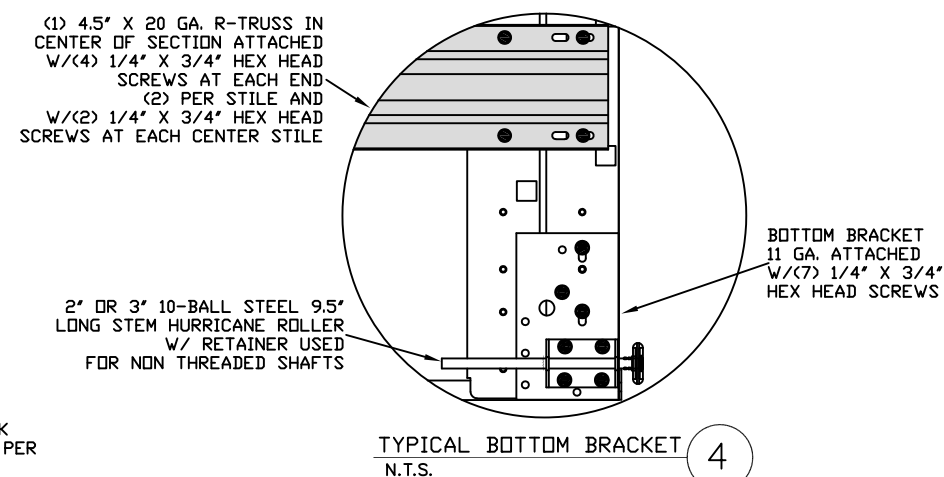
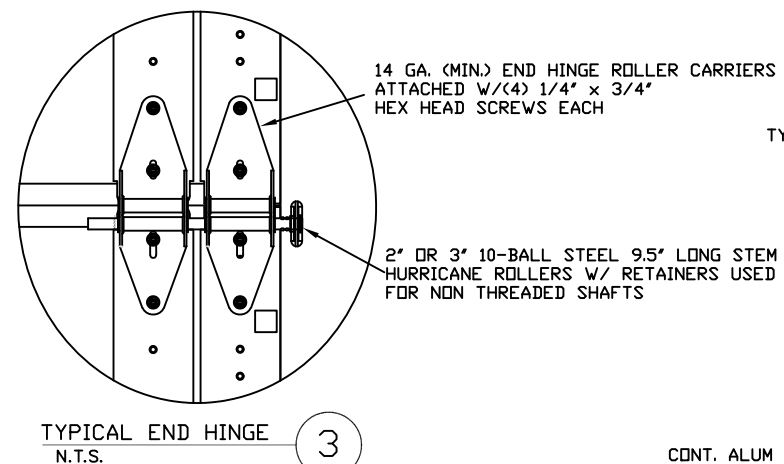
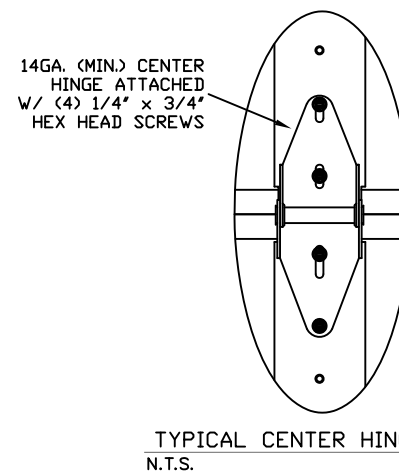
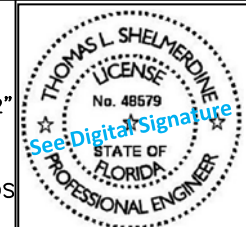


|                  |     |     |     |     |     |
|------------------|-----|-----|-----|-----|-----|
| WIND SPEED (MPH) | 168 | 152 | 145 | 138 | 133 |
| EXPOSURE LEVEL   | B   | C   | C   | D   | D   |
| MEAN ROOF HEIGHT | 30' | 15' | 25' | 15' | 25' |

| REV | DESCRIPTION OF REVISIONS | DATE    | BY |
|-----|--------------------------|---------|----|
| A   | ADDED GLAZING OPTIONS    | 6/12/14 | RS |

MAX SIZES  
WIDTH 16'-2"  
HEIGHT 24'

|              |
|--------------|
| DESIGN LOADS |
| +23.3 PSF    |
| -26.3 PSF    |
| TEST LOADS   |
| +35.0 PSF    |
| -39.5 PSF    |



