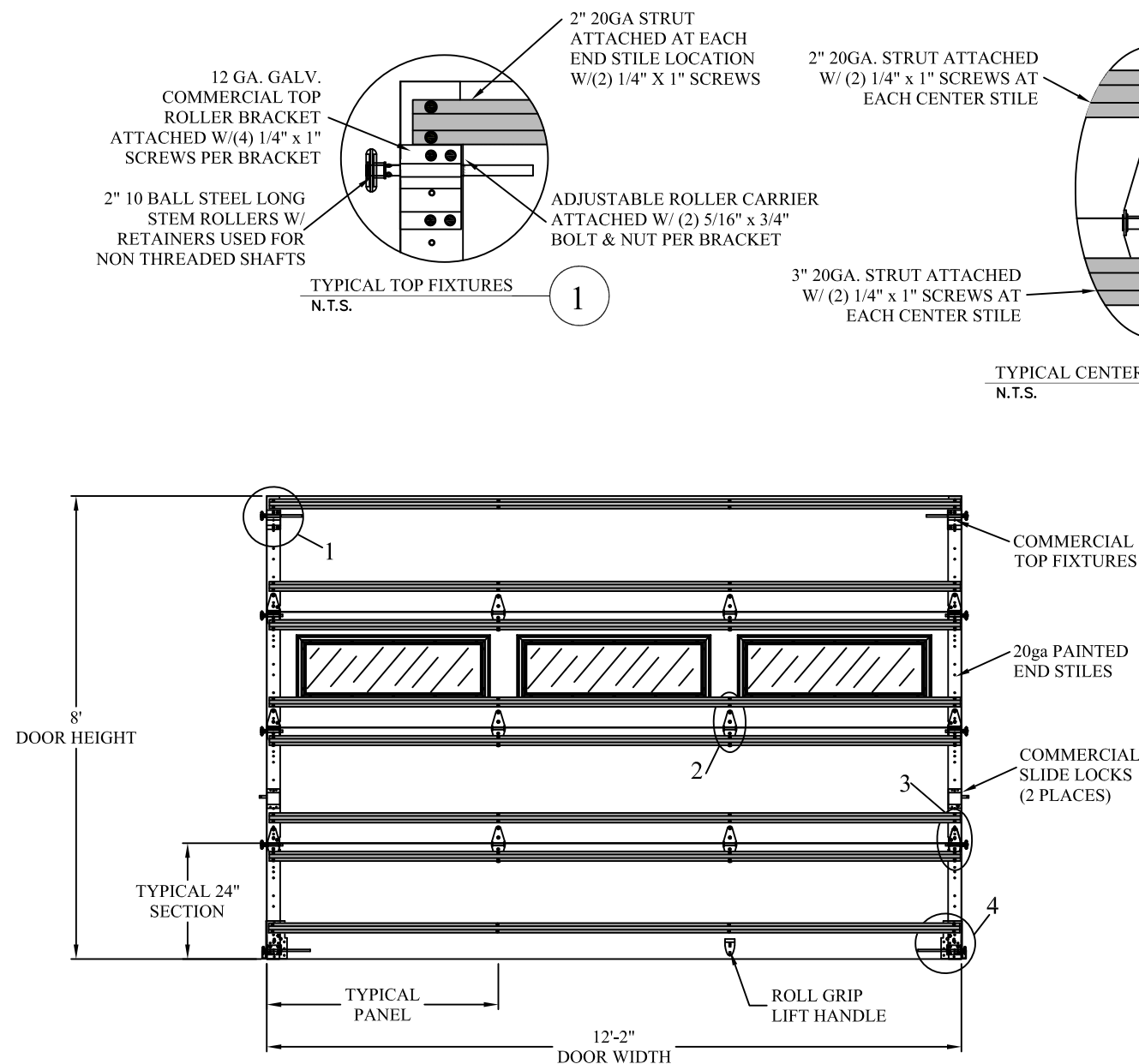
