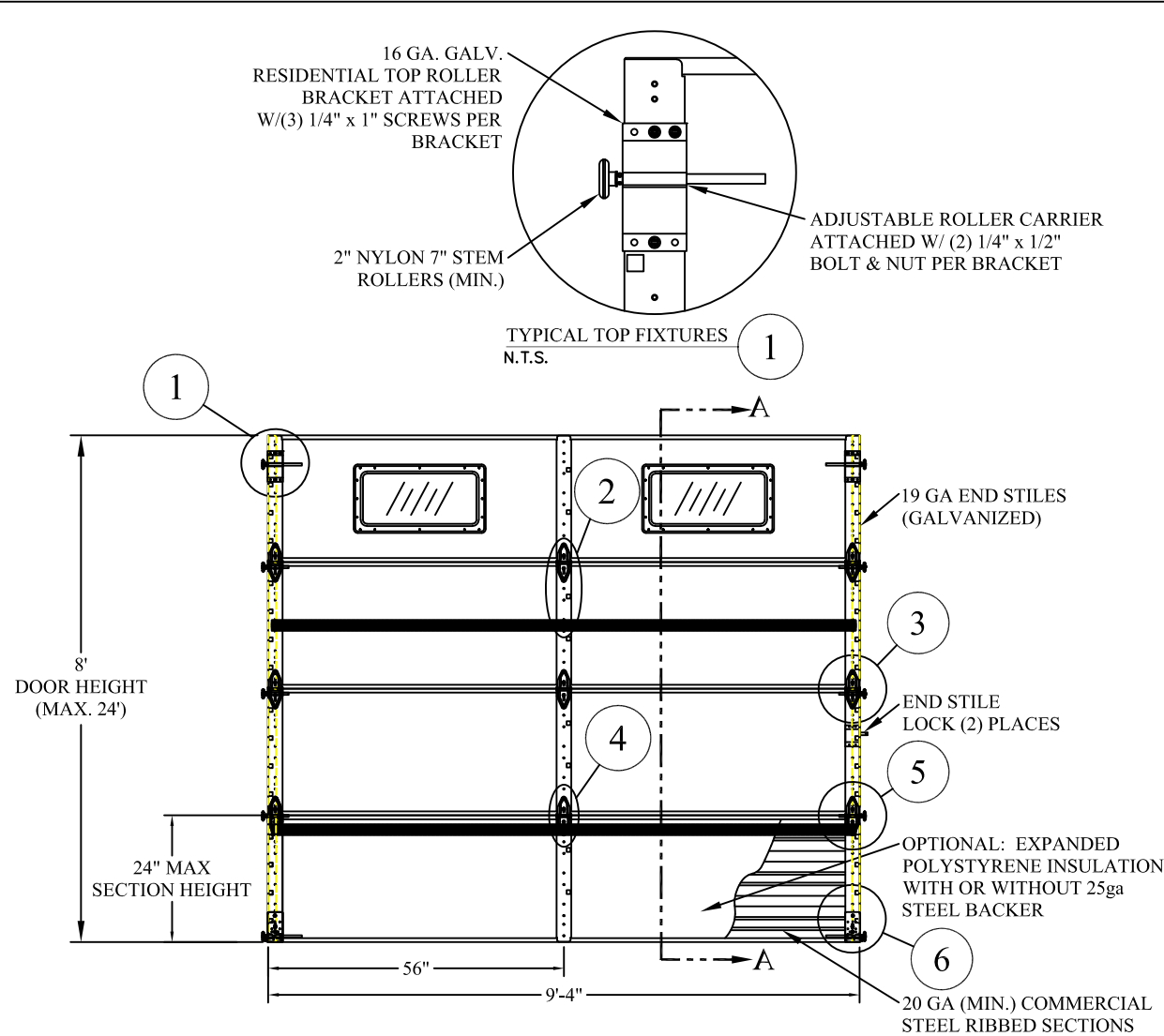
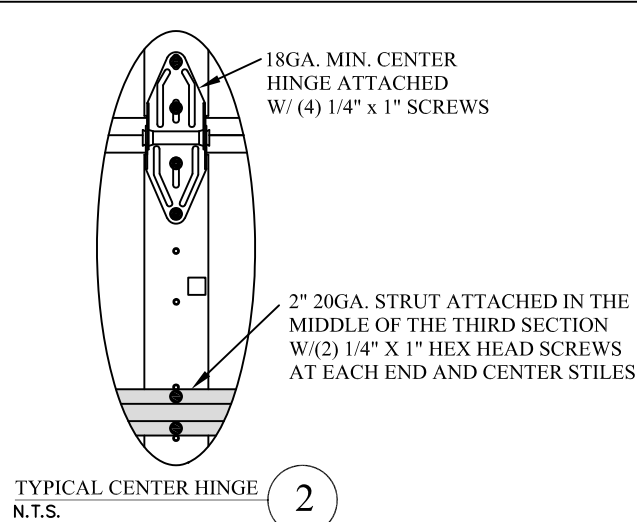
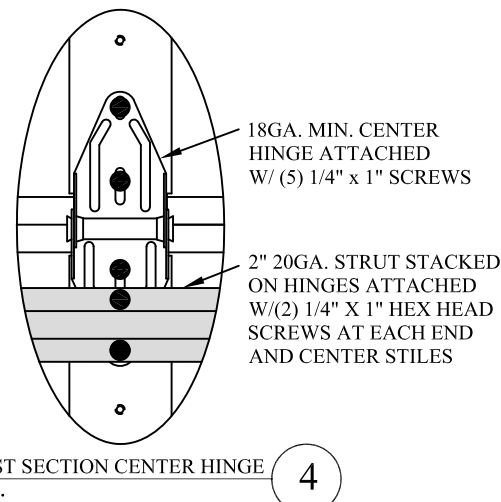




