

# STRUCTURAL NOTES:

- THIS NON-POROUS SYSTEM HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2014 (FIFTH EDITION) OF THE FLORIDA BUILDING CODE (FBC) FOR USE OUTSIDE THE HIGH VELOCITY HURRICANE ZONE (HMH-ZONE/ BROWARD COUNTIES). IT MAY BE INSTALLED IN WIND ZONE 2 OR 3 FOR ESSENTIAL FACILITIES IN WIND ZONES 1, 2, 3 OR 4 WITH STORM BARS AS NOTED ON SHEET 2 OF 10.
- THE ADEQUACY FOR ANCHOR, DETECTION AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.2 (NON-HVHZ) OF THE ABOVE REFERENCED CODE, AND AS PER TAS 201, TAS 202 AND TAS 203 AS LISTED HEREIN AS WELL AS ADDITIONAL STANDARDS AS MENTIONED ELSEWHERE ON SHEET 1 OF 10.
- DESIGN PRESSURE REQUIREMENTS OF A SPECIFIC SITE SHALL BE DETERMINED BY OTHERS IN CONFORMANCE TO SECTION 1609 OF THE FBC FOR A BASIC WIND SPEED (ALLOWABLE STRESS DESIGN) AS REQUIRED BY THE JURISDICTION WHERE THE SYSTEM WILL BE INSTALLED. ULTIMATE DESIGN LOADS (UDL) DETERMINED BY ASCE 7-10 SHALL BE REDUCED TO ALLOWABLE STRESS DESIGN LOADS (ASD) BY MULTIPLYING THE UDL BY 0.6 TO COMPARE THEM TO THE ASD PRESSURE RATINGS SHOWN ON SHEET 2. USE OF DIRECTIONALITY FACTOR Kd=0.85 IS ALLOWED.
- IMPACT AND FATIGUE RESISTANCE HAS BEEN DETERMINED IN ACCORDANCE WITH THE FBC SECTION 1609.1.2. LARGE MISSILE AS LISTED HEREIN.
- NO 33-1/2% INCREASE IN ALLOWABLE STRESS INCREASE HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. A 1.5 WIND LOAD DURATION FACTOR WAS USED TO CALCULATE STRESS SPACINGS FOR LAG SCREWS INTO WOOD.
- THIS PRODUCT EVALUATION DOCUMENT (PED) DETAIL HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE CONDITIONS DETAIL HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS TO BE USED IN CONJUNCTION WITH THIS DOCUMENT.
- THE CONTRACTOR AND / OR PERMIT HOLDER IS TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS SYSTEM, INCLUDING VERIFYING THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND THE NEW SUPERIMPOSED LOADS SHOWN BELOW AND THE SOUNDNESS OF THE STRUCTURE WHERE THE SYSTEM IS TO BE ATTACHED TO ENSURE PROPER ANCHORAGE.
- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA LICENSED ENGINEER OR ARCHITECT WHO WILL BECOME THE ENGINEER OF RECORD (EOR) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE PED. THE ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE PED ENGINEER, SHALL SUBMIT TO THIS ENGINEER THE SITE SPECIFIC DRAWINGS FOR REVIEW, OF ITS AVAILABILITY FROM THE FLORIDA PRODUCT APPROVAL WEBSITE.
- PANELS MAY BE MOUNTED INSIDE AND/OR OUTSIDE THE BUILDING ENVELOPE.
- CORRUGATED PANEL LIMITATIONS OF USE:  
THE MAXIMUM SIZE SHALL BE 25 PSF MAX. PRESSURE @135 INCHES MAXIMUM WIDTH (CENTER / CENTER OF WALL FASTENERS). SEE TABLES ON SHEET 2 OF 10.
- FLAT PANEL LIMITATIONS OF USE:  
THE MAXIMUM ALLOWABLE DESIGN PRESSURES ARE: +60PSF/-60PSF. SEE TABLES ON SHEET 2 OF 10.
- FOR DETERMINING INTERNAL PRESSURE IN THE ABOVE REFERENCED CODES, THIS PRODUCT IS CLASSIFIED AS NON-POROUS WITH A POROSITY OF LESS THAN 10% FOR THE CONDITIONS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT. CLEAR PANELS MUST COMPLETELY COVER AN OPENING IN ALL DIRECTIONS. SEE END CAP BUILD OUT DETAIL ON SHEET 8 OF 10.
- ALL SCREWS TO BE STAINLESS STEEL 304 OR GALVANIZED A507 STEEL. ALL BOLTS TO BE ASTM A507, GALVANIZED OR 304 SERIES STAINLESS STEEL.
- PANEL OR PANELS CAN BE USED ADJACENT TO OTHER APPROVED CORRUGATED SYSTEMS.
- SUPPORTBRACKETS AND ANCHORS:  
A. ANCHORS INTO THE SUPPORT SUBSTRUCTURE (WALL, CEILING, BEAMS AND FLOORS) SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.  
B. THE ANCHOR SPACING SHOWN ON SHEETS 2, 6, 7, 8 & 9 OF 10, INDICATED FOR 1/4" AND 3/8" DIAMETERS REFER TO CENTER OF SUPPORTING BRACKETS.  
C. THE ANCHOR SPACING CHARTS ARE BASED ON A REMOVAL BRACKET SYSTEM USING WALE PANELS WITH WINCONS, FEMALE PANELS, SAMMYS AND DROP-IN ANCHORS WITH SIDEWALK BOLTS. TAPCONS OF THE SAME SIZE MAY BE SUBSTITUTED FOR PERMANENT BRACKET INSTALLATIONS. ITW MAX-SET TAPCONS MAY BE USED.  
D. ANCHOR MINIMUM EMBEDMENT AND EDGE DISTANCES  
OF ELCO ULTRACONS, ITW TAPCONS OR ALL POINTS TAPCONS.

| SUBSTRUCTURE                     | EMBEDMENT  | EDGE DISTANCE                            |
|----------------------------------|------------|------------------------------------------|
| WALLET BLOCK                     | 1-1/4" MIN | 12" OR PER MANUFACTURER'S SPECIFICATIONS |
| GRAVEL FILL OR 2" CONCRETE       | 1-3/4" MIN | 12" OR PER MANUFACTURER'S SPECIFICATIONS |
| 4" OR CONCRETE OR 2" OR CONCRETE | 1-3/4" MIN | 12" OR PER MANUFACTURER'S SPECIFICATIONS |
| WOOD OR TIMBER                   | 8" D       | 3/4" MIN                                 |

- NO EMBEDMENT INTO NON-STRUCTURAL MATERIAL SUCH AS STUCCO, SILING AND PAVERS SHALL BE INCLUDED AS PART OF THE EMBEDMENT REQUIREMENT.
- STEEL SURFACES TO BE PLACED IN CONTACT WITH ALUMINUM SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPEC NO.: TTP-645, OR BE GALVANIZED.
- MAXIMUM DESIGN PRESSURE VERSUS PANEL SPAN SHOWN ON SHEET 2 OF 10. INTERPOLATION IS ALLOWED IN BETWEEN TWO SPANS TO OBTAIN SPACINGS NOT LISTED.
- ALL ALUMINUM ALLOYS SHALL BE 6061-T6, 6061-T5, 6061-T8 OR 6005-T5.
- ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- TRACKS MAY BE CURVED TO FOLLOW THE INSTALLATION PROFILE AROUND ARCHES AND RADIUS.
- PANEL'S MANUFACTURER LABEL SHALL BE PLACED ON A READY AND VISIBLE LOCATION ON THE PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

ULTRATEK WORLDWIDE  
3801 N. Washington Blvd.  
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FLORIDA PRODUCT APPROVAL NUMBER: F-XXXX. OPENING NO.: XX  
THIS DOCUMENT IN ITS ENTIRETY WILL BE CONSIDERED INVALID IF IT IS ALTERED BY ANY MEANS OR DOES NOT BEAR THE DATE AND ORIGINAL SEAL OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.

