

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330, E1886, E1996 & F588, 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 THE END ZONE, ROOF AT LESS THAN 10 DEGREES SLOPE):

WIND SPEED (MPH)	155	141	134	128	122
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 24'

DESIGN LOADS +20.0 PSF -22.4 PSF

TEST LOADS +30.0 PSF -33.6 PSF

STATE OF TEXAS

See Digital Signature

THOMAS L. SHELMERDINE

85829

LICENSED PROFESSIONAL ENGINEER

This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

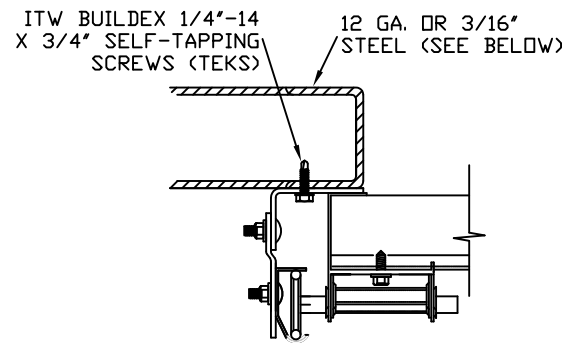
Thomas L. Shelmerdine, PE (TX PE #85829)
Structural Solutions, PA (TX Firm #F-004063)
5921-G W. Friendly Ave., Greensboro, NC 27410 TX



MODEL 1000 AMARR 2432

SIZE	DRAWN BY DRD	DATE 6/14/18	DRAWING NUMBER
B	CHECKED BY DLJ	DATE 10/02/18	IBC-1016-120-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 1 OF 4

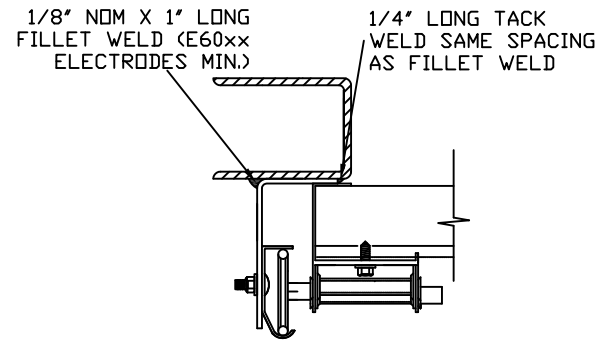
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

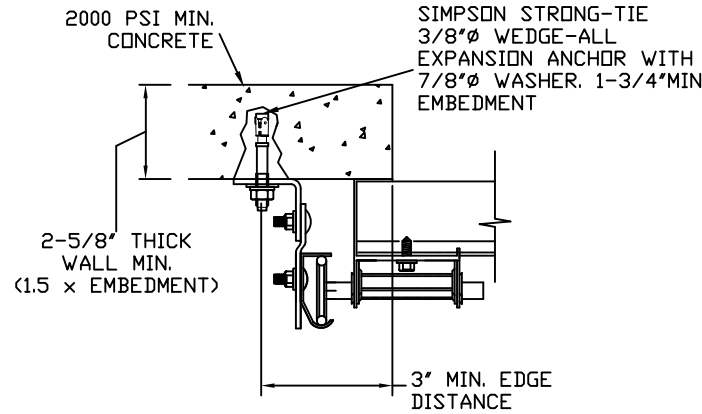
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6'
FROM ENDS AND 16" O.C.
REFER TO NOTES: 1, 2 AND 5

