

SUPERNOVA ACCORDION SHUTTER

EXTRUDED ALUMINUM ACCORDION SHUTTER

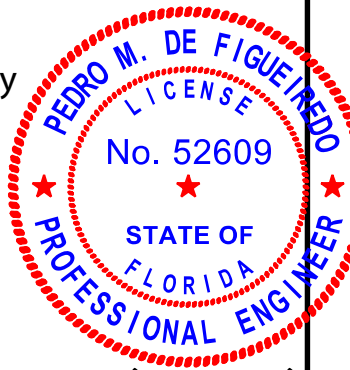
FLORIDA STATE APPROVAL
CODE VERSION: FLORIDA BUILDING CODE 2026 - 9th EDITION
APPROVED FOR USE IN HVHZ AND OUTSIDE HVHZ
CATEGORY: SHUTTERS -- SUBCATEGORY: ACCORDION
IMPACT RESISTANT: (LEVEL D) - LARGE & SMALL MISSILE

Pedro
Figueiredo

Digitally signed by
Pedro Figueiredo
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PE 52609
09/09/2026



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PPMF@AOL.COM
ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

GENERAL NOTES: (FLORIDA BUILDING CODE 2026 - 9th 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 2026 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. 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 7-22. 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.
- 9- PRODUCT INSTALLATIONS WITHIN 3000 FEET OF SALTWATER COASTAL LINE TO COMPLY WITH FBC SECTION 1711. (SEE SHEET 19)

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

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18	LOCK HARDWARE SECTION "N" DETAIL, SPECIAL SHUTTER HEIGHT TRANSITION
19	FBC 2026 SECTION 1711 CORROSION RESISTANCE OF FASTENERS

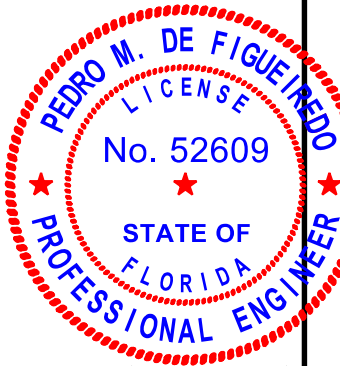
STANDARD COMPLIANCE:
ASTM E330, E1996 (LEVEL D MISSILE)
TAS 201, 202, 203 (LARGE & SMALL MISSILE)
ASCE 7-22, ADM-20, NDS-18



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:
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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 I A WHEN ONE OR MORE TYPE 1B BLADE IS USED
5- BLADE REVERSED INSTALLATION IS ALLOWED FOR ALL MOUNTED CONDITIONS

TABLE I A
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

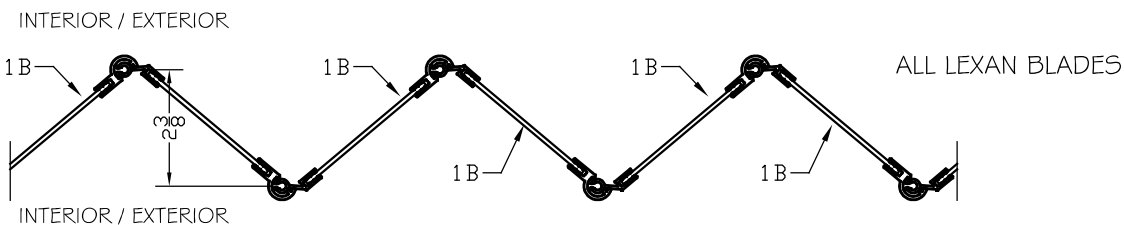
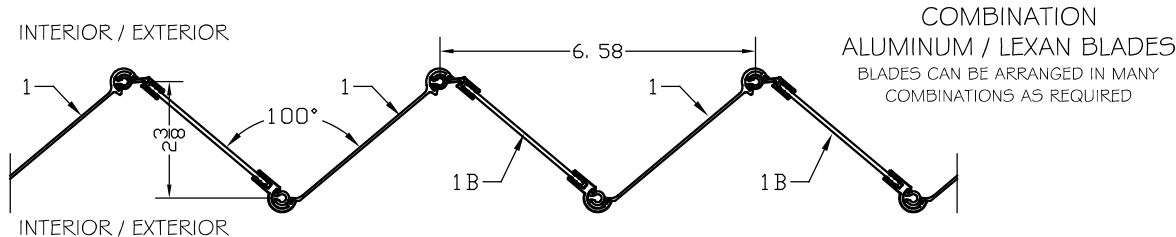
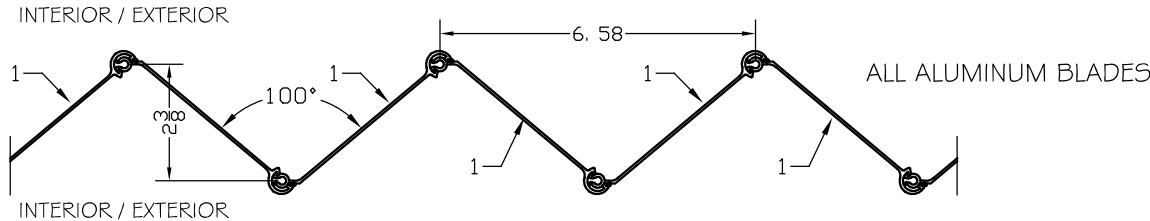
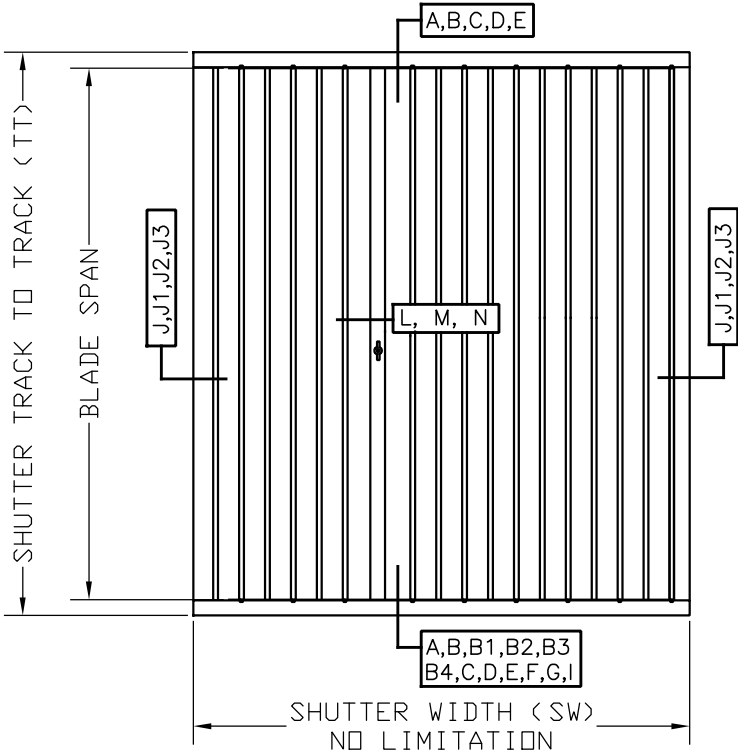


TABLE 2
MINIMUM SHUTTER SEPARATION FROM GLAZING

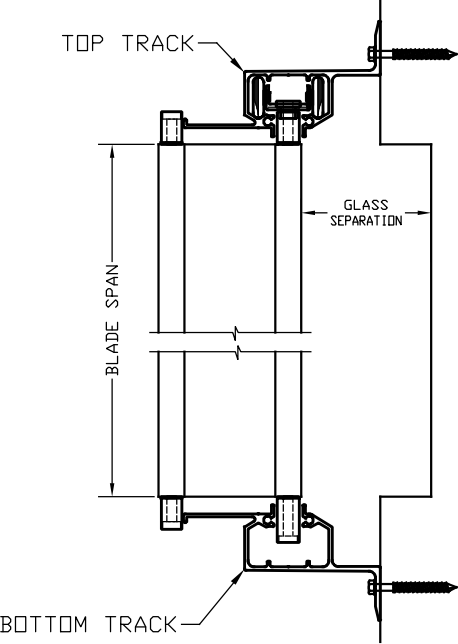
BLADE TYPE	GLAZING SEPARATION (INCHES)		
	BLADE SPAN		
	<=60"	<=104"	<=162"
ALUMINUM ALL ELEVATIONS	2"	2 3/4"	3"
LEXAN <=30' ELEVATION	3"	3"	3"
LEXAN >30' ELEVATION	2 1/8"	3"	3"

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 E 1996 AND ESSENTIAL FACILITIES AS DEFINED ON ASCE 7-22.
3- WHEN SHUTTER IS ASSEMBLED WITH BOTH TYPES OF BLADES THE LARGEST GLASS SEPARATION SHALL APPLY.

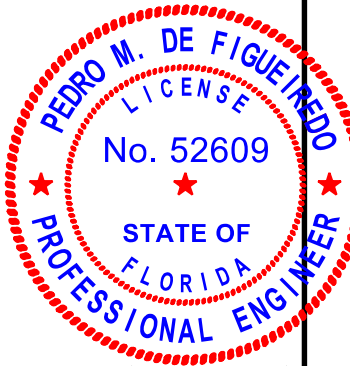
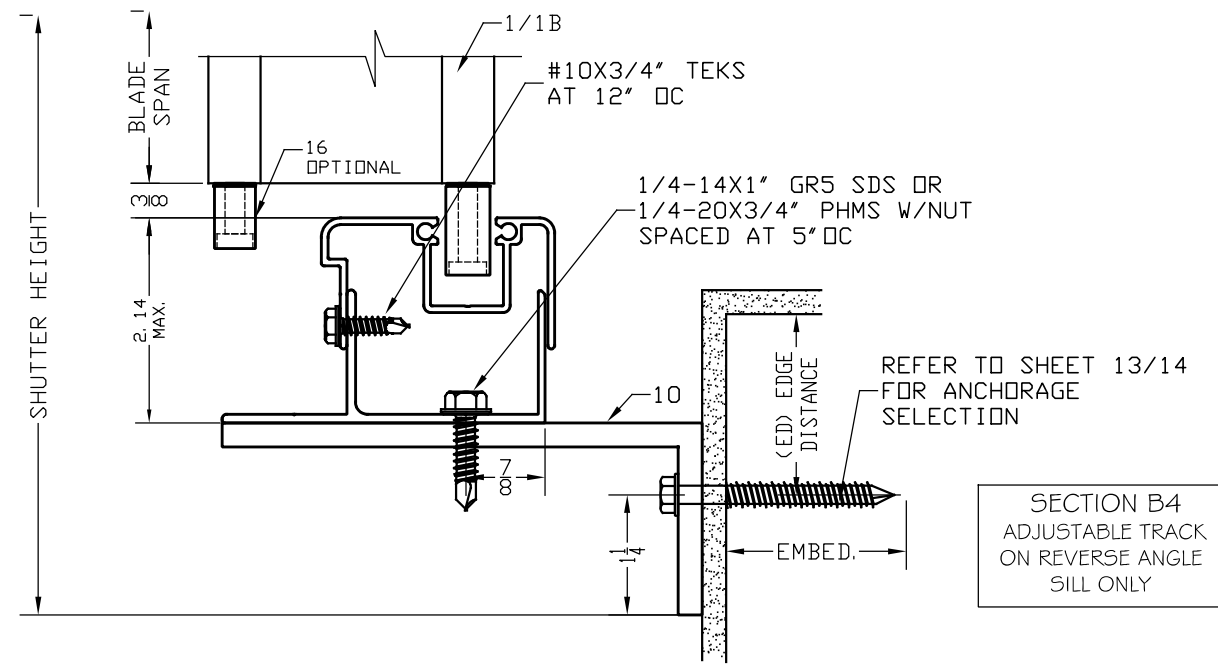
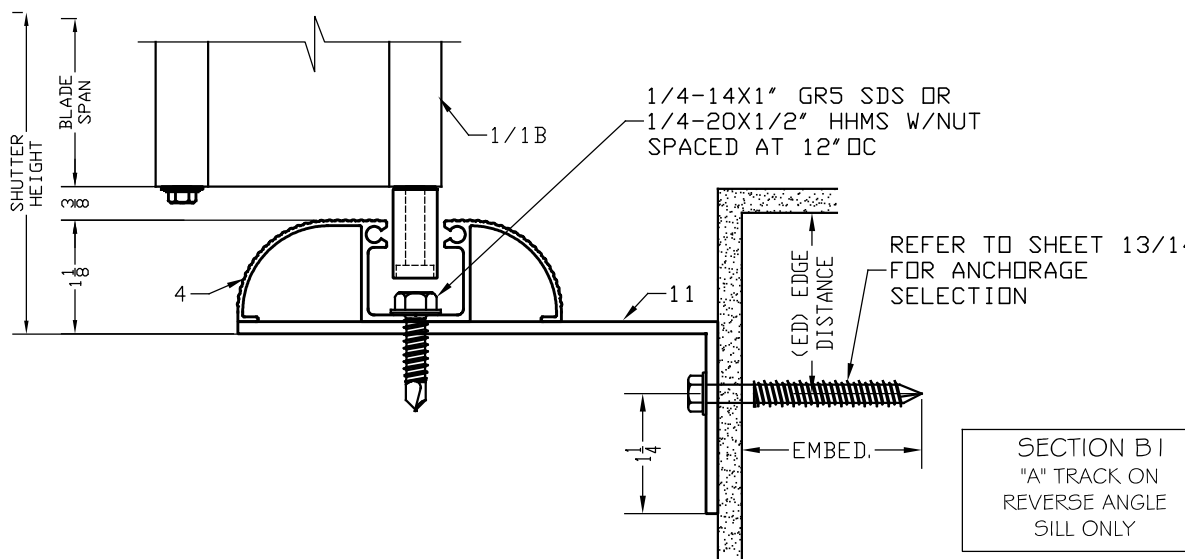
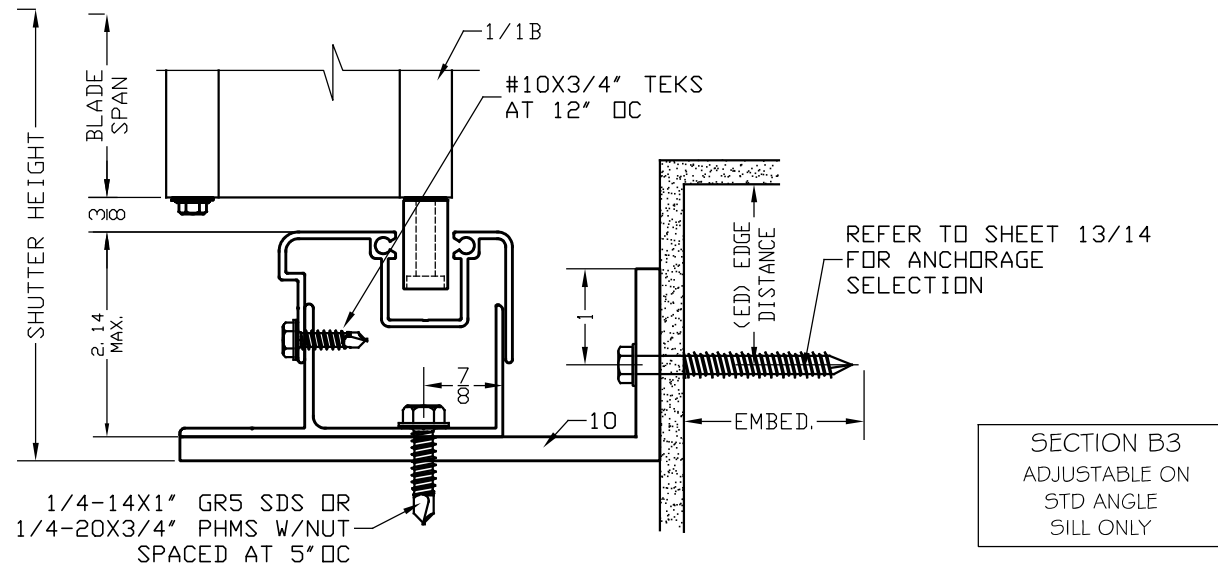
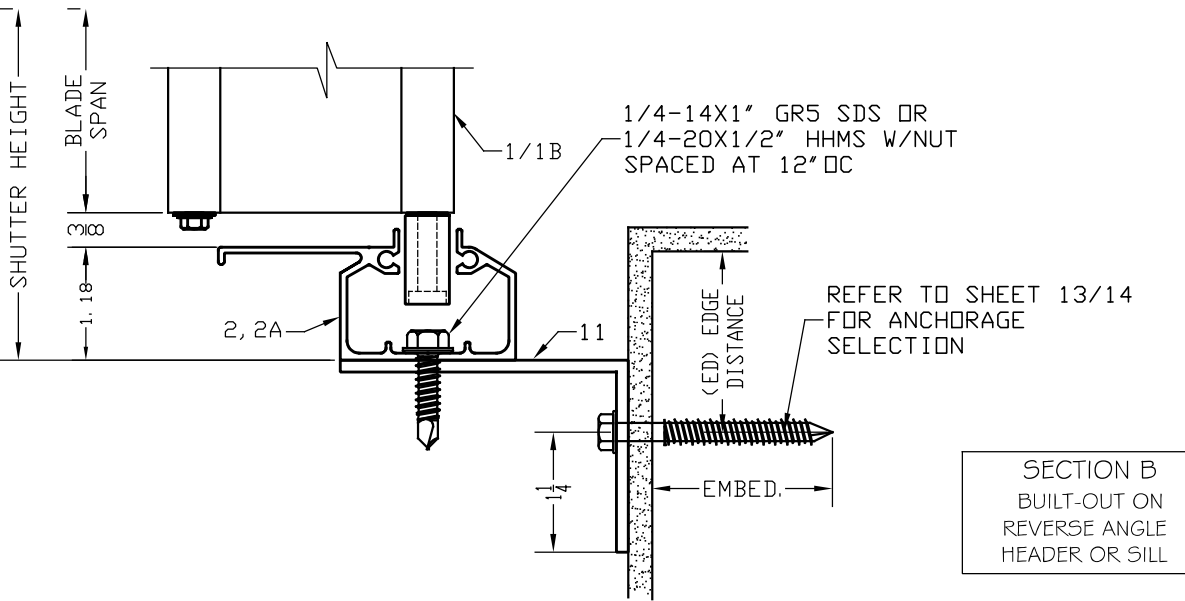
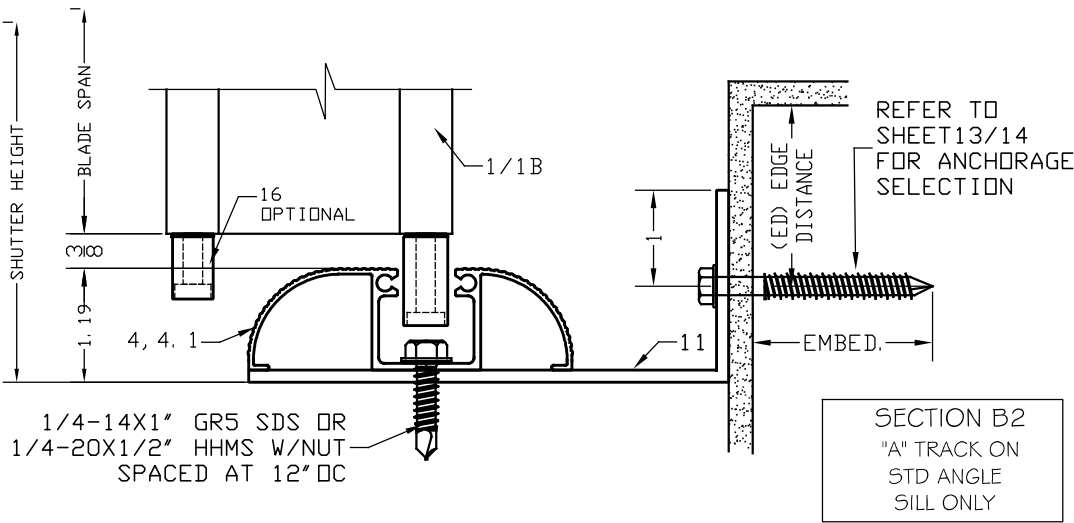
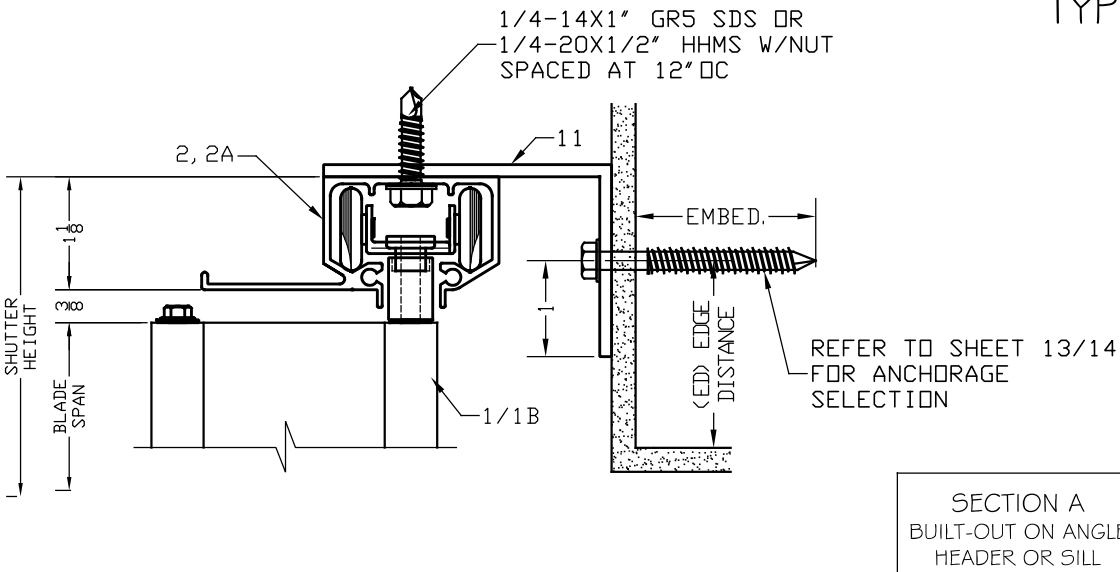
TYPICAL ELEVATION



