

**GENERAL NOTES:**

1- ROLL-UP SHUTTER SYSTEM SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2014 (5th EDITION) OF THE FLORIDA BUILDING CODE.

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 (NHVHZ) OF THE ABOVE MENTIONED CODE, FOR A WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THIS PRODUCT WILL BE INSTALLED AND FOR A DIRECTIONALITY FACTOR  $K_d=0.85$ , USING ASCE 7-10 AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 1.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON NOTE 1.

ROLL-UP SHUTTER'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 (NHVHZ) OF THE ABOVE MENTIONED CODE AS PER BLACK WATER TESTING, INC. REPORT # BT-ROD-15-001, PER TAS-201, TAS-202 & TAS-203 PROTOCOLS.

MAX. A.S.D. DESIGN PRESSURE RATING: +70.0, -70.0 PSF FOR SLAT ①  
 MAX. A.S.D. DESIGN PRESSURE RATING: +60.0, -60.0 PSF FOR SLAT ①A

2-SLAT TO BE A.S.T.M. A-653 GR 40 STRUCTURAL QUALITY STEEL WITH MIN  $F_y = 44.7$  ksi. AND G-90 GALVANIZING PER A.S.T.M. A-653, OR A.I.S.I. 304 SERIES STAINLESS STEEL MANUFACTURED WITH A MINIMUM YIELD STRENGTH OF  $F_y = 44.7$  ksi.

3- ALL STEEL ANGLES TO BE A.S.T.M. A-36 DESIGNATION, SHOP PRIMED AGAINST CORROSION PRIOR TO INSTALLATION. PAINT TO CONFORM TO FEDERAL SPECIFICATIONS CORRESPONDING TO RED OXIDE PAINT OR EQUAL.

4- WINDLOCKS TO BE "MALLEABLE IRON"  $F_y = 42$  ksi OR A.I.S.I. DESIGNATION STEEL W/  $F_y = 40$  ksi., CHROME OR NICKEL PLATED.

5- ALL ASSEMBLY BOLTS TO BE S.A.E. GRADE 2 CADMIUM PLATED OR GALVANIZED STEEL.

6- STEEL WINDBARS TO BE A.S.T.M. A-36 DESIGNATION, SHOP PRIMED PRIOR TO INSTALLATION. PAINT TO CONFORM TO FEDERAL SPECIFICATIONS CORRESPONDING TO RED OXIDE PAINT OR EQUAL.

7- HOOD TO BE 24 GA. A.S.T.M. A-653 DESIGNATION G-90 FINISH TYPE COATING.

8- ALL RIVETS TO BE A.I.S.I. C1006 SPHERODIZED ANNEALED ALUMINUM LOW CARBON COLD HEADING QUALITY STEEL, ZINC PLATED, W/ 55.0 ksi. MINIMUM TENSILE STRENGTH, AS MANUFACTURED BY UNIVERSAL RIVET, INC.

9- CONCRETE ANCHORS TO BE AS MANUFACTURED BY POWERS FASTENERS, INC, AND SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

10- ALL WELDING TO CONFORM TO AMERICAN WELDING SOCIETY'S AWS D1.1 REGULATIONS. USE A.W.S A5.1 OR A5.5 E60XX ELECTRODES MIN. 3/16" FILLET SIZE.

11- INSULATION MATERIAL SHALL BE EPS-EXPANDED POLYSTYRENE INSULATION, MANUFACTURED BY DYPLAST PRODUCTS LLC. W/ MIAMI DADE COUNTY APPROVAL.

12- THIS SHUTTER MAY BE INSTALLED WITH SLATS CONCAVE SIDE FACING OUTSIDE OR INSIDE OF BUILDING.

13- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE EXISTING STRUCTURE IS DESIGNED TO SUPPORT  $V_x$  AND  $V_y$  FORCES AT BOTH JAMBS. SEE SCHEDULE ON SHEET 4, FOR  $V_x$  &  $V_y$  VALUES.

14- ROLL-UP MECHANISM NOT PART OF THIS APPROVAL.

15- ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

16- THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL PRODUCT COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH BUILDING TO PREVENT WIND/RAIN INTRUSION. CAULK AND SEAL PRODUCT TRACKS ALL AROUND FULL LENGTH.

17- THIS PRODUCT'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.

18- (A) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.

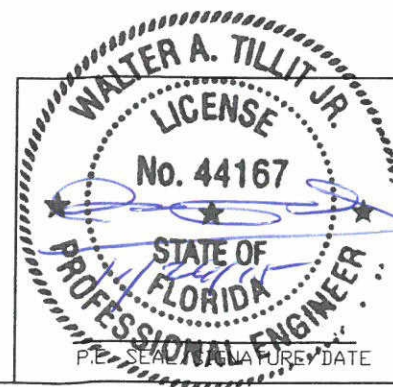
(C) THIS P.E.D. WILL BE CONSIDERED INVALID IF MODIFIED.

