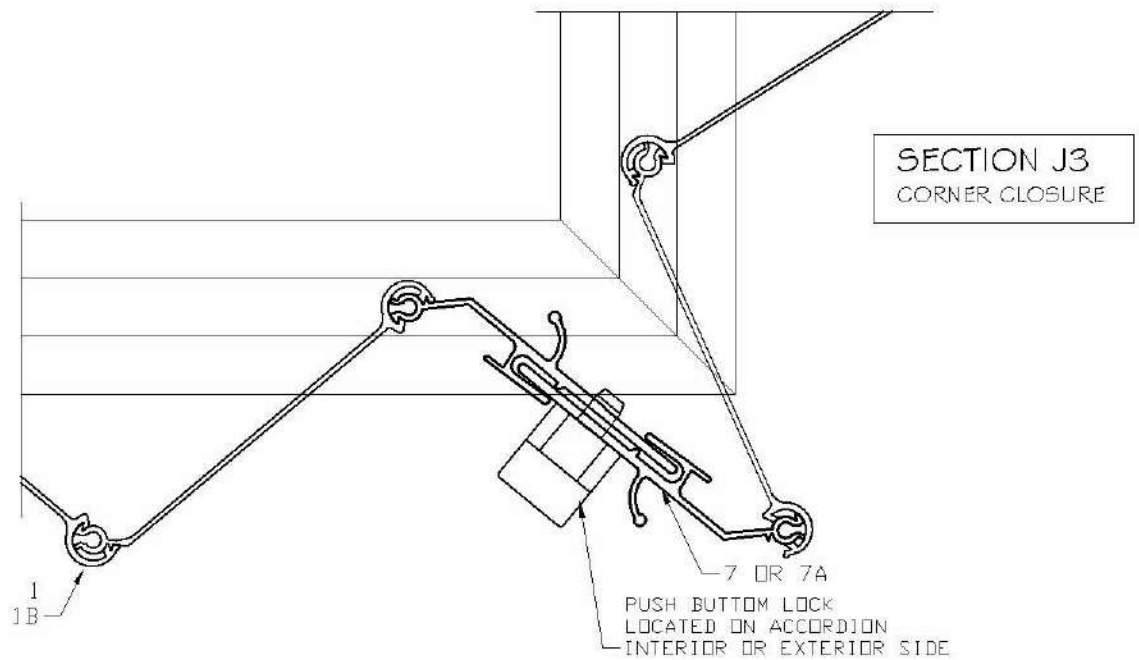
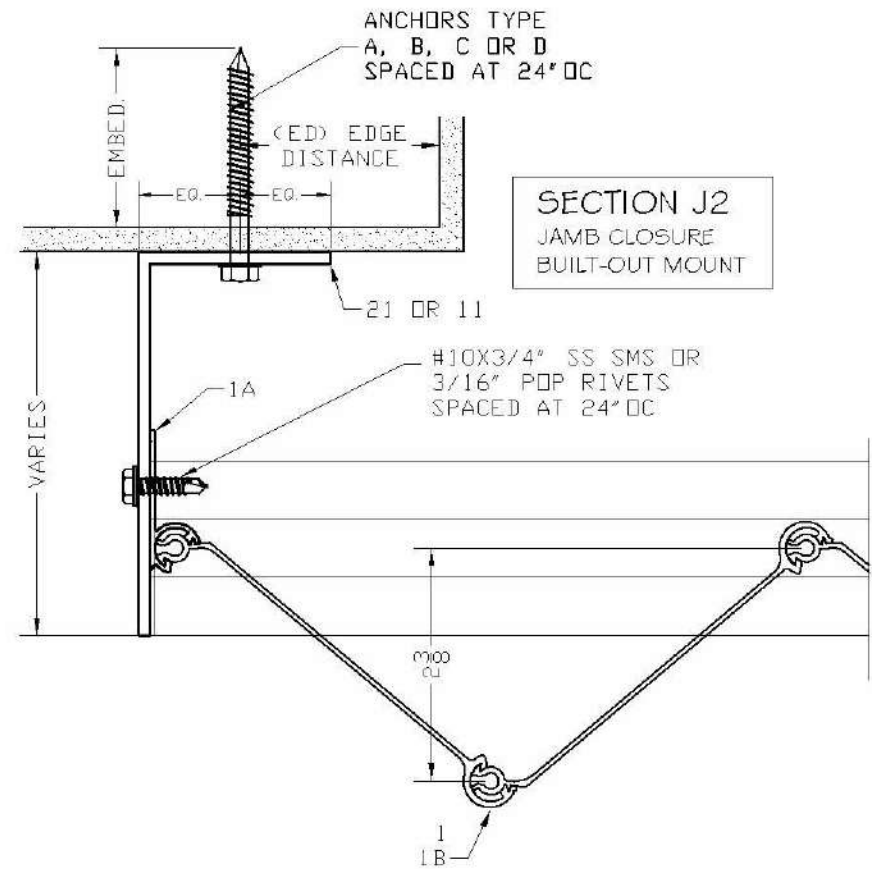
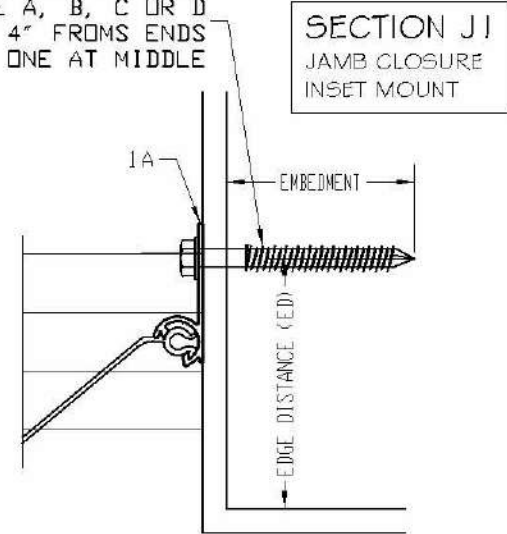
EACH SEGMENT CANNOT BE LESS THAN 8 INCHES LONG  
EACH SEGMENT MUST HAVE AT LEAST TWO ANCHORS WITH  
SPACING NOT LESS THAN 4" OC AT THE JOINTS OR AT SEGMENT.  
ANCHOR SPACING MUST BE VERIFIED AS PER SHEET 13



TYPICAL HORIZONTAL  
JAMB AND CORNER SECTIONS J



MIN. (3) ANCHORS  
TYPE A, B, C OR D  
4" FROMS ENDS  
AND ONE AT MIDDLE



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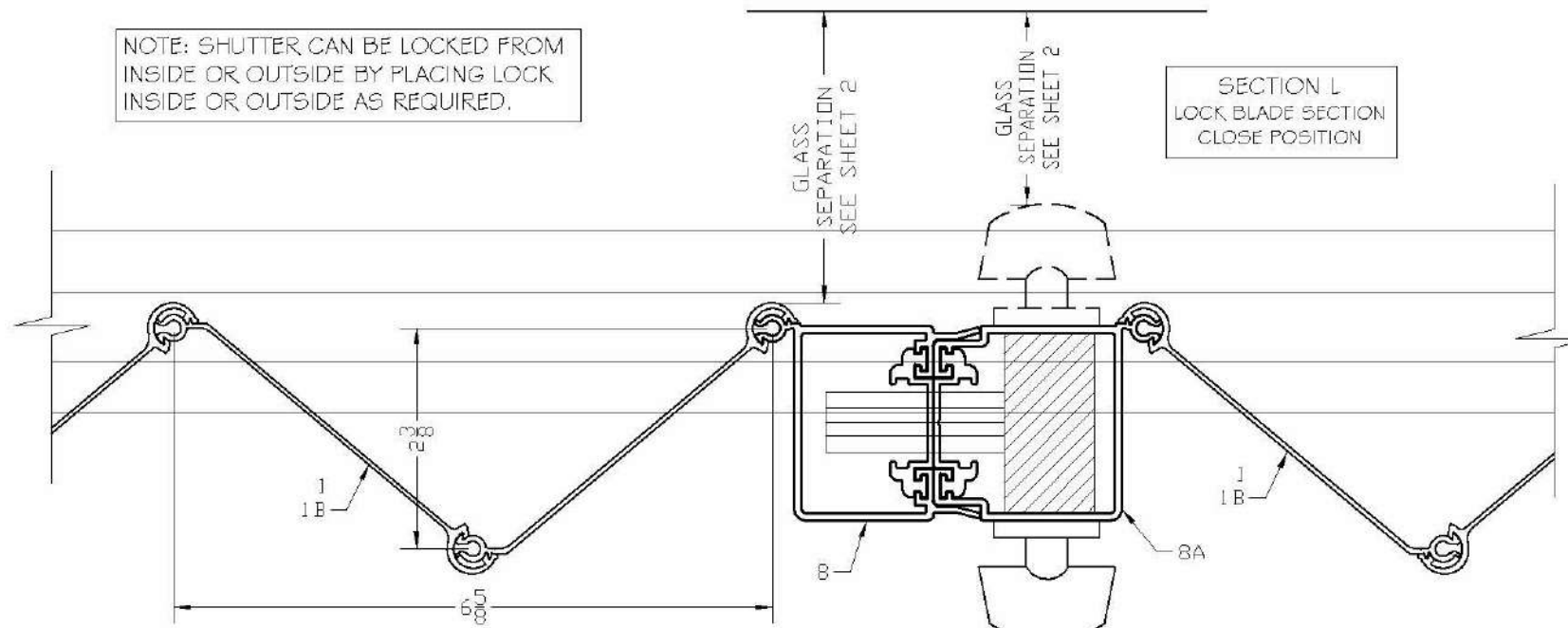
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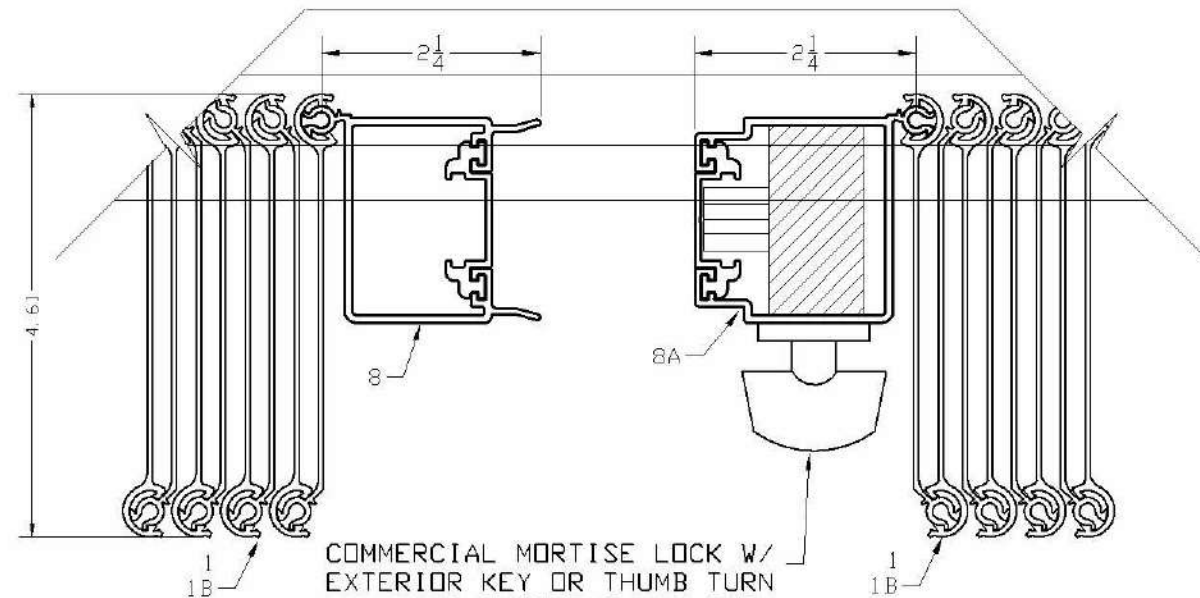
TYPICAL HORIZONTAL SECTIONS  
HD LOCK SECTIONS L

