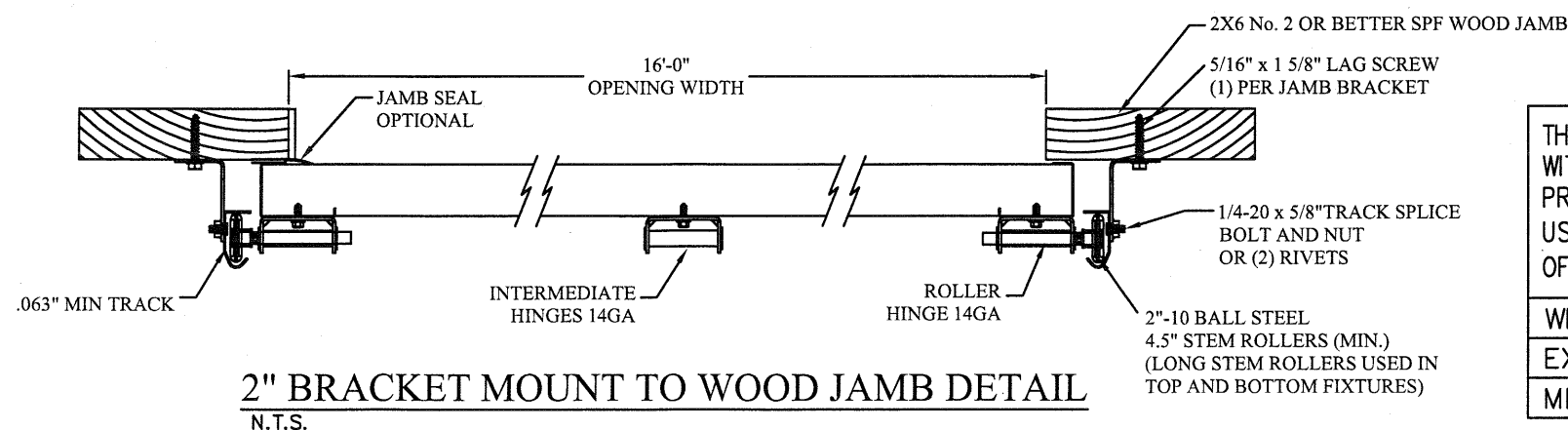
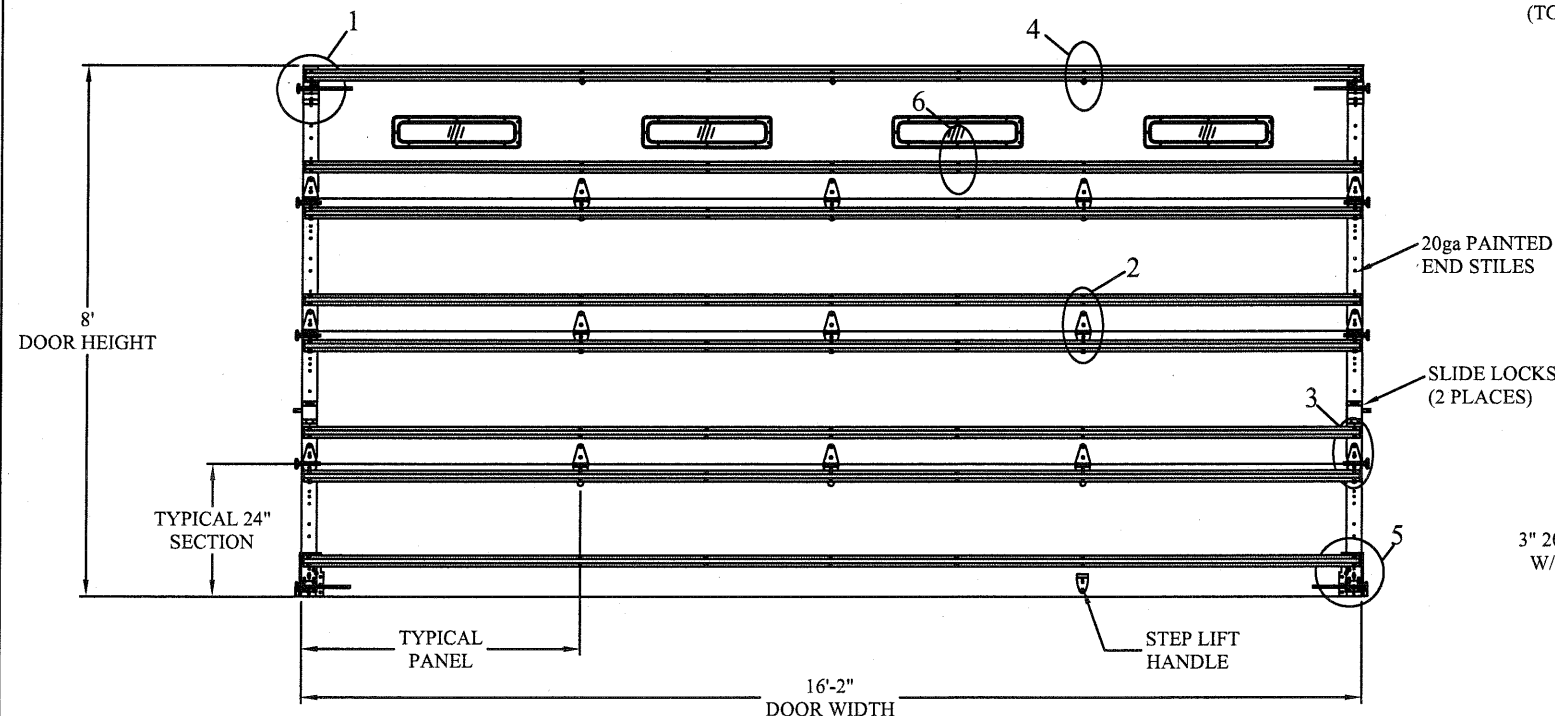
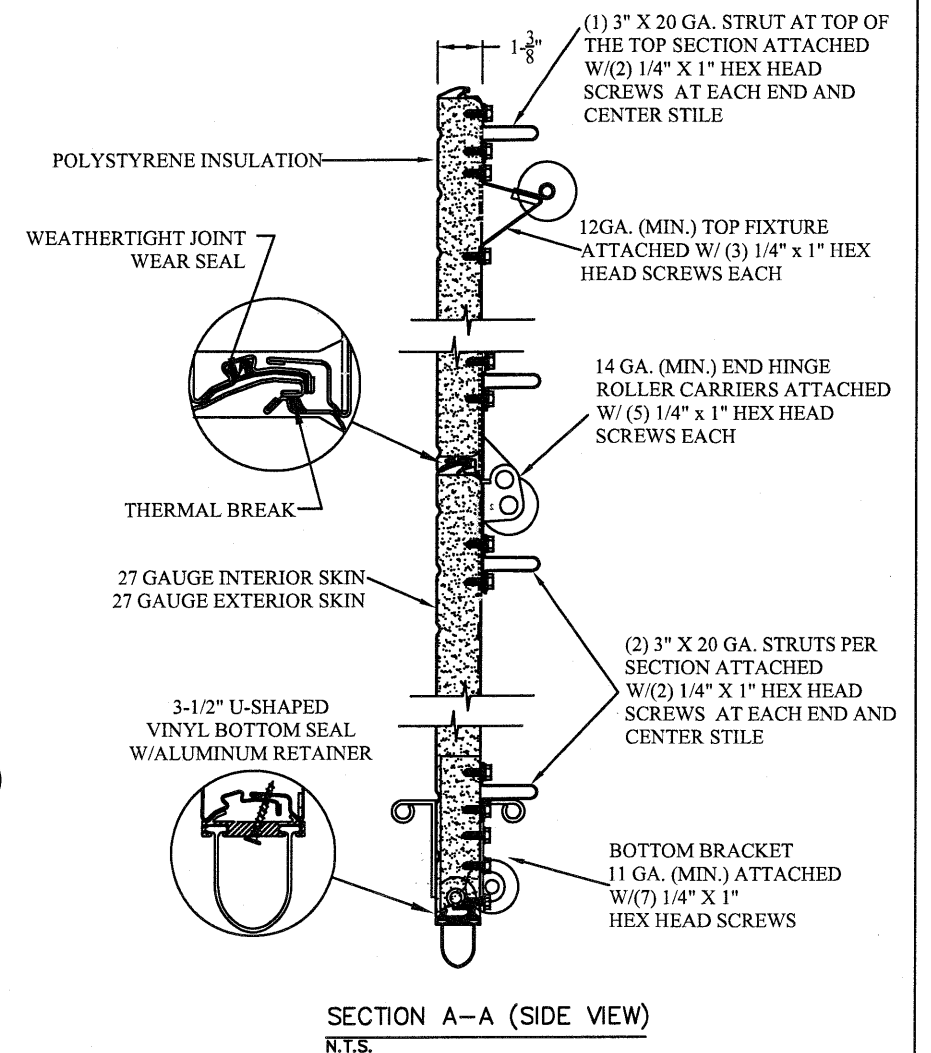
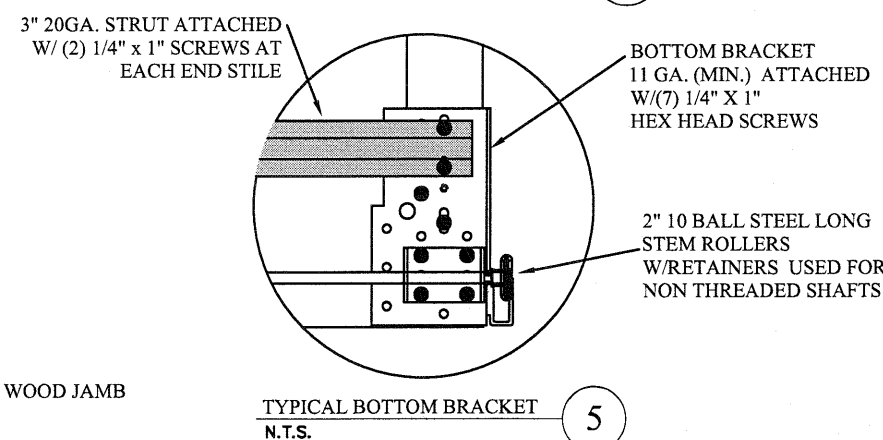
