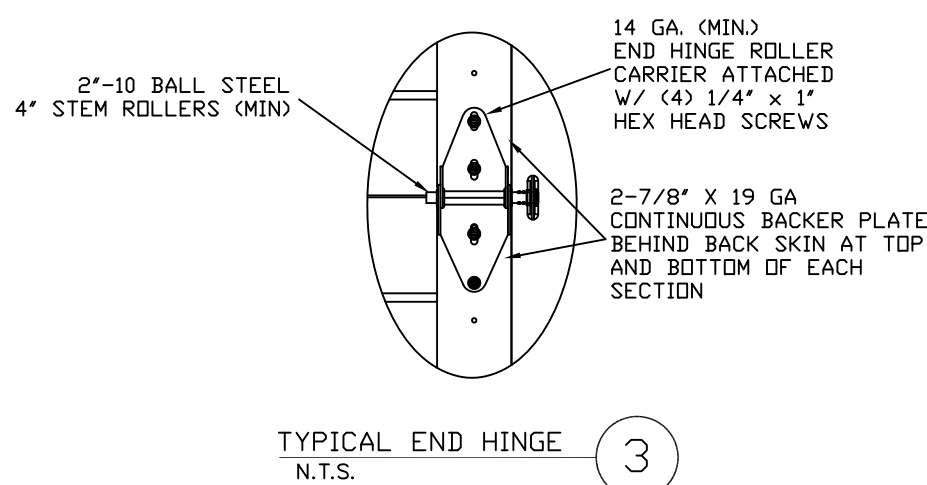
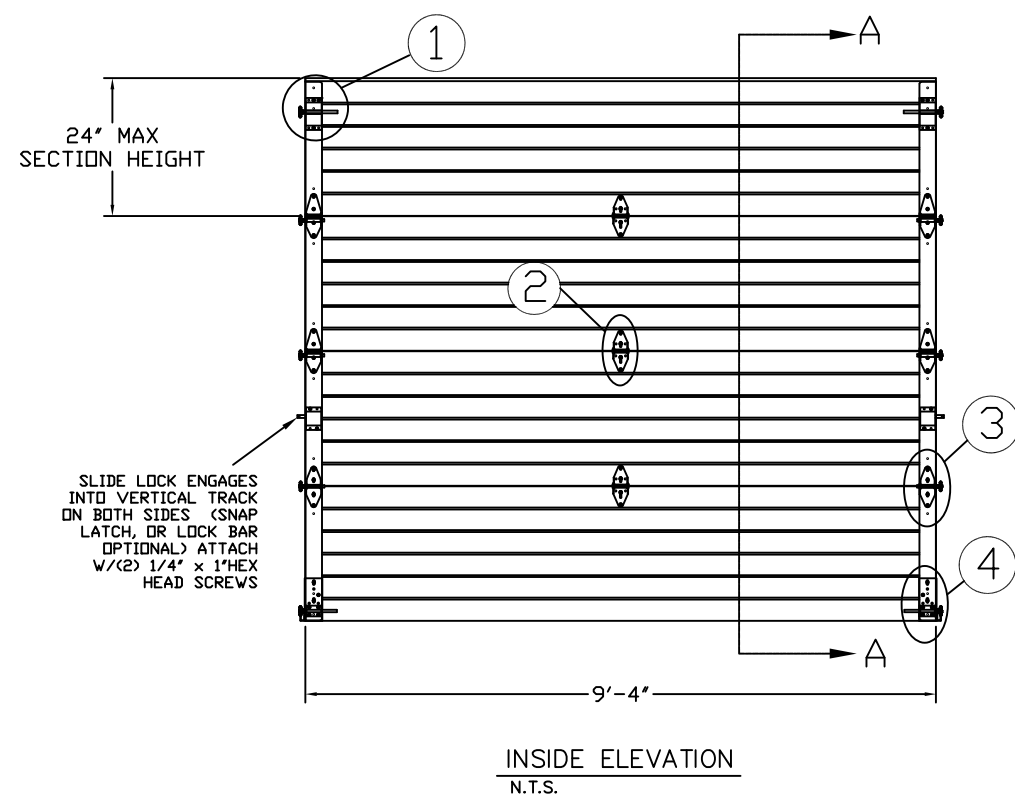
