

ACCORDION SHUTTER

WITH ALUMINUM OR POLYCARBONATE BLADES

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01/20/2022

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GENERAL NOTES

- THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE (IBC) 2018 EDITION AND THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2018 EDITION FOR USE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF INSURANCE (TDI) REQUIREMENTS, PER TAS 201, 202, & 203 STANDARDS. SEE PRODUCT APPROVAL EVALUATION FOR ADDITIONAL INFORMATION.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d=1.6$ HAS BEEN USED FOR WOOD ANCHOR DESIGN.
- 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 16 OF THE IBC OR CHAPTER 3 OF THE IRC (AS APPLICABLE) SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE ASD DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
- DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
- ALL POLYCARBONATE PANELS SHALL BE EXTRUDED WITH THICKNESS $t=0.090"$ AND SHALL BE FABRICATED FROM 100% SABIC INNOVATIVE PLASTICS THERMOPLASTIC POLYMER LEXAN SHEET #XL102UV (UV STABILIZED), AS APPROVED UNDER MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE (NOA) #15-0915.08 (OR SUPERSEDING NOA IF APPLICABLE).
- 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.
- PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
- EACH SHUTTER ASSEMBLY SHALL BEAR A PERMANENT LABEL IN ACCORDANCE WITH SECTIONS 1703.5.3 & 1703.5.4 OF IBC 2018 AS WELL AS ANY LOCAL PROVISIONS (IF APPLICABLE,) AND SHALL PROVIDE THE REQUIRED PRODUCT INFORMATION AS DEFINED BY TDI, TYP.
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE.
- ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI. ALL 3/16" \varnothing OR 1/4" \varnothing POP RIVETS SHALL BE 5056-H32 ALUMINUM ALLOY OR STRONGER.
- ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.
- WALL HEADERS (COMPONENT #'s 10, 13, 38 AND 39 AS SHOWN HEREIN) MAY BE MOUNTED ON THE INTERIOR OR EXTERIOR OF AN OPENING.
- ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE ONLY PERMITTED TO SHOW SITE-SPECIFIC CONDITIONS, HOWEVER ANY CHANGES, ALTERATIONS OR ADDITIONS MADE TO THE CONTENT OF THIS DOCUMENT WILL INVALIDATE THIS CERTIFICATION.



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TEXAS DEPARTMENT OF INSURANCE

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
2010 FBC (05-HT-01-04)	KL	FLB	02/14/12
FBC 5TH EDITION (2014)	CSL	TSB	02/06/15
IBC & IRC 2018 EDITION	EPR	RWN	01/05/22

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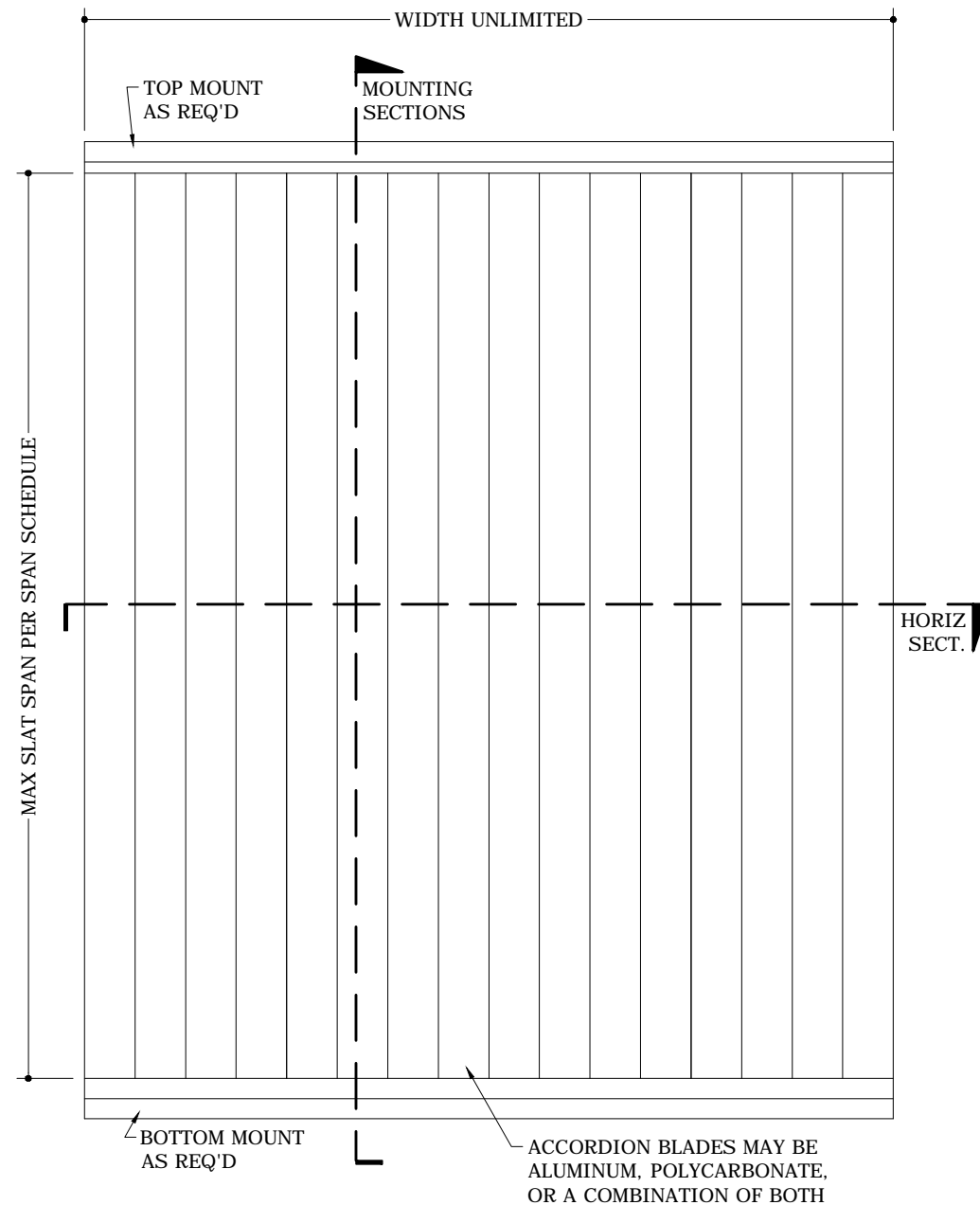
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CERTIFYING A: 01/20/2022



1 TYPICAL ELEVATION
02 N.T.S. EXTERIOR ELEV

ALLOWABLE SPAN SCHEDULE

SLAT SPAN	MAXIMUM ALLOWABLE DESIGN PRESSURES							
	STANDARD BLADES ONLY		LIGHTWEIGHT BLADES OR LIGHTWEIGHT/WINDOW BLADE COMBINATION†		WINDOW BLADES OR STANDARD/WINDOW BLADE COMBINATION†		SHUTTER WITH STANDARD BLADES AND ONE SINGLE WINDOW BLADE*	
72"	+ 152.5 PSF	- 152.5 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 93.6 PSF	- 93.6 PSF
90"	+ 117.8 PSF	- 117.8 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 93.6 PSF	- 93.6 PSF
108"	+ 100.5 PSF	- 100.5 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 93.6 PSF	- 93.6 PSF
126"	+ 42.4 PSF	- 62.4 PSF					+ 42.4 PSF	- 62.4 PSF
144"	+ 42.4 PSF	- 62.4 PSF					+ 42.4 PSF	- 62.4 PSF
162"	+ 25.5 PSF	- 41.6 PSF					+ 25.5 PSF	- 41.6 PSF

SPAN SCHEDULE NOTES:

- PRESSURES SHOWN IN "ALLOWABLE SPAN SCHEDULE" ARE MAXIMUM ALLOWABLE DESIGN PRESSURES AT EACH RESPECTIVE SHUTTER SPAN.
- † APPLICABLE FOR INSTALLATIONS UTILIZING ALTERNATING BLADE PAIRS/ WINDOW BLADE PAIRS (ie ONE PAIR OF ALUMINUM BLADES WITH A PAIR OF WINDOW BLADES TO THE LEFT AND A PAIR OF WINDOW BLADES TO THE RIGHT).
- * ONLY APPLICABLE FOR INSTALLATIONS WITH ONE SINGLE WINDOW BLADE SLAT, AND THE REMAINDER STANDARD BLADES.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS PERMITTED.

MINIMUM GLASS SEPARATION

SPAN LESS THAN:	STANDARD BLADES ONLY		LIGHTWEIGHT BLADES OR LIGHTWEIGHT/WINDOW BLADE COMBINATION†		WINDOW BLADES OR STANDARD/WINDOW BLADE COMBINATION†		SHUTTER WITH STANDARD BLADES AND ONE SINGLE WINDOW BLADE*	
	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE
72"	1.88"	1.88"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
90"	2.13"	2.13"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
108"	2.88"	2.78"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
126"	3.63"	3.00"					4.50"	3.00"
144"	4.50"	3.00"					4.50"	3.00"
162"	4.50"	3.00"					4.50"	3.00"

GLASS SEPARATION SCHEDULE NOTES:

- SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.
- † APPLICABLE FOR INSTALLATIONS UTILIZING ALTERNATING BLADE PAIRS/ WINDOW BLADE PAIRS (ie ONE PAIR OF ALUMINUM BLADES WITH A PAIR OF WINDOW BLADES TO THE LEFT AND A PAIR OF WINDOW BLADES TO THE RIGHT).
- * ONLY APPLICABLE FOR INSTALLATIONS WITH ONE SINGLE WINDOW BLADE SLAT, AND THE REMAINDER STANDARD BLADES.
- FOR BASIC PROTECTION, GLASS SEPARATION IS NOT REQUIRED.
- SHUTTERS MAY BE USED IN ESSENTIAL FACILITIES AT HEIGHTS ABOVE 30 FEET FROM GRADE IN WIND ZONE 3 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.
- SHUTTERS MAY BE USED IN ESSENTIAL FACILITIES AT ANY HEIGHT IN WIND ZONE 2 AND SHALL ADHERE TO THE GLASS SEPARATION REQUIREMENTS IN THIS SCHEDULE.
- SEPARATION FROM GLAZING IS REQUIRED FOR ALL INSTALLATIONS THAT ARE REQUIRED TO MAINTAIN A MINIMUM SEPARATION BETWEEN THE SHUTTER AND ANY GLAZING, AS REQUIRED BY THE BUILDING DEPARTMENT OR AUTHORITY HAVING JURISDICTION.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE SEPARATION FROM GLASS FOR THE NEXT HIGHER SPAN SHALL BE USED.

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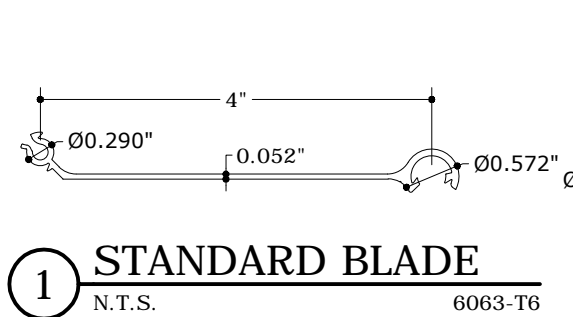
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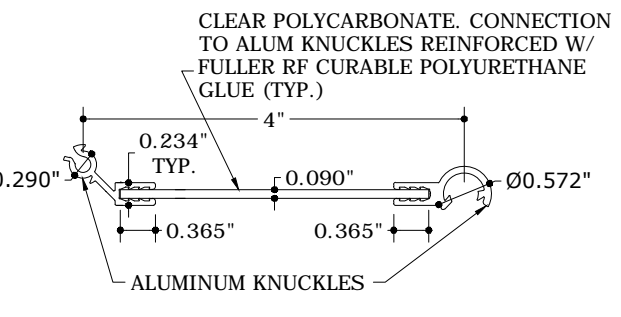
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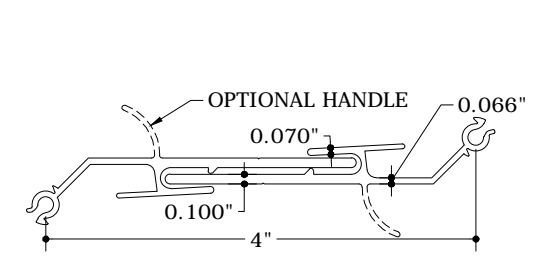
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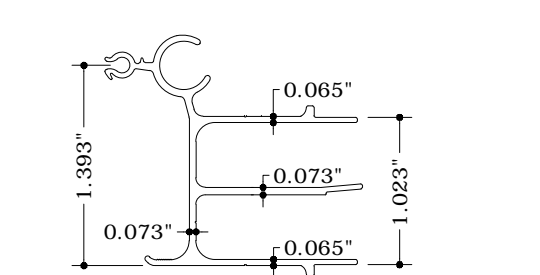
1 STANDARD BLADE
 N.T.S. 6063-T6



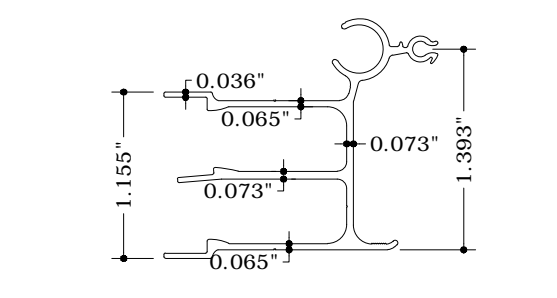
2 WINDOW BLADE
 N.T.S. 6063-T6/POLYCARBONATE



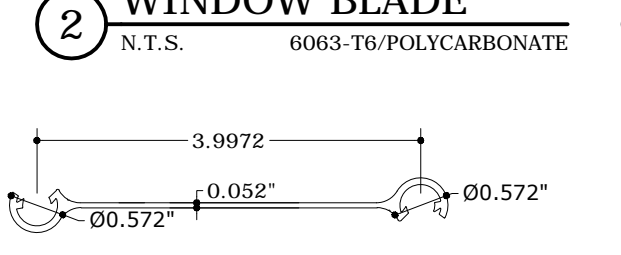
3 HERMAPHRODITIC CENTERMATE
 N.T.S. 6063-T6



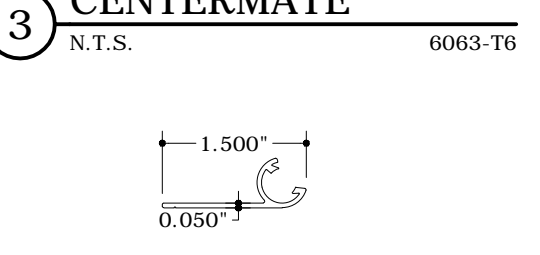
4 MALE CENTERMATE
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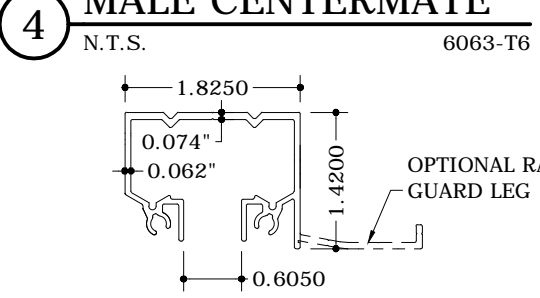
5 FEMALE CENTERMATE
 N.T.S. 6063-T6



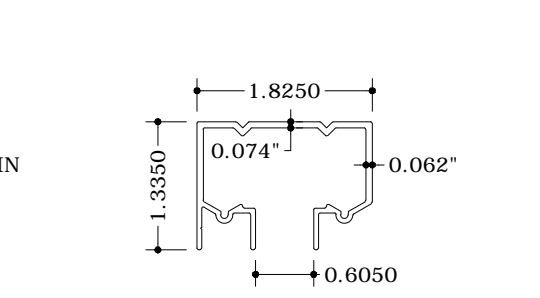
6 BLADE ADAPTER
 N.T.S. 6063-T6



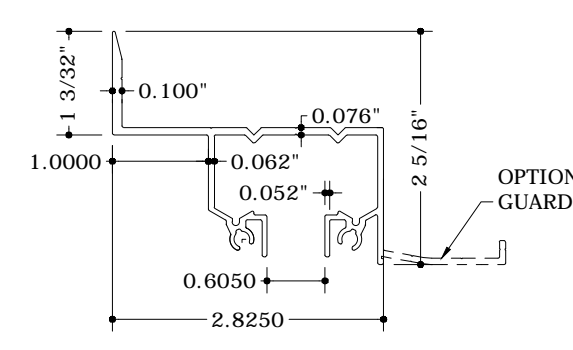
8 FLAT STARTER BLADE
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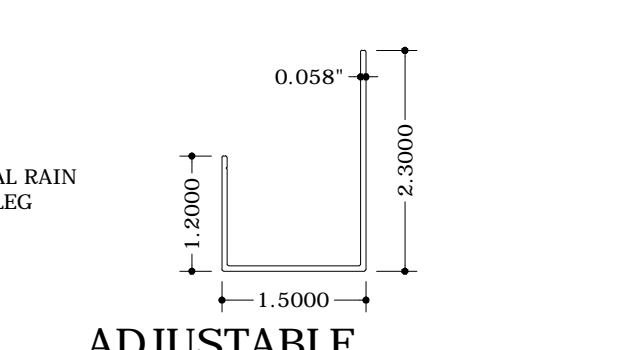
9 CEILING HEADER
 N.T.S. 6063-T6



