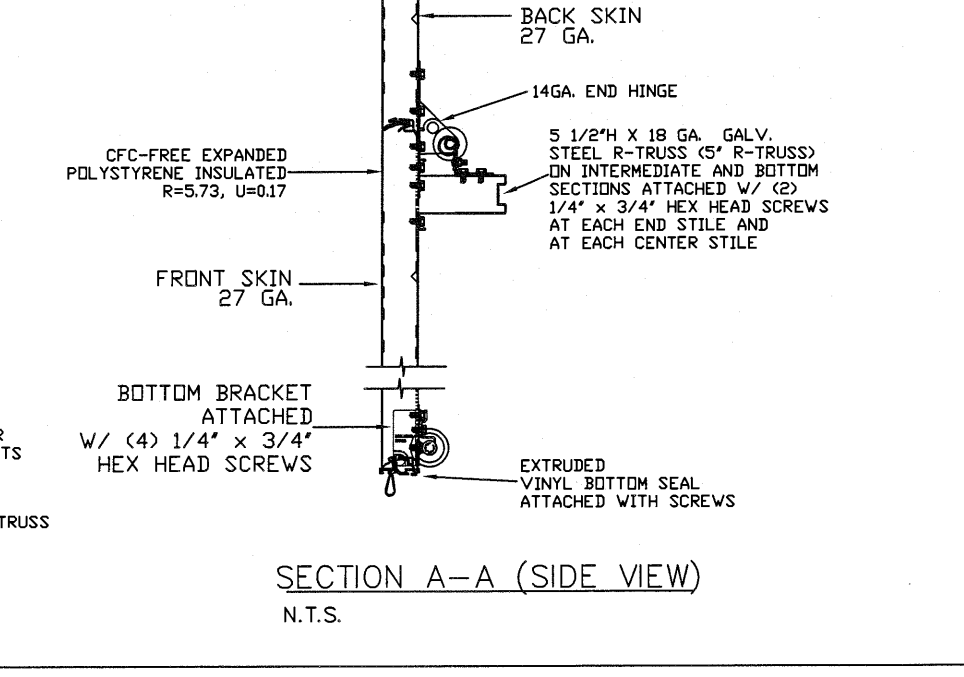


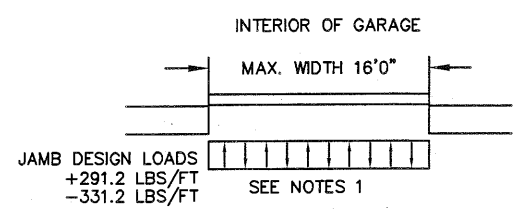
LARGE MISSILE IMPACT RESISTANT



THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN DASMA 108 & 115, ASTM E330, E1886, E1996, & F588. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE I=1.0):

WIND SPEED (MPH)	155	141	134	128	123
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

- SPECIFICATIONS AND NOTES**
- DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA. EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +291.2 LBS/FT & -331.2 LBS/FT
 - DOOR SECTIONS SHALL BE 27 GA. MIN. (.0151") ROLLED FORMED LIGHT COMMERCIAL QUALITY
 - SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16' WIDTH 14' HEIGHT (DOOR HEIGHT SUBJECT TO WEIGHT LIMITATIONS)

DESIGN LOADS +36.4 PSF -41.4 PSF

TEST LOADS +54.6 PSF -62.1 PSF

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

STATE OF TEXAS
THOMAS L. SHELMERDINE
85829
LICENSED PROFESSIONAL ENGINEER
TX

5921-G W. Friendly Ave., Greensboro, NC 27410

Amarr

ENTRE/MATIC

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

MODEL #1600 LINCOLN 3000

MODEL #1650 HILLCREST 3000

SIZE	DRAWN BY	RLR	DATE	02/24/14	DRAWING NUMBER
B	CHECKED BY		DATE		IRC-1616-155-26-1

SHEET 1 OF 3

TABLE 1

HEIGHT	TRACK ATTACHMENT														SPLICE	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
6' 0"	3.5"	10"	22"	34"	46"	58"										64"
6' 6"	3.5"	10"	22"	34"	46"	58"										70"
7' 0"	3.5"	10"	22"	34"	46"	58"	70"									76"
7' 6"	3.5"	10"	22"	34"	46"	58"	70"									82"
8' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"								88"
8' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"							94"
9' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"						100"
9' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"					106"
10' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"				112"
10' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"			118"
11' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"		124"
11' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	130"
12' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	136"
12' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	142"
13' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	148"
13' 6"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	154"
14' 0"	3.5"	10"	22"	34"	46"	58"	70"	82"	94"	106"	118"	130"	142"	154"	160"	160"

