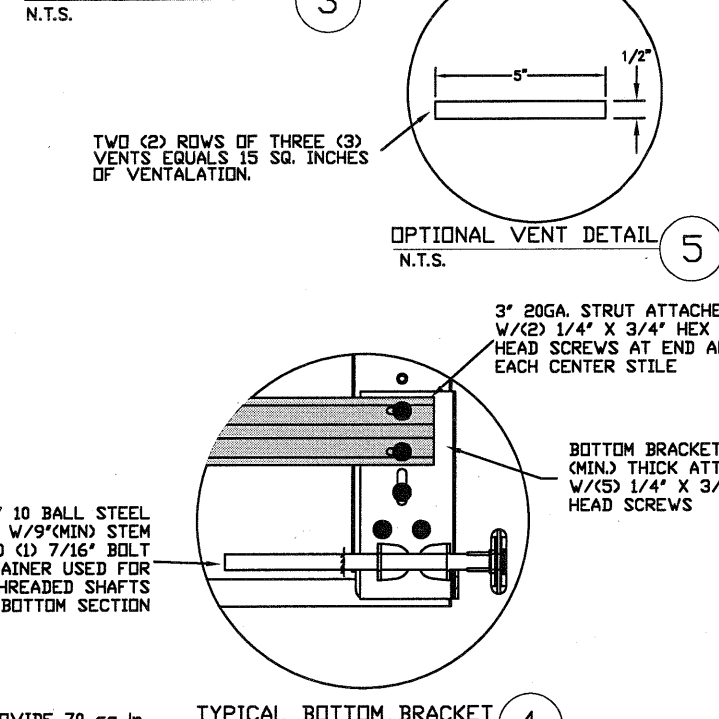
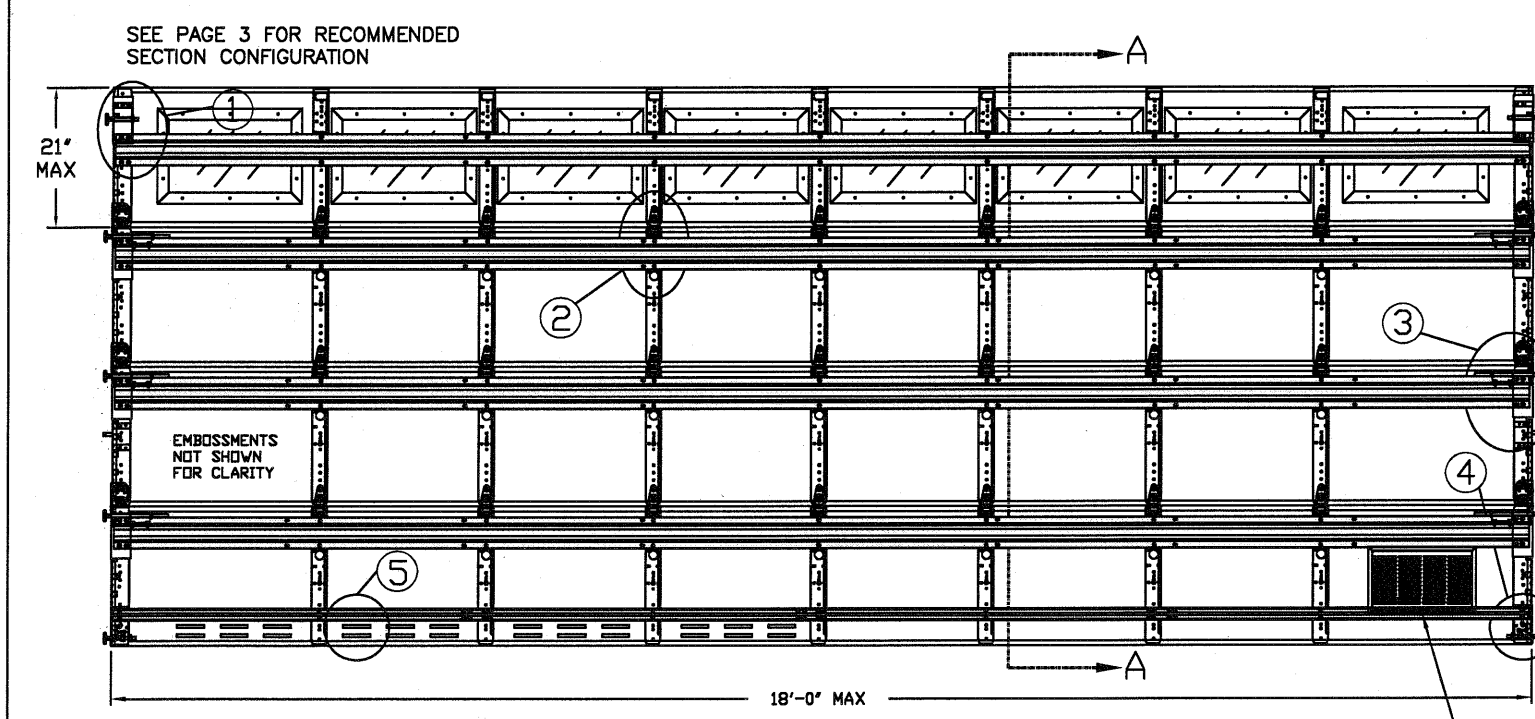
