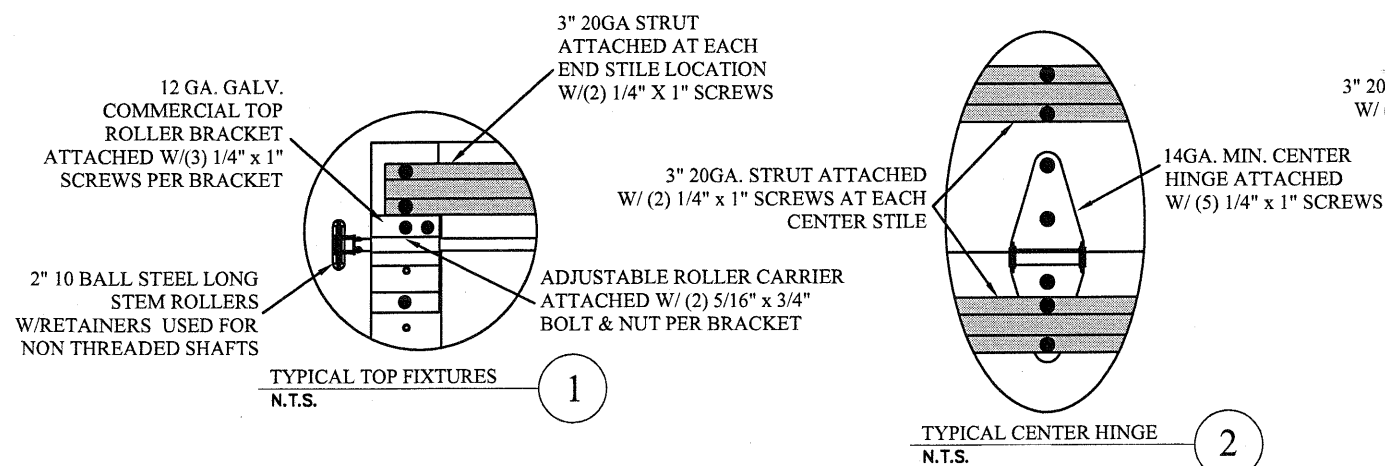
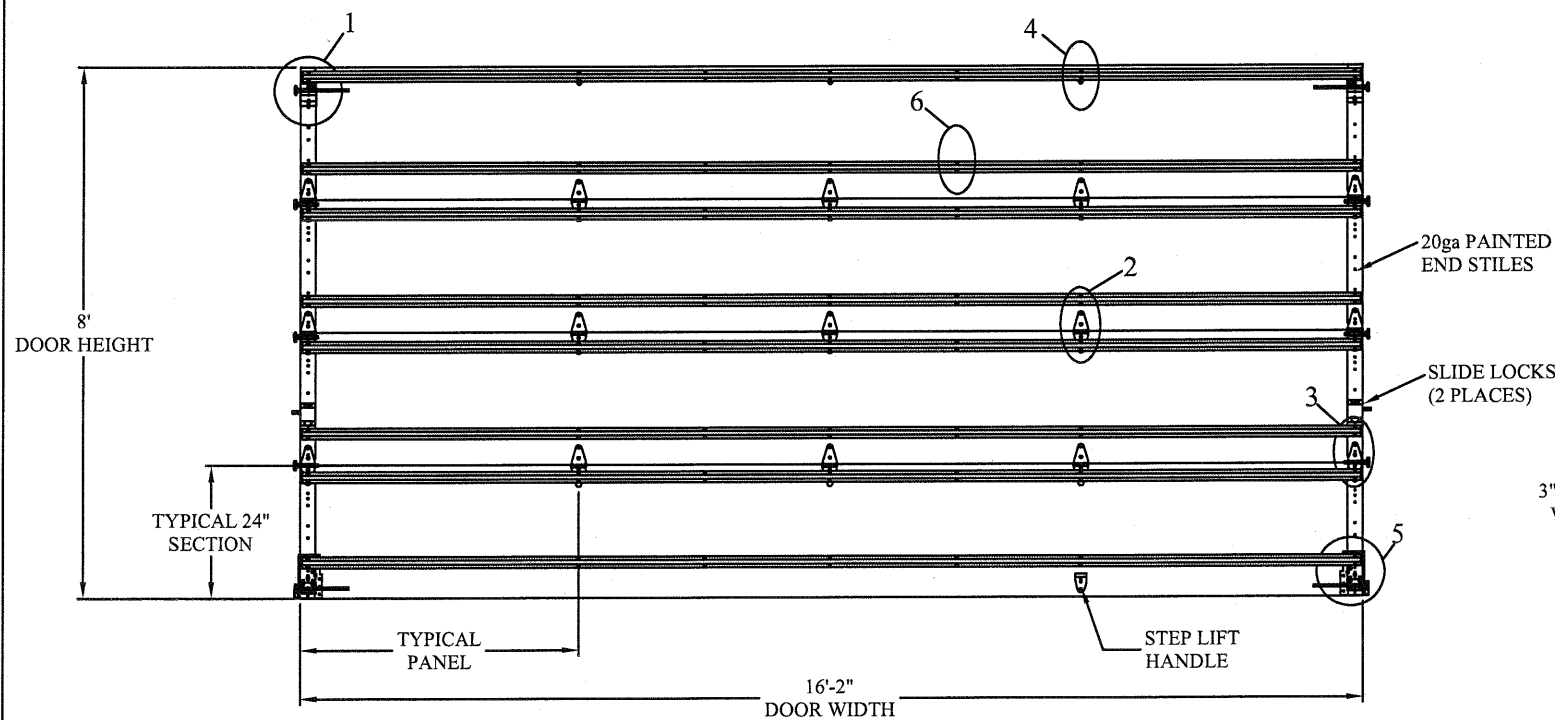
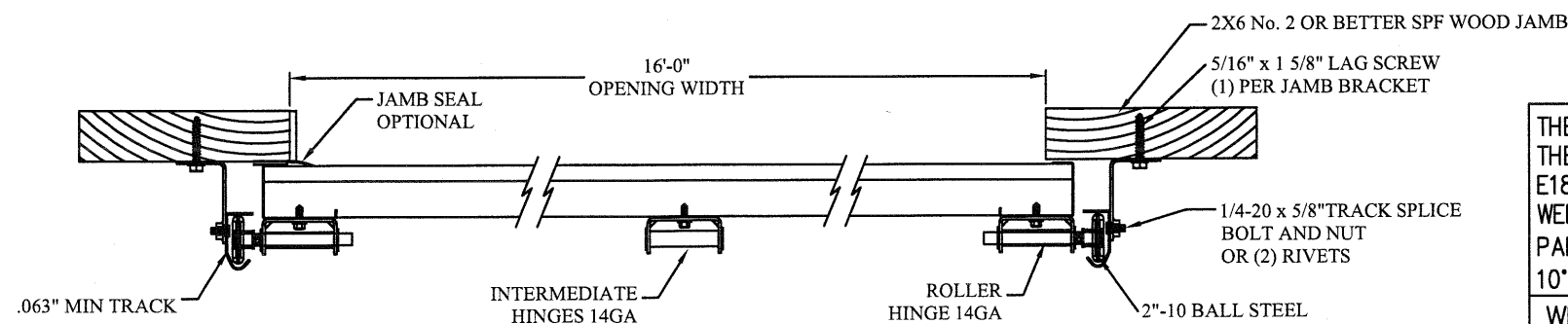