(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

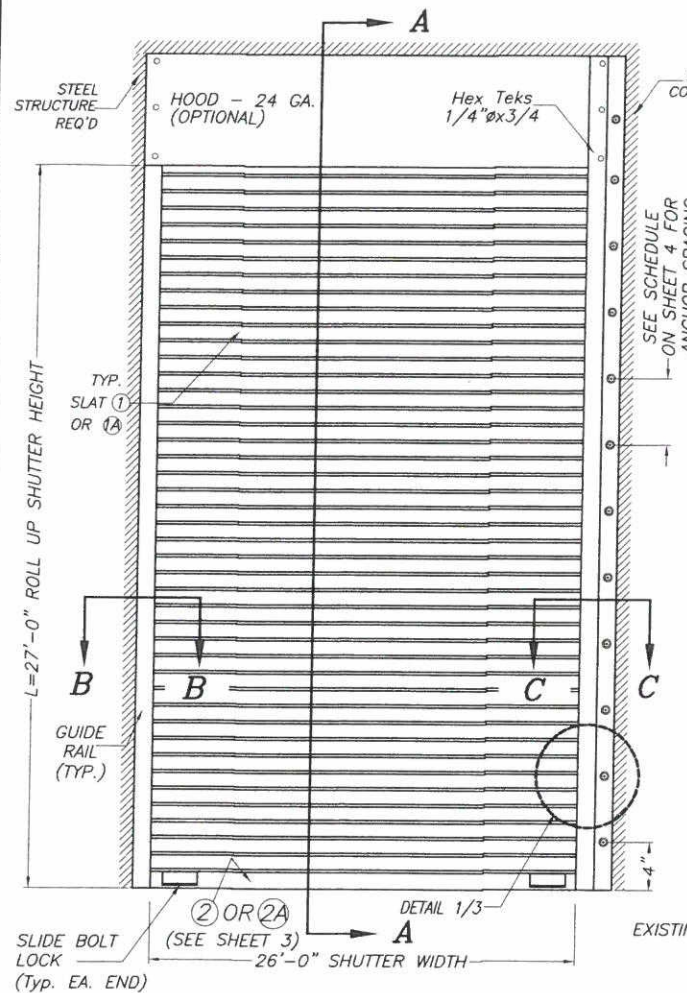
(E) ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

19- PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1710.8.3 OF THE FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1710.8.2 OF THE FLORIDA BUILDING CODE.