ALL TRACK ATTACHMENT SPACING +/- 2" ALLOWED WITH SYP OR SPF NO. 2 OR BETTER ONLY

WOOD JAMB ATTACHMENT TO STRUCTURE

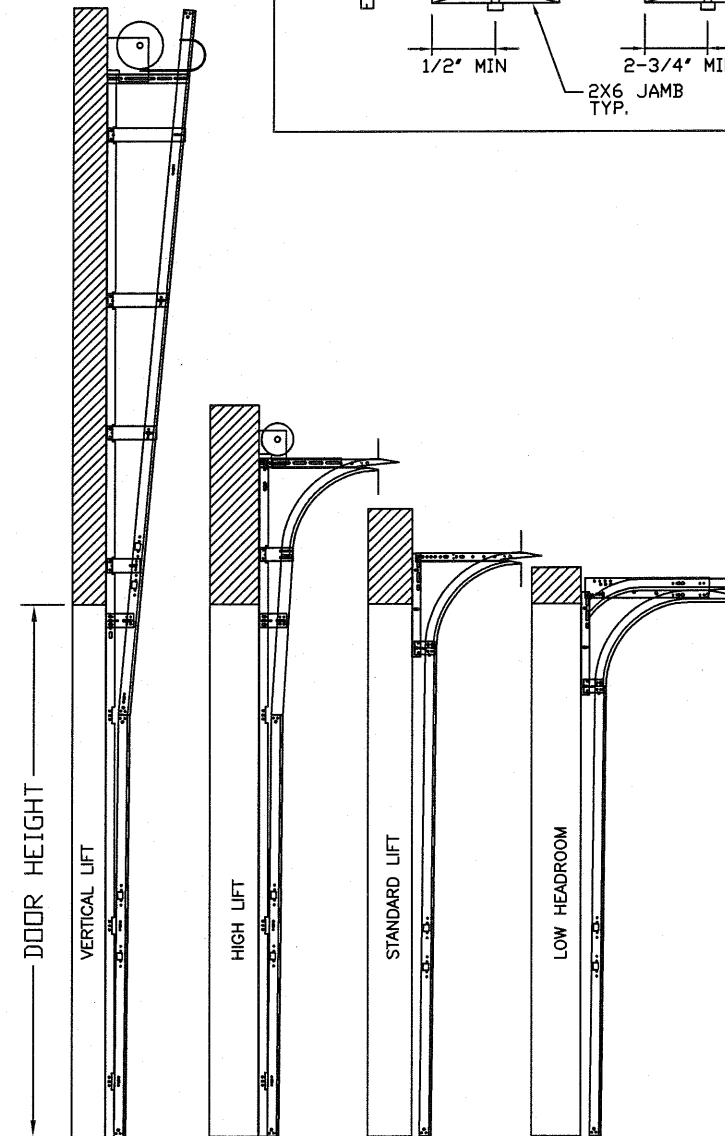
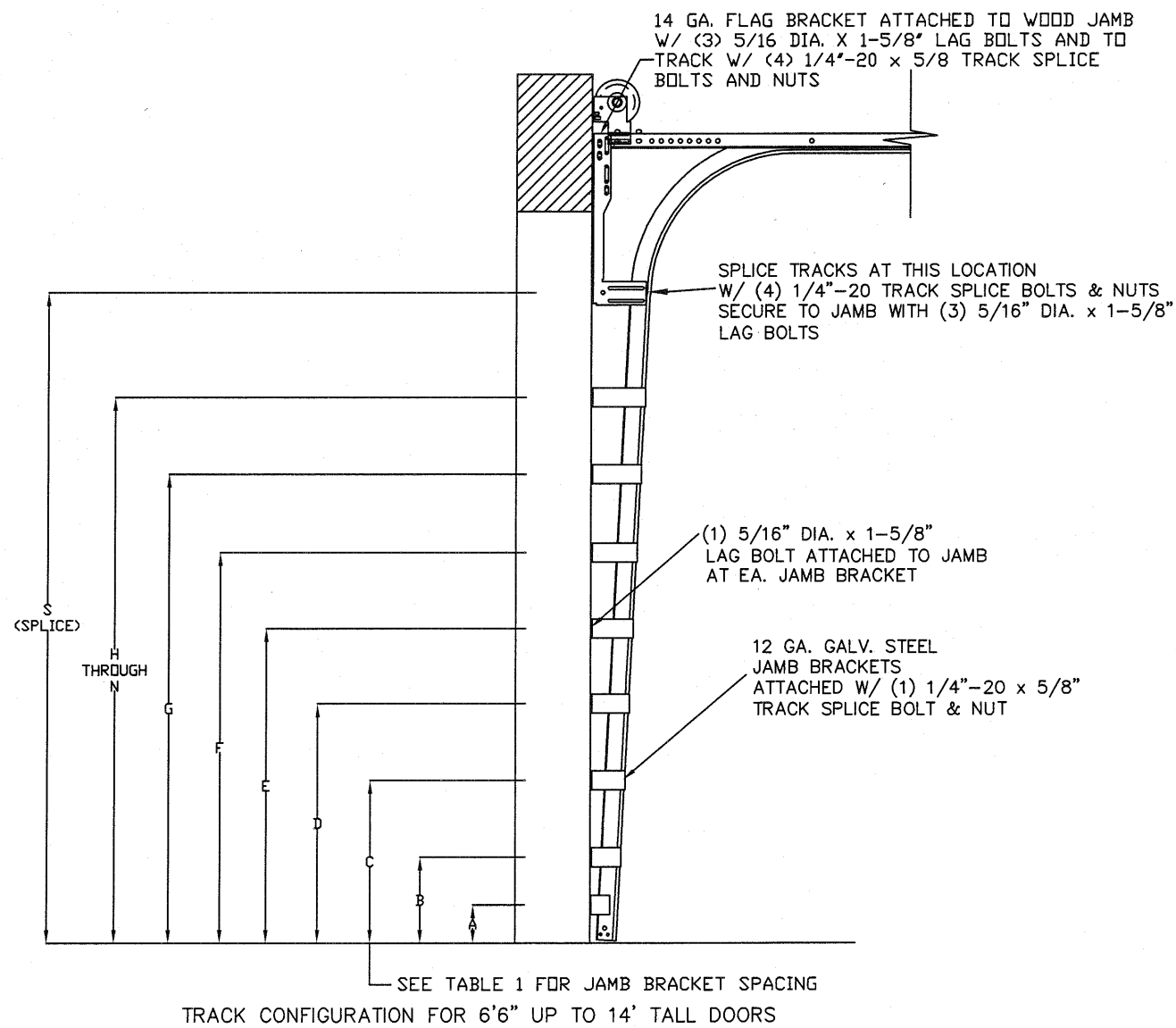
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
 5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 16" O.C. (1 1/2" EMBEDMENT)

