

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330, E1886, E1996, F588 AND DASMA 108, 115. 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, AND I=1.0):

WIND SPEED (MPH)	169	154	146	139	134
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

LARGE MISSILE IMPACT RESISTANT

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16' x 14'

DESIGN LOADS +45.8 PSF -49.3 PSF

LARGE MISSILE IMPACT RESISTANCE

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

Amarr

165 CARRIAGE COURT WINSTON-SALEM, NC. 27105 WWW.AMARR.COM

MODEL 950 HERITAGE (24 GA) 1000, 2000
MODEL 655 OAK SUMMIT (24 GA) 1000, 2000
SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS

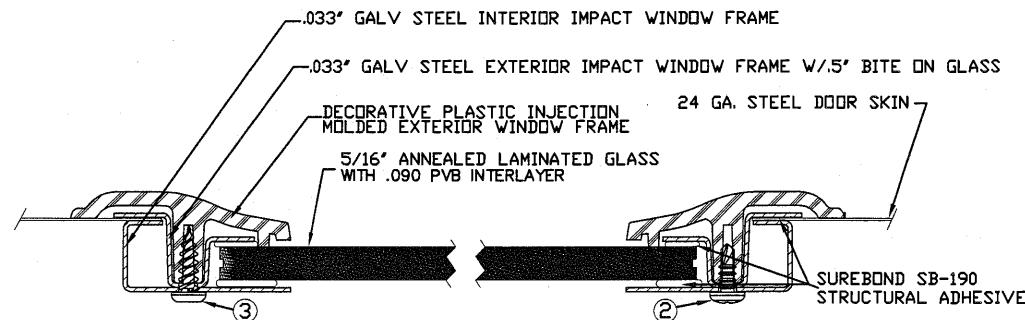
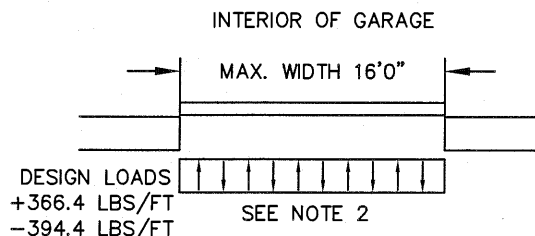
SIZE	DRAWN BY	RLR	DATE	03/12/13	DRAWING NUMBER
B	CHECKED BY		DATE		IRC-9516-169-26-G

SHEET 1 OF 3

dba Structural Solutions of North Carolina, Inc.
5921-G W. Friendly Ave., Greensboro, NC 27410

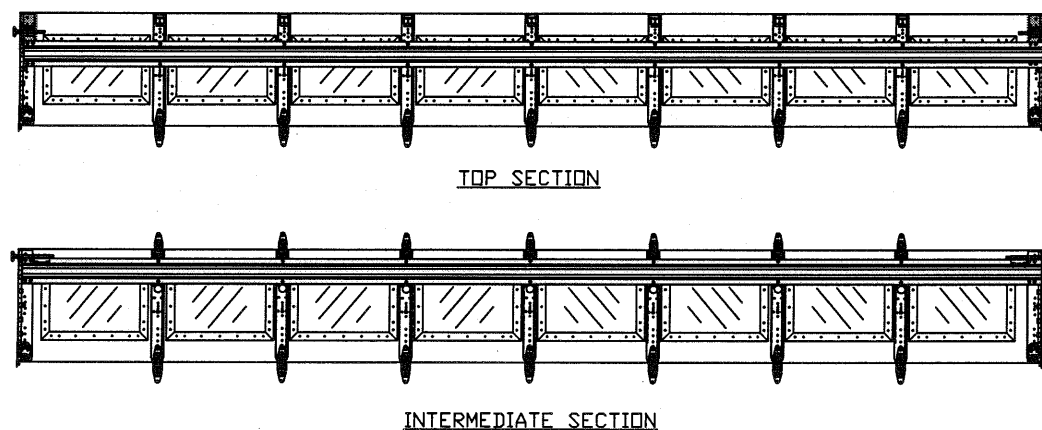
SPECIFICATIONS AND NOTES

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: +366.4 LBS/FT & -394.4 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 24 GA. (.0216) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 7'0" HIGH CONSIST OF (4) SECTIONS AS SHOWN. USE (1) 5 1/2" R-TRUSS PER SECTION & (2) 3" 20GA STRUTS AT BOTTOM SECTION
6. DOORS OVER (4) SECTIONS REFER TO TABLES 1 AND 2 ON PAGE 3
7. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.

