

# LARGE MISSILE IMPACT RESISTANT

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330, E1886, E1996, F588 AND DASMA 108, 115. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE, AND I=1.0):

WIND SPEED (MPH)	180	163	155	148	142
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 18' x 14'

DESIGN LOADS +48.6 PSF -55.0 PSF

TEST LOADS +72.9 PSF -82.5 PSF

LARGE MISSILE IMPACT RESISTANCE

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

STATE OF TEXAS  
THOMAS L. SHELMERDINE  
85829  
LICENSED PROFESSIONAL ENGINEER  
TX

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

**ENTREMATIC**  
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 WWW.AMARR.COM

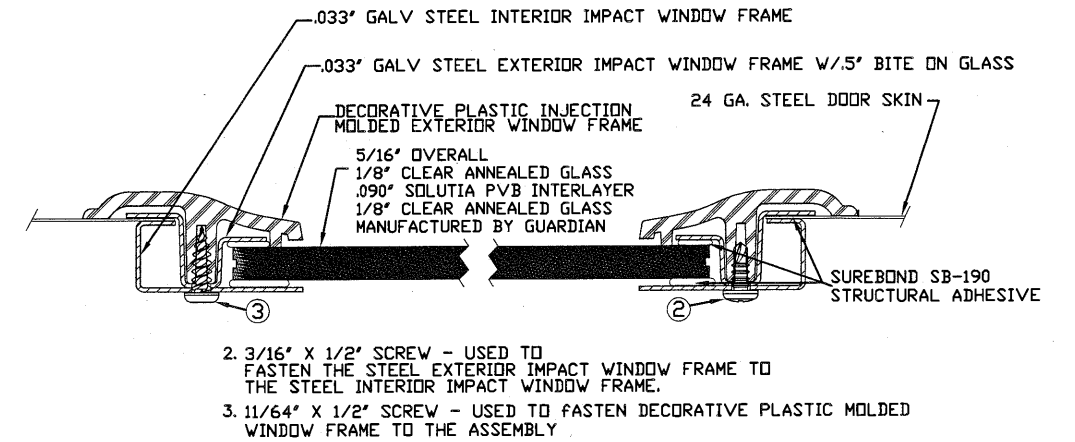
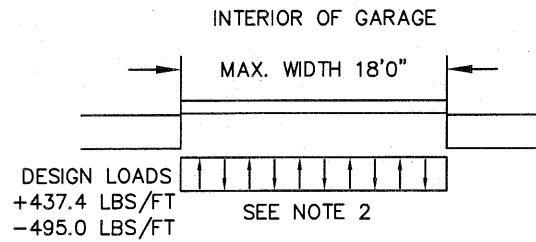
MODEL #950 AMARR HERITAGE (24 GA) 1000, 2000  
MODEL #655 AMARR OAK SUMMIT (24 GA) 1000, 2000  
SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS

SIZE	DRAWN BY	RLR	DATE	09/30/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	09/30/15	IRC-9518-180-26-1