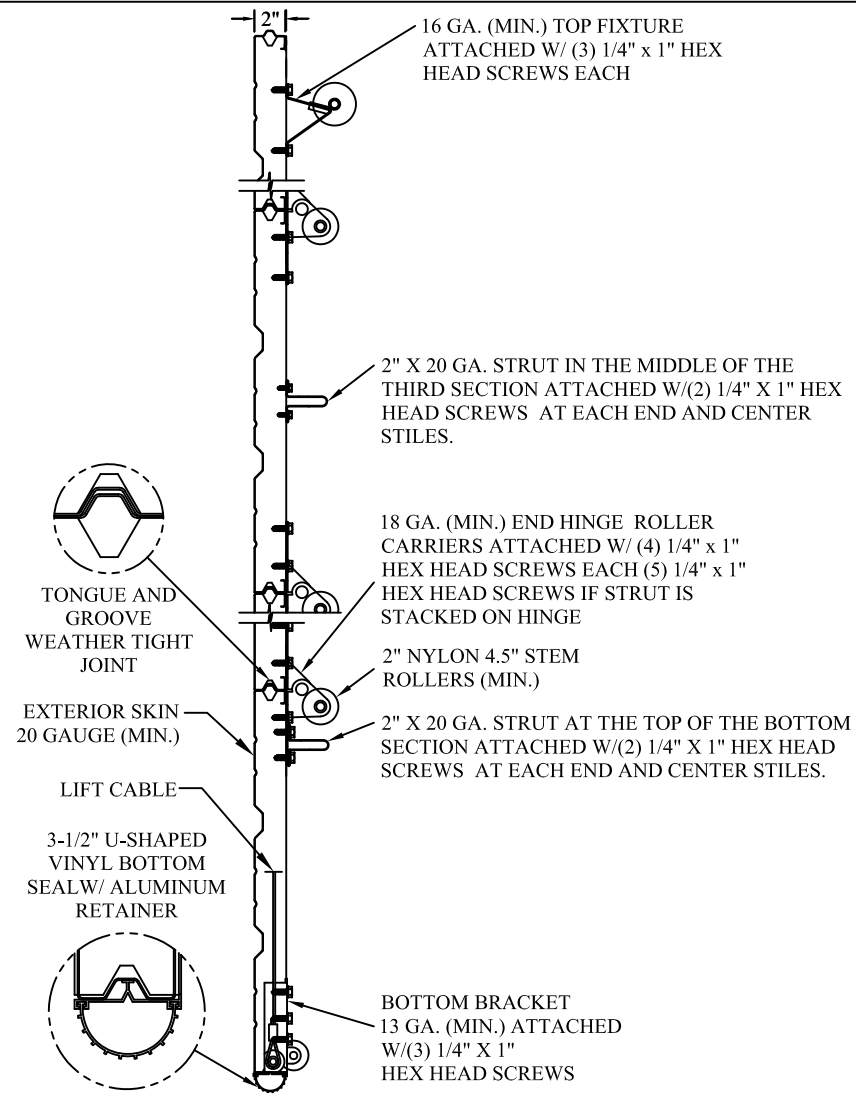
DOOR INTERIOR ELEVATION
N.T.S.



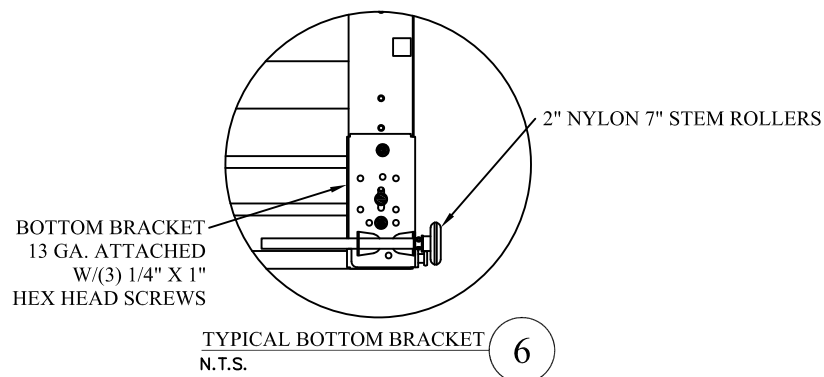
TYPICAL CENTER HINGE
N.T.S.