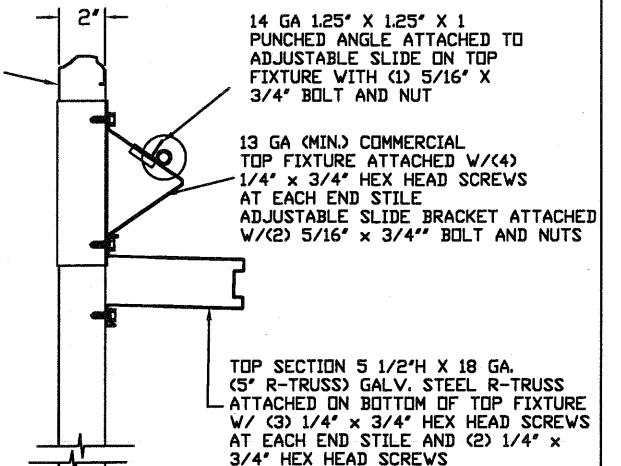
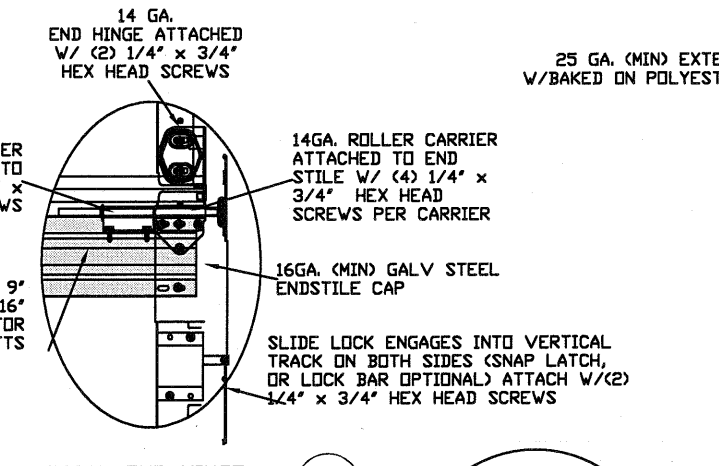
