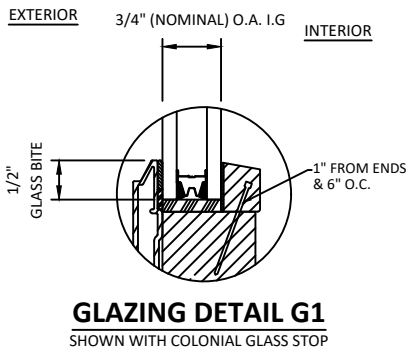


# ANDERSEN CORPORATION

## E-SERIES FIXED CASEMENT WINDOW - DIRECT SET (1-PC FRAME) (NON-HVHZ) (NON-IMPACT)

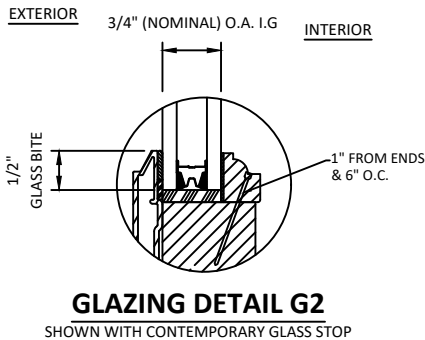
### GENERAL NOTES:

- THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE (FBC), **EXCLUDING** HVHZ AND HAS BEEN EVALUATED ACCORDING TO THE FOLLOWING:
  - AAMA/WDMA/CSA 101/I.S.2/A440-08/11
- ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY, 2X AND METAL STUD FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
- THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
- APPROVED IMPACT PROTECTIVE SYSTEM **IS REQUIRED** TO PROTECT THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE.
- WINDOW FRAME MATERIAL: *ALUMINUM CLAD WOOD*.
- MULLION MATERIAL: LAMINATED VENEER LUMBER.
- GLASS MEETS THE REQUIREMENTS OF ASTM E1300. SEE SHEET 1 FOR GLAZING DETAILS.
- DESIGNATIONS "X" AND "O" STAND FOR THE FOLLOWING:
  - X: OPERABLE PANEL
  - O: FIXED PANEL
- CUSTOM SIZES AVAILABLE UPON REQUEST. CUSTOM DESIGN PRESSURE WILL BE ASSIGNED EQUAL TO NEXT LARGER STANDARD SIZE.



### GLAZING NOTES:

- GLASS TYPE & THICKNESS SHALL COMPLY WITH ASTM E1300 REQUIREMENTS AS WELL AS APPLICABLE SAFETY GLAZING REQUIREMENTS PER THE FBC. TEMPER AND SAFETY GLAZING REQUIREMENTS SHALL BE REVIEWED ON A SITE SPECIFIC BASIS.
- SETTING BLOCK DUROMETER HARDNESS OF 70-90 (SHORE A) AS REFERENCED IN FBC CHAPTER 24.
- SETTING BLOCKS TO BE LOCATED AT 1/4 SPAN LENGTH FOR GLASS WIDER THAN 36" AS PER FBC CHAPTER 24.
- D.L.O. AND DESIGN PRESSURES MAY NOT EXCEED MAX VALUES IN DESIGN PRESSURE TABLES ON SHEET 1.



| WINDOW TYPE | OVERALL FRAME SIZE |              | OVERALL D.L.O. DIMENSION |              | GLASS TYPE | DESIGN PRESSURE (PSF) |      |
|-------------|--------------------|--------------|--------------------------|--------------|------------|-----------------------|------|
|             | WIDTH (IN.)        | HEIGHT (IN.) | WIDTH (IN.)              | HEIGHT (IN.) |            | POS.                  | NEG. |
| FIXED       | 72.0               | 96.0         | 65.87                    | 89.87        | G1, G2     | +80                   | -80  |
| FIXED       | 54.0               | 120.0        | 47.87                    | 113.87       | G1, G2     | +80                   | -80  |

NOTE:  
NAILING FLANGE INSTALLATIONS ARE LIMITED TO INDIVIDUAL UNITS OR ASSEMBLIES EQUAL TO OR LESS THAN +50/-50 AND EQUAL TO OR LESS THAN 30 SQUARE FEET.

### TABLE OF CONTENTS

| SHEET | REVISION | SHEET DESCRIPTION                            |
|-------|----------|----------------------------------------------|
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| 4     | B        | ANCHOR LAYOUTS                               |
| 5     | B        | MULLED ANCHOR LAYOUTS                        |
| 6     | B        | VERTICAL SECTIONS                            |
| 7     | B        | MULLED VERTICAL SECTIONS                     |
| 8     | B        | HORIZONTAL SECTIONS                          |
| 9     | B        | MULLED HORIZONTAL SECTIONS                   |
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| 11    | B        | ZERO MULLION LOADS TABLE - ONE WAY           |
| 12    | B        | ZERO MULLION LOADS TABLE - TWO WAY           |
| 13    | B        | 1/2" x 3-1/2" MULLION LOADS TABLE - ONE WAY  |
| 14    | B        | 1/2" x 3-1/2" MULLION LOADS TABLE - TWO WAY  |
| 15    | B        | 1/2" x 5-3/16" MULLION LOADS TABLE - ONE WAY |
| 16    | B        | 1/2" x 5-3/16" MULLION LOADS TABLE - TWO WAY |
| 17    | B        | 3/4" x 3-1/2" MULLION LOADS TABLE - ONE WAY  |
| 18    | B        | 3/4" x 3-1/2" MULLION LOADS TABLE - TWO WAY  |
| 19    | B        | 3/4" x 5-3/16" MULLION LOADS TABLE - ONE WAY |
| 20    | B        | 3/4" x 5-3/16" MULLION LOADS TABLE - TWO WAY |
| 21    | B        | 1" x 3-1/2" MULLION LOADS TABLE - ONE WAY    |
| 22    | B        | 1" x 3-1/2" MULLION LOADS TABLE - TWO WAY    |
| 23    | B        | 1" x 5-3/16" MULLION LOADS TABLE - ONE WAY   |
| 24    | B        | 1" x 5-3/16" MULLION LOADS TABLE - TWO WAY   |
| 25    | B        | 2" x 3-1/2" MULLION LOADS TABLE - ONE WAY    |
| 26    | B        | 2" x 3-1/2" MULLION LOADS TABLE - TWO WAY    |
| 27    | B        | 2" x 5-3/16" MULLION LOADS TABLE - ONE WAY   |
| 28    | B        | 2" x 5-3/16" MULLION LOADS TABLE - TWO WAY   |



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
GENERAL NOTES & GLAZING DETAIL

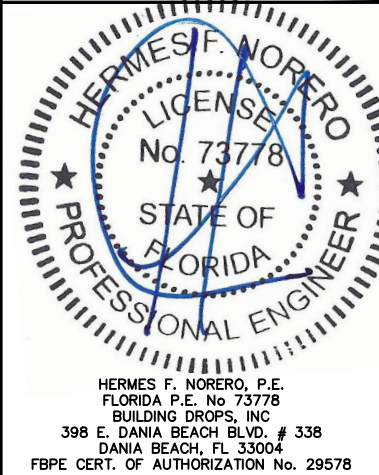
PREPARED BY:

BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com

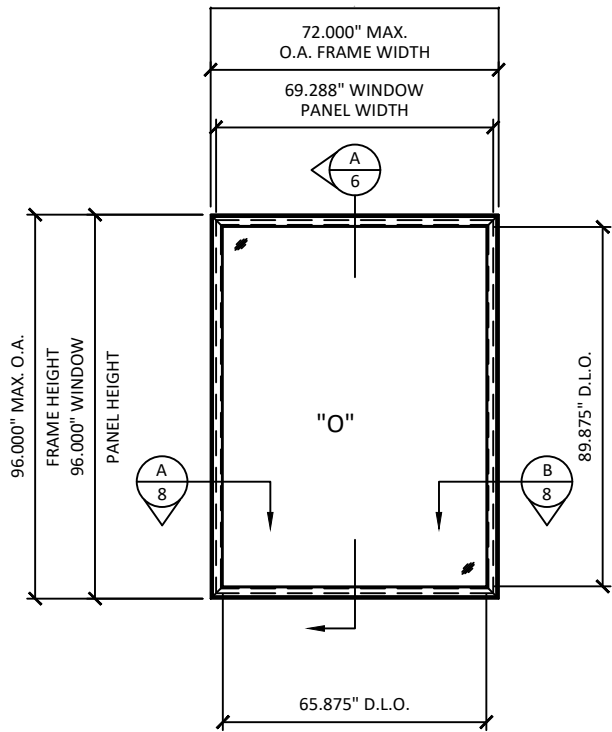


| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

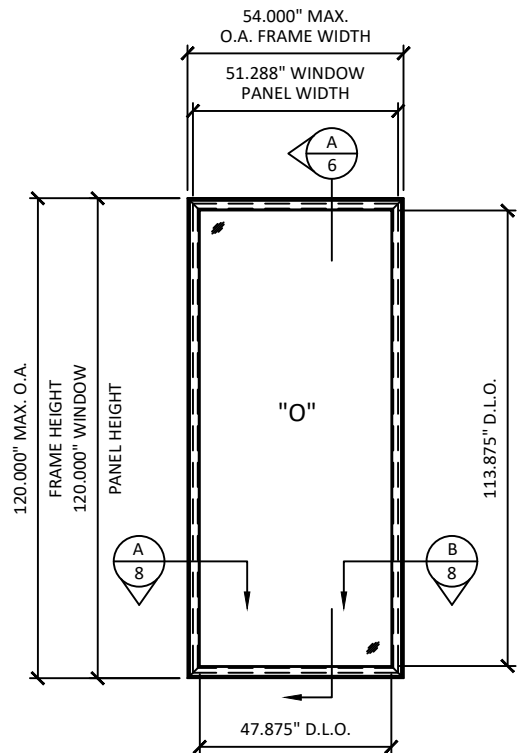
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 1        |
|          | OF 28    |



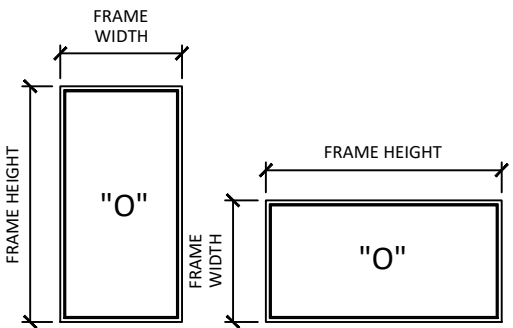
ELEVATION  
SINGLE UNIT



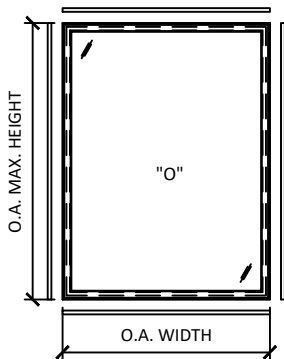
ELEVATION  
SINGLE UNIT

NOTE:  
SEE NOTE 2 FOR SIZE RESTRICTIONS

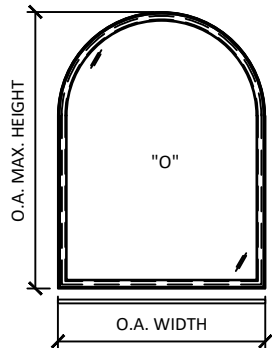
- NOTE:
1. THE ARCHITECT OR ENGINEER OF RECORD MUST ENGINEER THE BUCK AND FRAME ANCHORING FOR THE GEOMETRIC SHAPES THAT DO NOT HAVE ANCHORING SHOWN IN THIS DRAWING.
  2. GEOMETRIC SHAPES MUST FIT WITHIN THE BOUNDING BOX DIMENSIONS OF 72" x 96" OR 96" x 72" OR 54" x 120" OR 120" x 54".
  3. WHEN MULLING THE RECTANGULAR OR SQUARE SERIES 13 TO A GEOMETRIC SHAPE, ONLY MULL TO THE SIDE DESIGNATED BY AS SHOWN ON THIS SHEET.



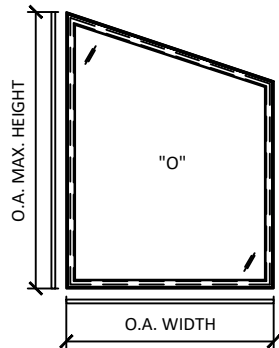
NOTE:  
WINDOW WIDTH AND HEIGHT ARE INTERCHANGEABLE FOR ALL SIZES SHOWN HEREIN NOT TO EXCEED MAXIMUM QUALIFIED SQUARE FOOT AREA.



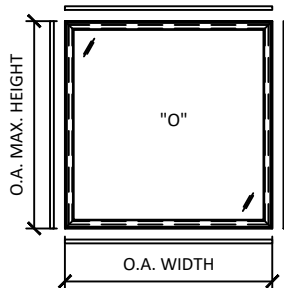
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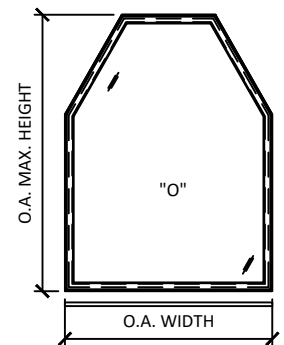
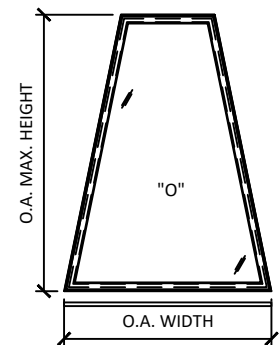
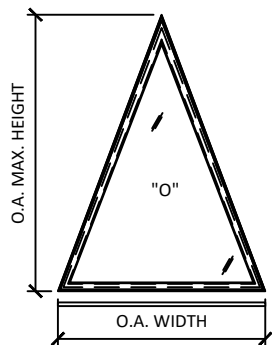
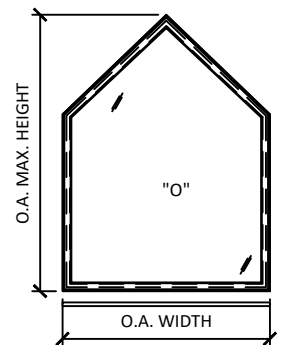
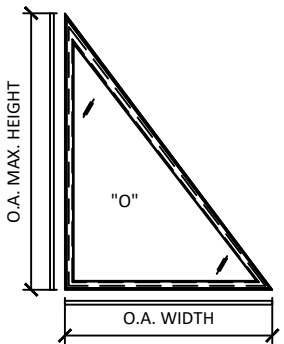
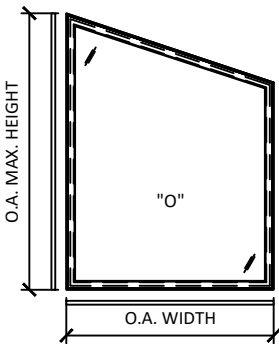
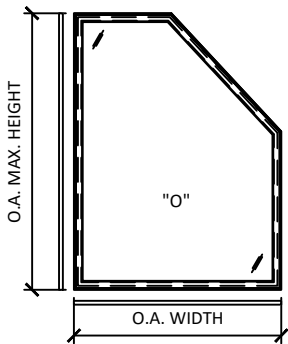
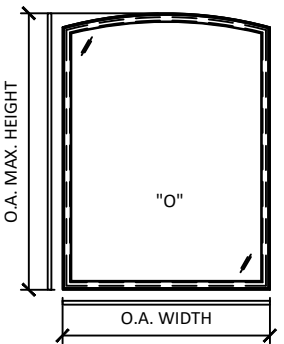
RADIUS



TRAPEZOID



SQUARE



ALLOWABLE SHAPES



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
ELEVATIONS AND QUALIFIED  
CONFIGURATIONS

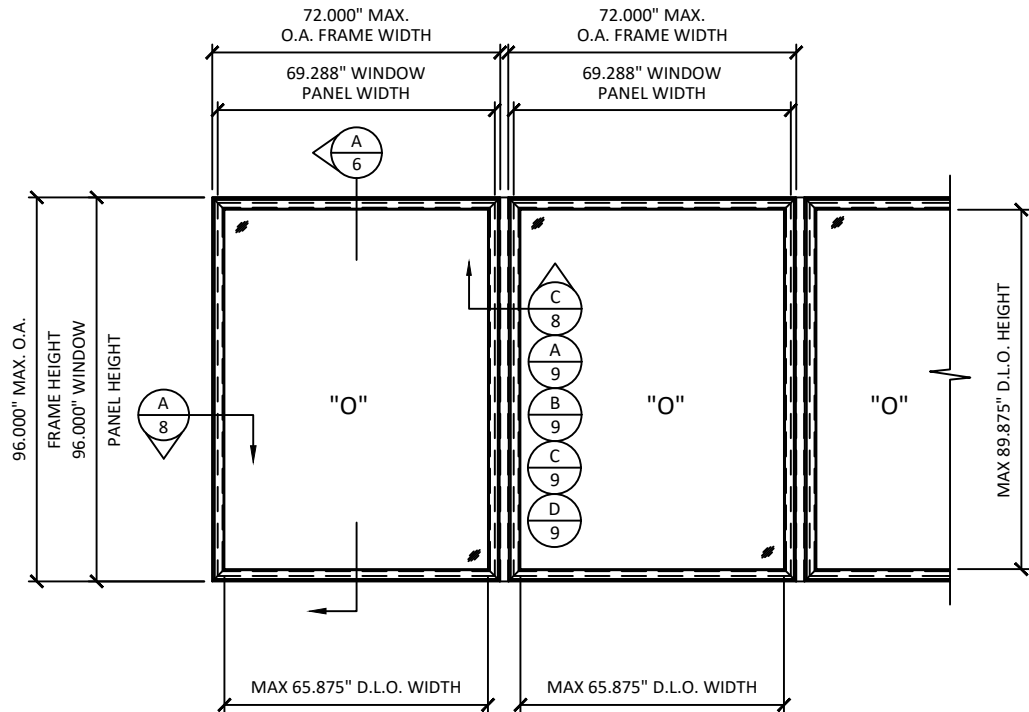
PREPARED BY:  
  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com

| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

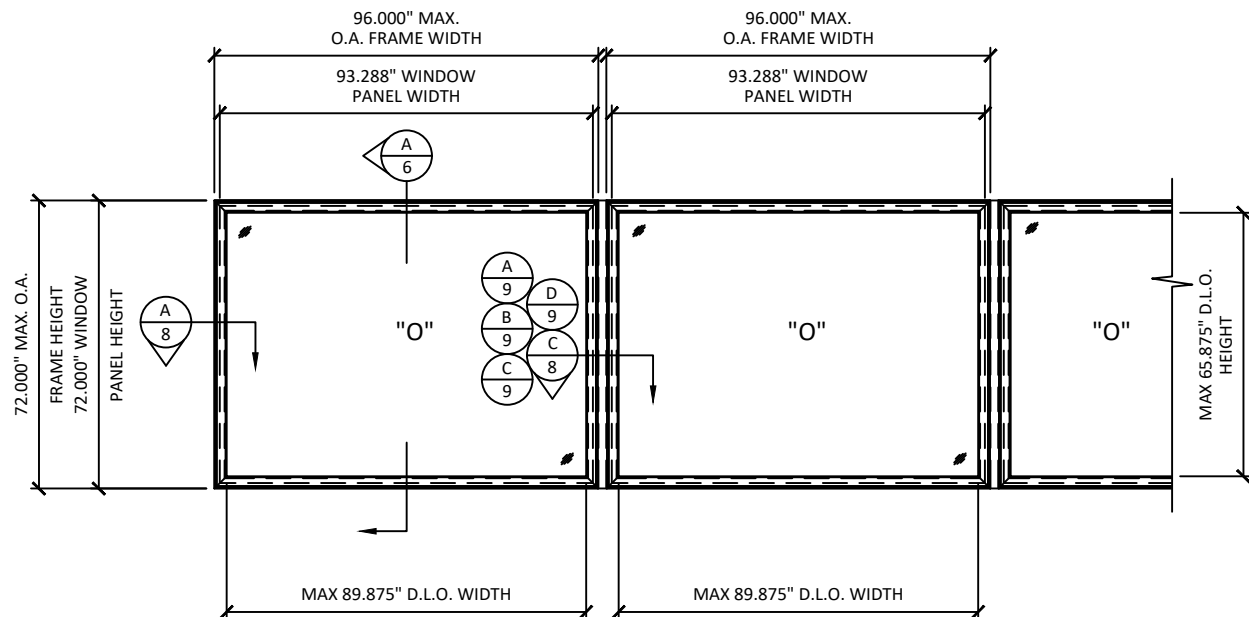
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|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | CHK. BY: |
| RV       | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   |          |



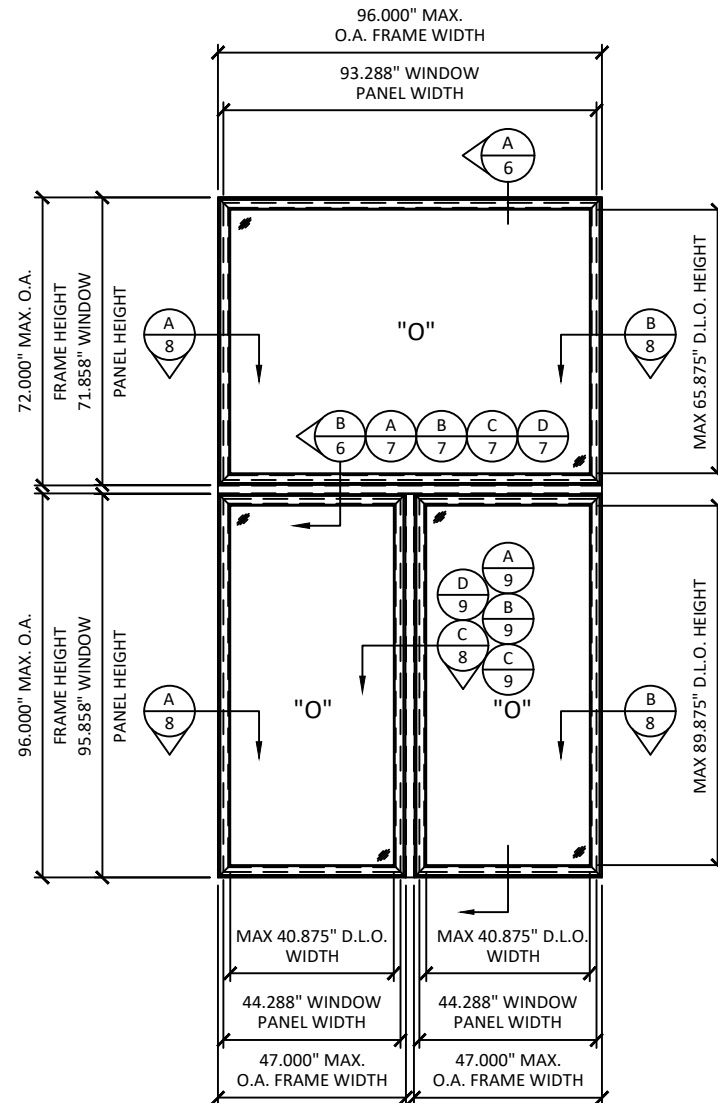
**ELEVATION**  
**MULLED UNITS (WITH 2" MULLION)**  
**HORIZONTAL CONFIGURATION**



**ELEVATION**  
**MULLED UNITS (WITH 2" MULLION)**  
**HORIZONTAL CONFIGURATION**

**NOTE:**

**REFER TO SHEETS 11-28 FOR DESIGN PRESSURES BASED ON CORRESPONDING MULLION TYPES**



**ELEVATION**  
**MULLED UNITS (WITH 2" MULLION)**  
**HORIZONTAL WITH TRANSOM CONFIGURATION**



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BAYPORT, MN 55003-1096  
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TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
MULLED ELEVATIONS

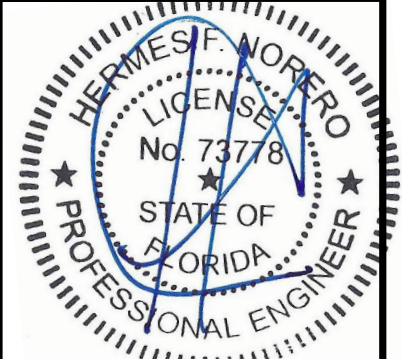
PREPARED BY:  
BUILDING DROPS, INC.