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



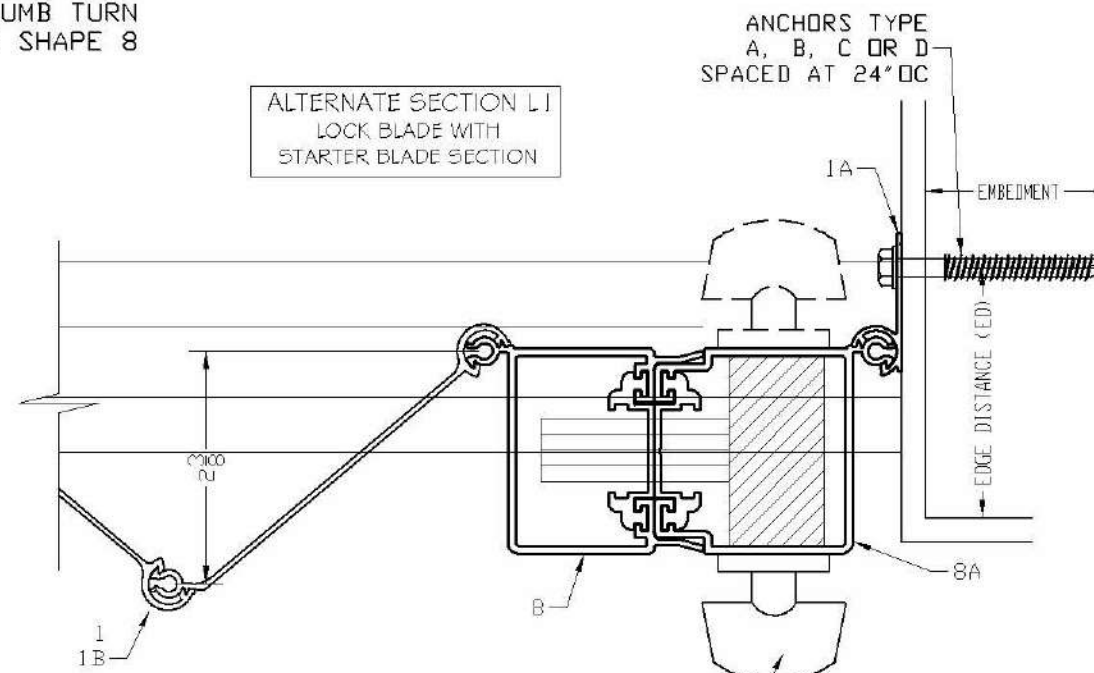
COMMERCIAL MORTISE LOCK W/  
EXTERIOR KEY OR THUMB TURN  
AND INSIDE THUMB TURN  
INSTALLED ON SHAPE 8

SECTION L  
LOCK BLADE SECTION  
OPEN POSITION



COMMERCIAL MORTISE LOCK W/  
EXTERIOR KEY OR THUMB TURN  
AND INSIDE THUMB TURN  
INSTALLED ON SHAPE 8

ALTERNATE SECTION L1  
LOCK BLADE WITH  
STARTER BLADE SECTION



COMMERCIAL MORTISE LOCK W/  
EXTERIOR KEY OR THUMB TURN  
AND INSIDE THUMB TURN  
INSTALLED ON SHAPE 8

ANCHORS TYPE  
A, B, C OR D  
SPACED AT 24" OC



Pedro De Figueiredo  
08/09/2021



ENGINEERING SERVICES - CA 82459  
9249 CHILSEA DR. S  
PLANTATION, FL 33324  
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ENGINEER SEAL  
PEDRO DE FIGUEIREDO  
FL 52609

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PRODUCT:  
**SUPERNOVA**  
EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

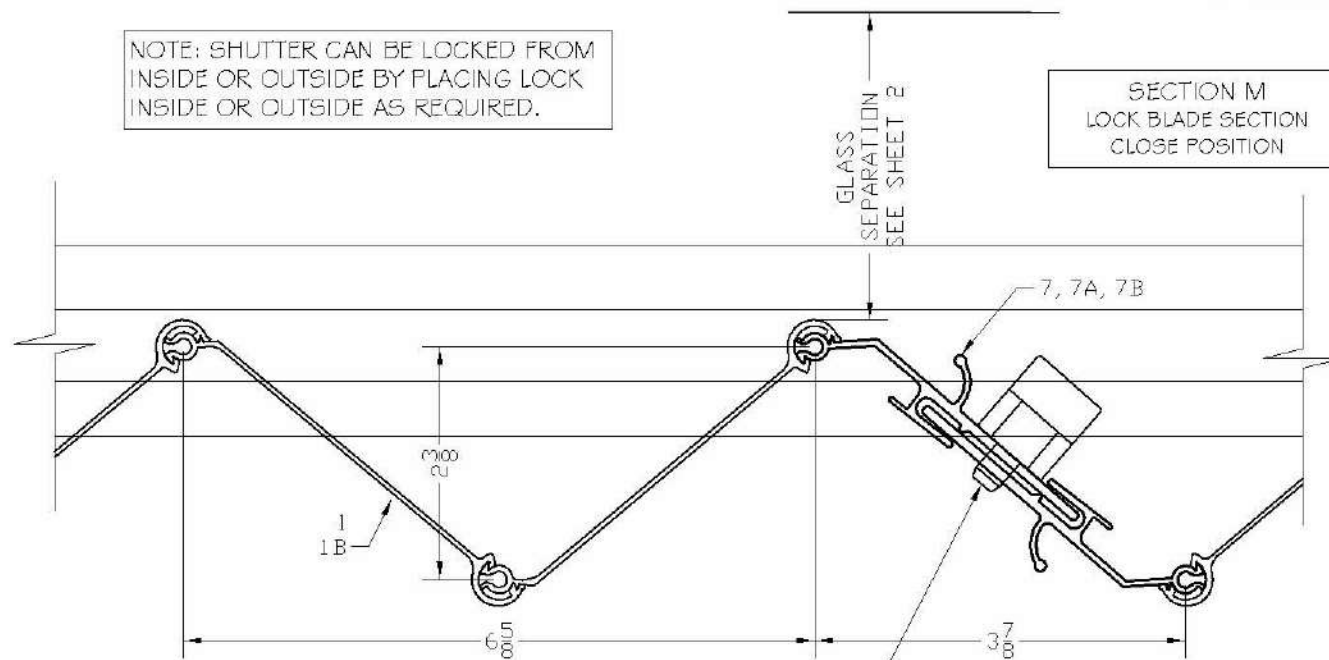
ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION L.L.C.  
MIRAMAR, FL 33027

SCALE:  
NA  
DATE:  
08/09/2021  
DRAWING #  
21-093  
SHEET  
08 OF 18



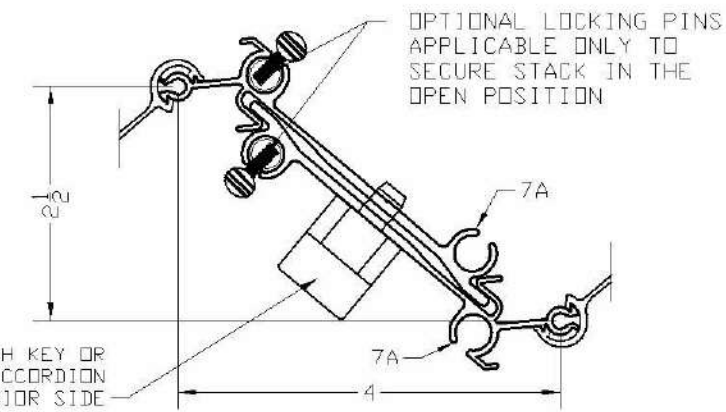
# TYPICAL HORIZONTAL UNIMATE LOCK SECTIONS M

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

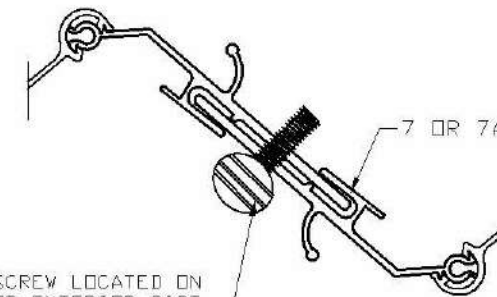


PUSH BUTTON LOCK WITH KEY OR  
THUMBTURN LOCATED ON ACCORDION  
INTERIOR OR EXTERIOR SIDE

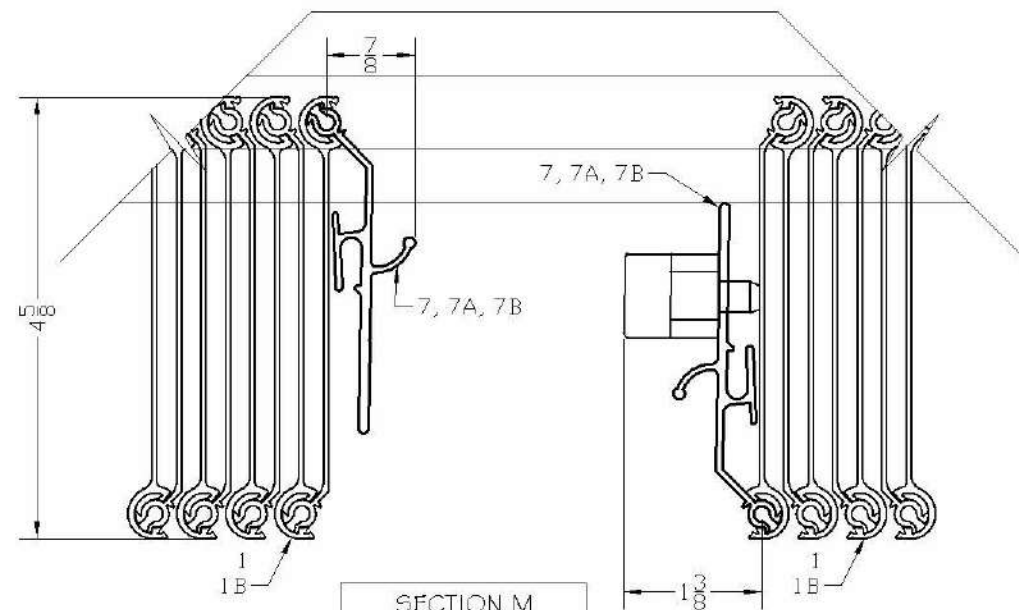
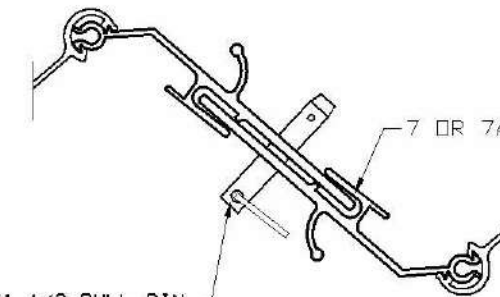
1/4-20X3/4" THUMB SCREW LOCATED ON  
ACCORDION INTERIOR OR EXTERIOR SIDE  
DRILL AND TAP OPPOSITE BLADE OR  
INSTALL JACK NUT TREAD TO RECEIVE SCREW



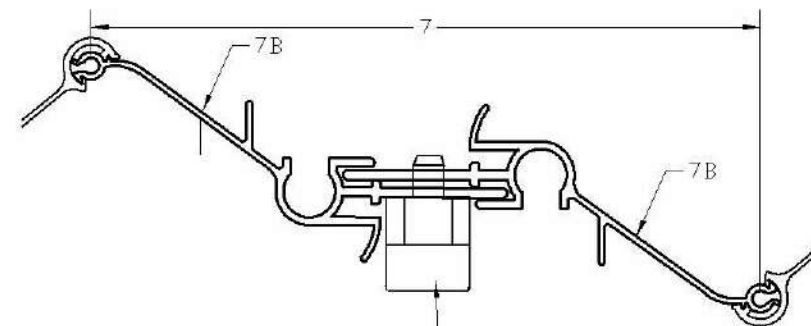
PUSH BUTTON LOCK WITH KEY OR  
THUMBTURN LOCATED ON ACCORDION  
INTERIOR OR EXTERIOR SIDE



1/4X1 1/2 PULL PIN  
INSIDE OR OUTSIDE

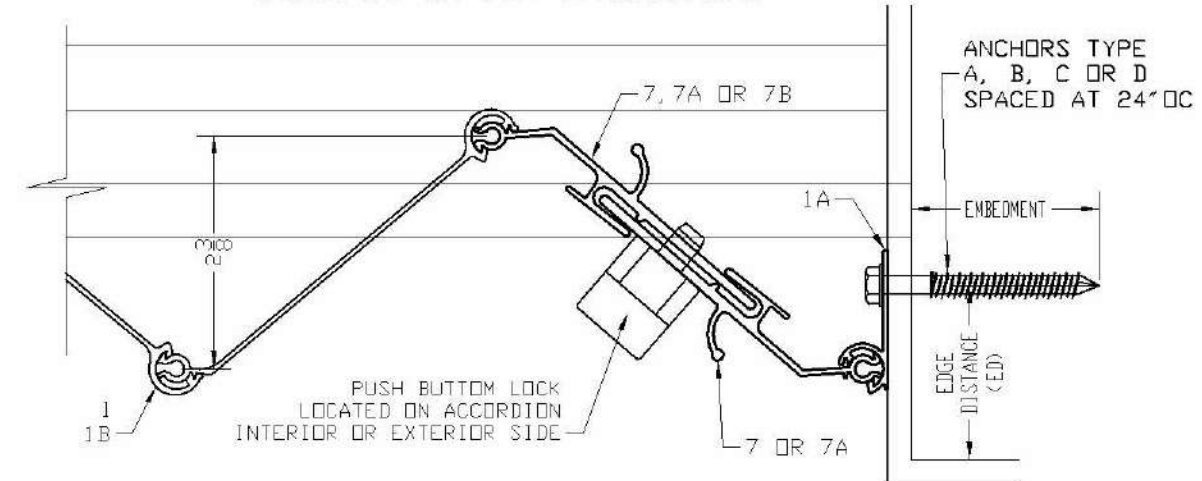


SECTION M  
LOCK BLADE SECTION  
OPEN POSITION



PUSH BUTTON LOCK WITH KEY OR  
THUMBTURN LOCATED ON ACCORDION  
INTERIOR OR EXTERIOR SIDE

1/4-20X3/4" THUMB SCREW LOCATED ON  
ACCORDION INTERIOR OR EXTERIOR SIDE  
DRILL AND TAP OPPOSITE BLADE OR  
INSTALL JACK NUT TREAD TO RECEIVE SCREW



