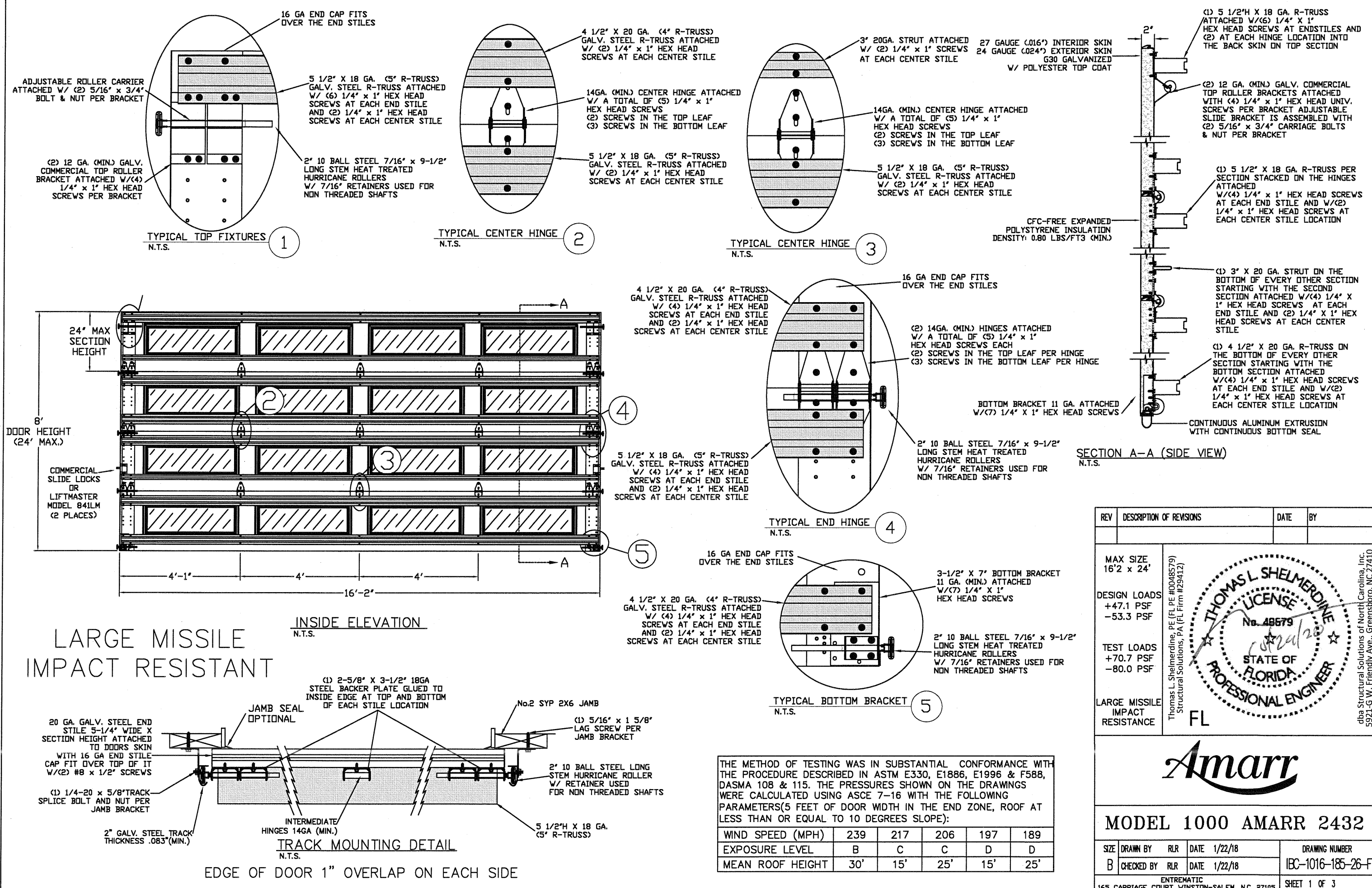




REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
16'2 x 24'

