

16 GA. GALV. RESIDENTIAL TOP ROLLER BRACKET ATTACHED W/(3) 1/4" X 1" SCREWS PER BRACKET

ADJUSTABLE ROLLER CARRIER ATTACHED W/(2) 1/4" X 1/2" BOLT & NUT PER BRACKET

2" NYLON LONG STEM ROLLERS

TYPICAL TOP FIXTURES  
N.T.S.

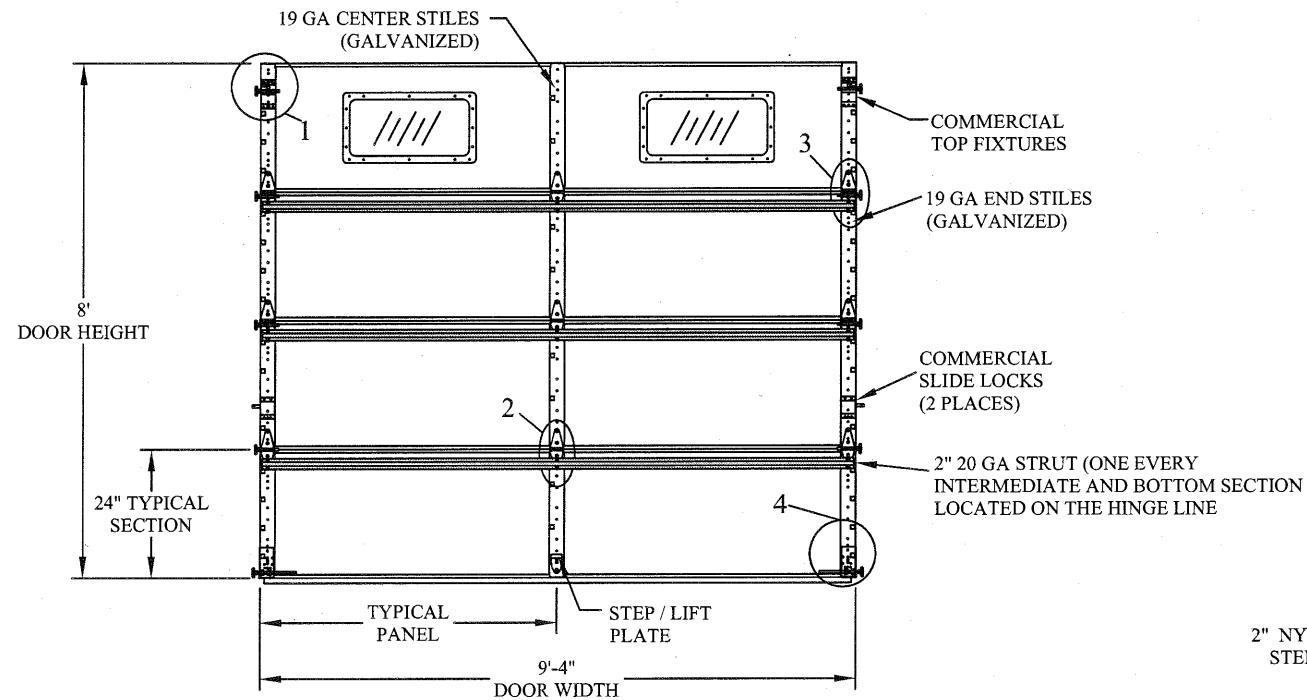
1

2" 20GA. STRUT STACKED ON HINGES ATTACHED W/(2) 1/4" X 1" HEX HEAD SCREWS AT EACH END AND CENTER STILE

TYPICAL CENTER HINGE  
N.T.S.

2

18GA. MIN. WIDE BODY CENTER HINGE ATTACHED W/(5) 1/4" X 1" SCREWS



DOOR INTERIOR ELEVATION  
N.T.S.

18GA. MIN. WIDE BODY END HINGE ATTACHED W/(5) 1/4" X 1" SCREWS

2" NYLON SHORT STEM ROLLERS (MIN.)