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 14" 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 8" 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 8" 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 16" 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



AVAILABLE TRACK CONFIGURATIONS
 N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE
 16' WIDTH
 14' HEIGHT
 (DOOR HEIGHT SUBJECT TO WEIGHT LIMITATIONS)

DESIGN LOADS
 +36.4 PSF
 -41.4 PSF

TEST LOADS
 +54.6 PSF
 -62.1 PSF

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 Structural Solutions, PA (TX Firm #F-004063)

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 MODEL #1650 HILLCREST 3000

SIZE	DRAWN BY	RLR	DATE	02/24/14	DRAWING NUMBER
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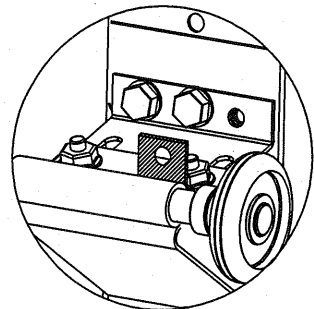
SHEET 2 OF 3

5921-G.W. Friendly Ave., Greensboro, NC 27410

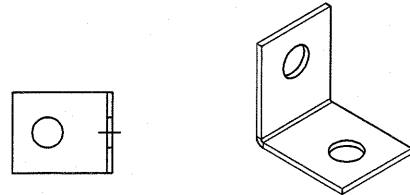
TABLE 2

Section	Center Stile Locations (Measured from Left Edge)			
	1st (in)	2st (in)	3rd (in)	4th (in)
10' 0	48.41	71.59		
10' 2	49.32	72.68		
10' 4	50.32	73.68		
10' 6	50.84	75.17		
10' 8	51.84	76.17		
10' 10	52.50	77.50		
11' 0	53.50	78.50		
11' 2	54.20	79.80		
11' 4	55.20	80.80		
11' 6	56.20	81.80		
11' 8	57.20	82.80		
11' 10	47.81	94.19		
12' 0	48.81	95.19		
12' 2	49.64	96.36		
12' 4	50.64	97.36		
12' 6	50.67	99.33		
12' 8	51.67	100.33		
12' 10	52.25	101.75		
13' 0	53.00	103.00		
13' 2	54.00	104.00		
13' 4	54.40	105.60		
13' 6	55.40	106.60		
13' 8	56.40	107.60		
13' 10	57.16	82.94	108.71	
14' 0	57.76	83.94	110.11	
14' 2	58.85	84.94	111.41	
14' 4	59.16	85.94	112.71	
14' 6	59.86	86.94	114.01	
14' 8	60.56	87.94	115.31	
14' 10	61.26	88.94	116.61	
15' 0	61.94	89.94	117.94	
15' 2	62.66	90.94	119.21	
15' 4	53.60	79.20	104.80	130.40
15' 6	46.62	93.00	139.38	
15' 8	47.62	94.00	140.38	
15' 10	48.62	95.00	141.38	
16' 0	49.62	96.00	142.38	

