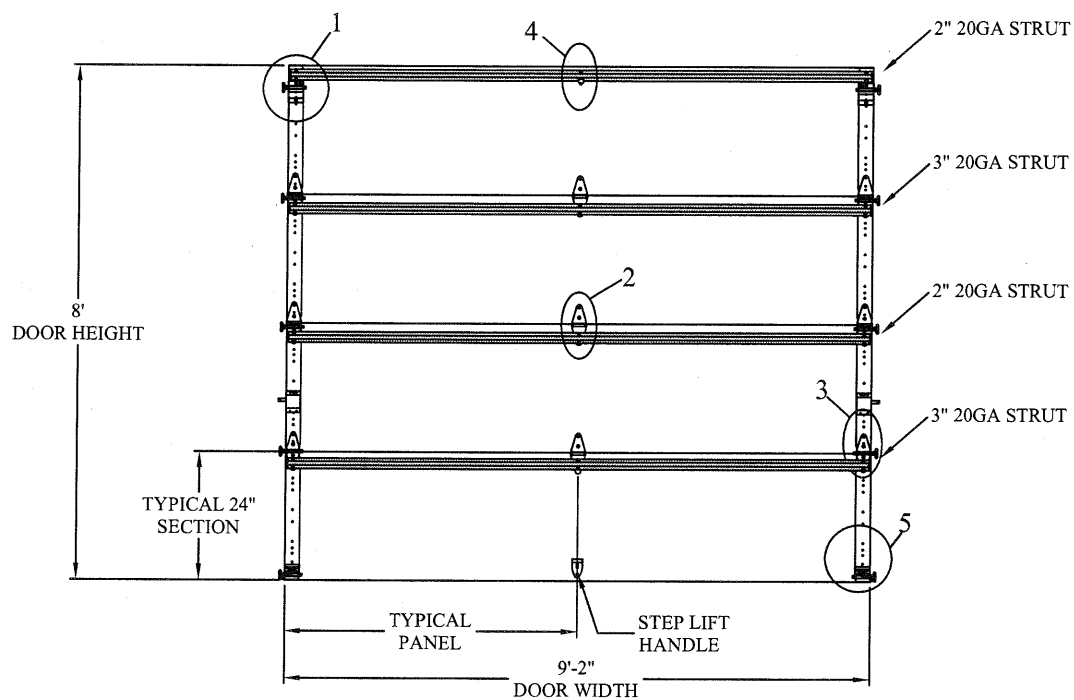
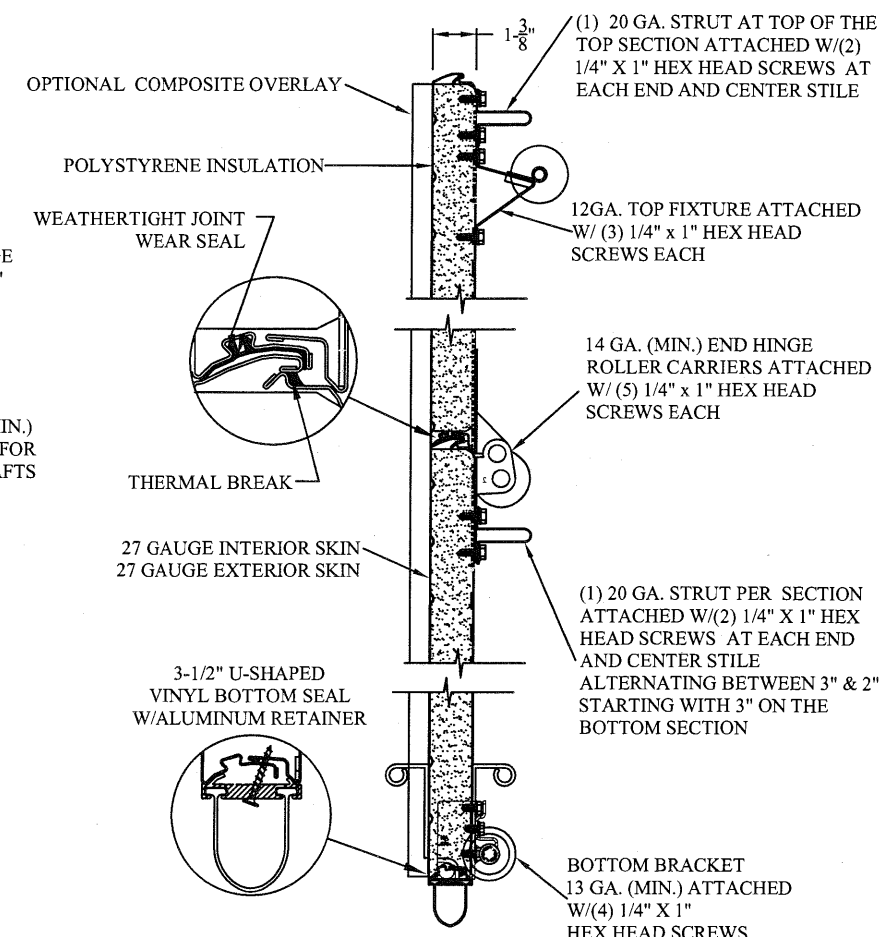
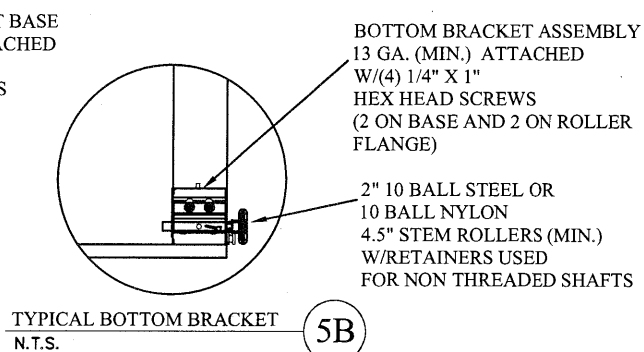
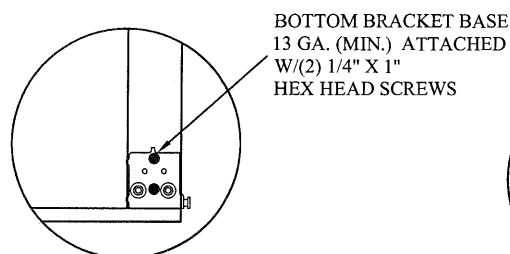
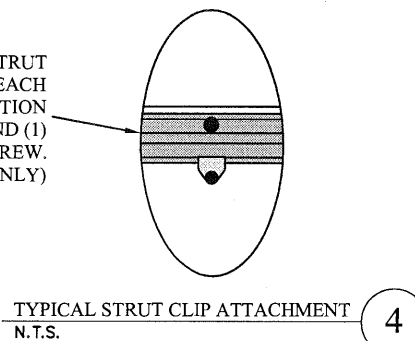