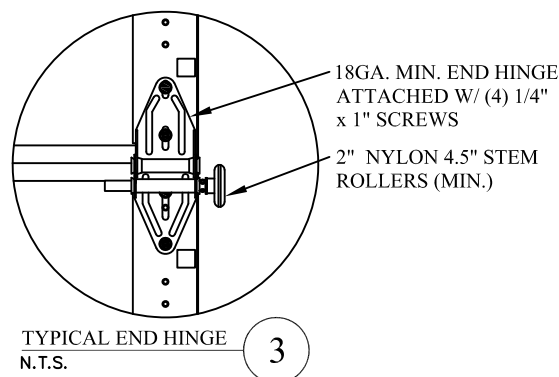
FIRST SECTION CENTER HINGE
N.T.S.



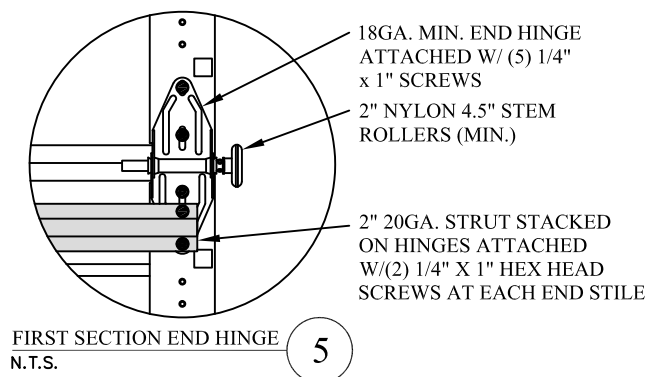
STEEL SECTION PROFILE



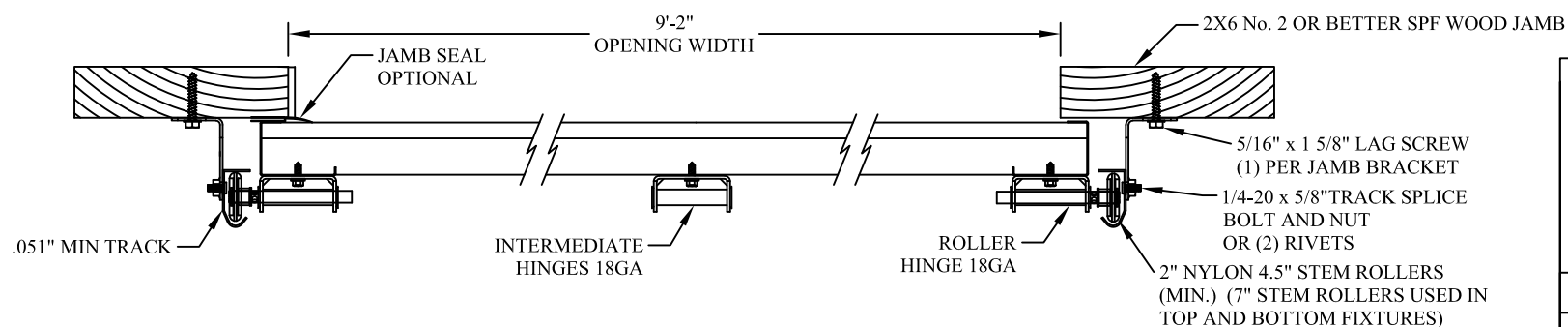
TYPICAL BOTTOM BRACKET
N.T.S.



TYPICAL END HINGE
N.T.S.



FIRST SECTION END HINGE
N.T.S.



2\"/>

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108. 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)	135	122	116	111	106
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
+15.6 PSF
-18.3 PSF

TEST LOADS
+23.4 PSF
-27.5 PSF

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Thomas L. Shelmerdine, PE (FL PE #0048579)
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dba Structural Solutions of North Carolina, Inc.
5921-G W. Friendly Ave., Greensboro, NC 27410

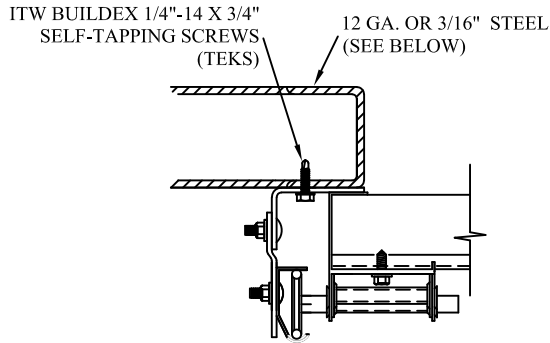
FL

Amarr

AMARR 2002, 2012, 2022

SIZE	DRAWN BY	DRD	DATE	5/23/18	DRAWING NUMBER
B	CHECKED BY	DLJ	DATE	7/24/18	IBC-2009-104-11-R
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 1 OF 4