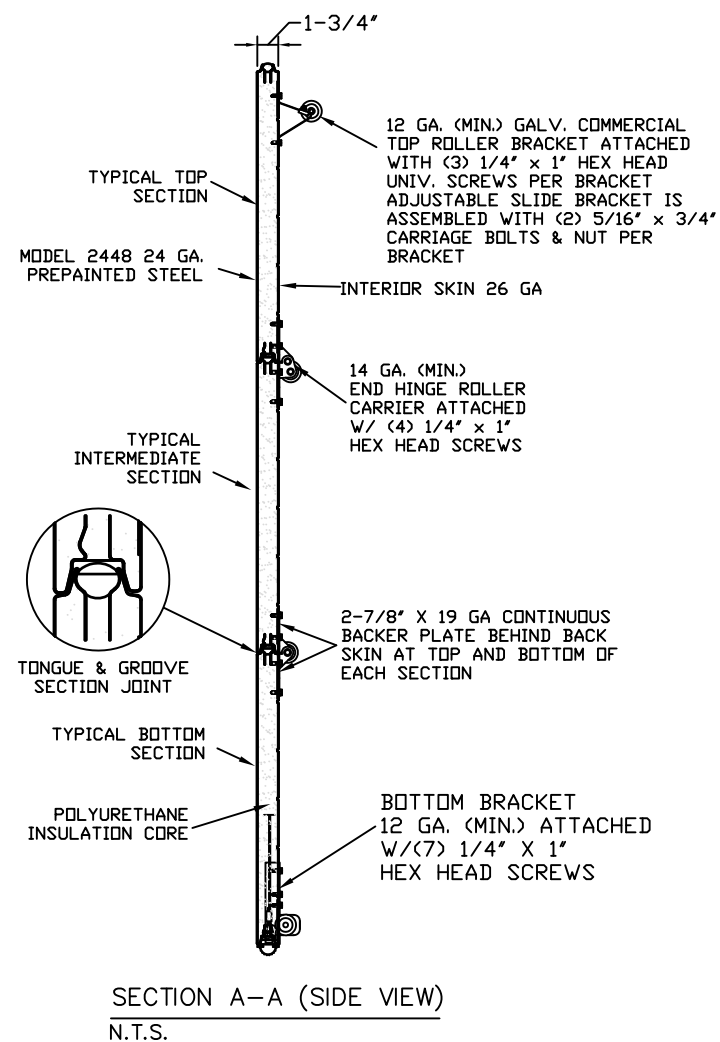
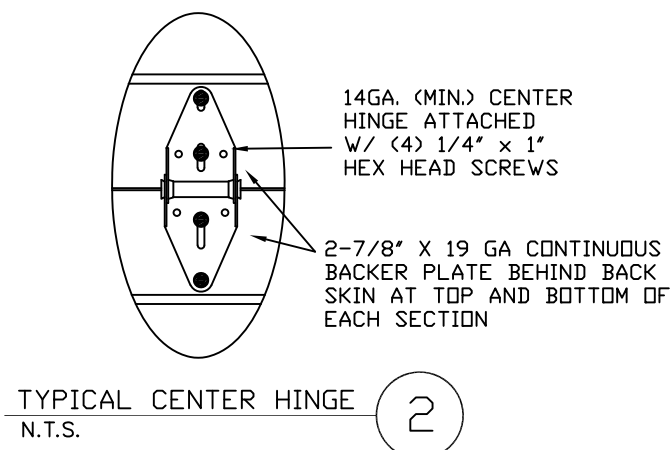
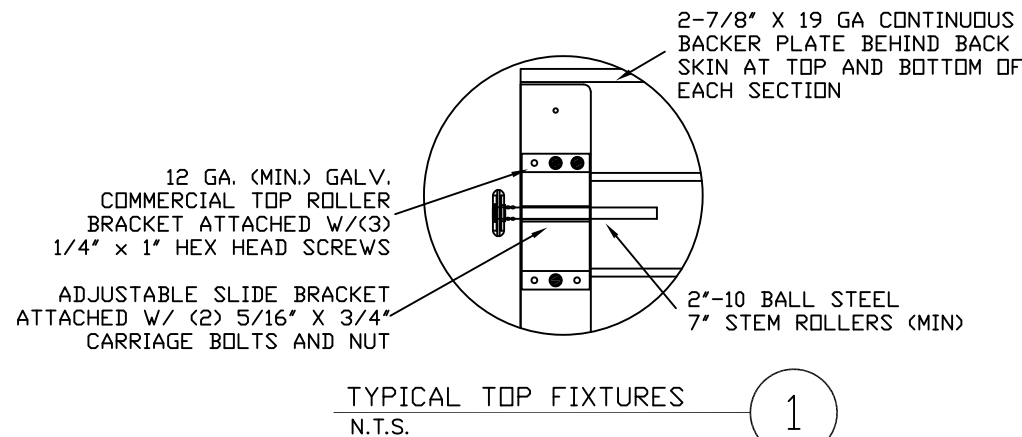