2" 20GA. STRUT STACKED ON HINGES ATTACHED W/(2) 1/4" X 1" HEX HEAD SCREWS AT EACH END AND CENTER STILE

TYPICAL END HINGE  
N.T.S.

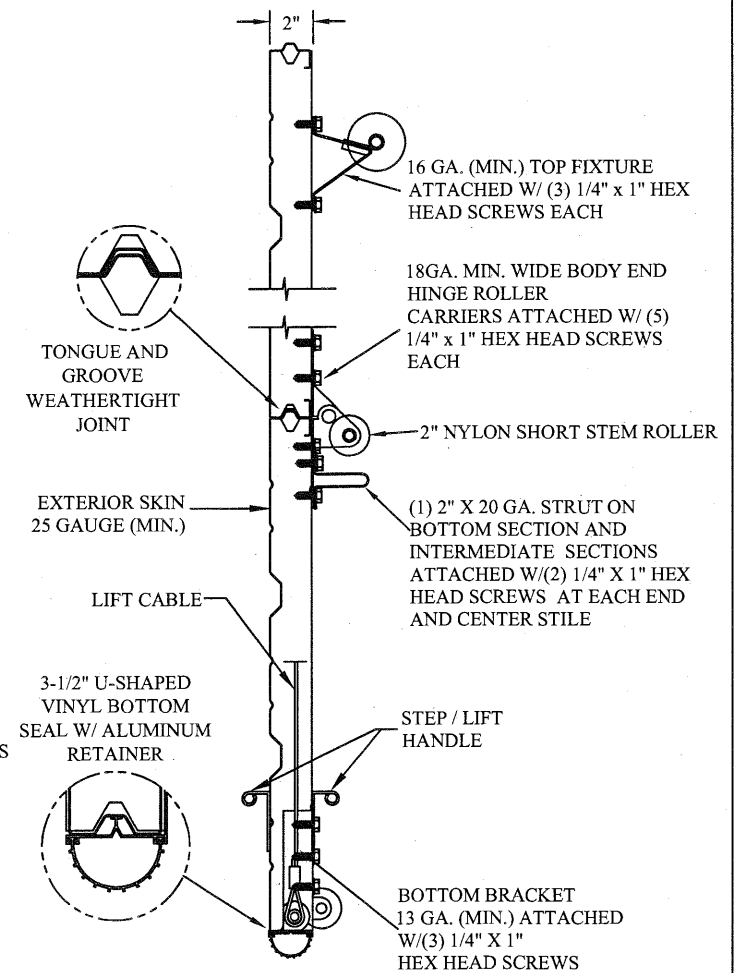
3

2" NYLON LONG STEM ROLLERS

BOTTOM BRACKET 13 GA. (MIN.) ATTACHED W/(3) 1/4" X 1" HEX HEAD SCREWS

TYPICAL BOTTOM BRACKET  
N.T.S.

4



STEEL SECTION PROFILE

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE  
9'4" x 10'  
DESIGN LOADS  
+15.6 PSF  
-18.3 PSF  
TEST LOADS  
+23.4 PSF  
-27.5 PSF

Thomas L. Shelmerdine, PE (TX PE #85829)  
Structural Solutions, PA (TX Firm #004063)