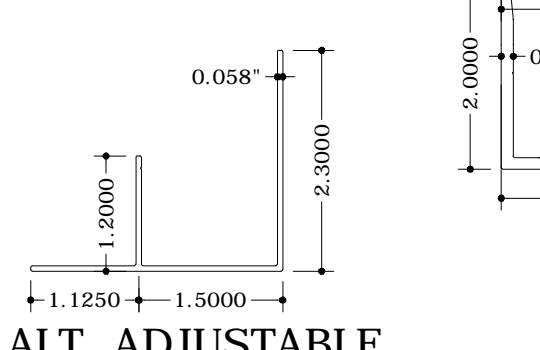
37 ALT. CEILING HEADER
 N.T.S. 6063-T6



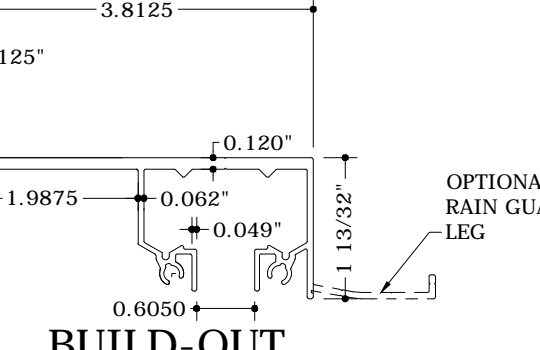
10 WALL HEADER
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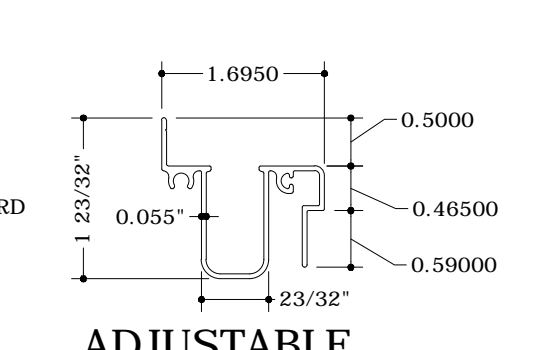
11 ADJUSTABLE SILL TRACK BOTTOM
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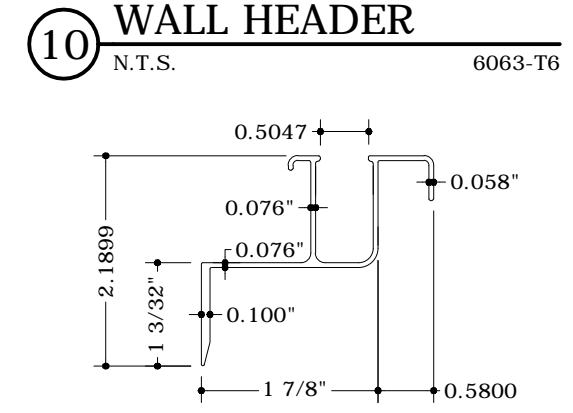
12 ALT. ADJUSTABLE SILL TRACK BOTTOM
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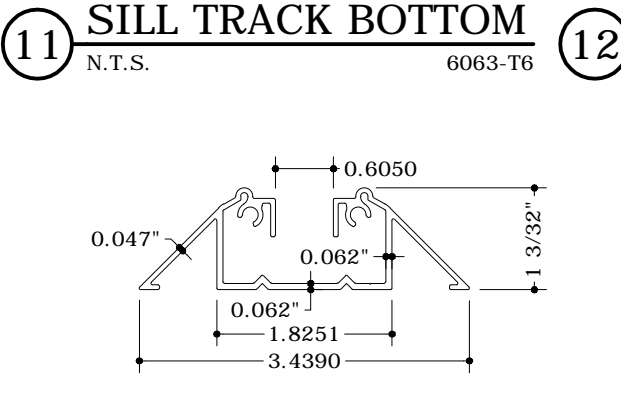
13 BUILD-OUT WALL HEADER
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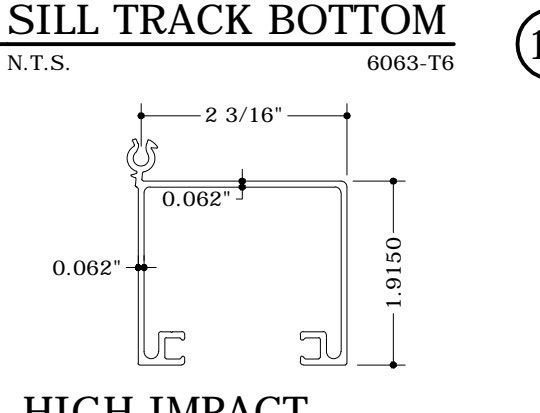
14 ADJUSTABLE SILL TRACK TOP
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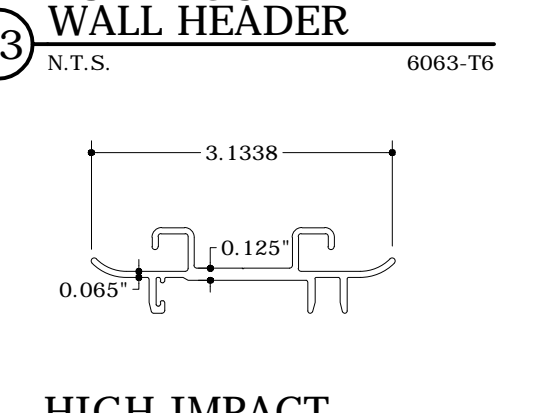
15 WALL SILL TRACK
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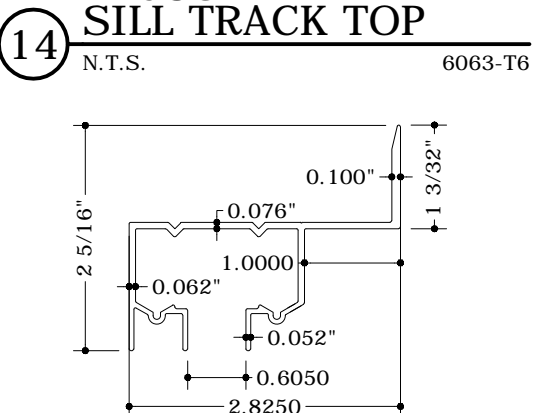
16 WALKOVER TRACK
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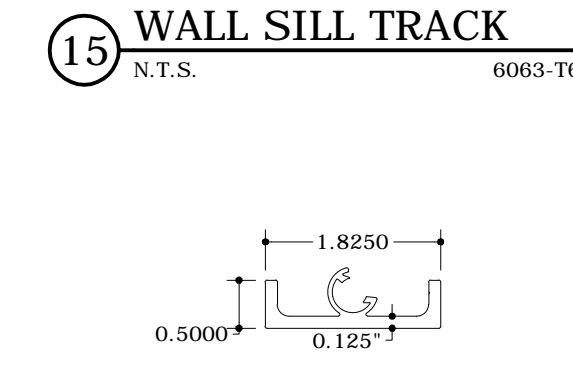
29 HIGH IMPACT CENTERMATE
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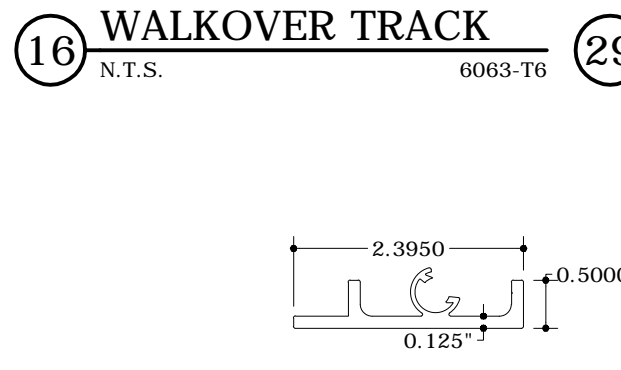
30 HIGH IMPACT CENTERMATE INSERT
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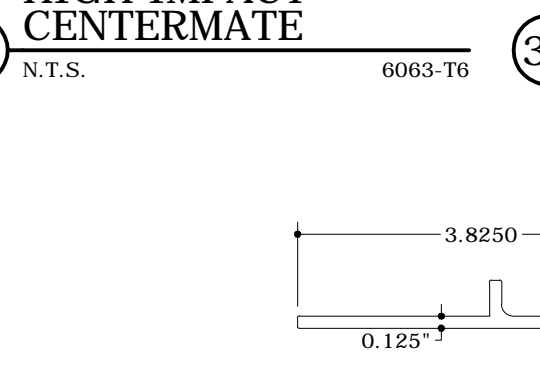
38 ALT. WALL HEADER
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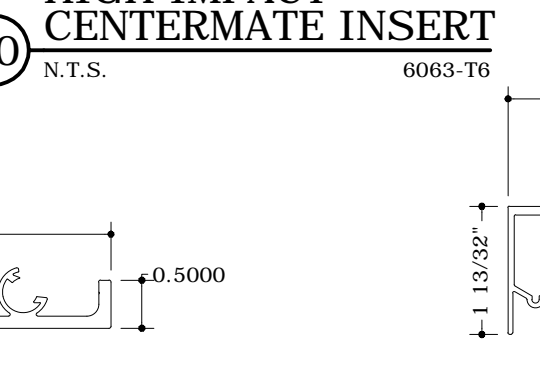
31 CEILING SIDE MOUNT
 N.T.S. 6063-T6



32 HEADER SIDE MOUNT
 N.T.S. 6063-T6



33 BUILD-OUT HEADER SIDE MOUNT
 N.T.S. 6063-T6



39 ALT. BUILD-OUT WALL HEADER
 N.T.S. 6063-T6

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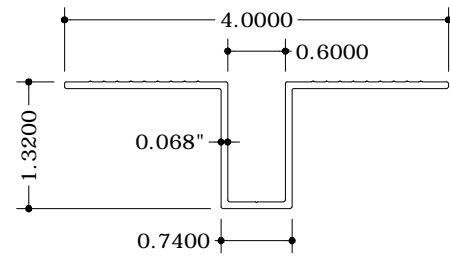
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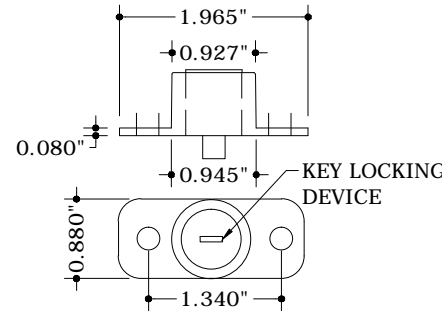
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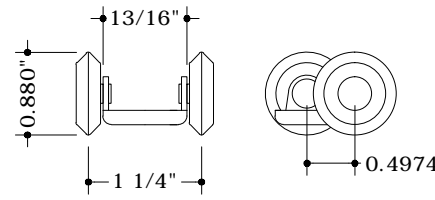
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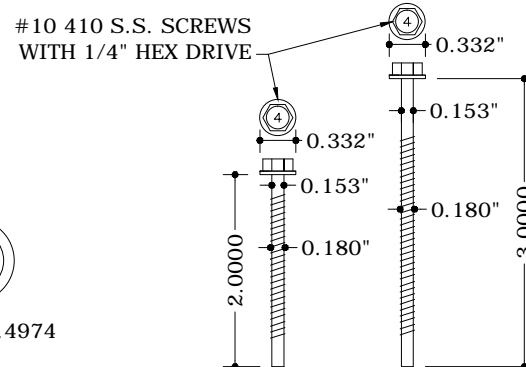
17 RECESSED TRACK
N.T.S. 6063-T5



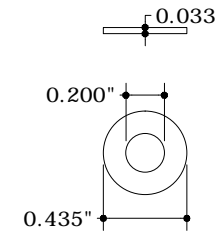
18 PUSH-BUTTON LOCK
N.T.S. 6063-T5



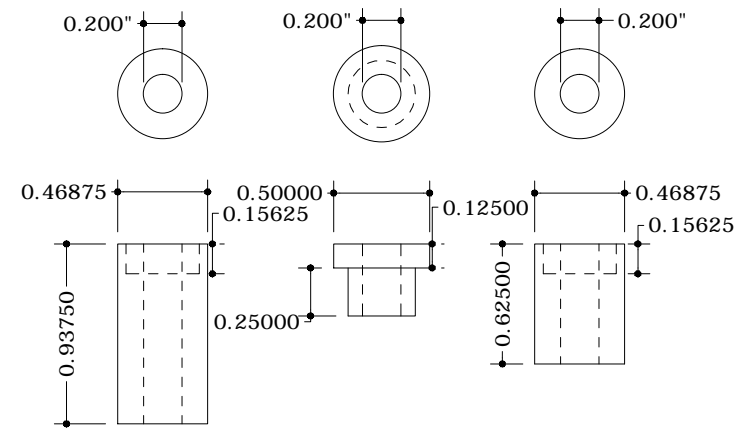
19 WHEEL CARRIAGE
N.T.S. NYLON/STAINLESS STEEL



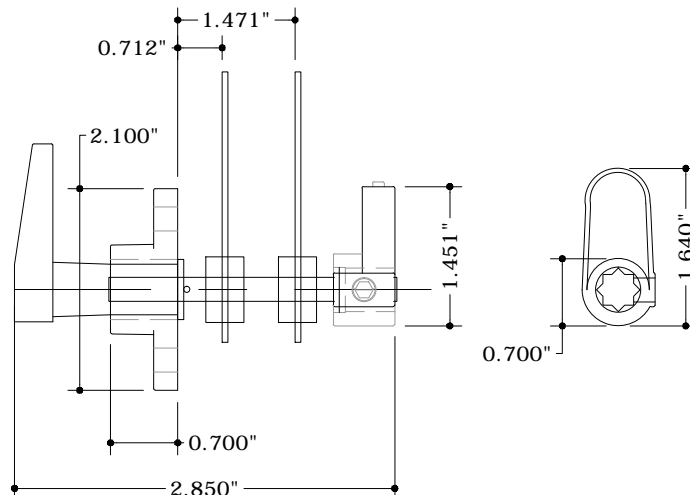
20 KNUCKLE SCREWS
N.T.S. STAINLESS STEEL



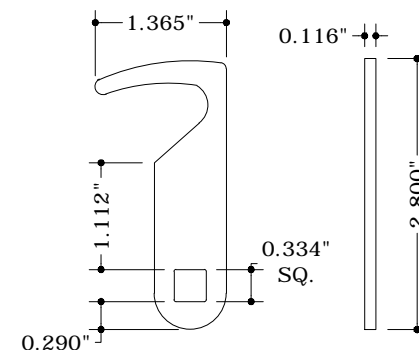
21 WASHER
N.T.S. STAINLESS STEEL



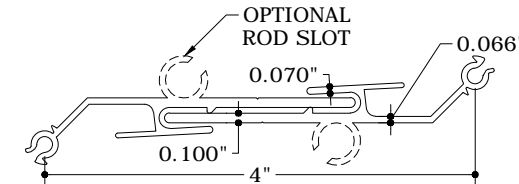
22 NYLON BUSHINGS
N.T.S. NYLON



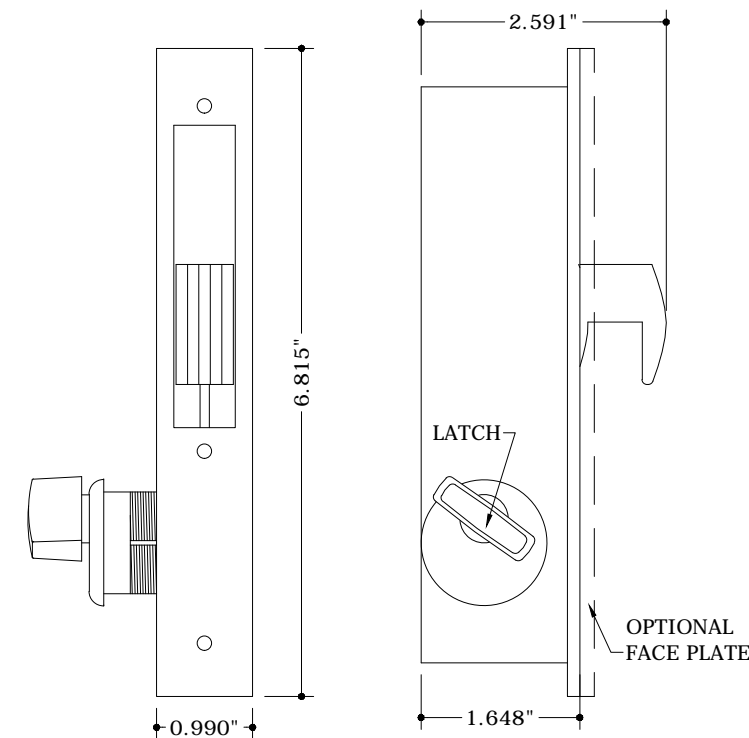
23 LOCK ASSEMBLY
N.T.S. ZINC ALLOY/STAINLESS STEEL



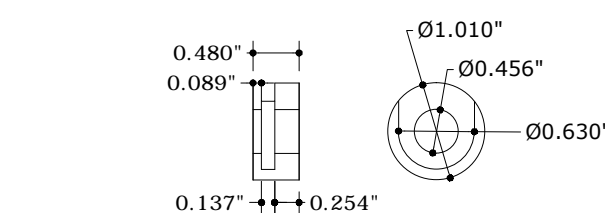
24 LOCKING ARM
N.T.S. 410 STAINLESS STEEL