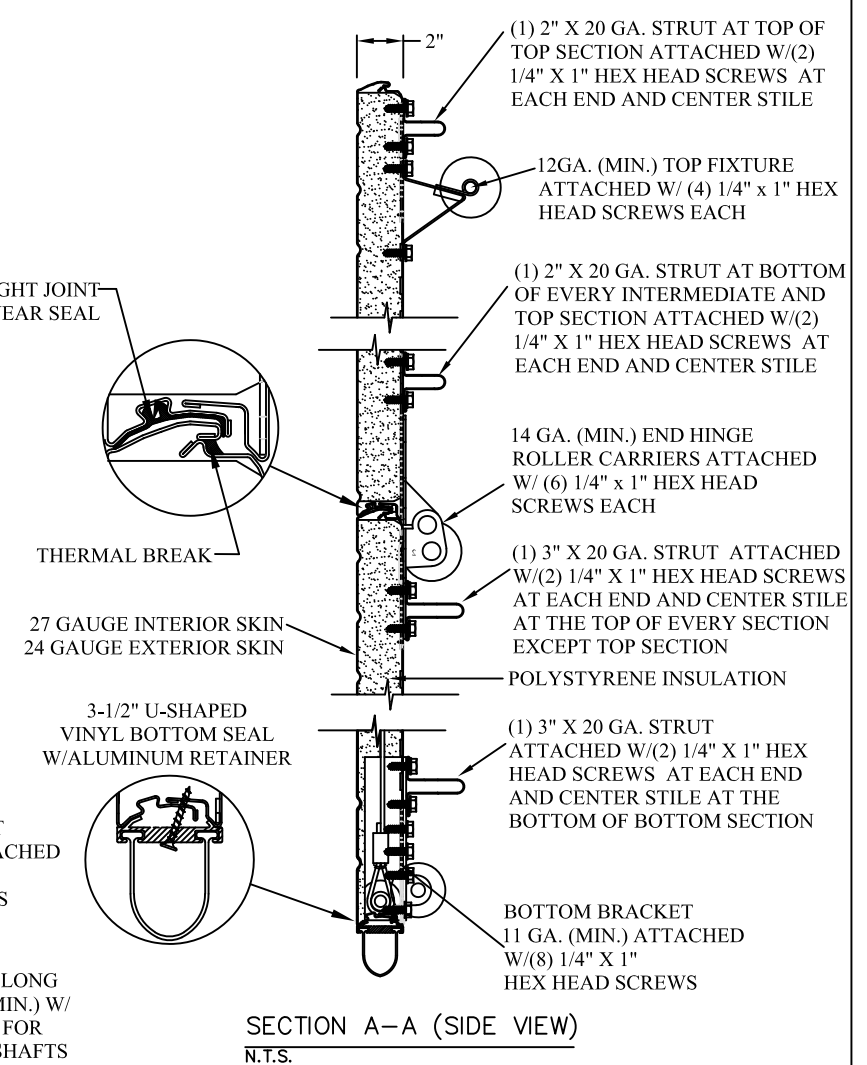
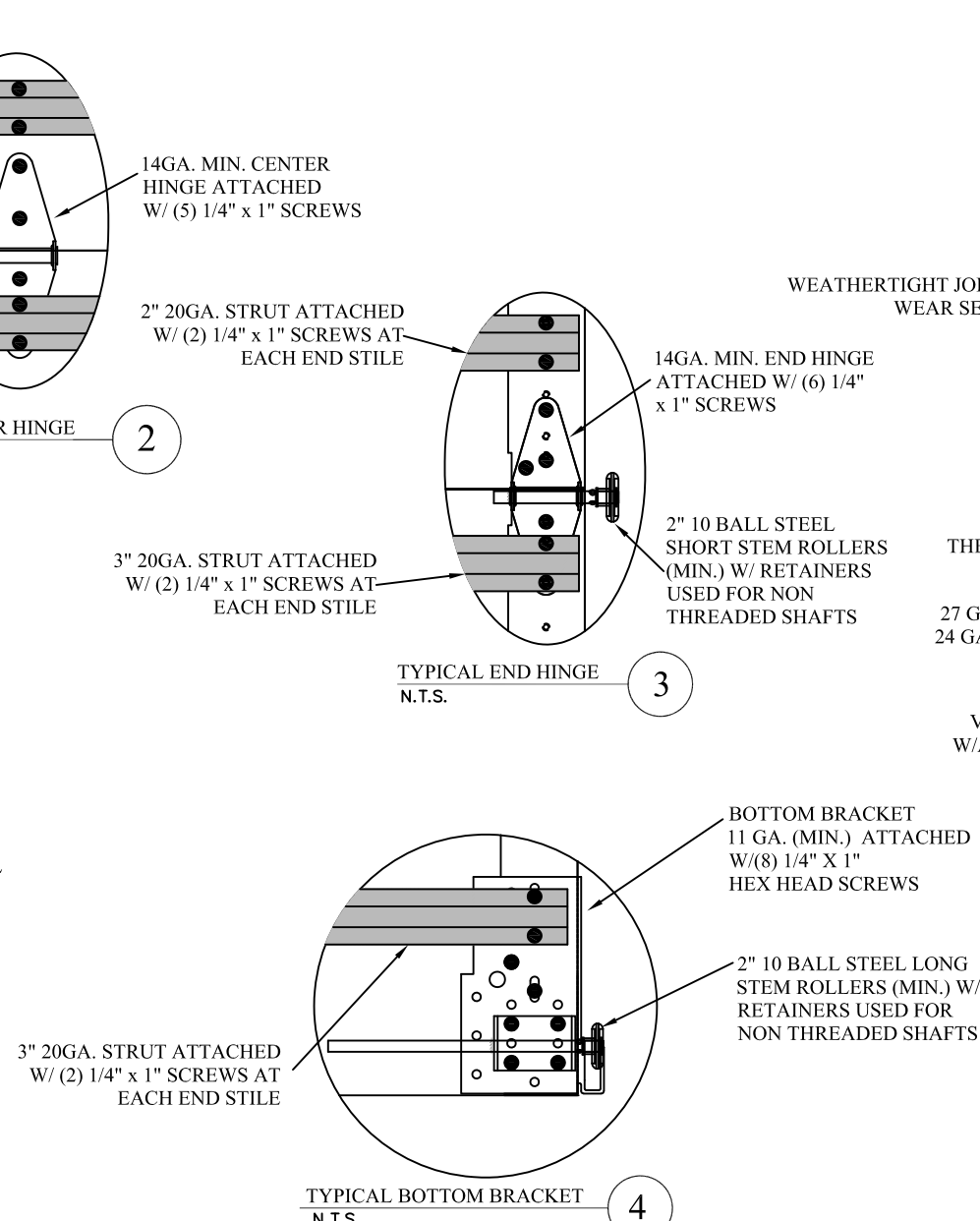