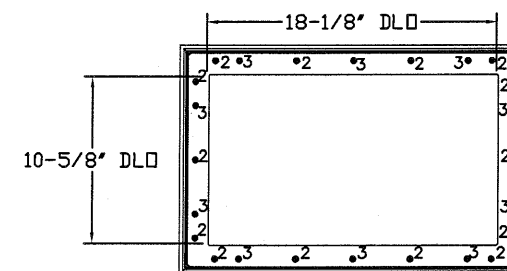


2. 3/16" X 1/2" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
3. 11/64" X 1/2" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

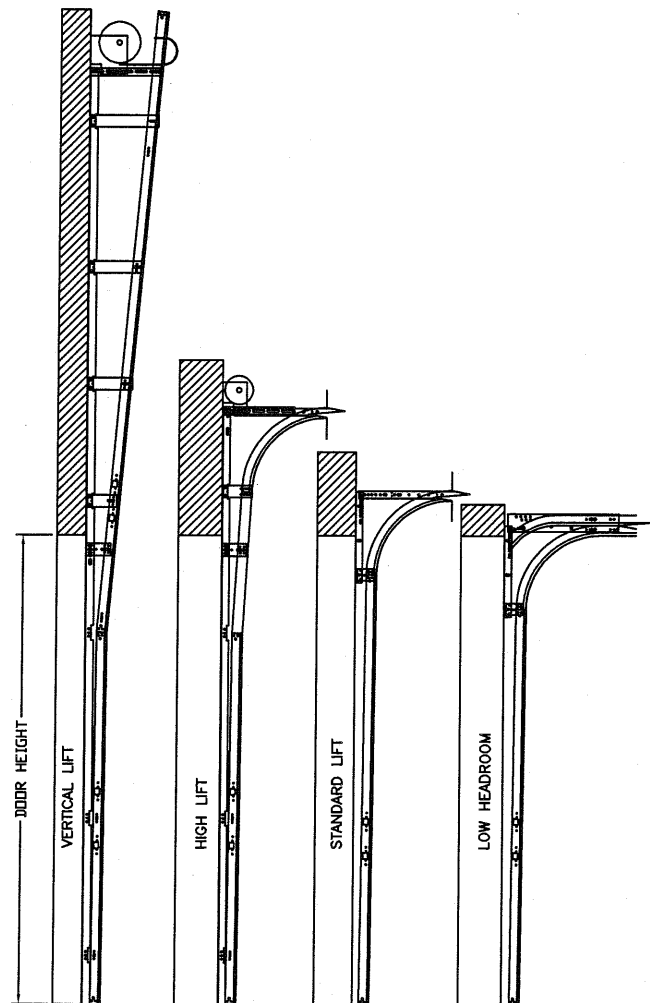
OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUTS
N.T.S.



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



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



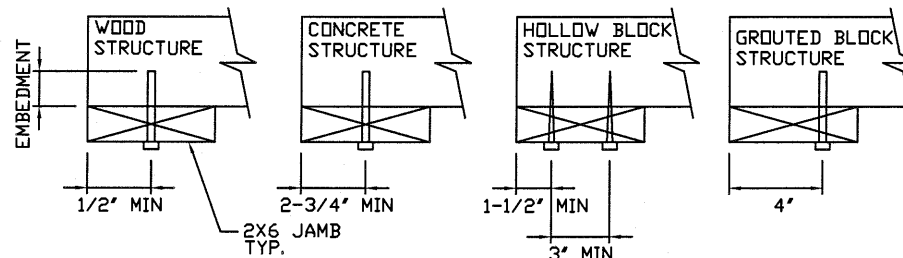
AVAILABLE TRACK CONFIGURATIONS
N.T.S.

