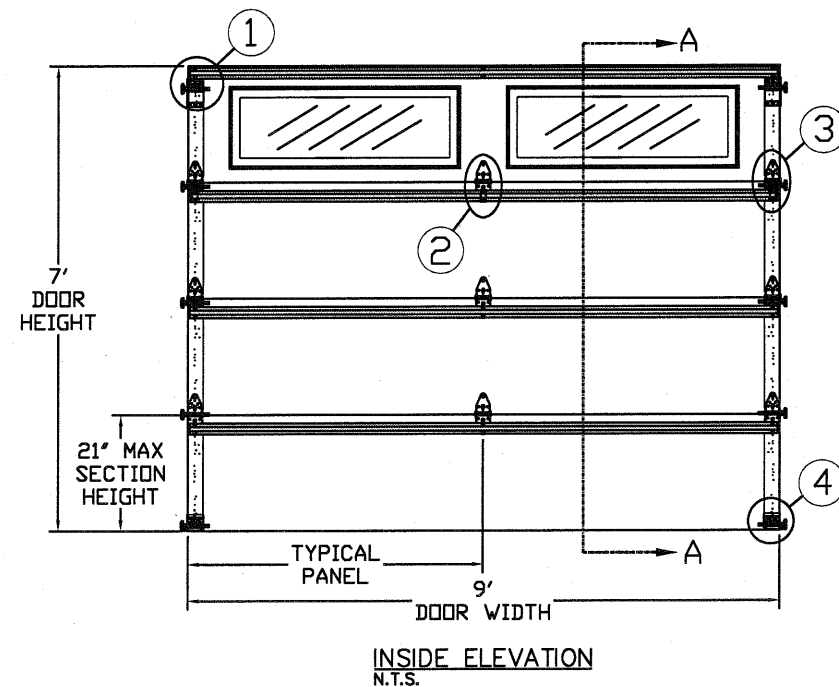
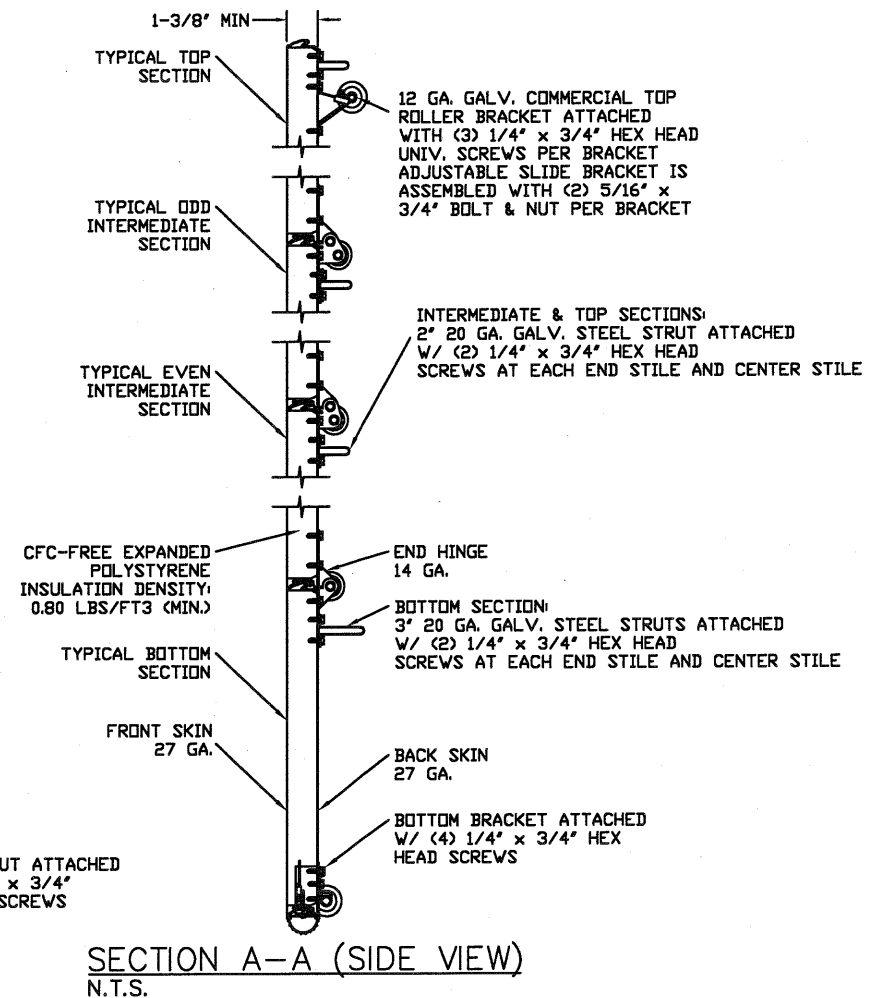
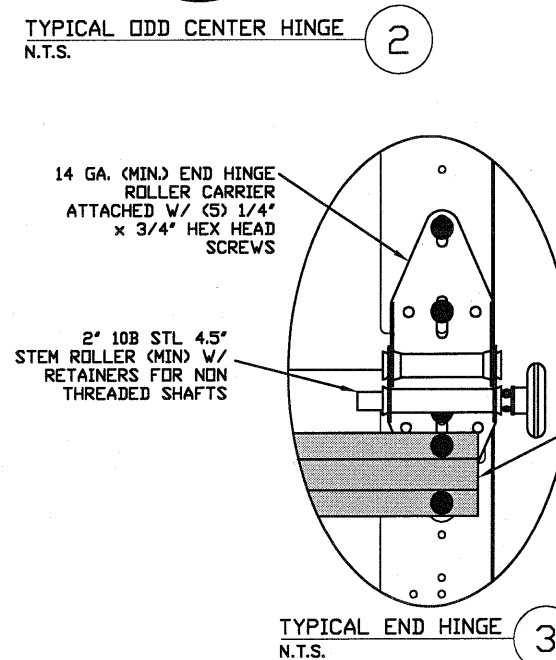