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

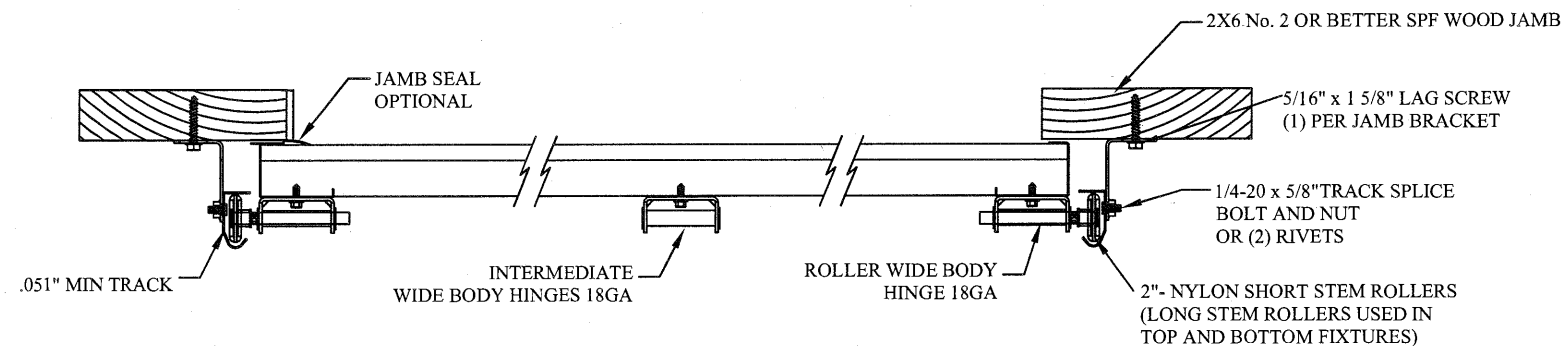
MODEL 2500 AMARR 2502, 2512  
MODEL 2400 AMARR 2402, 2412, 2422  
MODEL 2000 AMARR 2002, 2012, 2022

SIZE	DRAWN BY	RLR	DATE	08/19/15	DRAWING NUMBER
B	CHECKED BY	RLR	DATE	08/19/15	IBC-2509-104-11-R

SHEET 1 OF 4

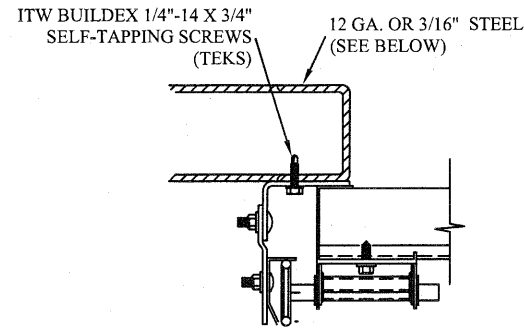
THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS, AND I=1.0):

WIND SPEED (MPH)	104	95	90	86	82
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'



2" BRACKET MOUNT TO WOOD JAMB DETAIL  
N.T.S.

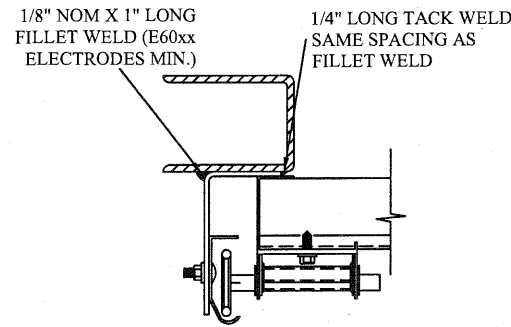
## TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

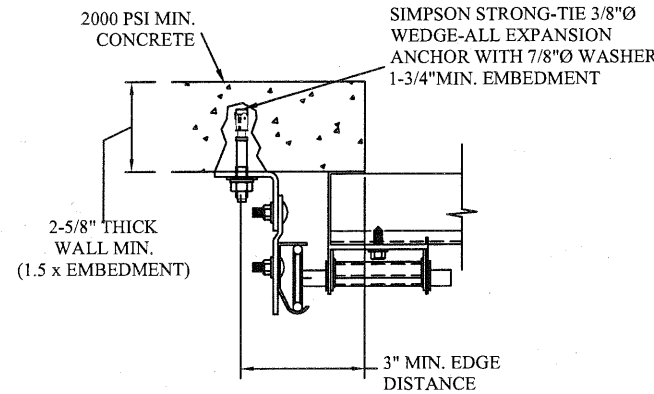
**12 GA. STEEL FRAMING**  
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS  
AND 24" O.C.  
REFER TO NOTES: 1, 2 AND 5