ANCHORS TYPE  
A, B, C OR D  
SPACED AT 24" OC

EMBEDMENT

EDGE DISTANCE (ED)

1A

7, 7A OR 7B

6'00"

7 OR 7A

1 1B

PUSH BUTTON LOCK LOCATED ON ACCORDION  
INTERIOR OR EXTERIOR SIDE

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

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7 OR 7A

6'00"

7, 7A OR 7B

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7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

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6'00"

7, 7A OR 7B

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7, 7A OR 7B

1 1B

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6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

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7 OR 7A

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7, 7A OR 7B

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7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

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6'00"

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7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

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7 OR 7A

6'00"

7, 7A OR 7B

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6'00"

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6'00"

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7 OR 7A

6'00"

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7 OR 7A

6'00"

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7 OR 7A

6'00"

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1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

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7 OR 7A

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1 1B

7 OR 7A

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7 OR 7A

6'00"

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7 OR 7A

6'00"

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1 1B

7 OR 7A

6'00"

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7 OR 7A

6'00"

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1 1B

7 OR 7A

6'00"

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6'00"

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1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

7, 7A OR 7B

1 1B

7 OR 7A

6'00"

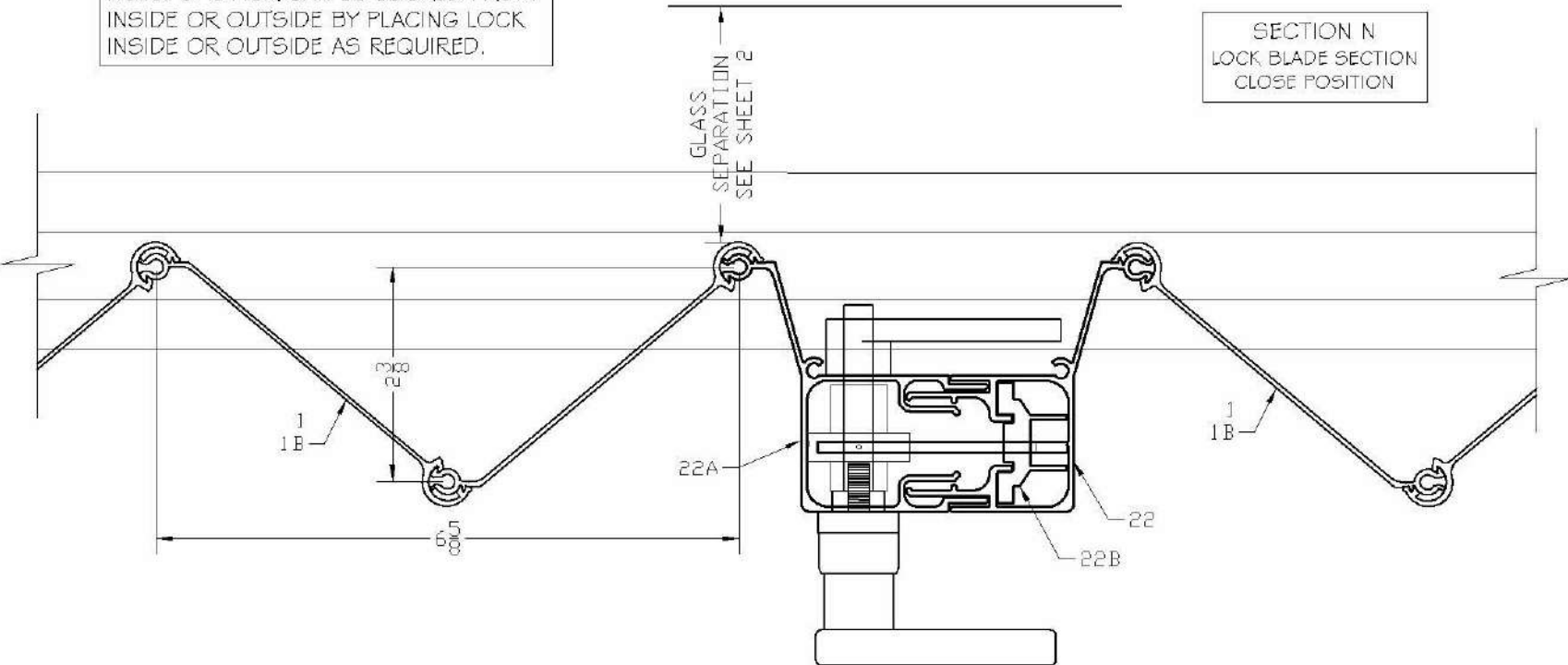
7,

TYPICAL HORIZONTAL SECTIONS  
STD LOCK SECTIONS N

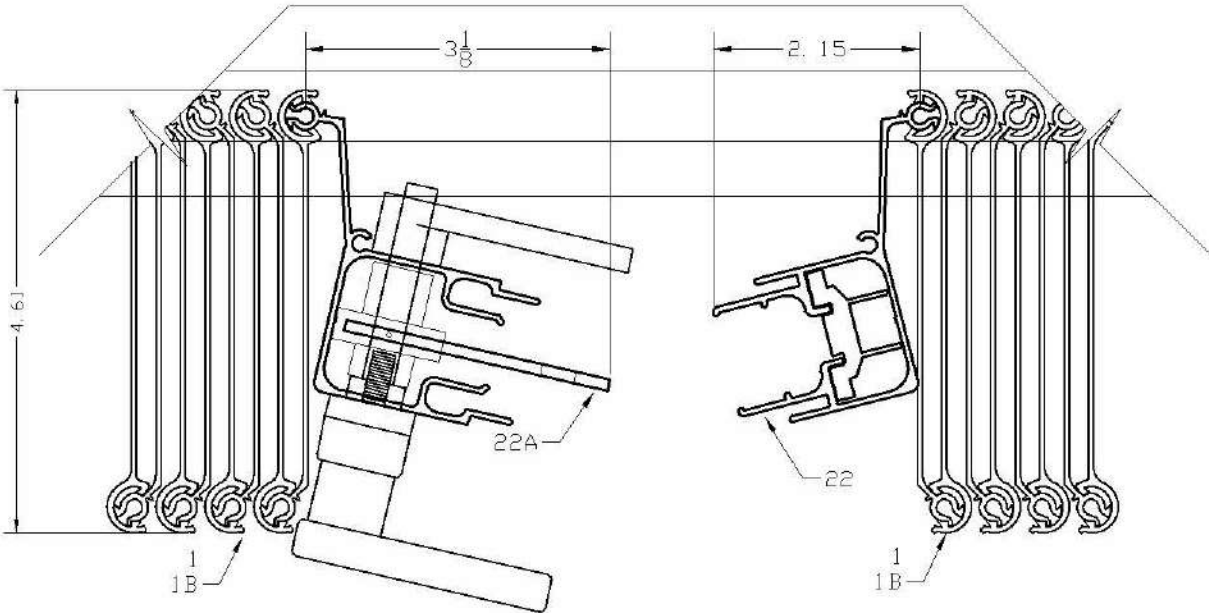
NOTE: SHUTTER CAN BE LOCKED FROM  
INSIDE OR OUTSIDE BY PLACING LOCK  
INSIDE OR OUTSIDE AS REQUIRED.

GLASS  
SEPARATION  
SEE SHEET 2

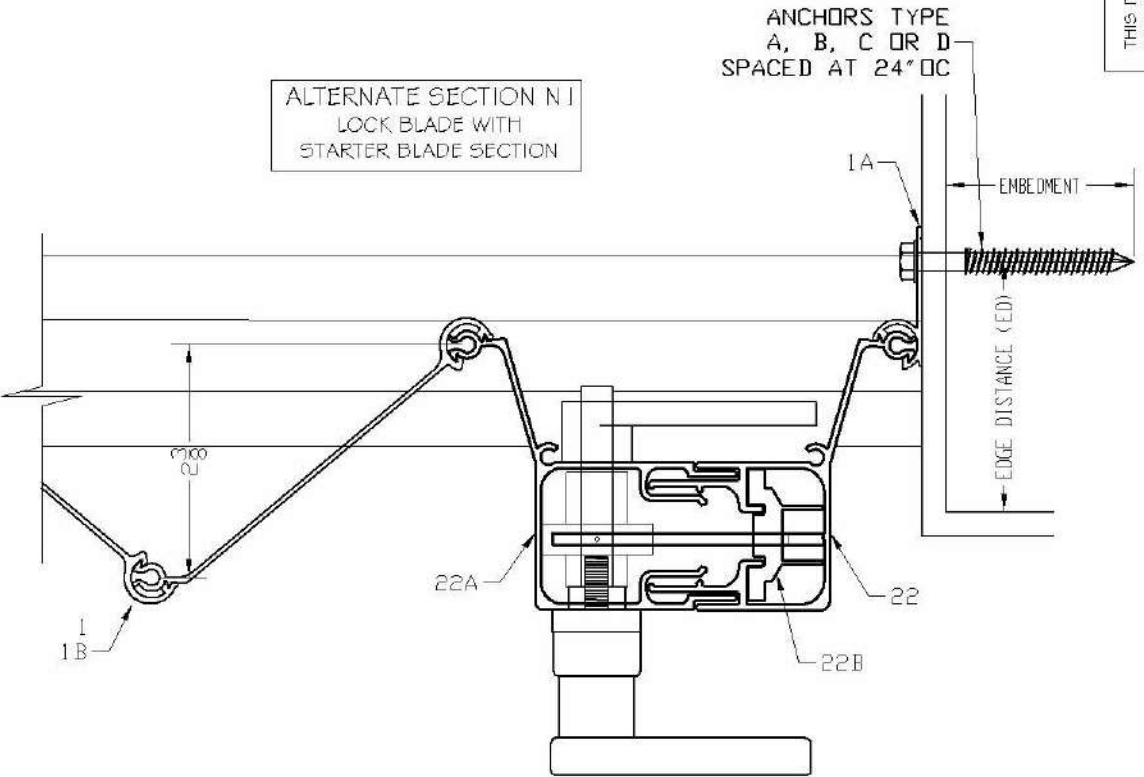
SECTION N  
LOCK BLADE SECTION  
CLOSE POSITION



SECTION N  
LOCK BLADE SECTION  
OPEN POSITION



ALTERNATE SECTION N I  
LOCK BLADE WITH  
STARTER BLADE SECTION



Pedro De Figueiredo  
08/09/2021

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LARGE MISSILE IMPACT RESISTANT

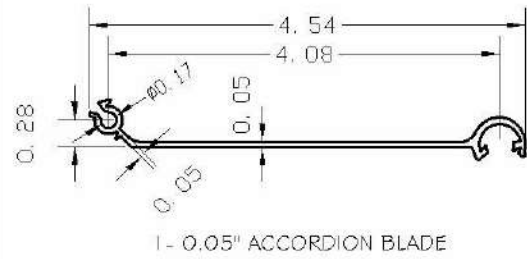
ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION L.L.C.  
MIRAMAR, FL 33027

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SHEET  
10 OF 18

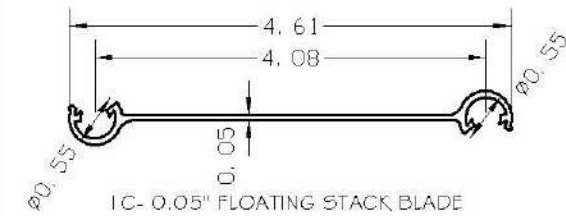
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PEDRO DE FIGUEIREDO  
PE 52609