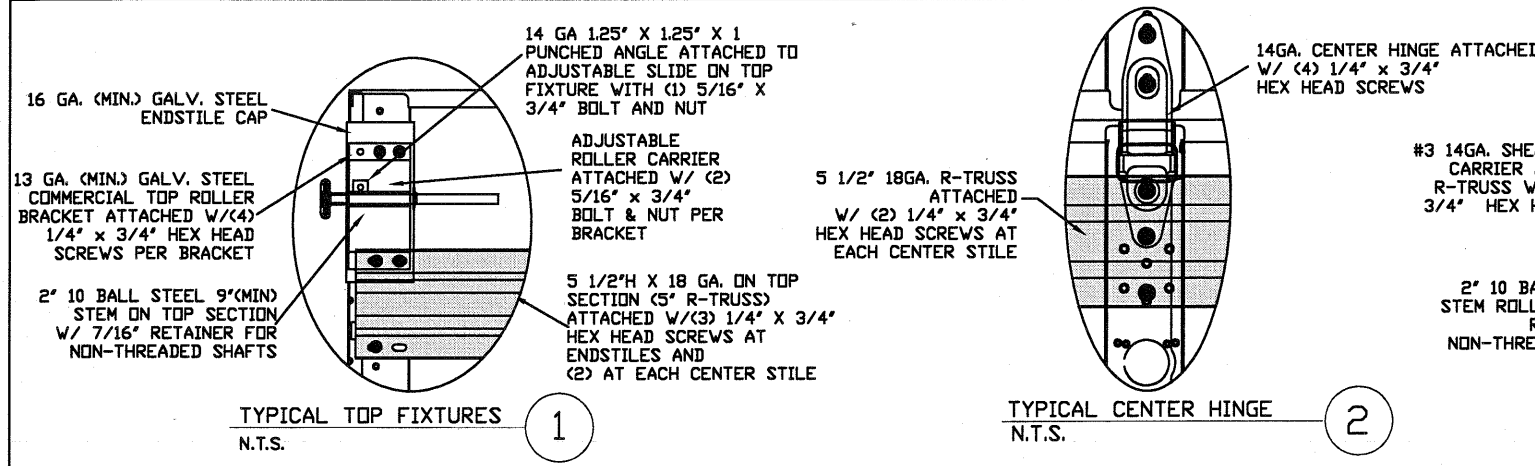
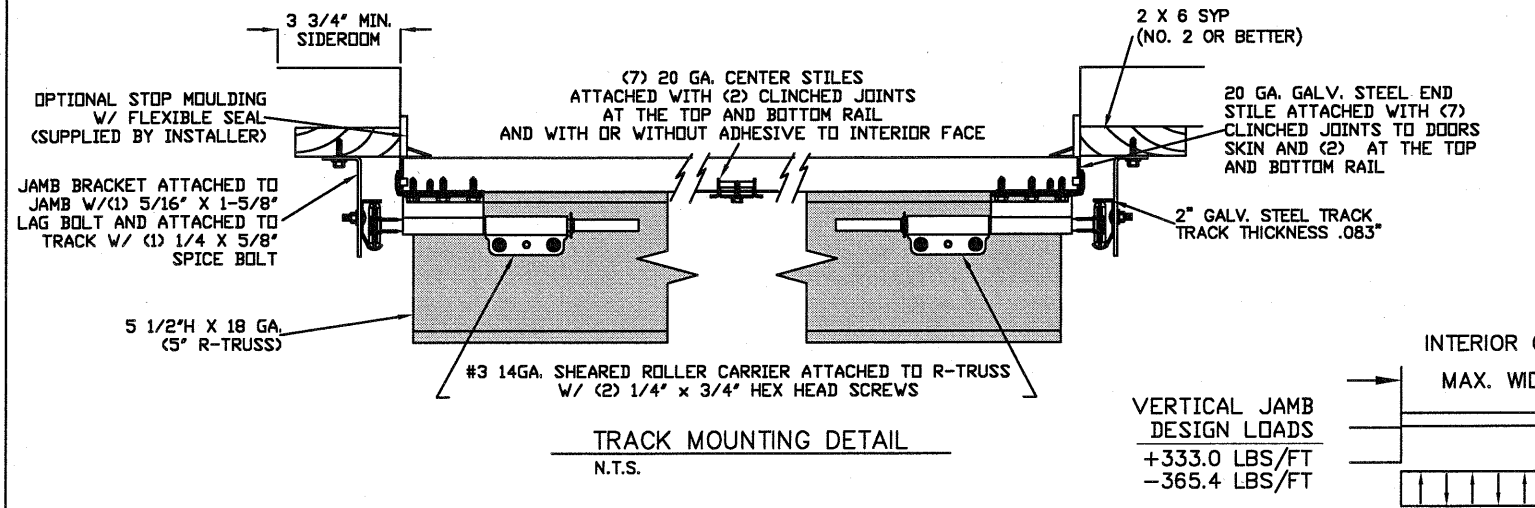




