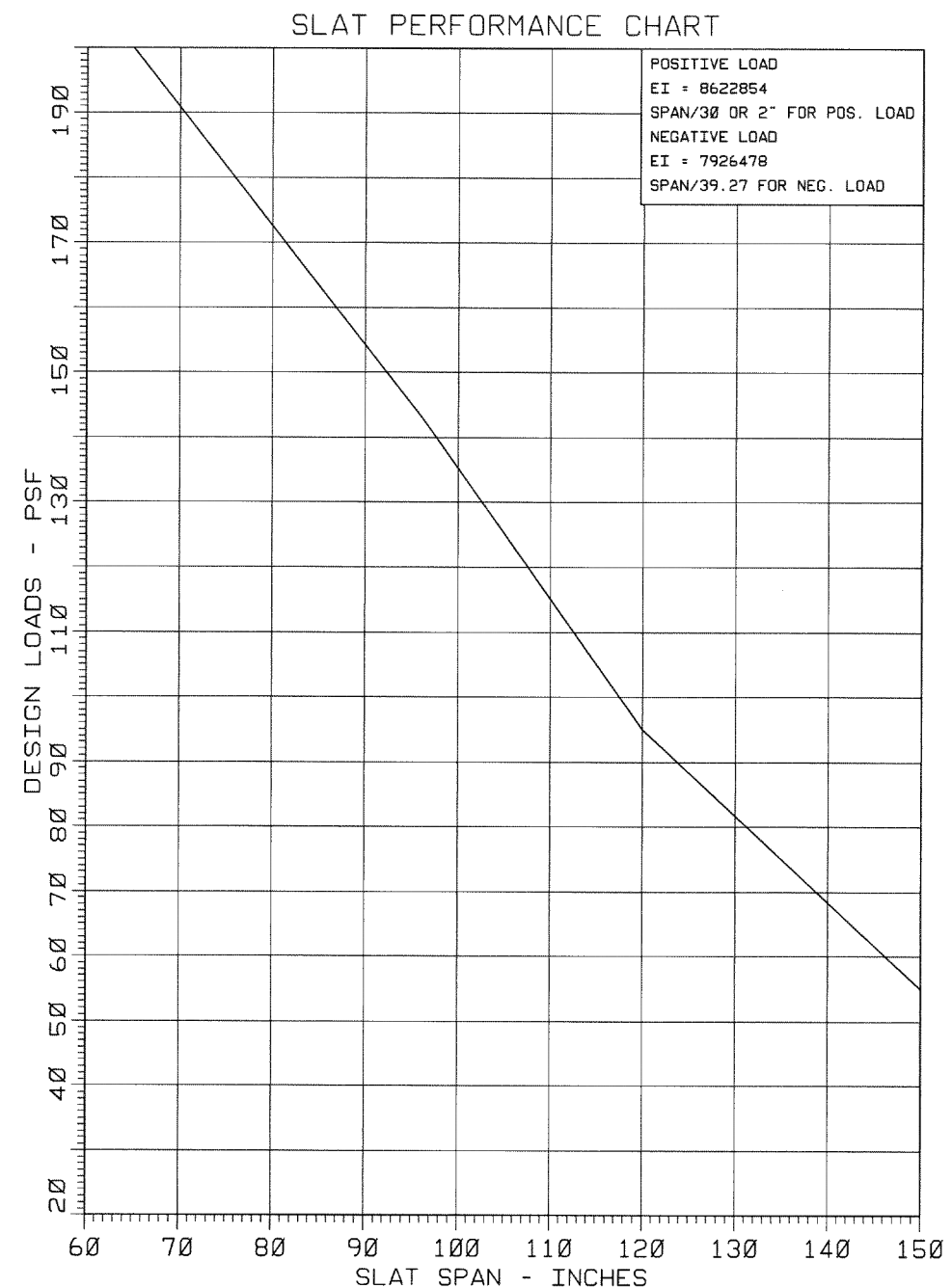


MINIMUM SEPARATION FROM GLASS			
SEPARATION REQD. DUE TO WIND LOAD		SEPARATION REQD. DUE TO LARGE MISSILE IMPACT	
SHUTTER SPAN = H =	IN.	FOR SLAT SPANS UPTO	SEPARATION
DESIGN LOAD = Pd =	PSF		
FACTOR = K = Pd/100 =	IN.	150"	3-1/2"
READING FROM SPAN D. CURVE = D =	IN.		
DEFLECTION AT Pd = K*D =	IN.		
MIN. SEPARATION REQD. = K*D+1" =		IN.	
FOR INSTALLATIONS UPTO 30' OF GRADE USE MAXIMUM OF WIND LOAD OR IMPACT LOAD REQUIREMENTS SHOWN ABOVE			
FOR INSTALLATIONS ABOVE 30' OF GRADE IGNORE LARGE MISSILE IMPACT REQUIREMENT.			
NOTE: NO PART OF SHUTTER SHALL BE UNDER 30' ABOVE GRADE TO WAIVE LARGE MISSILE IMPACT REQUIREMENT.			



POSITIVE LOAD  
EI = 8622854  
SPAN/30 OR 2" FOR POS. LOAD  
NEGATIVE LOAD  
EI = 7926478  
SPAN/39.27 FOR NEG. LOAD

**GENERAL NOTES**

1. THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2017 (6TH EDITION)/2020 (7TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
2. DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
3. ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY AS SHOWN
4. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2017/2020 FLORIDA BLDG. CODE & ADOPTED STANDARDS.
5. ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
6. ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6, OR PLATED STEEL. WING NUTS TO BE OF ZINC ALLOY.
7. DESIGN CRITERIA FOR SLATS: MAX DEFLECTION ≤ THE LESSER OF L/30 OR 2".
8. THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC. CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.
9. A LOAD DURATION INCREASE IN ALLOWABLE STRESS IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.
10. DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

**PRODUCT MARKING**

A LABEL SHALL BE AFFIXED ON LOCKING MEMBER OF UNIT ABOVE LOCK WITH THE FOLLOWING STATEMENT.

**ALUTECH UNITED INC.**  
15 DIXON STREET  
SELBYVILLE, DE. 19975

FOR INSTALLATION DETAILS SEE SHEETS 3 THRU 6.

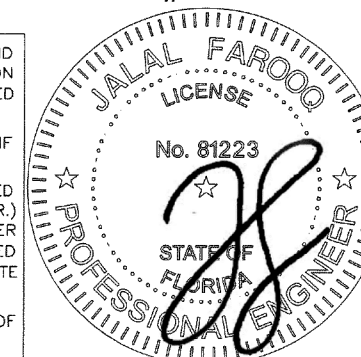
USE SLAT PERFORMANCE CHART TO VERIFY SLAT CAPACITY FOR THE REQUIRED DESIGN LOAD FOR THE PARTICULAR LOCATION.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-10.