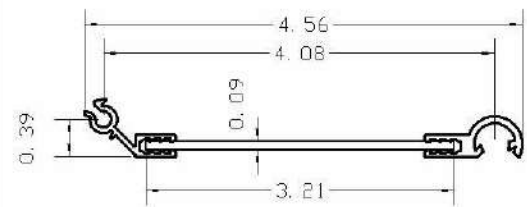
# SHUTTER COMPONENTS



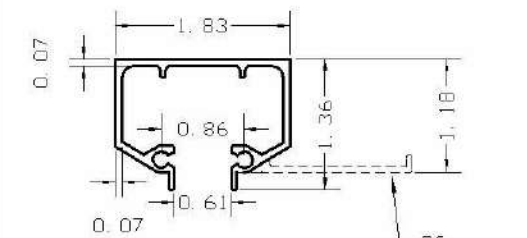
1- 0.05" ACCORDION BLADE



1C- 0.05" FLOATING STACK BLADE

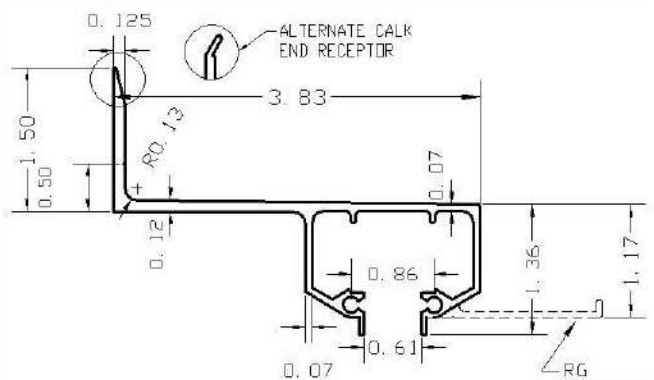


1B- COMPOSITE  
ALUMINUM / LEXAN BLADE  
LEXAN POLYCARBONATE APPROVED  
AS PER NOA 13-07 17.01  
XL102UV



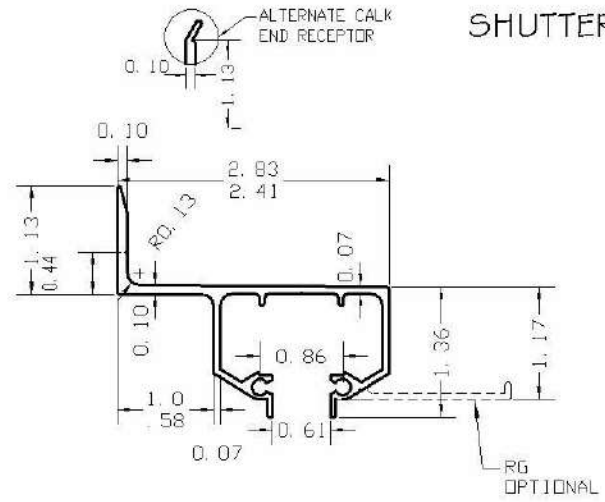
2- INSET TRACK W/ RG  
HEADER / SILL MOUNT

2.1- INSET TRACK W/O RG  
HEADER / SILL MOUNT



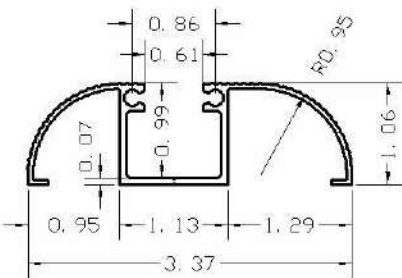
3A- 2" BUILD-OUT TRACK  
HEADER / SILL MOUNT

3A.1- 2" BO TRACK W/O  
RAIN GUARD (RG)

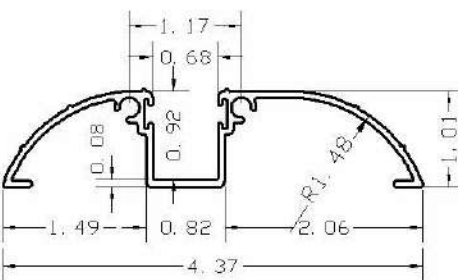


3- 1"  $\frac{1}{2}$ " BUILT-OUT TRACK  
HEADER / SILL MOUNT

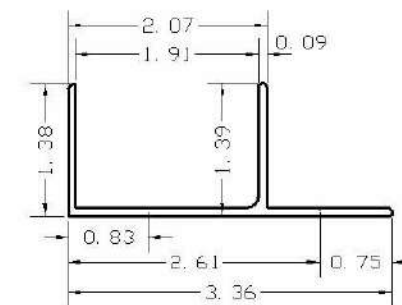
3.1- 1"  $\frac{1}{2}$ " BO TRACK W/O  
RAIN GUARD (RG)



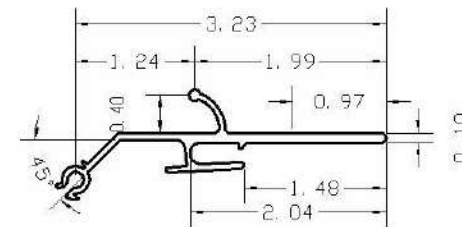
4- "A" TRACK  
SILL MOUNT ONLY



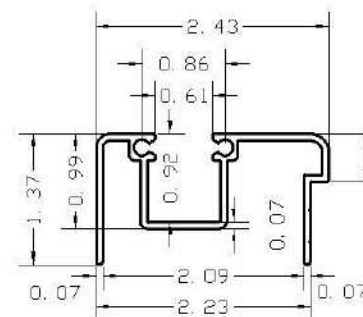
4.1- ALTERNATE "A" TRACK  
SILL MOUNT ONLY



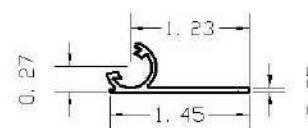
6A- ADJUSTABLE MALE  
HEADER/ SILL MOUNT



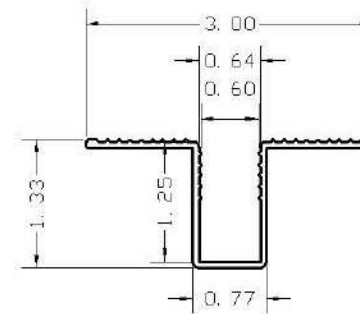
7- UNIMATE W/O LP  
LOCKING BLADES



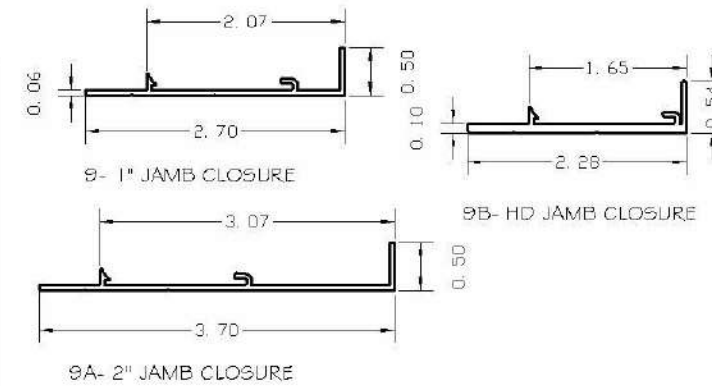
6- ADJUSTABLE FEMALE  
HEADER/ SILL MOUNT



1A- STARTER BLADE



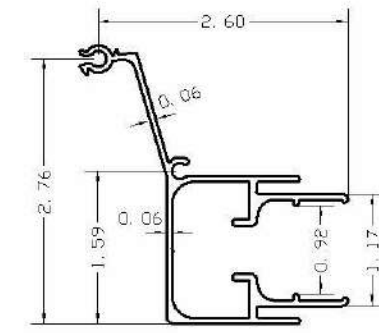
5- RECESSED TRACK  
SILL MOUNT ONLY



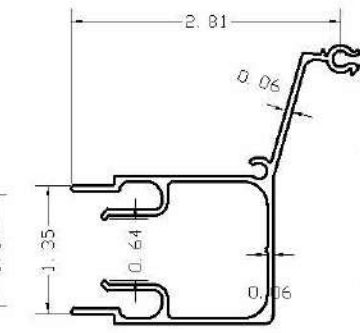
9- 1" JAMB CLOSURE

9B- HD JAMB CLOSURE

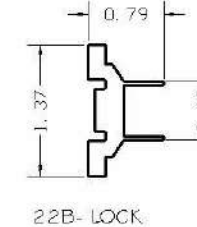
9A- 2" JAMB CLOSURE



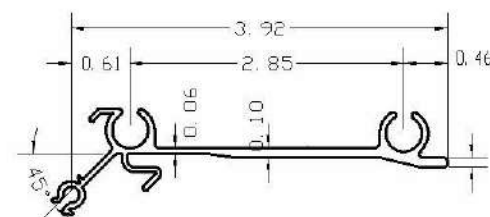
22- FEMALE STD  
LOCKING BLADE



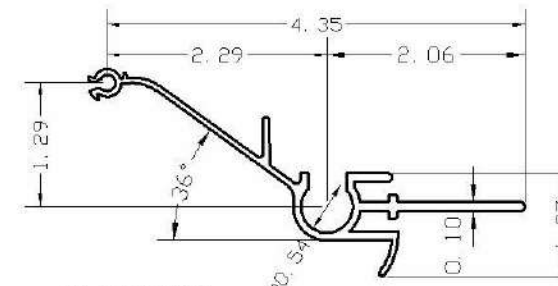
22A- MALE STD  
LOCKING BLADE



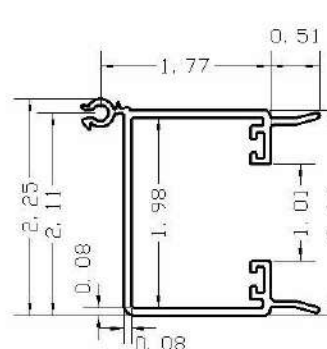
22B- LOCK  
KEEPER  
INSERT



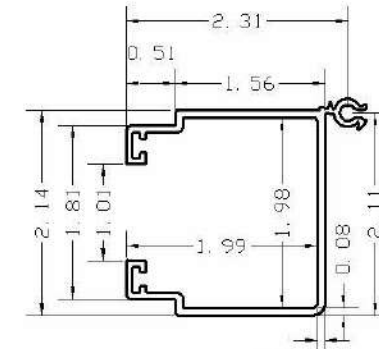
7A- UNIMATE W/ LP  
LOCKING BLADES



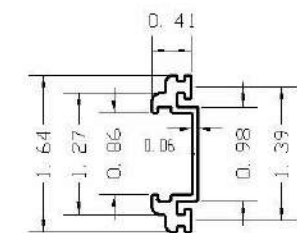
7B- UNIVERSAL  
LOCKING BLADES



8- FEMALE HD  
LOCKING BLADE



8A- MALE HD  
LOCKING BLADE



8B- ADAPTOR FILLER  
USE WITH 8 AND 8A



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08/09/2021

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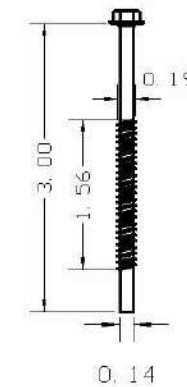
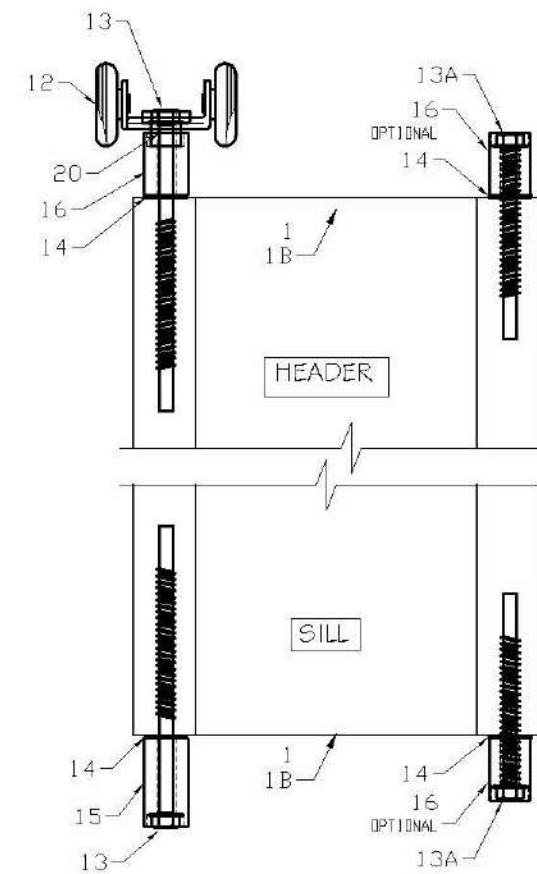
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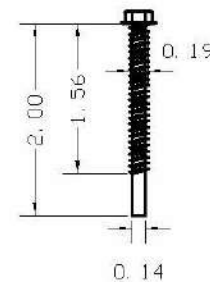
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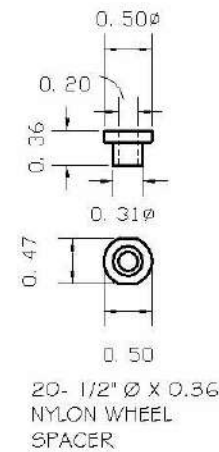
# TYPICAL BLADE ASSEMBLY