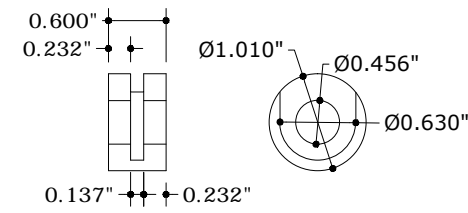
40 ALT. HERMAPHRODITIC CENTERMATE
N.T.S. 6063-T6



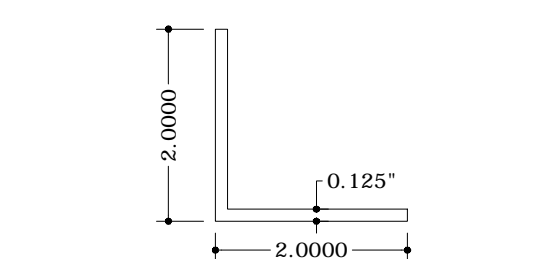
34 HOOK BOLT DEAD LOCK
N.T.S. ALUMINUM



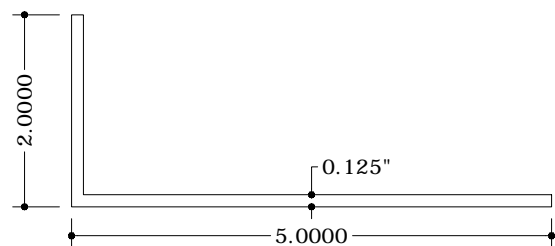
25 LEFT LOCKING ARM BUSHING
N.T.S. NYLON



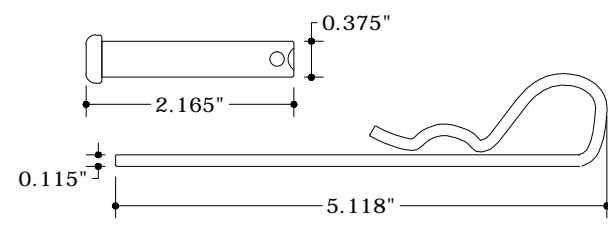
26 RIGHT LOCKING ARM BUSHING
N.T.S. NYLON



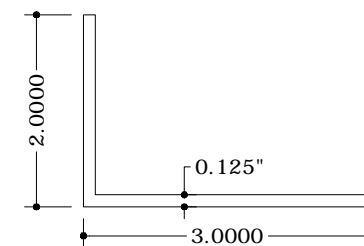
35 2" x 2" x 0.125" ANGLE
N.T.S. 6063-T6



27 2" x 5" x 0.125" ANGLE
N.T.S. 6063-T6



28 CLEVIS AND PIN
N.T.S. CADMIUM PLATED STEEL



36 2" x 3" x 0.125" ANGLE
N.T.S. 6063-T6

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PHONE: (786) 367-8740
ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
TEXAS DEPARTMENT OF INSURANCE

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
2010 FCC (05-HTI-01-04)	KL	FLB	02/14/12
FCC 5TH EDITION (2014)	CSL	TSB	02/08/15
IBC & IRC 2018 EDITION	EPR	RWN	01/05/22

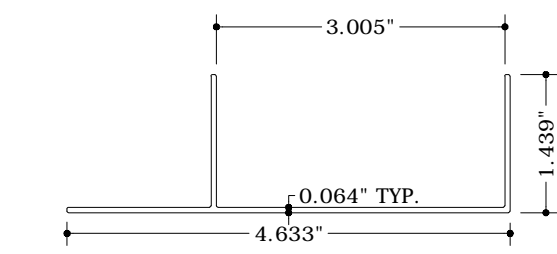
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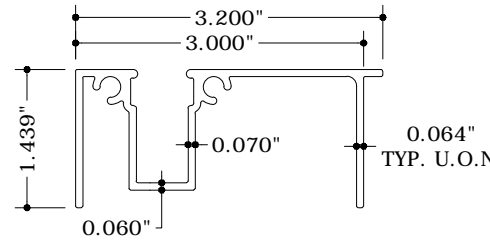
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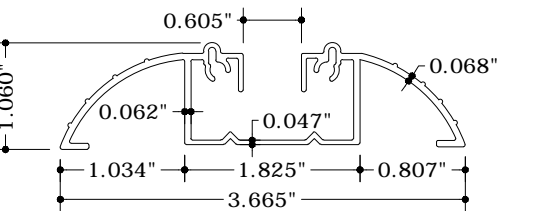
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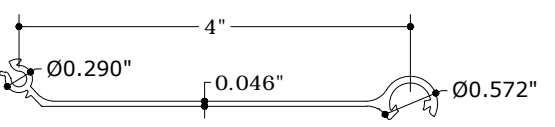
41 ALT. ADJUSTABLE SILL TRACK BOTTOM
N.T.S. 6063-T6



42 ALT. ADJUSTABLE SILL TRACK TOP
N.T.S. 6063-T6



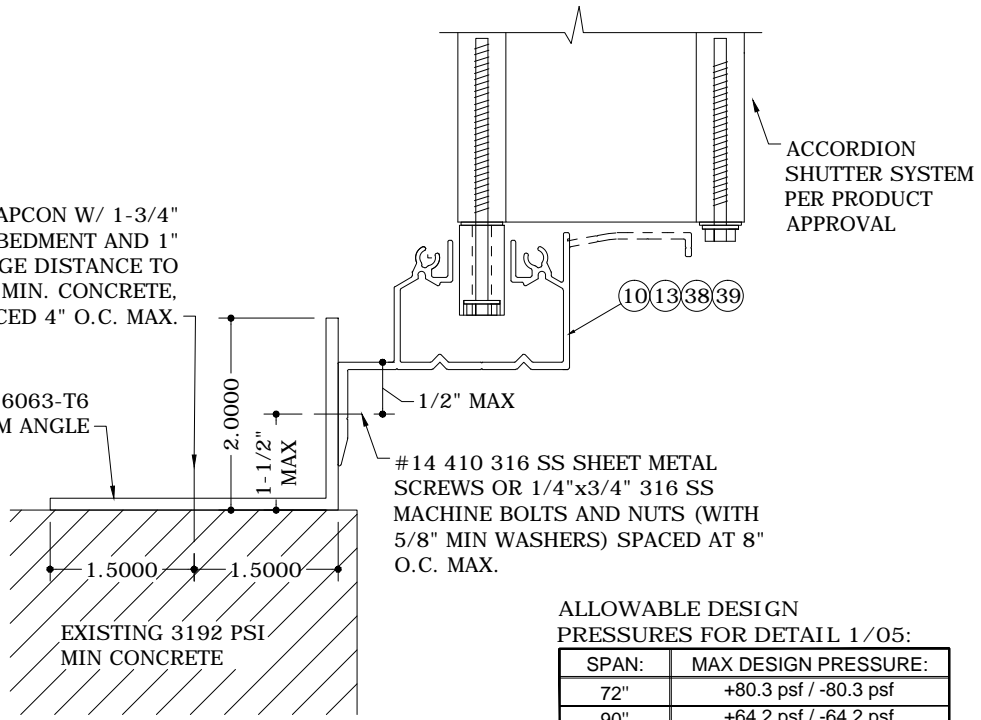
43 ALT. WALKOVER TRACK
N.T.S. 6063-T6



44 LIGHTWEIGHT BLADE
N.T.S. 6063-T6

1/4" ITW TAPCON W/ 1-3/4" MIN. EMBEDMENT AND 1" MIN. EDGE DISTANCE TO 3192 PSI MIN. CONCRETE, SPACED 4" O.C. MAX.

2"x3"x0.125" 6063-T6 ALUMINUM ANGLE



ACCORDION SHUTTER SYSTEM PER PRODUCT APPROVAL

#14 410 316 SS SHEET METAL SCREWS OR 1/4"x3/4" 316 SS MACHINE BOLTS AND NUTS (WITH 5/8" MIN WASHERS) SPACED AT 8" O.C. MAX.

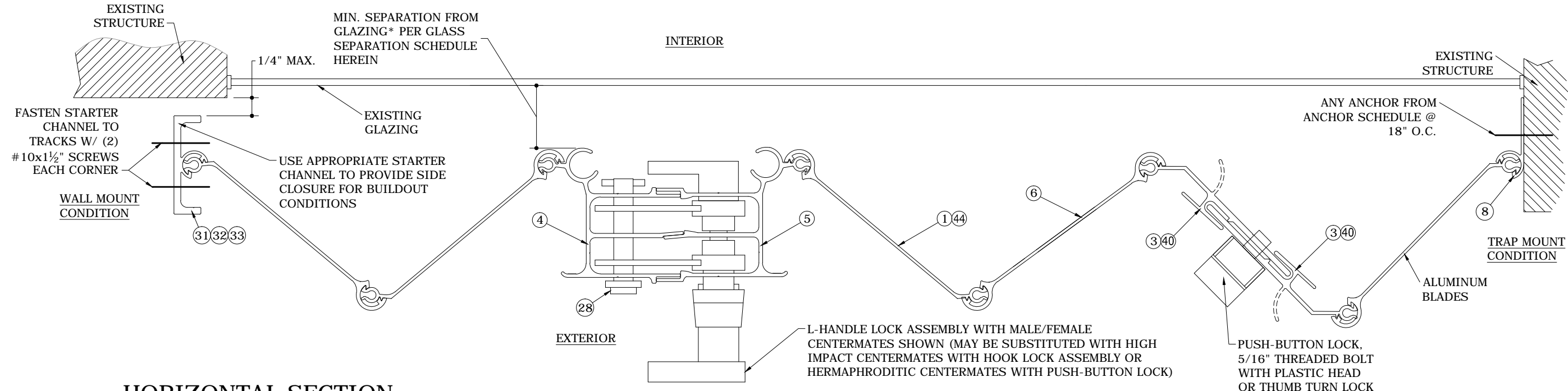
EXISTING 3192 PSI MIN CONCRETE

ALLOWABLE DESIGN PRESSURES FOR DETAIL 1/05:

SPAN:	MAX DESIGN PRESSURE:
72"	+80.3 psf / -80.3 psf
90"	+64.2 psf / -64.2 psf
108"	+53.5 psf / -53.5 psf
126"	+45.9 psf / -45.9 psf
144"	+40.1 psf / -40.1 psf

NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

1 BUILD-UP WALL MOUNT
05 N.T.S. VERT SECTION



2 HORIZONTAL SECTION W/ FLOATING STACK
05 N.T.S. HORIZ SECTION

*NOTE: SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.

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ACCORDION SHUTTER
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TEXAS DEPARTMENT OF INSURANCE

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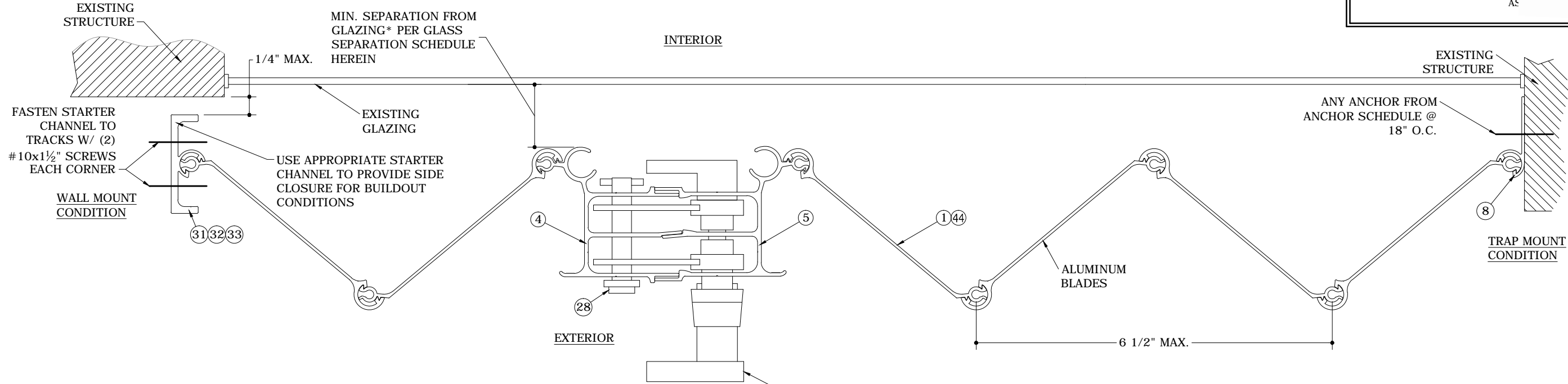
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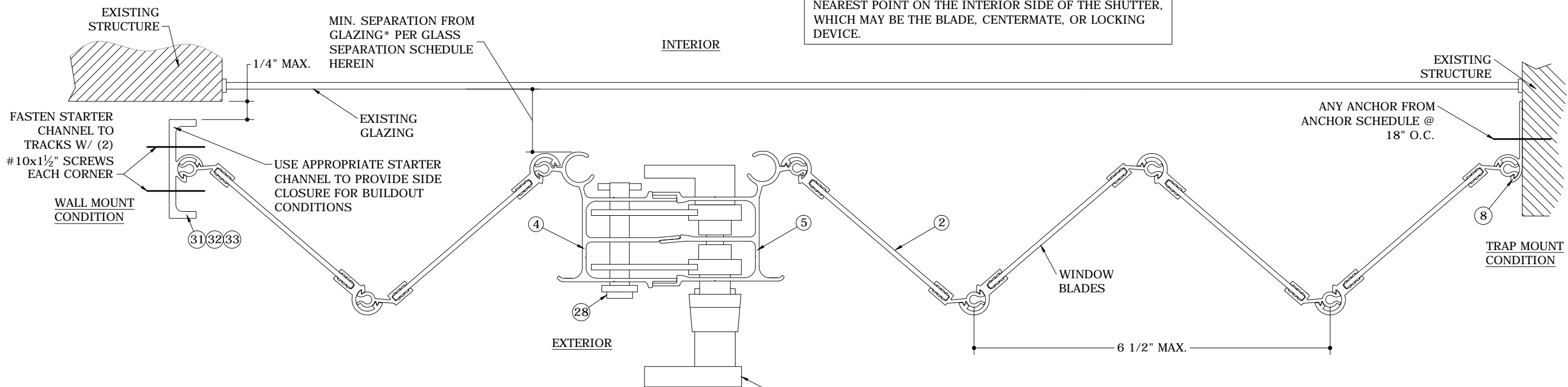
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1
HORIZONTAL SECTION W/ ALUMINUM BLADES
N.T.S. HORIZ SECTION

L-HANDLE LOCK ASSEMBLY WITH MALE/FEMALE CENTERMATES SHOWN (MAY BE SUBSTITUTED WITH HIGH IMPACT CENTERMATES WITH HOOK LOCK ASSEMBLY OR HERMAPHRODITIC CENTERMATES WITH PUSH-BUTTON LOCK)

*NOTE: SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.



2
HORIZONTAL SECTION W/ WINDOW BLADES
N.T.S. HORIZ SECTION

L-HANDLE LOCK ASSEMBLY WITH MALE/FEMALE CENTERMATES SHOWN (MAY BE SUBSTITUTED WITH HIGH IMPACT CENTERMATES WITH HOOK LOCK ASSEMBLY OR HERMAPHRODITIC CENTERMATES WITH PUSH-BUTTON LOCK)

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ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
TEXAS DEPARTMENT OF INSURANCE