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA

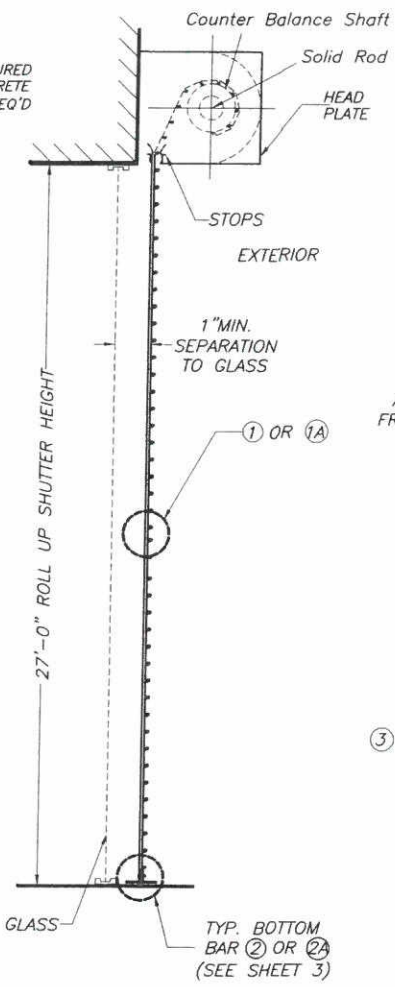


|  |             |      |         |   |              |
|--|-------------|------|---------|---|--------------|
| FLORIDA BUILDING CODE (NON HIGH VELOCITY HURRICANE ZONE)   |             |      |         |   |              |
| ©2015 TILTECO, INC.  |             |      |         | 26'-0" WIDE, 20 GAGE SLAT ROLL-UP SHUTTER SYSTEM  |              |
|  |             |      |         | M.L. DRAWN BY:  |              |
| TILLIT TESTING & ENGINEERING COMPANY<br>6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166<br>Phone : (305)871-1530 . Fax : (305)871-1531<br>EB-0006719<br>WALTER A. TILLIT Jr. P.E.<br>FLORIDA Lic. # 44167 |             |      |         | XOEZ IMPORT & EXPORT, INC.<br>dba.RollingDoors.com<br>7214 NW 78th TERRACE<br>MEDLEY, FL 33166<br>PHONE: (305)885-7590 EMAIL: info@rollingdoors.com |              |
|  |             |      |         | 11/18/15 DATE:  |              |
|  |             |      |         | 15-068 DRAWING No.  |              |
| REV. NO  | DESCRIPTION | DATE | REV. No | DESCRIPTION   | DATE         |
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|  |             |      |         |   | SHEET 1 OF 4 |