LARGE MISSILE IMPACT RESISTANT

INSIDE ELEVATION
N.T.S.



THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURE DESCRIBED IN ASTM E330 & E1996, AND DASHA 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)	200	181	172	165	158
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 JAMB RECEIVES MAXIMUM DESIGN LOADS OF: +333.0 LBS/FT & -365.4 LBS/FT
 - DOORS AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASHA.
 - 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

MAX SIZE
WIDTH 18'
HEIGHT 14'

SIZES SUBJECT
TO WEIGHT
LIMITATIONS

DESIGN LOADS
+37.0 PSF
-40.6 PSF

TEST LOADS
+55.5 PSF
-60.9 PSF

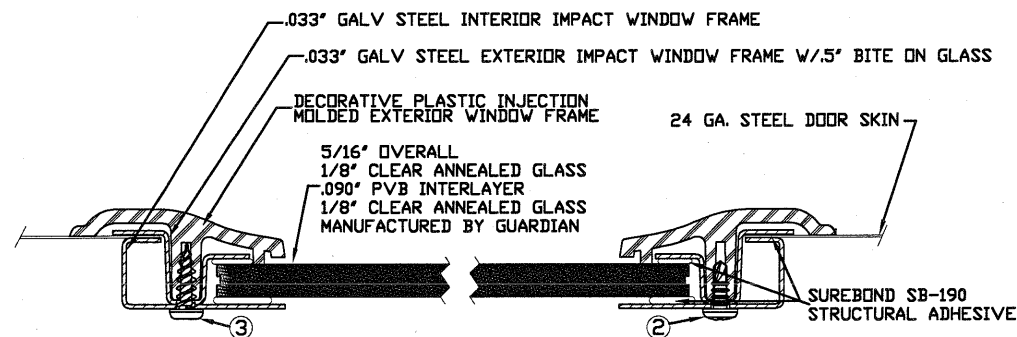
LARGE
MISSILE
IMPACT
RESISTANT

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

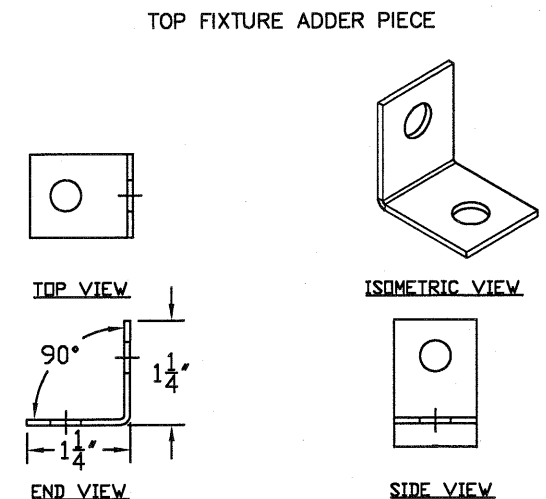
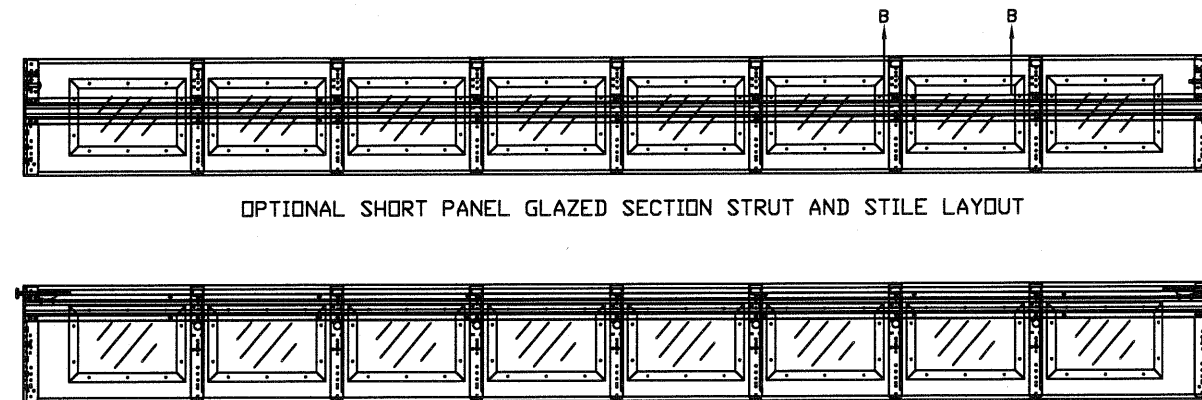
dba Structural Solutions of North Carolina, Inc.
5921-G.W. Friendly Ave., Greensboro, NC 27410

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	DRC	DATE
B	CHECKED BY	BHC	DATE
ENTREMATICS			SHEET 1 OF 3
165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			