DESIGN LOADS
+47.1 PSF
-53.3 PSF

TEST LOADS
+70.7 PSF
-80.0 PSF

LARGE MISSILE
IMPACT
RESISTANCE

Thomas L. Shelmerdine, PE (FL PE #00048579)
Structural Solutions, PA (FL Firm #29412)

FL

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

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

Amarr

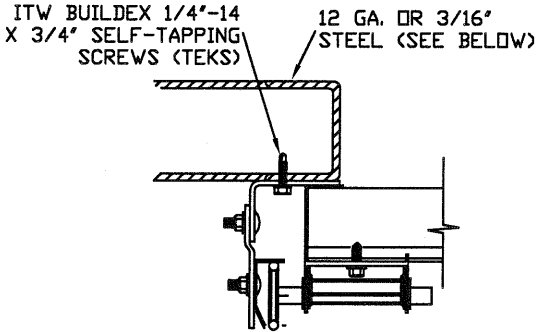
MODEL 1000 AMARR 2432

SIZE	DRAWN BY	RLR	DATE	1/22/18	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	1/22/18	IBC-1016-185-26-F

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

SHEET 1 OF 3

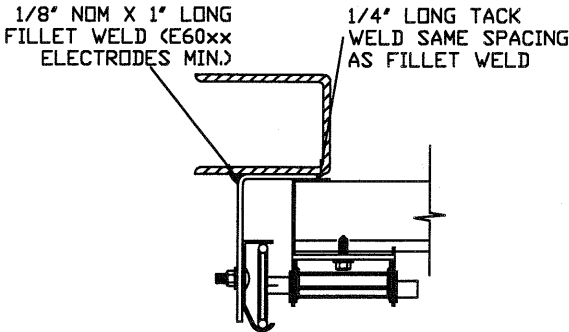
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

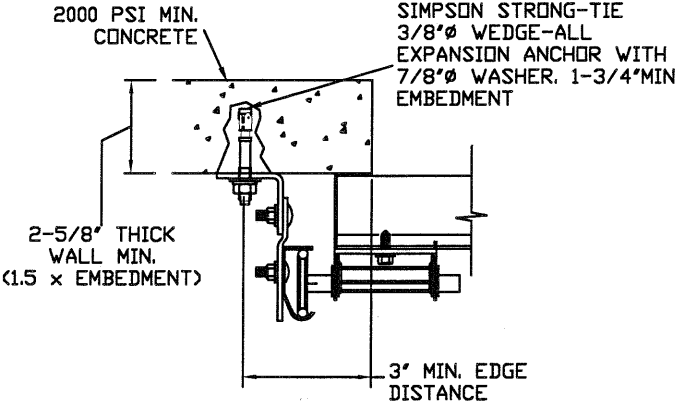
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 3'
FROM ENDS AND 6' O.C.
REFER TO NOTES: 1, 2 AND 5

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



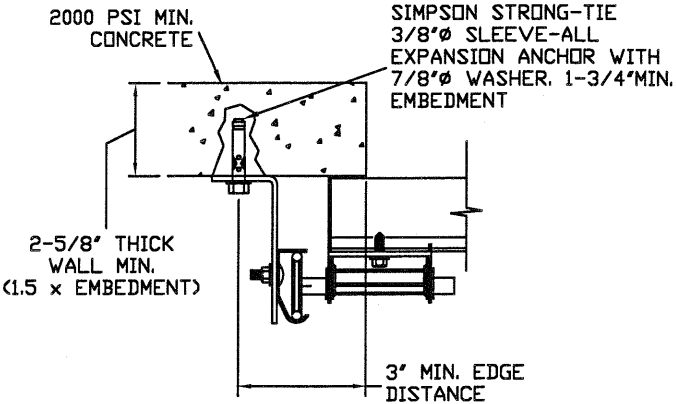
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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 -
5' FROM ENDS AND 10' 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 - 5' FROM ENDS AND 10' O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