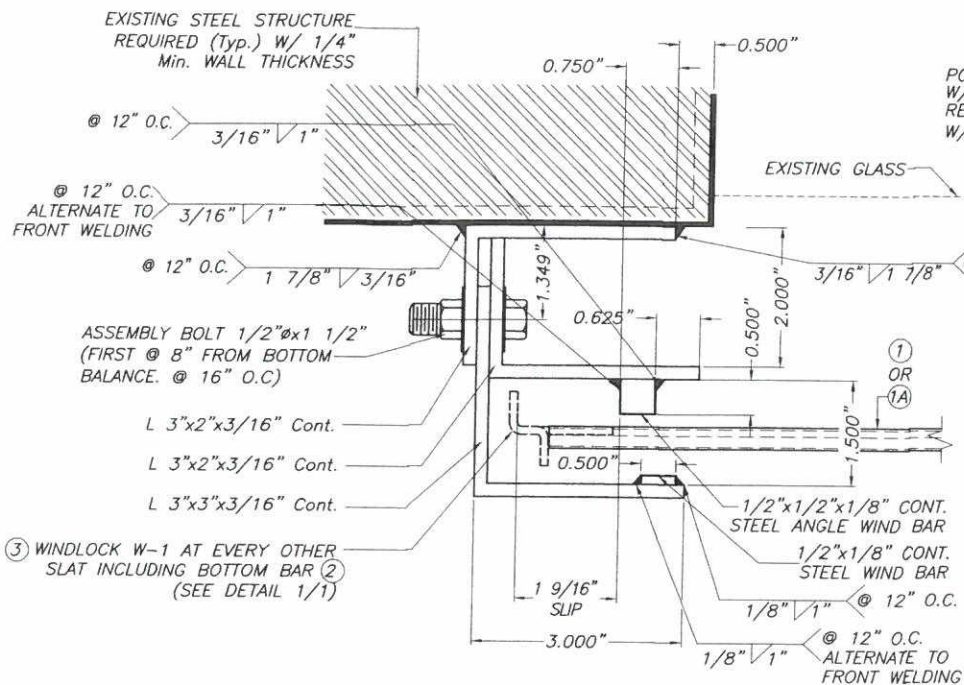
**TYPICAL SHUTTER ELEVATION**

N. T. S.



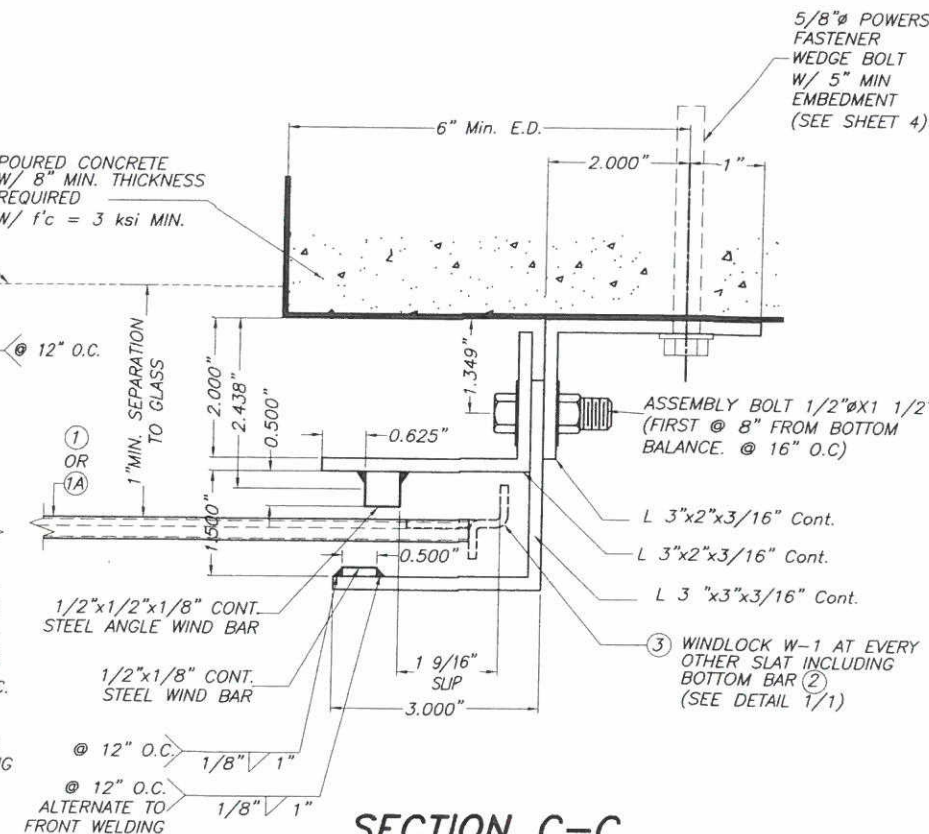
**SECTION A-A**

N. T. S.



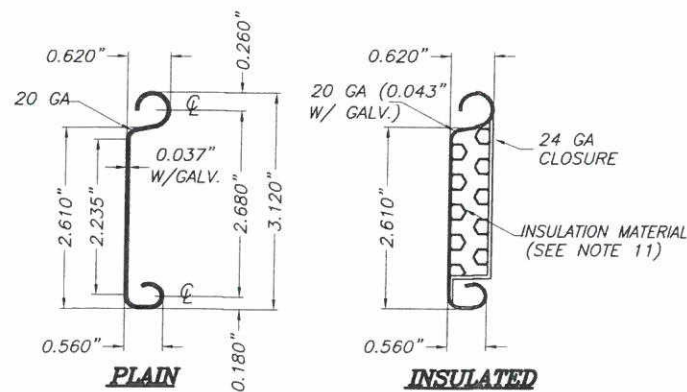
**SECTION B-B**

SCALE : 3/8" = 1"



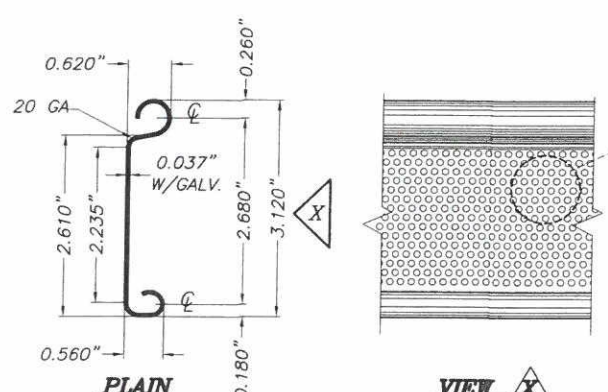
**SECTION C-C**

SCALE : 3/8" = 1"



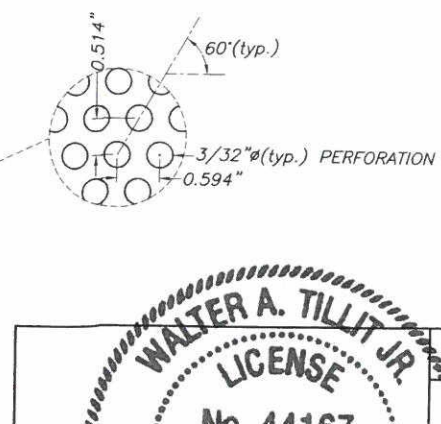
**1 FLAT SOLID SLAT**

SCALE : 3/8" = 1"



**1A FLAT PERFORATED SLAT**

SCALE : 3/8" = 1"



FLORIDA BUILDING CODE (NON HIGH VELOCITY HURRICANE ZONE)

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**TILTECO inc.**

TILLIT TESTING & ENGINEERING COMPANY  
355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530 . Fax : (305)871-1531