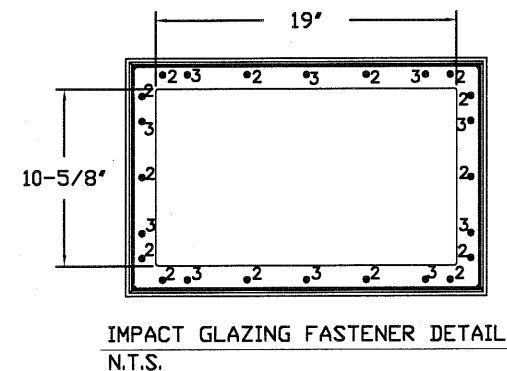
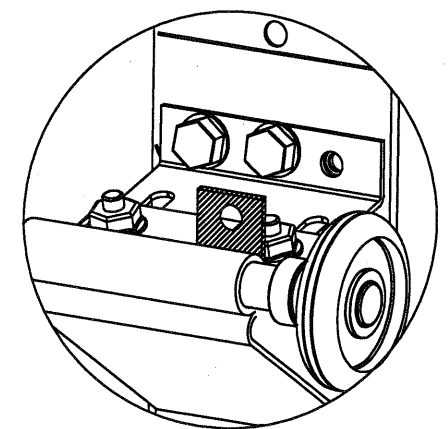


2. 3/16\" X 1/2\" SCREW - USED TO FASTEN THE STEEL EXTERIOR IMPACT WINDOW FRAME TO THE STEEL INTERIOR IMPACT WINDOW FRAME.
3. 11/64\" X 1/2\" SCREW - USED TO FASTEN DECORATIVE PLASTIC MOLDED WINDOW FRAME TO THE ASSEMBLY

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



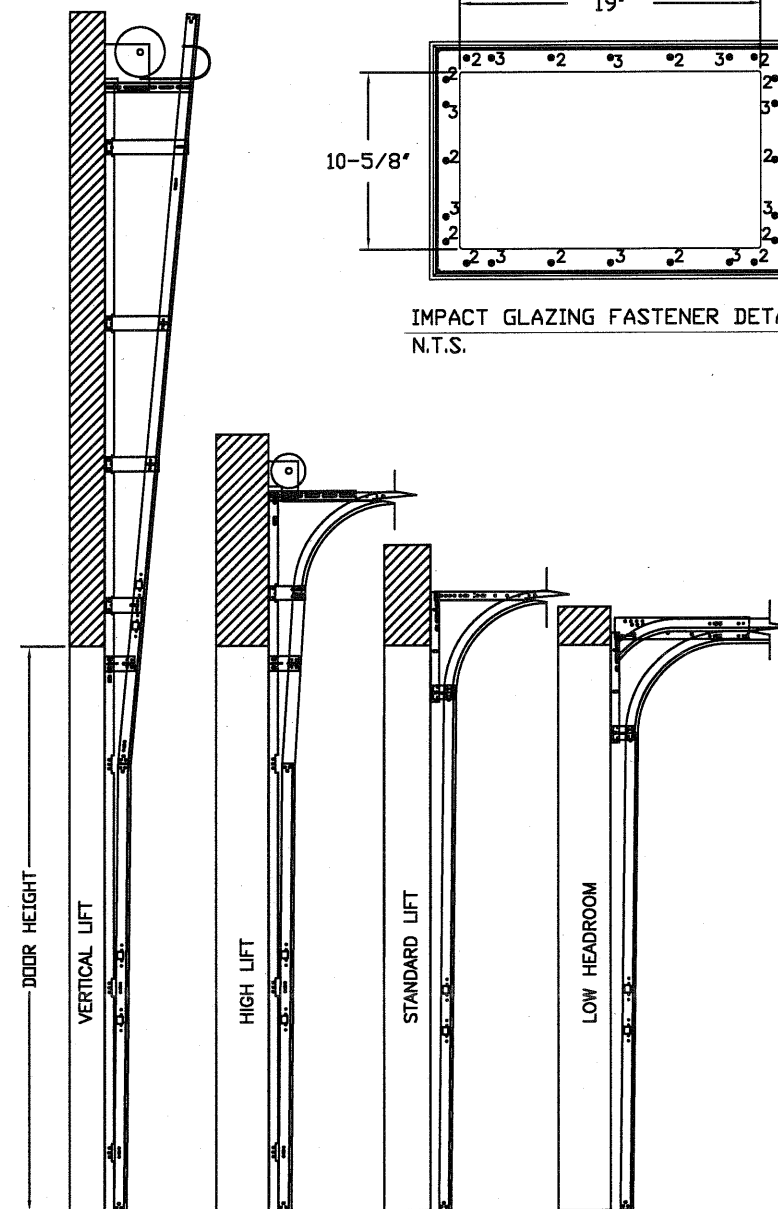
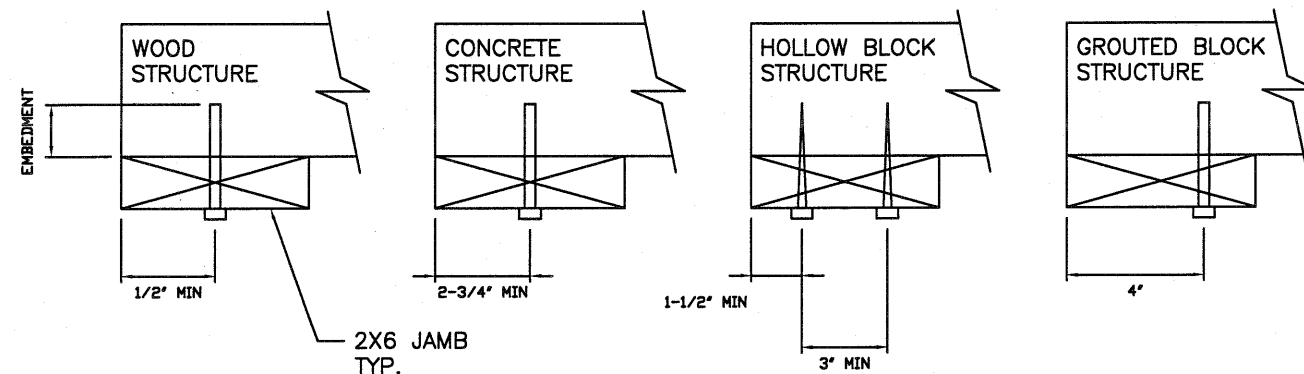
TOP FIXTURE REINFORCEMENT
ILLUSTRATION