| POLYCARBONATE SOURCES              |            | RESULT                   |                          |
|------------------------------------|------------|--------------------------|--------------------------|
| TYPICAL PROPERTIES                 | STANDARD   | SBAC                     | INTER                    |
| MATERIAL                           | ASTM D688  | 9.5 MI                   | 9.4 MI                   |
| TENSILE TENSILE STRENGTH           | ASTM D790  | 12.5 MI                  | 12.5 MI                  |
| FLEXURAL STRENGTH AT YIELD         | ASTM D790  | 36.5 MI                  | 36.0 MI                  |
| FLEXURAL MODULUS                   | ASTM D790  | 17 MI                    | 16 MI                    |
| IMPACT                             | ASTM D256  | 17 MI                    | 16 MI                    |
| NOTCHED IZOD                       | ASTM D256  | 17 MI                    | 16 MI                    |
| SHOCK RESISTANCE                   | ASTM D256  | 17 MI                    | 16 MI                    |
| RATE OF BURNING                    | ASTM D288  | 64.5% MAX.               | 47.2%                    |
| SELF EXTINGUISHING                 | ASTM D1293 | C-1 CLASS                | C-1 CLASS                |
| WEATHERING                         | ASTM D688  | 500 deg. F               | 500 deg. F               |
| TENSILE STRENGTH AFTER WEATHERING  | ASTM D688  | 8.800 MI                 | 9.302 MI                 |
| TENSILE STRENGTH BEFORE WEATHERING | ASTM D688  | 8.800 MI                 | 8.803 MI                 |
| EXTRUSAL                           | ASTM D792  | 0.043 MI/IN <sup>3</sup> | 0.043 MI/IN <sup>3</sup> |
| SPECIFIC GRAVITY                   | ASTM D792  | 0.043 MI/IN <sup>3</sup> | 0.043 MI/IN <sup>3</sup> |

## TEST REPORTS

### UNIFORM STATIC AIR PRESSURE (TAS 202, E390-02)

|                     |            |
|---------------------|------------|
| HEITI 07-4198       | 04/30/2007 |
| HEITI 07-4202/32    | 04/30/2007 |
| HEITI 07-4252       | 06/13/2007 |
| HEITI 07-4255       | 07/27/2007 |
| HEITI 08-2048/50/52 | 10/10/2008 |
| HEITI 08-2507A      | 01/28/2009 |
| HEITI 08-2508A      | 01/28/2009 |
| B9089.01-401-18     | 04/26/2012 |
| BT-ULTK-13-001A     | 08/24/2013 |
| BT-ULTK-13-001B     | 08/24/2013 |
| BT-ULTK-15-001      | 04/30/2015 |

### LARGE MISSILE & CYCLIC LOADING (TAS 201, TAS 203)

|                    |                                         |
|--------------------|-----------------------------------------|
| HEITI 07-4198/0405 | 04/30/2007                              |
| HEITI 07-4233/54   | 04/30/2007                              |
| HEITI 07-4233/86   | 07/27/2009                              |
| HEITI 08-2049      | 10/10/2008                              |
| HEITI 08-2507B     | 01/28/2009                              |
| HEITI 08-2508B     | 01/28/2009                              |
| B9089.01-401-18    | 04/26/2012                              |
| BT-ULTK-13-001A    | 08/24/2013 plus ASTM E1896-02, E1996-02 |
| BT-ULTK-13-001B    | 08/24/2013 plus ASTM E1896-02, E1996-02 |
| BT-ULTK-15-001     | 04/30/2015                              |

### TENSILE TEST (ASTM D638-03)

|                  |            |
|------------------|------------|
| HEITI 07-1750    | 09/01/2007 |
| HEITI 08-1104/05 | 01/28/2009 |

### EVALUATION BASED ON:

ARCHITECTURAL TESTING INC.

### REPORT NO.: 8733.01-401-44

REPORT DATE: 12-21-2011  
TEST PROTOCOL: ASTM E 1896-02 (IMPACT & CYCLIC TEST METHOD)  
ASTM E 1896-02 (IMPACT STANDARD SPECIFICATION)  
ASTM E 330-02 (STATIC TEST METHOD)  
DESIGN PRESSURE: 60 PSF W/ MISSILE LEVEL D AND WIND ZONE 4.  
TEST PRESSURE: 60 PSF W/ MISSILE LEVEL D AND WIND ZONE 4.  
OVERALL SPAN: 9'-1" (108 IN.)  
CIR/COR FASTENERS: 8'-8" (104 IN.) INSIDE TO INSIDE FRAME.

### EVALUATION BASED ON:

ARCHITECTURAL TESTING INC.

REPORT NO.: AL2001-401-44

REPORT DATE: 09/08/10 (IMPACT & CYCLIC TEST METHOD)  
TEST PROTOCOL: ASTM E 1896-02 (IMPACT STANDARD SPECIFICATION)  
ASTM E 1896-02 (IMPACT STANDARD SPECIFICATION)  
ASTM E 330-02 (STATIC TEST METHOD)  
DESIGN PRESSURE: 60 PSF W/ MISSILE LEVEL D AND WIND ZONE 4.  
TEST PRESSURE: 60 PSF W/ MISSILE LEVEL D AND WIND ZONE 4.  
OVERALL SPAN: 9'-1" (108 IN.)  
CIR/COR FASTENERS: 8'-8" (104 IN.) INSIDE TO INSIDE FRAME.



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## CLEARTEK STORM PANEL SYSTEM (NON-HVHZ)

1/10

NOTED  
4/30/15



# CORRUGATED PANEL TABLES

# FLAT PANEL TABLES

## CORRUGATED

| SPAN LOAD TABLE                  |                  |  |
|----------------------------------|------------------|--|
| DIRECT MOUNT PANELS AT BOTH ENDS |                  |  |
| MAX. SPAN - IN.                  | MAX. DESIGN LOAD |  |
| 60"                              | 75.0             |  |
| 72"                              | 60.0             |  |
| 84"                              | 55.0             |  |
| 96"                              | 52.0             |  |
| 108"                             | 35.0             |  |
| 120"                             | 32.0             |  |
| 132"                             | 30.0             |  |
| 135"                             | 25.0             |  |



MOUNT WITH FASTENERS AT MAX. 13 INCH O.C.

## CORRUGATED

| SPAN LOAD TABLE                     |                  |  |
|-------------------------------------|------------------|--|
| DIRECT MOUNT PANELS AT ONE END ONLY |                  |  |
| MAX. SPAN - IN.                     | MAX. DESIGN LOAD |  |
| 60"                                 | 60.0             |  |
| 72"                                 | 50.0             |  |
| 84"                                 | 45.0             |  |
| 96"                                 | 40.0             |  |
| 102"                                | 22.0             |  |



1. STORM BARS FOR WIND ZONE 4 AND ESSENTIAL FACILITIES
2. LENGTH OF STORM BARS SAME AS LENGTH OF PANELS.
3. MAXIMUM OPENING SIZE IS 80 INCHES.
4. WITH ABOVE CRITERIA, MAXIMUM DEFLECTION IS 0.85 INCHES. PANEL IS TO BE INSTALLED NO CLOSER THAN 2 INCHES FROM GLAZING.
6. STORM BARS (2"x2"x1/8" RECT. TUBE) FIT IN CORRUGATION BETWEEN PANEL AND BUILDING AND ARE TO BE USED ONLY WITH ALTERNATE "A" CORRUGATED PANEL SHOWN ON SHT. 5 OF 10.