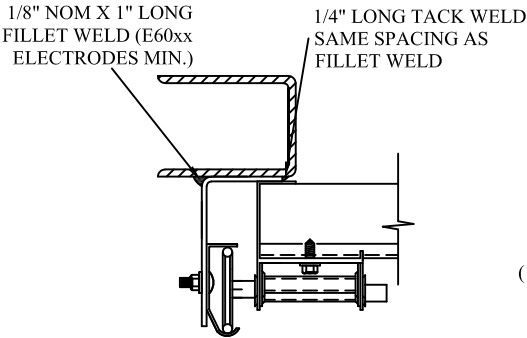
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

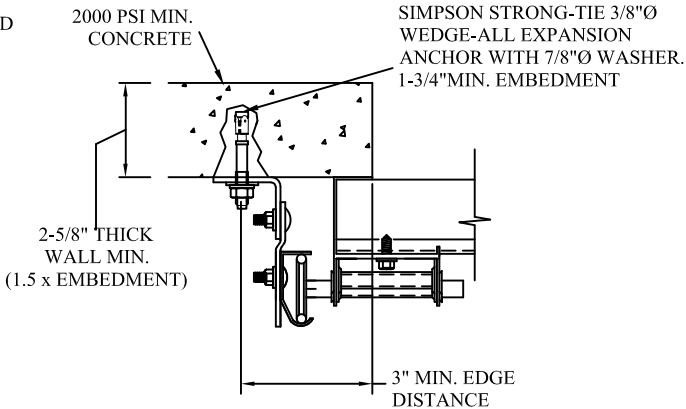
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS
AND 24" O.C.
REFER TO NOTES: 1, 2 AND 5

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



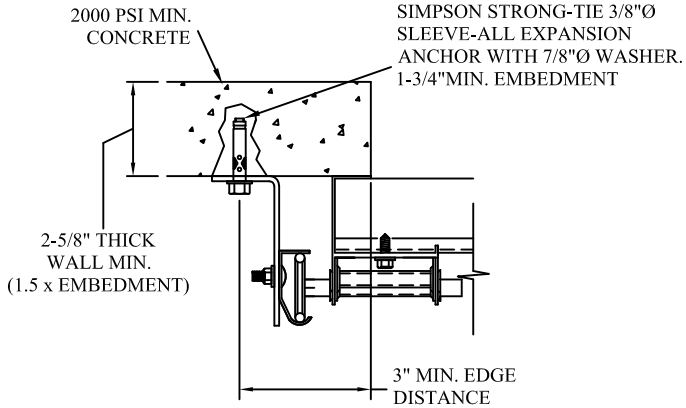
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED
ANGLE MOUNT AVAILABLE

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

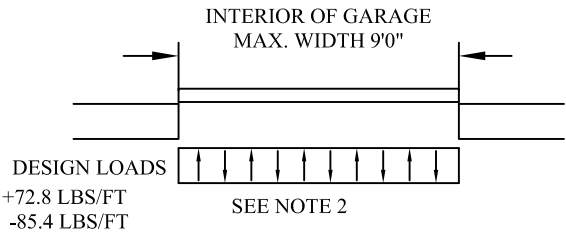
2000 PSI CONCRETE OR GREATER
336 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6"
FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

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: +72.8 LBS/FT AND -85.4 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 20 GA. (.033) MIN. EXTERIOR SKIN ROLLED FORMED, GALVANIZATION W/ BAKED ON POLYESTER FINISH
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

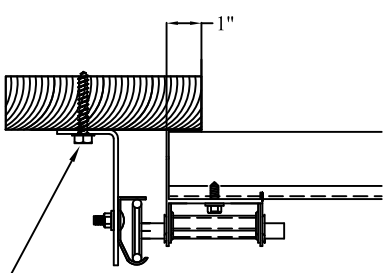
NOTES:

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.