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 14\" 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 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 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



AVAILABLE TRACK CONFIGURATIONS
N.T.S.

REV	DESCRIPTION OF REVISIONS	DATE	BY
MAX SIZE WIDTH 18' HEIGHT 14' SIZES SUBJECT TO WEIGHT LIMITATIONS DESIGN LOADS +37.0 PSF -40.6 PSF TEST LOADS +55.5 PSF -60.9 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 dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410			
Amarr MODEL #650 AMARR OAK SUMMIT SERIES 1000 & 2000 MODEL #800 AMARR STRATFORD SERIES 1000 & 2000 MODEL #950 AMARR HERITAGE SERIES 1000 & 2000			
SIZE	DRAWN BY	DRC	DATE
B	CHECKED BY	BHG	DATE
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			DRAWING NUMBER IRC-6018-155-26-1 SHEET 2 OF 3

TABLE 1

HEIGHT	TRACK ATTACHMENT								SPLICE
	A	B	C	D	E	F	G	H	
6' 0"	3.5"	18"	36"	54"					64"
6' 6"	3.5"	21"	38"	58"					70"
7' 0"	3.5"	21"	42"	63"					76"
7' 6"	3.5"	18"	36"	54"	72"				82"
8' 0"	3.5"	21"	39"	58"	75"				88"
8' 6"	3.5"	21"	42"	63"	81"				94"
9' 0"	3.5"	18"	36"	54"	72"	90"			100"
9' 6"	3.5"	21"	39"	57"	75"	93"			106"
10' 0"	3.5"	21"	42"	63"	81"	99"			112"
10' 6"	3.5"	21"	42"	63"	84"	105"			118"
11' 0"	3.5"	21"	39"	57"	75"	93"	111"		124"
11' 6"	3.5"	21"	42"	63"	81"	99"	117"		130"
12' 0"	3.5"	21"	42"	63"	84"	105"	123"		136"
12' 6"	3.5"	18"	36"	57"	75"	93"	111"	129"	142"
13' 0"	3.5"	21"	42"	63"	81"	99"	117"	135"	148"
13' 6"	3.5"	21"	42"	63"	84"	105"	123"	141"	154"
14' 0"	3.5"	21"	42"	63"	84"	105"	126"	147"	160"

