

GENERAL NOTES:
(FLORIDA BUILDING CODE 2026, 9th EDITION - non HVHZ)

- 1- DEFINITION: THIS PRODUCT IS A HURRICANE PROTECTION DEVICE; DESIGNED, CONSTRUCTED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS AND WIND BORNE DEBRIS WITHIN THE ALLOWABLE DESIGNED PRESSURES AND LIMITATIONS STATED IN THIS APPROVAL.
- 2- POSTING: A PERMANENT LABEL SHALL BE PROVIDED AS PER FBC AND IT SHALL BE LOCATED ON THE BOTTOM OF THE HOOD FACING THE EXTERIOR OR OUTSIDE AND A MINIMUM OF ONE LABEL PER OPENING.
- 3- GLASS SEPARATION (GS): PRODUCT IS QUALIFIED AS "NON POROUS", THEREFORE GLAZING SEPARATION IS NOT REQUIRED WITH EXCEPTION FOR THE FOLLOWING LOCATIONS:

3.1- WIND ZONE 4 AS DEFINED IN ASTM E 1996 (LOCATIONS WITH ULTIMATE WIND SPEED GREATER THAN 170 MPH AS PER FBC SECTION 1609.1.2.2)

3.2- ESSENTIAL FACILITIES AS DEFINED IN ASCE 7

FOR THE ABOVE LOCATIONS THE PRODUCT MUST BE SEPARATED FROM GLAZING AREAS AS PER TABLE 1.
- 4- LOADS: DESIGNED LOAD CALCULATED BASED ON THE ASCE 7-22 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. THE DESIGN PRESSURES ARE PERMITTED TO BE MULTIPLIED BY 0.6
- 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- MULTIPLE SPAN SHUTTERS: REINFORCEMENTS SUCH AS STORM BARS, HEADER AND MULLIONS WERE DESIGNED BY RATIONAL ANALYSIS AND ARE PART OF THESE DRAWINGS. DUE TO MANY VARIATIONS OF REINFORCEMENTS, LOADS AND SHUTTER DIMENSIONS BECOME IMPRACTICAL ADDRESSING ALL CONDITIONS IN ONE SET OF DRAWINGS. THE CONDITIONS ADDRESSED IN THE PROPOSED DRAWINGS HAVE CONSERVATIVE LIMITATIONS IN ORDER TO FACILITATE THE DESIGN. SITE SPECIFIC CONDITIONS CAN BE ADDRESSED ON A JOB BASIS PROVIDED PROPER ENGINEERING.
- 8- USE: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, ARCHITECT OR ENGINEER OF RECORD TO VERIFY THE FOLLOWING:

8.1- THE STABILITY OF THE STRUCTURE WHERE THE SHUTTER IS TO BE ATTACHED INSURING PROPER ANCHORAGE.

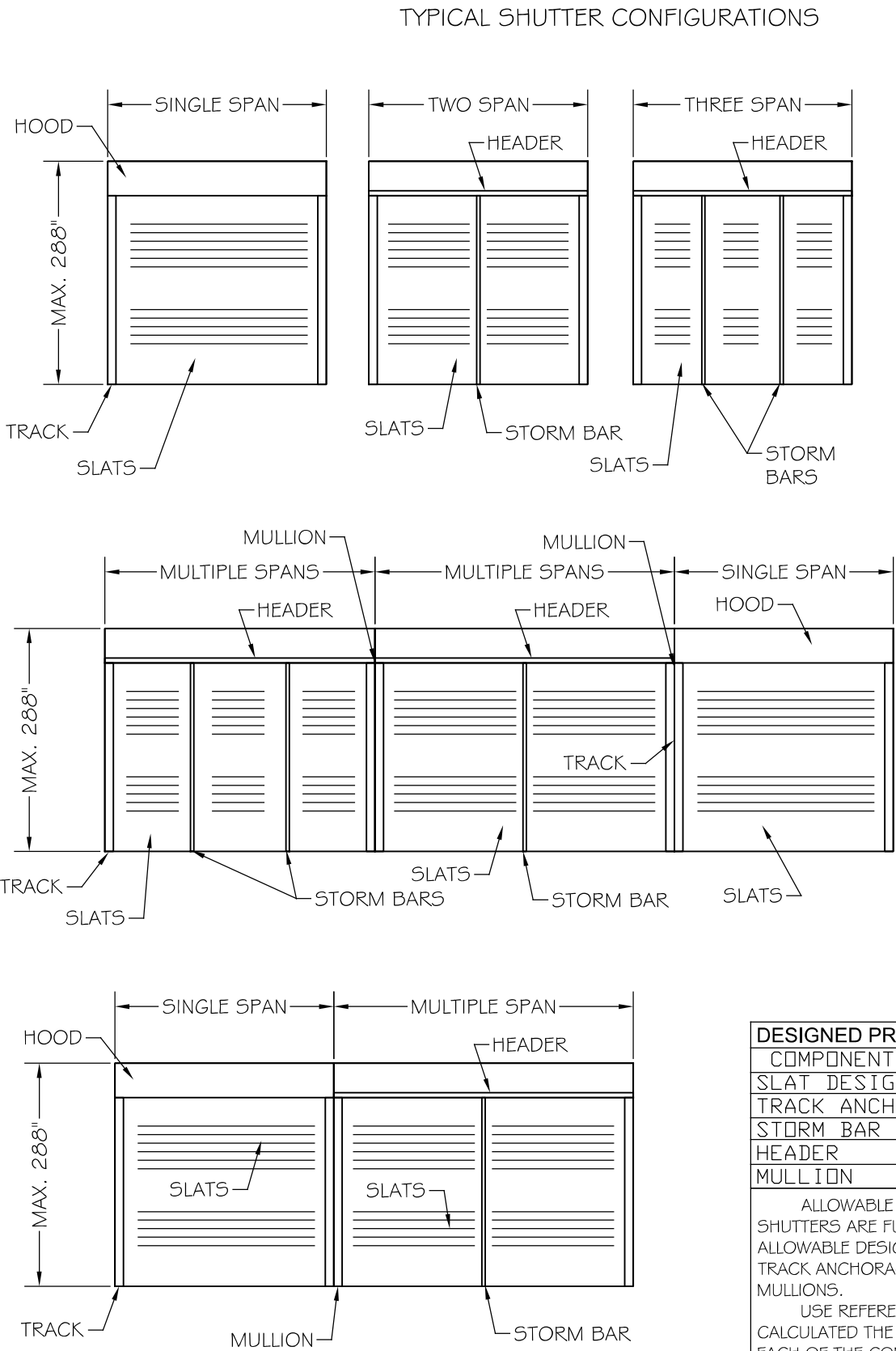
8.2- THE SITE SPECIFIC PROJECT CRITERIA, SUCH AS BUT NOT LIMITED TO, WIND LOADS, LOCAL CODE REQUIREMENTS, DESIGNED PRESSURES ETC.

8.3- THAT THIS APPROVAL IS ADEQUATE TO THE SPECIFIC PROJECT.
- 9- LIMITATIONS:

9.1- NOT DESIGNED FOR HIGH VELOCITY HURRICANE ZONES HVHZ (MIAMI-DADE AND BROWARD COUNTIES).

9.2- SITE SPECIFIC FOR CORROSION RESISTANCE ALTERNATE ANCHORAGE AS PER FBC 2026 SECTION 1711 MAY BE REQUIRED FOR PROJECTS LOCATED WITHIN 3000 FEET OF A SALTWATER COASTLINE. ANCHORS MUST COMPLY WITH SECTIONS 1711.1.1 AND 1711.1.2.

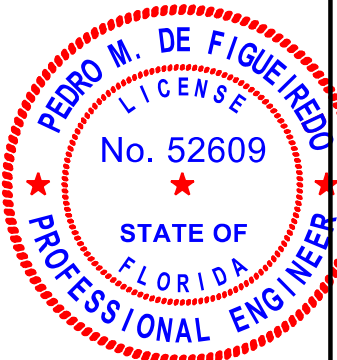
CODE AND STANDARD COMPLIANCE:
FLORIDA BUILDING CODE 2026 - 9th EDITION (non HVHZ)
ASTM E330, ASTM E1886, ASTM E1996 (LEVEL D MISSILE)
ASCE 7-22, ADM-20, NDS 2024



DESIGNED PRESSURE	
COMPONENT	REF. SHEET
SLAT DESIGN	2
TRACK ANCHORAGE	3-4
STORM BAR	5-8
HEADER	9-10
MULLION	11-17

ALLOWABLE DESIGNED PRESSURE FOR SHUTTERS ARE FUNCTION OF THE LOWEST ALLOWABLE DESIGNED LOAD FOR THE SLATS, TRACK ANCHORAGE, STORM BARS, HEADERS, MULLIONS.

USE REFERENCED SHEET ABOVE TO CALCULATED THE THE DESIGNED LOAD FOR EACH OF THE COMPONENTS.



Pedro De Figueiredo
PE 52609
08/28/2026

Pedro Figueiredo

Digitally signed by Pedro Figueiredo
Date: 2026.08.28 14:10:41 -04'00'

DIGITALLY SIGNED FOR 19 PAGES

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY PEDRO DE FIGUEIREDO, PE 52609 ON THE DATE INDICATED HERE.

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



PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

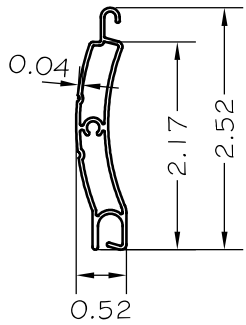
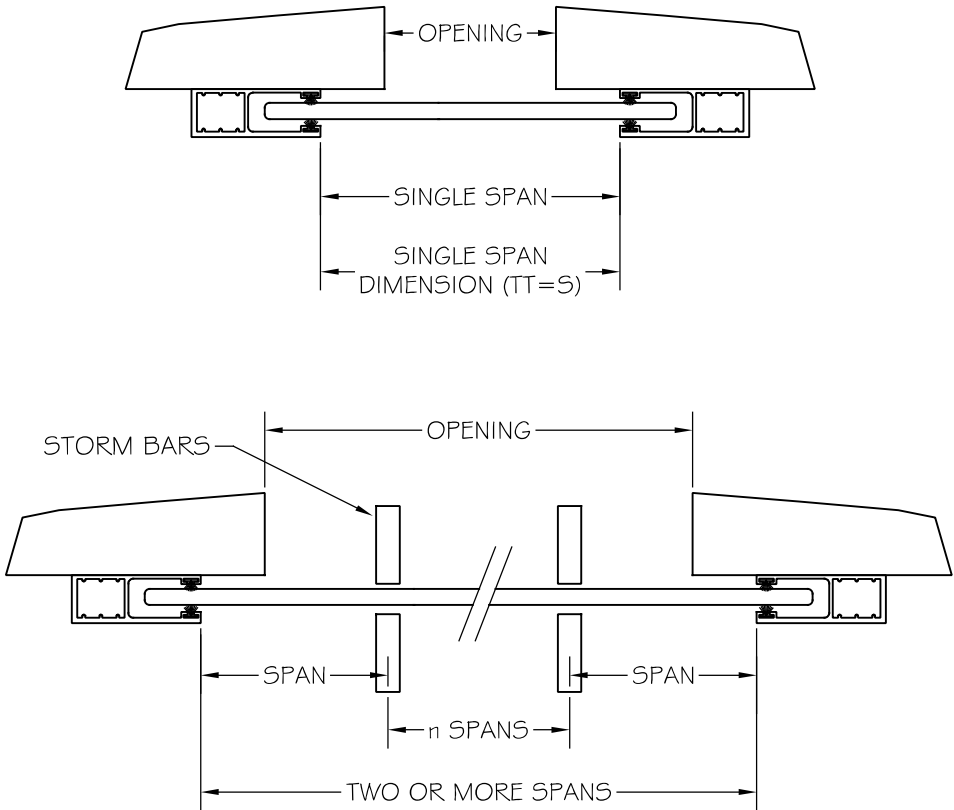
MANUFACTURER:
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11600 ADELMO LANE FORT MYERS, FL 33966
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SCALE:
NA
DATE:
08/28/2026
DRAWING #
26-171
SHEET
1 OF 19

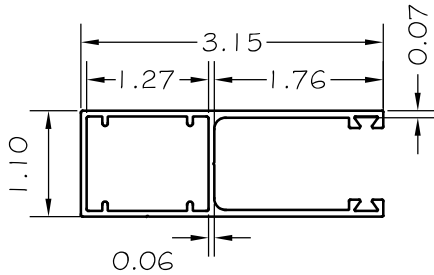
TABLE 1 - SLAT DESIGN

ALLOWABLE PRESSURE ± PSF	ES 55 SLAT		ES 44 SLAT	
	MAX. SPAN	MIN. GS	MAX SPAN	MIN. GS
40	80	5.75	51	5.50
50	74	5.75	48	5.50
60	70	5.25	44	5.00
70	66	4.75	41	5.00
80	62	4.50	38	5.00
90	58	4.50	36	5.00
100	54	4.50	34	5.00
110	49	4.50	32	5.00
120	45	4.50	30	5.00
130	42	4.50	28	5.00
140	39	4.50	26	5.00
150	36	4.50	24	5.00

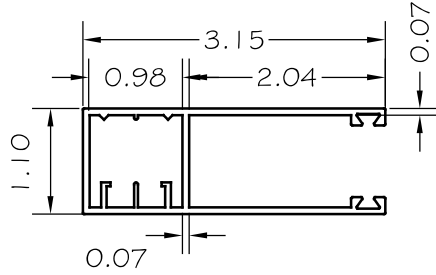
1- ALLOWABLE PRESSURE IN PSF
2- MAX. SPAN: MAXIMUM SLAT SPAN IN INCHES
3- MIN. GS: MINIMUM GLAZING SEPARATION ONLY APPLICABLE AS PER GENERAL NOTE 3



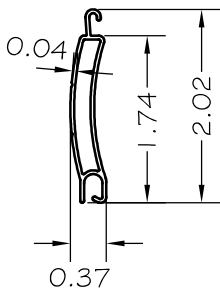
A1 - ES55
SLAT BLADE
6063-T6 Alloy



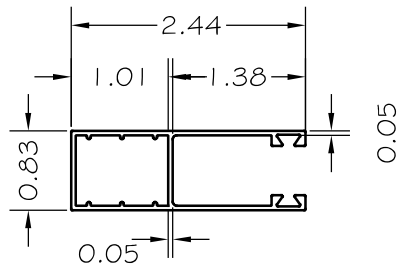
A2 - GE458028 SIDE RAIL
COMPATIBLE WITH ES55,
6063-T6 ALLOY



A21 - GE8028 ALTERNATE SIDE RAIL
COMPATIBLE WITH ES55 6063-T6
ALLOY

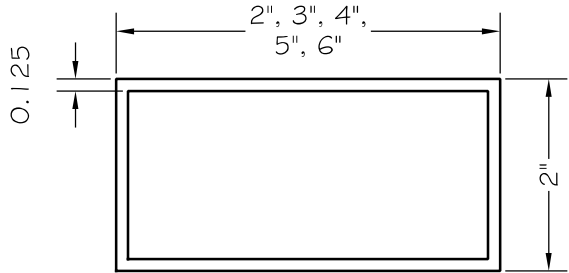
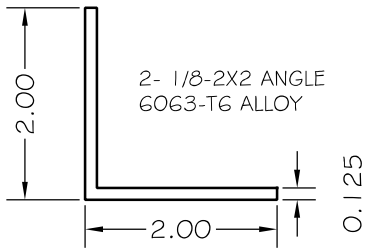


B1 - ES44
SLAT BLADE
6063-T6 Alloy



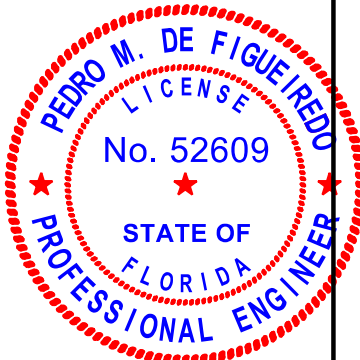
B2 - GE62X21 SIDE RAIL
COMPATIBLE WITH ES44
6063-T6 ALLOY

1 - TRACK FELT
FELT PILE



3- 1/8-2x ALUMINUM TUBE
6063-T6 Alloy

PRODUCT COMPONENTS



Pedro De Figueiredo
PE 52609
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ENGINEERING SERVICES

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ENGINEER SEAL
PEDRO DE FIGUEIREDO
PE 52609

A circular professional engineer seal for Pedro M. de Figueiredo. The seal features a red dotted outer border. Inside, the text "PEDRO M. DE FIGUEIREDO" is arched at the top, "LICENSE" is in the center, "No. 52609" is below the license word, "STATE OF FLORIDA" is below the number, and "PROFESSIONAL ENGINEER" is arched at the bottom. Three red stars are positioned around the inner circle: one on the left, one in the center below the license word, and one on the right.

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SHEET
3 OF 19

ANCHOR A, B, C OR D
USE SHEET 4 TABLE 2 FOR ES55
USE SHEET 4 TABLE 3 FOR ES44

EMBED.

EDGE DISTANCE (ED)

WALL DRESSING

"GS"

GENERAL NOTES 3

A2
A2 I
B2

EQ

**

3.15

SPAN

1

1.25" ES 55 SLAT
1.00" ES 44 SLAT

Technical drawing illustrating the installation of a wall dressing, showing cross-section and side elevation views.

Cross-section View (Top):

- EMBED.**: Indicated by a vertical double-headed arrow showing the depth of the anchor into the wall.
- EDGE DISTANCE (ED)**: Indicated by a horizontal double-headed arrow from the edge of the wall to the center of the anchor.
- WALL DRESSING**: The main component being installed.
- ANCHOR A, B, C OR D**: The fastener used to secure the wall dressing.
- USE SHEET 4 TABLE 2 FOR ES55** and **USE SHEET 4 TABLE 3 FOR ES44**: Reference to material specifications.
- MIN. 2"**: Minimum distance from the edge of the wall to the anchor.
- 3**: A dimension line indicating a distance of 3 units.
- A2, A21, B2**: Labels for different anchor types or materials.
- EQ**: Labels for equal spacing or alignment.
- ****: A dimension line indicating a distance of 2 units.
- 1.25" ES 55 SLAT** and **1.00" ES 44 SLAT**: Dimensions for the slat thickness.
- SPAN**: The distance between the two anchors.
- GENERAL NOTES 3**: Reference to general installation notes.

Side Elevation View (Bottom):

- 3.15**: A dimension line indicating a distance of 3.15 units.
- ANCHOR D - USE WALL MOUNT**: Label for the anchor type used in this view.
- USE SHEET 4 TABLE 2 FOR ES55** and **USE SHEET 4 TABLE 3 FOR ES44**: Reference to material specifications.
- APPLICABLE TO MULLIONS**: Note indicating the drawing is applicable to mullions.

Technical drawing illustrating the cross-section of a wall dressing assembly, showing the connection between the wall, the dressing, and the mounting hardware.