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dba Structural Solutions of North Carolina, Inc.  
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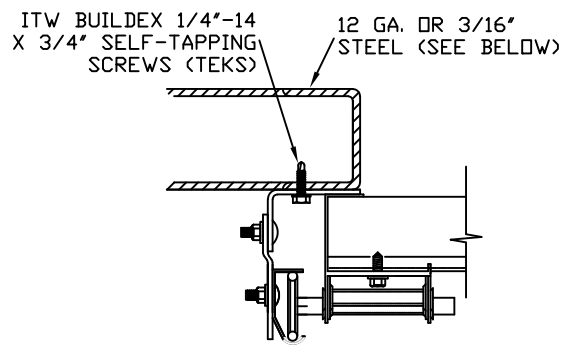
FL

*Amar*

AMARR 2402, 2412, 2422  
AMARR 2002, 2012, 2022

|                                                               |            |     |      |        |                |
|---------------------------------------------------------------|------------|-----|------|--------|----------------|
| SIZE                                                          | DRAWN BY   | RLR | DATE | 8/1/12 | DRAWING NUMBER |
| B                                                             | CHECKED BY |     | DATE |        |                |
| AMARR COMPANY<br>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 |            |     |      |        | SHEET 1 OF 4   |

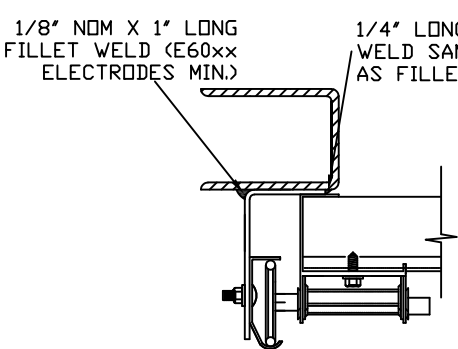
TRACK CONNECTION DIRECTLY TO STRUCTURE OPTIONS



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

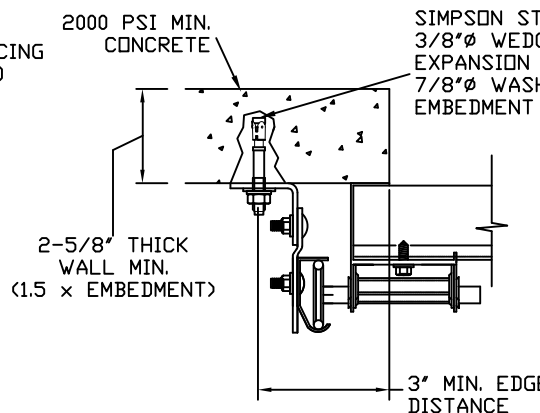
12 GA. STEEL FRAMING  
232 LBS./SCREW ALLOWABLE LOAD - 6"  
FROM ENDS AND 12" O.C.  
REFER TO NOTES: 1, 2 AND 5

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



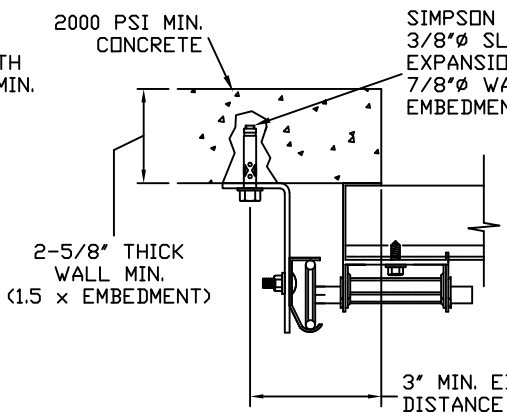
REVERSE ANGLE MOUNT SHOWN  
BRACKET, CONTINUOUS AND  
TAPERED ANGLE MOUNT AVAILABLE

STEEL FRAMING 12GA OR BETTER  
1590 LBS./IN. 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

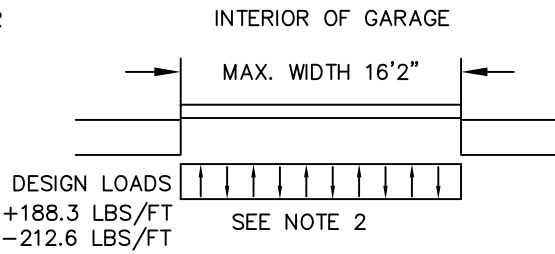
2000 PSI CONCRETE OR GREATER  
336 LBS./EXPANSION ANCHOR ALLOWABLE  
LOAD - 6" FROM ENDS AND 18" O.C.  
REFER TO NOTES: 1, 2, 3, 4 AND 5

