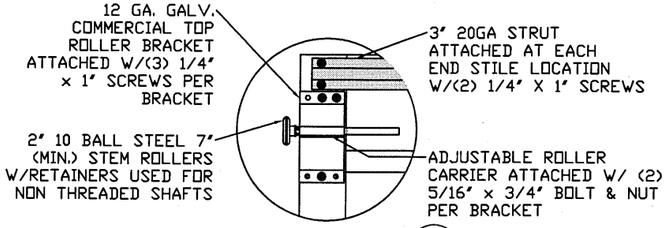
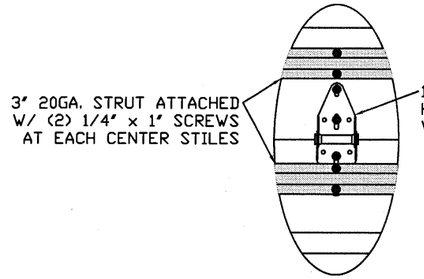
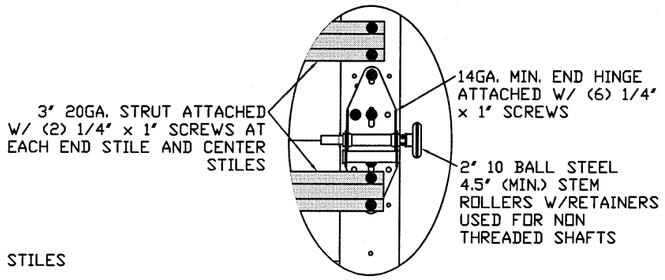