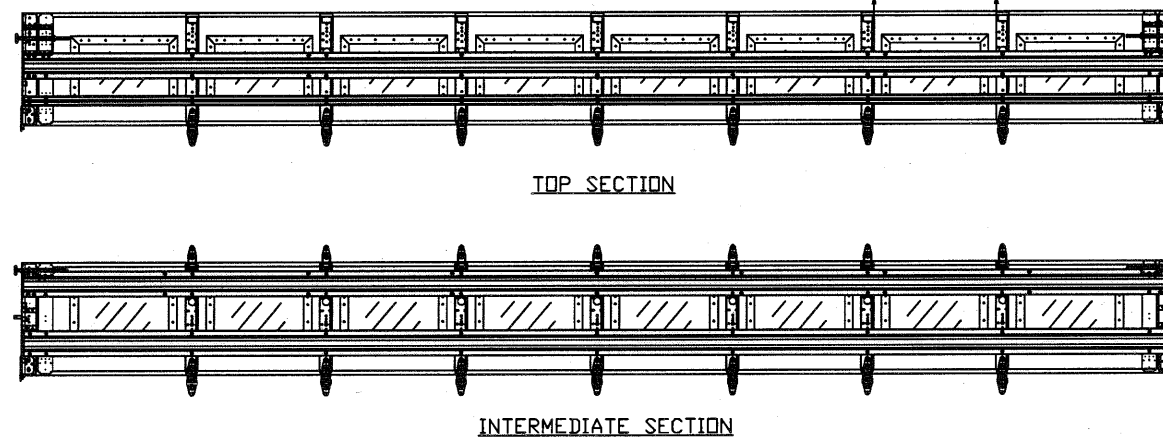
SHEET 1 OF 3

**SPECIFICATIONS AND NOTES**

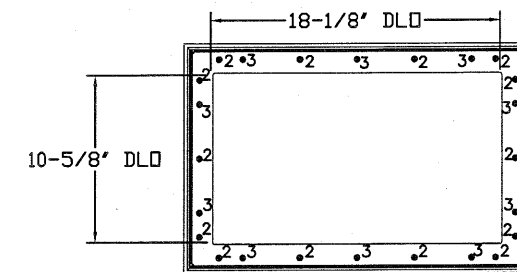
1. ALL THE LOAD FROM THE DOOR IS TRANSFERRED TO THE VERTICAL TRACK, FROM THE TRACK THE LOAD IS TRANSFERRED TO THE VERTICAL JAMBS. THE HORIZONTAL JAMB OR HEADER RECEIVES NO PORTION OF THE LOAD TRANSFERRED FROM THE DOOR.
2. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +437.4 LBS/FT & -495.0 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 24 GA. (.0216) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN. USE (1) 5 1/2" R-TRUSS AND (1) 3" STRUT ON TOP SECTION, (1) 5 1/2" R-TRUSS AND (1) 4 1/2" R-TRUSS PER INTERMEDIATE SECTION, & (2) 5 1/2" R-TRUSS ON THE BOTTOM SECTION
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.



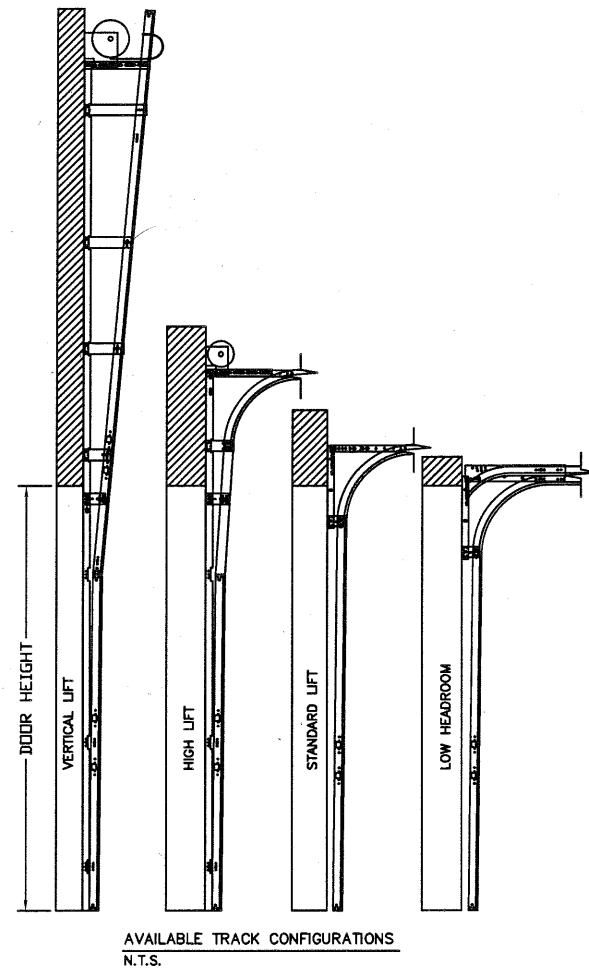
**OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUTS**  
N.T.S.



