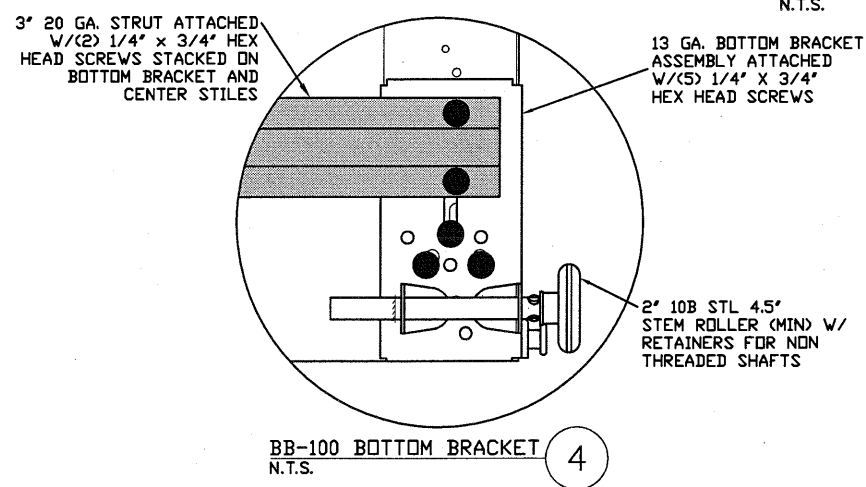
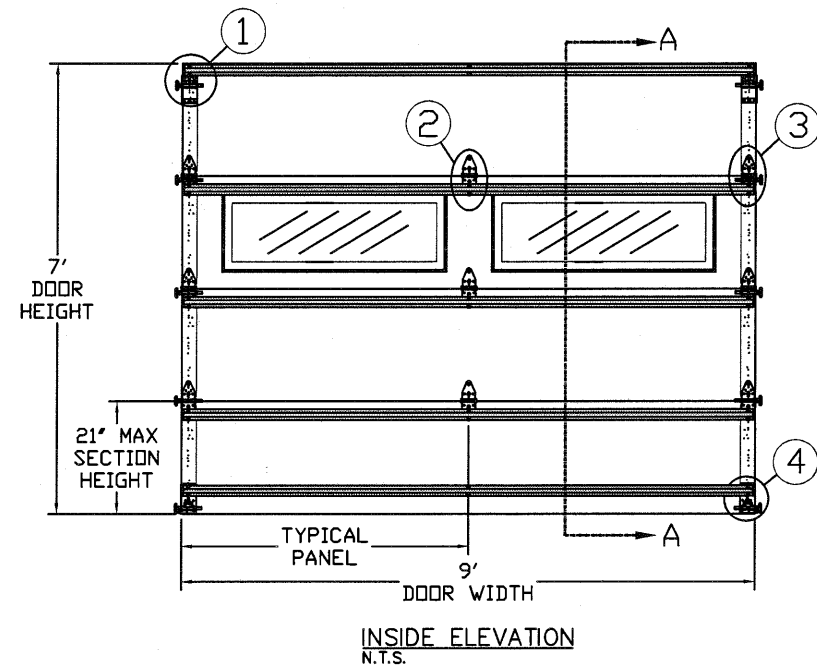
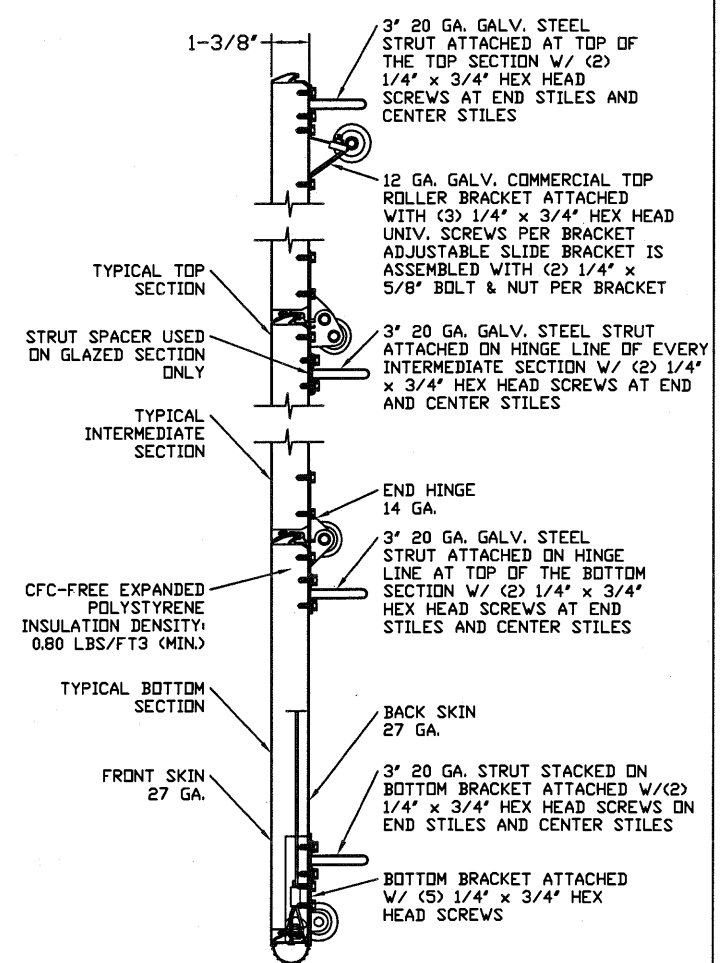


