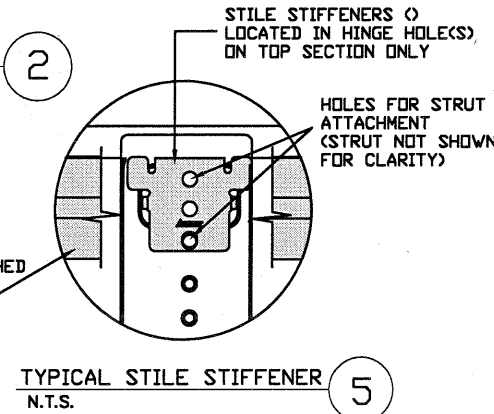
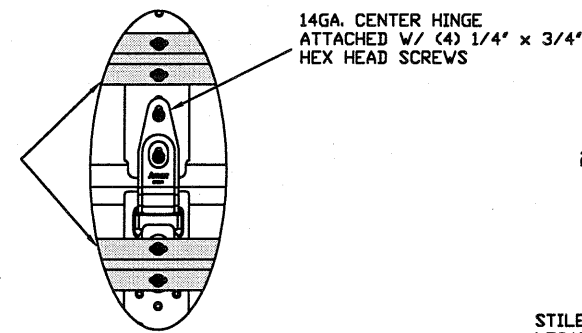
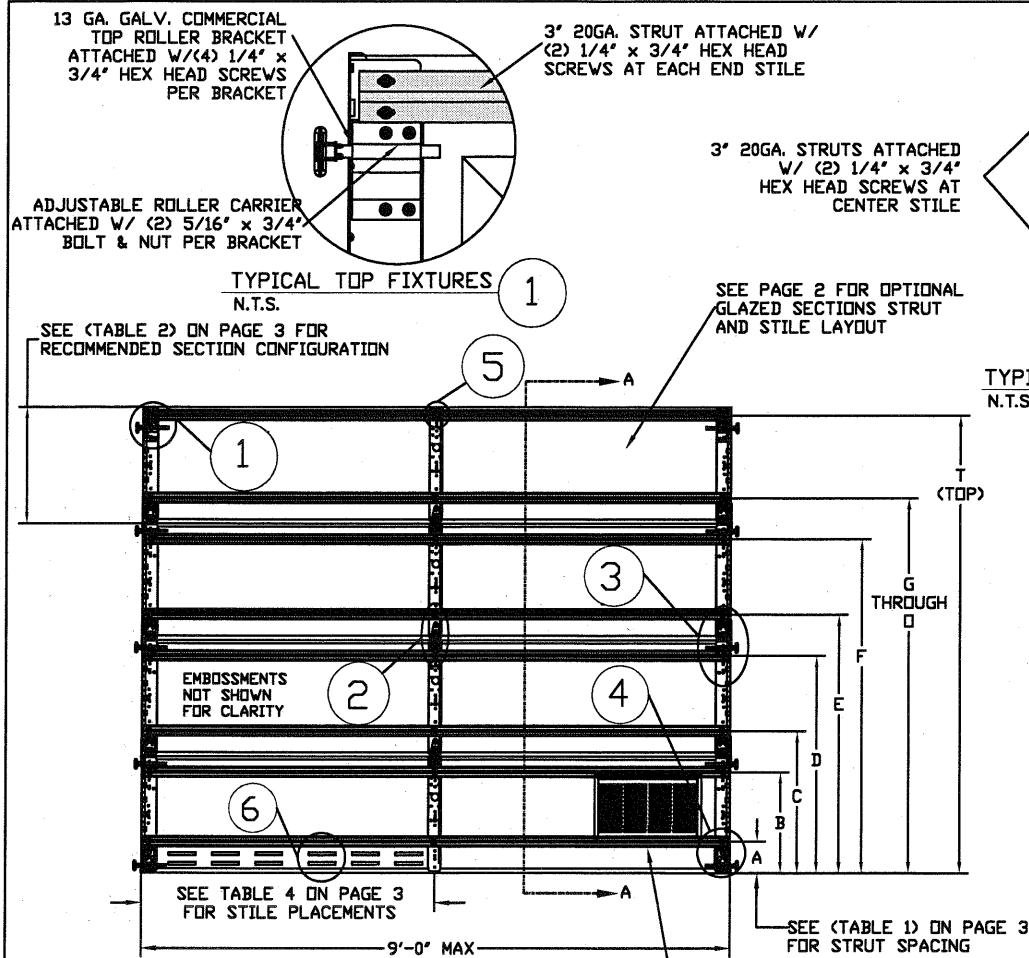
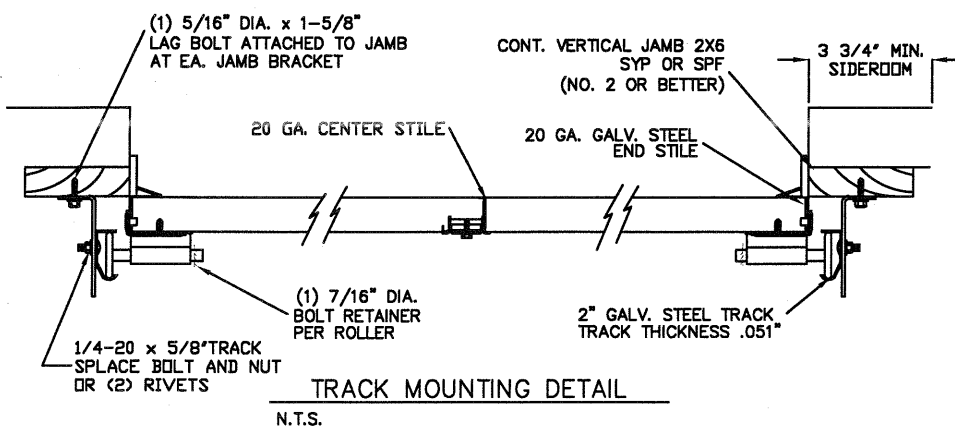