SPECIFICATIONS AND NOTES

NOTES:

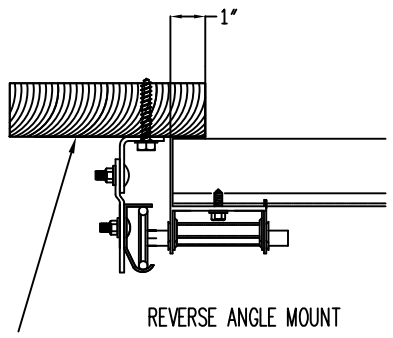
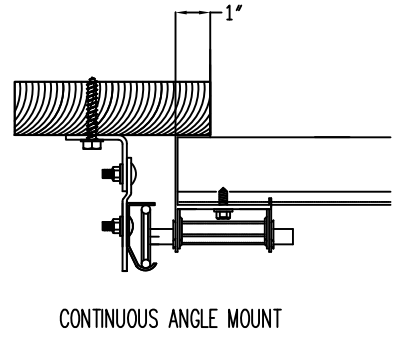
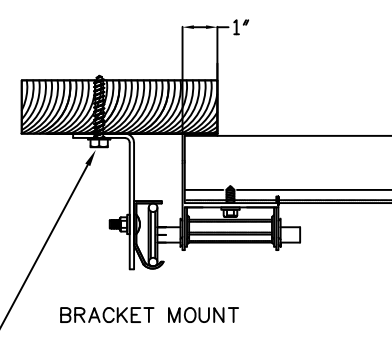
1. ANCHORS TO BE EVENLY SPACED BETWEEN THE HEADER AND FLOOR.
2. FIRST (BOTTOM) ANCHOR STARTING AT NO MORE THAN HALF OF THE MAXIMUM ON-CENTER DISTANCE. HIGHEST ANCHOR INSTALLED AT LEAST AS HIGH AS THE DOOR OPENING.
3. MIN. EGDE DISTANCE OF 3" REQUIRED.
4. USE WASHERS PROVIDED BY THE ANCHOR MANUFACTURER.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

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: +188.3 LBS/FT AND -212.6 LBS/FT
3. DOOR AND HARDWARE WILL BE DESIGNED, MANUFACTURED AND INSTALLED WITH STANDARDS AS SET FORTH BY DASHA.
4. DOOR SECTIONS SHALL BE 24 GA. (.022) MIN. EXTERIOR SKIN ROLLED FORMED, GALVANIZATION W/ BAKED ON POLYESTER FINISH
5. DOORS UP TO 24' HIGH USE (1) 4 1/2" R-TRUSS PER 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.



TRACK CONNECTION TO WOOD JAMB OPTIONS

FOR LAG SCREWS & BRACKET SPACING SEE PAGE 4 FOR TRACK CONFIGURATION DETAIL



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

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

WOOD JAMB ATTACHMENT TO STRUCTURE (OPTIONAL)

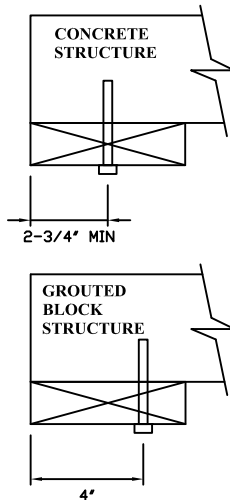
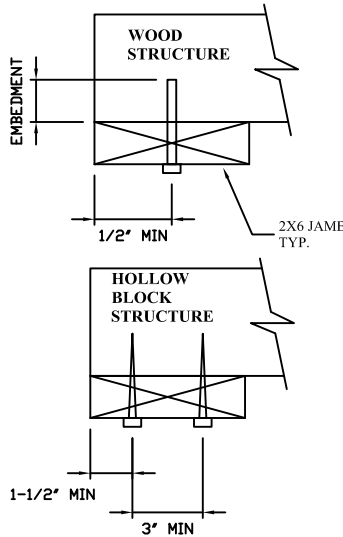
2 X 6 VERTICAL JAMB ATTACHMENT TO WOOD FRAME STRUCTURE  
5/16" X 3" LAG SCREWS STARTING 6" FROM ENDS THEN 24" O.C. (1 1/2" EMBEDMENT)

