

3" 20 GA STRUT AT THE TOP OF TOP SECTION ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS AT EACH END STILE AND CENTER STILE LOCATIONS

12 GA. (MIN.) GALV. COMMERCIAL TOP ROLLER BRACKET ATTACHED W/ (4) 1/4" X 3/4" HEX HEAD SCREWS

ADJUSTABLE SLIDE BRACKET ATTACHED W/ (2) 5/16" X 3/4" CARRIAGE BOLTS AND NUT

3-1/4" X 20 GA CONTINUOUS BACKER PLATE BEHIND BACK SKIN AT TOP AND BOTTOM OF EACH SECTION

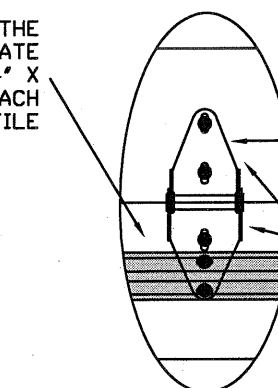
2"-10 BALL STEEL 7" STEM ROLLERS (MIN) W/ 7/16" RETAINERS FOR NON-THREADED SHAFTS

TYPICAL TOP FIXTURES
N.T.S.

1

LARGE MISSILE IMPACT RESISTANCE

3" 20 GA STRUT STACKED ON THE HINGES OF EACH INTERMEDIATE SECTION ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS AT EACH END STILE, AND CENTER STILE



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

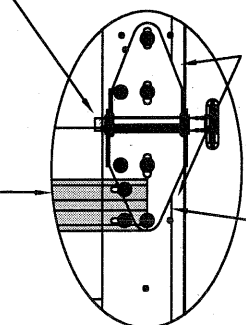
3-1/4" X 20 GA CONTINUOUS BACKER PLATE BEHIND BACK SKIN AT TOP AND BOTTOM OF EACH SECTION

TYPICAL CENTER HINGE
N.T.S.

2

2"-10 BALL STEEL 4" STEM ROLLERS (MIN) W/ 7/16" RETAINERS FOR NON-THREADED SHAFTS

3" 20 GA STRUT ON EACH INTERMEDIATE SECTION ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS AT EACH END STILE, AND CENTER STILE LOCATIONS



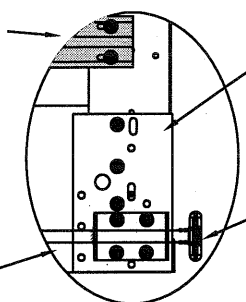
3-1/4" X 20 GA CONTINUOUS BACKER PLATE BEHIND BACK SKIN AT TOP AND BOTTOM OF EACH SECTION

14 GA. (MIN.) END HINGE ROLLER CARRIER ATTACHED W/ (6) 1/4" X 3/4" HEX HEAD SCREWS

TYPICAL END HINGE
N.T.S.

3

3" 20 GA STRUT ATTACHED W/ (2) 1/4" X 3/4" HEX HEAD SCREWS AT EACH END STILE, AND CENTER STILE LOCATIONS



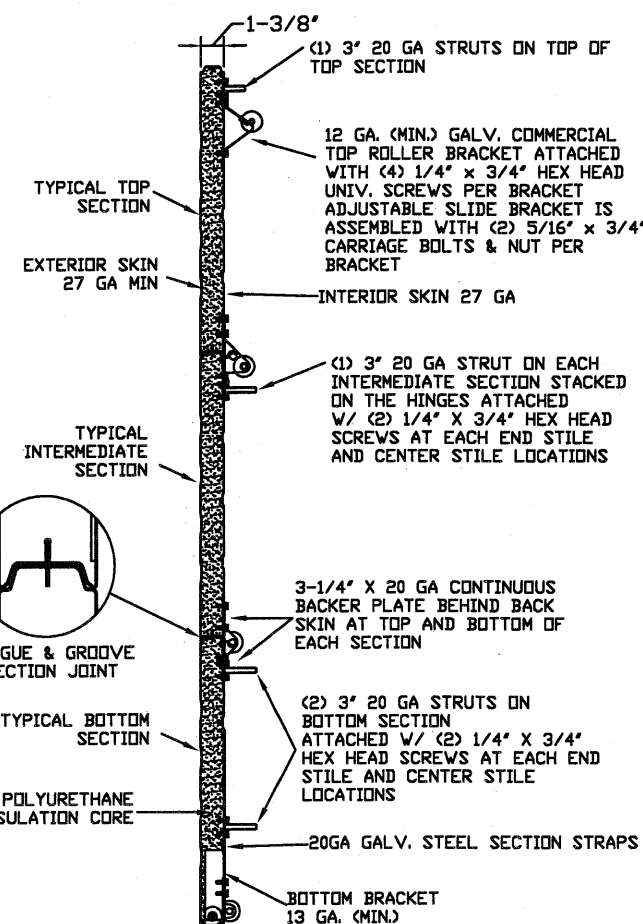
BB-4 BOTTOM BRACKET 13 GA. (MIN.) ATTACHED W/ A TOTAL OF (7) 1/4" X 3/4" HEX HEAD SCREWS