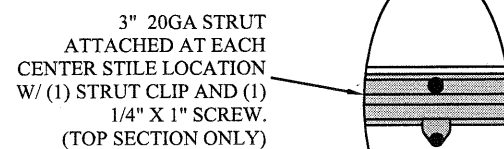
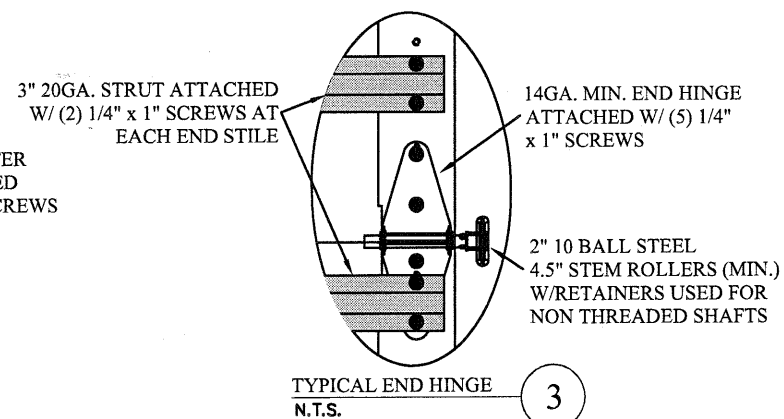
LARGE MISSILE IMPACT RESISTANT