# LARGE MISSILE IMPACT RESISTANT



## SECTION A-A (SIDE VIEW)

N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
	MAX SIZE 9' x 14'		
	DESIGN LOADS +38.0 PSF -45.0 PSF		
	TEST LOADS +57.0 PSF -67.5 PSF		
	LARGE MISSILE IMPACT RESISTANT		

Thomas L. Shelmerdine, PE (TX PE #85829) Structural Solutions, PA (TX Firm #F-004065)

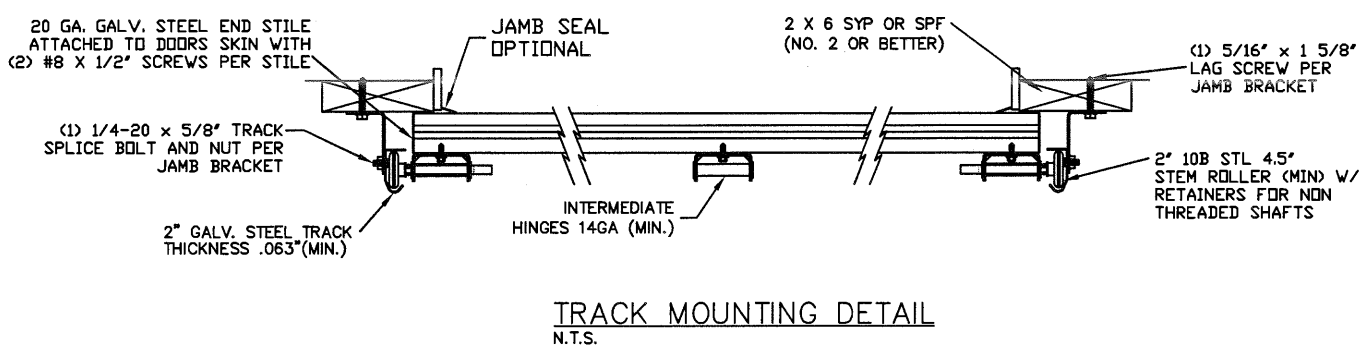
STATE OF TEXAS  
THOMAS L. SHELMERDINE  
85829  
LICENSED PROFESSIONAL ENGINEER

TX

Amarr  
ENTREMATICS

MODEL #3100 AMARR LINCOLN 3138  
MODEL #3150 AMARR HILLCREST 3138  
MODEL #1600 AMARR LINCOLN 3000  
MODEL #1650 AMARR HILLCREST 3000

9921-G W. Friendly Ave., Greensboro, NC 27410



NOTE: FOR STRUT SCHEDULE SEE TABLE 4 ON PAGE 3

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108 & 115, AND ASTM E330, E1886, E1996, & F588. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE I=1.0):