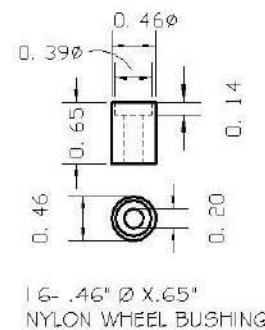
13- #10X3" HH  
BLADE SCREW  
410 STAINLESS STEEL



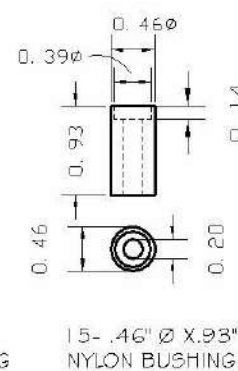
13A- #10X2" HH  
BLADE SCREW  
410 STAINLESS STEEL



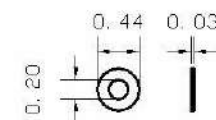
20- 1/2" Ø X 0.36"  
NYLON WHEEL  
SPACER



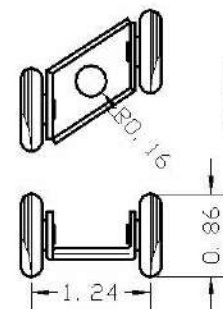
16- .46" Ø X .65"  
NYLON WHEEL BUSHING



15- .46" Ø X .93"  
NYLON BUSHING



14- 0.03" X 0.44" Ø  
STAINLESS STEEL  
FLAT WASHER



12- WHEEL CARRIER  
STAMPED SS WITH  
NYLON WHEELS

# BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL	MANUFACTURER
1	BLADE	6063-T6 ALUMINUM	N.A.S.A.
1A	STARTER BLADE	6063-T6 ALUMINUM	N.A.S.A.
1B	COMPOSITE BLADE	6063-T6 / LEXAN	N.A.S.A.
1C	FLOATING STACK BLADE	6063-T6 ALUMINUM	N.A.S.A.
2	CEILING TRACK	6063-T6 ALUMINUM	N.A.S.A.
3	1" WALL MOUNT TRACK	6063-T6 ALUMINUM	N.A.S.A.
3A	2" WALL MOUNT TRACK	6063-T6 ALUMINUM	N.A.S.A.
4	"A" TRACK	6063-T6 ALUMINUM	N.A.S.A.
4.1	ALTERNATE "A" TRACK	6063-T6 ALUMINUM	N.A.S.A.
5	RECESSED TRACK	6063-T6 ALUMINUM	N.A.S.A.
6	ADJUSTABLE FEMALE TRACK	6063-T6 ALUMINUM	N.A.S.A.
6A	ADJUSTABLE MALE TRACK	6063-T6 ALUMINUM	N.A.S.A.
7	UNIMATE LOCK BLADE W/O LP	6063-T6 ALUMINUM	N.A.S.A.
7A	UNIMATE LOCK BLADE W/ LP	6063-T6 ALUMINUM	N.A.S.A.
8	HD FEMALE LOCK BLADE	6063-T6 ALUMINUM	N.A.S.A.
8A	HD MALE LOCK BLADE	6063-T6 ALUMINUM	N.A.S.A.
8B	HD ADAPTOR FILLER	6063-T6 ALUMINUM	N.A.S.A.
9	1" JAMB CLOSURE	6063-T6 ALUMINUM	N.A.S.A.
9A	2" JAMB CLOSURE	6063-T6 ALUMINUM	N.A.S.A.
10	1/4-2X ANGLE	6063-T6 ALUMINUM	N.A.S.A.
11	1/8-2X ANGLE	6063-T6 ALUMINUM	N.A.S.A.
12	WHEEL CARRIER	PLATED STEEL/ NYLON	N.A.S.A.
13	#10X3" HH BLADE SCREW	410 STAINLESS STEEL	N.A.S.A.
13A	#10X2" HH BLADE SCREW	410 STAINLESS STEEL	N.A.S.A.
14	0.44" Ø FLAT WASHER	STAINLESS STEEL	N.A.S.A.
15	0.46" Ø x 0.93" BUSHING	NYLON	N.A.S.A.
16	0.46" Ø x 0.65" WHEEL BUSHING	NYLON	N.A.S.A.
19	PUSH-BUTTON LOCK		
20	1/2"x 3/8" WHEEL SPACER	NYLON	N.A.S.A.
21	1/16"-1X2, 1X2.5, 1X4, 1.5X3 ANGLES	6063-T5 ALUMINUM	N.A.S.A.
22	STD FEMALE LOCK BLADE	6063-T6 ALUMINUM	N.A.S.A.
22A	STD MALE LOCK BLADE	6063-T6 ALUMINUM	N.A.S.A.
22B	STD LOCK KEEPER	6063-T6 ALUMINUM	N.A.S.A.

# ANCHOR SCHEDULE

TYPE	DESCRIPTION	EMB	E.D.
A	1/4" ITW TAPCON INTO 3000 PSI CONCRETE	1.75	3.0
	1/4" DEWALT ULTRAON INTO 2700 PSI CONCRETE	1.75	2.5
A1	1/4" ITW TAPCON INTO CONCRETE BLOCK	1.25	3.0
	1/4" DEWALT ULTRAON INTO CONCRETE BLOCK	1.25	2.5
B	1/4-20X1 ALL POINTS SOLID-SET INTO 3.0 KSI CONCRETE	0.875	3.0
B1	1/4-20X1 ALL POINTS SOLID-SET INTO CONCRETE BLOCK	0.875	3.0
C	1/4" WOOD LAG SCREW INTO G=.55 WOOD	1.50	0.75
D	1/4"-14 SELF DRILLING SCREWS INTO 1/8" STEEL OR ALUMINUM	---	0.75
E	1/4" CRETE-FLEX SS4 INTO 3000 PSI CONCRETE	1.75	3.0
E1	1/4" CRETE-FLEX SS4 INTO CONCRETE BLOCK (2000 PSI)	1.25	3.0

- NOTES:
- 1- ED: EDGE DISTANCE SHALL BE BEYOND WALL DRESSING
  - 2- EMB: EMBEDMENT SHALL BE BEYOND WALL DRESSING
  - 3- 1/4" TAPCON, 1/4" CRETE-FLEX, #14 WOOD SCREWS CAN BE USED IN REPLACE OF 1/4" LAG SCREWS
  - 4- ANCHORS TYPE A CAN BE USED WITH REDUCED EDGE DISTANCE (3.0>E.D.>= 1 1/4") WHEN THE TABLE ANCHOR SPACING VALUES ON SHEET 13/14 ARE MULTIPLIED BY 0.95. THIS IS APPLICABLE ONLY FOR MOUNTS TYPE A, B, B1, B2, B3, B4 AND C
  - 5- THE ANCHOR TYPE A1 CAN BE USE WITH REDUCED EDGE DISTANCE OF 1" FOR ITW TAPCONS AND 2" FOR ULTRAONS FOR INSTALLATIONS WITH MOUNTS TYPE A, B, B1, B2, B3, B4 AND C. THE TABLE VALUES ON SHEET 13 CAN BE USED W/O REDUCTION.



Pedro De Figueiredo  
08/09/2021

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PRODUCT:  
**SUPERNOVA**  
EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION LLC.  
MIRAMAR, FL 33027

SCALE:  
NA

DATE:  
08/09/2021

DRAWING #  
21-093

SHEET  
12 OF 18



ANCHOR SPACING TABLE  
30 PSF <= PD <=70 PSF



Pedro De Figueiredo  
08/09/2021

ENGINEERING SERVICES - CA 82459  
9249 CHIESEA DR. S  
PLANTATION, FL 33324  
PPMIF@AOL.COM  
ENGINEER SEAL  
PEDRO DE FIGUEIREDO  
FL 52609



PRODUCT:  
**SUPERNOVA**  
EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION L.L.C.  
MIRAMAR, FL 33027

SCALE:  
NA  
DATE:  
08/09/2021  
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SHEET  
13 OF 18

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		MOUNT TYPE																																										
		A, B1, B2, B3, B4									B, C								D					E					GH					G					G1, F					
PD	SPAN	ANCHOR TYPES									ANCHOR TYPES									ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES				
30	162	14	7	14	14	14	14	14	14	14	14	7	14	14	14	14	14	14	12	14	7	8	15	7	8	5	5	8	6	7	4	4	7	8	9	5	5	9	15	16	8	11	16	
	156	14	7	14	14	14	14	14	14	14	14	7	14	14	14	14	14	14	12	15	7	9	15	7	8	5	5	8	6	7	5	4	7	8	9	5	5	9	16	16	8	11	16	
	144	14	8	14	14	14	14	14	14	14	14	8	14	14	14	14	14	14	13	16	8	10	16	8	9	5	5	9	7	8	5	5	8	8	10	6	6	10	16	16	9	12	16	
	132	14	9	14	14	14	14	14	14	14	14	9	14	14	14	14	14	14	15	16	9	10	16	8	10	6	6	10	7	8	5	5	9	9	11	6	6	11	16	16	10	13	16	
	120	14	9	14	14	14	14	14	14	14	14	9	14	14	14	14	14	14	16	16	10	11	16	9	11	7	6	11	8	9	6	5	10	10	12	7	7	12	16	16	11	15	16	
	108	14	10	14	14	14	14	14	14	14	14	10	14	14	14	14	14	14	16	16	11	13	16	10	11	7	7	11	9	10	7	6	11	11	13	8	8	14	16	16	12	16	16	
	96	14	12	14	14	14	14	14	14	14	14	12	14	14	14	14	14	14	16	16	12	14	16	11	11	8	8	11	10	12	7	7	12	13	15	9	9	15	16	16	14	16	16	
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40	162	14	5	14	14	14	14	14	11	14	5	14	14	14	14	14	11	9	11	5	6	11	5	6	—	—	6	4	5	—	—	5	6	7	—	—	7	11	14	6	8	14		
	156	14	5	14	14	14	14	14	11	14	5	14	14	14	14	14	11	9	11	5	7	11	5	6	—	—	6	5	5	—	—	6	6	7	4	4	7	12	14	6	9	15		
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50	156	14	4	14	12	14	12	14	9	14	4	14	12	14	12	14	9	7	9	4	5	9	4	5	—	—	5	—	4	—	—	4	5	6	—	—	6	9	11	5	7	12		
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60	144	14	—	14	11	14	10	14	8	6	—	7	4	6	4	7	—	7	8	—	5	8	—	4	—	—	5	—	—	—	—	—	4	5	—	—	5	8	10	5	6	11		
	132	14	4	14	11	14	11	14	9	14	4	14	11	14	11	14	9	7	9	4	5	9	4	5	—	—	5	—	4	—	—	4	5	5	—	—	6	9	11	5	7	12		
	120	14	5	14	13	14	13	14	10	14	5	14	13	14	13	14	10	8	10	5	6	10	5	5	—	—	5	—	5	—	—	5	5	6	—	—	6	10	12	5	7	13		
	108	14	5	14	14	14	14	14	11	14	5	14	14	14	14	14	11	9	11	5	6	11	5	6	—	—	6	4	5	—	—	5	6	7	—	—	7	11	14	6	8	14		
	96	14	6	14	14	14	14	14	12	14	6	14	14	14	14	14	12	10	12	6	7	12	6	7	4	—	7	5	6	—	—	6	6	7	4	4	8	13	15	7	9	16		
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	60	14	9	14	14	14	14	14	14	14	9</																																	



ANCHOR SPACING TABLE  
80 PSF <= PD <= 160 PSF



Pedro De Figueiredo  
08/09/2021

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9249 CHIESEA DR. S  
PLANTATION, FL 33324  
PPMIF@AOL.COM  
ENGINEER SEAL  
PEDRO DE FIGUEIREDO  
FL 52609



PRODUCT:  
**SUPERNOVA**  
EXTRUDED ALUMINUM  
ACCORDION SHUTTER  
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
NATIONAL APPROVED SHUTTER ASSOCIATION LLC.  
MIRAVAR, FL 33027