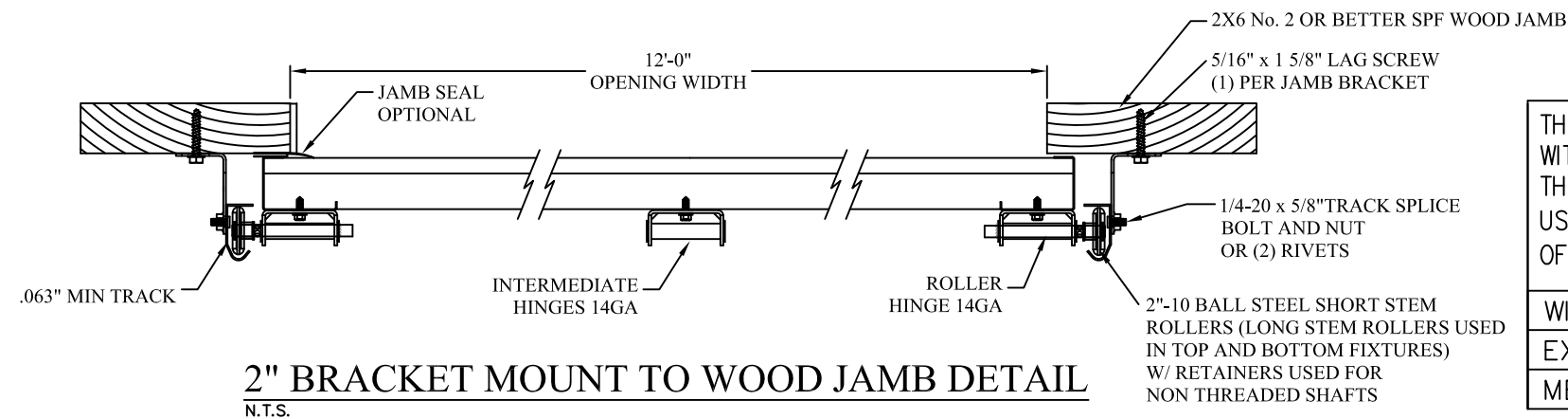