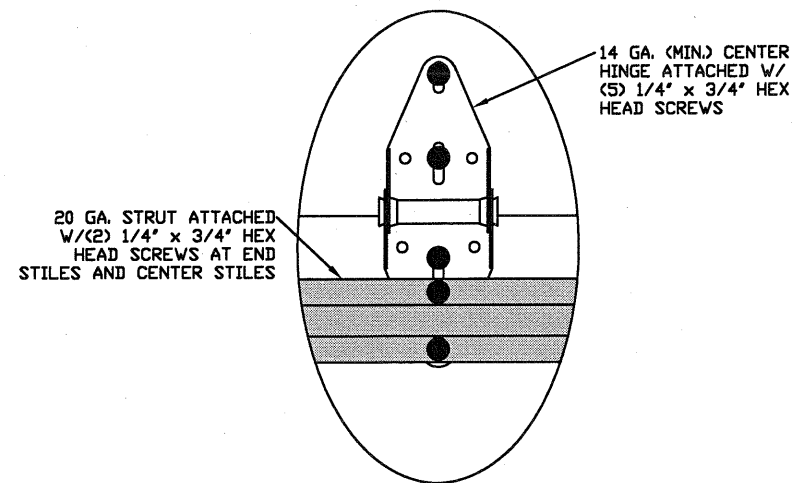
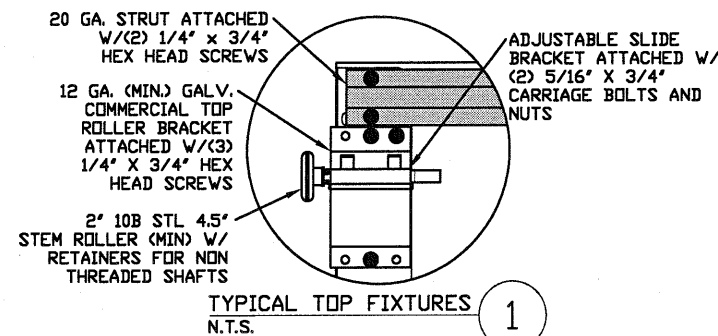
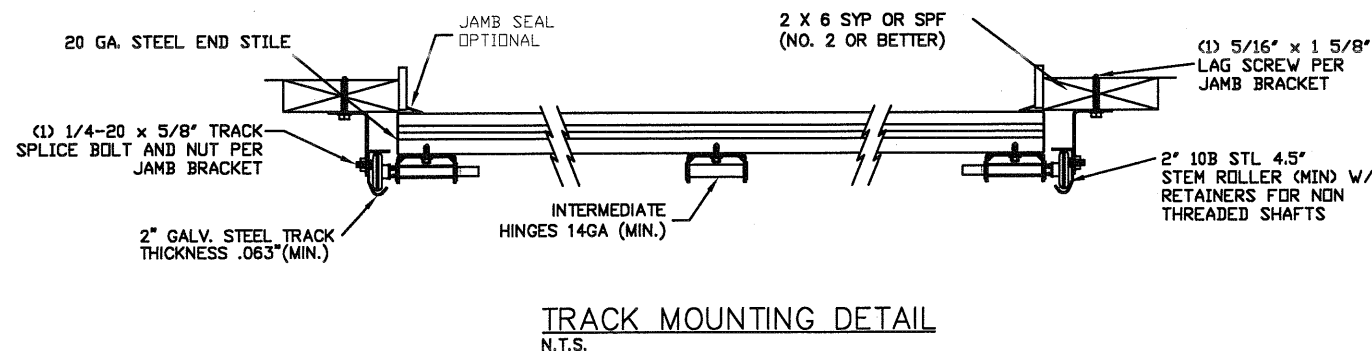