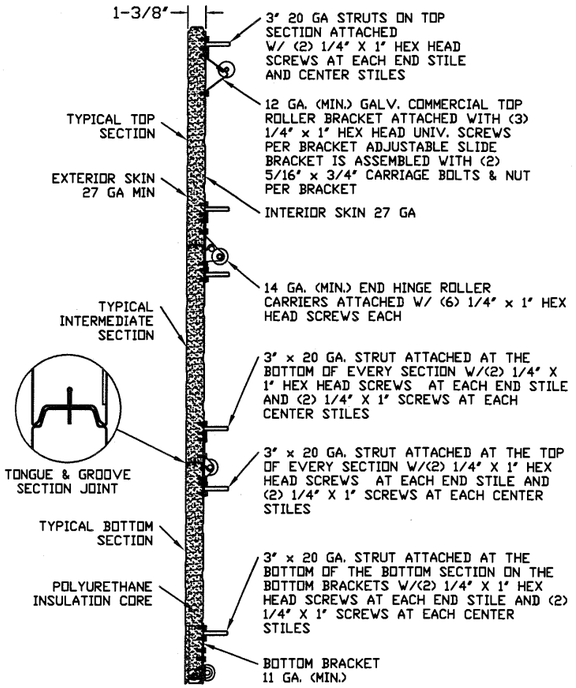

TYPICAL TOP FIXTURES
N.T.S. 1



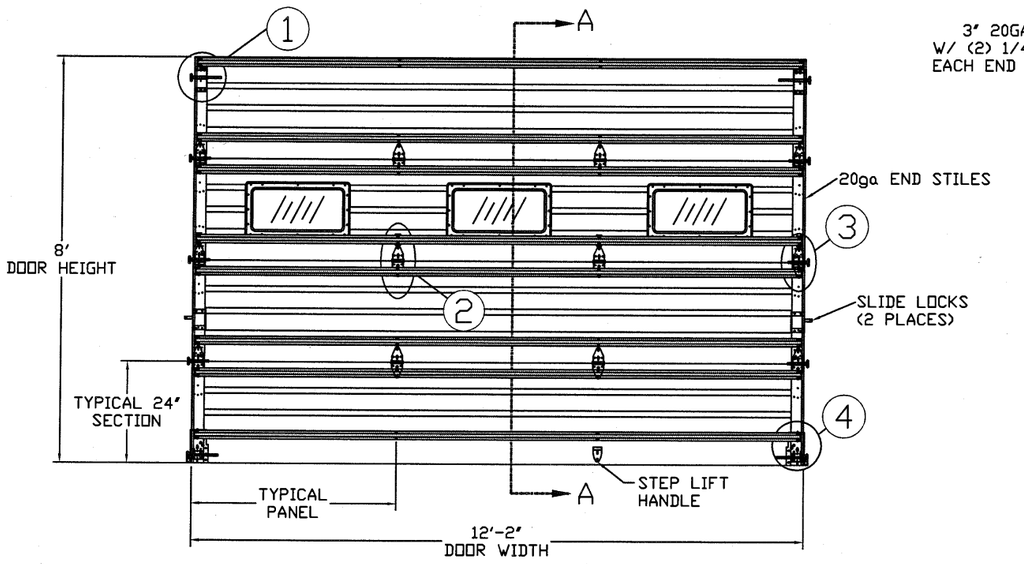

TYPICAL CENTER HINGE
N.T.S. 2



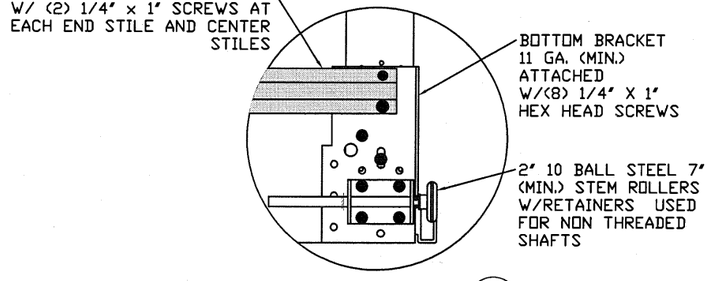

TYPICAL END HINGE
N.T.S. 3



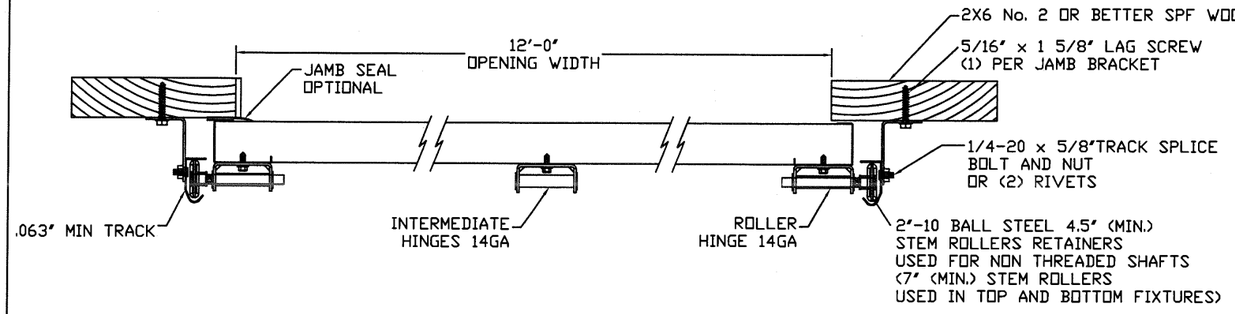

SECTION A-A (SIDE VIEW)




DOOR INTERIOR ELEVATION
N.T.S.




TYPICAL BOTTOM BRACKET
N.T.S. 4




2" BRACKET MOUNT TO WOOD JAMB DETAIL
N.T.S.

THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-98/02/05 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS, AND I=1.0):

| | | | | | |
|---|---|---|---|---|---|
| WIND SPEED (MPH) | 151 | 137 | 130 | 124 | 119 |
| 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
+32.0 PSF
-36.7 PSF

TEST LOADS
+48.0 PSF
-55.1 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

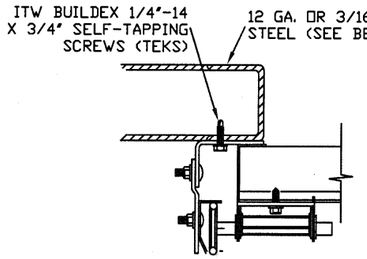
5921-G W. Friendly Ave., Greensboro, NC 27410

Amarr ENTREMATIC

**MODEL 1350 AMARR 2741 (27GA)**
**MODEL 2700 AMARR 2742 (27GA)**
**MODEL 2720 AMARR 2042 (20GA)**

| SIZE | DRAWN BY DRD | DATE 4/13/18 | DRAWING NUMBER |
|---|---|---|---|
| B | CHECKED BY RLR | DATE 5/9/18 | IBC-1312-150-15 |
| ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 | | | SHEET 1 OF 4 |

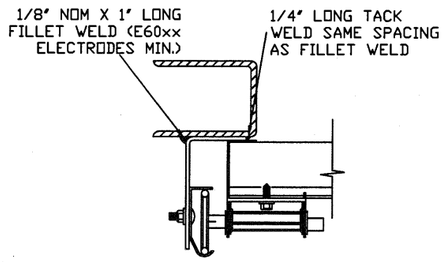
# TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS




