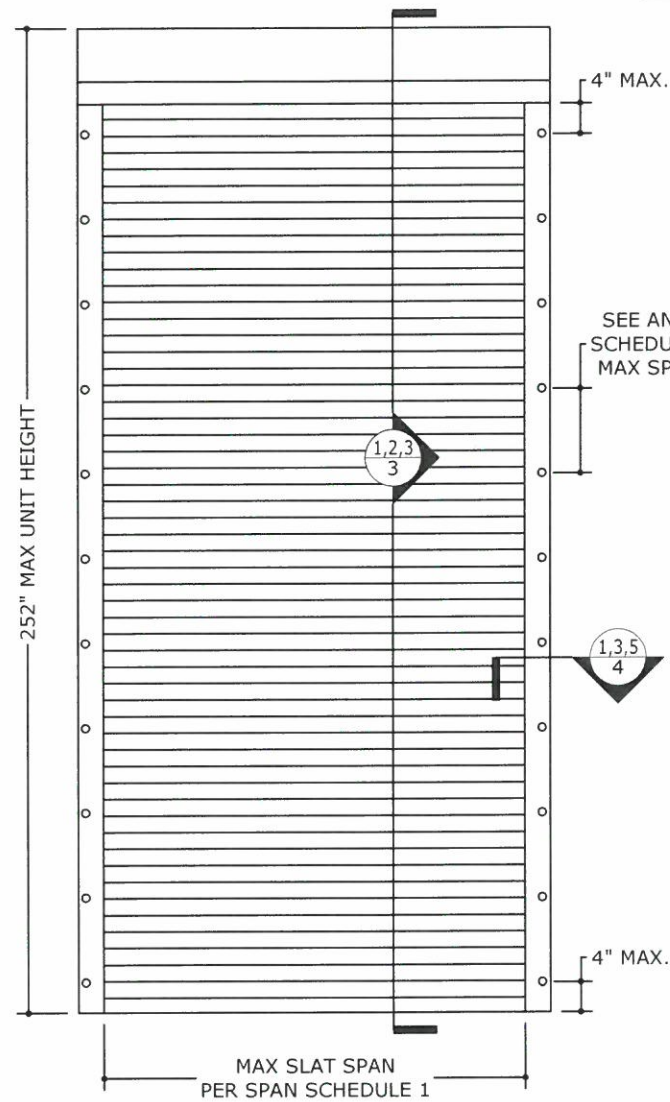


# BARRACUDA ROLL-UP SHUTTER NON-HVHZ



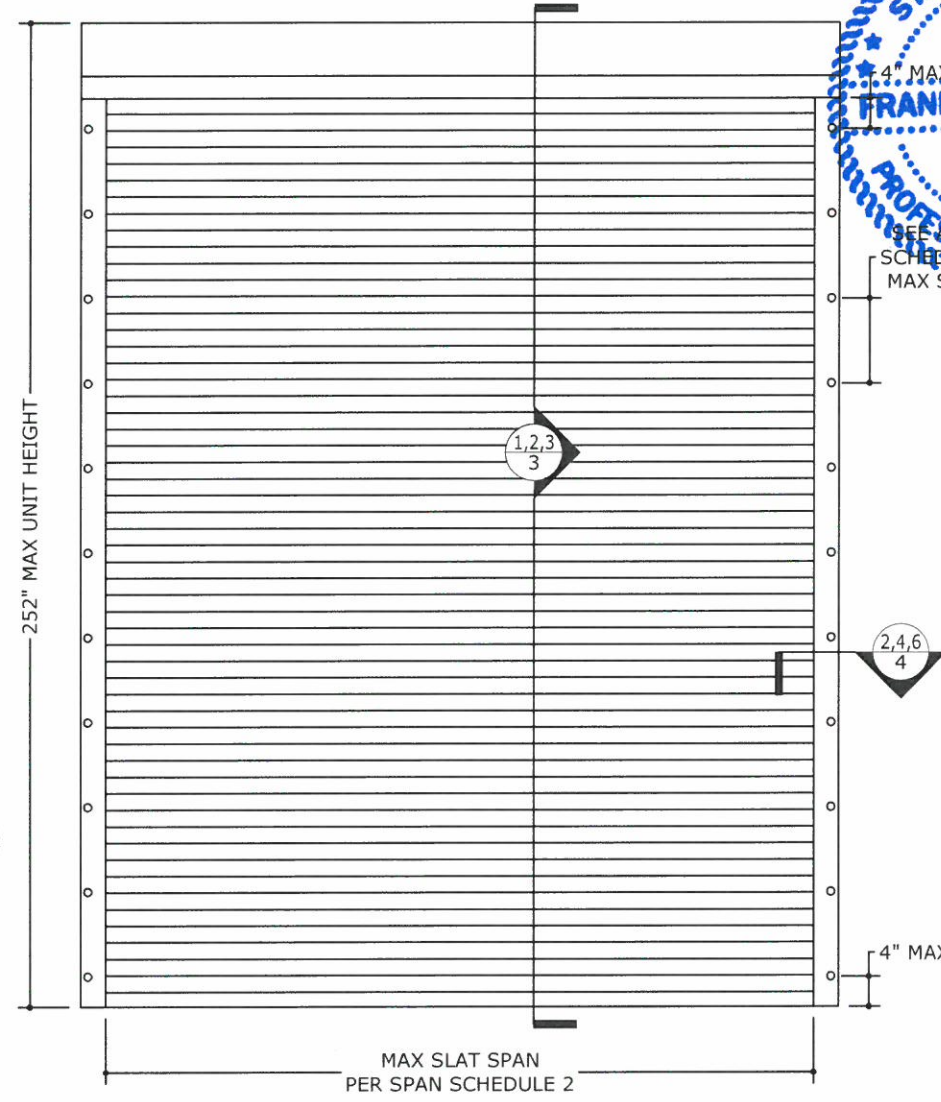
SPAN SCHEDULE 1 NON-END RETENTION SHUTTER	
SLAT SPAN	ALLOWABLE DESIGN PRESSURE
36.0"	± 80.0 PSF
42.0"	± 61.2 PSF
48.0"	± 48.8 PSF
54.0"	± 40.0 PSF
60.0"	± 28.8 PSF
66.0"	± 20.8 PSF
72.0"	± 15.0 PSF

SPAN SCHEDULE 2 END RETENTION SHUTTER WITH DOUBLE WALL SLATS	
SLAT SPAN	ALLOWABLE DESIGN PRESSURE
48.0"	± 113.3 PSF
54.0"	± 95.4 PSF
60.0"	± 84.4 PSF
66.0"	± 77.3 PSF
72.0"	± 72.4 PSF
78.0"	± 68.8 PSF
84.0"	± 66.0 PSF
90.0"	± 63.8 PSF
96.0"	± 61.9 PSF
102.0"	± 60.4 PSF
108.0"	± 59.0 PSF
114.0"	± 57.8 PSF
120.0"	± 56.3 PSF
126.0"	± 55.0 PSF
132.0"	± 53.8 PSF
138.0"	± 52.7 PSF
144.0"	± 51.6 PSF
150.0"	± 50.7 PSF
156.0"	± 49.8 PSF
162.0"	± 49.0 PSF
168.0"	± 48.2 PSF
174.0"	± 47.4 PSF
180.0"	± 46.7 PSF

GLASS SEPARATION SCHEDULE END RETENTION SHUTTER WITH DOUBLE WALL SLATS (WIND ZONE 4 AND ESSENTIAL FACILITIES ONLY)		
SLAT SPAN	INSTALLATIONS ≤ 30' ABOVE GRADE	INSTALLATIONS > 30' ABOVE GRADE
48.0"	9.0"	7.2"
54.0"	10.2"	7.5"
60.0"	10.2"	7.9"
66.0"	10.2"	8.3"
72.0"	10.2"	8.7"
78.0"	10.2"	9.1"
84.0"	10.2"	9.6"
90.0"	10.2"	10.0"
96.0"	10.4"	10.4"
102.0"	10.9"	10.9"
108.0"	11.3"	11.3"
114.0"	11.8"	11.8"
120.0"	12.1"	12.1"
126.0"	12.4"	12.4"
132.0"	12.7"	12.7"
138.0"	13.1"	13.1"
144.0"	13.4"	13.4"
150.0"	13.7"	13.7"
156.0"	14.1"	14.1"
162.0"	14.4"	14.4"
168.0"	14.8"	14.8"
174.0"	15.1"	15.1"
180.0"	15.5"	15.5"

**SPAN AND GLAZING SEPARATION NOTES:**

- SLAT SPAN IS DEFINED AS THE DISTANCE BETWEEN RAILS.
- SEPARATION FROM GLAZING IS APPLICABLE ONLY TO END RETENTION SHUTTERS WITH DOUBLE WALL SLATS, AND REQUIRED **ONLY** IN ASTM WIND ZONE 4 OR ESSENTIAL FACILITIES AS DEFINED IN ASTM E1996.
- NON-END RETENTION SHUTTER MAY NOT BE INSTALLED IN WIND ZONES 3 OR 4 OR ESSENTIAL FACILITIES, AS DEFINED IN ASTM E1996.
- LINEAR INTERPOLATION BETWEEN SHUTTER SPANS IS NOT PERMITTED. FOR SPANS BETWEEN THOSE INDICATED ABOVE, THE SEPARATION FROM GLASS AND/OR DESIGN PRESSURE FOR THE NEXT HIGHER SPAN SHALL BE USED.



**2** END RETENTION SHUTTER WITH DOUBLE WALL SLATS  
1 N.T.S. EXTERIOR ELEV

**1** NON-END RETENTION SHUTTER  
2 N.T.S. EXTERIOR ELEV

**GENERAL NOTES**

1. THIS SYSTEM HAS BEEN TESTED AND EVALUATED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING/RESIDENTIAL CODE PER ASTM STANDARDS E330, E1886, E1996 & PER TEXAS DEPARTMENT OF INSURANCE REQUIREMENTS.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-16 SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON TESTED DESIGN PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. 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.