ALL TRACK ATTACHMENT SPACING +/- (1/2)" WITH SYP NO. 2 OR BETTER ONLY

TABLE 2

Section	Panel Type	Center Stile Locations (Measured from Left Edge)							Max Design Loads Allowed	
		1st (in)	2nd (in)	3rd (in)	4th (in)	5th (in)	6th (in)	7th (in)	Positive (PSF)	Negative (PSF)
16' 2	Short	26.91	50.27	73.64	97.00	120.36	143.73	167.09	41.0	45.0
16' 2	Long	28.25	51.17	74.08	97.00	119.92	142.83	165.75	41.0	45.0
16' 2	Bead	24.63	48.75	72.88	97.00	121.13	145.25	169.38	41.0	45.0
16' 4	Short	27.91	51.27	74.64	98.00	121.36	144.73	168.09	40.6	44.5
16' 4	Long	29.25	52.17	75.08	98.00	120.92	143.83	166.75	40.4	44.3
16' 4	Bead	24.63	49.08	73.54	98.00	122.46	146.92	171.38	40.6	44.5
16' 6	Short	28.91	52.27	75.64	99.00	122.36	145.73	169.09	40.2	44.1
16' 6	Long	27.51	51.34	75.17	99.00	122.83	146.66	170.49	40.2	44.1
16' 6	Bead	24.63	49.42	74.21	99.00	123.79	148.59	173.38	40.2	44.1
16' 8	Short	27.01	51.34	75.67	100.00	124.33	148.66	172.99	39.8	43.6
16' 8	Long	28.30	52.20	76.10	100.00	123.90	147.80	171.70	39.8	43.6
16' 8	Bead	24.88	49.92	74.96	100.00	125.04	150.09	175.13	39.8	43.6
16' 10	Short	26.75	51.50	76.25	101.00	125.75	150.50	175.25	39.4	43.2
16' 10	Long	29.30	53.20	77.10	101.00	124.90	148.80	172.70	39.4	43.2
16' 10	Bead	24.86	50.15	75.57	101.00	126.29	151.59	176.88	39.4	43.2
17' 0	Short	29.01	53.34	77.67	102.00	126.33	150.66	174.99	39.0	42.8
17' 0	Long	30.30	54.20	78.10	102.00	125.90	149.80	173.70	38.9	42.7
17' 0	Bead	25.38	50.92	76.46	102.00	127.54	153.09	178.63	39.0	42.8
17' 2	Short	28.00	53.00	78.00	103.00	128.00	153.00	178.00	38.6	42.4
17' 2	Long	31.30	55.20	79.10	103.00	126.90	150.80	174.70	38.2	41.9
17' 2	Bead	25.63	51.42	77.21	103.00	128.79	154.59	180.38	38.6	42.4
17' 4	Short	29.00	54.00	79.00	104.00	129.00	154.00	179.00	38.2	42.0
17' 4	Long	32.30	56.20	80.10	104.00	127.90	151.80	175.70	37.5	41.2
17' 4	Bead	25.88	51.92	77.96	104.00	130.04	156.09	182.13	38.2	42.0
17' 6	Short	30.00	55.00	80.00	105.00	130.00	155.00	180.00	37.9	41.6
17' 6	Long	33.30	57.20	81.10	105.00	128.90	152.80	176.70	36.8	40.4
17' 6	Bead	26.13	52.42	78.71	105.00	131.29	157.59	183.88	37.9	41.6
17' 8	Short	29.20	54.80	80.40	106.00	131.60	157.20	182.80	37.5	41.2
17' 8	Long	30.70	55.80	80.90	106.00	131.10	156.20	181.30	37.5	41.2
17' 8	Bead	26.38	52.92	79.46	106.00	132.54	159.09	185.63	37.5	41.2
17' 10	Short	30.20	55.80	81.40	107.00	132.60	158.20	183.80	37.2	40.8
17' 10	Long	30.88	56.25	81.63	107.00	132.38	157.75	183.13	37.2	40.8
17' 10	Bead	26.63	53.42	80.21	107.00	133.79	160.59	187.38	37.2	40.8
18' 0	Short	31.88	57.25	82.63	108.00	133.38	158.75	184.13	37.0	40.6
18' 0	Long	32.70	57.80	82.90	108.00	133.10	158.20	183.30	37.0	40.6
18' 0	Bead	26.88	53.92	80.96	108.00	135.04	162.09	189.13	37.0	40.6

TABLE 3

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

REV	DESCRIPTION OF REVISIONS	DATE	BY
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Amarr 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 DRC	DATE 03/18/10	DRAWING NUMBER
B	CHECKED BY BHG	DATE 03/18/10	IRC-6018-155-26-1
ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105			SHEET 3 OF 3