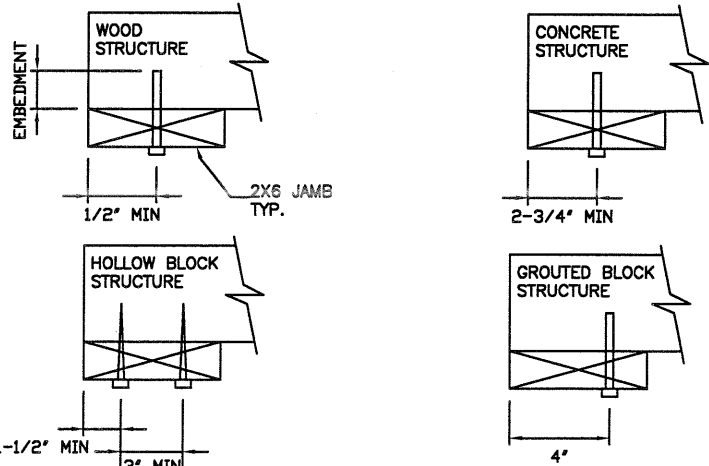
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS
THEN 12" O.C. (1 1/2" EMBEDMENT)

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 20" O.C. (2 1/2" EMBEDMENT)

2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK (1900 PSI MIN)
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 12" 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

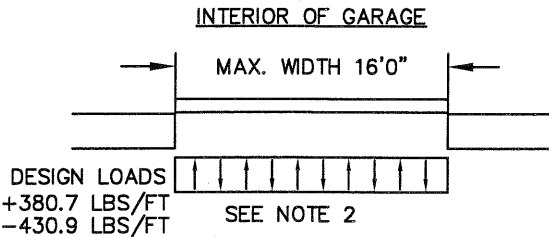


NOTES:

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.

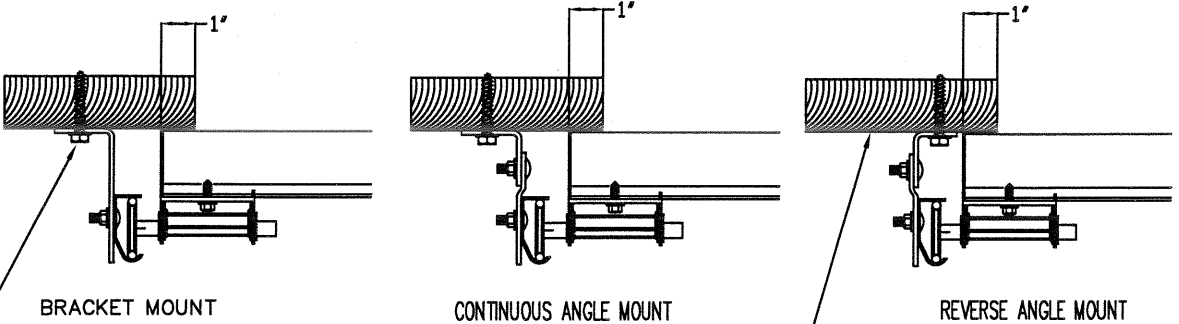
SPECIFICATIONS AND NOTES

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: +380.7 LBS/FT & -430.9 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. (.022) MIN. EXTERIOR SKIN ROLLED FORMED, G30 GALVANIZED W/POLYESTER TOP COAT
5. DOORS UP TO 24'0" HIGH USE (1) 5.5" 18GA R-TRUSS ON THE TOP OF EACH SECTION AND ALTERNATE BETWEEN (1) 3" 20GA STRUT AND (1) 4.5" 20GA R-TRUSS ON THE BOTTOM OF EACH SECTION STARTING WITH 4.5" 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.



TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE TABLE 1 ON PAGE 3



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

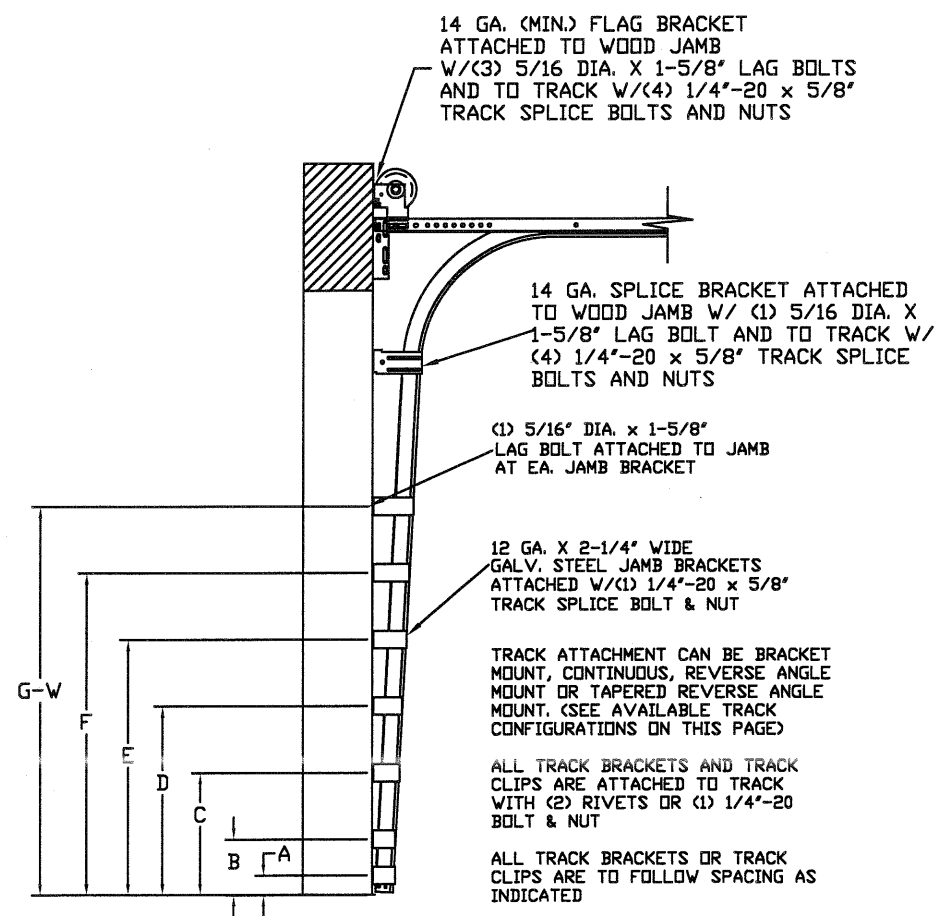
TABLE 1

DOOR HEIGHT		TRACK ATTACHMENT																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
7'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"																
7'	6"	3.5"	10.0"	22.0"	34"	46"	58"	70"																
8'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"																
8'	6"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"															
9'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"															
9'	6"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"														
10'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"														
11'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"													
12'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"												
13'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"											
14'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"										
15'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"									
16'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"								
17'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"							
18'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"						
19'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"					
20'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"				
21'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"			
22'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"		
23'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	
24'	0"	3.5"	10.0"	22.0"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"