6. ROLL-UP MECHANISM AND HOOD ASSEMBLY ARE NOT PART OF THIS APPROVAL.
7. THIS DOCUMENT CONTAINS INFORMATION RELEVANT TO THE NECESSARY STRUCTURAL REQUIREMENTS OF THE SYSTEM INSTALLATION. COMPONENTS AND FASTENERS NOT REFERENCED WHICH ARE PART OF THE INTERNAL FABRICATION OF THE SPECIFIED SYSTEMS OR ASSEMBLIES SHALL BE PER MANUFACTURER PUBLISHED SPECIFICATIONS.
8. 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.
9. ALL EXTRUSIONS SHALL BE MINIMUM 6063-T5 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
10. END RETENTION SHUTTER ASSEMBLY WITH DOUBLE WALL SLATS SHALL BEAR A PERMANENT LABEL ON THE BOTTOM OF THE HOOD OR ON THE BOTTOM SLAT FACING THE EXTERIOR WITH THE FOLLOWING MINIMUM INFORMATION:  
ALUTECH UNITED, INC.  
SELBYVILLE, DE  
MISSILE LEVEL D, WIND ZONE 4 - ASTM E1886, E1996 & E330  
FLORIDA PRODUCT APPROVAL NUMBER

11. NON-END RETENTION SHUTTER ASSEMBLY AND END RETENTION SHUTTER ASSEMBLY WITH SINGLE WALL SLATS SHALL BEAR A PERMANENT LABEL ON THE BOTTOM OF THE HOOD OR ON THE BOTTOM SLAT FACING THE EXTERIOR WITH THE FOLLOWING MINIMUM INFORMATION:  
ALUTECH UNITED, INC.  
SELBYVILLE, DE  
MISSILE LEVEL C, WIND ZONE 2 - ASTM E1886, E1996 & E330  
FLORIDA PRODUCT APPROVAL NUMBER
12. ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI. ALL ALUMINUM 3/16"Ø OR 1/4"Ø POP RIVETS SHALL BE 7075-T6 OR STRONGER.
13. ALL DISSIMILAR MATERIALS SHALL BE INSULATED FROM ELECTROLYSIS AS PRESCRIBED IN THE ABOVE-NOTED BUILDING CODE.

FRANK L. BENNARDO, P.E.  
PE# 96064 CA-F-1383

05/13/2020

STATE OF TEXAS

FRANK L. BENNARDO, P.E.  
96064

PROFESSIONAL ENGINEER

SEE ANCHOR SCHEDULE FOR MAX SPACING

4" MAX.

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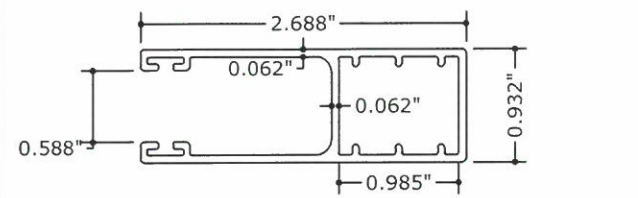
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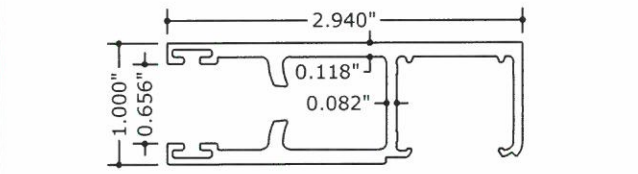
1 OF 12

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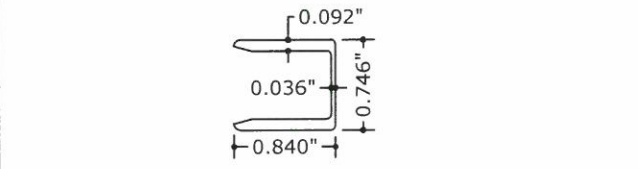
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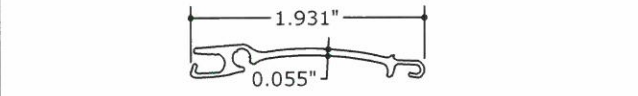
**1** **NON-END-RETENTION RAIL**  
8" = 1'-0" 6063-T5 ALUM.



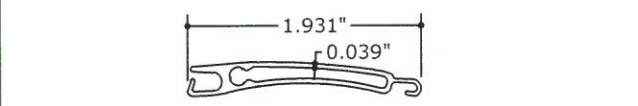
**2** **END-RETENTION RAIL**  
8" = 1'-0" 6063-T5 ALUM.



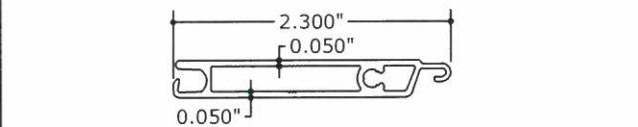
**5** **END-RETENTION RAIL INSERT**  
8" = 1'-0" PLASTIC



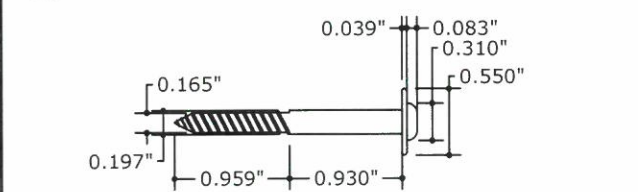
**7** **SINGLE WALL SLAT**  
8" = 1'-0" 6063-T5 ALUM.



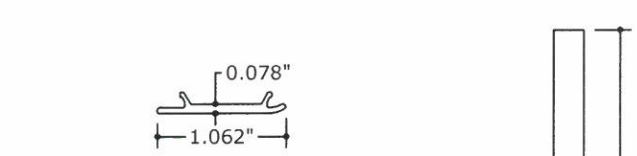
**8** **DOUBLE WALL SLAT**  
8" = 1'-0" 6063-T5 ALUM.



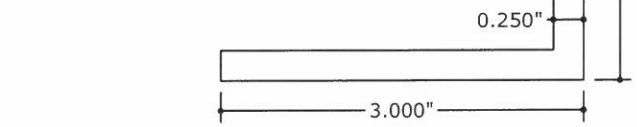
**9** **BASE SLAT**  
8" = 1'-0" 6063-T5 ALUM.



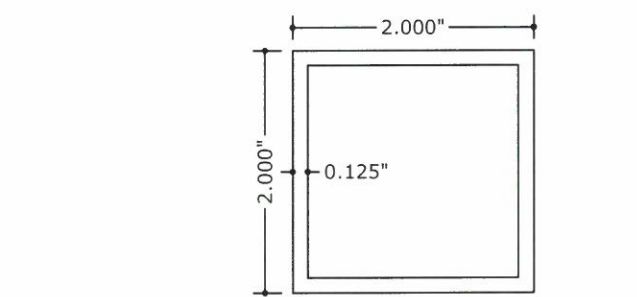
**10** **RETAINING SCREW**  
8" = 1'-0" 304 S.S.



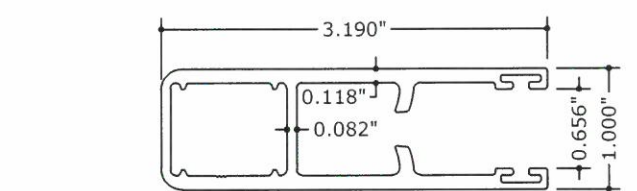
**6** **END-RETENTION RAIL SNAP COVER**  
8" = 1'-0" 6063-T5 ALUM.



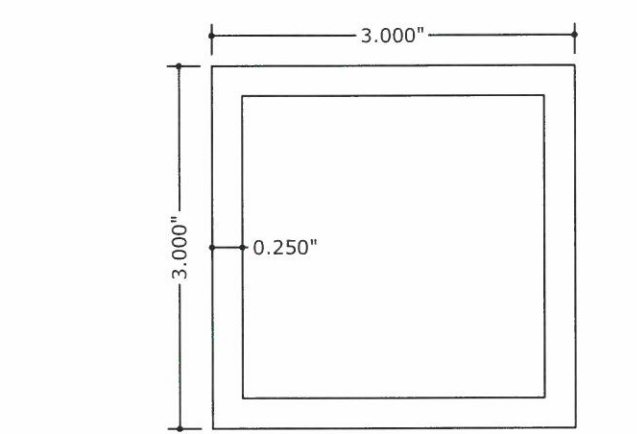
**3** **3"x3"x0.250" ANGLE**  
8" = 1'-0" 6063-T5 ALUM.