DOOR INTERIOR ELEVATION
N.T.S.



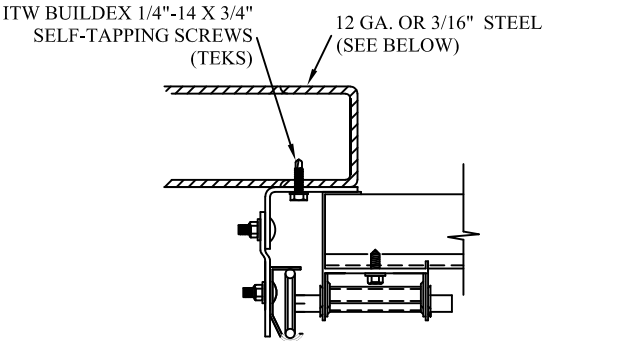
LARGE MISSILE IMPACT RESISTANT

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

WIND SPEED (MPH)	195	177	168	161	154
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 24' DESIGN LOADS +32.0 PSF -36.7 PSF TEST LOADS +48.0 PSF -55.1 PSF LARGE MISSILE IMPACT RESISTANCE	 Thomas L Shelmerdine 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	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=North Carolina, dnQualifier=A01410D000001856487A7B100 125CE2, cn=Thomas L. Shelmerdine Date: 2023.09.27 15:47:58 -04'00'	FL
			
AMARR 2432			
SIZE	DRAWN BY	RLR	DATE 02/08/17
B	CHECKED BY	RLR	DATE 02/08/17
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, NC 27105			DRAWING NUMBER IBC-1012-150-15-1 SHEET 1 OF 4

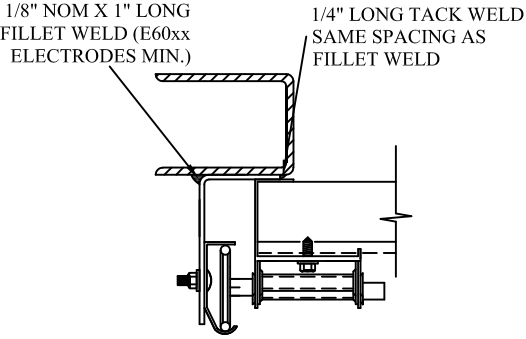
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

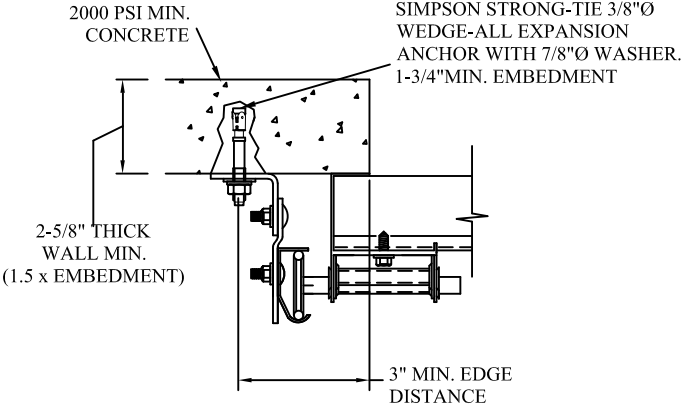
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 12" O.C.
REFER TO NOTES: 1, 2 AND 5