TYPICAL CROSS SECTION



TYPICAL SECTIONS



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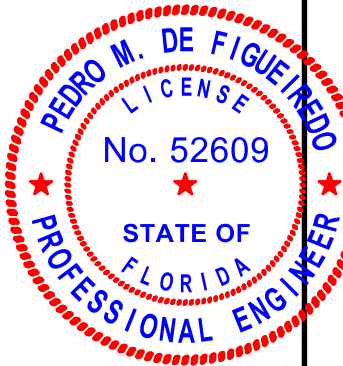
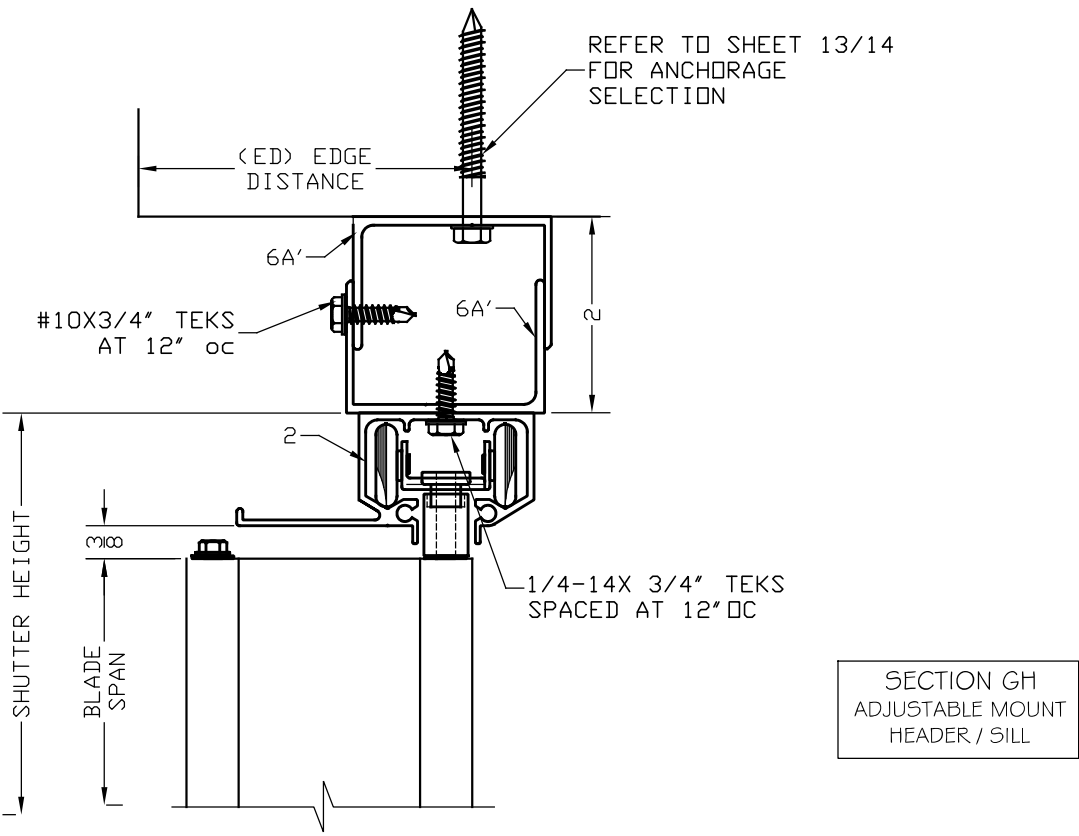
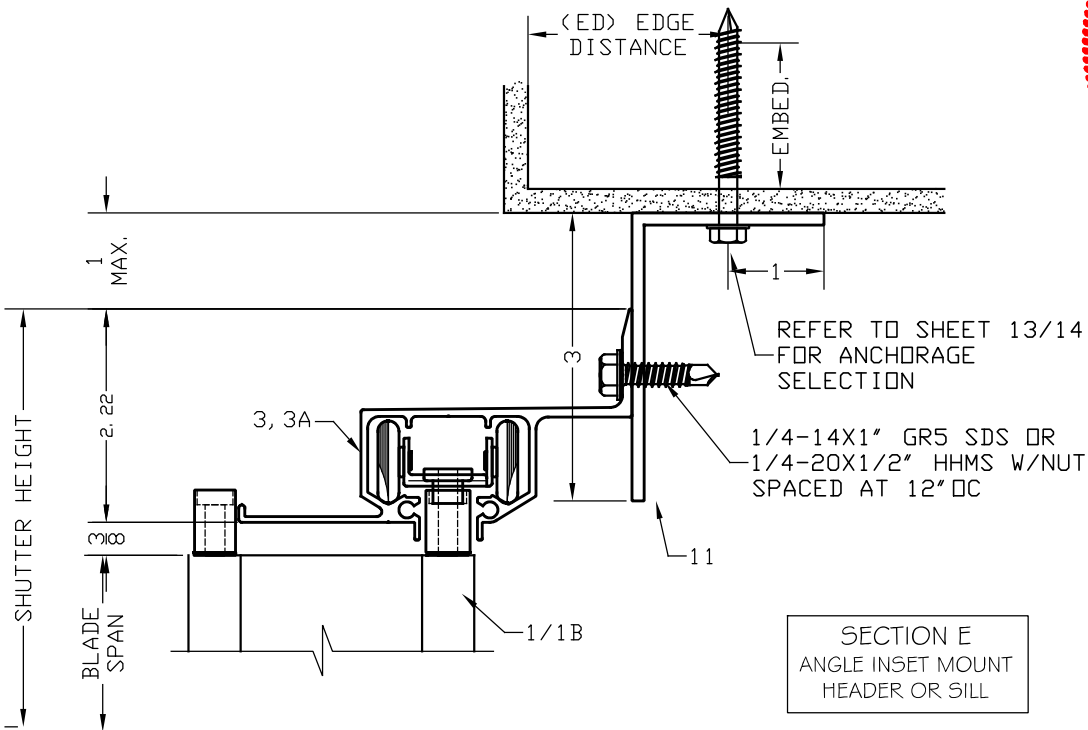
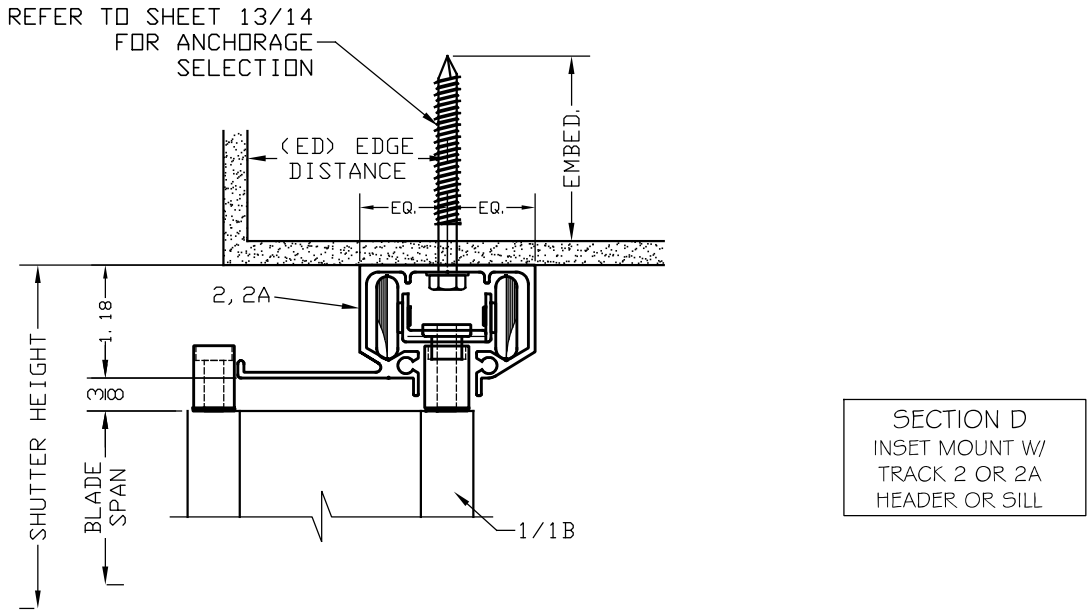
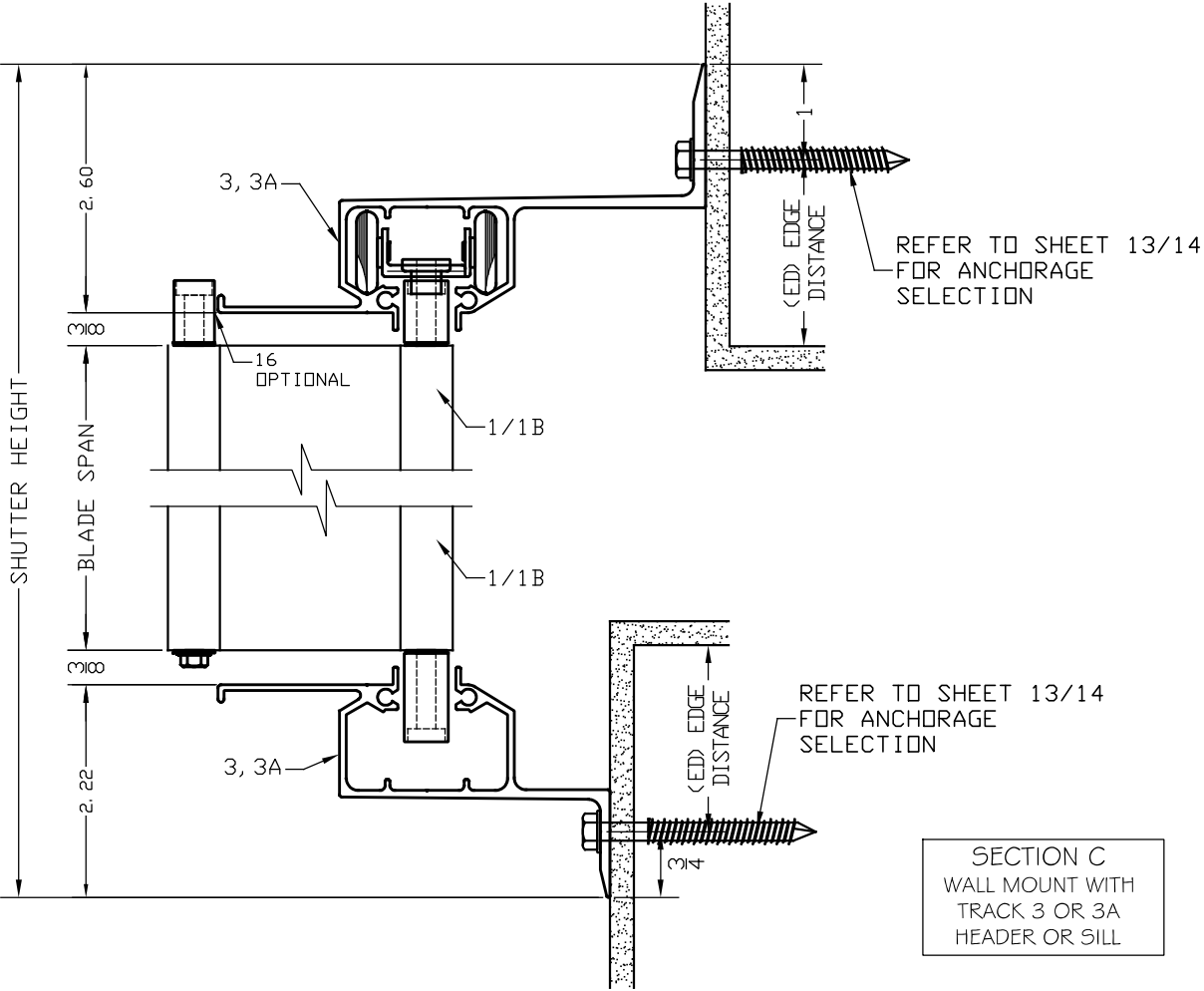
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TYPICAL SECTIONS