EB-0006719  
WALTER A. TILLIT Jr. P.E.  
FLORIDA Lic. # 44167

**26'-0" WIDE, 20 GAGE SLAT  
ROLL-UP SHUTTER SYSTEM**

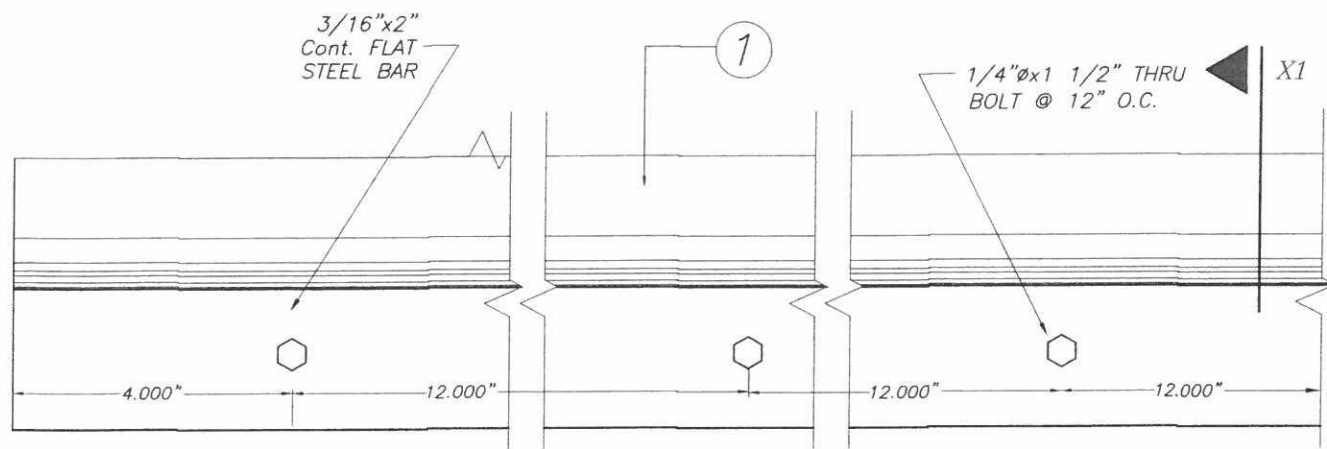
**XOEZ IMPORT & EXPORT, INC.**

7214 NW 78th TERRACE  
MEDLEY, FL 33166

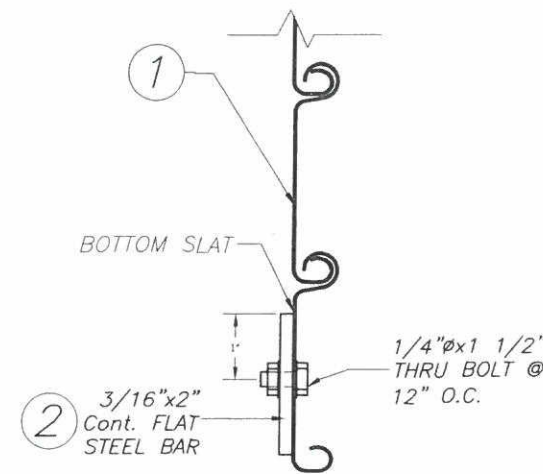
PHONE: (305)885-7590 EMAIL: info@rollingdoors.com

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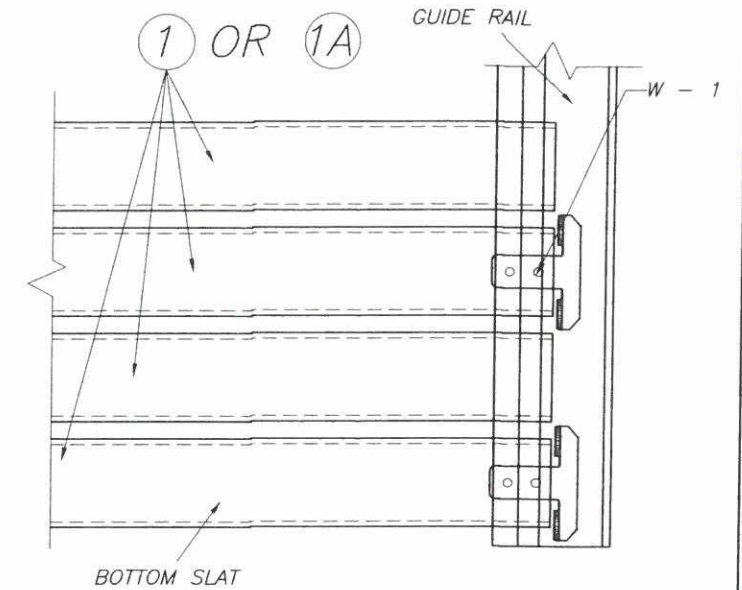
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DRAWN BY:  
11/18/15  
DATE:  
15-068  
DRAWING No.  
SHEET 2 OF 4