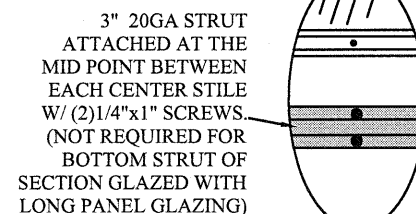
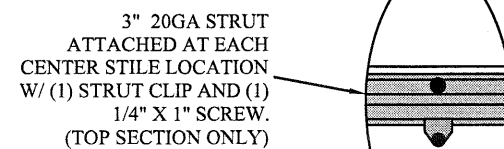
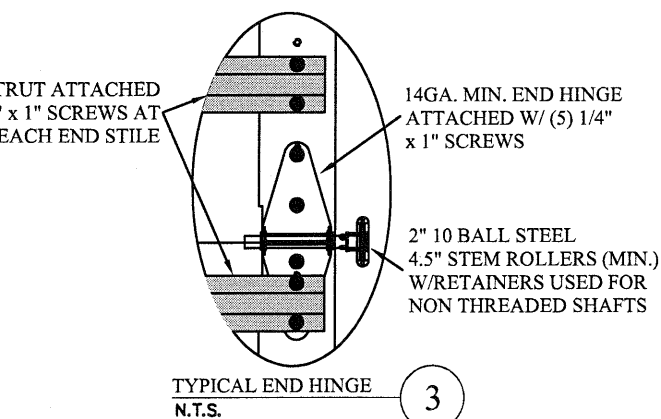
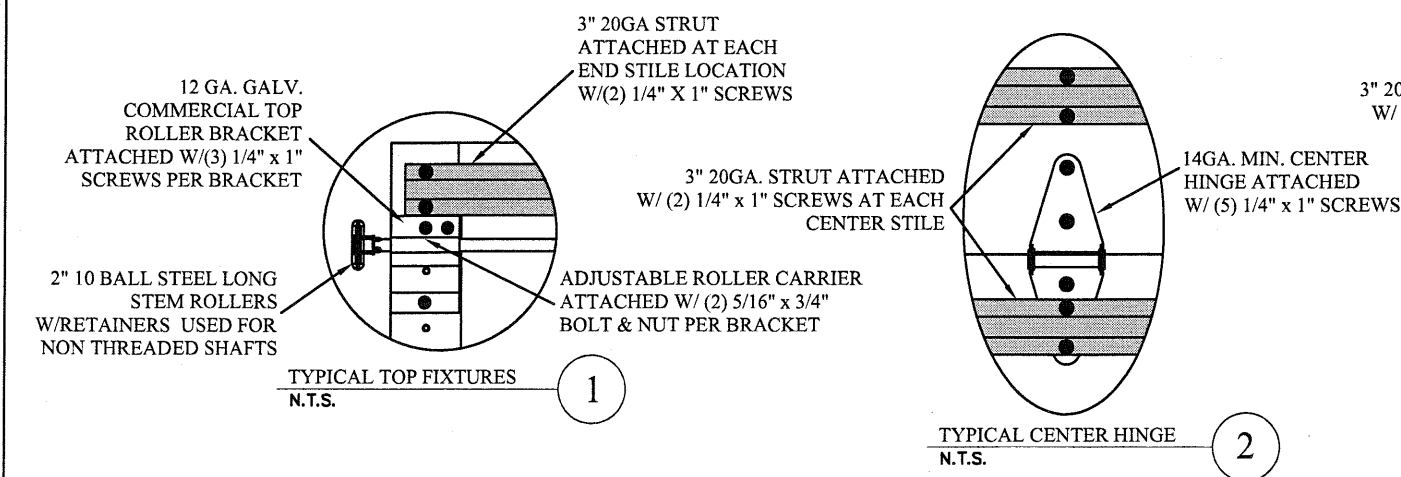




