1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING THE HVHZ.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. SHIM AS REQUIRED AT EACH ANCHOR LOCATION WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/2
4. SHIMS SHALL BE LOCATED, APPLIED AND MADE FROM MATERIALS AND THICKNESS CAPABLE OF SUSTAINING APPLICABLE LOADS
5. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
6. FRAME MATERIAL: EXTRUDED ALUMINUM 6063-T6.
7. UNITS MUST BE GLAZED PER ASTM E1300-04/09, SEE SHEET 9 FOR GLASS DETAILS
8. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS
9. FOR ANCHORING INTO WOOD FRAMING OR 2 X BUCK USE 1/2" LAG SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 2 " MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
10. FOR ANCHORING INTO GROUT FILLED MASONRY OR CONCRETE USE $1 / 2$ " WEDGE BOLTS WITH SUFFICIENT LENGTH TO ACHIEVE A $31 / 2^{\prime \prime}$ mINIMUM EMBEDMENT INTO SUBSTRATE WITH 6" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND NSTALLATION DETAILS.
11. FOR ANCHORING INTO METAL STRUCTURE USE $1 / 2-13$ SMS WITH LOCKWASHER AND NUT. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
12. ALL FASTENERS TO BE CORROSION RESISTANT.
13. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW: WOOD: MINIMUM SPECIFIC GRAVITY OF $G=0.42$
B. CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
. MASONRY: GROUT FILLED BLOCK PER ASTM Cgo WITH Fm=2,000PSI MINIMUM.
D. METAL STRUCTURE: STEEL $1 / 4$ " THICK MINIMUM FY $=33 \mathrm{KSI} / F U=52 \mathrm{KSI}$

|  | TABLE OF CONTENTS | US ALUMINUM DIVISION OF C.R. LAURENCE CO., INC. 720 CEL-RIVER RD., ROCK HILL, SC 29730 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SHEET NO. | DESCRIPTION | STORM WALL XL SSG HURRICANE RESISTANT CURTAIN WALL - WET GLAZED - LMI HVHZ |  |  |  |  |
| 1 | NOTES |  |  |  |  |  |
| $2-4$ | ELEVATIONS AND RATING CHARTS | $\begin{aligned} & \hline \text { DRAWN: } \\ & \text { R.L. } \end{aligned}$ | DWG No. | -03023 |  | Rev |
| $5-8$ | CROSS SECTIONS |  |  |  |  | REV |
| $9-10$ | GLAZING DETAILS | SCALE NTS | Date 12/07/16 ${ }^{\text {SHEET } 1}$ OF 24 |  |  |  |
| 11-21 | INSTALLATION DETAILS | L. ROBERTO LOMAS P.E. <br> 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rillomas@lrlomaspe.com |  |  |  |  |
| $22-24$ | COMPONENTS |  |  |  |  |  |  |  |



PROCEDURE TO DETERMINE RATING：
1．DETERMINE TRIBUTARY WIDTH PER FORMULA BELOW
1．DETERMINE TRIBUTARY WIDTH PER FORMULA BELOW
3．REFER TO CHARTS IN SHEET 4 TO DETERMINE RATINGS FOR JAMB AND MULLION SELECTED IN STEP 2
4．DETERMINE THE TYPE OF ANCHOR CLIP AND SUBSTRATE WHERE 5RODUCT IS TO BE INSTALLED．SEE SHEETS 10－17 REFER TRING SELECTED IN STEP 4.
6．SELECT GLASS TO BE USED，REFER TO SHEETS 9 AND 10
REFER TO CHART \＃5 IN SHEET 9 TO DETERMINE RATING OF GLASS
SELECTED IN STEP 6 ．
8．THE MINIMUM OF ALL TOTAL PRODUCT．

```
TRIBUTARY WIDTH = W1 +W2
```

| US ALUMINUM <br> DIVISION OF C．R．LAURENCE CO．，INC． <br> 720 CEL－RIVER RD．，ROCK HILL，SC 29730 <br> STORM WALL XL SSG HURRICANE RESISTANT CURTAIN WALL－WET GLAZED－LMI HVHZ SINGLE SPAN ELEVATION |  |  |  |  | ミ心SR．LOM／＂， <br> $\star$ ：No． $6251 / 4: \star$ <br>  －STATE OF <br>  SONAL <br> ノル॥॥いいい |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
| $\begin{aligned} & \hline \text { DRAWN: } \\ & \text { R.L. } \end{aligned}$ | DWG No．08－03023 |  |  | REV - |  |
| SCALE NTS | DATE $12 / 07 / 16$ SHEET 2 OF 24 |  |  |  |  |
| L．ROBERTO LOMAS P．E． 1432 WOODFORD RD LEWISVILLE，NC 27023$434-688-0609$ rllomas＠IrImaspe．com 434－688－0609 rllomas＠lromaspe．com |  |  |  |  | Luis R．Lomas P．E． FL No．： 62514 |