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- A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
- B- THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



**afc**

**AL-FAROOQ CORPORATION**  
ENGINEERS & PRODUCT DEVELOPMENT  
9360 SUNSET DRIVE, SUITE 220  
MIAMI, FLORIDA 33173 (C.A.N. 3538)  
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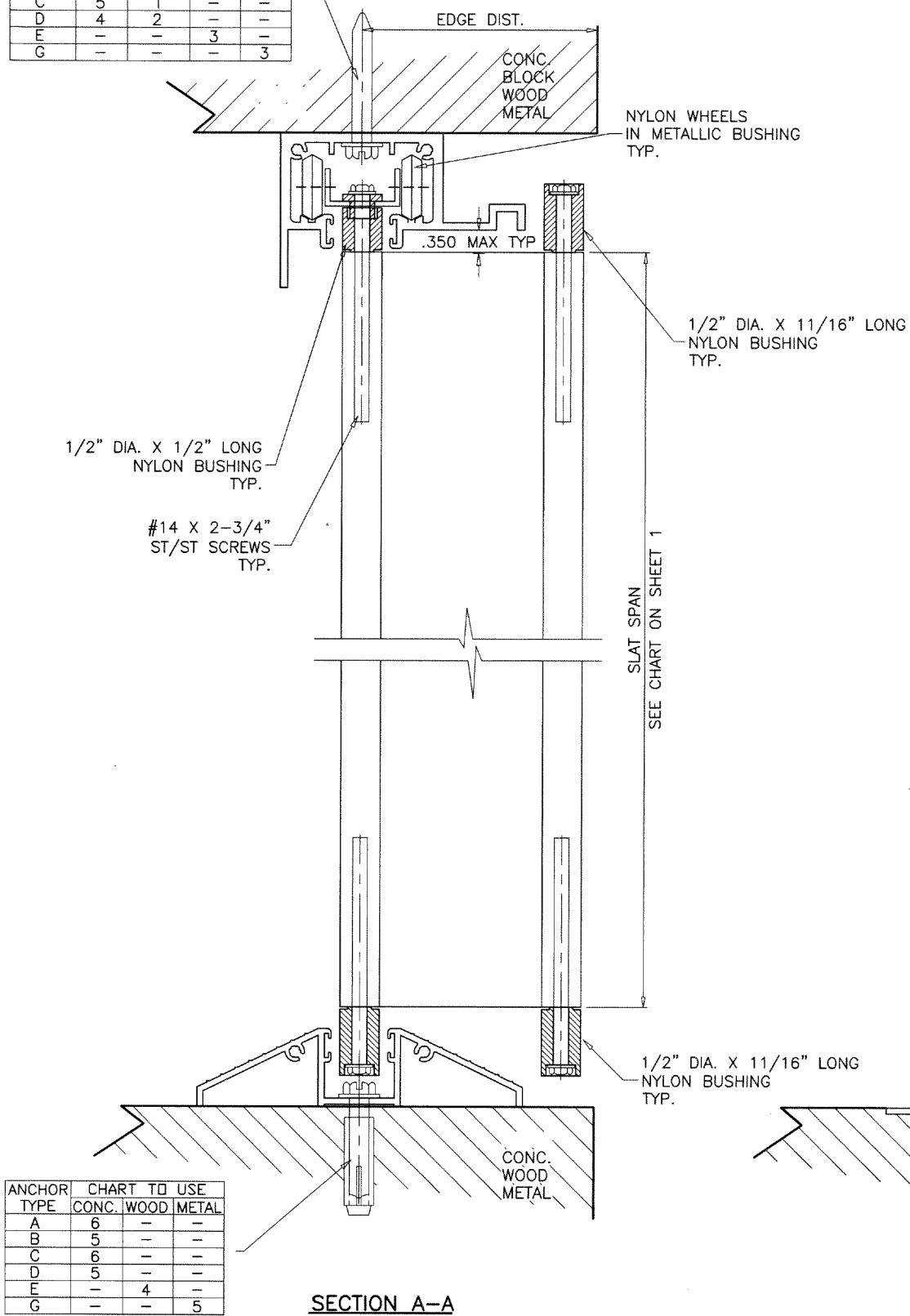
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A	GENERAL REVISION
date:	by:
04-30-09	TARIO
scale:	1/2" = 1"
dr. by:	TARIO
chk. by:	
drawing no.	
09-03	
sheet 1 of 7	

ACCORDION/09-03AUI



ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	5	2	-	-
B	4	1	-	-
C	5	1	-	-
D	4	2	-	-
E	-	-	3	-
G	-	-	-	3

**INSIDE MOUNTS**



ANCHOR TYPE	CHART TO USE		
	CONC.	WOOD	METAL
A	6	-	-
B	5	-	-
C	6	-	-
D	5	-	-
E	-	4	-
G	-	-	5

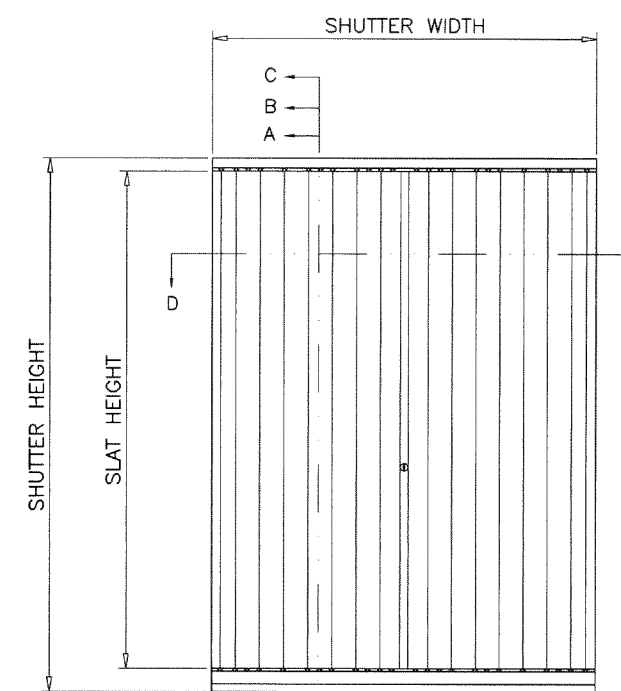
**SECTION A-A**

ANCHOR TYPE	CHART TO USE		
	CONC.	WOOD	METAL
A	7	-	-
B	7	-	-
C	8	-	-
D	7	-	-
E	-	5	-
G	-	-	7

ANCHORS: EMBEDMENT & EDGE DISTANCES SHOWN ARE BEYOND THE WALL & FLOOR COVERING (STUCCO, TILES, ETC.)

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.

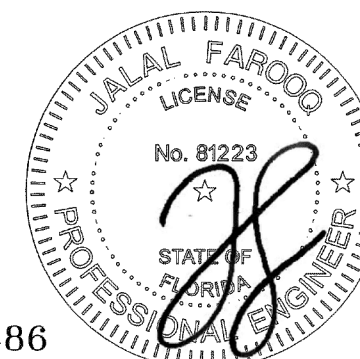
FOR GENERAL NOTES AND EXTRUSION DETAILS SEE SHEETS 1 & 2. FOR WOOD INSTALLATIONS SEE SHEET 6.