Labels and Dimensions:

- WALL DRESSING**: The main assembly being mounted.
- EDGE DISTANCE (ED)**: The distance from the edge of the wall to the center of the anchor.
- EMBED.**: The embedment length of the anchor in the wall.
- 2 OR 3**: Number of anchors used.
- ANCHOR A, B, C OR D**: Types of anchors used.
- USE SHEET 4 TABLE 2 FOR E555**: Reference to the specification table for E555 anchors.
- USE SHEET 4 TABLE 3 FOR E544**: Reference to the specification table for E544 anchors.
- 2**: Dimension indicating the distance between anchors.
- A2, A2-1, B2**: Material specifications for the anchors.
- EQ**: Dimension indicating the distance between the center of the anchor and the center of the dressing.
- 3.15**: Dimension indicating the distance between the center of the anchor and the center of the dressing.
- SPAN**: The distance between the two mounting points.
- 0.12**: Dimension indicating the thickness of the wall dressing.
- 1.25" ES 55 SLAT**: Dimension indicating the thickness of the slat for E555 anchors.
- 1.00" ES 44 SLAT**: Dimension indicating the thickness of the slat for E544 anchors.
- GENERAL NOTES 3**: Reference to the general notes section.
- ****: Dimension indicating the distance between the center of the anchor and the center of the dressing.

Anchor D Wall Mount into Aluminum:

- USE SHEET 4 TABLE 3 FOR E555**
- USE SHEET 4 TABLE 4 FOR E544**

ES44	ANCHORS TYPE A, B, C OR D	MAX. 12"OC
ES55	ANCHORS TYPE A OR D	MAX. 12"OC
ES55	ANCHORS TYPE B	MAX. 7"OC
ES55	ANCHORS TYPE C	MAX. 10"OC

GUIDE RAILS ANCHORAGE DESIGN

TABLE 2 - ES 55 MAXIMUM TRACK ANCHORAGE SPACING

Pd	SPAN	GE458028 RAIL WALL MOUNT ANCHOR TYPE				BUILT-OUT MOUNT ANCHOR TYPE				INSET MOUNT ANCHOR TYPE				GE8028 RAIL WALL MOUNT ANCHOR TYPE			
		A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
40	80	5	3	5	5	12	5	12	11	12	5	12	11	4	3	4	4
	60	7	5	7	7	12	7	12	12	12	7	12	12	6	4	6	6
	40	11	7	11	11	12	11	12	12	12	11	12	12	9	6	9	9
	30	12	10	12	12	12	12	12	12	12	12	12	12	12	8	12	12
60	80	3	-	3	3	8	3	8	7	6	-	4	5	3	-	3	3
	60	5	3	5	5	11	5	11	9	8	3	6	7	4	-	4	4
	50	6	4	6	6	12	6	12	11	10	4	7	9	5	3	5	5
	40	7	5	7	7	12	7	12	12	12	5	9	11	6	4	6	6
80	30	10	7	10	10	12	10	12	12	12	7	12	12	8	5	8	8
	80	-	-	-	-	6	-	6	5	4	-	3	4	-	-	-	-
	60	3	-	3	3	8	3	8	7	6	-	4	5	3	-	3	3
	50	4	3	4	4	10	4	10	8	7	3	5	7	3	-	3	3
100	40	5	3	5	5	12	5	12	11	9	4	6	8	4	3	4	4
	30	7	5	7	7	12	7	12	12	12	5	9	11	6	4	6	6
	60	3	-	3	3	6	3	6	5	5	-	3	4	-	-	-	-
	50	3	-	3	3	8	3	8	7	6	-	4	5	3	-	3	3
110	40	4	-	4	4	10	4	10	8	7	3	5	7	3	-	3	3
	30	6	4	6	6	12	6	12	11	10	4	7	9	5	3	5	5
	50	3	-	3	3	7	3	7	6	5	-	4	5	-	-	-	-
	40	4	-	4	4	9	4	9	8	6	3	5	6	3	-	3	3
130	30	5	3	5	5	12	5	12	10	9	4	6	8	4	3	4	4
	50	-	-	-	-	6	-	6	5	4	-	3	4	-	-	-	-
	40	3	-	3	3	7	3	7	6	5	-	4	5	-	-	-	-
150	30	4	3	4	4	10	4	10	9	7	3	5	7	3	-	3	3
	40	3	-	3	3	5	3	5	5	5	-	3	4	-	-	-	-
	36	3	-	3	3	6	3	6	6	5	-	4	5	-	-	-	-
	30	4	-	4	4	7	4	7	7	6	3	4	6	3	-	3	3

TABLE 3 - ES 44 MAXIMUM TRACK ANCHORAGE SPACING

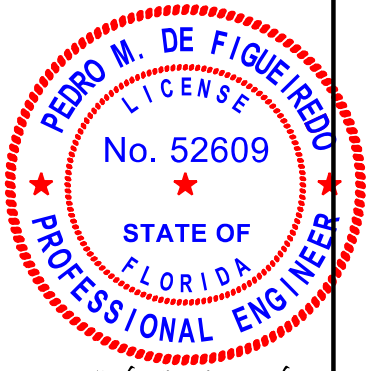
Pd	SPAN	WALL MOUNT ANCHOR TYPE				BUILT-OUT MOUNT ANCHOR TYPE				INSET MOUNT ANCHOR TYPE			
		A	B	C	D	A	B	C	D	A	B	C	D
40	51	6	6	6	6	12	11	12	12	12	11	12	12
	42	8	7	8	8	12	12	12	12	12	10	12	12
	32	10	9	10	10	12	12	12	12	12	12	12	12
	24	12	12	12	12	12	12	12	12	12	12	12	12
60	48	4	4	4	4	9	8	9	9	9	6	8	9
	44	5	4	5	5	9	8	9	9	9	6	9	9
	42	5	4	5	5	10	9	10	10	10	6	10	10
	32	7	6	7	7	12	12	12	12	12	9	12	12
80	24	9	8	9	9	12	12	12	12	12	12	12	12
	48	3	3	3	3	6	6	6	6	6	4	6	6
	44	3	3	3	3	7	6	7	7	7	4	7	7
	42	4	3	4	4	7	7	7	7	7	5	7	7
100	32	5	4	5	5	10	9	10	10	10	6	9	10
	24	7	6	7	7	12	12	12	12	12	9	12	12
	44	3	-	3	3	6	5	6	6	6	3	5	6
	42	3	-	3	3	6	5	6	6	6	4	6	6
110	32	4	3	4	4	8	7	8	8	8	5	7	8
	24	5	5	5	5	10	9	10	10	10	7	10	10
	42	-	-	-	-	5	5	5	5	5	3	5	5
	32	3	3	3	3	7	6	7	7	7	4	7	7
130	24	5	4	5	5	9	8	9	9	9	6	9	9
	32	3	3	3	3	6	5	6	6	6	4	6	6
	28	3	3	3	3	7	6	7	7	7	4	7	7
150	24	4	4	4	4	8	7	8	8	8	5	8	8
	28	3	-	3	3	6	5	6	6	6	4	6	6
	26	3	3	3	3	6	6	6	6	6	4	6	6
	24	3	3	3	3	7	6	7	7	7	4	7	7

ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 psi CONCRETE
B	1/4" ss TAPCON	ITW	1 1/4"	2 1/2"	HOLLOW BLOCK
C	1/4"-14 ss HHSMs	GENERIC	1 1/2"	1"	WOOD (SG>=.46)
D	1/4"-14 ss HHSMs	GENERIC	1/8"	3/4"	1/8" METAL STRUCTURE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL



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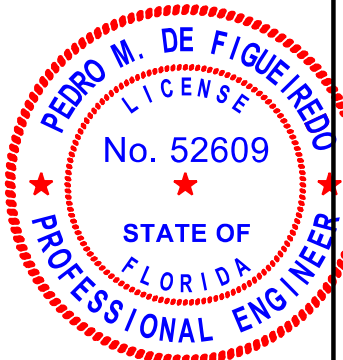
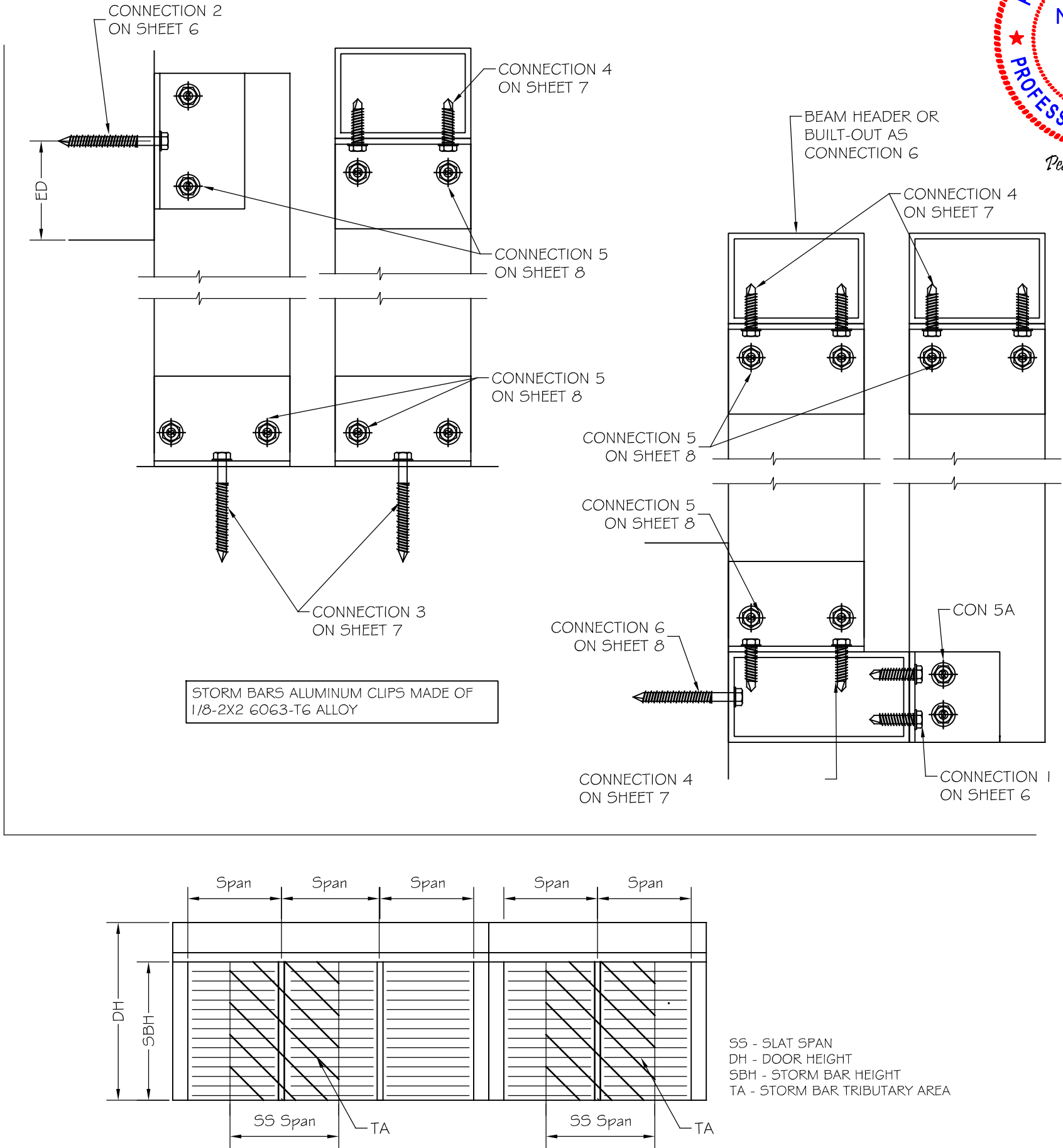
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TABLE 4- STORM BARS
ALLOWABLE DESIGN LOAD - Pd (Psf)

SS	SBH	STORM BAR TYPE				
		2X2	2X3	2X4	2X5	2X6
24	36	150	150	150	150	150
	48	150	150	150	150	150
	60	99	150	150	150	150
	72	57	135	150	150	150
	84	36	96	150	150	150
	96	24	64	114	150	150
	108	--	45	89	124	150
	120	--	32	66	100	131
30	36	150	150	150	150	150
	48	137	150	150	150	150
	60	79	150	150	150	150
	72	45	108	150	150	150
	84	28	76	120	150	150
	96	--	51	91	127	150
	108	--	36	71	99	131
	120	--	26	53	80	105
36	36	150	150	150	150	150
	48	114	150	150	150	150
	60	66	130	150	150	150
	72	38	90	137	150	150
	84	24	64	100	139	150
	96	--	42	76	106	139
	108	--	30	59	83	109
	120	--	21	44	66	87
48	36	110	110	110	110	110
	48	86	110	110	110	110
	60	49	97	110	110	110
	72	28	67	103	110	110
	84	--	48	75	104	110
	96	--	32	57	79	104
	108	--	22	44	62	82
	120	--	--	33	50	65
54	36	100	100	100	100	100
	48	76	100	100	100	100
	60	44	86	100	100	100
	72	25	60	91	100	100
	84	--	42	66	93	100
	96	--	28	50	70	93
	108	--	20	39	55	72
	120	--	--	29	44	58
60	36	85	85	85	85	85
	48	68	85	85	85	85
	60	39	78	85	85	85
	72	22	54	82	85	85
	84	--	38	60	83	85
	96	--	25	45	63	83
	108	--	--	35	49	65
	120	--	--	26	40	52
80	36	40	40	40	40	40
	48	40	40	40	40	40
	60	29	40	40	40	40
	72	--	40	40	40	40
	84	--	28	40	40	40
	96	--	--	34	40	40
	108	--	--	26	37	40
	120	--	--	20	30	39

STORM BAR NOTES:
1- SS: SLAT SPAN, SBH: STORM BAR HEIGH
2- TABLES MUST WORK IN CONJUNCTION WITH MAXIMUM ALLOWABLE SLAT SPAN
TABLES ON SHEET 2.
3- THESE TABLES ARE FURTHER LIMITED BY TYPE OF ANCHORAGE USED.
4- SPECIFIC CONDITIONS OUT OF THE SCOPE OF THESE TABLES CAN BE
ADDRESSED WITH A SITE SPECIFIC DESIGN BY A PROFESSIONAL ENGINEER.

STORM BARS MOUNTING OPTIONS



Pedro De Figueiredo
PE 52609
08/28/2026

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PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI
NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
TEL.: (239) 278-3066 - FAX: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

SCALE:
NA
DATE:
08/28/2026
DRAWING #
26-171
SHEET
5 OF 19

ENGINEERING SERVICES
CA 32459

9715 W. BROWARD BLVD. 247

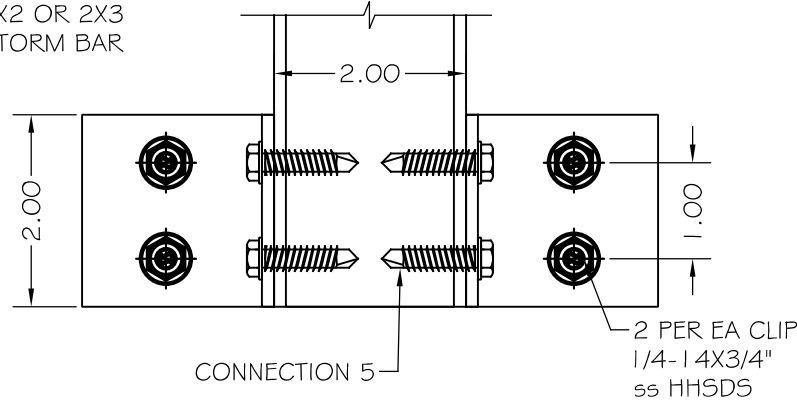
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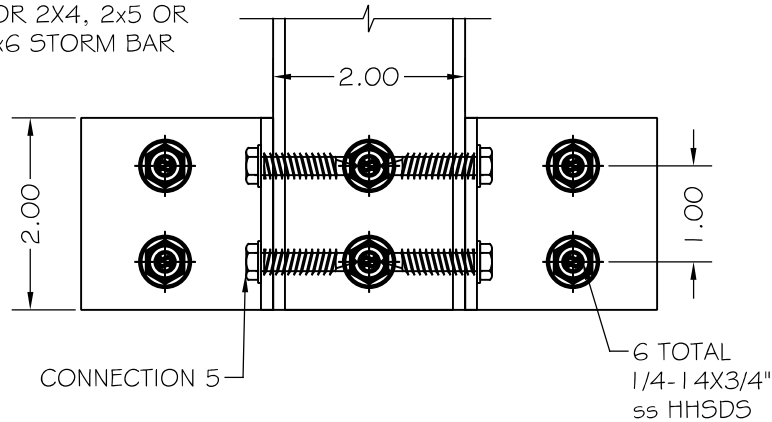
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CONNECTION 1 STORM BARS ANCHORAGE WALL MOUNTED TO ALUMINUM TUBE