LARGE MISSILE
IMPACT RESISTANT



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 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE):

WIND SPEED (MPH)	168	152	145	138	133
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9' x 14' DESIGN LOADS +26.7 PSF -31.6 PSF TEST LOADS +40.1 PSF -47.4 PSF LARGE MISSILE IMPACT RESISTANT	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL	THOMAS L. SHELMERDINE LICENSE No. 48579 STATE OF FLORIDA PROFESSIONAL ENGINEER FL dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410
--	---	--

Amarr

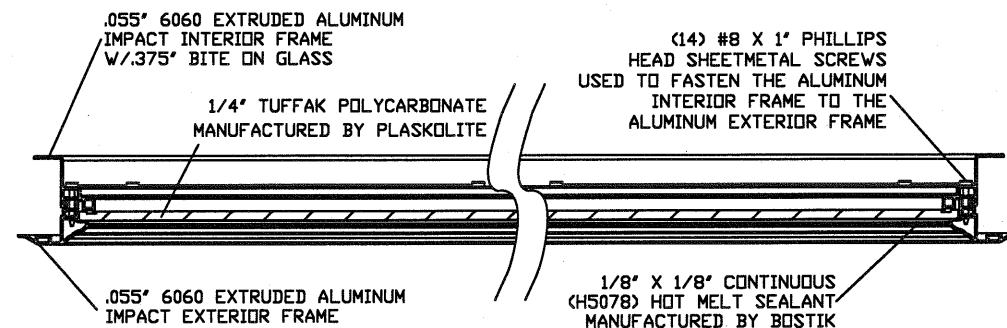
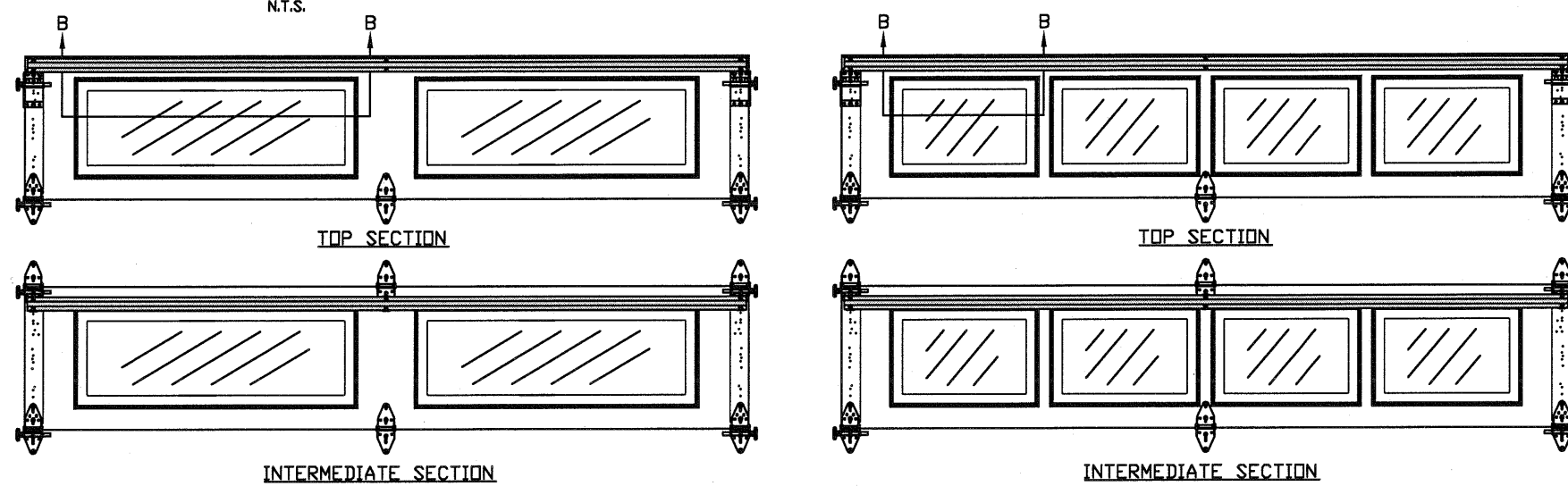
MODEL #3100 AMARR LINCOLN 3138	MODEL #3150 AMARR HILLCREST 3138
MODEL #1600 AMARR LINCOLN 3000	MODEL #1650 AMARR HILLCREST 3000

SIZE B	DRAWN BY DRC	DATE 03/13/19	DRAWING NUMBER IRC-3109-130-15-1
	CHECKED BY DLJ	DATE 01/05/19	

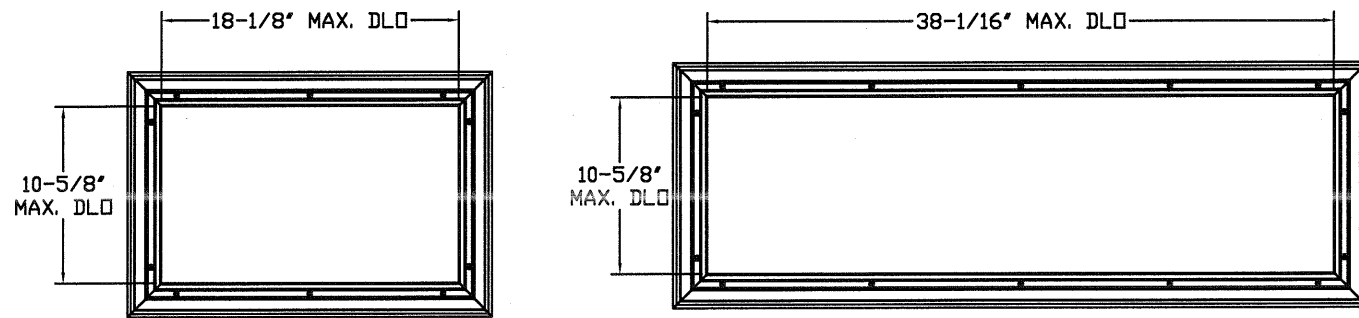
ENTREMATICA 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 1 OF 3