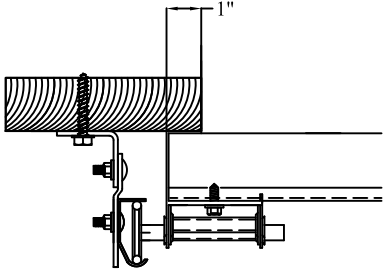
TRACK CONNECTION TO WOOD JAMB OPTIONS

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



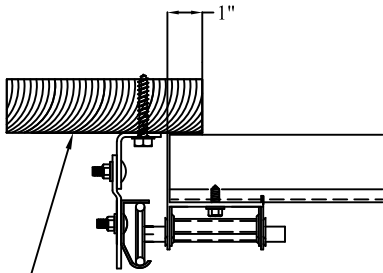
BRACKET MOUNT

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



CONTINUOUS ANGLE MOUNT

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



REVERSE ANGLE MOUNT

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

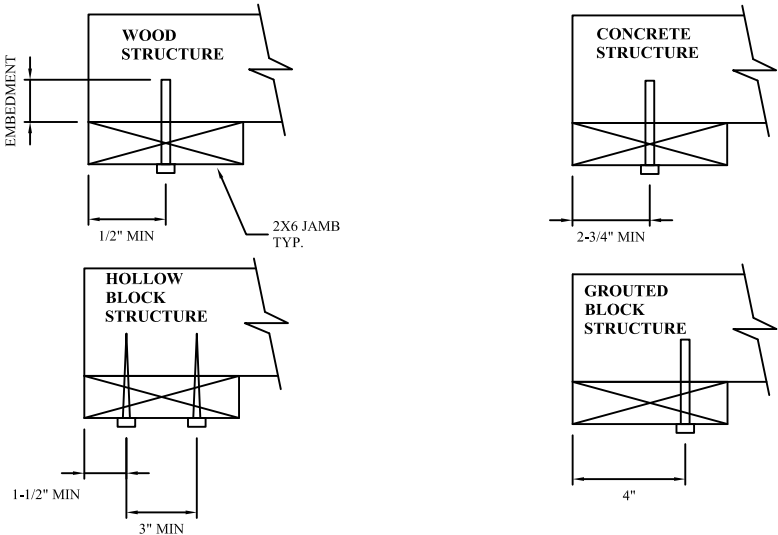
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

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



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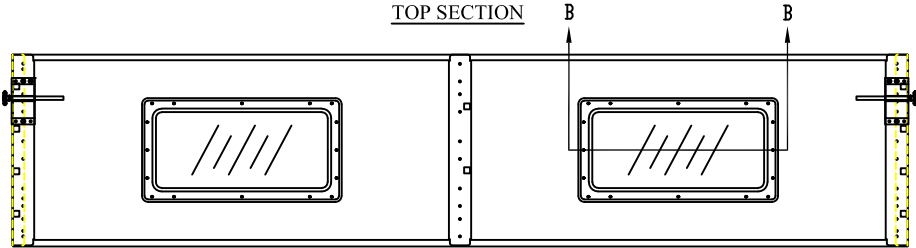
Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)
dba Structural Solutions of North Carolina, Inc.
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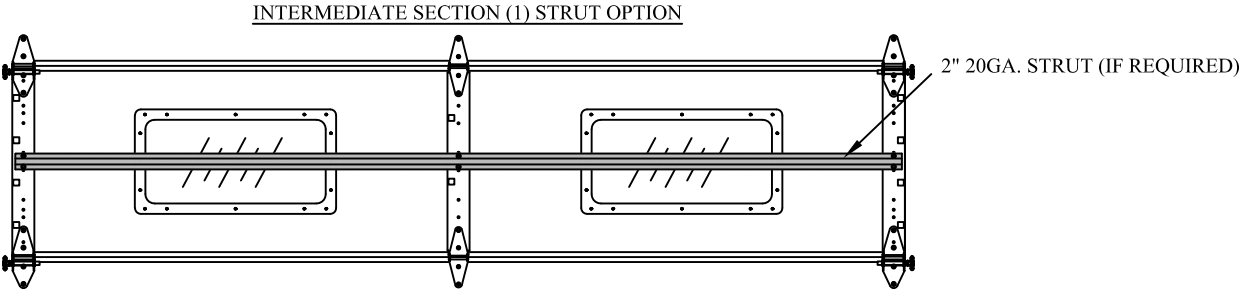
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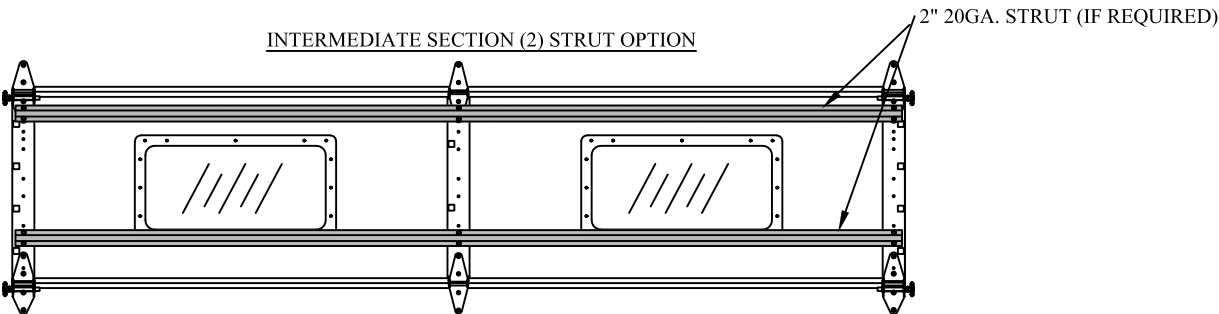
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B	CHECKED BY	DLJ	DATE	7/24/18	IBC-2009-104-11-R
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 2 OF 4