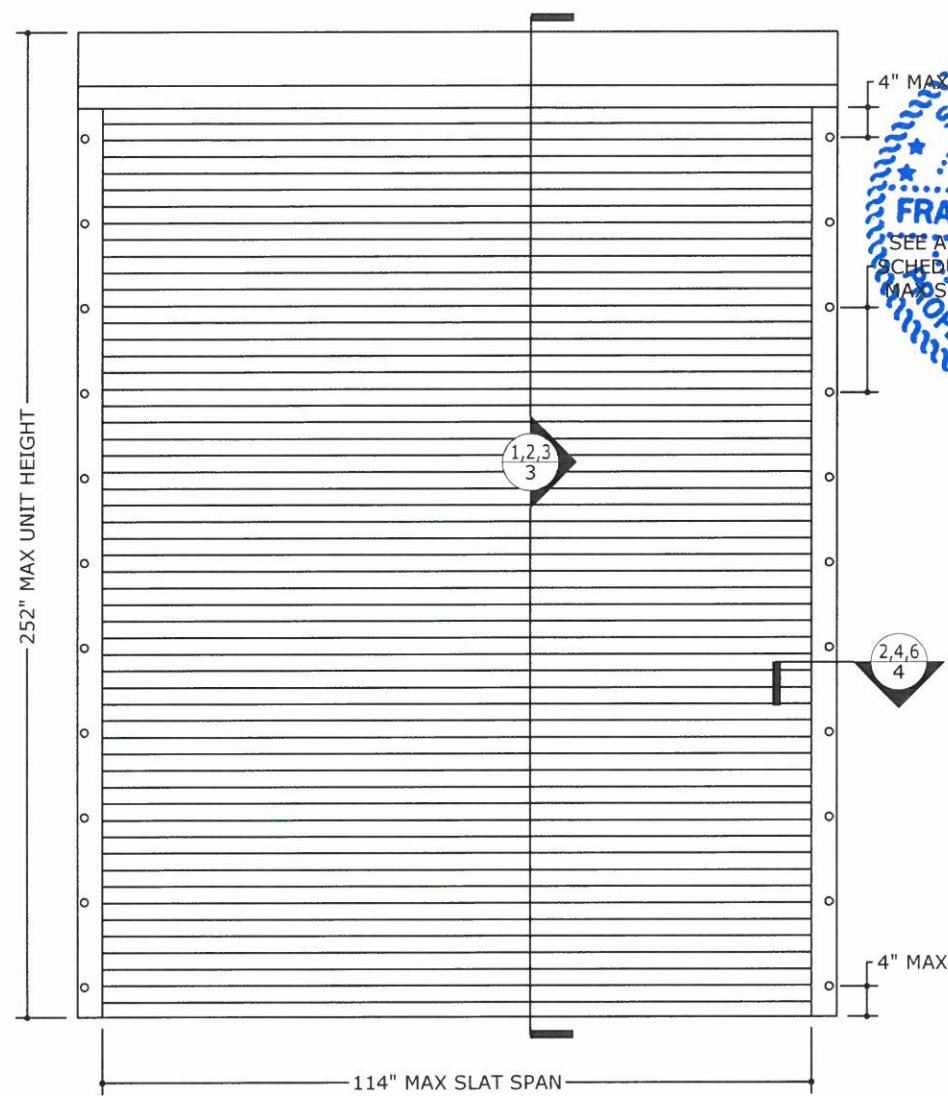
**4** **2"x2"x0.125" TUBE**  
8" = 1'-0" 6063-T5 ALUM.



**11** **"BIII.1" END-RETENTION RAIL**  
8" = 1'-0" 6063-T5 ALUM.



**12** **3"x3"x0.250" TUBE**  
8" = 1'-0" 6063-T5 ALUM.



**1** **END RETENTION SHUTTER WITH SINGLE WALL SLATS**  
2 N.T.S. EXTERIOR ELEV

**ALLOWABLE DESIGN PRESSURES**  
END RETENTION SHUTTER WITH SINGLE WALL SLATS\*  
**+50 PSF / -50 PSF**

- \*END RETENTION SHUTTER WITH SINGLE WALL SLAT NOTES:**
- END RETENTION SHUTTER WITH SINGLE WALL SLATS MAY NOT BE INSTALLED IN WIND ZONES 3 OR 4 OR ESSENTIAL FACILITIES, AS DEFINED IN ASTM E1996.
  - SYSTEM HAS BEEN DESIGNED AS A NON-POROUS ASSEMBLY AND NO SEPARATION FROM GLAZING IS REQUIRED.



FRANK L. BENNARDO, P.E.  
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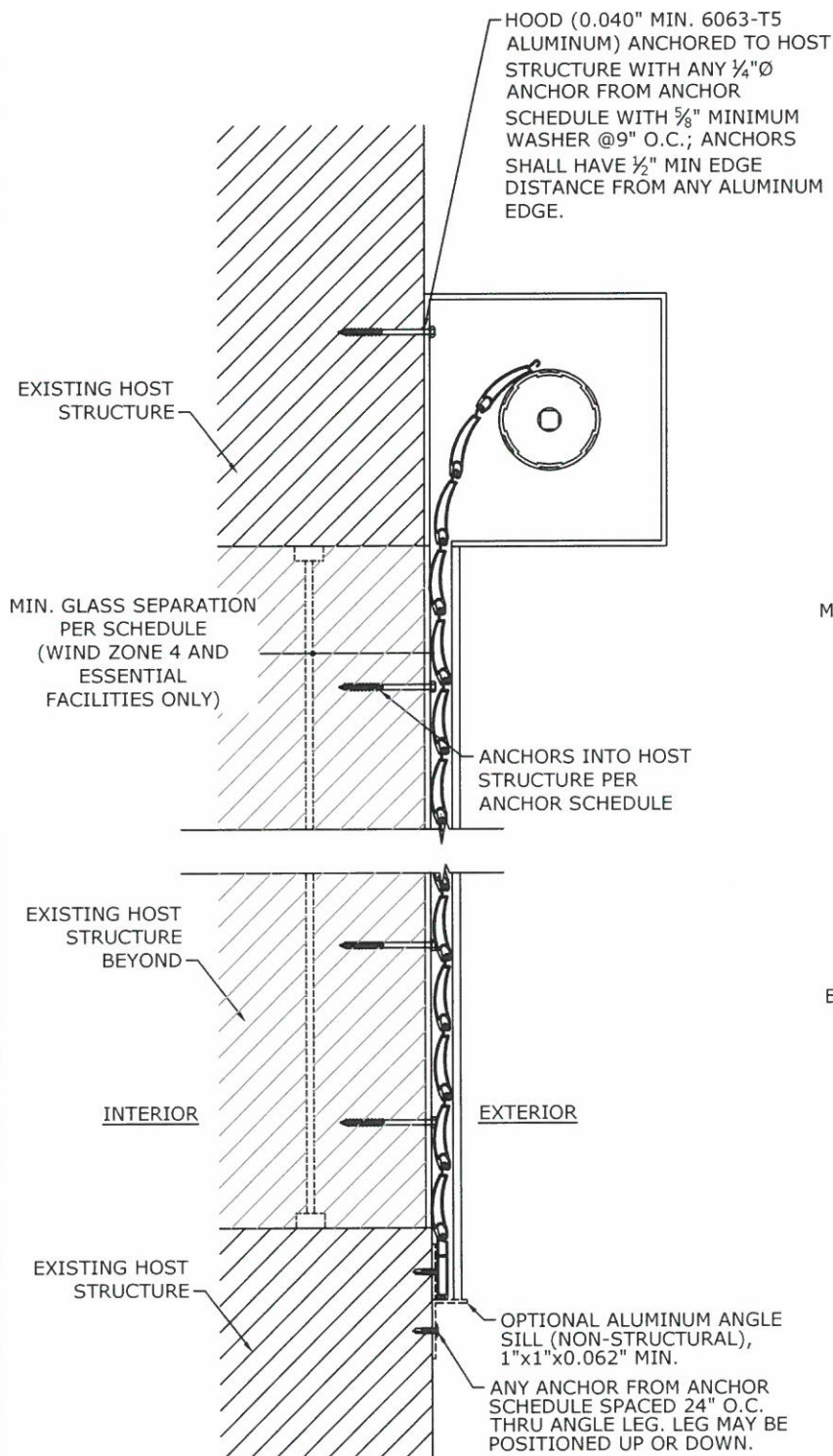
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CSL	TSB	01/02/13
PN	RN	05/13/20