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



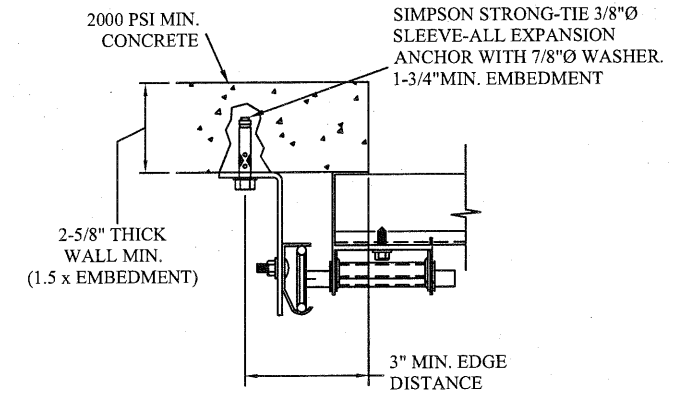
REVERSE ANGLE MOUNT SHOWN  
BRACKET, CONTINUOUS AND TAPERED  
ANGLE MOUNT AVAILABLE

**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 & -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 25 GA. (.018) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 10'0" HIGH USE 2" 20 GA STRUT ON BOTTOM SECTION AND EVERY INTERMEDIATE 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.

## 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

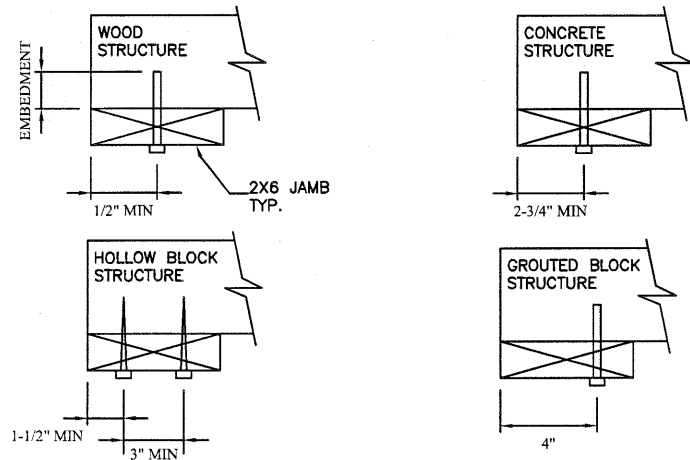
HILTI KWIK BOLT 3/8" X 4" STARTING 6" FROM ENDS  
THEN 24" O.C. (2 1/2" EMBEDMENT)  
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS  
THEN 24" O.C. (1 1/4" EMBEDMENT)  
ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS  
THEN 24" O.C. (2 1/2" EMBEDMENT)

### 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)

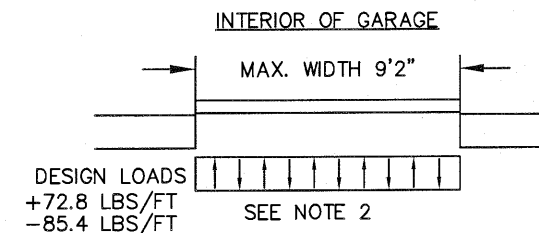
### 2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)

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



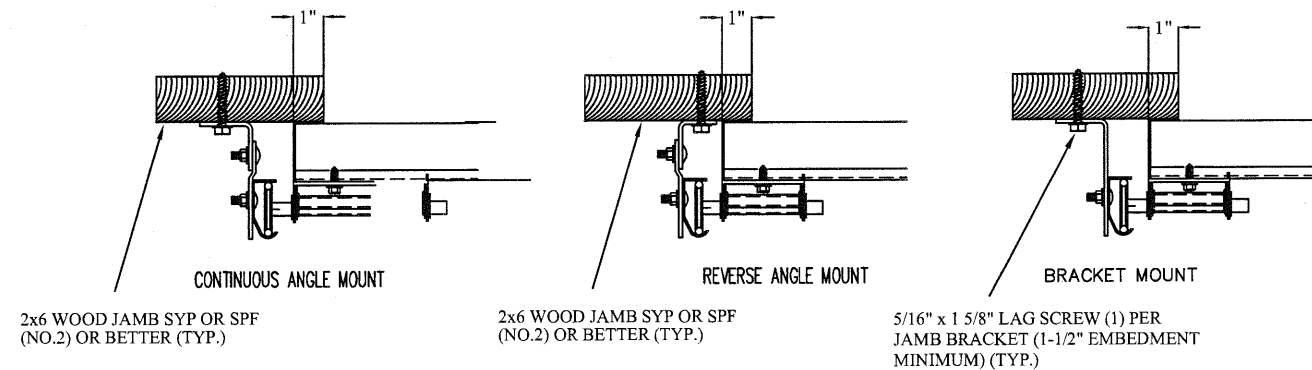
### NOTES:

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. 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 PAGE 4 FOR TRACK CONFIGURATION DETAIL



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE  
9'4" x 10'

DESIGN LOADS  
+15.6 PSF  
-18.3 PSF

TEST LOADS  
+23.4 PSF  
-27.5 PSF

Thomas L. Shelmerdine, PE (TX PE #85829)  
Structural Solutions, PA (TX Firm #004063)

TX

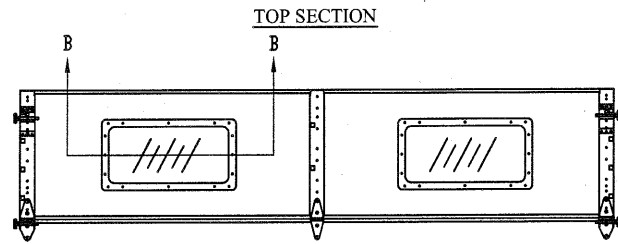
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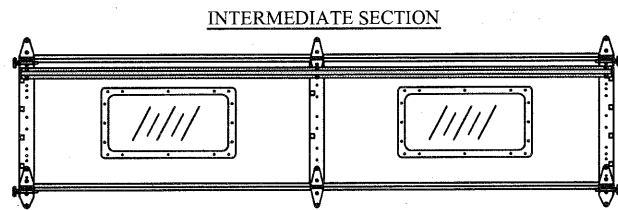
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**MODEL 2400 AMARR 2402, 2412, 2422**  
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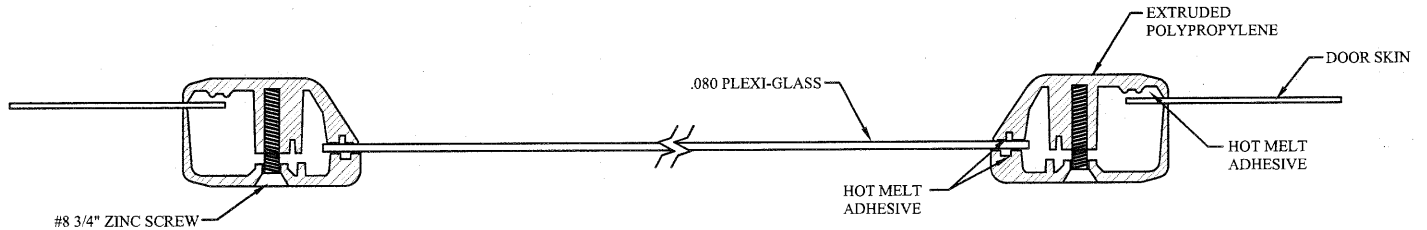
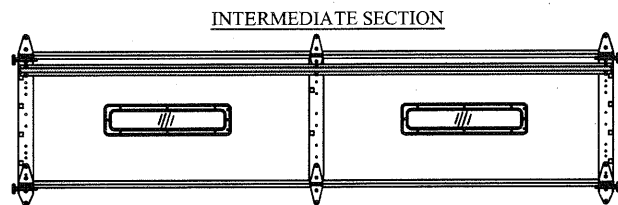
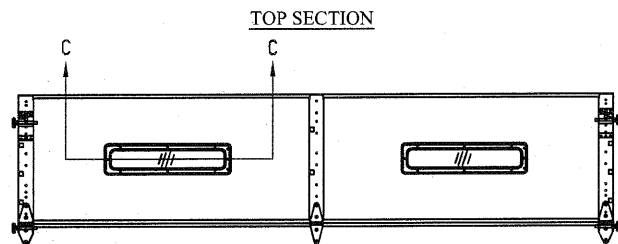
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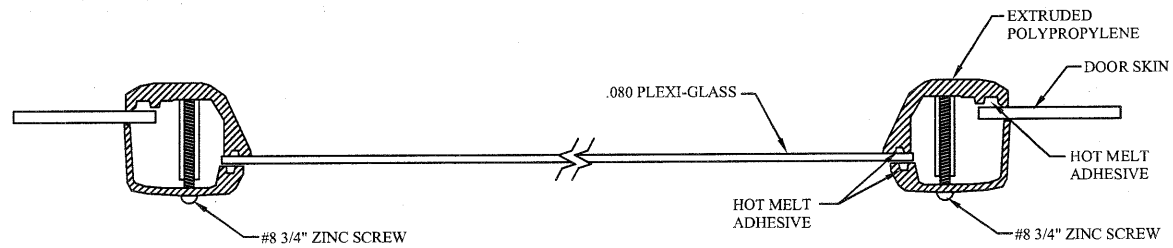
OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS AND STRUT LAYOUT  
N.T.S.



