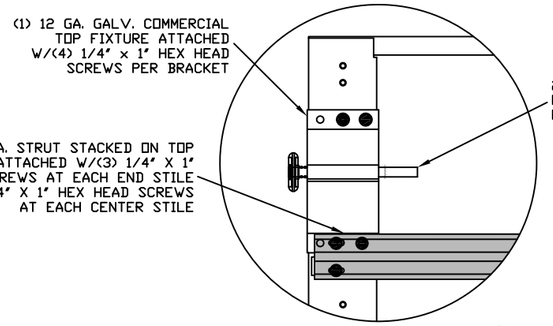
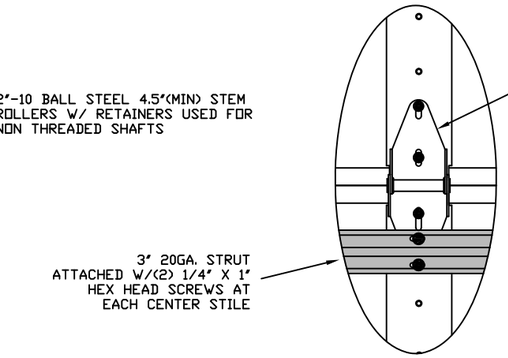


TYPICAL TOP FIXTURES 1
N.T.S.



TYPICAL ODD CENTER HINGE 2
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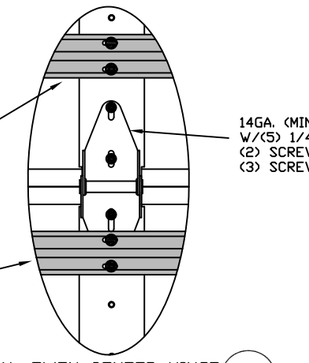
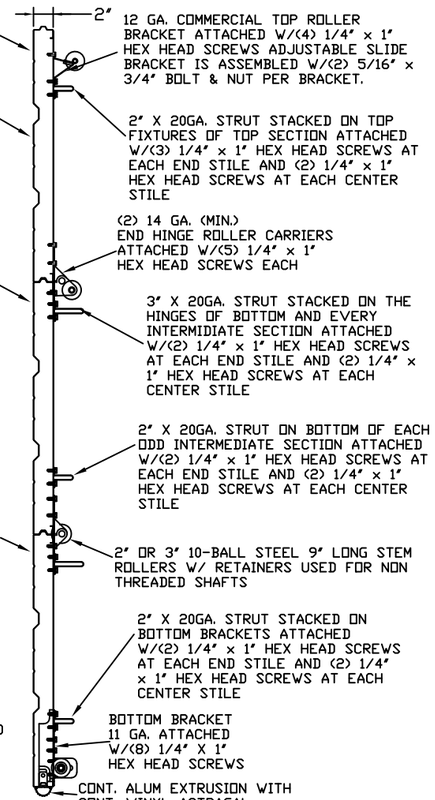
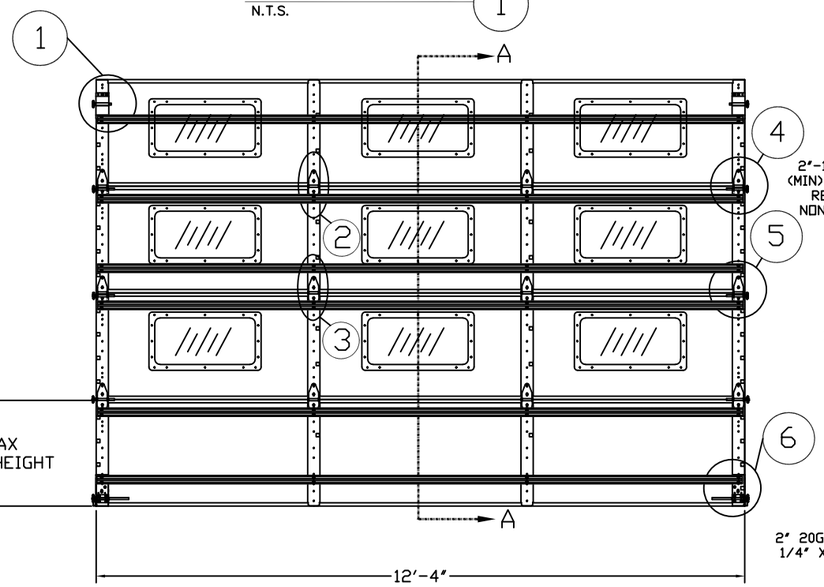


TYPICAL EVEN CENTER HINGE 3
N.T.S.