CLIP STYLE REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

12 GA. STEEL FRAMING
232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS AND 14" 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

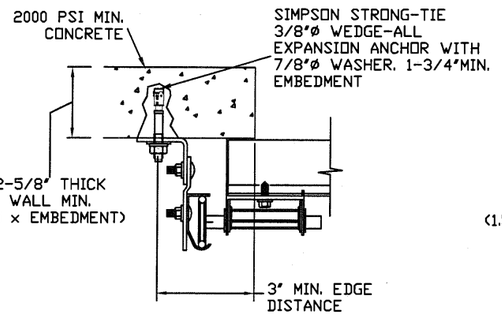



REVERSE ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

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

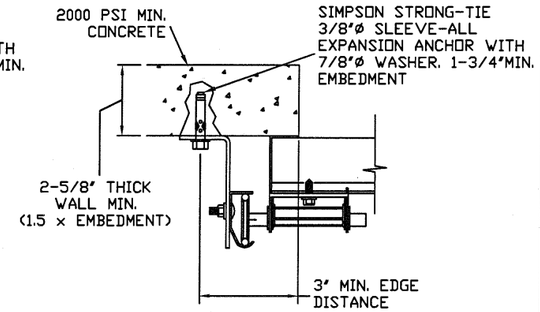
NOTES:
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EGDE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.
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.

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: +194.7 LBS/FT & -223.3 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. (.015) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24'0" HIGH HAVE (2) 3" 20GA STRUTS PER SECTION
6. SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTRED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.




CLIP STYLE CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, REVERSE AND TAPERED ANGLE MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER
351 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6" FROM ENDS AND 20" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

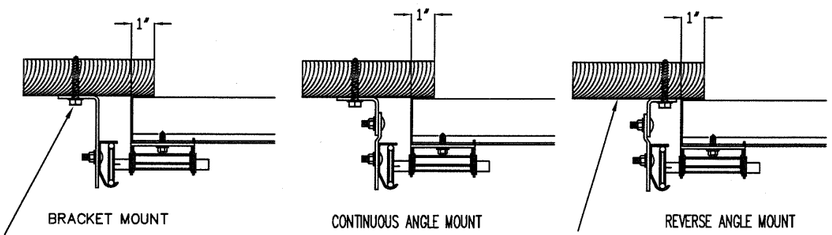



CONTINUOUS ANGLE MOUNT SHOWN
BRACKET, CONTINUOUS AND TAPERED ANGLE MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER
336 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6" FROM ENDS AND 20" O.C.
REFER TO NOTES: 1, 2, 3, 4 AND 5

# TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE TRACK CONFIGURATION DETAIL




# WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

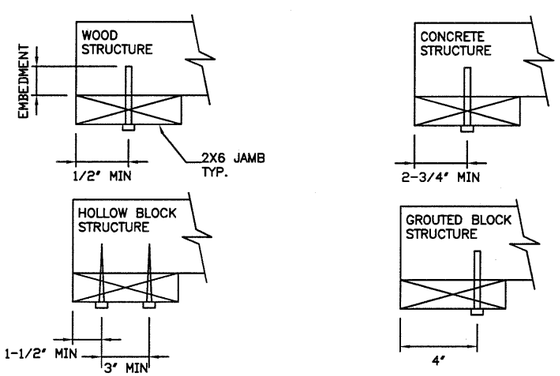
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS
THEN 24" O.C. (1 1/2" EMBEDMENT)

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 22" 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




INTERIOR OF GARAGE




| REV | DESCRIPTION OF REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |

MAX SIZE 12'2 x 24'

DESIGN LOADS +32.0 PSF -36.7 PSF

TEST LOADS +48.0 PSF -55.1 PSF

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

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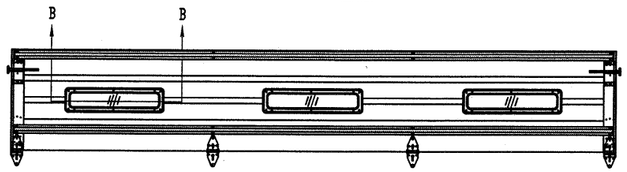
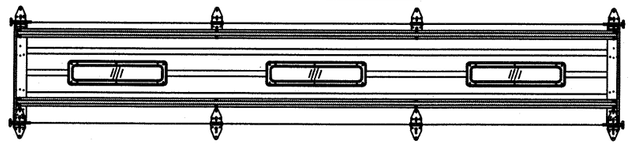
| ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 | | | SHEET 2 OF 4 |

TOP SECTION



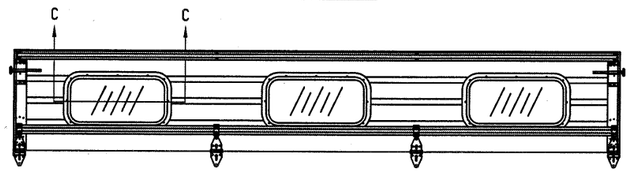

OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS
N.T.S.

