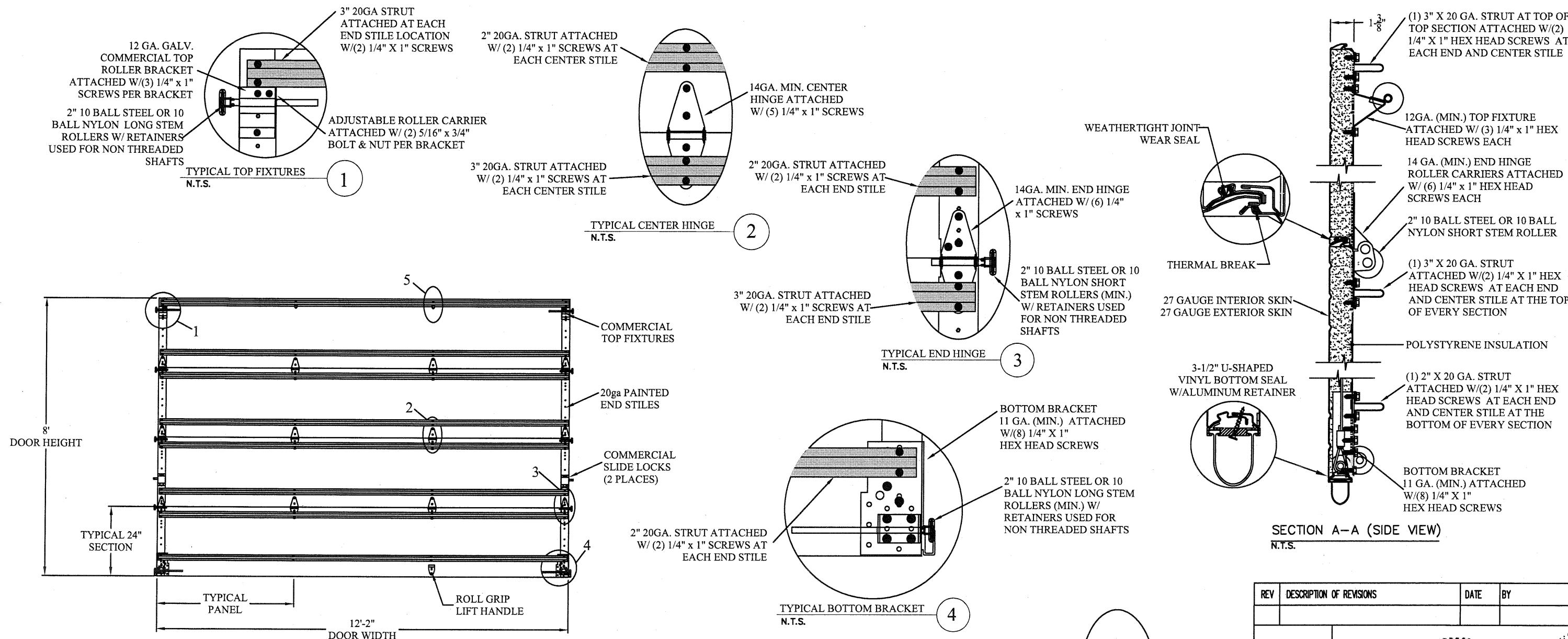
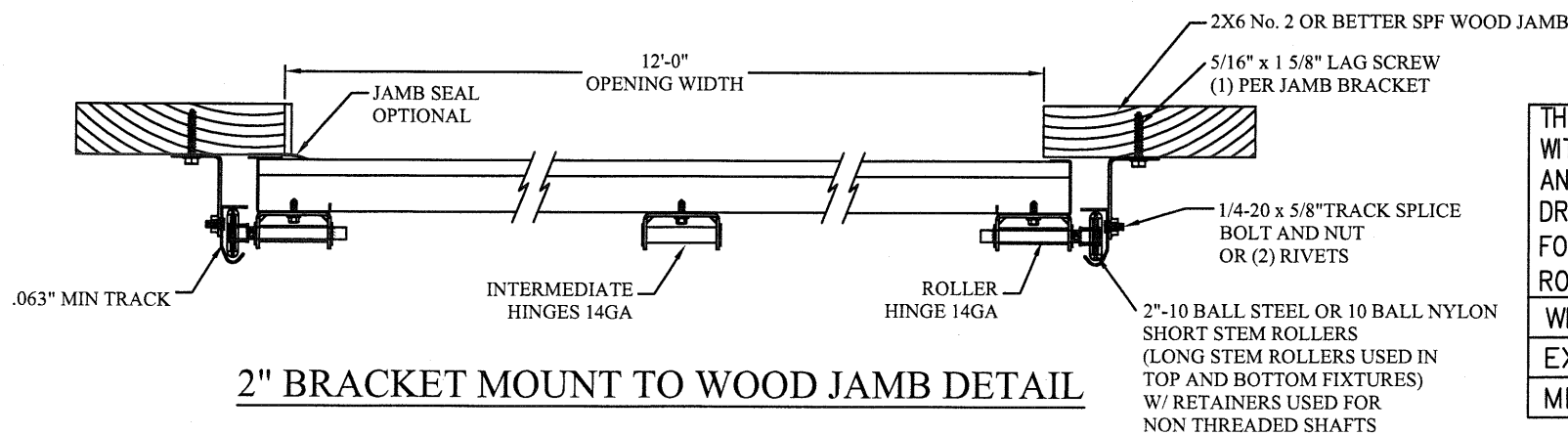