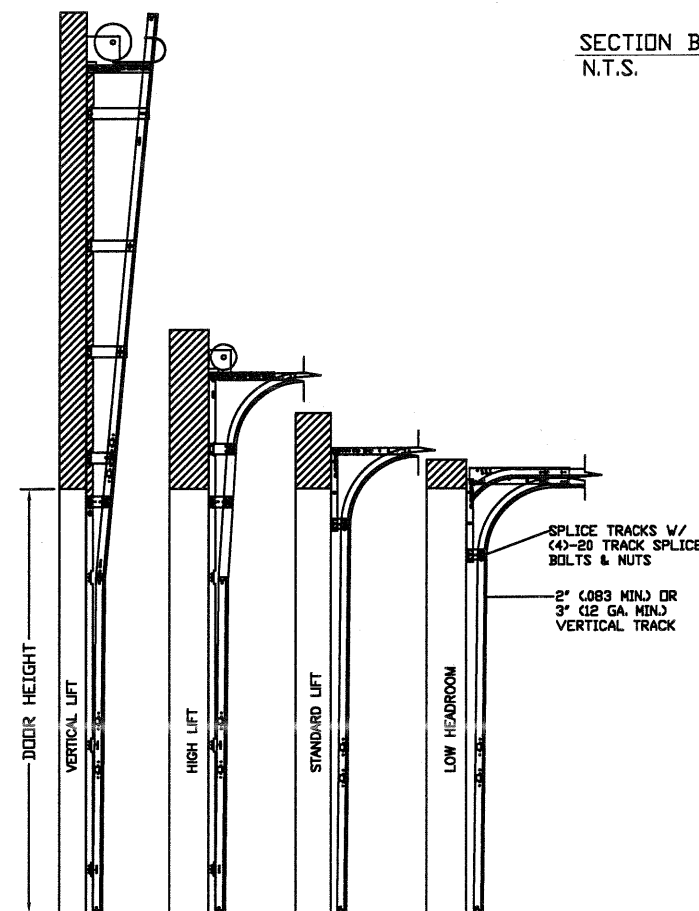
ALL TRACK ATTACHMENTS +/- 1" ALLOWED USING SYP NO.2 OR BETTER ONLY

TABLE 2

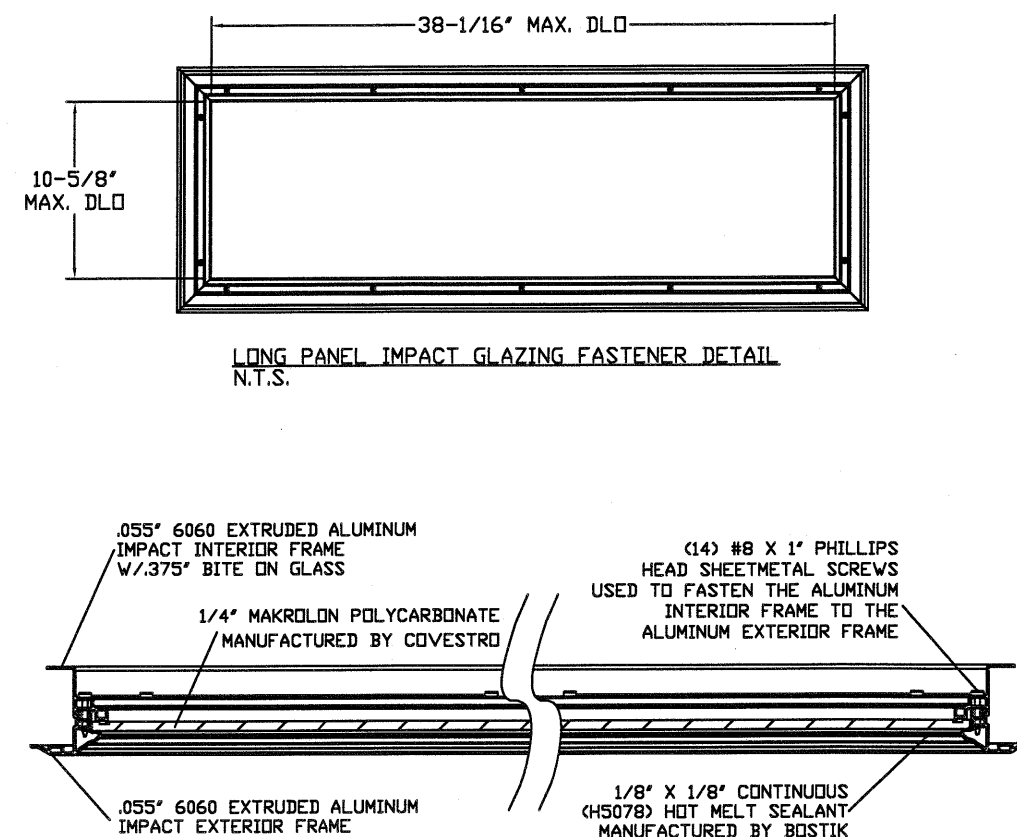
Section Width (ft)		Center Stile Locations (From Left Edge)			Max Design Loads Allowed	
		1st (in)	2nd (in)	3rd (in)	Positive (PSF)	Negative (PSF)
9'	4"	36"	76"	-	59.8	67.6
9'	6"	37"	77"	-	59.0	66.8
9'	8"	38"	78"	-	58.2	65.9
9'	10"	39"	79"	-	57.5	65.1
10'	0"	40"	80"	-	56.8	64.3
10'	2"	41"	81"	-	56.1	63.5
10'	4"	42"	82"	-	55.4	62.7
10'	6"	43"	83"	-	54.7	61.9
10'	8"	44"	84"	-	54.1	61.2
10'	10"	45"	85"	-	53.4	60.5
11'	0"	46"	86"	-	52.8	59.8
11'	2"	47"	87"	-	52.2	59.1
11'	4"	48"	88"	-	51.6	58.4
11'	6"	49"	89"	-	51.0	57.8
11'	8"	50"	90"	-	50.5	57.1
11'	10"	51"	91"	-	49.9	56.5
12'	0"	48"	96"	-	47.3	53.5
12'	2"	49"	97"	-	46.8	53.0
12'	4"	50"	98"	-	46.3	52.4
12'	6"	51"	99"	-	45.9	51.9
12'	8"	52"	100"	-	45.4	51.4
12'	10"	53"	101"	-	45.0	50.9
13'	0"	36"	78"	120"	54.1	61.2
13'	2"	37"	79"	121"	54.1	61.2
13'	4"	38"	80"	122"	54.1	61.2
13'	6"	39"	81"	123"	54.1	61.2
13'	8"	40"	82"	124"	54.1	61.2
13'	10"	41"	83"	125"	54.1	61.2