$\underset{\substack{\text { XLG107- } \\ \text { ISOLATOR }}}{ }$
VERTICAL CROSS SECTION


XLG107-
SOLATOR
$\left.\begin{array}{l}\text { C } \\ 5\end{array}\right)$ VERTICAL CROSS SECTION

| US ALUMINUM <br> DIVISION OF C.R. LAURENCE CO., INC. 720 CEL-RIVER RD., ROCK HILL, SC 29730 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| STORM WALL XL SSG HURRICANE RESISTANT CURTAIN WALL - WET GLAZED - LMI HVHZ <br> VERTICAL CROSS SECTIONS |  |  |  |  |
| $\begin{aligned} & \hline \text { DRAWN: } \\ & \text { R.L. } \end{aligned}$ | DWG No. | -03023 |  | $\stackrel{\text { REV }}{\text { - }}$ |
| SCALE NTS | DATE 12/07/16 | SHEET 5 | OF 2 |  |
| L. ROBERTO LOMAS P.E. <br> 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@Irlomaspe.com |  |  |  |  |




## FOR ILLUSTRATION PURPOSES ONLY



SIGNED: 12/15/2016











CORNER MULLION INSTALLATION DETAIL WITH "T" ANCHOR CLIP
WOOD FRAMING OR $2 X$ BUCK INSTALLATION SILL SHOWN, HEAD SIMILAR


EXTERIOR


CORNER MULLION INSTALLATION DETAIL WITH "T" ANCHOR CLIP
METAL STRUCTURE INSTALLATION SILL SHOWN HEAD SIMILAR SEE CHART \#10 FOR RATINGS


EXTERIOR


CORNER MULLION INSTALLATION DETAIL
WITH "T" ANCHOR CLIP
CONCRETE INSTALLATION
SEE CHART \#11 FOR RATING
SIGNED: 12/15/2016

| US ALUMINUM <br> DIVISION OF C.R. LAURENCE CO., INC. 720 CEL-RIVER RD., ROCK HILL, SC 29730 |  |  |  |
| :---: | :---: | :---: | :---: |
| STORM WALL XL SSG HURRICANE RESISTANT CURTAIN WALL - WET GLAZED - LMI HVHZ installation details |  |  |  |
| $\begin{array}{\|l} \hline \text { DRAWN: } \\ \text { R.L. } \end{array}$ | 08-03023 |  | REV |
| SCALE NTS | DATE $12 / 07 / 16$ SHEET 17 OF 24 |  |  |
| L. ROBERTO LOMAS P.E. <br> 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@Irlomaspe.com |  |  |  | DESIGNED IN ACCORDANCE WITH ASTM E2112

## Chart \#6

Design pressure for anchoring into wood with (2) anchors per clip

 \begin{tabular}{c|c|c|c|c|c|c|c|c|}
\hline 60.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 60.0 <br>
\hline \& 90.0 \& <br>
\hline

 

\hline 60.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 66.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 72.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 78.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
90.0 <br>
\hline

 

\hline 84.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 96.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 90.0 \& 90.0 <br>
\hline

 

\hline 102.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

108.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline
\end{tabular}

 \begin{tabular}{|c|c|c|c|c|c|c|ccc|}
\hline 120.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 1260 \& 900 \& 90.0 \& 900 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90 \& 90.0 <br>
\hline

 

126.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 132.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

132.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 89.9 <br>
\hline 130.0 \& 90.0 <br>
\hline

 

\hline 144.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 86.1 <br>
\hline

 

\hline 150.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 82.7 <br>
\hline 150.0 \& 90.0 \& 90.0 \& 90.0 \& 00. \& 90.0 \& 90 \& 90.0 \& 8.0 \& 79. <br>
\hline

 

\hline $\mathbf{1 5 6 . 0}$ \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 86.7 \& 79.5 <br>
\hline $\mathbf{1 6 2 . 0}$ \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 83.5 \& 76.5 <br>
\hline 1 \& 9.0 \& \& <br>
\hline

 

\hline 162.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 83.5 \& 76.5 <br>
\hline 168.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 88.6 \& 80.5 \& 73.8 <br>
\hline \& 97.0 \& 90.0 \& 00.0 \& 90.0 \& 90.0 \& 90. \& 85.5 \& 7.7 \& 71.3 <br>
\hline

 

\hline 174.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 85.5 \& 77.7 <br>
\hline 175.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 85.0 \& 77.3 <br>
\hline
\end{tabular}