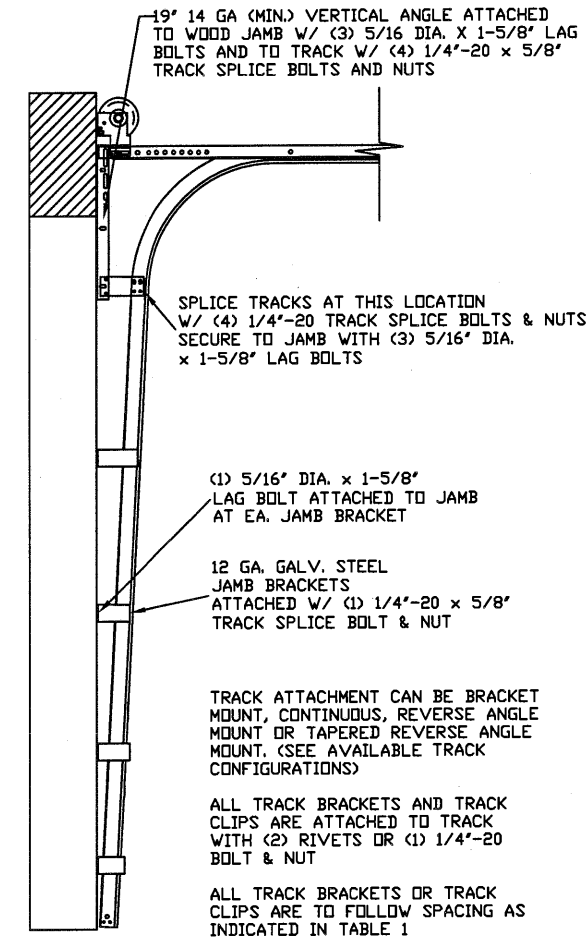
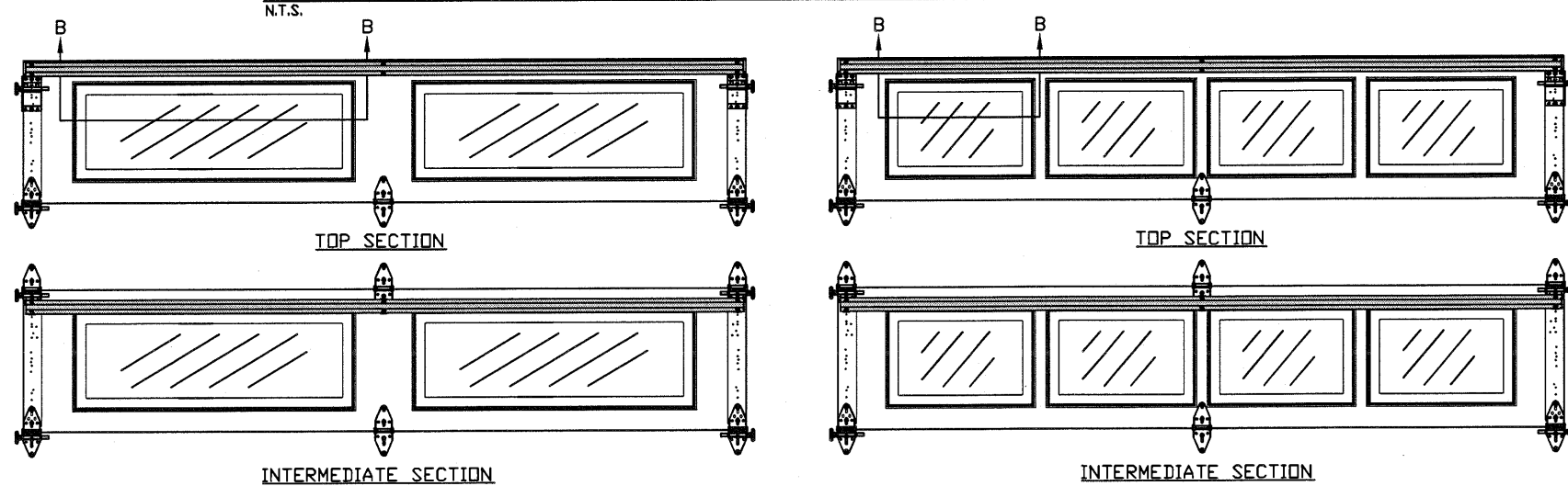
WIND SPEED (MPH)	155	141	134	128	123
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