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



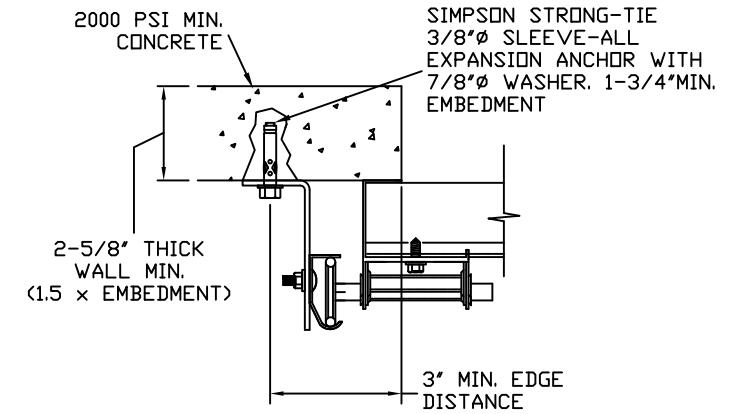
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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: +161.7 LBS/FT & -181.1 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 24 GA. (.022) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24'0" HIGH USE (1) 3" 20GA STRUT TOP EACH SECTION AND (1) 3" 20GA STRUT ON BOTTOM OF 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.
7. DOOR IS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE 2018 IRC/IBC.

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

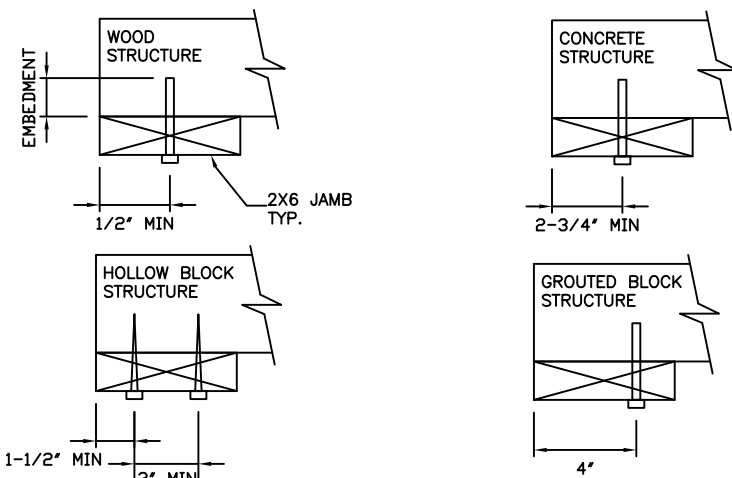
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART)
AT 16" O.C. (1 1/2" EMBEDMENT)
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART) AT 16" O.C. (1 1/4" EMBEDMENT)

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)

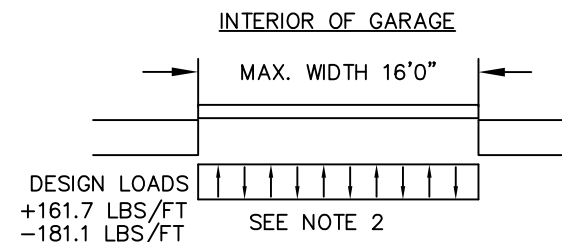
*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.

*PREPARATION OF WOOD JAMBS BY OTHERS



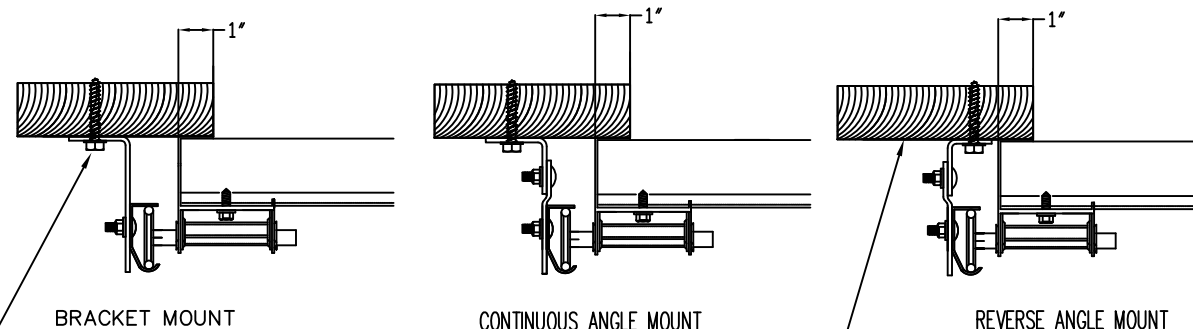
NOTES:

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

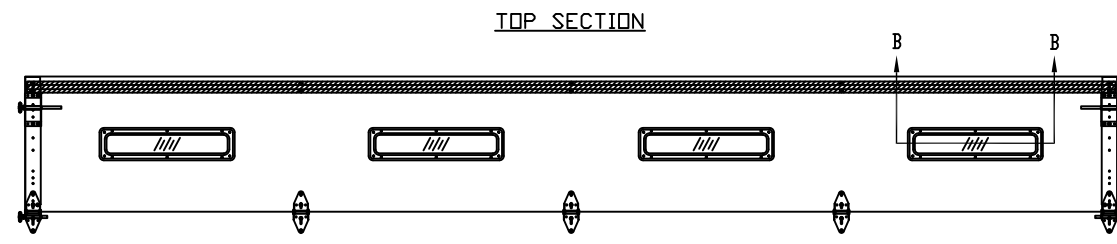
FOR LAG SCREWS & BRACKET SPACING SEE TABLE 1 ON PAGE 4



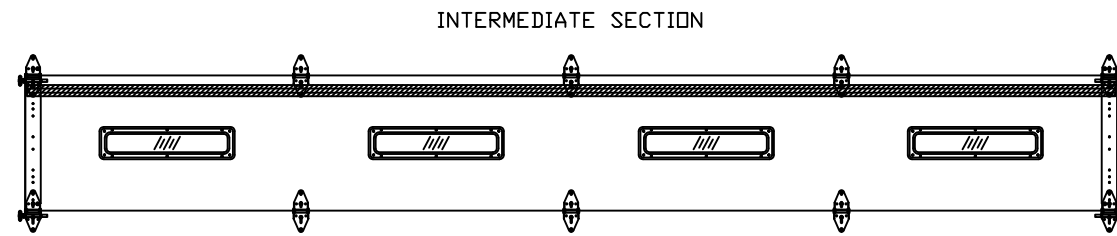
5/16" x 1 5/8" LAG SCREW (1)
PER JAMB BRACKET (1-1/2"
EMBEDMENT MINIMUM) (TYP.)

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

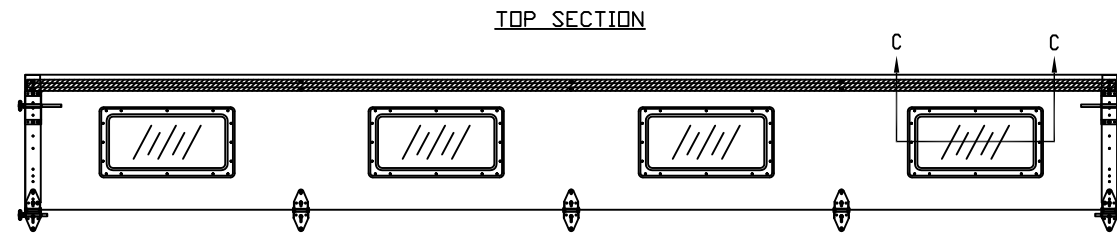
REV	DESCRIPTION OF REVISIONS	DATE	BY
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>MAX SIZE 16'2 x 24'</p> <p>DESIGN LOADS +20.0 PSF -22.4 PSF</p> <p>TEST LOADS +30.0 PSF -33.6 PSF</p> </div> <div style="width: 45%; text-align: center;"> <p>Thomas L. Shelmerdine, PE (TX PE #85829) Structural Solutions, PA (TX Firm #F-004063) 5921-G W. Friendly Ave., Greensboro, NC 27410</p> </div> </div>		
	TX		
MODEL 1000 AMARR 2432			
SIZE	DRAWN BY DRD	DATE 6/14/18	DRAWING NUMBER
B	CHECKED BY DLJ	DATE 10/02/18	IBC-1016-120-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 2 OF 4