DOOR INTERIOR ELEVATION

LARGE MISSILE IMPACT RESISTANT



THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN ASTM E1886, E1996, F588 AND DASMA 108, 115. 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)	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
12'2" x 14'

DESIGN LOADS
+23.8 PSF
-27.3 PSF

TEST LOADS
+35.7 PSF
-41.0 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

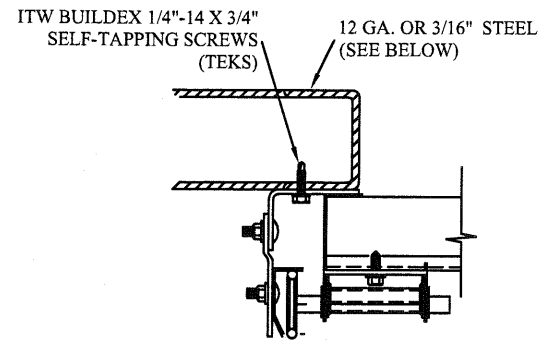
MODEL 1380 AMARR 2731

SIZE	DRAWN BY	RLR	DATE	02/16/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	02/16/15	IBC-1812-130-15-1

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

SHEET 1 OF 3

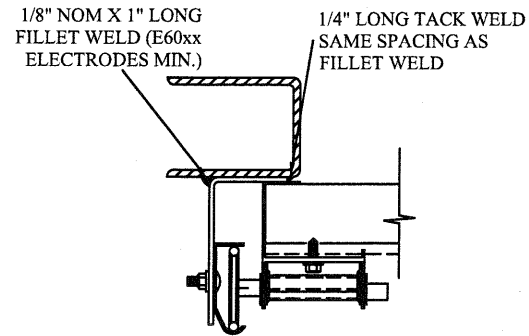
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

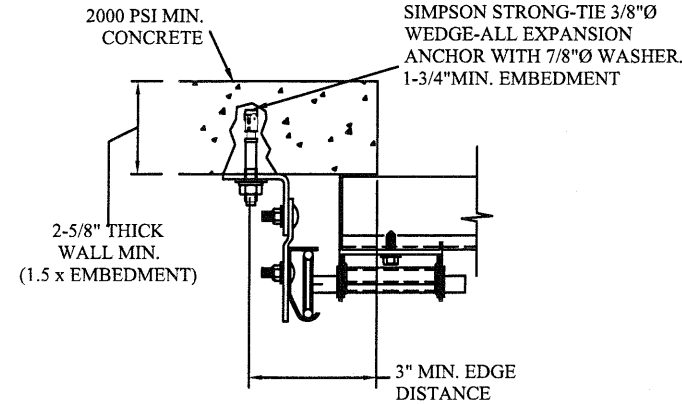
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 18" O.C.
REFER TO NOTES: 1, 2 AND 5

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



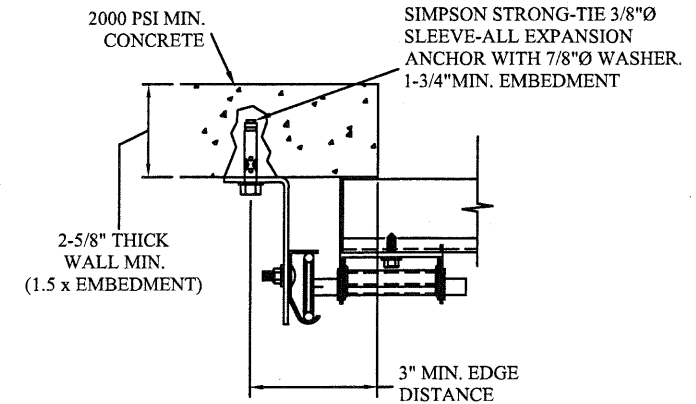
**REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED
ANGLE MOUNT AVAILABLE**

STEEL FRAMING 12GA OR BETTER
1590 LBS./IN. 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 24" 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 24" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

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: +144.8 LBS/FT & -166.1 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 24'0" HIGH HAVE (1) 3" 20GA STRUT & (1) 2" 20GA STRUT 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.