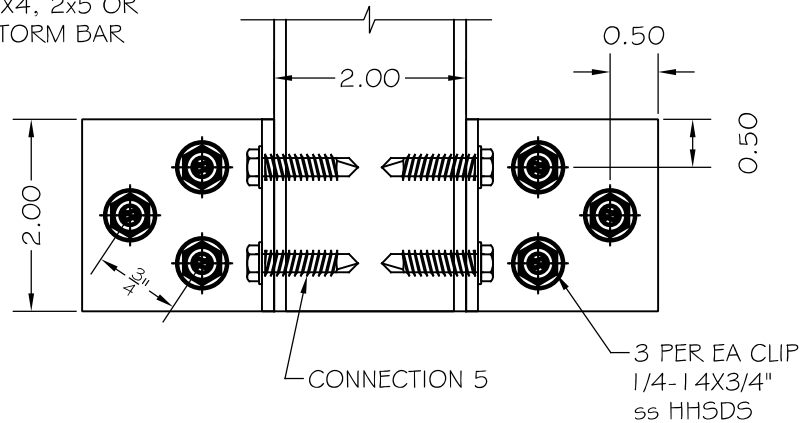
TYPICAL FOR
2X2 OR 2X3
STORM BAR



TYPICAL FOR
FOR 2X4, 2x5 OR
2x6 STORM BAR

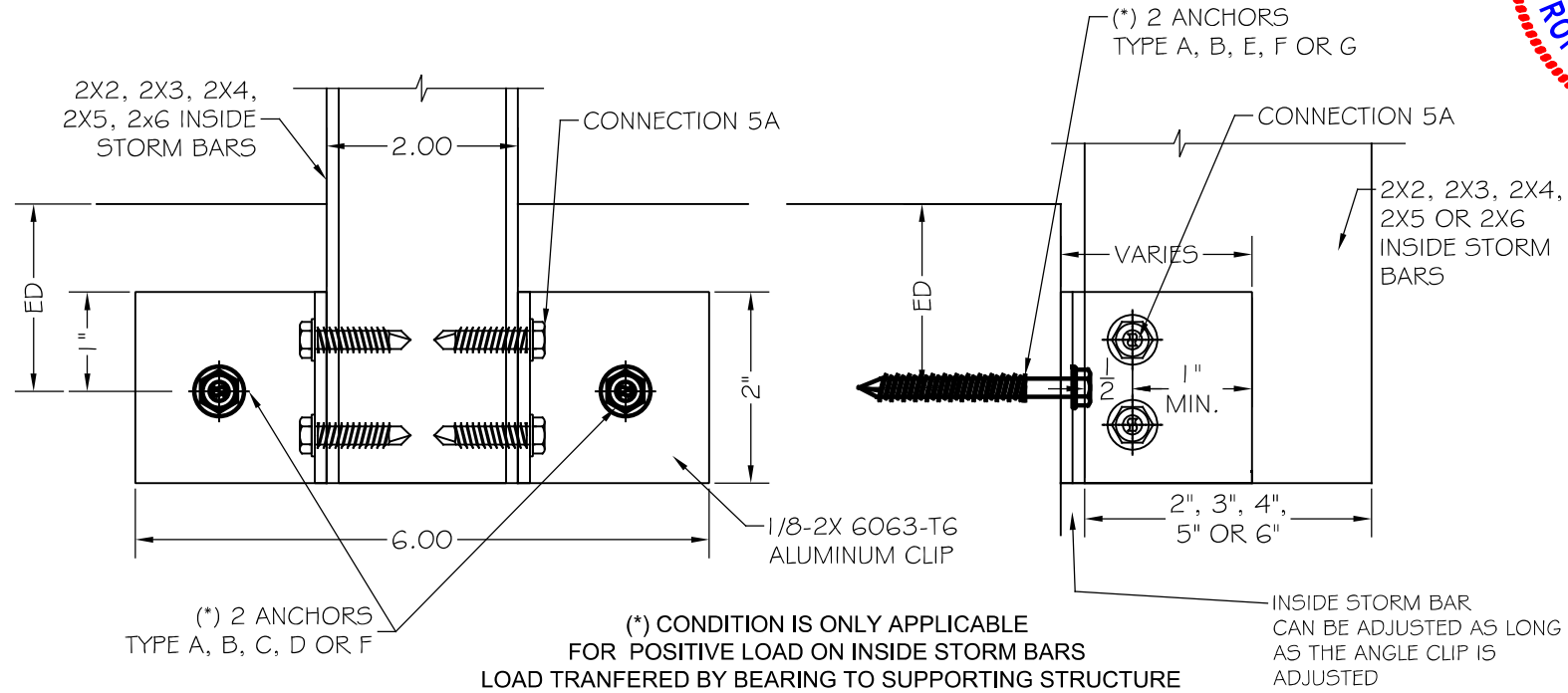


OPTIONAL CONNECTION
FOR 2X4, 2x5 OR
2x6 STORM BAR



CONNECTION CAPACITY IS LIMITED TO THE MAXIMUM ALLOWABLE PRESSURES
SPECIFIED AT TABLE 4 ON SHEET 5

CONNECTION 2 STORM BARS ANCHORAGE TO WALL

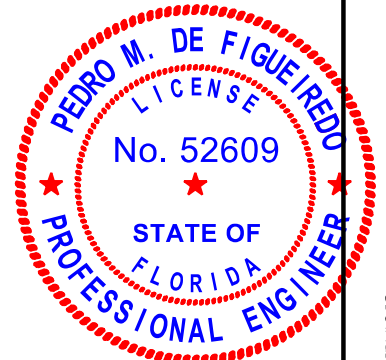
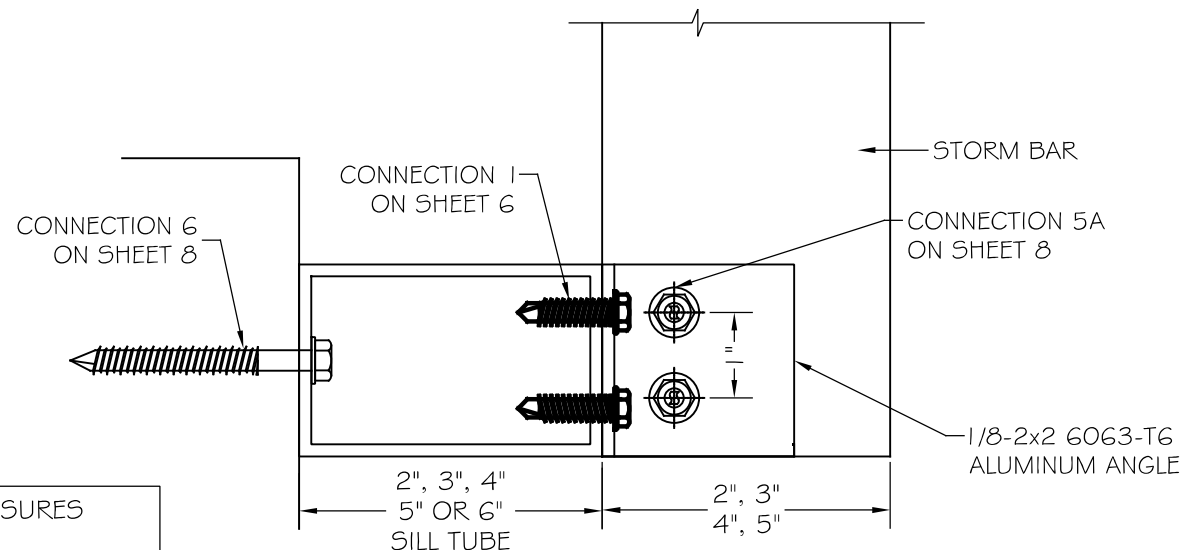


ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 p _{SI} CONCRETE
B	1/4" ss TAPCON	ITW	1 1/4"	2 1/2"	HOLLOW BLOCK
C	1/4"-14 ss HHSMs	GENERIC	1 1/2"	1"	WOOD (SG > .46)
D	1/4"-14 ss HHSMs	GENERIC	1/8"	3/4"	1/8" METAL STRUCTURE
F	1/4"-20 ss SOLID-SET	ALL POINTS	1"	2 1/2"	3000 p _{SI} CONCRETE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
- 2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
- 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL



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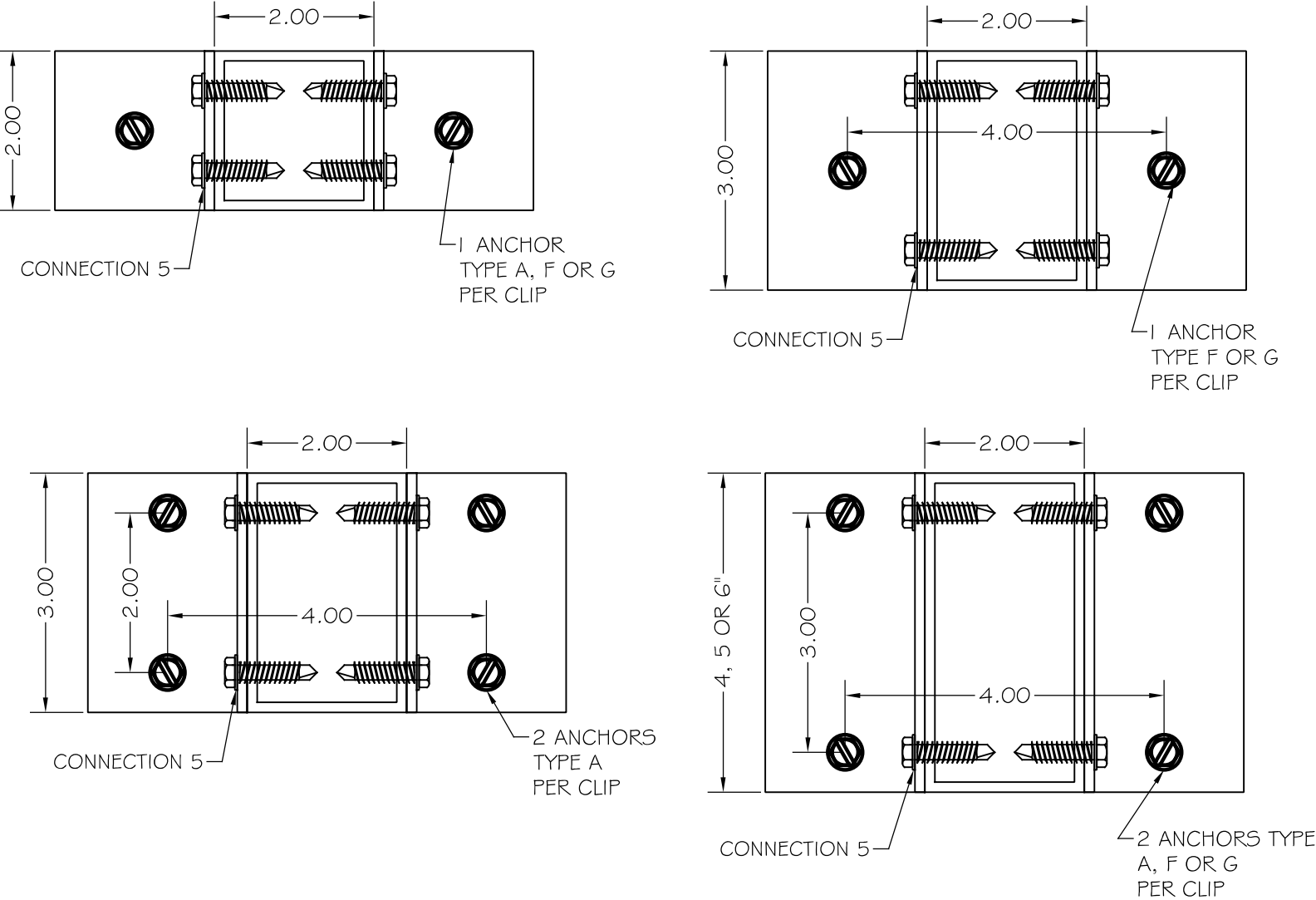
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CONNECTION 3 - STORM BARS ANCHORAGE
FLOOR/CEILING MOUNTED TO CONCRETE



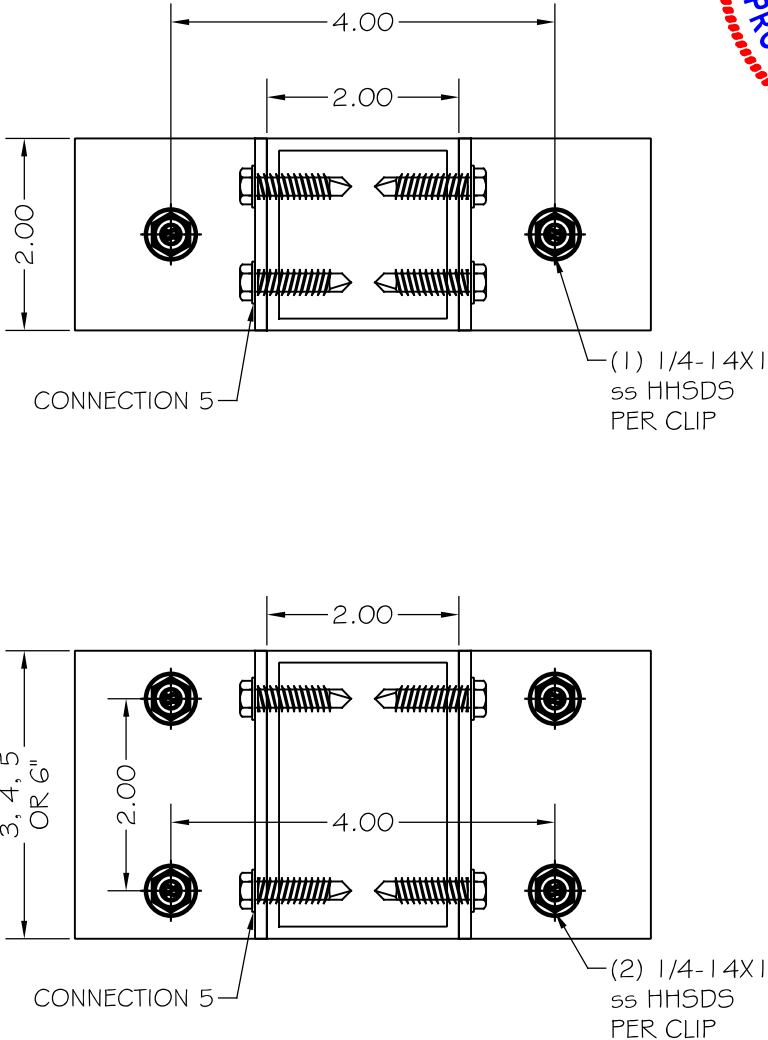
CONNECTION CAPACITY IS LIMITED TO THE MAXIMUM ALLOWABLE PRESSURES
SPECIFIED AT TABLE 4 ON SHEET 5

ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 p _{SI} CONCRETE
F	1/4"-20 ss SOLID-SET	ALL POINTS	1"	2 1/2"	3000 p _{SI} CONCRETE
G	5/16" TAPCON	ITW	2 1/4"	2 1/2"	3000 p _{SI} CONCRETE

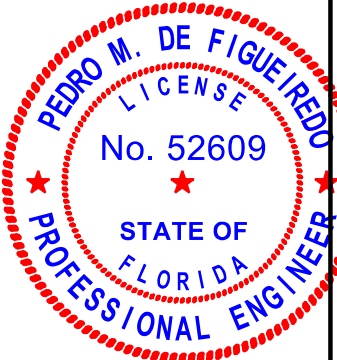
ANCHOR NOTES:
1- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL

CONNECTION 4
STORM BARS ANCHORAGE FLOOR/CEILING
TO BUILT-OUT TUBE OR HEADER



CONNECTION CAPACITY IS LIMITED TO THE MAXIMUM
ALLOWABLE PRESSURES SPECIFIED AT TABLE 4 ON SHEET 5

ANCHOR NOTES:
1- 1/4"-14 HHSD5 GRADE 5 CAN BE USED AS AN
ALTERNATE TO THE STAINLESS STEEL



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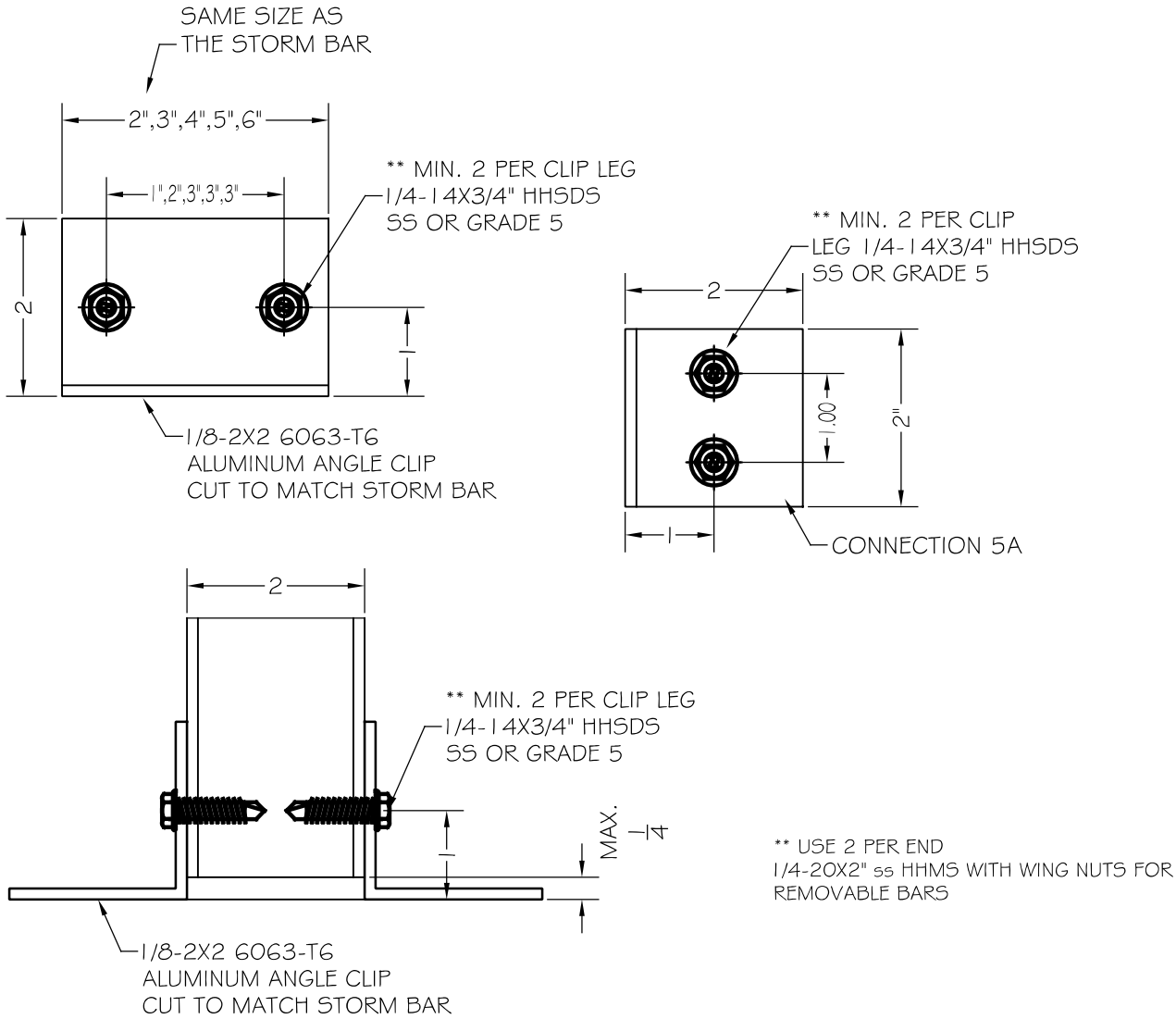
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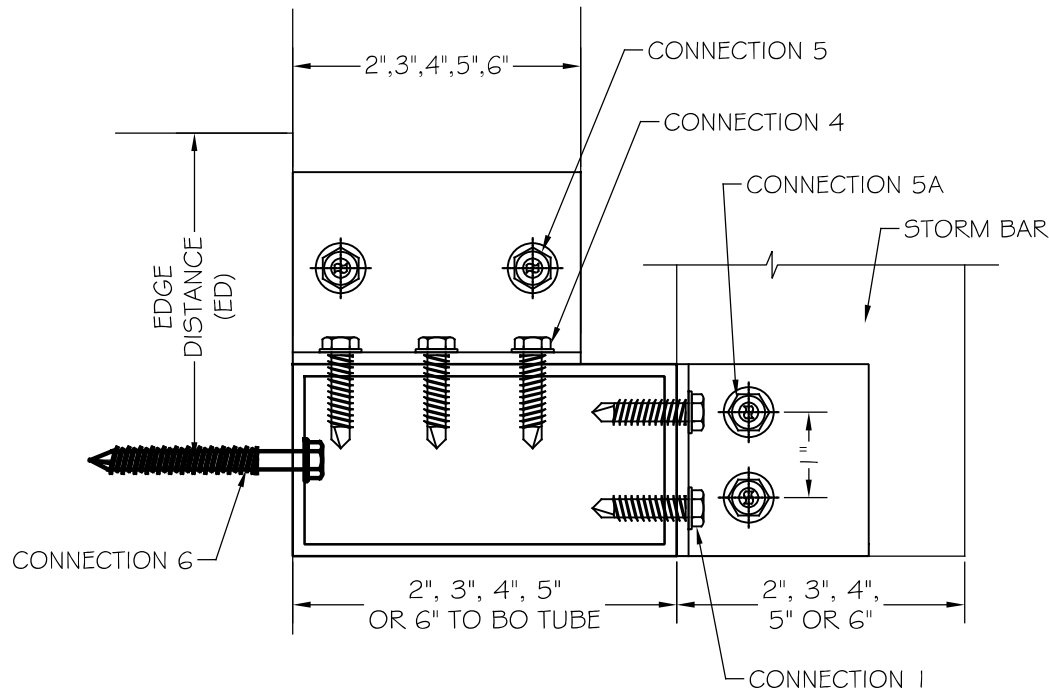
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PE 52609

CONNECTION 5
CLIP ANCHORED TO STORM BAR



CONNECTION 6
BUILT-OUT WALL ANCHORAGE



CONNECTION 6
MINIMUM NUMBER OF ANCHORS
TO SECURE BUILT-OUT TUBE TO WALL

STORM BARS	ANCHOR TYPE					
	A	B	C	D	E	G
2x2	4	5	4	3	3	3
2x3	5	7	5	4	5	5
2x4	7	8	7	4	6	6
2x5	8	10	8	5	7	7
2x6	9	11	9	6	8	8

