



**GENERAL NOTES:**

1. THIS SYSTEM HAS BEEN TESTED AND EVALUATED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE EIGHTH EDITION (2023), FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, AND THE INTERNATIONAL BUILDING CODE (IBC) AND INTERNATIONAL RESIDENTIAL CODE (IRC). THIS SYSTEM MEETS MISSILE LEVEL "D". SEE PRODUCT EVALUATION REPORT FOR MORE INFORMATION.
2. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7 AND CHAPTER 1609 OF THE FLORIDA BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
3. TESTING WAS CONDUCTED IN ACCORDANCE WITH TAS 201/202/203 AND ASTM E1886/E1996/E330.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. THIS SYSTEM HAS BEEN DESIGNED WITH NO SEPARATION FROM GLAZING REQUIRED FOR ALL WIND ZONES, IN ACCORDANCE WITH ASTM E1996. IT IS ACCEPTABLE BY CODE UNLESS OPTIONAL CRITERIA IS INDEPENDENTLY ADOPTED BY THE AUTHORITY HAVING JURISDICTION.
6. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THESE PRODUCTS. WIND LOAD DURATION FACTOR  $C_d = 1.6$  WAS USED FOR WOOD ANCHOR DESIGN.
7. DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH ASCE 7-16, A DIRECTIONALITY FACTOR OF  $K_d = 0.85$  SHALL BE USED.
8. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE.
9. THESE INSTALLATION INSTRUCTIONS ARE PART OF A PRODUCT APPROVAL EVALUATION AND SHALL ONLY BE USED IN CONJUNCTION WITH THE EVALUATION REPORT SUBMITTED FOR THE SAME PRODUCT APPROVAL. USE OF THESE APPROVAL DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15 OF THE FLORIDA ADMINISTRATIVE CODE.
10. THESE APPROVAL DOCUMENTS ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN.
11. WHEN THE SITE CONDITIONS DEVIATE FROM THESE APPROVAL DOCUMENTS, THE BUILDING OFFICIAL MAY REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION, AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
12. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING MINIMUM INFORMATION:
13. ALL EXTRUSIONS SHOWN SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N., WITH A MINIMUM  $F_y$  OF 25 K.S.I.
14. ALL BOLTS AND WASHERS (EXCLUDING INSTALLATION) SHALL BE STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 K.S.I., U.O.N. POP RIVETS SHALL BE 1/4"Ø OR 3/16"Ø 5052 ALUM. ALLOY.
15. ALL SHUTTERS SHALL HAVE A LOCKING MECHANISM CONSISTING OF THUMBSCREW, PUSH LOCK OR BOX LOCK AT CENTER OR SIDE CLOSURE.
16. TOP AND BOTTOM DETAILS MAY BE INTERCHANGED AS FIELD CONDITIONS REQUIRE.
17. FLOOR TRACKS MAY BE REMOVABLE AT NON-STACKING LOCATIONS. USE REMOVABLE ANCHORS.
18. MOUNTING EXTRUSIONS MAY BE BENT TO FORM A CURVE WITH A MIN. RADIUS OF 10".
19. ALL DIMENSIONS SHOWN INCLUDE POWDER COATING FINISH.
20. SEALANT SHALL BE USED ON ANCHORS OR TRACKS WHEREVER WATER SEEPAGE IS POSSIBLE.
21. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED AS PRESCRIBED IN THE ABOVE-NOTED BUILDING CODE
22. THE 6.8 SYSTEM MAY BE MOUNTED WITH THE INSIDE AND OUTSIDE OF THE SHUTTER BEING REVERSED. FOR EXAMPLE: IT IS PERMISSIBLE TO MOUNT TO A WOOD OR CONCRETE BEAM WITH THE BACK OF THE SLAT FACING OUTWARD. FOR THIS CONDITION POSITIVE ALLOWABLE DESIGN PRESSURES AS NOTED IN TABLE 1 ARE IN THE DIRECTION TOWARDS THE HOST STRUCTURE AND NEGATIVE ALLOWABLE DESIGN PRESSURES ARE AWAY FROM THE HOST STRUCTURE.
23. SHUTTER MAY BE INSTALLED WITH UP TO (2) ADDITIONAL BLADES OF SLACK
24. FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
25. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO EXISTING STRUCTURE
26. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
27. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
28. FASTENERS SHALL BE CADMIUM-PLATED OR OTHERWISE CORROSION-RESISTANT MATERIAL AND SHALL COMPLY WITH "SPECIFICATIONS FOR ALUMINUM STRUCTURES" SECTION J.3.7.2 BY THE ALUMINUM ASSOCIATION IN.C, AND ANY APPLICABLE FEDERAL, STATE AND OR LOCAL CODES.
29. REFER TO FASTENER MANUFACTURER'S PUBLISHED DATA SHEETS AND RECOMMENDATIONS FOR FASTENER INSTALLATION INSTRUCTIONS.
30. ENGINEER SEAL AFFIXED HERETO VALIDATE STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
31. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
32. PRESSURE VALUES ON THIS APPROVAL ARE (ASD) ALLOWABLE DESIGN PRESSURES.
33. ALTERATIONS ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.
34. SAFEGUARDS MUST BE OBSERVED (NOT IN THIS CERTIFICATION).
35. UNITS SHALL BE LABELED IN ACCORDANCE WITH THE FLORIDA BUILDING COMMISSION AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATION.

COLBY BENNARDO, P.E.  
PE# 95197 CA# 9885

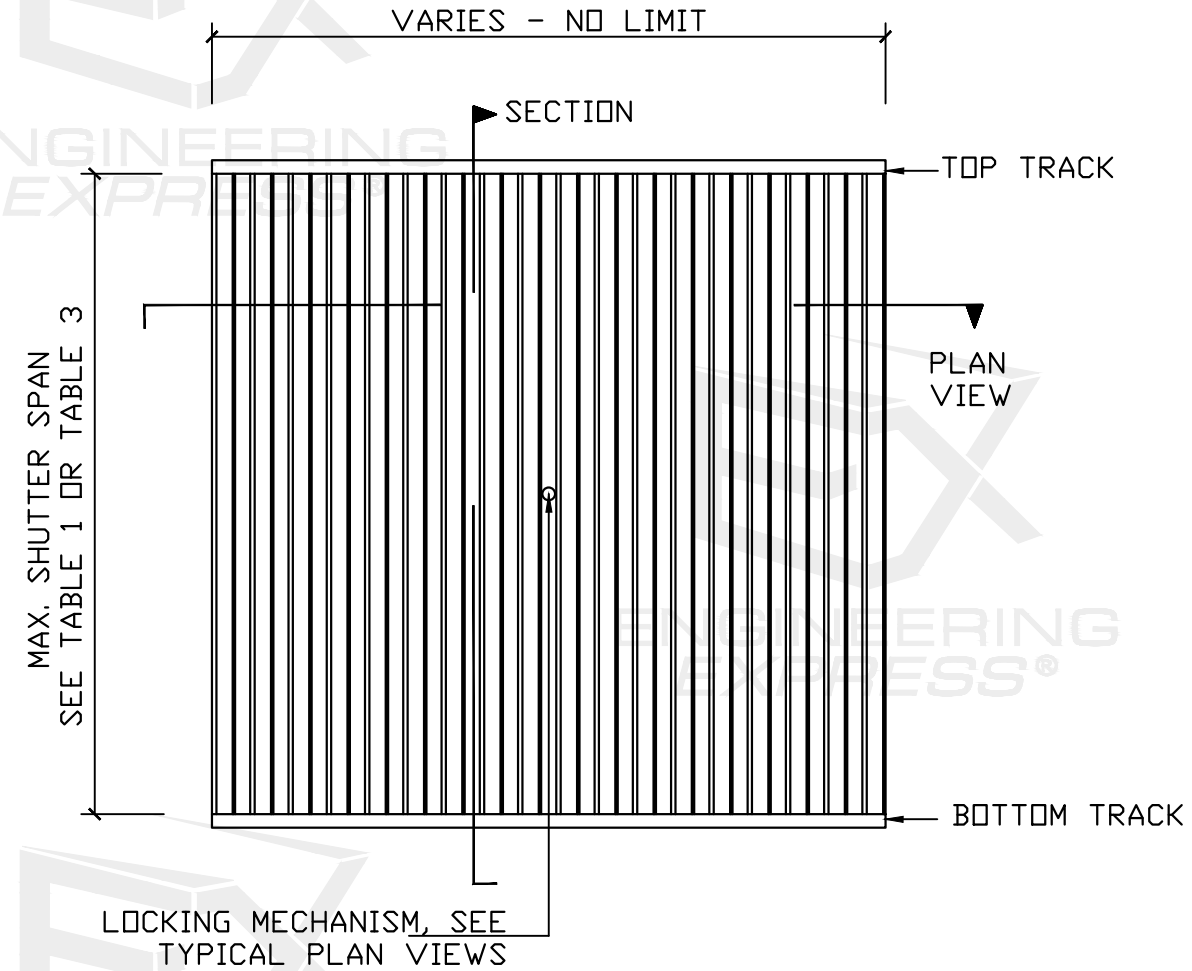
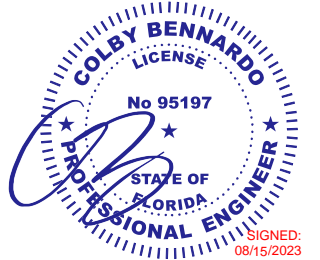
AUGUST 15, 2023

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



**TYPICAL ACCORDION SHUTTER ELEVATION**

N.T.S.

FL 13757.1

**EX ENGINEERING EXPRESS**

POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A member of the Berry Group, Inc.

400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA FL#13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156) FBC 2023	CCB	RWN	6/17/20
	MLD	CCB	08/15/23

COPYRIGHT ENGINEERING EXPRESS®

23-61154

SCALE: NTS UNLESS NOTED

2 OF 14

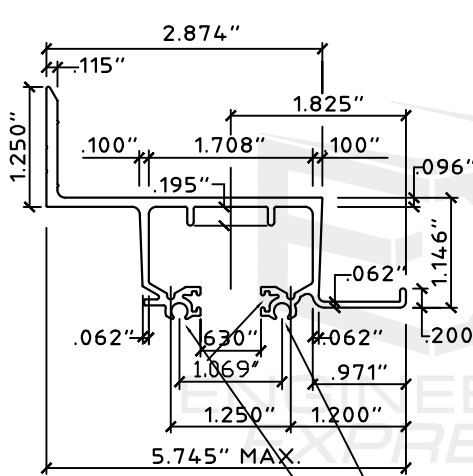
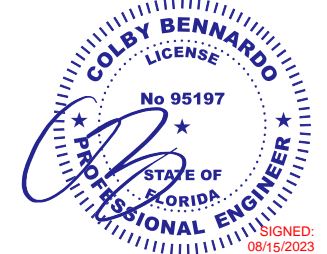
8/15/2023 11:59 AM MATTHEW c:\users\matthew\engineering\express\production - documents\projects\23-123-61154 multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154d - fl13757.1 - dwg.dwg

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

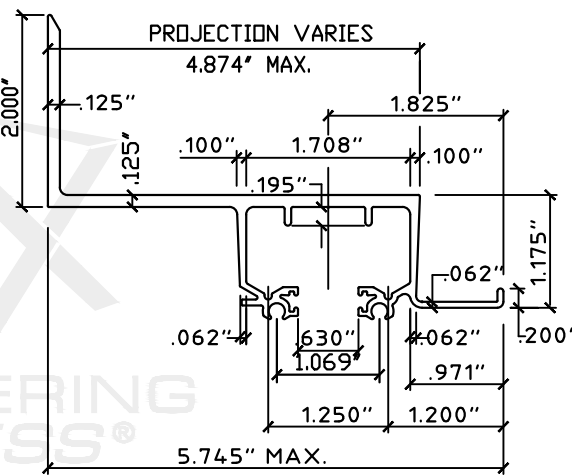
WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

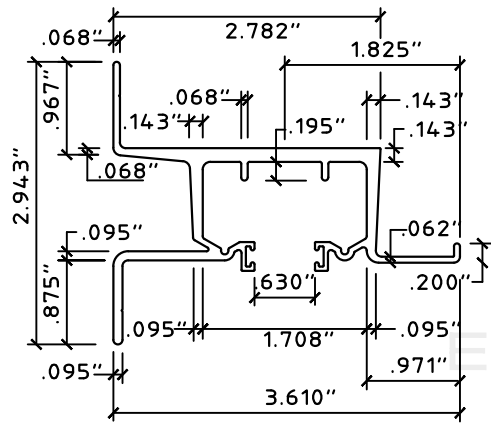
IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



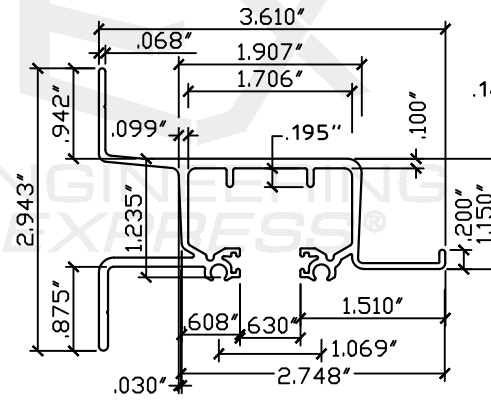
1 WALL  
SCALE: HALF SIZE



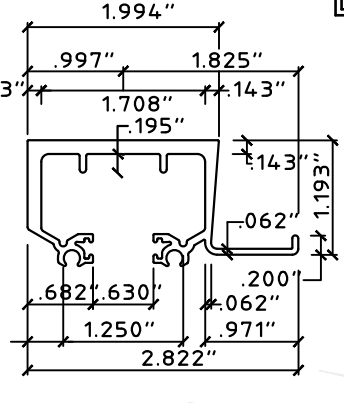
2 BUILD OUT WALL  
SCALE: HALF SIZE



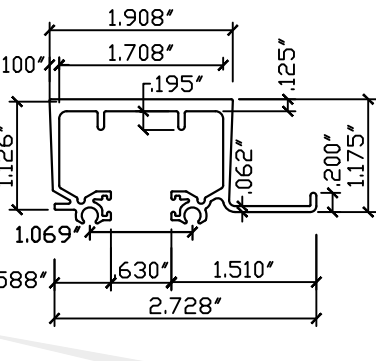
3 HEAVY 2-LEG WALL  
SCALE: HALF SIZE



4 LITE 2-LEG WALL  
SCALE: HALF SIZE

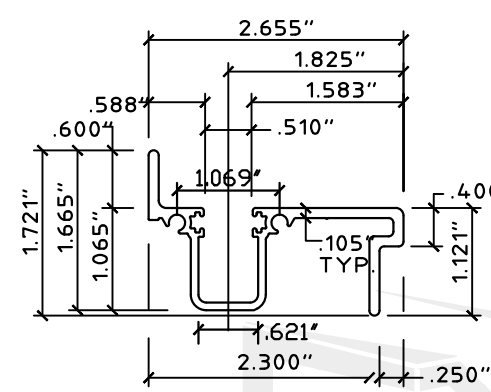


5 HEAVY HEADER/SILL  
SCALE: HALF SIZE

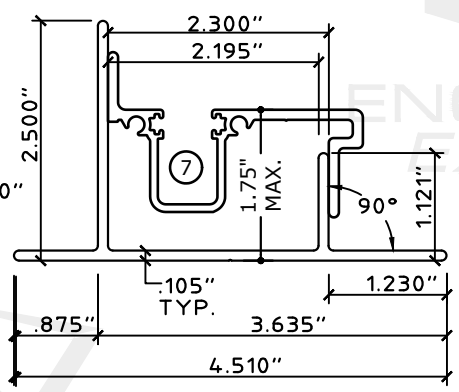


6 LITE HEADER/SILL  
SCALE: HALF SIZE

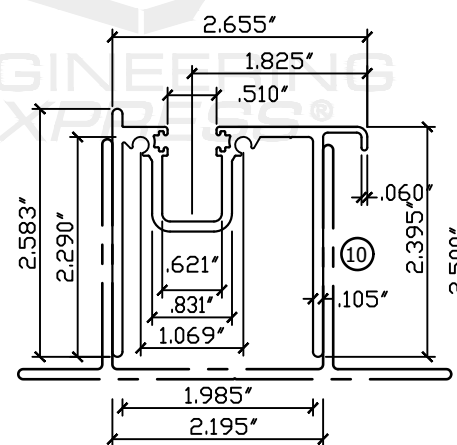
WHERE SHOWN SCREW BOSSES & FELT GROVES ARE OPTIONAL ON ALL EXTRUSIONS



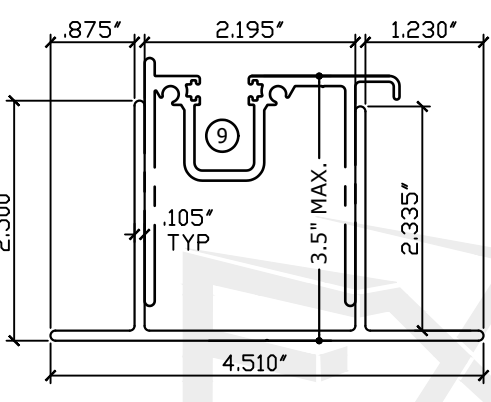
7 SILL  
SCALE: HALF SIZE



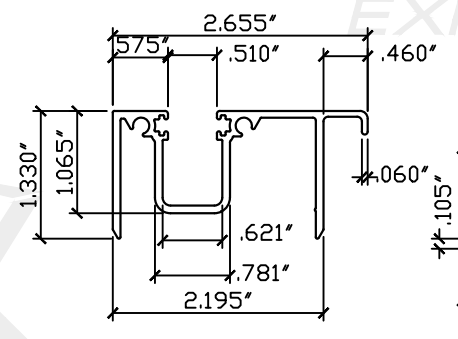
8 SILL ADAPTER  
SCALE: HALF SIZE



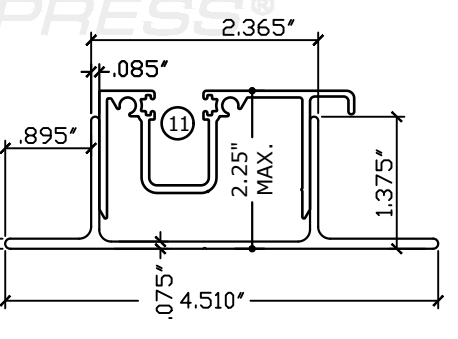
9 EXTENDED SILL  
SCALE: HALF SIZE



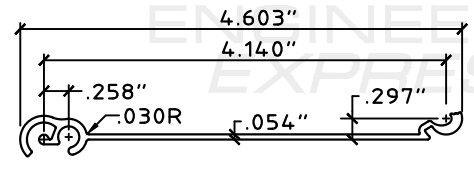
10 EXTENDED SILL ADAPTOR  
SCALE: HALF SIZE