| DESIGN PRESSURE 30 PSF |      | 4000 PSI CONCRETE |      | 2000 PSI CONCRETE |      | HOLLOW BLOCK |      | WOOD |      |
|------------------------|------|-------------------|------|-------------------|------|--------------|------|------|------|
| 1/4"                   | 3/8" | 1/4"              | 3/8" | 1/4"              | 3/8" | 1/4"         | 3/8" | 1/4" | 3/8" |
| 108                    | 86   | 11                | 11   | 11                | 11   | 8            | 7    | 7    | 7    |
| 67                     | 48   | 11                | 11   | 11                | 11   | 11           | 11   | 11   | 11   |
| 48                     |      | 11                | 11   | 11                | 11   | 11           | 11   | 11   | 11   |

| DESIGN PRESSURE 40 PSF |      | 4000 PSI CONCRETE |      | 2000 PSI CONCRETE |      | HOLLOW BLOCK |      | WOOD |      |
|------------------------|------|-------------------|------|-------------------|------|--------------|------|------|------|
| 1/4"                   | 3/8" | 1/4"              | 3/8" | 1/4"              | 3/8" | 1/4"         | 3/8" | 1/4" | 3/8" |
| 108                    | 86   | 10                | 11   | 9                 | 11   | 7            | 7    | 8    | 8    |
| 67                     | 48   | 11                | 11   | 11                | 11   | 11           | 11   | 7    | 7    |
| 48                     |      | 11                | 11   | 11                | 11   | 11           | 11   | 11   | 11   |

| DESIGN PRESSURE 50 PSF |      | 4000 PSI CONCRETE |      | 2000 PSI CONCRETE |      | HOLLOW BLOCK |      | WOOD |      |
|------------------------|------|-------------------|------|-------------------|------|--------------|------|------|------|
| 1/4"                   | 3/8" | 1/4"              | 3/8" | 1/4"              | 3/8" | 1/4"         | 3/8" | 1/4" | 3/8" |
| 108                    | 86   | 9                 | 10   | 8                 | 9    | 7            | 7    | 8    | 8    |
| 67                     | 48   | 11                | 11   | 11                | 11   | 11           | 11   | 10   | 10   |
| 48                     |      | 11                | 11   | 11                | 11   | 11           | 11   | 11   | 11   |

| DESIGN PRESSURE 60 PSF |      | 4000 PSI CONCRETE |      | 2000 PSI CONCRETE |      | HOLLOW BLOCK |      | WOOD |      |
|------------------------|------|-------------------|------|-------------------|------|--------------|------|------|------|
| 1/4"                   | 3/8" | 1/4"              | 3/8" | 1/4"              | 3/8" | 1/4"         | 3/8" | 1/4" | 3/8" |
| 108                    | 86   | 7                 | 9    | 7                 | 8    | 5            | 7    | 4    | 7    |
| 67                     | 48   | 11                | 11   | 11                | 11   | 11           | 11   | 7    | 7    |
| 48                     |      | 11                | 11   | 11                | 11   | 11           | 11   | 8    | 8    |

|  |                  |  |                            |  |                            |  |                     |  |                                                         |  |                     |
|--|------------------|--|----------------------------|--|----------------------------|--|---------------------|--|---------------------------------------------------------|--|---------------------|
|  | U-BOLTS          |  | SCREW (ST) - WOOD          |  | PANEL MATE (MALE FASTENER) |  | PANEL MATE (FEMALE) |  | SIDE WALL BOLTS FASTENERS 1/4"-20X1 FASTENERS 3/8"-16X1 |  | PANEL MATE INSERT   |
|  | SCREW (ST) CONC. |  | PANEL MATE (MALE FASTENER) |  | PANEL MATE (FEMALE)        |  | PANEL MATE (FEMALE) |  | PANEL MATE (FEMALE)                                     |  | PANEL MATE (FEMALE) |