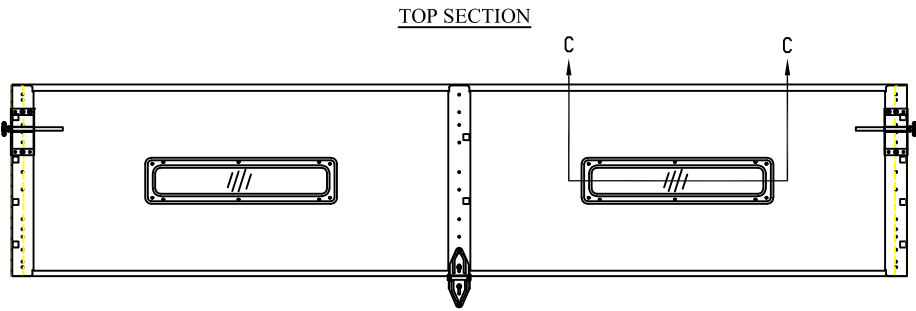
OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOW LAYOUT
N.T.S.



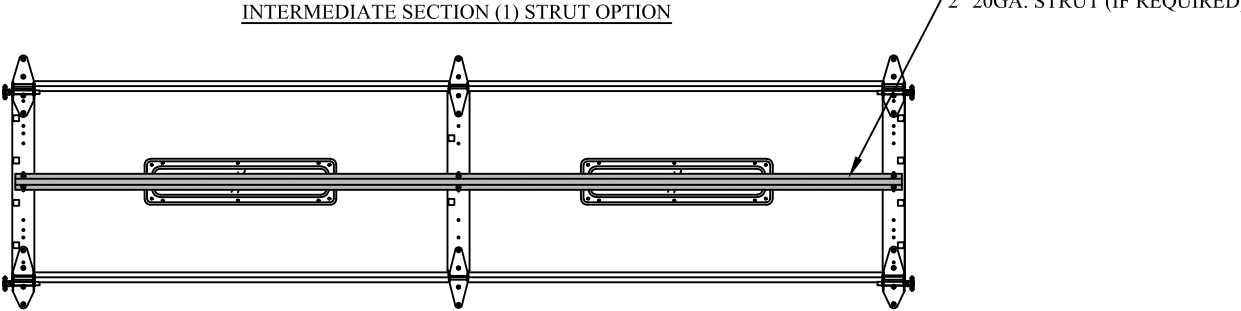
OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS AND STRUT LAYOUT
N.T.S.



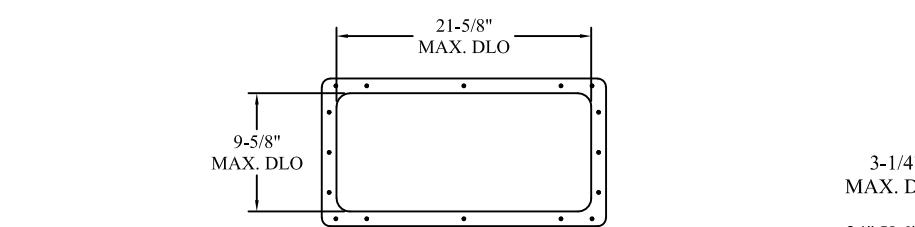
OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS AND STRUT LAYOUT
N.T.S.



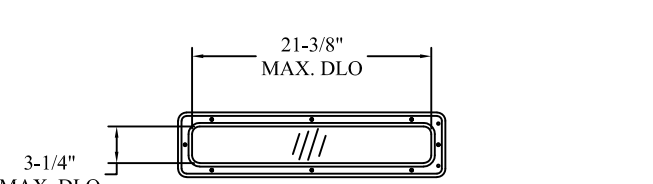
OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOW LAYOUT
N.T.S.