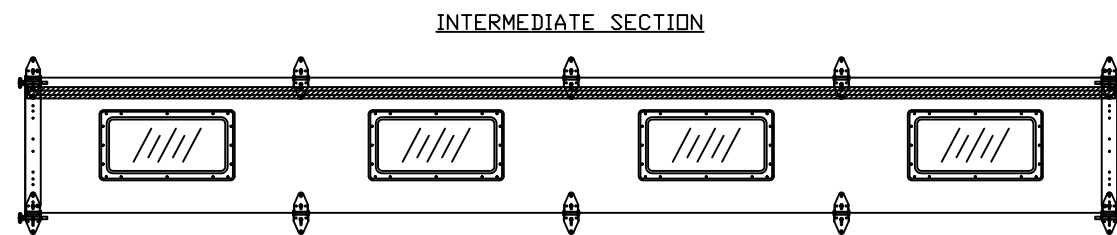
OPTIONAL GLAZED SECTION W/ 24' X 6' WINDOWS AND STRUT LAYOUT
N.T.S.



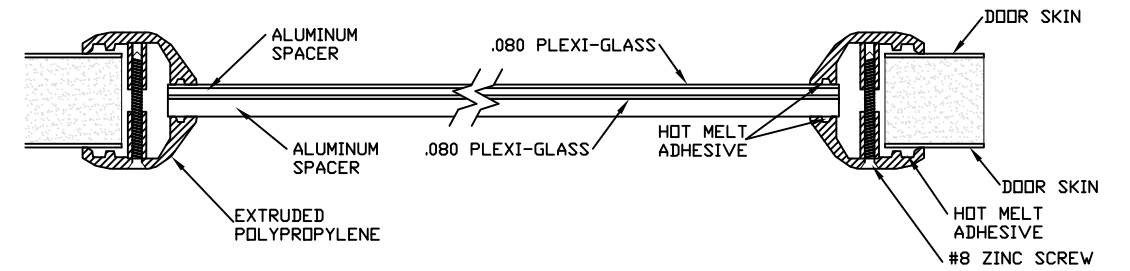
OPTIONAL GLAZED SECTION W/ 24' X 6' WINDOWS AND STRUT LAYOUT
N.T.S.



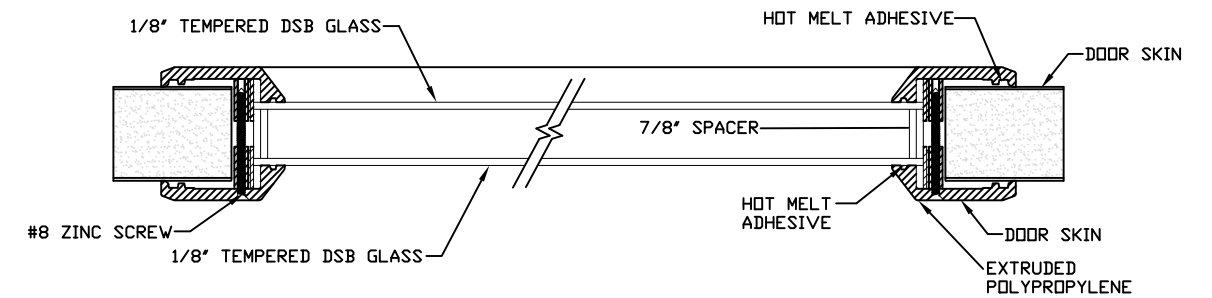
OPTIONAL GLAZED SECTION W/ 24' X 12' WINDOWS AND STRUT LAYOUT
N.T.S.