TYPICAL FASTENERS/ANCHORS - 1/4" AND 3/8" 1

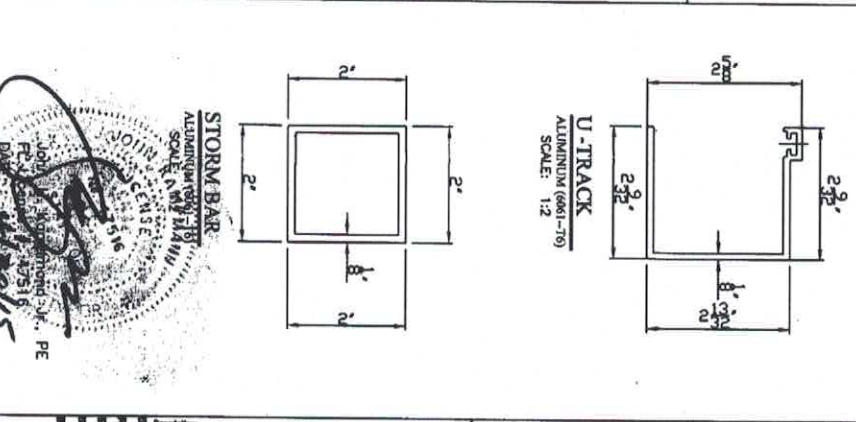
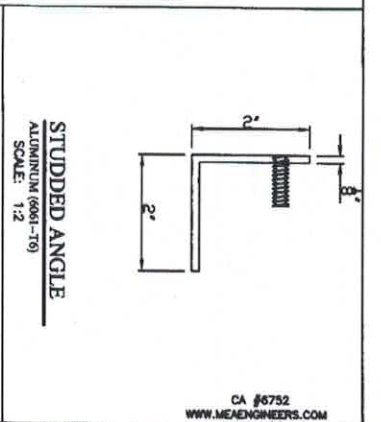
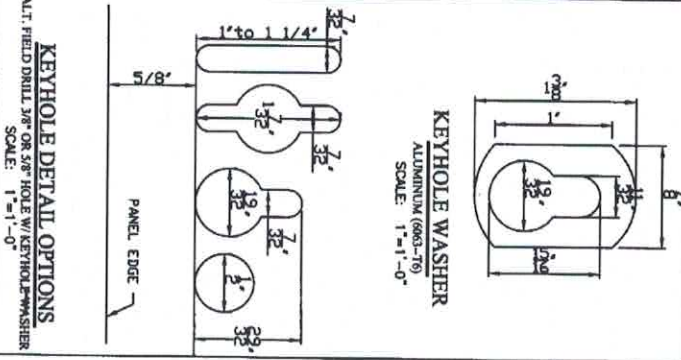
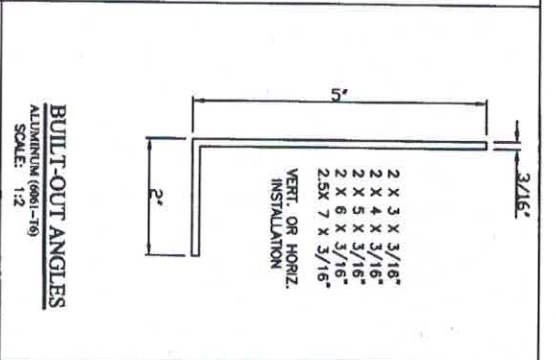
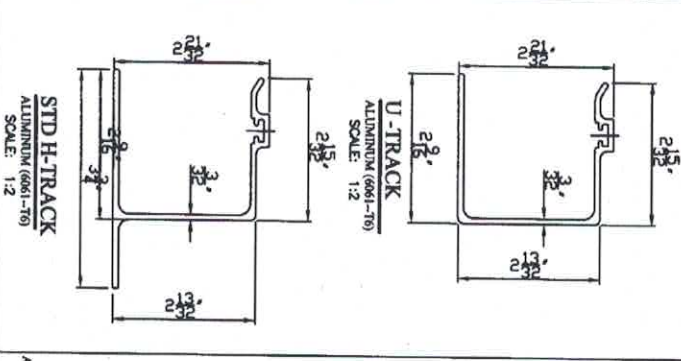
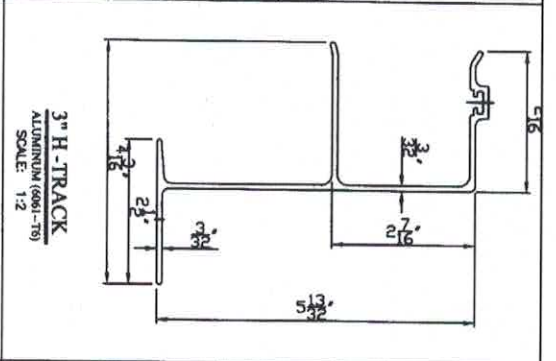
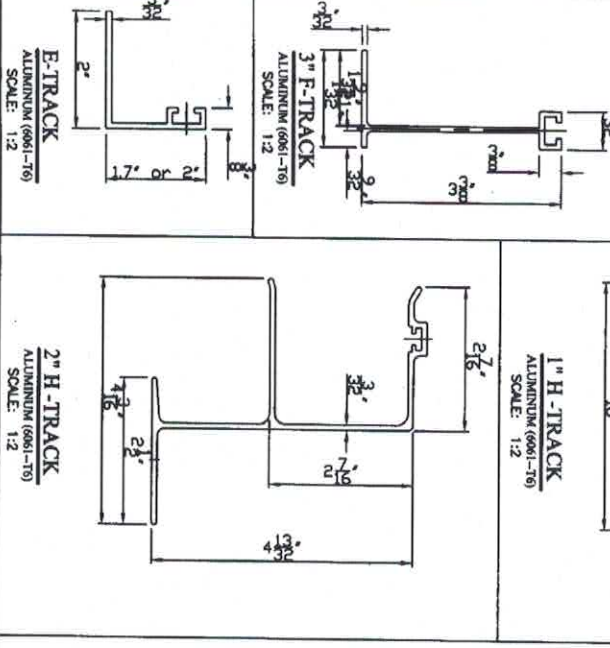
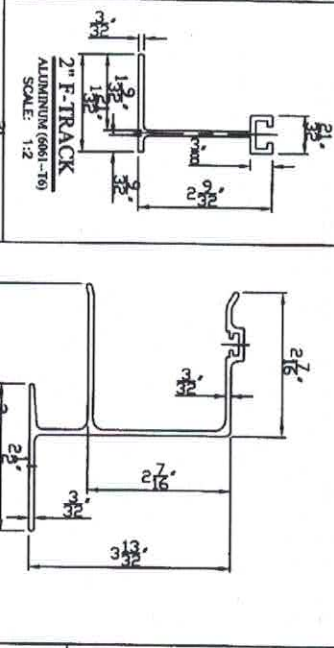
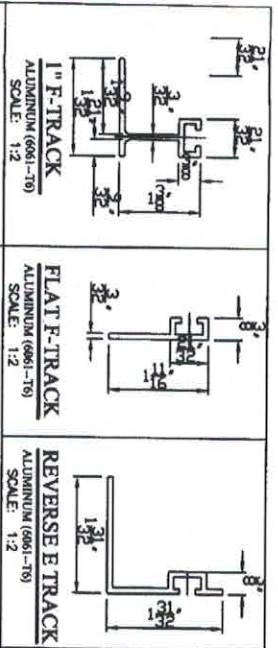
JOHN K. LUTHER  
FL. Lic. # 15-0117A  
DATE: 4/30/15  
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STORM PANEL SYSTEM  
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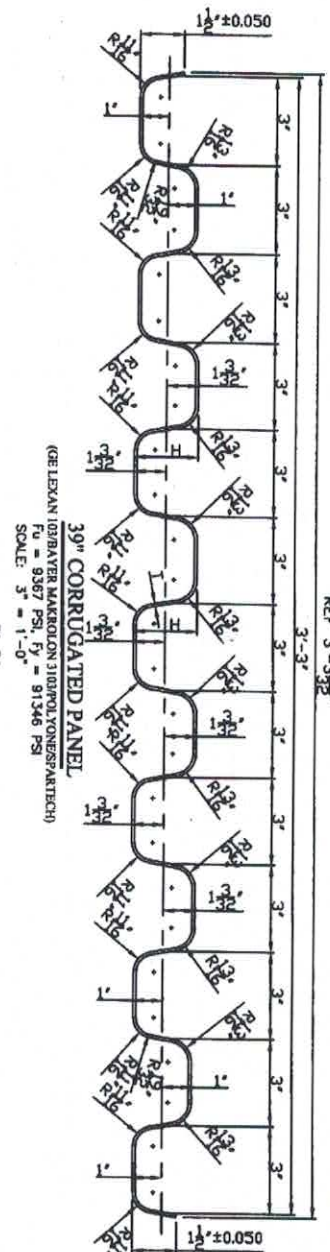
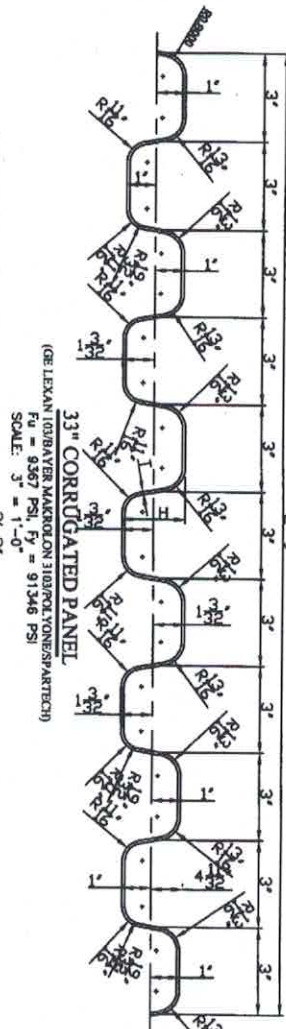
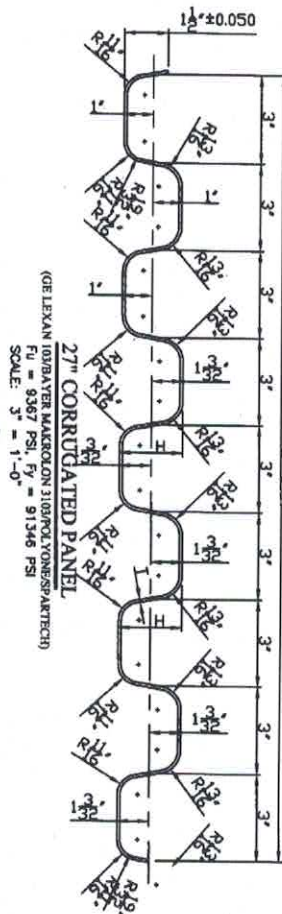
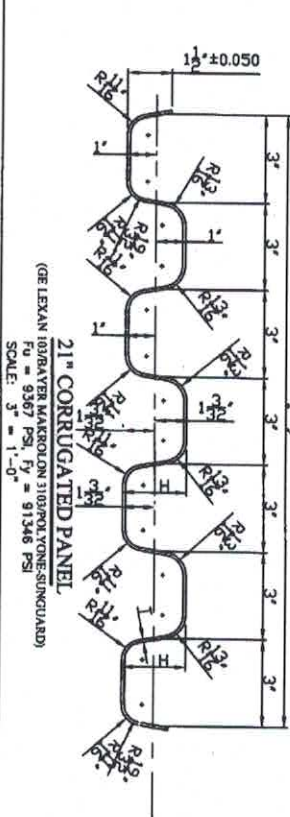
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1 XX/XX/XX - RESERVED.