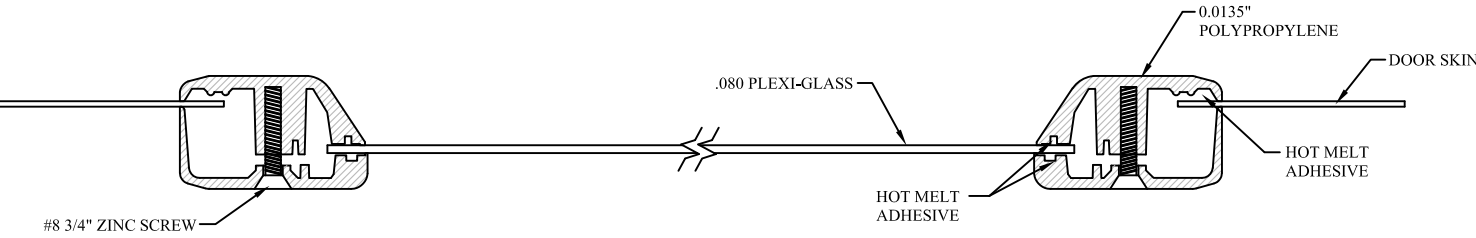
OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS AND STRUT LAYOUT
N.T.S.



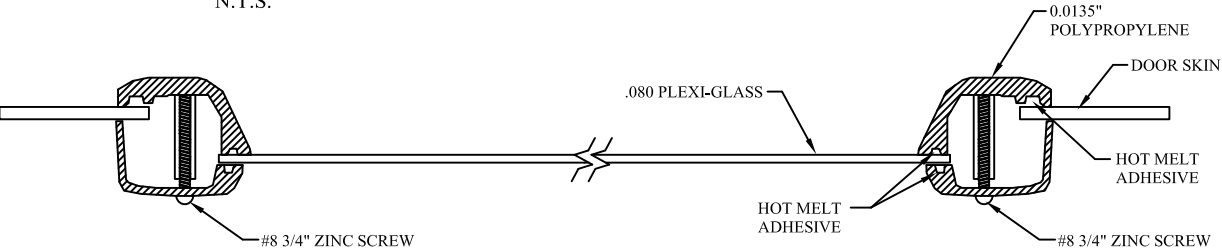
24" X 12" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.



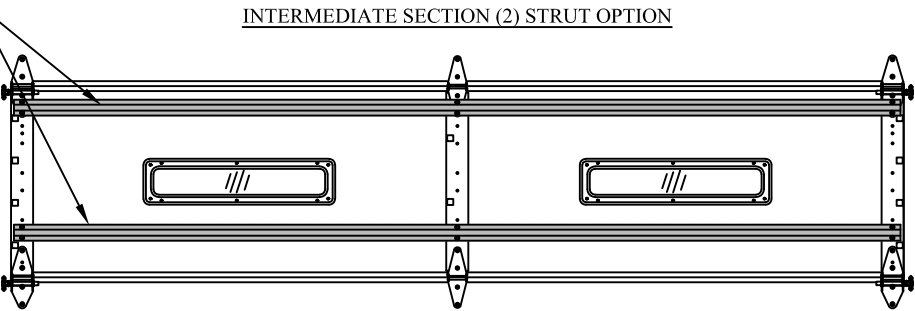
24" X 6" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.



SECTION B-B 24" X 12" WINDOW DETAIL W/ .080 PLEXI-GLASS
N.T.S.



SECTION C-C 24" X 6" WINDOW DETAIL W/ .080 PLEXI-GLASS
N.T.S. (ALSO AVAILABLE WITH 1/8" DSB GLASS)



OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS AND STRUT LAYOUT
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
9'4 x 24'

DESIGN LOADS
+15.6 PSF
-18.3 PSF

TEST LOADS
+23.4 PSF
-27.5 PSF

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

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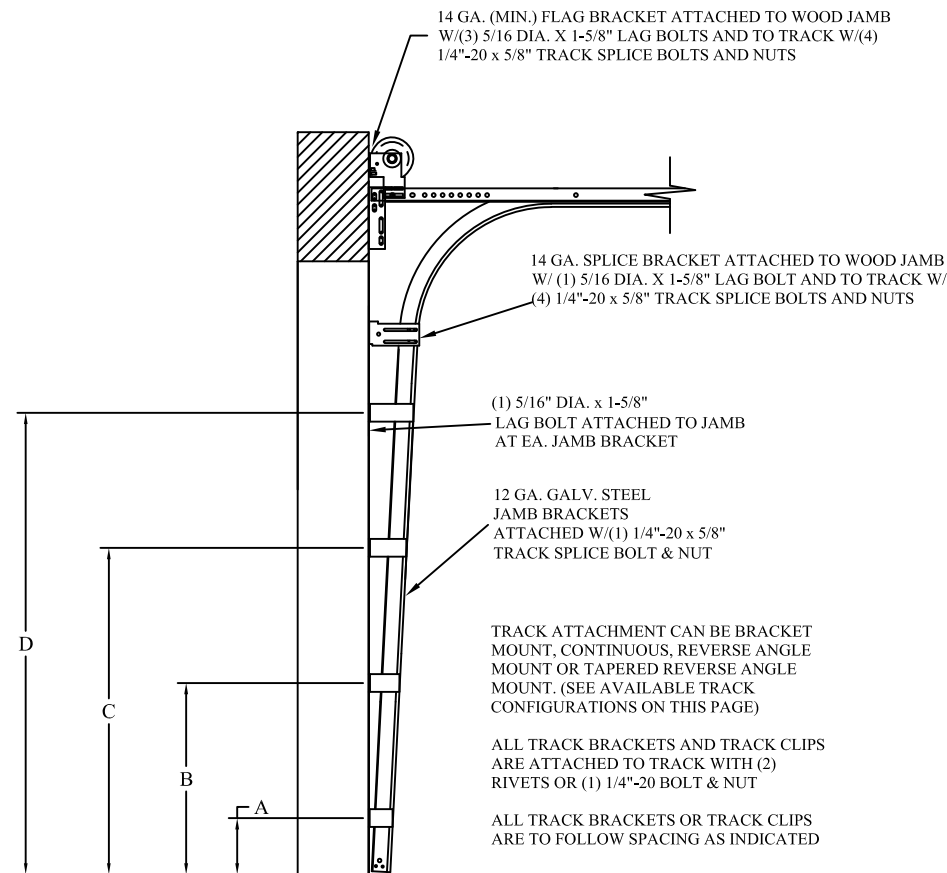
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SIZE B	DRAWN BY 	DRD 	DATE 5/23/18	DRAWING NUMBER IBC-2009-104-11-R
	CHECKED BY 	DLJ 	DATE 7/24/18	