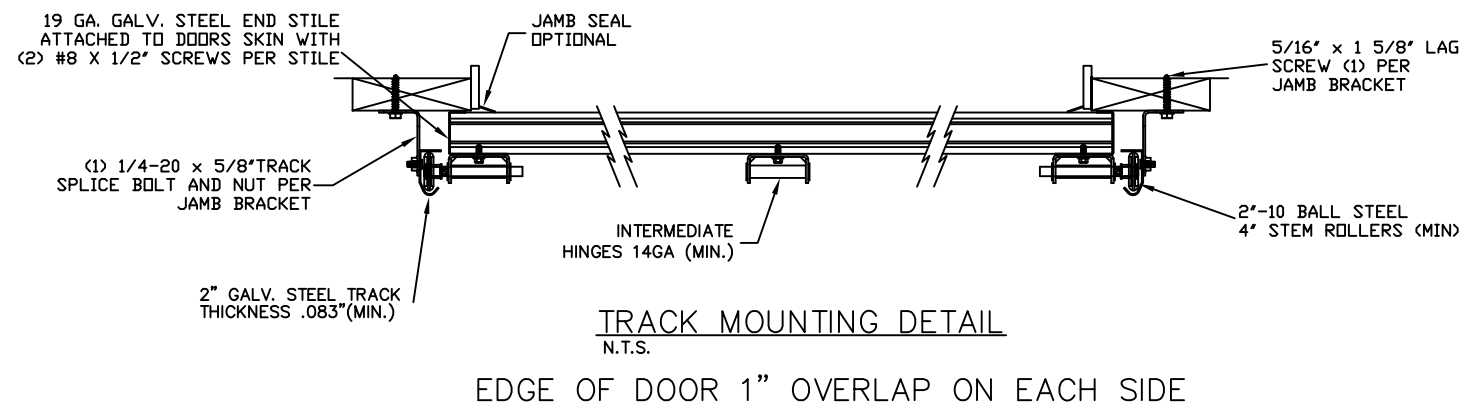
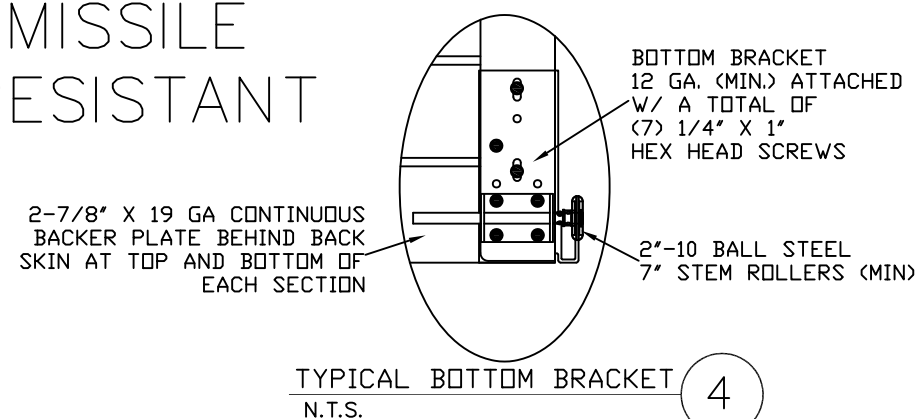