CONNECTION 6A:
WHEN USED TO HOLD ONLY INSIDE STORM
BAR WITH LOAD BEARING AGAINST THE
WALL USE ONLY 2 ANCHORS TYPE A, B,
C, D, E OR G

	ANCHOR TYPE					
	A	B	C	D	E	G
S	3.0	3.0	3.0	2.0	4.0	3.0
ED	2.5	2.5	1.0	0.5	4.0	2.5

S - ANCHOR SPACING
ED - EDGE DISTNCE

ANCHOR SCHEDULE

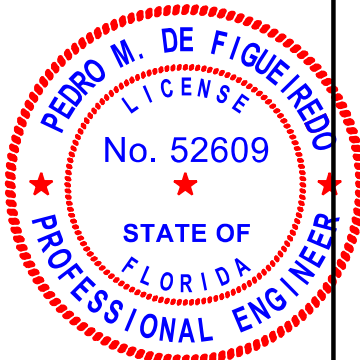
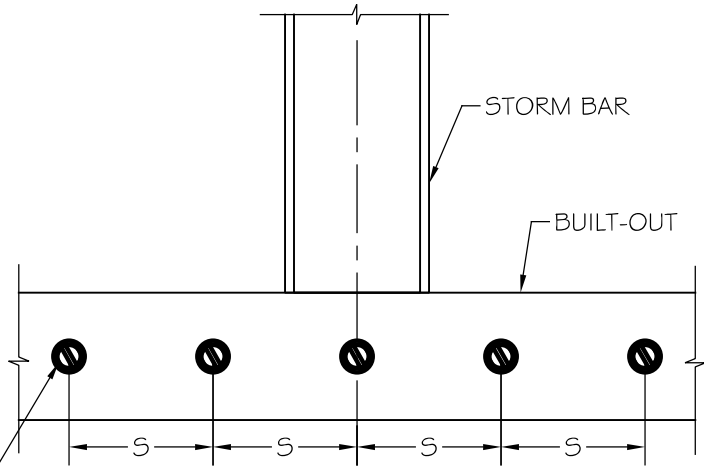
TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 psi CONCRETE
B	1/4" ss TAPCON	ITW	1 1/4"	2 1/2"	HOLLOW BLOCK
C	1/4"-1 4 ss HHMS	GENERIC	1 1/2"	1"	WOOD (SG >= .46)
D	1/4"-1 4 ss HHSDS	GENERIC	1/8"	3/4"	1/8" METAL STRUCTURE
E	5/16" TAPCON	ITW	1 1/4"	4"	HOLLOW BLOCK
G	5/16" TAPCON	ITW	2 1/4"	2 1/2"	3000 psi CONCRETE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
- 2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
- 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL

CONNECTION CAPACITY IS LIMITED TO THE MAXIMUM ALLOWABLE PRESSURES
SPECIFIED AT TABLE 4 ON SHEET 5

QUANTITY OF ANCHORS FROM TABLE
ARE TO BE EQUALLY DIVIDED
FROM CENTER LINE OF STORM BAR



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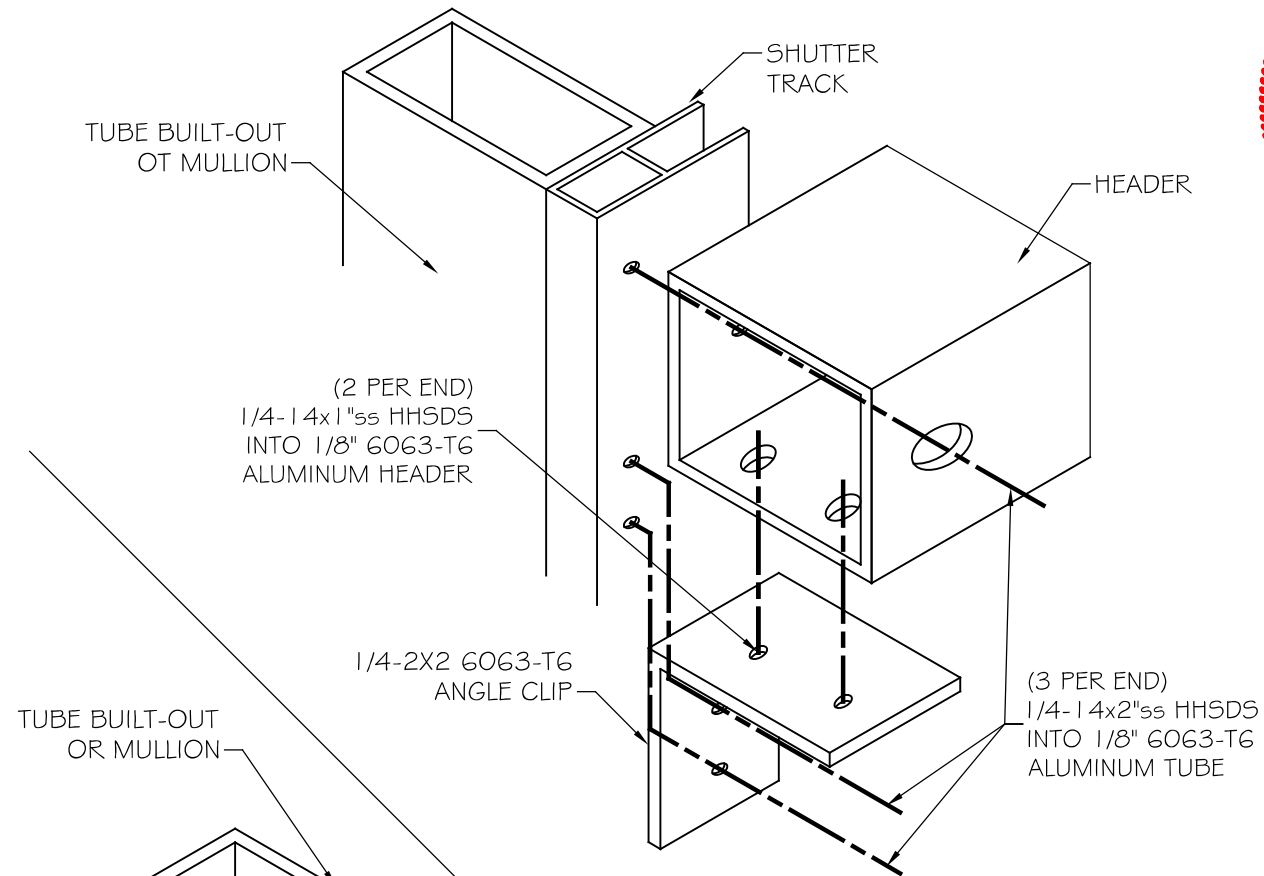
TABLE 5- HEADER BARS
CONNECTION TYPE 8
ALLOWABLE DESIGN LOAD - Pd (Psf)

TT	SBH	HEADER BAR				
		2X2	2X3	2X4	2X5	2X6
72	36	75	150	150	150	150
	48	57	136	147	147	147
	60	45	109	117	117	117
	72	38	91	98	98	98
	84	32	78	84	84	84
	96	28	68	73	73	73
	108	25	60	65	65	65
	120	23	54	59	59	59
84	36	48	127	150	150	150
	48	36	95	126	126	126
	60	29	76	100	100	100
	72	24	63	84	84	84
	84	20	54	72	72	72
	96	--	48	63	63	63
	108	--	42	56	56	56
	120	--	38	50	50	50
96	36	32	85	147	147	147
	48	24	64	110	110	110
	60	--	51	88	88	88
	72	--	43	73	73	73
	84	--	36	63	63	63
	96	--	32	55	55	55
	108	--	28	49	49	49
	120	--	26	44	44	44
108	36	22	60	121	130	130
	48	--	45	91	98	98
	60	--	36	73	78	78
	72	--	30	61	65	65
	84	--	26	52	56	56
	96	--	22	45	49	49
	108	--	20	40	43	43
	120	--	--	36	39	39
120	36	--	44	88	117	117
	48	--	33	66	88	88
	60	--	26	53	70	70
	72	--	22	44	59	59
	84	--	--	38	50	50
	96	--	--	33	44	44
	108	--	--	29	39	39
	120	--	--	26	35	35
130	36	--	34	69	108	108
	48	--	26	52	81	81
	60	--	21	42	65	65
	72	--	--	35	54	54
	84	--	--	30	46	46
	96	--	--	26	41	41
	108	--	--	23	36	36
	120	--	--	21	32	32
150	36	--	22	45	79	94
	48	--	--	34	59	70
	60	--	--	27	47	56
	72	--	--	23	39	47
	84	--	--	--	34	40
	96	--	--	--	30	35
	108	--	--	--	26	31
	120	--	--	--	24	28

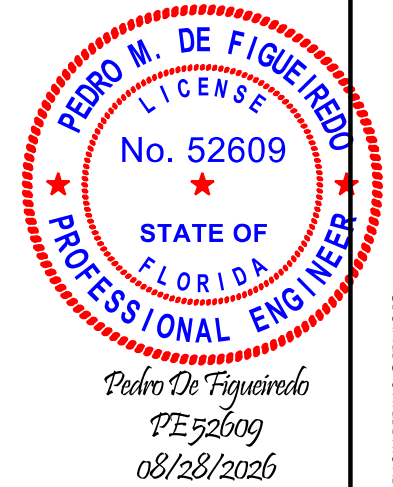
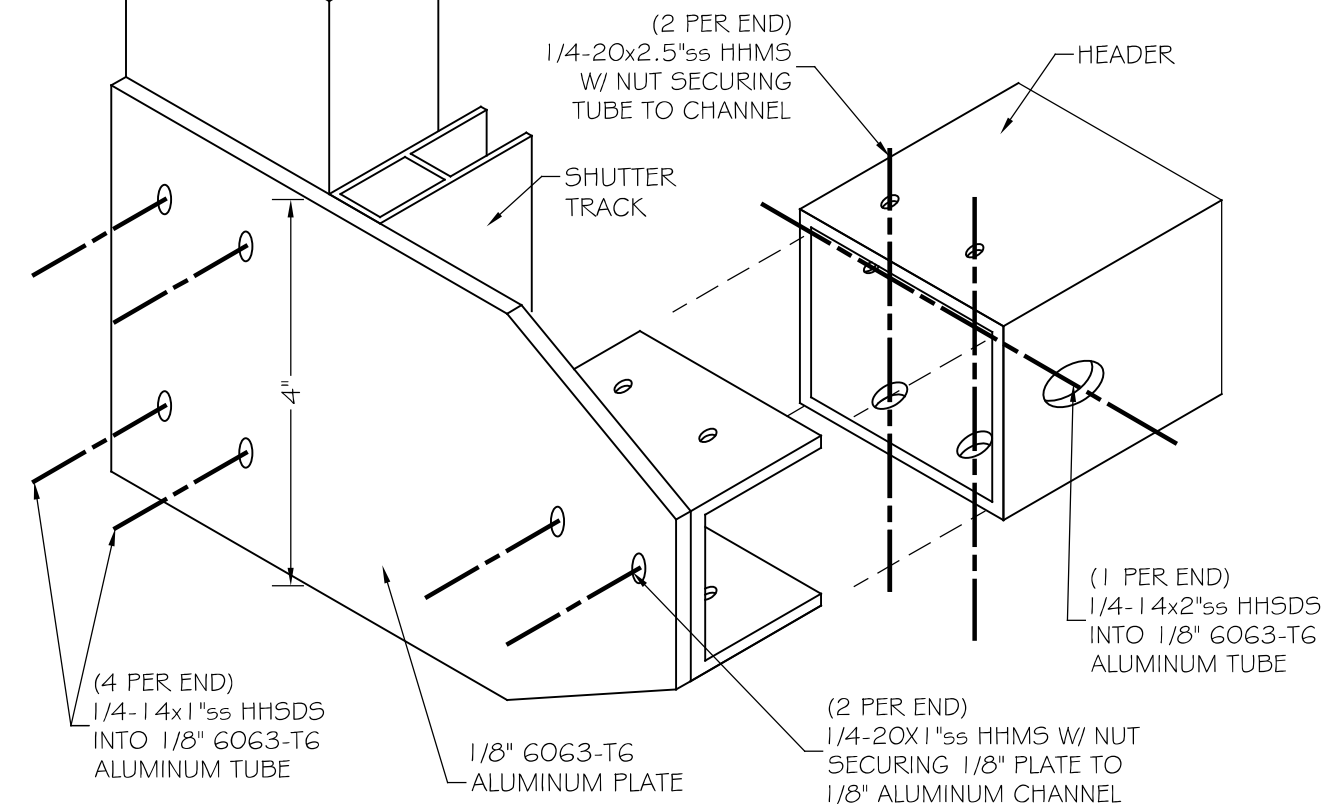
TABLE 6- HEADER BARS
CONNECTION TYPE 9
ALLOWABLE DESIGN LOAD - Pd (Psf)

TT	SBH	HEADER BAR TYPE				
		2X2	2X3	2X4	2X5	2X6
72	36	75	150	150	150	150
	48	57	136	150	150	150
	60	45	109	150	150	150
	72	38	91	138	150	150
	84	32	78	118	147	147
	96	28	68	103	129	129
	108	25	60	92	115	115
	120	23	54	83	103	103
84	36	48	127	150	150	150
	48	36	95	150	150	150
	60	29	76	122	150	150
	72	24	63	101	141	147
	84	20	54	87	121	126
	96	--	48	76	106	111
	108	--	42	68	94	98
	120	--	38	61	85	88
96	36	32	85	150	150	150
	48	24	64	116	150	150
	60	--	51	93	130	150
	72	--	43	78	108	129
	84	--	36	67	93	111
	96	--	32	58	81	97
	108	--	28	52	72	86
	120	--	26	47	65	77
108	36	22	60	121	150	150
	48	--	45	91	128	150
	60	--	36	73	103	136
	72	--	30	61	86	114
	84	--	26	52	73	97
	96	--	22	45	64	85
	108	--	20	40	57	76
	120	--	--	36	51	68
120	36	--	44	88	139	150
	48	--	33	66	104	138
	60	--	26	53	83	110
	72	--	22	44	69	92
	84	--	--	38	59	79
	96	--	--	33	52	69
	108	--	--	29	46	61
	120	--	--	26	42	55
130	36	--	34	69	118	150
	48	--	26	52	89	118
	60	--	21	42	71	94
	72	--	--	35	59	78
	84	--	--	30	51	67
	96	--	--	26	44	59
	108	--	--	23	39	52
	120	--	--	21	35	47
150	36	--	22	45	79	118
	48	--	--	34	59	88
	60	--	--	27	47	71
	72	--	--	23	39	59
	84	--	--	--	34	50
	96	--	--	--	30	44
	108	--	--	--	26	39
	120	--	--	--	24	35

HEADER MOUNT - CONNECTION 8



HEADER MOUNT - CONNECTION 9



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HEADER NOTES:
1- TT: TRACK TO TRACK, SBH: STORM BAR HEIGHT
2- SPECIFIC CONDITIONS OUT OF THE SCOPE OF THESE TABLES CAN BE ADDRESSED WITH A SITE SPECIFIC DESIGN BY A PROFESSIONAL ENGINEER.

DIVIDE EQUALLY FROM CENTER LINE OF HEADER
THE MINIMUM QUANTITY OF ANCHORS SELECTED
FROM TABLES BELOW

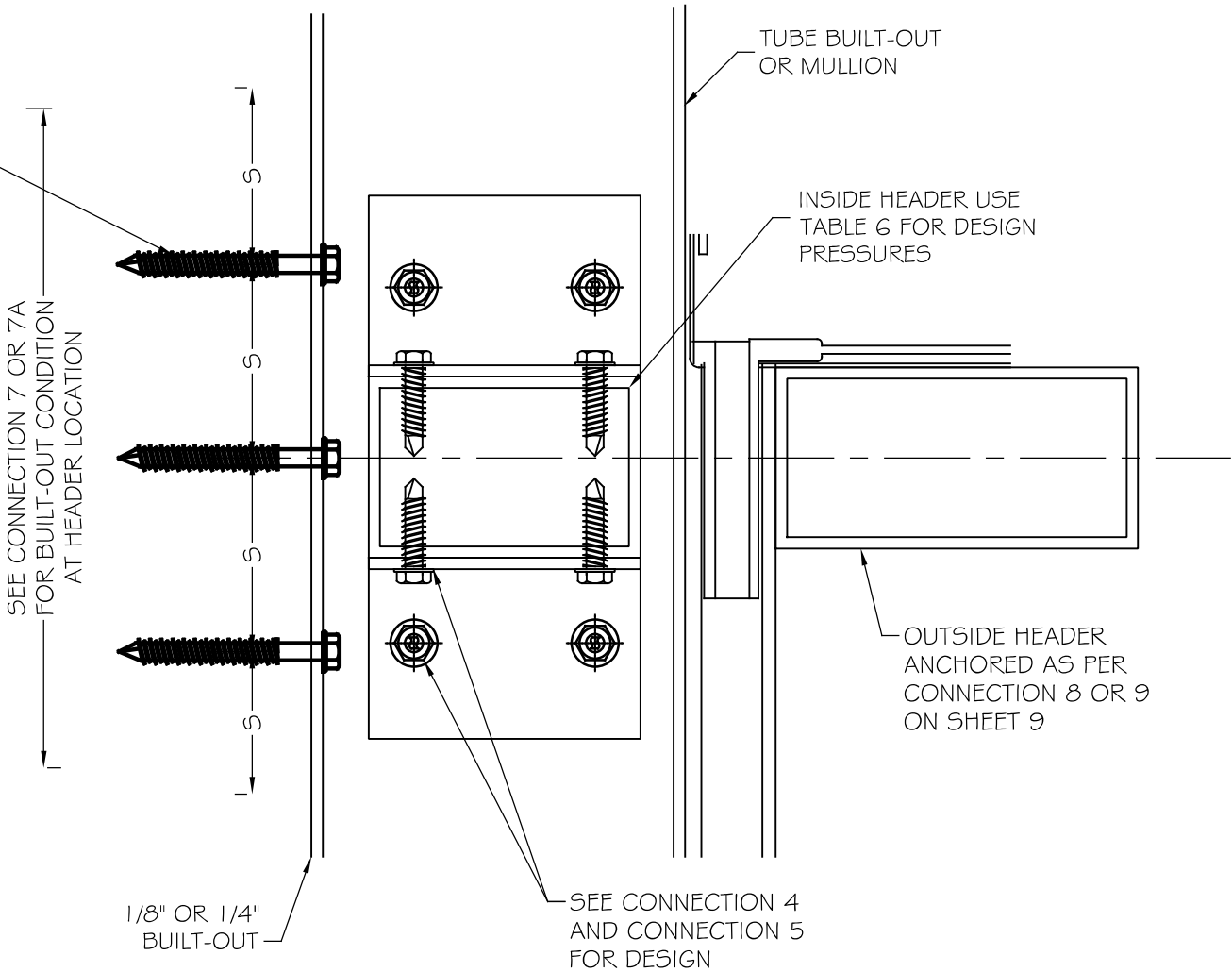
CONNECTION 7
MINIMUM NUMBER OF ANCHORS
TO SECURE 1/8" BUILT-OUT TUBE TO WALL

HEADER TYPE	CONNECTION 8						CONNECTION 9					
	A	B	C	D	E	G	A	B	C	D	E	G
2X2	1	2	1	1	1	1	2	3	2	2	2	2
2X3	3	4	3	2	3	3	5	6	5	3	4	4
2X4	5	6	5	3	4	4	-	-	-	4	6	6
2X5	5	6	5	3	4	4	-	-	-	5	-	-
2X6	5	6	5	3	4	4	-	-	-	5	-	-

CONNECTION 7A
MINIMUM NUMBER OF ANCHORS
TO SECURE 1/4" BUILT-OUT TUBE TO WALL

HEADER TYPE	CONNECTION 8						CONNECTION 9					
	A	B	C	D	E	G	A	B	C	D	E	G
2X2	1	3	1	2	2	1	1	3	1	2	2	1
2X3	2	6	2	3	4	2	2	6	2	3	4	2
2X4	3	6	3	3	4	2	4	--	4	4	5	3
2X5	3	6	3	3	4	2	4	--	4	5	6	4
2X6	3	6	3	3	4	2	4	--	4	5	6	4

S SPACING	ANCHOR TYPE					
	A	B	C	D	E	G
	3	3	2	2	4	3

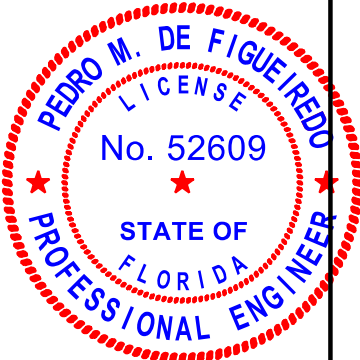


ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 psi CONCRETE
B	1/4" ss TAPCON	ITW	1 1/4"	2 1/2"	HOLLOW BLOCK
C	1/4"-14 ss HHSMs	GENERIC	1 1/2"	1"	WOOD (SG>=.46)
D	1/4"-14 ss HHSDs	GENERIC	1/8"	3/4"	1/8" METAL STRUCTURE
E	5/16" TAPCON	ITW	1 1/4"	4"	HOLLOW BLOCK
G	5/16" TAPCON	ITW	2 1/4"	2 1/2"	3000 psi CONCRETE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
- 2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
- 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL
- 4- SPECIFIC CONDITIONS OUT OF THE SCOPE OF THESE TABLES CAN BE ADDRESSED WITH A SITE SPECIFIC DESIGN BY A PROFESSIONAL ENGINEER.