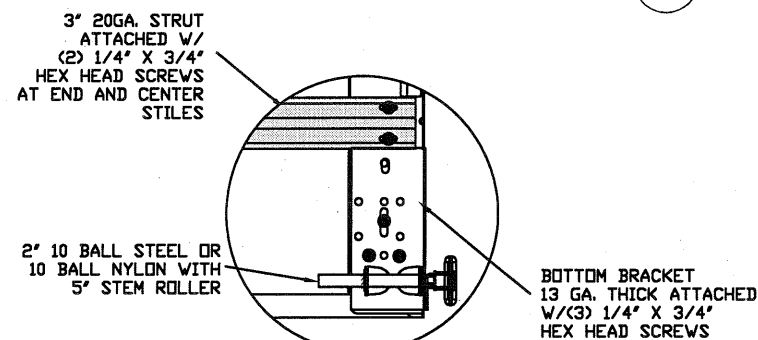
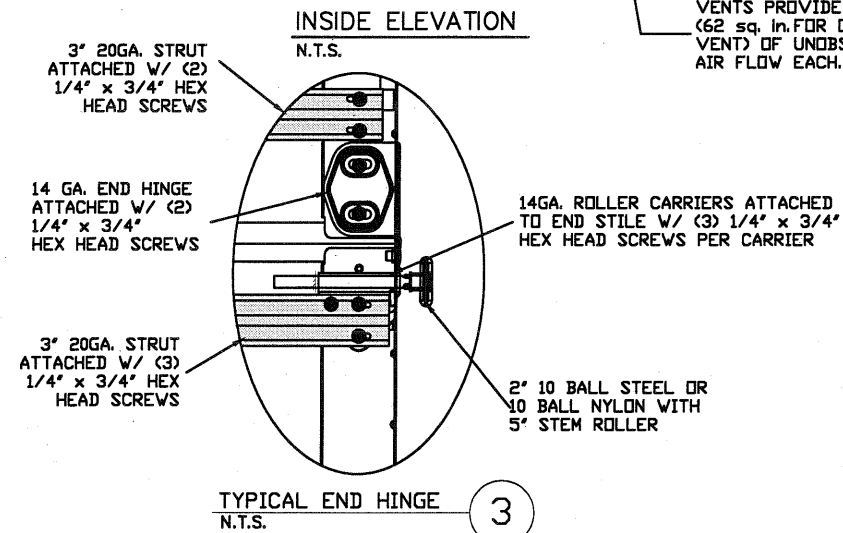
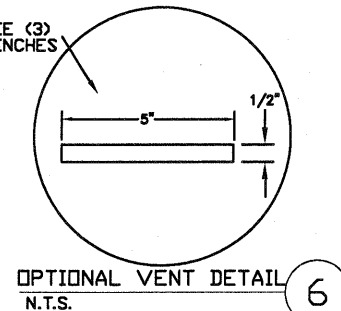