2"-10 BALL STEEL 7" STEM ROLLERS (MIN) W/ 7/16" RETAINERS FOR NON-THREADED SHAFTS

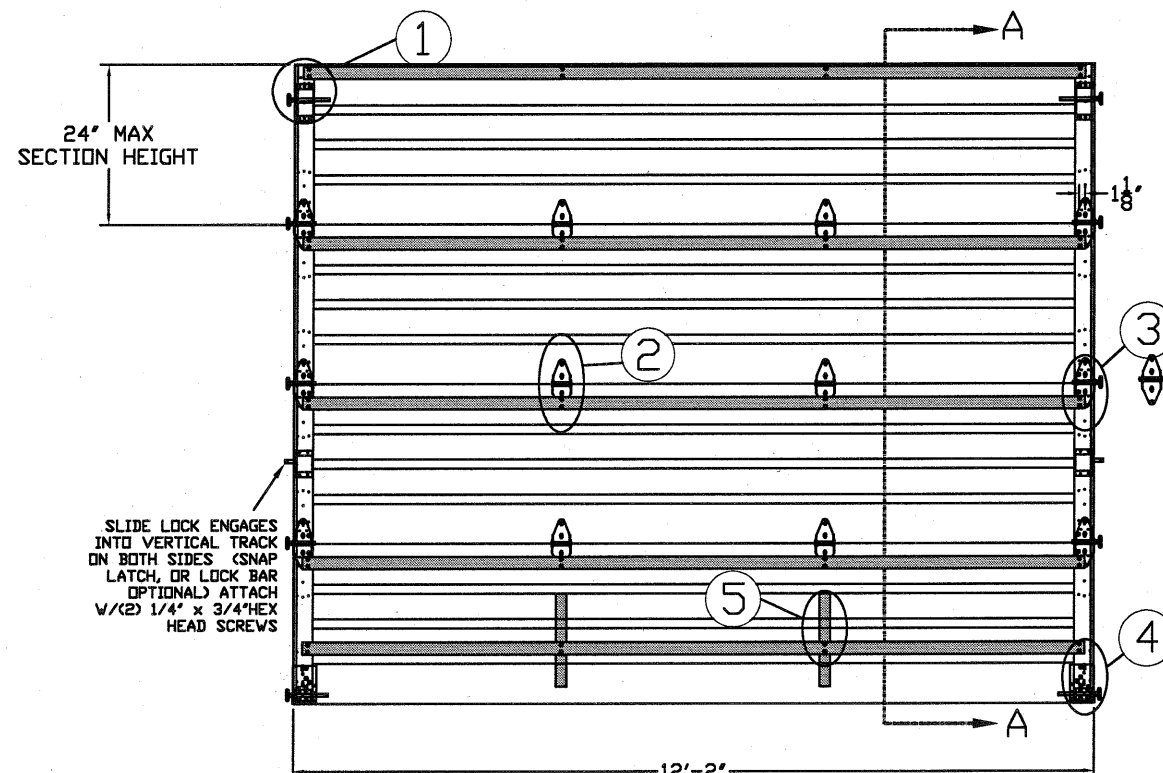
3-1/4" X 20 GA CONTINUOUS BACKER PLATE BEHIND BACK SKIN AT TOP AND BOTTOM OF EACH SECTION

TYPICAL BOTTOM BRACKET
N.T.S.