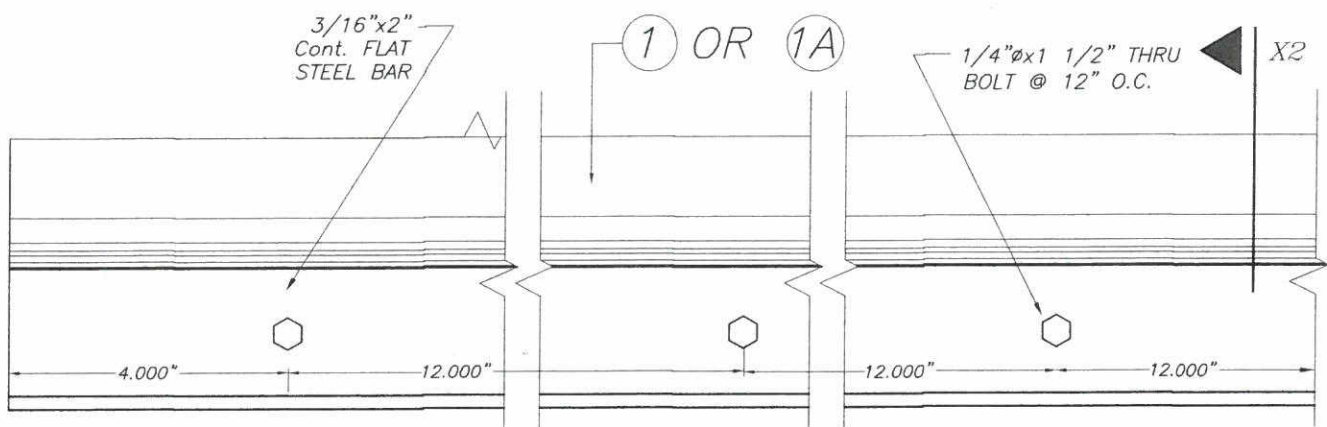
**ELEVATION**  
**2 BOTTOM BAR REQ'D. ONLY FOR SLAT 1**  
 SCALE : 3/8" = 1"



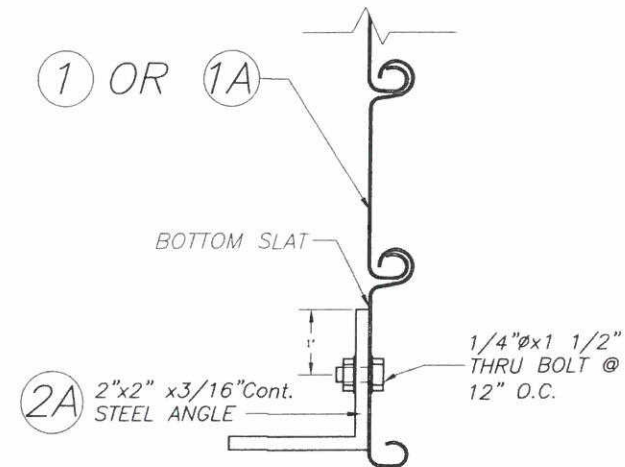
**SECTION X1**



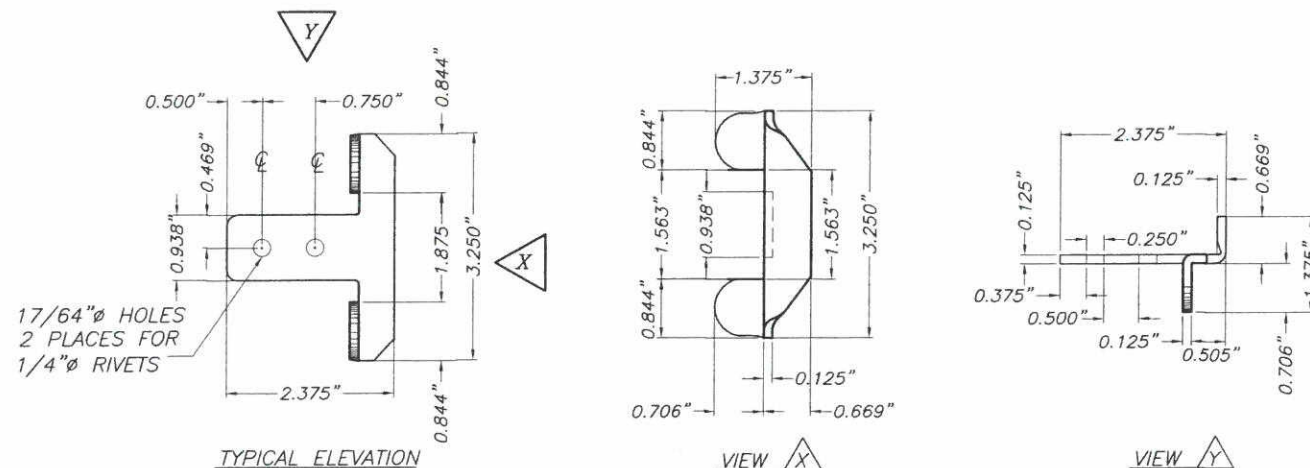
**DETAIL 1 (elevation)**  
 N.T.S.