THE METHOD OF TESTING WAS IN SUBSTANTIAL CONFORMANCE WITH THE PROCEDURES DESCRIBED IN DASMA 108. THE PRESSURES SHOWN ON THE DRAWINGS WERE CALCULATED USING ASCE 7-16 WITH THE FOLLOWING PARAMETERS (5 FEET OF DOOR WIDTH IN END ZONE, ROOF SLOPE 10° OR LESS):

|                  |     |     |     |     |     |
|------------------|-----|-----|-----|-----|-----|
| WIND SPEED (MPH) | 175 | 159 | 151 | 144 | 138 |
| EXPOSURE LEVEL   | B   | C   | C   | D   | D   |
| MEAN ROOF HEIGHT | 30' | 15' | 25' | 15' | 25' |

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

MAX SIZE  
16'2" x 14'

DESIGN LOADS  
+25.3 PSF  
-28.7 PSF

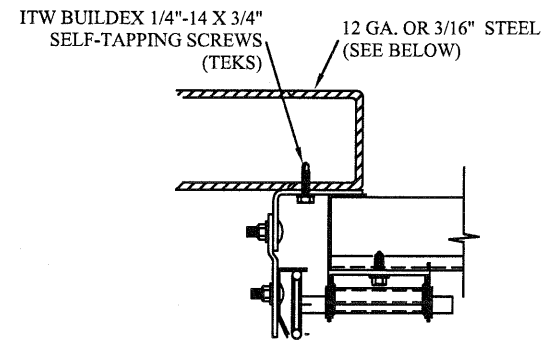
TEST LOADS  
+38.0 PSF  
-43.1 PSF

FL

Thomas L. Shelmerdine, PE (FL PE #0048579)  
Structural Solutions, PA (FL Firm #29412)  
dba Structural Solutions of North Carolina, Inc.  
5921-G W. Friendly Ave., Greensboro, NC 27410

|                                                                                              |                 |                  |                                   |
|----------------------------------------------------------------------------------------------|-----------------|------------------|-----------------------------------|
| <b>MODEL 1380 AMARR 2731</b><br><b>MODEL 1700 AMARR 2732</b><br><b>MODEL 1000 AMARR 2432</b> |                 |                  |                                   |
| SIZE<br>B                                                                                    | DRAWN BY<br>RLR | DATE<br>11/24/14 | DRAWING NUMBER<br>IBC-1816-136-15 |
| CHECKED BY<br>RLR                                                                            |                 | DATE<br>11/24/14 | SHEET 1 OF 4                      |
| ENTREMATICS<br>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105                                  |                 |                  |                                   |