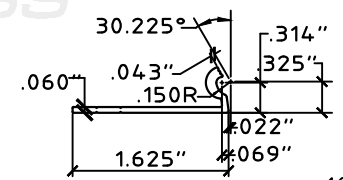
11 MID SILL  
SCALE: HALF SIZE



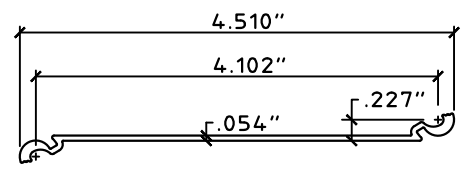
12 MID SILL ADAPTOR  
SCALE: HALF SIZE



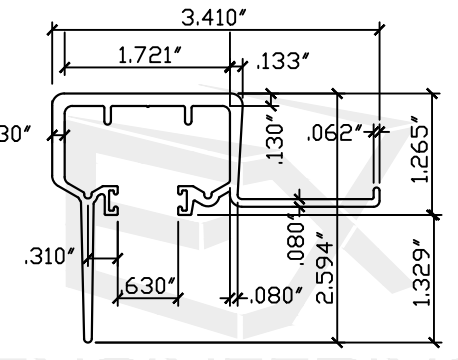
13 TYP. 6.8 SLAT/BLADE  
SCALE: HALF SIZE



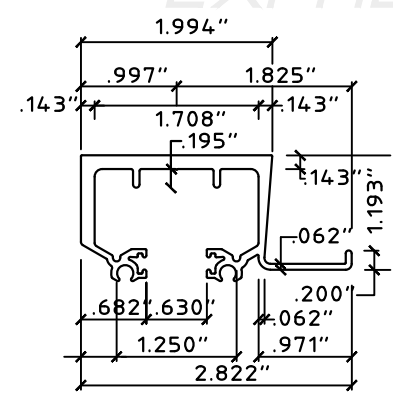
17 6.8 STARTER  
SCALE: HALF SIZE



15 6.8 STACK/CONECTOR SLAT/BLADE  
SCALE: HALF SIZE



14 CEILING HEADER/SILL  
SCALE: HALF SIZE



16 RADIUS CEILING HEADER/SILL  
SCALE: HALF SIZE

FL 13757.1

**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA FL#13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

23-61154

SCALE: NTS UNLESS NOTED

COLBY BENNARDO, P.E.  
PE# 95197 CA# 9885

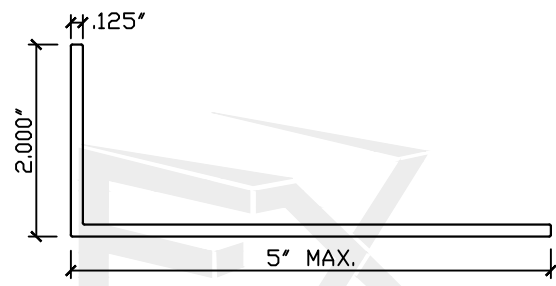
AUGUST 15, 2023

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

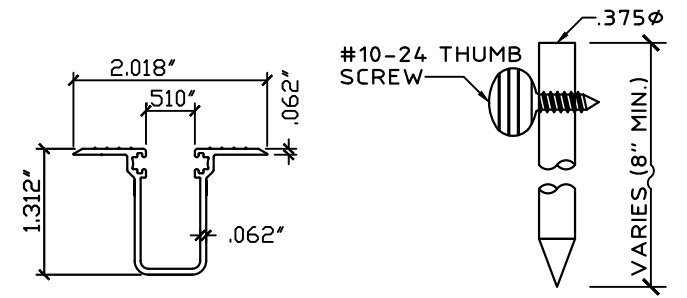
WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

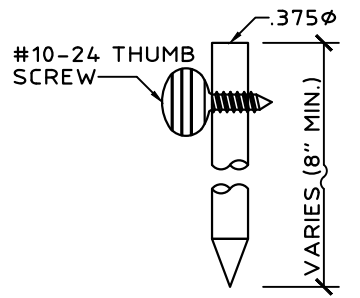
IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



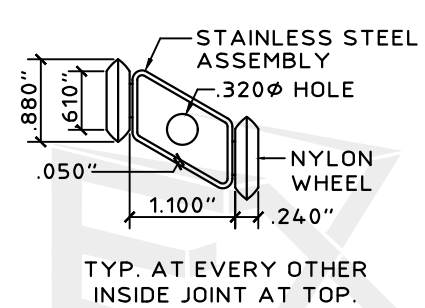
**19** ANGLE  
SCALE: HALF SIZE



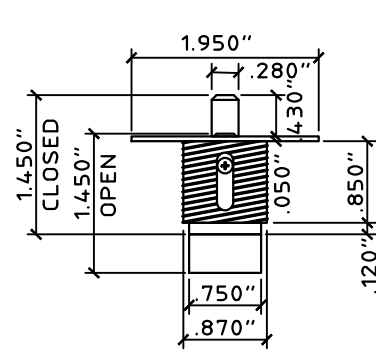
**20** RECESS SILL  
SCALE: HALF SIZE



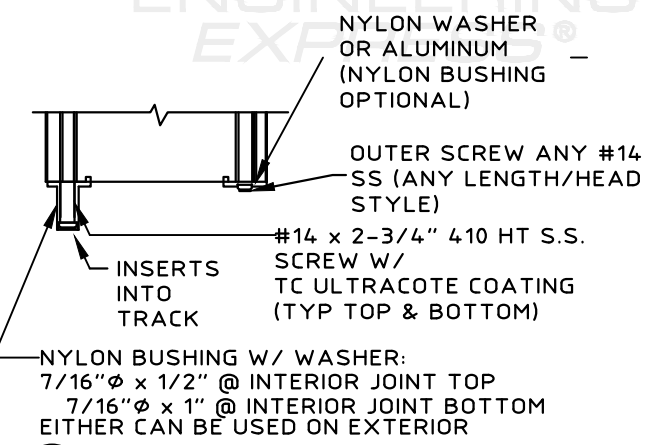
**21** SLIDE ROD  
SCALE: HALF SIZE



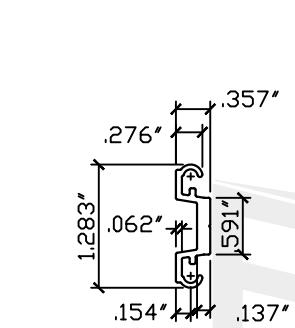
**22** ROLLER ASSEMBLY  
SCALE: HALF SIZE



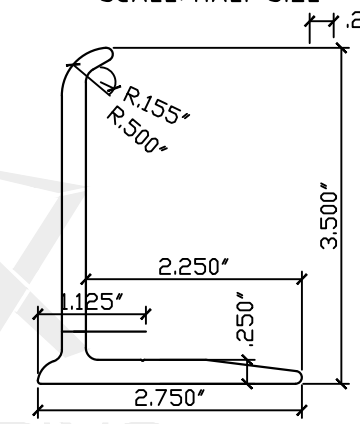
**23** BRASS PUSH LOCK  
SCALE: HALF SIZE



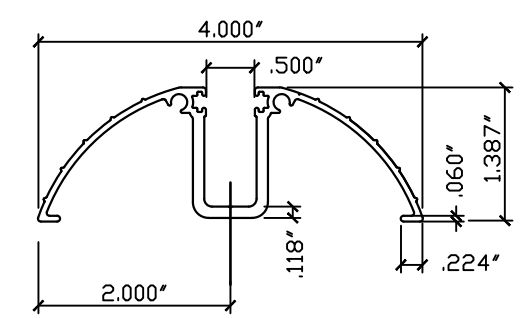
**24** BUSHING ASSEMBLY DETAIL  
SCALE: HALF SIZE



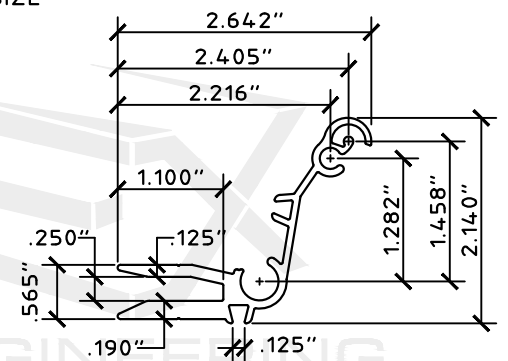
**26** BOX CENTER INSERT  
SCALE: HALF SIZE



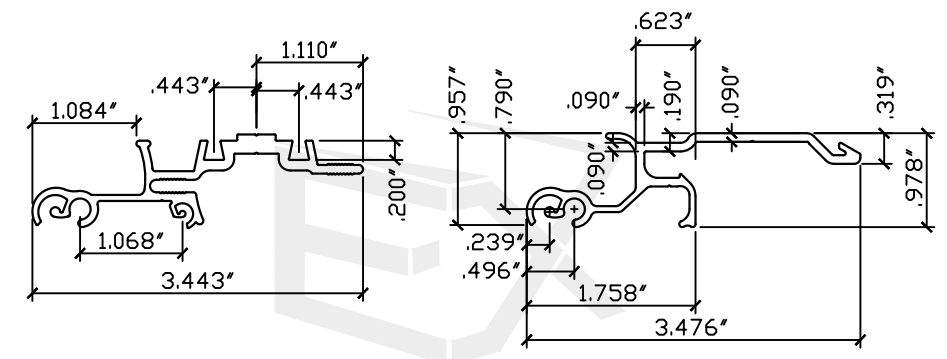
**27** RAINGUARD  
SCALE: HALF SIZE



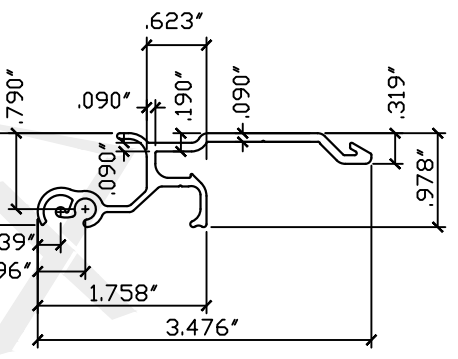
**28** DECORATIVE FLOOR TRACK  
SCALE: HALF SIZE



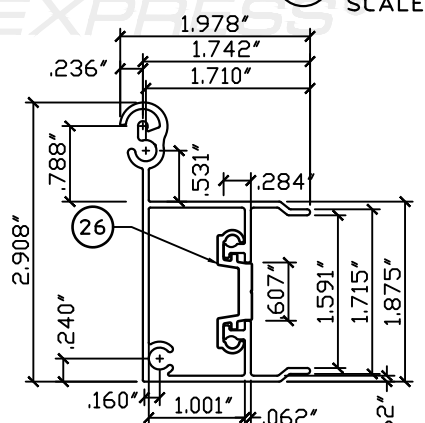
**34** INSIDE CENTER MATE  
SCALE: HALF SIZE



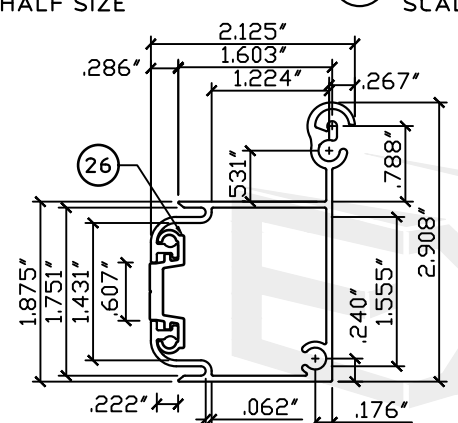
**29** 2003 6.8 CENTER MATE  
SCALE: HALF SIZE



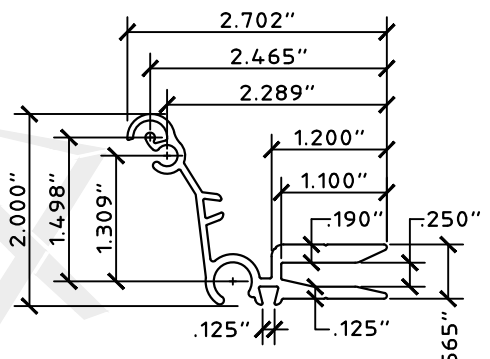
**30** UNIMATE LOCK  
SCALE: HALF SIZE



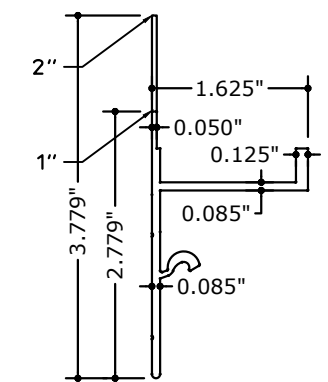
**31** MALE BOX CENTER  
SCALE: HALF SIZE



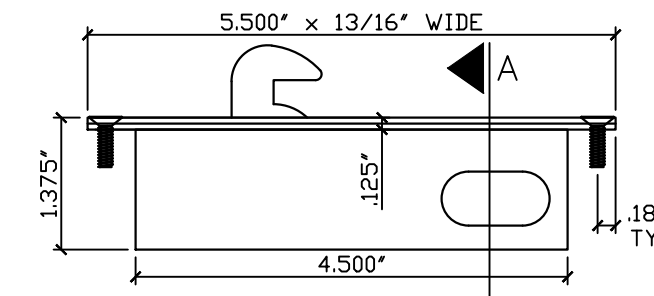
**32** FEMALE BOX CENTER  
SCALE: HALF SIZE



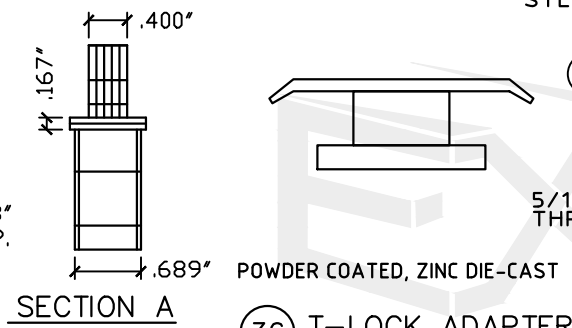
**33** OUTSIDE CENTER MATE  
SCALE: HALF SIZE



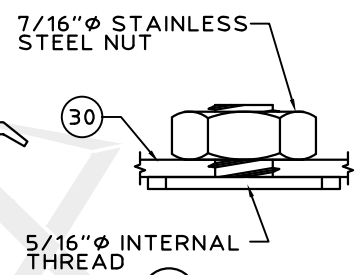
**40d** ALT. 1" OR 2" END STRIP  
SCALE: HALF SIZE



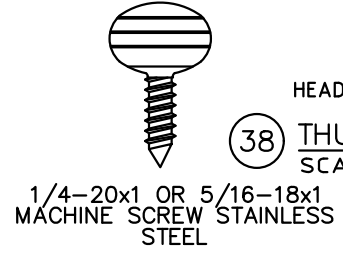
**35** BOX LOCK  
SCALE: HALF SIZE



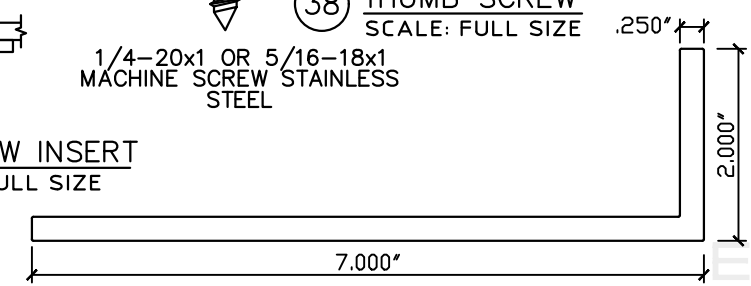
**36** T-LOCK ADAPTER (OPTIONAL)  
SCALE: HALF SIZE