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)

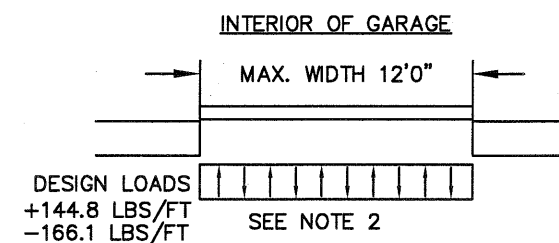
AT 24" O.C. (1 1/2" EMBEDMENT)
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART) AT 24" O.C. (1 1/4" EMBEDMENT)

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

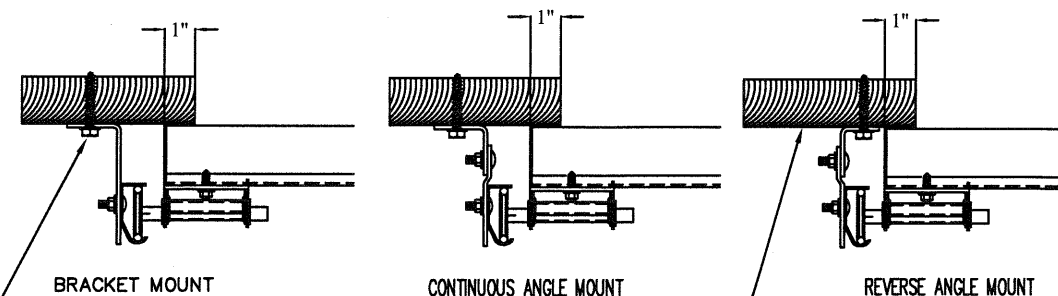
NOTES:

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.