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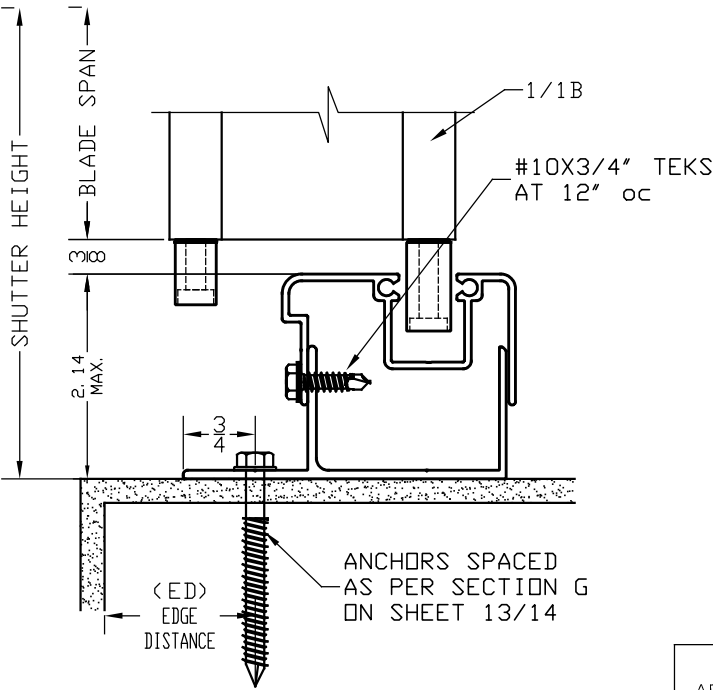
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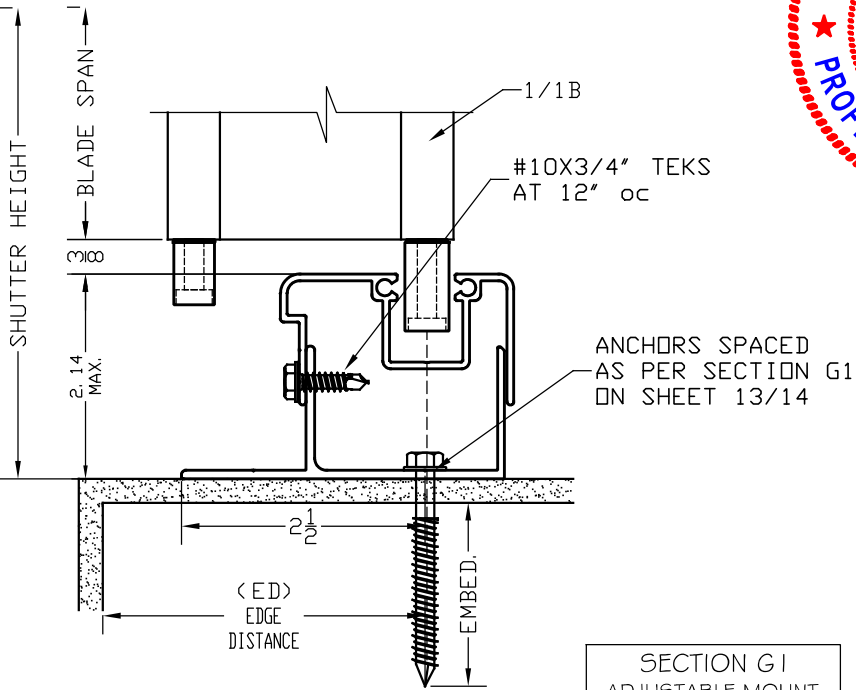
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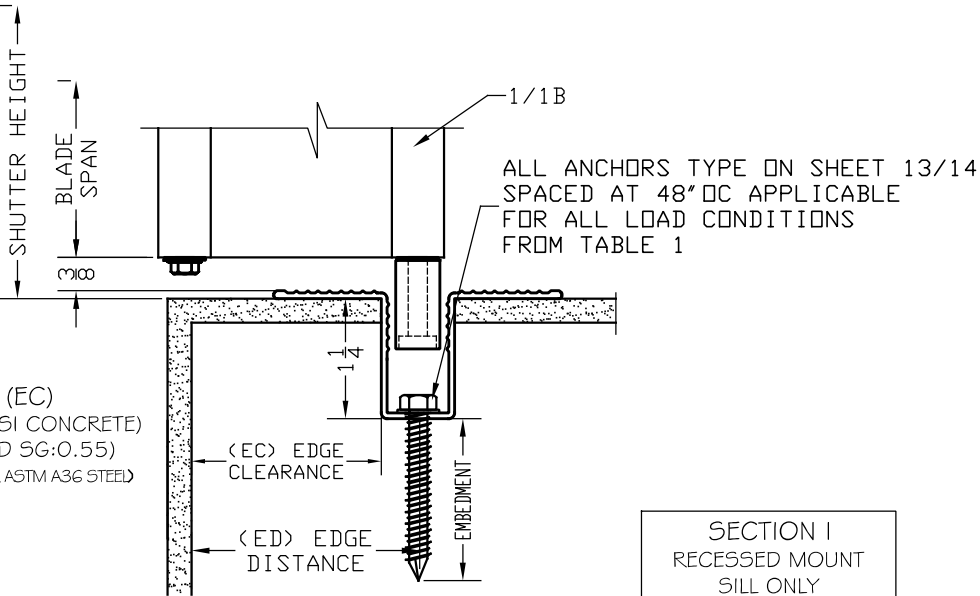
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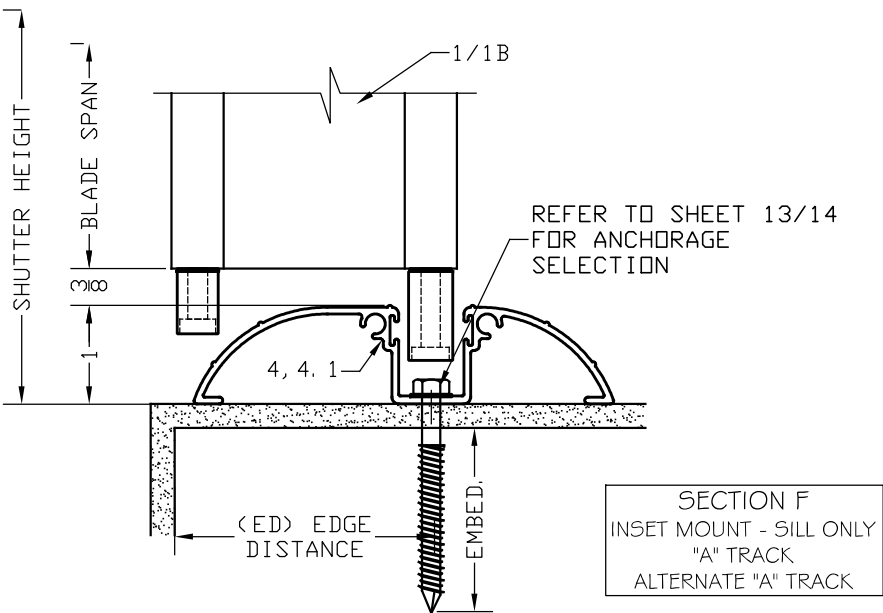
SECTION G
ADJUSTABLE MOUNT
SILL ONLY



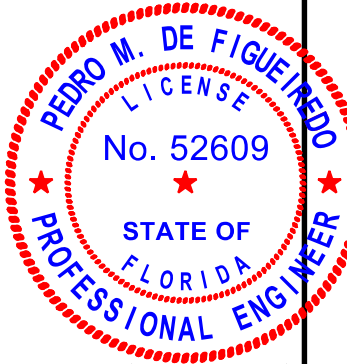
SECTION G1
ADJUSTABLE MOUNT
SILL ONLY



SECTION I
RECESSED MOUNT
SILL ONLY



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



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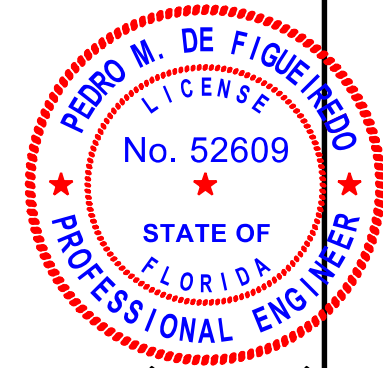
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OPTIONAL CURVED TRACK

BENT TRACK OR SEGMENTED TRACK OPTIONS



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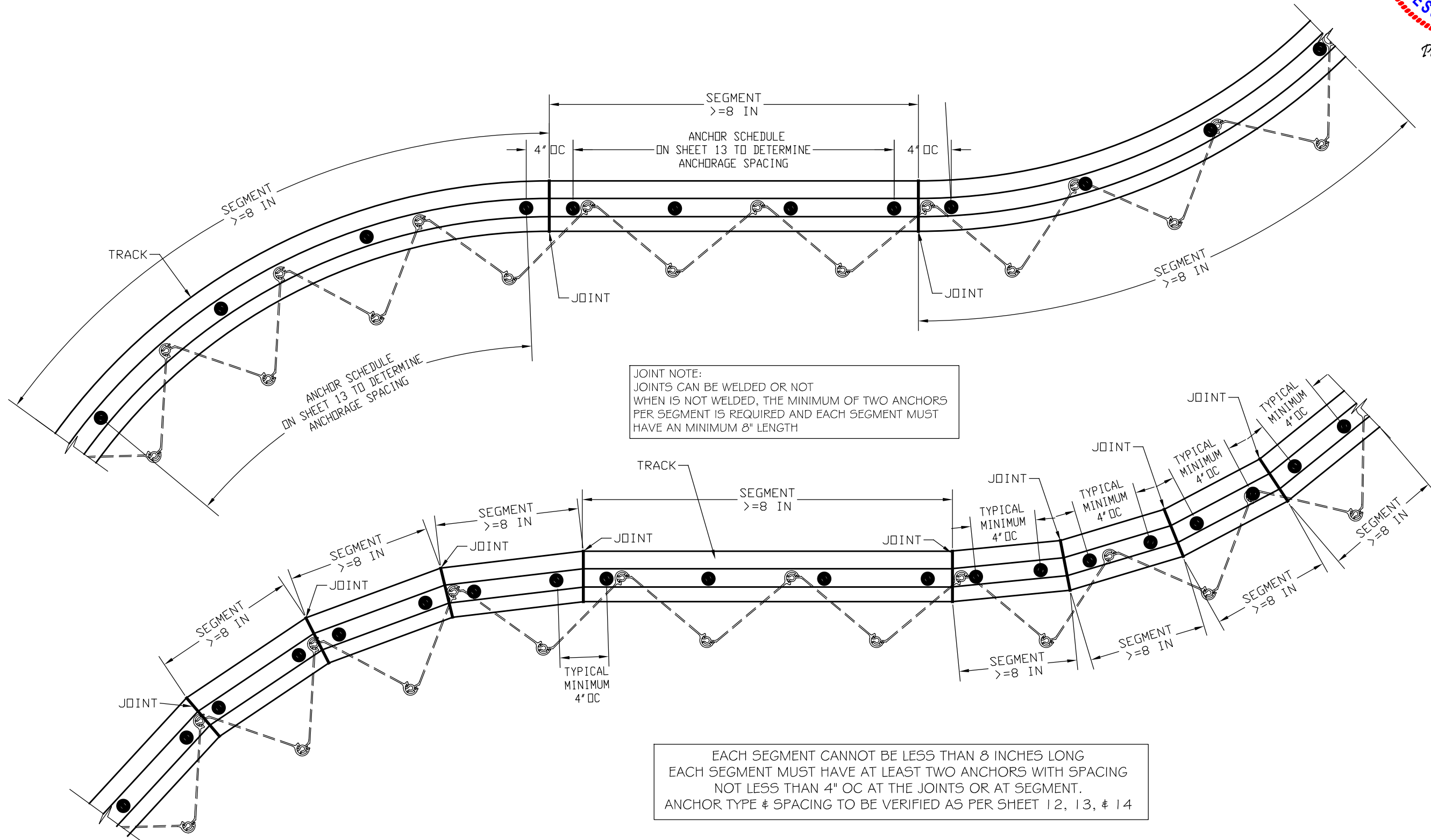
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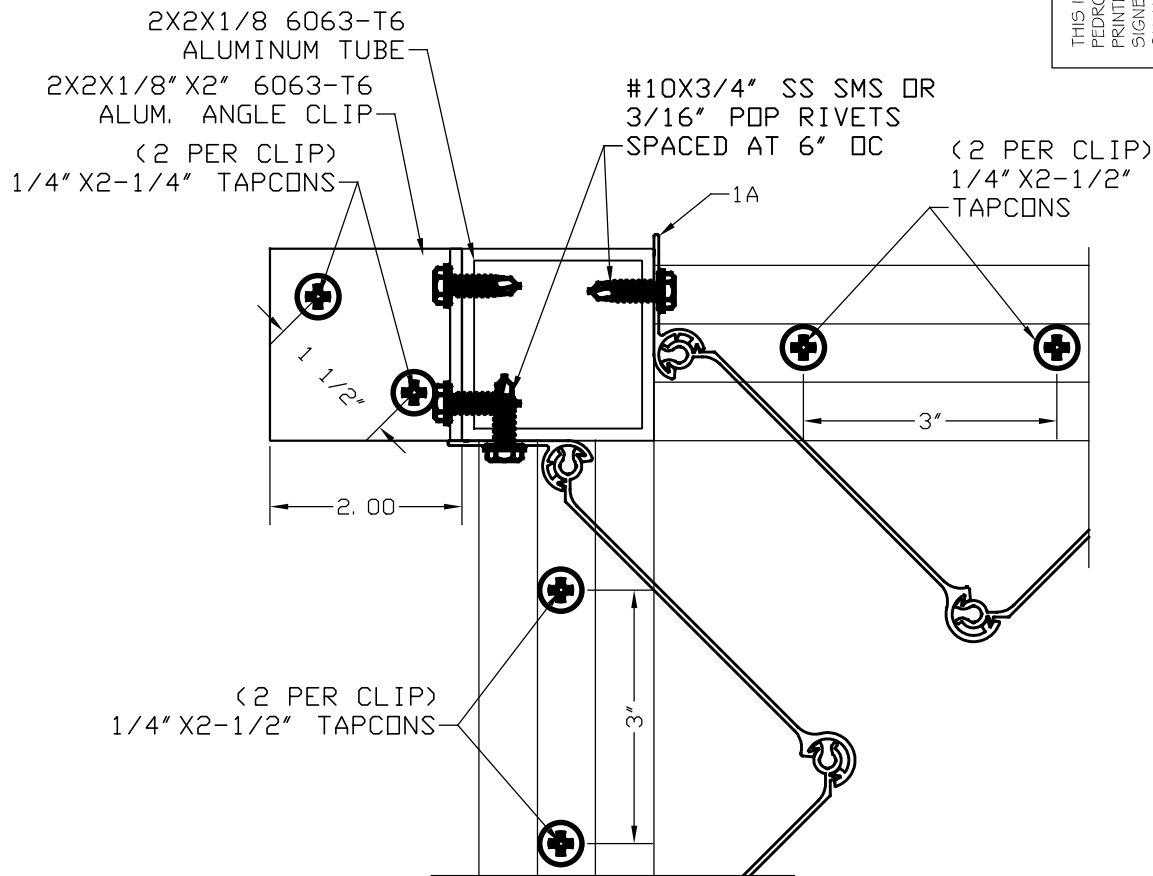
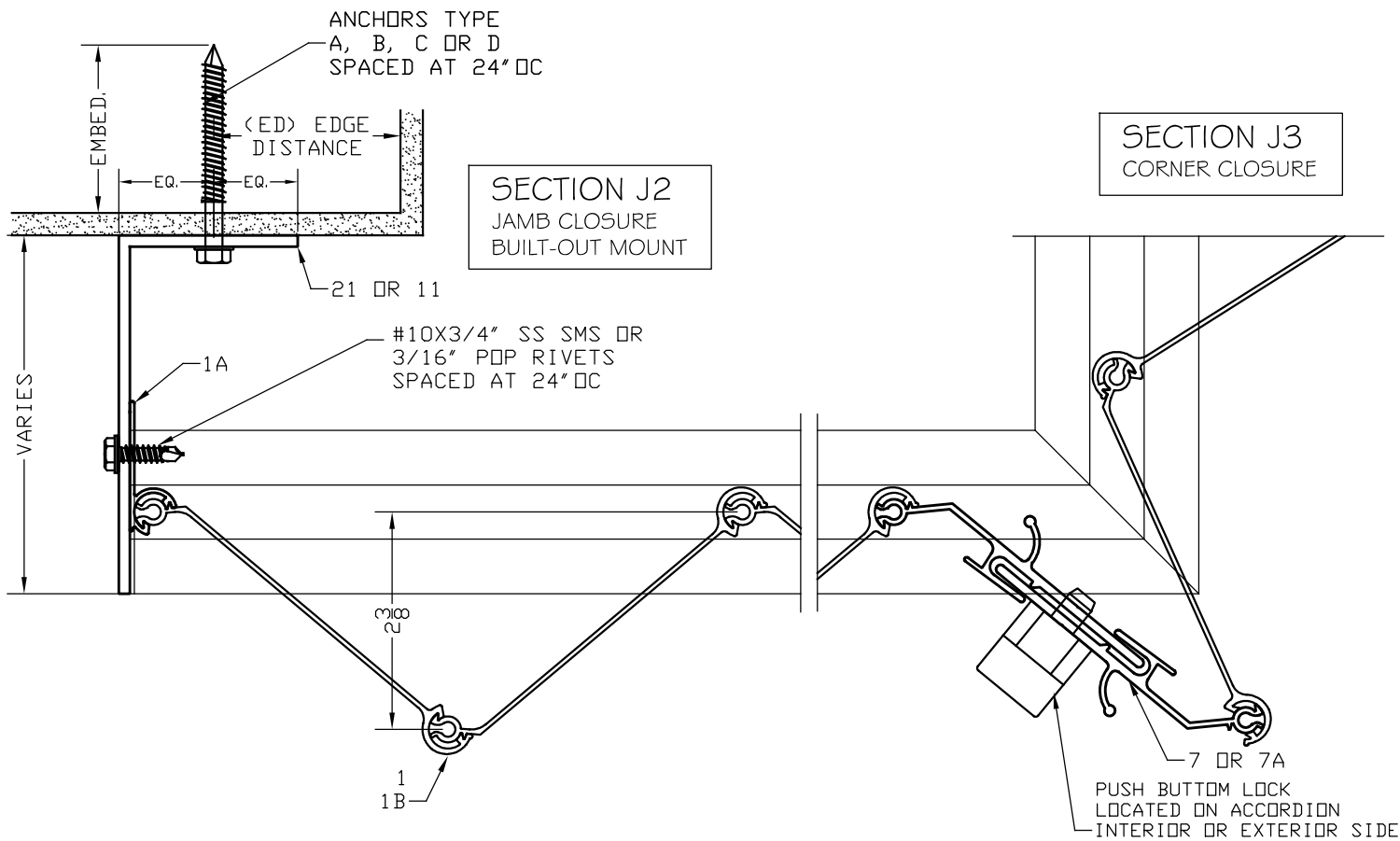
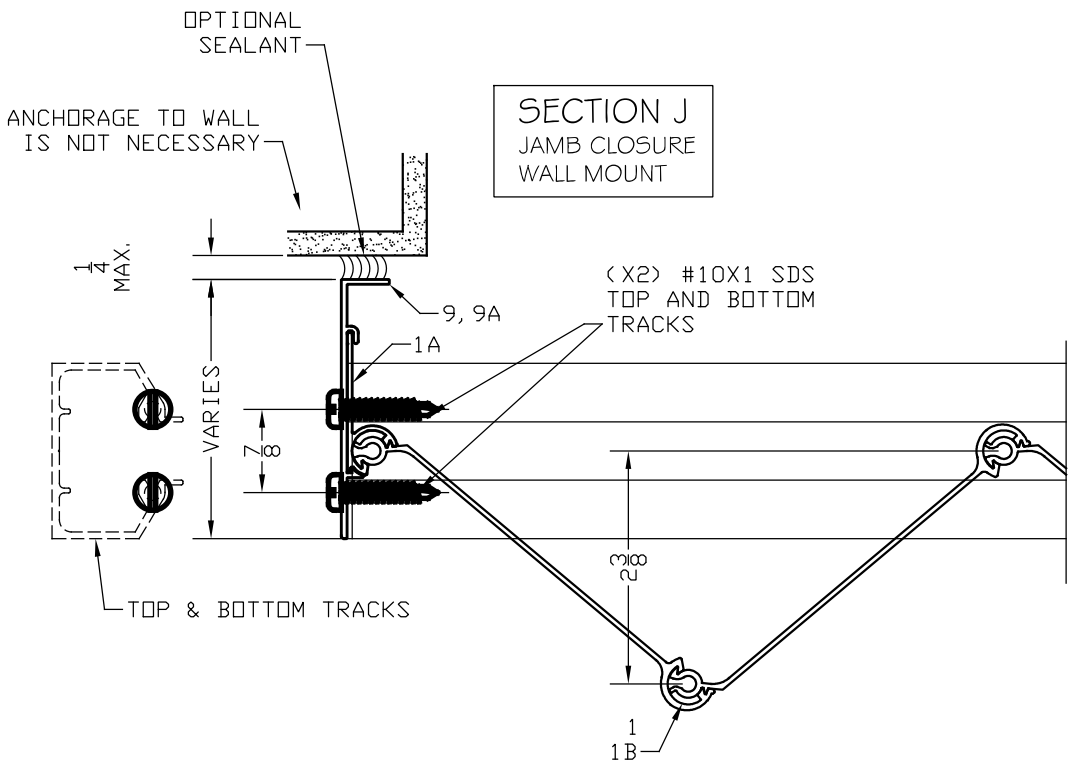
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TYPICAL HORIZONTAL
JAMB AND CORNER SECTIONS J