LARGE MISSILE IMPACT RESISTANT

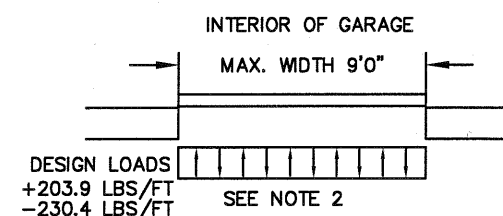
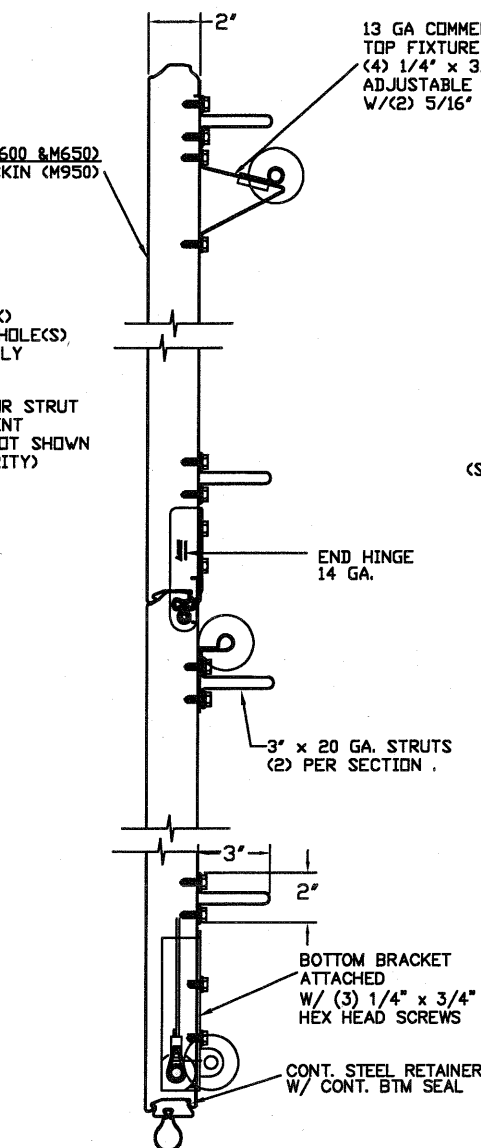


TWO (2) ROWS OF THREE (3) VENTS EQUALS 15 SQ. INCHES OF VENTILATION.