SECTION A–A (SIDE VIEW)
N.T.S.



INSIDE ELEVATION
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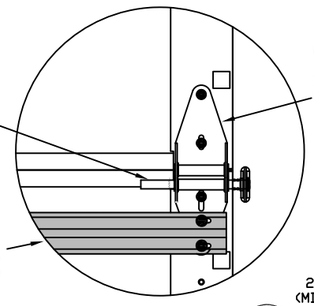
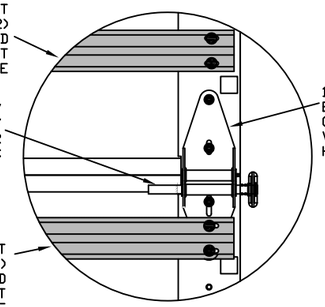


TYPICAL ODD END HINGE 4
N.T.S.



TYPICAL EVEN END HINGE 5
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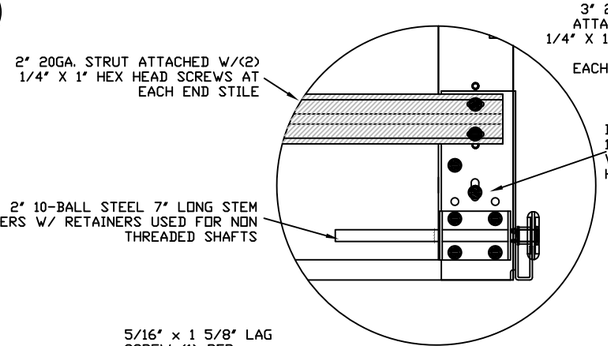
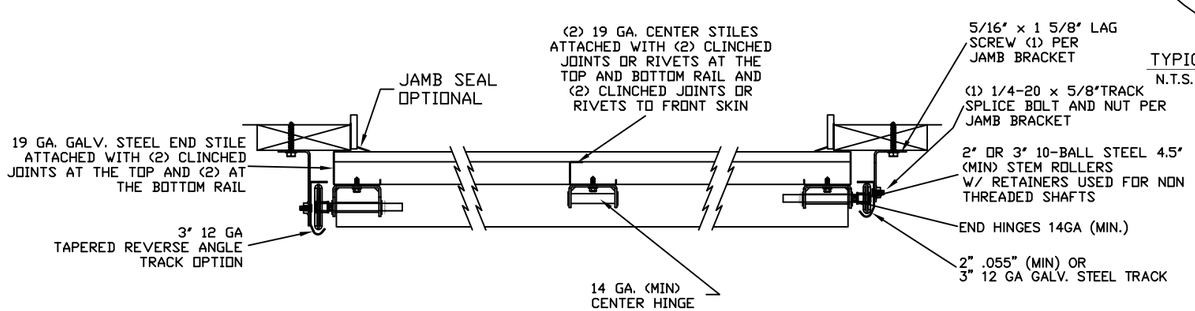


TYPICAL BOTTOM BRACKET 6
N.T.S.



TRACK MOUNTING DETAIL
N.T.S.
EDGE OF DOOR 1" OVERLAP ON EACH SIDE

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)	168	153	145	139	133
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
12'4 x 24'

DESIGN LOADS
+23.8 PSF
−27.3 PSF

TEST LOADS
+35.7 PSF
−41.0 PSF

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

Digitally signed by Thomas L Shelmerdine
DN: c=US, o=North Carolina, dnQualifier=A01410D000001856487A7B100125CE2, cn=Thomas L Shelmerdine
Date: 2024.04.15 15:56:39 -04'00'

Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)
dba Structural Solutions of North Carolina, Inc.
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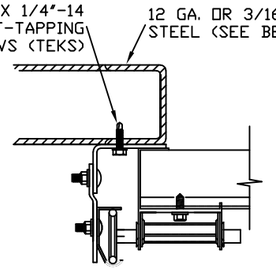
AMARR 2002, 2012, 2022

SIZE	DRAWN BY	DRC	DATE	11/29/23	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	04/09/24	IBC-2012-130-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 1 OF 4

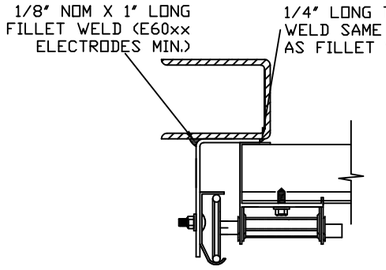
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

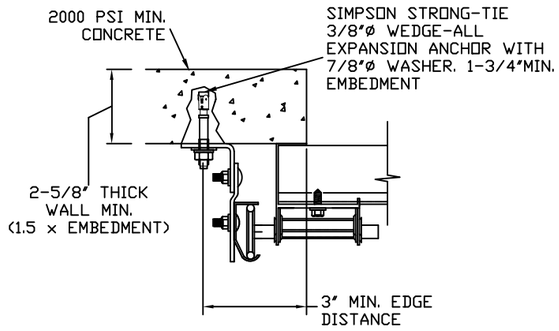
12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS AND 18" O.C.
REFER TO NOTES: 1, 2 AND 5

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



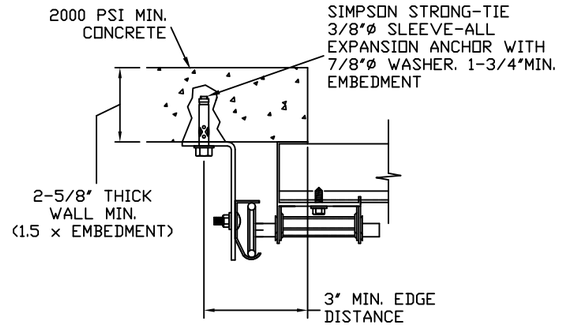
REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

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: +146.8 LBS/FT & −168.4 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. (.034) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24'0" HIGH USE (1) 3" 20GA STRUT ON TOP OF BOTTOM AND EACH INTERMEDIATE SECTION AND (1) 2" 20GA STRUT ON BOTTOM OF BOTTOM SECTION AND EVERY ODD INTERMEDIATE SECTION AND (1) 2" 20GA STRUT ON TOP SECTION.
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

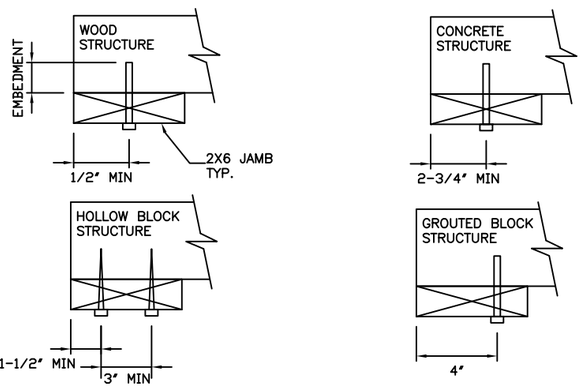
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS
THEN 24" O.C. (1 1/2" EMBEDMENT)

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)

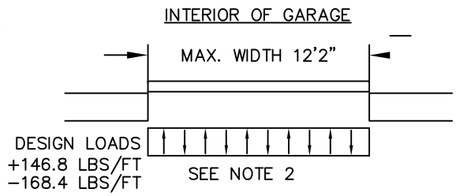
2 X 6 VERTICAL JAMB ATTACHMENT TO HOLLOW C-90 BLOCK
SIMPSON 1/4" X 3" TITEN SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART)
AT 24" O.C. (1 1/2" EMBEDMENT)
HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,
USE PAIRS OF FASTENERS (3" APART) AT 24" O.C. (1 1/4" EMBEDMENT)