INTERMEDIATE SECTION



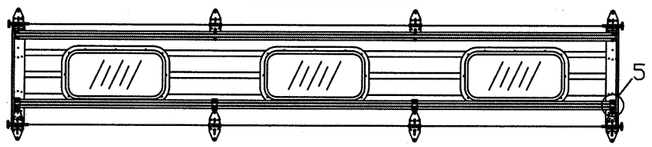
OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS
N.T.S.

TOP SECTION



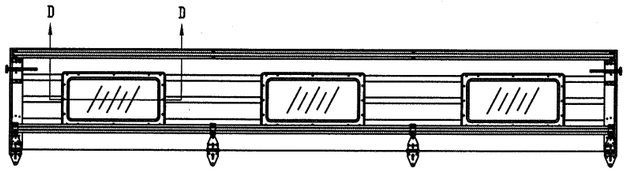

OPTIONAL GLAZED SECTION W/ 26" X 13" WINDOWS
N.T.S.

INTERMEDIATE SECTION



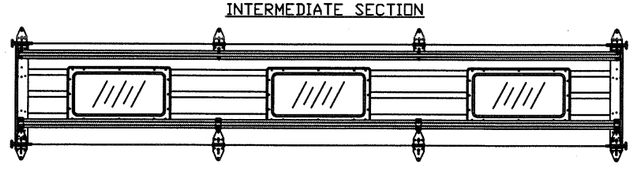

OPTIONAL GLAZED SECTION W/ 26" X 13" WINDOWS
N.T.S.

TOP SECTION

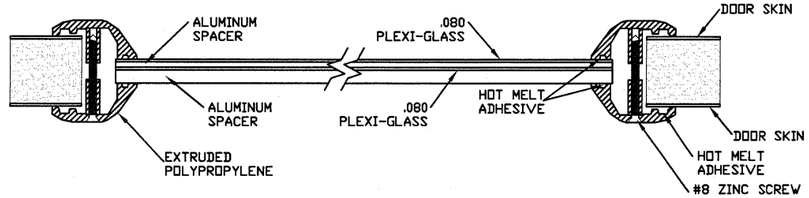



OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS
N.T.S.

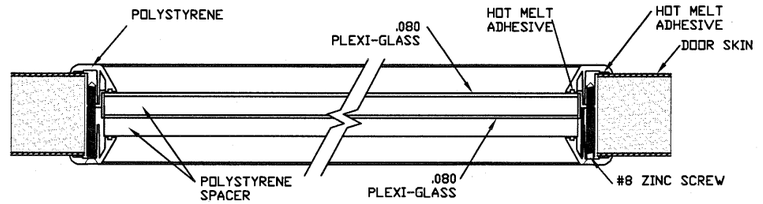
INTERMEDIATE SECTION



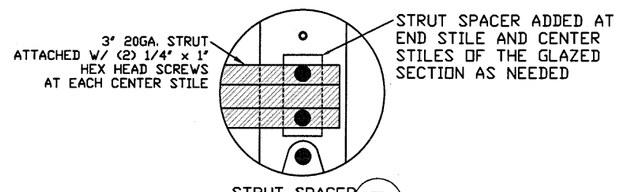
OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS
N.T.S.



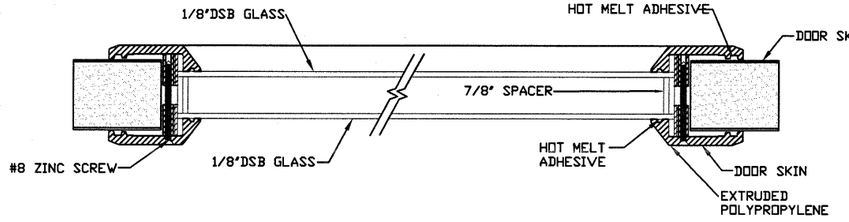

SECTION B-B 24" X 6" WINDOW DETAIL W/ .080 PLEXI-GLASS
N.T.S.