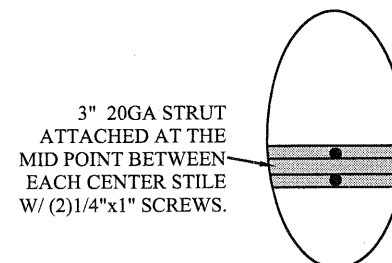
DOOR INTERIOR ELEVATION
N.T.S.



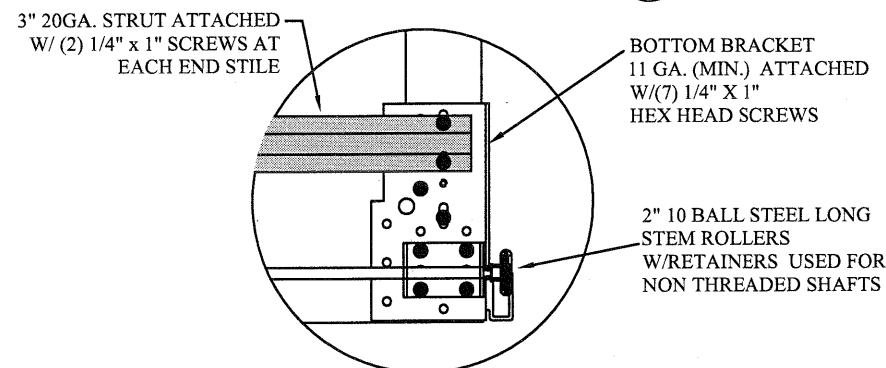
2" BRACKET MOUNT TO WOOD JAMB DETAIL
N.T.S.



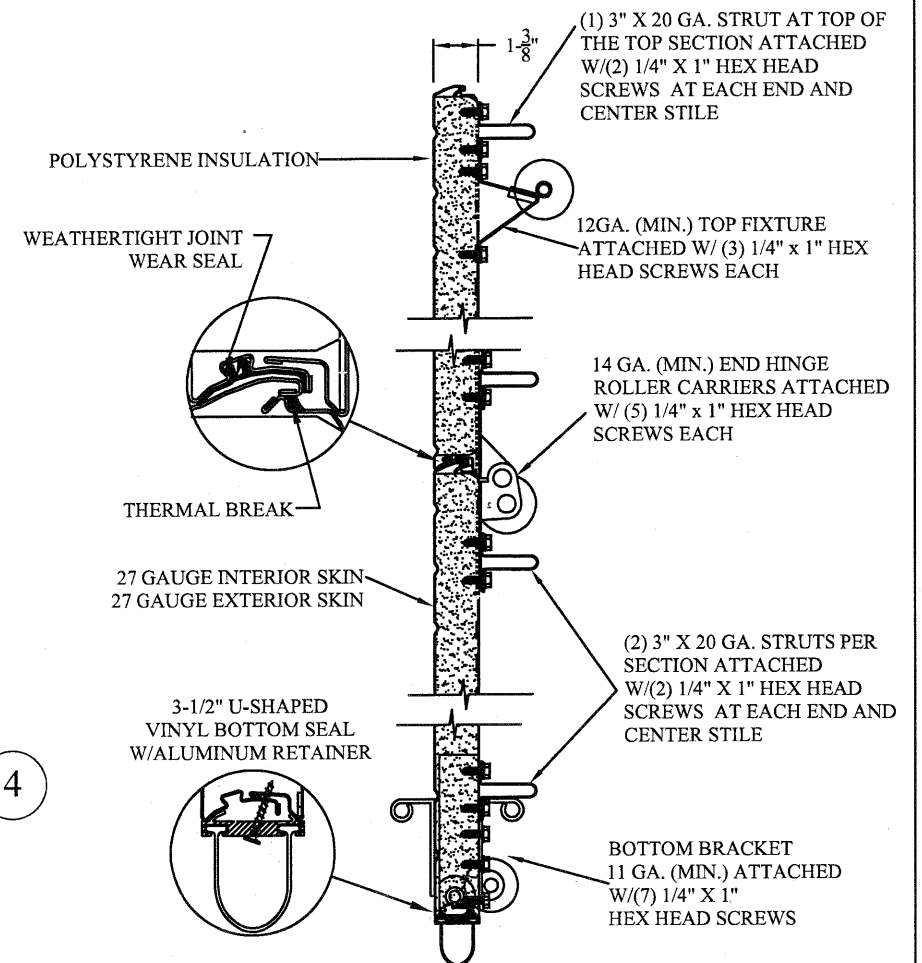
4
TYPICAL STRUT CLIP ATTACHMENT
N.T.S.