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



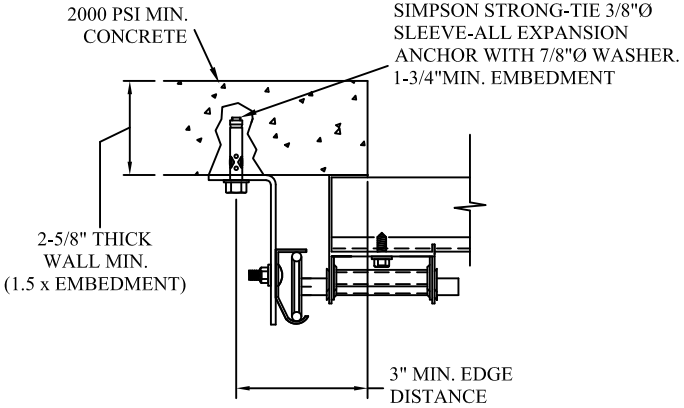
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED
ANGLE MOUNT AVAILABLE

STEEL FRAMING 12GA OR BETTER
1590 LBS./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 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

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 22" 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)

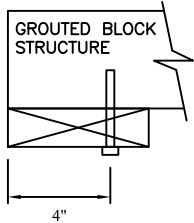
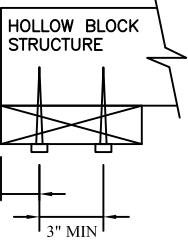
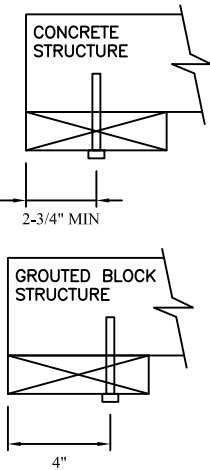
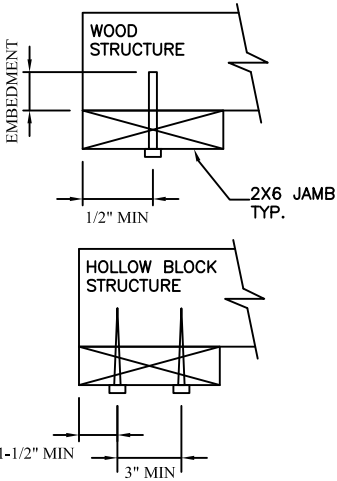
2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK

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

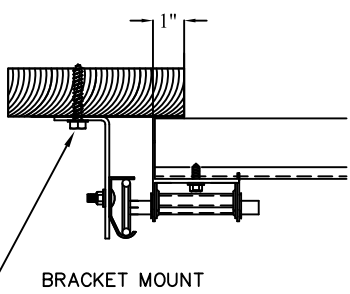


NOTES:

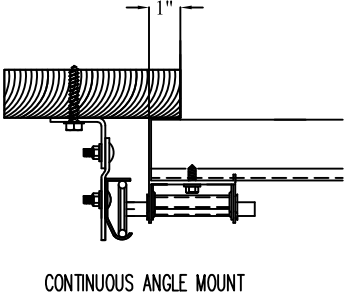
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EGDE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.
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

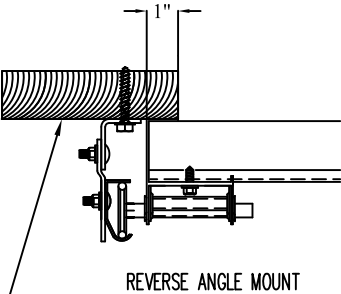
FOR LAG SCREWS & BRACKET SPACING SEE PAGE 4 FOR TRACK CONFIGURATION DETAIL



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



CONTINUOUS ANGLE MOUNT



REVERSE ANGLE MOUNT

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



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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

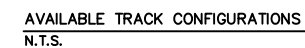
Amarr

AMARR 2432

SIZE	DRAWN BY	RLR	DATE	02/08/17	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	02/08/17	IBC-1012-150-15-I
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 2 OF 4



- OPTIONAL GLAZED SECTION W/LONG PANEL IMPACT WINDOWS
N.T.S.