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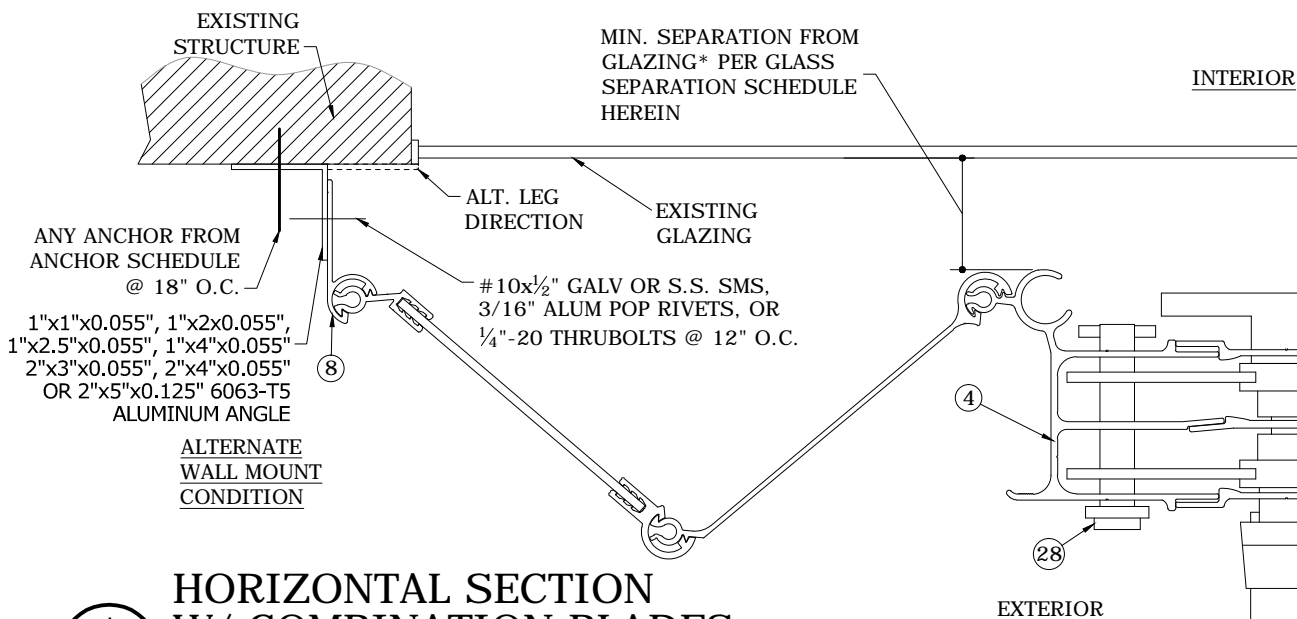
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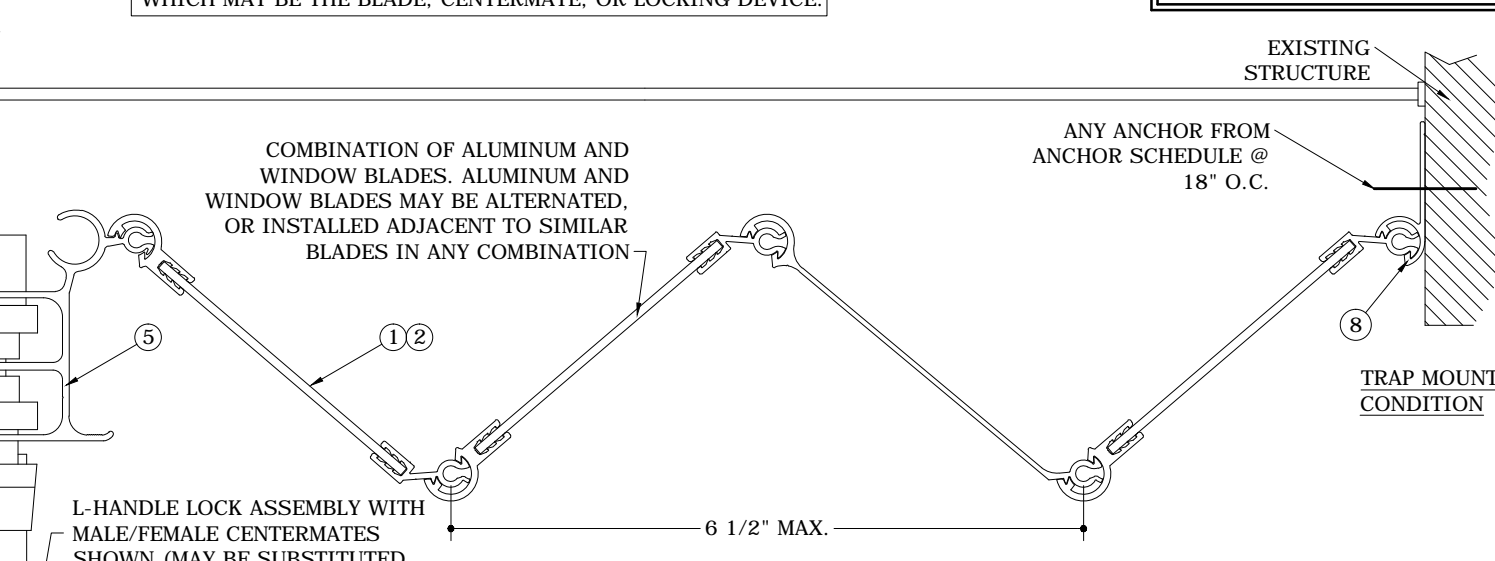
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*NOTE: SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.



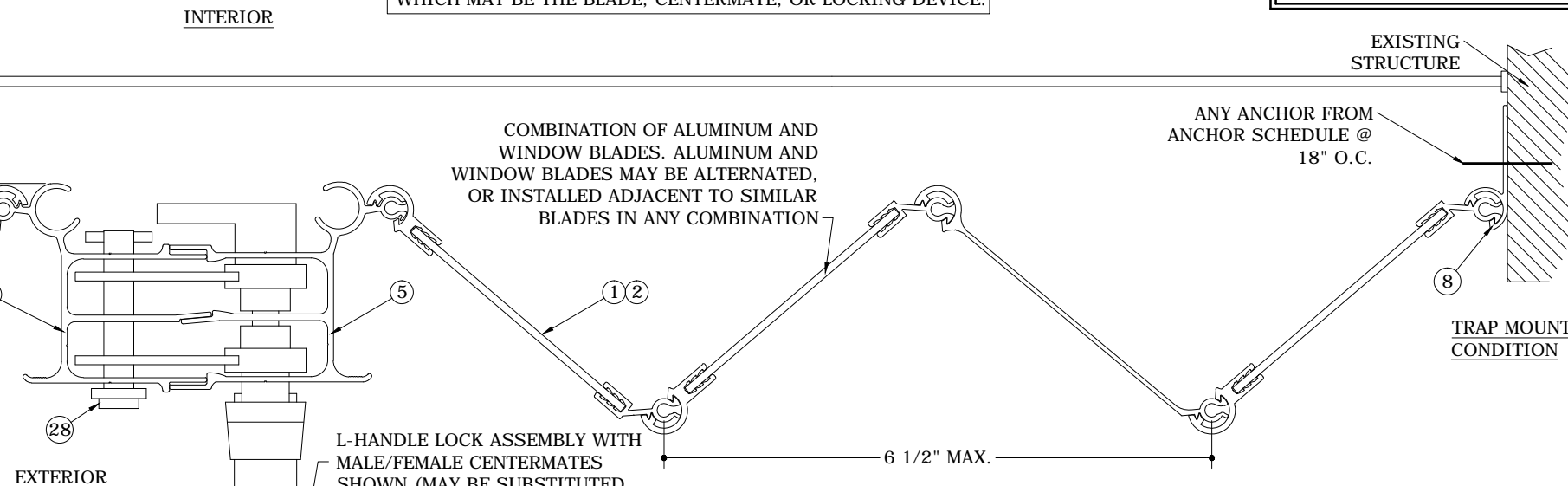
1
HORIZONTAL SECTION W/ COMBINATION BLADES

N.T.S. HORIZ SECTION



2
ALT. HERMAPHRODITIC CENTERMATE

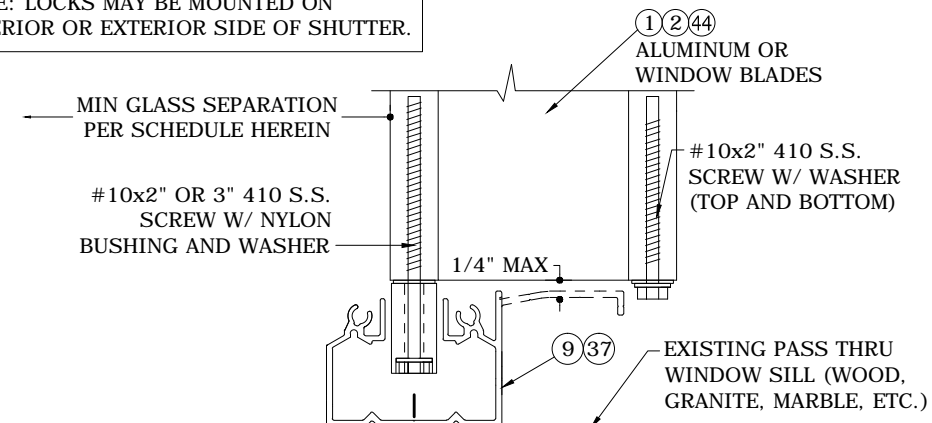
N.T.S. HORIZ SECTION



3
ALT. HIGH IMPACT CENTERMATE

N.T.S. HORIZ SECTION

NOTE: LOCKS MAY BE MOUNTED ON INTERIOR OR EXTERIOR SIDE OF SHUTTER.



4
PASS THRU WINDOW DETAIL

N.T.S. VERT SECTION

COMBINATION OF ALUMINUM AND WINDOW BLADES. ALUMINUM AND WINDOW BLADES MAY BE ALTERNATED, OR INSTALLED ADJACENT TO SIMILAR BLADES IN ANY COMBINATION

L-HANDLE LOCK ASSEMBLY WITH MALE/FEMALE CENTERMATES SHOWN (MAY BE SUBSTITUTED WITH HIGH IMPACT CENTERMATES WITH HOOK LOCK ASSEMBLY OR HERMAPHRODITIC CENTERMATES WITH PUSH-BUTTON LOCK)

#12x1/2" GALV OR S.S. SMS, 3/16" ALUM POP RIVETS, OR 1/4"-20 THRUBOLTS @ 12" O.C.

(3) #12x1/2" SMS OR 3/16" ALUM POP RIVETS EACH ANGLE TO TUBE
(2) 2"x2"x0.125" 6063-T6 ALUMINUM ANGLES AT TOP AND BOTTOM OF EACH TUBE

5
STANDARD CORNER CLOSURE

N.T.S. HORIZ SECTION

(2) ANCHORS PER ANGLE (USE ANY ANCHOR FROM ANCHOR SCHED)
#12x1/2" GALV OR S.S. SMS, 3/16" ALUM POP RIVETS, OR 1/4"-20 THRUBOLTS @ 12" O.C.

(3) #12x1/2" SMS OR 3/16" ALUM POP RIVETS EACH ANGLE TO TUBE
(2) 2"x2"x0.125" 6063-T6 ALUMINUM ANGLES AT TOP AND BOTTOM OF EACH TUBE

6
ALTERNATE CORNER CLOSURE

N.T.S. HORIZ SECTION

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IBC & IRC 2018 EDITION	01/05/22		

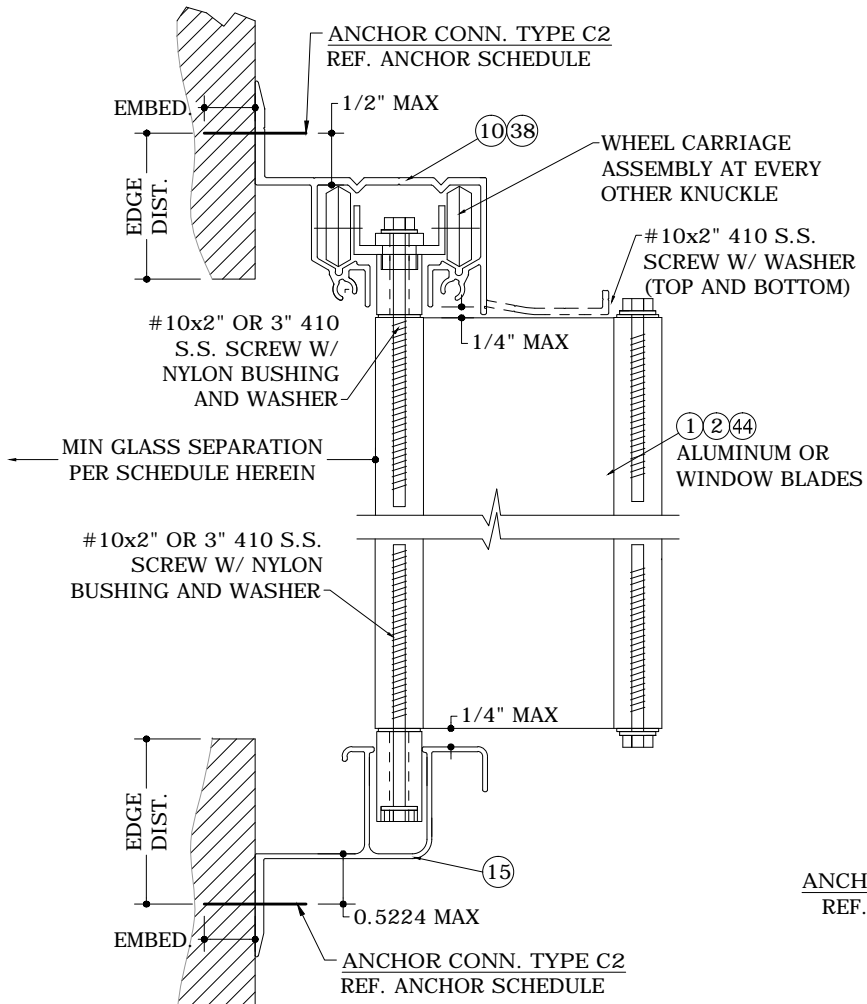
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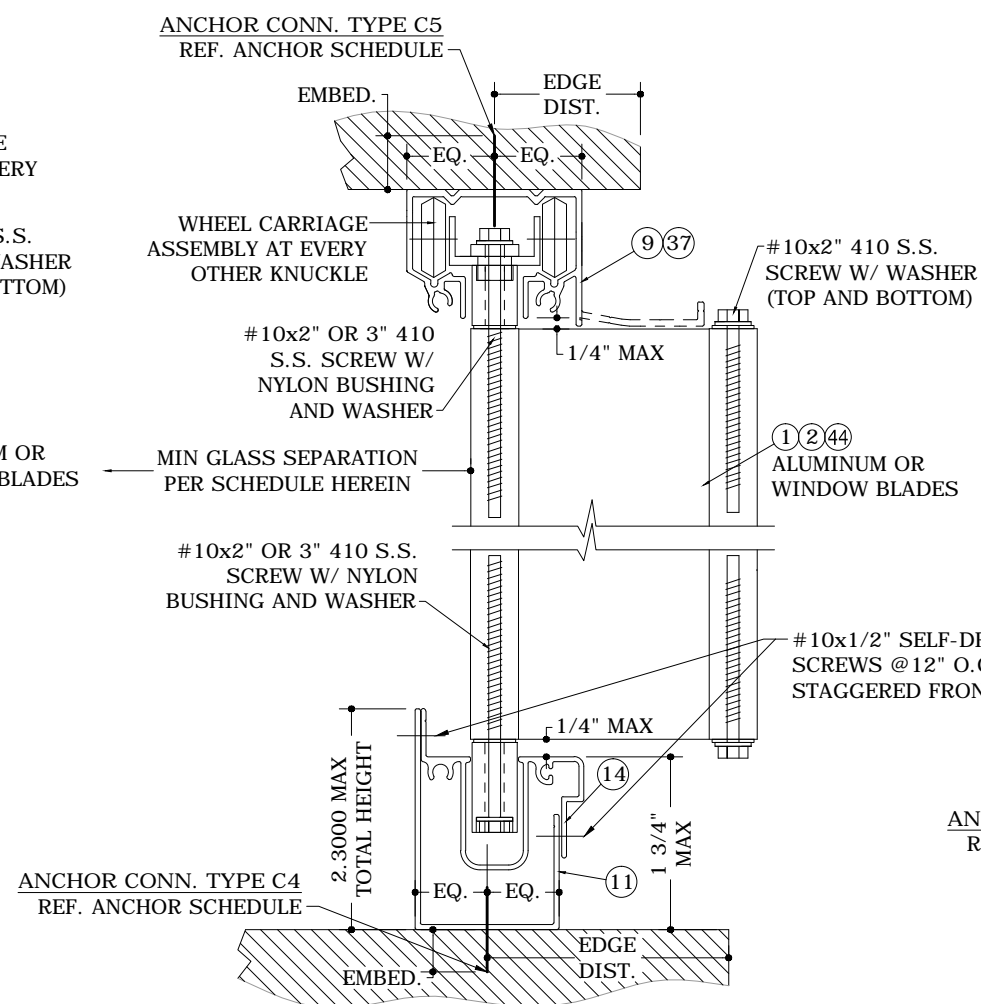
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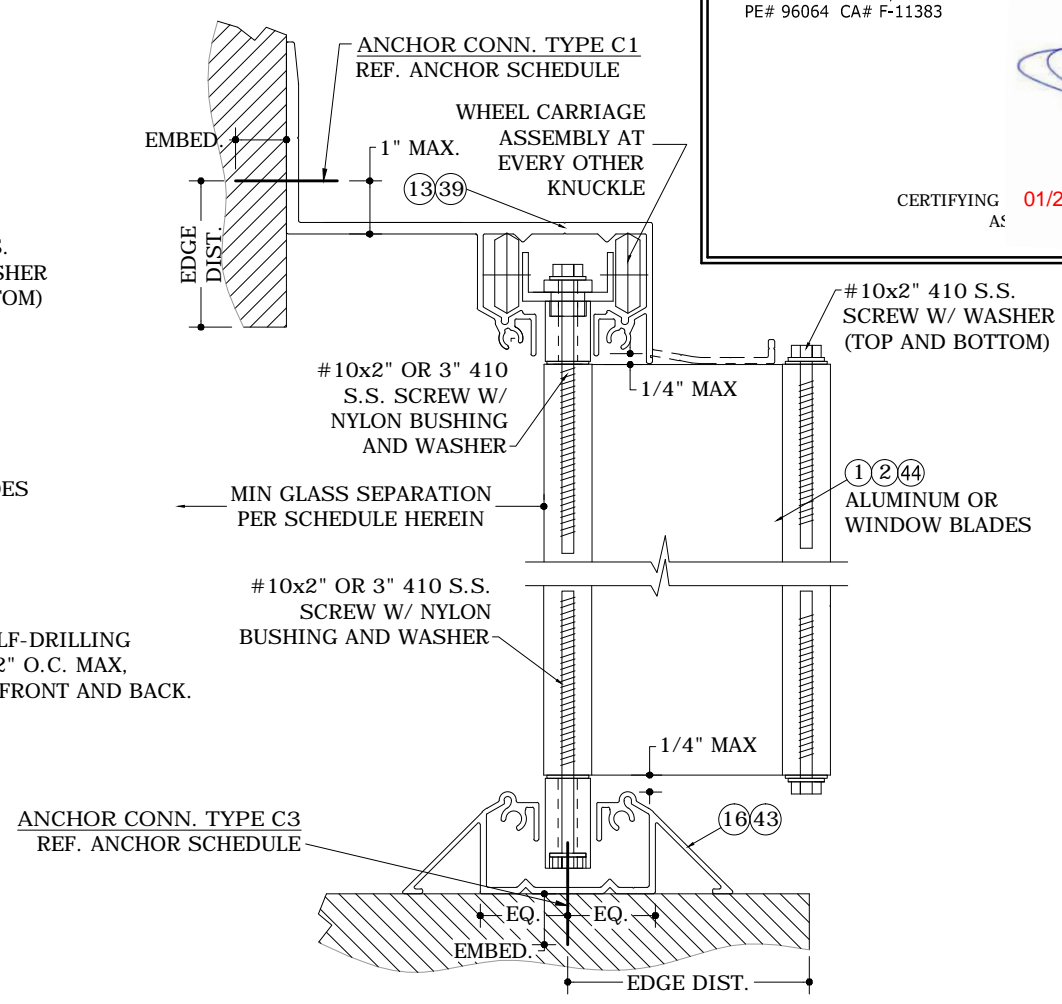
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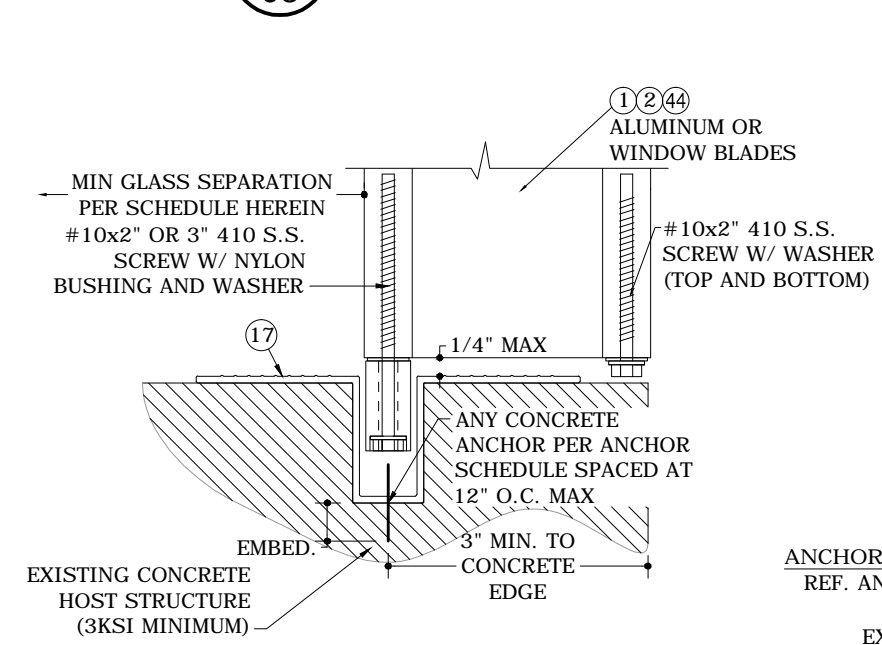
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WALL HEADER WALL SILL TRACK