6
TYPICAL STRUT ATTACHMENT
N.T.S.



5
TYPICAL BOTTOM BRACKET
N.T.S.



THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108 & 115, ASTM 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 END ZONE, ROOF SLOPE 10° OR LESS):

WIND SPEED (MPH)	175	159	151	144	138
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE	16'2 x 14'		
DESIGN LOADS	+25.3 PSF -28.7 PSF		
TEST LOADS	+38.0 PSF -43.1 PSF		
LARGE MISSILE IMPACT RESISTANCE			

Thomas L. Shelmerdine, PE (FL PE #0048579)
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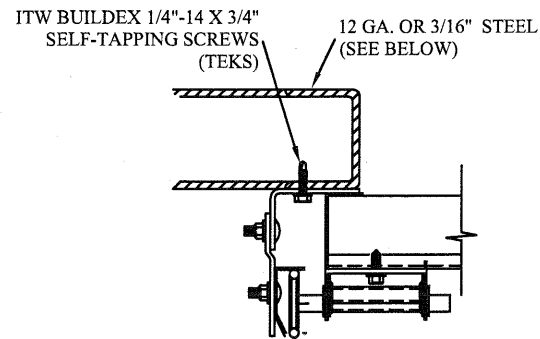
MODEL 1380 AMARR 2731
MODEL 1700 AMARR 2732
MODEL 1000 AMARR 2432

SIZE	DRAWN BY	RLR	DATE	11/24/14	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	11/24/14	IRC-1816-136-15-1

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

SHEET 1 OF 3

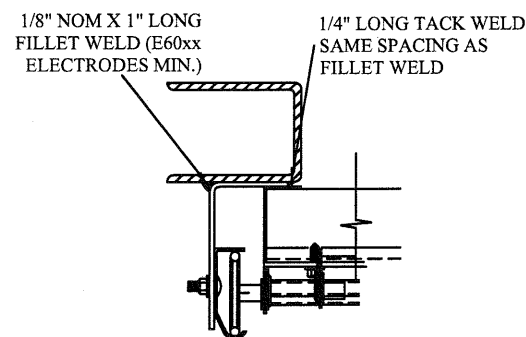
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



CLIP STYLE REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE
MOUNT AVAILABLE

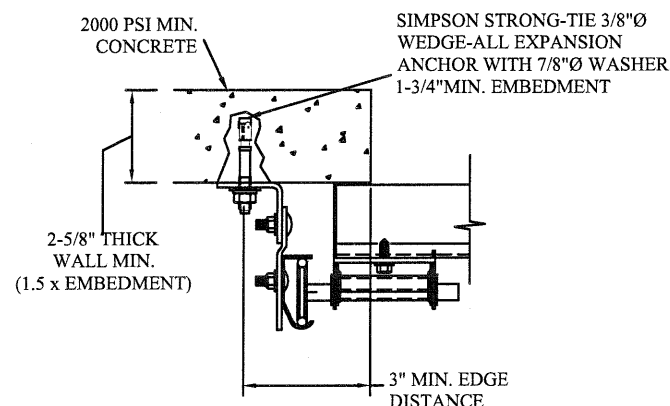
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 12" O.C.
REFER TO NOTES: 1, 2 AND 5