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| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #: **FL24230**

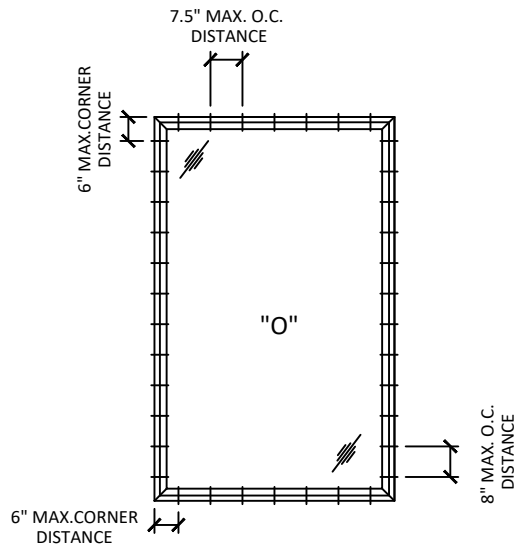
DATE: **10.12.17**

DWG. BY: **RV** CHK. BY: **HFN**

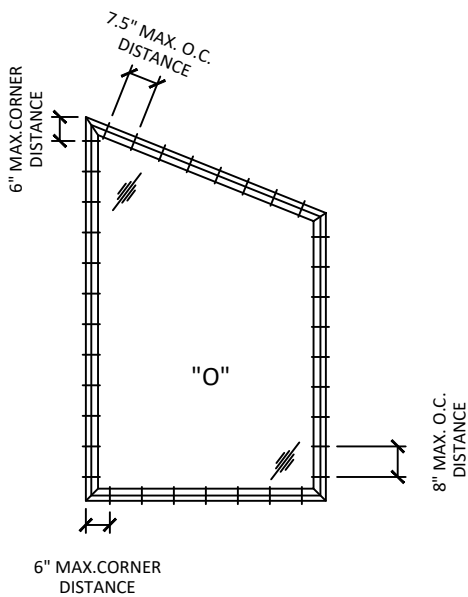
SCALE: **NTS**

DWG. #: **AWD211**

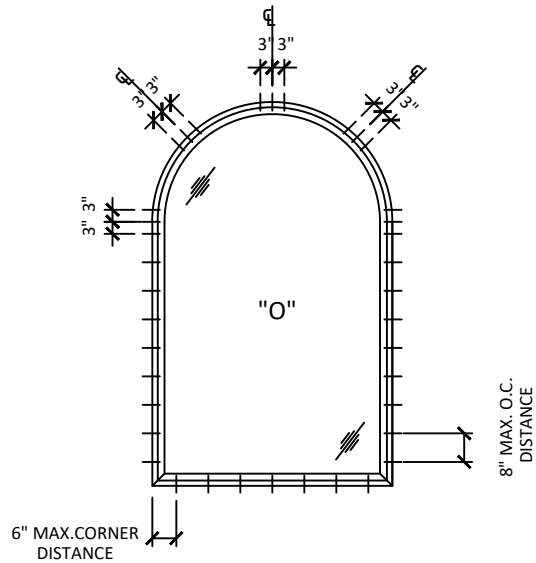
SHEET:  
**3**



**STRAP/FASTENER THROUGH FRAME ANCHORING**  
RETANGULAR/SQUARE SINGLE UNIT

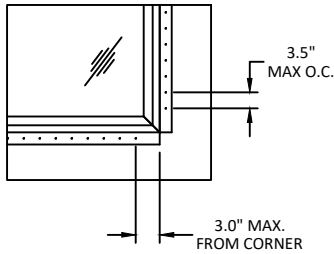


**STRAP/FASTENER THROUGH FRAME ANCHORING**  
TRAPEZOID SINGLE UNIT

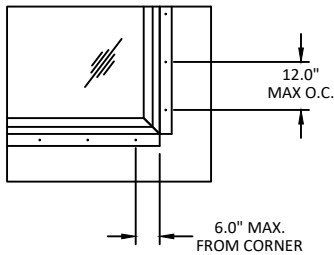


**STRAP/FASTENER THROUGH FRAME ANCHORING**  
RADIUS SINGLE UNIT

**NOTE:**  
NAILING FLANGE INSTALLATIONS ARE LIMITED TO INDIVIDUAL UNITS OR ASSEMBLIES EQUAL TO OR LESS THAN DP +50/-50 AND EQUAL TO OR LESS THAN 30 SQUARE FEET.



**VINYL FIN ANCHORING**  
SINGLE UNIT



**ALUMINUM FIN ANCHORING**  
SINGLE UNIT

**NOTE:**  
FOR MORE ANCHOR INFORMATION (INSTALLATION TYPE, SPACING, QUANTITY, ANCHOR TYPE, QUALIFIED SUBSTRATES, SEE SHEET 10



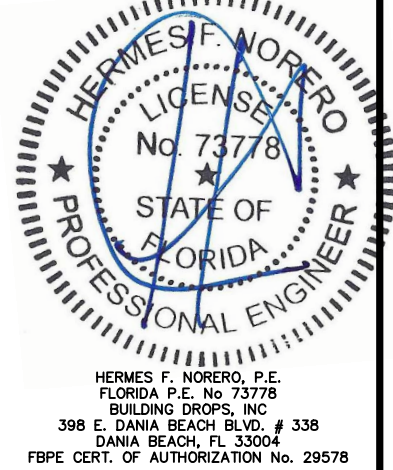
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
ANCHOR LAYOUTS

PREPARED BY:   
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| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
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|                        |    |          |
|                        |    |          |

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FL #:  
**FL24230**

DATE: **10.12.17**

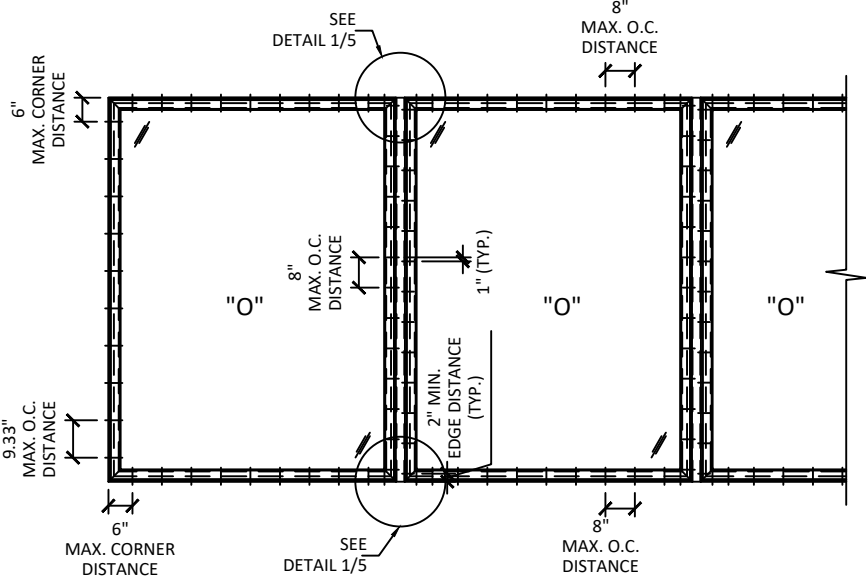
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| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: **NTS**

DWG. #: **AWD211**

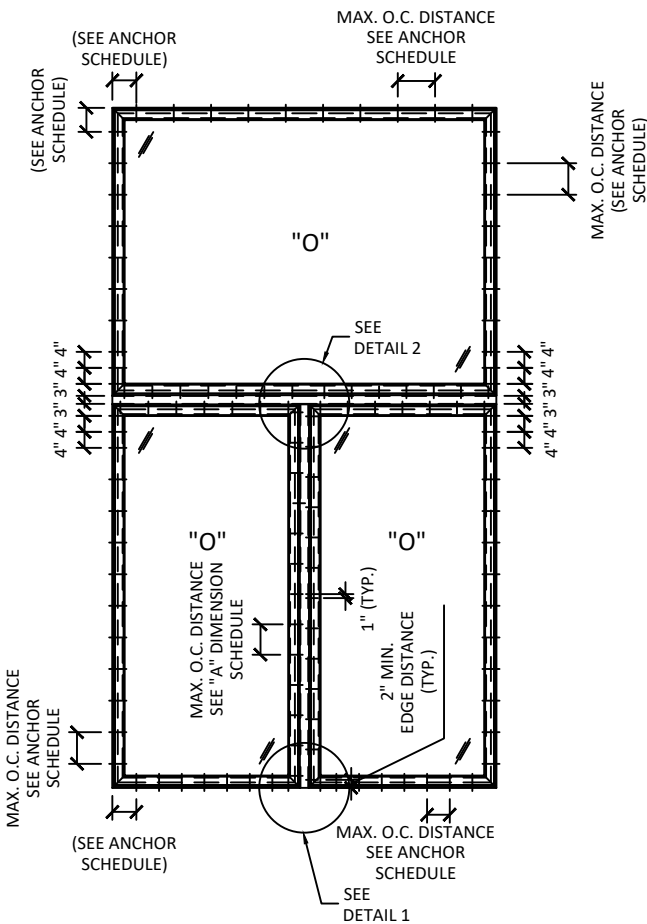
SHEET:

**4**



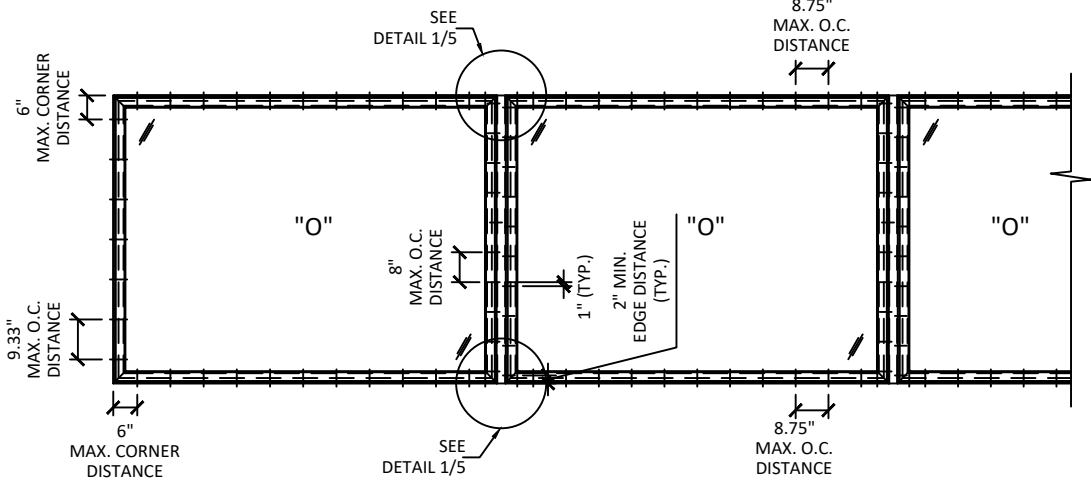
STRAP/FASTENER THROUGH FRAME  
ANCHORING

MULLED UNIT (2" MULLION) HORIZONTAL CONFIGURATION



STRAP/FASTENER THROUGH FRAME  
ANCHORING

MULLED UNIT (2" MULLION) HORIZONTAL WITH TRANSOM  
CONFIGURATION

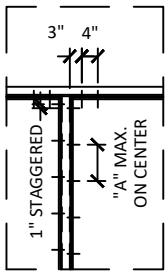


STRAP/FASTENER THROUGH FRAME  
ANCHORING

MULLED UNIT (2" MULLION) HORIZONTAL CONFIGURATION

NOTE:

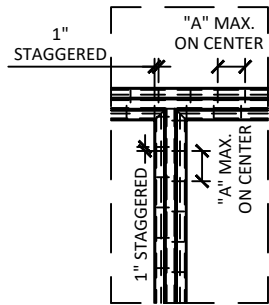
FOR MORE ANCHOR INFORMATION (INSTALLATION TYPE, SPACING,  
QUANTITY, ANCHOR TYPE, QUALIFIED SUBSTRATES, SEE SHEET 10



DETAIL 1

| DESIGN PRESSURE | "A" DIMENSION |
|-----------------|---------------|
| UP TO 60 PSF    | 9" MAX. O.C.  |
| UP TO 70 PSF    | 8" MAX. O.C.  |
| UP TO 80 PSF    | 7" MAX. O.C.  |

OPTIONAL SCREW ASSEMBLY OF MULLION



DETAIL 2

| DESIGN PRESSURE | "A" DIMENSION |
|-----------------|---------------|
| UP TO 60 PSF    | 9" MAX. O.C.  |
| UP TO 70 PSF    | 8" MAX. O.C.  |
| UP TO 80 PSF    | 7" MAX. O.C.  |

OPTIONAL SCREW ASSEMBLY OF MULLION



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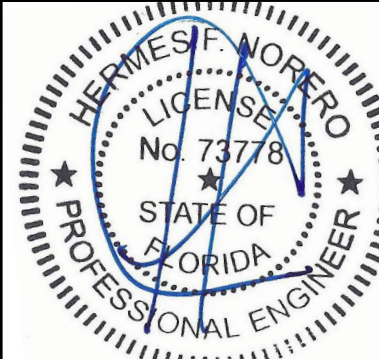
TITLE: E-SERIES FIXED CASEMENT WINDOW -  
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MULLED ANCHOR LAYOUTS

PREPARED BY:  
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| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:  
**FL24230**

DATE: **10.12.17**

DWG. BY: **RV** CHK. BY: **HFN**

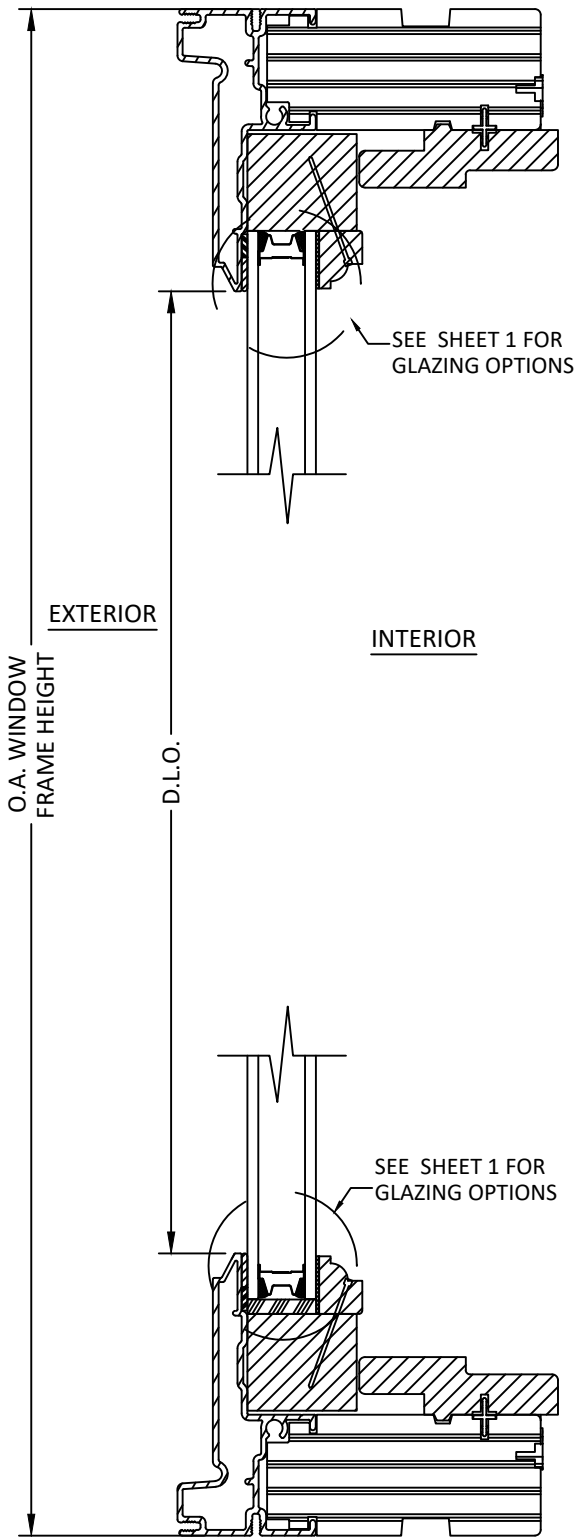
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DWG. #: **AWD211**

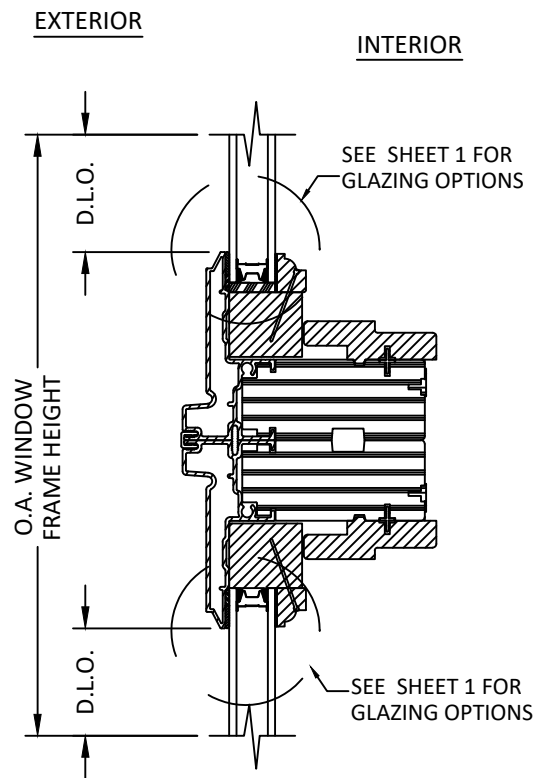
SHEET:

**5**

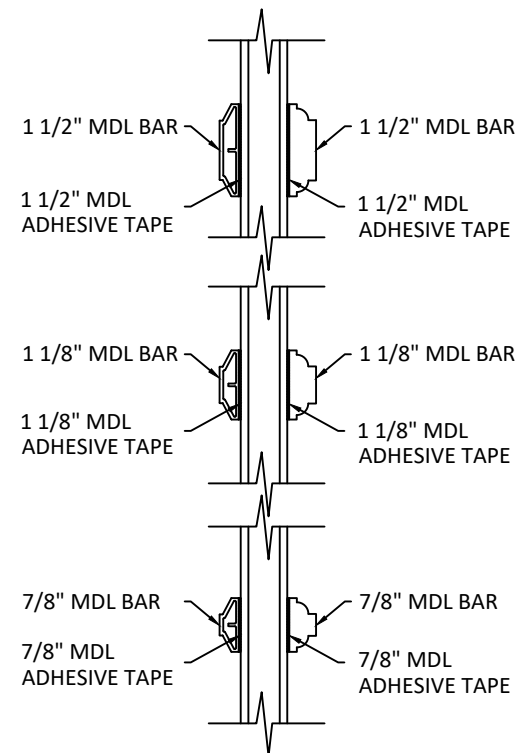
OF 28



**A**  
**6** VERTICAL SECTION  
INSULATED GLASS



**B**  
**6** VERTICAL SECTION  
ZERO MULLION



OPTIONAL MUNTIN BAR  
ATTACHMENT TO GLASS



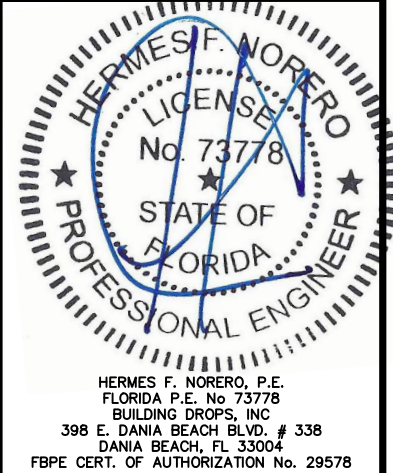
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
VERTICAL SECTIONS

PREPARED BY:  
  
**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com

| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

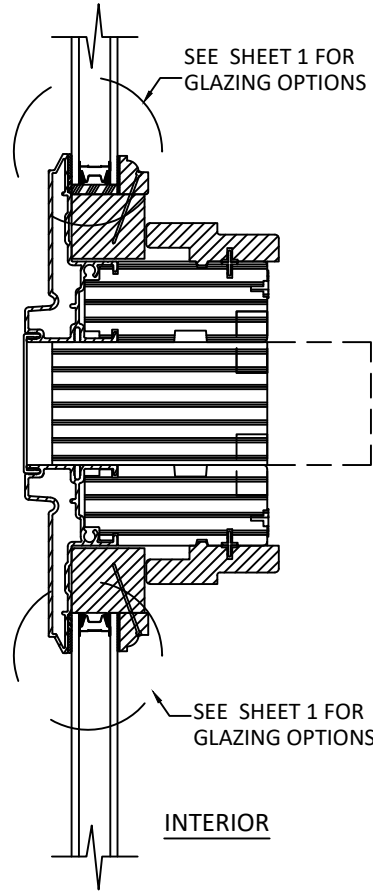
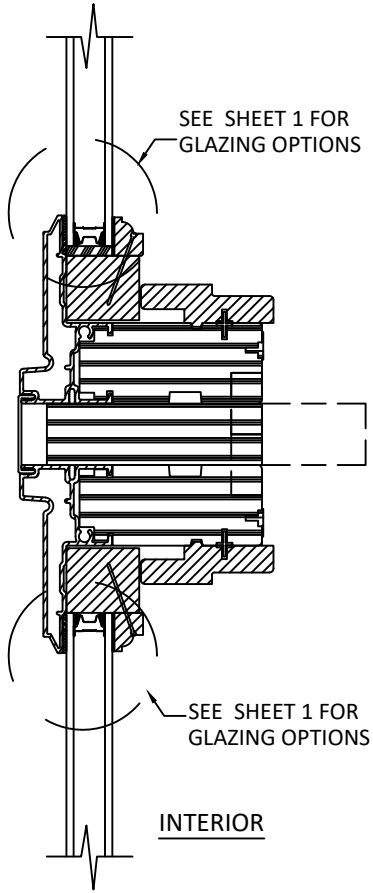
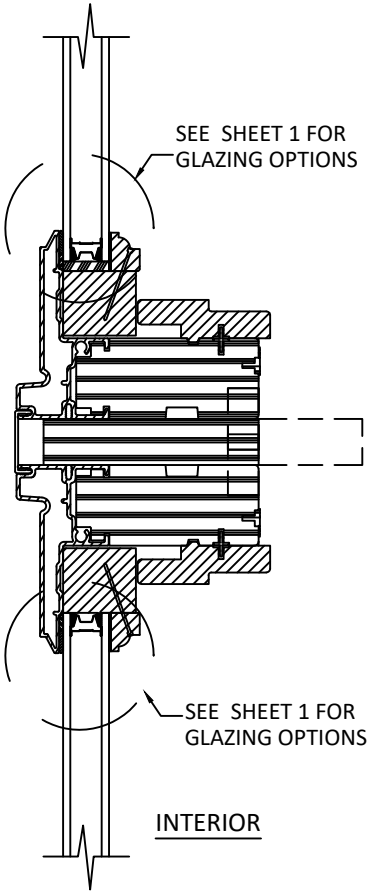
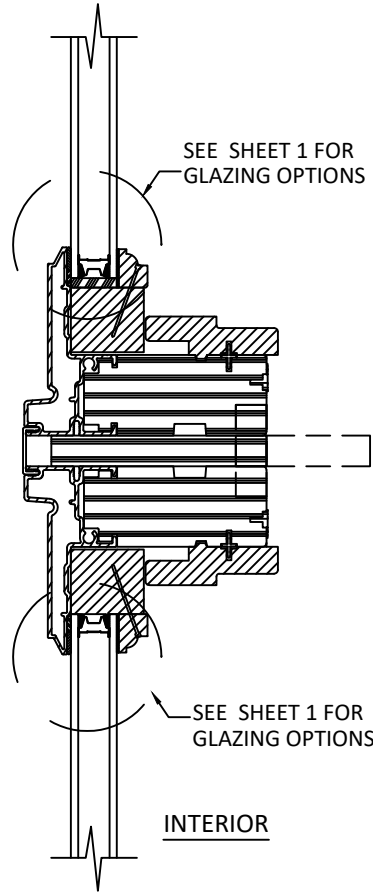
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FBPE CERT. OF AUTHORIZATION No. 29578

|          |                 |
|----------|-----------------|
| FL #:    | <b>FL24230</b>  |
| DATE:    | <b>10.12.17</b> |
| DWG. BY: | RV              |
| CHK. BY: | HFN             |
| SCALE:   | <b>NTS</b>      |
| DWG. #:  | <b>AWD211</b>   |
| SHEET:   | <b>6</b>        |

s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\174230.4 & 5\awd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg 8/15/2019 10:19 AM



**A**  
**7**  
**VERTICAL SECTION**  
INSULATED GLASS  
1/2" x 3 1/2" MULLION  
OR 1/2" x 5 3/16"

**B**  
**7**  
**VERTICAL SECTION**  
INSULATED GLASS  
3/4" x 3 1/2" MULLION  
OR 3/4" x 5 3/16"

**C**  
**7**  
**VERTICAL SECTION**  
INSULATED GLASS  
1" x 3 1/2" MULLION  
OR 1" x 5 3/16"

**D**  
**7**  
**VERTICAL SECTION**  
INSULATED GLASS  
2" x 3 1/2" MULLION  
OR 2" x 5 3/16"

NOTE : LVL MULLS BETWEEN JAMBS MAY BE  
3 1/2" OR 5 3/16" IN DEPTH AS  
REPRESENTED BY DASHED LINES



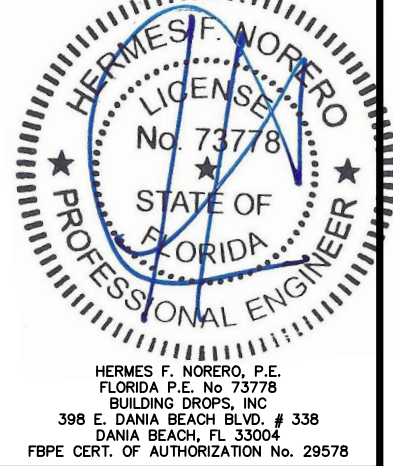
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
MULLED VERTICAL SECTIONS