## LARGE MISSILE IMPACT RESISTANT

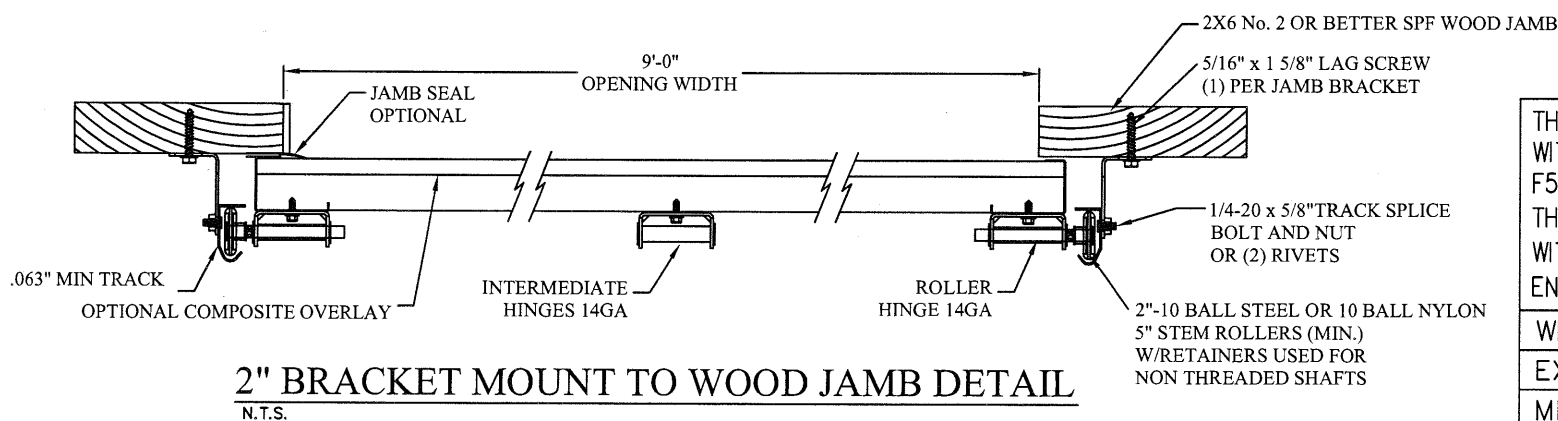
20GA STRUT ATTACHED AT EACH CENTER STILE LOCATION W/ (1) STRUT CLIP AND (1) 1/4" X 1" SCREW. (TOP SECTION ONLY)



**DOOR INTERIOR ELEVATION**  
N.T.S.

**TYPICAL BOTTOM BRACKET**  
N.T.S.

**TYPICAL BOTTOM BRACKET**  
N.T.S.



THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN ASTM E1886, E1996, F588, AND DASHA 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 END ZONE, ROOF AT ANY SLOPE, AND I=1.0):

WIND SPEED (MPH)	130	118	112	107	103
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9'2" x 14'

DESIGN LOADS +26.4 PSF -31.1 PSF

TEST LOADS +39.6 PSF -46.7 PSF

LARGE MISSILE IMPACT RESISTANCE

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

**TX**

STATE OF TEXAS  
THOMAS L. SHELMERDINE  
85829  
LICENSED PROFESSIONAL ENGINEER

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

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

**AMARR MODEL #1480 CARRIAGE COURT**

SIZE	DRAWN BY	RLR	DATE	1/22/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	1/29/15	IRC-1409-130-15-1