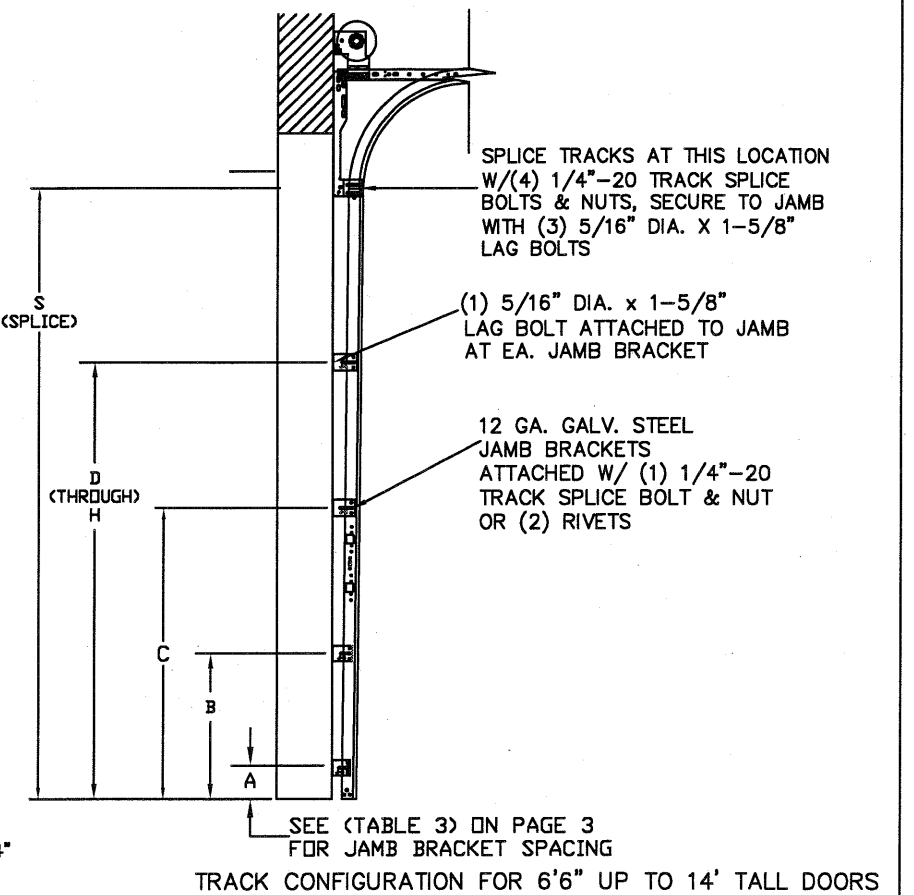
THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330 & E1996, AND DASMA 108 & 115. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN THE END ZONE, ROOF AT ANY SLOPE):

WIND SPEED (MPH)	214	194	184	176	169
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'



SPECIFICATIONS AND NOTES

- 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.
- EACH VERTICAL JAMBS RECEIVES MAXIMUM DESIGN LOADS OF: +203.9 LBS/FT & -230.4 LBS/FT
- DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
- DOOR SECTIONS SHALL BE 25 GA. MIN. (.019") 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.
- AMARR MANUFACTURES AND DISTRIBUTES GARAGE DOORS UNDER MANY BRAND LABELS. PLEASE SEE AMARR-MANUFACTURED PRIVATE LABEL CHART FOR REFERENCE OF EQUIVALENT PRODUCTS FOR WINDLOAD APPROVAL.
- REFER TO TABLES ON THE PAGE 3 FOR ADDITIONAL DOOR WIDTHS AND THEIR DESIGN PRESSURES
- PANEL STAMP DOES NOT EFFECT WINDLOAD CAPABILITIES.



REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED GLAZING NOTE	12/19/12	RLR

MAX SIZE
9' x 14'

DESIGN LOADS
+45.3 PSF
-51.2 PSF

TEST LOADS
+67.9 PSF
-76.8 PSF

LARGE
MISSILE
IMPACT
RESISTANT

Thomas L. Shelmerdine, PE (FL PE #0048579)
Structural Solutions, PA (FL Firm #29412)

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

FL

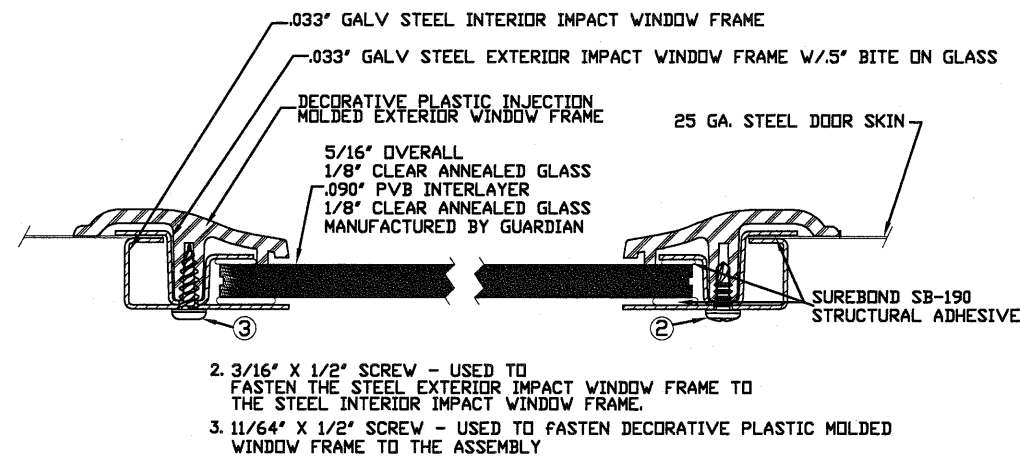
Amarr

MODEL #650 AMARR OAK SUMMIT SERIES 1000 & 2000
MODEL #600 AMARR STRATFORD SERIES 1000 & 2000
MODEL #950 AMARR HERITAGE SERIES 1000 & 2000