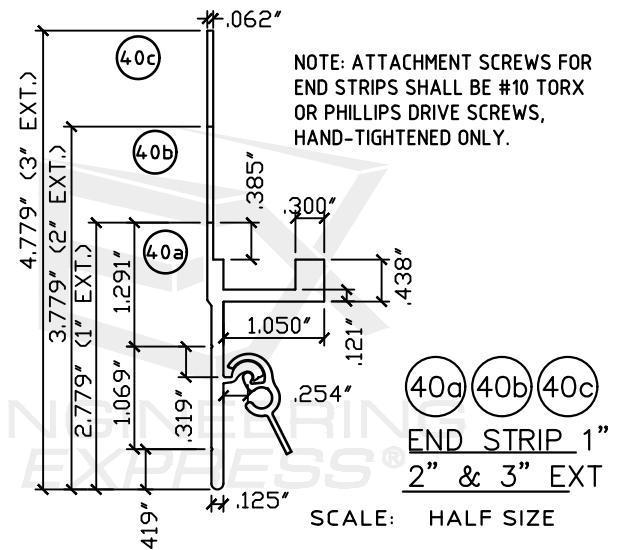
**37** T-SCREW INSERT  
SCALE: FULL SIZE



**38** THUMB SCREW  
SCALE: FULL SIZE



**39** 2X7 ANGLE  
SCALE: HALF SIZE



**40a 40b 40c** END STRIP 1" & 3" EXT  
SCALE: HALF SIZE

FL 13757.1

**ENGINEERING EXPRESS**

POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products

400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309

6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

COPYRIGHT ENGINEERING EXPRESS

23-61154

SCALE: NTS UNLESS NOTED

4 OF 14

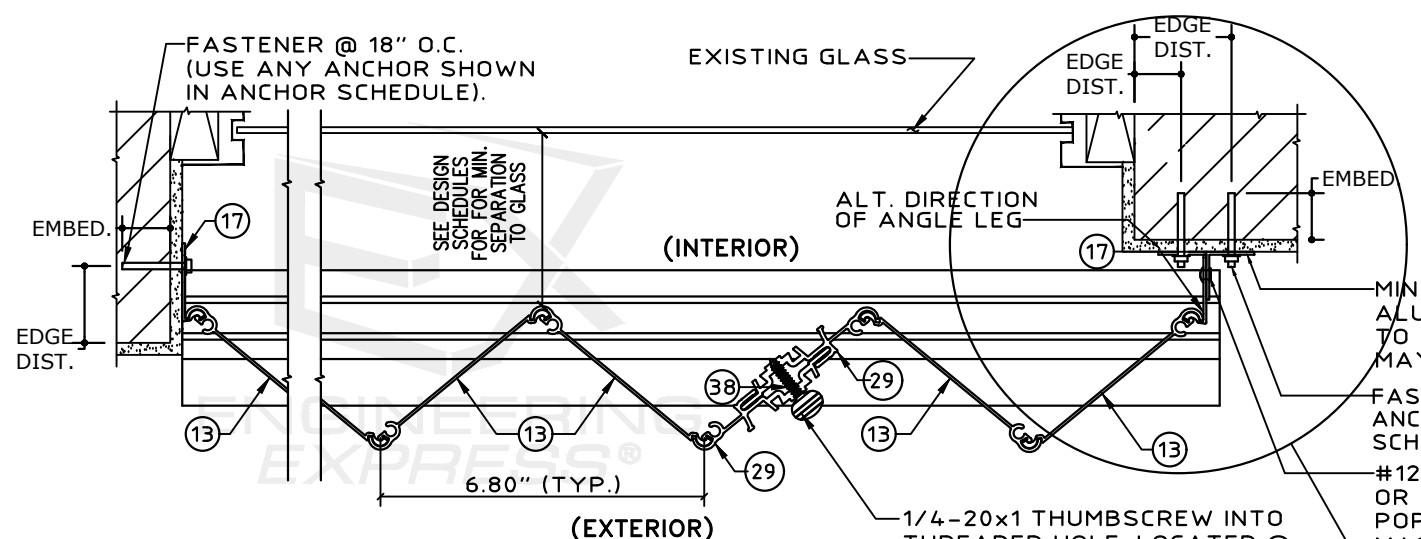
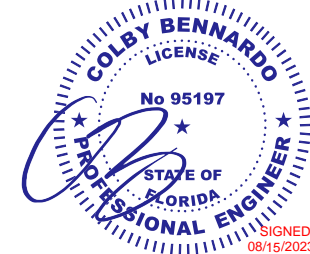
c:\users\matthew\engineering\express\production - documents\projects\23-123-61154 multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154d - fl13757.1 - dwg.dwg

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

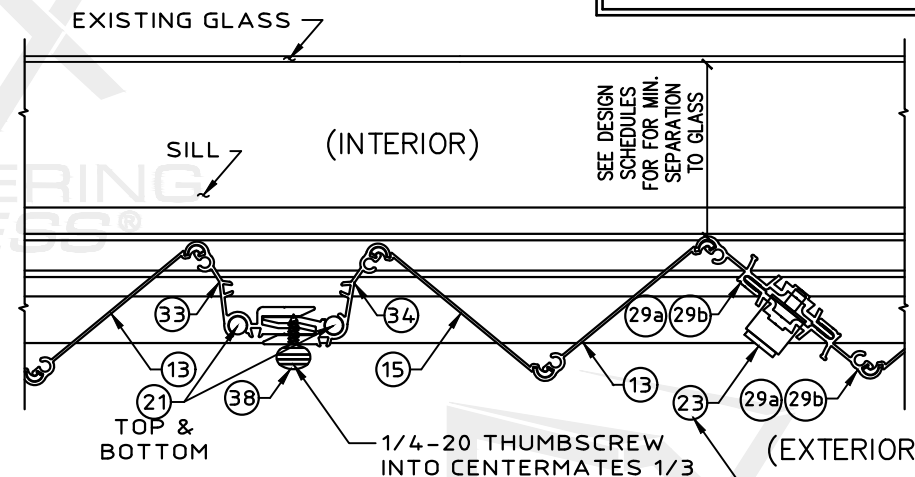
WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP

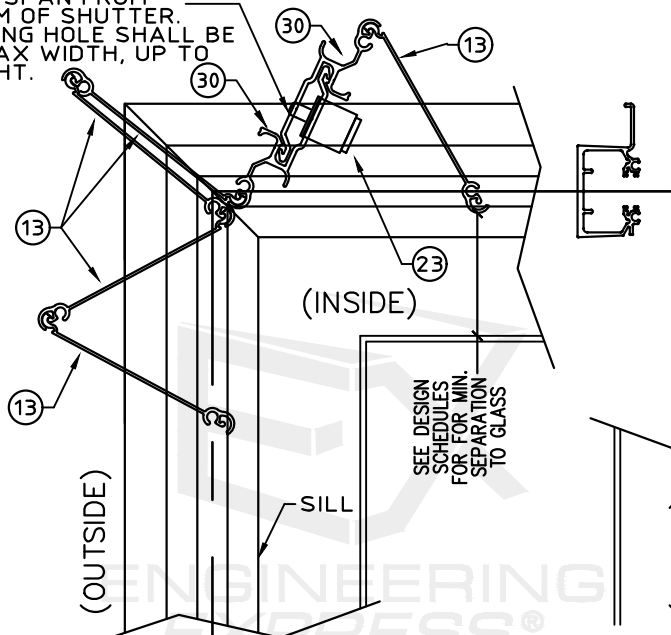


TYPICAL PLAN VIEW  
SCALE: 3" = 1'-0"



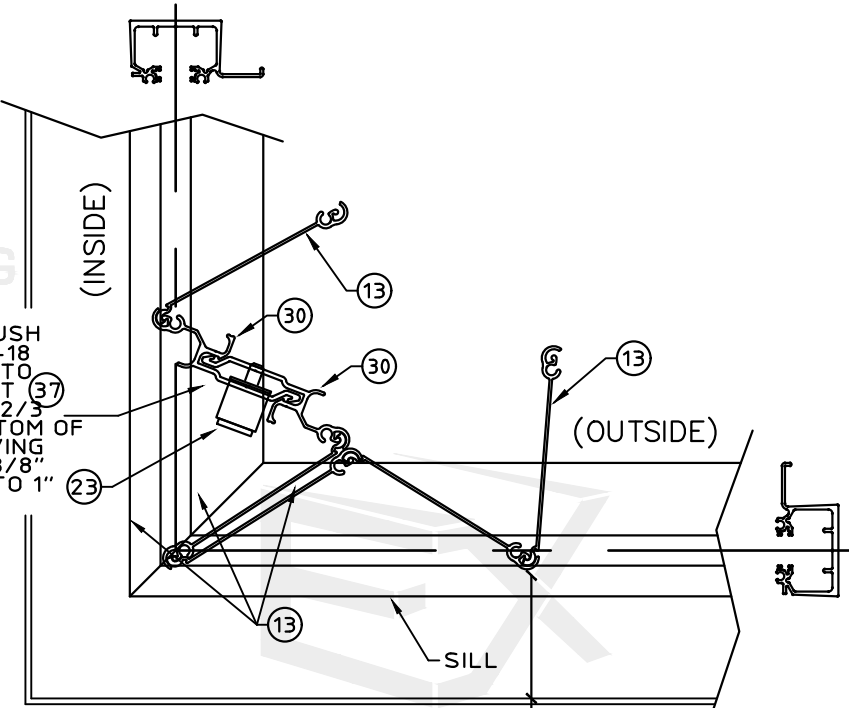
MULTIPLE SHUTTER ASSEMBLY  
SCALE: 3" = 1'-0"

USE (1) BRASS PUSH LOCK OR (1) 5/16-18 THUMB SCREW INTO THREADED INSERT (37) AT 1/3 SPAN TO 2/3 SPAN FROM BOTTOM OF SHUTTER. RECEIVING HOLE SHALL BE 3/8" MAX. WIDTH, UP TO 1" HEIGHT.



CC1 TYPICAL OUTSIDE CORNER CLOSURE DETAILS WO/CORNER POSTS

USE (1) BRASS PUSH LOCK OR (1) 5/16-18 THUMB SCREW INTO THREADED INSERT (37) AT 1/3 SPAN TO 2/3 SPAN FROM BOTTOM OF SHUTTER. RECEIVING HOLE SHALL BE 3/8" MAX. WIDTH, UP TO 1" HEIGHT.

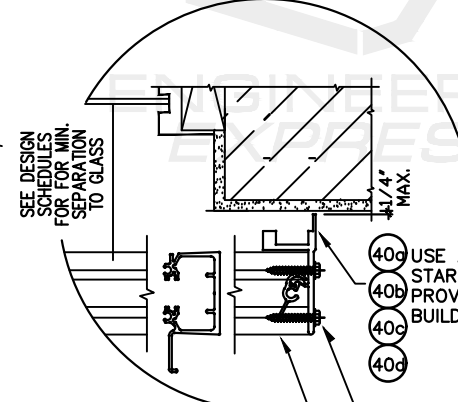


CC2 TYPICAL INSIDE CORNER CLOSURE DETAILS WO/CORNER POSTS

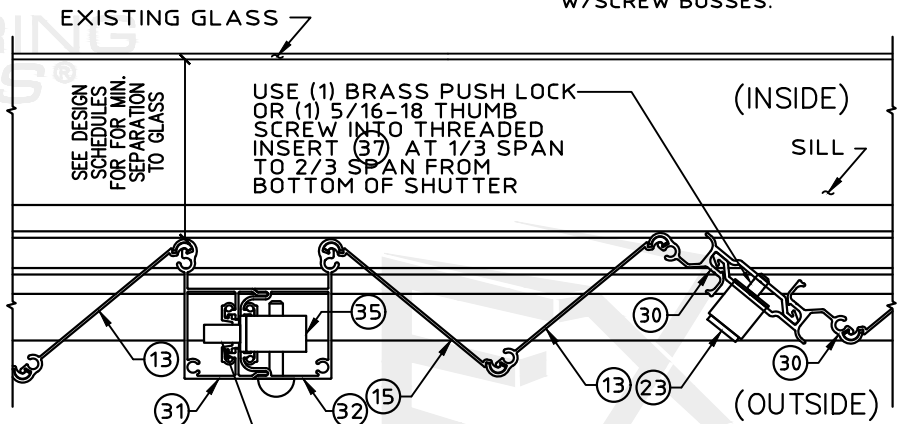
END STRIP SCHEDULE

	PSF	SPAN
1" B/O (2.7") 40a	62	108"
	72	100"
	82	94"
	112	80"
	132	75"
2" B/O (3.7") 40b	62	95"
	72	88"
	82	83"
	62	86"
	72	79"
3" B/O (4.7") 40c	82	74"
	62	110"
	72	102"
	82	95"
	112	81"
ALT. B/O 40d	132	75"
	45	93"
	52	87"
	57	83"
	60	81"
1.5"x3" x0.093" ANGLE	64	78"
	70	75"
	73	73"
	45	139"
	52	129"
	57	123"
	60	120"
	64	116"
	70	111"
	73	109"
2"x3" x0.125" ANGLE	45	145"
	52	135"
	57	129"
	60	125"
	64	121"
2"x4" x0.125" ANGLE	70	116"
	73	114"

FOR GREATER SPANS OR LOADS THAN SHOWN IN END STRIP SCHEDULE, END STRIPS REQUIRE A 1"x1" .090" CLIP ANGLE MID SPAN USING ANY ANCHOR ON THE ANCHOR SCHEDULE & #14x3/4" TEK SCREW OR 1/4-20 BOLT TO END STRIP.



ALTERNATE END STRIP DETAIL  
SCALE: 3" = 1'-0"



MULTIPLE SHUTTER ASSEMBLY  
SCALE: 3" = 1'-0"

FL 13757.1

ENGINEERING EXPRESS  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

Town & Country INDUSTRIES  
Wholesale Aluminum and Building Products  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

23-61154

SCALE: NTS UNLESS NOTED

FL 13757.1

**ENGINEERING EXPRESS**

POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A Division of Alloy Corp.

400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

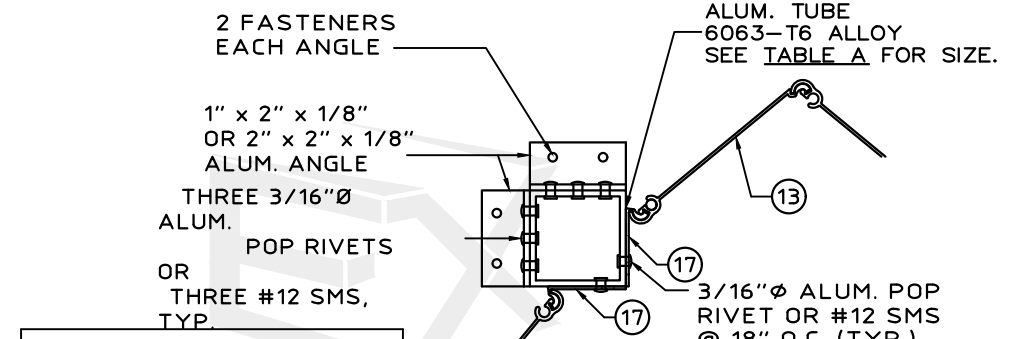
REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

COPYRIGHT ENGINEERING EXPRESS®

23-61154

SCALE: NTS UNLESS NOTED

OF 14

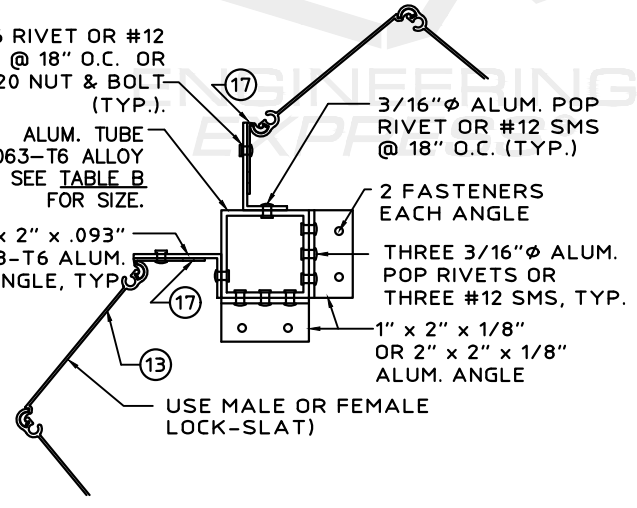


**TABLE A (CC3)**  
PRESSURE VS ALLOWABLE LENGTH

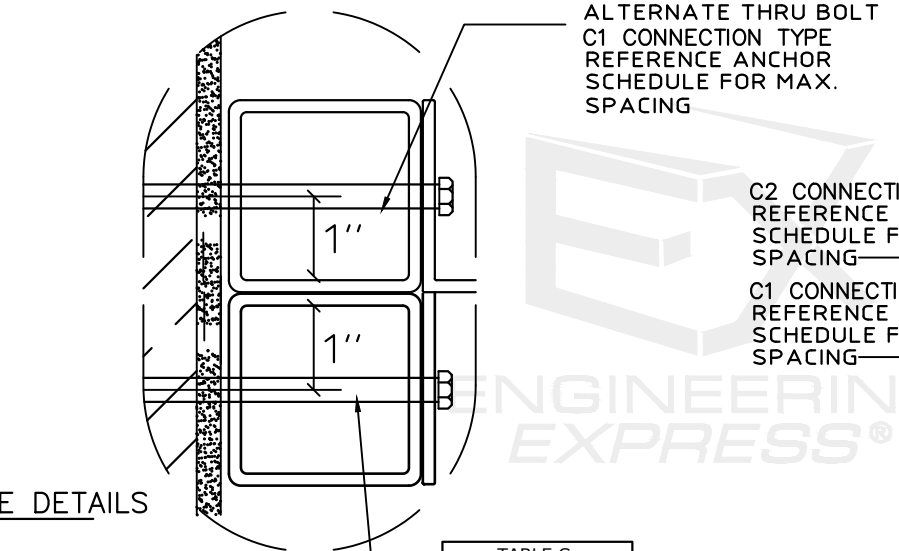
PSF	2"x2"x1/8" No B/O	3"x3"x1/8" No B/O
62	130"	188"
72	124"	179"
82	119"	172"
92	114"	165"
102	110"	160"
120	104"	147"
150	97"	131"
200	88"	114"