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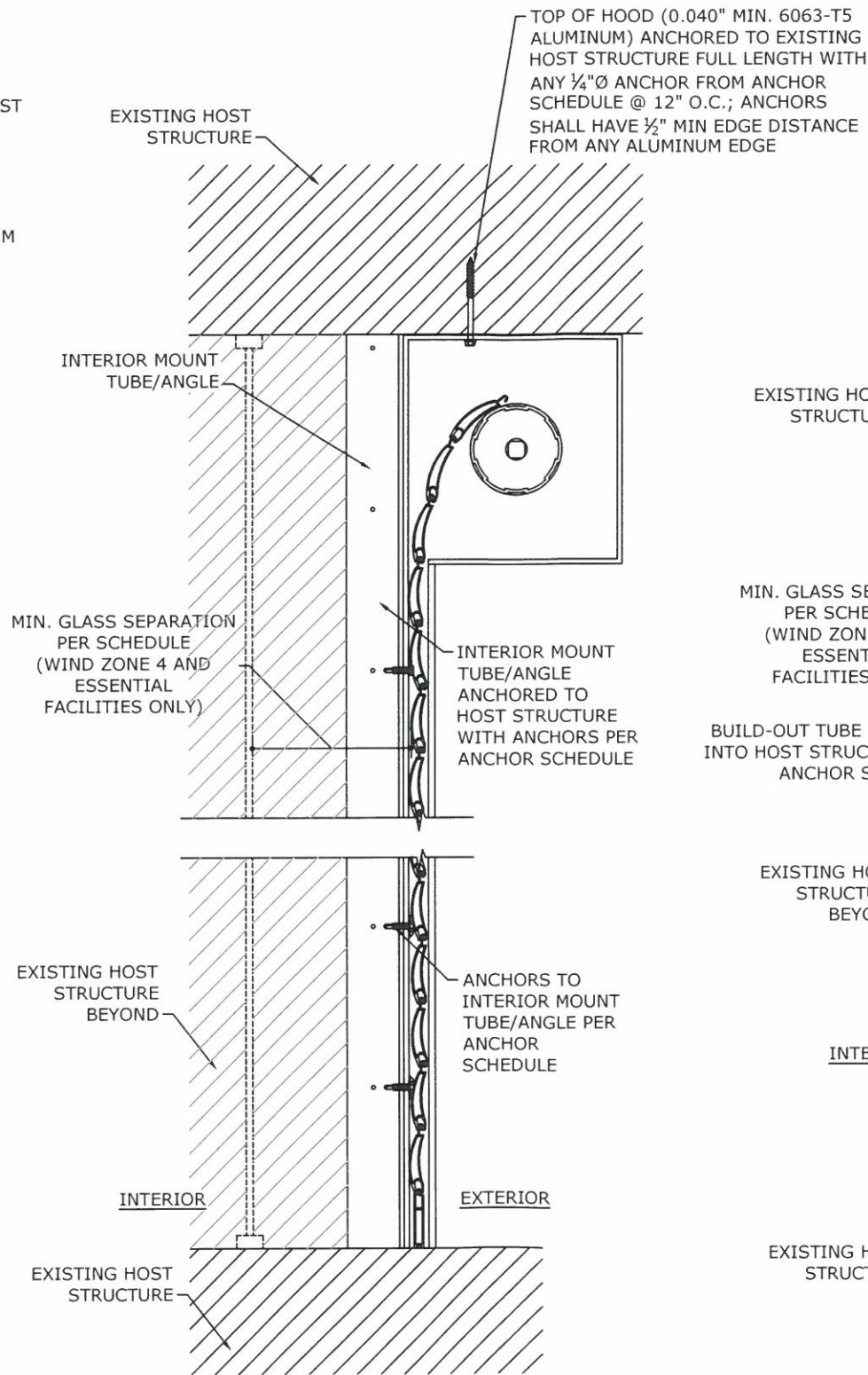
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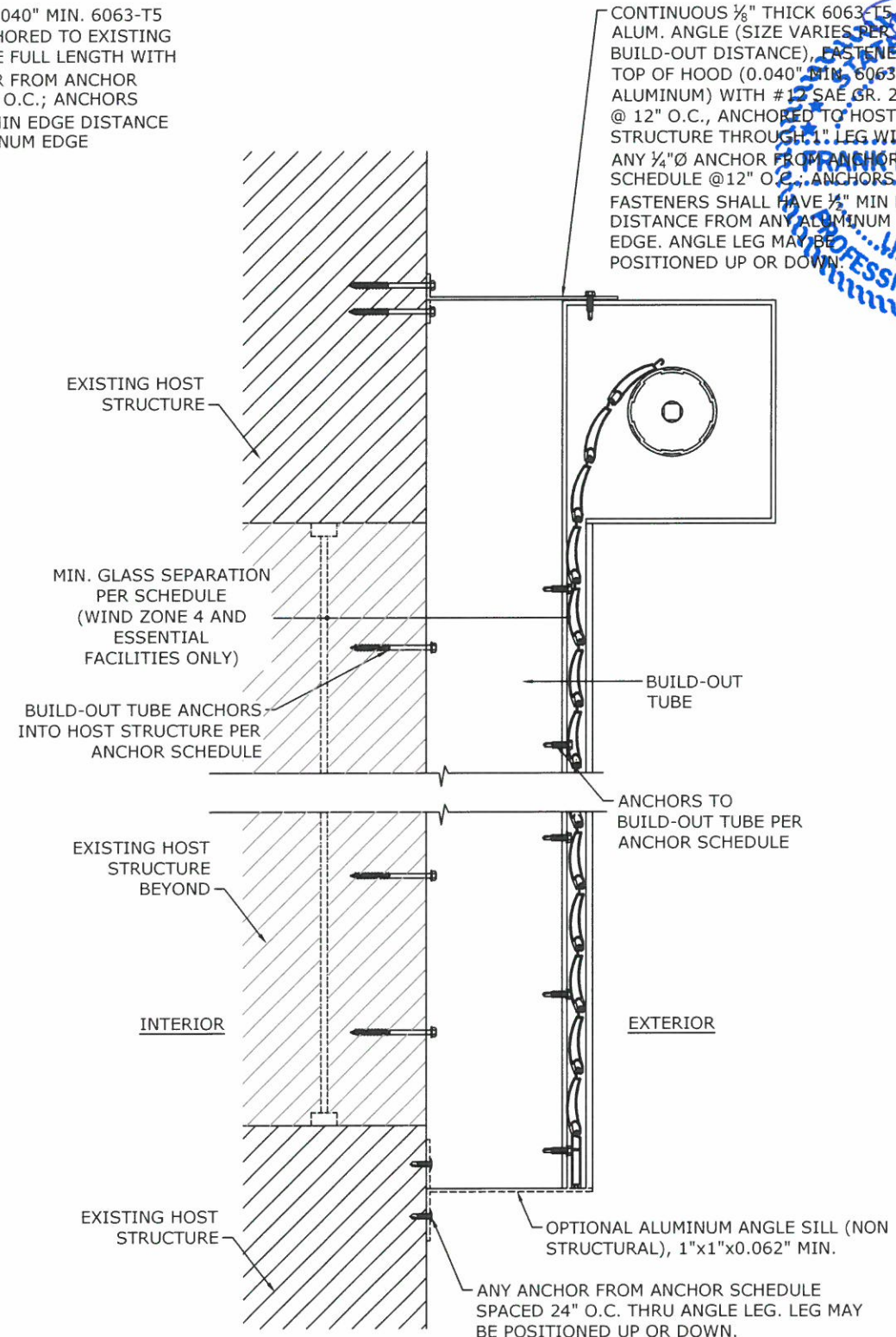
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1 TYPICAL WALL MOUNT  
3 N.T.S. VERT SECTION



2 TYPICAL INTERIOR MOUNT  
3 N.T.S. VERT SECTION



3 BUILD-OUT WALL MOUNT  
3 N.T.S. VERT SECTION

**NOTE:** SHUTTERS WITH DOUBLE WALL SLATS SHOWN HERE. INSTALLATION WITH SINGLE WALL SLATS SIMILAR.

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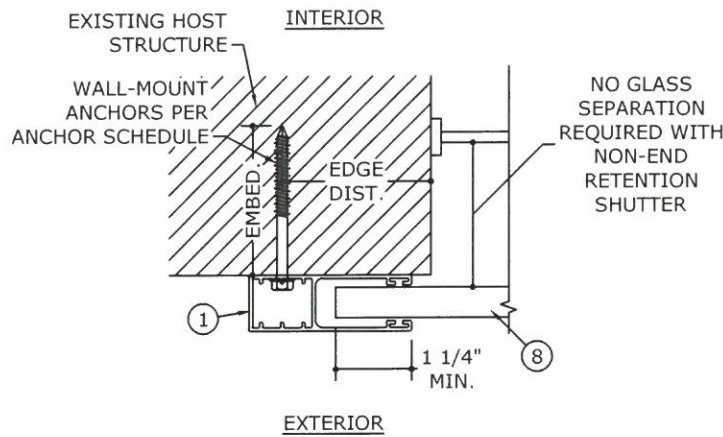
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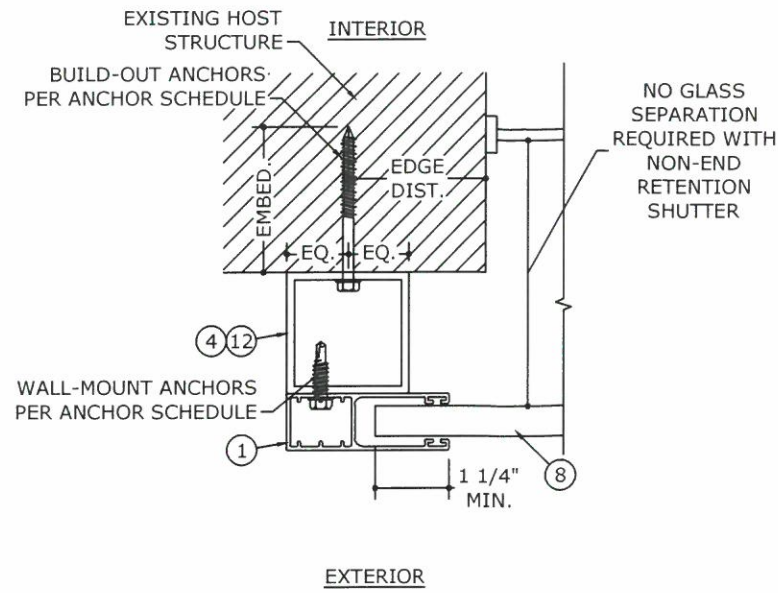
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3 OF 12

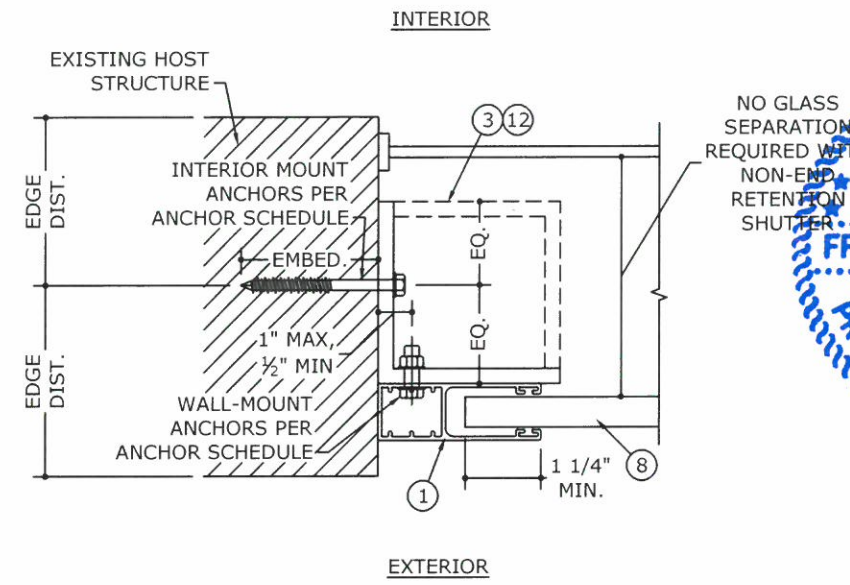
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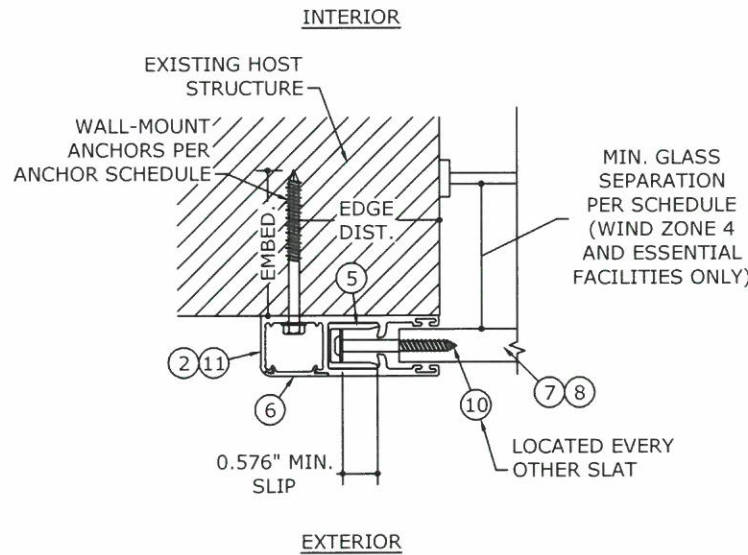
**1**  
NON-END RETENTION  
TYPICAL WALL MOUNT  
N.T.S. HORIZ SECTION