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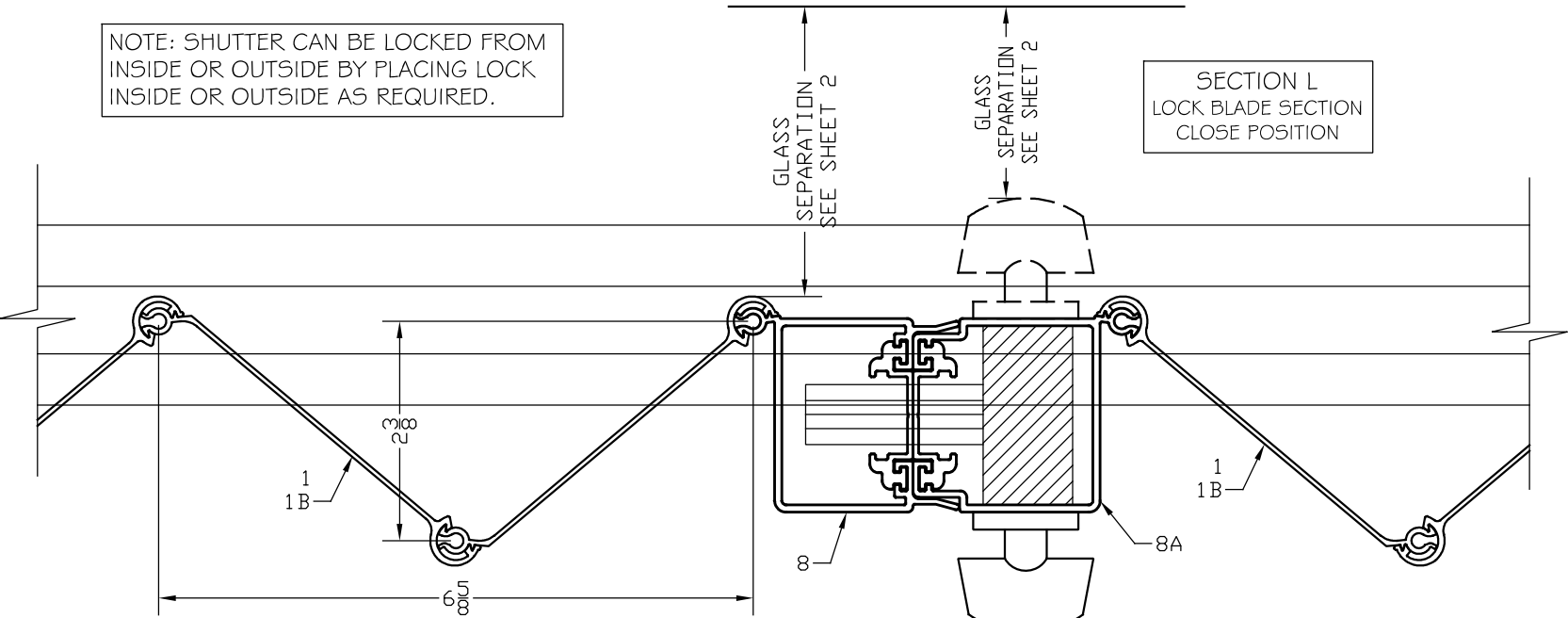
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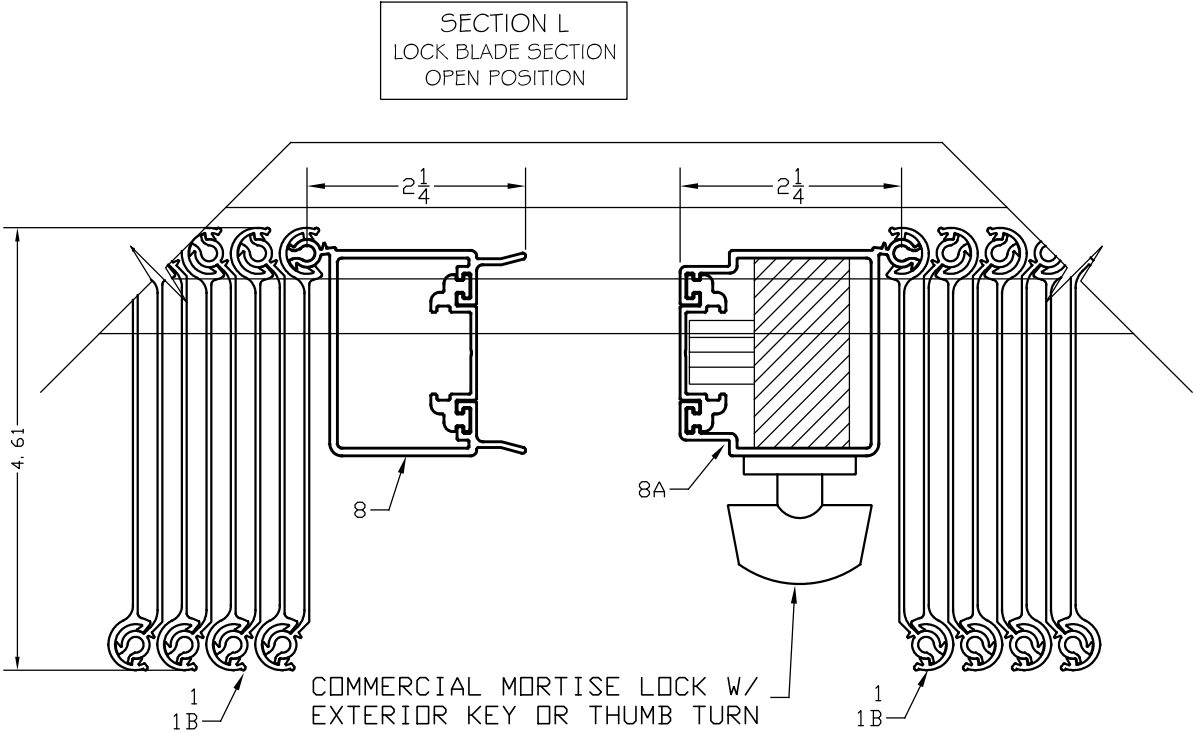
TYPICAL HORIZONTAL SECTIONS
HD LOCK SECTIONS L

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



SECTION L
LOCK BLADE SECTION
CLOSE POSITION

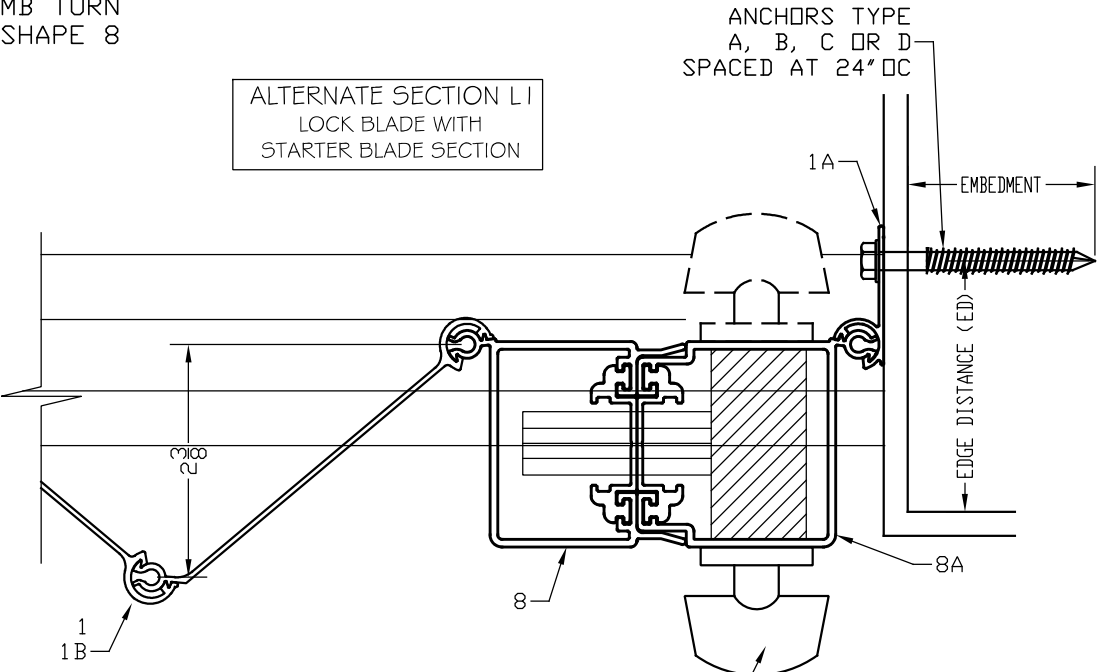
COMMERCIAL MORTISE LOCK W/
EXTERIOR KEY OR THUMB TURN
AND INSIDE THUMB TURN
INSTALLED ON SHAPE 8



SECTION L
LOCK BLADE SECTION
OPEN POSITION

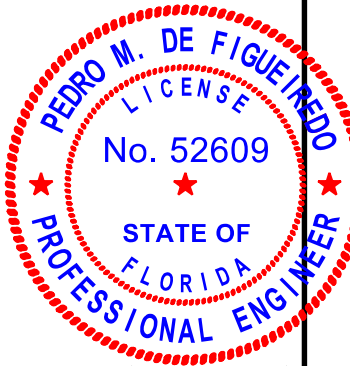
COMMERCIAL MORTISE LOCK W/
EXTERIOR KEY OR THUMB TURN
AND INSIDE THUMB TURN
INSTALLED ON SHAPE 8

ALTERNATE SECTION L I
LOCK BLADE WITH
STARTER BLADE SECTION



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

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



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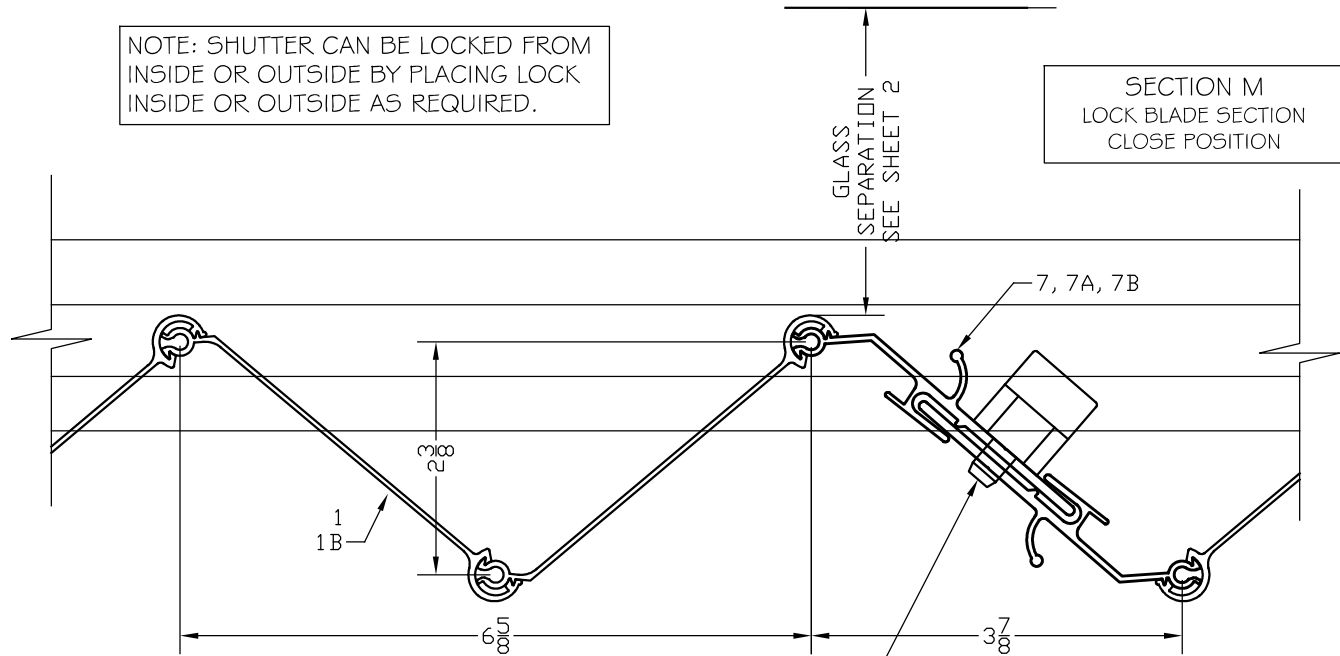
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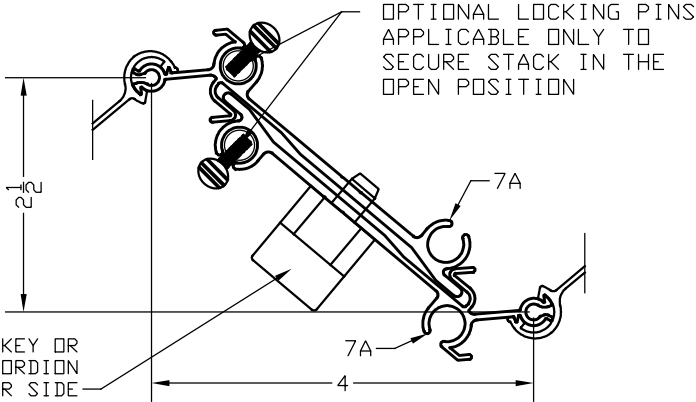
TYPICAL HORIZONTAL
UNIMATE LOCK SECTIONS M

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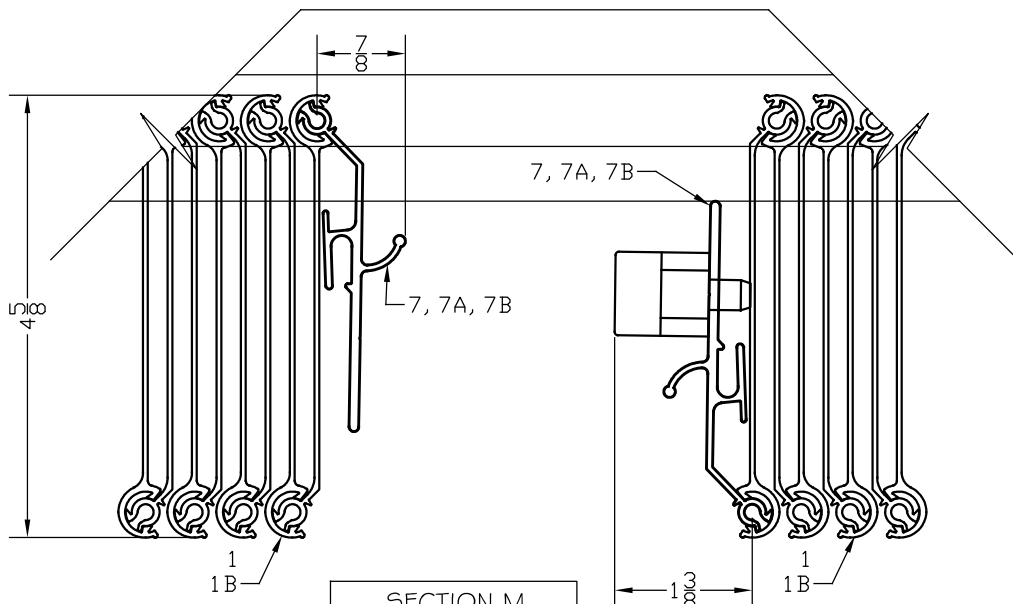
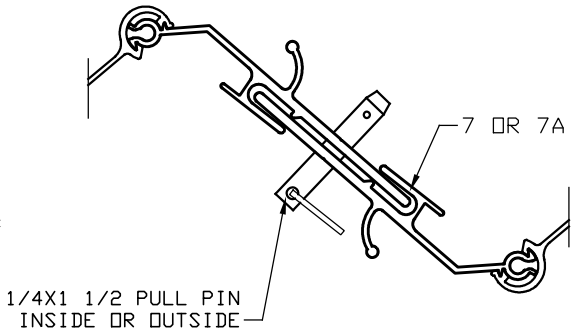
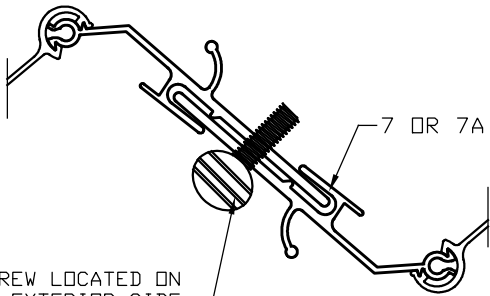