SCALE:  
NA  
DATE:  
08/09/2021  
DRAWING #  
21-093  
SHEET  
14 OF 18

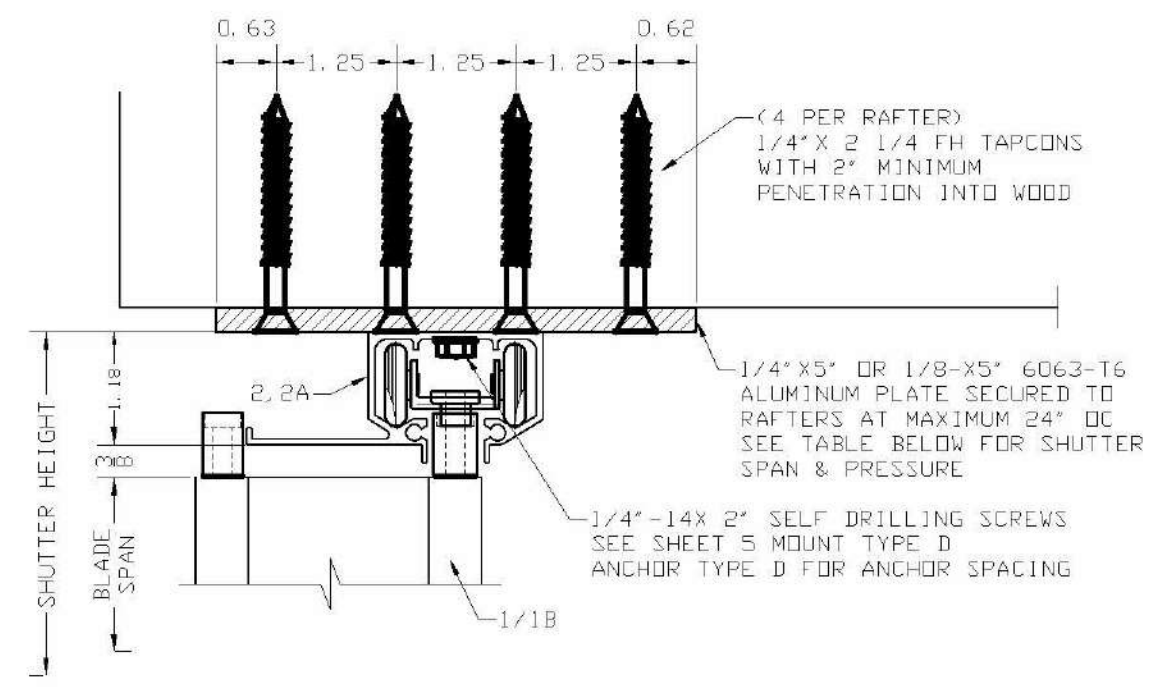
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		MOUNT TYPE																																										
		A, B1, B2, B3, B4								B, C								D					E					GH					G					G1, F						
		ANCHOR TYPES								ANCHOR TYPES								ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES					ANCHOR TYPES						
PD	SPAN	A	A1	B	B1	C	D	E	E1	A	A1	B	B1	C	D	E	E1	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E							
80	120	14	—	14	9	14	9	14	7	6	—	7	—	6	—	7	—	6	7	—	4	7	—	—	—	—	4	—	—	—	—	—	—	4	—	—	5	8	9	4	6	9		
	96	14	4	14	12	14	12	14	9	14	4	14	12	14	12	14	9	8	9	4	5	9	4	5	—	—	5	—	4	—	—	4	5	6	—	—	6	10	12	5	7	12		
	84	14	5	14	14	14	13	14	10	14	5	14	14	14	13	14	10	9	10	5	6	11	5	6	—	—	6	4	5	—	—	5	5	6	—	—	7	11	13	6	8	14		
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	96	13	—	14	8	13	8	14	7	5	—	6	—	5	—	6	—	5	6	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	7	8	—	5	8		
	84	14	—	14	11	14	10	14	8	6	—	7	4	6	4	7	—	7	8	—	5	8	—	4	—	—	5	—	—	—	—	—	—	4	5	—	—	5	8	10	5	6	11	
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	96	14	—	14	9	14	9	14	7	6	—	7	—	6	—	7	—	6	7	—	4	7	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	84	14	4	14	11	14	11	14	8	7	—	7	4	7	4	8	—	7	8	4	5	8	—	5	—	—	5	—	4	—	—	4	4	5	—	—	5	9	11	5	6	11		
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	72	13	—	14	9	13	9	14	7	5	—	6	—	5	—	6	—	5	7	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	84	14	—	14	10	14	10	14	8	6	—	7	—	6	—	7	—	6	8	—	4	8	—	4	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
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	72	12	—	14	8	12	8	14	6	5	—	5	—	5	—	6	—	5	6	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	84	14	—	14	9	14	9	14	7	5	—	6	—	6	—	6	—	6	7	—	4	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
140	120	14	—	14	11	14	10	14	8	6	—	7	4	6	4	7	—	7	8	—	5	8	—	4	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	96	14	5	14	14	14	13	14	10	14	5	14	14	14	13	14	10	9	10	5	6	11	5	6	—	—	6	4	5	—	—	5	5	6	—	—	7	11	13	6	8	14		
	84	12	—	13	8	12	8	14	6	5	—	5	—	5	—	5	—	5	6	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	72	14	—	14	9	14	9	14	7	5	—	6	—	6	—	6	—	6	7	—	4	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	60	14	4	14	11	14	11	14	8	7	—	7	4	7	4	8	—	7	8	4	5	8	—	5	—	—	5	—	4	—	—	4	4	5	—	—	5	9	11	5	6	11		
160	120	12	—	14	8	12	8	14	6	5	—	5	—	5	—	6	—	5	6	—	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	96	14	—	14	9	14	9	14	7	6	—	7	—	6	—	7	—	6	7	—	4	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	48	14	4	14	12	14	12	14	9	14	4	14	12	14	12	14	9	8	9	4	5	9	4	5	—	—	5	—	4	—	—	4	5	6	—	—	6	10	12	5	7	12		

NOTE: SEE SHEET 12 FOR ANCHOR TYPE AND SELECTION



**SECTION X**  
 TRACK 2 OR 2A INSET MOUNT  
 SECURED TO AN ALUMINUM PLATE  
 BETWEEN WOOD TRUSSES



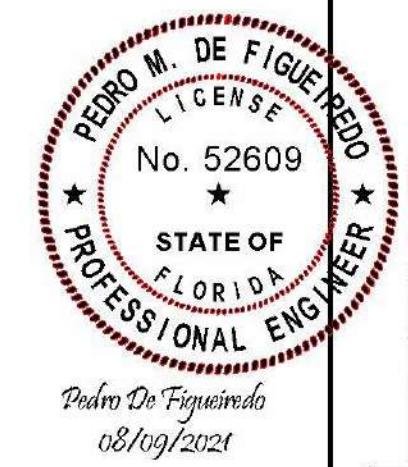
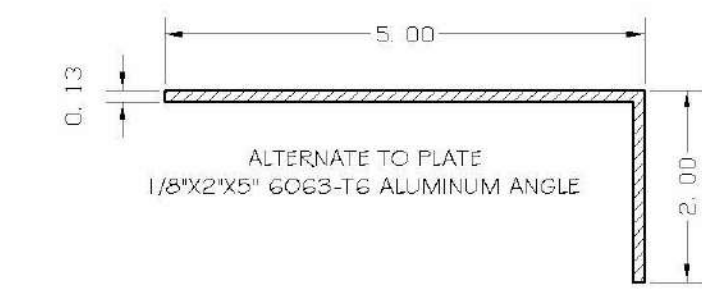
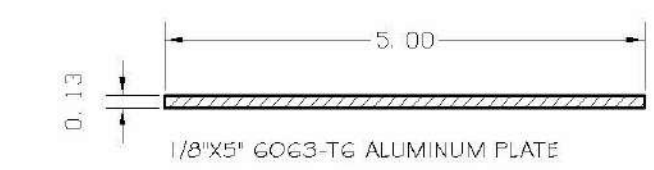
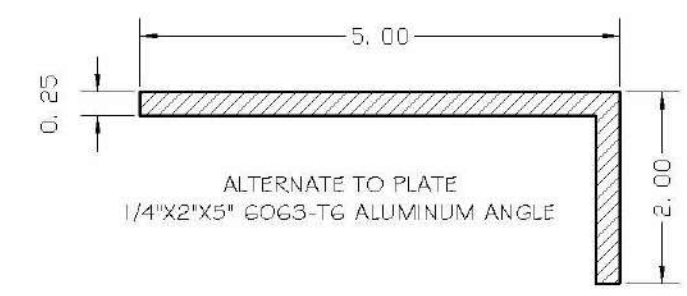
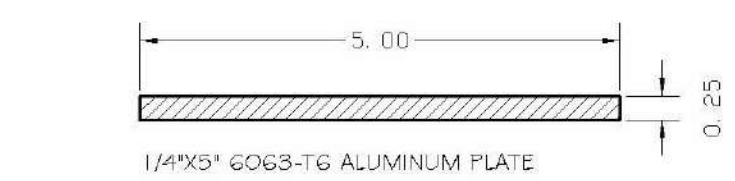
ALLOWABLE DESIGNED PRESSURES  
 FOR SECTION X WITH 1/4" ALUMINUM PLATE

BLADE SPAN (IN)	MAXIMUM DESIGNED PRESSURE (PSF)	
	BLADE 1	BLADE 1B
60	±159	±159
72	±132	±132
84	±113	±113
90	±106	±106
108	± 88	± 88
126	± 68	± 68
132	± 62	± 61
144	+48, -52	+45, -47
162	+30, -40	+28, -33

ALLOWABLE DESIGNED PRESSURES  
 FOR SECTION X WITH 1/8" ALUMINUM PLATE

BLADE SPAN (IN)	MAXIMUM DESIGNED PRESSURE (PSF)	
	BLADE 1	BLADE 1B
60	±99	±99
72	±82	±82
84	±71	±71
90	±66	±66
108	±55	±55
126	±47	±47
132	±45	±45
144	±41	±41
162	±30	+28, -30

NOTE: 1- LINEAR INTERPOLATION IS ALLOWABLE BETWEEN BLADE SPAN SIZES



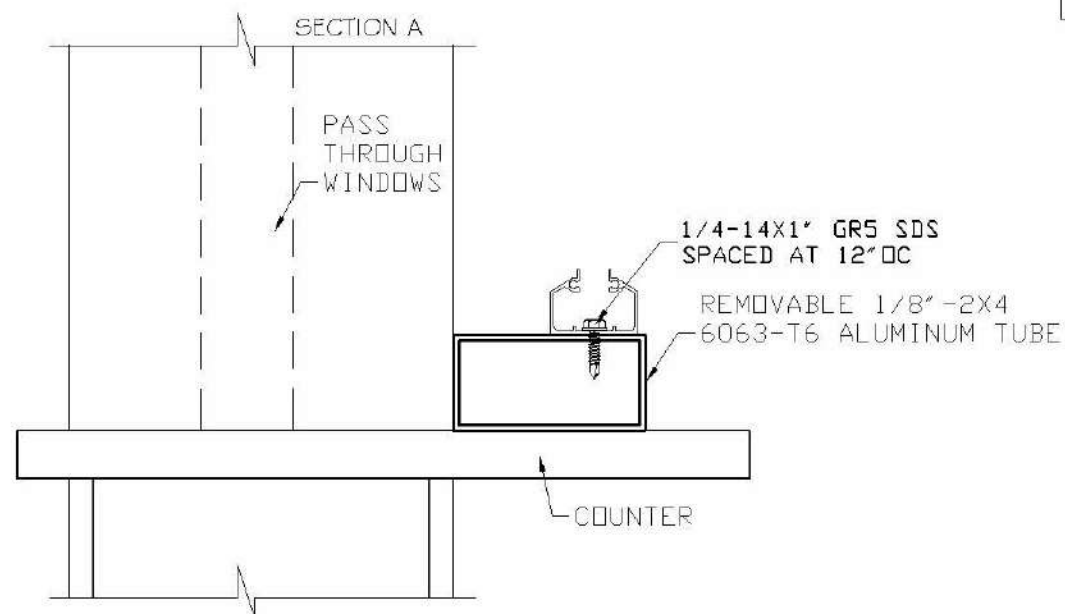
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 PPMIF@AOL.COM  
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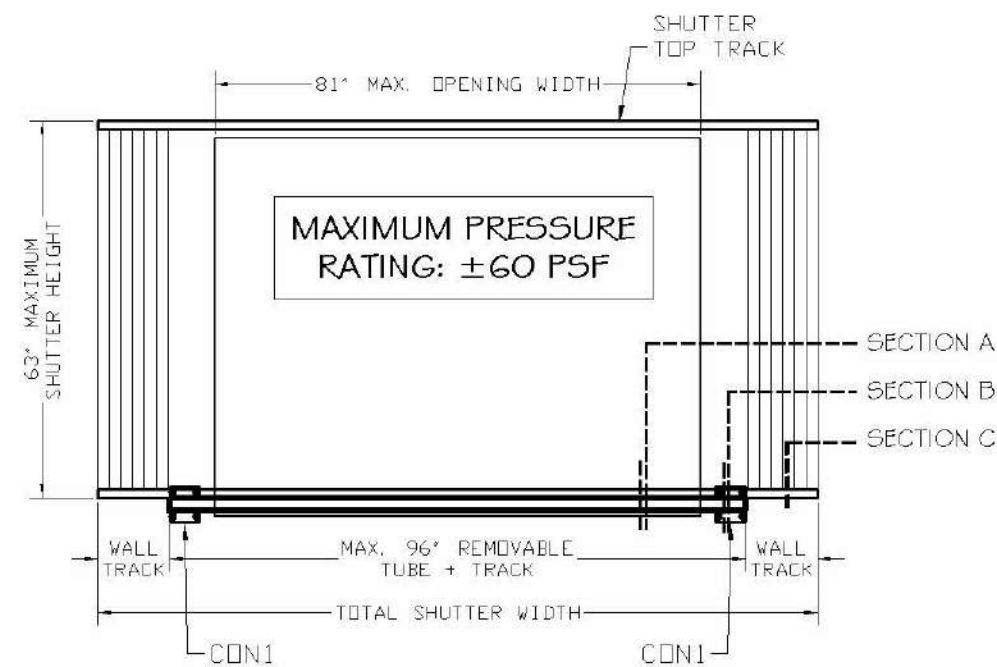
PRODUCT:  
**SUPERNOVA**  
 EXTRUDED ALUMINUM  
 ACCORDION SHUTTER  
 LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:  
**N.A.S.A**  
 NATIONAL APPROVED SHUTTER ASSOCIATION L.L.C.  
 MIRAMAR, FL 33027