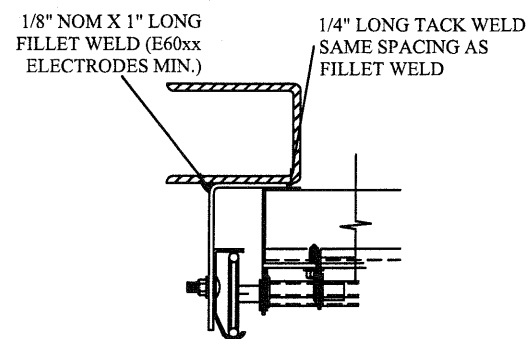
## TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

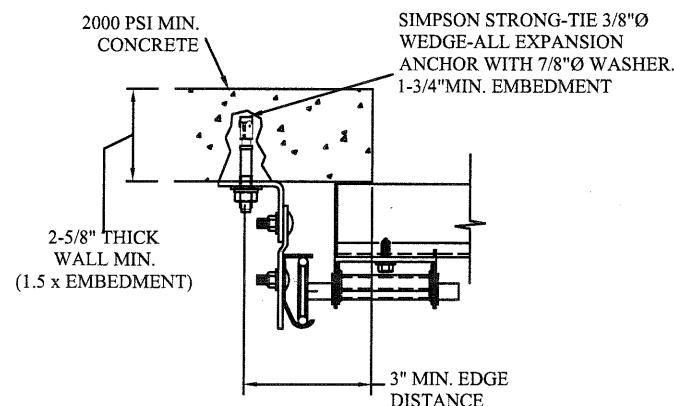
**12 GA. STEEL FRAMING**  
**232 LBS./SCREW ALLOWABLE LOAD - 6" FROM ENDS**  
**AND 12" O.C.**  
**REFER TO NOTES: 1, 2 AND 5**

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



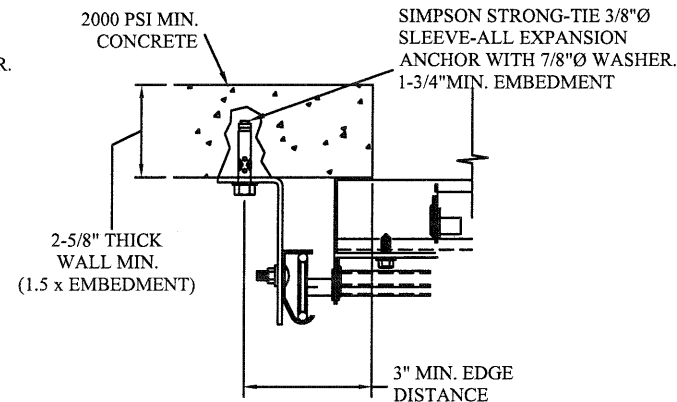
REVERSE ANGLE MOUNT SHOWN  
BRACKET, CONTINUOUS AND TAPERED  
ANGLE MOUNT AVAILABLE

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



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 18" O.C.**  
**REFER TO NOTES: 1, 2, 3, 4 AND 5**

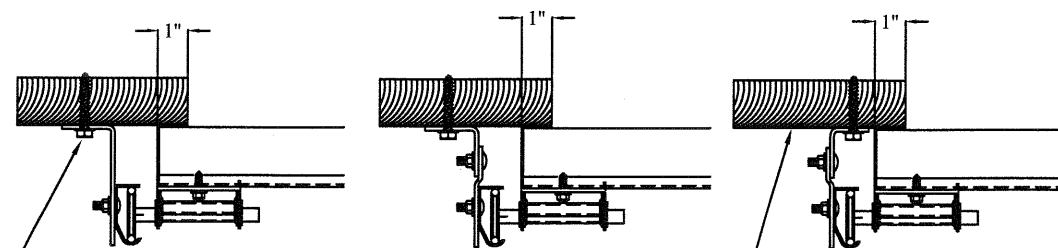


CONTINUOUS ANGLE MOUNT SHOWN  
BRACKET, CONTINUOUS AND TAPERED ANGLE  
MOUNT AVAILABLE

2000 PSI CONCRETE OR GREATER  
336 LBS./EXPANSION ANCHOR ALLOWABLE LOAD - 6"  
FROM ENDS AND 18" 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



5/16" x 1 5/8" LAG SCREW (1) PER  
JAMB BRACKET (1-1/2" EMBEDMENT  
MINIMUM) (TYP.)

CONTINUOUS ANGLE MOUNT

2x6 WOOD JAMB SYP OR SPF  
(NO.2) OR BETTER (TYP.)

REVERSE ANGLE MOUNT

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.