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

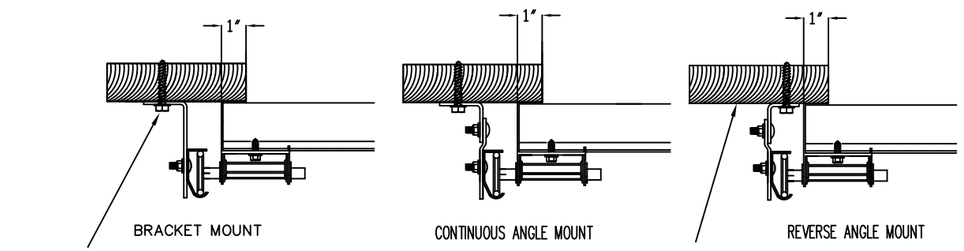


NOTES:
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EGDE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.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



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
12'4 x 24'

DESIGN LOADS
+23.8 PSF
−27.3 PSF

TEST LOADS
+35.7 PSF
−41.0 PSF

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Structural Solutions, PA (FL Firm #29412)
dba Structural Solutions of North Carolina, Inc.
5921-G W. Friendly Ave., Greensboro, NC 27410

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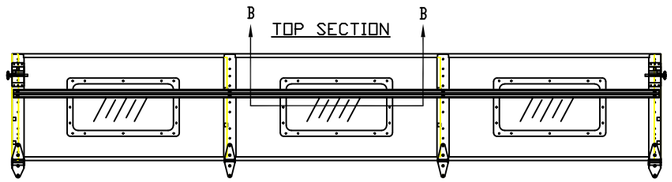
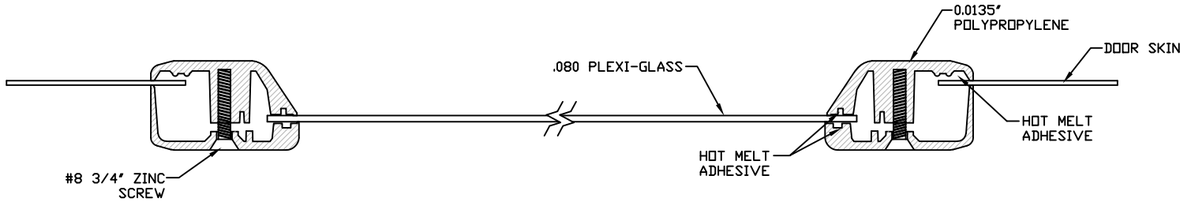
Amarr

AMARR 2002, 2012, 2022

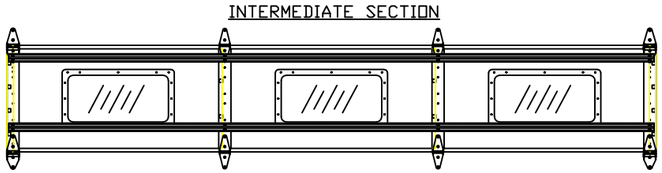
SIZE	DRAWN BY	DRC	DATE	11/29/23	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	04/09/24	IBC-2012-130-15

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

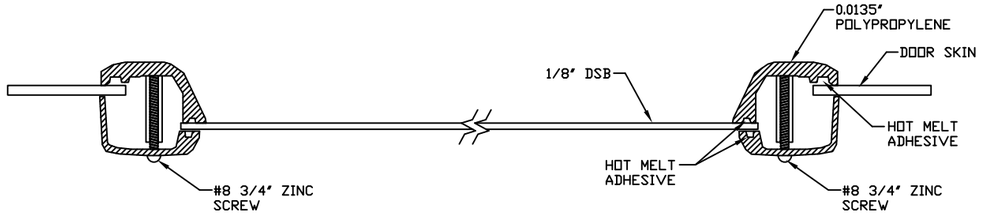




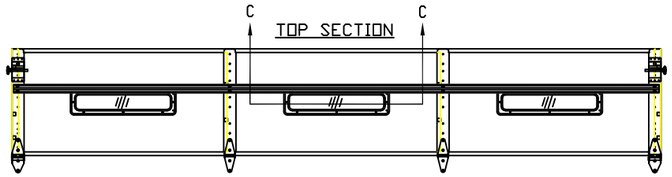
SECTION B-B 24" X 12" WINDOW DETAIL W/ .080 PLEXI-GLASS
N.T.S.