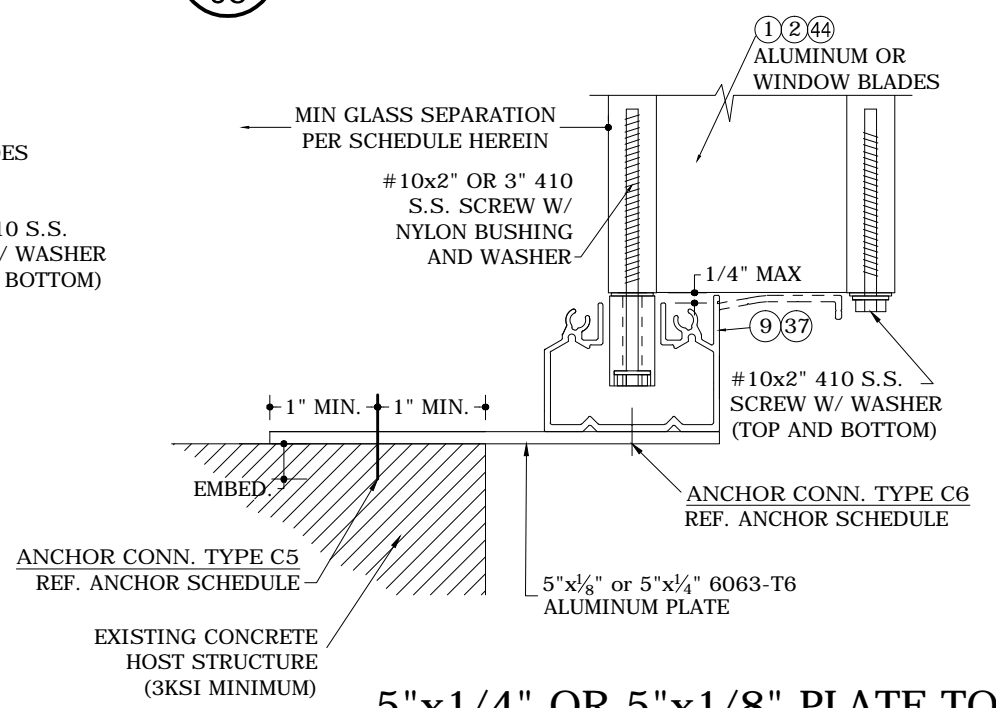
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CEILING HEADER ADJUSTABLE SILL TRACK



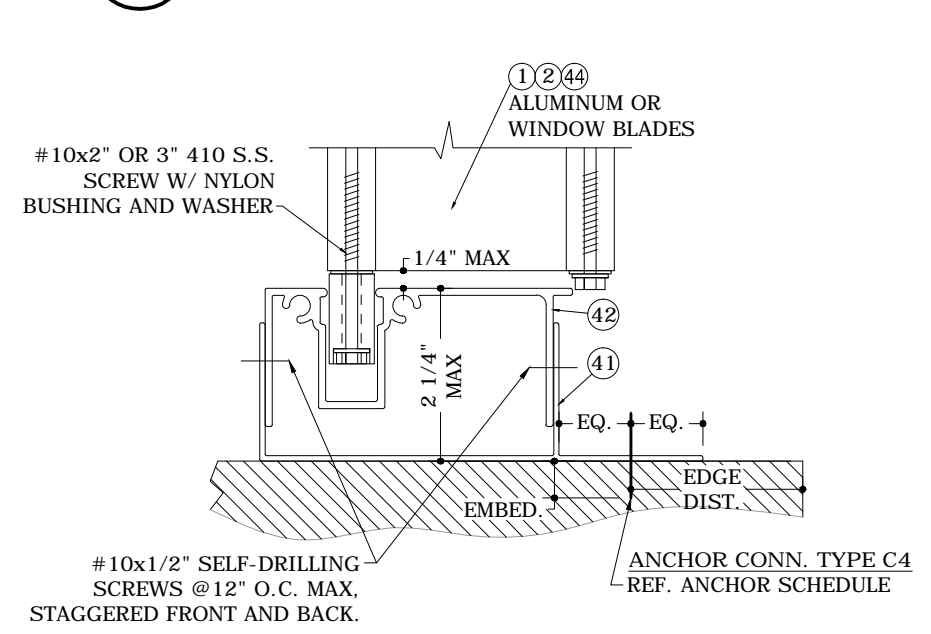
3
 08 N.T.S. VERT SECTION
B.O. WALL HEADER WALKOVER TRACK



4
 08 N.T.S. VERT SECTION
RECESSED FLOOR TRACK



5
 08 N.T.S. VERT SECTION
5" x 1/4" OR 5" x 1/8" PLATE TO EXISTING HOST STRUCTURE



6
 08 N.T.S. VERT SECTION
ALT. ADJUSTABLE SILL TRACK THRU-FLANGE INSTALLATION

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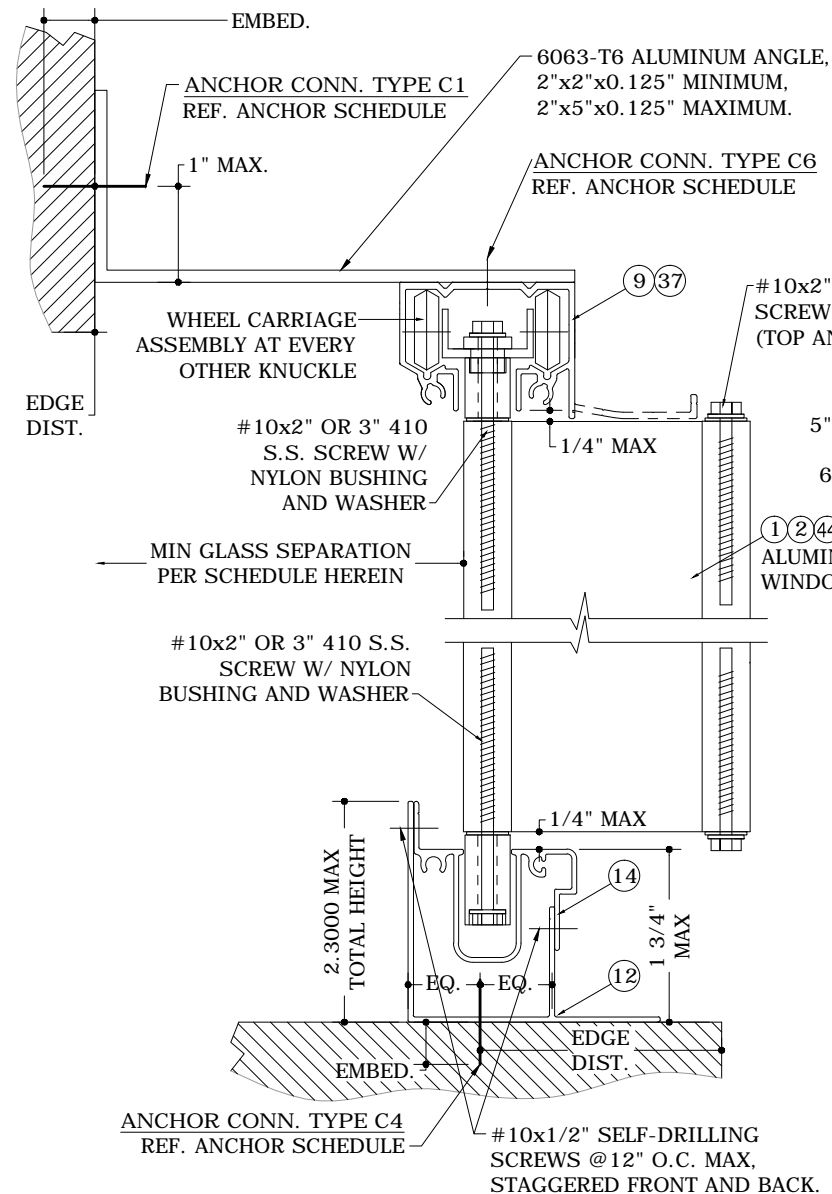
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 ACCORDION SHUTTER
 WITH ALUMINUM OR POLYCARBONATE BLADES
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IBC & IRC 2018 EDITION	EPR	RWN	01/05/22

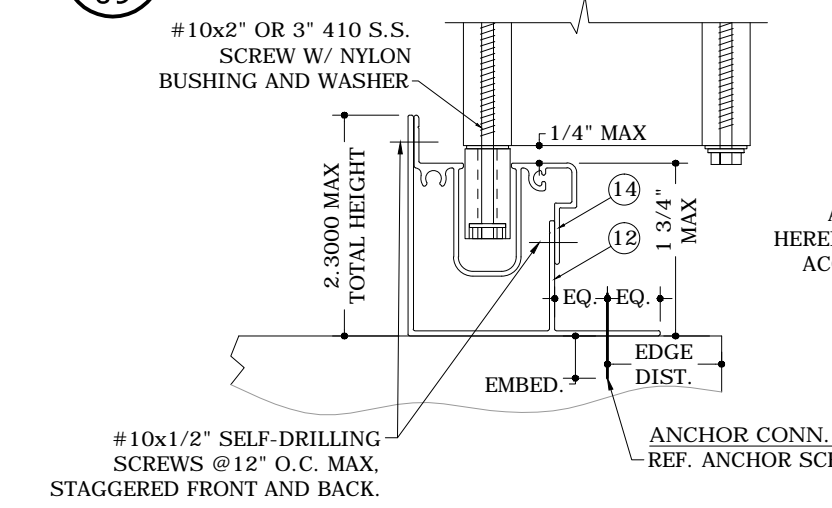
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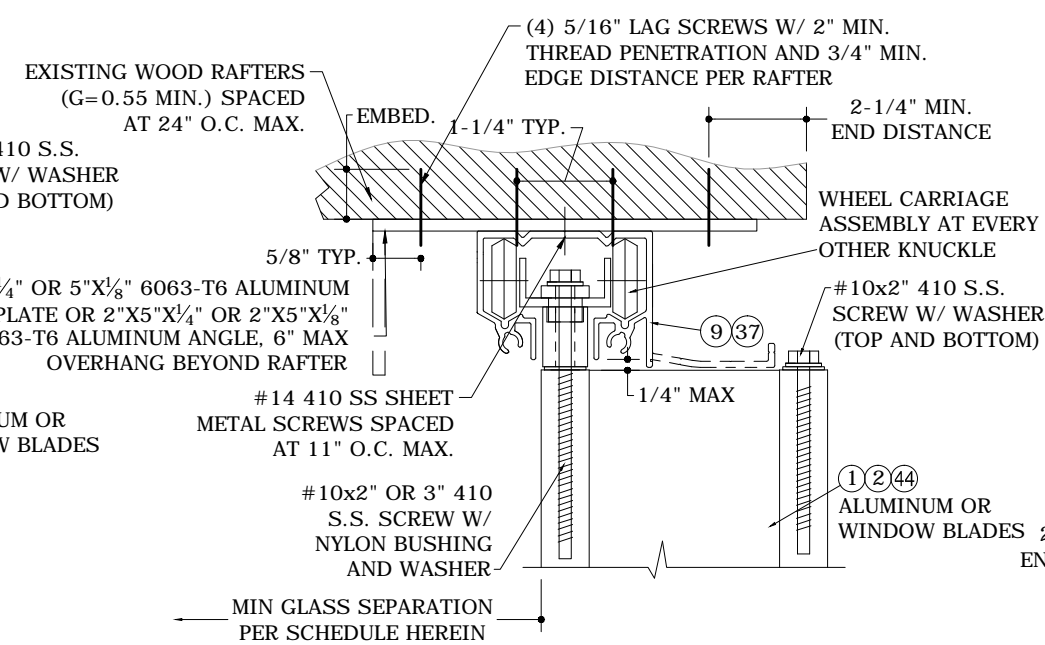
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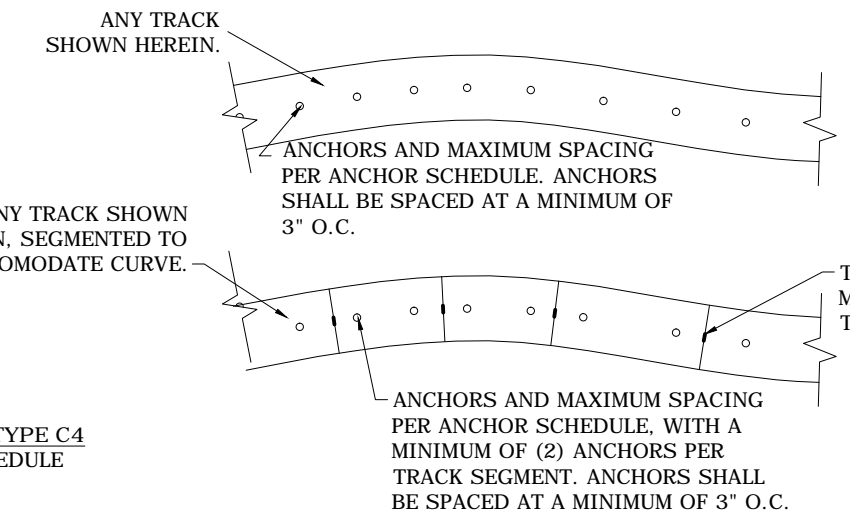
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 09 N.T.S. VERT SECTION
**2"x5" ANGLE W/ CEILING HEADER
 ALT. ADJUSTABLE SILL TRACK**