**TYPICAL ELEVATION**

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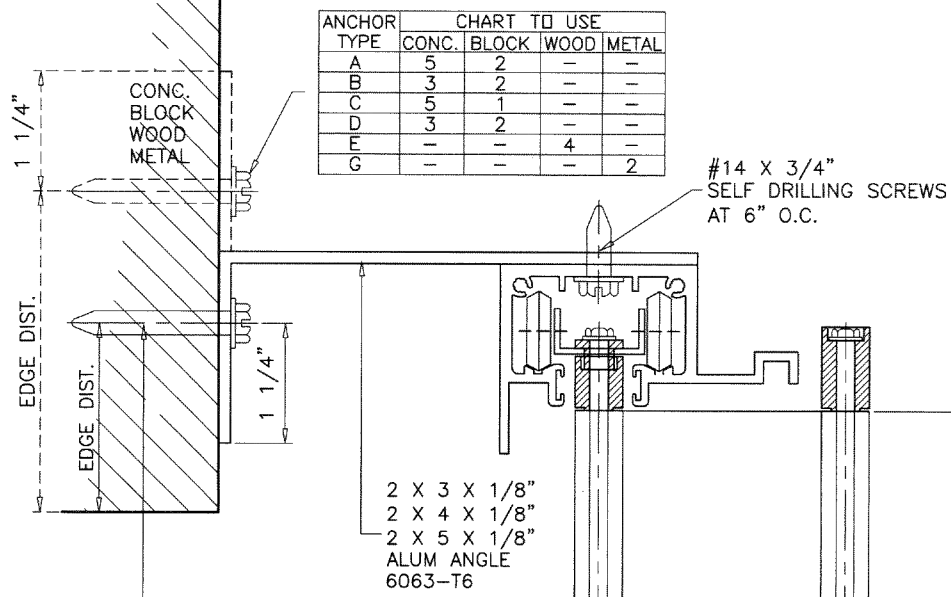
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no	date by description

date: 04-30-09	scale: 1/2" = 1"	dr. by: TARIQ	chk. by:
drawing no. 09-03		sheet 3 of 7	

ACCORDION/09-03AUI

**BUILT-OUT CONDITION**

**BUILT-OUT HEADER**



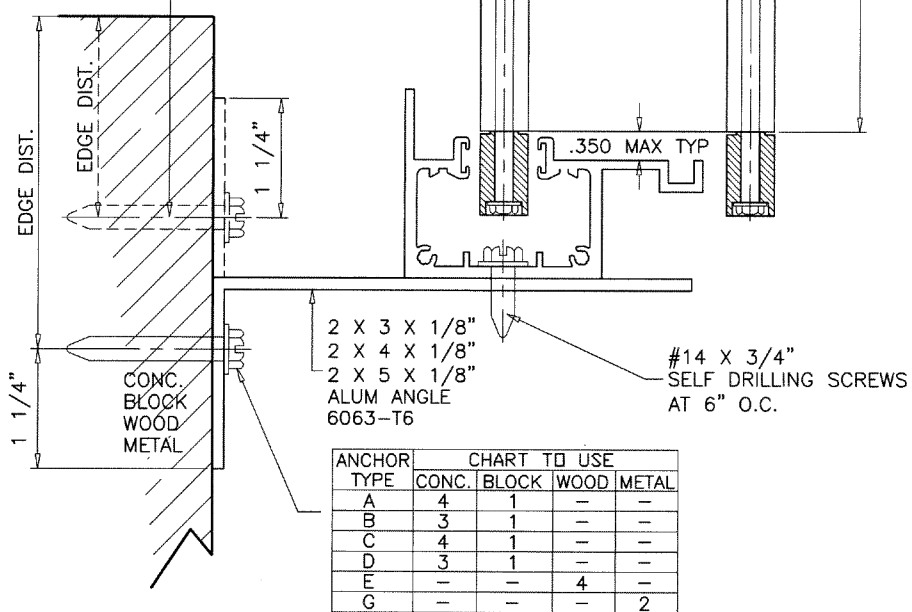
ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	5	2	-	-
B	3	2	-	-
C	5	1	-	-
D	3	2	-	-
E	-	-	4	-
G	-	-	-	2

#14 X 3/4" SELF DRILLING SCREWS AT 6" O.C.

2 X 3 X 1/8"  
2 X 4 X 1/8"  
2 X 5 X 1/8"  
ALUM ANGLE  
6063-T6

ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	6	2	-	-
B	4	2	-	-
C	6	2	-	-
D	4	2	-	-
E	-	-	5	-
G	-	-	-	3

ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	5	2	-	-
B	3	2	-	-
C	5	1	-	-
D	3	2	-	-
E	-	-	5	-
G	-	-	-	2



2 X 3 X 1/8"  
2 X 4 X 1/8"  
2 X 5 X 1/8"  
ALUM ANGLE  
6063-T6

#14 X 3/4" SELF DRILLING SCREWS AT 6" O.C.

ANCHOR TYPE	CHART TO USE			
	CONC.	BLOCK	WOOD	METAL
A	4	1	-	-
B	3	1	-	-
C	4	1	-	-
D	3	1	-	-
E	-	-	4	-
G	-	-	-	2

ANCHOR TYPE	CHART TO USE			
	CONC.	WOOD	METAL	
A	3	-	-	-
B	2	-	-	-
C	3	-	-	-
D	2	-	-	-
E	-	2	-	-
G	-	-	1	-

**SECTION B-B**

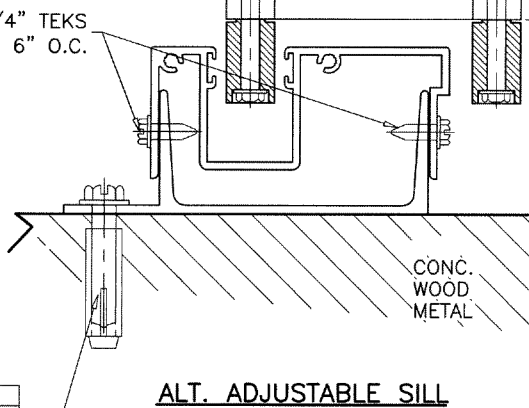
SLAT SPAN SEE CHART ON SHEET 1

SLAT SPAN SEE CHART ON SHEET 1

SLAT SPAN SEE CHART ON SHEET 1

SLAT SPAN SEE CHART ON SHEET 1

#10 X 3/4" TEKS AT 6" O.C.



**ALT. ADJUSTABLE SILL**

#10 X 3/4" TEKS AT 6" O.C.

ANCHOR TYPE	CHART TO USE		
	CONC.	WOOD	METAL
A	5	-	-
B	4	-	-
C	5	-	-
D	4	-	-
E	-	4	-
G	-	-	3

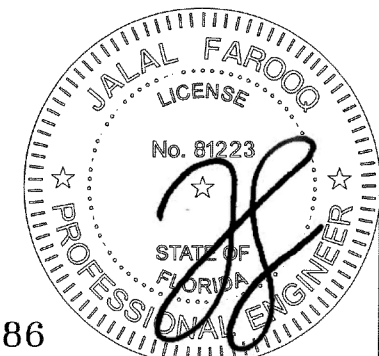
**ADJUSTABLE SILL**

**SECTION C-C**

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.