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 12" 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 12" O.C. (1 1/4" EMBEDMENT)
- ITW/RAMSET REDHEAD (TRU-BOLT) 3/8" X 4" STARTING 6" FROM ENDS THEN 22" 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 14" 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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	MAX SIZE 16' x 14'		
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	LARGE MISSILE IMPACT RESISTANCE		
	165 CARRIAGE COURT WINSTON-SALEM, NC. 27105 WWW.AMARR.COM		
	MODEL 950 HERITAGE (24 GA) 1000, 2000		
	MODEL 655 OAK SUMMIT (24 GA) 1000, 2000		
	SHORT, LONG, FLUSH, AND OAK SUMMIT PANELS		
SIZE	DRAWN BY RLR	DATE 03/12/13	DRAWING NUMBER
B	CHECKED BY	DATE	IRC-9516-169-26-G
			SHEET 2 OF 3

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

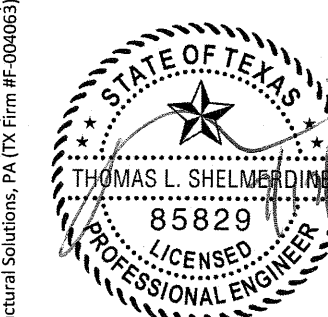


TABLE 1

DOOR HEIGHT	STRUT SPACING (BASED ON RECOMMENDED SECTION CONFIGURATION)									TOP
	A	B	C	D	E	F	G	H	I	
6' 6"	4 1/2"	7"	17 1/2"	35 1/2"	53 1/2"					70 1/2"
7'	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"					76 1/2"
7' 6"	4 1/2"	7"	14 1/2"	32 1/2"	50 1/2"	68 1/2"				82 1/2"
8'	4 1/2"	7"	17 1/2"	35 1/2"	53 1/2"	71 1/2"				88 1/2"
8' 6"	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	77 1/2"				94 1/2"
9'	4 1/2"	7"	14 1/2"	32 1/2"	50 1/2"	68 1/2"	86 1/2"			100 1/2"
9' 6"	4 1/2"	7"	17 1/2"	35 1/2"	53 1/2"	71 1/2"	89 1/2"			106 1/2"
10'	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	77 1/2"	95 1/2"			112 1/2"
10' 6"	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	80 1/2"	101 1/2"			118 1/2"
11'	4 1/2"	7"	17 1/2"	35 1/2"	53 1/2"	71 1/2"	89 1/2"	107 1/2"		124 1/2"
11' 6"	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	77 1/2"	95 1/2"	113 1/2"		130 1/2"
12'	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	80 1/2"	101 1/2"	119 1/2"		136 1/2"
12' 6"	4 1/2"	7"	17 1/2"	35 1/2"	53 1/2"	71 1/2"	89 1/2"	107 1/2"	125 1/2"	142 1/2"
13'	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	77 1/2"	95 1/2"	113 1/2"	131 1/2"	148 1/2"
13' 6"	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	80 1/2"	101 1/2"	119 1/2"	137 1/2"	154 1/2"
14'	4 1/2"	7"	17 1/2"	38 1/2"	59 1/2"	80 1/2"	101 1/2"	122 1/2"	143 1/2"	160 1/2"

TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT														SPLICE	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N		
6' 6"	3"	14"	27"	38"	46"	56"	64"									70"
7'	3"	14"	27"	38"	46"	56"	68"									76"
7' 6"	3"	14"	27"	38"	46"	56"	68"	78"								82"
8'	3"	14"	27"	38"	46"	56"	68"	78"								88"
8' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"							94"
9'	3"	14"	27"	38"	46"	56"	68"	78"	88"							100"
9' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	98"						106"
10'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"						112"
10' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"					118"
11'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"					124"
11' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"	120"				130"
12'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	110"	122"				136"
12' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	109"	122"	132"			142"
13'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	114"	122"	134"			148"
13' 6"	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	109"	122"	134"	144"		154"
14'	3"	14"	27"	38"	46"	56"	68"	78"	88"	100"	114"	122"	134"	146"		160"

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

TABLE 4

Section Width (ft)	Panel Type	Center Stile Locations (Measured from Left Edge)						
		1st (in)	2st (in)	3rd (in)	4th (in)	5th (in)	6th (in)	7th (in)
10' 0"	Short	25.218	48.406	71.594	94.782			
10' 0"	Long	30.000	60.000	90.000				
10' 0"	Bead	30.625	60.000	89.375				
12' 0"	Short	25.624	48.812	72.000	95.188	118.376		
12' 0"	Long	27.250	49.625	72.000	94.375	116.750		
12' 0"	Bead	24.625	48.313	72.000	95.688	119.375		
12' 2"	Short	26.272	49.636	73.000	96.364	119.728		
12' 2"	Long	27.168	50.084	73.000	95.916	118.832		
12' 2"	Bead	25.125	49.063	73.000	96.938	120.875		
12' 4"	Short	27.272	50.636	74.000	97.364	120.728		
12' 4"	Long	28.168	51.084	74.000	96.916	119.832		
12' 4"	Bead	25.625	49.813	74.000	98.188	122.375		
12' 6"	Short	26.340	50.670	75.000	99.330	123.660		
12' 6"	Long	27.340	51.170	75.000	98.830	122.660		
12' 6"	Bead	26.125	50.563	75.000	99.438	123.875		
12' 8"	Short	27.340	51.670	76.000	100.330	124.660		
12' 8"	Long	28.200	52.100	76.000	99.900	123.800		
12' 8"	Bead	26.625	51.313	76.000	100.688	125.375		
12' 10"	Short	27.500	52.250	77.000	101.750	126.500		
12' 10"	Long	29.200	53.100	77.000	100.900	124.800		
12' 10"	Bead	27.125	52.063	77.000	101.938	126.875		
13' 0"	Short	28.000	53.000	78.000	103.000	128.000		
13' 0"	Long	30.200	54.100	78.000	101.900	125.800		
13' 0"	Bead	27.625	52.813	78.000	103.188	128.375		
13' 2"	Short	29.000	54.000	79.000	104.000	129.000		
13' 2"	Long	31.200	55.100	79.000	102.900	126.800		
13' 2"	Bead	28.125	53.563	79.000	104.438	129.875		
13' 4"	Short	28.800	54.400	80.000	105.600	131.200		
13' 4"	Long	29.800	54.900	80.000	105.100	130.200		
13' 4"	Bead	28.625	54.313	80.000	105.688	131.375		
13' 6"	Short	29.800	55.400	81.000	106.600	132.200		
13' 6"	Long	30.800	55.900	81.000	106.100	131.200		
13' 6"	Bead	29.125	55.063	81.000	106.938	132.875		
13' 8"	Short	30.800	56.400	82.000	107.600	133.200		