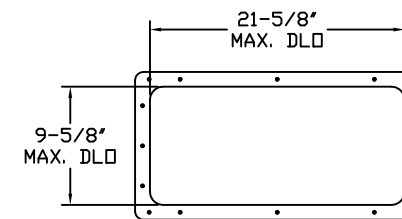
OPTIONAL GLAZED SECTION W/ 24' X 12' WINDOWS AND STRUT LAYOUT
N.T.S.



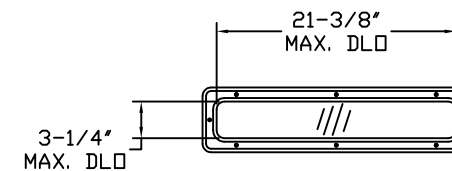
SECTION B-B 24' X 6' WINDOW DETAIL W/ .080 PLEXI-GLASS
N.T.S.



SECTION C-C 24' X 12' WINDOW DETAIL W/ 1-1/8" INSULATED GLASS
N.T.S.



24' X 12' DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.



24' X 6' DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
	MAX SIZE 16'2 x 24'		
	DESIGN LOADS +20.0 PSF -22.4 PSF		
	TEST LOADS +30.0 PSF -33.6 PSF		
		This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.	
		Thomas L. Shelmerdine, PE (TX PE #85829) Structural Solutions, PA (TX Firm #F-004063) 5921-G W. Friendly Ave., Greensboro, NC 27410 TX	

Amarr

MODEL 1000 AMARR 2432

SIZE	DRAWN BY	DRD	DATE	6/14/18	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	10/02/18	IBC-1016-120-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 3 OF 4