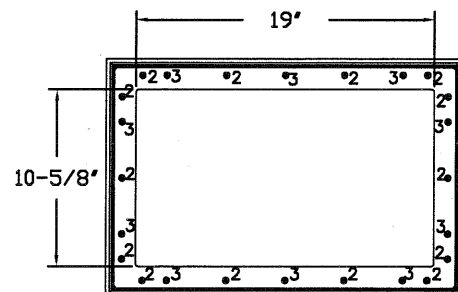
dba Structural Solutions of North Carolina, Inc.
5921-G W. Friendly Ave., Greensboro, NC 27410

SIZE B	DRAWN BY BHG	DATE 11/09/09	DRAWING NUMBER IRC-6009-169-15-1
CHECKED BY CBT			DATE 11/09/09
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			

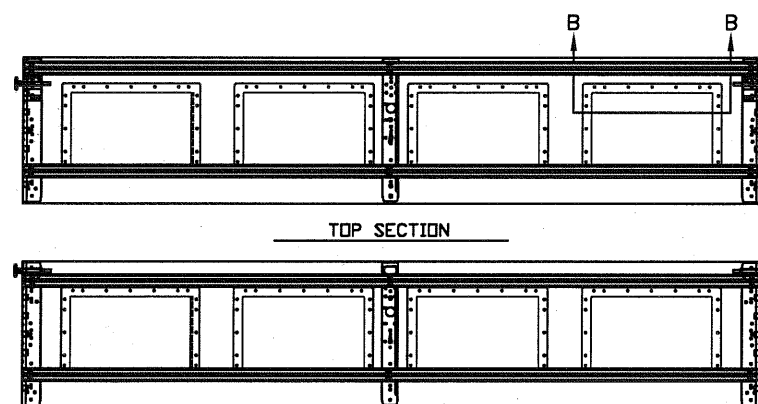
SHEET 1 OF 3



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



IMPACT GLAZING FASTENER DETAIL
N.T.S.



INTERMEDIATE SECTION

GLAZING OPTION DETAIL
N.T.S.