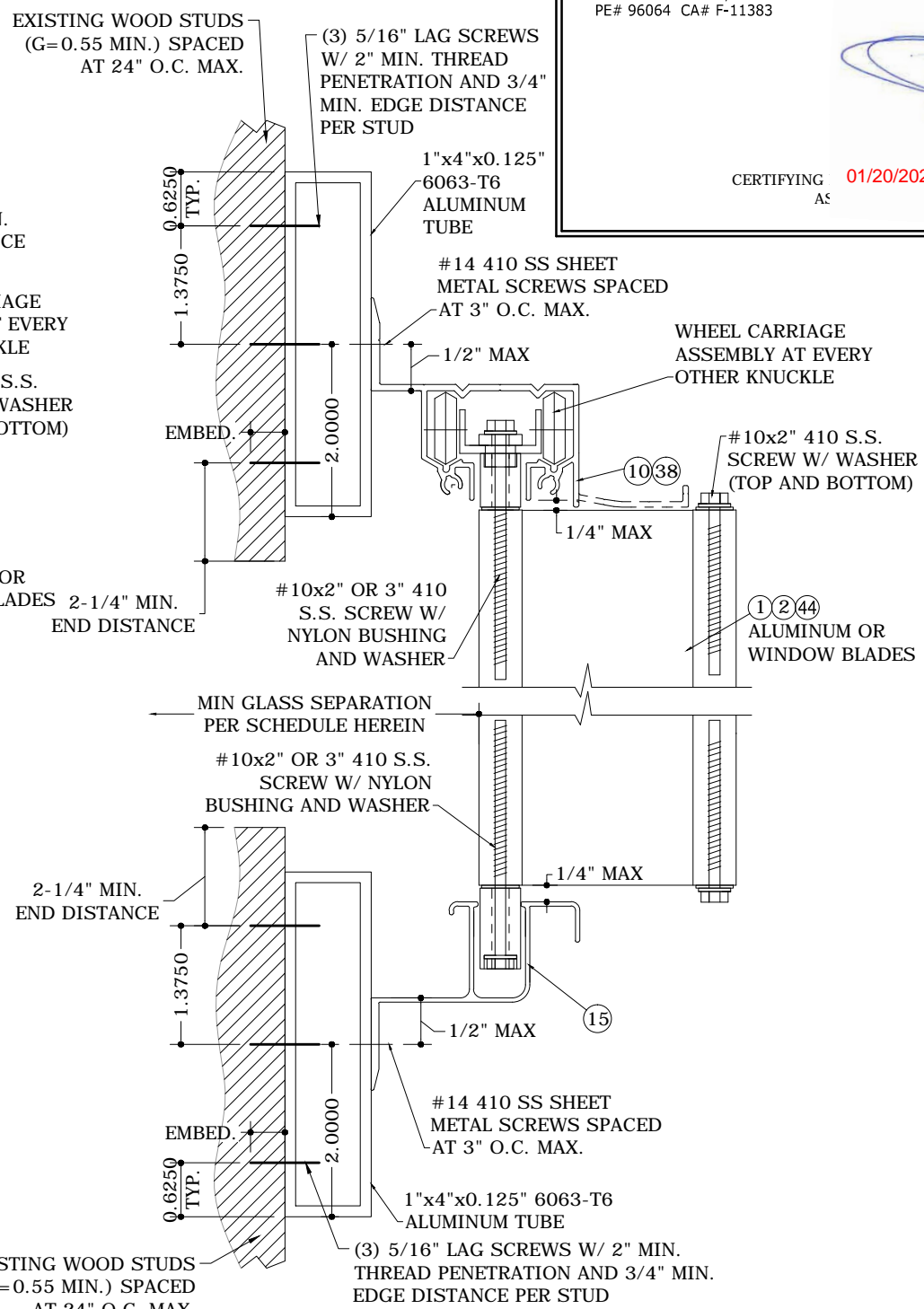
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 09 N.T.S. VERT SECTION
**ALT. ADJUSTABLE SILL TRACK
 THRU-FLANGE INSTALLATION**



2
 09 N.T.S. VERT SECTION
**5"x1/4" OR 5"x1/8" PLATE
 TO EXISTING RAFTERS**



5
 09 N.T.S. PLAN VIEW
**OPTIONAL CURVED TRACK
 W/ & W/O SEGMENTED SECTIONS**



3
 09 N.T.S. VERT SECTION
**1"x4"x0.125" TUBE TO
 EXISTING WALL STUDS**

ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/09 WITH 1/4" ALUMINUM PLATE/ANGLE:

SPAN:	MAX DESIGN PRESSURE:
72"	+124.8 psf / -124.8 psf
90"	+99.8 psf / -99.8 psf
108"	+83.2 psf / -83.2 psf
126"	+61.2 psf / -71.3 psf
144"	+42.4 psf / -62.4 psf

ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/09 WITH 1/8" ALUMINUM PLATE/ANGLE:

SPAN:	MAX DESIGN PRESSURE:
72"	+71.7 psf / -71.7 psf
90"	+57.3 psf / -57.3 psf
108"	+47.8 psf / -47.8 psf
126"	+40.9 psf / -40.9 psf
144"	+35.8 psf / -35.8 psf

NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

ALLOWABLE DESIGN PRESSURES FOR DETAIL 3/09:

SPAN:	MAX DESIGN PRESSURE:
72"	+111.5 psf / -111.5 psf
90"	+89.2 psf / -89.2 psf
108"	+74.3 psf / -74.3 psf
126"	+61.2 psf / -63.7 psf
144"	+42.4 psf / -55.7 psf

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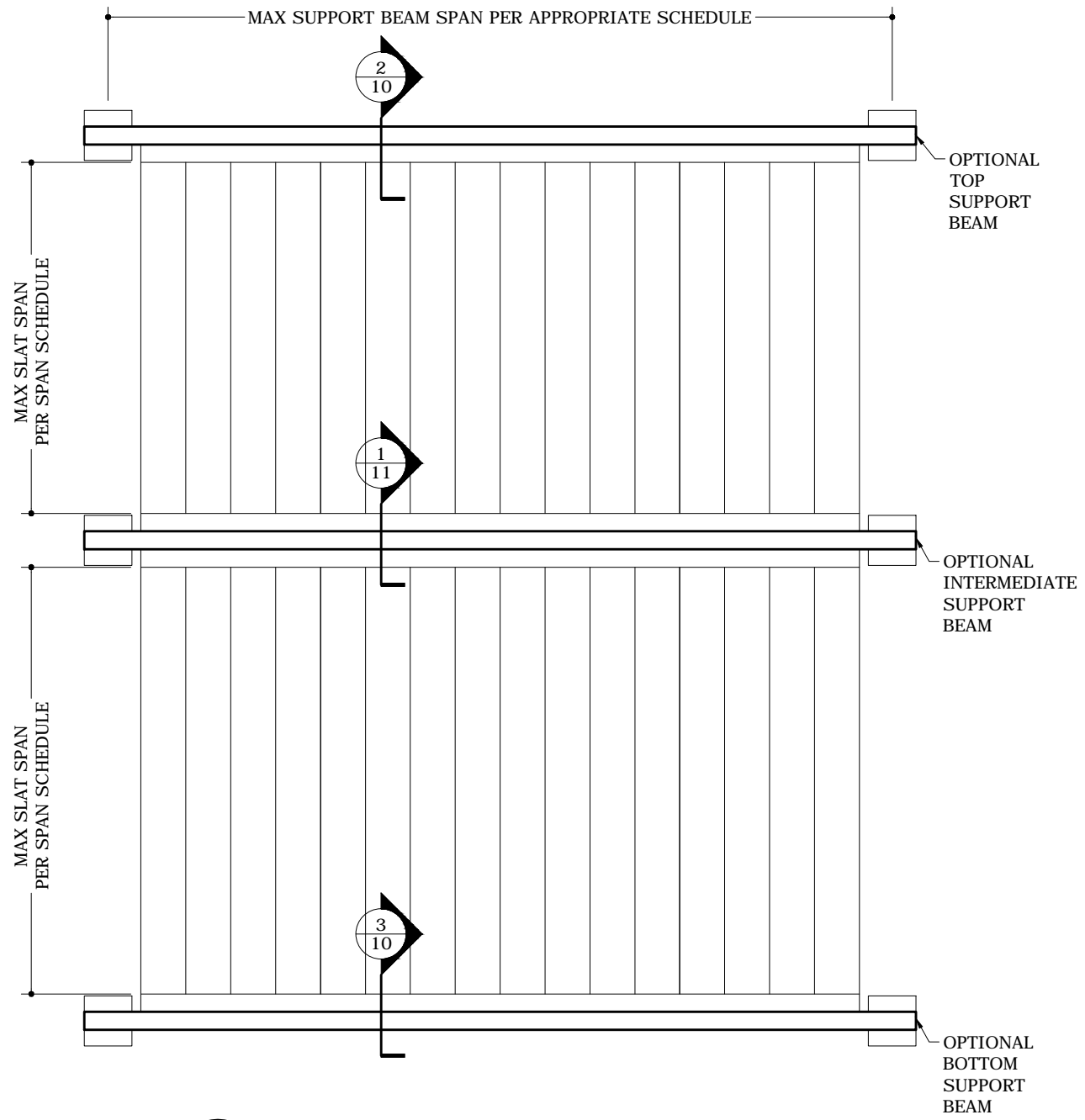
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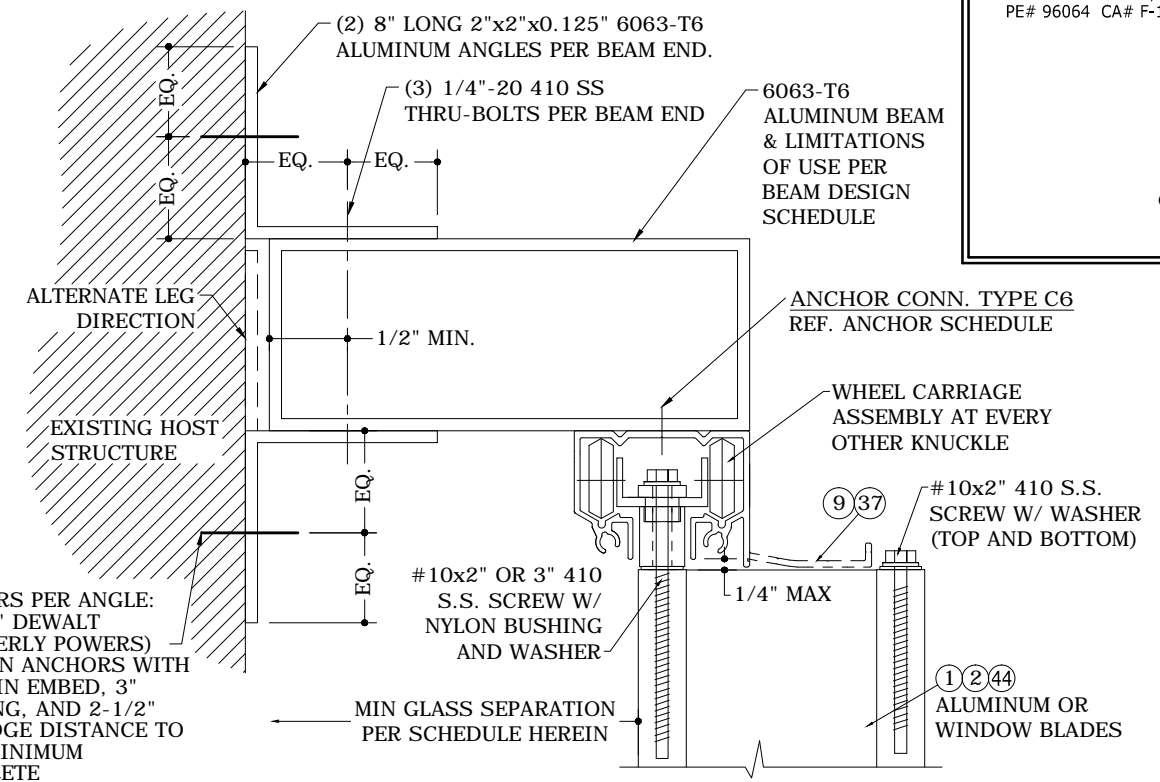


1 ELEVATION WITH STORM BARS
 10 N.T.S. EXTERIOR ELEV

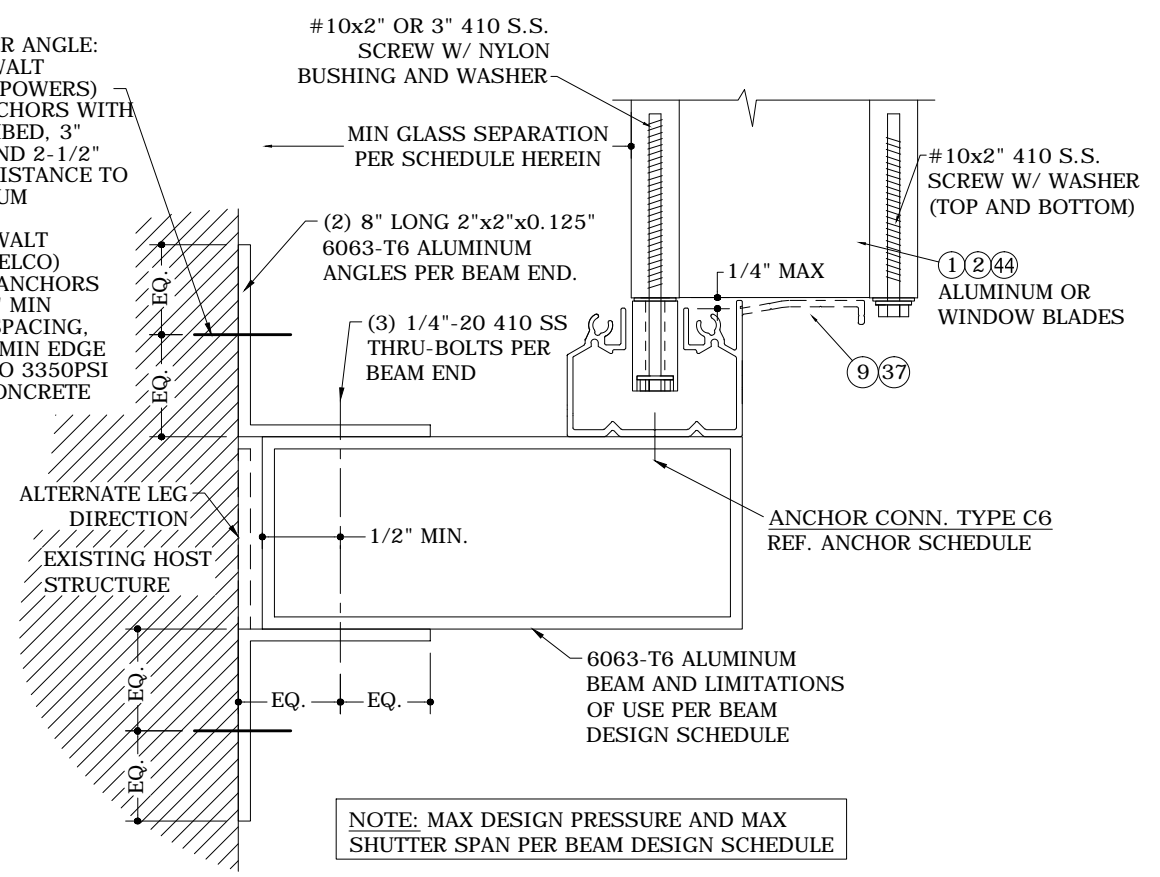
BEAM SIZE	SHUTTER SPAN	BEAM SPAN	ALLOWABLE DESIGN PRESSURE		
			TOP BEAM	BOTTOM BEAM	INTERMEDIATE BEAM
2"x5"x0.125"	5'-0"	9'-5"	74.0 PSF	74.0 PSF	37.0 PSF
	8'-0"	8'-1"	73.0 PSF	73.0 PSF	36.0 PSF
	10'-0"	7'-6"	73.0 PSF	73.0 PSF	36.0 PSF
2"x8"x0.072"/0.224"	5'-0"	14'-0"	68.4 PSF	81.0 PSF	34.2 PSF
	8'-0"	11'-6"	61.8 PSF	83.1 PSF	30.9 PSF
	10'-0"	10'-4"	61.1 PSF	82.3 PSF	30.5 PSF
2"x9"x0.072"/0.224"	5'-0"	15'-5"	59.4 PSF	80.5 PSF	29.7 PSF
	8'-0"	12'-5"	56.3 PSF	80.4 PSF	28.2 PSF
	10'-0"	11'-2"	55.5 PSF	79.6 PSF	27.7 PSF

- (3) ANCHORS PER ANGLE:
 • 1/4"-20" DEWALT (FORMERLY POWERS) CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE
 • OR 1/4" DEWALT (FORMERLY ELCO) CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE

- (3) ANCHORS PER ANGLE:
 • 1/4"-20" DEWALT (FORMERLY POWERS) CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE
 • OR 1/4" DEWALT (FORMERLY ELCO) CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE



2 TOP SUPPORT BEAM
 10 N.T.S. VERT SECTION



3 BOTTOM SUPPORT BEAM
 10 N.T.S. VERT SECTION

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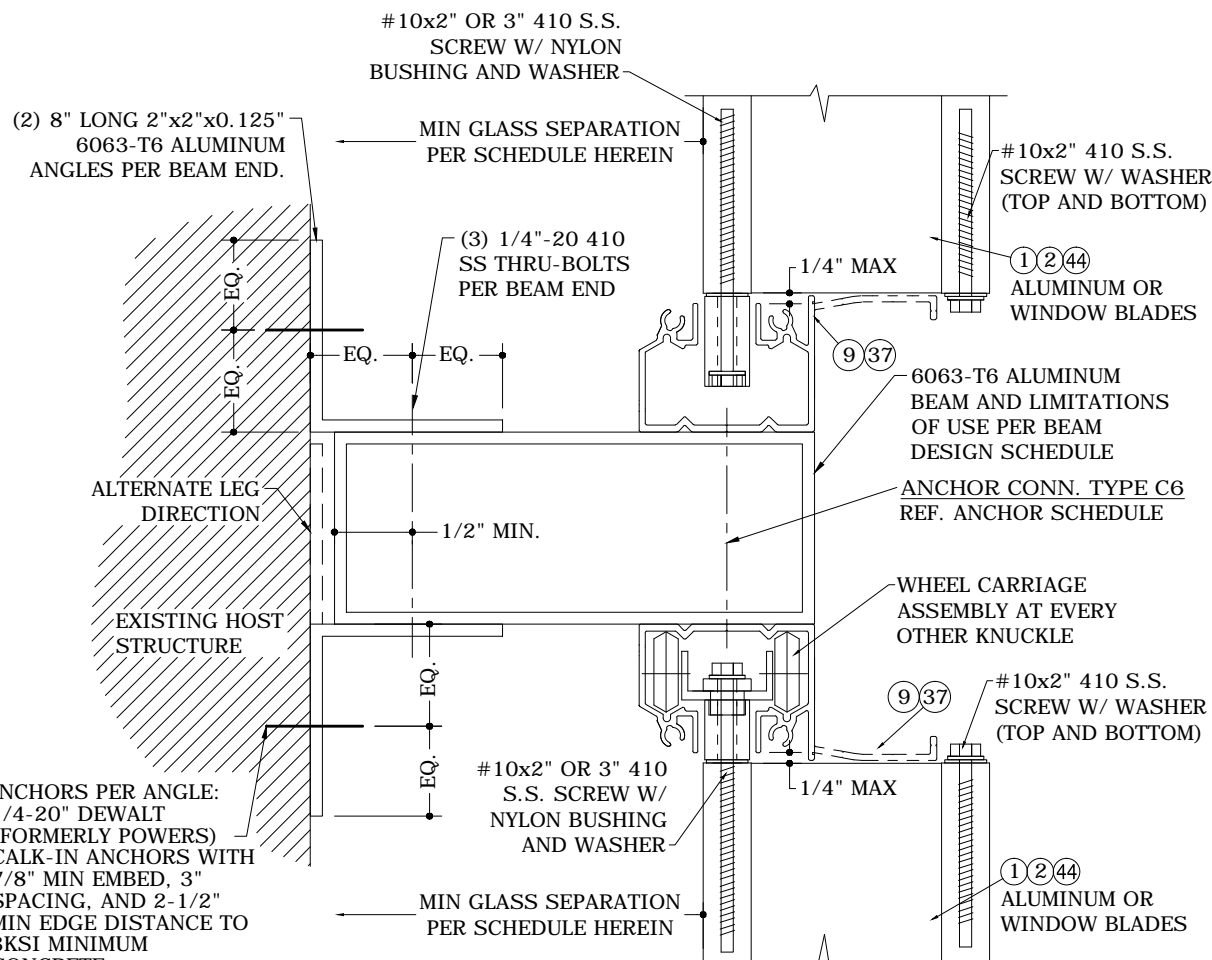
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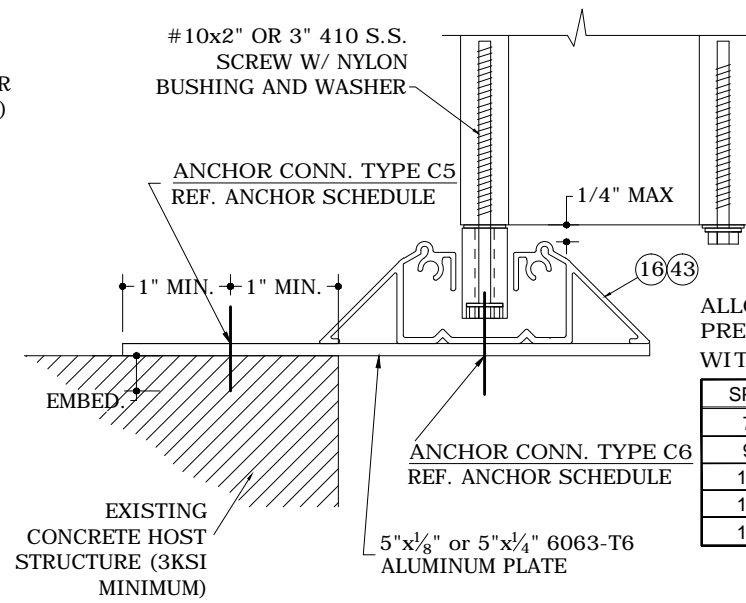


- (3) ANCHORS PER ANGLE: 1/4"-20" DEWALT (FORMERLY POWERS) CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE OR 1/4" DEWALT (FORMERLY ELCO) CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE

NOTE: MAX DESIGN PRESSURE AND MAX SHUTTER SPAN PER BEAM DESIGN SCHEDULE

1 INTERMEDIATE SUPPORT BEAM
11 N.T.S. VERT SECTION

BEAM SIZE	SHUTTER SPAN	BEAM SPAN	ALLOWABLE DESIGN PRESSURE		
			TOP BEAM	BOTTOM BEAM	INTERMEDIATE BEAM
2"x5"x0.125"	5'-0"	9'-5"	74.0 PSF	74.0 PSF	37.0 PSF
	8'-0"	8'-1"	73.0 PSF	73.0 PSF	36.0 PSF
	10'-0"	7'-6"	73.0 PSF	73.0 PSF	36.0 PSF
2"x8"x0.072"/0.224"	5'-0"	14'-0"	68.4 PSF	81.0 PSF	34.2 PSF
	8'-0"	11'-6"	61.8 PSF	83.1 PSF	30.9 PSF
	10'-0"	10'-4"	61.1 PSF	82.3 PSF	30.5 PSF
2"x9"x0.072"/0.224"	5'-0"	15'-5"	59.4 PSF	80.5 PSF	29.7 PSF
	8'-0"	12'-5"	56.3 PSF	80.4 PSF	28.2 PSF
	10'-0"	11'-2"	55.5 PSF	79.6 PSF	27.7 PSF



NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR ALUMINUM PLATE MOUNTING CONDITION PER TABLE BELOW.

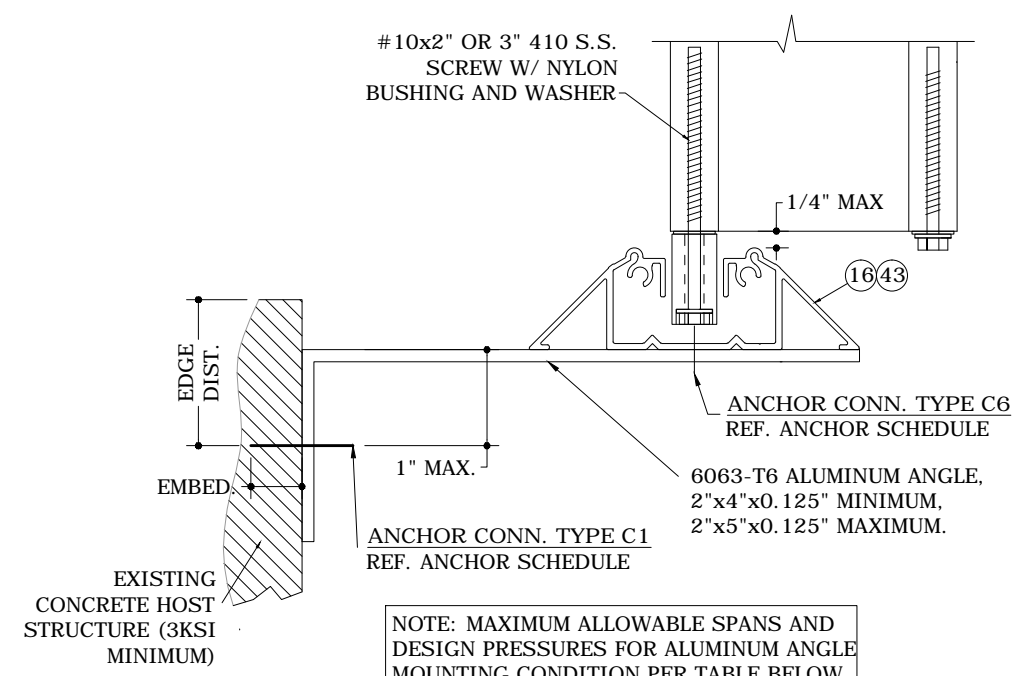
ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/11 WITH 1/4" ALUMINUM PLATE:

SPAN:	MAX DESIGN PRESSURE:
72"	+140.7 psf / -140.7 psf
90"	+112.6 psf / -112.6 psf
108"	+93.8 psf / -93.8 psf
126"	+61.2 psf / -76.2 psf
144"	+42.4 psf / -62.4 psf

ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/11 WITH 1/8" ALUMINUM PLATE:

SPAN:	MAX DESIGN PRESSURE:
72"	+65.7 psf / -65.7 psf
90"	+52.5 psf / -52.5 psf
108"	+43.8 psf / -43.8 psf
126"	+37.5 psf / -37.5 psf
144"	+32.8 psf / -32.8 psf

2 5"x1/4" OR 5"x1/8" PLATE TO EXISTING HOST STRUCTURE
11 N.T.S. VERT SECTION



NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR ALUMINUM ANGLE MOUNTING CONDITION PER TABLE BELOW.

ALLOWABLE DESIGN PRESSURES FOR DETAIL 3/11 WITH 1/8" ALUMINUM ANGLE:

SPAN:	MAX DESIGN PRESSURE:
72"	+77.1 psf / -77.1 psf
90"	+61.7 psf / -61.7 psf
108"	+53.4 psf / -53.4 psf
126"	+44.0 psf / -44.0 psf
144"	+38.5 psf / -38.5 psf

3 2"x5" ANGLE W/ WALKOVER TRACK
11 N.T.S. VERT SECTION

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TEXAS DEPARTMENT OF INSURANCE

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
2010 FBC (05-HT-01-04)	KL	FLB	02/14/12
FBC 5TH EDITION (2014)	CSL	TSB	02/06/15
IBC & IRC 2018 EDITION	EPR	RWN	01/05/22

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SCALE: NTS UNLESS NOTED


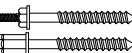



C:\Users\eric\Engineering\Express\Production - Documents\Projects\21-48584 Accordion Shutter with Aluminum or Polycarbonate Blades\WorkDrawings & CAD\TDI-21-48584e Alum Polycarb Accordion Shutter.dwg
01/20/2022 - 8:51am eric

ANCHOR SCHEDULE, CONCRETE HOST STRUCTURE

FRANK BERNARDO, P.E.
PE# 96064 CA# F-11383



CERTIFYING: 01/20/2022
AS

HOST STRUCTURE	ANCHOR	LOAD (psf)	2.5" MIN EDGE DISTANCE																			
			Spans Up To 6'-0"					Spans Up To 9'-0"					Spans Up To 12'-0"					Spans Up To 13'-6"				
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
CONCRETE	1/4" ITW TAPCON WITH 1-3/4" EMBED (3192psi MIN CONC) 	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	10.9"	12.0"	12.0"	12.0"	12.0"	8.0"	12.0"	12.0"	11.7"	12.0"	7.0"	12.0"
		40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.4"	12.0"	12.0"	11.4"	12.0"	6.9"	11.9"	12.0"	9.5"	12.0"	6.1"	10.5"
		47	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	7.9"	12.0"	11.2"	8.9"	12.0"	5.8"	10.0"	9.5"	7.6"	12.0"	5.1"	8.9"
		60	12.0"	12.0"	12.0"	9.4"	12.0"	12.0"	9.5"	12.0"	6.1"	10.5"	7.9"	6.4"	10.8"	4.5"	7.8"	6.8"	5.5"	9.7"	4.0"	6.9"
		72	12.0"	12.0"	12.0"	7.7"	12.0"	9.2"	7.4"	12.0"	5.0"	8.7"	6.2"	5.1"	9.1"	3.7"	6.5"	5.8"	4.7"	8.6"	3.5"	6.1"
		120	7.9"	6.4"	10.8"	4.5"	7.8"	5.8"	4.7"	8.6"	3.5"	6.1"	5.8"	4.7"	8.6"	3.5"	6.1"	5.8"	4.7"	8.6"	3.5"	6.1"
	152	5.8"	4.7"	8.7"	3.5"	6.1"	5.8"	4.7"	8.6"	3.5"	6.1"	5.8"	4.7"	8.6"	3.5"	6.1"	5.8"	4.7"	8.6"	3.5"	6.1"	
	1/4" DEWALT (FORMERLY ELCO) PANELMATE (FEMALE, MALE) W/ 1-3/4" MIN EMBED (3350psi MIN CONC) 	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	10.3"	12.0"	12.0"	12.0"	12.0"	8.0"	12.0"	12.0"	11.6"	12.0"	6.6"	11.0"
		40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	8.9"	12.0"	12.0"	11.3"	12.0"	6.5"	10.9"	11.9"	9.5"	12.0"	5.8"	9.6"
		47	12.0"	12.0"	12.0"	11.7"	12.0"	12.0"	12.0"	12.0"	7.5"	12.0"	11.2"	8.9"	12.0"	5.5"	9.2"	9.4"	7.5"	10.9"	4.9"	8.1"
		60	12.0"	12.0"	12.0"	8.9"	12.0"	11.9"	9.5"	12.0"	5.8"	9.6"	7.9"	6.4"	9.6"	4.3"	7.1"	6.7"	5.5"	8.6"	3.8"	6.3"
		72	12.0"	12.0"	12.0"	7.3"	12.0"	9.1"	7.3"	10.7"	4.7"	8.0"	6.2"	5.0"	8.1"	3.5"	5.9"	5.8"	4.7"	7.7"	3.3"	5.6"
		120	7.9"	6.4"	9.6"	4.3"	7.1"	5.8"	4.7"	7.7"	3.3"	5.6"	5.8"	4.7"	7.7"	3.3"	5.6"	5.8"	4.7"	7.7"	3.3"	5.6"
	152	5.8"	4.7"	7.7"	3.3"	5.6"	5.8"	4.7"	7.7"	3.3"	5.6"	5.8"	4.7"	7.7"	3.3"	5.6"	5.8"	4.7"	7.7"	3.3"	5.6"	
	1/4" DEWALT (FORMERLY ELCO) CRETEFLEX W/ 1-3/4" MIN EMBED (3350psi MIN CONC) 	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.6"	12.0"	12.0"	12.0"	12.0"	8.4"	12.0"
		40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	11.3"	12.0"	12.0"	12.0"	12.0"	8.3"	12.0"	12.0"	10.9"	12.0"	7.3"	12.0"
		47	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	9.5"	12.0"	12.0"	12.0"	12.0"	7.0"	12.0"	10.8"	8.7"	12.0"	6.1"	11.0"
		60	12.0"	12.0"	12.0"	11.3"	12.0"	12.0"	10.9"	12.0"	7.3"	12.0"	9.1"	7.3"	12.0"	5.4"	9.7"	7.7"	6.3"	12.0"	4.7"	8.6"
		72	12.0"	12.0"	12.0"	9.3"	12.0"	10.5"	8.4"	12.0"	6.0"	10.8"	7.1"	5.8"	11.7"	4.4"	8.0"	6.6"	5.4"	11.1"	4.2"	7.6"
		120	9.1"	7.3"	12.0"	5.4"	9.7"	6.6"	5.4"	11.1"	4.2"	7.6"	6.6"	5.4"	11.1"	4.2"	7.6"	6.6"	5.4"	11.1"	4.2"	7.6"
	152	6.6"	5.4"	11.2"	4.2"	7.6"	6.6"	5.4"	11.1"	4.2"	7.6"	6.6"	5.4"	11.1"	4.2"	7.6"	6.6"	5.4"	11.1"	4.2"	7.6"	
	1/4-20 DEWALT (FORMERLY POWERS) CALK-IN WITH 7/8" MIN EMBED (3000psi MIN CONC) 	35	12.0"	12.0"	12.0"	11.4"	12.0"	12.0"	12.0"	12.0"	7.1"	12.0"	11.3"	8.7"	12.0"	5.2"	9.1"	9.2"	7.2"	11.1"	4.5"	8.1"
		40	12.0"	12.0"	12.0"	9.7"	12.0"	12.0"	11.5"	12.0"	6.1"	10.7"	8.9"	7.0"	10.9"	4.5"	7.9"	7.4"	5.9"	9.8"	3.9"	7.0"
		47	12.0"	12.0"	12.0"	8.0"	12.0"	11.1"	8.6"	12.0"	5.1"	9.1"	6.9"	5.5"	9.4"	3.8"	6.7"	5.8"	4.7"	8.4"	3.3"	5.9"
		60	12.0"	11.5"	12.0"	6.1"	10.7"	7.4"	5.9"	9.8"	3.9"	7.0"	4.9"	4.0"	7.5"	3.4"	5.2"	4.2"	3.4"	6.7"	4.6"	4.6"
		72	10.7"	8.3"	12.0"	5.0"	8.9"	5.7"	4.5"	8.3"	3.2"	5.8"	3.8"	3.1"	6.3"	3.1"	4.3"	3.6"	3.0"	6.0"	4.1"	4.1"
		120	4.9"	4.0"	7.5"	4.1"	5.2"	3.6"	3.6"	6.0"	4.1"	3.6"	3.6"	3.6"	6.0"	3.6"	4.1"	3.6"	3.6"	6.0"	4.1"	4.1"
	152	3.6"	3.6"	6.0"	4.1"	3.6"	3.6"	3.6"	6.0"	4.1"	3.6"	3.6"	3.6"	6.0"	3.6"	4.1"	3.6"	3.6"	6.0"	4.1"	4.1"	
	1/4 DEWALT (FORMERLY ELCO) PANELMATE INSERT WITH 1-5/8" MIN EMBED (3000 psi MIN CONC) 	35	12.0"	12.0"	12.0"	10.7"	12.0"	12.0"	12.0"	12.0"	6.7"	11.2"	11.5"	8.9"	10.7"	4.9"	8.2"	9.4"	7.3"	9.6"	4.3"	7.3"
		40	12.0"	12.0"	12.0"	9.2"	12.0"	12.0"	11.7"	12.0"	5.8"	9.7"	9.1"	7.2"	9.5"	4.2"	7.2"	7.5"	6.0"	8.5"	3.7"	6.3"
		47	12.0"	12.0"	12.0"	7.6"	12.0"	11.3"	8.8"	10.6"	4.9"	8.2"	7.1"	5.6"	8.1"	3.6"	6.1"	5.9"	4.8"	7.3"	3.1"	5.4"
		60	12.0"	11.7"	12.0"	5.8"	9.7"	7.5"	6.0"	8.5"	3.7"	6.3"	5.0"	4.0"	6.5"	3.6"	4.7"	4.3"	3.5"	5.8"	4.2"	4.2"
		72	10.9"	8.5"	10.4"	4.7"	8.0"	5.8"	4.6"	7.1"	3.1"	5.3"	3.9"	3.2"	5.4"	3.9"	3.6"	3.6"	3.6"	5.1"	3.7"	3.7"
		120	5.0"	4.0"	6.5"	4.7"	3.7"	3.6"	3.6"	5.1"	3.7"	3.6"	3.6"	3.6"	5.1"	3.7"	3.6"	3.6"	3.6"	5.1"	3.7"	3.7"
	152	3.7"	3.7"	5.2"	3.7"	3.6"	3.6"	3.6"	5.1"	3.7"	3.6"	3.6"	3.6"	5.1"	3.7"	3.6"	3.6"	3.6"	5.1"	3.7"	3.7"	

ANCHOR NOTES (APPLICABLE FOR ALL ANCHOR SCHEDULES):

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- TAPCONS SHALL BE 410 STAINLESS STEEL AND SHALL BE MANUFACTURED BY ITW.
- ENSURE MINIMUM 2.5" EDGE DISTANCE FOR ALL ANCHORS TO CONCRETE & TO HOLLOW BLOCK.
- ALL CONCRETE ANCHOR SHALL BE INSTALLED TO NON-CRACKED CONCRETE ONLY.
- WHERE ANCHORS FASTEN TO NARROW FACE OF STUD FRAMING, ANCHOR SHALL BE LOCATED IN CENTER OF NOMINAL 2x (MIN) WOOD STUD (i.e. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING).
- WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY.
- MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
- ANCHOR SCHEDULE APPLIES TO ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED IN SPAN SCHEDULE SHALL APPLY.
- WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
- WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
- MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD ("SIDEWALK BOLT") U.N.O.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.
- * DESIGNATES ANCHORS WHICH ARE REMOVABLE.