SHEET 1 OF 2

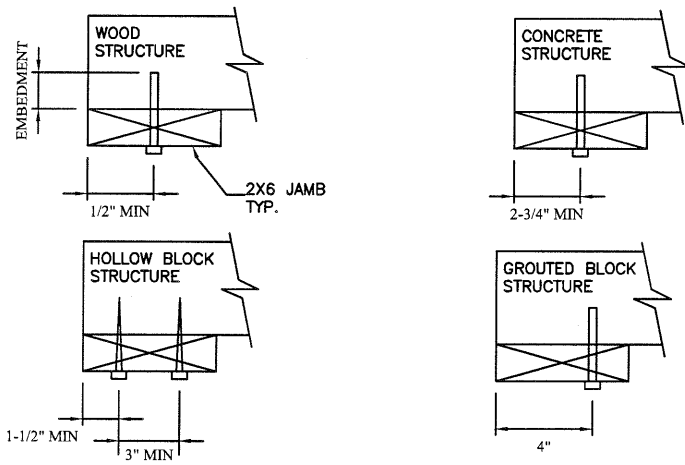
TABLE 1

DOOR HEIGHT	TRACK ATTACHMENT							TYPICAL SPLICE
	A	B	C	D	E	F	G	
7' 0"	3.5"	22"	46"	70"				76"
7' 6"	3.5"	22"	46"	70"				82"
8' 0"	3.5"	22"	46"	70"				88"
9' 0"	3.5"	22"	46"	70"	94"			100"
9' 6"	3.5"	22"	46"	70"	94"			106"
10' 0"	3.5"	22"	46"	70"	94"			112"
11' 0"	3.5"	22"	46"	70"	94"	118"		124"
12' 0"	3.5"	22"	46"	70"	94"	118"		136"
13' 0"	3.5"	22"	46"	70"	94"	118"	142"	148"
14' 0"	3.5"	22"	46"	70"	94"	118"	142"	160"