PUSH BOTTOM LOCK WITH KEY OR
THUMBTURN LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

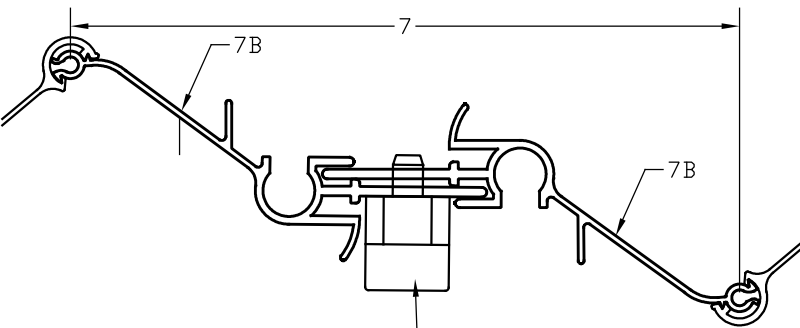
1/4-20X3/4" THUMB SCREW LOCATED ON
ACCORDION INTERIOR OR EXTERIOR SIDE
DRILL AND TAP OPPOSITE BLADE OR
INSTALL JACK NUT TREAD TO RECEIVE SCREW



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

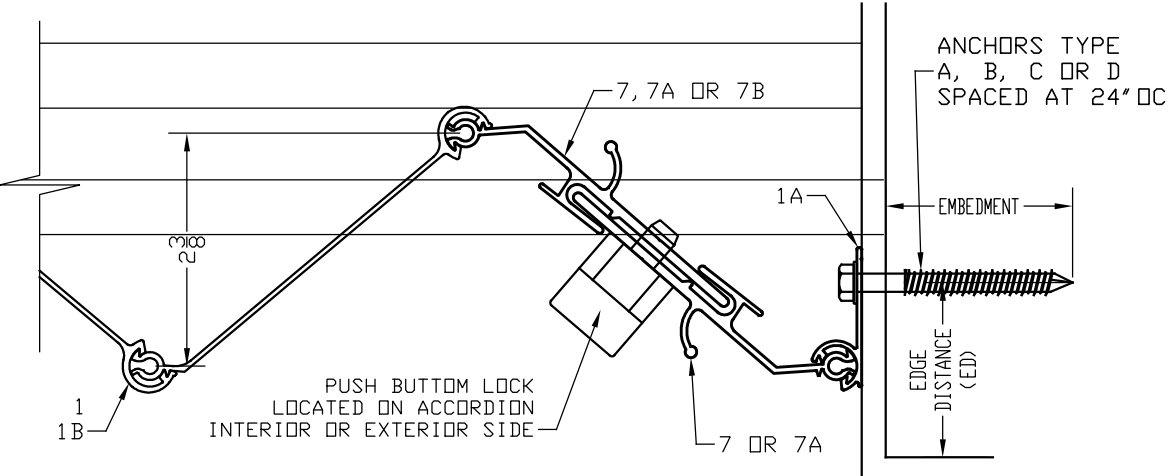
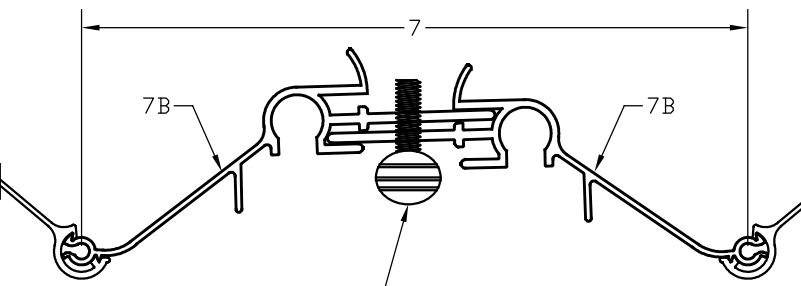


SECTION M
LOCK BLADE SECTION
OPEN POSITION

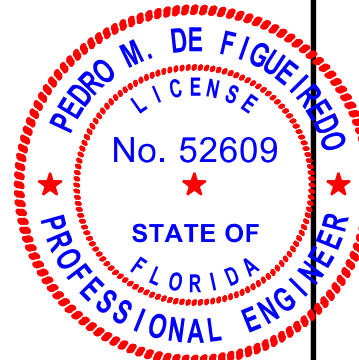


PUSH BOTTOM LOCK WITH KEY OR
THUMBTURN LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

ALTERNATE SECTION M/I
LOCK BLADE WITH
STARTER BLADE SECTION



PUSH BOTTOM LOCK
LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE



Pedro De Figueiredo
PE 52609
09/09/2026

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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:
09/09/2026
DRAWING #
26-172
SHEET
09 OF 19

ENGINEERING SERVICES - CA 32459
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ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

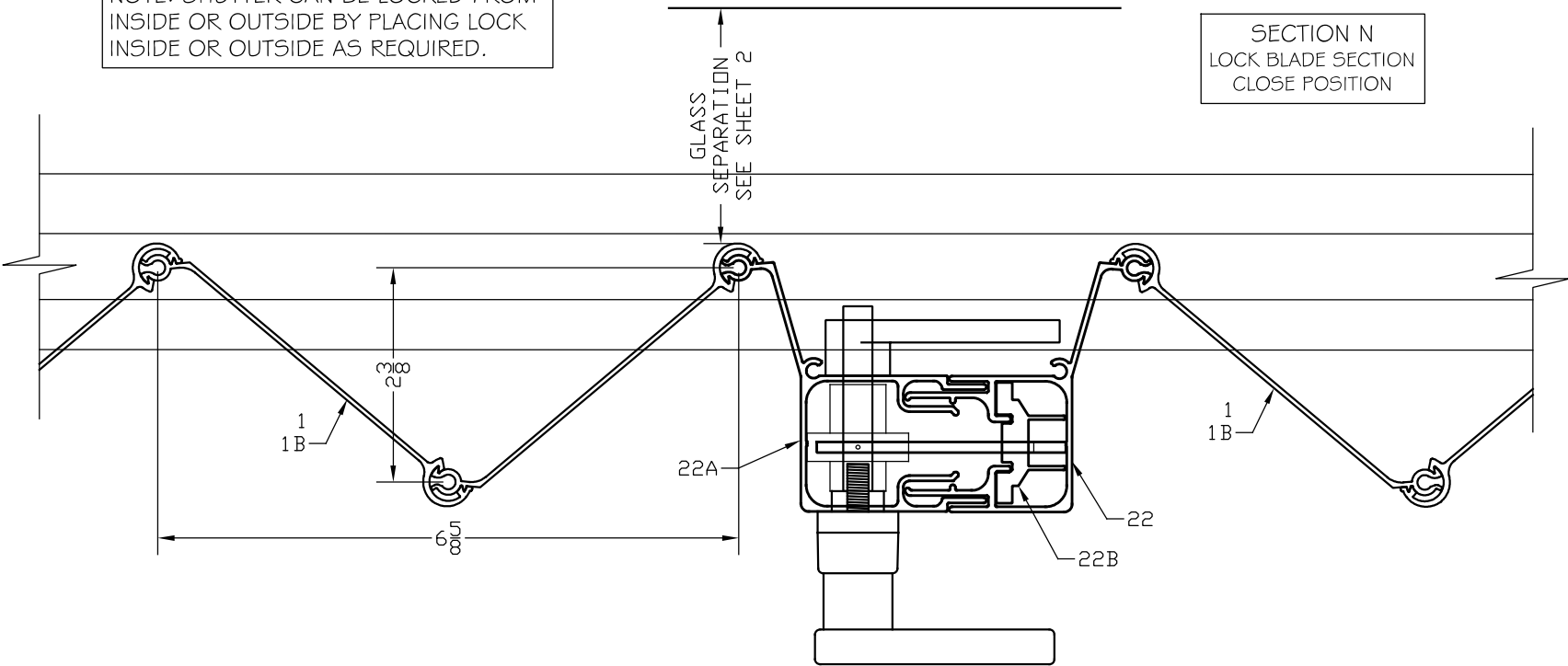


TYPICAL HORIZONTAL SECTIONS
STD LOCK SECTIONS N

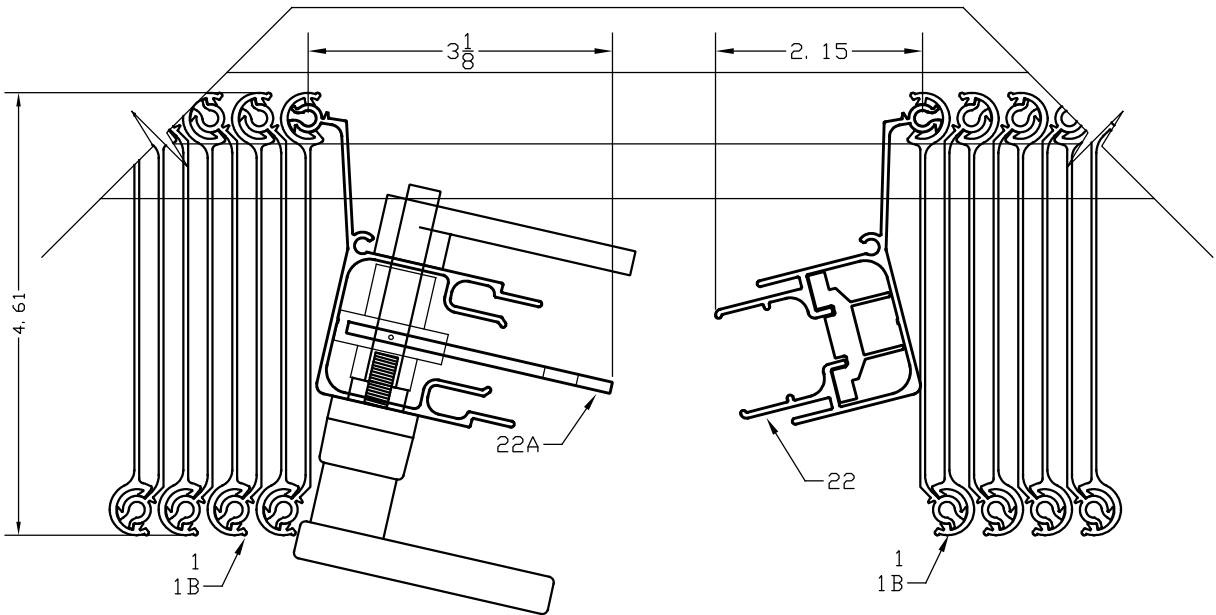
NOTE: SHUTTER CAN BE LOCKED FROM
INSIDE OR OUTSIDE BY PLACING LOCK
INSIDE OR OUTSIDE AS REQUIRED.

GLASS
SEPARATION
SEE SHEET 2

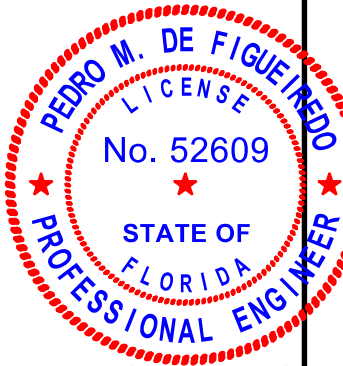
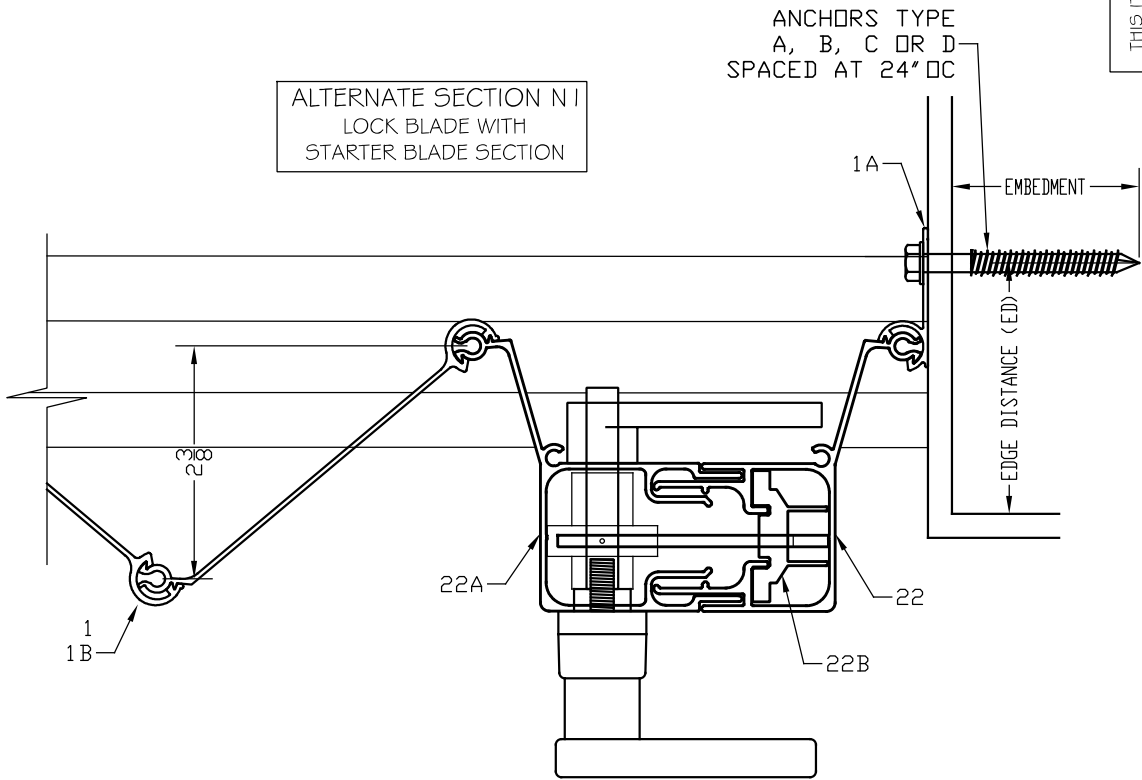
SECTION N
LOCK BLADE SECTION
CLOSE POSITION