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

SHEET 3 OF 4

Section	Center Stile	Max Design Loads Allowed	
Width (ft)	1st (in)	Positive (PSF)	Negative (PSF)
6' 0	36"	24.1	28.3
6' 2	37"	23.5	27.5
6' 4	38"	22.8	26.8
6' 6	39"	22.3	26.1
6' 8	40"	21.7	25.5
6' 10	41"	21.2	24.8
7' 0	42"	20.7	24.3
7' 2	43"	20.2	23.7
7' 4	44"	19.7	23.1
7' 6	45"	19.3	22.6
7' 8	46"	18.8	22.1
7' 10	47"	18.4	21.7
8' 0	48"	18.1	21.2
8' 2	49"	17.7	20.8
8' 4	50"	17.3	20.3
8' 6	51"	17.0	19.9
8' 8	52"	16.7	19.6
8' 10	53"	16.3	19.2
9' 0	54"	16.0	18.8
9' 2	55"	15.7	18.5
9' 4	56"	15.6	18.3



DOOR HEIGHT

VERTICAL LIFT/RAPID INSTALL VERTICAL LIFT

HIGH LIFT

STANDARD LIFT

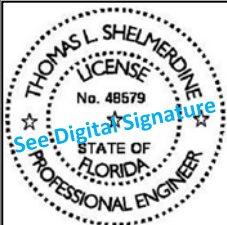
LOW HEADROOM

SPLICE TRACKS W/ (4)-20 TRACK SPLICE BOLTS & NUTS

2" (.051 MIN.) OR 3" (12 GA. MIN.) VERTICAL TRACK

SECTION	STRUT SIZE
12TH	
11TH	2"
10TH	
9TH	2"
8TH	
7TH	2"
6TH	
5TH	2"
4TH	
3RD	2"
2ND	
BOTTOM	2"

DOOR HEIGHT		TRACK ATTACHMENT												TYPICAL SPLICE
		A	B	C	D	E	F	G	H	I	J	K	L	
7'	0"	10"	34"	58"										76"
7'	6"	10"	34"	58"										82"
8'	0"	10"	34"	58"										88"
8'	6"	10"	34"	58"	70"									94"
9'	0"	10"	34"	58"	70"									100"
9'	6"	10"	34"	58"	70"	94"								106"
10'	0"	10"	34"	58"	70"	94"								112"
11'	0"	10"	34"	58"	70"	94"								124"
12'	0"	10"	34"	58"	70"	94"	118"							136"
13'	0"	10"	34"	58"	70"	94"	118"							148"
14'	0"	10"	34"	58"	70"	94"	118"	142"						160"
15'	0"	10"	34"	58"	70"	94"	118"	142"						172"
16'	0"	10"	34"	58"	70"	94"	118"	142"	166"					184"
17'	0"	10"	34"	58"	70"	94"	118"	142"	166"					196"
18'	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"				208"
19'	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"				220"
20'	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"	214"			232"
21	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"	214"			244"
22	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"	214"	238"		256"
23	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"	214"	238"		268"
24	0"	10"	34"	58"	70"	94"	118"	142"	166"	190"	214"	238"	262"	280"

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE 9'4" x 24' DESIGN LOADS +15.6 PSF -18.3 PSF TEST LOADS +23.4 PSF -27.5 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 (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 2002, 2012, 2022			
SIZE	DRAWN BY	DRD	DATE 5/23/18
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AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IBC-2009-104-11-R SHEET 4 OF 4