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- NOTE:
- 1) THICKNESS: 2.36 mm TO 2.50 mm  $\pm 0.05$
  - 2) MATERIAL: (GE LEXAN 103/BAAYER MAKROLON 3103/POLYONE-SINGULARD)
  - 3) THE DIMENSION "H" MUST BE 53.3 - 55.0 mm.
  - 4) ALL INCLINED PLANE THE THICKNESS "T" MUST BE MINIMUM 2.10 mm
  - 5) PANELS MAY BE BENT ALONG CORRUGATION TO PATCH CURVED OR ANGLED OPENINGS
  - 6) PANEL RADIUS MAY BE CUT TO DECREASE ITS WIDTH.
  - 7) ALL PANELS MAY BE CUT TO DECREASE ITS WIDTH.
  - 8) DISTANCE BETWEEN CORVED AND ANGLED RADIUS.
  - 9) HEIGHT OF VALVE MAY BE ADJUSTED TO 0.75 INCH.
  - 10) PANELS MAY BE BENT OR CURVED TO ACCOMMODATE CURVED OR MITERED GLASS.
  - 11) PANEL WIDTH MAY VARY BY 5%.



4/10

NOTED  
4/30/15

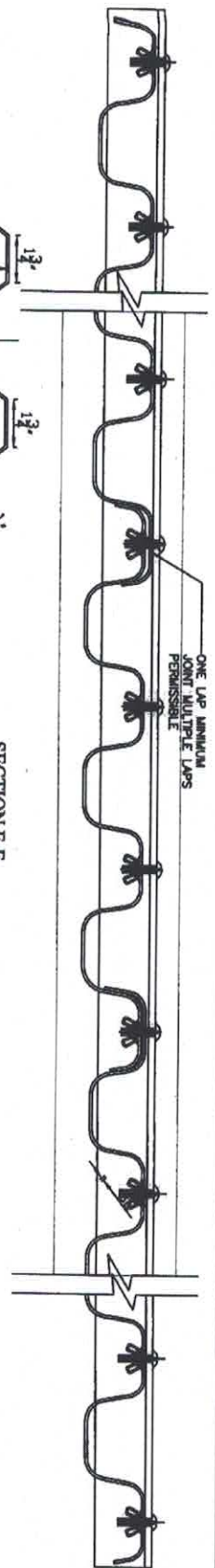
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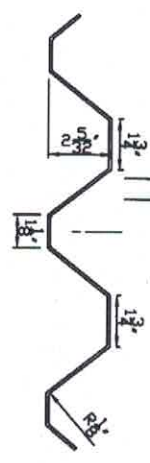
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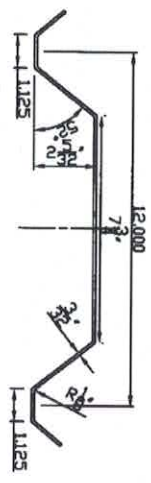
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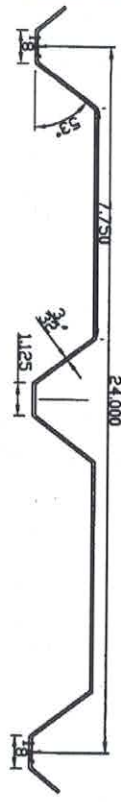
SECTION E-E  
SCALE: 3" = 1'-0"



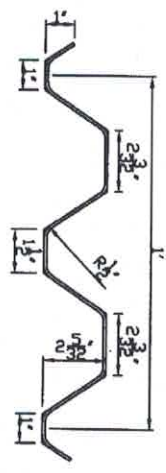
ALTERNATE "A" 12" CORRUGATED PANEL  
(GE LEXAN 100/BAVIER MAKROLON 3100POLYONESPARTTECH)  
Fu = 9367 PSI, Fy = 91346 PSI  
SCALE: 3" = 1'-0"



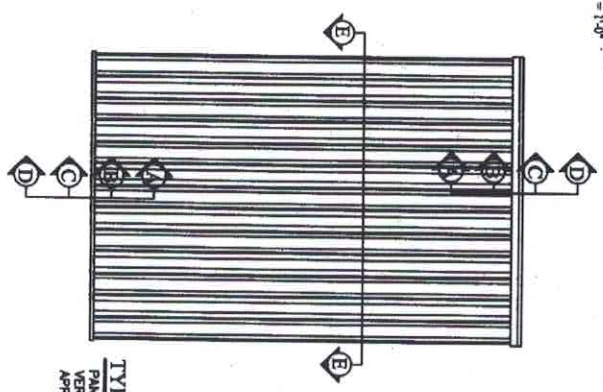
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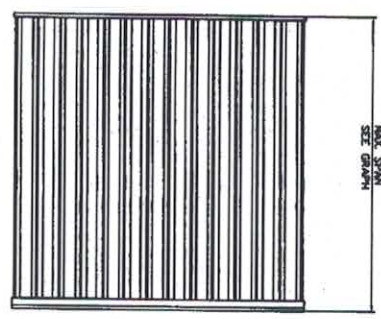
ALTERNATE "C" 24" CORRUGATED PANEL  
(GE LEXAN 100/BAVIER MAKROLON 3100POLYONESPARTTECH)  
Fu = 9367 PSI, Fy = 91346 PSI  
SCALE: 3" = 1'-0"



ALTERNATE "D" CORRUGATED PANEL  
(GE LEXAN 100/BAVIER MAKROLON 3100POLYONESPARTTECH)  
Fu = 9367 PSI, Fy = 91346 PSI  
SCALE: 3" = 1'-0"



TYPICAL ELEVATION  
PANELS CAN BE INSTALLED VERTICALLY OR HORIZONTALLY USING APPLICABLE ANCHORING DETAILS



ALTERNATE PANEL NOTE:

1) ALTERNATE PANEL "B" AND "C" MAY ONLY BE USED AS A DIRECT MOUNT AT BOTH ENDS.



5/10

NOTED  
4/30/15

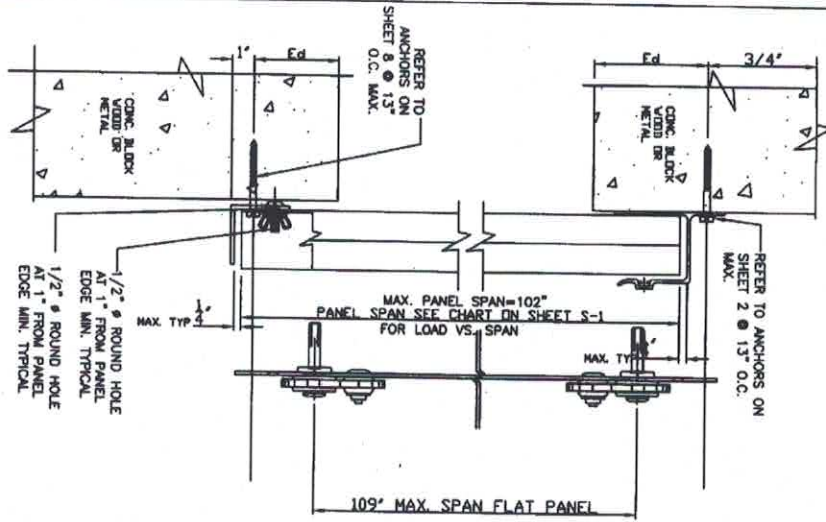
CLEARTEK  
STORM PANEL SYSTEM  
(NON-HVHZ)

Ultratek Worldwide Inc.  
3801 N. Washington Blvd.  
Sarasota, FL 34234  
PHONE: (941) 924-2285  
www.ultratekworldwide.com