SECTION N
LOCK BLADE SECTION
OPEN POSITION



ALTERNATE SECTION N I
LOCK BLADE WITH
STARTER BLADE SECTION



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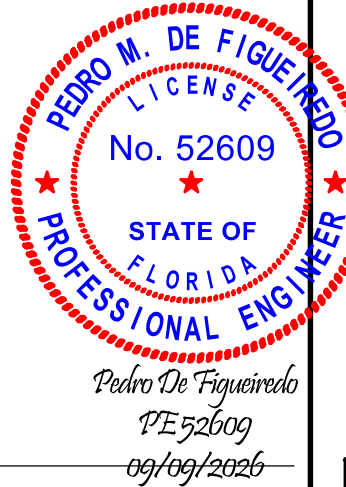
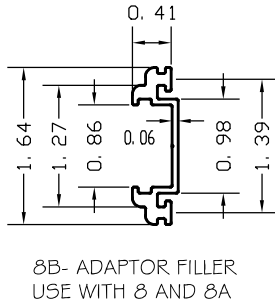
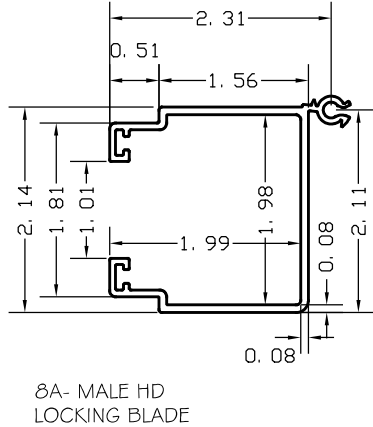
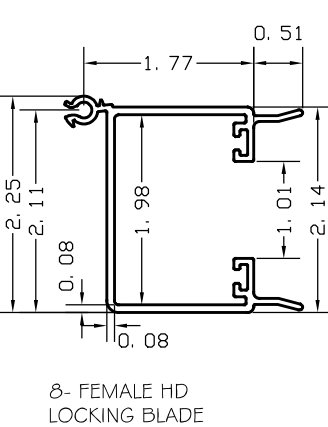
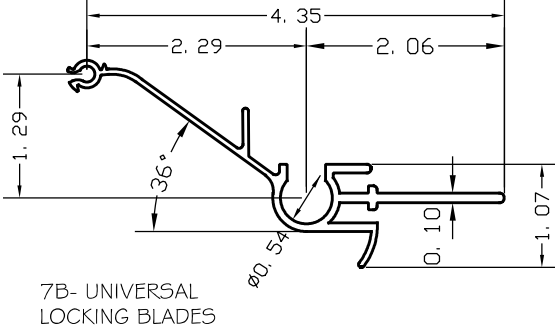
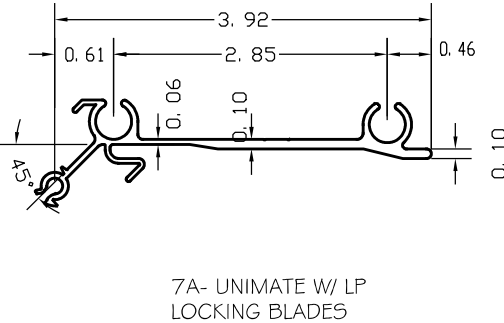
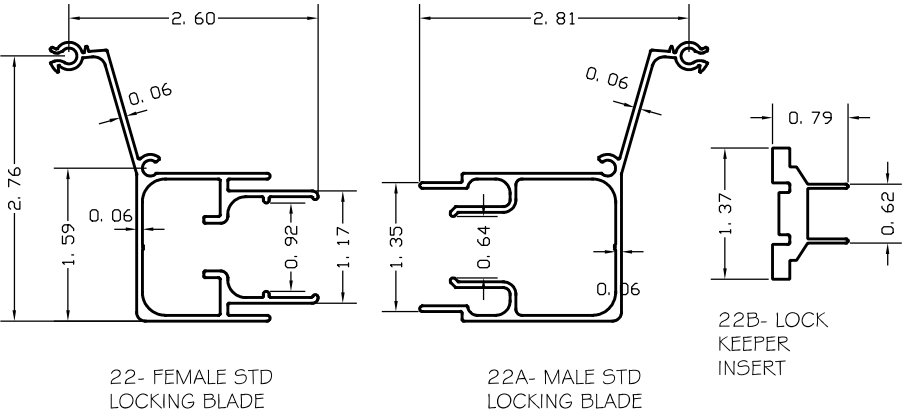
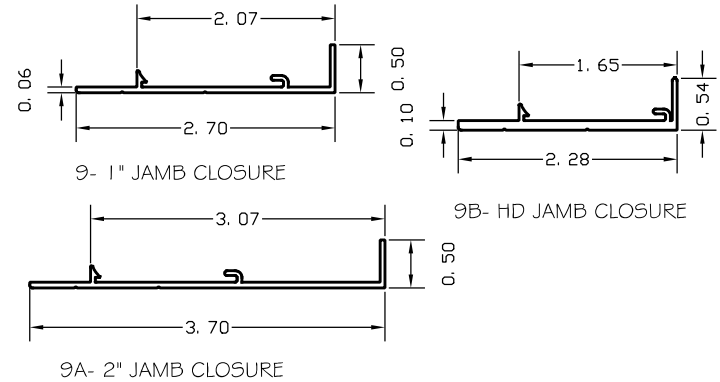
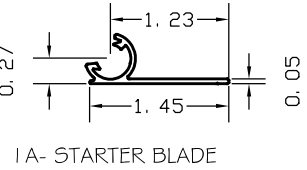
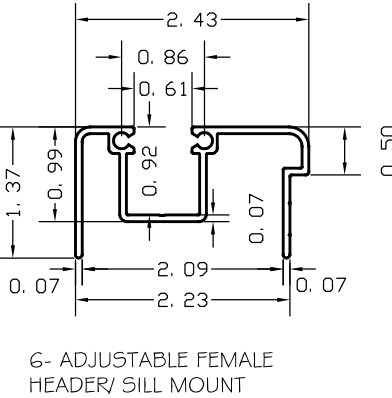
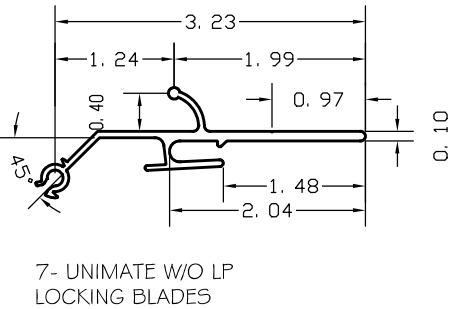
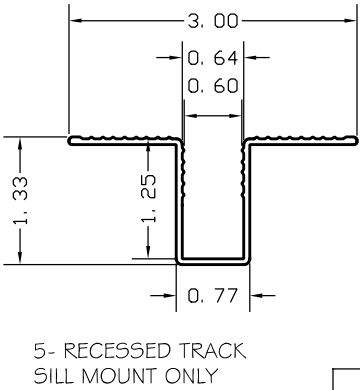
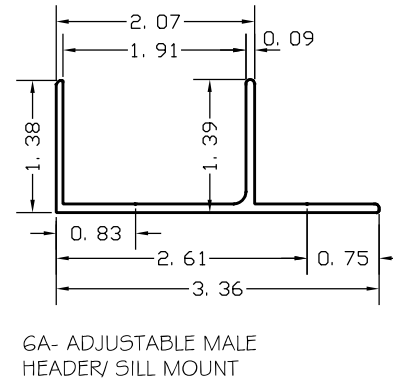
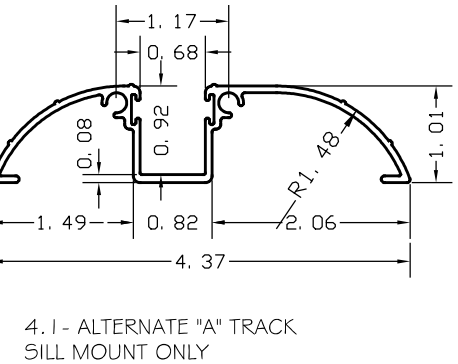
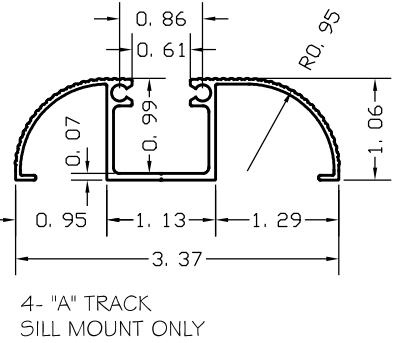
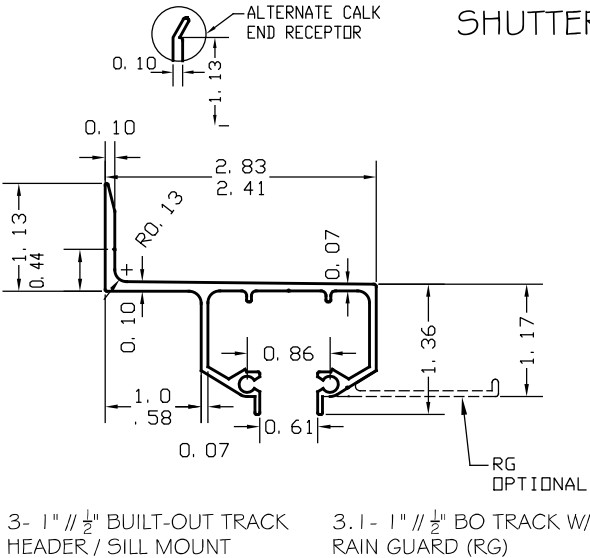
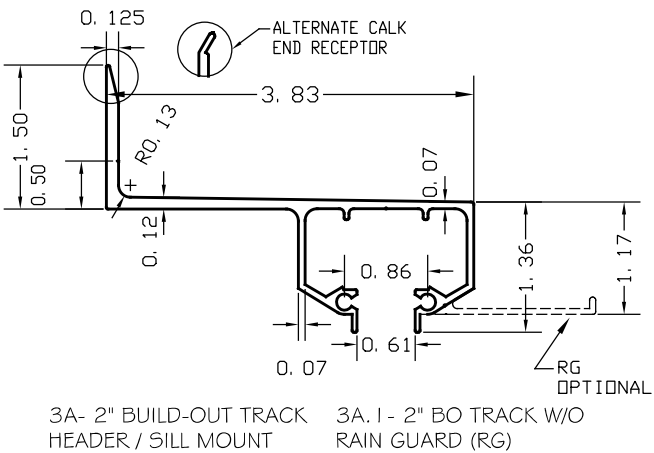
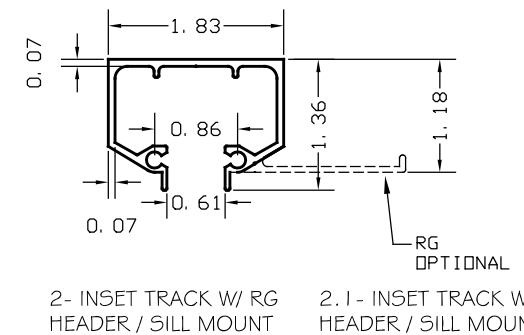
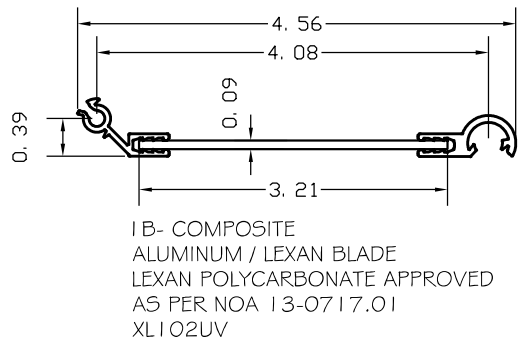
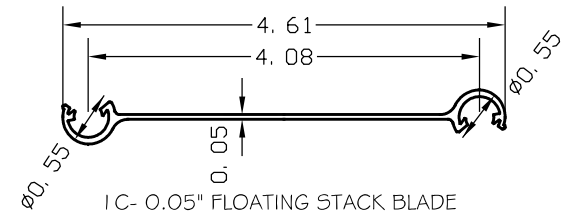
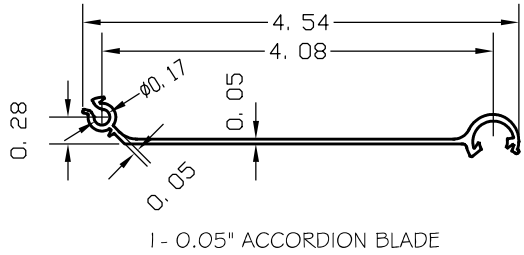


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LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:
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MIRAMAR, FL 33027

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NA
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26-172
SHEET
10 OF 19

SHUTTER COMPONENTS



Pedro De Figueiredo
PE 52609
09/09/2026

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LARGE MISSILE IMPACT RESISTANT

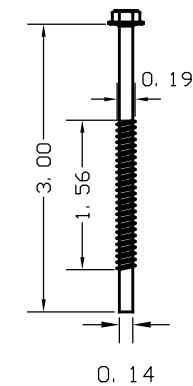
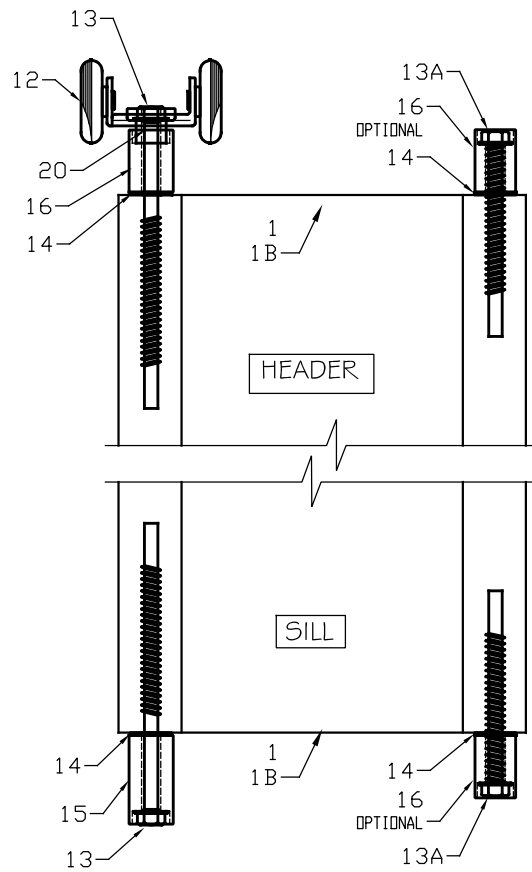
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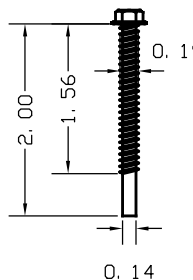


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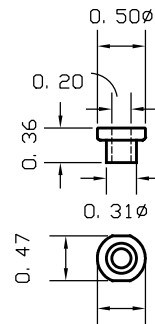
TYPICAL BLADE ASSEMBLY



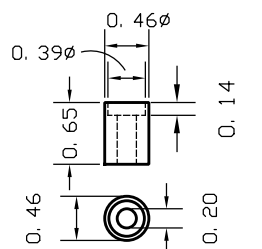
13- #10X3" HH
BLADE SCREW
410 STAINLESS STEEL



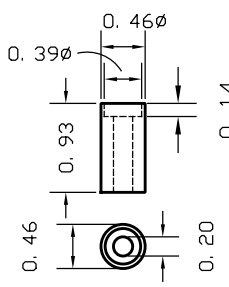
13A- #10X2" HH
BLADE SCREW
410 STAINLESS STEEL



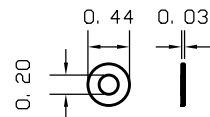
20- 1/2" Ø x 0.36"
NYLON WHEEL
SPACER



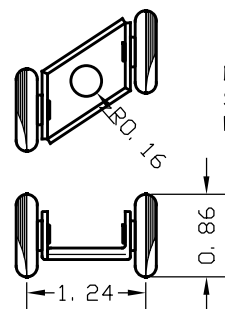
16- .46" Ø x .65"
NYLON WHEEL BUSHING



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 ULTRACON INTO 2700 PSI CONCRETE	1.75	2.5
A1	1/4" ITW TAPCON INTO CONCRETE BLOCK	1.25	3.0
	1/4" DEWALT ULTRACON 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 REPLY 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 ULTRACONS 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
PE 52609
09/09/2026

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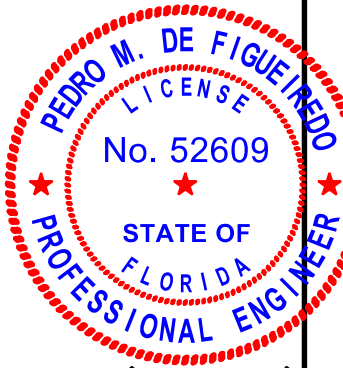


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ANCHOR SPACING TABLE
30 PSF <= PD <=70 PSF

		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				
		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					
30	162	14	7	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
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ANCHOR SPACING TABLE
80 PSF <= PD <= 160 PSF



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PRODUCT:
SUPERNOVA
EXTRUDED ALUMINUM
ACCORDION SHUTTER
LARGE MISSILE IMPACT RESISTANT

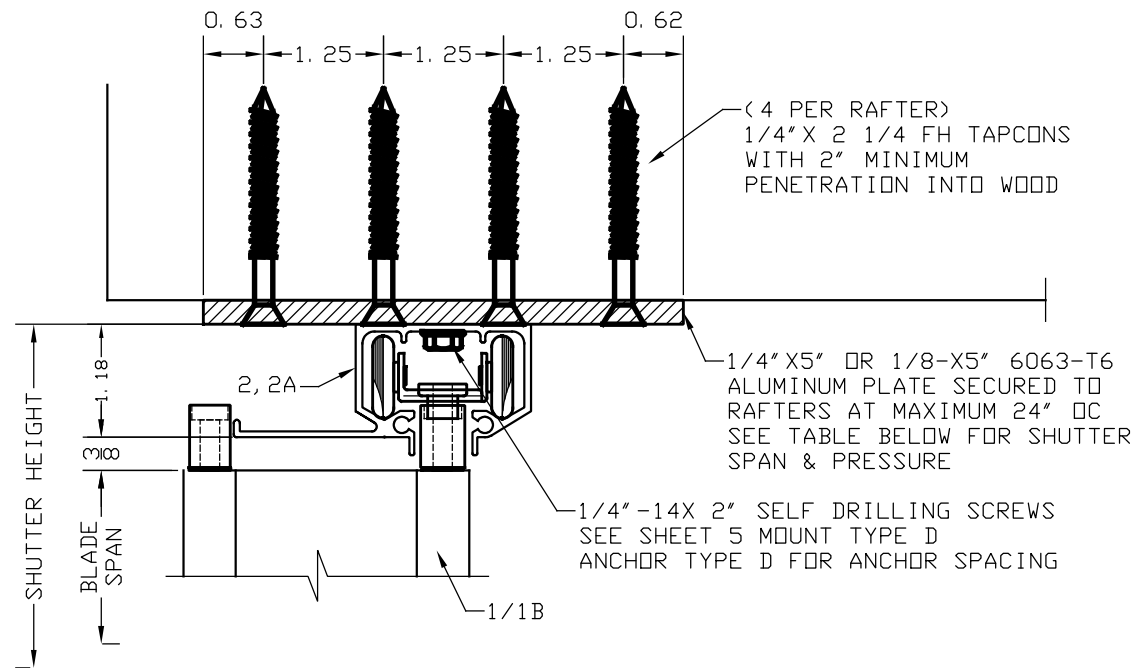
ASSOCIATION OF MANUFACTURERS:
N.A.S.A
NATIONAL APPROVED SHUTTER ASSOCIATION LLC.
MIRAMAR, FL 33027

SCALE:
NA
DATE:
09/09/2026
DRAWING #
26-172
SHEET
14 OF 19

		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									
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					
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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