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



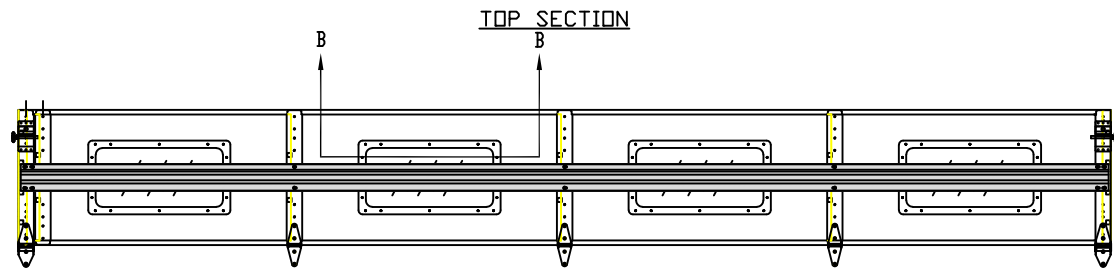
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dba Structural Solutions of North Carolina, Inc.  
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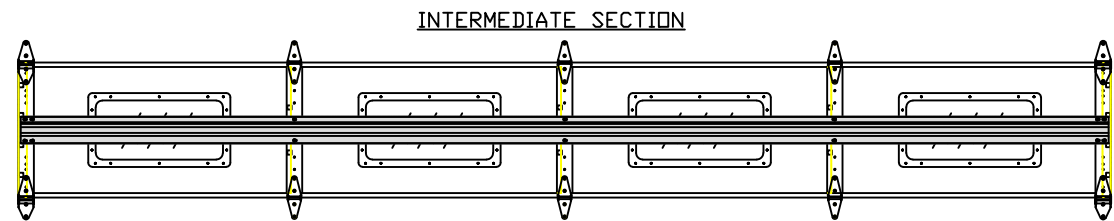


AMARR 2402, 2412, 2422  
AMARR 2002, 2012, 2022

|                                                               |            |     |      |        |                 |
|---------------------------------------------------------------|------------|-----|------|--------|-----------------|
| SIZE                                                          | DRAWN BY   | RLR | DATE | 8/1/12 | DRAWING NUMBER  |
| B                                                             | CHECKED BY |     | DATE |        | IBC-2416-130-24 |
| AMARR COMPANY<br>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105 |            |     |      |        | SHEET 2 OF 4    |

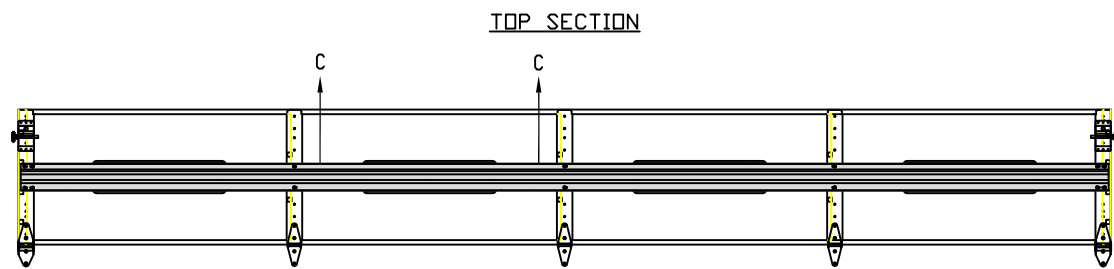


TOP SECTION

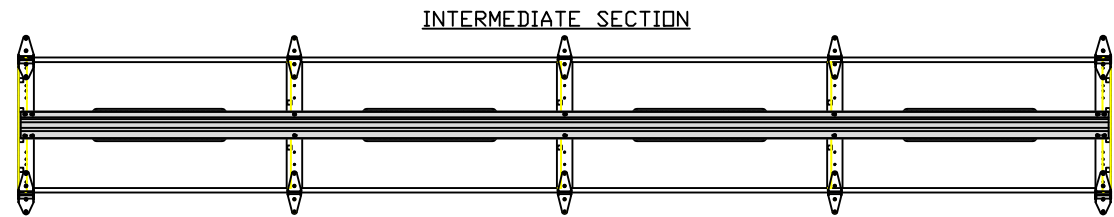


INTERMEDIATE SECTION

OPTIONAL GLAZED SECTION W/ 24" X 12" WINDOWS AND R-TRUSS LAYOUT  
N.T.S.