OPTIONAL SHORT AND LONG PANEL GLAZING LAYOUTS

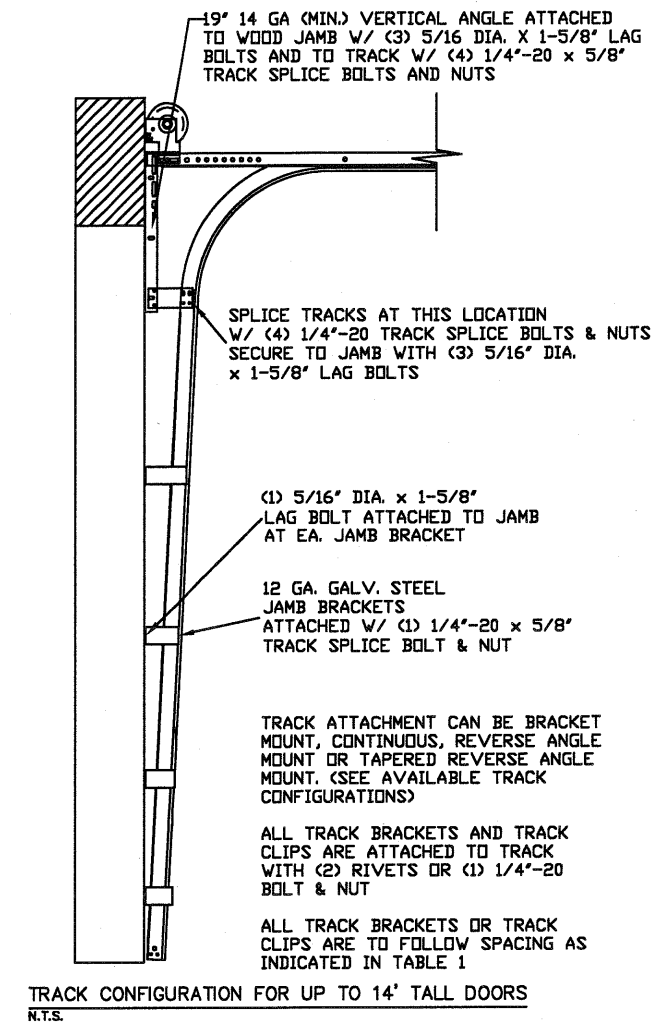


SECTION B-B IMPACT WINDOW DETAIL
N.T.S.



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

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



TRACK CONFIGURATION FOR UP TO 14' TALL DOORS
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 +26.7 PSF -31.6 PSF TEST LOADS +40.1 PSF -47.4 PSF LARGE MISSILE IMPACT RESISTANT	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) THOMAS L. SHELMERDINE LICENSE No. 48579 12/13/20 STATE OF FLORIDA PROFESSIONAL ENGINEER FL dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410
--	--

Amarr

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	03/13/19	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	01/05/19	IRC-3109-130-15-1
ENTREMATICA 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 2 OF 3