**TABLE B (CC4)**  
PRESSURE VS ALLOWABLE LENGTH

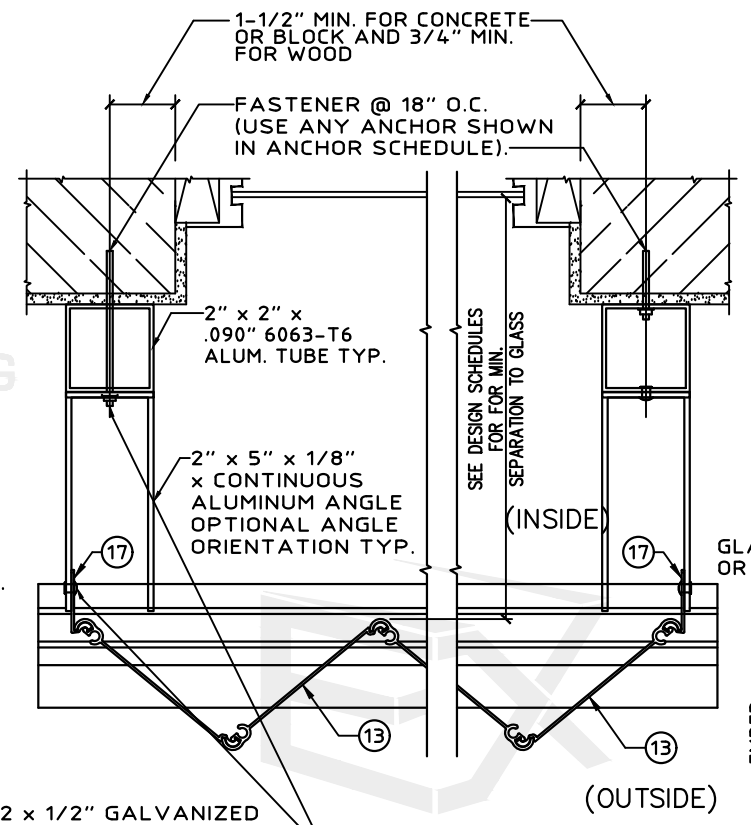
PSF	2"x2"x1/8" WITH B/O	3"x3"x1/8" WITH B/O
62	113"	166"
72	107"	157"
82	101"	147"
92	95"	139"
102	90"	132"
120	83"	122"
150	74"	109"
200	64"	94"



**CC4** TYPICAL CORNER CLOSURE DETAILS NTS



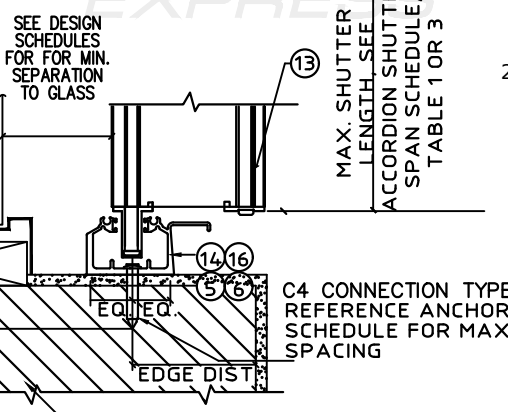
**CC3** TYPICAL CORNER CLOSURE DETAILS NTS



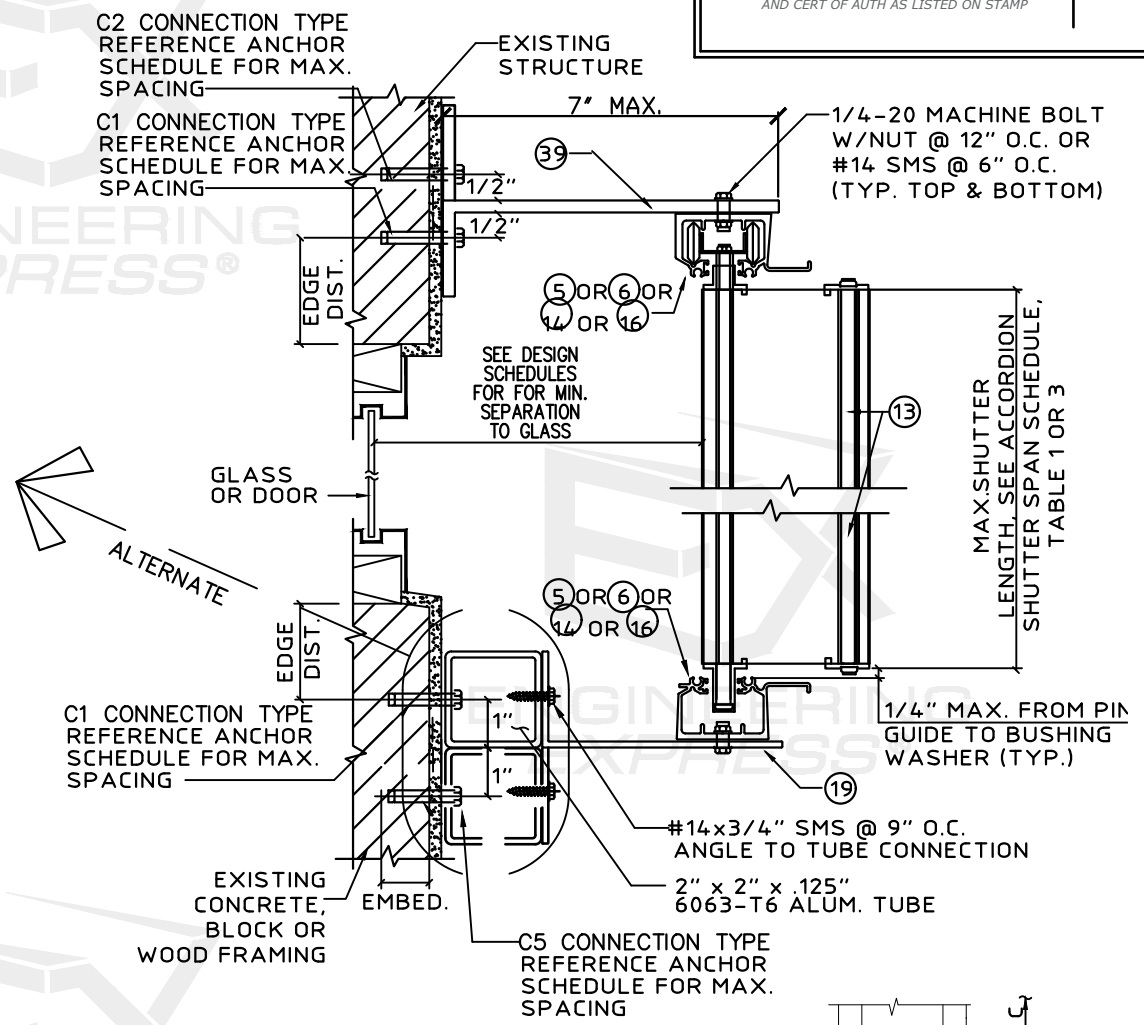
**CC4** SIDE CLOSURE OPTIONS SCALE: 3" = 1'-0"

**TABLE C: ALLOWABLE SPAN SCHEDULE FOR BUILDOUT MOUNT (DETAIL F)**

MAX SHUTTER SPAN	MAX DESIGN PRESSURE
125 IN.	+/-30.1 PSF
121 IN.	+/-31.1 PSF
118 IN.	+/-31.9 PSF
115 IN.	+/-32.7 PSF
112 IN.	+/-33.6 PSF
110 IN.	+/-34.2 PSF
107 IN.	+/-35.2 PSF
105 IN.	+/-35.9 PSF
103 IN.	+/-36.5 PSF
101 IN.	+/-37.3 PSF
99 IN.	+/-38.0 PSF
95 IN.	+/-39.6 PSF
92 IN.	+/-40.9 PSF
89 IN.	+/-42.3 PSF
86 IN.	+/-43.8 PSF
83 IN.	+/-45.4 PSF
81 IN.	+/-46.5 PSF
78 IN.	+/-48.3 PSF
76 IN.	+/-49.5 PSF
74 IN.	+/-50.9 PSF
72 IN.	+/-52.3 PSF
70 IN.	+/-53.8 PSF
68 IN.	+/-55.4 PSF
66 IN.	+/-57.0 PSF

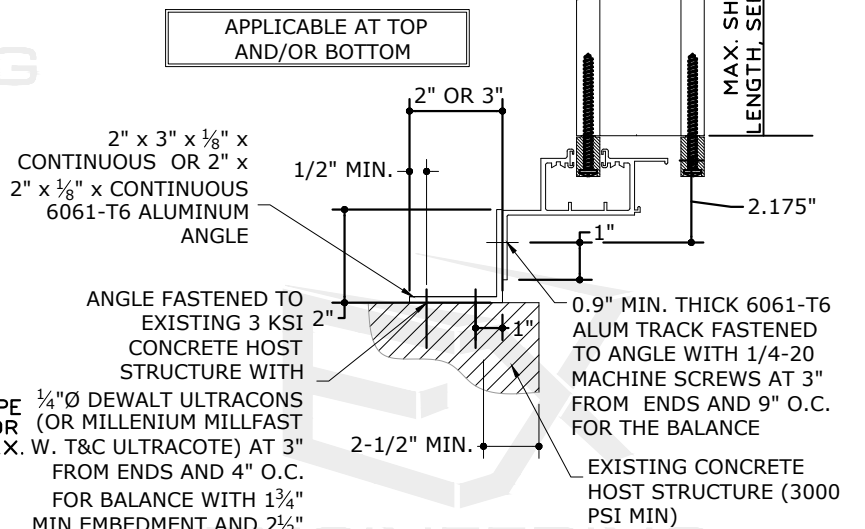


**EE** INSIDE SILL MOUNT SECTION SCALE: 3" = 1'-0"



**F** BUILDOUT MOUNT SCALE: NTS

**Cb** ALTERNATE BUILD OUT MOUNT SECTION SCALE: 3" = 1'-0"



**F** BUILDOUT MOUNT SCALE: NTS

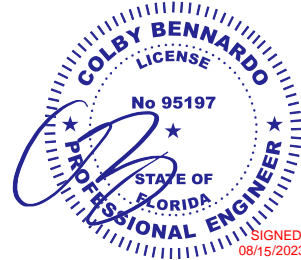
8/15/2023 11:59 AM MATTHEW c:\users\matthew\engineering\express\production - documents\projects\23-123-61154 multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154.dwg - fl13757.1 - dwg.dwg