SIZE	DRAWN BY	DRC	DATE	03/14/19	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	03/19/19	IRC-3109-155-15-1

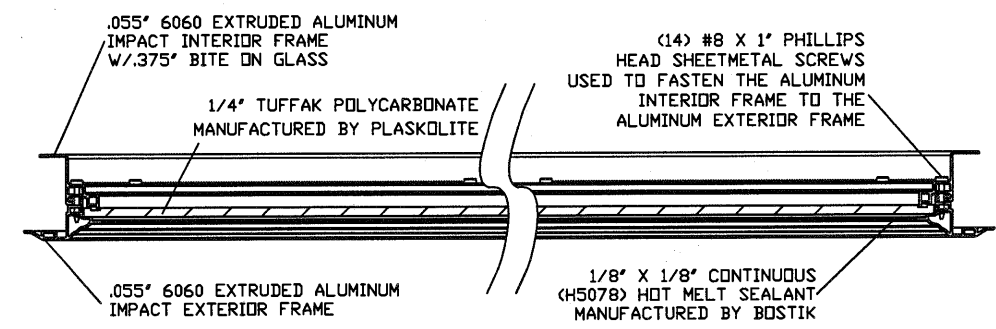
ENTREMATICS  
165 CARRIAGE COURT WINSTON-SALEM, NC 27105

SHEET 1 OF 3

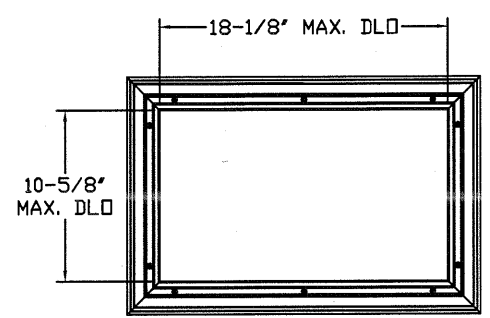
OPTIONAL SHORT AND LONG PANEL GLAZING LAYOUTS



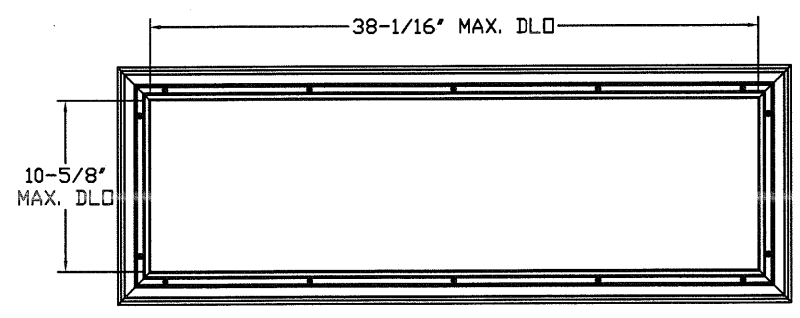
TRACK CONFIGURATION FOR UP TO 14' TALL DOORS  
N.T.S.



SECTION B-B IMPACT WINDOW DETAIL  
N.T.S.



SHORT PANEL IMPACT GLAZING FASTENER DETAIL  
N.T.S.



LONG PANEL IMPACT GLAZING FASTENER DETAIL  
N.T.S.

TABLE 1

DOOR HEIGHT	TRACK ATTACHMENT							
	A	B	C	D	E	F	G	H
6' 6"	3.5"	21"	39"	57"				
7'	3.5"	21"	42"	63"				
7' 6"	3.5"	18"	36"	54"	72"			
8'	3.5"	21"	39"	57"	75"			
8' 6"	3.5"	21"	42"	63"	81"			
9'	3.5"	18"	36"	54"	72"	90"		
9' 6"	3.5"	21"	39"	57"	75"	93"		
10'	3.5"	21"	42"	63"	81"	99"		
10' 6"	3.5"	21"	42"	63"	84"	105"		
11'	3.5"	21"	39"	57"	75"	93"	111"	
11' 6"	3.5"	21"	42"	63"	81"	99"	117"	
12'	3.5"	21"	42"	63"	84"	105"	123"	
12' 6"	3.5"	21"	39"	57"	75"	93"	111"	129"
13'	3.5"	21"	42"	63"	81"	99"	117"	135"
13' 6"	3.5"	21"	42"	63"	84"	105"	123"	141"
14'	3.5"	21"	42"	63"	84"	105"	126"	147"