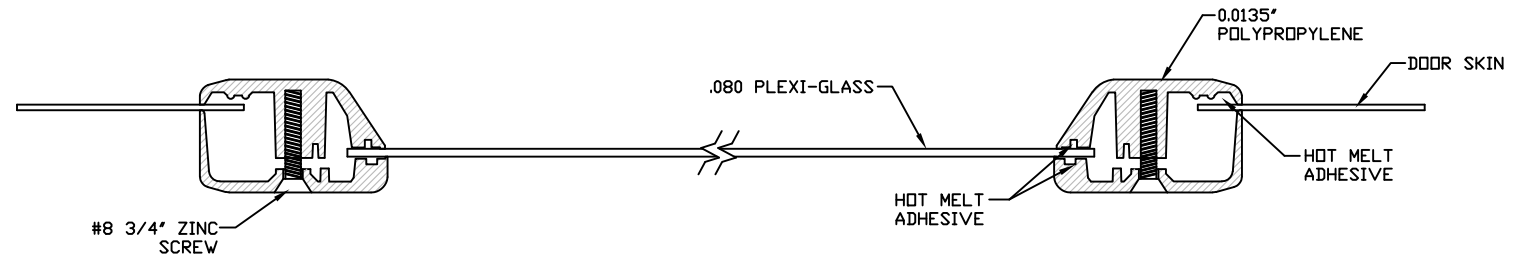


TOP SECTION

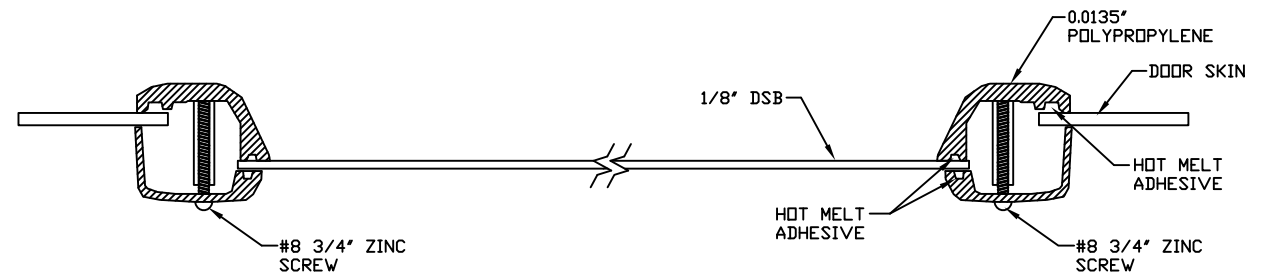


INTERMEDIATE SECTION

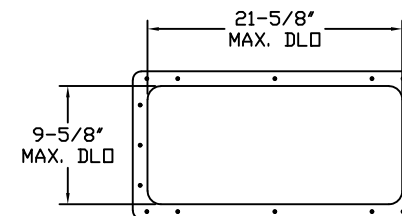
OPTIONAL GLAZED SECTION W/ 24" X 6" WINDOWS AND R-TRUSS LAYOUT  
N.T.S.



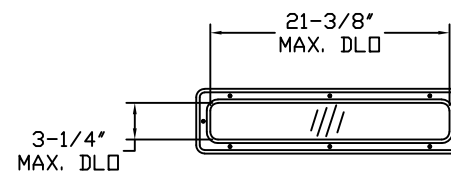
SECTION B-B 24" X 12" WINDOW DETAIL W/ .080 PLEXI-GLASS  
N.T.S.