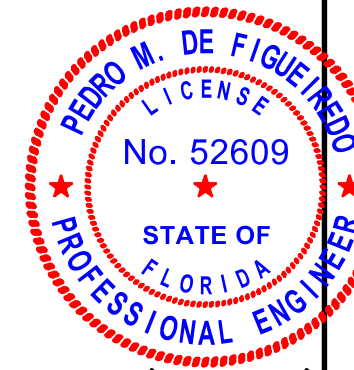
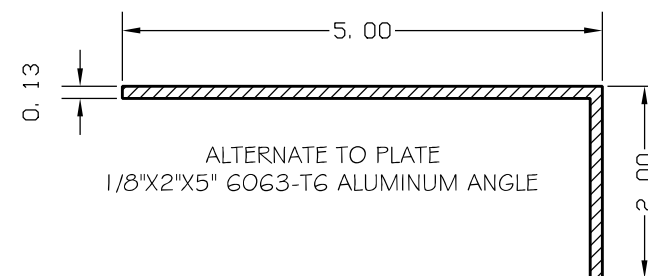
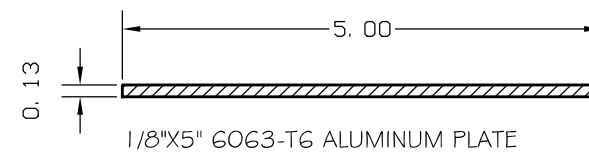
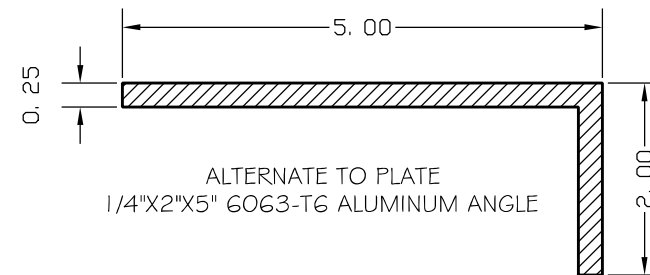
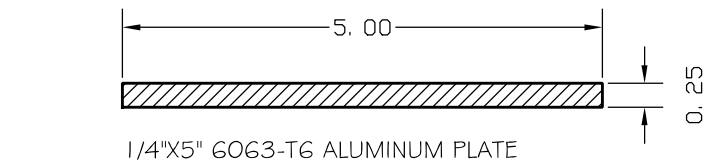
ALLOWABLE DESIGNED PRESSURES
FOR SECTION X WITH 1/4" ALUMINUM PLATE

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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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

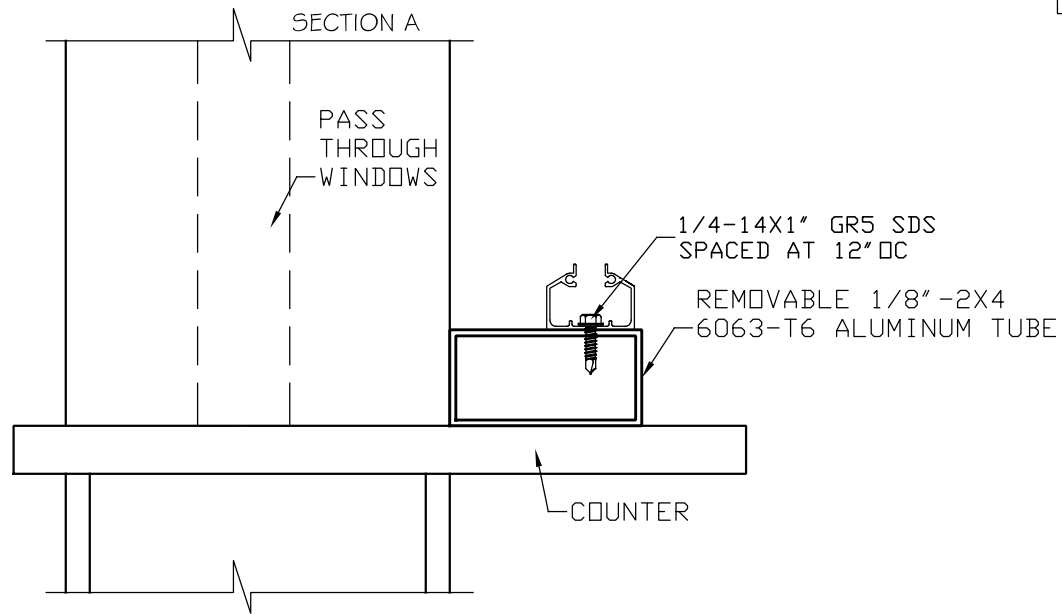
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09/09/2026

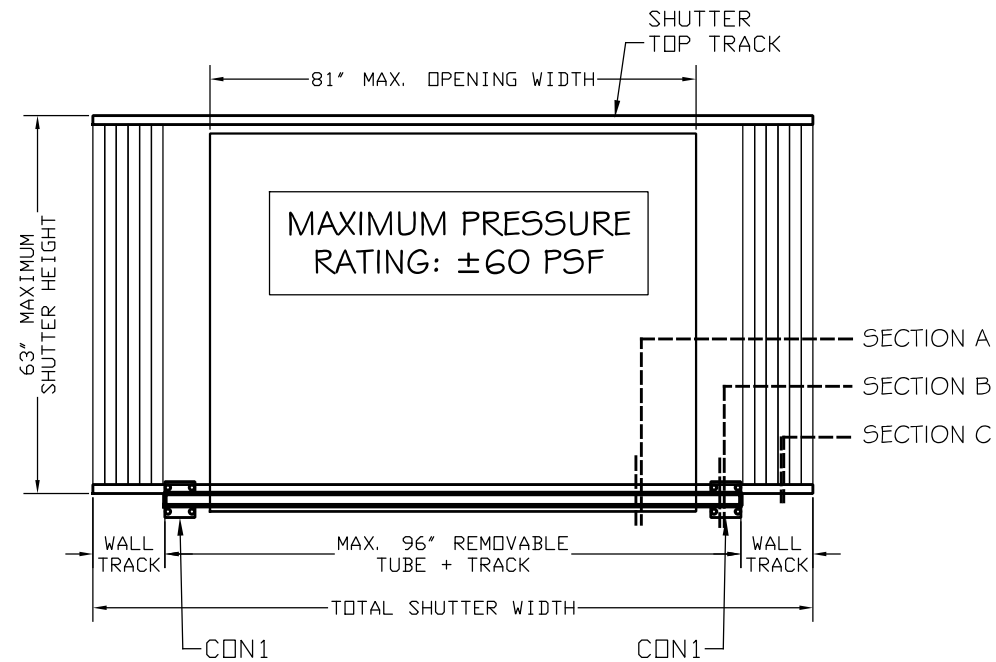
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26-172

SHEET
15 OF 19

ENGINEERING SERVICES - CA 32459
9715 W. BROWARD BLVD. 247
PLANTATION, FL 33324
PE 52609
PPMF@AOL.COM



SECTION CT
REMOVABLE SILL
OVER COUNTER TOP

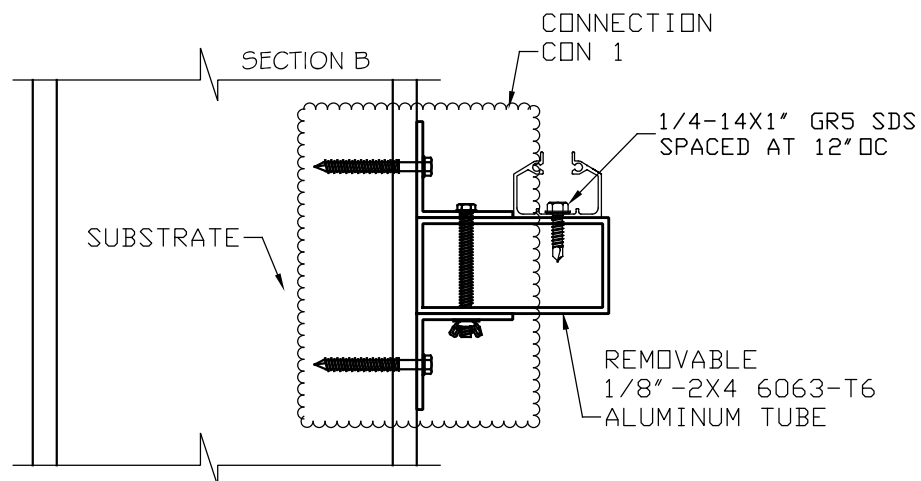


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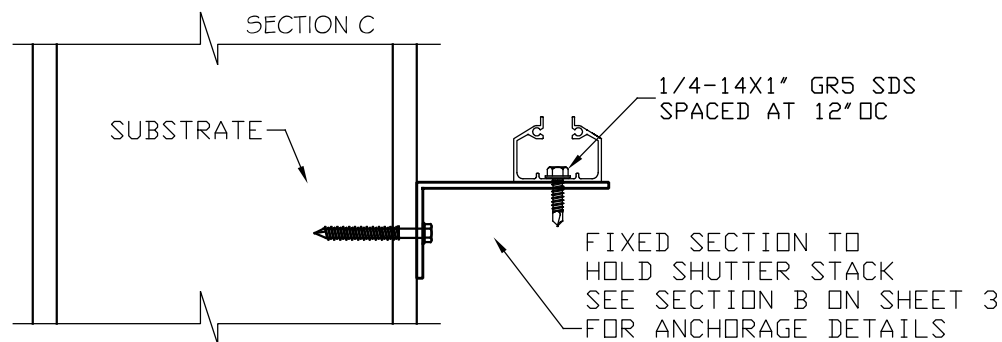
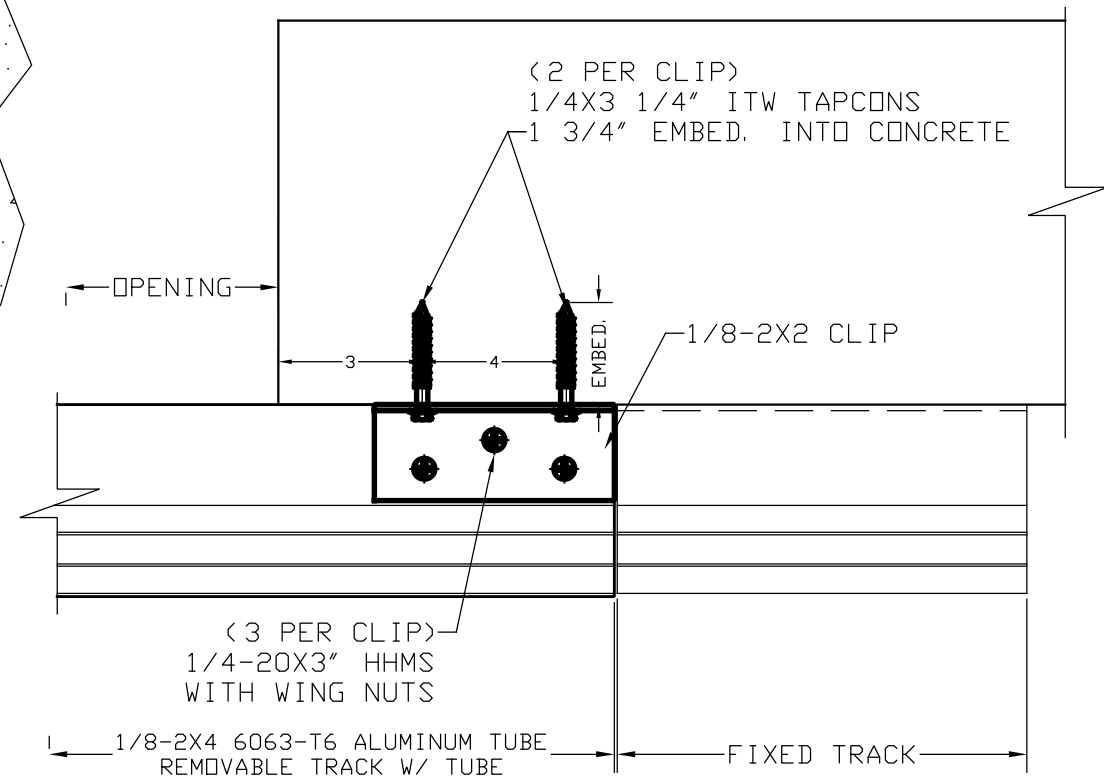
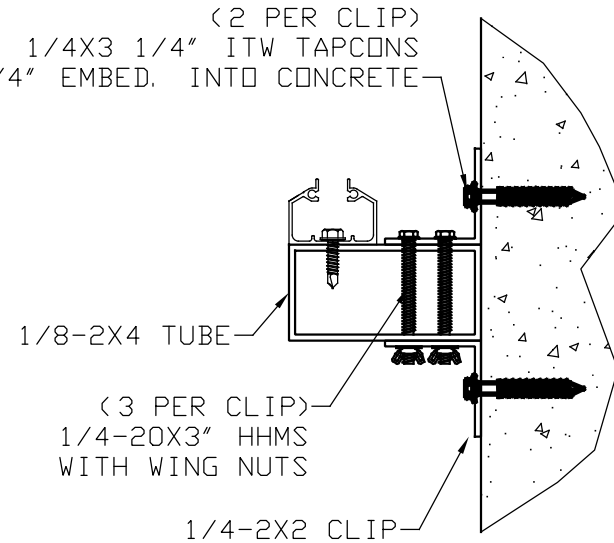


ENGINEERING SERVICES - CA 32459
9715 W. BROWARD BLVD. 247
PLANTATION, FL 33324
PEDRO DE FIGUEIREDO
PE 52609
PPMF@AOL.COM



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

TUBE ANCHORAGE
CON 1



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

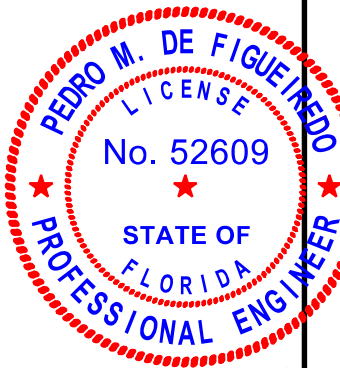
SCALE:
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09/09/2026

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26-172

SHEET
16 OF 19

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



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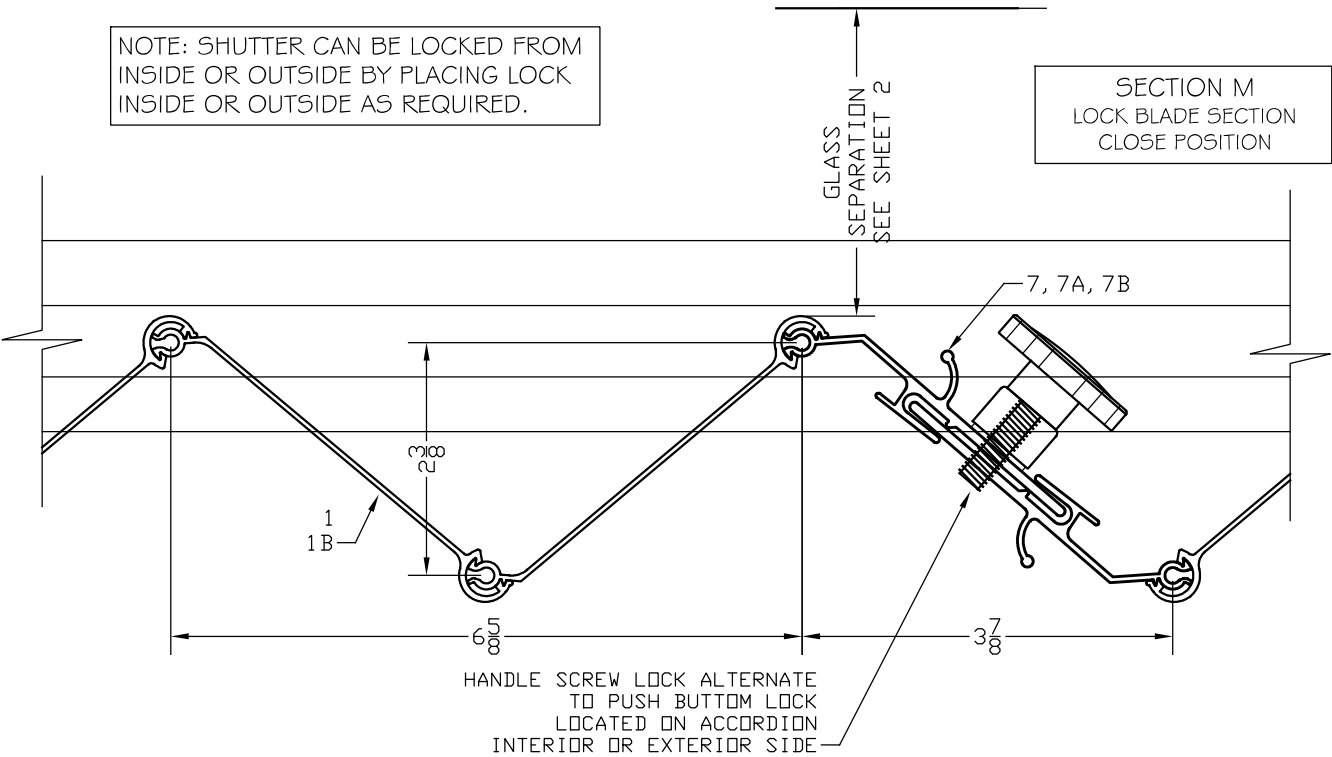