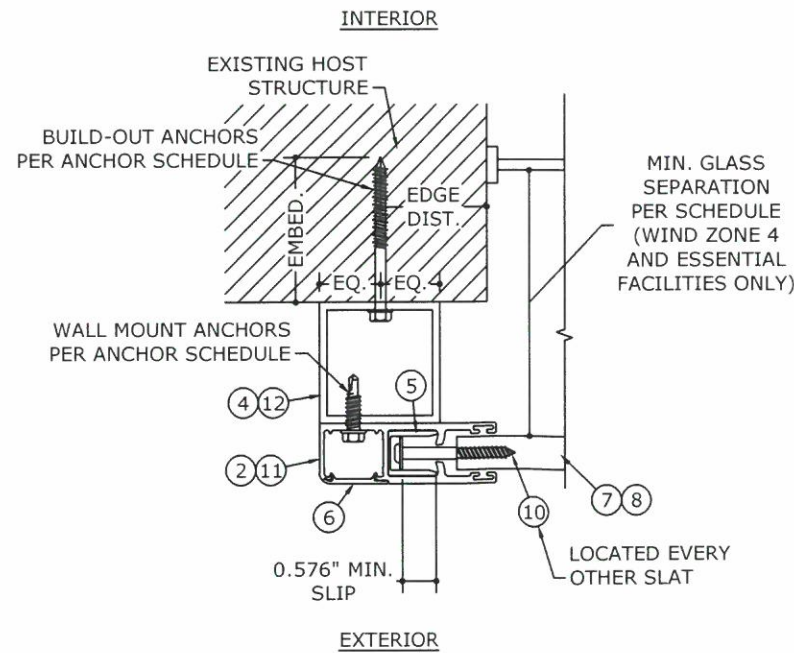
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NON-END RETENTION  
TYP. BUILD-OUT MOUNT  
N.T.S. HORIZ SECTION



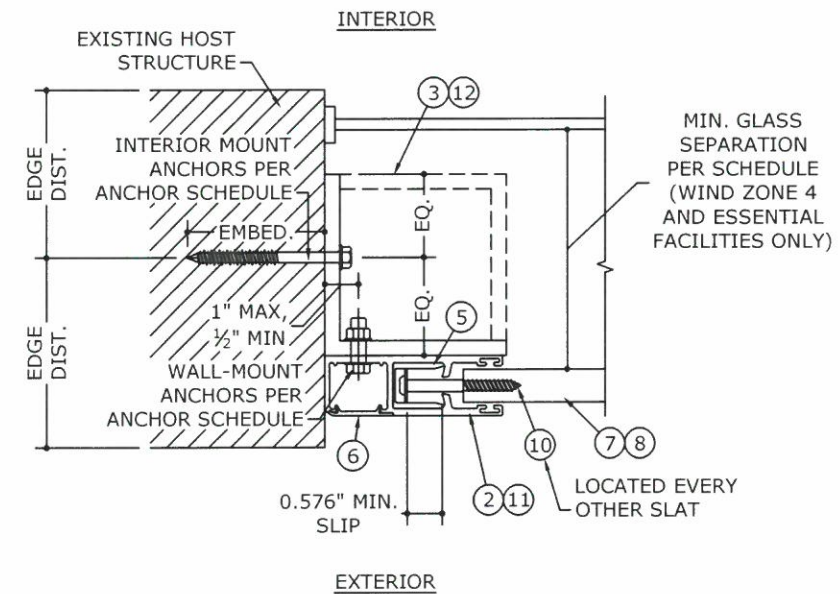
**5**  
NON-END RETENTION  
TYP. INTERIOR MOUNT  
N.T.S. HORIZ SECTION



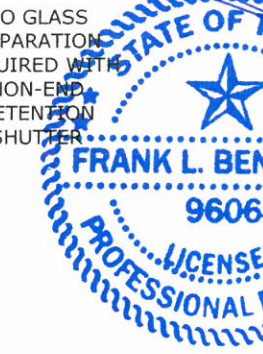
**2**  
END RETENTION  
TYPICAL WALL MOUNT  
N.T.S. HORIZ SECTION



**4**  
END RETENTION  
TYP. BUILD-OUT MOUNT  
N.T.S. HORIZ SECTION



**6**  
END RETENTION  
TYP. INTERIOR MOUNT  
N.T.S. HORIZ SECTION



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### ANCHOR SCHEDULE: NON-END RETENTION WALL MOUNT

ANCHOR	SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE	MAXIMUM SPACING (O.C.)
1/4" ELCO/ DEWALT ULTRACON	2846 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	GROUT-FILLED CONCRETE BLOCK	2.25"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	12.0"
1/4" ITW SS TAPCON	3192 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	12.0"
1/4" LAG SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	12.0"
#14 WOOD SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	12.0"
#14 316 SS SMS (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER	1/8" THICK MIN. 6063-T5 ALUMINUM OR A36 STEEL	FULL THREAD PENETRATION	0.5"	12.0"

### ANCHOR SCHEDULE: NON-END RETENTION BUILD-OUT MOUNT

ANCHOR	SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE	MAXIMUM SPACING (O.C.)
1/4" ELCO/ DEWALT ULTRACON	2846 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	GROUT-FILLED CONCRETE BLOCK	2.25"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	8.3"
1/4" ITW SS TAPCON	3192 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	7.6"
1/4" LAG SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	12.0"
#14 WOOD SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	12.0"
#14 316 SS SMS (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER	1/8" THICK MIN. 6063-T5 ALUMINUM OR A36 STEEL	FULL THREAD PENETRATION	0.5"	10.2"

### ANCHOR SCHEDULE: NON-END RETENTION INTERIOR MOUNT

ANCHOR	SUBSTRATE	MINIMUM EMBEDMENT	MINIMUM EDGE DISTANCE	MAXIMUM SPACING (O.C.)
1/4" ELCO/ DEWALT ULTRACON	2846 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	GROUT-FILLED CONCRETE BLOCK	2.25"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	12.0"
1/4" ITW SS TAPCON	3192 PSI MIN. CONCRETE	1.75"	2.5"	12.0"
	HOLLOW CONCRETE BLOCK	1.25"	2.5"	10.3"
1/4" LAG SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	11.5"
#14 WOOD SCREW	G=0.42 MIN. WOOD	1.5"	0.75"	10.2"
#14 316 SS SMS (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER	1/8" THICK MIN. 6063-T5 ALUMINUM OR A36 STEEL	FULL THREAD PENETRATION	0.5"	12.0"

### ANCHOR NOTES:

- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- 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).
- 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.
- SHEET METAL SCREWS SHALL BE INSTALLED WITH FULL ENGAGEMENT OF THREADS INTO METAL HOST STRUCTURE.
- ██████ DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.



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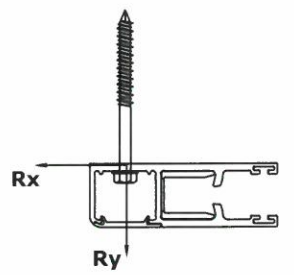
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INIT ISSUE	CSL	TSB	01/02/13
2018 UPDATE	PN	RN	05/13/20

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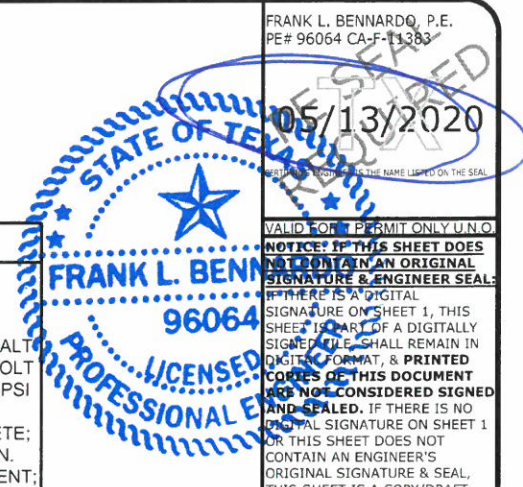
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# ANCHOR SCHEDULE: WALL MOUNT: END RETENTION SHUTTER WITH DOUBLE WALL SLATS