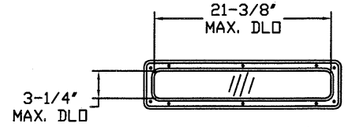

SECTION C-C 26" X 13" WINDOW DETAIL W/ INSULATED PLEXI-GLASS
N.T.S.



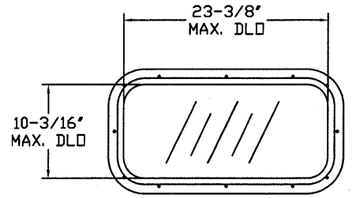

STRUT SPACER
N.T.S.



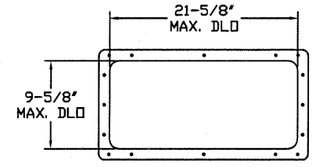

SECTION D-D 24" X 12" WINDOW DETAIL W/ 1-1/8" INSULATED GLASS
N.T.S.




24" X 6" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.




26" X 13" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.




24" X 12" DAY LIGHT OPENING AND FASTENER DETAIL
N.T.S.

| REV | DESCRIPTION OF REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |

MAX SIZE
12'2 x 24'

DESIGN LOADS
+32.0 PSF
-36.7 PSF

TEST LOADS
+48.0 PSF
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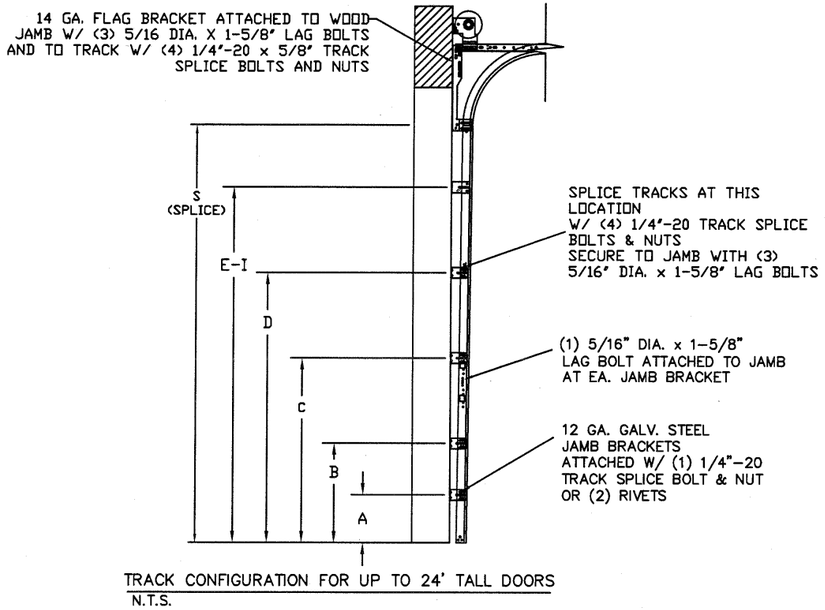
| ENTREMATIC 165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 | | | | | SHEET 3 OF 4 |