### 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 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)

HILTI 1/4" X 2-3/4" KWIK-CON II+ SCREWS STARTING 6" FROM ENDS,

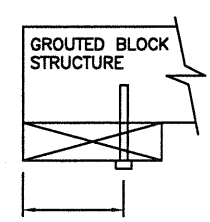
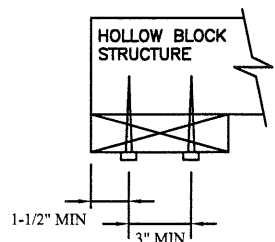
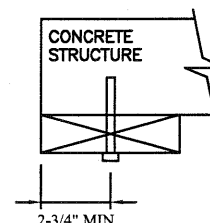
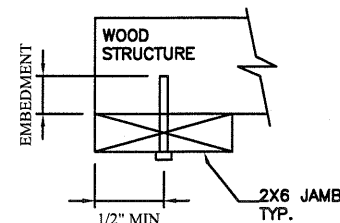
2 X 6 VERTICAL JAMB ATTACHMENT TO GROUTED C-90 BLOCK (2000 PSI GROUT)

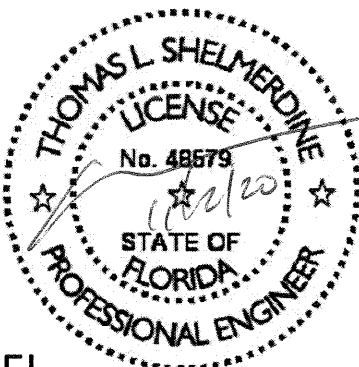
HILTI SLEEVE ANCHOR 3/8" X 2-3/4" STARTING 6" FROM ENDS  
THEN 24" O.C. (1 1/4" EMBEDMENT)

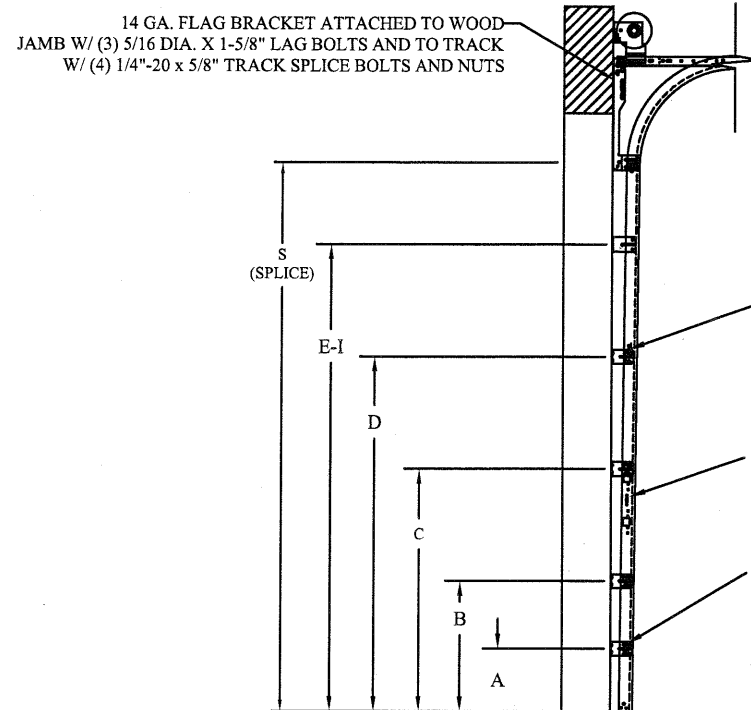
(OR, USE FASTENERS FOR HOLLOW C-90 BLOCK)

\*LAGS AND BOLTS CAN BE COUNTERSUNK TO PROVIDE A FLUSH MOUNTING SURFACE.

\*PREPARATION OF WOOD JAMBS BY OTHERS



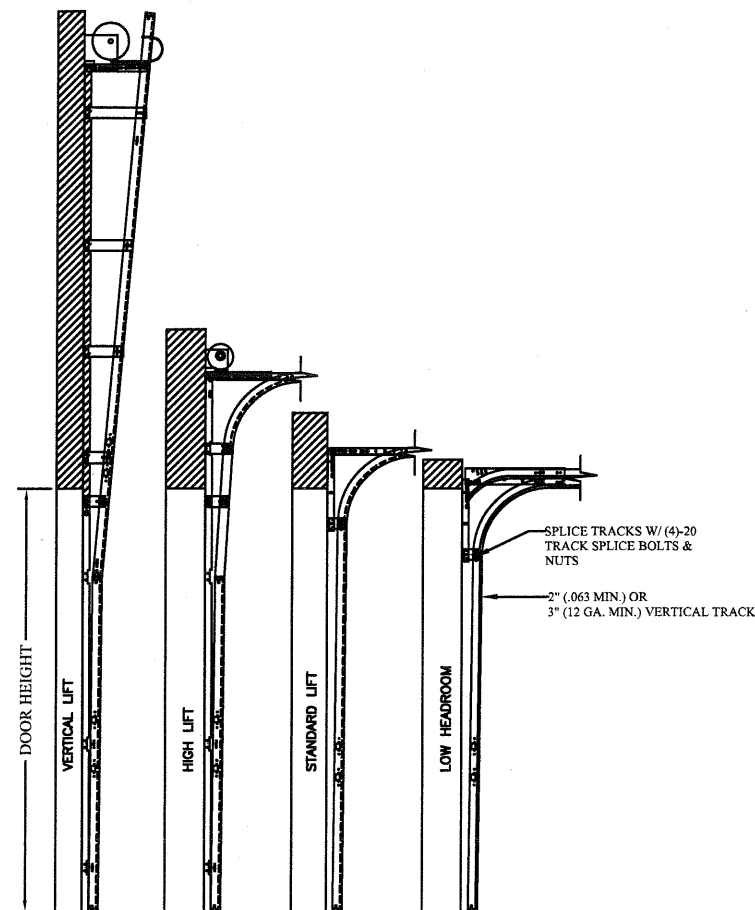
|                                                                                                                              |                                                                                                           |                                                                                                                                                                                                 |                     |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| REV                                                                                                                          | DESCRIPTION OF REVISIONS                                                                                  | DATE                                                                                                                                                                                            | BY                  |
|                                                                                                                              |                                                                                                           |                                                                                                                                                                                                 |                     |
| <p>MAX SIZE<br/>16'2 x 14'</p> <p>DESIGN LOADS<br/>+25.3 PSF<br/>-28.7 PSF</p> <p>TEST LOADS<br/>+38.0 PSF<br/>-43.1 PSF</p> | <p>Thomas L. Shelmerdine, PE (FL PE #0048579)<br/>Structural Solutions, PA (FL Firm #29412)</p> <p>FL</p> |  <p>dba Structural Solutions of North Carolina, Inc.<br/>5921-G W. Friendly Ave., Greensboro, NC 27410</p> |                     |
|                                         |                                                                                                           |                                                                                                                                                                                                 |                     |
| <p><b>MODEL 1380 AMARR 2731</b><br/> <b>MODEL 1700 AMARR 2732</b><br/> <b>MODEL 1000 AMARR 2432</b></p>                      |                                                                                                           |                                                                                                                                                                                                 |                     |
| SIZE                                                                                                                         | DRAWN BY                                                                                                  | RLR                                                                                                                                                                                             | DATE 11/24/14       |
| B                                                                                                                            | CHECKED BY                                                                                                | RLR                                                                                                                                                                                             | DATE 11/24/14       |
| <p>ENTREMATRIC<br/>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105</p>                                                          |                                                                                                           |                                                                                                                                                                                                 |                     |
| <p>DRAWING NUMBER<br/>IBC-1816-136-15</p>                                                                                    |                                                                                                           |                                                                                                                                                                                                 | <p>SHEET 2 OF 4</p> |