3/16" STEEL FRAMING
569 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 24" O.C.
REFER TO NOTES: 1, 2 AND 5



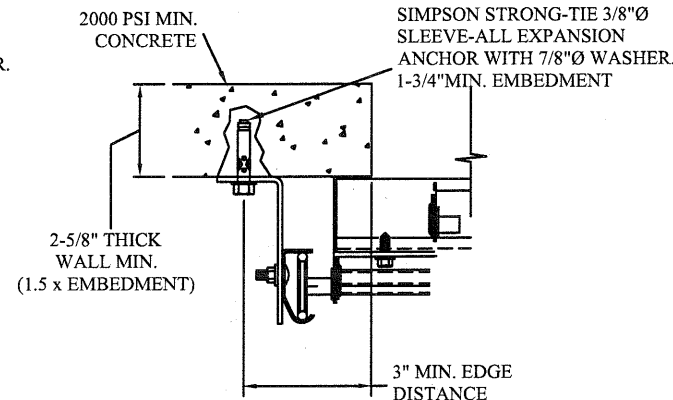
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED
ANGLE MOUNT AVAILABLE

STEEL FRAMING 12GA OR BETTER
1590 LBS./TN. ALLOWABLE LOAD - 6"
FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 5, 6, 7, 8 AND 9



CLIP STYLE CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, REVERSE AND TAPERED ANGLE MOUNT
AVAILABLE

2000 PSI CONCRETE OR GREATER
351 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6"
FROM ENDS AND 18" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

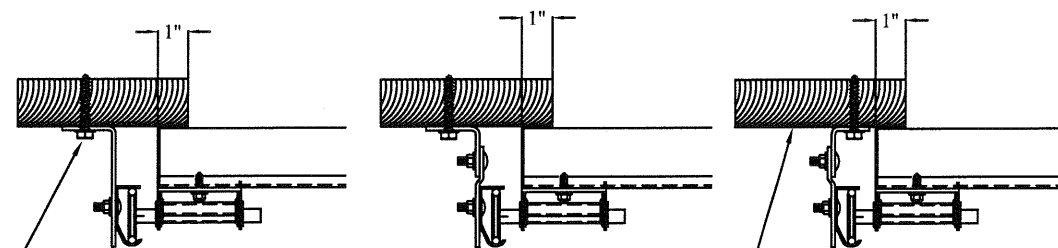


CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE
MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER
336 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6"
FROM ENDS AND 18" O.C.
REFER TO NOTES: 1. 2. 3. 4 AND 5

TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE TRACK CONFIGURATION DETAIL



5/16" x 1 5/8" LAG SCREW (1) PER
JAMB BRACKET (1-1/2" EMBEDMENT
MINIMUM) (TYP.)

CONTINUOUS ANGLE MOUNT

2x6 WOOD JAMB SYP OR SPF
(NO.2) OR BETTER (TYP.)

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 20" 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)

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)

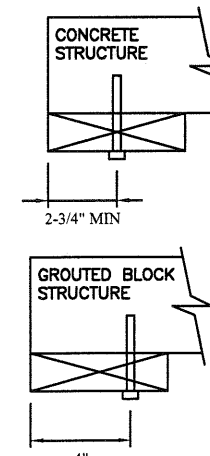
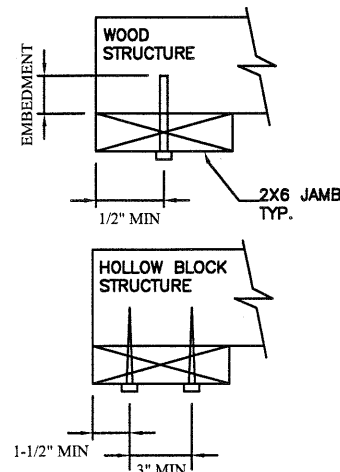
2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)
MULTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS

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



NOTES:

1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EDGE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS IN ADDITION TO OTHER LOADS.
6. MOST GARAGE DOOR TRACK IS GALVANIZED STEEL. USE ALL NECESSARY PRECAUTIONS WHEN WELDING GALVANIZED STEEL.
7. ALL WELDS SHOULD BE PERFORMED BY A CERTIFIED WELDER OR INSPECTED BY A CERTIFIED WELDING INSPECTOR TO VERIFY THE INTEGRITY OF THE WELD.
8. FILLET WELDS TO HAVE A STRAIGHT OR CONVEX FACE SURFACE.
9. TACK WELD TOE OF ANGLE AT SAME SPACING TO PREVENT ROTATION OF TRACK ANGLE.