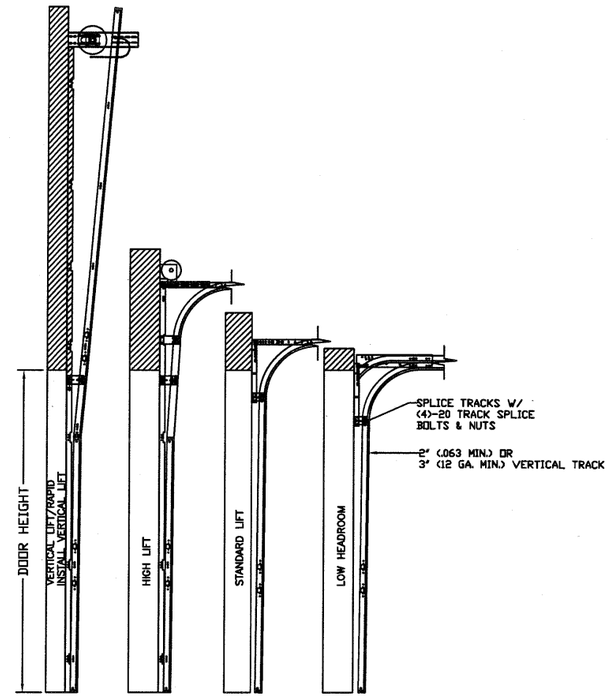
## TABLE 1

| Section Width (ft) | | Center Stile 1st (in) | Center Stile 2nd (in) | Max Design Loads Allowed Positive (PSF) | Max Design Loads Allowed Negitive (PSF) |
|---|---|---|---|---|---|
| 9' | 4" | 36" | 76" | 40.6 | 46.6 |
| 9' | 6" | 37" | 77" | 40.1 | 46.0 |
| 9' | 8" | 38" | 78" | 39.5 | 45.4 |
| 9' | 10" | 39" | 79" | 39.0 | 44.8 |
| 10' | 0" | 40" | 80" | 38.6 | 44.2 |
| 10' | 2" | 41" | 81" | 38.1 | 43.7 |
| 10' | 4" | 42" | 82" | 37.4 | 42.9 |
| 10' | 6" | 43" | 83" | 36.8 | 42.3 |
| 10' | 8" | 44" | 84" | 36.3 | 41.6 |
| 10' | 10" | 45" | 85" | 35.7 | 41.0 |
| 11' | 0" | 46" | 86" | 35.2 | 40.3 |
| 11' | 2" | 47" | 87" | 34.6 | 39.7 |
| 11' | 4" | 48" | 88" | 34.1 | 39.2 |
| 11' | 6" | 49" | 89" | 33.6 | 38.6 |
| 11' | 8" | 50" | 90" | 33.2 | 38.0 |
| 11' | 10" | 51" | 91" | 32.7 | 37.5 |
| 12' | 0" | 48" | 96" | 32.1 | 36.8 |
| 12' | 2" | 49" | 97" | 32.0 | 36.7 |




TRACK CONFIGURATION FOR UP TO 24' TALL DOORS
N.T.S.

SEE TABLE 2 FOR TRACK ATTACHMENT SPACING




AVAILABLE TRACK CONFIGURATIONS
N.T.S.

## TABLE 2

| DOOR HEIGHT | | TRACK ATTACHMENT A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | TYPICAL SPLICE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7' | 0" | 10.0" | 22" | 34" | 58" | | | | | | | | | | | | | | | | | | 76" |
| 7' | 6" | 10.0" | 22" | 34" | 58" | 70" | | | | | | | | | | | | | | | | | 82" |
| 8' | 0" | 10.0" | 22" | 34" | 58" | 70" | | | | | | | | | | | | | | | | | 88" |
| 8' | 6" | 10.0" | 22" | 34" | 58" | 70" | 82" | | | | | | | | | | | | | | | | 94" |
| 9' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | | | | | | | | | | | | | | | | 100" |
| 9' | 6" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | | | | | | | | | | | | | | | 106" |
| 10' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | | | | | | | | | | | | | | | 112" |
| 11' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | | | | | | | | | | | | | | 124" |
| 12' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | | | | | | | | | | | | | 136" |
| 13' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | | | | | | | | | | | | 148" |
| 14' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | | | | | | | | | | | 160" |
| 15' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | | | | | | | | | | 172" |
| 16' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | | | | | | | | | 184" |
| 17' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | | | | | | | | 196" |
| 18' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | | | | | | | 208" |
| 19' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | | | | | | 220" |
| 20' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | 214" | | | | | 232" |
| 21' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | 214" | 226" | | | | 244" |
| 22' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | 214" | 226" | 238" | | | 256" |
| 23' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | 214" | 226" | 238" | 250" | | 268" |
| 24' | 0" | 10.0" | 22" | 34" | 58" | 70" | 82" | 94" | 106" | 118" | 130" | 142" | 154" | 166" | 178" | 190" | 202" | 214" | 226" | 238" | 250" | 262" | 280" |

ALL TRACK ATTACHMENT SPACING +/-2" ALLOWED WITH SPF OR SYP NO. 2 OR BETTER ONLY
AMARR MODEL 1350 ONLY AVAILABLE UP TO 14'

| REV | DESCRIPTION OF REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |

MAX SIZE
12'2 x 24'

DESIGN LOADS
+32.0 PSF
-36.7 PSF

TEST LOADS
+48.0 PSF
-55.1 PSF


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



TX


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


Amarr
ENTREMATIC

**MODEL 1350 AMARR 2741 (27GA)**
**MODEL 2700 AMARR 2742 (27GA)**
**MODEL 2720 AMARR 2042 (20GA)**

| SIZE | DRAWN BY | DATE | DRAWING NUMBER |
|---|---|---|---|
| B | CHECKED BY RLR | DATE 5/9/18 | IBC-1312-150-15 |

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

SHEET 4 OF 4