TOP FIXTURE REINFORCEMENT ILLUSTRATION

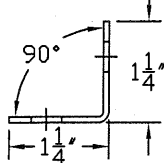


TOP FIXTURE ADDER PIECE

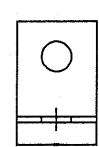


TOP VIEW

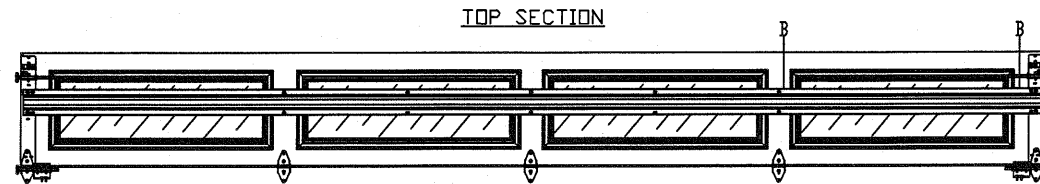
ISOMETRIC VIEW



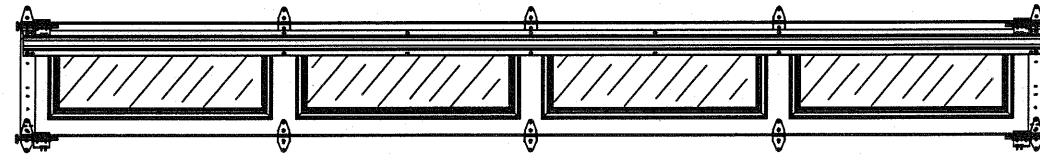
END VIEW



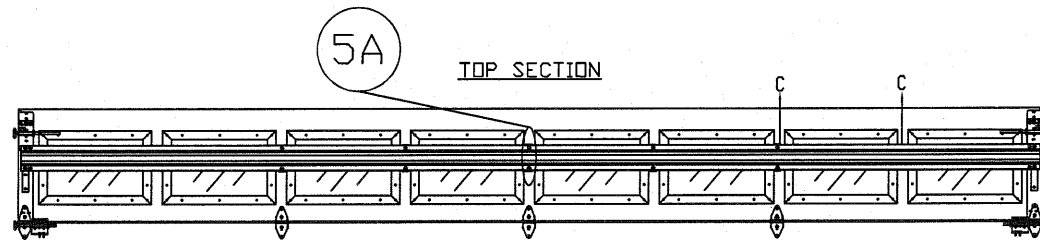
SIDE VIEW



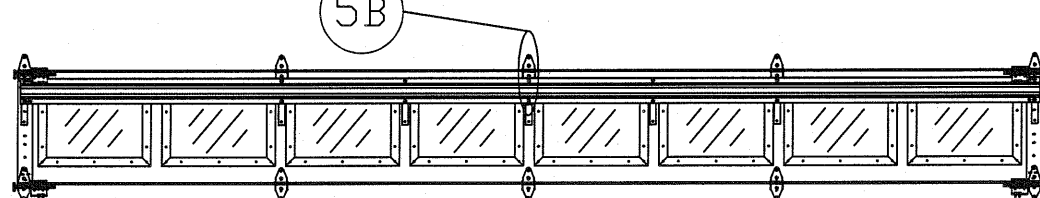
INTERMEDIATE SECTION



OPTIONAL LONG PANEL GLAZED SECTION STRUT AND STILE LAYOUT N.T.S.

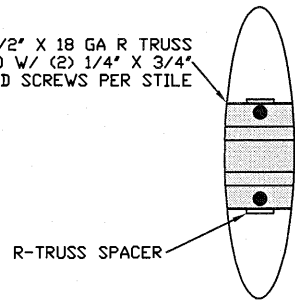


INTERMEDIATE SECTION



OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUT N.T.S.