TRACK CONFIGURATION FOR 8' TALL DOORS

N.T.S.

SEE TABLE 2 FOR TRACK ATTACHMENT SPACING



AVAILABLE TRACK CONFIGURATIONS

N.T.S.

TABLE 1

| Section Width (ft) | Center Stile Locations (Measured from Left Edge) |          |          |  | Max Design Loads Allowed |                |
|--------------------|--------------------------------------------------|----------|----------|--|--------------------------|----------------|
|                    | 1st (in)                                         | 2nd (in) | 3rd (in) |  | Positive (PSF)           | Negative (PSF) |
| 12' 4"             | 51.084                                           | 96.916   | -        |  | 25.1                     | 28.5           |
| 12' 6"             | 51.170                                           | 98.830   | -        |  | 24.7                     | 28.0           |
| 12' 8"             | 52.100                                           | 99.900   | -        |  | 24.4                     | 27.7           |
| 12' 10"            | 53.100                                           | 100.900  | -        |  | 24.2                     | 27.4           |
| 13' 0"             | 54.100                                           | 101.900  | -        |  | 23.9                     | 27.1           |
| 13' 2"             | 55.1                                             | 102.9    | -        |  | 23.7                     | 26.9           |
| 13' 4"             | 54.900                                           | 105.100  | -        |  | 23.2                     | 26.3           |
| 13' 6"             | 55.900                                           | 106.100  | -        |  | 23.0                     | 26.1           |
| 13' 8"             | 56.625                                           | 107.375  | -        |  | 22.7                     | 25.7           |
| 13' 10"            | 57.170                                           | 108.830  | -        |  | 22.4                     | 25.4           |
| 14' 0"             | 58.625                                           | 109.375  | -        |  | 22.3                     | 25.3           |
| 14' 2"             | 59.2                                             | 110.8    | -        |  | 22.0                     | 24.9           |
| 14' 4"             | 60.170                                           | 111.830  | -        |  | 21.8                     | 24.7           |
| 14' 6"             | 61.170                                           | 112.830  | -        |  | 21.6                     | 24.5           |
| 14' 8"             | 44.812                                           | 88.000   | 131.188  |  | 27.7                     | 31.4           |
| 14' 10"            | 45.600                                           | 89.000   | 132.400  |  | 27.4                     | 31.1           |
| 15' 0"             | 46.600                                           | 90.000   | 133.400  |  | 27.1                     | 30.7           |
| 15' 2"             | 47.6                                             | 91.0     | 134.4    |  | 26.8                     | 30.4           |
| 15' 4"             | 47.250                                           | 92.000   | 136.750  |  | 26.5                     | 30.1           |
| 15' 6"             | 47.600                                           | 93.000   | 138.400  |  | 26.2                     | 29.7           |
| 15' 8"             | 48.600                                           | 94.000   | 139.400  |  | 25.9                     | 29.4           |
| 15' 10"            | 49.167                                           | 95.000   | 140.833  |  | 25.7                     | 29.1           |
| 16' 0"             | 50.600                                           | 96.000   | 141.400  |  | 25.4                     | 28.8           |
| 16' 2"             | 51.2                                             | 97.0     | 142.8    |  | 25.3                     | 28.7           |