TABLE 2

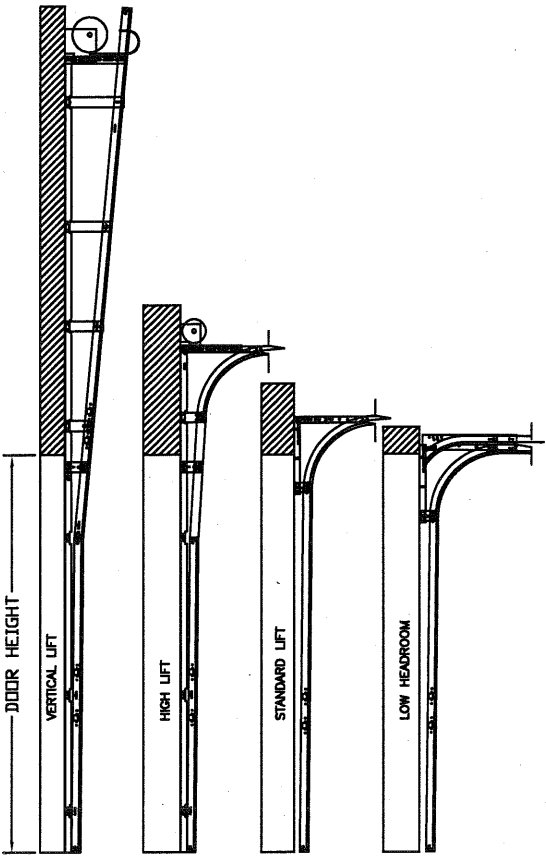
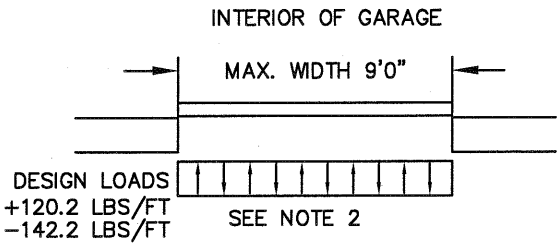
DOOR HEIGHT	SECTION HEIGHTS							
	Btm	#2	#3	#4	#5	#6	#7	#8
6' 0"	18"	18"	18"	18"				
6' 6"	21"	18"	18"	21"				
7' 0"	21"	21"	21"	21"				
7' 6"	18"	18"	18"	18"	18"			
8' 0"	21"	18"	18"	18"	21"			
8' 6"	21"	21"	21"	18"	21"			
9' 0"	18"	18"	18"	18"	18"	18"		
9' 6"	21"	18"	18"	18"	18"	21"		
10' 0"	21"	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	2"
7TH	2"
6TH	2"
5TH	2"
4TH	2"
3RD	2"
2ND	2"
BOTTOM	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: +120.2 LBS/FT & -142.2 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.



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

TABLE 3

Section	Panel Type	Center Stile Location (Measured from Left Edge)		Max Design Loads Allowed	
		1st (in)	2nd (in)	Positive (PSF)	Negative (PSF)
6' 0	Short	24.406	47.594	40.0	47.4
7' 0	Short	29.200	54.800	34.3	40.6
7' 2	Short	30.200	55.800	33.5	39.6
7' 4	Short	31.200	56.800	32.7	38.7
7' 6	Short	32.200	57.800	32.0	37.9
7' 6	Long	45.000		32.0	37.9
7' 8	Short	32.200	60.000	31.3	37.0
7' 8	Long	46.000		31.3	37.0
7' 10	Short	33.000	61.000	30.6	36.3
7' 10	Long	47.000		30.6	36.3
8' 0	Short	48.000		30.0	35.5
8' 0	Long	48.000		30.0	35.5
8' 2	Short	49.000		29.4	34.8
8' 2	Long	49.000		29.4	34.8
8' 4	Short	50.000		28.8	34.1
8' 4	Long	50.000		28.8	34.1
8' 6	Short	51.000		28.2	33.4
8' 6	Long	51.000		28.2	33.4
8' 8	Short	52.000		27.7	32.8
8' 8	Long	52.000		27.7	32.8
8' 10	Short	53.000		27.2	32.1
8' 10	Long	53.000		27.2	32.1
9' 0	Short	54.000		26.7	31.6
9' 0	Long	54.000		26.7	31.6

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 24" 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 24" 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

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
9' x 14'

DESIGN LOADS
+26.7 PSF
-31.6 PSF

TEST LOADS
+40.1 PSF
-47.4 PSF

LARGE
MISSILE
IMPACT
RESISTANT

Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)

THOMAS L. SHELMERDINE
LICENSE
No. 48579
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
FL

dba Structural Solutions of North Carolina, Inc.
5921-G.W. Friendly Ave., Greensboro, NC 27410

Amarr

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	03/13/19	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	01/05/19	IRC-3109-130-15-1

ENTREMATIC
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 3 OF 3