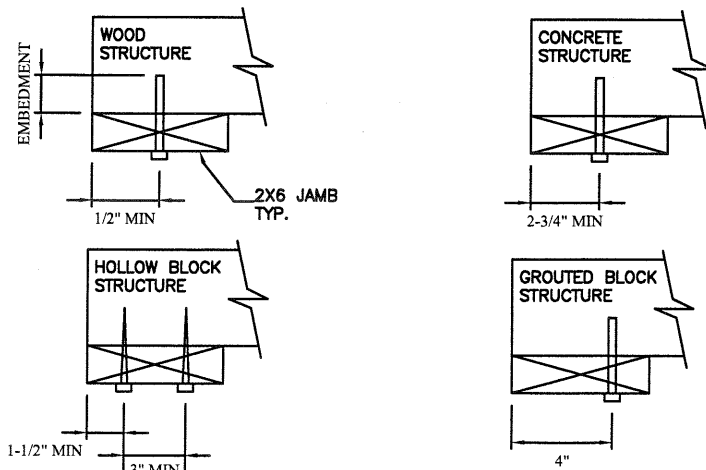
TRACK CONNECTION TO WOOD JAMB OPTIONS

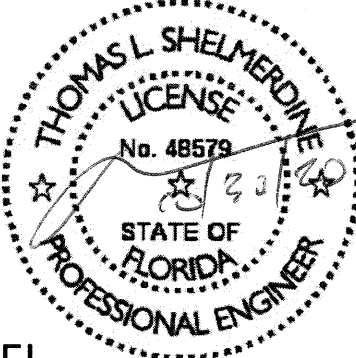
FOR LAG SCREWS & BRACKET SPACING SEE PAGE 3 FOR TRACK CONFIGURATION DETAIL



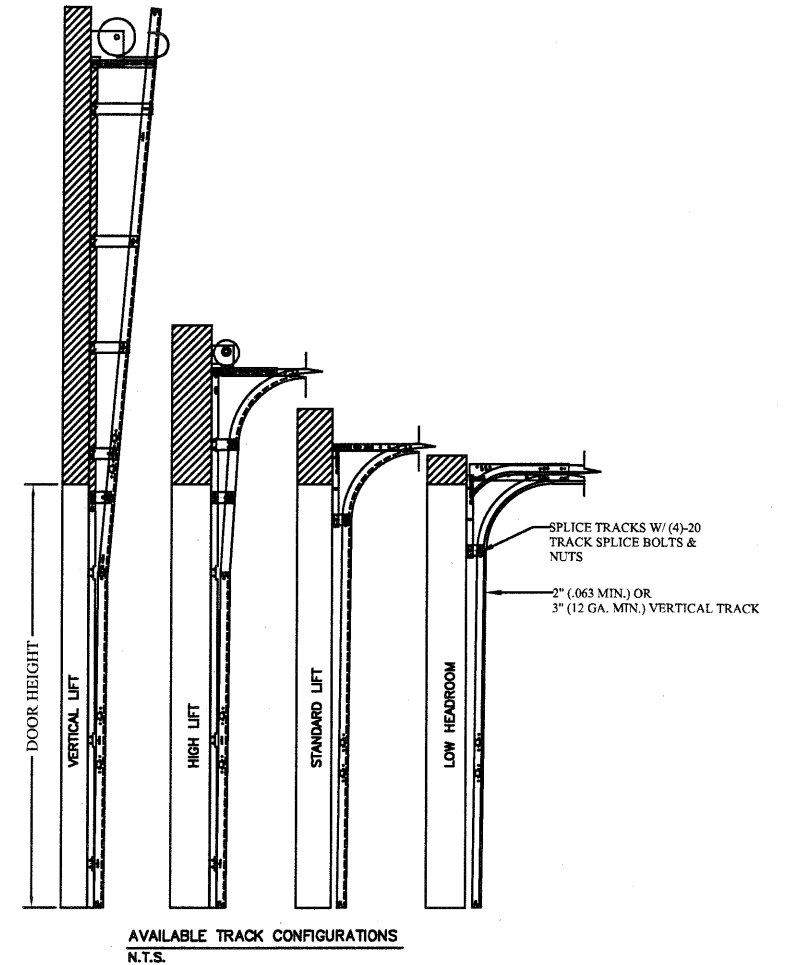
5/16" x 1 5/8" LAG SCREW (1) PER
JAMB BRACKET (1-1/2" EMBEDMENT
MINIMUM) (TYP.)

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

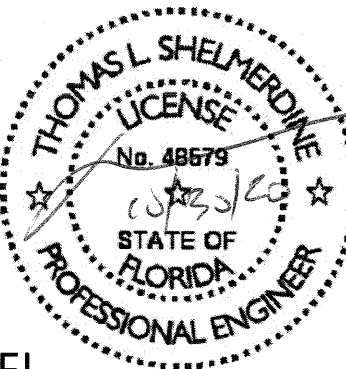


REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 12'2" x 14' DESIGN LOADS +23.8 PSF -27.3 PSF TEST LOADS +35.7 PSF -41.0 PSF LARGE MISSILE IMPACT RESISTANCE	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL	 dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410	
			
MODEL 1380 AMARR 2731			
SIZE	DRAWN BY	R/LR	DATE 02/16/15
B	CHECKED BY	R/LR	DATE 02/16/15
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-1812-130-15-I SHEET 2 OF 3

Section Width (ft)		Center Stile Locations		Max Design Loads Allowed	
		1st (in)	2nd (in)	Positive (PSF)	Negative (PSF)
6'	0"	36"	-	31.7	36.4
6'	2"	37"	-	30.8	35.4
6'	4"	38"	-	30.0	34.4
6'	6"	39"	-	29.2	33.6
6'	8"	40"	-	28.5	32.7
6'	10"	41"	-	27.8	31.9
7'	0"	42"	-	27.2	31.2
7'	2"	43"	-	26.5	30.4
7'	4"	44"	-	25.9	29.7
7'	6"	45"	-	25.3	29.1
7'	8"	46"	-	24.8	28.4
7'	10"	47"	-	24.3	27.8
8'	0"	48"	-	23.8	27.3
8'	2"	49"	-	23.3	26.7
8'	4"	50"	-	22.8	26.2
8'	6"	51"	-	22.4	25.6
8'	8"	52"	-	21.9	25.2
8'	10"	53"	-	21.5	24.7
9'	0"	54"	-	21.1	24.2
9'	2"	55"	-	20.7	23.8
9'	4"	56"	-	20.2	23.2
9'	6"	57"	-	19.9	22.8
9'	8"	58"	-	19.5	22.4
9'	10"	59"	-	19.2	22.0
10'	0"	60"	-	18.9	21.7
10'	2"	61"	-	18.6	21.3
10'	4"	62"	-	18.3	21.0
10'	6"	63"	-	18.0	20.6
10'	8"	64"	-	17.7	20.3
10'	10"	65"	-	17.4	20.0
11'	0"	44.4"	87.6"	25.9	29.7
11'	2"	45.3"	88.7"	25.6	29.3
11'	4"	46.3"	89.7"	25.3	29.0
11'	6"	47.3"	90.7"	25.0	28.7
11'	8"	47.6"	92.4"	24.6	28.2
11'	10"	48.3"	93.7"	24.2	27.8
12'	0"	49.6"	94.4"	24.0	27.5
12'	2"	50.1"	96.0"	23.8	27.3



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"

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 12'2 x 14' DESIGN LOADS +23.8 PSF -27.3 PSF TEST LOADS +35.7 PSF -41.0 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			
SIZE B	DRAWN BY	RLR	DATE 02/16/15
	CHECKED BY	RLR	DATE 02/16/15
ENTREMATICS 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-1812-130-15-1 SHEET 3 OF 3