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



FL 13757.1

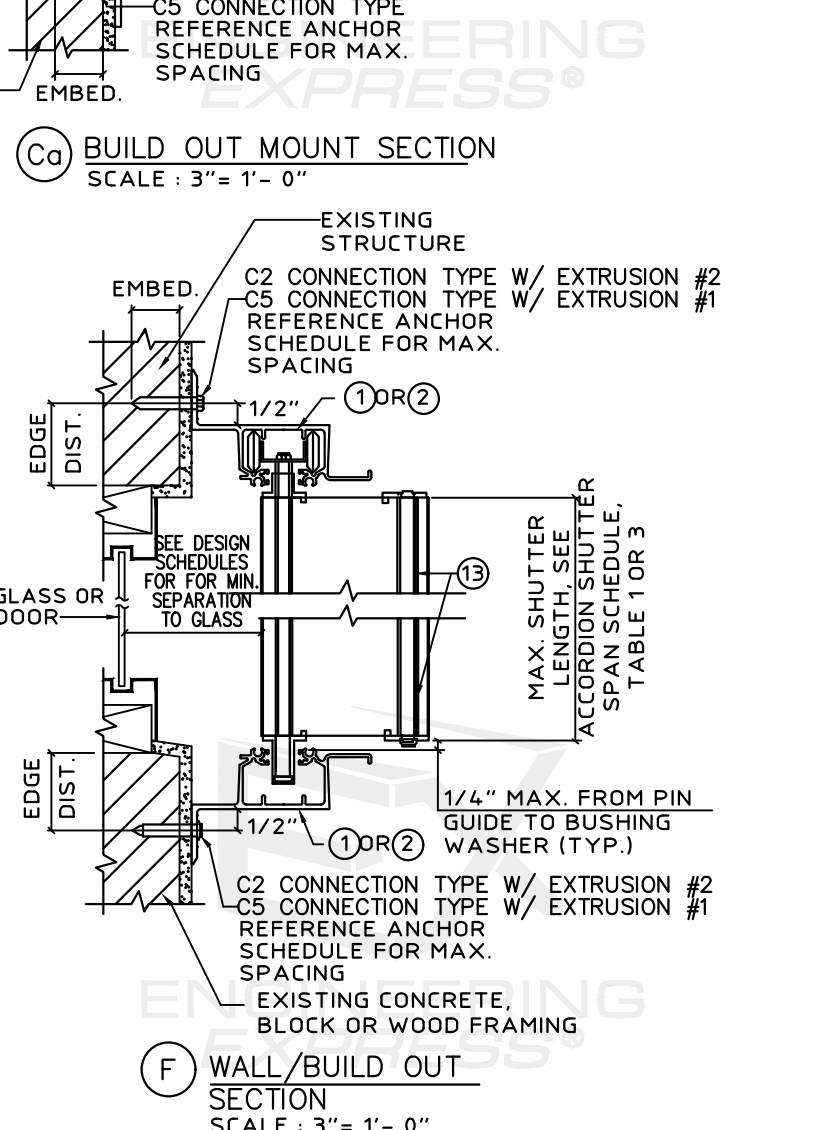
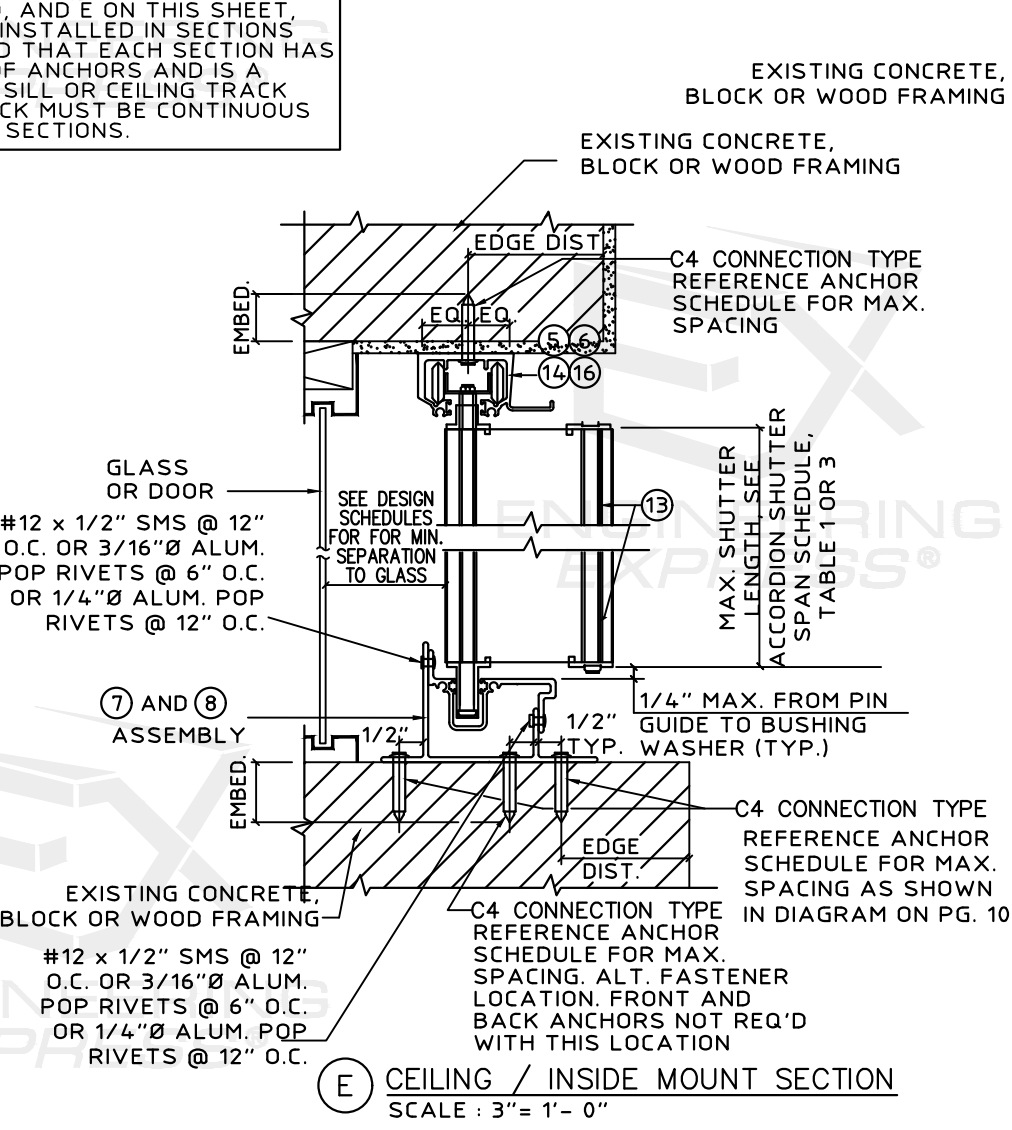
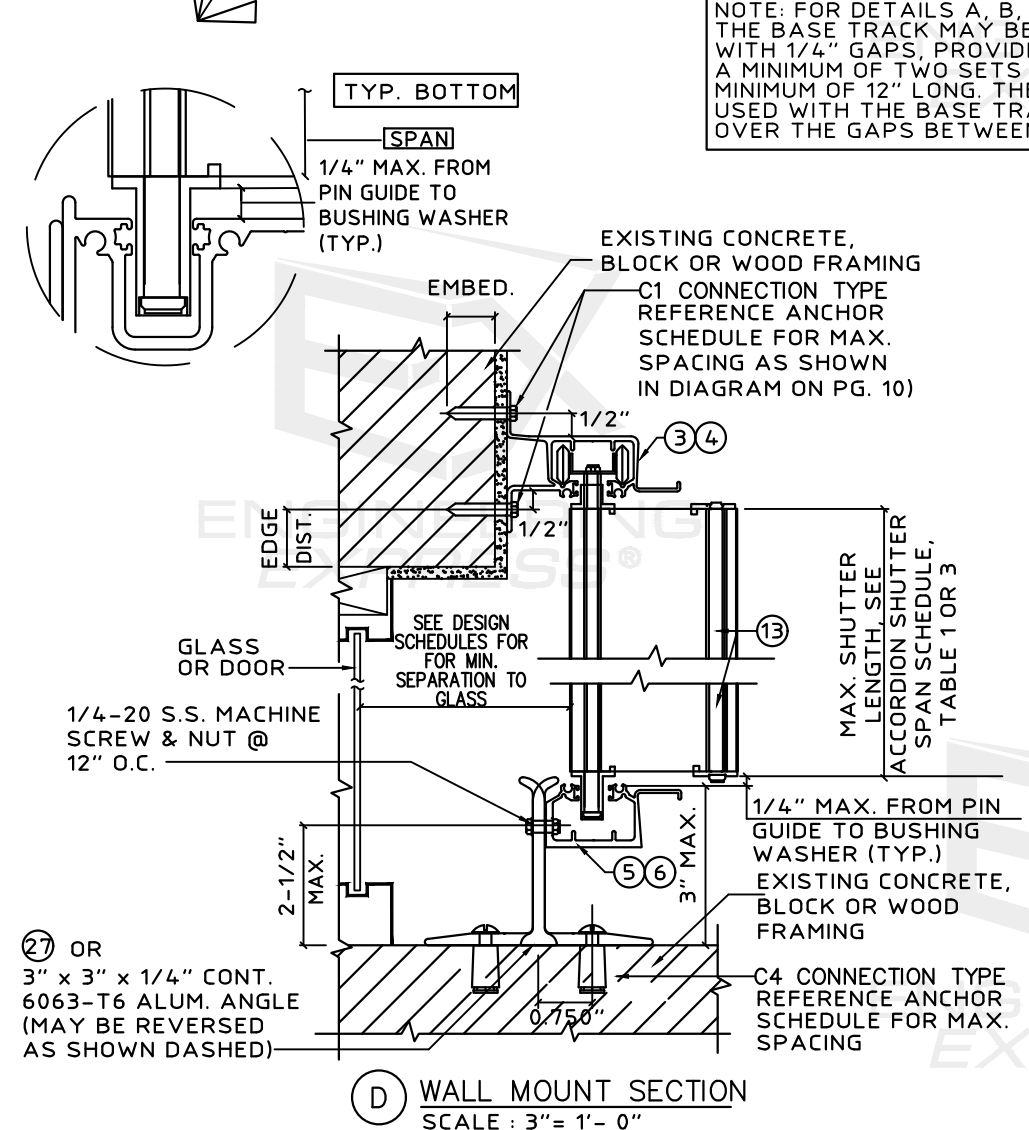
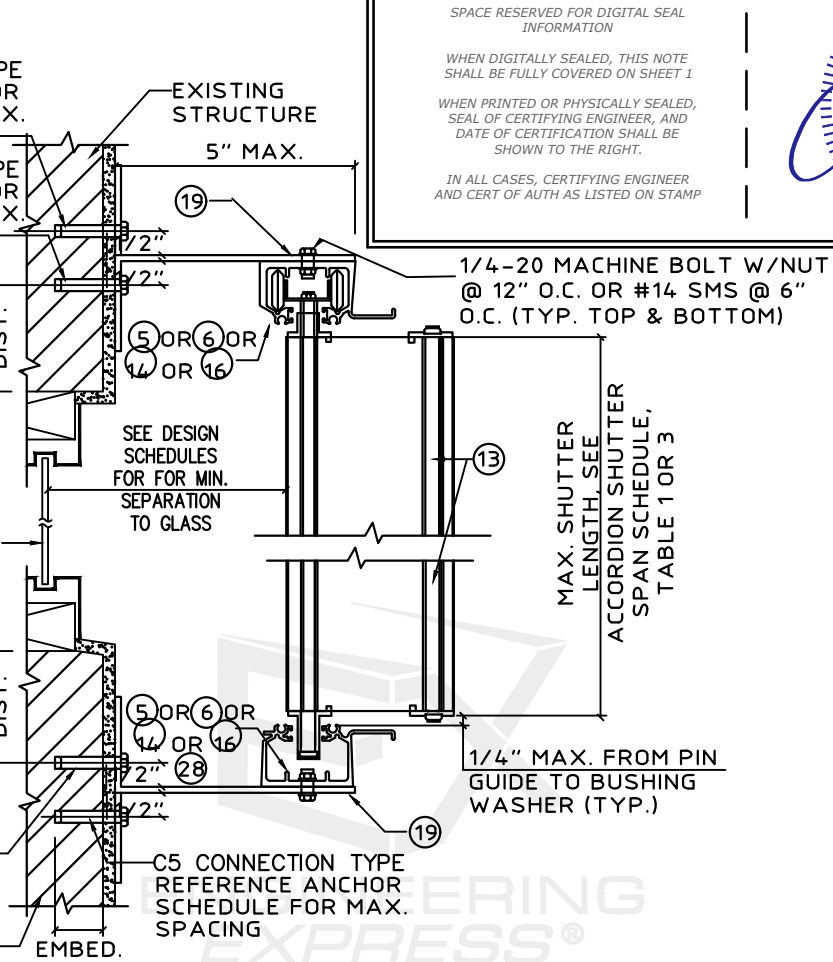
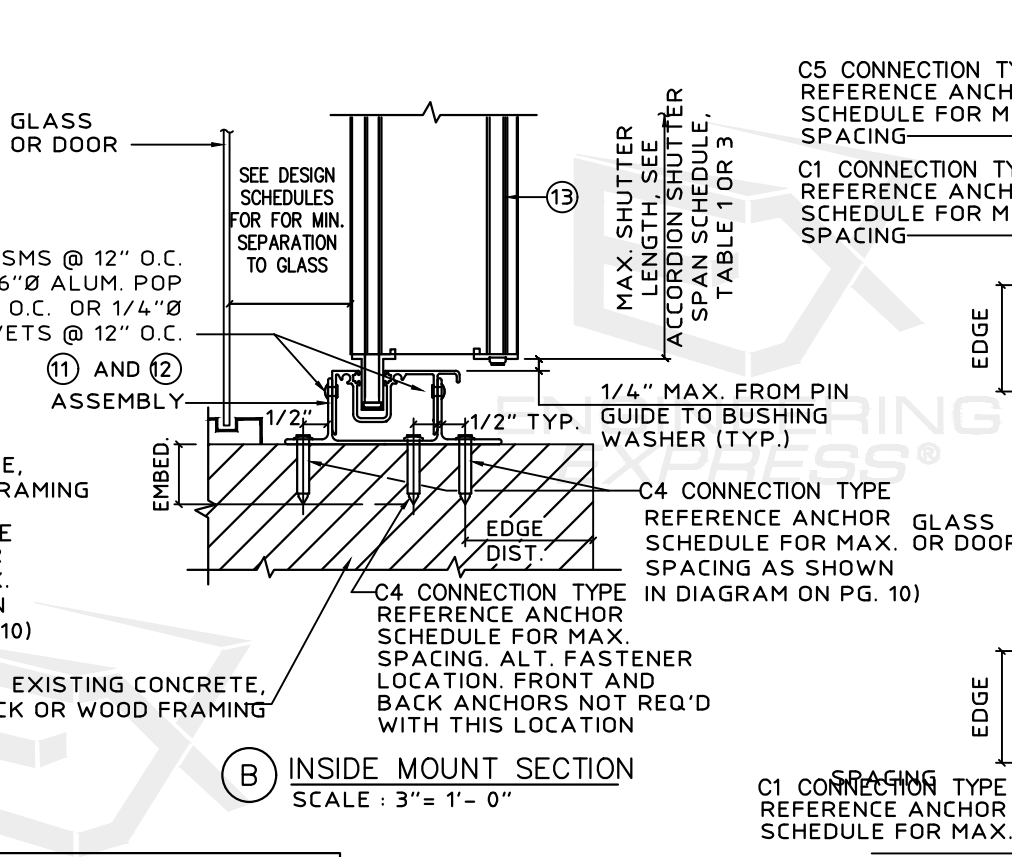
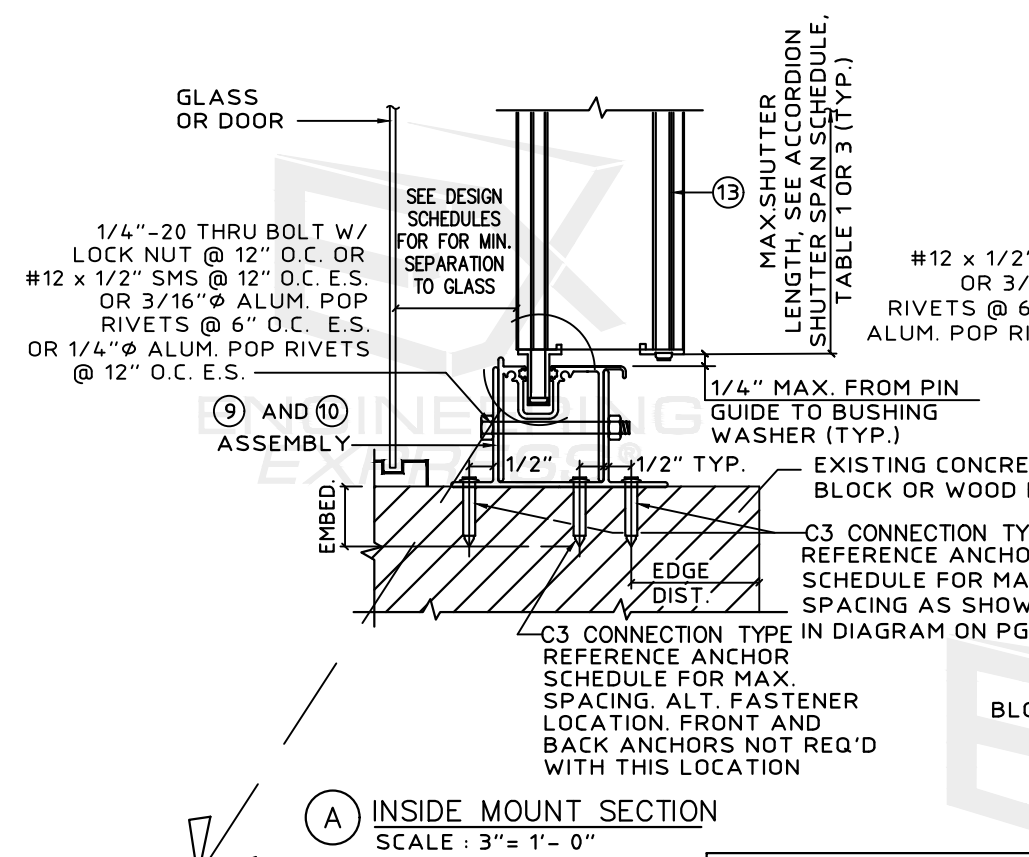
**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A member of the Rayco Group  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

23-61154

SCALE: NTS UNLESS NOTED



NOTE: FOR DETAILS A, B, D, AND E ON THIS SHEET, THE BASE TRACK MAY BE INSTALLED IN SECTIONS WITH 1/4" GAPS, PROVIDED THAT EACH SECTION HAS A MINIMUM OF TWO SETS OF ANCHORS AND IS A MINIMUM OF 12" LONG. THE SILL OR CEILING TRACK USED WITH THE BASE TRACK MUST BE CONTINUOUS OVER THE GAPS BETWEEN SECTIONS.

27 OR  
3" x 3" x 1/4" CONT.  
6063-T6 ALUM. ANGLE  
(MAY BE REVERSED  
AS SHOWN DASHED)

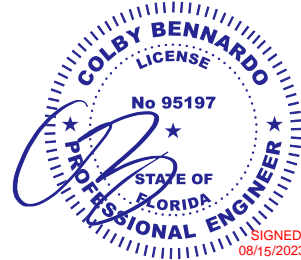
8/15/2023 11:59 AM MATTHEW c:\users\matthew\engineering\express\production - documents\projects\23-123-61154d - multiple products 2023 fbc update fl 13757\work\2023 fbc update fl 13757\1 - dwg.dwg

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



FL 13757.1

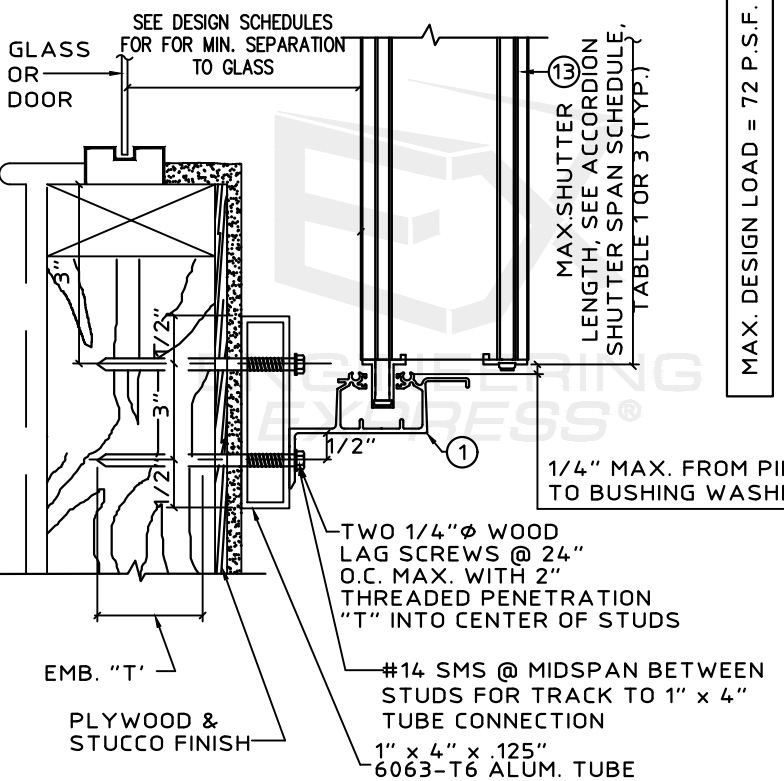
**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A Division of Berry Co. Inc.  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