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TEXAS DEPARTMENT OF INSURANCE

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
2010 FBC (05-HT-01-04)	KL	FLB	02/14/12
FBC 5TH EDITION (2014)	CSL	TSB	02/06/15
IBC & IRC 2018 EDITION	EPR	RWN	01/05/22

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ANCHOR SCHEDULE, HOLLOW BLOCK HOST STRUCTURE

HOST STRUCT.	ANCHOR	LOAD (psf)	2.5" MIN EDGE DISTANCE																					
			Spans Up To 6'-0"					Spans Up To 9'-0"					Spans Up To 12'-0"					Spans Up To 13'-6"						
			CONN TYPE					CONN TYPE					CONN TYPE					CONN TYPE						
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5		
HOLLOW BLOCK	1/4" ITW TAPCON WITH 1-1/4" EMBED	35	12.0"	12.0"	11.2"	4.9"	9.1"	7.9"	5.7"	8.1"	3.0"	5.8"	4.3"	3.3"	6.3"	4.3"	3.5"	5.7"	4.4"	3.8"				
		40	12.0"	12.0"	10.1"	4.2"	7.9"	5.8"	4.4"	7.2"		5.0"	3.4"	3.3"	5.6"	3.7"		5.1"		3.3"				
		47	10.7"	7.4"	8.8"	3.4"	6.6"	4.2"	3.3"	6.3"		4.2"			4.9"	3.1"		4.4"						
		60	5.8"	4.4"	7.2"		5.0"			5.1"		3.3"			3.9"			3.5"						
		72	4.1"	3.2"	6.2"		4.2"			4.3"					3.3"			3.1"						
		120			3.9"					3.1"					3.1"			3.1"						
		152			3.1"					3.1"					3.1"			3.1"						
	1/4" DEWALT (FORMERLY ELCO) PANELMATE (FEMALE, MALE) W/ 1-1/4" MIN EMBED	35	12.0"	12.0"	12.0"	7.1"	11.7"	12.0"	9.7"	9.6"	4.4"	7.6"	7.3"	5.6"	7.4"	3.2"	5.6"	5.9"	4.7"	6.6"				4.9"
		40	12.0"	12.0"	12.0"	6.1"	10.1"	9.9"	7.4"	8.5"	3.8"	6.6"	5.8"	4.5"	6.6"		4.9"	4.8"	3.8"	5.9"				4.3"
		47	12.0"	12.0"	10.6"	5.0"	8.5"	7.2"	5.6"	7.4"	3.2"	5.5"	4.5"	3.6"	5.6"		4.1"	3.8"	3.0"	5.1"				3.6"
		60	9.9"	7.4"	8.5"	3.8"	6.6"	4.8"	3.8"	5.9"		4.3"	3.2"		4.5"		3.2"			4.0"				
		72	6.9"	5.4"	7.2"	3.1"	5.4"	3.7"		5.0"		3.6"			3.8"					3.6"				
		120	3.2"		4.5"		3.2"			3.6"					3.6"					3.6"				
		152			3.6"					3.6"				2.3"	3.6"					3.6"				
	1/4" DEWALT (FORMERLY ELCO) CRETEFLEX W/ 1-1/4" MIN EMBED	35	12.0"	12.0"	12.0"	8.3"	12.0"	12.0"	10.9"	11.9"	5.2"	9.2"	8.1"	6.3"	9.2"	3.8"	6.8"	6.6"	5.2"	8.3"	3.3"	6.0"		
		40	12.0"	12.0"	12.0"	7.1"	12.0"	11.0"	8.3"	10.6"	4.5"	8.0"	6.5"	5.1"	8.2"	3.3"	5.9"	5.4"	4.2"	7.3"				5.2"
		47	12.0"	12.0"	12.0"	5.9"	10.3"	8.0"	6.2"	9.2"	3.8"	6.7"	5.0"	4.0"	7.1"		5.0"	4.2"	3.4"	6.3"				4.4"
60		11.0"	8.3"	10.6"	4.5"	8.0"	5.4"	4.2"	7.3"		5.2"	3.5"		5.6"		3.9"	3.0"		5.0"				3.4"	
72		7.7"	6.0"	9.0"	3.7"	6.6"	4.1"	3.3"	6.2"		4.3"			4.7"		3.2"			4.5"				3.0"	
120		3.5"		5.6"		3.9"			4.5"		3.0"			4.5"		3.0"			4.5"				3.0"	
152				4.5"		3.0"			4.5"		3.0"			4.5"		3.0"			4.5"				3.0"	
1/4-20 ALL POINTS SOLID SET WITH 7/8" MIN EMBED	35	12.0"	12.0"	12.0"	9.6"	12.0"	12.0"	12.0"	12.0"	6.0"	10.1"	10.1"	7.8"	9.8"	4.4"	7.5"	8.2"	6.4"	8.8"	3.9"	6.6"			
	40	12.0"	12.0"	12.0"	8.2"	12.0"	12.0"	10.2"	11.3"	5.2"	8.8"	8.0"	6.3"	8.7"	3.8"	6.5"	6.6"	5.2"	7.8"	3.3"	5.8"			
	47	12.0"	12.0"	12.0"	6.8"	11.4"	9.9"	7.7"	9.8"	4.3"	7.4"	6.2"	4.9"	7.5"	3.2"	5.5"	5.2"	4.2"	6.7"				4.9"	
	60	12.0"	10.2"	11.3"	5.2"	8.8"	6.6"	5.2"	7.8"	3.3"	5.8"	4.4"	3.5"	5.9"		4.3"	3.7"	3.0"	5.3"				3.8"	
	72	9.6"	7.4"	9.6"	4.2"	7.3"	5.0"	4.1"	6.6"		4.8"	3.4"		5.0"		3.6"	3.2"		4.7"				3.4"	
	120	4.4"	3.5"	5.9"		4.3"	3.2"		4.7"		3.4"	3.2"		4.7"		3.4"	3.2"		4.7"				3.4"	
	152	3.2"		4.7"		3.4"	3.2"		4.7"		3.4"	3.2"		4.7"		3.4"	3.2"		4.7"				3.4"	
1/4 DEWALT (FORMERLY ELCO) PANELMATE INSERT WITH 1-1/4" MIN EMBED	35	12.0"	12.0"	12.0"	8.6"	12.0"	12.0"	12.0"	11.1"	5.4"	8.9"	9.2"	7.1"	8.6"	3.9"	6.6"	7.5"	5.9"	7.7"	3.4"	5.8"			
	40	12.0"	12.0"	12.0"	7.3"	11.9"	12.0"	9.4"	9.9"	4.6"	7.7"	7.3"	5.7"	7.6"	3.4"	5.7"	6.0"	4.8"	6.8"				5.1"	
	47	12.0"	12.0"	12.0"	6.1"	10.0"	9.1"	7.0"	8.5"	3.9"	6.5"	5.7"	4.5"	6.5"		4.9"	4.8"	3.8"	5.8"				4.3"	
	60	12.0"	9.4"	9.9"	4.6"	7.7"	6.0"	4.8"	6.8"		5.1"	4.0"	3.2"	5.2"		3.8"	3.4"		4.6"				3.3"	
	72	8.7"	6.8"	8.3"	3.8"	6.4"	4.6"	3.7"	5.7"		4.2"	3.1"		4.3"		3.1"			4.1"					
	120	4.0"	3.2"	5.2"		3.8"			4.1"					4.1"					4.1"					
	152			4.1"					4.1"					4.1"					4.1"					

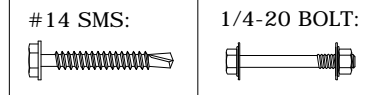
ANCHOR SCHEDULE, WOOD HOST STRUCTURE

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE																				
			Spans Up To 6'-0"					Spans Up To 9'-0"					Spans Up To 12'-0"					Spans Up To 13'-6"					
			CONN TYPE					CONN TYPE					CONN TYPE					CONN TYPE					
			C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	
WOOD	1/4" ITW TAPCON OR #14 WOOD SCREW W/ 1-1/2" EMBED	35	12.0"	12.0"	12.0"	9.1"	11.7"	12.0"	12.0"	8.5"	5.9"	7.7"	12.0"	12.0"	6.4"	4.3"	5.7"	12.0"	10.7"	5.8"	3.8"	5.1"	
		40	12.0"	12.0"	11.0"	7.9"	10.2"	12.0"	12.0"	7.5"	5.1"	6.7"	12.0"	10.4"	5.7"	3.8"	5.0"	11.0"	8.7"	5.1"	3.3"	4.4"	
		47	12.0"	12.0"	9.4"	6.6"	8.6"	12.0"	12.0"	6.4"	4.3"	5.7"	10.3"	8.2"	4.8"	3.2"	4.3"	8.7"	6.9"	4.3"	2.8"	3.8"	
		60	12.0"	12.0"	7.5"	5.1"	6.7"	11.0"	8.7"	5.1"	3.3"	4.4"	7.3"	5.9"	3.8"	2.5"	3.3"	6.2"	5.0"	3.4"	2.2"	2.9"	
		72	12.0"	12.0"	6.3"	4.2"	5.6"	8.4"	6.7"	4.2"	2.8"	3.7"	5.7"	4.6"	3.2"	2.0"	2.8"	5.3"	4.3"	3.0"			2.6"
		120	7.3"	5.9"	3.8"	2.5"	3.3"	5.3"	4.3"	3.0"		2.6"	5.3"	4.3"	3.0"		2.6"	5.3"	4.3"	3.0"			2.6"
		152	5.3"	4.3"	3.0"		2.6"	5.3"	4.3"	3.0"		2.6"	5.3"	4.3"	3.0"		2.6"	5.3"	4.3"	3.0"			2.6"
	1/4" DEWALT (FORMERLY ELCO) PANELMATE (FEMALE, MALE) W/ 1-7/8" MIN EMBED	35	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	10.2"	12.0"	12.0"	12.0"	12.0"	7.4"	11.0"	12.0"	12.0"	11.7"	6.6"	9.7"		
		40	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	12.0"	8.8"	12.0"	12.0"	12.0"	11.5"	6.5"	9.6"	12.0"	11.5"	10.3"	5.7"	8.5"		
		47	12.0"	12.0"	12.0"	11.5"	12.0"	12.0"	12.0"	7.4"	10.9"	12.0"	10.8"	9.9"	5.5"	8.1"	11.4"	9.1"	8.8"	4.8"	7.2"		
		60	12.0"	12.0"	12.0"	8.8"	12.0"	12.0"	11.5"	10.3"	5.7"	8.5"	9.5"	7.7"	7.8"	4.2"	6.3"	8.2"	6.6"	7.0"	3.7"	5.6"	
		72	12.0"	12.0"	12.0"	7.2"	10.7"	11.0"	8.9"	8.6"	4.7"	7.0"	7.5"	6.1"	6.5"	3.5"	5.3"	7.0"	5.7"	6.2"	3.3"	5.0"	
		120	9.5"	7.7"	7.8"	4.2"	6.3"	7.0"	5.7"	6.2"	3.3"	5.0"	7.0"	5.7"	6.2"	3.3"	5.0"	7.0"	5.7"	6.2"	3.3"	5.0"	
		152	7.0"	5.7"	6.2"	3.3"	5.0"	7.0"	5.7"	6.2"	3.3"	5.0"	7.0"	5.7"	6.2"	3.3"	5.0"	7.0"	5.7"	6.2"	3.3"	5.0"	
	1/4" LAG SCREW WITH 1.5" MIN THREAD PENETRATION	35	12.0"	12.0"	12.0"	9.6"	12.0"	12.0"	12.0"	8.7"	6.2"	8.0"	12.0"	12.0"	6.6"	4.6"	5.9"	12.0"	11.9"	5.9"	4.0"	5.3"	
		40	12.0"	12.0"	11.3"	8.3"	10.6"	12.0"	12.0"	7.7"	5.4"	7.0"	12.0"	11.6"	5.8"	4.0"	5.2"	12.0"	9.7"	5.2"	3.5"	4.6"	
		47	12.0"	12.0"	9.7"	7.0"	8.9"	12.0"	12.0"	6.6"	4.5"	5.9"	11.5"	9.1"	5.0"	3.4"	4.4"	9.6"	7.7"	4.4"	3.0"	3.9"	
60		12.0"	12.0"	7.7"	5.4"	7.0"	12.0"	9.7"	5.2"	3.5"	4.6"	8.1"	6.5"	3.9"	2.6"	3.4"	6.9"	5.6"	3.5"	2.3"	3.1"		
72		12.0"	12.0"	6.4"	4.4"	5.8"	9.4"	7.5"	4.3"	2.9"	3.8"	6.4"	5.2"	3.3"	2.2"	2.9"	5.9"	4.8"	3.1"	2.0"	2.7"		
120		8.1"	6.5"	3.9"	2.6"	3.4"	5.9"	4.8"	3.1"	2.0"	2.7"	5.9"	4.8"	3.1"	2.0"	2.7"	5.9"	4.8"	3.1"	2.0"	2.7"		
152		5.9"	4.8"	3.1"	2.0"	2.7"	5.9"	4.8"	3.1"	2.0"	2.7"	5.9"	4.8"	3.1"	2.0"	2.7"	5.9"	4.8"	3.1"	2.0"	2.7"		

FRANK BENNARDO, P.E.
PE# 96064 CA# F-11383



CERTIFYING A: 01/20/2022



MATERIAL	ANCHOR TYPE	CONN TYPE C6+	
		DESIGN PRESSURE DP ≤ 100 PSF	DP > 100 PSF
0.072" ALUMINUM	#14 SMS	6.5"	6.0"
	1/4-20 BOLT	7.5"	7.0"
0.125" ALUMINUM	#14 SMS	12.0"	10.0"
	1/4-20 BOLT	12.0"	10.0"
0.25" ALUMINUM	#14 SMS	12.0"	10.0"
	1/4-20 BOLT	12.0"	10.0"

CONNECTION TYPE C6 NOTES:

- SHEET METAL SCREWS AND 1/4-20 BOLTS SHALL BE 410 SS.
 - FOR SMS, PROVIDE (5) PITCHES MINIMUM PAST THE THREAD PLANE.
 - ALL FASTENERS HEREIN SHALL UTILIZE 5/8"Ø MINIMUM WASHER AT HEAD OF ANCHOR.
 - 1/4-20 BOLTS SHALL UTILIZE SAE GRADE NUTS AND WASHERS.
 - ALUMINUM MEMBERS SHALL BE 6063-T6 MIN. ALLOY.
- † CONNECTION TYPE C6 IS VALID FOR ALL ALLOWABLE SPANS PER SPAN SCHEDULES.

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ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
TEXAS DEPARTMENT OF INSURANCE

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
FBC 5TH EDITION (2014)	KL	FLB	02/14/12
IBC & IRC 2018 EDITION	CSL	TSB	02/06/15
	EPR	RWN	01/05/22

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ANCHOR NOTES:
SEE PREVIOUS PAGE FOR ANCHOR NOTES.

21-48584

SCALE: NTS UNLESS NOTED

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C:\Users\eric\Engineering\Projects\21-48584 - Accordion Shutters with Aluminum or Polycarbonate Blades\WorkDrawings & CAD\TDI-21-48584e Alum Polycarb Accordion Shutter.dwg 01/20/2022 - 8:51am eric