LARGE MISSILE IMPACT RESISTANT



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 7-22 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT LESS THAN 10 DEGREES SLOPE):

WIND SPEED (MPH)	181	164	156	149	143
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
9'4" x 24'

DESIGN LOADS
+28.1 PSF
-33.0 PSF

TEST LOADS
+42.2 PSF
-49.5 PSF

Thomas L Shelmerdine

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FL

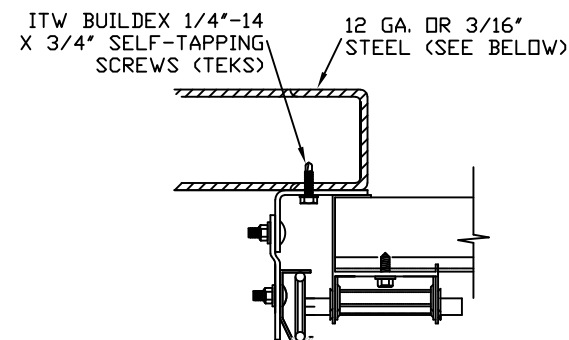
This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

Digitally signed by Thomas L. Shelmerdine
DN: c=US, o=Unaffiliated, dnQualifier=A01410D000001938E1ECCEA0007AC78, cn=Thomas L. Shelmerdine
Date: 2025.08.21 14:53:19 -0400

AMARR 2448

SIZE	DRAWN BY	DRC	DATE	07/24/25	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	07/24/25	IBC-4809-140-00-1
AMARR COMPANY					SHEET 1 OF 3
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					

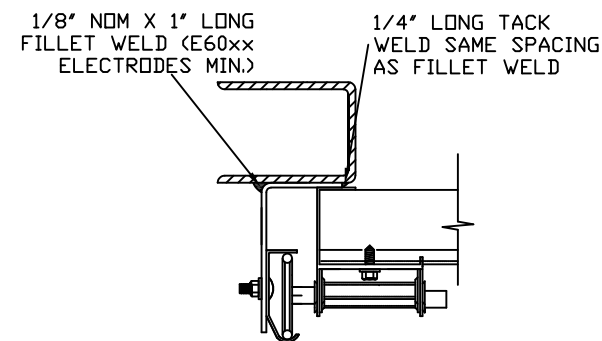
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

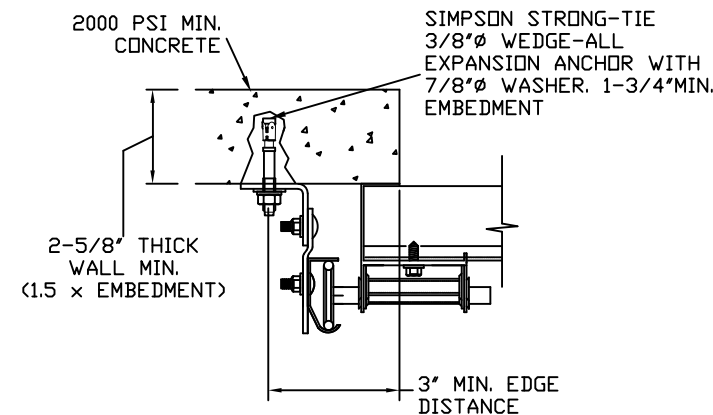
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6"
FROM ENDS AND 20" O.C.
REFER TO NOTES: 1, 2 AND 5

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



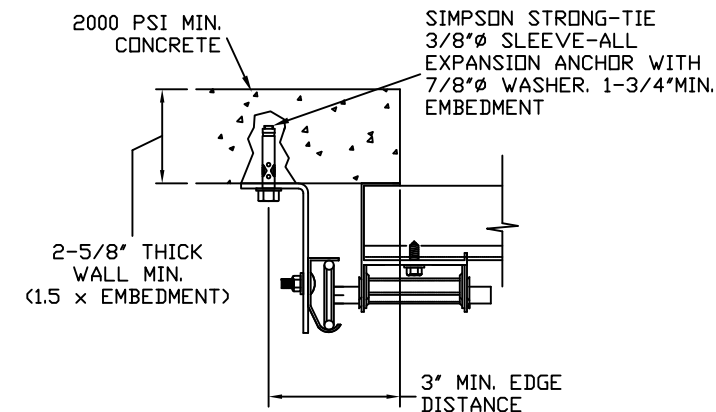
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND
TAPERED ANGLE MOUNT AVAILABLE