SCALE:  
 NA  
 DATE:  
 08/09/2021  
 DRAWING #  
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 SHEET  
 15 OF 18



SECTION CT  
REMOVABLE SILL  
OVER COUNTER TOP

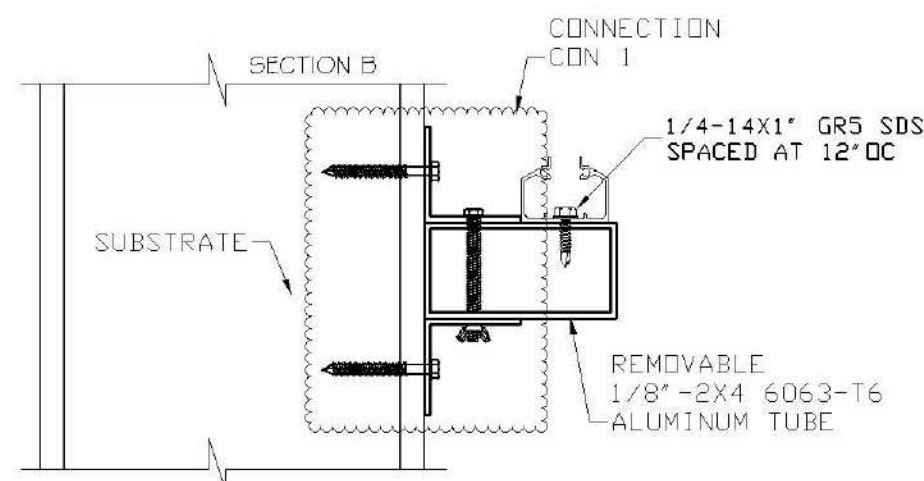


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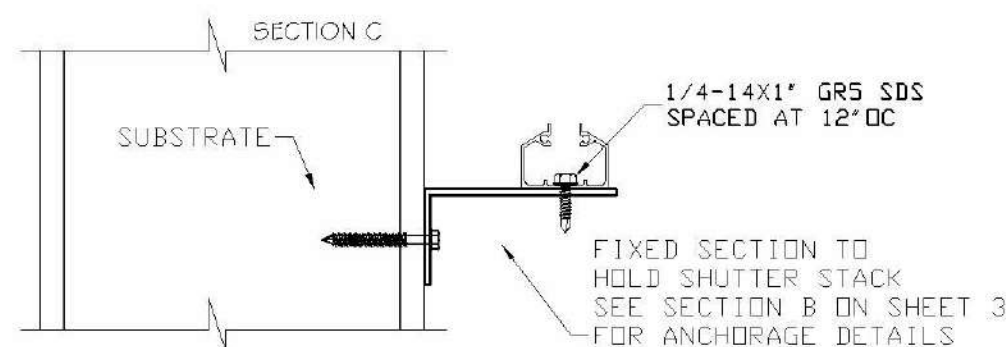
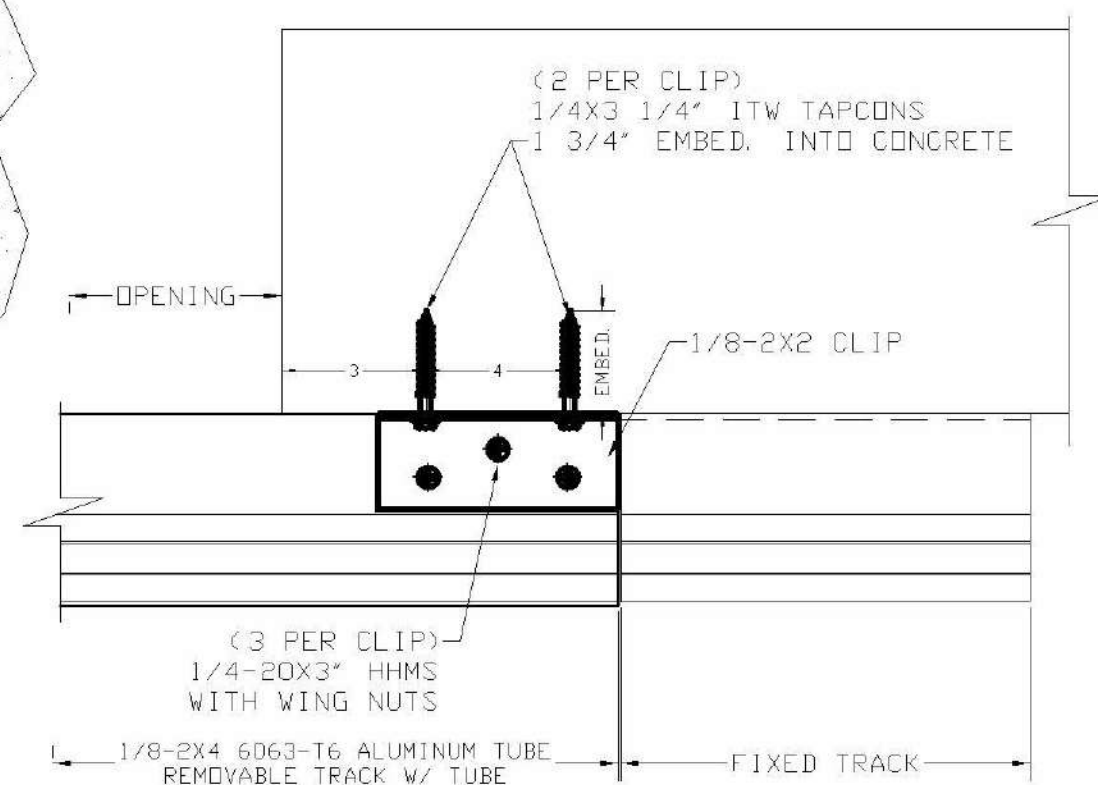
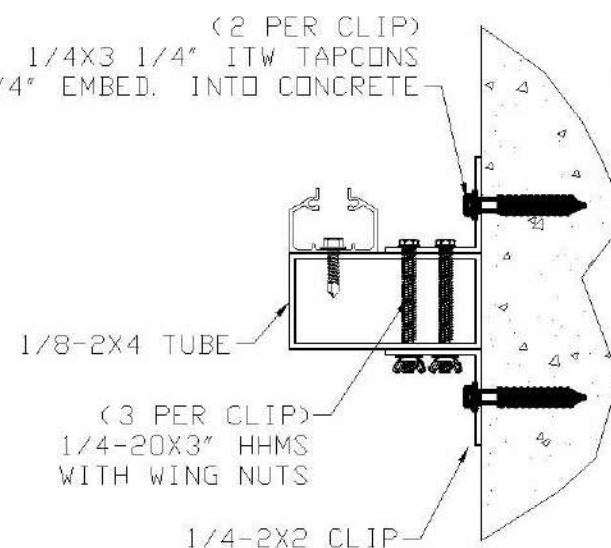


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(2 PER CLIP)  
1/4X3 1/4" ITW TAPCONS  
1 3/4" EMBED. INTO CONCRETE

TUBE ANCHORAGE  
CON 1



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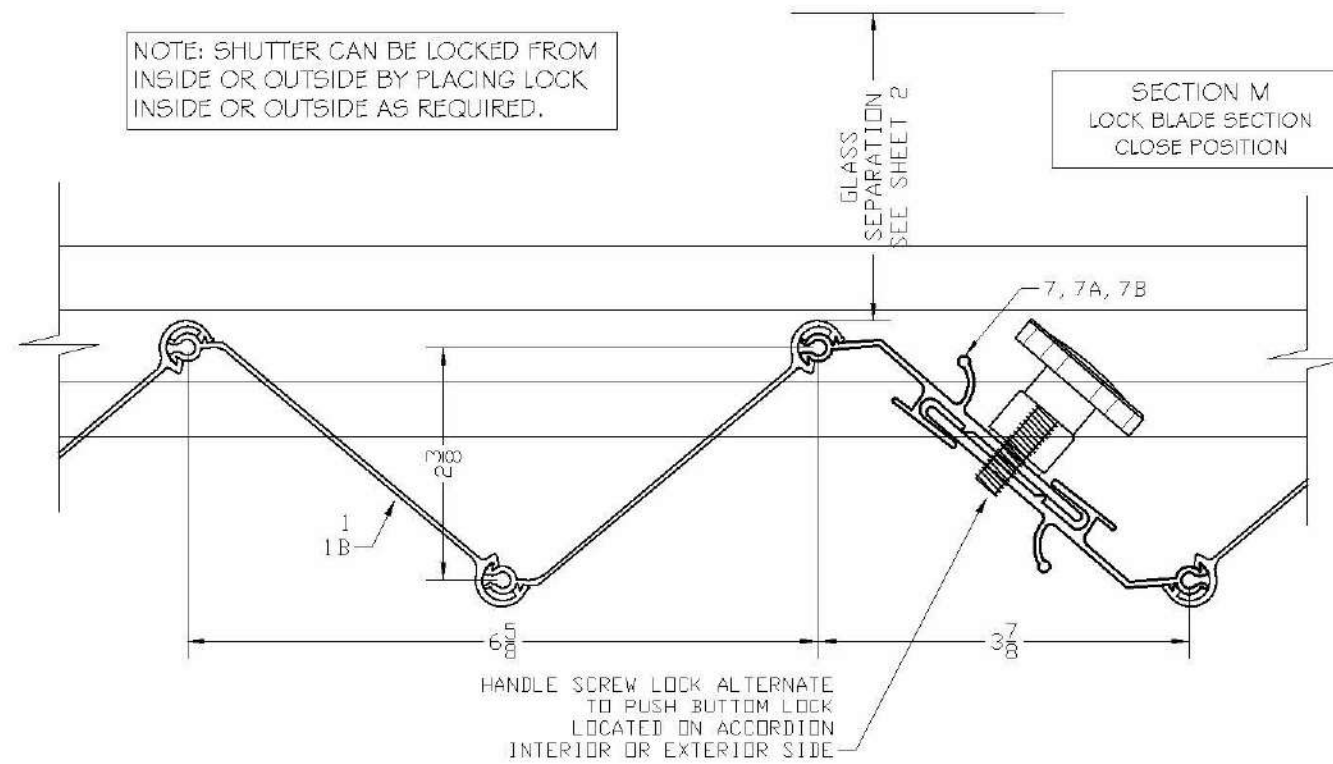
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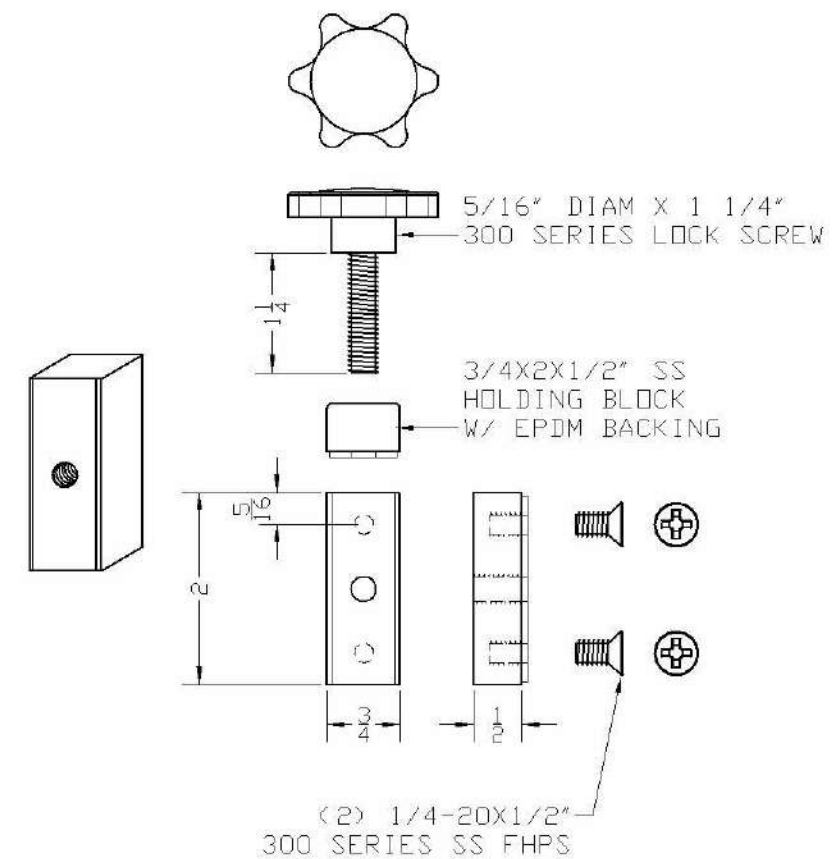
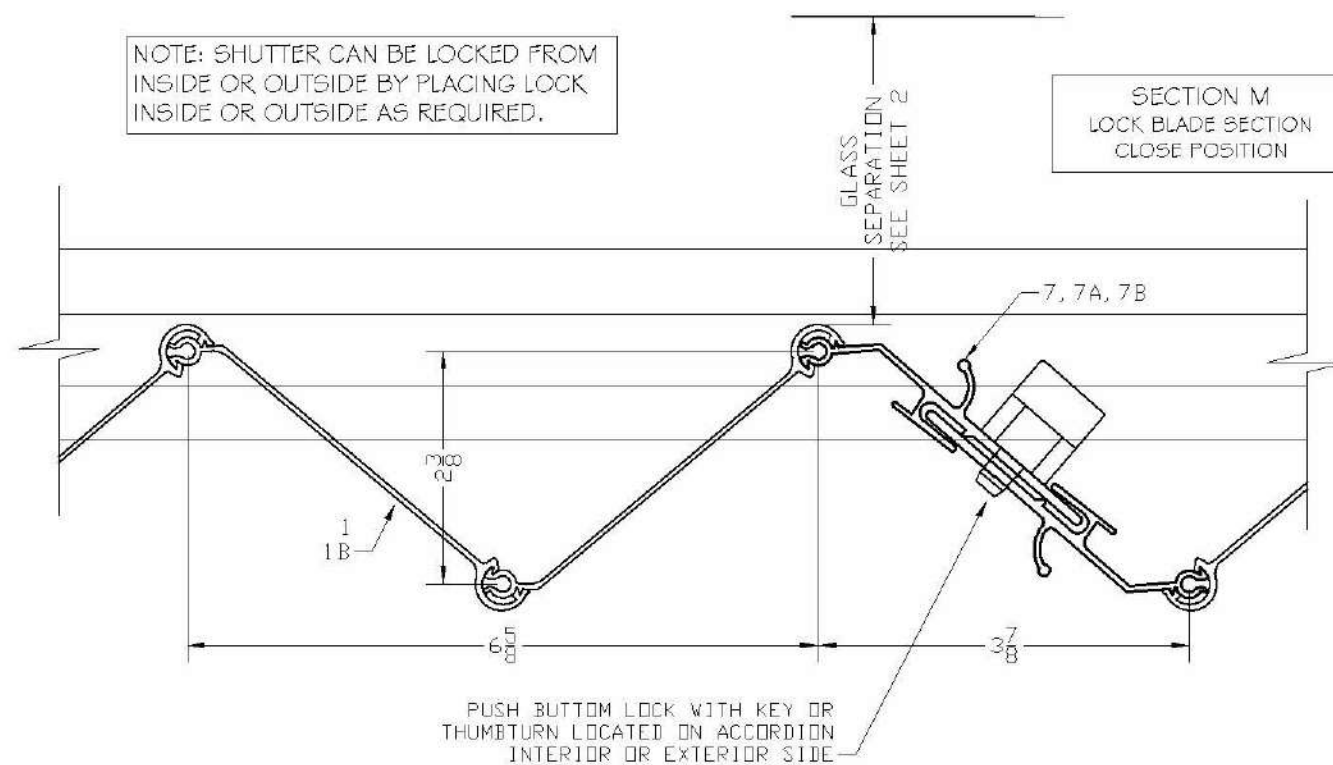