SLAT SPAN	DESIGN PRESSURE	Rx	Ry	MAXIMUM SPACING (O.C.)														
				1/4" ELCO/ DEWALT ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON			1/4" DEWALT POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" ALL-POINTS SOLID-SET		1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. 6063-T5 ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.25" MIN. 6063-T5 ALUM; 0.5" MIN. EDGE DISTANCE	3/8" DEWALT SCREWBOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE	
48"	+/- 40 PSF	0.0 LB/FT	80.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	0.0 LB/FT	100.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	0.0 LB/FT	120.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	40.3 LB/FT	156.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 80 PSF	89.5 LB/FT	198.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 90 PSF	137.6 LB/FT	243.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
60"	+/- 100 PSF	184.6 LB/FT	290.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 113 PSF	245.3 LB/FT	356.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	81.4 LB/FT	130.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	150.7 LB/FT	183.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	219.0 LB/FT	240.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	286.0 LB/FT	299.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
72"	+/- 80 PSF	351.9 LB/FT	361.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 84 PSF	380.5 LB/FT	388.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	230.3 LB/FT	204.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	320.3 LB/FT	273.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	408.9 LB/FT	346.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	496.1 LB/FT	423.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
84"	+/- 72 PSF	516.8 LB/FT	441.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	362.9 LB/FT	269.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	475.8 LB/FT	355.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	587.0 LB/FT	444.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 66 PSF	652.7 LB/FT	500.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	490.1 LB/FT	330.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
96"	+/- 50 PSF	627.7 LB/FT	432.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	763.0 LB/FT	540.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 62 PSF	788.5 LB/FT	561.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	616.6 LB/FT	390.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
108"	+/- 50 PSF	780.4 LB/FT	509.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 59 PSF	925.4 LB/FT	622.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	877.4 LB/FT	504.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
132"	+/- 50 PSF	1098.8 LB/FT	658.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 54 PSF	1182.0 LB/FT	719.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	1013.0 LB/FT	561.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
144"	+/- 50 PSF	1265.5 LB/FT	734.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 52 PSF	1305.4 LB/FT	762.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	1152.6 LB/FT	620.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
156"	+/- 50 PSF	1437.1 LB/FT	811.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	1296.2 LB/FT	680.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
168"	+/- 48 PSF	1557.2 LB/FT	852.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	1443.9 LB/FT	741.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
180.0"	+/- 47 PSF	1680.5 LB/FT	895.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.



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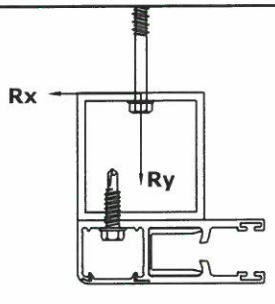
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# ANCHOR SCHEDULE: BUILD-OUT MOUNT: END RETENTION SHUTTER WITH DOUBLE WALL SLATS



SLAT SPAN	DESIGN PRESSURE	Rx	Ry	MAXIMUM SPACING (O.C.)														
				1/4" ELCO/ DEWALT ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON			1/4" DEWALT POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" ALL-POINTS SOLID-SET		1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. 6063-T5 ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.25" MIN. 6063-T5 ALUM; 0.5" MIN. EDGE DISTANCE	3/8" DEWALT SCREWBOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE	
48"	+/- 40 PSF	0.0 LB/FT	133.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	0.0 LB/FT	166.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	0.0 LB/FT	200.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	40.3 LB/FT	260.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 80 PSF	89.5 LB/FT	331.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 90 PSF	137.6 LB/FT	406.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
60"	+/- 100 PSF	184.6 LB/FT	484.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 113 PSF	245.3 LB/FT	593.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	81.4 LB/FT	216.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	150.7 LB/FT	306.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	219.0 LB/FT	400.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	286.0 LB/FT	499.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
72"	+/- 80 PSF	351.9 LB/FT	601.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 84 PSF	380.5 LB/FT	648.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	230.3 LB/FT	340.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	320.3 LB/FT	456.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	408.9 LB/FT	578.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 70 PSF	496.1 LB/FT	705.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
84"	+/- 72 PSF	516.8 LB/FT	736.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	362.9 LB/FT	449.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	475.8 LB/FT	591.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	587.0 LB/FT	741.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 66 PSF	652.7 LB/FT	834.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	490.1 LB/FT	551.1 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
96"	+/- 50 PSF	627.7 LB/FT	721.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 60 PSF	763.0 LB/FT	900.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 62 PSF	788.5 LB/FT	935.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	616.6 LB/FT	650.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
108"	+/- 50 PSF	780.4 LB/FT	849.5 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 59 PSF	925.4 LB/FT	1038.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	877.4 LB/FT	841.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	1098.8 LB/FT	1097.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
132"	+/- 54 PSF	1182.0 LB/FT	1199.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 40 PSF	1013.0 LB/FT	936.6 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 52 PSF	1305.4 LB/FT	1271.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
144"	+/- 40 PSF	1152.6 LB/FT	1034.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 50 PSF	1437.1 LB/FT	1352.9 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
156"	+/- 40 PSF	1296.2 LB/FT	1133.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 48 PSF	1557.2 LB/FT	1420.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
168"	+/- 40 PSF	1443.9 LB/FT	1236.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"
	+/- 47 PSF	1680.5 LB/FT	1492.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.

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SHU-213 TDI UPDATE

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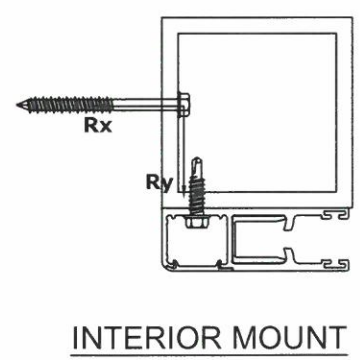
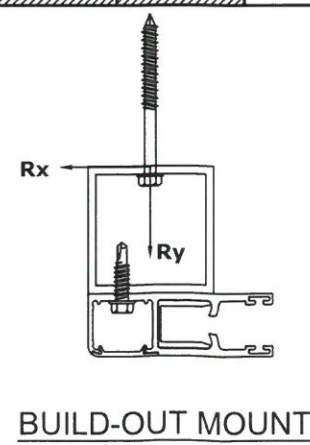
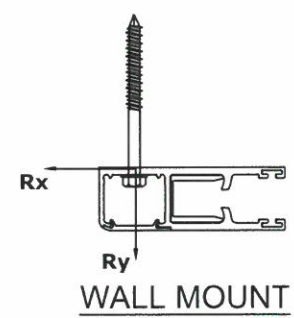


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## ANCHOR SCHEDULE: END RETENTION SHUTTER WITH SINGLE WALL SLATS

ANCHOR NOTES: SEE SHEET 5 FOR ANCHOR NOTES.

SLAT SPAN	DESIGN PRESSURE	Rx	Ry	MAXIMUM SPACING (O.C.)															
				1/4" ELCO/ DEWALT ULTRACON TO 2846 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	1/4" SS ITW TAPCON TO 3192 PSI MIN. CONCRETE; 1.75" MIN. EMBEDMENT; 2.5" MIN. EDGE DISTANCE	5/16" ITW TAPCON		TO HOLLOW CONCRETE BLOCK; 1.75" MIN. EMBEDMENT; 4" MIN. EDGE DISTANCE	1/4" DEWALT POWER-BOLT TO 3000 PSI MIN. CONCRETE; 2.5" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	TO 3000 PSI MIN. CONCRETE; 0.875" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	TO HOLLOW BLOCK; 0.875" MIN. EMBEDMENT; 3" MIN. EDGE DISTANCE	1/4" LAG SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	5/16" LAG SCREW TO G=0.42 MIN WOOD; 2" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 WOOD SCREW TO G=0.55 MIN WOOD; 1.5" MIN. EMBEDMENT; 0.75" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.125" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	#14 316 SS SMS W/ FULL THREAD PENETRATION (OR 1/4-20 316 SS THRU-BOLT) W/ 5/8" WASHER TO 0.25" MIN. ALUM; 0.5" MIN. EDGE DISTANCE	3/8" DEWALT SCREWBOLT TO 3000 PSI MIN. CONCRETE; 3.5" MIN. EMBEDMENT; 4.5" MIN. EDGE DISTANCE		
<b>WALL MOUNT</b>																			
114"	+/- 25 PSF	426.4 LB/FT	253.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.6"	4.0"	4.0"	4.0"	4.0"	
	+/- 30 PSF	516.7 LB/FT	313.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.4"	3.0"	3.5"	4.0"	4.0"	4.0"	
	+/- 35 PSF	606.1 LB/FT	376.3 LB/FT	4.0"	4.0"	4.0"	4.0"	3.8"	4.0"	4.0"	3.9"	2.9"	2.6"	3.0"	4.0"	4.0"	4.0"	4.0"	
	+/- 40 PSF	694.5 LB/FT	441.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.3"	2.5"	2.2"	2.6"	3.7"	4.0"	4.0"	4.0"	
	+/- 45 PSF	782.0 LB/FT	508.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.2"	2.0"	2.3"	3.2"	4.0"	4.0"	4.0"	
+/- 50 PSF	868.5 LB/FT	577.7 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.0"	2.0"	2.1"	2.8"	3.8"	4.0"	4.0"		
<b>BUILD-OUT MOUNT</b>																			
114"	+/- 25 PSF	426.4 LB/FT	423.0 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.8"	3.4"	3.8"	4.0"	4.0"	4.0"	4.0"	
	+/- 30 PSF	516.7 LB/FT	523.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.7"	3.1"	2.8"	3.2"	3.5"	4.0"	4.0"	4.0"	
	+/- 35 PSF	606.1 LB/FT	627.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.1"	2.7"	2.4"	2.7"	2.9"	4.0"	4.0"	4.0"	
	+/- 40 PSF	694.5 LB/FT	735.4 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.3"	2.3"	2.1"	2.3"	2.5"	3.6"	4.0"	4.0"	
	+/- 45 PSF	782.0 LB/FT	847.3 LB/FT	4.0"	3.7"	4.0"	4.0"	4.0"	4.0"	4.0"	2.0"	2.0"	2.0"	2.0"	2.2"	3.1"	4.0"	4.0"	
+/- 50 PSF	868.5 LB/FT	963.0 LB/FT	4.0"	3.3"	4.0"	4.0"	4.0"	4.0"	3.6"	3.6"	3.6"	3.6"	2.8"	2.8"	2.8"	4.0"	4.0"		
<b>INTERIOR MOUNT</b>																			
114"	+/- 25 PSF	595.6 LB/FT	253.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.6"	4.0"	4.0"	4.0"	
	+/- 30 PSF	726.0 LB/FT	313.8 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.7"	4.0"	3.7"	3.8"	2.9"	4.0"	4.0"	4.0"	
	+/- 35 PSF	857.1 LB/FT	376.3 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	3.1"	3.4"	3.1"	3.2"	2.5"	3.7"	4.0"	4.0"	
	+/- 40 PSF	988.8 LB/FT	441.2 LB/FT	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	4.0"	2.9"	2.7"	2.7"	2.8"	2.1"	3.2"	4.0"	4.0"	
	+/- 45 PSF	1121.0 LB/FT	508.3 LB/FT	4.0"	3.8"	4.0"	4.0"	4.0"	4.0"	4.0"	2.5"	2.5"	2.3"	2.4"	2.4"	2.8"	4.0"	4.0"	
+/- 50 PSF	1253.8 LB/FT	577.7 LB/FT	4.0"	3.4"	4.0"	4.0"	4.0"	4.0"	3.6"	3.6"	2.2"	2.1"	2.1"	2.1"	2.5"	4.0"	4.0"		