PREPARED BY:  
  
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| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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FL #:  
**FL24230**

DATE: **10.12.17**

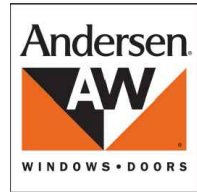
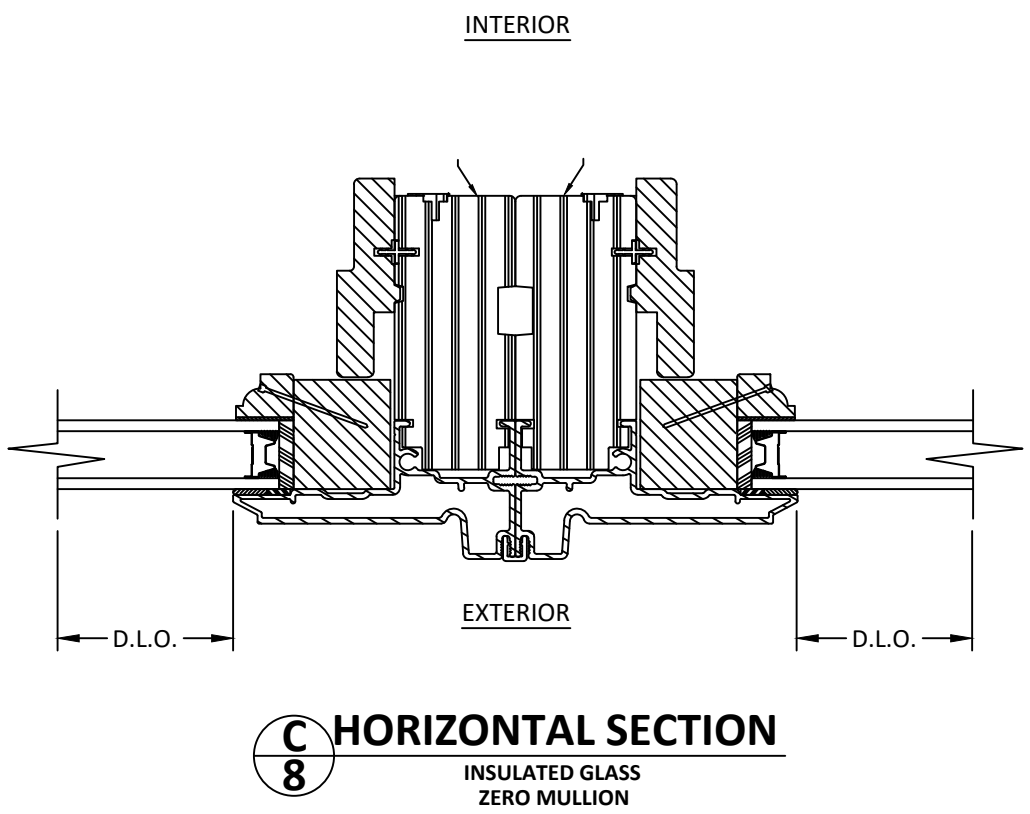
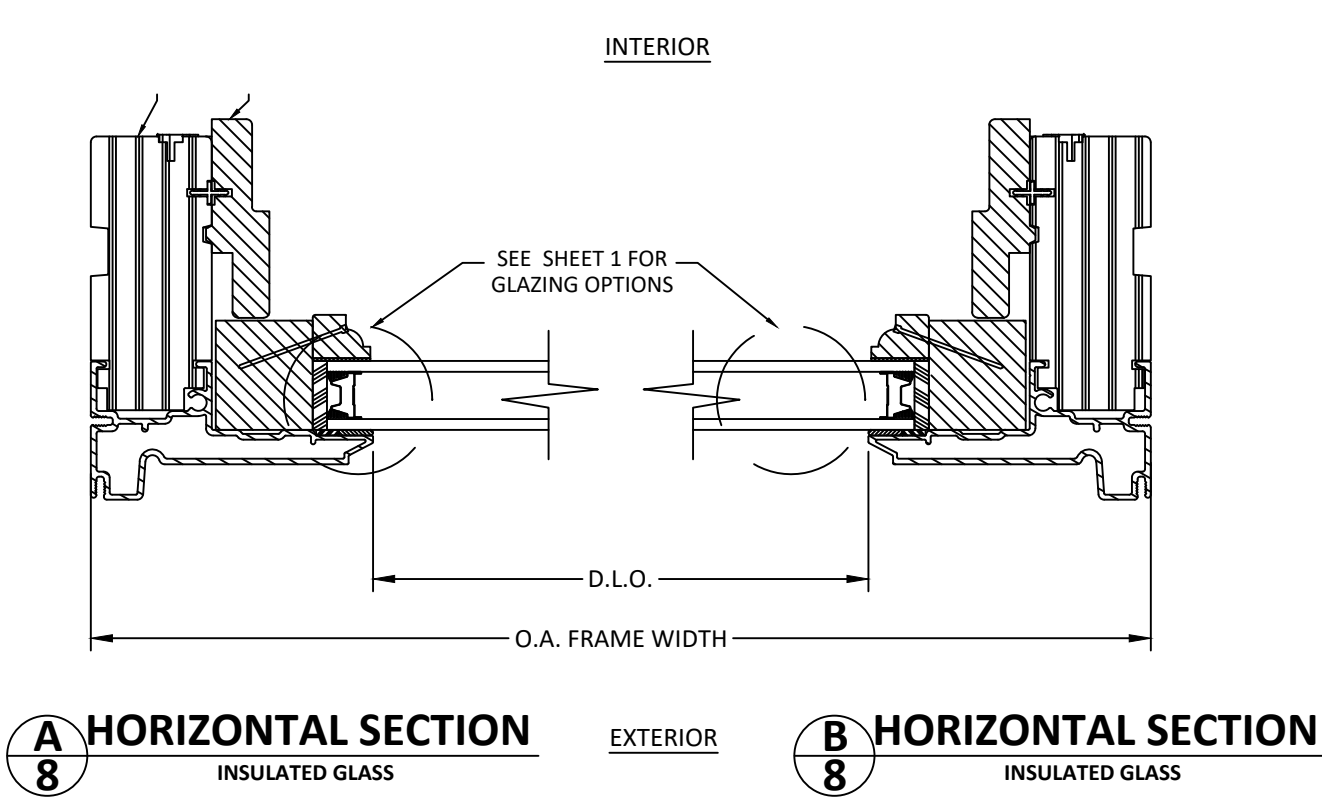
DWG. BY: **RV** CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **AWD211**

SHEET:  
**7**  
OF 28

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100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
HORIZONTAL SECTIONS

PREPARED BY:

**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

FL24230

DATE:

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RV

CHK. BY:

HFN

SCALE:

NTS

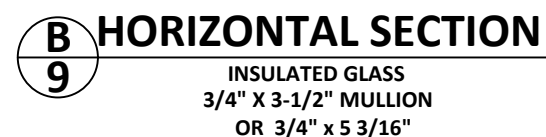
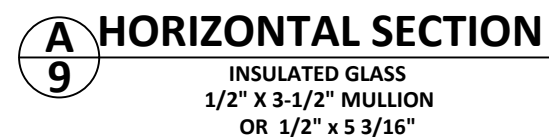
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AWD211

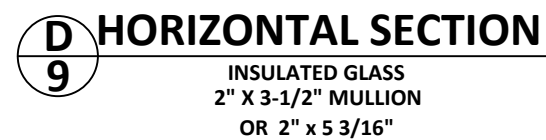
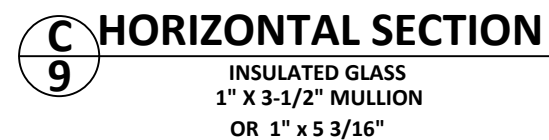
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8

OF 28

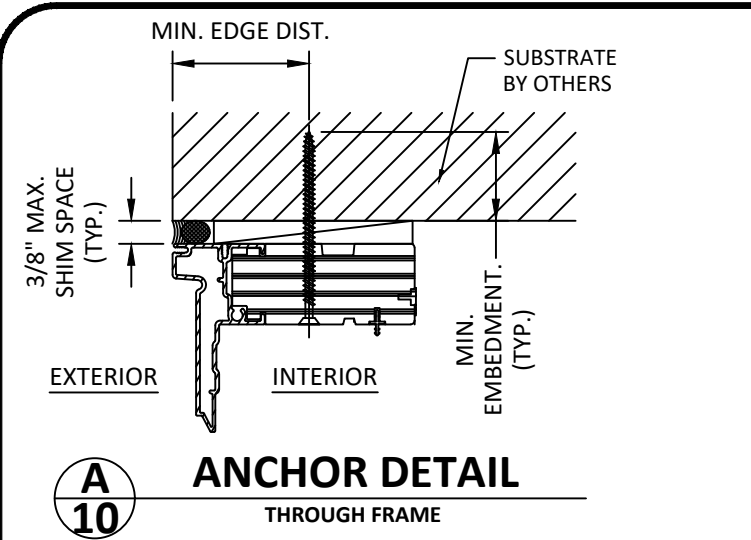


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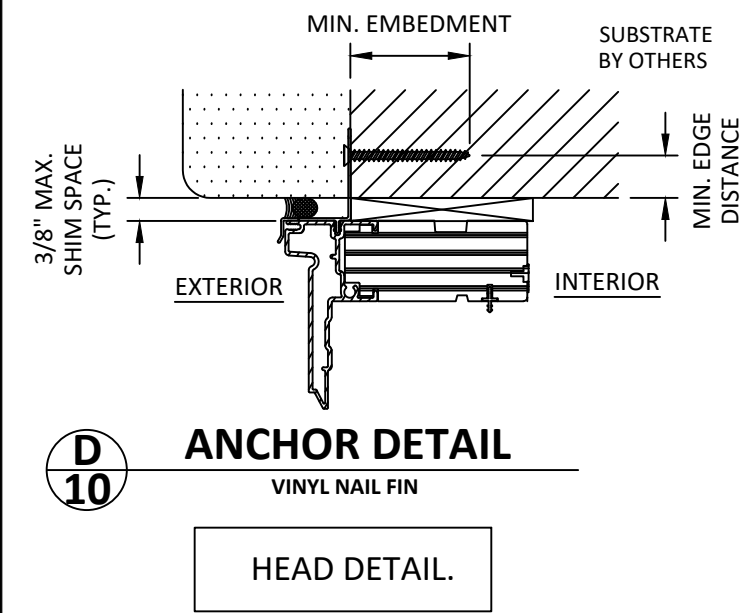


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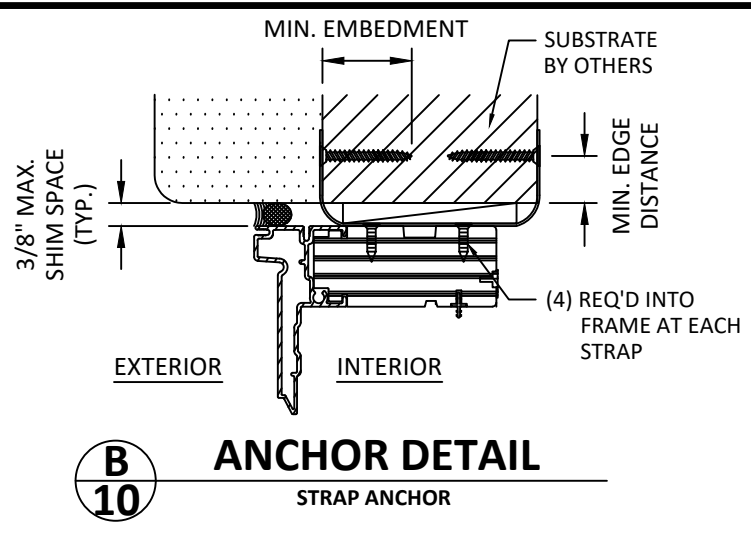
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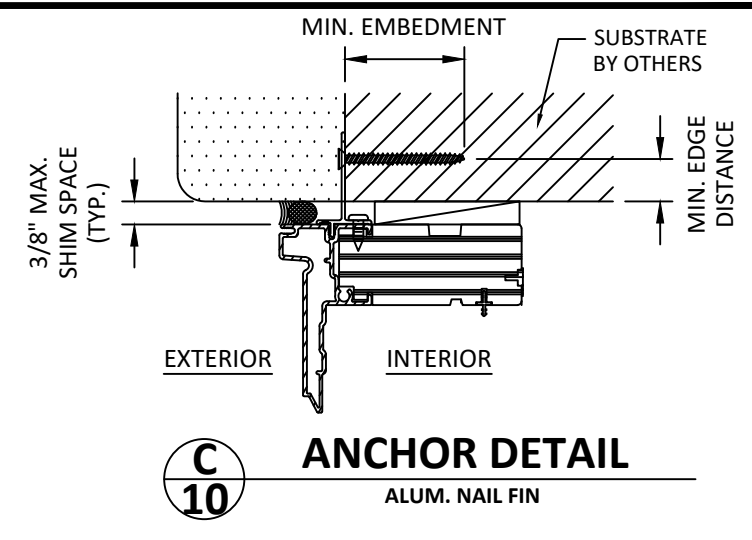
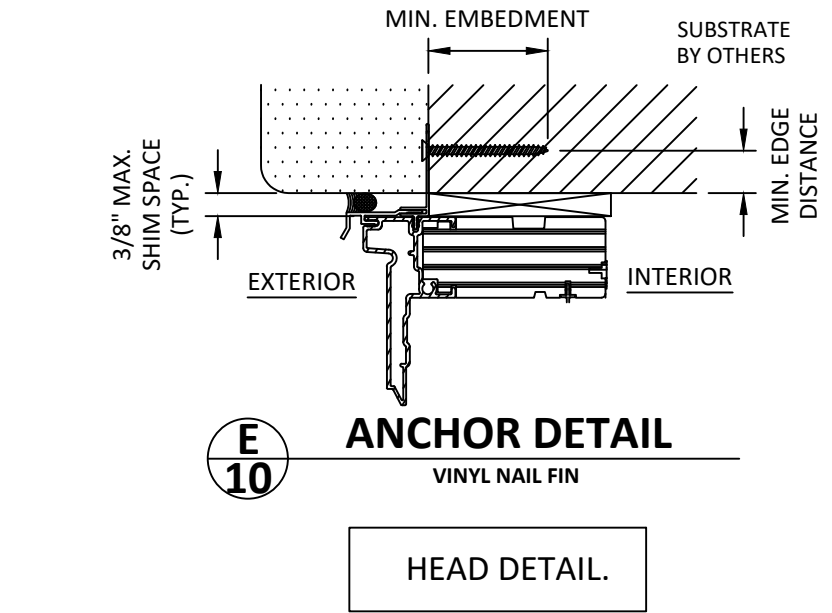
SILL & JAMB HAVE A SIMILAR DETAIL.



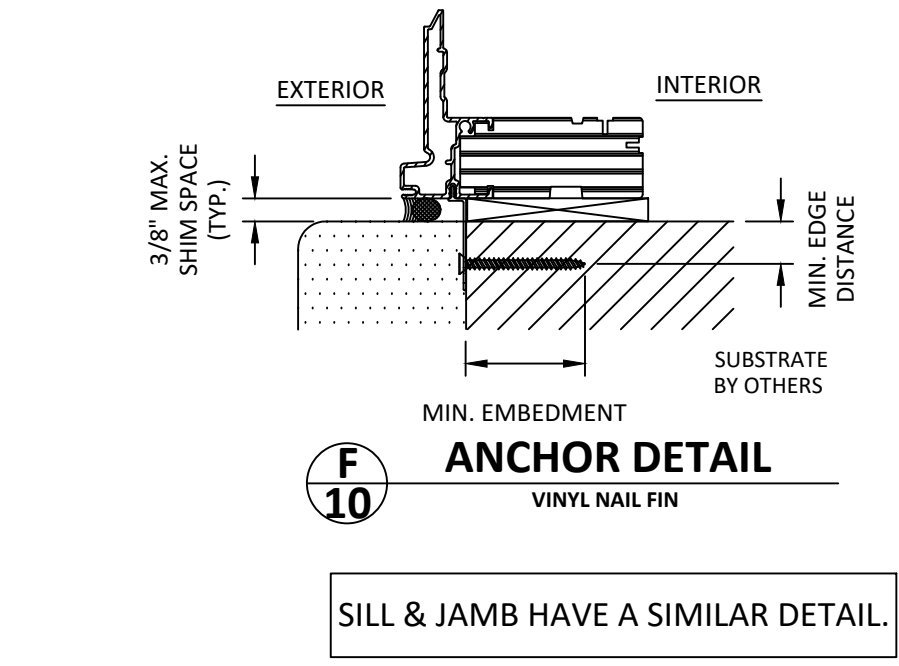
- INSTALLATION NOTES:**
- ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN, UNLESS OTHERWISE STATED.
  - THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
  - INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF  $\pm 1/2$  INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.
  - MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
  - SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM STACK TO BE 3/8 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
  - INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
  - FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
  - 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 BY THE ANCHOR MANUFACTURER.



SILL & JAMB HAVE A SIMILAR DETAIL.



SILL & JAMB HAVE A SIMILAR DETAIL.



SILL & JAMB HAVE A SIMILAR DETAIL.

| ANCHOR SCHEDULE   |                  |                   |                        |                 |                     |
|-------------------|------------------|-------------------|------------------------|-----------------|---------------------|
| INSTALLATION TYPE | QTY PER LOCATION | SUBSTRATE         | ANCHOR TYPE            | EMBEDMENT (IN.) | EDGE DISTANCE (IN.) |
| STRAP             | 1                | WOOD              | #8 WOOD ANCHOR         | 1.50            | 0.75                |
|                   | 1                | CONCRETE/ MASONRY | 3/16" ITW TAPCON       | 1.25            | 2.50                |
|                   | 1                | METAL STUD        | #8 SELF-TAPPING SCREW  | 3 THREADS       | N/A                 |
| THRU FRAME        | 1                | WOOD              | #10 WOOD ANCHOR        | 1.50            | 0.75                |
|                   | 1                | CONCRETE/ MASONRY | 3/16" ITW TAPCON       | 1.25            | 2.50                |
|                   | 1                | METAL STUD        | #10 SELF-TAPPING SCREW | 3 THREADS       | N/A                 |
| NAILING FLANGE    | 1                | WOOD              | 11 GA. ROOFING NAIL    | 1.50            | 0.75                |
|                   | 1                | WOOD              | #8 WOOD ANCHOR         | 1.50            | 0.75                |
|                   | 1                | METAL STUD        | #8 SELF-TAPPING SCREW  | 3 THREADS       | N/A                 |



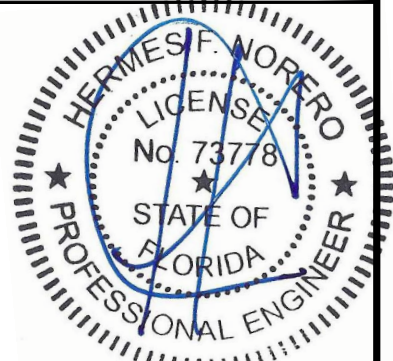
100 FOURTH AVE NORTH  
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TITLE: E-SERIES FIXED CASEMENT WINDOW - DIRECT SET (1-PC FRAME) (NON-HVHZ) (NON-IMPACT)  
ANCHOR DETAILS

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| REMARKS                | BY | DATE     |
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| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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FL #:

FL24230

DATE: 10.12.17

|             |              |
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| DWG. BY: RV | CHK. BY: HFN |
|-------------|--------------|

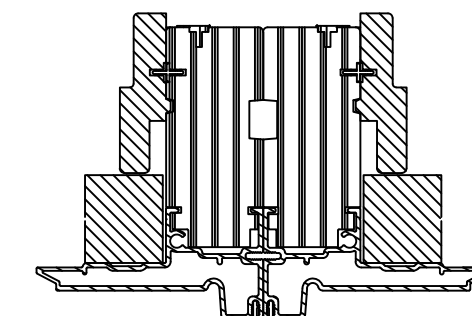
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DWG. #: AWD211

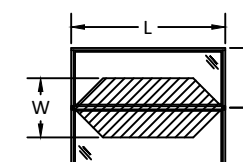
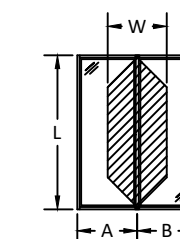
SHEET:

10 OF 28

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)    |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ZERO STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull<br>Length (in)                         | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                 | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                            | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                            | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                            | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                            | 69.79                    | 54.93 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 | 53.33 |
| 48.0                                            | 51.95                    | 39.07 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 | 35.73 |
| 54.0                                            | 40.29                    | 29.44 | 25.55 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 | 25.09 |
| 60.0                                            | 32.20                    | 23.09 | 19.37 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 | 18.29 |
| 66.0                                            | 26.36                    | 18.64 | 15.29 | 13.91 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 | 13.74 |
| 72.0                                            | 21.99                    | 15.39 | 12.42 | 11.02 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 | 10.59 |
| 78.0                                            | 18.63                    | 12.94 | 10.32 | 8.99  | 8.40  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  | 8.33  |
| 84.0                                            | 15.99                    | 11.05 | 8.72  | 7.49  | 6.87  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  | 6.67  |
| 90.0                                            | 13.88                    | 9.54  | 7.48  | 6.36  | 5.74  | 5.46  | 5.42  | 5.42  | 5.42  | 5.42  | 5.42  | 5.42  | 5.42  | 5.42  | 5.42  |
| 96.0                                            | 12.17                    | 8.33  | 6.49  | 5.47  | 4.88  | 4.57  | 4.47  | 4.47  | 4.47  | 4.47  | 4.47  | 4.47  | 4.47  | 4.47  | 4.47  |
| 102.0                                           | 10.75                    | 7.34  | 5.69  | 4.77  | 4.21  | 3.89  | 3.74  | 3.72  | 3.72  | 3.72  | 3.72  | 3.72  | 3.72  | 3.72  | 3.72  |
| 108.0                                           | 9.57                     | 6.52  | 5.04  | 4.19  | 3.68  | 3.37  | 3.19  | 3.14  | 3.14  | 3.14  | 3.14  | 3.14  | 3.14  | 3.14  | 3.14  |
| 114.0                                           | 8.58                     | 5.83  | 4.49  | 3.72  | 3.25  | 2.94  | 2.76  | 2.68  | 2.67  | 2.67  | 2.67  | 2.67  | 2.67  | 2.67  | 2.67  |
| 120.0                                           | 7.73                     | 5.24  | 4.03  | 3.32  | 2.89  | 2.60  | 2.42  | 2.32  | 2.29  | 2.29  | 2.29  | 2.29  | 2.29  | 2.29  | 2.29  |
| 126.0                                           | 7.00                     | 4.74  | 3.63  | 2.99  | 2.58  | 2.32  | 2.14  | 2.03  | 1.98  | 1.98  | 1.98  | 1.98  | 1.98  | 1.98  | 1.98  |
| 132.0                                           | 6.37                     | 4.31  | 3.30  | 2.71  | 2.33  | 2.08  | 1.91  | 1.80  | 1.74  | 1.72  | 1.72  | 1.72  | 1.72  | 1.72  | 1.72  |
| 138.0                                           | 5.82                     | 3.93  | 3.00  | 2.46  | 2.11  | 1.88  | 1.72  | 1.61  | 1.54  | 1.51  | 1.50  | 1.50  | 1.50  | 1.50  | 1.50  |
| 144.0                                           | 5.34                     | 3.61  | 2.75  | 2.25  | 1.92  | 1.70  | 1.55  | 1.45  | 1.38  | 1.34  | 1.32  | 1.32  | 1.32  | 1.32  | 1.32  |
| 150.0                                           | 4.92                     | 3.32  | 2.53  | 2.06  | 1.76  | 1.56  | 1.41  | 1.31  | 1.24  | 1.20  | 1.17  | 1.17  | 1.17  | 1.17  | 1.17  |
| 156.0                                           | 4.55                     | 3.06  | 2.33  | 1.90  | 1.62  | 1.43  | 1.29  | 1.19  | 1.12  | 1.08  | 1.05  | 1.04  | 1.04  | 1.04  | 1.04  |
| 162.0                                           | 4.21                     | 2.84  | 2.15  | 1.75  | 1.49  | 1.31  | 1.18  | 1.09  | 1.02  | 0.98  | 0.95  | 0.93  | 0.93  | 0.93  | 0.93  |
| 168.0                                           | 3.92                     | 2.63  | 2.00  | 1.62  | 1.38  | 1.21  | 1.09  | 1.00  | 0.94  | 0.89  | 0.86  | 0.84  | 0.83  | 0.83  | 0.83  |
| 174.0                                           | 3.65                     | 2.45  | 1.86  | 1.51  | 1.28  | 1.12  | 1.01  | 0.92  | 0.86  | 0.82  | 0.78  | 0.76  | 0.75  | 0.75  | 0.75  |
| 180.0                                           | 3.41                     | 2.29  | 1.74  | 1.41  | 1.19  | 1.04  | 0.94  | 0.86  | 0.79  | 0.75  | 0.72  | 0.70  | 0.68  | 0.68  | 0.68  |
| 186.0                                           | 3.19                     | 2.14  | 1.62  | 1.31  | 1.11  | 0.97  | 0.87  | 0.79  | 0.74  | 0.69  | 0.66  | 0.64  | 0.62  | 0.62  | 0.61  |
| 192.0                                           | 2.95                     | 1.98  | 1.51  | 1.22  | 1.04  | 0.91  | 0.81  | 0.74  | 0.68  | 0.64  | 0.61  | 0.59  | 0.57  | 0.56  | 0.56  |