## Design pressure for anchoring into

into wood with (4) anchors per clip or
into metal or concrete with (2) or (4) anchors per clip

| Tributary width |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Height (in) | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 | 66.0 | 72.0 |
| 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 66.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 72.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 78.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 84.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 96.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 102.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 3 0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 114.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 120.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 126.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 132.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 138.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 144.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 150.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 156.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 162.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 168.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 174.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 175.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |

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| US ALUMINUM <br> DIVISION OF C.R. LAURENCE CO., INC. 720 CEL-RIVER RD., ROCK HILL, SC 29730 |  |  |  |
| :---: | :---: | :---: | :---: |
| STORM WALL XL SSG HURRICANE RESISTANT CURTAIN WALL - WET GLAZED - LMI HVHZ installation details rating charts |  |  |  |
| $\begin{aligned} & \text { DRAWN: } \\ & \text { R.L. } \end{aligned}$ | DWG NO. | -03023 | ReV |
| SCALE NTS | DATE 12/07/16 | SHEET 18 Of |  |
| L. ROBERTO LOMAS P.E. <br> 1432 WOODFORD RD LEWISVILLE, NC 27023 434-688-0609 rllomas@Irlomaspe.com |  |  |  |

## Chart \#8

Design pressure for anchoring into wood with (2) anchors per clip Design pressure for anchoring into wood with (2) anchors per cilp

| Frame | Tributary width (in) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Height (in) | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 | 66.0 | 72.0 |
|  |  |  |  |  |  |  |  |  |  | | Heigh (h) | 24.0 |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | | 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
|  | 720 |  | 0.0 |  |  |  |  |  |  | | 72.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 86.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 78.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 8.7 | 79.5 | | 7.0 | 90.0 | 90.0 | 90.0 | 900.0 | 90.0 | 90.0 | 90.0 | 86.7 | 79.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 84.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 88.6 | 8.5 | 73.8 | | 84.0 | 90.0 | 90.0 | 99.0 | 900.0 | 90.0 | 90.0 | 88.6 | 80.5 | 73.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{9 0 . 0}$ | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 82.7 | 75.2 | 68.9 | | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 900.0 | 82.7 | 75.2 | 68.9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 99.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 86.1 | 77.5 | 70.5 | 64.6 | | 102.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 81.0 | 72.9 | 66.3 | 640.8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | 108.0 | 90.0 | 90.0 | 90.0 | 90.0 | 86.1 | 76.5 | 68.9 | 62.6 | 57.4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | 114.0 | 90.0 | 90.0 | 90.0 | 90.0 | 81.6 | 72.5 | 65.3 | 59.3 | 54.4 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 120.0 | 0.0 | 90 | 0.0 |  | 77.5 |  | 62.0 |  |  | | 120.0 | 90.0 | 90.0 | 90.0 | 88.6 | 77.5 | 68.9 | 62.0 | 56.4 | 51.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | 126.0 | 90.0 | 90.0 | 90.0 | 844.4 | 73.8 | 65.6 | 59.0 | 53.7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 3 2 . 0}$ | 90.0 | 90.0 | 90.0 | 80.5 | 70.5 | 62.6 | 56.4 | 51.2 |
|  | 47.0 |  |  |  |  |  |  |  | | 132.0 | 90.0 | 90.0 | 90.0 | 80.5 | 70.5 | 62.6 | 56.4 | 51.2 | 47.0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 138.0 | 90.0 | 90.0 | 89.9 | 77.0 | 67.4 | 59.9 | 53.9 | 49.0 | 44.9 | | 144.0 | 90.0 | 90.0 | 86.1 | 73.8 | 64.6 | 57.4 | 51.7 | 47.0 | 43.1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 150.0 | 90.0 | 90.0 | 827 | 7.9 | 62.0 | 5.1 | 49.6 | 45.1 | 41.3 | | $\mathbf{1 5 0 . 0}$ | 90.0 | 90.0 | 82.7 | 70.9 | 62.0 | 55.1 | 49.6 | 45.1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1 5 6 . 0}$ | 90.0 | 90.0 | 79.3 | 68.1 | 59.6 | 53.0 | 47.7 | 43.4 |
| 19.7 |  |  |  |  |  |  |  |  |

 \begin{tabular}{c|cc|cc|c|c|c|c}
168.0 \& 90.0 \& 88.6 \& 73.8 \& 63.3 \& 55.4 \& 49.2 \& 44.3 \& 40.3 <br>
\hline 16.9 <br>
\hline 174.0 \& 00.0 \& 855 \& 713 \& 611 \& 53.4 \& 45.5 \& 42.8 \& 30.9 <br>
356 <br>
\hline

 