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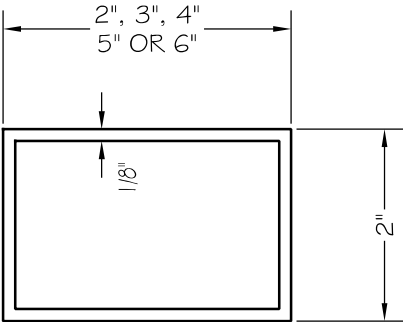
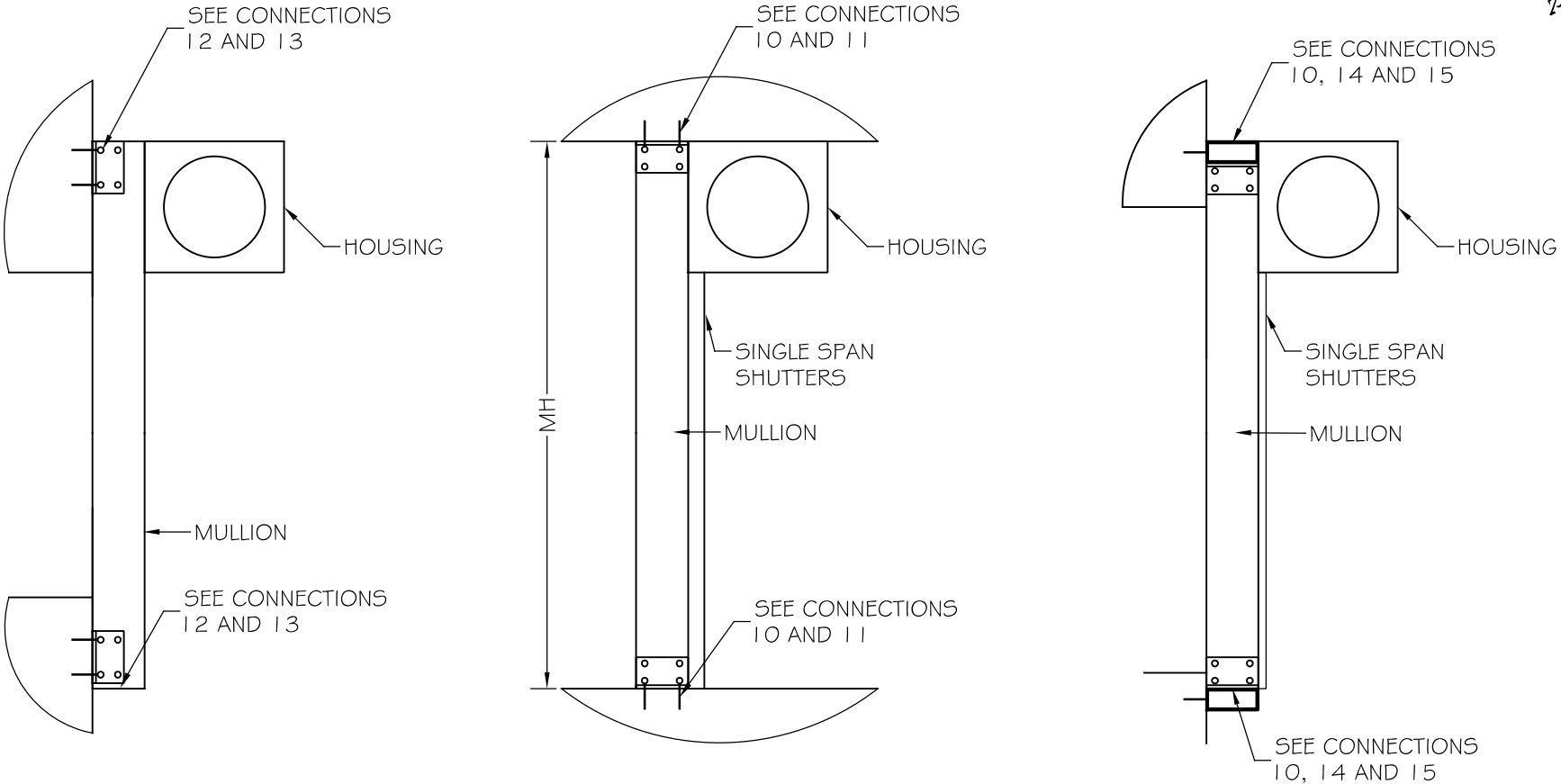
TABLE 7- MULLION BARS
ALLOWABLE DESIGN LOAD - Pd (Psf)

SS	MH	MULLION BAR TYPE				
		2X2	2X3	2X4	2X5	2X6
24	48	150	150	150	150	150
	60	150	150	150	150	150
	72	114	150	150	150	150
	84	72	150	150	150	150
	96	48	128	150	150	150
	108	33	90	150	150	150
	120	24	65	133	150	150
30	132	--	44	91	150	150
	48	150	150	150	150	150
	60	150	150	150	150	150
	72	91	150	150	150	150
	84	57	150	150	150	150
	96	38	102	150	150	150
	108	27	72	143	150	150
36	120	--	52	106	150	150
	132	--	35	73	127	150
	48	150	150	150	150	150
	60	132	150	150	150	150
	72	76	150	150	150	150
	84	48	128	150	150	150
	96	32	85	150	150	150
48	108	22	60	119	150	150
	120	--	43	89	133	150
	132	--	29	60	106	144
	48	100	100	110	110	110
	60	99	100	110	110	110
	72	57	100	110	110	110
	84	36	96	110	110	110
54	96	24	64	110	110	110
	108	--	45	89	110	110
	120	--	32	66	100	110
	132	--	22	45	79	108
	48	100	100	100	100	100
	60	88	100	100	100	100
	72	50	100	100	100	100
60	84	32	85	100	100	100
	96	21	57	100	100	100
	108	--	40	79	100	100
	120	--	29	59	89	100
	132	--	--	40	70	100
	48	85	85	85	85	85
	60	79	85	85	85	85
80	72	45	85	85	85	85
	84	28	76	85	85	85
	96	--	51	85	85	85
	108	--	36	71	80	85
	120	--	26	53	63	85
	132	--	--	36	85	85
	48	40	40	40	40	40
	60	40	40	40	40	40
	72	34	40	40	40	40
	84	21	40	40	40	40
	96	--	38	40	40	40
	108	--	27	40	40	40
	120	--	--	40	40	40
	132	--	--	27	40	40

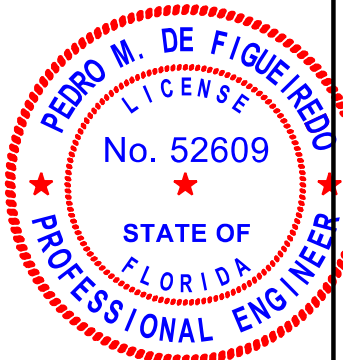
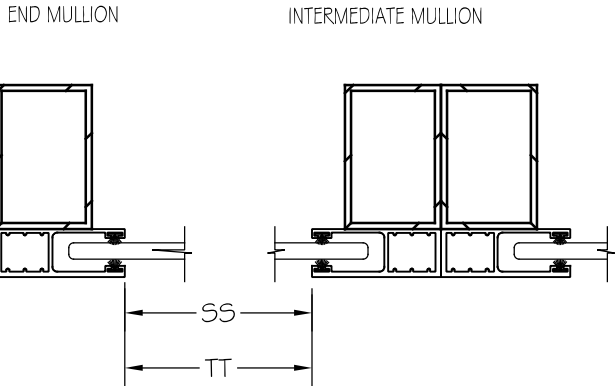
STORM BAR NOTES:
1- SS: SLAT SPAN, MH: MULLION BAR HEIGH
2- TABLES MUST WORK IN CONJUNCTION WITH MAXIMUM ALLOWABLE SLAT SPAN
TABLES ON SHEET 2.
3- THESE TABLES ARE FURTHER LIMITED BY TYPE OF ANCHORAGE USED.
4- SPECIFIC CONDITIONS OUT OF THE SCOPE OF THESE TABLES CAN BE
ADDRESSED WITH A SITE SPECIFIC DESIGN BY A PROFESSIONAL ENGINEER.

MULLION SELECTION TABLES
ALLOWABLE DESIGN LOAD - Pd (Psf)

CASE 1 :
SINGLE SPAN SHUTTERS



SHAPES:
1/8-2X2 6063-T6
1/8-2X3 6063-T6
1/8-2X4 6063-T6
1/8-2X5 6063-T6
1/8-2X6 6063-T6



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ENGINEERING SERVICES
CA 32459
9715 W. BROWARD BLVD. 247
PLANTATION, FL 33324
PPMIF@AOL.COM



PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI
NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
TEL.: (239) 278-3066 - FAX: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

SCALE:
NA
DATE:
08/28/2026
DRAWING #
26-171
SHEET
11 OF 19

TABLE 8- MULLION BARS
ALLOWABLE DESIGN LOAD - Pd (Psf)

TT	MH	MULLION BAR TYPE				
		2X2	2X3	2X4	2X5	2X6
72	48	75	150	150	150	150
	60	57	120	150	150	150
	72	45	95	150	150	150
	84	29	80	128	150	150
	96	--	52	100	135	135
	108	--	34	78	115	118
	120	--	23	58	92	104
	132	--	--	36	75	93
84	48	48	127	150	150	150
	60	36	95	150	150	150
	72	29	76	122	150	150
	84	21	63	101	137	137
	96	--	54	87	116	116
	108	--	39	76	101	101
	120	--	27	62	89	89
	132	--	--	39	76	80
96	48	32	85	150	150	150
	60	24	64	116	150	150
	72	--	51	93	130	142
	84	--	43	78	108	120
	96	--	36	67	93	102
	108	--	32	58	81	88
	120	--	28	52	72	78
	132	--	--	42	65	70
108	48	22	60	121	150	150
	60	--	45	91	128	150
	72	--	36	73	103	126
	84	--	30	61	86	106
	96	--	26	52	73	90
	108	--	22	45	64	78
	120	--	20	40	57	69
	132	--	--	36	51	62
120	48	--	44	88	139	150
	60	--	33	66	104	138
	72	--	26	53	83	110
	84	--	22	44	69	92
	96	--	--	38	59	79
	108	--	--	33	52	69
	120	--	--	29	46	61
	132	--	--	26	42	55
130	48	--	34	69	118	150
	60	--	26	52	89	118
	72	--	21	42	71	94
	84	--	--	35	59	78
	96	--	--	30	51	67
	108	--	--	26	44	59
	120	--	--	23	39	52
	132	--	--	21	35	47
150	48	--	22	45	79	118
	60	--	--	34	59	88
	72	--	--	27	47	71
	84	--	--	23	39	59
	96	--	--	--	34	50
	108	--	--	--	30	44
	120	--	--	--	26	39
	132	--	--	--	24	35

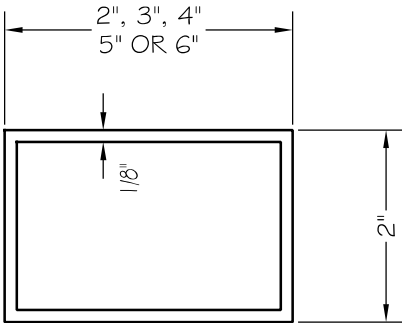
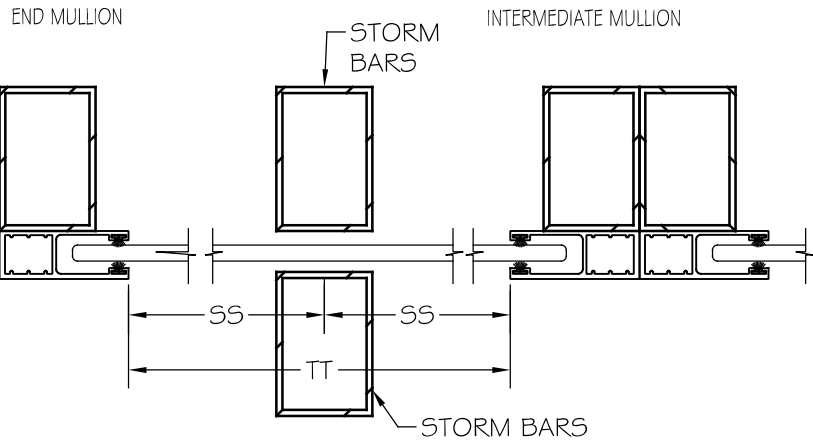
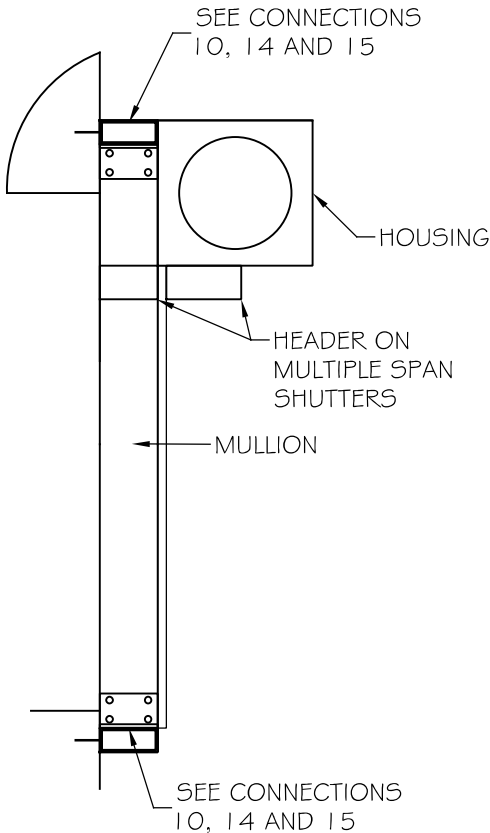
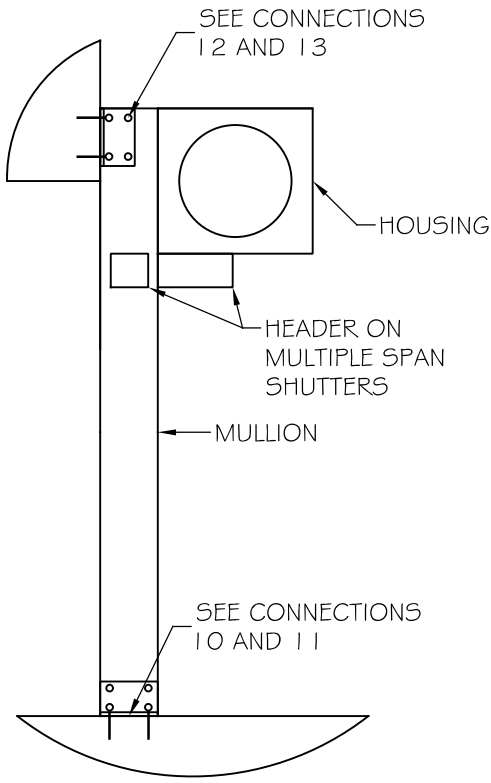
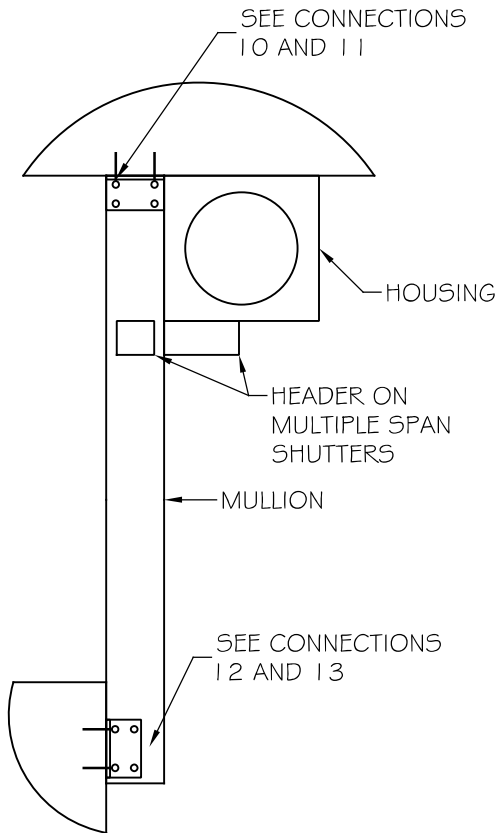
STORM BAR NOTES:
1- TT: TRACK TO TRACK, MH: MULLION BAR HEIGH
2- TABLES MUST WORK IN CONJUNCTION WITH MAXIMUM ALLOWABLE SLAT SPAN TABLES ON SHEET 2.
3- THESE TABLES ARE FURTHER LIMITED BY TYPE OF ANCHORAGE USED.
4- SPECIFIC CONDITIONS OUT OF THE SCOPE OF THESE TABLES CAN BE ADDRESSED WITH A SITE SPECIFIC DESIGN BY A PROFESSIONAL ENGINEER.