## ZERO MULLION PROFILE



$$\frac{A + B}{2} = V$$

**NOTE:**

- 1) MULLION CHART APPLIES TO ZERO MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

ZERO MULLION LOADS TABLE  
ONE WAY

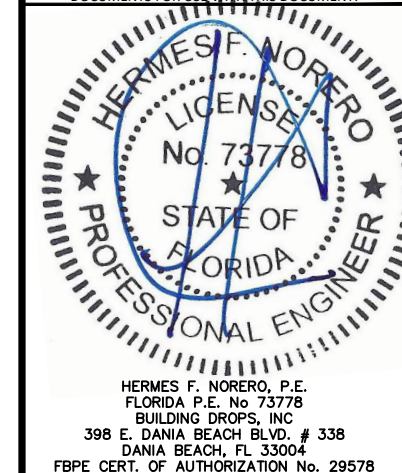
**PREPARED BY:**



**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)

| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:

#. FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

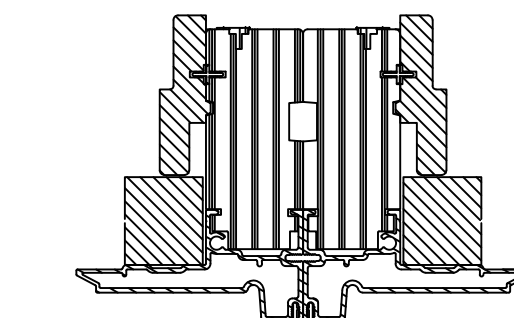
SHEET:

1

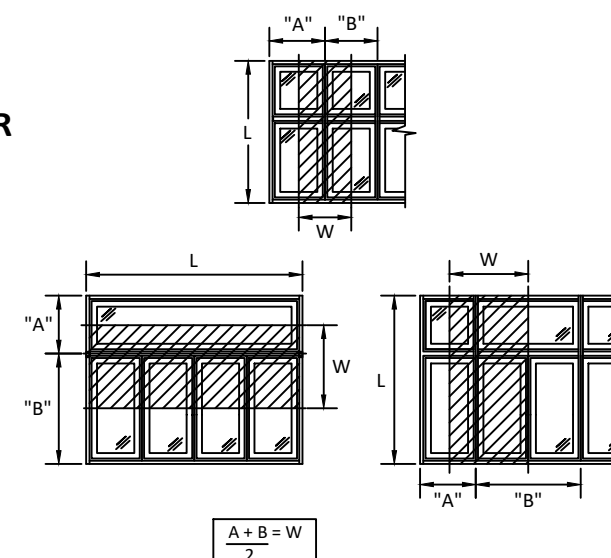
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)    |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ZERO STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull<br>Length (in)                         | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                 | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                            | 75.00                    | 75.00 | 75.00 | 75.00 | 63.52 | 54.45 | 47.64 | 42.35 | 38.11 | 34.65 | 31.76 | 29.32 | 27.22 | 25.41 | 23.82 |
| 30.0                                            | 75.00                    | 75.00 | 60.98 | 48.78 | 40.65 | 34.85 | 30.49 | 27.10 | 24.39 | 22.17 | 20.33 | 18.76 | 17.42 | 16.26 | 15.24 |
| 36.0                                            | 75.00                    | 56.46 | 42.35 | 33.88 | 28.23 | 24.20 | 21.17 | 18.82 | 16.94 | 15.40 | 14.12 | 13.03 | 12.10 | 11.29 | 10.59 |
| 42.0                                            | 62.22                    | 41.48 | 31.11 | 24.89 | 20.74 | 17.78 | 15.56 | 13.83 | 12.44 | 11.31 | 10.37 | 9.57  | 8.89  | 8.30  | 7.78  |
| 48.0                                            | 47.64                    | 31.76 | 23.82 | 19.06 | 15.88 | 13.61 | 11.91 | 10.59 | 9.53  | 8.66  | 7.94  | 7.33  | 6.81  | 6.35  | 5.96  |
| 54.0                                            | 37.64                    | 25.09 | 18.82 | 15.06 | 12.55 | 10.75 | 9.41  | 8.36  | 7.53  | 6.84  | 6.27  | 5.79  | 5.38  | 5.02  | 4.71  |
| 60.0                                            | 30.49                    | 20.33 | 15.24 | 12.20 | 10.16 | 8.71  | 7.62  | 6.78  | 6.10  | 5.54  | 5.08  | 4.69  | 4.36  | 4.07  | 3.81  |
| 66.0                                            | 25.20                    | 16.80 | 12.60 | 10.08 | 8.40  | 7.20  | 6.30  | 5.60  | 5.04  | 4.58  | 4.20  | 3.88  | 3.60  | 3.36  | 3.15  |
| 72.0                                            | 21.17                    | 14.12 | 10.59 | 8.47  | 7.06  | 6.05  | 5.29  | 4.71  | 4.23  | 3.85  | 3.53  | 3.26  | 3.02  | 2.82  | 2.65  |
| 78.0                                            | 18.04                    | 12.03 | 9.02  | 7.22  | 6.01  | 5.15  | 4.51  | 4.01  | 3.61  | 3.28  | 3.01  | 2.78  | 2.58  | 2.41  | 2.26  |
| 84.0                                            | 15.56                    | 10.37 | 7.78  | 6.22  | 5.19  | 4.44  | 3.89  | 3.46  | 3.11  | 2.83  | 2.59  | 2.39  | 2.22  | 2.07  | 1.94  |
| 90.0                                            | 13.55                    | 9.03  | 6.78  | 5.42  | 4.52  | 3.87  | 3.39  | 3.01  | 2.71  | 2.46  | 2.26  | 2.08  | 1.94  | 1.81  | 1.69  |
| 96.0                                            | 11.91                    | 7.94  | 5.96  | 4.76  | 3.97  | 3.40  | 2.98  | 2.65  | 2.38  | 2.17  | 1.99  | 1.83  | 1.70  | 1.59  | 1.49  |
| 102.0                                           | 10.55                    | 7.03  | 5.28  | 4.22  | 3.52  | 3.01  | 2.64  | 2.34  | 2.11  | 1.92  | 1.76  | 1.62  | 1.51  | 1.41  | 1.32  |
| 108.0                                           | 9.41                     | 6.27  | 4.71  | 3.76  | 3.14  | 2.69  | 2.35  | 2.09  | 1.88  | 1.71  | 1.57  | 1.45  | 1.34  | 1.25  | 1.18  |
| 114.0                                           | 8.45                     | 5.63  | 4.22  | 3.38  | 2.82  | 2.41  | 2.11  | 1.88  | 1.69  | 1.54  | 1.41  | 1.30  | 1.21  | 1.13  | 1.06  |
| 120.0                                           | 7.62                     | 5.08  | 3.81  | 3.05  | 2.54  | 2.18  | 1.91  | 1.69  | 1.52  | 1.39  | 1.27  | 1.17  | 1.09  | 1.02  | 0.95  |
| 126.0                                           | 6.91                     | 4.61  | 3.46  | 2.77  | 2.30  | 1.98  | 1.73  | 1.54  | 1.38  | 1.26  | 1.15  | 1.06  | 0.99  | 0.92  | 0.86  |
| 132.0                                           | 6.30                     | 4.20  | 3.15  | 2.52  | 2.10  | 1.80  | 1.57  | 1.40  | 1.26  | 1.15  | 1.05  | 0.97  | 0.90  | 0.84  | 0.79  |
| 138.0                                           | 5.76                     | 3.84  | 2.88  | 2.31  | 1.92  | 1.65  | 1.44  | 1.28  | 1.15  | 1.05  | 0.96  | 0.89  | 0.82  | 0.77  | 0.72  |
| 144.0                                           | 5.29                     | 3.53  | 2.65  | 2.12  | 1.76  | 1.51  | 1.32  | 1.18  | 1.06  | 0.96  | 0.88  | 0.81  | 0.76  | 0.71  | 0.66  |
| 150.0                                           | 4.88                     | 3.25  | 2.44  | 1.95  | 1.63  | 1.39  | 1.22  | 1.08  | 0.98  | 0.89  | 0.81  | 0.75  | 0.70  | 0.65  | 0.61  |
| 156.0                                           | 4.51                     | 3.01  | 2.26  | 1.80  | 1.50  | 1.29  | 1.13  | 1.00  | 0.90  | 0.82  | 0.75  | 0.69  | 0.64  | 0.60  | 0.56  |
| 162.0                                           | 4.18                     | 2.79  | 2.09  | 1.67  | 1.39  | 1.19  | 1.05  | 0.93  | 0.84  | 0.76  | 0.70  | 0.64  | 0.60  | 0.56  | 0.52  |
| 168.0                                           | 3.89                     | 2.59  | 1.94  | 1.56  | 1.30  | 1.11  | 0.97  | 0.86  | 0.78  | 0.71  | 0.65  | 0.60  | 0.56  | 0.52  | 0.49  |
| 174.0                                           | 3.63                     | 2.42  | 1.81  | 1.45  | 1.21  | 1.04  | 0.91  | 0.81  | 0.73  | 0.66  | 0.60  | 0.56  | 0.52  | 0.48  | 0.45  |
| 180.0                                           | 3.39                     | 2.26  | 1.69  | 1.36  | 1.13  | 0.97  | 0.85  | 0.75  | 0.68  | 0.62  | 0.56  | 0.52  | 0.48  | 0.45  | 0.42  |
| 186.0                                           | 3.17                     | 2.12  | 1.59  | 1.27  | 1.06  | 0.91  | 0.79  | 0.71  | 0.63  | 0.58  | 0.53  | 0.49  | 0.45  | 0.42  | 0.40  |
| 192.0                                           | 2.94                     | 1.96  | 1.47  | 1.17  | 0.98  | 0.84  | 0.73  | 0.65  | 0.59  | 0.53  | 0.49  | 0.45  | 0.42  | 0.39  | 0.37  |

**NOTE:**

- 1) MULLION CHART APPLIES TO ZERO MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



## ZERO MULLION PROFILE



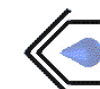
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

(NON-IMPACT)  
ZERO MULLION LOADS TABLE  
TWO WAY

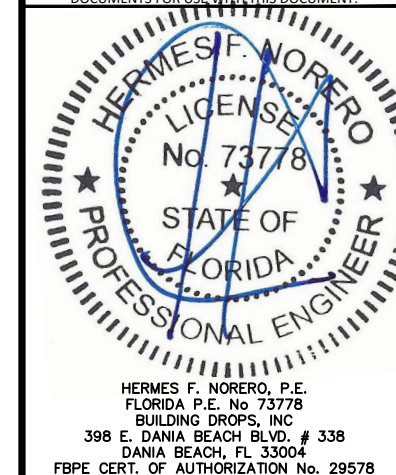
PREPARED BY:

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744.4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERAL IN NATURE AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:

FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

SHEET:

12

OF 28

**NOTE:**

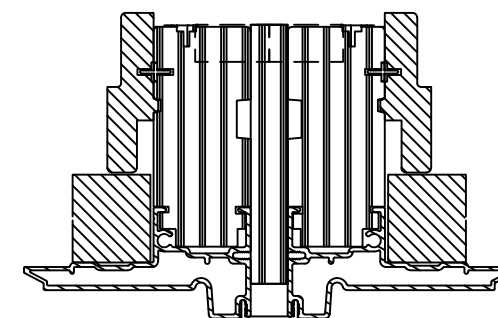
- 1) MULLION CHART APPLIES TO 1/2" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.**
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.**
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.**
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.**
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.**
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$**
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.**

**1/2" X 3 1/2"**  
**LVL MULL PROFILE**

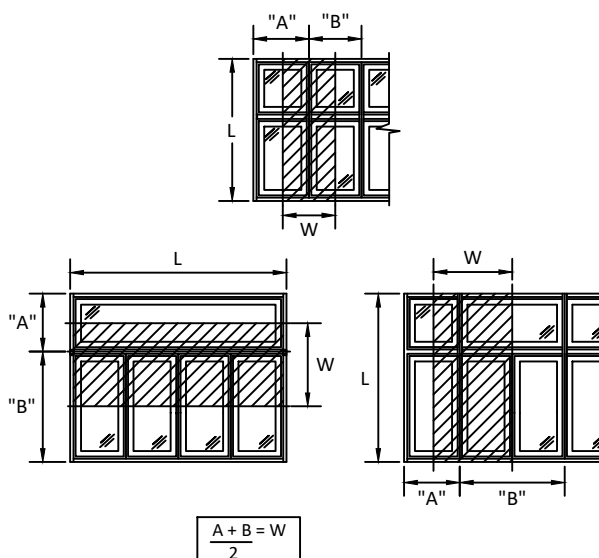


OF 28

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)             |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/2" X 3-1/2" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                     | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                          | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                     | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                     | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                     | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                     | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                     | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                     | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                     | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                     | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                     | 64.10                    | 42.74 | 32.05 | 25.64 | 21.37 | 18.32 | 16.03 | 14.25 | 12.82 | 11.66 | 10.68 | 9.86  | 9.16  | 8.55  | 8.01  |
| 84.0                                                     | 51.33                    | 34.22 | 25.66 | 20.53 | 17.11 | 14.66 | 12.83 | 11.41 | 10.27 | 9.33  | 8.55  | 7.90  | 7.33  | 6.84  | 6.42  |
| 90.0                                                     | 41.73                    | 27.82 | 20.86 | 16.69 | 13.91 | 11.92 | 10.43 | 9.27  | 8.35  | 7.59  | 6.95  | 6.42  | 5.96  | 5.56  | 5.22  |
| 96.0                                                     | 34.38                    | 22.92 | 17.19 | 13.75 | 11.46 | 9.82  | 8.60  | 7.64  | 6.88  | 6.25  | 5.73  | 5.29  | 4.91  | 4.58  | 4.30  |
| 102.0                                                    | 28.67                    | 19.11 | 14.33 | 11.47 | 9.56  | 8.19  | 7.17  | 6.37  | 5.73  | 5.21  | 4.78  | 4.41  | 4.10  | 3.82  | 3.58  |
| 108.0                                                    | 24.15                    | 16.10 | 12.07 | 9.66  | 8.05  | 6.90  | 6.04  | 5.37  | 4.83  | 4.39  | 4.02  | 3.72  | 3.45  | 3.22  | 3.02  |
| 114.0                                                    | 20.53                    | 13.69 | 10.27 | 8.21  | 6.84  | 5.87  | 5.13  | 4.56  | 4.11  | 3.73  | 3.42  | 3.16  | 2.93  | 2.74  | 2.57  |
| 120.0                                                    | 17.60                    | 11.74 | 8.80  | 7.04  | 5.87  | 5.03  | 4.40  | 3.91  | 3.52  | 3.20  | 2.93  | 2.71  | 2.51  | 2.35  | 2.20  |
| 126.0                                                    | 15.21                    | 10.14 | 7.60  | 6.08  | 5.07  | 4.35  | 3.80  | 3.38  | 3.04  | 2.77  | 2.53  | 2.34  | 2.17  | 2.03  | 1.90  |
| 132.0                                                    | 13.23                    | 8.82  | 6.61  | 5.29  | 4.41  | 3.78  | 3.31  | 2.94  | 2.65  | 2.40  | 2.20  | 2.03  | 1.89  | 1.76  | 1.65  |
| 138.0                                                    | 11.58                    | 7.72  | 5.79  | 4.63  | 3.86  | 3.31  | 2.89  | 2.57  | 2.32  | 2.10  | 1.93  | 1.78  | 1.65  | 1.54  | 1.45  |
| 144.0                                                    | 10.19                    | 6.79  | 5.09  | 4.08  | 3.40  | 2.91  | 2.55  | 2.26  | 2.04  | 1.85  | 1.70  | 1.57  | 1.46  | 1.36  | 1.27  |
| 150.0                                                    | 9.01                     | 6.01  | 4.51  | 3.61  | 3.00  | 2.58  | 2.25  | 2.00  | 1.80  | 1.64  | 1.50  | 1.39  | 1.29  | 1.20  | 1.13  |
| 156.0                                                    | 8.01                     | 5.34  | 4.01  | 3.21  | 2.67  | 2.29  | 2.00  | 1.78  | 1.60  | 1.46  | 1.34  | 1.23  | 1.14  | 1.07  | 1.00  |
| 162.0                                                    | 7.16                     | 4.77  | 3.58  | 2.86  | 2.39  | 2.04  | 1.79  | 1.59  | 1.43  | 1.30  | 1.19  | 1.10  | 1.02  | 0.95  | 0.89  |
| 168.0                                                    | 6.42                     | 4.28  | 3.21  | 2.57  | 2.14  | 1.83  | 1.60  | 1.43  | 1.28  | 1.17  | 1.07  | 0.99  | 0.92  | 0.86  | 0.80  |
| 174.0                                                    | 5.77                     | 3.85  | 2.89  | 2.31  | 1.92  | 1.65  | 1.44  | 1.28  | 1.15  | 1.05  | 0.96  | 0.89  | 0.82  | 0.77  | 0.72  |
| 180.0                                                    | 5.22                     | 3.48  | 2.61  | 2.09  | 1.74  | 1.49  | 1.30  | 1.16  | 1.04  | 0.95  | 0.87  | 0.80  | 0.75  | 0.70  | 0.65  |
| 186.0                                                    | 4.73                     | 3.15  | 2.36  | 1.89  | 1.58  | 1.35  | 1.18  | 1.05  | 0.95  | 0.86  | 0.79  | 0.73  | 0.68  | 0.63  | 0.59  |
| 192.0                                                    | 4.30                     | 2.87  | 2.15  | 1.72  | 1.43  | 1.23  | 1.07  | 0.96  | 0.86  | 0.78  | 0.72  | 0.66  | 0.61  | 0.57  | 0.54  |



**1/2" X 3 1/2"**  
**LVL MULL PROFILE**



**NOTE:**

- 1) MULLION CHART APPLIES TO 1/2" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

1/2" X 3-1/2" MULLION LOADS TABLE  
TWO WAY

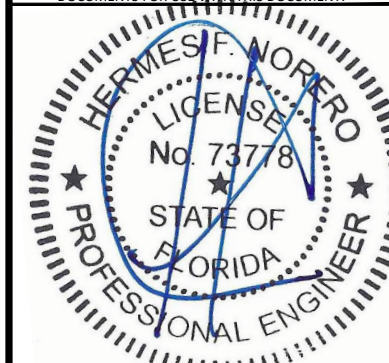
PREPARED BY: BUILDING PROCESS INC

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744.4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



HERMES F. NORERO, P.E.  
FLORIDA P.E. No 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

#. FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

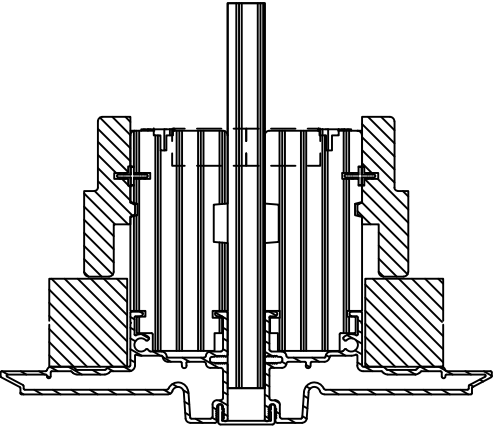
SHEET:

14

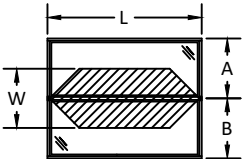
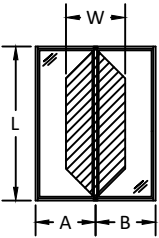
OF 28

s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\l74230.4 & 5\lwd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg 8/15/2019 10:19 AM

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)              |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/2" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                      | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                           | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                      | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                      | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |
| 72.0                                                      | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |
| 78.0                                                      | 75.00                    | 62.40 | 52.00 | 46.80 | 44.57 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 |
| 84.0                                                      | 75.00                    | 56.73 | 46.80 | 41.43 | 38.29 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 | 37.30 |
| 90.0                                                      | 69.91                    | 48.35 | 38.18 | 32.71 | 29.78 | 28.48 | 28.30 | 28.30 | 28.30 | 28.30 | 28.30 | 28.30 | 28.30 | 28.30 | 28.30 |
| 96.0                                                      | 57.39                    | 39.53 | 31.01 | 26.33 | 23.68 | 22.31 | 21.86 | 21.86 | 21.86 | 21.86 | 21.86 | 21.86 | 21.86 | 21.86 | 21.86 |
| 102.0                                                     | 47.70                    | 32.74 | 25.55 | 21.54 | 19.18 | 17.85 | 17.24 | 17.16 | 17.16 | 17.16 | 17.16 | 17.16 | 17.16 | 17.16 | 17.16 |
| 108.0                                                     | 40.09                    | 27.42 | 21.31 | 17.86 | 15.78 | 14.53 | 13.87 | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 | 13.65 |
| 114.0                                                     | 34.01                    | 23.21 | 17.97 | 14.98 | 13.15 | 12.01 | 11.35 | 11.04 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 |
| 120.0                                                     | 29.11                    | 19.82 | 15.30 | 12.70 | 11.09 | 10.06 | 9.42  | 9.08  | 8.96  | 8.96  | 8.96  | 8.96  | 8.96  | 8.96  | 8.96  |
| 126.0                                                     | 25.10                    | 17.06 | 13.14 | 10.87 | 9.44  | 8.52  | 7.92  | 7.56  | 7.39  | 7.37  | 7.37  | 7.37  | 7.37  | 7.37  | 7.37  |
| 132.0                                                     | 21.80                    | 14.79 | 11.36 | 9.37  | 8.11  | 7.28  | 6.73  | 6.38  | 6.19  | 6.12  | 6.12  | 6.12  | 6.12  | 6.12  | 6.12  |
| 138.0                                                     | 19.06                    | 12.91 | 9.90  | 8.14  | 7.03  | 6.28  | 5.77  | 5.44  | 5.23  | 5.14  | 5.12  | 5.12  | 5.12  | 5.12  | 5.12  |
| 144.0                                                     | 16.76                    | 11.34 | 8.68  | 7.12  | 6.13  | 5.45  | 4.99  | 4.68  | 4.47  | 4.36  | 4.32  | 4.32  | 4.32  | 4.32  | 4.32  |
| 150.0                                                     | 14.81                    | 10.01 | 7.65  | 6.27  | 5.38  | 4.77  | 4.35  | 4.06  | 3.86  | 3.74  | 3.68  | 3.67  | 3.67  | 3.67  | 3.67  |
| 156.0                                                     | 13.16                    | 8.88  | 6.78  | 5.54  | 4.75  | 4.20  | 3.82  | 3.54  | 3.36  | 3.23  | 3.16  | 3.14  | 3.14  | 3.14  | 3.14  |
| 162.0                                                     | 11.74                    | 7.92  | 6.04  | 4.93  | 4.21  | 3.72  | 3.37  | 3.12  | 2.94  | 2.82  | 2.74  | 2.70  | 2.70  | 2.70  | 2.70  |
| 168.0                                                     | 10.52                    | 7.09  | 5.40  | 4.40  | 3.75  | 3.31  | 2.99  | 2.76  | 2.59  | 2.47  | 2.39  | 2.35  | 2.33  | 2.33  | 2.33  |
| 174.0                                                     | 9.46                     | 6.37  | 4.85  | 3.95  | 3.36  | 2.96  | 2.66  | 2.45  | 2.29  | 2.18  | 2.10  | 2.05  | 2.03  | 2.03  | 2.03  |
| 180.0                                                     | 8.54                     | 5.75  | 4.37  | 3.55  | 3.02  | 2.65  | 2.39  | 2.19  | 2.04  | 1.94  | 1.86  | 1.81  | 1.78  | 1.77  | 1.77  |
| 186.0                                                     | 7.74                     | 5.21  | 3.95  | 3.21  | 2.73  | 2.39  | 2.15  | 1.97  | 1.83  | 1.73  | 1.66  | 1.60  | 1.57  | 1.55  | 1.55  |
| 192.0                                                     | 7.03                     | 4.73  | 3.59  | 2.91  | 2.47  | 2.16  | 1.94  | 1.77  | 1.65  | 1.55  | 1.48  | 1.43  | 1.39  | 1.37  | 1.37  |