SECTION C-C 24" X 6" WINDOW DETAIL W/ 1/8" DSB GLASS  
N.T.S. (ALSO AVAILABLE WITH .080 PLEXI-GLASS)



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



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

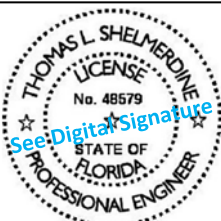
|                                                                                                                                                     |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| REV                                                                                                                                                 | DESCRIPTION OF REVISIONS | DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BY              |
| A                                                                                                                                                   | ADDED GLAZING OPTIONS    | 6/12/14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | RS              |
| <div>MAX SIZES<br/>WIDTH 16'-2"<br/>HEIGHT 24'</div> <div>DESIGN LOADS<br/>+23.3 PSF<br/>-26.3 PSF<br/>TEST LOADS<br/>+35.0 PSF<br/>-39.5 PSF</div> |                          | <div><p>This document has been digitally signed &amp; sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed &amp; sealed, and the signature must be verified on any electronic copies.</p><p>Thomas L. Shelmerdine, PE (FL PE #0048579)<br/>Structural Solutions, PA (FL Firm #29412)<br/>dba Structural Solutions of North Carolina, Inc.<br/>5921-G W. Friendly Ave., Greensboro, NC 27410</p><div>FL</div></div> |                 |
| <div>Amarr</div>                                                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |
| <div>AMARR 2402, 2412, 2422<br/>AMARR 2002, 2012, 2022</div>                                                                                        |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |
| SIZE                                                                                                                                                | DRAWN BY                 | RLR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DATE 8/1/12     |
| B                                                                                                                                                   | CHECKED BY               | DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | IBC-2416-130-24 |
| AMARR COMPANY<br>165 CARRIAGE COURT WINSTON-SALEM, N.C. 27105                                                                                       |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SHEET 3 OF 4    |

TABLE 1

| Section Width (ft) |     | Center Stile Locations (Measured from Left) |          |          | Max Design Loads Allowed |                |
|--------------------|-----|---------------------------------------------|----------|----------|--------------------------|----------------|
|                    |     | 1st (in)                                    | 2nd (in) | 3rd (in) | Positive (PSF)           | Negative (PSF) |
| 9'                 | 4"  | 36"                                         | 76"      | -        | 29.5                     | 33.3           |
| 9'                 | 6"  | 37"                                         | 77"      | -        | 29.2                     | 32.9           |
| 9'                 | 8"  | 38"                                         | 78"      | -        | 28.8                     | 32.5           |
| 9'                 | 10" | 39"                                         | 79"      | -        | 28.4                     | 32.1           |
| 10'                | 0"  | 40"                                         | 80"      | -        | 28.1                     | 31.7           |
| 10'                | 2"  | 41"                                         | 81"      | -        | 27.7                     | 31.3           |
| 10'                | 4"  | 42"                                         | 82"      | -        | 27.4                     | 30.9           |
| 10'                | 6"  | 43"                                         | 83"      | -        | 27.0                     | 30.5           |
| 10'                | 8"  | 44"                                         | 84"      | -        | 26.7                     | 30.2           |
| 10'                | 10" | 45"                                         | 85"      | -        | 26.4                     | 29.8           |
| 11'                | 0"  | 46"                                         | 86"      | -        | 26.1                     | 29.5           |
| 11'                | 2"  | 47"                                         | 87"      | -        | 25.8                     | 29.1           |
| 11'                | 4"  | 48"                                         | 88"      | -        | 25.5                     | 28.8           |
| 11'                | 6"  | 49"                                         | 89"      | -        | 25.2                     | 28.5           |
| 11'                | 8"  | 50"                                         | 90"      | -        | 24.9                     | 28.2           |
| 11'                | 10" | 51"                                         | 91"      | -        | 24.7                     | 27.8           |
| 12'                | 0"  | 48"                                         | 96"      | -        | 23.4                     | 26.4           |
| 13'                | 0"  | 36"                                         | 78"      | 120"     | 26.7                     | 30.2           |
| 13'                | 2"  | 37"                                         | 79"      | 121"     | 26.7                     | 30.2           |
| 13'                | 4"  | 38"                                         | 80"      | 122"     | 26.7                     | 30.2           |
| 13'                | 6"  | 39"                                         | 81"      | 123"     | 26.7                     | 30.2           |
| 13'                | 8"  | 40"                                         | 82"      | 124"     | 26.7                     | 30.2           |
| 13'                | 10" | 41"                                         | 83"      | 125"     | 26.7                     | 30.2           |
| 14'                | 0"  | 42"                                         | 84"      | 126"     | 26.7                     | 30.2           |
| 14'                | 2"  | 43"                                         | 85"      | 127"     | 26.4                     | 29.8           |
| 14'                | 4"  | 44"                                         | 86"      | 128"     | 26.1                     | 29.5           |
| 14'                | 6"  | 45"                                         | 87"      | 129"     | 25.8                     | 29.1           |
| 14'                | 8"  | 46"                                         | 88"      | 130"     | 25.5                     | 28.8           |
| 14'                | 10" | 47"                                         | 89"      | 131"     | 25.2                     | 28.5           |
| 15'                | 0"  | 48"                                         | 90"      | 132"     | 24.9                     | 28.2           |
| 15'                | 2"  | 49"                                         | 91"      | 133"     | 24.7                     | 27.8           |
| 15'                | 4"  | 50"                                         | 92"      | 134"     | 24.4                     | 27.5           |
| 15'                | 6"  | 51"                                         | 93"      | 135"     | 24.1                     | 27.2           |
| 15'                | 8"  | 52"                                         | 94"      | 136"     | 23.9                     | 27.0           |
| 15'                | 10" | 53"                                         | 95"      | 137"     | 23.6                     | 26.7           |
| 16'                | 0"  | 48"                                         | 96"      | 144"     | 23.4                     | 26.4           |
| 16'                | 2"  | 49"                                         | 97"      | 145"     | 23.3                     | 26.3           |