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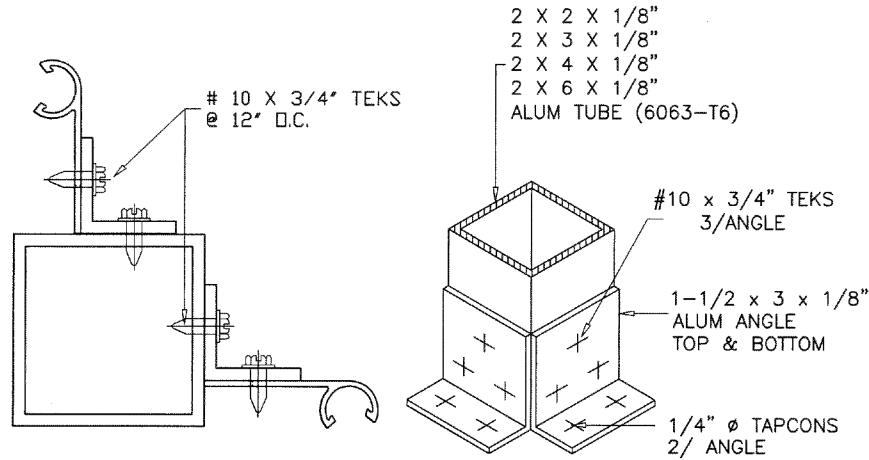
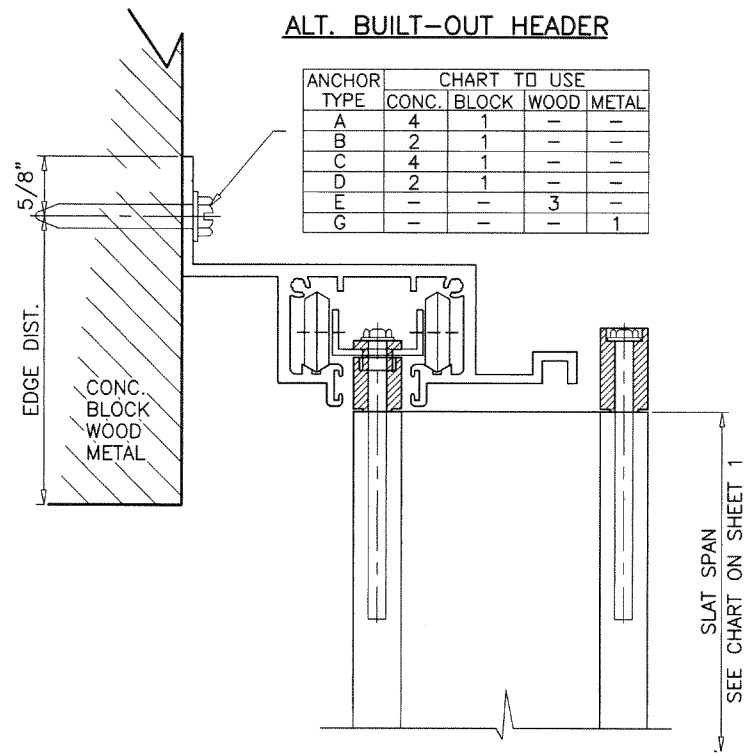
**afc**  
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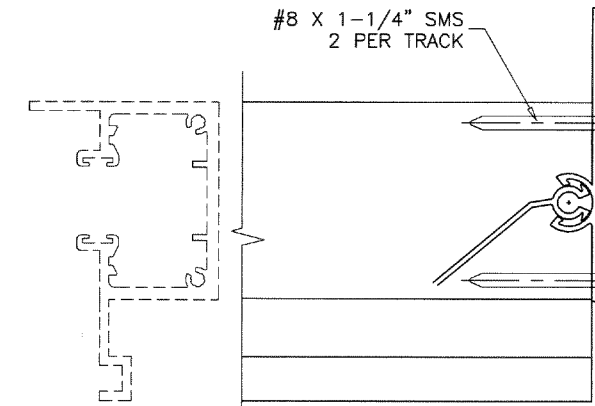
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chk. by:				
drawing no.	09-03			
sheet	4 of 7			

**ALT. BUILT-OUT HEADER**

ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD/METAL
A	4	1	-
B	2	1	-
C	4	1	-
D	2	1	-
E	-	-	3
G	-	-	1

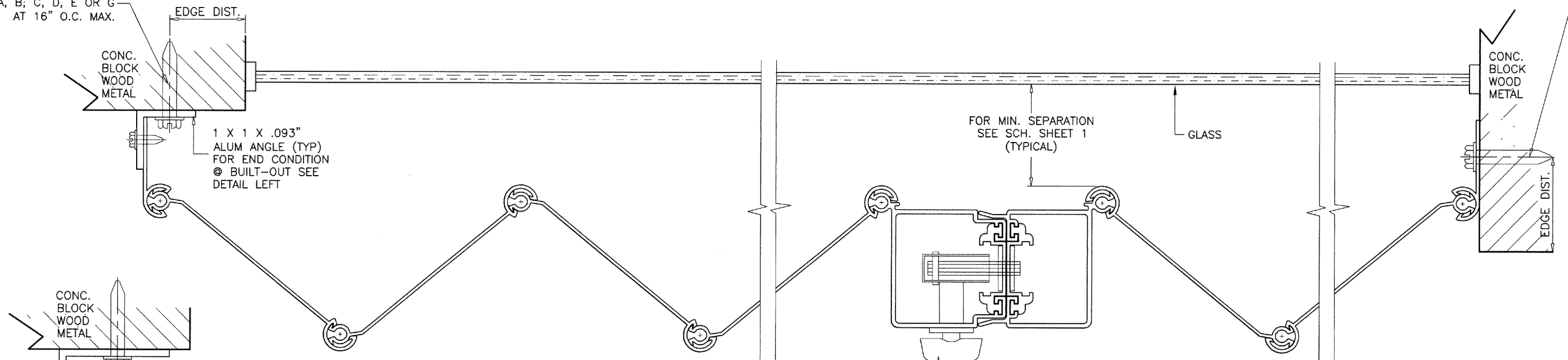


**FIXED CORNER DETAIL**



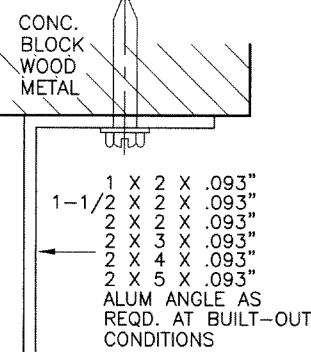
**FEMALE END SLAT**  
MOUNTING TO HEAD/SILL TRACKS

ANCHORS TYPE A, B, C, D, E OR G AT 16" O.C. MAX.



