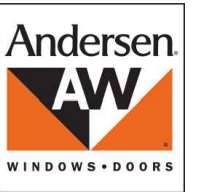


# ANDERSEN CORPORATION

## E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (WZ3)(IMPACT)

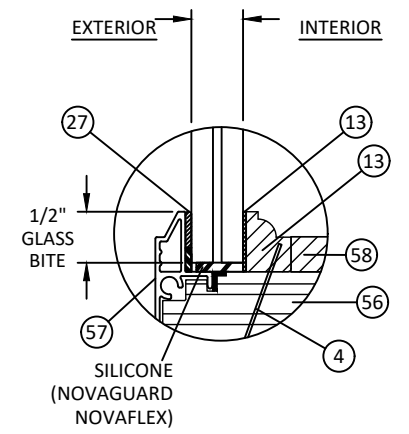


100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

**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
  - ASTM 1886-05
  - ASTM 1996-06
- 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 NOT REQUIRED** TO PROTECT THIS PRODUCT IN AREAS REQUIRING IMPACT RESISTANCE IN WZ 3 OR LESS.
- APPROVED IMPACT PROTECTIVE GROUP **IS REQUIRED** IN WIND ZONE 4
- WINDOW FRAME MATERIAL: *ALUMINUM CLAD WOOD.*
- MULLION MATERIAL: *LAMINATED VENEER LUMBER.*
- GLASS MEETS THE REQUIREMENTS OF ASTM E1300. SEE GLAZING DETAILS ON SHEET 1.
- 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.

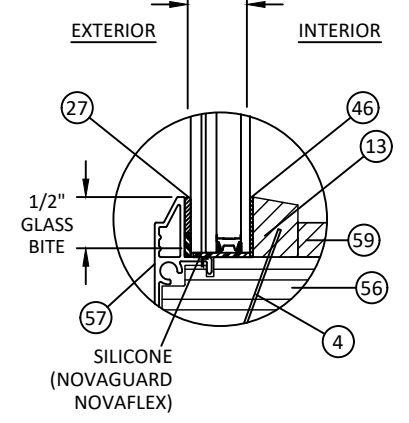
9/16" O.A. MONOLITHIC LAMINATED GLASS :  
1/4" ANNEALED GLASS  
0.090" SENTRYGLAS INTERLAYER BY KURARAY  
1/4" ANNEALED GLASS



**GLAZING DETAIL 1**  
SHOWN WITH COLONIAL GLASS STOP

- GLAZING NOTES:**
- GLASS CAPACITIES ON THIS SHEET ARE BASED ON ASTM E1300-04 (3 SEC. GUSTS) AND CHAPTER 17 OF THE CURRENT FBC FOR SIZES OTHER THAN TESTED.
  - SETTING BLOCK DUROMETER HARDNESS OF 70-90 (SHORE A) AS REFERENCED IN CHAPTER 24.
  - SETTING BLOCKS TO BE LOCATED AT 1/4 SPAN LENGTH FOR GLASS WIDER THAN 36" AS PER CHAPTER 24.
  - D.L.O. MAY NOT EXCEED MAX DIMENSIONS IN DESIGN PRESSURE TABLES.

1-1/4" O.A. INSULATED GLASS :  
1/4" ANNEALED GLASS  
0.090" SENTRYGLAS INTERLAYER BY KURARAY  
1/4" ANNEALED GLASS  
AIR SPACE: STAINLESS STEEL BOX SPACER  
3/16" HEAT STRENGTHENED GLASS



**GLAZING DETAIL 2**  
SHOWN WITH CONTEMPORARY GLASS STOP

OVERALL FRAME SIZE		OVERALL D.L.O. DIMENSION		GLASS TYPE	DESIGN PRESSURE (PSF)	
WIDTH (IN.)	HEIGHT (IN.)	WIDTH (IN.)	HEIGHT (IN.)		POS.	NEG.
60.0	96.0	56.0	92.0	G1, G2	+70.0	-75.0