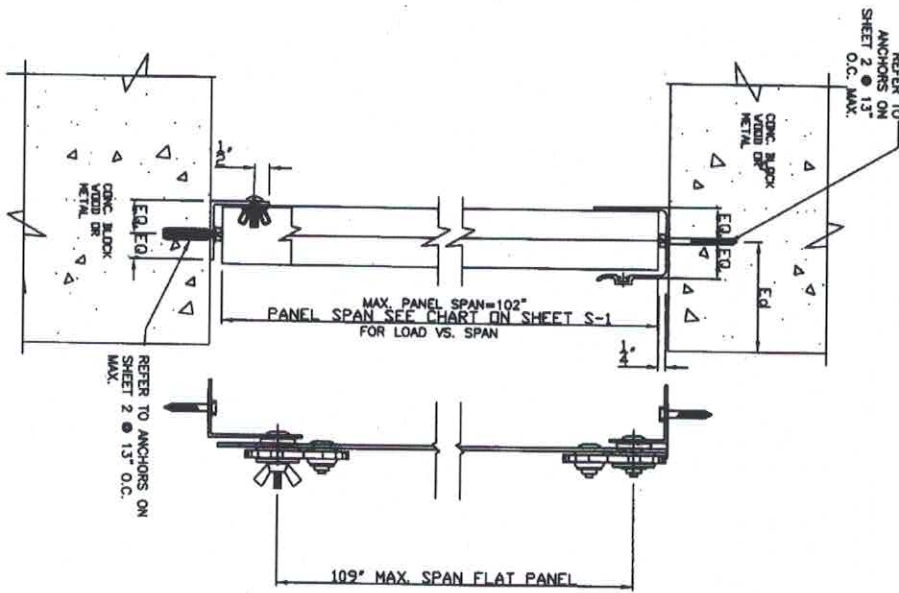
REV. 1  
DESCRIPTION  
XX/XX/XX - RESERVED.

CA #0782  
WWW.MEAENGINEERS.COM  
**MEA**  
ENGINEERS, INC.  
2352 Appleton Circle  
Sarasota, Florida 34240  
(941) 922-3854 CA-9072

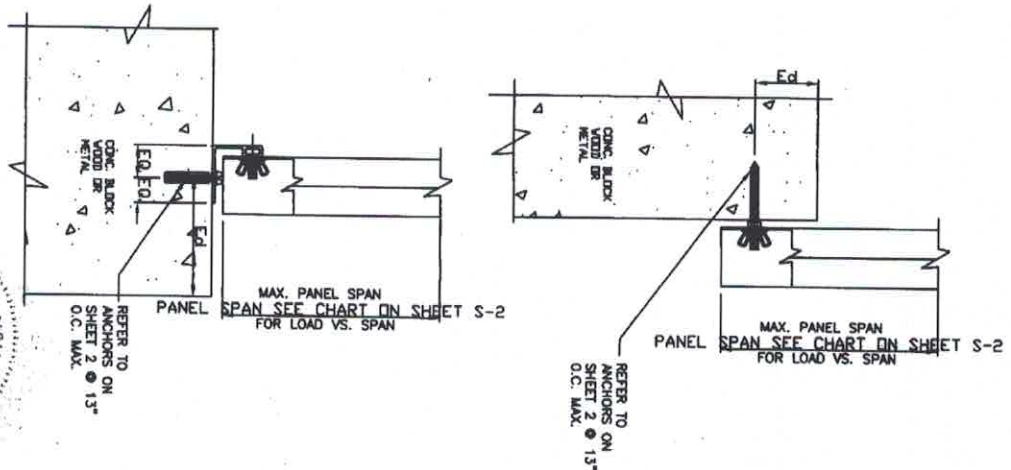
SECTION A-A



SECTION B-B



SECTION C-C



JOHN K. KOPPELMAN, JR., P.E.  
FL. REG. NO. 47515  
DATE 4/30/15

6/10

JK  
NOTED  
4/30/15

CLEARTEK  
STORM PANEL SYSTEM  
(NON-HVHZ)

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Sarasota, FL 34234  
PHONE: (941) 924-2285  
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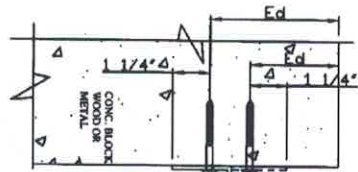
REV. 1  
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CA #6782  
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ENGINEERS, INC.

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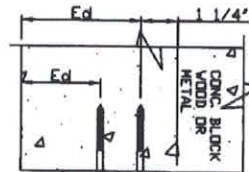
SECTION C-C

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

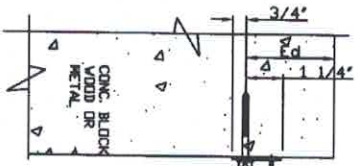
MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



SECTION D-D

REFER TO ANCHORS ON  
SHEET 8 @ 13" O.C. MAX.  
2 x 3 x 1/8"  
2 x 4 x 1/8"  
2 x 5 x 1/8"  
2.5x 7 x 1/8"  
ALUM. ANGLE  
6063-T6  
#14 x 5/8" TENS @  
6" O.C.

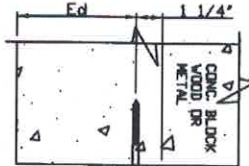
REFER TO ANCHORS ON  
SHEET 2 @ 13" O.C. MAX.



SECTION D-D

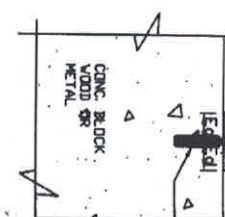
MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



SECTION D-D

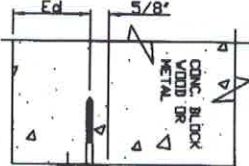
REFER TO ANCHORS ON  
SHEET 2 @ 13" O.C. MAX.



SECTION D-D

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

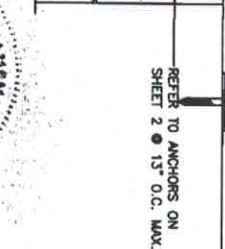
MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



SECTION D-D

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

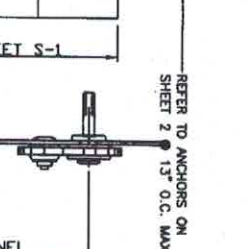
MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



SECTION D-D

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



SECTION D-D

MAX. PANEL SPAN=102"  
PANEL SPAN SEE CHART ON SHEET S-1  
FOR LOAD VS. SPAN

MAX. TY 1"  
MAX. TY 1"  
MAX. TY 1"



7/10

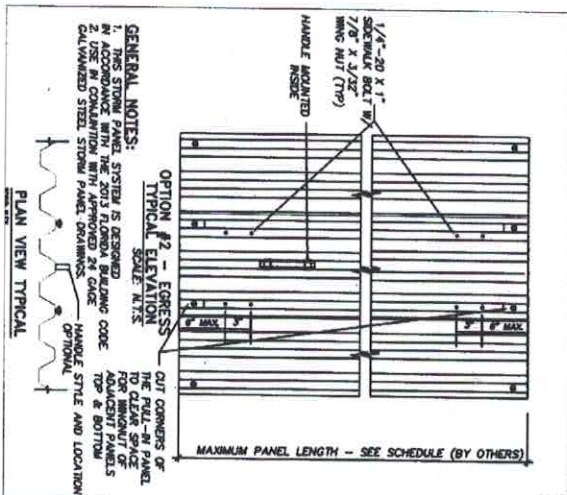
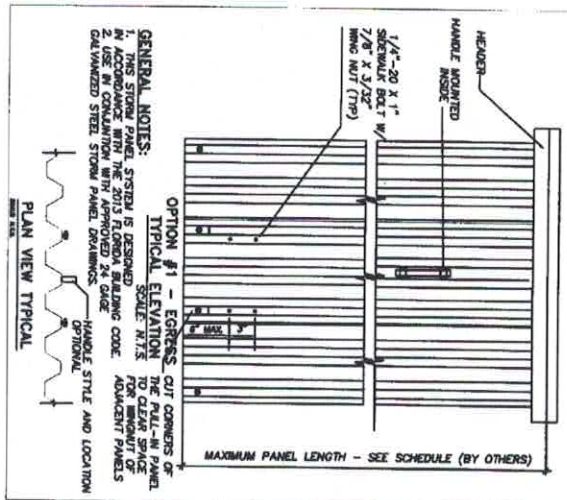
NOTED  
4/30/15