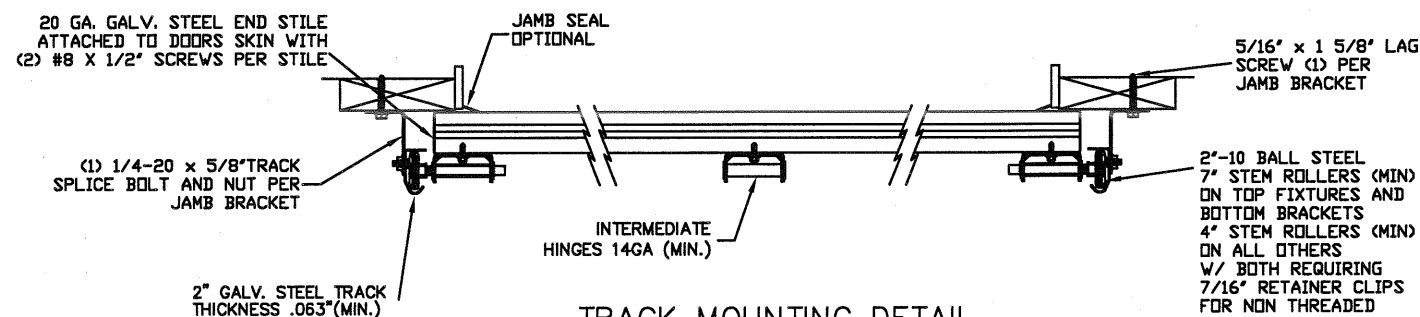
4



SECTION A-A (SIDE VIEW)



INSIDE ELEVATION
N.T.S.



TRACK MOUNTING DETAIL
N.T.S.

EDGE OF DOOR 1" OVERLAP ON EACH SIDE

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN, ANSI/DASMA 115, ASTM E1886, ASTM E1996 AND ASTM F588. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS):

WIND SPEED (MPH)	168	152	145	138	133
EXPOSURE LEVEL	B	C	C	D	D
MEAN ROOF HEIGHT	30'	15'	25'	15'	25'

REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX. SIZE
12'2" x 24'

DESIGN LOADS
+23.8 PSF
-27.3 PSF

TEST LOADS
+35.7 PSF
-41.0 PSF

LARGE MISSILE
IMPACT
RESISTANCE

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

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

Amarr

MODEL 1350 AMARR 2741
MODEL 2700 AMARR 2742
MODEL 2720 AMARR 2042

SIZE	DRAWN BY	RLR	DATE	05/18/12	DRAWING NUMBER
B	CHECKED BY		DATE		IBC-1312-130-15-1

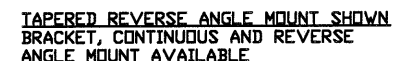
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165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105

SHEET 1 OF 3

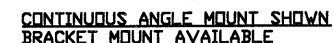


12 GA STEEL FRAMING
232 LBS/SCREW ALLOWABLE LOAD - 6' FROM ENDS AND 18' O.C.
REFER TO NOTES: 1, 2 AND 5

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



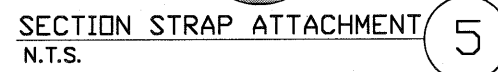
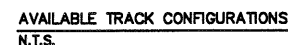
STEEL FRAMING 12GA OR GREATER
1590 LBS/LN ALLOWABLE LOAD - 6" FROM ENDS AND 24" O.C.
REFER TO NOTES: 1, 2, 5, 6, 7, 8 AND 9



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



2000 PSI CONCRETE OR GREATER
336 LBS/SLEEVE ANCHOR ALLOWABLE LOAD - 6" FROM ENDS AND 24" O.C.
REFER TO NOTES 1, 2, 3, 4 AND 5



- 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.



REV	DESCRIPTION OF REVISIONS	DATE	BY

MAX SIZE 12'2" x 24' DESIGN LOADS +23.8 PSF -27.3 PSF TEST LOADS +35.7 PSF -41.0 PSF LARGE MISSILE IMPACT RESISTANCE	Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412)		dba Structural Solutions of North Carolina, Inc. 704-444-7777
	FL		MODEL 1350 AMARR 2741 MODEL 2700 AMARR 2742 MODEL 2720 AMARR 2042