SHEET	REVISION	SHEET DESCRIPTION
1	B	GENERAL NOTES AND GLAZING DETAILS
2	B	ELEVATIONS AND QUALIFIED CONFIGURATIONS
3	B	MULLED ELEVATIONS
4	B	ANCHOR LAYOUTS
5	B	MULLED ANCHOR LAYOUTS
6	B	VERTICAL SECTIONS
7	B	MULLION VERTICAL SECTIONS
8	B	HORIZONTAL SECTIONS
9	B	MULLION HORIZONTAL SECTIONS
10	B	ANCHOR DETAILS
11	B	COMPONENTS AND BILL OF MATERIALS
12	B	ZERO MULLION LOADS TABLE - ONE WAY
13	B	ZERO MULLION LOADS TABLE - TWO WAY
14	B	1/2" x 3-1/2" MULLION LOADS TABLE - ONE WAY
15	B	1/2" x 3-1/2" MULLION LOADS TABLE - TWO WAY
16	B	1/2" x 5-3/16" MULLION LOADS TABLE - ONE WAY
17	B	1/2" x 5-3/16" MULLION LOADS TABLE - TWO WAY
18	B	3/4" x 3-1/2" MULLION LOADS TABLE - ONE WAY
19	B	3/4" x 3-1/2" MULLION LOADS TABLE - TWO WAY
20	B	3/4" x 5-3/16" MULLION LOADS TABLE - ONE WAY
21	B	3/4" x 5-3/16" MULLION LOADS TABLE - TWO WAY
22	B	1" x 3-1/2" MULLION LOADS TABLE - ONE WAY
23	B	1" x 3-1/2" MULLION LOADS TABLE - TWO WAY
24	B	1" x 5-3/16" MULLION LOADS TABLE - ONE WAY
25	B	1" x 5-3/16" MULLION LOADS TABLE - TWO WAY
26	B	2" x 3-1/2" MULLION LOADS TABLE - ONE WAY
27	B	2" x 3-1/2" MULLION LOADS TABLE - TWO WAY
28	B	2" x 5-3/16" MULLION LOADS TABLE - ONE WAY
29	B	2" x 5-3/16" MULLION LOADS TABLE - TWO WAY

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (WZ3) (IMPACT)  
GENERAL NOTES AND GLAZING DETAILS

PREPARED BY: BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)395-8478  
FAX: (954)744.4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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**

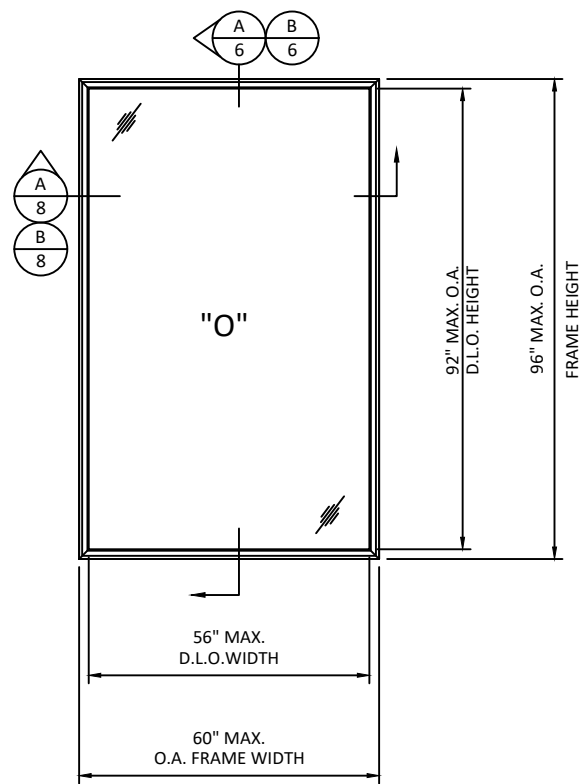
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SCALE: **NTS**