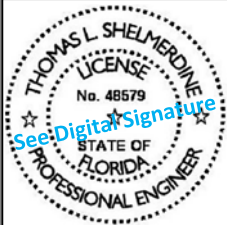
REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE, 12'2 x 24' DESIGN LOADS +32.0 PSF -36.7 PSF TEST LOADS +48.0 PSF -55.1 PSF LARGE MISSILE IMPACT RESISTANCE	 This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered 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 2432			
SIZE B	DRAWN BY RLR	DATE 02/08/17	DRAWING NUMBER IBC-1012-150-15-1
	CHECKED BY RLR	DATE 02/08/17	
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, NC 27105			SHEET 3 OF 4

TABLE 1

Section Width (ft)		Center Stile Locations		Max Design Loads Allowed	
		1st (in)	2nd (in)	Positive (PSF)	Negative (PSF)
6'	0"	36"	-	43.1	49.4
6'	2"	37"	-	41.9	48.1
6'	4"	38"	-	40.8	46.8
6'	6"	39"	-	39.7	45.6
6'	8"	40"	-	38.8	44.4
6'	10"	41"	-	37.8	43.4
7'	0"	42"	-	36.9	42.3
7'	2"	43"	-	36.0	41.3
7'	4"	44"	-	35.2	40.4
7'	6"	45"	-	34.4	39.5
7'	8"	46"	-	33.7	38.6
7'	10"	47"	-	33.0	37.8
8'	0"	48"	-	32.3	37.0
8'	2"	49"	-	31.6	36.3
8'	4"	50"	-	31.0	35.5
8'	6"	51"	-	30.4	34.9
8'	8"	52"	-	29.8	34.2
8'	10"	53"	-	29.2	33.5
9'	0"	54"	-	28.7	32.9
9'	2"	55"	-	28.2	32.3
9'	4"	36"	76"	40.6	46.6
9'	6"	37"	77"	40.1	46.0
9'	8"	38"	78"	39.5	45.4
9'	10"	39"	79"	39.0	44.8
10'	0"	40"	80"	38.6	44.2
10'	2"	41"	81"	38.1	43.7
10'	4"	42"	82"	37.4	42.9
10'	6"	43"	83"	36.8	42.3
10'	8"	44"	84"	36.3	41.6
10'	10"	45"	85"	35.7	41.0
11'	0"	46"	86"	35.2	40.3
11'	2"	47"	87"	34.6	39.7
11'	4"	48"	88"	34.1	39.2
11'	6"	49"	89"	33.6	38.6
11'	8"	50"	90"	33.2	38.0
11'	10"	51"	91"	32.7	37.5
12'	0"	48"	96"	32.1	36.8
12'	2"	49"	97"	32.0	36.7