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05/13/2020

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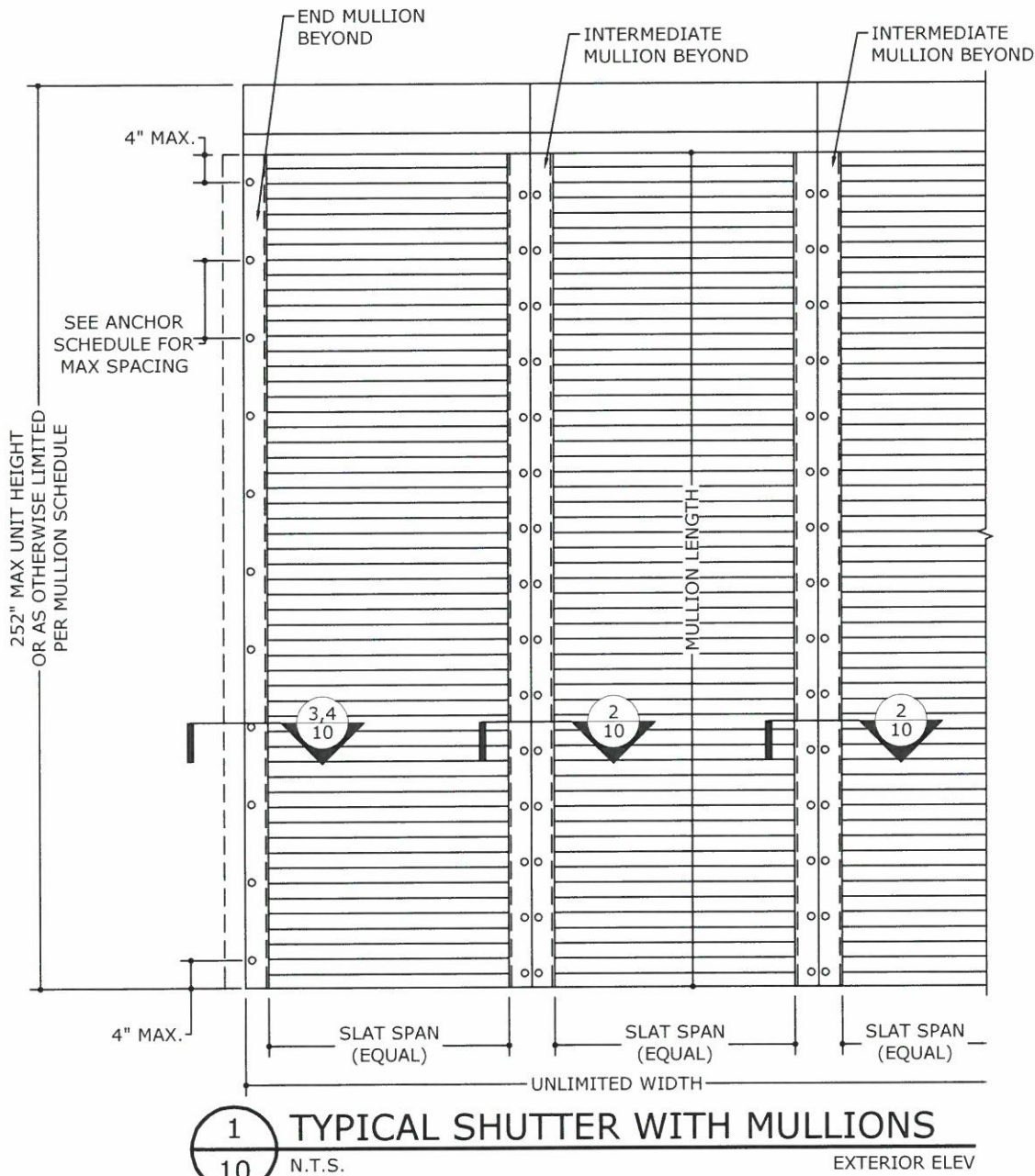
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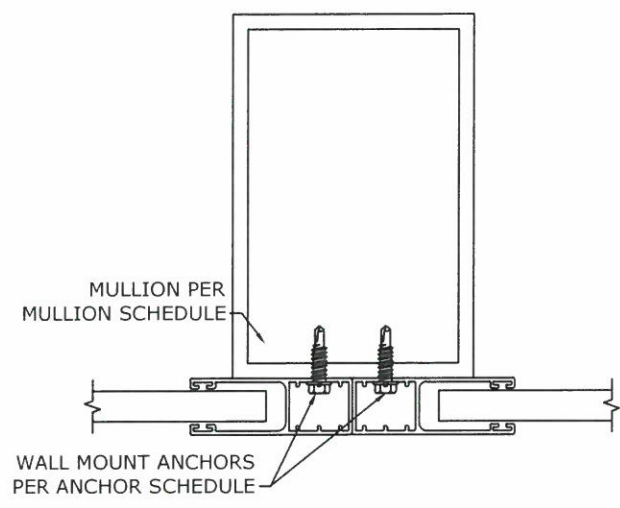
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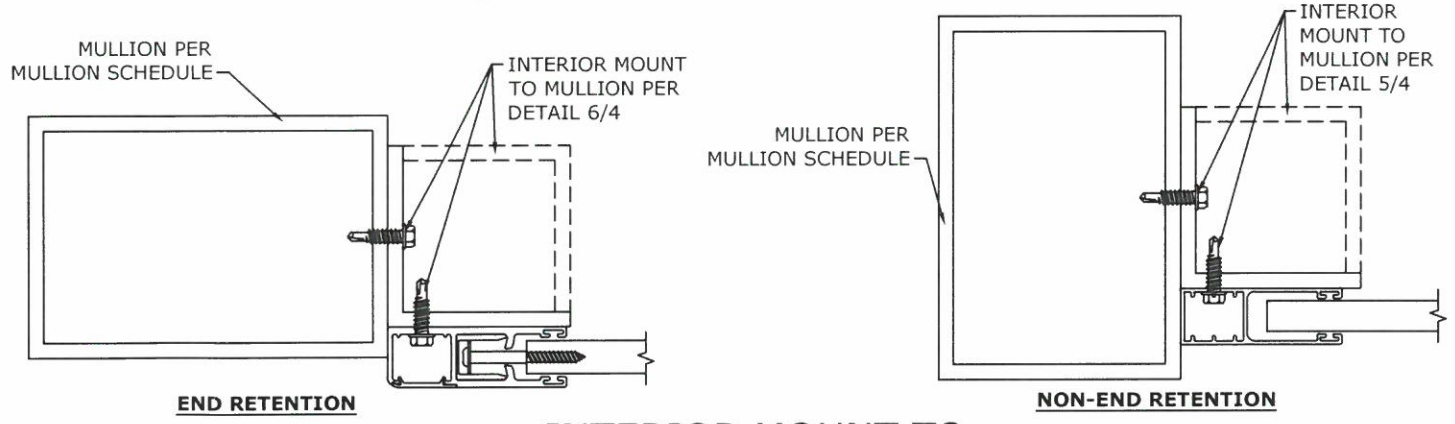


**1**  
10 N.T.S. EXTERIOR ELEV

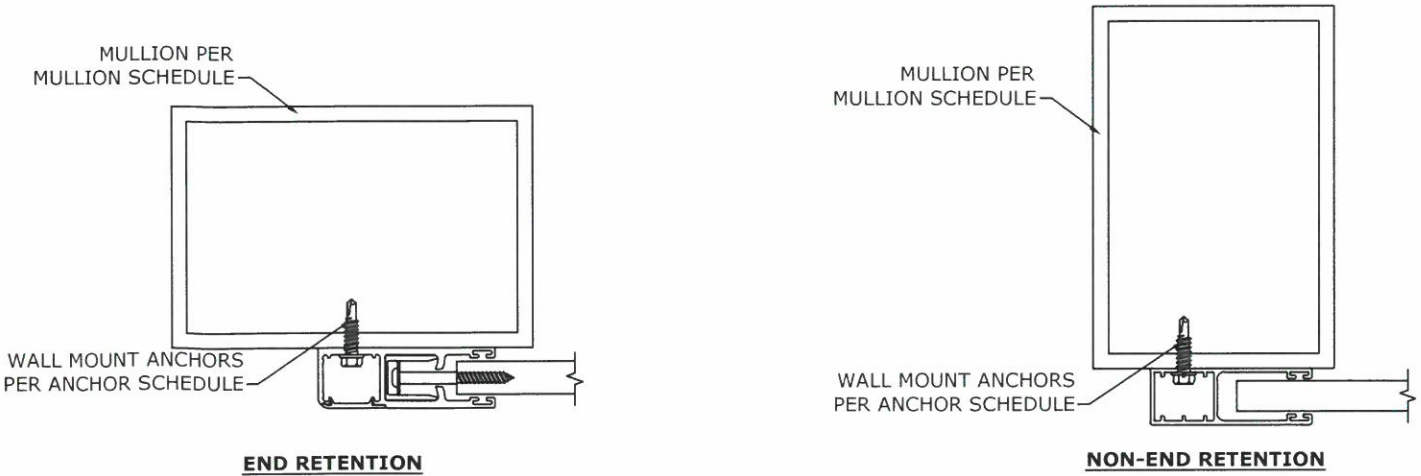


**NOTE:** SEE SHEET 4 FOR ADDITIONAL LIMITATIONS AND REQUIREMENTS. NON-END RETENTION SHUTTER SHOWN HERE. END RETENTION SHUTTER WALL MOUNT TO MULLION SIMILAR, SEE DETAIL 2/4.