PRODUCT:
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ACCORDION SHUTTER
LARGE MISSILE IMPACT RESISTANT

ASSOCIATION OF MANUFACTURERS:
N.A.S.A
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MIRAMAR, FL 33027

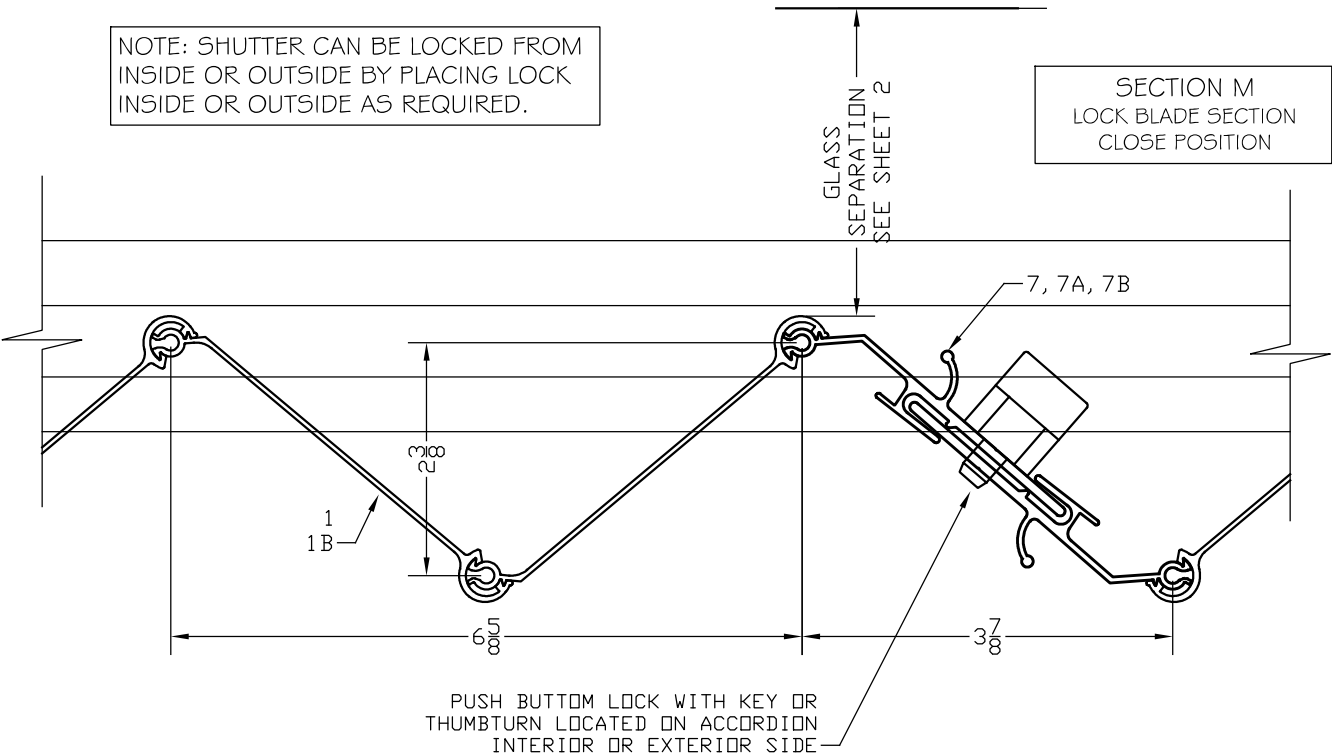
SCALE:
NA
DATE:
09/09/2026
DRAWING #
26-172
SHEET
17 OF 19

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

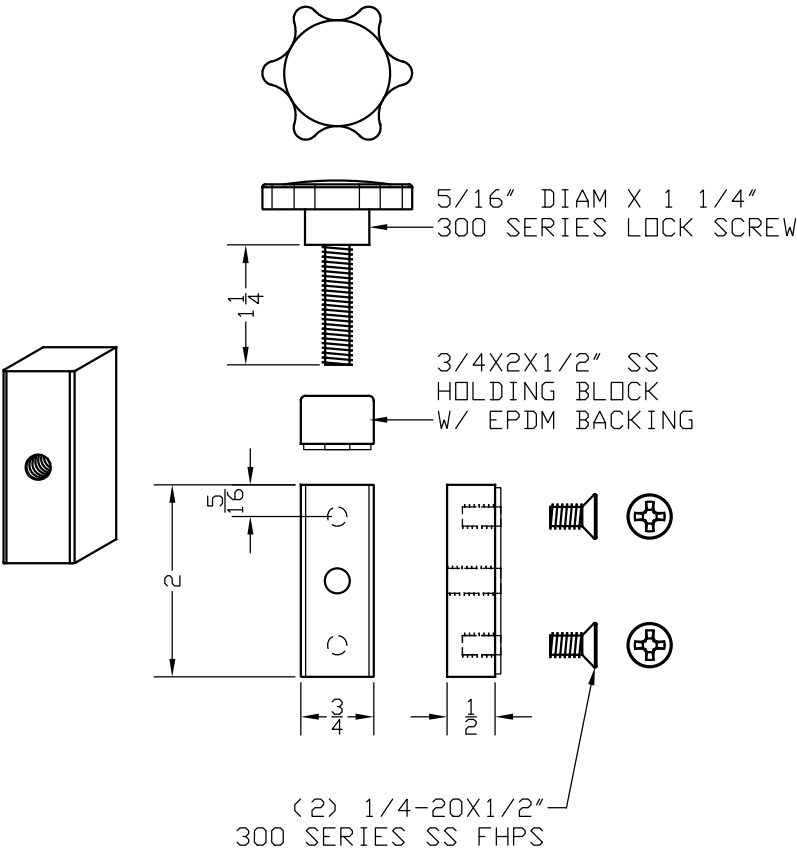


HANDLE SCREW LOCK ALTERNATE
TO PUSH BUTTON LOCK
LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

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

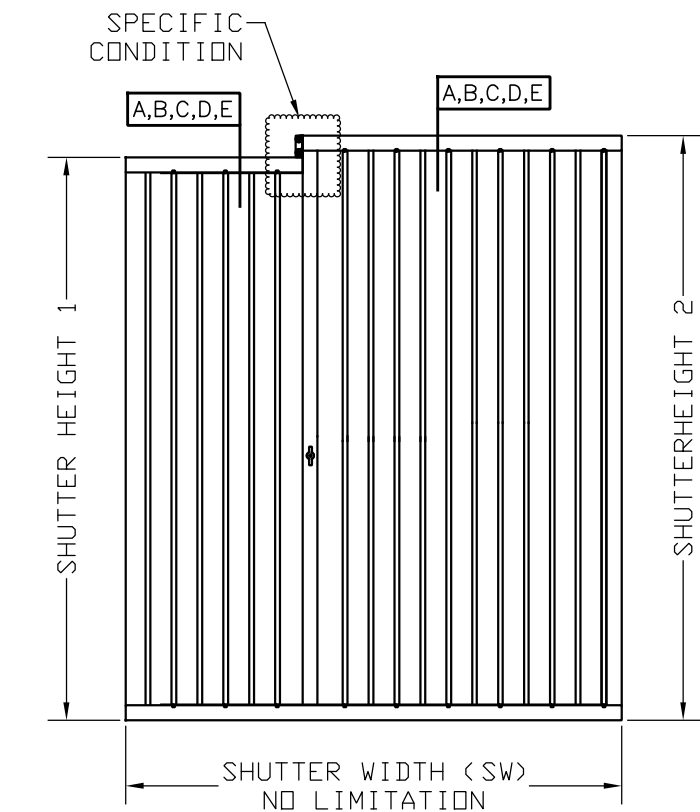
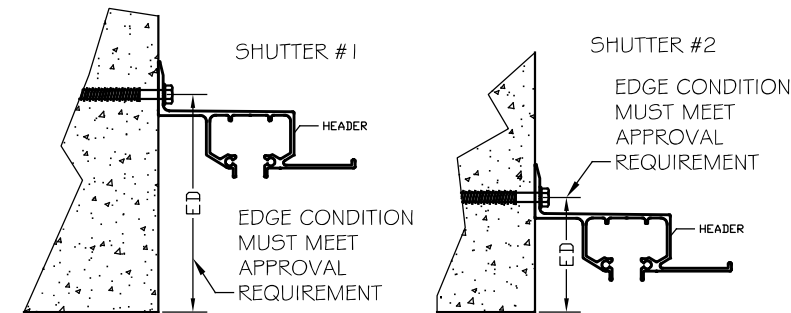
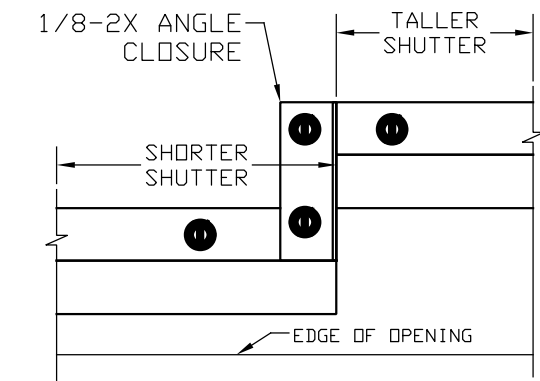


PUSH BUTTON LOCK WITH KEY OR
THUMBTURN LOCATED ON ACCORDION
INTERIOR OR EXTERIOR SIDE

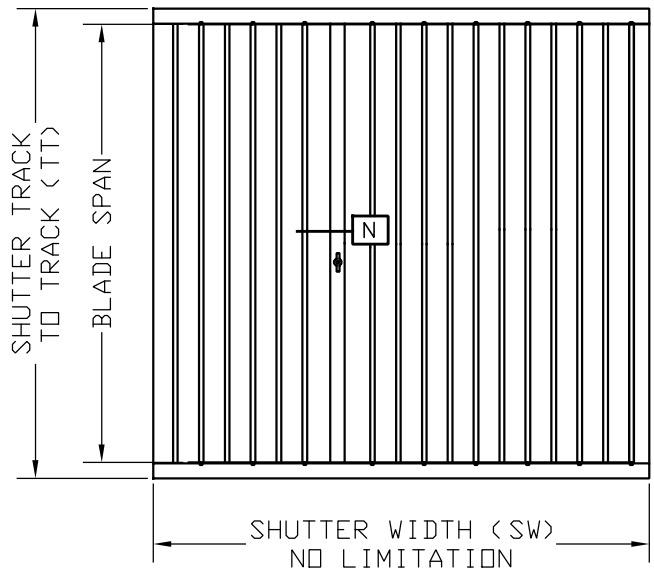


SHUTTERS STACKS WITH DIFFERENT HEIGHTS:

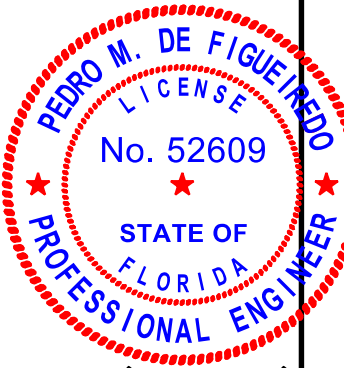
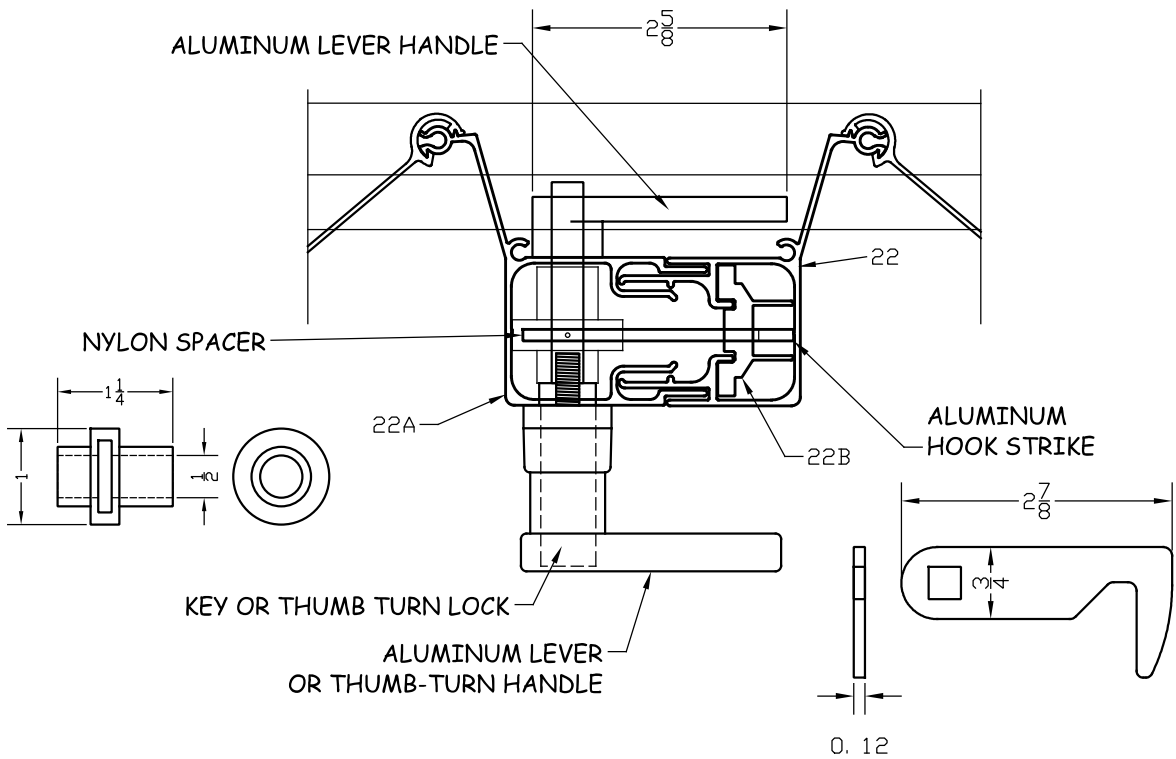
- 1- SOME FIELD CONDITIONS WILL CREATE AN INSTALLATION REQUIREMENT THAT THE LEFT AND THE RIGHT STACKS OF THE SHUTTER BE WITH DIFFERENT HEIGHTS. THE LOCK STILES WILL BE THE BRIDGE TO CONNECT BOTH STACKS AT THE CLOSED POSITION.
- 2- THIS APPLICATION IS NOT VALID FOR INSET MOUNT HEAD CONDITIONS



ACCORDION SHUTTER
LOCK TYPE N DETAILS



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



Pedro De Figueiredo
PE 52609
09/09/2026

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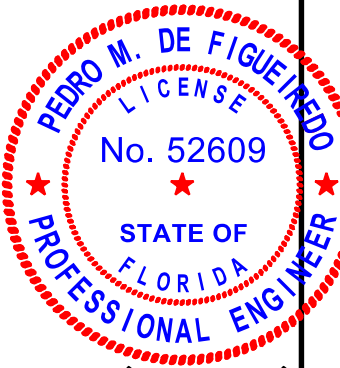
PRODUCT:
SUPERNOVA
EXTRUDED ALUMINUM
ACCORDION SHUTTER
LARGE MISSILE IMPACT RESISTANT

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

SCALE:
NA
DATE:
09/09/2026
DRAWING #
26-172
SHEET
18 OF 19

ENGINEERING SERVICES - CA 32459
9715 W. BROWARD BLVD. 247
PLANTATION, FL 33324
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ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

TABLE 1711.1 - CORROSION RESISTANCE OF FASTENERS			
EXPOSURE		BUILDING LOCATION FROM COASTAL SHORELINE	
		≤ 300 FEET	>300 AND ≤3000 FEET
EXTERIOR	PARTIALLY SHELTERED	STAINLESS STEEL SECTION 1711.1.1.1	GALVANIZED SECTION 1711.1.1.2
	OPEN EXPOSED		
INTERIOR UNCONDITIONED ENCLOSED	VENTED UNVENTED	GALVANIZED SECTION 1711.1.1.2	GALVANIZED SECTION 1711.1.1.2



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ANCHOR DATA						FBC 2026 SECTION 1711 COMPLIANCE
MARK	MANUFACTURER	DESCRIPTION	SUBSTRATE	EMB.	ED	
A	ITW BUILDEX	1/4" TAPCONS	3 Ksi CONCRETE	1.75	3	1711.1.1.2
	DEWALT	1/4" ULTRACONS	2.7 Ksi CONCRETE	1.75	2.5	1711.1.1.2
A1	ITW BUILDEX	1/4" TAPCONS	C90 CMU WALL	1.25	3	1711.1.1.2
	DEWALT	1/4" ULTRACONS	C90 CMU WALL	1.25	2.5	1711.1.1.2
B	THE HILLMAN GROUP	1/4-20 SOLID SET 300 SS	3 Ksi CONCRETE	0.875	3	1711.1.1.1
B1	THE HILLMAN GROUP	1/4-20 SOLID SET 300 SS	C90 CMU WALL	0.875	3	1711.1.1.1
C	GENERIC	1/4" GALVANIZED LAG SCREWS	WOOD W/ SG>=0.55	1.5	0.75	1711.1.1.2
	DEWALT	1/4" AGGRE-GATORS 300 SERIES	WOOD W/ SG>=0.55	1.5	1	1711.1.1.1
D	DEWALT	1/4-14 DRIL-FLEX	1/8" METAL	3 TREADS	0.75	1711.1.1.2
	DEWALT	1/4-14 BI-FLEX 300 SS	1/8" METAL	3 TREADS	0.75	1711.1.1.1
E	DEWALT	1/4" CRETE-FLEX SS4	3 Ksi CONCRETE	1.75	3	1711.1.1.2
	DEWALT	1/4" CRETE-FLEX SS4	C90 CMU WALL	1.25	3	1711.1.1.2
NOTES: 1- EMD.: MINIMUM EMBEDMENT INTO SUBSTRATE, E.D.: MINIMUM EDGE DISTANCE 2- ALL DIMENSIONS IN INCHES 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A-36 4- THE CONTRACTOR TO VERIFY THE JOB LOCATION FROM COASTAL SHORELINE AND SELECT THE PRODUCT EXPOSURE INSTALLATION IN ORDER TO COMPLY WITH SECTION 1711. 5- A SITE SPECIFIC FOR AN ALTERNATE ANCHOR MEETING SECTION 1711 CAN BE USED WITH PROPER CALCULATIONS BY A PROFESSIONAL ENGINEER AND APPROVED BY PPMF INC.						

PRODUCT:
SUPERNOVA
EXTRUDED ALUMINUM
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ASSOCIATION OF MANUFACTURERS:
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