DWG. #: **AWD210**

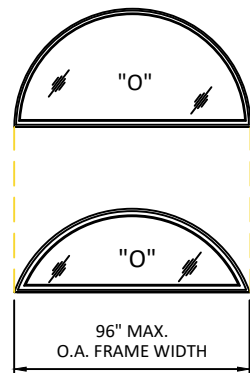
SHEET: **1** OF 29

8/14/2019 6:44 PM

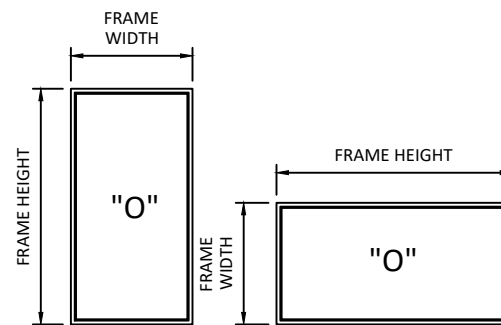


**ELEVATION  
SINGLE UNIT**

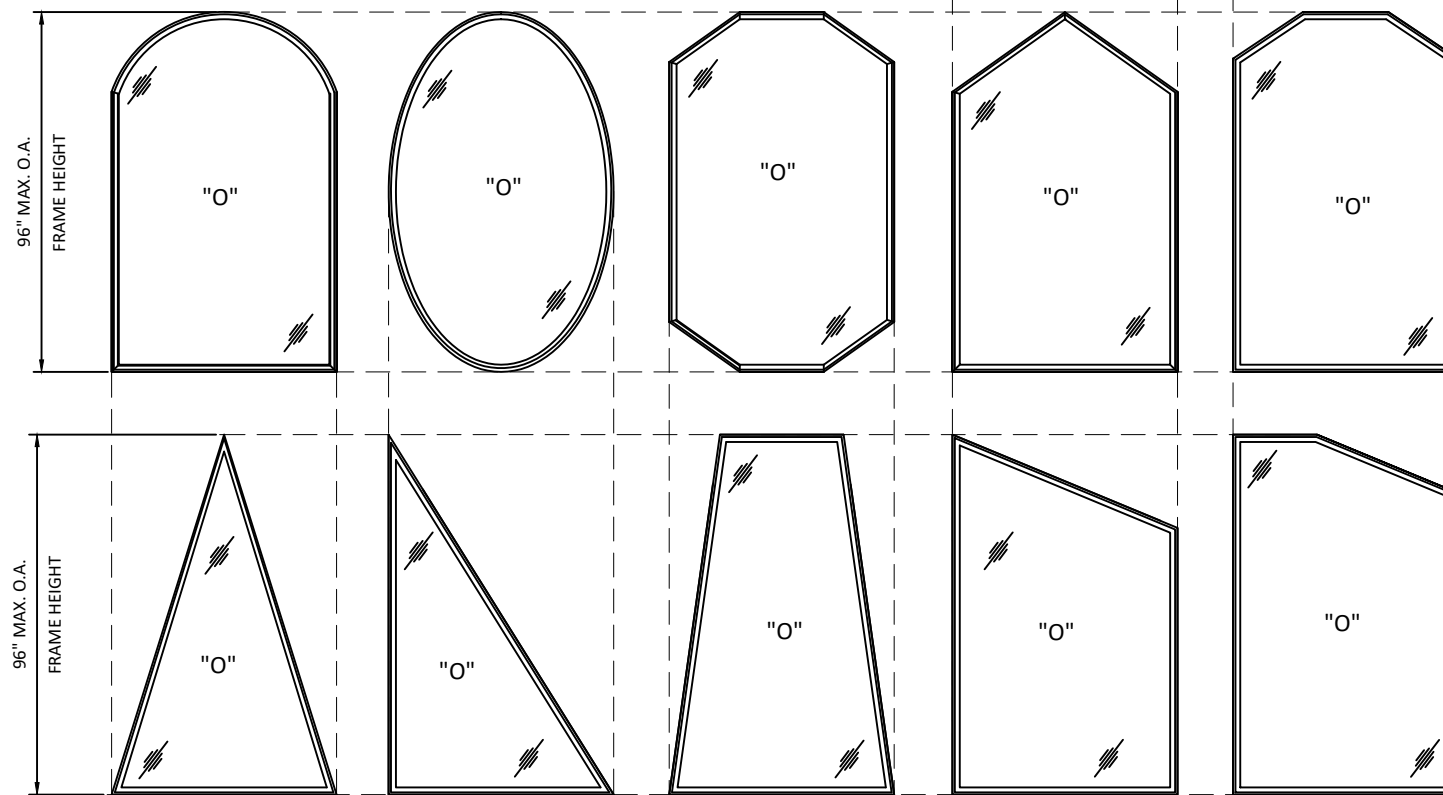
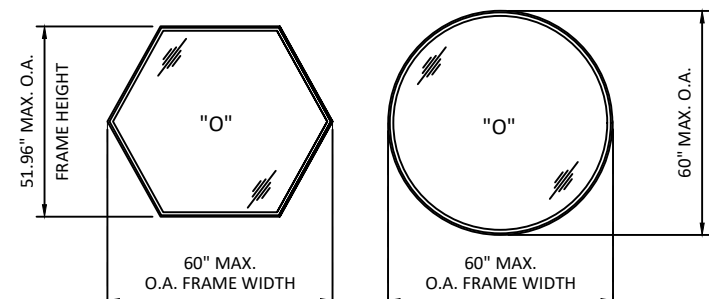
- NOTE:**
1. THE ARCHITECT OR ENGINEER OF RECORD MUST ENGINEER THE BUCK AND FRAME ANCHORING FOR THE GEOMETRIC SHAPES THAT DO NOT HAVE ANCHORING SHOWN IN THIS DRAWING.
  2. GEOMETRIC SHAPES MUST FIT WITHIN THE BOUNDING BOX DIMENSIONS OF 60" x 96" OR 96" x 60".