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



**IMPACT GLAZING FASTENER DETAIL**  
N.T.S.  
GLAZING MEETS ASTM E1300-04



**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 10" 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 10" O.C. (1 1/4" EMBEDMENT)  
ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 18" 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 8" 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 8" 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 10" 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

WOOD STRUCTURE  
CONCRETE STRUCTURE  
HOLLOW BLOCK STRUCTURE  
GROUTED BLOCK STRUCTURE

EMBEDMENT  
1/2" MIN  
2-3/4" MIN  
1-1/2" MIN  
3" MIN  
4"

2X6 JAMB TYP.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 18' x 14'  
DESIGN LOADS +48.6 PSF -55.0 PSF  
TEST LOADS +72.9 PSF -82.5 PSF  
LARGE MISSILE IMPACT RESISTANCE

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

STATE OF TEXAS  
THOMAS L. SHELMERDINE  
85829  
LICENSED PROFESSIONAL ENGINEER  
TX

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

**ENTRE/MATIC**  
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 WWW.AMARR.COM  
MODEL #950 AMARR HERITAGE (24 GA) 1000, 2000  
MODEL #655 AMARR OAK SUMMIT (24 GA) 1000, 2000  
SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS

SIZE	DRAWN BY RLR	DATE 09/30/15	DRAWING NUMBER
B	CHECKED BY RLR	DATE 09/30/15	IRC-9518-180-26-1

SHEET 2 OF 3

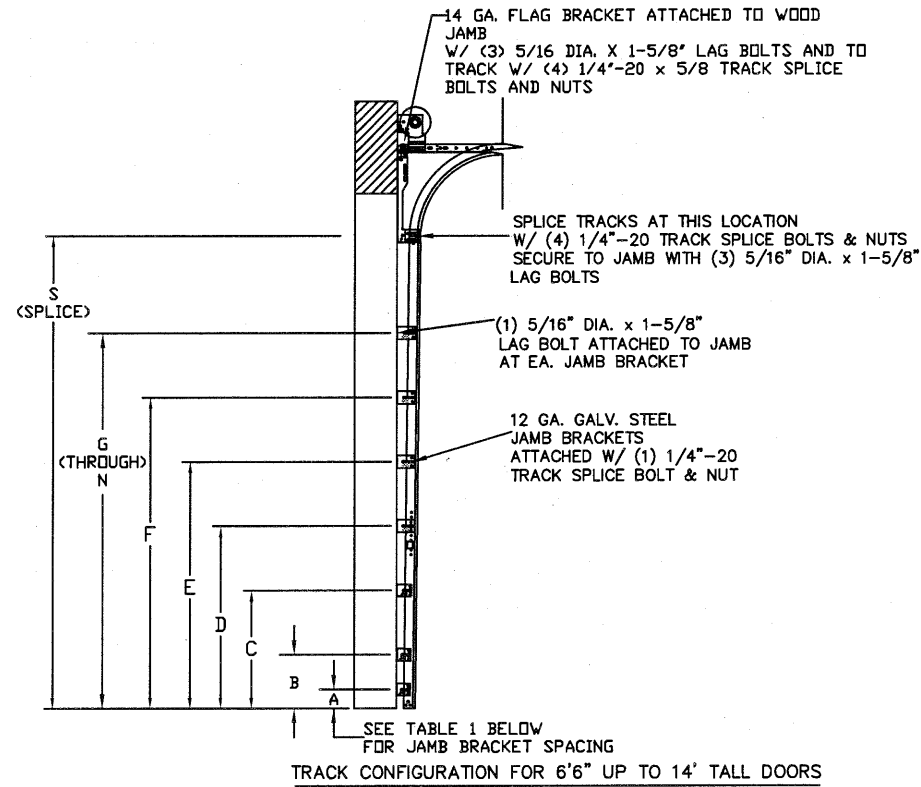


TABLE 2

Section	Panel Type	Center Stile Locations (Measured from Left Edge)						
		1st (in)	2nd (in)	3rd (in)	4th (in)	5th (in)	6th (in)	7th (in)
16' 2	Short	26.91	50.27	73.64	97.00	120.36	143.73	167.09
16' 2	Long	28.25	51.17	74.08	97.00	119.92	142.83	165.75
16' 4	Short	27.91	51.27	74.64	98.00	121.36	144.73	168.09
16' 4	Long	29.25	52.17	75.08	98.00	120.92	143.83	166.75
16' 6	Short	28.91	52.27	75.64	99.00	122.36	145.73	169.09
16' 6	Long	27.51	51.34	75.17	99.00	122.83	146.66	170.49
16' 8	Short	27.01	51.34	75.67	100.00	124.33	148.66	172.99
16' 8	Long	28.30	52.20	76.10	100.00	123.90	147.80	171.70
16' 10	Short	26.75	51.50	76.25	101.00	125.75	150.50	175.25
16' 10	Long	29.30	53.20	77.10	101.00	124.90	148.80	172.70
17' 0	Short	29.01	53.34	77.67	102.00	126.33	150.66	174.99
17' 0	Long	30.30	54.20	78.10	102.00	125.90	149.80	173.70
17' 2	Short	28.00	53.00	78.00	103.00	128.00	153.00	178.00
17' 2	Long	31.30	55.20	79.10	103.00	126.90	150.80	174.70