**SECTION D-D**

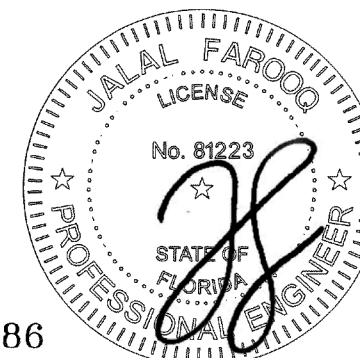
LOCK HANDLE CAN BE INSTALLED INSIDE OR OUTSIDE



**END CONDITION AT BUILT-OUT**

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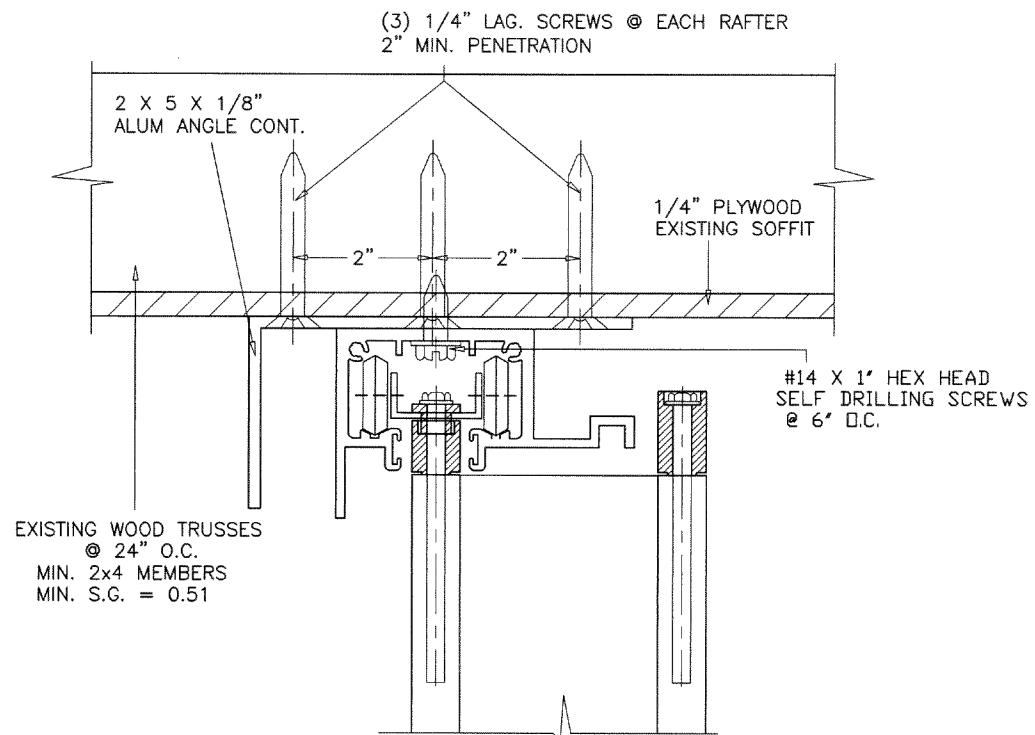


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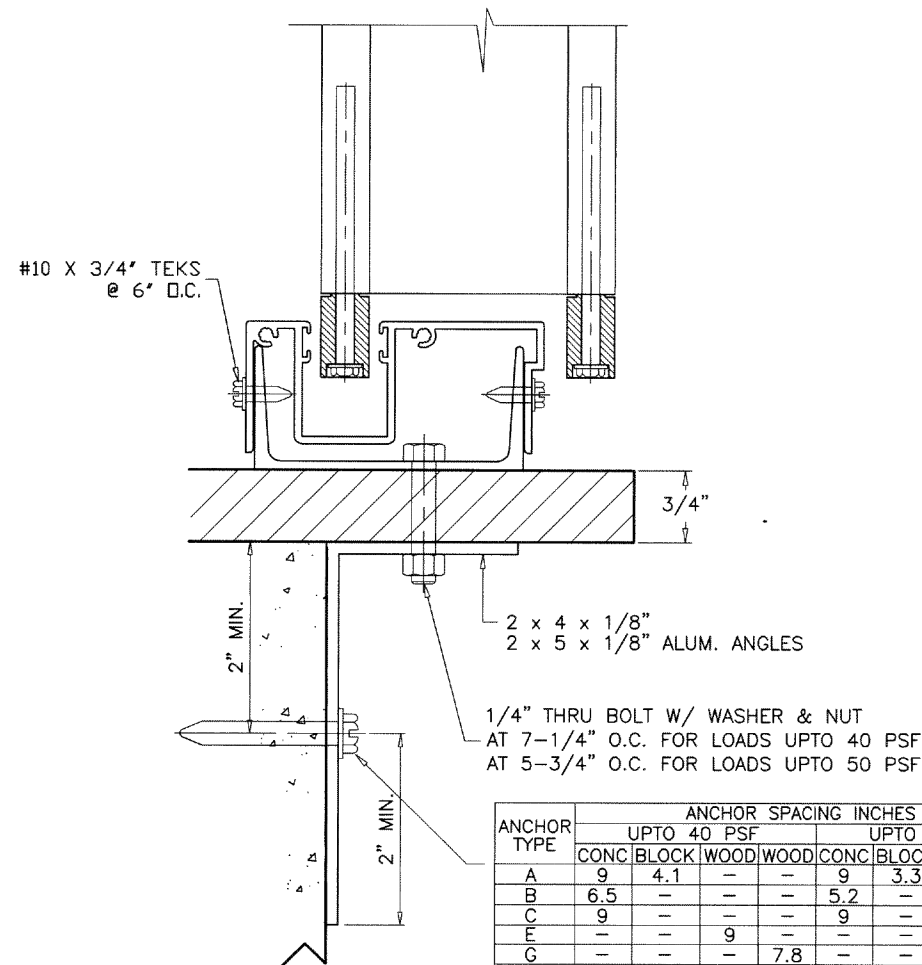
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drawing no.	09-03			
sheet	5 of 7			



**HEADER CONNECTION TO WOOD TRUSSES**

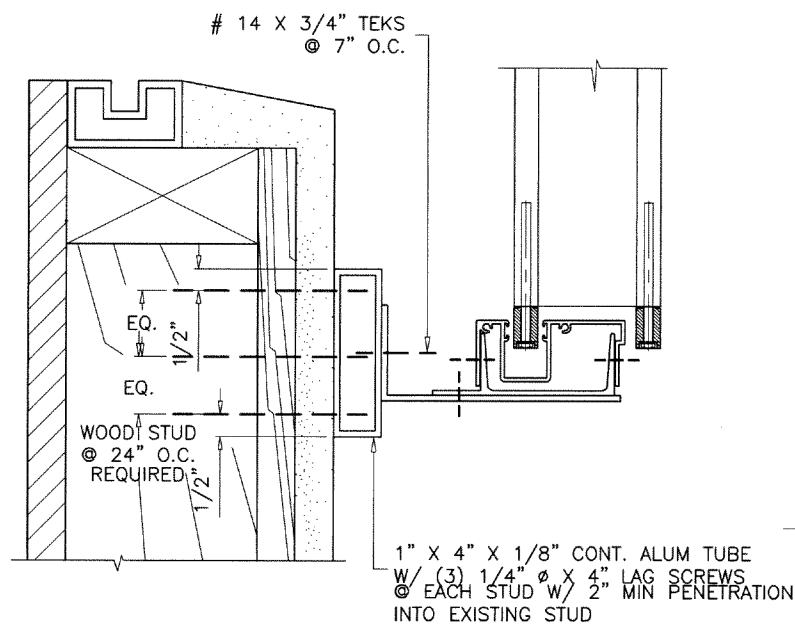
FOR SHUTTER HEIGHT OF 72" MAX. DESIGN LOAD = 88 PSF  
 FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 75 PSF  
 FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 66 PSF  
 FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 58 PSF



**COUNTER TOP CONDITION**

(PASS THRU WINDOW)  
 MAX SHUTTER HEIGHT = 6 FT.