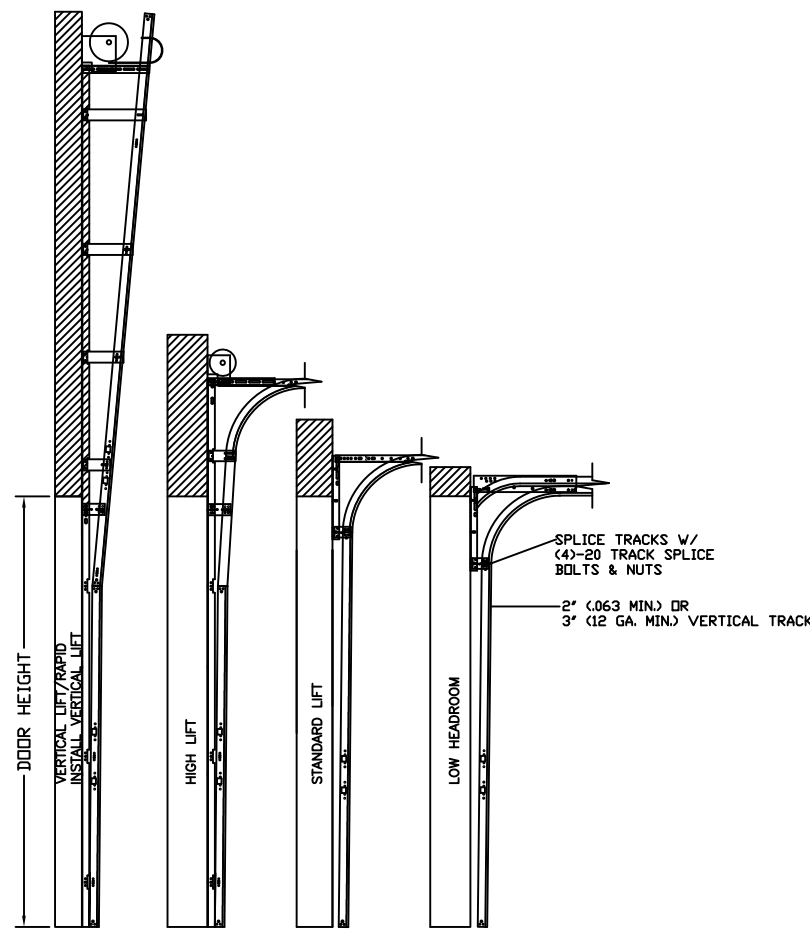
TABLE 1

DOOR HEIGHT	TRACK ATTACHMENT											SPLICE
	A	B	C	D	E	F	G	H	I	J	K	
6' 6"	10"	34"	58"									70"
7' 0"	10"	34"	58"									76"
7' 6"	10"	34"	58"									82"
8' 0"	10"	34"	58"									88"
8' 6"	10"	34"	58"	82"								94"
9' 0"	10"	34"	58"	82"								100"
9' 6"	10"	34"	58"	82"								106"
10' 0"	10"	34"	58"	82"								112"
10' 6"	10"	34"	58"	82"	100"							118"
11' 0"	10"	34"	58"	82"	106"							124"
11' 6"	10"	34"	58"	82"	100"							130"
12' 0"	10"	34"	58"	82"	106"							136"
12' 6"	10"	34"	58"	82"	98"	124"						142"
13' 0"	10"	34"	58"	82"	106"	130"						148"
13' 6"	10"	34"	58"	82"	98"	124"						154"
14' 0"	10"	34"	58"	82"	106"	130"						160"
15' 0"	10"	34"	58"	82"	106"	130"	154"					172"
16' 0"	10"	34"	58"	82"	106"	130"	154"					184"
17' 0"	10"	34"	58"	82"	106"	130"	154"	178"				196"
18' 0"	10"	34"	58"	82"	106"	130"	154"	178"				208"
19' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"			220"
20' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"			232"
21' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"	226"		244"
22' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"	226"		256"
23' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"	226"	250"	268"
24' 0"	10"	34"	58"	82"	106"	130"	154"	178"	202"	226"	250"	280"