1/2" X 5 3/16"  
LVL MULL PROFILE



$$\frac{A + B}{2} = W$$

- NOTE:**
- 1) MULLION CHART APPLIES TO 1/2" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
  - 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
  - 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
  - 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
  - 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
  - 6) TRIBUTARY WIDTH = W = (A+B)/2
  - 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

1/2" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

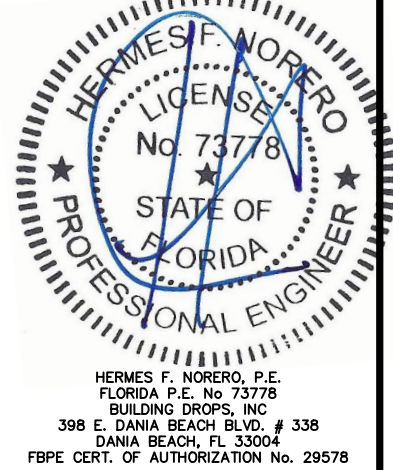
PREPARED BY:  
BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

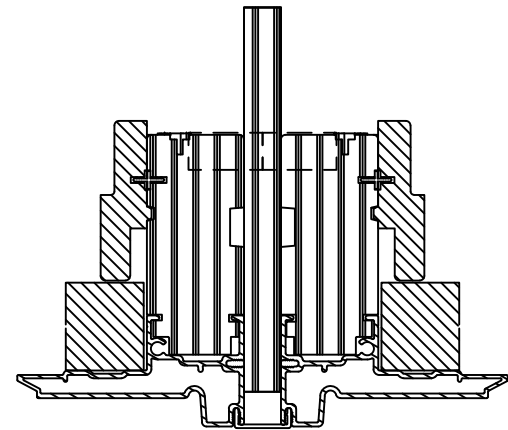
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



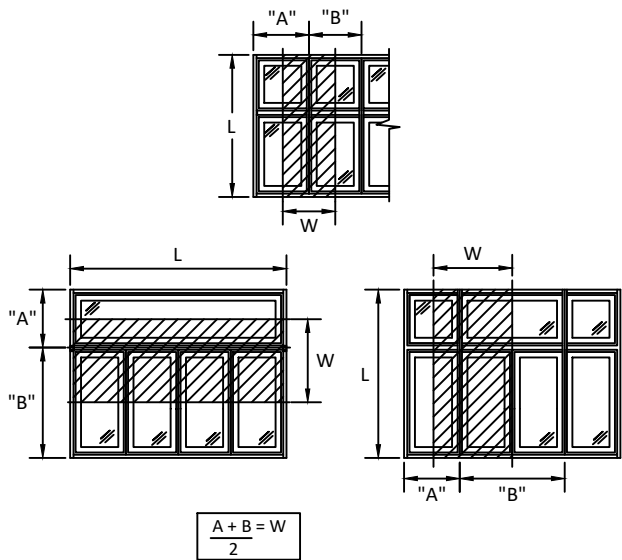
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|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 15       |

s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\174230.4 & 5\lwd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)              |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/2" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                      | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                           | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                      | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                      | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                      | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                      | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                      | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                      | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                      | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                      | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                      | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                      | 66.86                    | 44.57 | 33.43 | 26.74 | 22.29 | 19.10 | 16.71 | 14.86 | 13.37 | 12.16 | 11.14 | 10.29 | 9.55  | 8.91  | 8.36  |
| 90.0                                                      | 62.40                    | 41.60 | 31.20 | 24.96 | 20.80 | 17.83 | 15.60 | 13.87 | 12.48 | 11.35 | 10.40 | 9.60  | 8.91  | 8.32  | 7.80  |
| 96.0                                                      | 55.97                    | 37.32 | 27.99 | 22.39 | 18.66 | 15.99 | 13.99 | 12.44 | 11.19 | 10.18 | 9.33  | 8.61  | 8.00  | 7.46  | 7.00  |
| 102.0                                                     | 46.67                    | 31.11 | 23.33 | 18.67 | 15.56 | 13.33 | 11.67 | 10.37 | 9.33  | 8.48  | 7.78  | 7.18  | 6.67  | 6.22  | 5.83  |
| 108.0                                                     | 39.31                    | 26.21 | 19.66 | 15.72 | 13.10 | 11.23 | 9.83  | 8.74  | 7.86  | 7.15  | 6.55  | 6.05  | 5.62  | 5.24  | 4.91  |
| 114.0                                                     | 33.43                    | 22.28 | 16.71 | 13.37 | 11.14 | 9.55  | 8.36  | 7.43  | 6.69  | 6.08  | 5.57  | 5.14  | 4.78  | 4.46  | 4.18  |
| 120.0                                                     | 28.66                    | 19.11 | 14.33 | 11.46 | 9.55  | 8.19  | 7.16  | 6.37  | 5.73  | 5.21  | 4.78  | 4.41  | 4.09  | 3.82  | 3.58  |
| 126.0                                                     | 24.76                    | 16.50 | 12.38 | 9.90  | 8.25  | 7.07  | 6.19  | 5.50  | 4.95  | 4.50  | 4.13  | 3.81  | 3.54  | 3.30  | 3.09  |
| 132.0                                                     | 21.53                    | 14.35 | 10.77 | 8.61  | 7.18  | 6.15  | 5.38  | 4.78  | 4.31  | 3.91  | 3.59  | 3.31  | 3.08  | 2.87  | 2.69  |
| 138.0                                                     | 18.84                    | 12.56 | 9.42  | 7.54  | 6.28  | 5.38  | 4.71  | 4.19  | 3.77  | 3.43  | 3.14  | 2.90  | 2.69  | 2.51  | 2.36  |
| 144.0                                                     | 16.58                    | 11.06 | 8.29  | 6.63  | 5.53  | 4.74  | 4.15  | 3.69  | 3.32  | 3.02  | 2.76  | 2.55  | 2.37  | 2.21  | 2.07  |
| 150.0                                                     | 14.67                    | 9.78  | 7.34  | 5.87  | 4.89  | 4.19  | 3.67  | 3.26  | 2.93  | 2.67  | 2.45  | 2.26  | 2.10  | 1.96  | 1.83  |
| 156.0                                                     | 13.04                    | 8.70  | 6.52  | 5.22  | 4.35  | 3.73  | 3.26  | 2.90  | 2.61  | 2.37  | 2.17  | 2.01  | 1.86  | 1.74  | 1.63  |
| 162.0                                                     | 11.65                    | 7.77  | 5.82  | 4.66  | 3.88  | 3.33  | 2.91  | 2.59  | 2.33  | 2.12  | 1.94  | 1.79  | 1.66  | 1.55  | 1.46  |
| 168.0                                                     | 10.44                    | 6.96  | 5.22  | 4.18  | 3.48  | 2.98  | 2.61  | 2.32  | 2.09  | 1.90  | 1.74  | 1.61  | 1.49  | 1.39  | 1.31  |
| 174.0                                                     | 9.40                     | 6.27  | 4.70  | 3.76  | 3.13  | 2.69  | 2.35  | 2.09  | 1.88  | 1.71  | 1.57  | 1.45  | 1.34  | 1.25  | 1.18  |
| 180.0                                                     | 8.49                     | 5.66  | 4.25  | 3.40  | 2.83  | 2.43  | 2.12  | 1.89  | 1.70  | 1.54  | 1.42  | 1.31  | 1.21  | 1.13  | 1.06  |
| 186.0                                                     | 7.70                     | 5.13  | 3.85  | 3.08  | 2.57  | 2.20  | 1.92  | 1.71  | 1.54  | 1.40  | 1.28  | 1.18  | 1.10  | 1.03  | 0.96  |
| 192.0                                                     | 7.00                     | 4.66  | 3.50  | 2.80  | 2.33  | 2.00  | 1.75  | 1.55  | 1.40  | 1.27  | 1.17  | 1.08  | 1.00  | 0.93  | 0.87  |



1/2" X 5 3/16"  
LVL MULL PROFILE



NOTE:

- 1) MULLION CHART APPLIES TO 1/2" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH = W = (A+B)/2
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

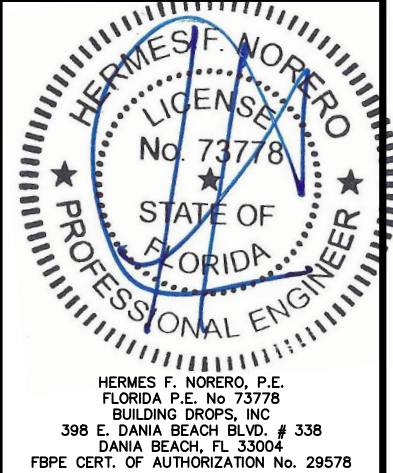
1/2" X 5-3/16" MULLION LOADS TABLE  
TWO WAY

PREPARED BY:  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

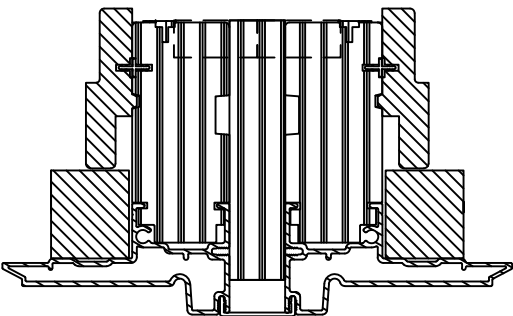
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



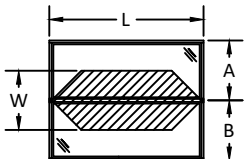
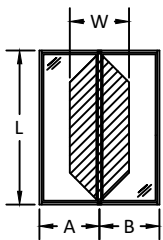
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|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 16       |

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)             |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3/4" x 3-1/2" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                     | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                          | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                     | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                     | 75.00                    | 75.00 | 66.86 | 61.01 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 | 60.27 |
| 72.0                                                     | 75.00                    | 67.50 | 54.46 | 48.32 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 | 46.42 |
| 78.0                                                     | 75.00                    | 53.13 | 42.72 | 37.57 | 35.40 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 | 35.11 |
| 84.0                                                     | 60.43                    | 42.03 | 33.45 | 28.99 | 26.79 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 | 26.10 |
| 90.0                                                     | 48.92                    | 33.84 | 26.72 | 22.89 | 20.84 | 19.93 | 19.81 | 19.81 | 19.81 | 19.81 | 19.81 | 19.81 | 19.81 | 19.81 | 19.81 |
| 96.0                                                     | 40.16                    | 27.66 | 21.70 | 18.43 | 16.57 | 15.61 | 15.30 | 15.30 | 15.30 | 15.30 | 15.30 | 15.30 | 15.30 | 15.30 | 15.30 |
| 102.0                                                    | 33.38                    | 22.91 | 17.88 | 15.07 | 13.42 | 12.49 | 12.07 | 12.01 | 12.01 | 12.01 | 12.01 | 12.01 | 12.01 | 12.01 | 12.01 |
| 108.0                                                    | 28.05                    | 19.19 | 14.92 | 12.50 | 11.04 | 10.17 | 9.71  | 9.55  | 9.55  | 9.55  | 9.55  | 9.55  | 9.55  | 9.55  | 9.55  |
| 114.0                                                    | 23.80                    | 16.24 | 12.58 | 10.49 | 9.20  | 8.41  | 7.94  | 7.73  | 7.69  | 7.69  | 7.69  | 7.69  | 7.69  | 7.69  | 7.69  |
| 120.0                                                    | 20.37                    | 13.87 | 10.71 | 8.89  | 7.76  | 7.04  | 6.59  | 6.35  | 6.27  | 6.27  | 6.27  | 6.27  | 6.27  | 6.27  | 6.27  |
| 126.0                                                    | 17.57                    | 11.94 | 9.19  | 7.61  | 6.61  | 5.96  | 5.54  | 5.29  | 5.17  | 5.16  | 5.16  | 5.16  | 5.16  | 5.16  | 5.16  |
| 132.0                                                    | 15.26                    | 10.35 | 7.95  | 6.56  | 5.68  | 5.09  | 4.71  | 4.46  | 4.33  | 4.28  | 4.28  | 4.28  | 4.28  | 4.28  | 4.28  |
| 138.0                                                    | 13.34                    | 9.03  | 6.93  | 5.70  | 4.92  | 4.39  | 4.04  | 3.80  | 3.66  | 3.59  | 3.58  | 3.58  | 3.58  | 3.58  | 3.58  |
| 144.0                                                    | 11.73                    | 7.93  | 6.07  | 4.98  | 4.29  | 3.82  | 3.49  | 3.27  | 3.13  | 3.05  | 3.02  | 3.02  | 3.02  | 3.02  | 3.02  |
| 150.0                                                    | 10.36                    | 7.00  | 5.35  | 4.39  | 3.76  | 3.34  | 3.04  | 2.84  | 2.70  | 2.62  | 2.57  | 2.57  | 2.57  | 2.57  | 2.57  |
| 156.0                                                    | 9.21                     | 6.22  | 4.74  | 3.88  | 3.32  | 2.94  | 2.67  | 2.48  | 2.35  | 2.26  | 2.21  | 2.19  | 2.19  | 2.19  | 2.19  |
| 162.0                                                    | 8.22                     | 5.54  | 4.22  | 3.45  | 2.95  | 2.60  | 2.36  | 2.18  | 2.06  | 1.97  | 1.92  | 1.89  | 1.89  | 1.89  | 1.89  |
| 168.0                                                    | 7.36                     | 4.96  | 3.78  | 3.08  | 2.63  | 2.31  | 2.09  | 1.93  | 1.81  | 1.73  | 1.67  | 1.64  | 1.63  | 1.63  | 1.63  |
| 174.0                                                    | 6.62                     | 4.46  | 3.39  | 2.76  | 2.35  | 2.07  | 1.86  | 1.72  | 1.61  | 1.53  | 1.47  | 1.44  | 1.42  | 1.42  | 1.42  |
| 180.0                                                    | 5.98                     | 4.02  | 3.06  | 2.49  | 2.11  | 1.86  | 1.67  | 1.53  | 1.43  | 1.36  | 1.30  | 1.27  | 1.25  | 1.24  | 1.24  |
| 186.0                                                    | 5.42                     | 3.64  | 2.77  | 2.25  | 1.91  | 1.67  | 1.50  | 1.38  | 1.28  | 1.21  | 1.16  | 1.12  | 1.10  | 1.09  | 1.09  |
| 192.0                                                    | 4.92                     | 3.31  | 2.51  | 2.04  | 1.73  | 1.51  | 1.36  | 1.24  | 1.15  | 1.09  | 1.04  | 1.00  | 0.98  | 0.96  | 0.96  |

- NOTE:
- MULLION CHART APPLIES TO 3/4" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
  - DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
  - MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
  - DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
  - MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
  - TRIBUTARY WIDTH = W = (A+B)/2
  - WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



3/4" X 3 1/2"  
LVL MULL PROFILE



$$\frac{A+B}{2} = W$$



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

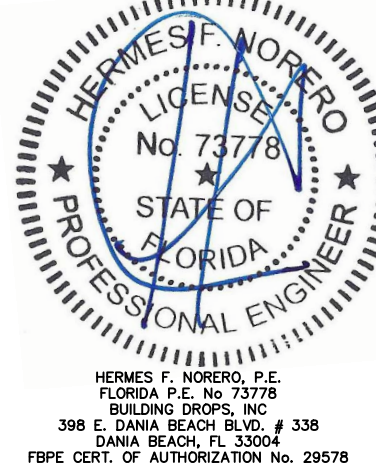
TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)  
3/4" X 3-1/2" MULLION LOADS TABLE  
ONE WAY

PREPARED BY:  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
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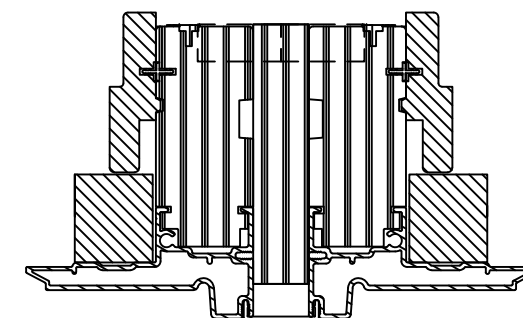
| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 17       |

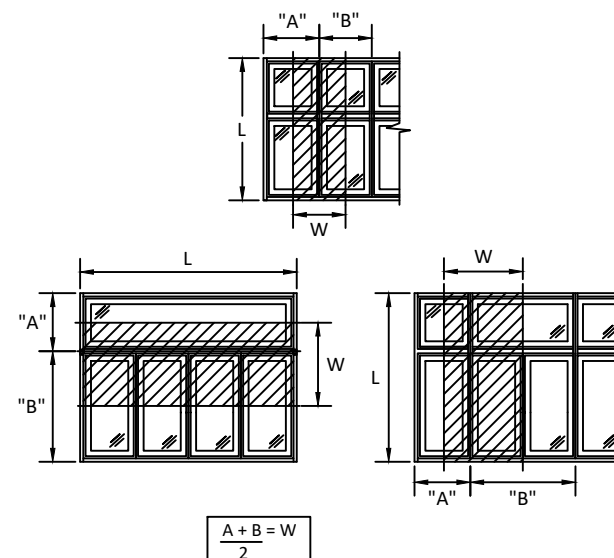
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)             |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3/4" X 3-1/2" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                     | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                          | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                     | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                     | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                     | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                     | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                     | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                     | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                     | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                     | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                     | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                     | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                     | 58.47                    | 38.98 | 29.23 | 23.39 | 19.49 | 16.71 | 14.62 | 12.99 | 11.69 | 10.63 | 9.74  | 9.00  | 8.35  | 7.80  | 7.31  |
| 90.0                                                     | 47.54                    | 31.69 | 23.77 | 19.01 | 15.85 | 13.58 | 11.88 | 10.56 | 9.51  | 8.64  | 7.92  | 7.31  | 6.79  | 6.34  | 5.94  |
| 96.0                                                     | 39.17                    | 26.11 | 19.58 | 15.67 | 13.06 | 11.19 | 9.79  | 8.70  | 7.83  | 7.12  | 6.53  | 6.03  | 5.60  | 5.22  | 4.90  |
| 102.0                                                    | 32.66                    | 21.77 | 16.33 | 13.06 | 10.89 | 9.33  | 8.16  | 7.26  | 6.53  | 5.94  | 5.44  | 5.02  | 4.67  | 4.35  | 4.08  |
| 108.0                                                    | 27.51                    | 18.34 | 13.76 | 11.00 | 9.17  | 7.86  | 6.88  | 6.11  | 5.50  | 5.00  | 4.59  | 4.23  | 3.93  | 3.67  | 3.44  |
| 114.0                                                    | 23.39                    | 15.59 | 11.70 | 9.36  | 7.80  | 6.68  | 5.85  | 5.20  | 4.68  | 4.25  | 3.90  | 3.60  | 3.34  | 3.12  | 2.92  |
| 120.0                                                    | 20.05                    | 13.37 | 10.03 | 8.02  | 6.68  | 5.73  | 5.01  | 4.46  | 4.01  | 3.65  | 3.34  | 3.09  | 2.86  | 2.67  | 2.51  |
| 126.0                                                    | 17.32                    | 11.55 | 8.66  | 6.93  | 5.77  | 4.95  | 4.33  | 3.85  | 3.46  | 3.15  | 2.89  | 2.67  | 2.47  | 2.31  | 2.17  |
| 132.0                                                    | 15.07                    | 10.04 | 7.53  | 6.03  | 5.02  | 4.30  | 3.77  | 3.35  | 3.01  | 2.74  | 2.51  | 2.32  | 2.15  | 2.01  | 1.88  |
| 138.0                                                    | 13.19                    | 8.79  | 6.59  | 5.27  | 4.40  | 3.77  | 3.30  | 2.93  | 2.64  | 2.40  | 2.20  | 2.03  | 1.88  | 1.76  | 1.65  |
| 144.0                                                    | 11.61                    | 7.74  | 5.80  | 4.64  | 3.87  | 3.32  | 2.90  | 2.58  | 2.32  | 2.11  | 1.93  | 1.79  | 1.66  | 1.55  | 1.45  |
| 150.0                                                    | 10.27                    | 6.85  | 5.13  | 4.11  | 3.42  | 2.93  | 2.57  | 2.28  | 2.05  | 1.87  | 1.71  | 1.58  | 1.47  | 1.37  | 1.28  |
| 156.0                                                    | 9.13                     | 6.09  | 4.56  | 3.65  | 3.04  | 2.61  | 2.28  | 2.03  | 1.83  | 1.66  | 1.52  | 1.40  | 1.30  | 1.22  | 1.14  |
| 162.0                                                    | 8.15                     | 5.43  | 4.08  | 3.26  | 2.72  | 2.33  | 2.04  | 1.81  | 1.63  | 1.48  | 1.36  | 1.25  | 1.16  | 1.09  | 1.02  |
| 168.0                                                    | 7.31                     | 4.87  | 3.65  | 2.92  | 2.44  | 2.09  | 1.83  | 1.62  | 1.46  | 1.33  | 1.22  | 1.12  | 1.04  | 0.97  | 0.91  |
| 174.0                                                    | 6.58                     | 4.39  | 3.29  | 2.63  | 2.19  | 1.88  | 1.64  | 1.46  | 1.32  | 1.20  | 1.10  | 1.01  | 0.94  | 0.88  | 0.82  |
| 180.0                                                    | 5.94                     | 3.96  | 2.97  | 2.38  | 1.98  | 1.70  | 1.49  | 1.32  | 1.19  | 1.08  | 0.99  | 0.91  | 0.85  | 0.79  | 0.74  |
| 186.0                                                    | 5.39                     | 3.59  | 2.69  | 2.15  | 1.80  | 1.54  | 1.35  | 1.20  | 1.08  | 0.98  | 0.90  | 0.83  | 0.77  | 0.72  | 0.67  |
| 192.0                                                    | 4.90                     | 3.26  | 2.45  | 1.96  | 1.63  | 1.40  | 1.22  | 1.09  | 0.98  | 0.89  | 0.82  | 0.75  | 0.70  | 0.65  | 0.61  |



**3/4" X 3 1/2"**  
**LVL MULL PROFILE**

**NOTE:**

- 1) MULLION CHART APPLIES TO 3/4" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

3/4" X 3-1/2" MULLION LOADS TABLE  
TWO WAY

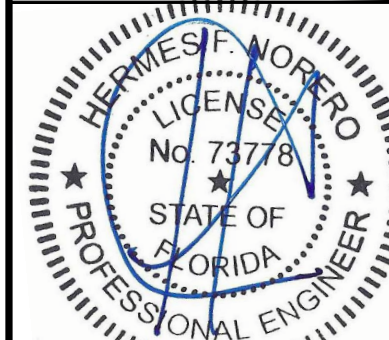
PREPARED BY:

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744.4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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HERMES F. NORERO, P.E.  
FLORIDA P.E. No 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

SHEET:

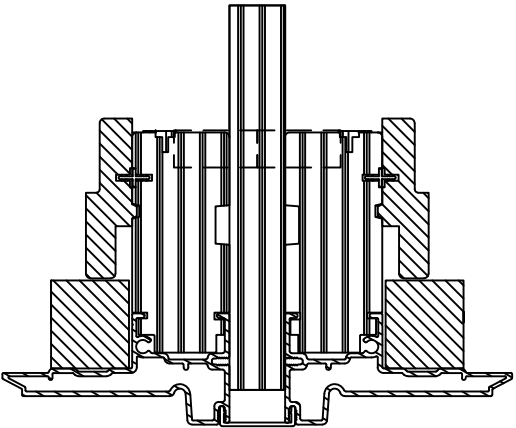
18

s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\l74230.4 & 5\awd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg 8/15/2019 10:19 AM