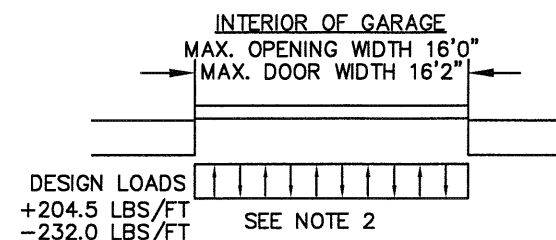
TABLE 2

| DOOR HEIGHT | TRACK ATTACHMENT |     |     |     |     |     |      |      |      | TYPICAL SPLICE |
|-------------|------------------|-----|-----|-----|-----|-----|------|------|------|----------------|
|             | A                | B   | C   | D   | E   | F   | G    | H    | I    |                |
| 7' 0"       | 10.0"            | 21" | 39" | 57" |     |     |      |      |      | 76"            |
| 7' 6"       | 10.0"            | 21" | 39" | 57" | 75" |     |      |      |      | 82"            |
| 8' 0"       | 10.0"            | 21" | 39" | 57" | 75" |     |      |      |      | 88"            |
| 9' 0"       | 10.0"            | 21" | 39" | 57" | 75" | 93" |      |      |      | 100"           |
| 9' 6"       | 10.0"            | 21" | 39" | 57" | 75" | 93" |      |      |      | 106"           |
| 10' 0"      | 10.0"            | 21" | 39" | 57" | 75" | 93" |      |      |      | 112"           |
| 11' 0"      | 10.0"            | 21" | 39" | 57" | 75" | 93" | 111" |      |      | 124"           |
| 12' 0"      | 10.0"            | 21" | 39" | 57" | 75" | 93" | 111" | 129" |      | 136"           |
| 13' 0"      | 10.0"            | 21" | 39" | 57" | 75" | 93" | 111" | 129" |      | 148"           |
| 14' 0"      | 10.0"            | 21" | 39" | 57" | 75" | 93" | 111" | 129" | 147" | 160"           |

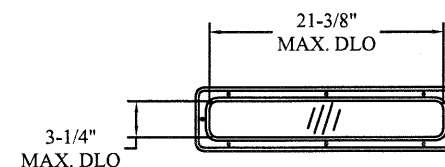
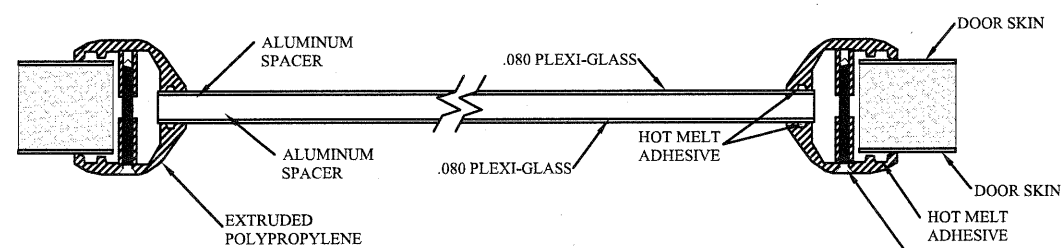
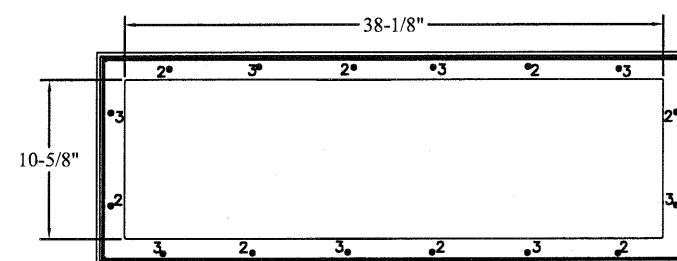
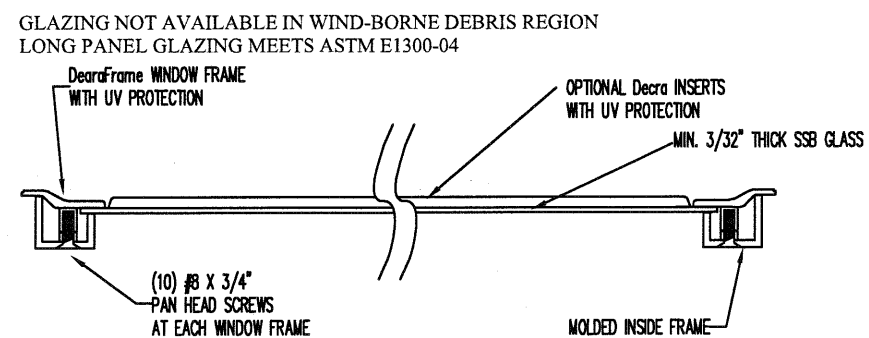
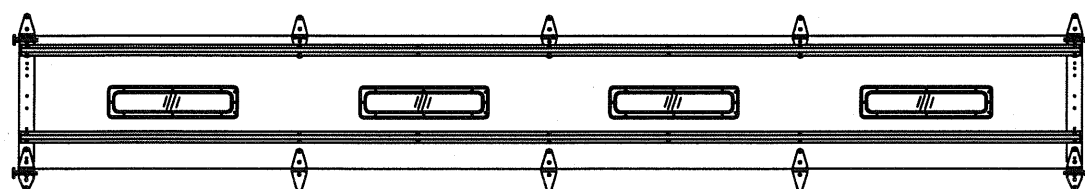
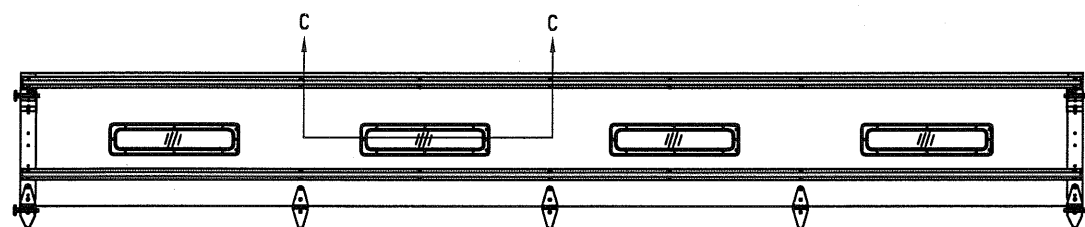
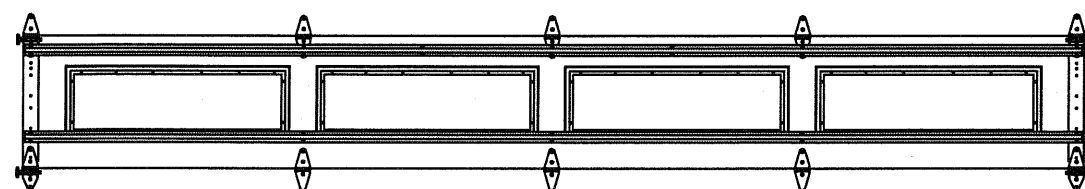
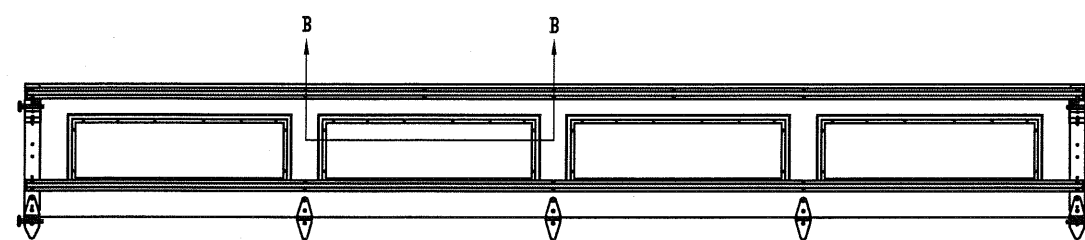
ALL TRACK ATTACHMENT SPACING +/-2" ALLOWED WITH SPF OR SYP NO. 2 OR BETTER ONLY