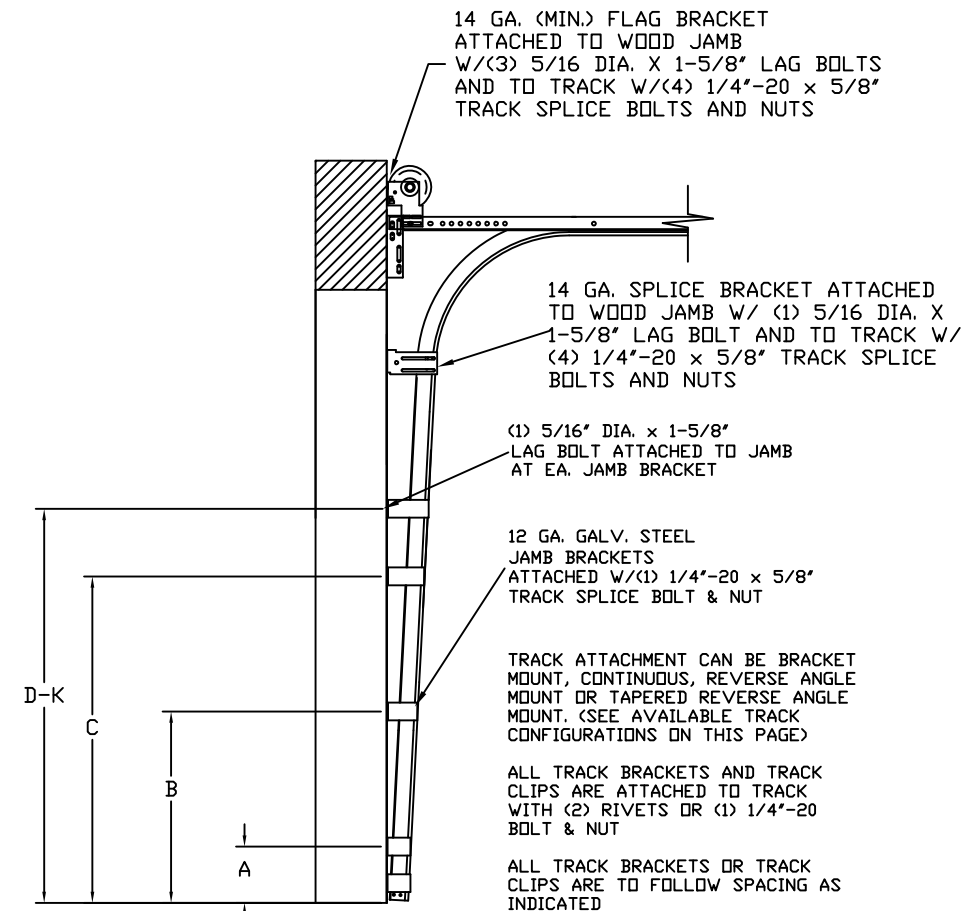
ALL TRACK ATTACHMENTS +/- 2" ALLOWED USING SYP OR SPF NO.2 OR BETTER ONLY

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"	-	25.3	28.4
9' 6"	37"	77"	-	25.0	28.0
9' 8"	38"	78"	-	24.7	27.7
9' 10"	39"	79"	-	24.4	27.3
10' 0"	40"	80"	-	24.1	27.0
10' 2"	41"	81"	-	23.8	26.6
10' 4"	42"	82"	-	23.5	26.3
10' 6"	43"	83"	-	23.2	26.0
10' 8"	44"	84"	-	22.9	25.7
10' 10"	45"	85"	-	22.7	25.4
11' 0"	46"	86"	-	22.4	25.1
11' 2"	47"	87"	-	22.1	24.8
11' 4"	48"	88"	-	21.9	24.5
11' 6"	49"	89"	-	21.6	24.2
11' 8"	50"	90"	-	21.4	24.0
11' 10"	51"	91"	-	21.2	23.7
12' 0"	48"	96"	-	20.1	22.5
13' 0"	36"	78"	120"	22.9	25.7
13' 2"	37"	79"	121"	22.9	25.7
13' 4"	38"	80"	122"	22.9	25.7
13' 6"	39"	81"	123"	22.9	25.7
13' 8"	40"	82"	124"	22.9	25.7
13' 10"	41"	83"	125"	22.9	25.7
14' 0"	42"	84"	126"	22.9	25.7
14' 2"	43"	85"	127"	22.7	25.4
14' 4"	44"	86"	128"	22.4	25.1
14' 6"	45"	87"	129"	22.1	24.8
14' 8"	46"	88"	130"	21.9	24.5
14' 10"	47"	89"	131"	21.6	24.2
14' 0"	48"	90"	132"	21.4	24.0
15' 2"	49"	91"	133"	21.2	23.7
15' 4"	50"	92"	134"	20.9	23.4
15' 6"	51"	93"	135"	20.7	23.2
15' 8"	52"	94"	136"	20.5	22.9
15' 10"	53"	95"	137"	20.3	22.7
16' 0"	48"	96"	144"	20.1	22.5
16' 2"	49"	97"	145"	20.0	22.4



AVAILABLE TRACK CONFIGURATIONS N.T.S.



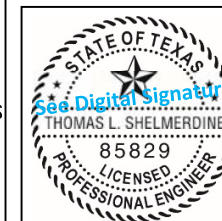
TRACK CONFIGURATION FOR UP TO 24' TALL DOORS SEE TABLE 1 ON PAGE 4

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
16'2 x 24'

DESIGN LOADS
+20.0 PSF
-22.4 PSF

TEST LOADS
+30.0 PSF
-33.6 PSF



This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

Thomas L. Shelmerdine, PE (TX PE #85829)
Structural Solutions, PA (TX Firm #F-004063)
5921-G W. Friendly Ave., Greensboro, NC 27410 TX



MODEL 1000 AMARR 2432

SIZE	DRAWN BY	DRD	DATE	6/14/18	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	12/02/16	IBC-1016-120-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 4 OF 4