17' 4	Short	29.00	54.00	79.00	104.00	129.00	154.00	179.00
17' 4	Long	32.30	56.20	80.10	104.00	127.90	151.80	175.70
17' 6	Short	30.00	55.00	80.00	105.00	130.00	155.00	180.00
17' 6	Long	33.30	57.20	81.10	105.00	128.90	152.80	176.70
17' 8	Short	29.20	54.80	80.40	106.00	131.60	157.20	182.80
17' 8	Long	30.70	55.80	80.90	106.00	131.10	156.20	181.30
17' 10	Short	30.20	55.80	81.40	107.00	132.60	158.20	183.80
17' 10	Long	30.88	56.25	81.63	107.00	132.38	157.75	183.13
18' 0	Short	31.88	57.25	82.63	108.00	133.38	158.75	184.13
18' 0	Long	32.70	57.80	82.90	108.00	133.10	158.20	183.30

TABLE 1

DOOR HEIGHT	TRACK ATTACHMENT														SPLICE	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
6' 6"	3.5"	10"	22"	34"	46"	58"										70"
7'	3.5"	10"	22"	34"	46"	58"	70"									76"
7' 6"	3.5"	10"	22"	34"	46"	58"	70"									82"
8'	3.5"	10"	22"	34"	46"	58"	70"	82"								88"
8' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"								94"
9'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"							100"
9' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"							106"
10'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"						112"
10' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"						118"
11'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"					124"
11' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"					130"
12'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"				136"
12' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"				142"
13'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"			148"
13' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"			154"
14'	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"		160"

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

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE  
18' x 14'

DESIGN LOADS  
+48.6 PSF  
-55.0 PSF

TEST LOADS  
+72.9 PSF  
-82.5 PSF

LARGE MISSILE  
IMPACT  
RESISTANCE

TX

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

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

## ENTRE//MATIC

165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 WWW.AMARR.COM

MODEL #950 AMARR HERITAGE (24 GA) 1000, 2000  
MODEL #855 AMARR OAK SUMMIT (24 GA) 1000, 2000  
SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS

SIZE	DRAWN BY	RLR	DATE	09/30/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	09/30/15	IRC-9518-180-26-1

SHEET 3 OF 3