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: +131.1 LBS/FT & -154.0 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 24 GA. MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

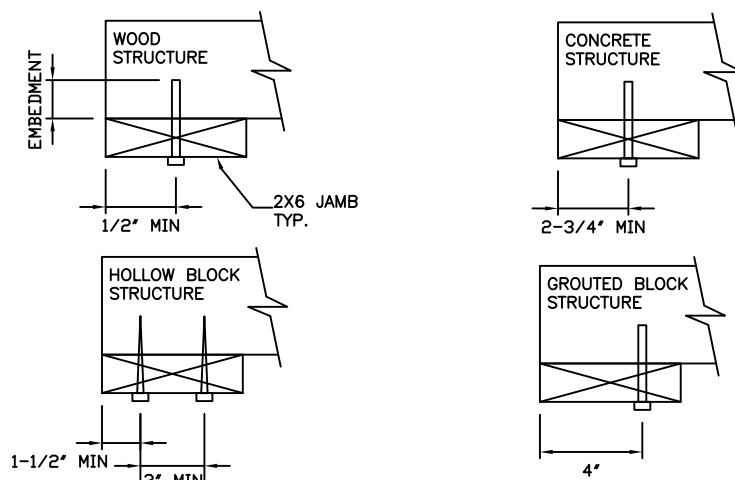
WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

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)

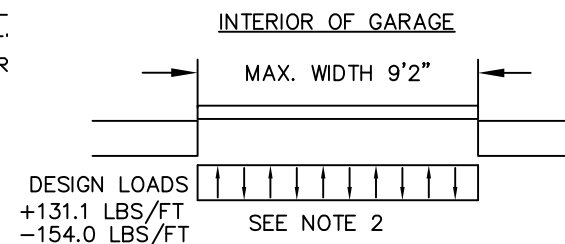
2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART)
AT 24" O.C. (1 1/2" EMBEDMENT)
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART) AT 24" O.C. (1 1/4" EMBEDMENT)
2 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



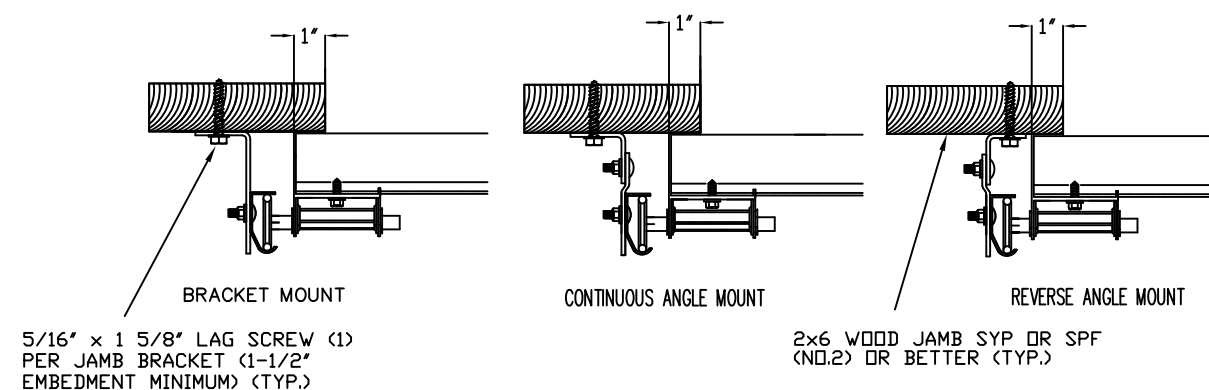
NOTES:

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. EGDE 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