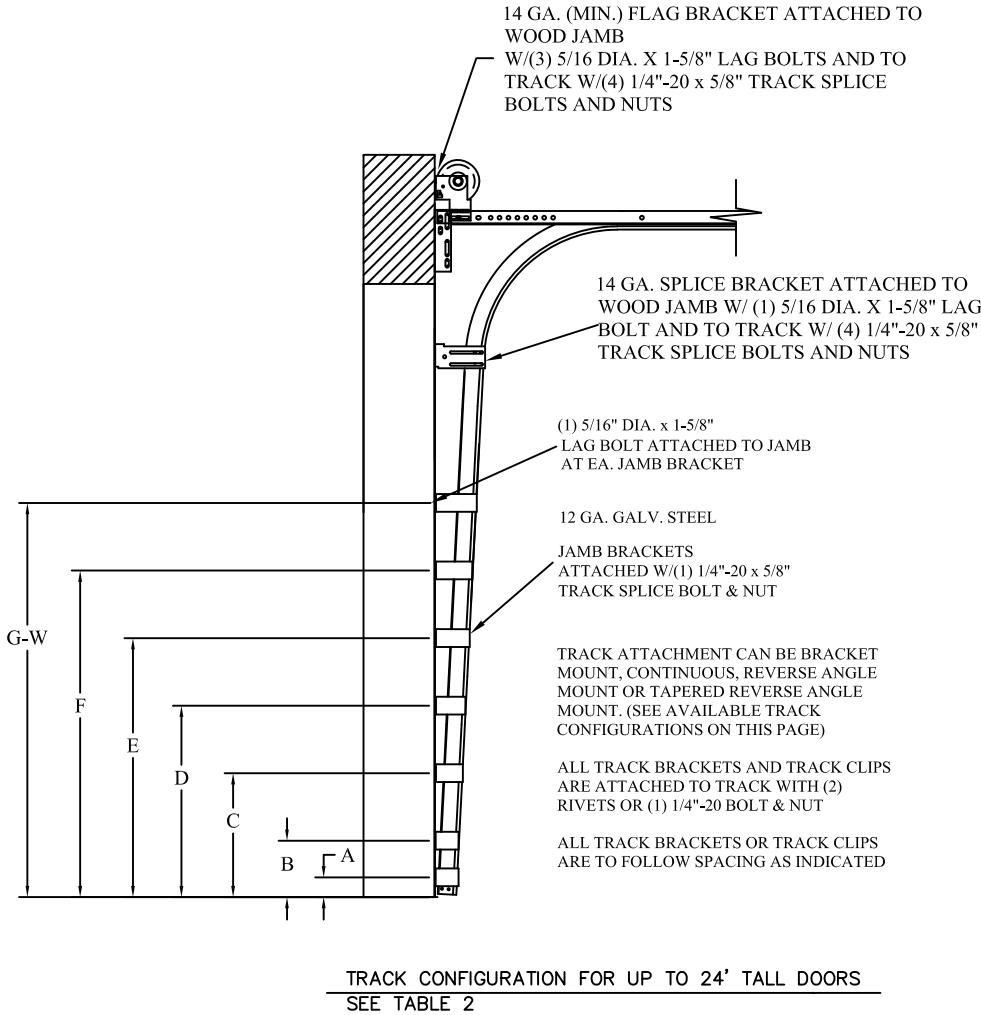


TABLE 2

DOOR HEIGHT		TRACK ATTACHMENT																						TYPICAL SPLICE	
7'	0"	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"	22"	34"	46"	58"																		76"
7'	6"	3.5"	10"	22"	34"	46"	58"	70"																	82"
8'	0"	3.5"	10"	22"	34"	46"	58"	70"																	88"
8'	6"	3.5"	10"	22"	34"	46"	58"	70"	82"																94"
9'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"																100"
9'	6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"															106"
10'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"															112"
11'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"														124"
12'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"													136"
13'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"												148"
14'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"											160"
15'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"										172"
16'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"									184"
17'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"								196"
18'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"							208"
19'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"						220"
20'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"					232"
21'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"				244"
22'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"			256"
23'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"		268"
24'	0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	166"	178"	190"	202"	214"	226"	238"	250"	262"	280"

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

TABLE 3

SECTION	
TOP	2"
	2"
11TH	3"
	2"
10TH	3"
	2"
9TH	3"
	2"
8TH	3"
	2"
7TH	3"
	2"
6TH	3"
	2"
5TH	3"
	2"
4TH	3"
	2"
3RD	3"
	2"
2ND	3"
	2"
BOTTOM	3"
	3"

REVDESCRIPTION OF REVISIONSDATEBY

MAX SIZE
12'2 x 24'

DESIGN LOADS
+32.0 PSF
-36.7 PSF

TEST LOADS
+48.0 PSF
-55.1 PSF

LARGE MISSILE IMPACT
RESISTANCE

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

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FL

Amarr

AMARR 2432

SIZE
B

DRAWN BY
RLR

DATE
02/08/17

CHECKED BY
RLR

DATE
02/08/17

DRAWING NUMBER
IBC-1012-150-15-I

AMARR COMPANY
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 4 OF 4