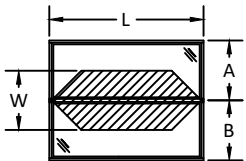
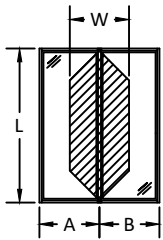
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)              |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3/4" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                      | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                           | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                      | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                      | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |
| 72.0                                                      | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |
| 78.0                                                      | 75.00                    | 62.40 | 52.00 | 46.80 | 44.57 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 |
| 84.0                                                      | 75.00                    | 56.73 | 46.80 | 41.60 | 39.00 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 |
| 90.0                                                      | 72.00                    | 52.00 | 42.55 | 37.44 | 34.67 | 33.43 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 |
| 96.0                                                      | 66.86                    | 48.00 | 39.00 | 33.66 | 30.27 | 28.52 | 27.95 | 27.95 | 27.95 | 27.95 | 27.95 | 27.95 | 27.95 | 27.95 | 27.95 |
| 102.0                                                     | 60.98                    | 41.85 | 32.66 | 27.53 | 24.52 | 22.82 | 22.04 | 21.93 | 21.93 | 21.93 | 21.93 | 21.93 | 21.93 | 21.93 | 21.93 |
| 108.0                                                     | 51.24                    | 35.06 | 27.25 | 22.83 | 20.17 | 18.58 | 17.73 | 17.45 | 17.45 | 17.45 | 17.45 | 17.45 | 17.45 | 17.45 | 17.45 |
| 114.0                                                     | 43.48                    | 29.67 | 22.97 | 19.15 | 16.81 | 15.36 | 14.51 | 14.11 | 14.06 | 14.06 | 14.06 | 14.06 | 14.06 | 14.06 | 14.06 |
| 120.0                                                     | 37.21                    | 25.33 | 19.56 | 16.24 | 14.17 | 12.86 | 12.04 | 11.60 | 11.45 | 11.45 | 11.45 | 11.45 | 11.45 | 11.45 | 11.45 |
| 126.0                                                     | 32.09                    | 21.81 | 16.79 | 13.89 | 12.07 | 10.89 | 10.12 | 9.67  | 9.45  | 9.42  | 9.42  | 9.42  | 9.42  | 9.42  | 9.42  |
| 132.0                                                     | 27.87                    | 18.91 | 14.53 | 11.98 | 10.37 | 9.31  | 8.60  | 8.15  | 7.91  | 7.82  | 7.82  | 7.82  | 7.82  | 7.82  | 7.82  |
| 138.0                                                     | 24.36                    | 16.50 | 12.65 | 10.41 | 8.98  | 8.02  | 7.38  | 6.95  | 6.69  | 6.57  | 6.55  | 6.55  | 6.55  | 6.55  | 6.55  |
| 144.0                                                     | 21.42                    | 14.49 | 11.09 | 9.11  | 7.83  | 6.97  | 6.38  | 5.98  | 5.72  | 5.57  | 5.52  | 5.52  | 5.52  | 5.52  | 5.52  |
| 150.0                                                     | 18.93                    | 12.80 | 9.78  | 8.01  | 6.87  | 6.10  | 5.56  | 5.19  | 4.93  | 4.78  | 4.70  | 4.69  | 4.69  | 4.69  | 4.69  |
| 156.0                                                     | 16.82                    | 11.35 | 8.66  | 7.09  | 6.07  | 5.37  | 4.88  | 4.53  | 4.29  | 4.13  | 4.04  | 4.01  | 4.01  | 4.01  | 4.01  |
| 162.0                                                     | 15.01                    | 10.12 | 7.72  | 6.30  | 5.38  | 4.75  | 4.30  | 3.98  | 3.76  | 3.60  | 3.50  | 3.45  | 3.45  | 3.45  | 3.45  |
| 168.0                                                     | 13.45                    | 9.06  | 6.90  | 5.63  | 4.80  | 4.23  | 3.82  | 3.52  | 3.31  | 3.16  | 3.06  | 3.00  | 2.98  | 2.98  | 2.98  |
| 174.0                                                     | 12.10                    | 8.15  | 6.20  | 5.05  | 4.30  | 3.78  | 3.41  | 3.13  | 2.93  | 2.79  | 2.69  | 2.63  | 2.60  | 2.59  | 2.59  |
| 180.0                                                     | 10.92                    | 7.35  | 5.59  | 4.54  | 3.86  | 3.39  | 3.05  | 2.80  | 2.61  | 2.48  | 2.38  | 2.31  | 2.28  | 2.26  | 2.26  |
| 186.0                                                     | 9.89                     | 6.65  | 5.05  | 4.11  | 3.49  | 3.06  | 2.74  | 2.51  | 2.34  | 2.21  | 2.12  | 2.05  | 2.01  | 1.99  | 1.98  |
| 192.0                                                     | 8.99                     | 6.04  | 4.59  | 3.72  | 3.16  | 2.76  | 2.48  | 2.26  | 2.10  | 1.98  | 1.89  | 1.83  | 1.78  | 1.76  | 1.75  |

NOTE:

- MULLION CHART APPLIES TO 3/4" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- TRIBUTARY WIDTH =  $W = (A+B)/2$
- WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



3/4" X 5 3/16"  
LVL MULL PROFILE



$$\frac{A+B}{2} = W$$



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

3/4" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

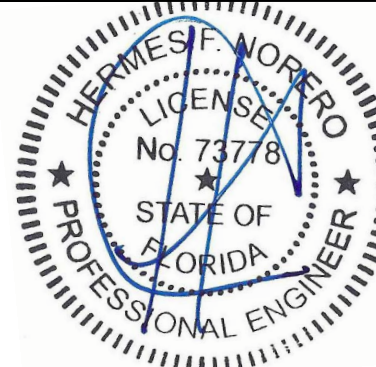
PREPARED BY:  
BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

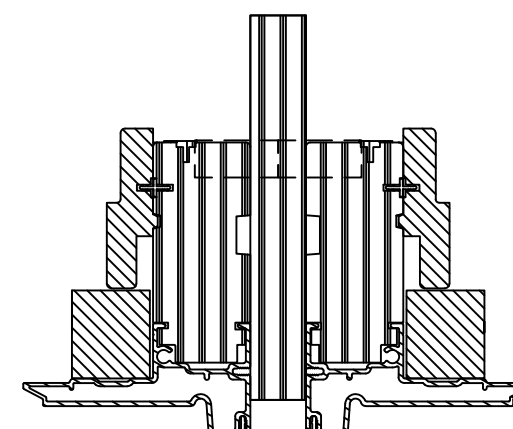
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

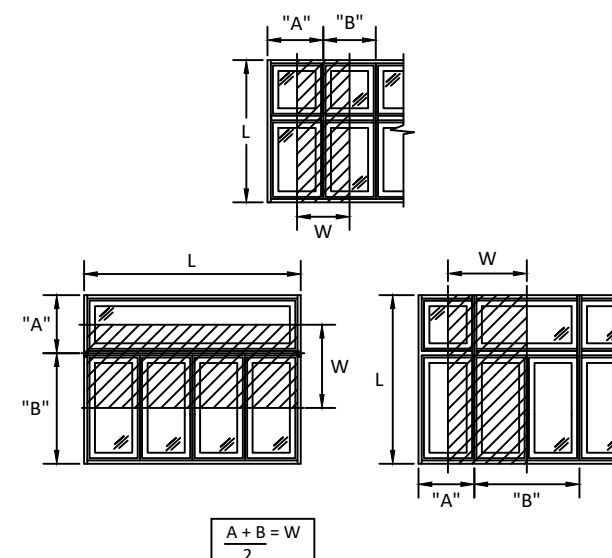
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| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 19       |

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)              |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3/4" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                      | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                           | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                      | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                      | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                      | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                      | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                      | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                      | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                      | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                      | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                      | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                      | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                      | 66.86                    | 44.57 | 33.43 | 26.74 | 22.29 | 19.10 | 16.71 | 14.86 | 13.37 | 12.16 | 11.14 | 10.29 | 9.55  | 8.91  | 8.36  |
| 90.0                                                      | 62.40                    | 41.60 | 31.20 | 24.96 | 20.80 | 17.83 | 15.60 | 13.87 | 12.48 | 11.35 | 10.40 | 9.60  | 8.91  | 8.32  | 7.80  |
| 96.0                                                      | 58.50                    | 39.00 | 29.25 | 23.40 | 19.50 | 16.71 | 14.63 | 13.00 | 11.70 | 10.64 | 9.75  | 9.00  | 8.36  | 7.80  | 7.31  |
| 102.0                                                     | 55.06                    | 36.71 | 27.53 | 22.02 | 18.35 | 15.73 | 13.76 | 12.24 | 11.01 | 10.01 | 9.18  | 8.47  | 7.87  | 7.34  | 6.88  |
| 108.0                                                     | 50.25                    | 33.50 | 25.13 | 20.10 | 16.75 | 14.36 | 12.56 | 11.17 | 10.05 | 9.14  | 8.38  | 7.73  | 7.18  | 6.70  | 6.28  |
| 114.0                                                     | 42.73                    | 28.49 | 21.36 | 17.09 | 14.24 | 12.21 | 10.68 | 9.50  | 8.55  | 7.77  | 7.12  | 6.57  | 6.10  | 5.70  | 5.34  |
| 120.0                                                     | 36.64                    | 24.42 | 18.32 | 14.65 | 12.21 | 10.47 | 9.16  | 8.14  | 7.33  | 6.66  | 6.11  | 5.64  | 5.23  | 4.88  | 4.58  |
| 126.0                                                     | 31.65                    | 21.10 | 15.82 | 12.66 | 10.55 | 9.04  | 7.91  | 7.03  | 6.33  | 5.75  | 5.27  | 4.87  | 4.52  | 4.22  | 3.96  |
| 132.0                                                     | 27.52                    | 18.35 | 13.76 | 11.01 | 9.17  | 7.86  | 6.88  | 6.12  | 5.50  | 5.00  | 4.59  | 4.23  | 3.93  | 3.67  | 3.44  |
| 138.0                                                     | 24.09                    | 16.06 | 12.04 | 9.64  | 8.03  | 6.88  | 6.02  | 5.35  | 4.82  | 4.38  | 4.01  | 3.71  | 3.44  | 3.21  | 3.01  |
| 144.0                                                     | 21.20                    | 14.13 | 10.60 | 8.48  | 7.07  | 6.06  | 5.30  | 4.71  | 4.24  | 3.85  | 3.53  | 3.26  | 3.03  | 2.83  | 2.65  |
| 150.0                                                     | 18.76                    | 12.50 | 9.38  | 7.50  | 6.25  | 5.36  | 4.69  | 4.17  | 3.75  | 3.41  | 3.13  | 2.89  | 2.68  | 2.50  | 2.34  |
| 156.0                                                     | 16.68                    | 11.12 | 8.34  | 6.67  | 5.56  | 4.76  | 4.17  | 3.71  | 3.34  | 3.03  | 2.78  | 2.57  | 2.38  | 2.22  | 2.08  |
| 162.0                                                     | 14.89                    | 9.93  | 7.45  | 5.96  | 4.96  | 4.25  | 3.72  | 3.31  | 2.98  | 2.71  | 2.48  | 2.29  | 2.13  | 1.99  | 1.86  |
| 168.0                                                     | 13.35                    | 8.90  | 6.68  | 5.34  | 4.45  | 3.81  | 3.34  | 2.97  | 2.67  | 2.43  | 2.23  | 2.05  | 1.91  | 1.78  | 1.67  |
| 174.0                                                     | 12.02                    | 8.01  | 6.01  | 4.81  | 4.01  | 3.43  | 3.00  | 2.67  | 2.40  | 2.18  | 2.00  | 1.85  | 1.72  | 1.60  | 1.50  |
| 180.0                                                     | 10.86                    | 7.24  | 5.43  | 4.34  | 3.62  | 3.10  | 2.71  | 2.41  | 2.17  | 1.97  | 1.81  | 1.67  | 1.55  | 1.45  | 1.36  |
| 186.0                                                     | 9.84                     | 6.56  | 4.92  | 3.94  | 3.28  | 2.81  | 2.46  | 2.19  | 1.97  | 1.79  | 1.64  | 1.51  | 1.41  | 1.31  | 1.23  |
| 192.0                                                     | 8.94                     | 5.96  | 4.47  | 3.58  | 2.98  | 2.56  | 2.24  | 1.99  | 1.79  | 1.63  | 1.49  | 1.38  | 1.28  | 1.19  | 1.12  |



**3/4" X 5 3/16"**  
**LVL MULL PROFILE**

- NOTE:**
- 1) MULLION CHART APPLIES TO 3/4" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.**
  - 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.**
  - 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.**
  - 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.**
  - 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.**
  - 6) TRIBUTARY WIDTH =  $W = (A+B)/2$**
  - 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.**



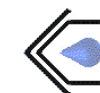
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

3/4"X 5-3/16" MULLION LOADS TABLE  
ONE WAY

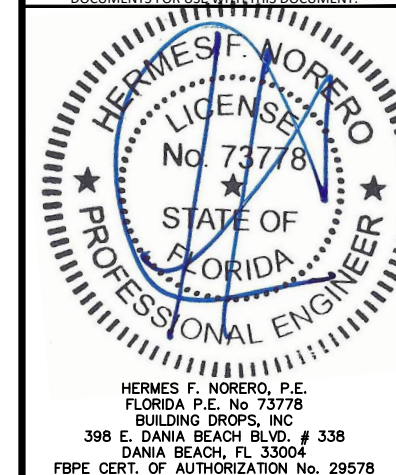
PREPARED BY:  
BUILDING PROPS, INC.

**E. DANIA BEACH BLVD., STE. 3000**  
**DANIA BEACH, FL 33004**  
**PH: (954)399-8478**  
**FAX: (954)744.4738**  
**WEB: [www.buildingdrops.com](http://www.buildingdrops.com)**



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERAL IN NATURE AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #: **FL24230**

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

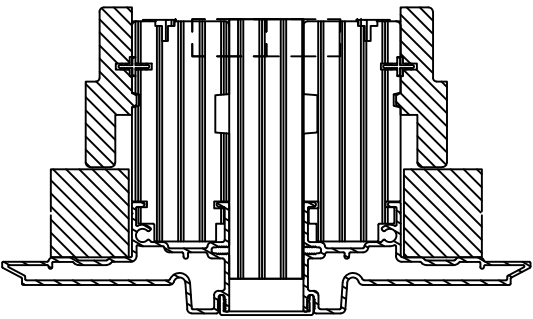
DWG. #: AWD211

SHEET: 20

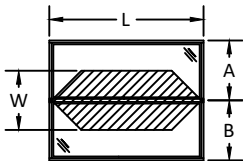
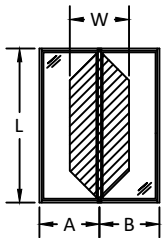
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)           |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1" X 3-1/2" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                   | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                        | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 |
| 24.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                   | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                   | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |
| 72.0                                                   | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |
| 78.0                                                   | 75.00                    | 59.62 | 47.94 | 42.16 | 39.72 | 39.40 | 39.40 | 39.40 | 39.40 | 39.40 | 39.40 | 39.40 | 39.40 | 39.40 |
| 84.0                                                   | 67.82                    | 47.16 | 37.54 | 32.53 | 30.07 | 29.29 | 29.29 | 29.29 | 29.29 | 29.29 | 29.29 | 29.29 | 29.29 | 29.29 |
| 90.0                                                   | 54.90                    | 37.97 | 29.98 | 25.69 | 23.38 | 22.37 | 22.23 | 22.23 | 22.23 | 22.23 | 22.23 | 22.23 | 22.23 | 22.23 |
| 96.0                                                   | 45.07                    | 31.04 | 24.35 | 20.68 | 18.59 | 17.52 | 17.17 | 17.17 | 17.17 | 17.17 | 17.17 | 17.17 | 17.17 | 17.17 |
| 102.0                                                  | 37.46                    | 25.71 | 20.07 | 16.91 | 15.06 | 14.02 | 13.54 | 13.47 | 13.47 | 13.47 | 13.47 | 13.47 | 13.47 | 13.47 |
| 108.0                                                  | 31.48                    | 21.53 | 16.74 | 14.02 | 12.39 | 11.41 | 10.89 | 10.72 | 10.72 | 10.72 | 10.72 | 10.72 | 10.72 | 10.72 |
| 114.0                                                  | 26.71                    | 18.22 | 14.11 | 11.77 | 10.33 | 9.43  | 8.91  | 8.67  | 8.63  | 8.63  | 8.63  | 8.63  | 8.63  | 8.63  |
| 120.0                                                  | 22.86                    | 15.56 | 12.01 | 9.98  | 8.71  | 7.90  | 7.40  | 7.13  | 7.03  | 7.03  | 7.03  | 7.03  | 7.03  | 7.03  |
| 126.0                                                  | 19.71                    | 13.40 | 10.31 | 8.53  | 7.42  | 6.69  | 6.22  | 5.94  | 5.81  | 5.79  | 5.79  | 5.79  | 5.79  | 5.79  |
| 132.0                                                  | 17.12                    | 11.62 | 8.92  | 7.36  | 6.37  | 5.72  | 5.28  | 5.01  | 4.86  | 4.80  | 4.80  | 4.80  | 4.80  | 4.80  |
| 138.0                                                  | 14.97                    | 10.14 | 7.77  | 6.40  | 5.52  | 4.93  | 4.53  | 4.27  | 4.11  | 4.03  | 4.02  | 4.02  | 4.02  | 4.02  |
| 144.0                                                  | 13.16                    | 8.90  | 6.81  | 5.59  | 4.81  | 4.28  | 3.92  | 3.67  | 3.51  | 3.42  | 3.39  | 3.39  | 3.39  | 3.39  |
| 150.0                                                  | 11.63                    | 7.86  | 6.01  | 4.92  | 4.22  | 3.75  | 3.42  | 3.19  | 3.03  | 2.93  | 2.89  | 2.88  | 2.88  | 2.88  |
| 156.0                                                  | 10.33                    | 6.97  | 5.32  | 4.35  | 3.73  | 3.30  | 3.00  | 2.78  | 2.63  | 2.54  | 2.48  | 2.46  | 2.46  | 2.46  |
| 162.0                                                  | 9.22                     | 6.22  | 4.74  | 3.87  | 3.31  | 2.92  | 2.64  | 2.45  | 2.31  | 2.21  | 2.15  | 2.12  | 2.12  | 2.12  |
| 168.0                                                  | 8.26                     | 5.57  | 4.24  | 3.46  | 2.95  | 2.60  | 2.35  | 2.16  | 2.03  | 1.94  | 1.88  | 1.84  | 1.83  | 1.83  |
| 174.0                                                  | 7.43                     | 5.00  | 3.81  | 3.10  | 2.64  | 2.32  | 2.09  | 1.92  | 1.80  | 1.71  | 1.65  | 1.61  | 1.59  | 1.59  |
| 180.0                                                  | 6.71                     | 4.51  | 3.43  | 2.79  | 2.37  | 2.08  | 1.87  | 1.72  | 1.61  | 1.52  | 1.46  | 1.42  | 1.40  | 1.39  |
| 186.0                                                  | 6.08                     | 4.09  | 3.10  | 2.52  | 2.14  | 1.88  | 1.69  | 1.54  | 1.44  | 1.36  | 1.30  | 1.26  | 1.23  | 1.22  |
| 192.0                                                  | 5.52                     | 3.71  | 2.82  | 2.29  | 1.94  | 1.70  | 1.52  | 1.39  | 1.29  | 1.22  | 1.16  | 1.12  | 1.10  | 1.07  |

NOTE:

- 1) MULLION CHART APPLIES TO 1" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH = W = (A+B)/2
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



1" X 3 1/2"  
LVL MULL PROFILE



A + B = W  
2



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

1" X 3-1/2" MULLION LOADS TABLE  
ONE WAY

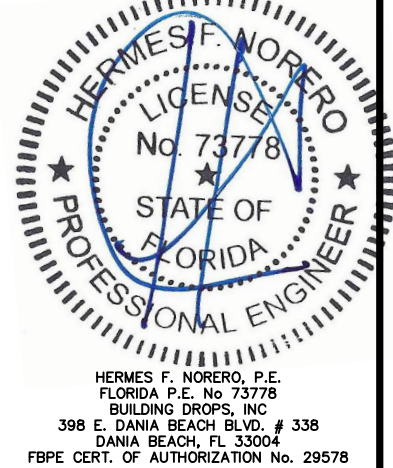
PREPARED BY:

BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:  
FL24230

DATE:  
10.12.17

DWG. BY:  
RV

CHK. BY:  
HFN

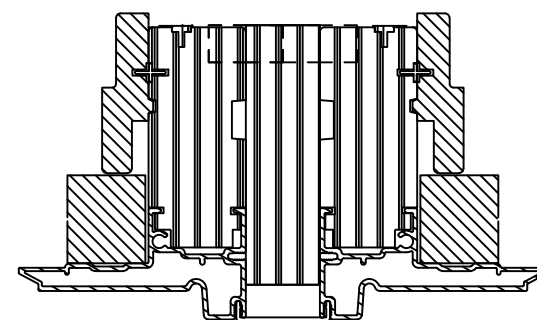
SCALE:  
NTS

DWG. #:  
AWD211

SHEET:  
21

OF 28

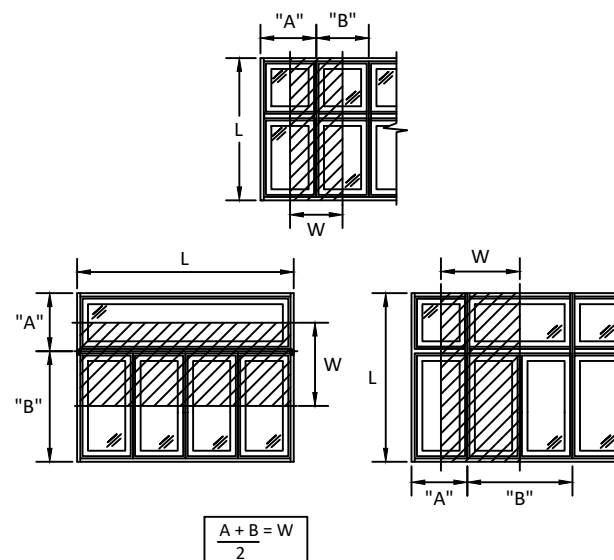
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)           |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1" X 3-1/2" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                   | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                        | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                   | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                   | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                   | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                   | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                   | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                   | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                   | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                   | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                   | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                   | 65.61                    | 43.74 | 32.81 | 26.24 | 21.87 | 18.75 | 16.40 | 14.58 | 13.12 | 11.93 | 10.94 | 10.09 | 9.37  | 8.75  | 8.20  |
| 90.0                                                   | 53.34                    | 35.56 | 26.67 | 21.34 | 17.78 | 15.24 | 13.34 | 11.85 | 10.67 | 9.70  | 8.89  | 8.21  | 7.62  | 7.11  | 6.67  |
| 96.0                                                   | 43.95                    | 29.30 | 21.98 | 17.58 | 14.65 | 12.56 | 10.99 | 9.77  | 8.79  | 7.99  | 7.33  | 6.76  | 6.28  | 5.86  | 5.49  |
| 102.0                                                  | 36.65                    | 24.43 | 18.32 | 14.66 | 12.22 | 10.47 | 9.16  | 8.14  | 7.33  | 6.66  | 6.11  | 5.64  | 5.24  | 4.89  | 4.58  |
| 108.0                                                  | 30.87                    | 20.58 | 15.44 | 12.35 | 10.29 | 8.82  | 7.72  | 6.86  | 6.17  | 5.61  | 5.15  | 4.75  | 4.41  | 4.12  | 3.86  |
| 114.0                                                  | 26.25                    | 17.50 | 13.12 | 10.50 | 8.75  | 7.50  | 6.56  | 5.83  | 5.25  | 4.77  | 4.37  | 4.04  | 3.75  | 3.50  | 3.28  |
| 120.0                                                  | 22.50                    | 15.00 | 11.25 | 9.00  | 7.50  | 6.43  | 5.63  | 5.00  | 4.50  | 4.09  | 3.75  | 3.46  | 3.21  | 3.00  | 2.81  |
| 126.0                                                  | 19.44                    | 12.96 | 9.72  | 7.78  | 6.48  | 5.55  | 4.86  | 4.32  | 3.89  | 3.53  | 3.24  | 2.99  | 2.78  | 2.59  | 2.43  |
| 132.0                                                  | 16.91                    | 11.27 | 8.45  | 6.76  | 5.64  | 4.83  | 4.23  | 3.76  | 3.38  | 3.07  | 2.82  | 2.60  | 2.42  | 2.25  | 2.11  |
| 138.0                                                  | 14.80                    | 9.86  | 7.40  | 5.92  | 4.93  | 4.23  | 3.70  | 3.29  | 2.96  | 2.69  | 2.47  | 2.28  | 2.11  | 1.97  | 1.85  |
| 144.0                                                  | 13.02                    | 8.68  | 6.51  | 5.21  | 4.34  | 3.72  | 3.26  | 2.89  | 2.60  | 2.37  | 2.17  | 2.00  | 1.86  | 1.74  | 1.63  |
| 150.0                                                  | 11.52                    | 7.68  | 5.76  | 4.61  | 3.84  | 3.29  | 2.88  | 2.56  | 2.30  | 2.09  | 1.92  | 1.77  | 1.65  | 1.54  | 1.44  |
| 156.0                                                  | 10.24                    | 6.83  | 5.12  | 4.10  | 3.41  | 2.93  | 2.56  | 2.28  | 2.05  | 1.86  | 1.71  | 1.58  | 1.46  | 1.37  | 1.28  |
| 162.0                                                  | 9.15                     | 6.10  | 4.57  | 3.66  | 3.05  | 2.61  | 2.29  | 2.03  | 1.83  | 1.66  | 1.52  | 1.41  | 1.31  | 1.22  | 1.14  |
| 168.0                                                  | 8.20                     | 5.47  | 4.10  | 3.28  | 2.73  | 2.34  | 2.05  | 1.82  | 1.64  | 1.49  | 1.37  | 1.26  | 1.17  | 1.09  | 1.03  |
| 174.0                                                  | 7.38                     | 4.92  | 3.69  | 2.95  | 2.46  | 2.11  | 1.85  | 1.64  | 1.48  | 1.34  | 1.23  | 1.14  | 1.05  | 0.98  | 0.92  |
| 180.0                                                  | 6.67                     | 4.45  | 3.33  | 2.67  | 2.22  | 1.91  | 1.67  | 1.48  | 1.33  | 1.21  | 1.11  | 1.03  | 0.95  | 0.89  | 0.83  |
| 186.0                                                  | 6.04                     | 4.03  | 3.02  | 2.42  | 2.01  | 1.73  | 1.51  | 1.34  | 1.21  | 1.10  | 1.01  | 0.93  | 0.86  | 0.81  | 0.76  |
| 192.0                                                  | 5.49                     | 3.66  | 2.75  | 2.20  | 1.83  | 1.57  | 1.37  | 1.22  | 1.10  | 1.00  | 0.92  | 0.85  | 0.78  | 0.73  | 0.69  |