\*FOR WIDTHS 12'-2" TO 12'-10" CONTACT ENGINEERING FOR STILE PLACEMENT

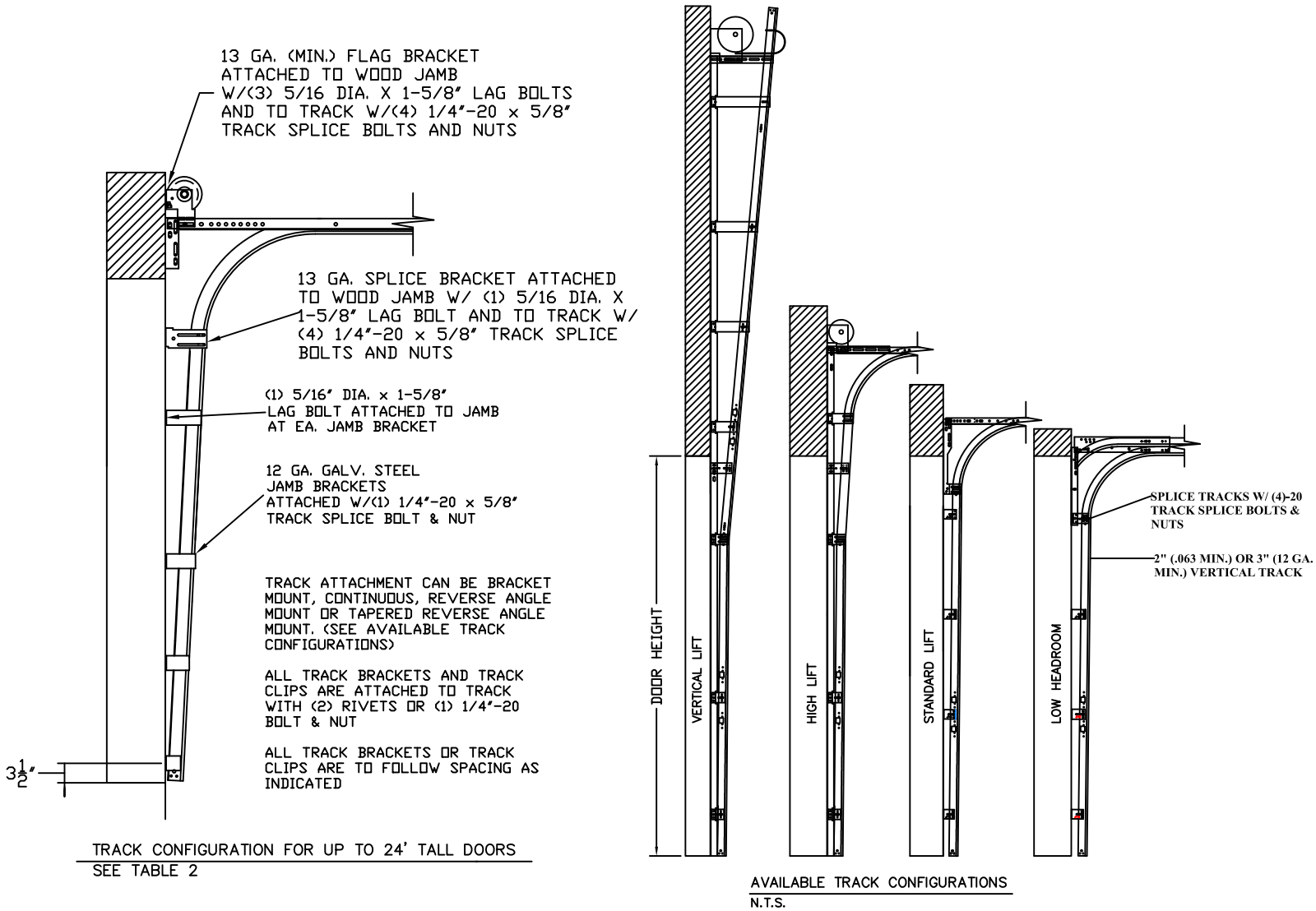


TABLE 2

| DOOR HEIGHT |    | TRACK ATTACHMENT |     |     |     |     |      |      |      |      |      |      |      | TYPICAL SPLICE |
|-------------|----|------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|----------------|
|             |    | A                | B   | C   | D   | E   | F    | G    | H    | I    | J    | K    | L    |                |
| 7'          | 0" | 3.5"             | 22" | 44" |     |     |      |      |      |      |      |      |      | 76"            |
| 7'          | 6" | 3.5"             | 22" | 44" | 68" |     |      |      |      |      |      |      |      | 82"            |
| 8'          | 0" | 3.5"             | 22" | 44" | 75" |     |      |      |      |      |      |      |      | 88"            |
| 8'          | 6" | 3.5"             | 22" | 44" | 75" |     |      |      |      |      |      |      |      | 94"            |
| 9'          | 0" | 3.5"             | 22" | 44" | 75" |     |      |      |      |      |      |      |      | 100"           |
| 9'          | 6" | 3.5"             | 22" | 44" | 68" | 92" |      |      |      |      |      |      |      | 106"           |
| 10'         | 0" | 3.5"             | 22" | 44" | 68" | 92" |      |      |      |      |      |      |      | 112"           |
| 11'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" |      |      |      |      |      |      | 124"           |
| 12'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" |      |      |      |      |      |      | 136"           |
| 13'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" |      |      |      |      |      |      | 148"           |
| 14'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" |      |      |      |      |      | 160"           |
| 15'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" |      |      |      |      |      | 172"           |