**ELEVATION**  
**2A BOTTOM BAR REQ'D. FOR SLATS 1 OR 1A**  
 SCALE : 3/8" = 1"



**SECTION X2**



**3 TYPICAL WINDLOCK W - 1 DETAIL**  
 SCALE : 3/8" = 1"

**COMPONENTS**

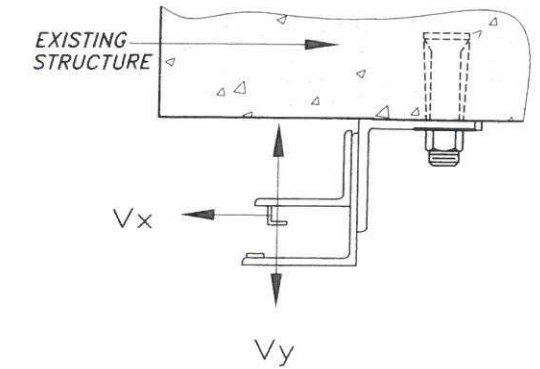
|  | FLORIDA BUILDING CODE (NON HIGH VELOCITY HURRICANE ZONE)   |  | ©2015 TILTECO, INC.  |                       |             |      |         |             |      |   |   |   |   |   |   |   |   |   |   |   |   |              |
|--|--|--|--|-----------------------|-------------|------|---------|-------------|------|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
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| P.E. SEAL SIGNATURE NAME               |  | <table border="1"> <thead> <tr> <th>REV. NO</th> <th>DESCRIPTION</th> <th>DATE</th> <th>REV. No</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-</td> <td>-</td> <td>3</td> <td>-</td> <td>-</td> </tr> <tr> <td>2</td> <td>-</td> <td>-</td> <td>4</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |  | REV. NO               | DESCRIPTION | DATE | REV. No | DESCRIPTION | DATE | 1 | - | - | 3 | - | - | 2 | - | - | 4 | - | - | SHEET 3 OF 4 |
| REV. NO                                | DESCRIPTION  | DATE   | REV. No  | DESCRIPTION           | DATE        |      |         |             |      |   |   |   |   |   |   |   |   |   |   |   |   |              |
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**Vx & Vy REACTIONS & ANCHOR SPACING SCHEDULE**  
**VALID ONLY FOR SLAT ①**

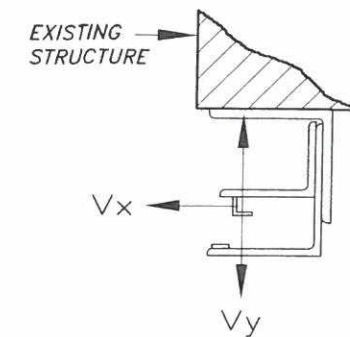
| MAXIMUM A.S.D. DESIGN PRESSURE RATING (PSF) | DOOR WIDTH (Ft.) | SLIP (In) | Vx (Lb/Ft) | Vy (Lb/Ft) | MAX. ANCHOR SPACING TO POURED CONCRETE |                  |                  |
|---|------------------|-----------|------------|------------|--|------------------|------------------|
|   |                  |           |            |            | ANCHOR TYPE 1 *                        |                  |                  |
|   |                  |           |            |            | f'c = 3 ksi Min.                       | f'c = 4 ksi Min. | f'c = 6 ksi Min. |
| +50.0, -50.0                                | 16'-0"           | 5/8"      | 1436       | 400        | 11"                                    | 11"              | 11"              |
|   | 18'-0"           | 1"        | 1419       | 450        | 11"                                    | 11"              | 11"              |
|   | 20'-0"           | 1 1/4"    | 1532       | 500        | 11"                                    | 11"              | 11"              |
|   | 24'-0"           | 1 1/2"    | 1885       | 600        | 10 1/2"                                | 11"              | 11"              |
|   | 26'-0"           | 1 1/2"    | 2125       | 650        | 9"                                     | 10 1/2"          | 11"              |
| +55.0, -55.0                                | 16'-0"           | 5/8"      | 1591       | 440        | 11"                                    | 11"              | 11"              |
|   | 18'-0"           | 1"        | 1569       | 495        | 11"                                    | 11"              | 11"              |
|   | 20'-0"           | 1 1/4"    | 1689       | 550        | 11"                                    | 11"              | 11"              |
|   | 24'-0"           | 1 1/2"    | 2071       | 660        | 9 1/2"                                 | 10 1/2"          | 11"              |
|   | 26'-0"           | 1 1/2"    | 2331       | 715        | 8 1/2"                                 | 9 1/2"           | 10 1/2"          |
| +60.0, -60.0                                | 16'-0"           | 5/8"      | 1743       | 480        | 11"                                    | 11"              | 11"              |
|   | 18'-0"           | 1"        | 1718       | 540        | 11"                                    | 11"              | 11"              |
|   | 20'-0"           | 1 1/4"    | 1845       | 600        | 10 1/2"                                | 11"              | 11"              |
|   | 24'-0"           | 1 1/2"    | 2256       | 720        | 8 1/2"                                 | 10"              | 10 1/2"          |
|   | 26'-0"           | 1 1/2"    | 2536       | 780        | 7 1/2"                                 | 8 1/2"           | 9 1/2"           |
| +70.0, -70.0                                | 16'-0"           | 5/8"      | 2046       | 560        | 10"                                    | 11"              | 11"              |
|   | 18'-0"           | 1"        | 2012       | 630        | 10"                                    | 11"              | 11"              |
|   | 20'-0"           | 1 1/4"    | 2155       | 700        | 9"                                     | 10"              | 11"              |
|   | 24'-0"           | 1 1/2"    | 2611       | 840        | 7 1/2"                                 | 8 1/2"           | 9"               |
|   | 26'-0"           | 1 9/16"   | 2881       | 910        | 7 1/2" ▲                               | 7 1/2"           | 8 1/2"           |