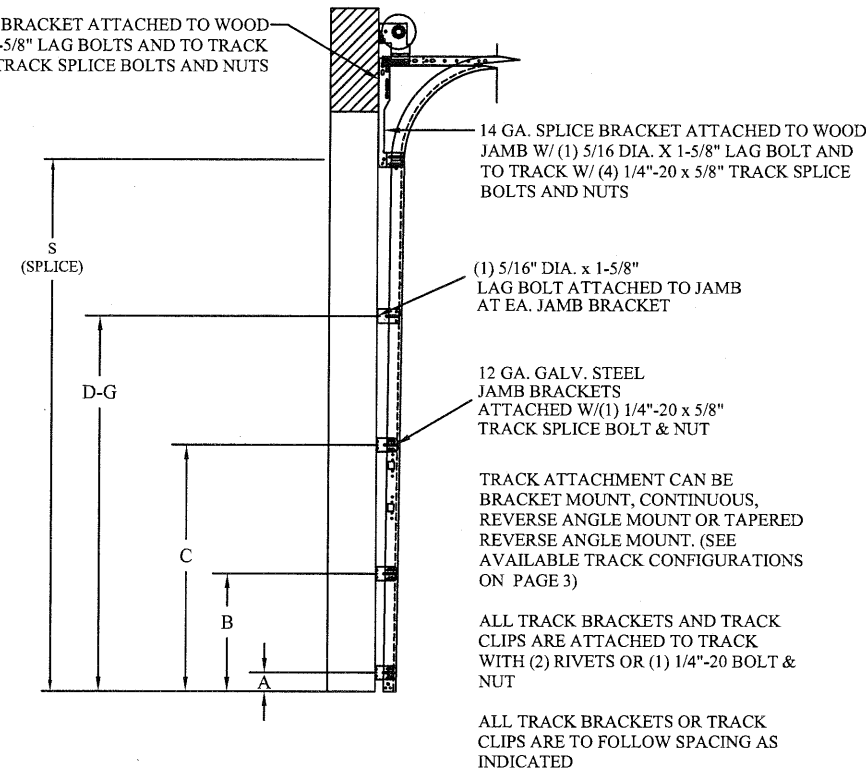
ALL TRACK ATTACHMENTS +/- 2" ALLOWED USING SYP OR SPF NO.2 OR BETTER ONLY

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

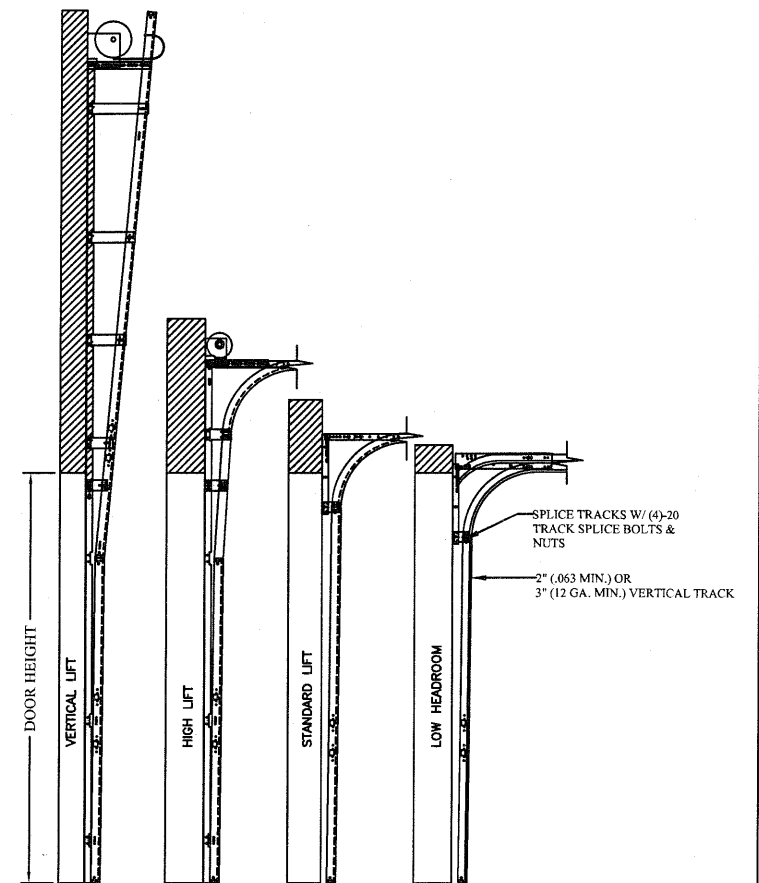
- 2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE  
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)
  - 2 X 6 VERTICAL JAMB ATTACHMENT TO 2,000 PSI CONCRETE  
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS THEN 24" O.C. (2 1/2" EMBEDMENT)  
HILTI SLEEVE ANCHOR 3/8" 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



14 GA. FLAG BRACKET ATTACHED TO WOOD JAMB W/ (3) 5/16 DIA. X 1-5/8" LAG BOLTS AND TO TRACK W/ (4) 1/4"-20 X 5/8" TRACK SPLICE BOLTS AND NUTS



TRACK CONFIGURATION FOR UP TO 14' TALL DOORS  
SEE TABLE 1



AVAILABLE TRACK CONFIGURATIONS  
N.T.S.

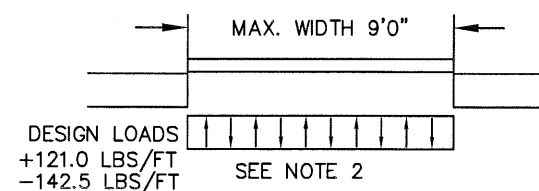
TABLE 2

Section Width (ft)	Center Stile Locations (Measured from Left Edge)	
	1st (in)	
6' 0"	36"	
6' 2"	37"	
6' 4"	38"	
6' 6"	39"	
6' 8"	40"	
6' 10"	41"	
7' 0"	42"	
7' 2"	43"	
7' 4"	44"	
7' 6"	45"	
7' 8"	46"	
7' 10"	47"	
8' 0"	48"	
8' 2"	49"	
8' 4"	50"	
8' 6"	51"	
8' 8"	52"	
8' 10"	53"	
9' 0"	54"	
9' 2"	55"	

SPECIFICATIONS AND NOTES

- 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.
- EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +121.0 LBS/FT & -142.5 LBS/FT
- DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
- DOOR SECTIONS SHALL BE 27 GA. (.015) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
- DOORS UP TO 14'0" HIGH HAVE ALTERNATE BETWEEN (1) 3" 20GA STRUT AND (1) 2" 20 GA STRUT PER SECTION STARTING WITH A 3" ON THE BOTTOM SECTION
- SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

INTERIOR OF GARAGE



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 9'2" x 14'

DESIGN LOADS +26.4 PSF -31.1 PSF

TEST LOADS +39.6 PSF -46.7 PSF

LARGE MISSILE IMPACT RESISTANCE

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SHEET 2 OF 2