ANCHOR TYPE	ANCHOR SPACING INCHES							
	UPTO 40 PSF				UPTO 50 PSF			
	CONC	BLOCK	WOOD	WOOD	CONC	BLOCK	WOOD	WOOD
A	9	4.1	-	-	9	3.3	-	-
B	6.5	-	-	-	5.2	-	-	-
C	9	-	-	-	9	-	-	-
E	-	-	9	-	-	-	9	-
G	-	-	-	7.8	-	-	-	6.3

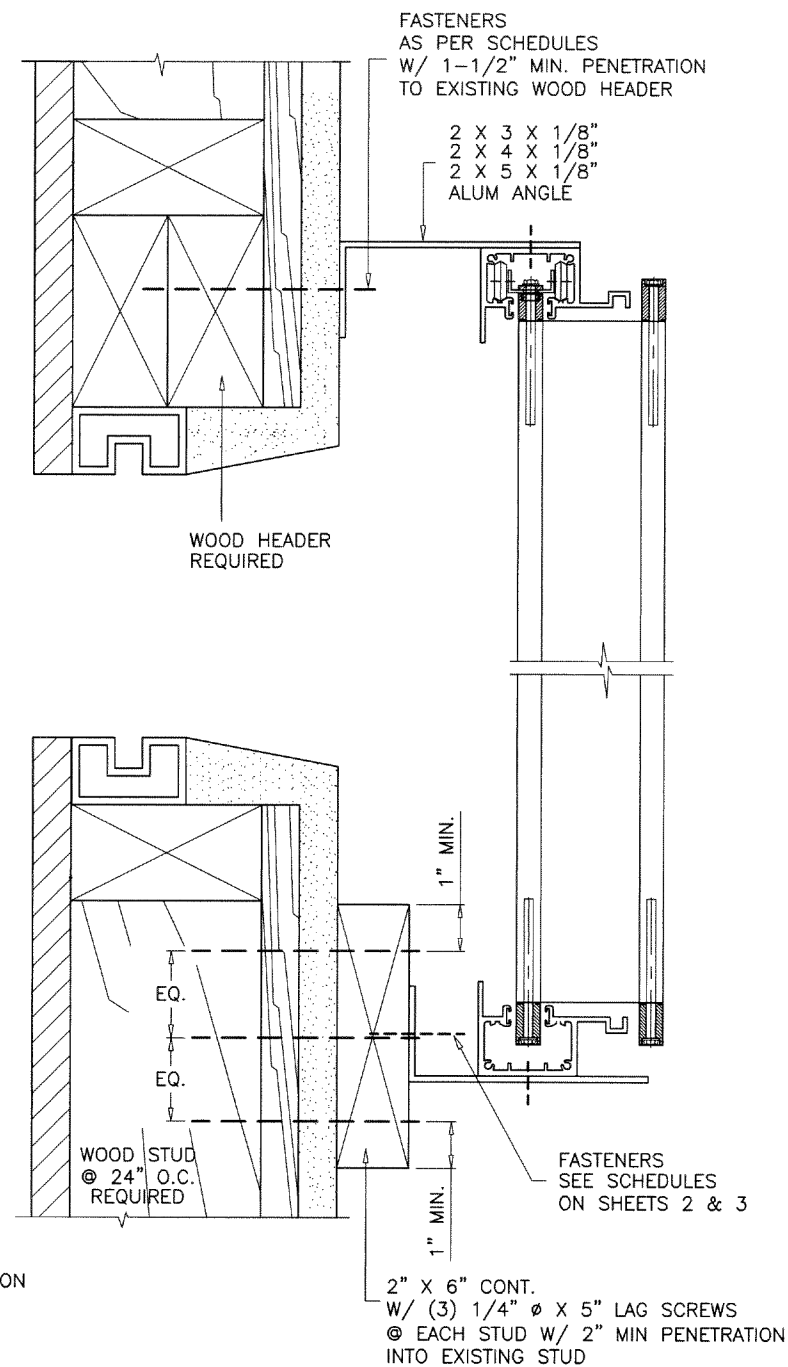


FOR SHUTTER HEIGHT OF 84" MAX. DESIGN LOAD = 80 PSF  
 FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 70 PSF  
 FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 62 PSF  
 FOR SHUTTER HEIGHT OF 120" MAX. DESIGN LOAD = 56 PSF

**INSTALLATION DETAIL ON EXISTING WOOD BUCKS** SCALE: 1/4"=1"

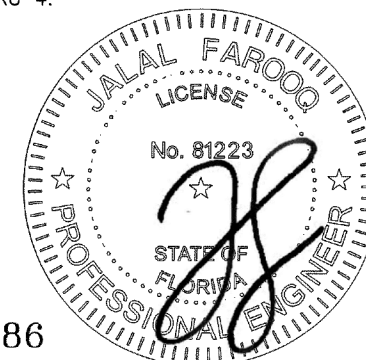
ABOVE DETAILS SHOWS CONNECTION OF 2X6 BUCK & 1X4 ALUM TUBE TO WOOD STUDS TO PROVIDE A CONTINUOUS SURFACE FOR SHUTTER INSTALLATION.

FOR INSTALLATION DETAILS OF HEADER/SILL TO CONTINUOUS WOOD MEMBERS SEE SHEETS 3 THRU 4.