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 16'2 x 14' DESIGN LOADS +25.3 PSF -28.7 PSF TEST LOADS +38.0 PSF -43.1 PSF LARGE MISSILE IMPACT RESISTANCE		Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410	
MODEL 1380 AMARR 2731 MODEL 1700 AMARR 2732 MODEL 1000 AMARR 2432			
SIZE	DRAWN BY	RLR	DATE 11/24/14
B	CHECKED BY	RLR	DATE 11/24/14
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			
DRAWING NUMBER IBC-1816-136-15-1			SHEET 2 OF 3

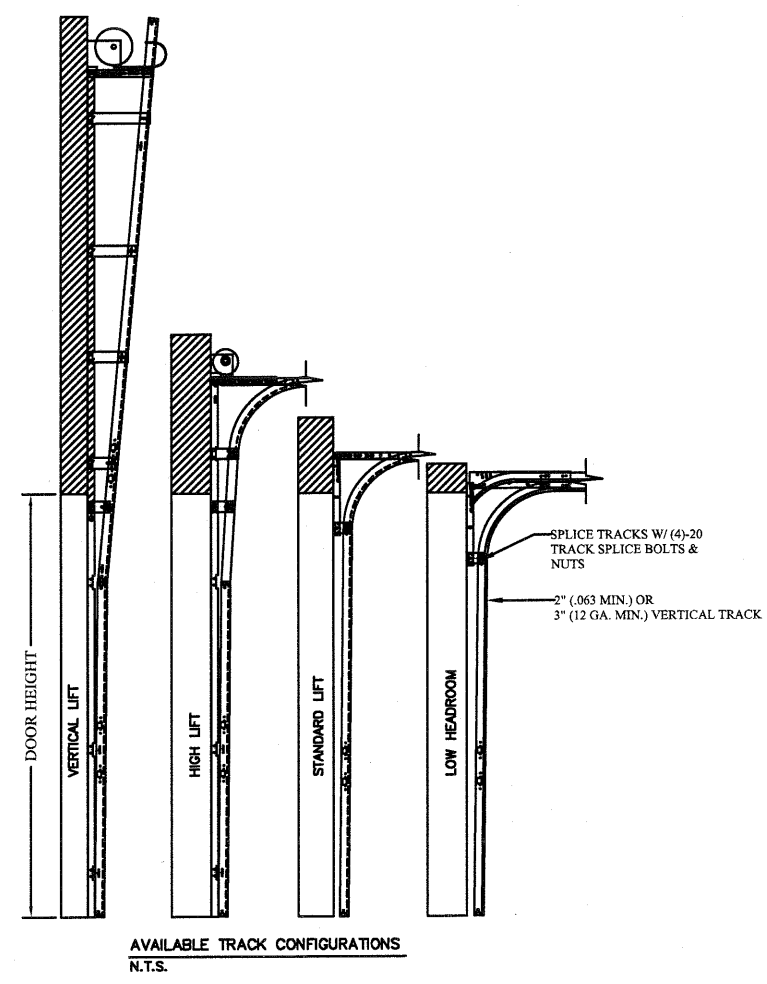
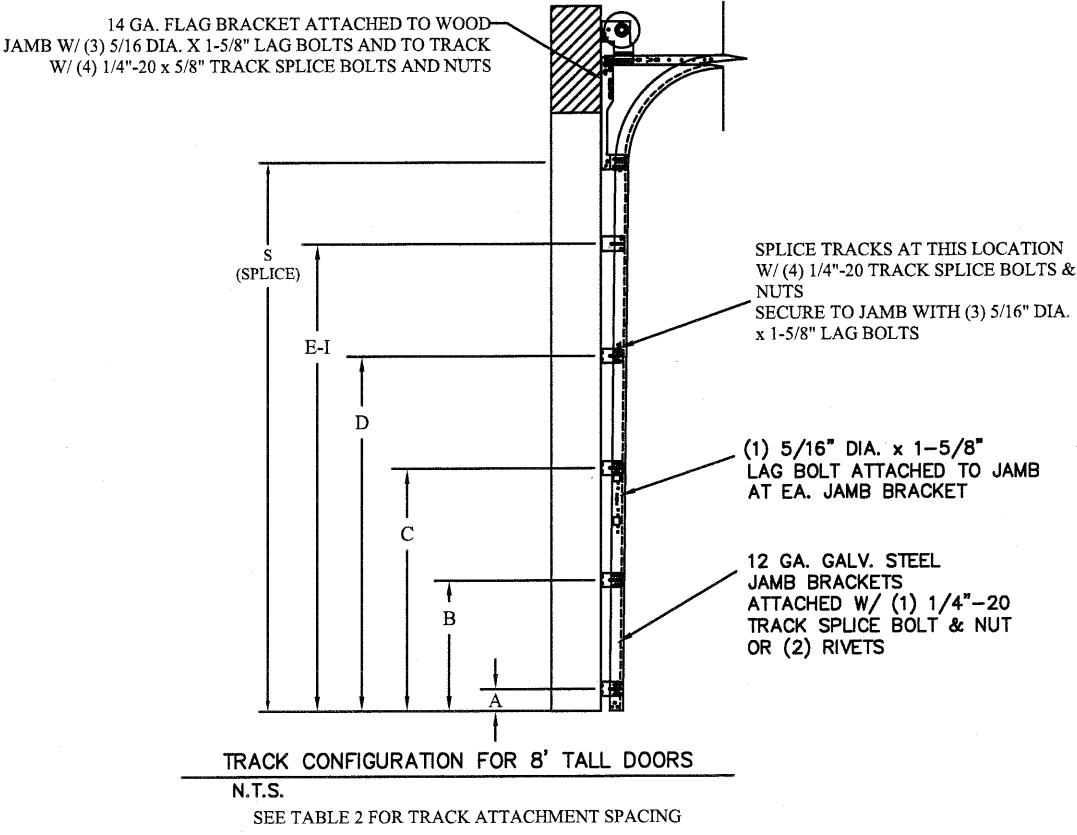