**1" X 3 1/2"**  
**LVL MULL PROFILE**

**NOTE:**

- 1) MULLION CHART APPLIES TO 1" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

1" X 3-1/2" MULLION LOADS TABLE  
TWO WAY

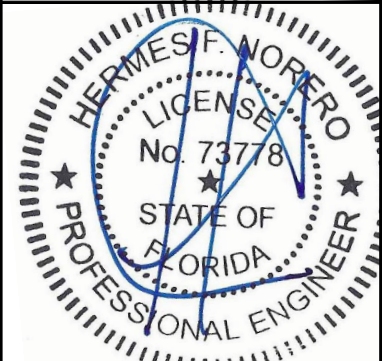
PREPARED BY:

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744.4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



HERMES F. NORERO, P.E.  
FLORIDA P.E. No 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

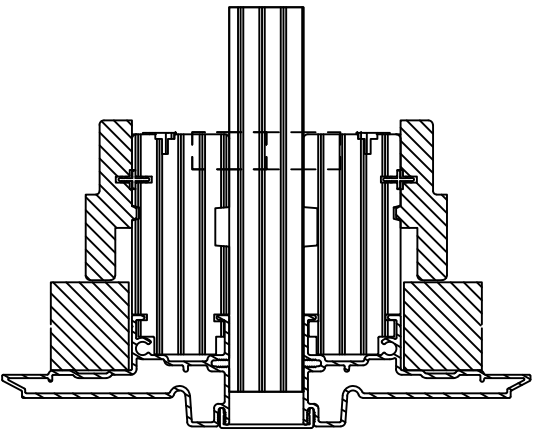
SHEET:

22

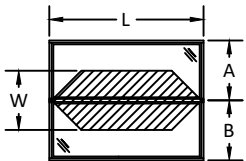
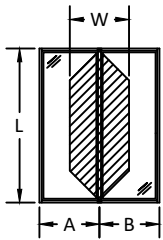
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)            |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                    | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                         | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                    | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                    | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |
| 72.0                                                    | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |
| 78.0                                                    | 75.00                    | 62.40 | 52.00 | 46.80 | 44.57 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 |
| 84.0                                                    | 75.00                    | 56.73 | 46.80 | 41.60 | 39.00 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 |
| 90.0                                                    | 72.00                    | 52.00 | 42.55 | 37.44 | 34.67 | 33.43 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 |
| 96.0                                                    | 66.86                    | 48.00 | 39.00 | 34.04 | 31.20 | 29.71 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 |
| 102.0                                                   | 62.40                    | 44.57 | 36.00 | 31.20 | 28.36 | 26.74 | 26.00 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 |
| 108.0                                                   | 58.50                    | 41.60 | 33.18 | 27.80 | 24.56 | 22.63 | 21.59 | 21.25 | 21.25 | 21.25 | 21.25 | 21.25 | 21.25 | 21.25 | 21.25 |
| 114.0                                                   | 52.94                    | 36.13 | 27.98 | 23.33 | 20.47 | 18.70 | 17.67 | 17.19 | 17.12 | 17.12 | 17.12 | 17.12 | 17.12 | 17.12 | 17.12 |
| 120.0                                                   | 45.31                    | 30.85 | 23.82 | 19.77 | 17.26 | 15.66 | 14.67 | 14.13 | 13.94 | 13.94 | 13.94 | 13.94 | 13.94 | 13.94 | 13.94 |
| 126.0                                                   | 39.08                    | 26.56 | 20.45 | 16.92 | 14.70 | 13.26 | 12.33 | 11.77 | 11.51 | 11.47 | 11.47 | 11.47 | 11.47 | 11.47 | 11.47 |
| 132.0                                                   | 33.94                    | 23.03 | 17.69 | 14.59 | 12.63 | 11.33 | 10.47 | 9.93  | 9.63  | 9.52  | 9.52  | 9.52  | 9.52  | 9.52  | 9.52  |
| 138.0                                                   | 29.67                    | 20.10 | 15.41 | 12.68 | 10.94 | 9.77  | 8.98  | 8.46  | 8.15  | 8.00  | 7.97  | 7.97  | 7.97  | 7.97  | 7.97  |
| 144.0                                                   | 26.08                    | 17.65 | 13.51 | 11.09 | 9.54  | 8.49  | 7.77  | 7.28  | 6.97  | 6.79  | 6.72  | 6.72  | 6.72  | 6.72  | 6.72  |
| 150.0                                                   | 23.06                    | 15.58 | 11.91 | 9.76  | 8.37  | 7.43  | 6.77  | 6.32  | 6.01  | 5.82  | 5.73  | 5.71  | 5.71  | 5.71  | 5.71  |
| 156.0                                                   | 20.48                    | 13.83 | 10.55 | 8.63  | 7.39  | 6.54  | 5.94  | 5.52  | 5.22  | 5.03  | 4.92  | 4.88  | 4.88  | 4.88  | 4.88  |
| 162.0                                                   | 18.27                    | 12.33 | 9.40  | 7.67  | 6.55  | 5.79  | 5.24  | 4.85  | 4.57  | 4.38  | 4.27  | 4.21  | 4.20  | 4.20  | 4.20  |
| 168.0                                                   | 16.38                    | 11.04 | 8.40  | 6.85  | 5.84  | 5.15  | 4.65  | 4.29  | 4.03  | 3.85  | 3.73  | 3.66  | 3.63  | 3.63  | 3.63  |
| 174.0                                                   | 14.73                    | 9.92  | 7.55  | 6.14  | 5.23  | 4.60  | 4.15  | 3.82  | 3.57  | 3.40  | 3.28  | 3.20  | 3.16  | 3.15  | 3.15  |
| 180.0                                                   | 13.30                    | 8.95  | 6.80  | 5.53  | 4.70  | 4.13  | 3.72  | 3.41  | 3.18  | 3.02  | 2.90  | 2.82  | 2.77  | 2.75  | 2.75  |
| 186.0                                                   | 12.05                    | 8.10  | 6.15  | 5.00  | 4.25  | 3.72  | 3.34  | 3.06  | 2.85  | 2.69  | 2.58  | 2.50  | 2.45  | 2.42  | 2.42  |
| 192.0                                                   | 10.95                    | 7.36  | 5.58  | 4.53  | 3.85  | 3.37  | 3.02  | 2.76  | 2.56  | 2.41  | 2.30  | 2.22  | 2.17  | 2.14  | 2.13  |

NOTE:

- MULLION CHART APPLIES TO 1" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- TRIBUTARY WIDTH =  $W = (A+B)/2$
- WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



1" X 5 3/16"  
LVL MULL PROFILE



$$\frac{A+B}{2} = W$$



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

1" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

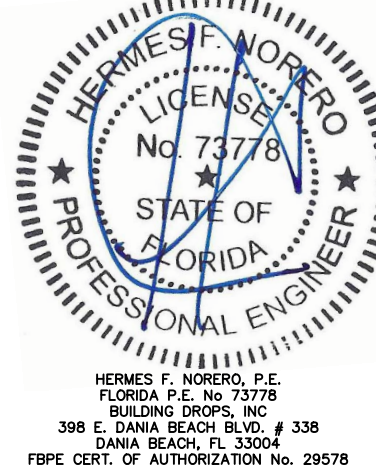
PREPARED BY:

BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



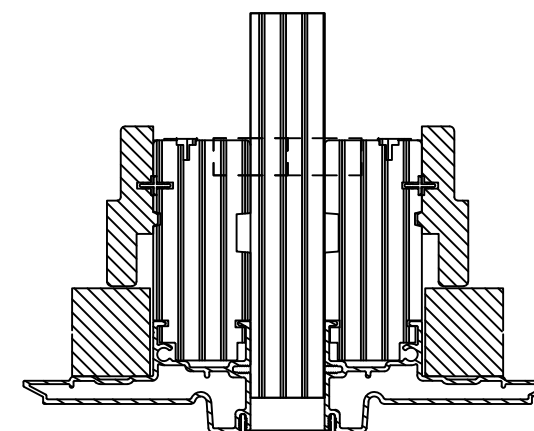
| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC  
AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC  
SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE  
FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED  
ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC  
DOCUMENTS FOR USE WITH THIS DOCUMENT.

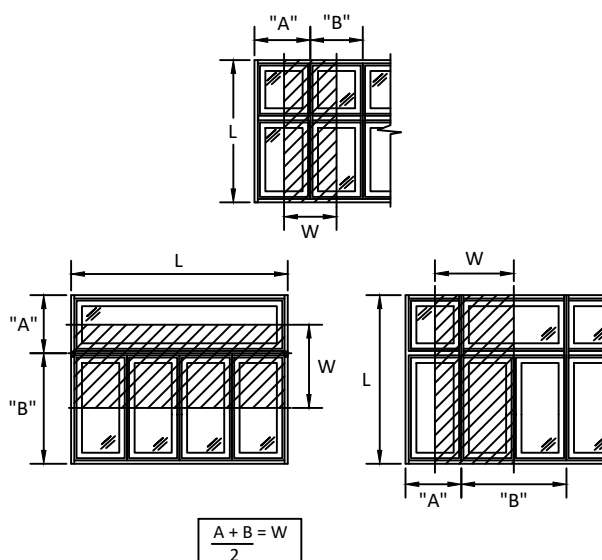


|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 23       |

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)            |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                    | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                         | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                    | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                    | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                    | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                    | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                    | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                    | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                    | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                    | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                    | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                    | 66.86                    | 44.57 | 33.43 | 26.74 | 22.29 | 19.10 | 16.71 | 14.86 | 13.37 | 12.16 | 11.14 | 10.29 | 9.55  | 8.91  | 8.36  |
| 90.0                                                    | 62.40                    | 41.60 | 31.20 | 24.96 | 20.80 | 17.83 | 15.60 | 13.87 | 12.48 | 11.35 | 10.40 | 9.60  | 8.91  | 8.32  | 7.80  |
| 96.0                                                    | 58.50                    | 39.00 | 29.25 | 23.40 | 19.50 | 16.71 | 14.63 | 13.00 | 11.70 | 10.64 | 9.75  | 9.00  | 8.36  | 7.80  | 7.31  |
| 102.0                                                   | 55.06                    | 36.71 | 27.53 | 22.02 | 18.35 | 15.73 | 13.76 | 12.24 | 11.01 | 10.01 | 9.18  | 8.47  | 7.87  | 7.34  | 6.88  |
| 108.0                                                   | 52.00                    | 34.67 | 26.00 | 20.80 | 17.33 | 14.86 | 13.00 | 11.56 | 10.40 | 9.45  | 8.67  | 8.00  | 7.43  | 6.93  | 6.50  |
| 114.0                                                   | 49.26                    | 32.84 | 24.63 | 19.71 | 16.42 | 14.08 | 12.32 | 10.95 | 9.85  | 8.96  | 8.21  | 7.58  | 7.04  | 6.57  | 6.16  |
| 120.0                                                   | 44.61                    | 29.74 | 22.31 | 17.85 | 14.87 | 12.75 | 11.15 | 9.91  | 8.92  | 8.11  | 7.44  | 6.86  | 6.37  | 5.95  | 5.58  |
| 126.0                                                   | 38.54                    | 25.69 | 19.27 | 15.42 | 12.85 | 11.01 | 9.63  | 8.56  | 7.71  | 7.01  | 6.42  | 5.93  | 5.51  | 5.14  | 4.82  |
| 132.0                                                   | 33.52                    | 22.35 | 16.76 | 13.41 | 11.17 | 9.58  | 8.38  | 7.45  | 6.70  | 6.09  | 5.59  | 5.16  | 4.79  | 4.47  | 4.19  |
| 138.0                                                   | 29.33                    | 19.56 | 14.67 | 11.73 | 9.78  | 8.38  | 7.33  | 6.52  | 5.87  | 5.33  | 4.89  | 4.51  | 4.19  | 3.91  | 3.67  |
| 144.0                                                   | 25.82                    | 17.21 | 12.91 | 10.33 | 8.61  | 7.38  | 6.45  | 5.74  | 5.16  | 4.69  | 4.30  | 3.97  | 3.69  | 3.44  | 3.23  |
| 150.0                                                   | 22.84                    | 15.23 | 11.42 | 9.14  | 7.61  | 6.53  | 5.71  | 5.08  | 4.57  | 4.15  | 3.81  | 3.51  | 3.26  | 3.05  | 2.86  |
| 156.0                                                   | 20.31                    | 13.54 | 10.15 | 8.12  | 6.77  | 5.80  | 5.08  | 4.51  | 4.06  | 3.69  | 3.38  | 3.12  | 2.90  | 2.71  | 2.54  |
| 162.0                                                   | 18.13                    | 12.09 | 9.07  | 7.25  | 6.04  | 5.18  | 4.53  | 4.03  | 3.63  | 3.30  | 3.02  | 2.79  | 2.59  | 2.42  | 2.27  |
| 168.0                                                   | 16.26                    | 10.84 | 8.13  | 6.50  | 5.42  | 4.65  | 4.06  | 3.61  | 3.25  | 2.96  | 2.71  | 2.50  | 2.32  | 2.17  | 2.03  |
| 174.0                                                   | 14.63                    | 9.76  | 7.32  | 5.85  | 4.88  | 4.18  | 3.66  | 3.25  | 2.93  | 2.66  | 2.44  | 2.25  | 2.09  | 1.95  | 1.83  |
| 180.0                                                   | 13.22                    | 8.81  | 6.61  | 5.29  | 4.41  | 3.78  | 3.30  | 2.94  | 2.64  | 2.40  | 2.20  | 2.03  | 1.89  | 1.76  | 1.65  |
| 186.0                                                   | 11.98                    | 7.99  | 5.99  | 4.79  | 3.99  | 3.42  | 3.00  | 2.66  | 2.40  | 2.18  | 2.00  | 1.84  | 1.71  | 1.60  | 1.50  |
| 192.0                                                   | 10.89                    | 7.26  | 5.45  | 4.36  | 3.63  | 3.11  | 2.72  | 2.42  | 2.18  | 1.98  | 1.82  | 1.68  | 1.56  | 1.45  | 1.36  |



**1" X 5 3/16"**  
**LVL MULL PROFILE**



**NOTE:**

- 1) MULLION CHART APPLIES TO 1" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



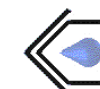
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

1" X 5-3/16" MULLION LOADS TABLE  
TWO WAY

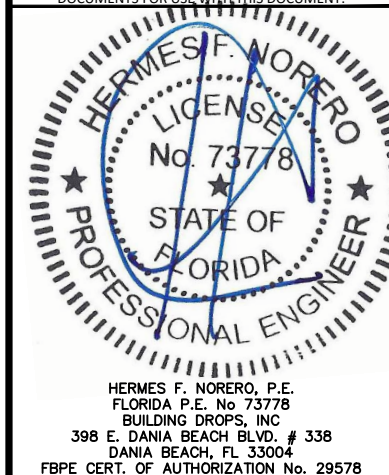
PREPARED BY:

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744.4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:

#. FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

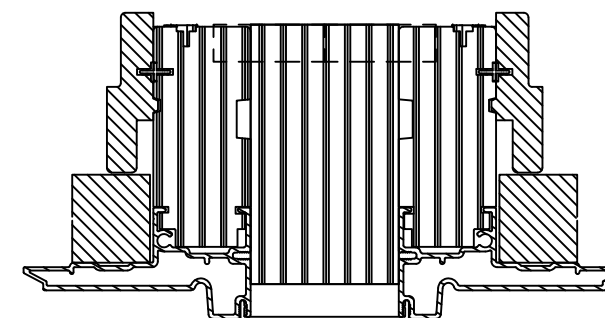
SCALE: NTS

DWG. #: AWD211

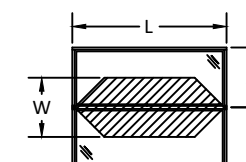
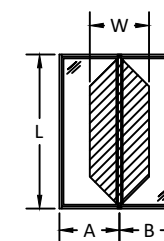
SHEET:

24

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)           |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2" X 3-1/2" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull<br>Length (in)                                | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                        | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | ####  | 180.0 | 192.0 |
| 24.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 30.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 36.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 42.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 48.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 54.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |
| 60.0                                                   | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |
| 66.0                                                   | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |
| 72.0                                                   | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |
| 78.0                                                   | 75.00                    | 62.40 | 52.00 | 46.80 | 44.57 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 |
| 84.0                                                   | 75.00                    | 56.73 | 46.80 | 41.60 | 39.00 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 |
| 90.0                                                   | 72.00                    | 52.00 | 42.55 | 37.03 | 33.71 | 32.25 | 32.04 | 32.04 | 32.04 | 32.04 | 32.04 | 32.04 | 32.04 | 32.04 | 32.04 |
| 96.0                                                   | 64.97                    | 44.75 | 35.11 | 29.81 | 26.81 | 25.26 | 24.75 | 24.75 | 24.75 | 24.75 | 24.75 | 24.75 | 24.75 | 24.75 | 24.75 |
| 102.0                                                  | 54.00                    | 37.06 | 28.93 | 24.38 | 21.71 | 20.21 | 19.52 | 19.42 | 19.42 | 19.42 | 19.42 | 19.42 | 19.42 | 19.42 | 19.42 |
| 108.0                                                  | 45.38                    | 31.05 | 24.13 | 20.22 | 17.86 | 16.45 | 15.70 | 15.45 | 15.45 | 15.45 | 15.45 | 15.45 | 15.45 | 15.45 | 15.45 |
| 114.0                                                  | 38.50                    | 26.27 | 20.35 | 16.96 | 14.89 | 13.60 | 12.85 | 12.50 | 12.45 | 12.45 | 12.45 | 12.45 | 12.45 | 12.45 | 12.45 |
| 120.0                                                  | 32.95                    | 22.43 | 17.32 | 14.38 | 12.55 | 11.39 | 10.67 | 10.27 | 10.14 | 10.14 | 10.14 | 10.14 | 10.14 | 10.14 | 10.14 |
| 126.0                                                  | 28.42                    | 19.31 | 14.87 | 12.30 | 10.69 | 9.64  | 8.97  | 8.56  | 8.37  | 8.34  | 8.34  | 8.34  | 8.34  | 8.34  | 8.34  |
| 132.0                                                  | 24.68                    | 16.75 | 12.86 | 10.61 | 9.18  | 8.24  | 7.62  | 7.22  | 7.00  | 6.92  | 6.92  | 6.92  | 6.92  | 6.92  | 6.92  |
| 138.0                                                  | 21.58                    | 14.62 | 11.21 | 9.22  | 7.95  | 7.11  | 6.53  | 6.16  | 5.93  | 5.81  | 5.80  | 5.80  | 5.80  | 5.80  | 5.80  |
| 150.0                                                  | 16.77                    | 11.33 | 8.66  | 7.09  | 6.09  | 5.40  | 4.92  | 4.59  | 4.37  | 4.23  | 4.16  | 4.15  | 4.15  | 4.15  | 4.15  |
| 156.0                                                  | 14.89                    | 10.05 | 7.67  | 6.28  | 5.37  | 4.75  | 4.32  | 4.01  | 3.80  | 3.66  | 3.58  | 3.55  | 3.55  | 3.55  | 3.55  |
| 162.0                                                  | 13.29                    | 8.96  | 6.83  | 5.58  | 4.77  | 4.21  | 3.81  | 3.53  | 3.33  | 3.19  | 3.10  | 3.06  | 3.05  | 3.05  | 3.05  |
| 168.0                                                  | 11.91                    | 8.03  | 6.11  | 4.98  | 4.25  | 3.74  | 3.38  | 3.12  | 2.93  | 2.80  | 2.71  | 2.66  | 2.64  | 2.64  | 2.64  |
| 174.0                                                  | 10.71                    | 7.21  | 5.49  | 4.47  | 3.81  | 3.35  | 3.02  | 2.77  | 2.60  | 2.47  | 2.38  | 2.33  | 2.30  | 2.29  | 2.29  |
| 180.0                                                  | 9.67                     | 6.51  | 4.95  | 4.02  | 3.42  | 3.00  | 2.70  | 2.48  | 2.31  | 2.19  | 2.11  | 2.05  | 2.02  | 2.00  | 2.00  |
| 186.0                                                  | 8.76                     | 5.89  | 4.47  | 3.64  | 3.09  | 2.71  | 2.43  | 2.23  | 2.07  | 1.96  | 1.87  | 1.82  | 1.78  | 1.76  | 1.76  |
| 192.0                                                  | 7.96                     | 5.35  | 4.06  | 3.30  | 2.80  | 2.45  | 2.19  | 2.01  | 1.86  | 1.76  | 1.68  | 1.62  | 1.58  | 1.56  | 1.55  |



**2" X 3 1/2"**  
**LVL MULL PROFILE**



$$\frac{A + B = W}{2}$$

**NOTE:**

- 1) MULLION CHART APPLIES TO 2" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

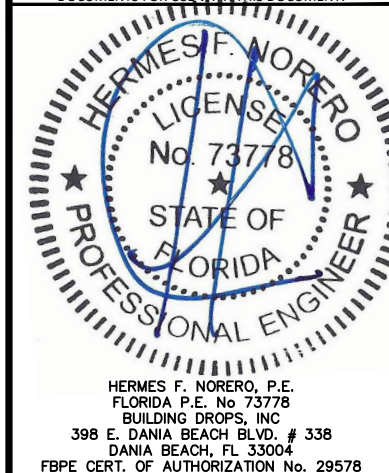
2" X 3 1/2" MULLION LOADS TABLE  
ONE WAY

**PREPARED BY:**

 **BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)

| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



FL #:

#. FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

SHEET:

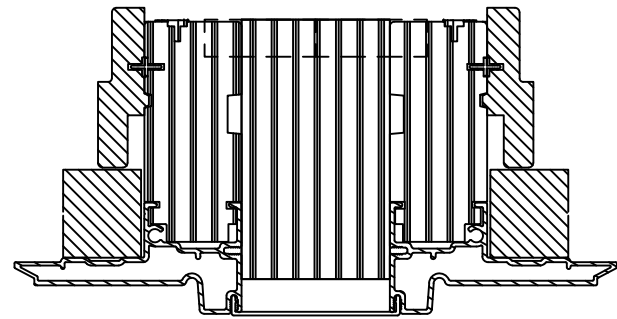
25

s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\l74230.4 & 5\lwd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg

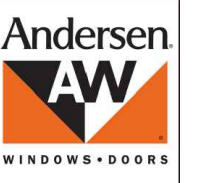
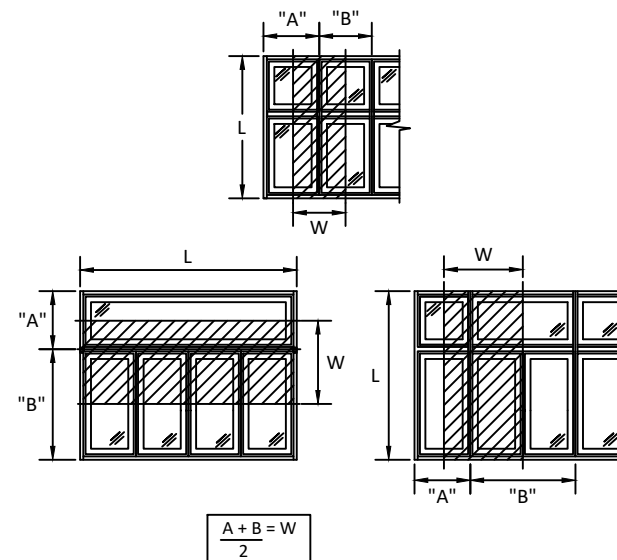
| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)           |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2" X 3-1/2" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                   | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                        | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                   | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                   | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                   | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                   | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                   | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                   | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                   | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                   | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                   | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                   | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                   | 66.86                    | 44.57 | 33.43 | 26.74 | 22.29 | 19.10 | 16.71 | 14.86 | 13.37 | 12.16 | 11.14 | 10.29 | 9.55  | 8.91  | 8.36  |
| 90.0                                                   | 62.40                    | 41.60 | 31.20 | 24.96 | 20.80 | 17.83 | 15.60 | 13.87 | 12.48 | 11.35 | 10.40 | 9.60  | 8.91  | 8.32  | 7.80  |
| 96.0                                                   | 58.50                    | 39.00 | 29.25 | 23.40 | 19.50 | 16.71 | 14.63 | 13.00 | 11.70 | 10.64 | 9.75  | 9.00  | 8.36  | 7.80  | 7.31  |
| 102.0                                                  | 52.83                    | 35.22 | 26.41 | 21.13 | 17.61 | 15.09 | 13.21 | 11.74 | 10.57 | 9.61  | 8.80  | 8.13  | 7.55  | 7.04  | 6.60  |
| 108.0                                                  | 44.50                    | 29.67 | 22.25 | 17.80 | 14.83 | 12.72 | 11.13 | 9.89  | 8.90  | 8.09  | 7.42  | 6.85  | 6.36  | 5.93  | 5.56  |
| 114.0                                                  | 37.84                    | 25.23 | 18.92 | 15.14 | 12.61 | 10.81 | 9.46  | 8.41  | 7.57  | 6.88  | 6.31  | 5.82  | 5.41  | 5.05  | 4.73  |
| 120.0                                                  | 32.44                    | 21.63 | 16.22 | 12.98 | 10.81 | 9.27  | 8.11  | 7.21  | 6.49  | 5.90  | 5.41  | 4.99  | 4.63  | 4.33  | 4.06  |
| 126.0                                                  | 28.03                    | 18.68 | 14.01 | 11.21 | 9.34  | 8.01  | 7.01  | 6.23  | 5.61  | 5.10  | 4.67  | 4.31  | 4.00  | 3.74  | 3.50  |
| 132.0                                                  | 24.38                    | 16.25 | 12.19 | 9.75  | 8.13  | 6.96  | 6.09  | 5.42  | 4.88  | 4.43  | 4.06  | 3.75  | 3.48  | 3.25  | 3.05  |
| 138.0                                                  | 21.33                    | 14.22 | 10.67 | 8.53  | 7.11  | 6.09  | 5.33  | 4.74  | 4.27  | 3.88  | 3.56  | 3.28  | 3.05  | 2.84  | 2.67  |
| 144.0                                                  | 18.78                    | 12.52 | 9.39  | 7.51  | 6.26  | 5.36  | 4.69  | 4.17  | 3.76  | 3.41  | 3.13  | 2.89  | 2.68  | 2.50  | 2.35  |
| 150.0                                                  | 16.61                    | 11.07 | 8.31  | 6.64  | 5.54  | 4.75  | 4.15  | 3.69  | 3.32  | 3.02  | 2.77  | 2.56  | 2.37  | 2.21  | 2.08  |
| 156.0                                                  | 14.77                    | 9.84  | 7.38  | 5.91  | 4.92  | 4.22  | 3.69  | 3.28  | 2.95  | 2.68  | 2.46  | 2.27  | 2.11  | 1.97  | 1.85  |
| 162.0                                                  | 13.19                    | 8.79  | 6.59  | 5.27  | 4.40  | 3.77  | 3.30  | 2.93  | 2.64  | 2.40  | 2.20  | 2.03  | 1.88  | 1.76  | 1.65  |
| 168.0                                                  | 11.82                    | 7.88  | 5.91  | 4.73  | 3.94  | 3.38  | 2.96  | 2.63  | 2.36  | 2.15  | 1.97  | 1.82  | 1.69  | 1.58  | 1.48  |
| 174.0                                                  | 10.64                    | 7.09  | 5.32  | 4.26  | 3.55  | 3.04  | 2.66  | 2.36  | 2.13  | 1.93  | 1.77  | 1.64  | 1.52  | 1.42  | 1.33  |
| 180.0                                                  | 9.61                     | 6.41  | 4.81  | 3.85  | 3.20  | 2.75  | 2.40  | 2.14  | 1.92  | 1.75  | 1.60  | 1.48  | 1.37  | 1.28  | 1.20  |
| 186.0                                                  | 8.71                     | 5.81  | 4.36  | 3.48  | 2.90  | 2.49  | 2.18  | 1.94  | 1.74  | 1.58  | 1.45  | 1.34  | 1.24  | 1.16  | 1.09  |
| 192.0                                                  | 7.92                     | 5.28  | 3.96  | 3.17  | 2.64  | 2.26  | 1.98  | 1.76  | 1.58  | 1.44  | 1.32  | 1.22  | 1.13  | 1.06  | 0.99  |

NOTE:

- MULLION CHART APPLIES TO 2" X 3-1/2" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
- MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
- TRIBUTARY WIDTH =  $W = (A+B)/2$
- WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



2" X 3 1/2"  
LVL MULL PROFILE



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

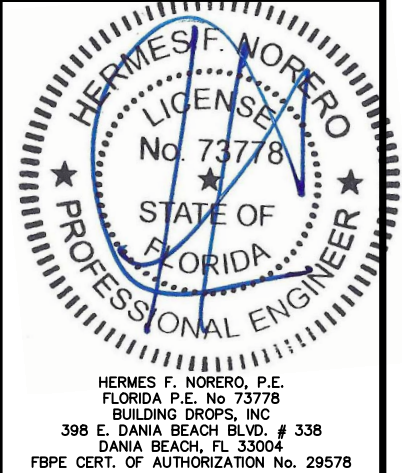
2" X 3 1/2" MULLION LOADS TABLE  
TWO WAY

PREPARED BY:  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

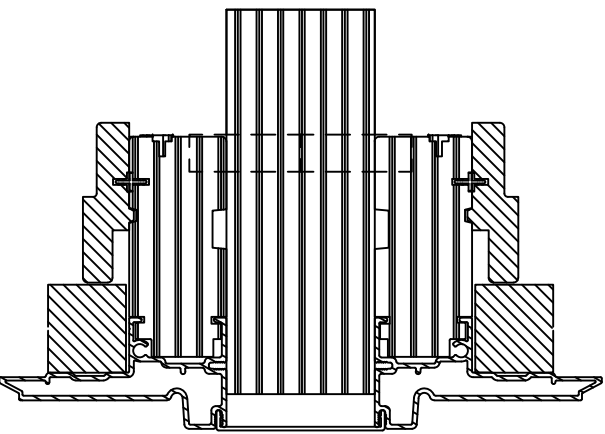
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | CHK. BY: |
| RV       | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   | 26       |

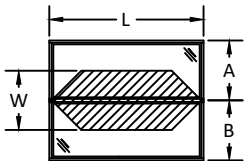
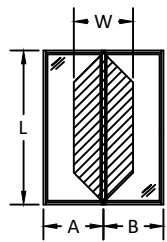
s:\projects\andersen windows\lbc-19-0548-2 - fbc submittal - e-series mullion revisions\dwgs\l74230.4 & 5\lwd211 - fl15440-series 13 casement fixed-non-impact-(n-hvz).dwg 8/15/2019 10:19 AM

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)<br>2" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|---------------------------------------------------------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| L - Mull Length (in)                                                                                    | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |  |
|                                                                                                         | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |  |
| 24.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 30.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 36.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 42.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 48.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 54.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 | 75.00 |  |
| 60.0                                                                                                    | 75.00                    | 75.00 | 75.00 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 | 74.88 |  |
| 66.0                                                                                                    | 75.00                    | 75.00 | 66.86 | 62.40 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 | 61.88 |  |
| 72.0                                                                                                    | 75.00                    | 69.33 | 58.50 | 53.49 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 | 52.00 |  |
| 78.0                                                                                                    | 75.00                    | 62.40 | 52.00 | 46.80 | 44.57 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 | 44.31 |  |
| 84.0                                                                                                    | 75.00                    | 56.73 | 46.80 | 41.60 | 39.00 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 | 38.20 |  |
| 90.0                                                                                                    | 72.00                    | 52.00 | 42.55 | 37.44 | 34.67 | 33.43 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 | 33.28 |  |
| 96.0                                                                                                    | 66.86                    | 48.00 | 39.00 | 34.04 | 31.20 | 29.71 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 | 29.25 |  |
| 102.0                                                                                                   | 62.40                    | 44.57 | 36.00 | 31.20 | 28.36 | 26.74 | 26.00 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 | 25.91 |  |
| 108.0                                                                                                   | 58.50                    | 41.60 | 33.43 | 28.80 | 26.00 | 24.31 | 23.40 | 23.11 | 23.11 | 23.11 | 23.11 | 23.11 | 23.11 | 23.11 | 23.11 |  |
| 114.0                                                                                                   | 55.06                    | 39.00 | 31.20 | 26.74 | 24.00 | 22.29 | 21.27 | 20.80 | 20.74 | 20.74 | 20.74 | 20.74 | 20.74 | 20.74 | 20.74 |  |
| 120.0                                                                                                   | 52.00                    | 36.71 | 29.25 | 24.96 | 22.29 | 20.57 | 19.50 | 18.91 | 18.72 | 18.72 | 18.72 | 18.72 | 18.72 | 18.72 | 18.72 |  |
| 126.0                                                                                                   | 49.26                    | 34.67 | 27.53 | 23.40 | 20.80 | 19.10 | 18.00 | 17.33 | 17.02 | 16.98 | 16.98 | 16.98 | 16.98 | 16.98 | 16.98 |  |
| 132.0                                                                                                   | 46.80                    | 32.84 | 26.00 | 22.02 | 19.50 | 17.83 | 16.71 | 16.00 | 15.60 | 15.47 | 15.47 | 15.47 | 15.47 | 15.47 | 15.47 |  |
| 138.0                                                                                                   | 44.57                    | 31.20 | 24.63 | 20.80 | 18.35 | 16.71 | 15.44 | 14.54 | 14.00 | 13.74 | 13.70 | 13.70 | 13.70 | 13.70 | 13.70 |  |
| 150.0                                                                                                   | 39.62                    | 26.77 | 20.46 | 16.76 | 14.38 | 12.76 | 11.64 | 10.85 | 10.32 | 10.00 | 9.84  | 9.81  | 9.81  | 9.81  | 9.81  |  |
| 156.0                                                                                                   | 35.19                    | 23.76 | 18.13 | 14.83 | 12.69 | 11.23 | 10.21 | 9.48  | 8.98  | 8.64  | 8.46  | 8.39  | 8.39  | 8.39  | 8.39  |  |
| 162.0                                                                                                   | 31.40                    | 21.18 | 16.14 | 13.18 | 11.26 | 9.94  | 9.01  | 8.34  | 7.86  | 7.53  | 7.33  | 7.23  | 7.21  | 7.21  | 7.21  |  |
| 168.0                                                                                                   | 28.14                    | 18.96 | 14.44 | 11.77 | 10.04 | 8.85  | 7.99  | 7.37  | 6.93  | 6.61  | 6.40  | 6.28  | 6.24  | 6.24  | 6.24  |  |
| 174.0                                                                                                   | 25.31                    | 17.05 | 12.97 | 10.56 | 8.99  | 7.91  | 7.13  | 6.56  | 6.14  | 5.84  | 5.63  | 5.50  | 5.43  | 5.42  | 5.42  |  |
| 180.0                                                                                                   | 22.85                    | 15.38 | 11.69 | 9.51  | 8.08  | 7.10  | 6.38  | 5.86  | 5.47  | 5.18  | 4.98  | 4.84  | 4.76  | 4.73  | 4.73  |  |
| 186.0                                                                                                   | 20.70                    | 13.92 | 10.57 | 8.59  | 7.30  | 6.39  | 5.74  | 5.26  | 4.90  | 4.63  | 4.43  | 4.29  | 4.20  | 4.16  | 4.15  |  |
| 192.0                                                                                                   | 18.81                    | 12.65 | 9.60  | 7.79  | 6.61  | 5.78  | 5.18  | 4.74  | 4.40  | 4.15  | 3.96  | 3.82  | 3.73  | 3.68  | 3.66  |  |



2" X 5 3/16"  
LVL MULL PROFILE

- NOTE:
- 1) MULLION CHART APPLIES TO 2" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
  - 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
  - 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
  - 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL OR MIAMI-DADE APPROVAL.
  - 5) MULLION CHART APPLIES TO THE FOLLOWING INSTALLATION CONDITIONS LISTED ON SHEET 10.
  - 6) TRIBUTARY WIDTH = W = (A+B)/2
  - 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



$$\frac{A+B}{2} = W$$



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)

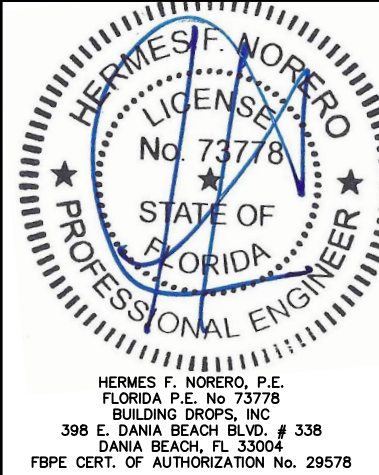
2" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

PREPARED BY:  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 399-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.

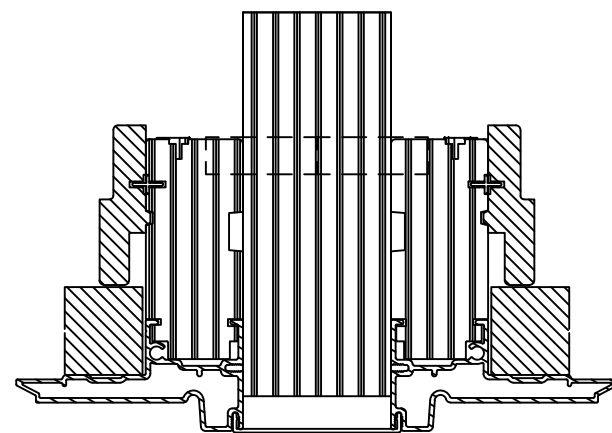


|          |          |
|----------|----------|
| FL #:    | FL24230  |
| DATE:    | 10.12.17 |
| DWG. BY: | RV       |
| CHK. BY: | HFN      |
| SCALE:   | NTS      |
| DWG. #:  | AWD211   |
| SHEET:   |          |

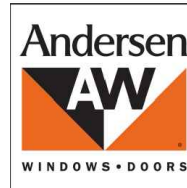
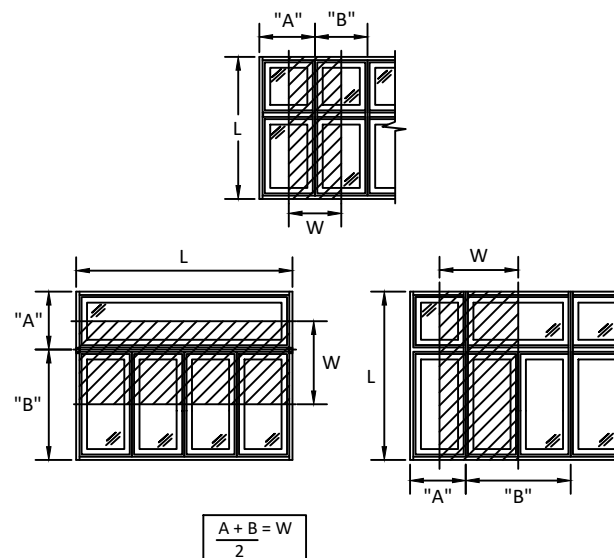
27

| MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)            |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION |                          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| L - Mull Length (in)                                    | W - Tributary Width (in) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|                                                         | 24.0                     | 36.0  | 48.0  | 60.0  | 72.0  | 84.0  | 96.0  | 108.0 | 120.0 | 132.0 | 144.0 | 156.0 | 168.0 | 180.0 | 192.0 |
| 24.0                                                    | 75.00                    | 75.00 | 75.00 | 75.00 | 75.00 | 66.86 | 58.50 | 52.00 | 46.80 | 42.55 | 39.00 | 36.00 | 33.43 | 31.20 | 29.25 |
| 30.0                                                    | 75.00                    | 75.00 | 75.00 | 74.88 | 62.40 | 53.49 | 46.80 | 41.60 | 37.44 | 34.04 | 31.20 | 28.80 | 26.74 | 24.96 | 23.40 |
| 36.0                                                    | 75.00                    | 75.00 | 75.00 | 62.40 | 52.00 | 44.57 | 39.00 | 34.67 | 31.20 | 28.36 | 26.00 | 24.00 | 22.29 | 20.80 | 19.50 |
| 42.0                                                    | 75.00                    | 75.00 | 66.86 | 53.49 | 44.57 | 38.20 | 33.43 | 29.71 | 26.74 | 24.31 | 22.29 | 20.57 | 19.10 | 17.83 | 16.71 |
| 48.0                                                    | 75.00                    | 75.00 | 58.50 | 46.80 | 39.00 | 33.43 | 29.25 | 26.00 | 23.40 | 21.27 | 19.50 | 18.00 | 16.71 | 15.60 | 14.63 |
| 54.0                                                    | 75.00                    | 69.33 | 52.00 | 41.60 | 34.67 | 29.71 | 26.00 | 23.11 | 20.80 | 18.91 | 17.33 | 16.00 | 14.86 | 13.87 | 13.00 |
| 60.0                                                    | 75.00                    | 62.40 | 46.80 | 37.44 | 31.20 | 26.74 | 23.40 | 20.80 | 18.72 | 17.02 | 15.60 | 14.40 | 13.37 | 12.48 | 11.70 |
| 66.0                                                    | 75.00                    | 56.73 | 42.55 | 34.04 | 28.36 | 24.31 | 21.27 | 18.91 | 17.02 | 15.47 | 14.18 | 13.09 | 12.16 | 11.35 | 10.64 |
| 72.0                                                    | 75.00                    | 52.00 | 39.00 | 31.20 | 26.00 | 22.29 | 19.50 | 17.33 | 15.60 | 14.18 | 13.00 | 12.00 | 11.14 | 10.40 | 9.75  |
| 78.0                                                    | 72.00                    | 48.00 | 36.00 | 28.80 | 24.00 | 20.57 | 18.00 | 16.00 | 14.40 | 13.09 | 12.00 | 11.08 | 10.29 | 9.60  | 9.00  |
| 84.0                                                    | 66.86                    | 44.57 | 33.43 | 26.74 | 22.29 | 19.10 | 16.71 | 14.86 | 13.37 | 12.16 | 11.14 | 10.29 | 9.55  | 8.91  | 8.36  |
| 90.0                                                    | 62.40                    | 41.60 | 31.20 | 24.96 | 20.80 | 17.83 | 15.60 | 13.87 | 12.48 | 11.35 | 10.40 | 9.60  | 8.91  | 8.32  | 7.80  |
| 96.0                                                    | 58.50                    | 39.00 | 29.25 | 23.40 | 19.50 | 16.71 | 14.63 | 13.00 | 11.70 | 10.64 | 9.75  | 9.00  | 8.36  | 7.80  | 7.31  |
| 102.0                                                   | 55.06                    | 36.71 | 27.53 | 22.02 | 18.35 | 15.73 | 13.76 | 12.24 | 11.01 | 10.01 | 9.18  | 8.47  | 7.87  | 7.34  | 6.88  |
| 108.0                                                   | 52.00                    | 34.67 | 26.00 | 20.80 | 17.33 | 14.86 | 13.00 | 11.56 | 10.40 | 9.45  | 8.67  | 8.00  | 7.43  | 6.93  | 6.50  |
| 114.0                                                   | 49.26                    | 32.84 | 24.63 | 19.71 | 16.42 | 14.08 | 12.32 | 10.95 | 9.85  | 8.96  | 8.21  | 7.58  | 7.04  | 6.57  | 6.16  |
| 120.0                                                   | 46.80                    | 31.20 | 23.40 | 18.72 | 15.60 | 13.37 | 11.70 | 10.40 | 9.36  | 8.51  | 7.80  | 7.20  | 6.69  | 6.24  | 5.85  |
| 126.0                                                   | 44.57                    | 29.71 | 22.29 | 17.83 | 14.86 | 12.73 | 11.14 | 9.90  | 8.91  | 8.10  | 7.43  | 6.86  | 6.37  | 5.94  | 5.57  |
| 132.0                                                   | 42.55                    | 28.36 | 21.27 | 17.02 | 14.18 | 12.16 | 10.64 | 9.45  | 8.51  | 7.74  | 7.09  | 6.55  | 6.08  | 5.67  | 5.32  |
| 138.0                                                   | 40.70                    | 27.13 | 20.35 | 16.28 | 13.57 | 11.63 | 10.17 | 9.04  | 8.14  | 7.40  | 6.78  | 6.26  | 5.81  | 5.43  | 5.09  |
| 144.0                                                   | 39.00                    | 26.00 | 19.50 | 15.60 | 13.00 | 11.14 | 9.75  | 8.67  | 7.80  | 7.09  | 6.50  | 6.00  | 5.57  | 5.20  | 4.88  |
| 150.0                                                   | 37.44                    | 24.96 | 18.72 | 14.98 | 12.48 | 10.70 | 9.36  | 8.32  | 7.49  | 6.81  | 6.24  | 5.76  | 5.35  | 4.99  | 4.68  |
| 156.0                                                   | 34.89                    | 23.26 | 17.45 | 13.96 | 11.63 | 9.97  | 8.72  | 7.75  | 6.98  | 6.34  | 5.82  | 5.37  | 4.98  | 4.65  | 4.36  |
| 162.0                                                   | 31.16                    | 20.77 | 15.58 | 12.46 | 10.39 | 8.90  | 7.79  | 6.92  | 6.23  | 5.66  | 5.19  | 4.79  | 4.45  | 4.15  | 3.89  |
| 168.0                                                   | 27.94                    | 18.62 | 13.97 | 11.17 | 9.31  | 7.98  | 6.98  | 6.21  | 5.59  | 5.08  | 4.66  | 4.30  | 3.99  | 3.72  | 3.49  |
| 174.0                                                   | 25.15                    | 16.76 | 12.57 | 10.06 | 8.38  | 7.18  | 6.29  | 5.59  | 5.03  | 4.57  | 4.19  | 3.87  | 3.59  | 3.35  | 3.14  |
| 180.0                                                   | 22.71                    | 15.14 | 11.36 | 9.09  | 7.57  | 6.49  | 5.68  | 5.05  | 4.54  | 4.13  | 3.79  | 3.49  | 3.24  | 3.03  | 2.84  |
| 186.0                                                   | 20.59                    | 13.72 | 10.29 | 8.23  | 6.86  | 5.88  | 5.15  | 4.57  | 4.12  | 3.74  | 3.43  | 3.17  | 2.94  | 2.74  | 2.57  |
| 192.0                                                   | 18.72                    | 12.48 | 9.36  | 7.49  | 6.24  | 5.35  | 4.68  | 4.16  | 3.74  | 3.40  | 3.12  | 2.88  | 2.67  | 2.50  | 2.34  |

- 1) MULLION CHART APPLIES TO 2" X 5-3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN TWO-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
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- 7) WHEN WINDOWS ARE STACKED VERTICALLY, THE MANUFACTURER/INSTALLER SHALL ENSURE THAT THE WEIGHT OF UNITS ABOVE WILL NOT CAUSE DEFLECTIONS OR STRESSES WHICH WILL AFFECT OPERATION OR STRUCTURAL ADEQUACY OF UNITS BELOW.



**2" X 5 3/16"**  
**LVL MULL PROFILE**



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**TITLE: E-SERIES FIXED CASEMENT WINDOW -  
DIRECT SET (1-PC FRAME) (NON-HVHZ)  
(NON-IMPACT)**

2" X 5-3/16" MULLION LOADS TABLE  
TWO WAY

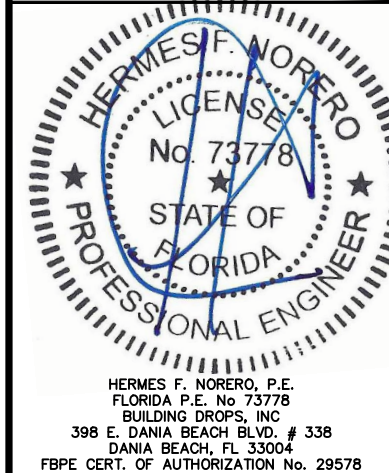
PREPARED BY:

**BUILDING DROPS, INC.**  
E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)399-8478  
FAX: (954)744-4738  
WEB: [www.buildingdrops.com](http://www.buildingdrops.com)



| REMARKS                | BY | DATE     |
|------------------------|----|----------|
| 6TH FBC CODE CHANGE    | RV | 10.17.17 |
| ADDED MULL & DP CHARTS | LL | 8.5.19   |
|                        |    |          |
|                        |    |          |

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FL #:

FL24230

DATE: 10.12.17

|                       |                        |
|-----------------------|------------------------|
| DWG. BY:<br><b>RV</b> | CHK. BY:<br><b>HFN</b> |
|-----------------------|------------------------|

SCALE: NTS

DWG. #: AWD211

SHEET:

28