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: +204.5 LBS/FT & -232.0 LBS/FT
- DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASMA.
- DOOR SECTIONS SHALL BE 27 GA. (.015) MIN. EXTERIOR SKIN ROLLED FORMED, W/ BAKED ON POLYESTER FINISH
- DOORS UP TO 14'0" HIGH HAVE (2) 3" 20GA STRUTS PER SECTION
- SUPPORTING STRUCTURAL ELEMENTS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR WIND LOADS INDICATED ON THIS DRAWING IN ADDITION TO OTHER LOADINGS.



|                                                                                                                                                                                                                                                                                                                                                                                                                                |     |               |                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------|-----------------|
| DESCRIPTION OF REVISIONS                                                                                                                                                                                                                                                                                                                                                                                                       |     | DATE          | BY              |
| MAX SIZE 16'2 x 14'                                                                                                                                                                                                                                                                                                                                                                                                            |     |               |                 |
| DESIGN LOADS +25.3 PSF -28.7 PSF                                                                                                                                                                                                                                                                                                                                                                                               |     |               |                 |
| TEST LOADS +38.0 PSF -43.1 PSF                                                                                                                                                                                                                                                                                                                                                                                                 |     |               |                 |
| <div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Thomas L. Shelmerdine, PE (FL PE #0048579) Structural Solutions, PA (FL Firm #29412)</p> </div> <div style="flex: 1; text-align: center;"> </div> <div style="flex: 1; writing-mode: vertical-rl; transform: rotate(180deg);"> <p>dba Structural Solutions of North Carolina, Inc. 5921-G W. Friendly Ave., Greensboro, NC 27410</p> </div> </div> |     |               |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                |     |               |                 |
| <p>MODEL 1380 AMARR 2731<br/>MODEL 1700 AMARR 2732<br/>MODEL 1000 AMARR 2432</p>                                                                                                                                                                                                                                                                                                                                               |     |               |                 |
| DRAWN BY                                                                                                                                                                                                                                                                                                                                                                                                                       | RLR | DATE 11/24/14 | DRAWING NUMBER  |
| CHECKED BY                                                                                                                                                                                                                                                                                                                                                                                                                     | RLR | DATE 11/24/14 | IBC-1816-136-15 |
| ENTREMATIC<br>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105                                                                                                                                                                                                                                                                                                                                                                     |     |               | SHEET 3 OF 4    |



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

|                                                                                                                              |                                                                                                           |  |                                                         |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------|
| <p>MAX SIZE<br/>16'2 x 14'</p> <p>DESIGN LOADS<br/>+25.3 PSF<br/>-28.7 PSF</p> <p>TEST LOADS<br/>+38.0 PSF<br/>-43.1 PSF</p> | <p>Thomas L. Shelmerdine, PE (FL PE #0048579)<br/>Structural Solutions, PA (FL Firm #29412)</p> <p>FL</p> |  | <p>dba Structural Solutions of North Carolina, Inc.</p> |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------|

|                                                                                                             |
|-------------------------------------------------------------------------------------------------------------|
| <p><b>MODEL 1380 AMARR 2731</b></p> <p><b>MODEL 1700 AMARR 2732</b></p> <p><b>MODEL 1000 AMARR 2432</b></p> |
|-------------------------------------------------------------------------------------------------------------|

|      |            |     |      |          |                                   |
|------|------------|-----|------|----------|-----------------------------------|
| SIZE | DRAWN BY   | R/R | DATE | 11/24/14 | DRAWING NUMBER<br>IBC-1816-136-15 |
| B    | CHECKED BY | R/R | DATE | 11/24/14 |                                   |

ENTREMATRIC

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

SHEET 4 OF 4