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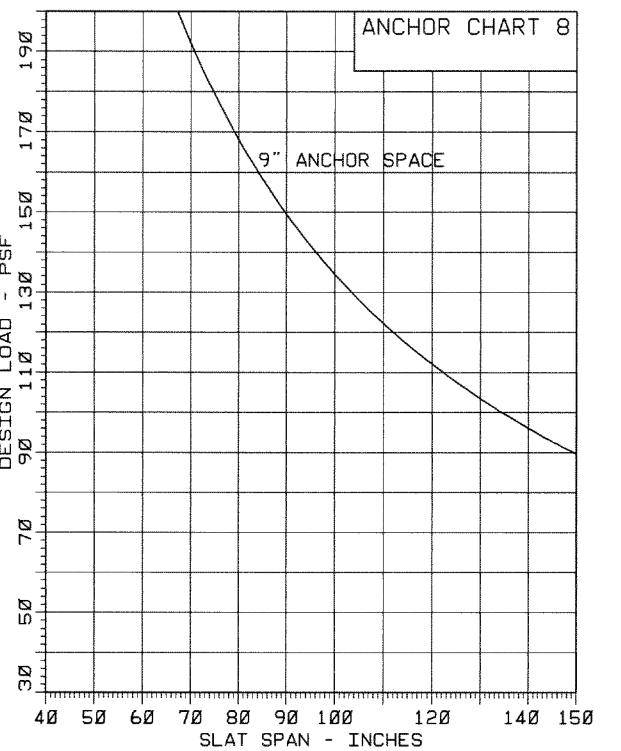
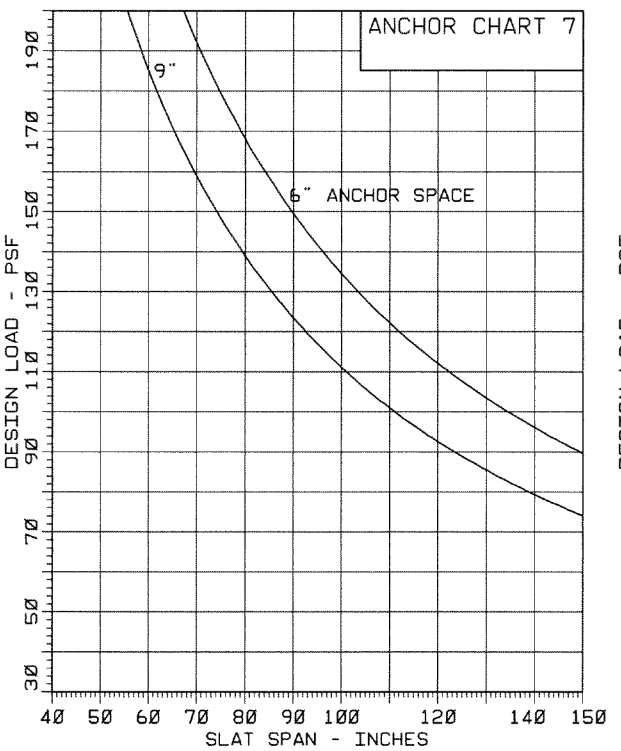
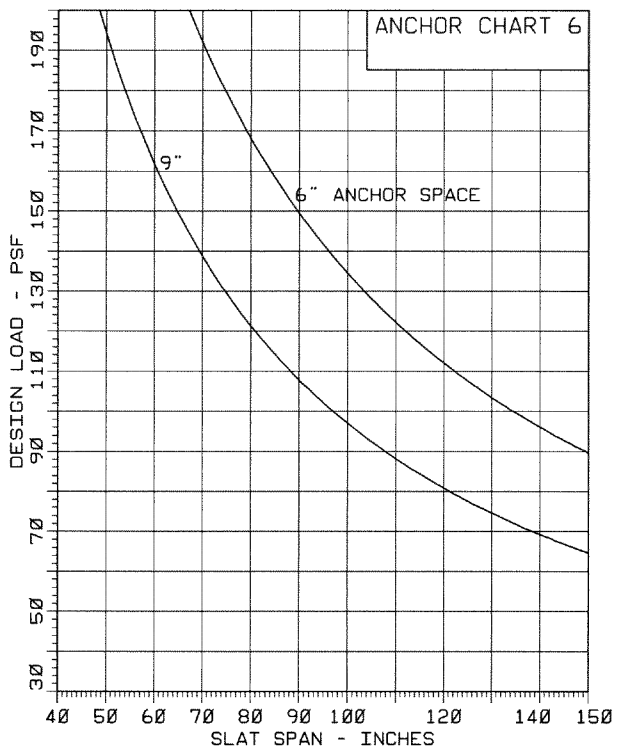
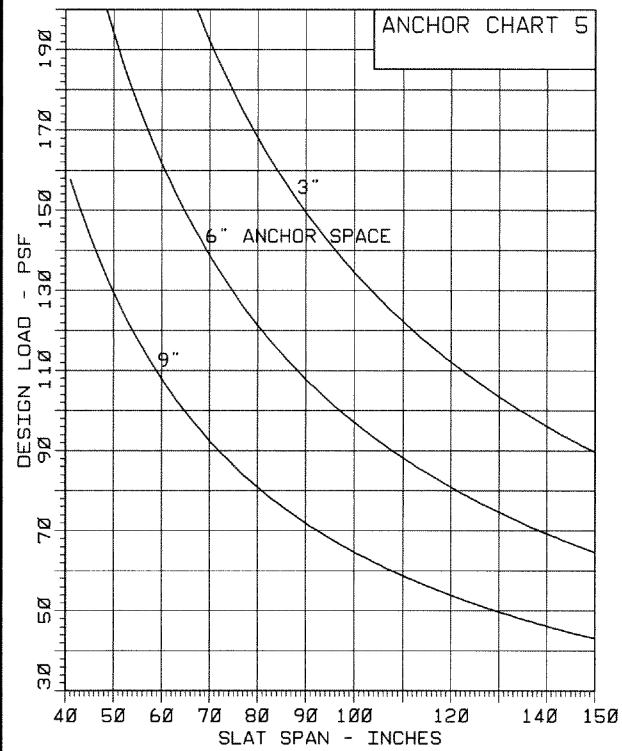
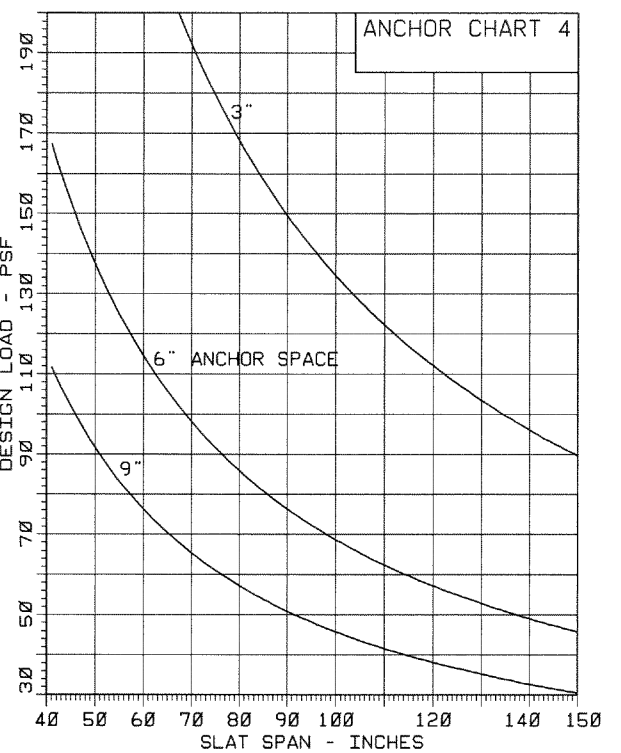
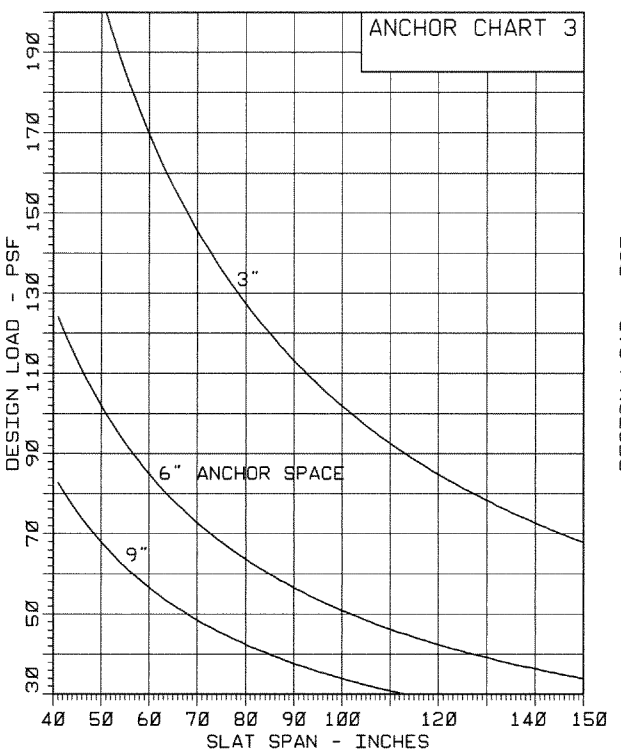
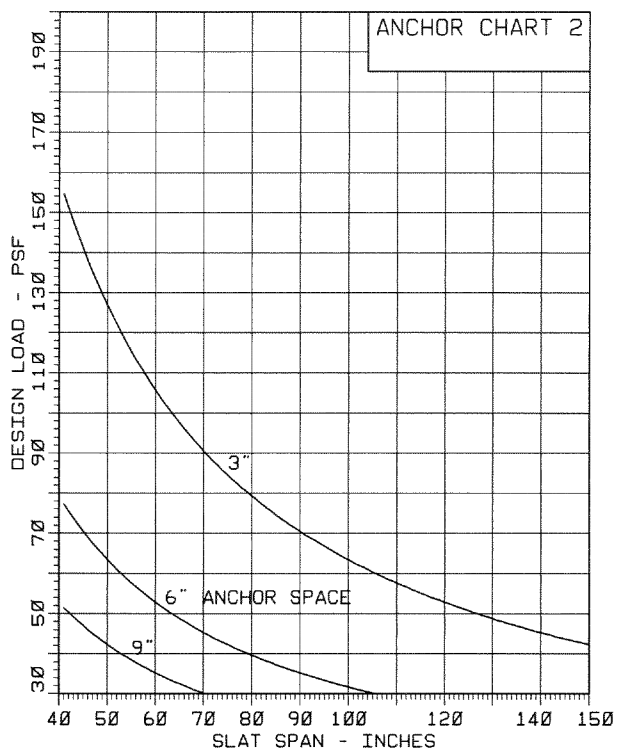
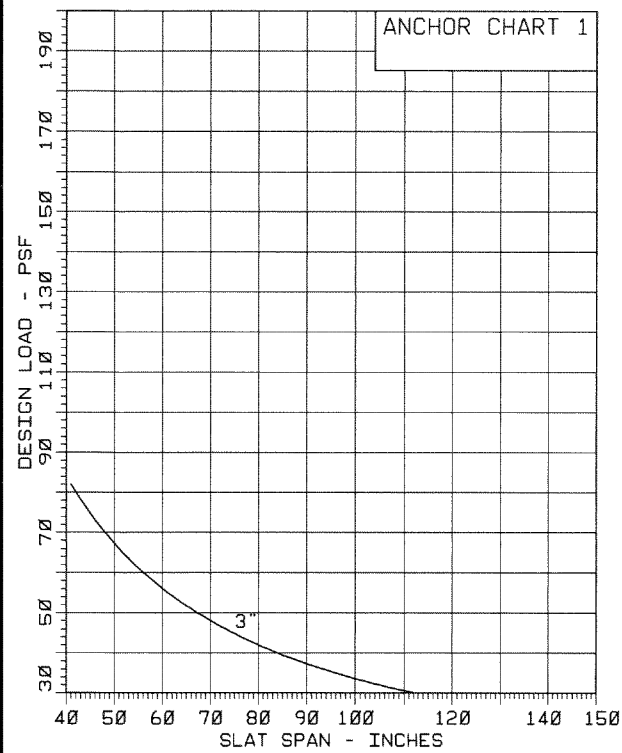
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date: 04-30-09  
 scale: 1/2" = 1"  
 dr. by: TARIQ  
 chk. by:  
 drawing no. 09-03  
 sheet 6 of 7