**2**  
10 N.T.S. HORIZ SECTION



**3**  
10 N.T.S. HORIZ SECTION



**4**  
10 N.T.S. HORIZ SECTION

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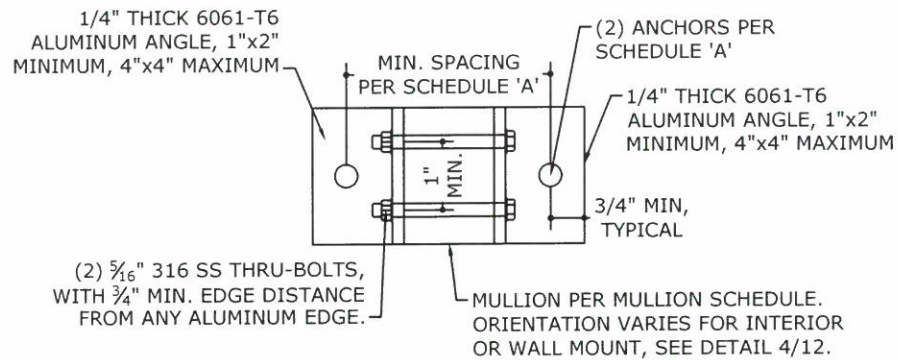
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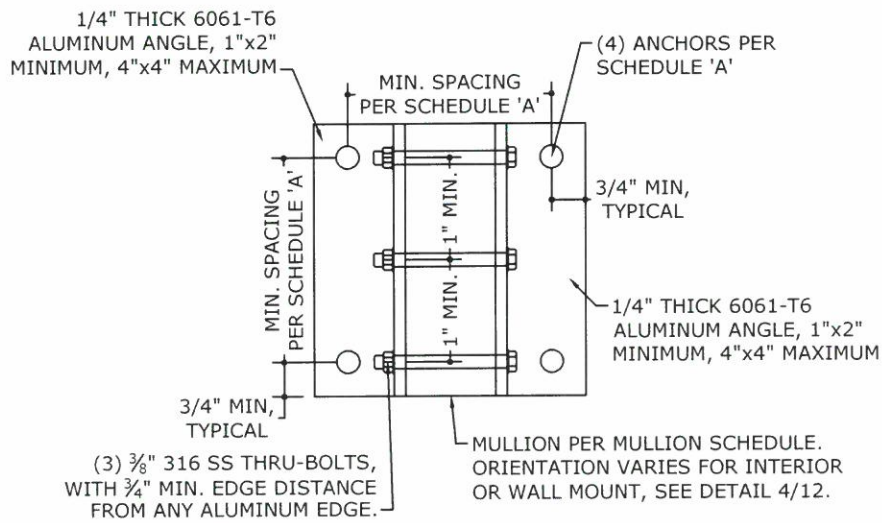
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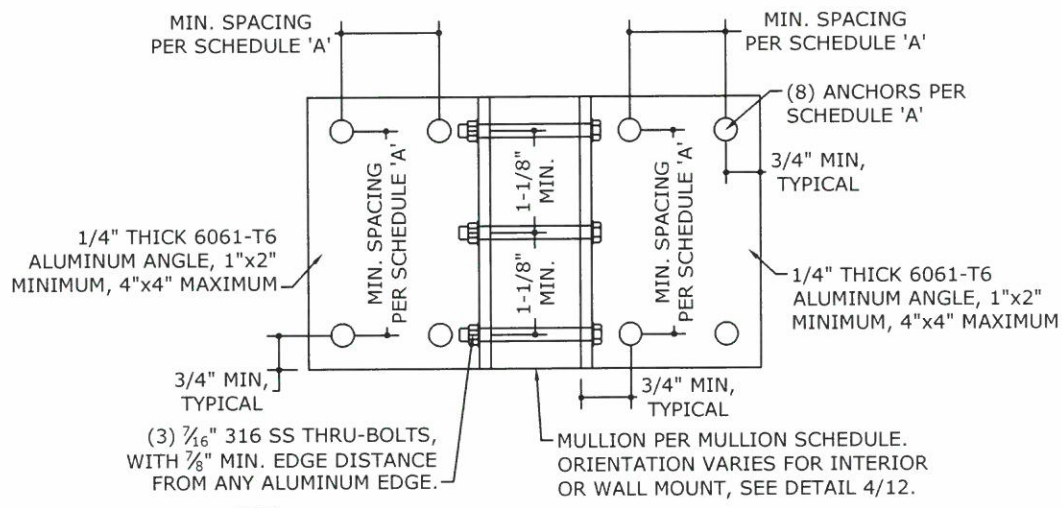
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**1** INTERIOR OR WALL MOUNT  
12 N.T.S.



**2** INTERIOR OR WALL MOUNT  
12 N.T.S.

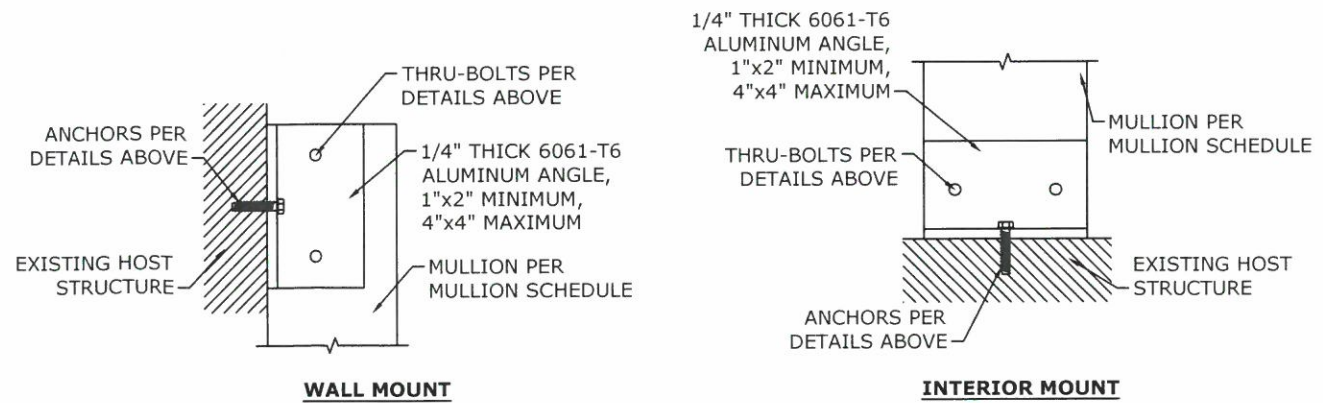


**3** INTERIOR OR WALL MOUNT  
12 N.T.S.

**SCHEDULE 'A'**

ANCHOR TYPE	MINIMUM SPACING	MINIMUM EDGE DISTANCE	CONNECTION DETAIL	CONNECTION CAPACITY	
				Tcap	Vcap
3/8" DEWALT SCREWBOLT W/ 3-1/2" EMBED TO 3KSI MIN. CONCRETE	4.5"	4.5"	1/12	4410 LB	3065 LB
			2/12	8820 LB	6130 LB
	2.5"	4.5"	3/12	11819 LB	10176 LB
3/8" DEWALT STEEL DROPIN W/ 1-9/16" EMBED TO 3KSI MIN. CONCRETE	4.5"	5.25"	1/12	1590 LB	2290 LB
			2/12	3180 LB	4580 LB
	2.5"	5.25"	3/12	3689 LB	5313 LB
5/16" ITW TAPCON XL OR ELCO/ DEWALT ULTRACON W/ 2-1/4" MIN. EMBED TO 3.515 KSI MIN. CONCRETE	5.0"	3.125"	1/12	1576 LB	1700 LB
			2/12	3152 LB	3400 LB

- SCHEDULE 'A' NOTES:**
- INTERIOR MOUNT:**
    - FOR ALL MULLIONS, 'Rsum' VALUES IN MULLION SCHEDULE SHALL NOT EXCEED MAX 'Vcap' VALUES NOTED IN SCHEDULE 'A'.
  - WALL MOUNT:**
    - FOR INTERMEDIATE END RETENTION MULLIONS AND ALL NON-END RETENTION MULLIONS, 'Rsum' VALUES IN MULLION SCHEDULE SHALL NOT EXCEED MAX 'Tcap' VALUES NOTED IN SCHEDULE 'A'.
    - FOR END RETENTION END MULLIONS, **Rv/Vcap + Rt/Tcap SHALL BE LESS THAN OR EQUAL TO 1.0**, WHERE 'Rv' AND 'Rt' ARE PER MULLION SCHEDULE, AND 'Tcap' AND 'Vcap' ARE PER SCHEDULE 'A'.



**4** MOUNTING CONDITIONS VERTICAL SECTIONS  
12 N.T.S.



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PE# 96064 CA-F-11383  
05/13/2020  
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SHU-213 TDI UPDATE

DATE	DATE	DRWN	CHKD	DATE
01/02/13	01/02/13	CSL	TSB	01/02/13
	05/13/20	PN	RN	

REMARKS:  
INIT ISSUE  
2018 UPDATE

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