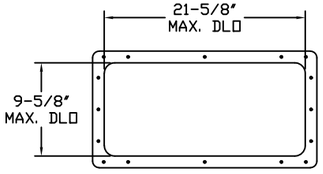


OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS AND STRUT LAYOUT
N.T.S.

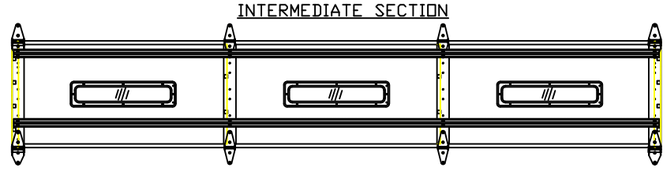


SECTION C-C 24" X 6" WINDOW DETAIL
N.T.S.

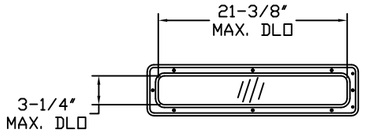




24" X 12" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.



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



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

GLAZING AVAILABLE IN ANY SECTION COMBINATION, EXCLUDING THE BOTTOM SECTION

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
12'4 x 24'

DESIGN LOADS
+23.8 PSF
−27.3 PSF

TEST LOADS
+35.7 PSF
−41.0 PSF

THOMAS L. SHELMERDINE LICENSE No. 48579 STATE OF FLORIDA PROFESSIONAL ENGINEER
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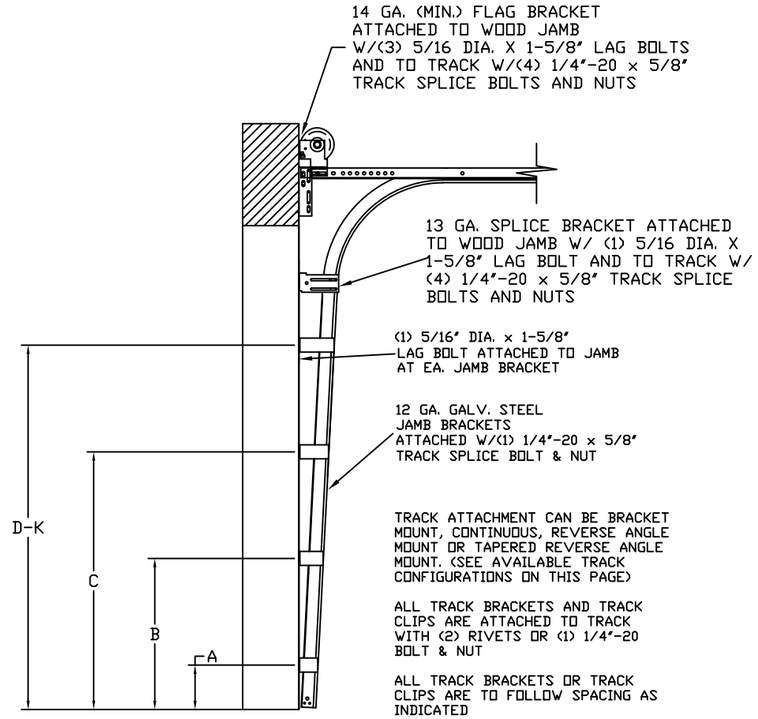
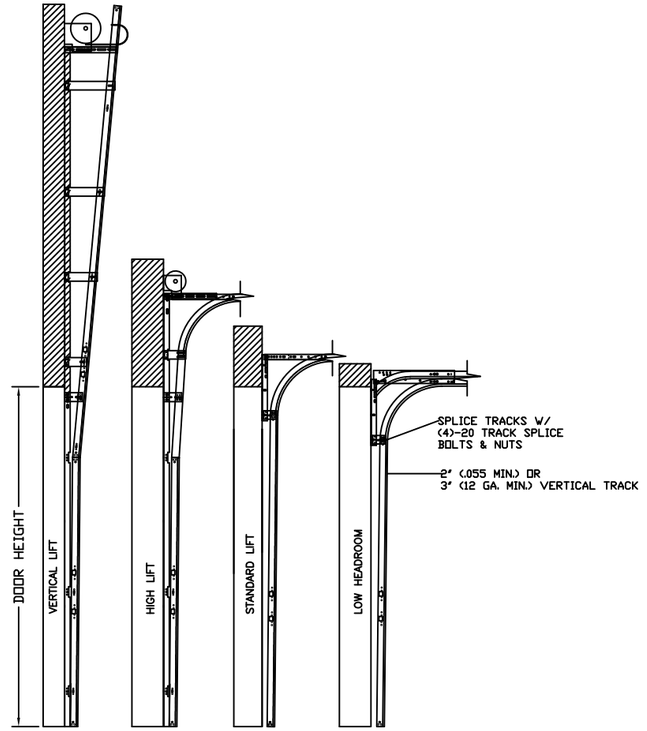
SIZE	DRAWN BY DRC	DATE 11/29/23	DRAWING NUMBER
B	CHECKED BY RLR	DATE 04/09/24	IBC-2012-130-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 3 OF 4