REMARKS	DATE	DRWN	CHKD
2020 FBC (20-26156)	6/17/20	CCB	RWN
FBC 2023	08/15/23	MLD	CCB

23-61154

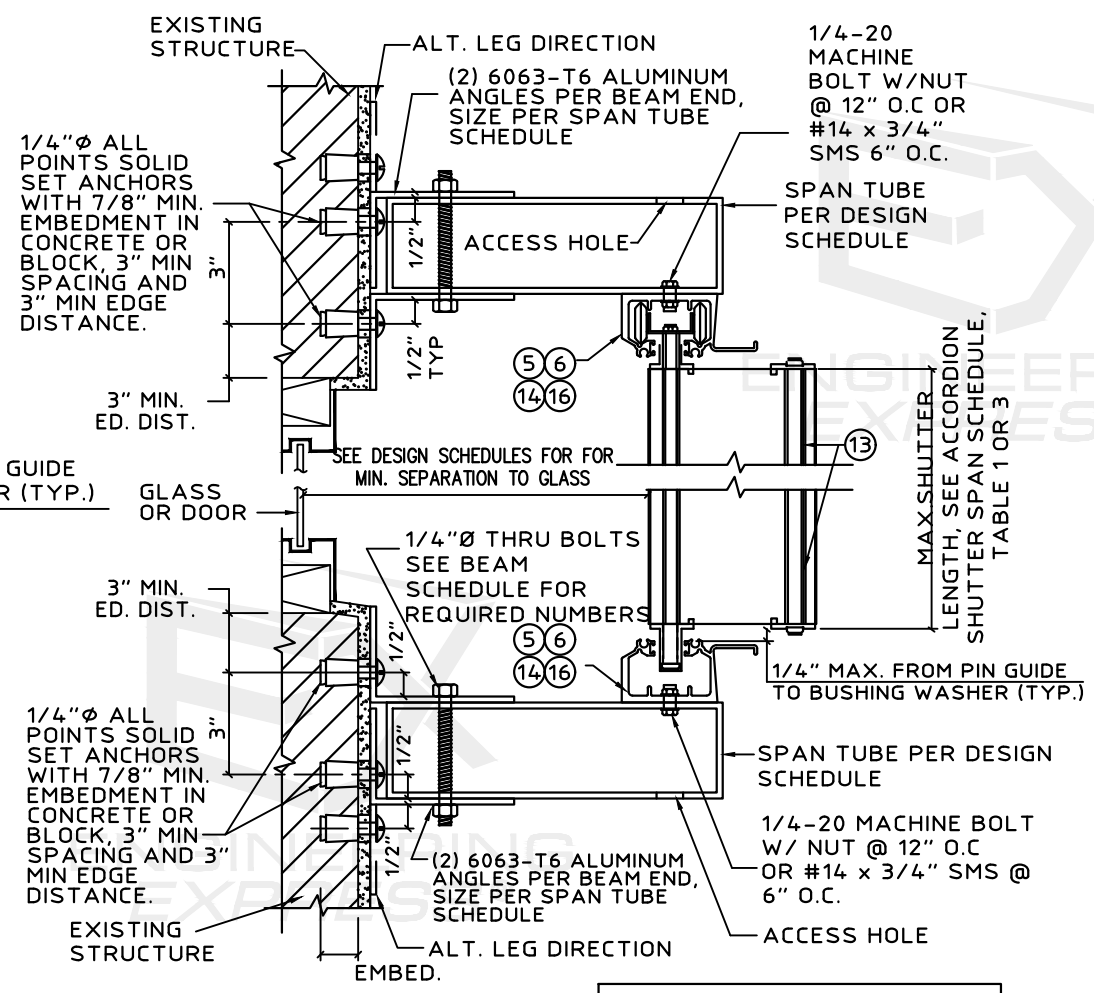
SCALE: NTS UNLESS NOTED



THIS DETAIL TO BE USED WHEN STUD SPACING EXCEEDS THE MAX. ALLOWABLE ANCHOR SPACING.

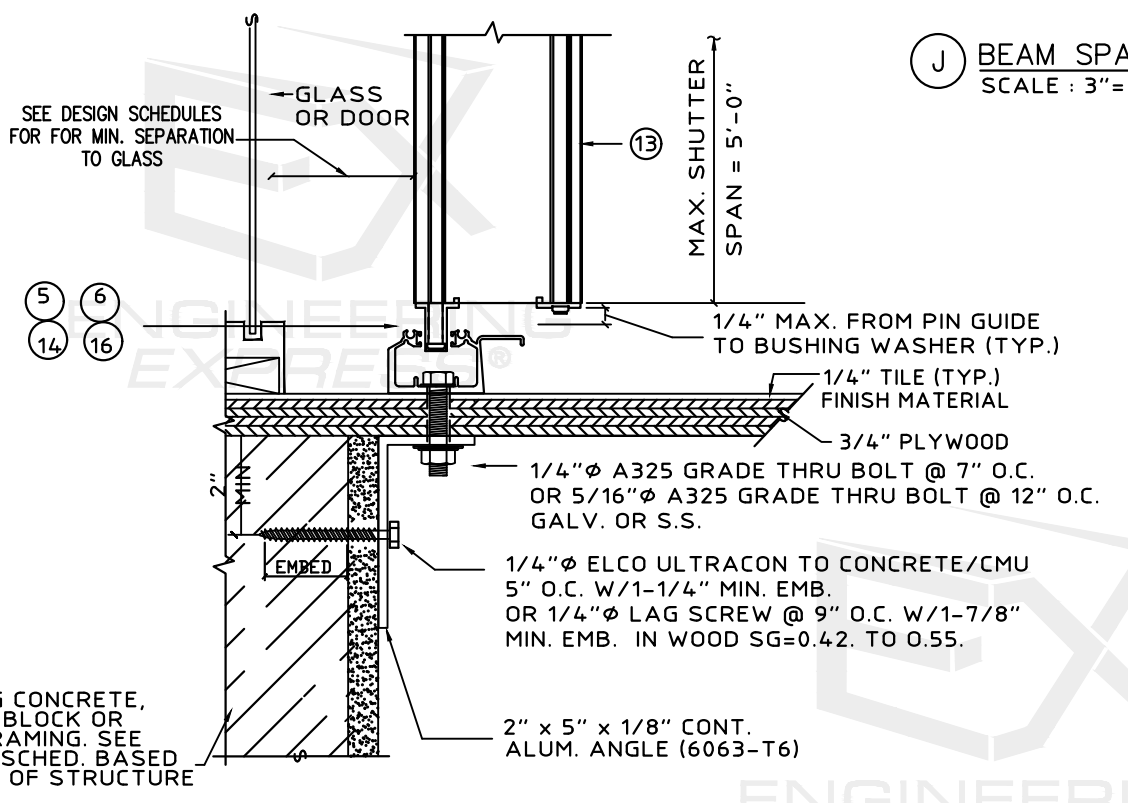
**G** WALL MOUNT SECTION  
SCALE: 3" = 1'-0"

THIS DETAIL MAY ALSO BE USED AT TOP



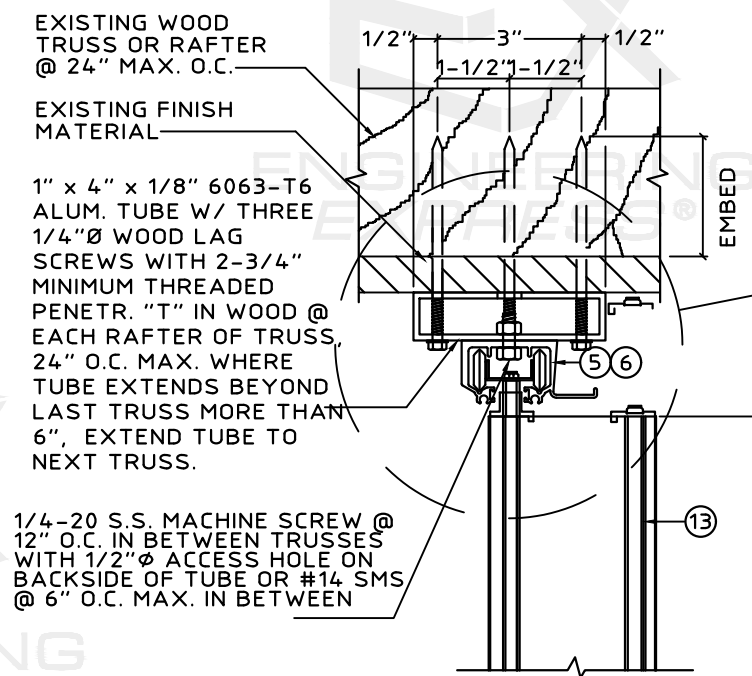
MAX. DESIGN LOAD = ± 72 PSF

**J** BEAM SPAN SECTION  
SCALE: 3" = 1'-0"



(MAX. DESIGN LOAD ± 72 P.S.F.)

**H** PASS THRU DETAIL  
SCALE: 3" = 1'-0"



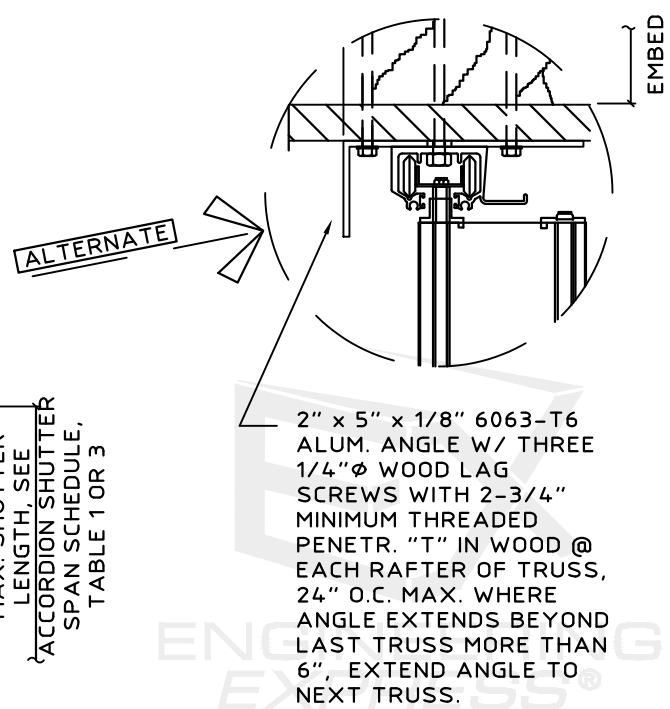
(MAX. DESIGN LOAD ± 72 P.S.F.)

**K** TRUSS MOUNT SECTION  
SCALE: 3" = 1'-0"

TUBE SIZE	SHUTTER SPAN	ALLOWABLE TUBE SPAN		NUMBER OF THRU-BOLTS		NUMBER OF ANCHORS PER ANGLE		MINIMUM ANGLE LENGTH	
		TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE	TOP TUBE	BOTTOM TUBE
2"x5"x 0.125"	60"	123.8"	135.2"	2	2	2	3	4"	7"
	96"	101.7"	106.9"	2	2	3	3	7"	7"
	123"	89.9"	94.4"	2	2	3	3	7"	7"
2"x6"x 0.125"	60"	129.1"	157.0"	2	2	2	3	4"	7"
	96"	114.8"	124.1"	2	2	3	3	7"	7"
	123"	102.8"	109.6"	2	2	4	4	10"	10"
2"x8"x 0.125"	60"	138.0"	196.9"	2	2	3	3	7"	7"
	96"	122.7"	155.7"	2	2	3	4	7"	10"
	123"	115.4"	137.5"	2	3	4	5	10"	13"
2"x10"x 0.1875"	60"	158.1"	240.0"	2	2	3	4	7"	10"
	96"	140.6"	229.9"	2	3	4	6	10"	16"
	123"	132.2"	203.1"	3	4	5	7	13"	19"

**SPAN TUBE SCHEDULE NOTES:**

- USE 2"x3"x1/4" OR 2"x5"x1/4" ANGLES FOR 2"x5" & 2"x6" BEAMS.
- USE 2"x5"x1/4" ANGLES FOR 2"x8" & 2"x10" BEAMS.
- USE BEAM SCHEDULE FOR DETAIL J.
- TOP & BOTTOM BEAMS MAY BE USED TOGETHER OR IN COMBINATION WITH OTHER CONNECTION DETAILS. WHERE USED TOGETHER, BEAM MUST BE LIMITED TO TOP BEAM SPANS.
- SPAN TUBES MAY BE USED IN A MID-SPAN CONDITION WITH SHUTTERS SPANNING ABOVE AND BELOW THE BEAM. MID-SPAN TUBES SHALL HAVE TOP BEAM LIMITATIONS (INCLUDING SPANS, ANCHORS, ANGLES AND BOLTS), WITH THE SHUTTER SPAN TAKEN AS THE SUM OF THE SPANS ABOVE AND BELOW THE BEAM.
- LAP BEAMS ARE NOT ALLOWED.
- ALL BEAMS AND ANGLES TO BE 6063-T6 ALUMINUM.



2" x 5" x 1/8" 6063-T6 ALUM. ANGLE W/ THREE 1/4" Ø WOOD LAG SCREWS WITH 2-3/4" MINIMUM THREADED PENETR. "T" IN WOOD @ EACH RAFTER OF TRUSS, 24" O.C. MAX. WHERE ANGLE EXTENDS BEYOND LAST TRUSS MORE THAN 6", EXTEND ANGLE TO NEXT TRUSS.

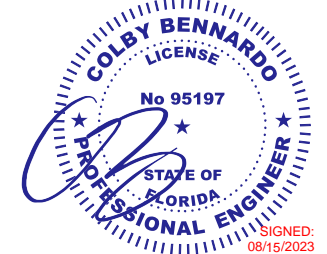


SPACE RESERVED FOR DIGITAL SEAL INFORMATION

WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



FL 13757.1

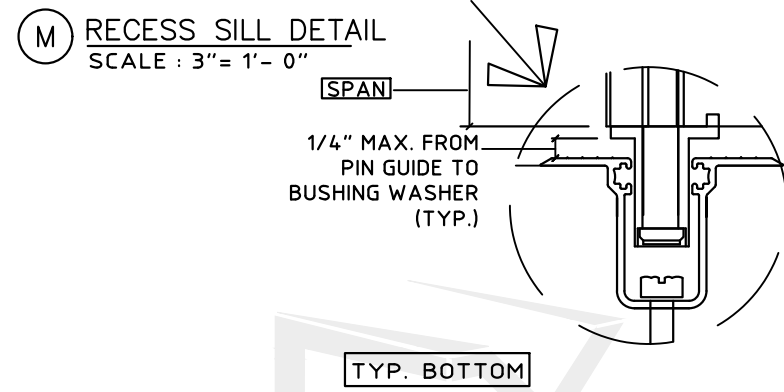
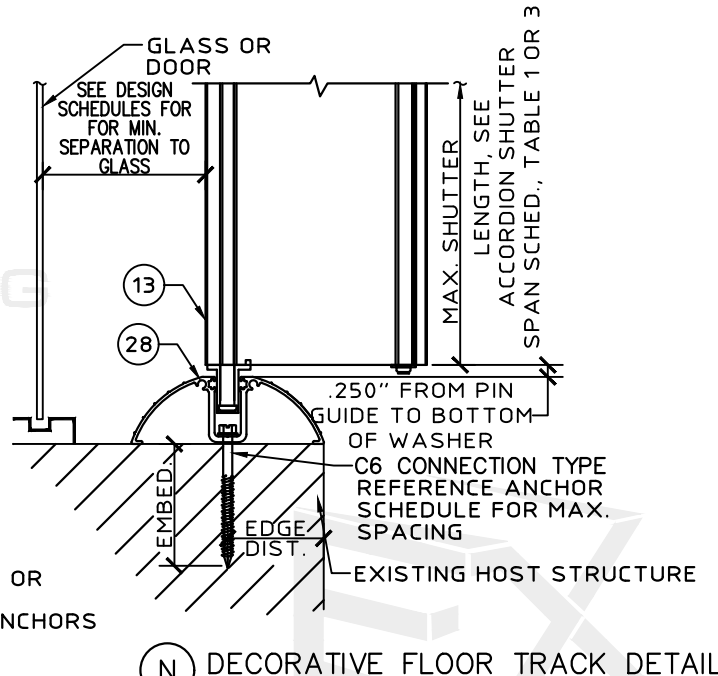
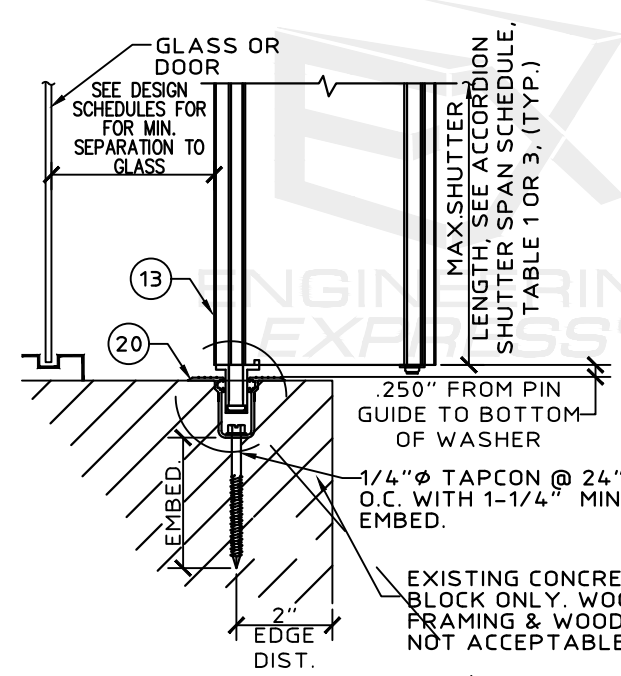
**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A member of the bayside group, Inc.  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