DESCRIPTION  
CLEARTEK  
STORM PANEL SYSTEM  
(NON-HVHZ)

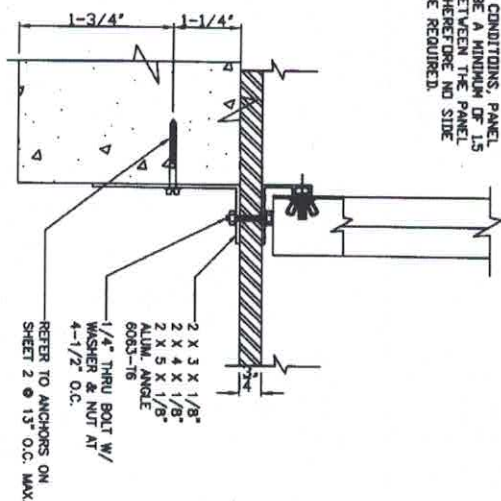
Project Name  
Ultratek Worldwide Inc.  
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Sarasota, FL 34234  
PHONE: (941) 924-2285  
www.ultratekworldwide.com

REV. DESCRIPTION  
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**MEA**  
ENGINEERS, INC.  
2382 Appaloosa Circle  
Sarasota, Florida 34240  
(941) 922-3854 CA-6072

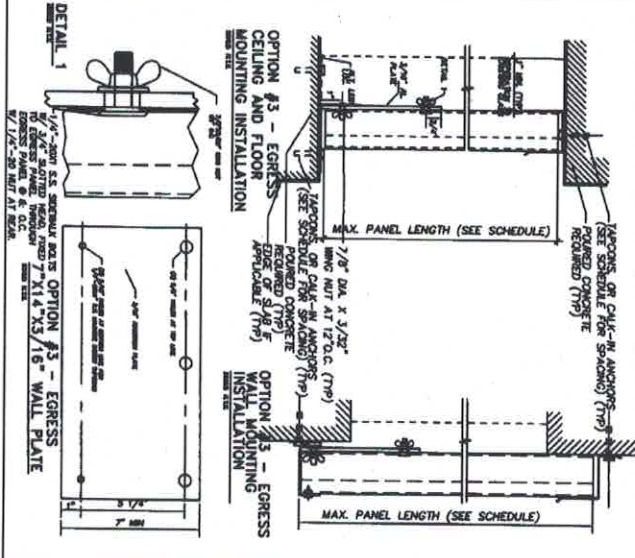
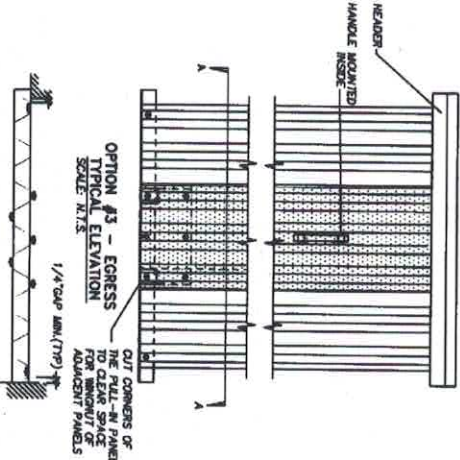


**SIDE CLOSURE NOTE:**  
1. FOR WALL MOUNT, PANEL DIVERS AP SHALL BE A MINIMUM OF 15 TIMES THE GAP BETWEEN THE PANEL AND THE WALL. THEREFORE NO SIDE CLOSURES WILL BE REQUIRED.

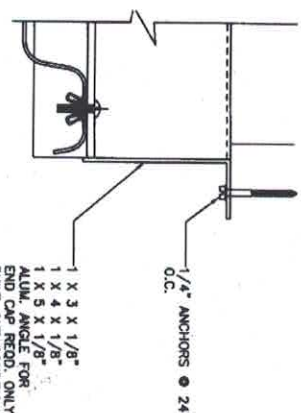


**COUNTER TOP CONDITION**  
SCALE: 3\"/>

(PASS THRU WINDOW)  
MAX. SHUTTER HEIGHT=6 FT.



**END CAP BUILT-OUT CONDITION DETAIL 'A'**  
SCALE: 3\"/>



John A. Koppmann, Jr., PE  
FL. REG. NO. 157518  
4/20/15

8/10

NOTED  
4/20/15

**CLEARTEK  
STORM PANEL SYSTEM  
(NON-HVHZ)**

**Ultratek Worldwide Inc.**  
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Sarasota, FL 34234  
PHONE: (941) 924-2285  
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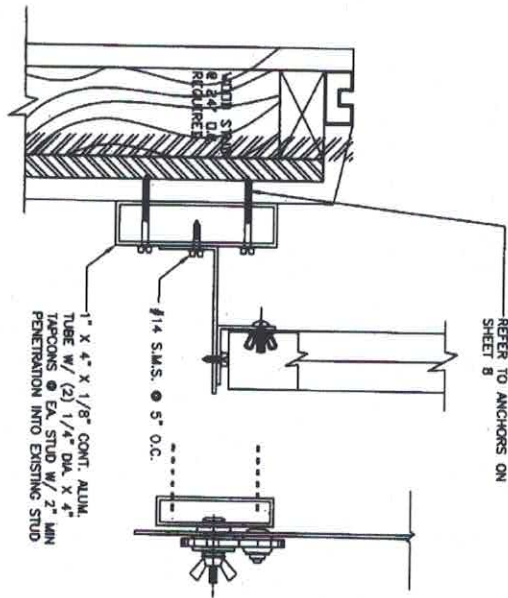
| REV. | DESCRIPTION          |
|------|----------------------|
| 1    | XX/XX/XX - RESERVED. |

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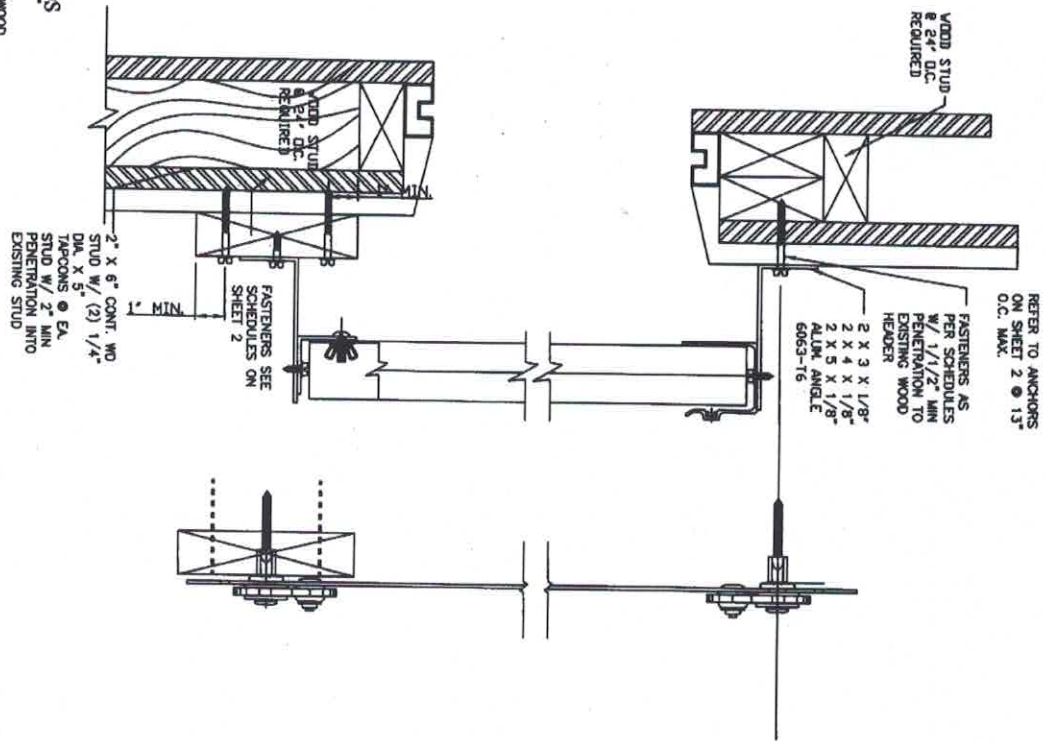
2352 Appaloosa Circle  
Sarasota, Florida 34240  
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**INSTALLATION DETAILS ON EXISTING WOOD STUDS**