**TYPICAL ANCHORS:**

- ANCHOR (A) = **1/4" DIA. ULTRACON+ BY 'DEWALT'** ( $F_u=164$  KSI,  $F_y=148$  KSI)  
 1-3/4" EMBEDMENT INTO 3000 PSI CONC., 2-1/2" MIN. EDGE DIST.  
 1-1/4" EMBEDMENT INTO C-90 BLOCK, 2-1/2" MIN. EDGE DIST.
- ANCHOR (B) = **5/16" DIA. ULTRACON BY 'DEWALT'** ( $F_u=177$  KSI,  $F_y=155$  KSI)  
 2" EMBEDMENT INTO 3000 PSI CONC., 3-1/8" MIN. EDGE DIST.  
 1-1/4" EMBEDMENT INTO C-90 BLOCK, 3-1/8" MIN. EDGE DIST.
- ANCHOR (C) = **1/4" DIA. TAPCON BY 'ITW'** ( $F_u=125$  KSI,  $F_y=100$  KSI)  
 1-3/4" EMBEDMENT INTO 3000 PSI CONC., 2-1/2" MIN. EDGE DIST.  
 1-1/2" EMBEDMENT INTO GROUT FILLED C-90 BLOCK, 2" MIN. EDGE DIST.

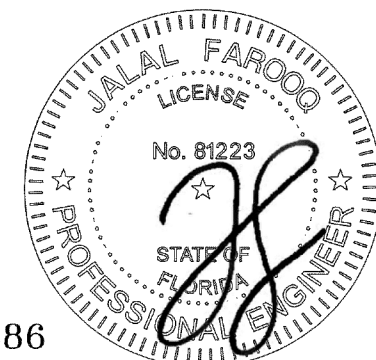
- ANCHOR (D) = **1/4" DIA. CALK-IN ANCHOR BY 'DEWALT'**  
 TOTAL ANCHOR BODY INTO 3000 PSI CONC., 3" MIN. EDGE DIST.  
 TOTAL ANCHOR BODY INTO C-90 BLOCK, 3" MIN. EDGE DIST.
- ANCHOR (E) = **1/4" DIA. LAG SCREWS**  
 1-1/2" MIN PENETRATION INTO WOOD (S.G.=0.55), 1" MIN. EDGE DIST.
- ANCHOR (G) = **1/4" DIA. KWIK-FLEX SELF DRILLING SCREWS BY 'HILTI'** ( $F_u=120$  KSI,  $F_y=92$  KSI)  
 INTO METAL STRUCTURES  
 (3) THREADS MIN. PENETRATION BEYOND SUBSTRATE  
 ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)  
 STEEL: 1/8" THK. MIN. ( $F_y = 36$  KSI MIN.)  
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

USE CHARTS 1 THRU 8 TO VERIFY ANCHOR REQUIREMENTS AND STRESS LIMITATIONS OF LOAD/SPAN COMBINATIONS FOR HEADER AND SILL.

NOTE: ANCHORS EMBEDMENT SHOWN IS BEYOND WALL & FLOOR COVERINGS (STUCCO, TILES, ETC.)

Sealed: 10/14/2020

FL #15486



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			chk. by:	
drawing no.	09-03			
sheet	7 of 7			

ACCORDION/09-03AJU