14'	0"	42"	84"	126"	54.1	61.2
14'	2"	43"	85"	127"	53.4	60.5
14'	4"	44"	86"	128"	52.8	59.8
14'	6"	45"	87"	129"	52.2	59.1
14'	8"	46"	88"	130"	51.6	58.4
14'	10"	47"	89"	131"	51.0	57.8
14'	0"	48"	90"	132"	50.5	57.1
15'	2"	49"	91"	133"	49.9	56.5
15'	4"	50"	92"	134"	49.4	55.9
15'	6"	51"	93"	135"	48.8	55.3
15'	8"	52"	94"	136"	48.3	54.7
15'	10"	53"	95"	137"	47.8	54.1
16'	0"	48"	96"	144"	47.3	53.5
16'	2"	49"	97"	145"	47.1	53.3



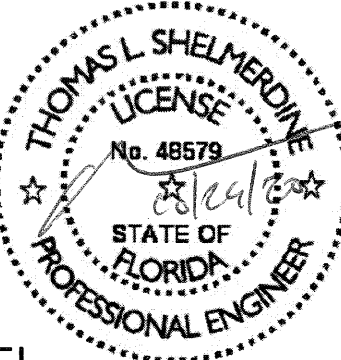
TRACK CONFIGURATION FOR UP TO 24' TALL DOORS
SEE TABLE 1



AVAILABLE TRACK CONFIGURATIONS
N.T.S.



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

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 16'2 x 24' DESIGN LOADS +47.1 PSF -53.3 PSF TEST LOADS +70.7 PSF -80.0 PSF LARGE MISSILE IMPACT RESISTANCE		Thomas L. Shelmerdine, PE (FL PE #00048579) Structural Solutions, PA (FL Firm #259412) FL 	
			
MODEL 1000 AMARR 2432			
SIZE	DRAWN BY	RUR	DATE 1/22/18
B	CHECKED BY	RUR	DATE 1/22/18
ENTREMATICS 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-1016-185-26-1 SHEET 3 OF 3