174.0 \& 90.0 \& 85.5 \& 71.3 \& 61.1 \& 53.4 \& 47.5 \& 42.8 \& 38.9 \& 35.6 <br>
\hline 175.0 \& 90.0 \& 85.0 \& 70.9 \& 60.7 \& 53.1 \& 47.2 \& 42.5 \& 38.6 \& 35.4 <br>
\hline
\end{tabular}

## Chart \#10

Design pressure for anchoring into metal structure with (2) or (4) anchors per clip

| $\begin{gathered} \text { Frame } \\ \text { Height (in) } \\ \hline \end{gathered}$ | Tributary width (in) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 | 66.0 | 0 |
| 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 66.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 72.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 0 |
| 78.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 0.0 |
| 84.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 96.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 102.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 108.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 114.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 120.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 126.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 132.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 138.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 144.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 150.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 156.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 162.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 168.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 174.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 175.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |


| $\begin{gathered} \text { Frame } \\ \text { Height (in) } \end{gathered}$ | Tributary width (in) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 24.0 | 30.0 | 36.0 | 42.0 | 48.0 | 54.0 | 60.0 | 66.0 | 72.0 |
| 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 66.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 72.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 78.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 84.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 96.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 102.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 108.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 114.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 120.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 126.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 132.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| 138.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 89.9 |
| 144.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 86.1 |
| 150.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 82.7 |
| 156.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 86.7 | 79.5 |
| 162.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 83.5 | 76.5 |
| 168.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 88.6 | 80.5 | 73.8 |
| 174.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 85.5 | 77.7 | 71.3 |
| 175.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 85.0 | 77.3 | 70.9 |

## Chart \#11

Design pressure for anchoring into concrete with (2) anchors per clip

 \begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Height (in) \& 24.0 \& 30.0 \& 36.0 \& 42.0 \& 48.0 \& 54.0 \& 60.0 \& 66.0 \& 72.0 <br>
\hline 60.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline \& 0 \& 0 \& 0 \& \& 0 \& \& \& \& <br>
\hline

 

\hline 60.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 66.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 72.0 \& 900 \& 90.0 \& 90.0 \& 90. \& 90. \& 90. \& 90. \& 90 \& 90.0 <br>
\hline

 

\hline 72.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 78.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 78.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 84.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline \& 90.0 <br>
\hline

 

\hline 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline
\end{tabular}

 \begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline 102.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 1020.0 \& 00.0 \& 90.0 \& 90.0 \& 00.0 \& 90. \& 90.0 \& 90.0 \& 0.0 \& 90 <br>
\hline

 

\hline 102.0 \& 00.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 100.0 \& 90.0 \& 90.0 <br>
\hline 114.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90 \& 90.0 <br>
\hline

 

\hline 114.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 120.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 120.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 126.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 132.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 138.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline \& 14.0 \& <br>
\hline

 

\hline 144.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 1450.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 159.1 <br>
\hline 156.0 \& 90.0 \& 90.0 \& 990.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 900 \& 856 <br>
\hline

 

\hline 156.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 85.6 <br>
\hline 162.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 82.5 <br>
\hline

 

\hline 162.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 82.5 <br>
\hline 168.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 86.8 \& 79.5 <br>
\hline

 

168.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 86.8 \& 79.5 <br>
\hline 174.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 83.8 \& 76.8 <br>
\hline 1750 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 83.3 \& 763 <br>
\hline
\end{tabular}

Chart \#12
Design pressure for anchoring into concrete with (4) anchors per clip


| Height (in) | 2400 | 30.0 | 360 | 420 | 480 | 54.0 | 60.0 | 660 | 72.0 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | | 60.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 66.0 | 90.0 | 99.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | | 72.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | 78.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 | 90.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9 | 90 | 90.0 | 9.0 | 90 | 90. | 90. | 9.0 |  |

 \begin{tabular}{c|ccccccccccc}
\hline 94.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 90.0 \& 90.0 \& 90.0 \& 90 \& 90.0 \& 90.0 \& 90.0 \& 90 \& 90. \& 90.0 <br>
\hline

 

\hline 96.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 102.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 102.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 108.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 114.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

114.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline \& 120.0 \& 0.0 \& <br>
\hline
\end{tabular}

 \begin{tabular}{|c|ccccc|c|c|ccc|}
\hline 126.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

1232.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 138.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 138.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 144.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
90.0 <br>
\hline

 

\hline 144.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 150.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 1556.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

\hline 162.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline

 

168.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 1740 \& 900 \& 90.0 \& 90.0 \& 900 \& <br>
\hline

 

174.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline 175.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 \& 90.0 <br>
\hline
\end{tabular}



SIGNED: 12/15/2016