MULLION SELECTION TABLES

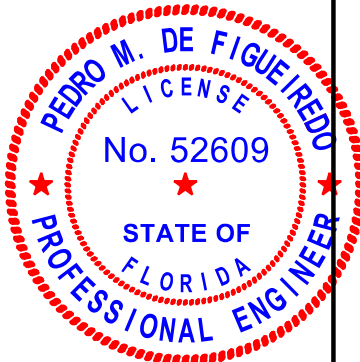
ALLOWABLE DESIGN LOAD - Pd (Psf)

CASE 2:

MULTIPLE SPAN SHUTTERS WITH
HEADER ANCHORED TO MULLION



SHAPES:
1/8-2X2 6063-T6
1/8-2X3 6063-T6
1/8-2X4 6063-T6
1/8-2X5 6063-T6
1/8-2X6 6063-T6



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ENGINEERING SERVICES

CA 32459

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PLANTATION, FL 33324

PPMIF@AOL.COM



PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI
NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
TEL.: (239) 278-3066 - FAX: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

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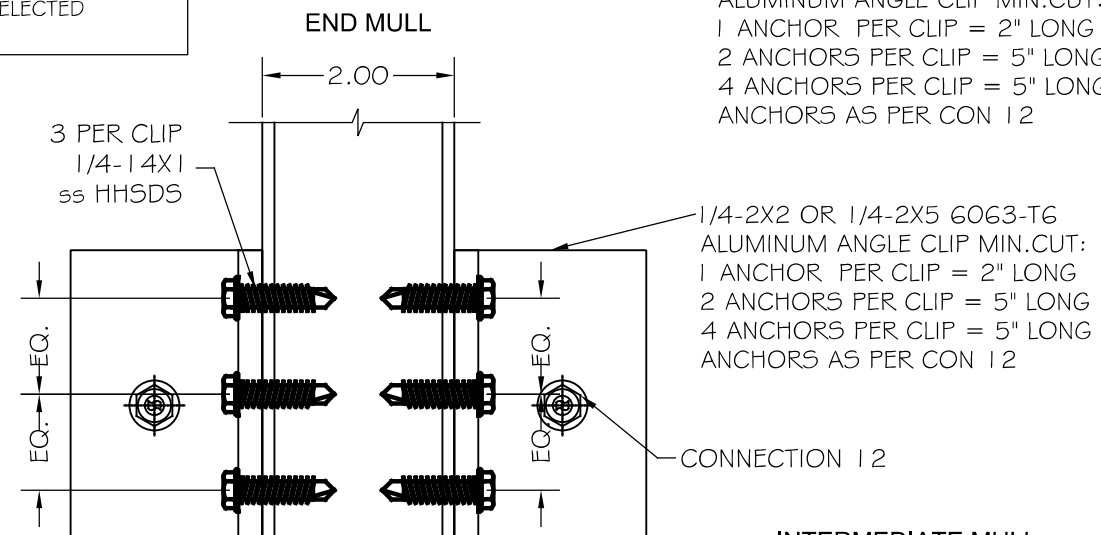
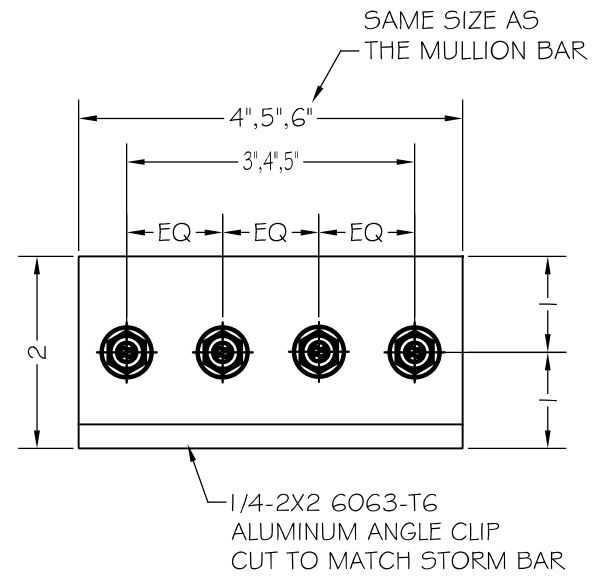
SAME SIZE AS THE MULLION BAR

2', 3"

1', 2"

2'

1/4-2X2 6063-T6 ALUMINUM ANGLE CLIP CUT TO MATCH STORM BAR



THE M
FROM

MIN. 2 PER CLIP LEG

1/4-14X3/4" HHSDS
S5 OR GRADE 5

CONNECTION 11 FOR
END MULLION

1/4-2X2 6063-T6
ALUMINUM ANGLE CLIP
CUT TO MATCH MULLION

2

MAX. 1/4

[illegible]

ANCHORS TO BE DESIGNED BASED ON THE MINIMUM MULLION SIZE SELECTED FROM TABLES 7 AND 8.

1/4-2X2 OR 1/4-2X5 6063-T6
ALUMINUM ANGLE CLIP MIN. CUT:
1 ANCHOR PER CLIP = 2" LONG
2 ANCHORS PER CLIP = 5" LONG
4 ANCHORS PER CLIP = 5" LONG
ANCHORS AS PER CON 12

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BY
 ERE.

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CALF:

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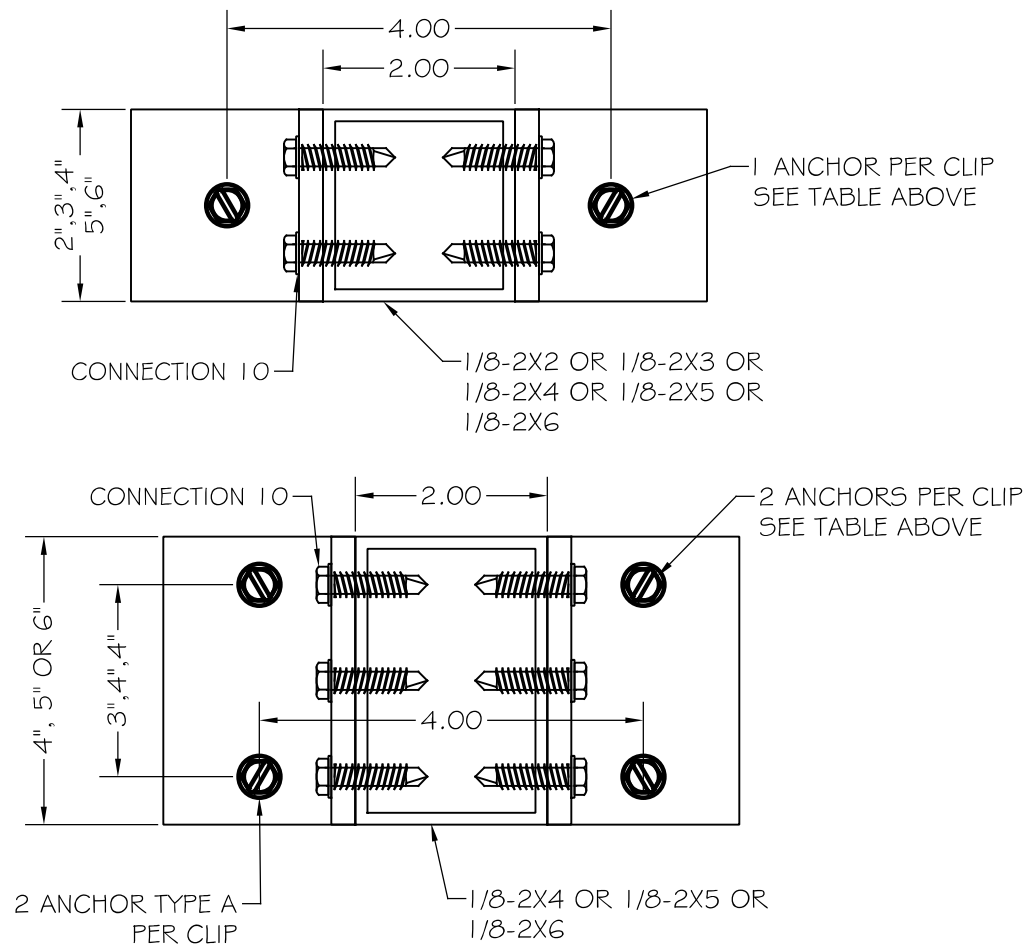
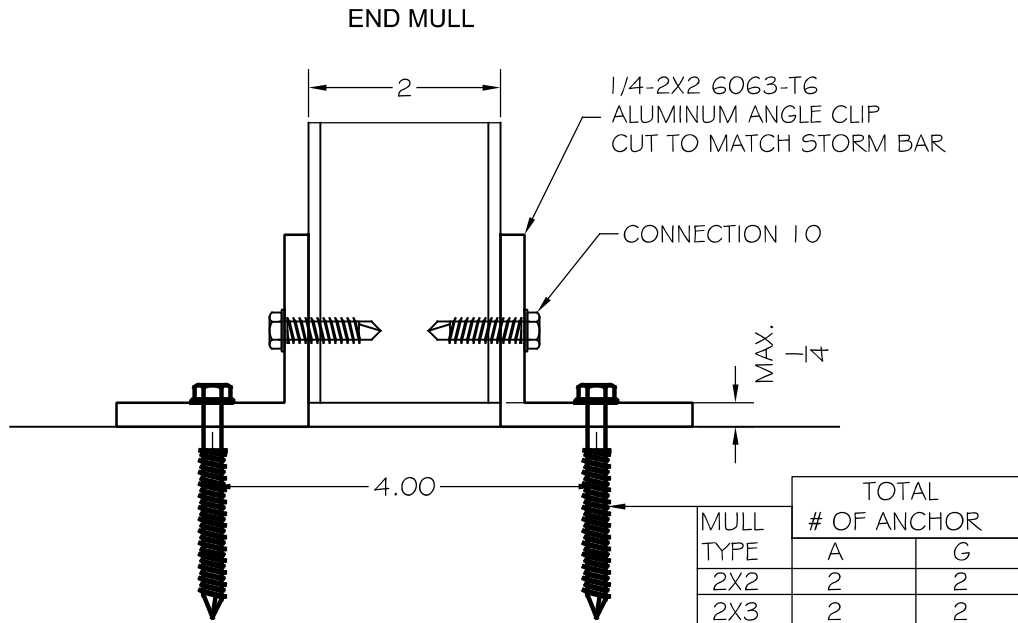
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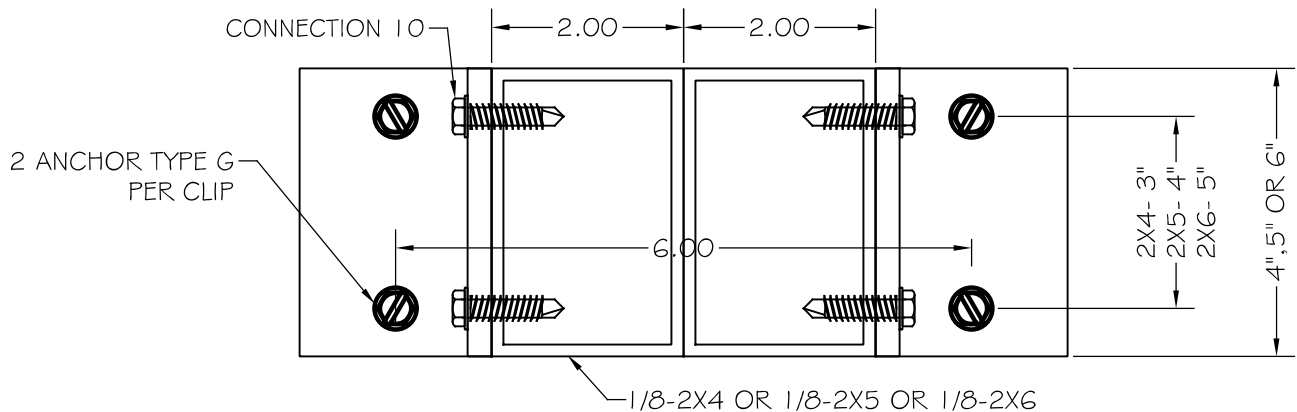
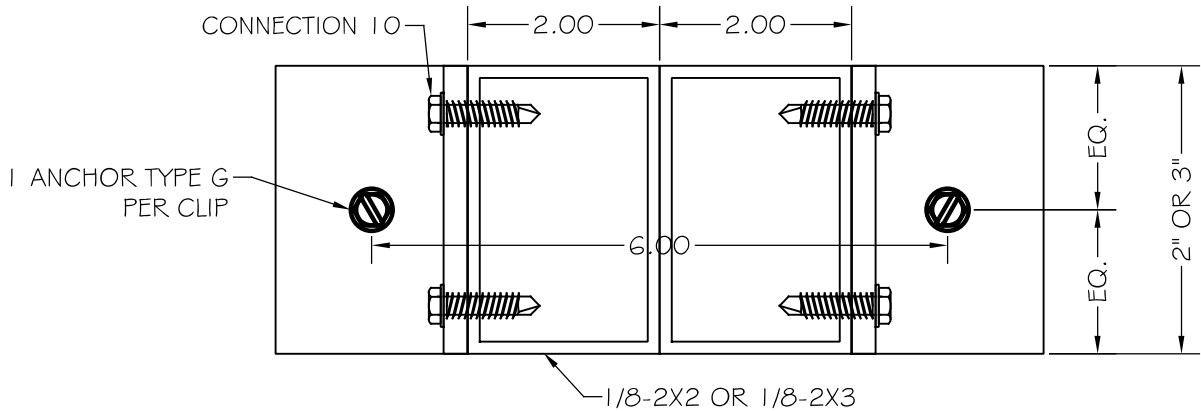
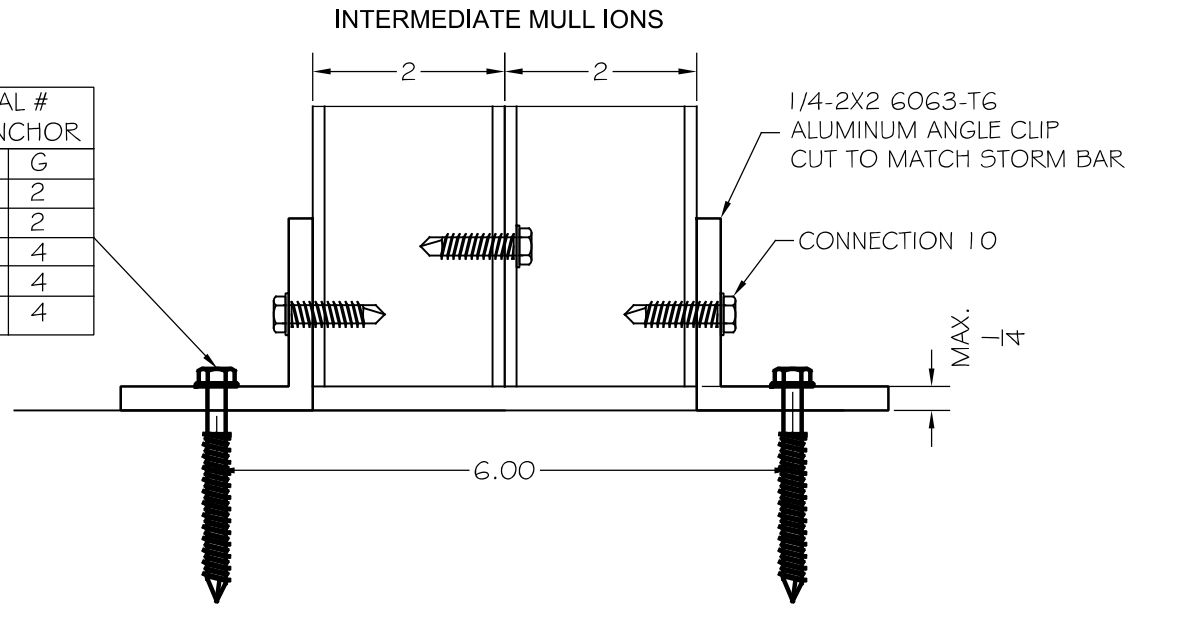
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PE 52609

CONNECTION 11
CLIP ANCHORED TO CONCRETE FLOOR/CEILING



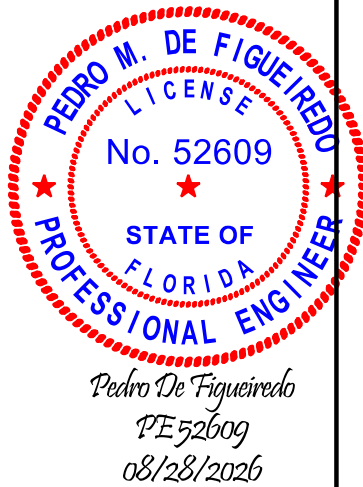
MULL TYPE	TOTAL # OF ANCHOR	
	A	G
2X2	NA	2
2X3	NA	2
2X4	NA	4
2X5	NA	4
2X6	NA	4



ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 psi CONCRETE
G	5/16" TAPCON	TW	2 1/4"	2 1/2"	3000 psi CONCRETE

ANCHOR NOTES:
1- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL



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PPMIF@AOL.COM



PRODUCT:
E544
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI
NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
TEL.: (239) 278-3066 - FAX: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