ALL TRACK ATTACHMENT SPACING +/- 2" ALLOWED WITH SYP OR SPF NO. 2 OR BETTER ONLY

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9' x 14'

DESIGN LOADS  
+38.0 PSF  
-45.0 PSF

TEST LOADS  
+57.0 PSF  
-67.5 PSF

LARGE MISSILE IMPACT RESISTANT

Thomas L. Shelmerdine, PE (TX PE #85829)  
Structural Solutions, PA (TX Firm #F-004063)

TX

**Amarr**  
ENTREMATICS

MODEL #3100 AMARR LINCOLN 3138  
MODEL #3150 AMARR HILLCREST 3138  
MODEL #1600 AMARR LINCOLN 3000  
MODEL #1650 AMARR HILLCREST 3000

SIZE	DRAWN BY	DRC	DATE	03/14/19	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	03/19/19	IRC-3109-155-15-1

ENTREMATICS  
165 CARRIAGE COURT WINSTON-SALEM, NC. 27105

SHEET 2 OF 3

5921-G W. Friendly Ave., Greensboro, NC 27410

TABLE 2

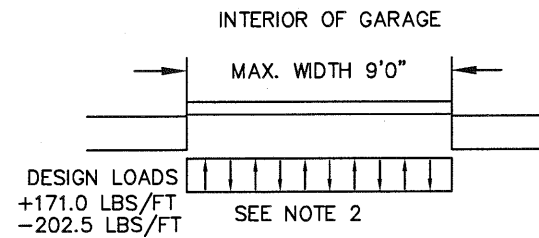
DOOR HEIGHT	SECTION HEIGHTS							
	Btm	#2	#3	#4	#5	#6	#7	#8
6' 0"	18"	18"	18"	18"				
6' 6"	21"	18"	18"	21"				
7' 0"	21"	21"	21"	21"				
7' 6"	18"	18"	18"	18"	18"			
8' 0"	21"	18"	18"	18"	21"			
8' 6"	21"	21"	21"	18"	21"			
9' 0"	18"	18"	18"	18"	18"	18"		
9' 6"	21"	18"	18"	18"	18"	21"		
10' 0"	21"	21"	21"	18"	18"	21"		
10' 6"	21"	21"	21"	21"	21"	21"		
11' 0"	21"	18"	18"	18"	18"	18"	21"	
11' 6"	21"	21"	21"	18"	18"	18"	21"	
12' 0"	21"	21"	21"	21"	21"	18"	21"	
12' 6"	21"	18"	18"	18"	18"	18"	18"	21"
13' 0"	21"	21"	21"	18"	18"	18"	18"	21"
13' 6"	21"	21"	21"	21"	21"	18"	18"	21"
14' 0"	21"	21"	21"	21"	21"	21"	21"	21"

TABLE 4

SECTION	STRUT SIZE
8TH	3"
7TH	3"
6TH	3"
5TH	3"
4TH	3"
3RD	3"
2ND	3"
BOTTOM	3"
	3"

SPECIFICATIONS AND NOTES

1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK, FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +171.0 LBS/FT & -202.5 LBS/FT.
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 27GA MIN. INTERIOR AND 27GA MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.
6. PANEL STAMP DOES NOT AFFECT WINDLOAD CAPABILITIES.