OPTIONAL SHORT PANEL GLAZED SECTION STRUT AND STILE LAYOUT

WOOD JAMB ATTACHMENT TO STRUCTURE

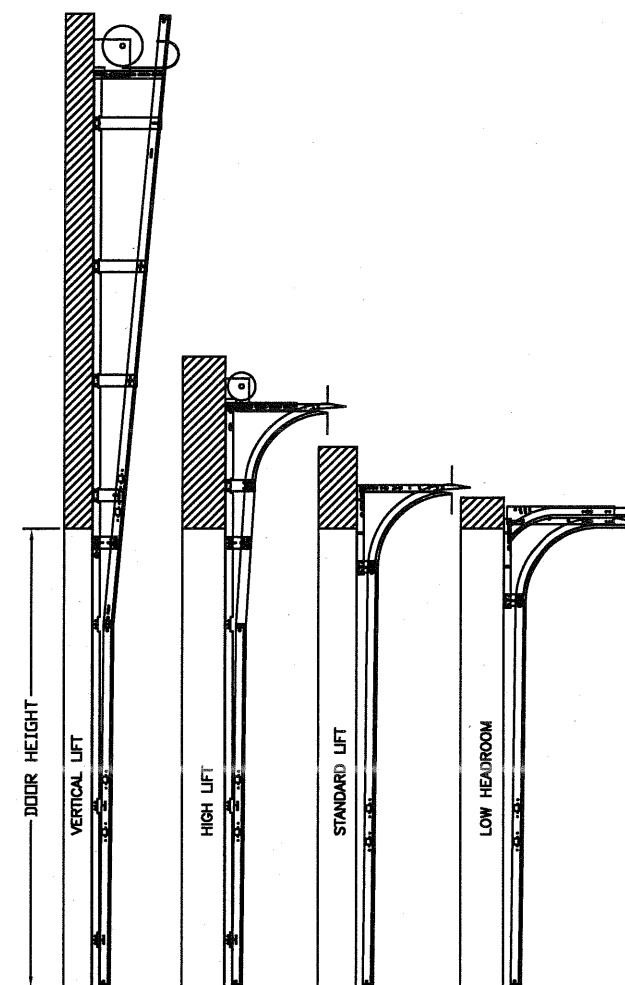
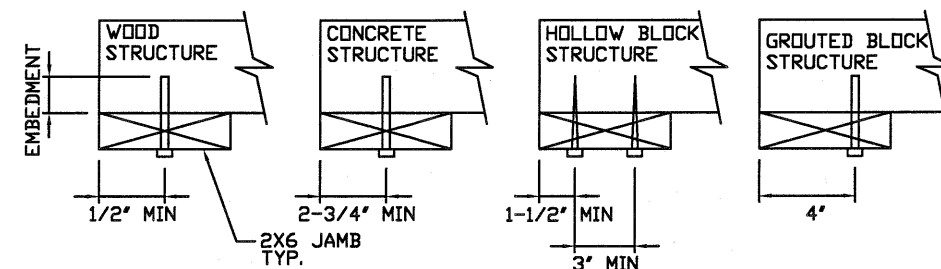
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

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 20" 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 16" 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 16" 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



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED GLAZING NOTE	12/19/12	RLR

MAX SIZE 9' x 14' DESIGN LOADS +45.3 PSF -51.2 PSF TEST LOADS +67.9 PSF -76.8 PSF LARGE MISSILE IMPACT RESISTANT	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412) FL	THOMAS L. SHELMERDINE LICENSE No. 48579 STATE OF FLORIDA PROFESSIONAL ENGINEER FL	dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410
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Amarr			
MODEL #850 AMARR OAK SUMMIT SERIES 1000 & 2000 MODEL #600 AMARR STRATFORD SERIES 1000 & 2000 MODEL #950 AMARR HERITAGE SERIES 1000 & 2000			
DRAWN BY	BHG	DATE	11/09/09
CHECKED BY	CBT	DATE	11/09/09
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IRC-6009-169-15-1
			SHEET 2 OF 3

TABLE 1

DOOR HEIGHT	STRUT SPACING (BASED ON RECOMMENDED SECTION CONFIGURATION)															TOP
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T
6' 6"	5 1/2"	18"	25 3/8"	36"	43 3/8"	54"	61 3/8"									76 1/4"
7'	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"									82 1/4"
7' 6"	5 1/2"	15"	22 3/8"	33"	40 3/8"	51"	58 3/8"	69"	76 3/8"							88 1/4"
8'	5 1/2"	18"	25 3/8"	36"	43 3/8"	54"	61 3/8"	72"	79 3/8"							94 1/4"
8' 6"	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	78"	85 3/8"							100 1/4"
9'	5 1/2"	15"	22 3/8"	33"	40 3/8"	51"	58 3/8"	69"	76 3/8"	87"	94 3/8"					106 1/4"
9' 6"	5 1/2"	18"	25 3/8"	36"	43 3/8"	54"	61 3/8"	72"	79 3/8"	90"	97 3/8"					112 1/4"
10'	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	78"	85 3/8"	96"	103 3/8"					118 1/4"
10' 6"	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	81"	88 3/8"	102"	109 3/8"					124 1/4"
11'	5 1/2"	18"	25 3/8"	36"	43 3/8"	54"	61 3/8"	72"	79 3/8"	90"	97 3/8"	108"	115 3/8"			130 1/4"
11' 6"	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	78"	85 3/8"	96"	103 3/8"	114"	121 3/8"			136 1/4"
12'	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	81"	88 3/8"	102"	109 3/8"	120"	127 3/8"			142 1/4"
12' 6"	5 1/2"	18"	25 3/8"	36"	43 3/8"	54"	61 3/8"	72"	79 3/8"	90"	97 3/8"	108"	115 3/8"	126"	133 3/8"	148 1/4"
13'	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	78"	85 3/8"	96"	103 3/8"	114"	121 3/8"	132"	139 3/8"	154 1/4"
13' 6"	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	81"	88 3/8"	102"	109 3/8"	120"	127 3/8"	138"	145 3/8"	160 1/4"
14'	5 1/2"	18"	25 3/8"	39"	46 3/8"	60"	67 3/8"	81"	88 3/8"	102"	109 3/8"	123"	130 3/8"	144"	151 3/8"	166 1/4"