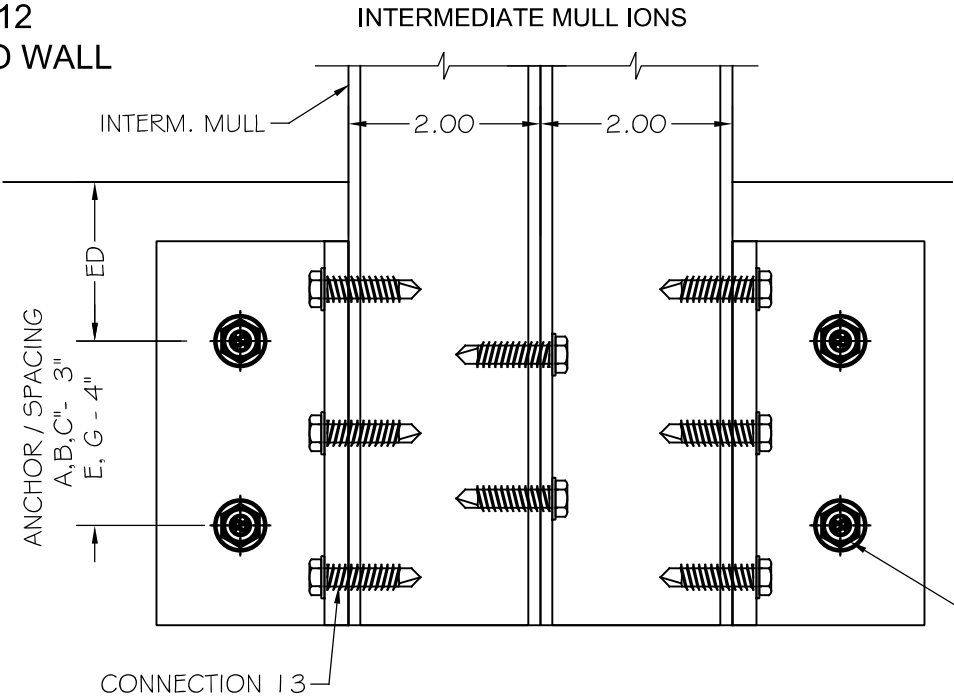
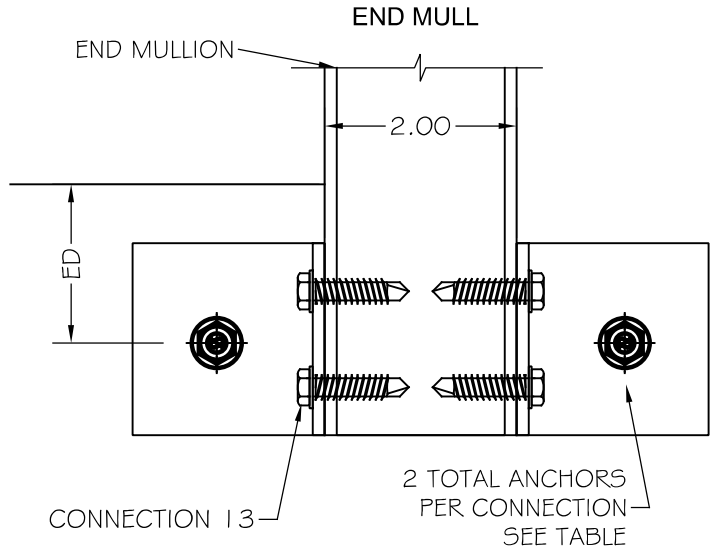
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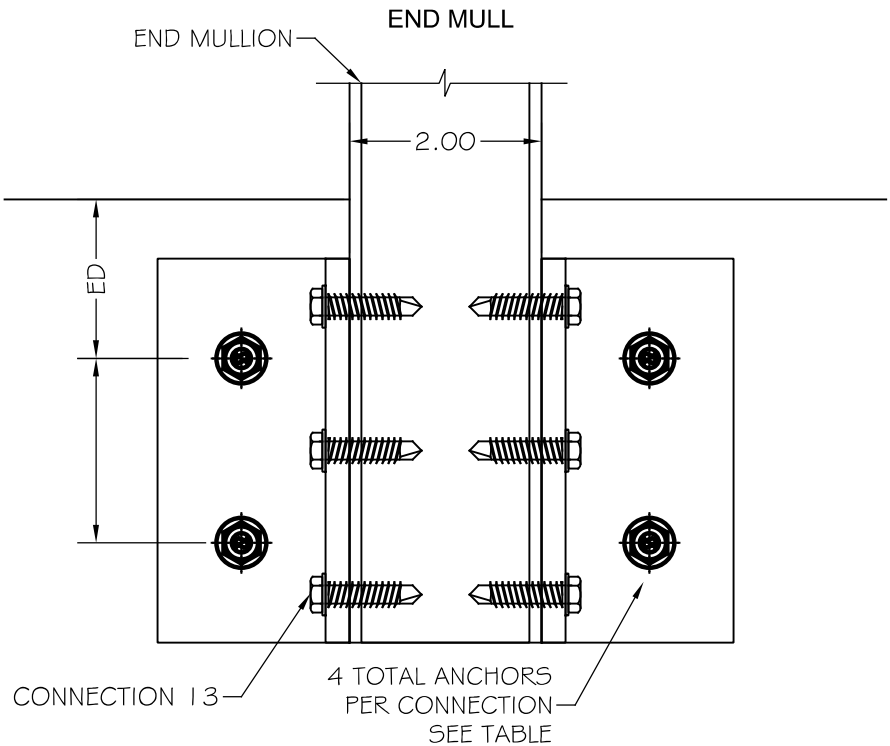
CONNECTION 12
CLIP ANCHORED TO WALL



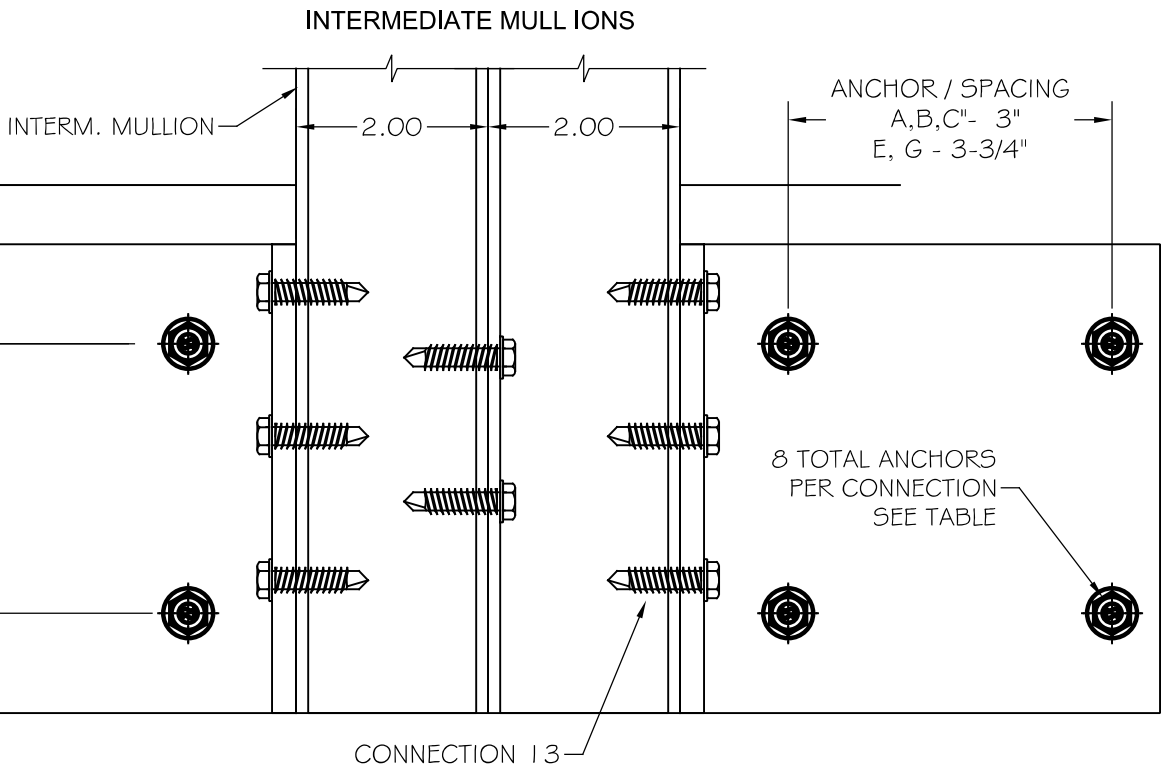
MULL TYPE	TOTAL # OF ANCHOR				
	A	B	C	G	E
2X2	4	8	4	4	4
2X3	4	-	4	4	8
2X4	8	-	8	8	-
2X5	8	-	8	8	-
2X6	8	-	8	8	-

4 TOTAL ANCHORS
PER CONNECTION
SEE TABLE

MULL TYPE	TOTAL # OF ANCHOR				
	A	B	C	G	E
2X2	2	4	2	2	2
2X3	2	-	2	2	4
2X4	4	-	4	4	-
2X5	4	-	4	4	-
2X6	4	-	4	4	-



ANCHORS TO BE DESIGNED BASED ON
THE MINIMUM MULLION SIZE SELECTED
FROM TABLES 7 AND 8.

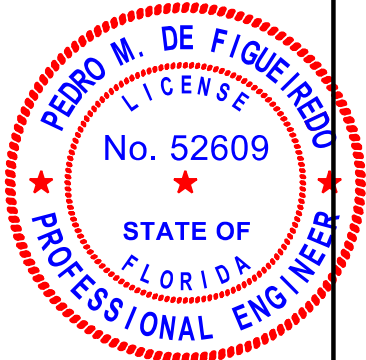


ANCHOR SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 p _{si} CONCRETE
B	1/4" ss TAPCON	ITW	1 1/4"	2 1/2"	HOLLOW BLOCK
C	1/4"-14 ss HHSMs	GENERIC	1 1/2"	1"	WOOD (SG>=.46)
E	5/16" TAPCON	ITW	1 1/4"	4"	HOLLOW BLOCK
G	5/16" TAPCON	ITW	2 1/4"	2 1/2"	3000 p _{si} CONCRETE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
- 2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
- 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL



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PE 52609
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PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
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NORTH AMERICA
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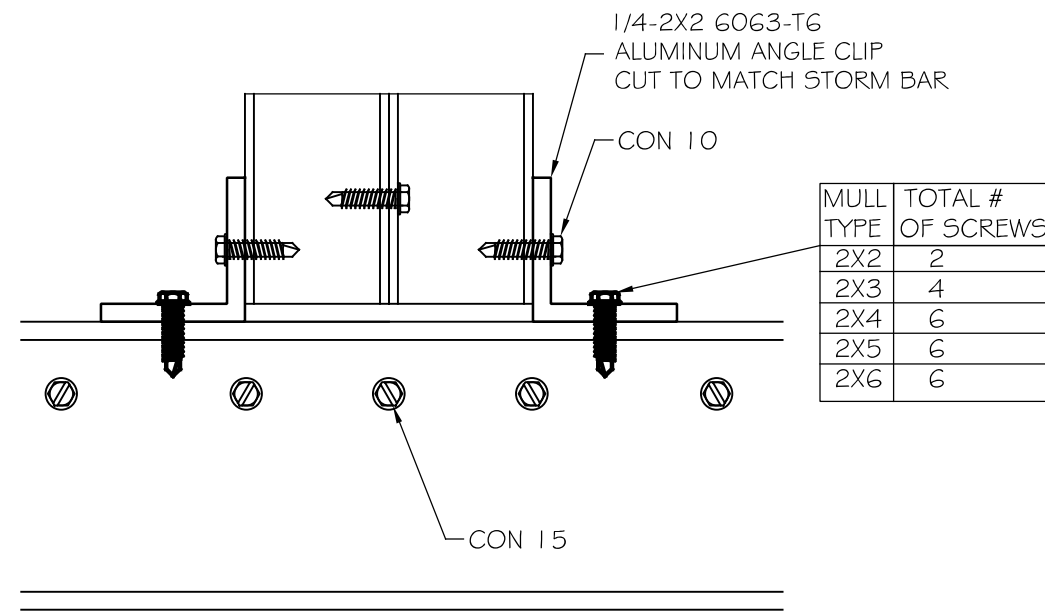
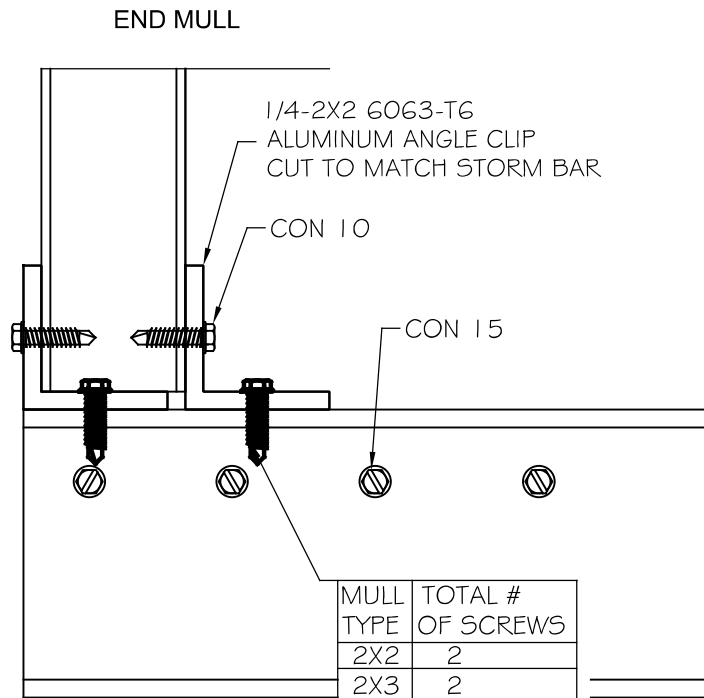
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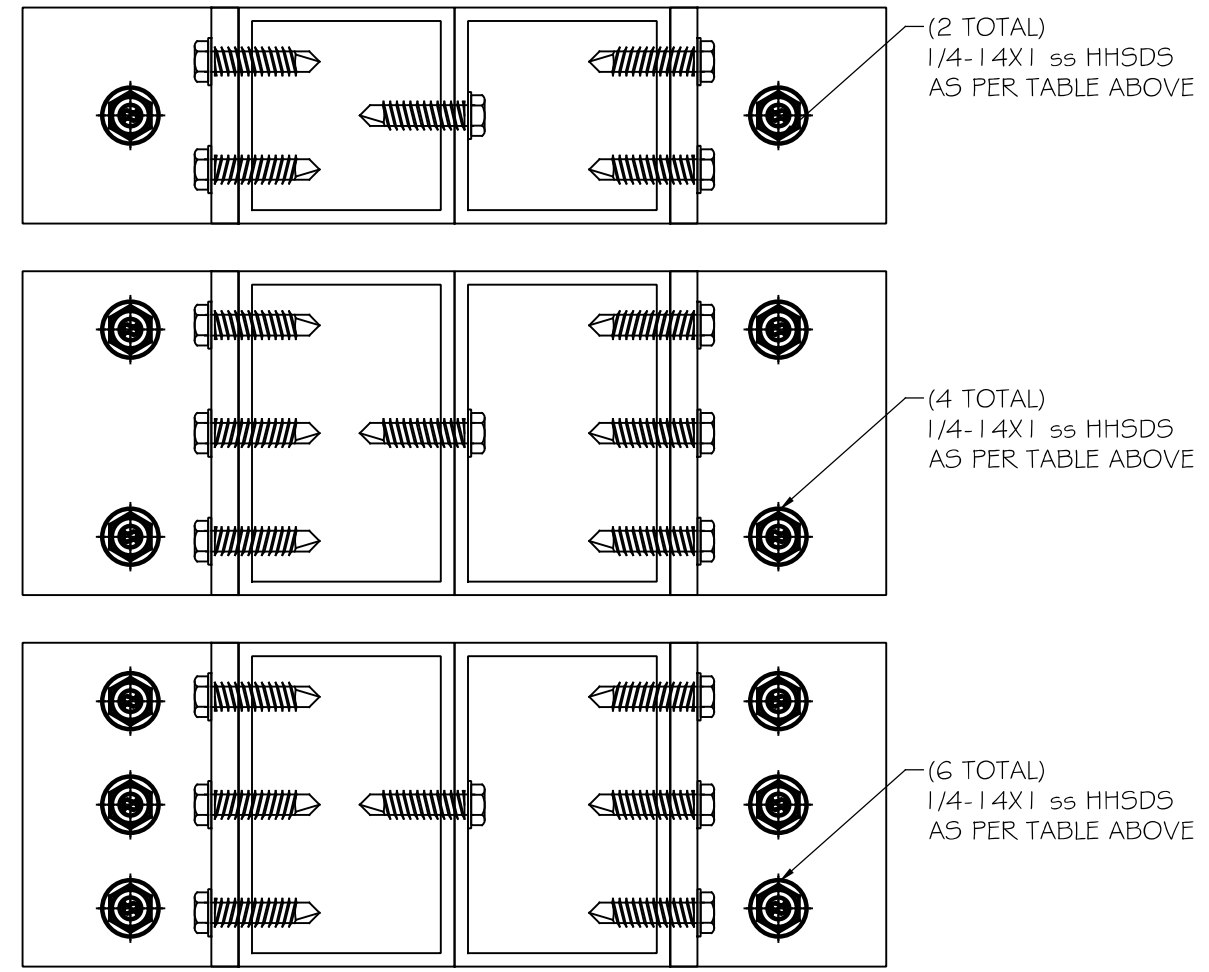
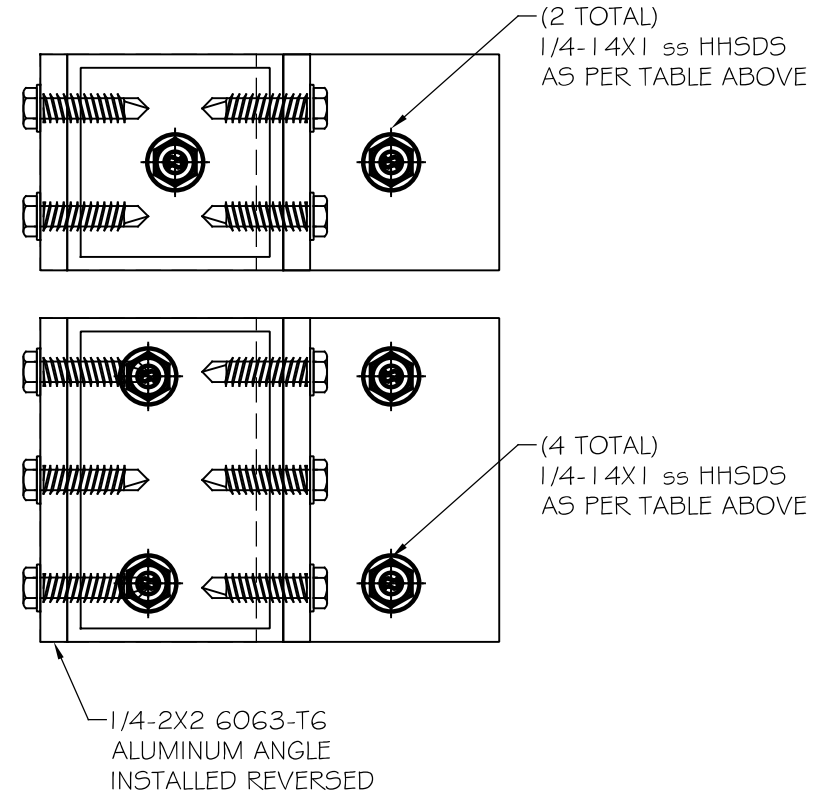
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26-171

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CONNECTION 14
CLIP ANCHORED TO BUILT-OUT TUBE



ANCHORS TO BE DESIGNED BASED ON THE MINIMUM MULLION SIZE SELECTED FROM TABLES 7 AND 8.



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PRF Inc.

PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
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EMAIL: INFO@CROCIUSA.COM

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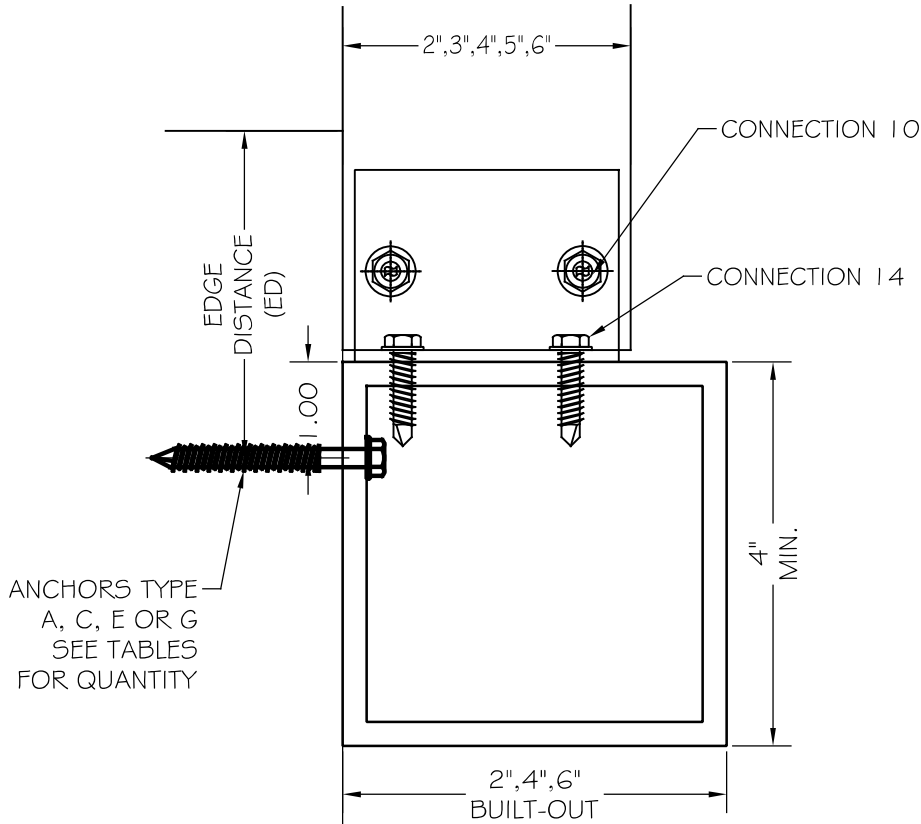
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CONNECTION 15
BUILT-OUT WALL ANCHORAGE
SUPPORTING MULLIONS

CONNECTION 15 -- INTERMEDIATE MULL
MIN. NUMBER OF ANCHORS
TO SECURE BUILT-OUT TUBE TO WALL

MULL BARS	ANCHOR TYPE				
	A	B	C	E	G
2x2	4	10	4	6	3
2x3	6	-	6	9	5
2x4	9	-	9	-	8
2x5	-	-	-	-	10
2x6	-	-	-	-	10



	ANCHOR TYPE			
	A	C	E	G
S	3.0	3.0	4.0	4.0
ED	2.5	1.0	4.0	4.0

S - ANCHOR SPACING
ED - EDGE DISTNCE

ANCHOR SCHEDULE

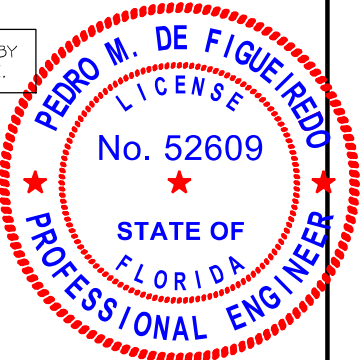
TYPE	DESCRIPTION	MANUFACTURER	EMBEDMENT	ED	BASE MATERIAL
A	1/4" ss TAPCON	ITW	1 3/4"	2 1/2"	3000 psi CONCRETE
C	1/4"-14 ss HHSMs	GENERIC	1 1/2"	1"	WOOD (SG>=.46)
E	5/16" TAPCON	ITW	1 1/4"	4"	HOLLOW BLOCK
G	5/16" TAPCON	ITW	2 1/4"	2 1/2"	3000 psi CONCRETE

ANCHOR NOTES:

- 1- 1/4" TAPCONS CAN BE USED AS TYPE C INTO WOOD
- 2- 1/4" CARBON STEEL TAPCONS CAN BE USED AS AN ALTERNATE TO THE STAINLESS STEEL
- 3- METAL STRUCTURES ARE MADE OF MINIMUM 6063-T6 ALUMINUM OR ASTM A36 STEEL

ANCHORS TO BE DESIGNED BASED ON
THE MINIMUM MULLION SIZE SELECTED
FROM TABLES 7 AND 8.

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PE 52609
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PRODUCT:
E555 - E544
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

MANUFACTURER:
CROCI
NORTH AMERICA
11600 ADELMO LANE FORT MYERS, FL 33966
TEL.: (239) 278-3066 - FAX: (239) 278-5977
EMAIL: INFO@CROCIUSA.COM

SCALE:

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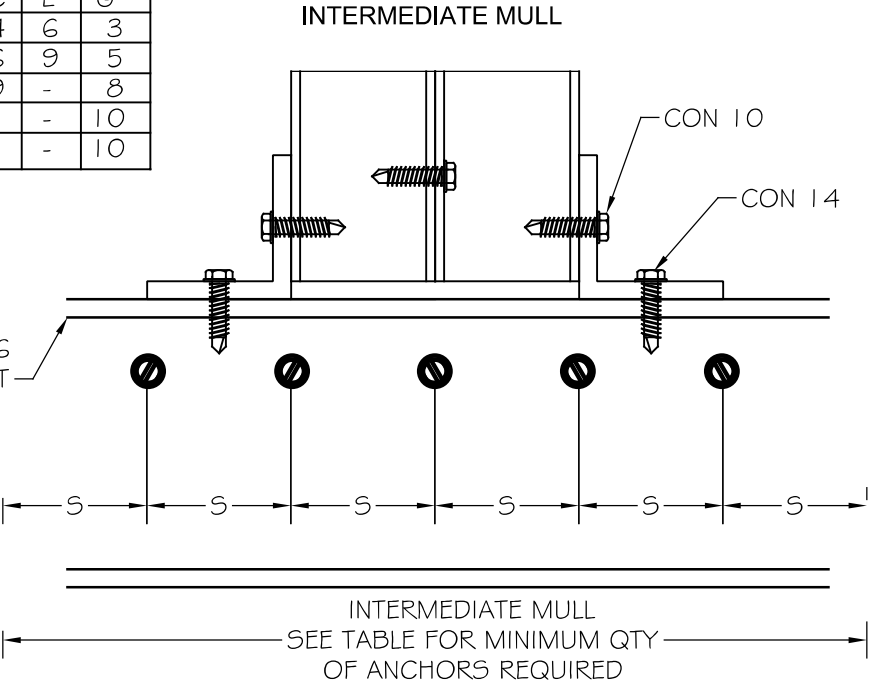
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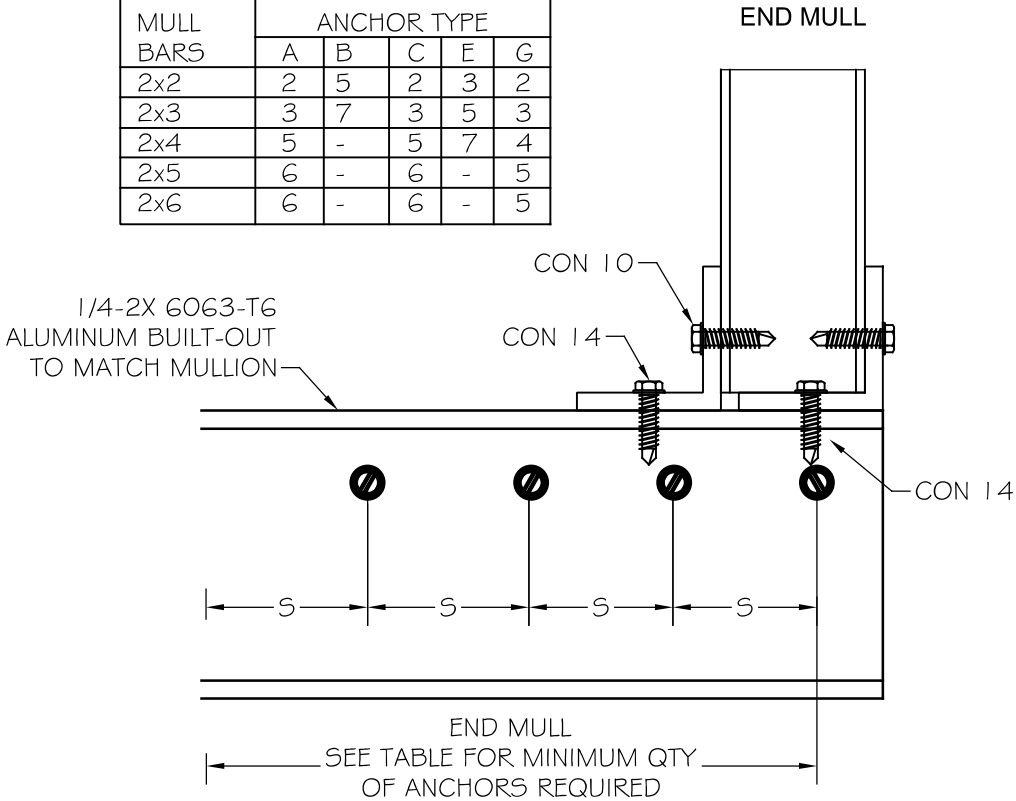
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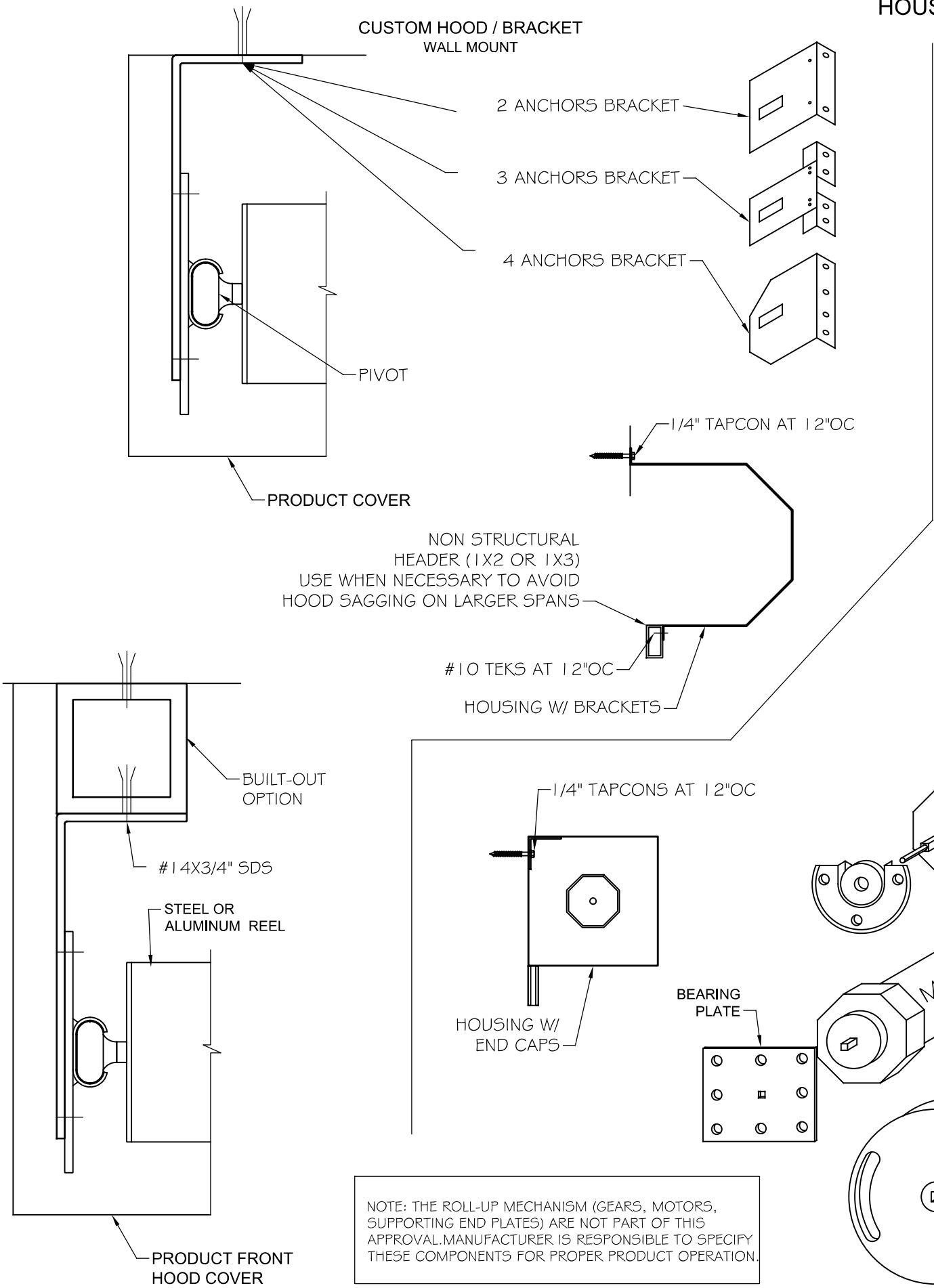


CONNECTION 15 -- END MULL
MIN. NUMBER OF ANCHORS
TO SECURE BUILT-OUT TUBE TO WALL

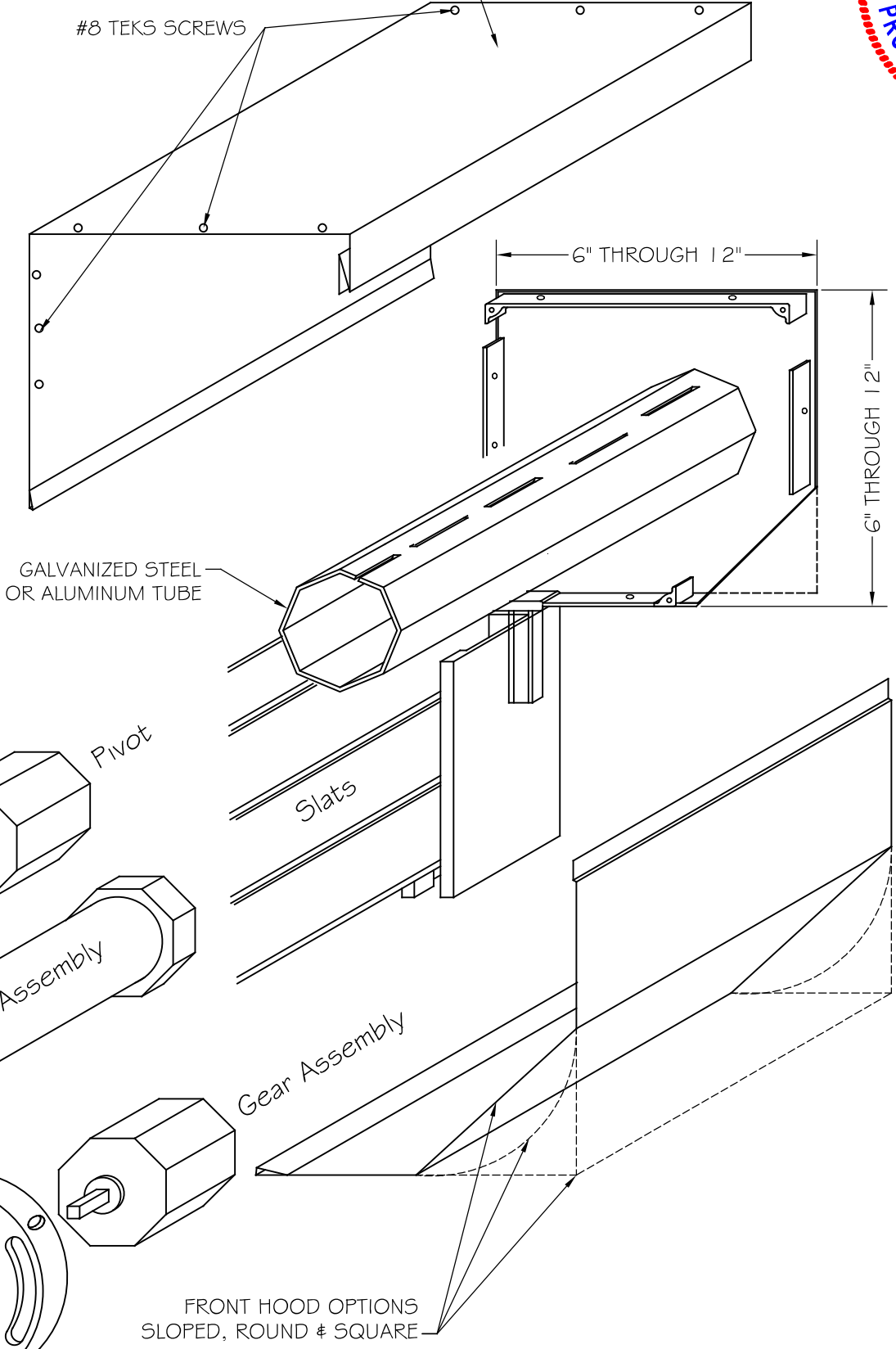
MULL BARS	ANCHOR TYPE				
	A	B	C	E	G
2x2	2	5	2	3	2
2x3	3	7	3	5	3
2x4	5	-	5	7	4
2x5	6	-	6	-	5
2x6	6	-	6	-	5



HOUSING ASSEMBLY



MINIMUM HOUSING THICKNESS
 $t \geq 0.04"$ FOR 8" OR GREATER HOUSING
 $t = 0.032$ FOR 8" OR LESSER HOUSING



Pedro De Figueiredo
PE 52609
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ENGINEERING SERVICES CA 32459 9715 W. BROWARD BLVD. 247 PLANTATION, FL 33324 PPMIF@AOL.COM		PRODUCT: E555 - E544 EXTRUDED ALUMINUM ROLLING SHUTTER LARGE & SMALL MISSILE IMPACT RATED	
		MANUFACTURER: CROCI NORTH AMERICA 11600 ADELMO LANE FORT MYERS, FL 33966 TEL.: (239) 278-3066 - FAX: (239) 278-5977 EMAIL: INFO@CROCIUSA.COM	SCALE: NA DATE: 08/28/2026 DRAWING # 26-171 SHEET 18 OF 19

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PEDRO M. DE FIGUEIREDO

LICENSE

No. 52609

STATE OF FLORIDA

PROFESSIONAL ENGINEER

Pedro De Figueiredo

PE 52609

08/28/2026

ENGINEERING SERVICES

CA 32459

9715 W. BROWARD BLVD. 247

PLANTATION, FL 33324

PPMIF@AOL.COM

ENGINEER SEAL

PEDRO DE FIGUEIREDO

PE 52609

ANCHOR DATA						FBC 2026 SECTION 1711 COMPLIANCE
MARK	MANUFACTURER	DESCRIPTION	SUBSTRATE	EMB.	ED	
A	ITW BUILDEX	1/4" TAPCONS 410 SS	3 Ksi CONCRETE	1.75	2.5	1711.1.1.2
	ITW BUILDEX	1/4" TAPCONS CARBON STEEL	3 Ksi CONCRETE	1.75	2.5	1711.1.1.2
	DEWALT	1/4" AGGRE-GATORS	3 Ksi CONCRETE	1.75	2.5	1711.1.1.1
B	ITW BUILDEX	1/4" TAPCONS 410 SS	C-90 HOLLOW CMU	1.25	2.5	1711.1.1.2
	ITW BUILDEX	1/4" TAPCONS CARBON STEEL	C-90 HOLLOW CMU	1.25	2.5	1711.1.1.2
	DEWALT	1/4" AGGRE-GATORS 300 SERIES	C-90 GF CMU	2	4	1711.1.1.1
C	GENERIC	1/4-14 HHSMS 300 SS	WOOD W/ SG>=0.46	1.5	1	1711.1.1.1
	DEWALT	1/4" AGGRE-GATORS 300 SERIES	WOOD W/ SG>=0.46	1.5	1	1711.1.1.1
	ITW BUILDEX	1/4" TAPCONS 410 SS	WOOD W/ SG>=0.46	1.5	1	1711.1.1.2
	ITW BUILDEX	1/4" TAPCONS CARBON STEEL	WOOD W/ SG>=0.46	1.5	1	1711.1.1.2
D	GENERIC	1/4-14 HHSMS 300 SS	1/8" METAL	3 TREADS	0.75	1711.1.1.1
	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	ITW BUILDEX	5/16" ITW TAPCONS XL	C-90 HOLLOW CMU	1.25	4	1711.1.1.2
F	THE HILLMAN GROUP	1/4-20 SOLID SET 300 SS	3 Ksi CONCRETE	1	2.5	1711.1.1.1
G	ITW BUILDEX	5/16" ITW TAPCONS XL	3 Ksi CONCRETE	2.25	2.5	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- ANCHORS CAN BE CONSIDERED EXTERIOR OPEN OR PARTIALLY SHELTERED EXPOSED AS PER SECTION 1711 OF THE FBC
5- SITE SPECIFIC MAY BE REQUIRED FOR CONDITIONS MEETING SECTION 1711.1.1.1 (WITHIN 300 FEET FROM SALTWATER ENVIRONMENTS).

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



PRODUCT: ES55 - ES44
EXTRUDED ALUMINUM ROLLING SHUTTER
LARGE & SMALL MISSILE
IMPACT RATED

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