**NOTE:  
SEE NOTE 2 FOR SIZE RESTRICTIONS**



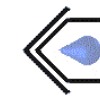
**NOTE:  
WINDOW WIDTH AND HEIGHT ARE  
INTERCHANGEABLE FOR ALL SIZES  
SHOWN HEREIN NOT TO EXCEED  
MAXIMUM QUALIFIED SQUARE  
FOOT AREA.**



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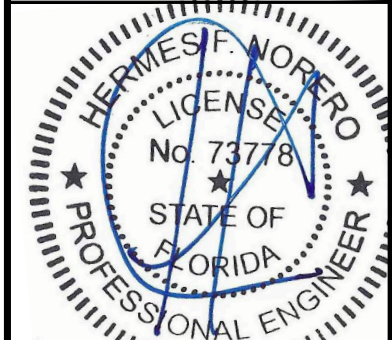
**TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED  
WINDOW (WZ3) (IMPACT)  
ELEVATIONS AND QUALIFIED  
CONFIGURATIONS**

**PREPARED BY:**  
**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

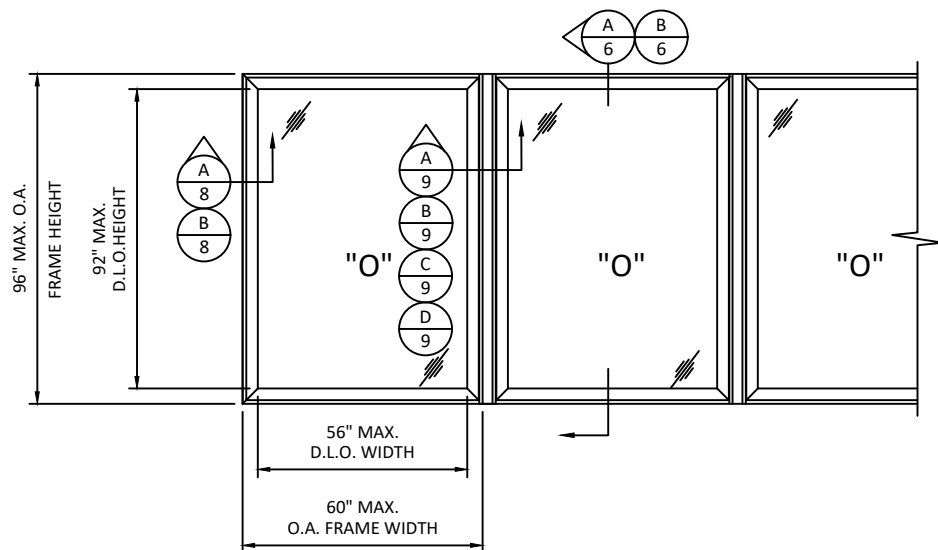
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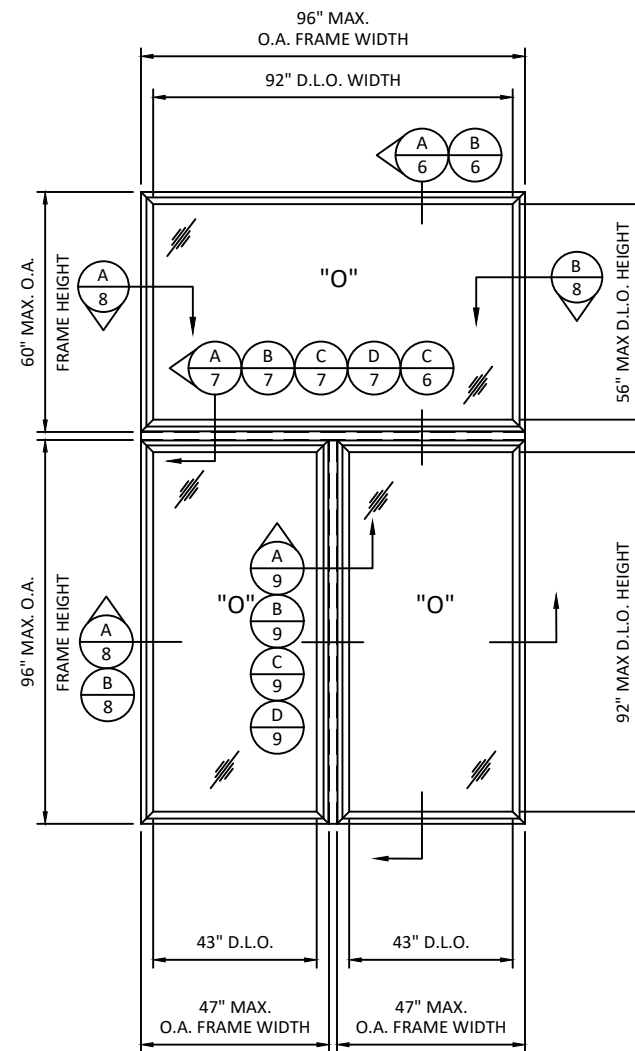
HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	<b>FL24230</b>
DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>