| 16'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" |      |      |      |      | 184"           |
| 17'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" |      |      |      | 196"           |
| 18'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" |      |      |      | 208"           |
| 19'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" |      |      | 220"           |
| 20'         | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" |      |      | 232"           |
| 21          | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" | 226" |      | 244"           |
| 22          | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" | 226" |      | 256"           |
| 23          | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" | 226" |      | 268"           |
| 24          | 0" | 3.5"             | 22" | 44" | 68" | 92" | 116" | 140" | 154" | 178" | 202" | 226" | 250" | 280"           |

TABLE 3

| SECTION |      |
|---------|------|
| TOP     | 4.5" |
| 11TH    | 4.5" |
| 10TH    | 4.5" |
| 9TH     | 4.5" |
| 8TH     | 4.5" |
| 7TH     | 4.5" |
| 6TH     | 4.5" |
| 5TH     | 4.5" |
| 4TH     | 4.5" |
| 3RD     | 4.5" |
| 2ND     | 4.5" |
| BTM     | 4.5" |

|     |                          |         |    |
|-----|--------------------------|---------|----|
| REV | DESCRIPTION OF REVISIONS | DATE    | BY |
| A   | ADDED GLAZING OPTIONS    | 6/12/14 | RS |

MAX. SIZES  
WIDTH 16'-2"  
HEIGHT 24'

DESIGN LOADS  
+23.3 PSF  
-26.3 PSF

TEST LOADS  
+35.0 PSF  
-39.5 PSF

THOMAS L. SHELME RDINE  
No. 48579  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

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

FL

**Amarr**

AMARR 2402, 2412, 2422  
AMARR 2002, 2012, 2022

|      |            |     |      |        |                 |
|------|------------|-----|------|--------|-----------------|
| SIZE | DRAWN BY   | RLR | DATE | 8/1/12 | DRAWING NUMBER  |
| B    | CHECKED BY |     | DATE |        | IBC-2416-130-24 |

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

SHEET 4 OF 4