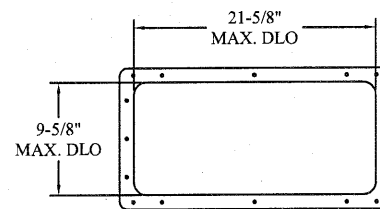
OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS AND STRUT LAYOUT  
N.T.S.



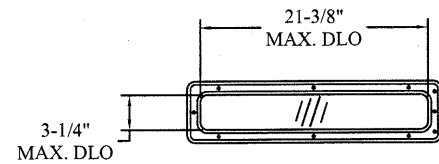
SECTION B-B 24" X 12" WINDOW DETAIL W/ .080 PLEXI-GLASS  
N.T.S.



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



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

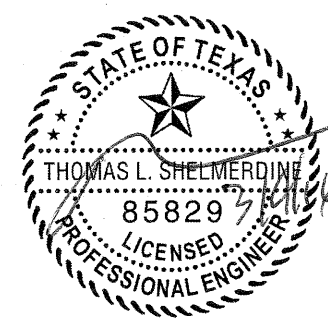


24" X 6" DAY LIGHT OPENING AND FASTENER DETAIL  
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE  
9'4" x 10'  
DESIGN LOADS  
+15.6 PSF  
-18.3 PSF  
TEST LOADS  
+23.4 PSF  
-27.5 PSF

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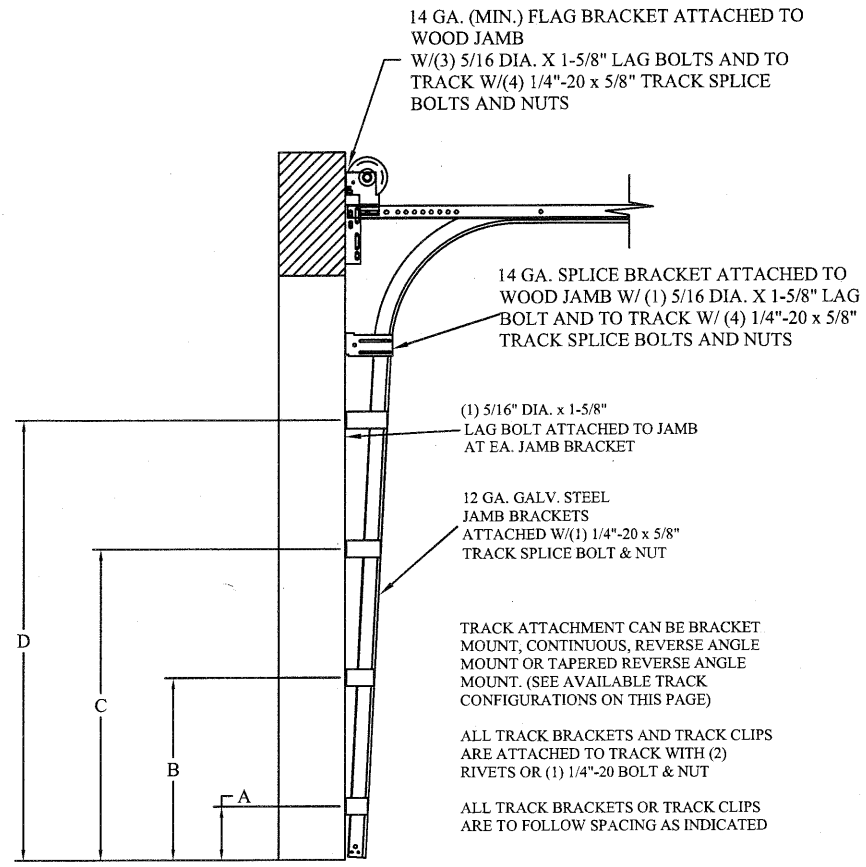
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**TABLE 2**