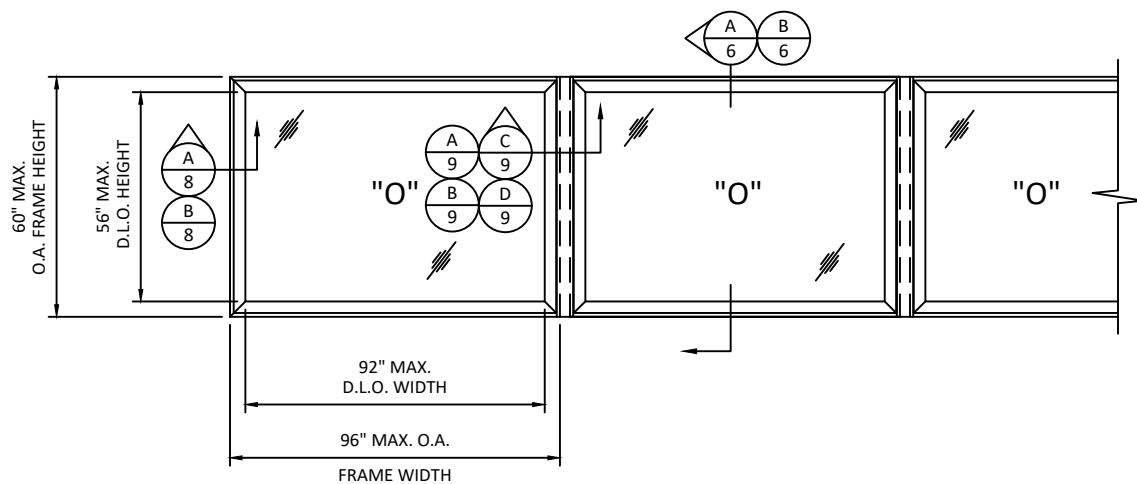
SHEET:  
**2**  
OF 29



**ELEVATION**  
**MULLER UNITS**  
**HORIZONTAL CONFIGURATION**



**ELEVATION**  
**MULLER UNITS**  
**HORIZONTAL WITH TRANSOM CONFIGURATION**



**ELEVATION**  
**MULLER UNITS**  
**HORIZONTAL CONFIGURATION**



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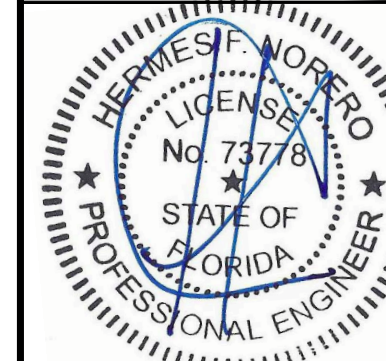
TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)

MULLED ELEVATIONS

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
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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DWG. BY: **AG**      CHK. BY: **HFN**