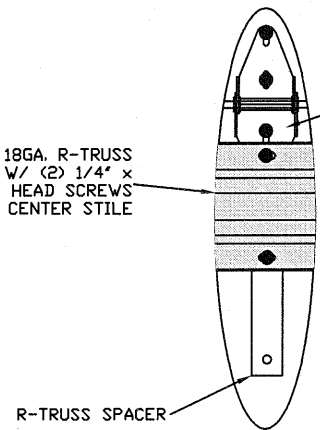
5 1/2" X 18 GA R TRUSS ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS PER STILE



R-TRUSS SPACER

R-TRUSS SPACER N.T.S. (5A)

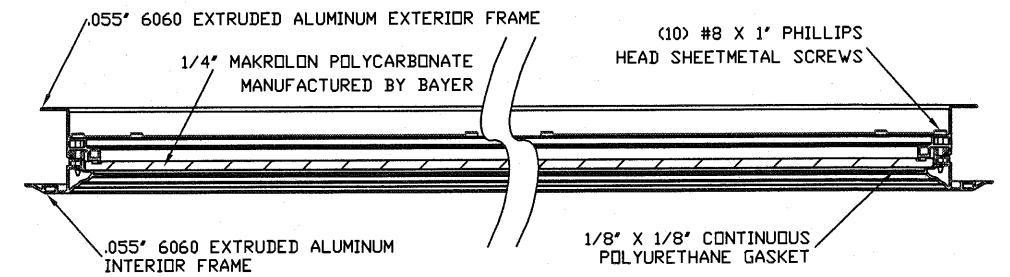
5 1/2" 18GA. R-TRUSS ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS AT EACH CENTER STILE



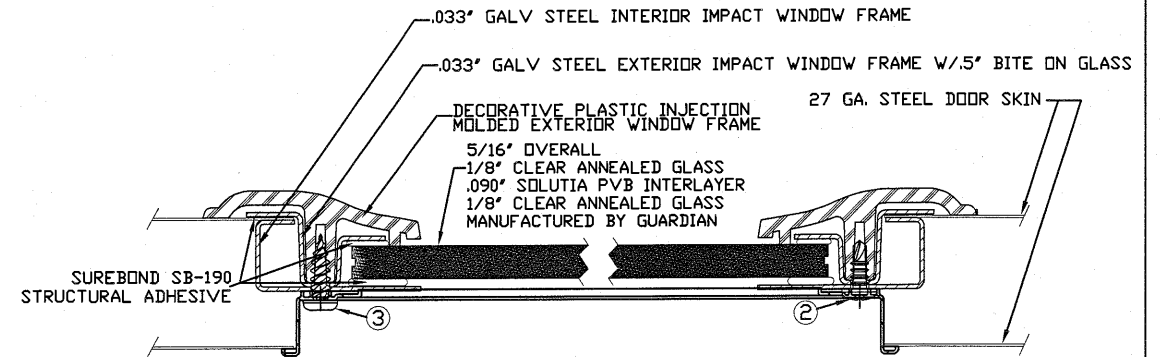
R-TRUSS SPACER

R-TRUSS SPACER N.T.S. (5B)

14GA. CENTER HINGE ATTACHED W/ (4) 1/4" X 3/4" HEX HEAD SCREWS

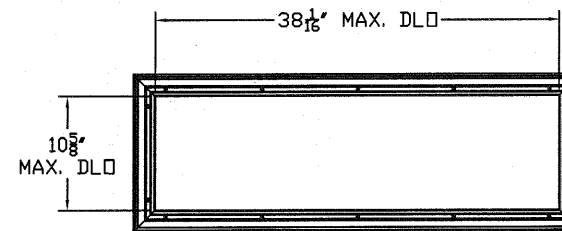


SECTION B-B IMPACT WINDOW DETAIL N.T.S.

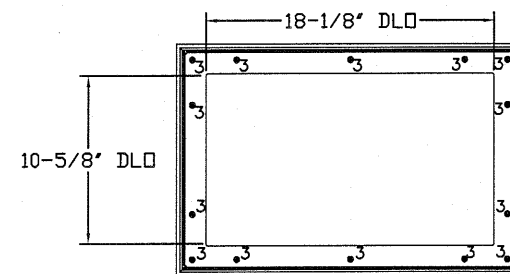


- 2. 3/16" X 1/2" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
- 3. 11/64" X 1/2" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

SECTION C-C IMPACT WINDOW DETAIL N.T.S.



LONG PANEL GLAZING FASTENER DETAIL N.T.S.



IMPACT GLAZING FASTENER DETAIL N.T.S. GLAZING MEETS ASTM E1300-04

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16' WIDTH 14' HEIGHT (DOOR HEIGHT SUBJECT TO WEIGHT LIMITATIONS)

DESIGN LOADS +36.4 PSF -41.4 PSF

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