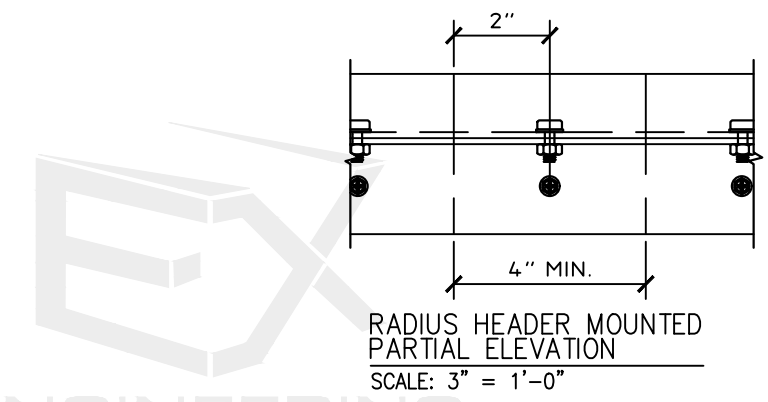
REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

23-61154

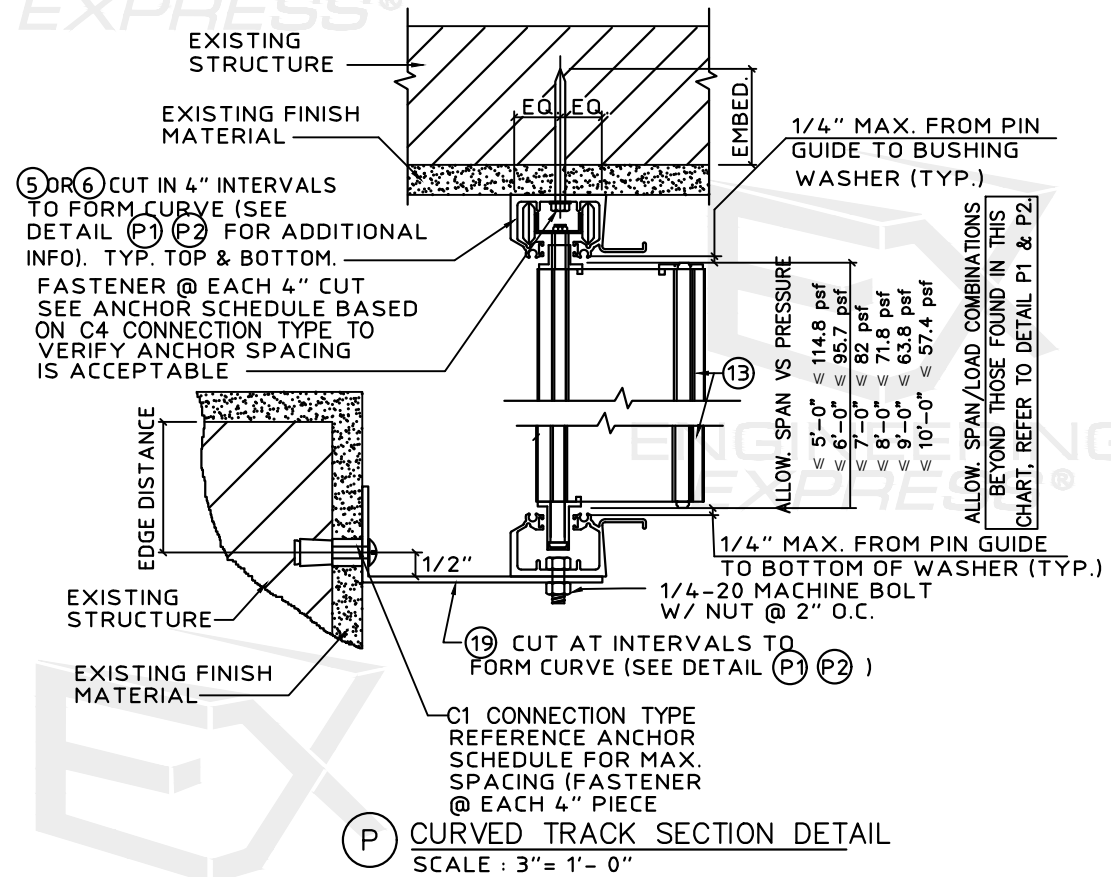
SCALE: NTS UNLESS NOTED



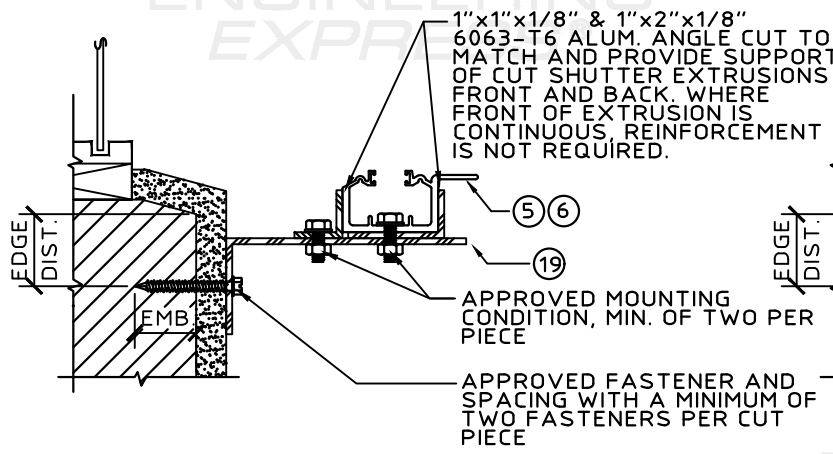
**(N) DECORATIVE FLOOR TRACK DETAIL**  
SCALE: 3" = 1'-0"



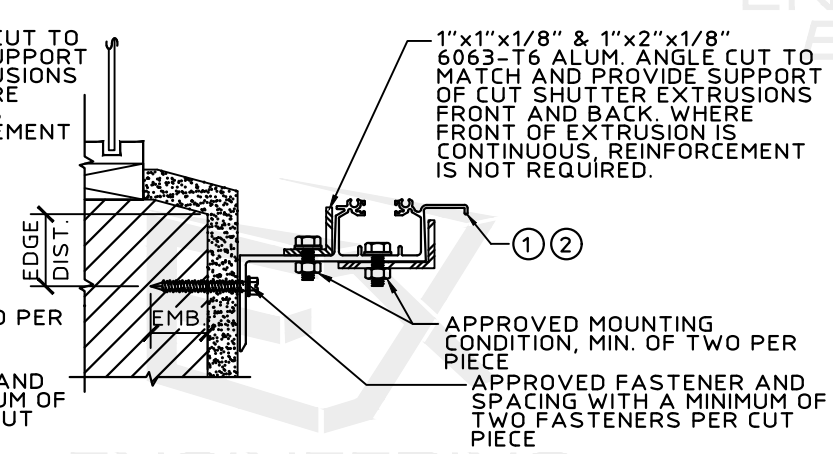
**RADIUS HEADER MOUNTED PARTIAL ELEVATION**  
SCALE: 3" = 1'-0"



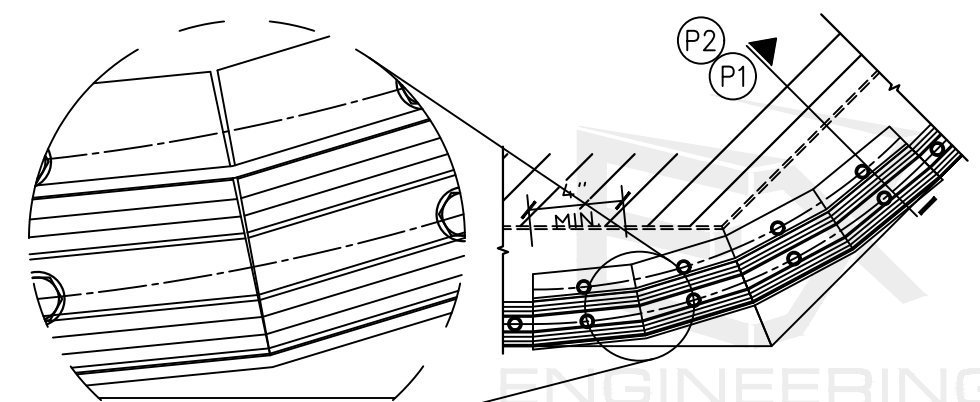
**(P) CURVED TRACK SECTION DETAIL**  
SCALE: 3" = 1'-0"



**(P1) TYP. SECTION FOR SHUTTERS**  
SCALE: 3" = 1'-0"



**(P2) TYP. ALTERNATE SECTION FOR SHUTTERS**  
SCALE: 3" = 1'-0"



c:\users\matthew\engineering\express\production - documents\projects\23-123-61154 multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154d - fl13757.1 - dwg.dwg





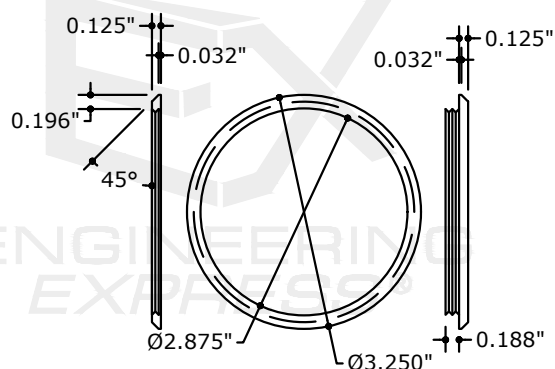
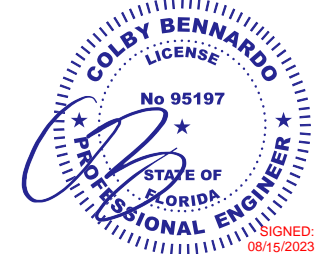


SPACE RESERVED FOR DIGITAL SEAL INFORMATION

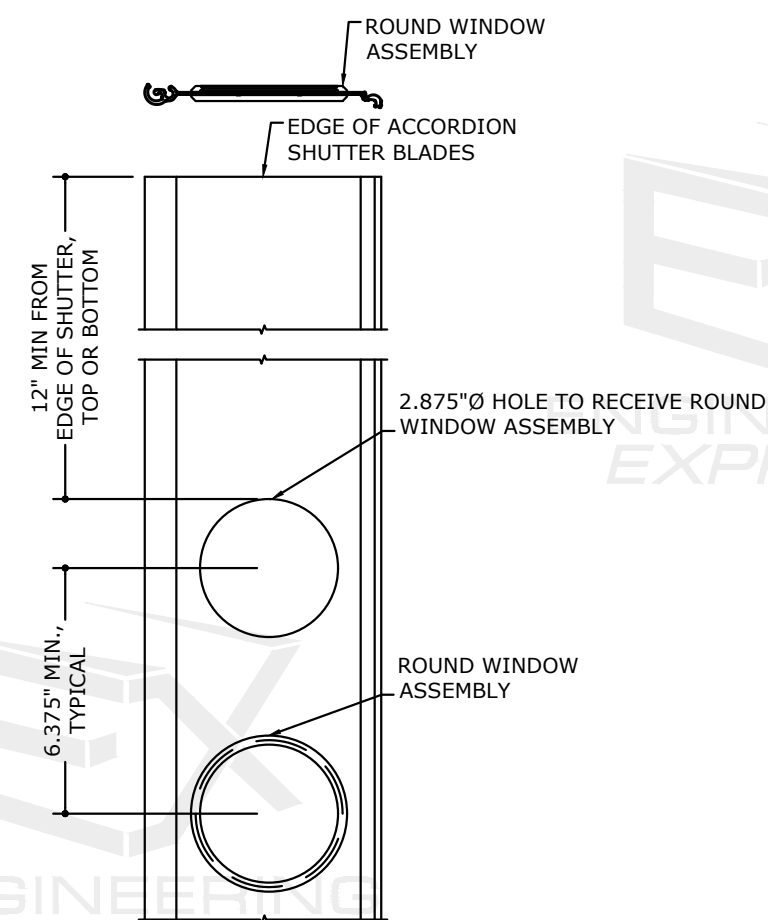
WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

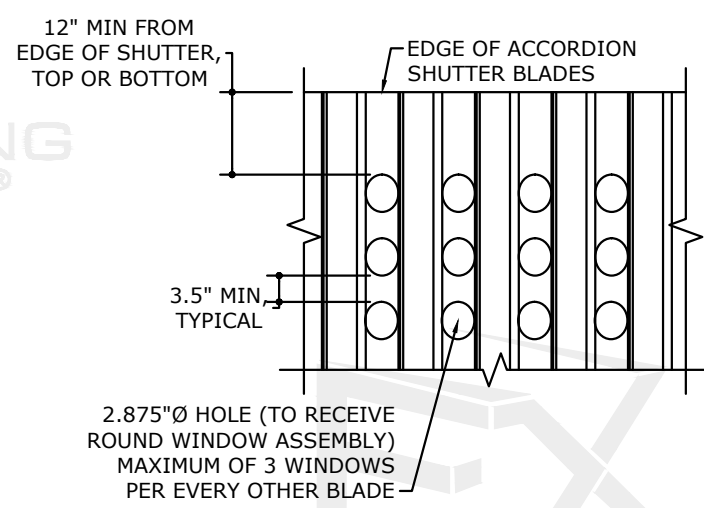
IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



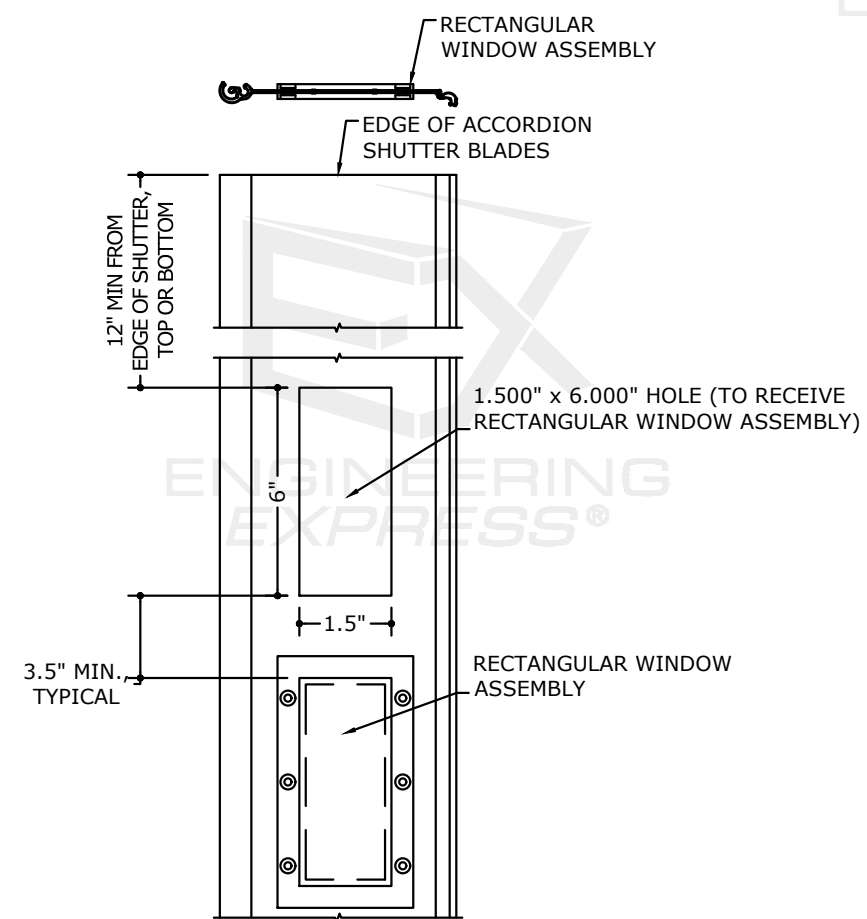
**1** LIGHT-N-VIEW WINDOW  
N.T.S. SABIC PLASTICS SLX1431T-UL-94HB



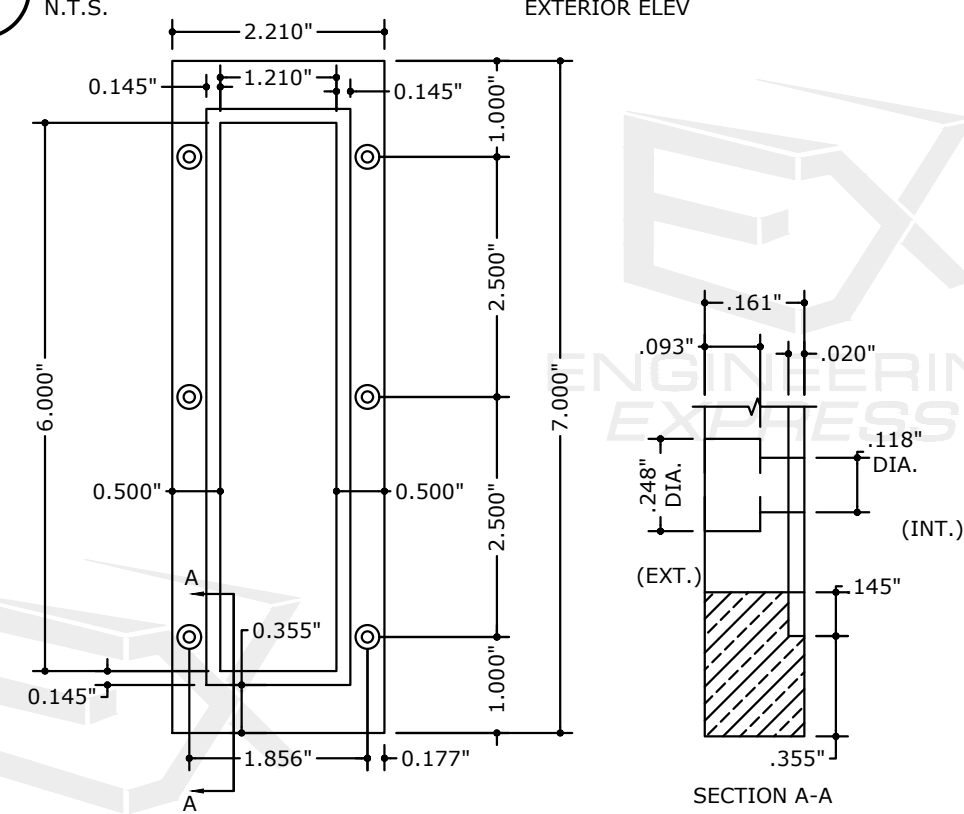
**1** BLADE W/ ROUND WINDOW  
13 N.T.S. EXTERIOR ELEV