**Vx & Vy REACTIONS & ANCHOR SPACING SCHEDULE**  
**VALID ONLY FOR SLAT ①A**

| MAXIMUM A.S.D. DESIGN PRESSURE RATING (PSF) | DOOR WIDTH (Ft.) | SLIP (In) | Vx (Lb/Ft) | Vy (Lb/Ft) | MAX. ANCHOR SPACING TO POURED CONCRETE |                  |                  |
|---|------------------|-----------|------------|------------|--|------------------|------------------|
|   |                  |           |            |            | ANCHOR TYPE 1 *                        |                  |                  |
|   |                  |           |            |            | f'c = 3 ksi Min.                       | f'c = 4 ksi Min. | f'c = 6 ksi Min. |
| +50.0, -50.0                                | 16'-0"           | 5/8"      | 1436       | 400        | 11"                                    | 11"              | 11"              |
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| +60.0, -60.0                                | 16'-0"           | 5/8"      | 1743       | 480        | 11"                                    | 11"              | 11"              |
|   | 18'-0"           | 1"        | 1718       | 540        | 11"                                    | 11"              | 11"              |
|   | 20'-0"           | 1 1/4"    | 1845       | 600        | 10 1/2"                                | 11"              | 11"              |
|   | 24'-0"           | 1 1/2"    | 2256       | 720        | 8 1/2"                                 | 10"              | 10 1/2"          |
|   | 26'-0"           | 1 1/2"    | 2536       | 780        | 7 1/2"                                 | 8 1/2"           | 9 1/2"           |



LOAD DIAGRAM

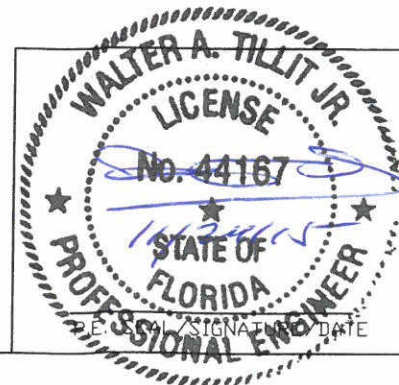


LOAD DIAGRAM

**ANCHOR LEGEND**

\* ANCHOR TYPE 1: - 5/8"Ø POWERS FASTENERS, INC WEDGE BOLT ANCHOR W/ 5" MINIMUM EMBEDMENT, 6" MIN. EDGE DISTANCE & 8" MIN. WALL THICKNESS.

▲ SPACING ONLY VALID FOR 7 1/2" MIN. EDGE DISTANCE



FLORIDA BUILDING CODE (NON HIGH VELOCITY HURRICANE ZONE)

©2015 TILTECO, INC.



26'-0" WIDE, 20 GAGE SLAT ROLL-UP SHUTTER SYSTEM

XOEZ IMPORT & EXPORT, INC.

7214 NW 78th TERRACE, MEDLEY, FL 33166

PHONE: (305)885-7590 EMAIL: info@rollingdoors.com

| REV. NO | DESCRIPTION | DATE | REV. No | DESCRIPTION | DATE |
|---------|-------------|------|---------|-------------|------|
| 1       | -           | -    | 3       | -           | -    |
| 2       | -           | -    | 4       | -           | -    |

M.L. DRAWN BY:

11/18/15 DATE:

15-068 DRAWING No.

SHEET 4 OF 4