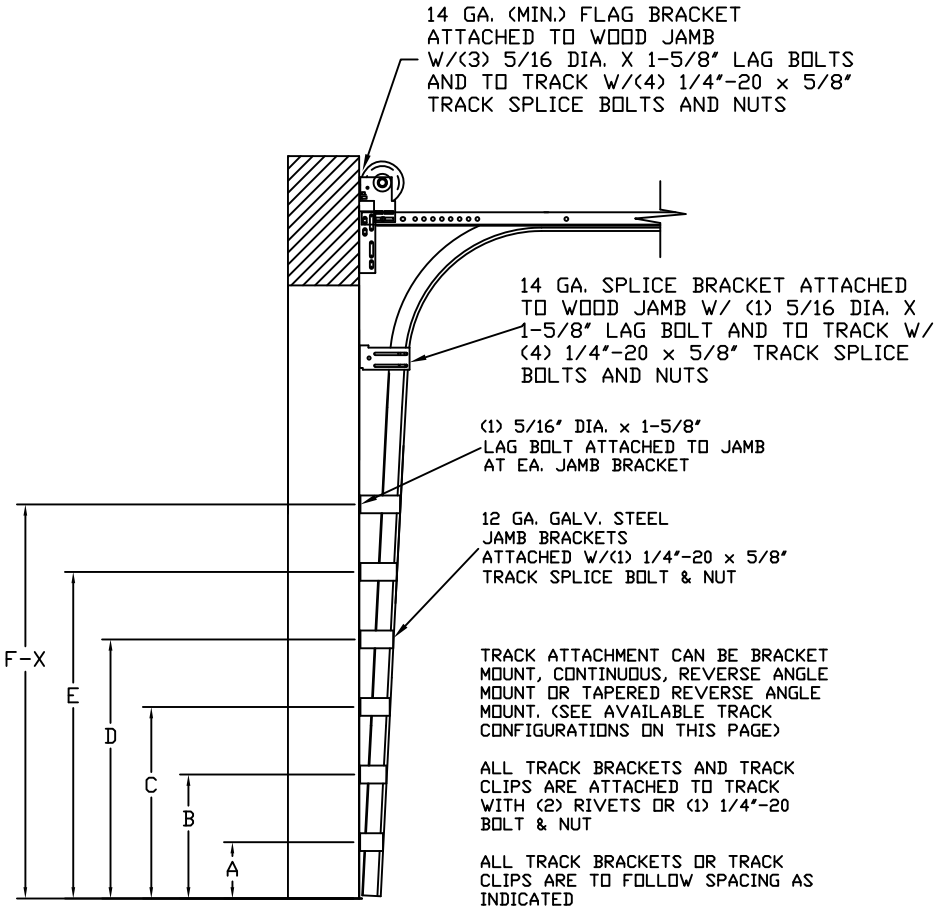
FOR LAG SCREWS & BRACKET SPACING SEE PAGE 3 FOR TRACK CONFIGURATION DETAIL



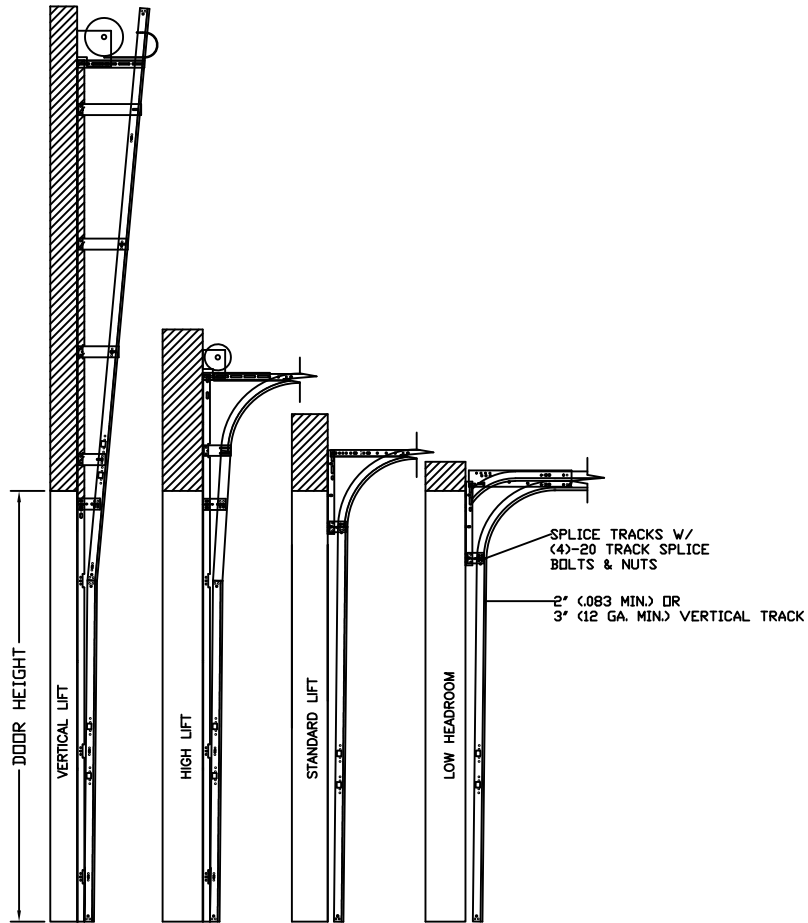
REV	DESCRIPTION OF REVISIONS	DATE	BY
A			
MAX SIZE 9'4 x 24' DESIGN LOADS +28.1 PSF -33.0 PSF TEST LOADS +42.2 PSF -49.5 PSF THOMAS L. SHELMERDINE LICENSE No. 48579 STATE OF FLORIDA PROFESSIONAL ENGINEER This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies. Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410 FL			
Amarr AMARR 2448			
SIZE	DRAWN BY	DRC	DATE
B	8	RLR	07/24/25
CHECKED BY		DATE	DRAWING NUMBER
AMARR COMPANY		07/24/25	IBC-4809-140-00-1
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 2 OF 3

TABLE 1

Section	Center Stile		Max Design	
	Locations		Loads Allowed	
Width (ft)	1st (in)	Positive (PSF)	Negative (PSF)	
6'0	36"	43.5	51.0	
6'2	37"	42.3	49.7	
6'4	38"	41.2	48.4	
6'6	39"	40.1	47.1	
6'8	40"	39.1	46.0	
6'10	41"	38.1	44.8	
7'0	42"	37.2	43.8	
7'2	43"	36.3	42.7	
7'4	44"	35.5	41.8	
7'6	45"	34.7	40.8	
7'8	46"	34.0	39.9	
7'10	47"	33.2	39.1	
8'0	48"	32.5	38.3	
8'2	49"	31.9	37.5	
8'4	50"	31.2	36.7	
8'6	51"	30.6	36.0	
8'8	52"	30.0	35.3	
8'10	53"	29.5	34.6	
9'0	54"	29.0	34.0	
9'2	55"	28.5	33.4	
9'4	56"	28.1	33.0	



TRACK CONFIGURATION FOR UP TO 24' TALL DOORS
SEE TABLE 2



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

TABLE 2

DOOR																									SPLICE
HEIGHT	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	S
7'	3.5	10"	22"	34"	46"	58"	70"																		76"
8'	3.5	10"	22"	34"	46"	58"	70"	82"																	88"
9'	3.5	10"	22"	34"	46"	58"	70"	82"	94"																100"
10'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"															112"
11'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"														124"
12'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"													136"
13'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"												148"
14'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"											160"
15'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"										172"
16'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"									184"
17'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"								196"
18'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"							208"
19'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"						220"
20'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"					232"
21'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"				244"
22'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"			256"
23'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"		268"
24'	3.5	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"	274"	280"

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

REV	DESCRIPTION OF REVISIONS	DATE	BY
A			

MAX SIZE
9'4 x 24'

DESIGN LOADS
+28.1 PSF
-33.0 PSF

TEST LOADS
+42.2 PSF
-49.5 PSF

THOMAS L. SHELDERDINE
LICENSE
No. 48579
See Digital Signature
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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Amarr

AMARR 2448

SIZE	DRAWN BY	DRC	DATE	07/24/25	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	07/24/25	IBC-4809-140-00-I
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 3 OF 3