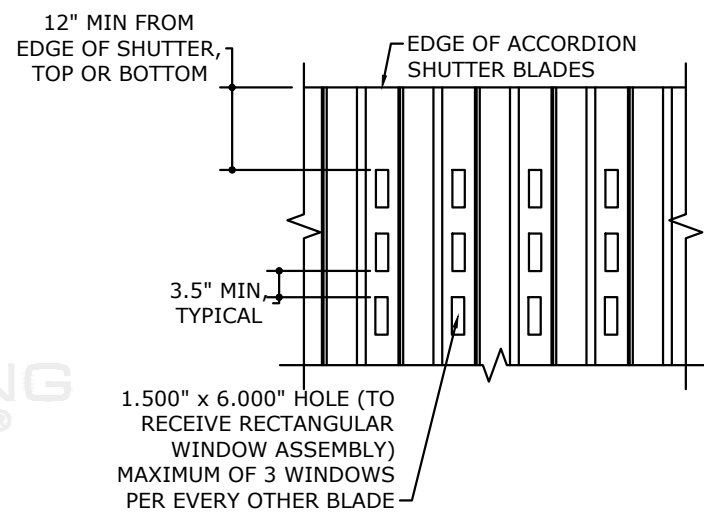
**2** LIGHT-N-VIEW WINDOW  
13 N.T.S. EXTERIOR ELEV



**4** BLADE W/ RECT. WINDOW  
13 N.T.S. EXTERIOR ELEV



**5** RECTANGULAR WINDOW  
13 N.T.S. EXTERIOR ELEV



**3** RECTANGULAR WINDOW  
13 N.T.S. EXTERIOR ELEV

RECTANGULAR WINDOW NOTES:  
1. THE RECTANGULAR WINDOW SHOWN IN 5/13 IS MADE FROM GE XL10 LEXAN WITH 0.075" MINIMUM THICKNESS.  
2. FRAME FOR RECTANGULAR WINDOW MAY BE NYLON 6 OR POLYCARBONATE WITH A MINIMUM THICKNESS OF 0.161". ATTACH TO BLADE WITH (6) #4 SS SCREWS OR BOLTS WITH NUTS.

FL 13757.1

**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA #13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

23-61154

SCALE: NTS UNLESS NOTED

8/15/2023 12:00 PM MATTHEW c:\users\matthew\engineering\express\production - documents\projects\23-123-61154 multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154d - fl13757.1 - dwg.dwg

c:\users\matthew\engineering\express\production - documents\projects\23-123-61154\multiple products 2023 fbc update fl 13757\work\2023 fbc\23-61154d - fl13757.1 - dwg.dwg

# ALTERNATE MOUNTING OPTION

## DESIGN SCHEDULES

COLBY BENNARDO, P.E.  
PE# 95197 CA# 9885

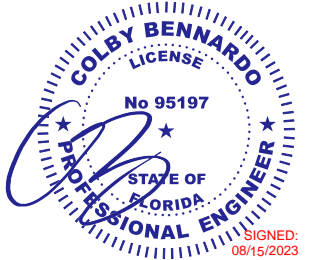
AUGUST 15, 2023

SPACE RESERVED FOR DIGITAL SEAL INFORMATION

WHEN DIGITALLY SEALED, THIS NOTE SHALL BE FULLY COVERED ON SHEET 1

WHEN PRINTED OR PHYSICALLY SEALED, SEAL OF CERTIFYING ENGINEER, AND DATE OF CERTIFICATION SHALL BE SHOWN TO THE RIGHT.

IN ALL CASES, CERTIFYING ENGINEER AND CERT OF AUTH AS LISTED ON STAMP



FL 13757.1

**ENGINEERING EXPRESS**  
POSTAL ADDRESS:  
401 W. ATLANTIC AVE R10 BOX 219  
DELRAY BEACH, FL 33444  
ENGINEERINGEXPRESS.COM

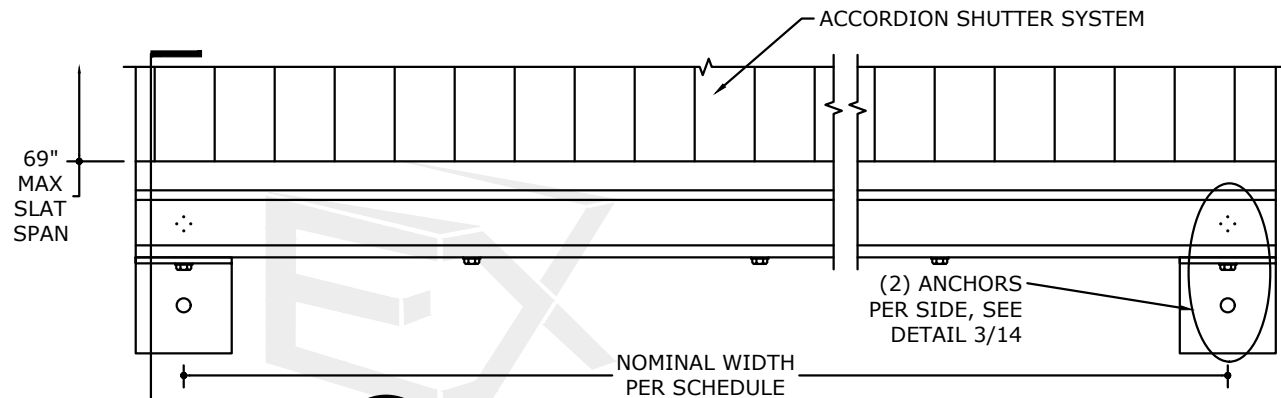
**Town & Country INDUSTRIES**  
Wholesale Aluminum and Building Products  
A member of the bayside group, inc.  
400 WEST MCNAB ROAD, FT. LAUDERDALE, FL 33309  
6.8 ACCORDION SHUTTER  
FLORIDA BUILDING CODE EIGHTH EDITION (2023)  
FLORIDA STATEWIDE APPROVAL (FSA FL#13757.1)

REMARKS	DRWN	CHKD	DATE
2020 FBC (20-26156)	CCB	RWN	6/17/20
FBC 2023	MLD	CCB	08/15/23

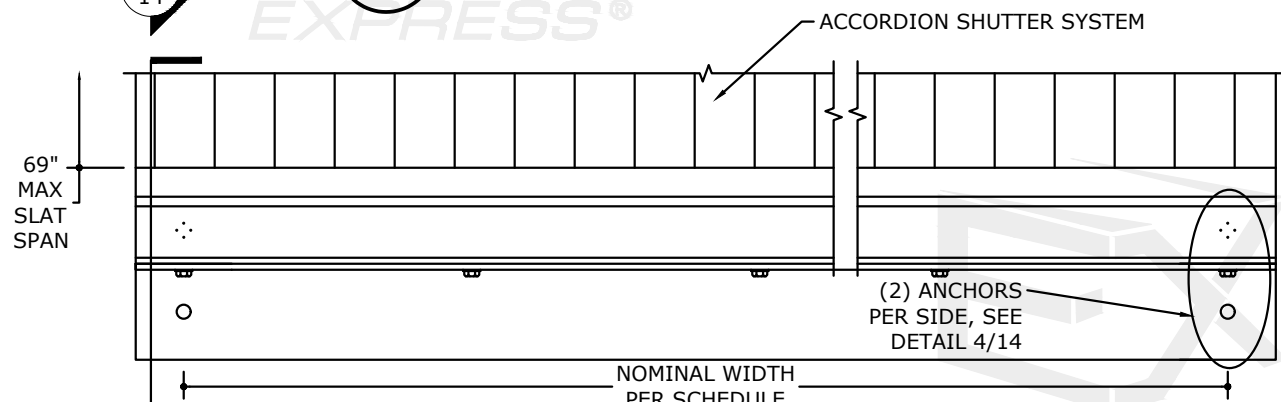
23-61154

SCALE: NTS UNLESS NOTED

14 OF 14



**1** TYPICAL ELEVATION (OPTION 1)  
14 N.T.S. EXTERIOR ELEV



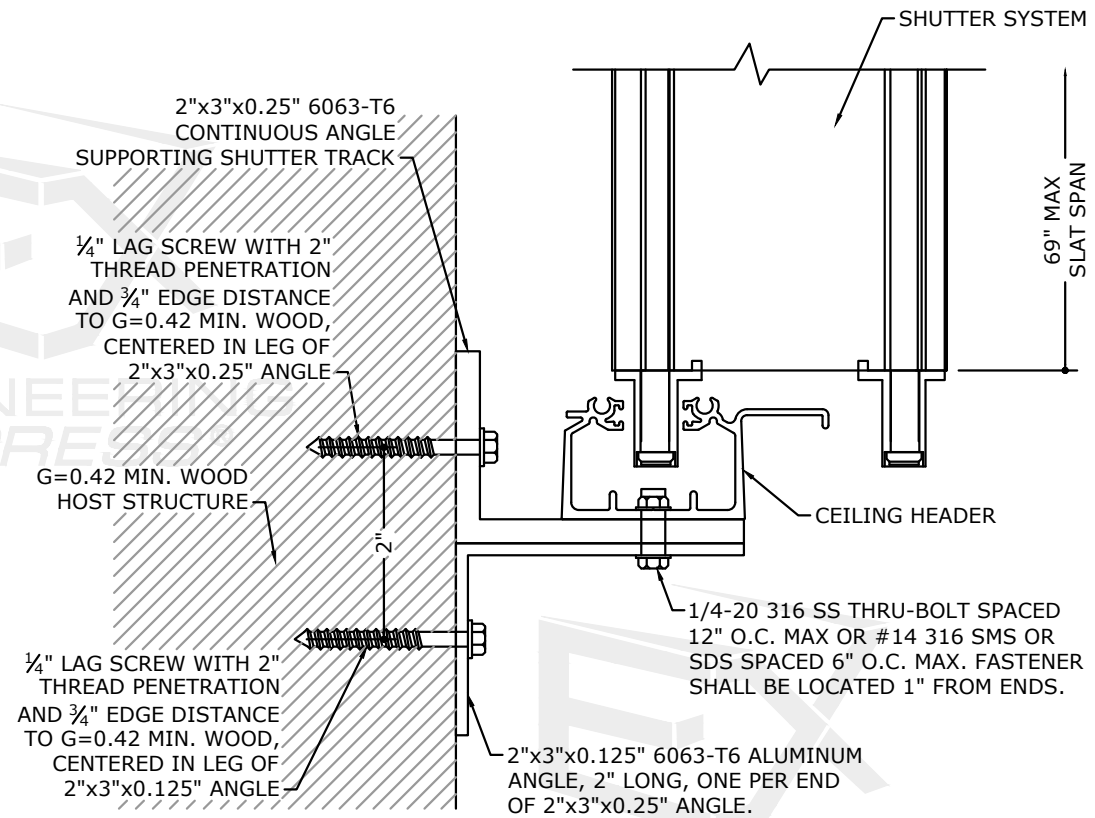
**2** TYPICAL ELEVATION (OPTION 2)  
14 N.T.S. EXTERIOR ELEV

OPTION 1		
(1) 2x3x0.25 ANGLE (6063-T6)		
NOMINAL WIDTH	ALLOWABLE DESIGN PRESSURE	
	POSITIVE (+)	NEGATIVE (-)
42"	151 psf	200 psf
45"	131 psf	200 psf
48"	116 psf	177 psf
51"	102 psf	147 psf
54"	91 psf	124 psf
57"	82 psf	106 psf
60"	74 psf	91 psf
63"	67 psf	78 psf
66"	61 psf	68 psf
69"	56 psf	60 psf
72"	51 psf	52 psf
75"	46 psf	46 psf
78"	41 psf	41 psf
81"	37 psf	37 psf

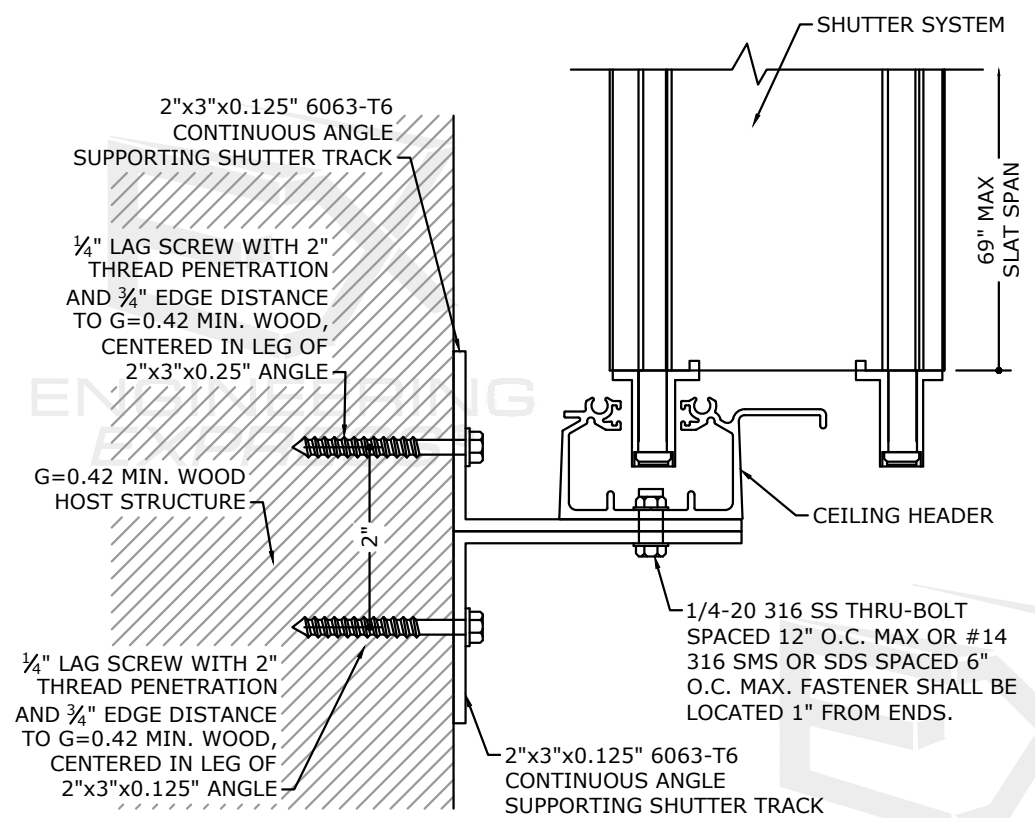
OPTION 2		
(2) 2x3x0.125 ANGLES (6063-T6)		
NOMINAL WIDTH	ALLOWABLE DESIGN PRESSURE	
	POSITIVE (+)	NEGATIVE (-)
42"	80 psf	173 psf
45"	69 psf	151 psf
48"	61 psf	132 psf
51"	54 psf	117 psf
54"	48 psf	105 psf
57"	43 psf	94 psf
60"	39 psf	85 psf
63"	35 psf	77 psf
66"	32 psf	70 psf
69"	30 psf	63 psf
72"	27 psf	56 psf
75"	25 psf	49 psf
78"	23 psf	44 psf
81"	21 psf	39 psf

**ANCHOR NOTE:** 1/4" MILLENNIUM MILLFAST SCREWS W/ T&C ULTRACOTE MAY BE USED IN LIEU OF THE LAG SCREWS CALLED OUT ON THIS SHEET UTILIZING THE SAME CRITERIA.

**NOTE:** DESIGN PRESSURES SHOWN IN DESIGN SCHEDULE ARE FOR DETERMINING MAXIMUM ALLOWABLE HORIZONTAL SUPPORT ANGLE SPAN. SHUTTER SPANS AND ALLOWABLE LOADS SHALL NOT EXCEED THOSE PERMITTED IN DESIGN SCHEDULES.



**3** TYPICAL END ATTACHMENT (OPTION 1)  
14 N.T.S. VERT SECTION



**4** TYPICAL END ATTACHMENT (OPTION 2)  
14 N.T.S. VERT SECTION