■ ADDITIONAL STRUTS MAY BE ADDED TO DOOR WHEN GLAZED FOR COUNTERBALANCE PURPOSES

TABLE 4

Section Width (ft)	Panel Type	Center Stile Location (Measured from Left Edge)	Max Design Loads Allowed	
			Positive (PSF)	Negative (PSF)
8' 0	Short, Oak Summit	48.000	50.7	57.3
8' 0	Long	48.000	50.7	57.3
8' 2	Short, Oak Summit	49.000	49.7	56.1
8' 2	Long	49.000	49.7	56.1
8' 4	Short, Oak Summit	50.000	48.7	55.0
8' 4	Long	50.000	48.7	55.0
8' 6	Short, Oak Summit	51.000	47.7	53.9
8' 6	Long	51.000	47.7	53.9
8' 8	Short, Oak Summit	52.000	46.8	52.9
8' 8	Long	52.000	46.8	52.9
8' 10	Short, Oak Summit	53.000	45.9	51.9
8' 10	Long	53.000	45.9	51.9
9' 0	Short, Oak Summit	54.000	45.3	51.2
9' 0	Long	54.000	45.3	51.2

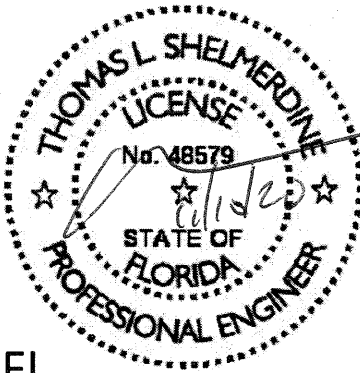
TABLE 2

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"				

TABLE 3

DOOR HEIGHT	TRACK ATTACHMENT								SPLICE
	A	B	C	D	E	F	G	H	S
6' 6"	3.5"	21"	39"	57"					70"
7'	3.5"	21"	42"	63"					76"
7' 6"	3.5"	18"	36"	54"	72"				82"
8'	3.5"	21"	39"	57"	75"				88"
8' 6"	3.5"	21"	42"	63"	81"				94"
9'	3.5"	18"	36"	54"	72"	90"			100"
9' 6"	3.5"	21"	39"	57"	75"	93"			106"
10'	3.5"	21"	42"	63"	81"	99"			112"
10' 6"	3.5"	21"	42"	63"	84"	105"			118"
11'	3.5"	21"	39"	57"	75"	93"	111"		124"
11' 6"	3.5"	21"	42"	63"	81"	99"	117"		130"
12'	3.5"	21"	42"	63"	84"	105"	123"		136"
12' 6"	3.5"	21"	39"	57"	75"	93"	111"	129"	142"
13'	3.5"	21"	42"	63"	81"	99"	117"	135"	148"
13' 6"	3.5"	21"	42"	63"	84"	105"	123"	141"	154"
14'	3.5"	21"	42"	63"	84"	105"	126"	147"	160"

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

REV	DESCRIPTION OF REVISIONS	DATE	BY
A	ADDED GLAZING NOTE	12/19/12	RLR
MAX SIZE 9' x 14' DESIGN LOADS +45.3 PSF -51.2 PSF TEST LOADS +67.9 PSF -76.8 PSF LARGE MISSILE IMPACT RESISTANT		Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412)  FL dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410	
			
MODEL #650 AMARR OAK SUMMIT SERIES 1000 & 2000 MODEL #600 AMARR STRATFORD SERIES 1000 & 2000 MODEL #950 AMARR HERITAGE SERIES 1000 & 2000			
SIZE	DRAWN BY	BHG	DATE
B	CHECKED BY	CBT	DATE
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 3 OF 3