TABLE 1

Section Width (ft)		Center Stile Locations		Max Design Loads Allowed	
		1st (in)	2nd (in)	Positive (PSF)	Negitive (PSF)
6'	0"	36"	-	32.3	37.1
6'	2"	37"	-	31.5	36.1
6'	4"	38"	-	30.6	35.2
6'	6"	39"	-	29.9	34.3
6'	8"	40"	-	29.1	33.4
6'	10"	41"	-	28.4	32.6
7'	0"	42"	-	27.7	31.8
7'	2"	43"	-	27.1	31.1
7'	4"	44"	-	26.5	30.4
7'	6"	45"	-	25.9	29.7
7'	8"	46"	-	25.3	29.0
7'	10"	47"	-	24.8	28.4
8'	0"	48"	-	24.2	27.8
8'	2"	49"	-	23.8	27.3
8'	4"	50"	-	23.3	26.7
8'	6"	51"	-	22.8	26.2
8'	8"	52"	-	22.4	25.7
8'	10"	53"	-	22.0	25.2
9'	0"	54"	-	21.5	24.7
9'	2"	37"	73"	31.9	36.6
9'	4"	36"	76"	30.5	35.0
9'	6"	37"	77"	30.1	34.5
9'	8"	38"	78"	29.7	34.1
9'	10"	39"	79"	29.3	33.6
10'	0"	40"	80"	29.0	33.2
10'	2"	41"	81"	28.6	32.8
10'	4"	42"	82"	28.2	32.4
10'	6"	43"	83"	27.8	31.9
10'	8"	44"	84"	27.3	31.4
10'	10"	45"	85"	26.9	30.9
11'	0"	46"	86"	26.5	30.4
11'	2"	47"	87"	26.1	30.0
11'	4"	48"	88"	25.7	29.5
11'	6"	49"	89"	25.3	29.1
11'	8"	50"	90"	25.0	28.7
11'	10"	51"	91"	24.6	28.3
12'	0"	48"	96"	24.1	27.7
12'	2"	49"	97"	23.9	27.4
12'	4"	50"	98"	23.8	27.3



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



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

TABLE 3

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

TABLE 2

DOOR HEIGHT		TRACK ATTACHMENT											TYPICAL SPLICE
		A	B	C	D	E	F	G	H	I	J	K	
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"
11'	0"	10"	34"	58"	82"	106"							124"
12'	0"	10"	34"	58"	82"	106"							136"
13'	0"	10"	34"	58"	82"	106"	130"						148"
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

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
12'4 x 24'

DESIGN LOADS
+23.8 PSF
-27.3 PSF

TEST LOADS
+35.7 PSF
-41.0 PSF

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

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 2002, 2012, 2022

SIZE	DRAWN BY	DRC	DATE	11/29/23	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	04/09/24	IBC-2012-130-15
AMARR COMPANY 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105					SHEET 4 OF 4