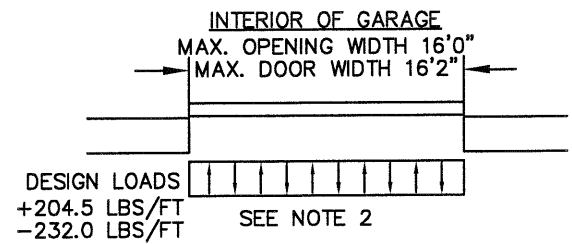
TABLE 2

DOOR HEIGHT		TRACK ATTACHMENT								TYPICAL SPLICE
		A	B	C	D	E	F	G	H	I
7'	0"	3.5"	21"	39"	57"					76"
7'	6"	3.5"	21"	39"	57"	75"				82"
8'	0"	3.5"	21"	39"	57"	75"				88"
9'	0"	3.5"	21"	39"	57"	75"	93"			100"
9'	6"	3.5"	21"	39"	57"	75"	93"			106"
10'	0"	3.5"	21"	39"	57"	75"	93"			112"
11'	0"	3.5"	21"	39"	57"	75"	93"	111"		124"
12'	0"	3.5"	21"	39"	57"	75"	93"	111"	129"	136"
13'	0"	3.5"	21"	39"	57"	75"	93"	111"	129"	148"
14'	0"	3.5"	21"	39"	57"	75"	93"	111"	129"	147"
14'	0"	3.5"	21"	39"	57"	75"	93"	111"	129"	160"

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

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: +204.5 LBS/FT & -232.0 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 27 GA. (.015) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 14'0" HIGH HAVE (2) 3" 20GA STRUTS PER 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.



DESCRIPTION OF REVISIONS		DATE	BY

MAX SIZE
16'2 x 14'

DESIGN LOADS
+25.3 PSF
-28.7 PSF

TEST LOADS
+38.0 PSF
-43.1 PSF

LARGE MISSILE IMPACT
RESISTANCE

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 1380 AMARR 2731
MODEL 1700 AMARR 2732
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SHEET 3 OF 3