13' 8"	Long	31.250	56.625	82.000	107.375	132.750		
13' 8"	Bead	29.625	55.813	82.000	108.188	134.375		
13' 10"	Short	31.388	57.163	82.938	108.713	134.488		
13' 10"	Long	31.340	57.170	83.000	108.830	134.660		
13' 10"	Bead	30.125	56.563	83.000	109.438	135.875		
14' 0"	Short	31.588	57.763	83.938	110.113	136.288		
14' 0"	Long	33.250	58.625	84.000	109.375	134.750		
14' 0"	Bead	30.625	57.313	84.000	110.688	137.375		
14' 2"	Short	32.754	58.846	84.938	111.413	137.888		
14' 2"	Long	33.340	59.170	85.000	110.830	136.660		
14' 2"	Bead	31.125	58.063	85.000	111.938	138.875		
14' 4"	Short	32.388	59.163	85.938	112.713	139.488		
14' 4"	Long	34.340	60.170	86.000	111.830	137.660		
14' 4"	Bead	31.625	58.813	86.000	113.188	140.375		
14' 6"	Short	32.788	59.863	86.938	114.013	141.088		
14' 6"	Long	35.340	61.170	87.000	112.830	138.660		
14' 6"	Bead	32.125	59.563	87.000	114.438	141.875		
14' 8"	Short	33.188	60.563	87.938	115.313	142.688		
14' 8"	Long	33.218	60.563	88.000	109.594	131.188	152.782	
14' 8"	Bead	32.625	60.313	88.000	115.688	143.375		
14' 10"	Short	33.588	61.263	88.938	116.613	144.288		
14' 10"	Long	33.900	61.600	89.000	110.700	132.400	154.100	
14' 10"	Bead	33.125	61.063	89.000	116.938	144.875		
15' 0"	Short	33.938	61.938	89.938	117.938	145.938		
15' 0"	Long	34.900	62.600	90.000	111.700	133.400	155.100	
15' 0"	Bead	33.625	61.813	90.000	118.188	146.375		
15' 2"	Short	34.388	62.663	90.938	119.213	147.488		
15' 2"	Long	35.900	63.600	91.000	112.700	134.400	156.100	
15' 2"	Bead	34.125	62.563	91.000	119.438	147.875		
15' 4"	Short	35.000	63.600	92.000	120.800	150.000		
15' 4"	Long	36.875	64.250	92.000	114.375	136.750	159.125	
15' 4"	Bead	34.625	63.313	92.000	120.688	149.375		
15' 6"	Short	36.436	64.624	93.000	116.188	139.376	162.564	
15' 6"	Long	38.900	65.600	93.000	115.700	138.400	161.100	
15' 6"	Bead	36.625	64.417	93.000	115.792	138.583	161.375	
15' 8"	Short	38.436	65.624	94.000	117.188	140.376	163.564	
15' 8"	Long	40.900	66.600	94.000	116.700	139.400	162.100	
15' 8"	Bead	38.026	64.017	94.000	116.992	139.983	162.975	
15' 10"	Short	40.436	67.624	95.000	118.188	141.376	164.564	
15' 10"	Long	42.900	68.600	95.000	117.700	140.400	163.100	
15' 10"	Bead	40.625	66.617	95.000	118.192	141.383	164.575	
16' 0"	Short	43.436	69.624	96.000	119.188	142.376	165.564	
16' 0"	Long	45.900	70.600	96.000	118.700	141.400	164.100	
16' 0"	Bead	43.625	68.417	96.000	119.792	143.583	167.375	

TABLE 2

DOOR HEIGHT	SECTION HEIGHTS							
	Btm	#2	#3	#4	#5	#6	#7	#8
14' 0"	21"	21"	21"	21"	21"	21"	21"	21"
13' 6"	21"	21"	21"	21"	21"	18"	18"	21"
13' 0"	21"	21"	21"	18"	18"	18"	18"	21"
12' 6"	21"	18"	18"	18"	18"	18"	18"	21"
12' 0"	21"	21"	21"	21"	21"	18"	21"	
11' 6"	21"	21"	21"	18"	18"	18"	21"	
11' 0"	21"	18"	18"	18"	18"	18"	21"	
10' 6"	21"	21"	21"	21"	21"	21"		
10' 0"	21"	21"	21"	18"	18"	21"		
9' 6"	21"	18"	18"	18"	18"	21"		
9' 0"	18"	18"	18"	18"	18"	18"		
8' 6"	21"	21"	21"	18"	21"			
8' 0"	21"	18"	18"	18"	21"			
7' 6"	18"	18"	18"	18"	18"			
7' 0"	21"	21"	21"	21"				
6' 6"	21"	18"	18"	21"				

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 16