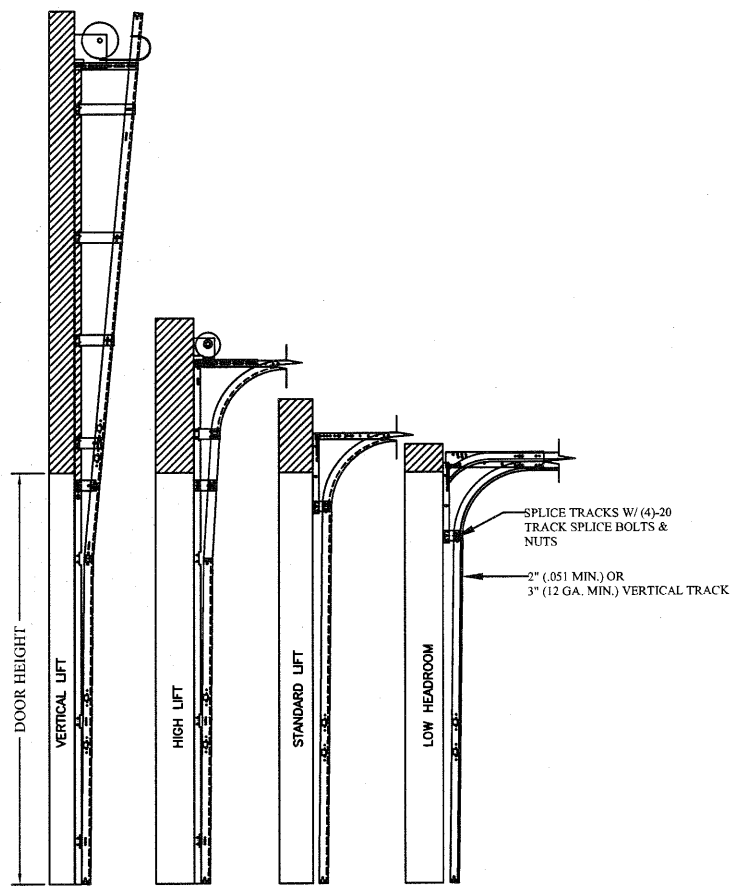
DOOR HEIGHT	TRACK ATTACHMENT				TYPICAL SPLICE
	A	B	C	D	
7' 0"	10.0"	34"	58"		76"
7' 6"	10.0"	34"	58"		82"
8' 0"	10.0"	34"	58"		88"
9' 0"	10.0"	34"	58"	82"	100"
9' 6"	10.0"	34"	58"	82"	106"
10' 0"	10.0"	34"	58"	82"	112"

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

TRACK CONFIGURATION FOR UP TO 10' TALL DOORS  
SEE TABLE 2

**TABLE 1**

Section Width (ft)	Center Stile (in)	Max Design Loads Allowed	
		1st 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



AVAILABLE TRACK CONFIGURATIONS  
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE  
9'4" x 10'

DESIGN LOADS  
+15.6 PSF  
-18.3 PSF

TEST LOADS  
+23.4 PSF  
-27.5 PSF

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			SHEET 4 OF 4