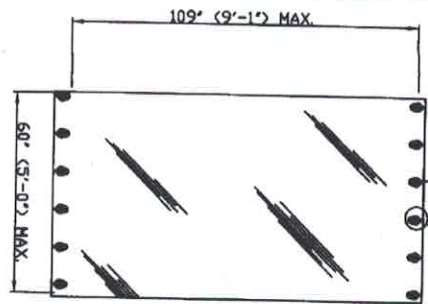
ABOVE DETAILS SHOW CONNECTIONS OF 2X6 BUCK & 1X4 ALUM. TUBE TO WOOD STUDS TO PROVIDE A CONTINUOUS SURFACE FOR A SHUTTER INSTALLATION. FOR INSTALLATION DETAILS OF HEADER/SILL TO CONTINUOUS WOOD MEMBERS SEE SHEETS 6 THROUGH 9.



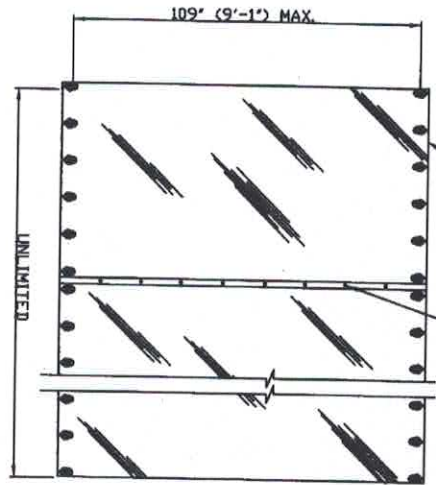
47616  
4/30/15  
PE  
4/30/15

|             |                                                              |                                                                                                                                                   |                                                        |                                                                                                                                                          |
|-------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>9/10</p> | <p><b>CLEARTEK<br/>STORM PANEL SYSTEM<br/>(NON-HVHZ)</b></p> | <p><b>Ultratek Worldwide Inc.</b><br/>3801 N. Washington Blvd.<br/>Sarasota, FL 34234<br/>PHONE: (941) 924-2285<br/>www.ultratekworldwide.com</p> | <p>REV. 1<br/>DESCRIPTION<br/>XX/XX/XX - RESERVED.</p> | <p>CA #6752<br/>WWW.MEAENGINEERS.COM<br/><b>MEA ENGINEERS, INC.</b><br/>2382 Appaloosa Circle<br/>Sarasota, Florida 34240<br/>(841) 922-3054 CA-6072</p> |
|-------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|

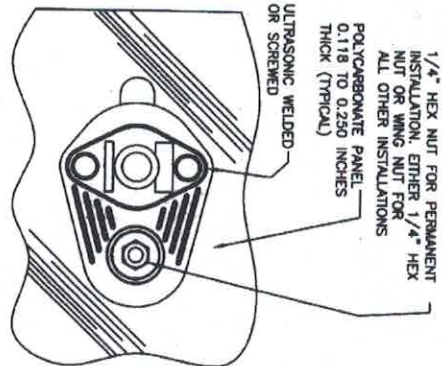
REFER TO SHIT. 2 OF 10 FOR ADDITIONAL DETAILS  
 11" MAX. D.C. REFER TO SHIT. 2 OF 10 FOR ADDITIONAL DETAILS  
 SHEET 2 OF 10 FOR FASTENER SPACING AND SHEET 2 OF 10 FOR FASTENER SPACING



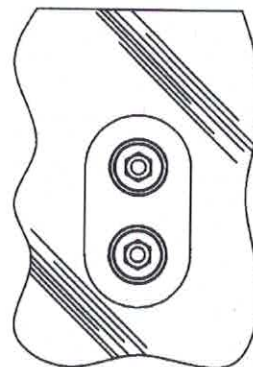
TYPICAL TWO-SIDED INSTALLATION  
 VERTICAL OR HORIZONTAL INSTALLATION N.T.S.



TYPICAL OVERLAP INSTALLATION  
 VERTICAL OR HORIZONTAL INSTALLATION N.T.S.



CLEARTEK STRETCH BRACKET  
 VERTICAL OR HORIZONTAL INSTALLATION 1/2"-1"

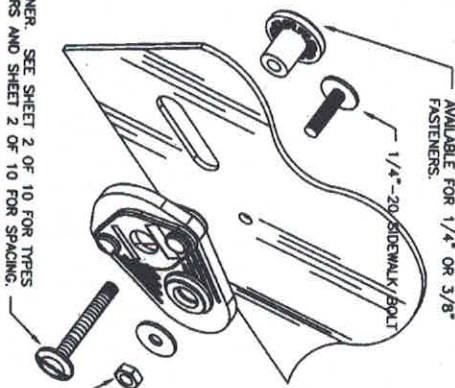


CLEARTEK ALT. STRETCH BRACKET  
 VERTICAL OR HORIZONTAL INSTALLATION 1/2"-1"

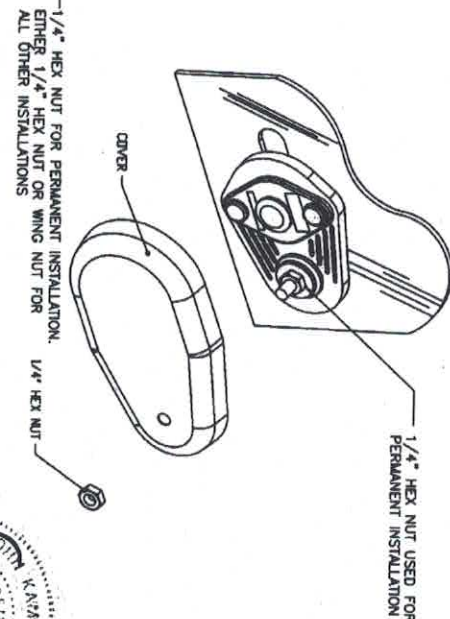
- NOTE:
1. SIDE COURTESY STRETCH BRACKETS MAY BE USED.
  2. SITTING OF PANELS CAN BE SUBSTITUTED BY SOLID PANELS AS LONG AS THE SPAN REQUIREMENTS ARE MET.
  3. STRETCH BRACKETS MAY BE USED ON ARCHED PANEL SECTIONS.
  4. PANELS MAY BE CURVED AND/OR CUT TO FOLLOW THE PROFILE AROUND CIRCLES, ARCHES AND ANY OTHER IRREGULAR-SHAPED OPENINGS.
  5. STORM BAR MULTIPLIER (# OF STORM BARS +1) X SPAN CHART
  6. PANEL EDGES CAN BE BENT TO INCREASE RIGIDITY.
  7. AN OPTIONAL UV AND/OR SOLAR EXTERNAL LAYER MAY BE ADDED ONTO THE SYSTEM.

1/4" OR 3/8" FASTENER. SEE SHEET 2 OF 10 FOR TYPES OF FASTENERS AND SHEET 2 OF 10 FOR SPACING.

TYPICAL ATTACHMENT DETAIL  
 VERTICAL OR HORIZONTAL INSTALLATION 1/2"-1"



OPTIONAL COVER DETAIL  
 VERTICAL OR HORIZONTAL INSTALLATION 1/2"-1"



DATE: 4/30/15  
 10/10