WOOD JAMB ATTACHMENT TO STRUCTURE

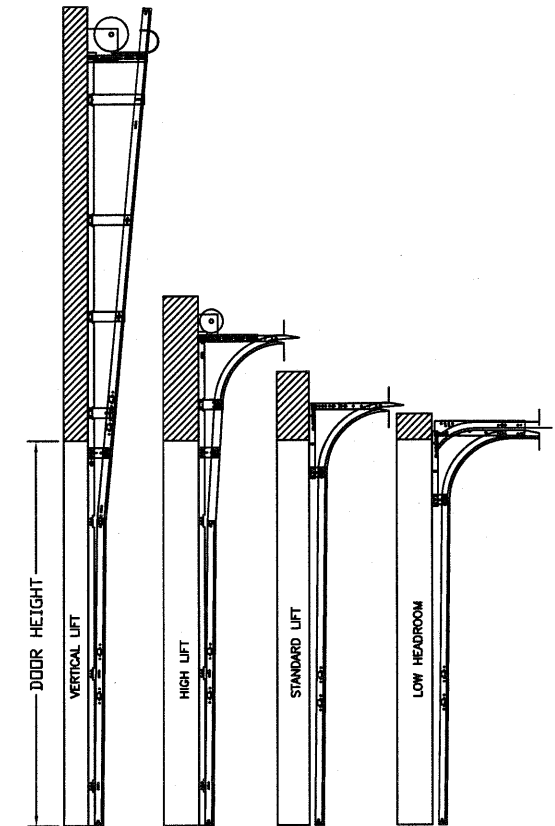
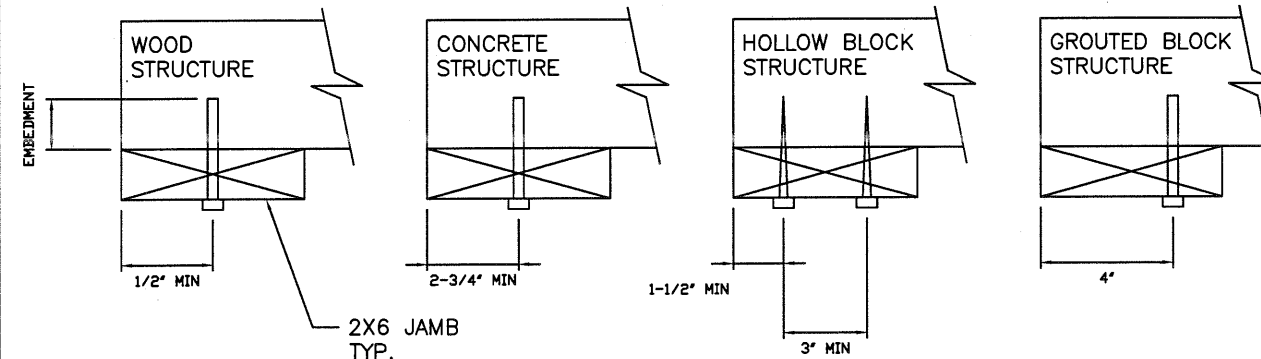
**2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE**  
 5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE**  
 HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)  
 HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)  
 ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK**  
 SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 16" O.C. (1 1/2" EMBEDMENT)  
 HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS, USE PAIRS OF FASTENERS (3" APART) AT 16" O.C. (1 1/4" EMBEDMENT)

**2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)**  
 HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS THEN 24" O.C. (1 1/4" EMBEDMENT)  
 (OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

\*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.  
 \*PREPARATION OF WOOD JAMBS BY OTHERS



AVAILABLE TRACK CONFIGURATIONS N.T.S.

TABLE 3

Section	Panel Type	Center Stile Location (Measured from Left Edge)	
		1st (in)	2nd (in)
6' 0"	Short	24.406	47.594
7' 0"	Short	29.200	54.800
7' 2"	Short	30.200	55.800
7' 4"	Short	31.200	56.800
7' 6"	Short	32.200	57.800
7' 6"	Long	45.000	
7' 8"	Short	32.200	60.000
7' 8"	Long	46.000	
7' 10"	Short	33.000	61.000
7' 10"	Long	47.000	
8' 0"	Short	48.000	
8' 0"	Long	48.000	
8' 2"	Short	49.000	
8' 2"	Long	49.000	
8' 4"	Short	50.000	
8' 4"	Long	50.000	
8' 6"	Short	51.000	
8' 6"	Long	51.000	
8' 8"	Short	52.000	
8' 8"	Long	52.000	
8' 10"	Short	53.000	
8' 10"	Long	53.000	
9' 0"	Short	54.000	
9' 0"	Long	54.000	

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9' x 14'

DESIGN LOADS +38.0 PSF -45.0 PSF

TEST LOADS +57.0 PSF -67.5 PSF

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SIZE	DRAWN BY	DRC	DATE	DRAWING NUMBER
B			03/14/19	IRC-3109-155-15-1
	CHECKED BY	RLR	DATE 03/19/19	

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SHEET 3 OF 3

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