TYPICAL HORIZONTAL  
UNIMATE LOCK SECTIONS M  
WITH PUSH BUTTON LOCK OR HANDLE SCREW LOCK

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



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



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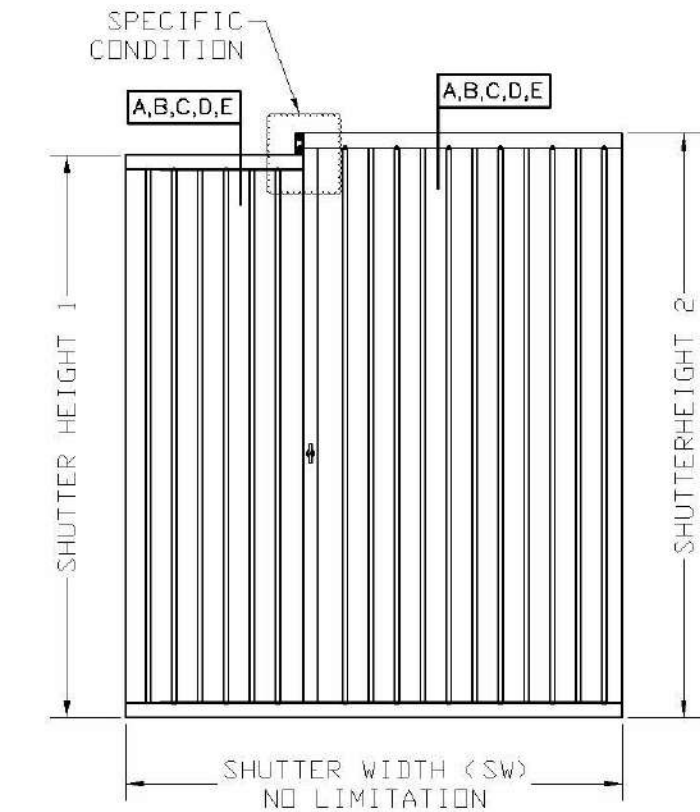
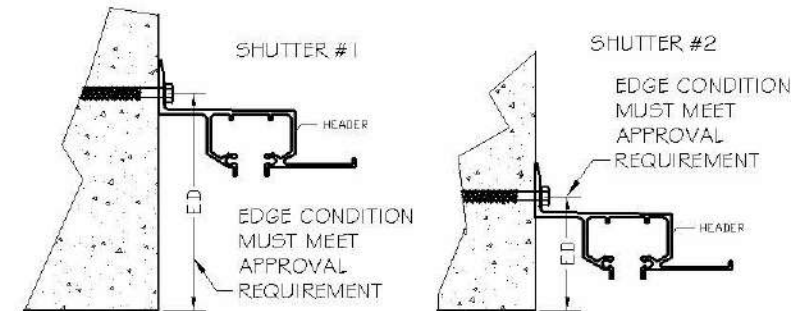
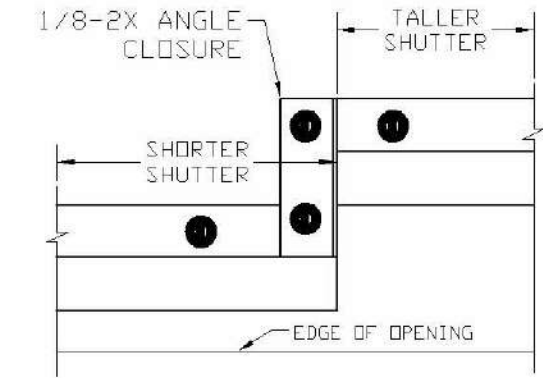
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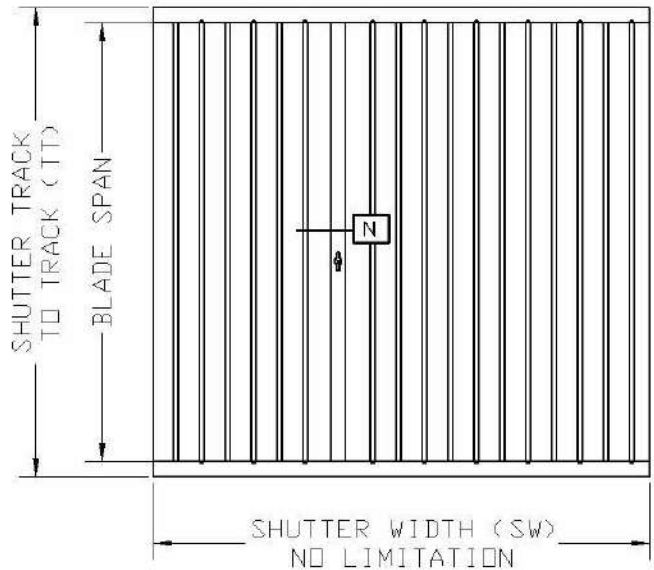
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SHUTTERS STACKS WITH DIFFERENT HEIGHTS:

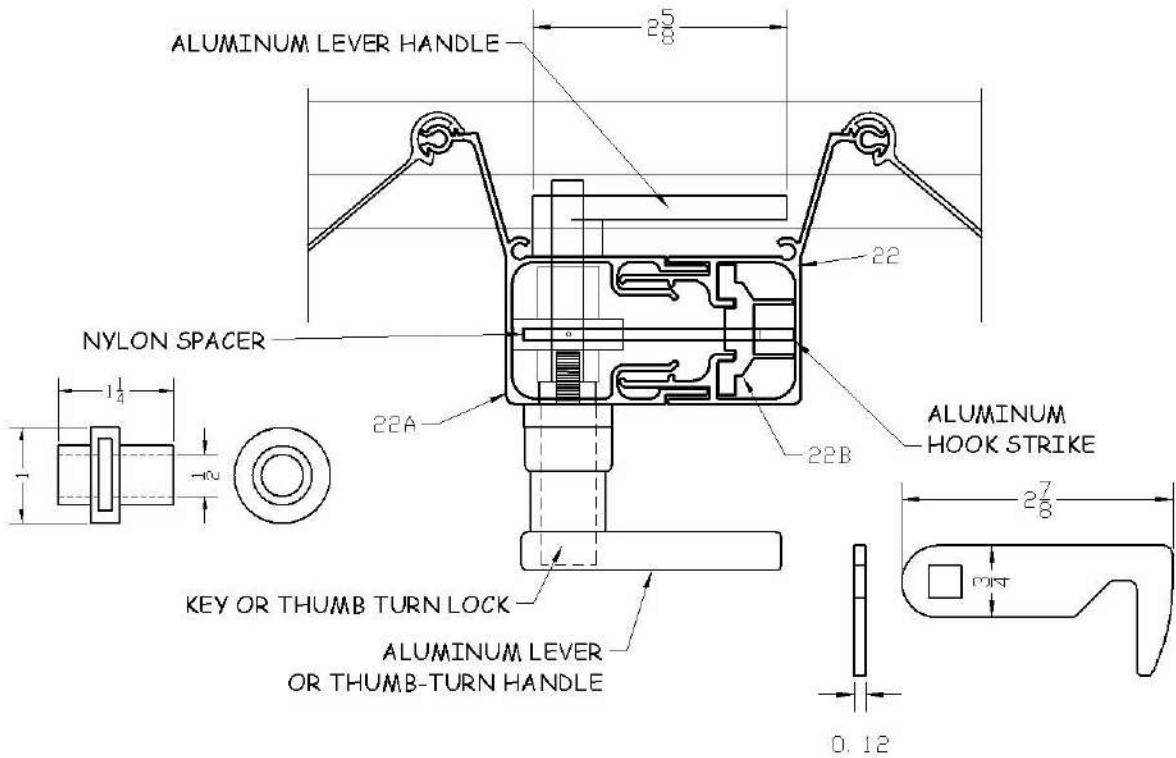
- 1- SOME FIELD CONDITIONS WILL CREATE AN INSTALLATION REQUIREMENT THAT THE LEFT AND THE RIGHT STACKS OF THE SHUTTER BE WITH DIFFERENT HEIGHTS. THE LOCK STILES WILL BE THE BRIDGE TO CONNECT BOTH STACKS AT THE CLOSED POSITION.
- 2- THIS APPLICATION IS NOT VALID FOR INSET MOUNT HEAD CONDITIONS



ACCORDION SHUTTER  
LOCK TYPE N DETAILS



STANDARD ACCORDION LEVER HANDLE LOCK  
INSTALLATION CAN BE DONE WITH  
LOCK ACCESS FROM INSIDE OR OUTSIDE



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