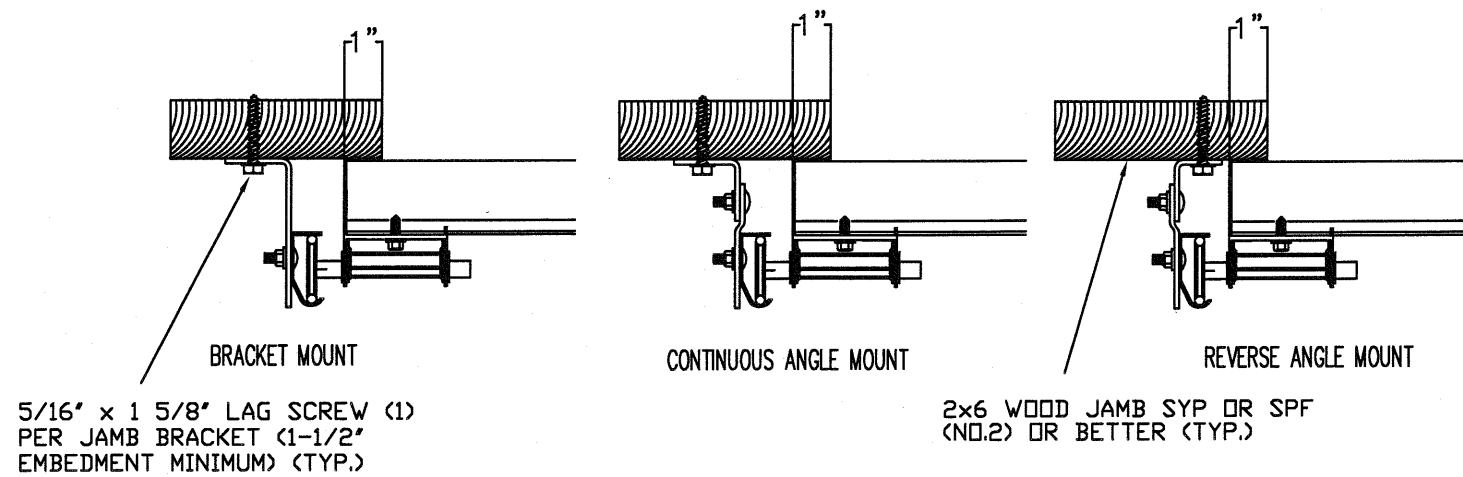
SIZE B	DRAWN BY	RLR	DATE 05/18/12	DRAWING NUMBER IBC-1312-130-15-
	CHECKED BY		DATE	

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SHEET 2 OF 3

TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE SHEET 2 TRACK CONFIGURATION DETAIL



WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

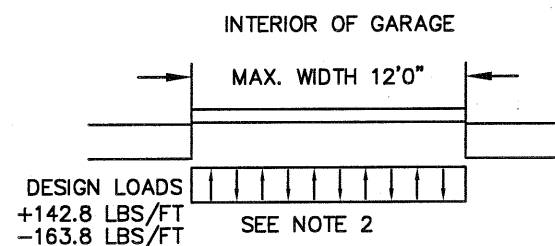
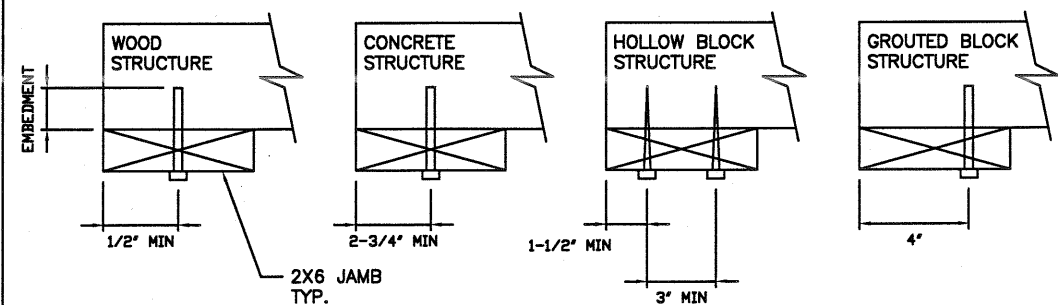
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

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/RAMSEY 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



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:
+142.8 LBS/FT & -163.8 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
4. DOOR SECTIONS SHALL BE 27 GA MIN. INTERIOR AND EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24'0" HIGH REQUIRE (2) 3" 20 GA STRUTS ON BOTTOM, (1) 3" 20 GA STRUT ON EACH INTERMEDIATE, AND (1) 3" 20 GA STRUT ON THE TOP 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.

TABLE 1

Section Width (ft)		Center Stile Locations (Measured from Left Edge)	
		1st (in)	2nd (in)
9'	2"	37.000	73.000
9'	4"	36.000	76.000
9'	6"	37.000	77.000
9'	8"	38.000	78.000
9'	10"	39.000	79.000
10'	0"	40.000	80.000
10'	2"	41.000	81.000
10'	4"	42.000	82.000
10'	6"	43.000	83.000
10'	8"	44.000	84.000
10'	10"	45.000	85.000
11'	0"	46.000	86.000
11'	2"	47.000	87.000
11'	4"	48.000	88.000
11'	6"	49.000	89.000
11'	8"	50.000	90.000
11'	10"	51.000	91.000
12'	0"	48.000	96.000
12'	2"	49.000	97.000

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