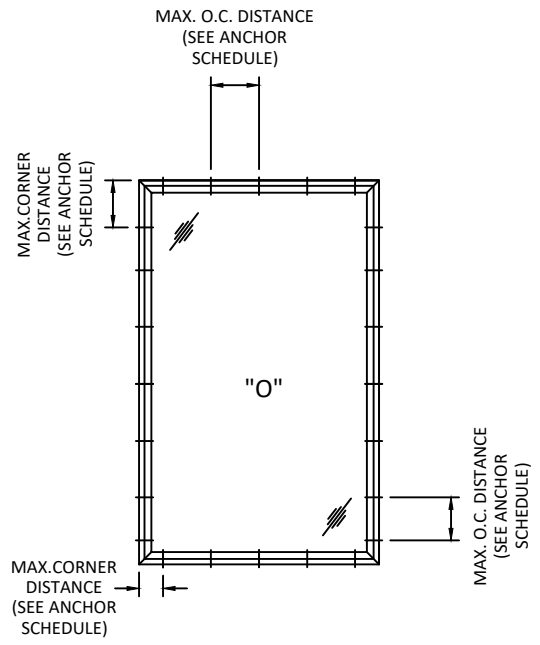
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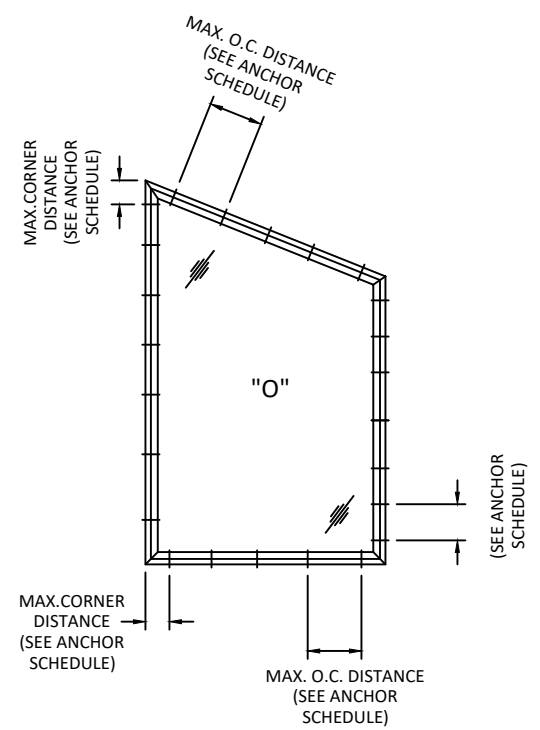
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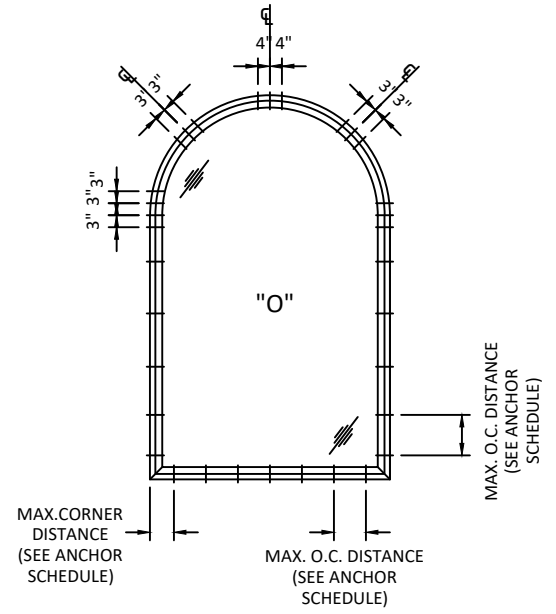
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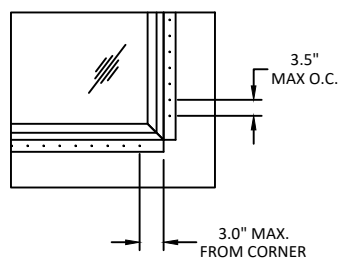
**FRAME ANCHORING**  
RETANGULAR/SQUARE SINGLE UNIT



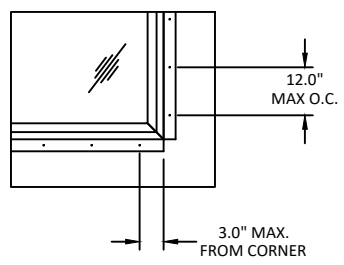
**FRAME ANCHORING**  
TRAPEZOID SINGLE UNIT



**FRAME ANCHORING**  
RADIUS SINGLE UNIT



**VINYL FIN ANCHORING**  
SINGLE UNIT



**ALUMINUM FIN ANCHORING**  
SINGLE UNIT

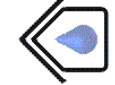
**NOTE:**  
NAILING FLANGE INSTALLATIONS ARE LIMITED TO INDIVIDUAL UNITS OR ASSEMBLIES EQUAL TO OR LESS THAN DP50 AND EQUAL TO OR LESS THAN 30 SQUARE FEET.

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



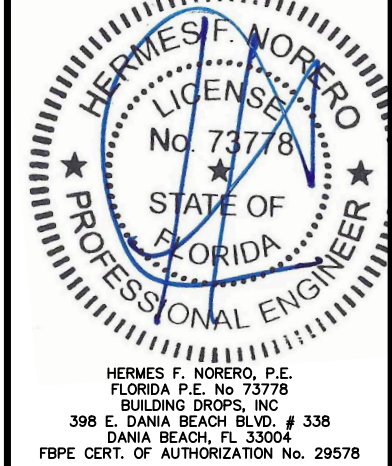
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
ANCHOR LAYOUTS

PREPARED BY:  
 BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
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ADDED MULL & DP CHARTS	LL	7.15.19

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FL #:  
**FL24230**

DATE: **10.12.17**

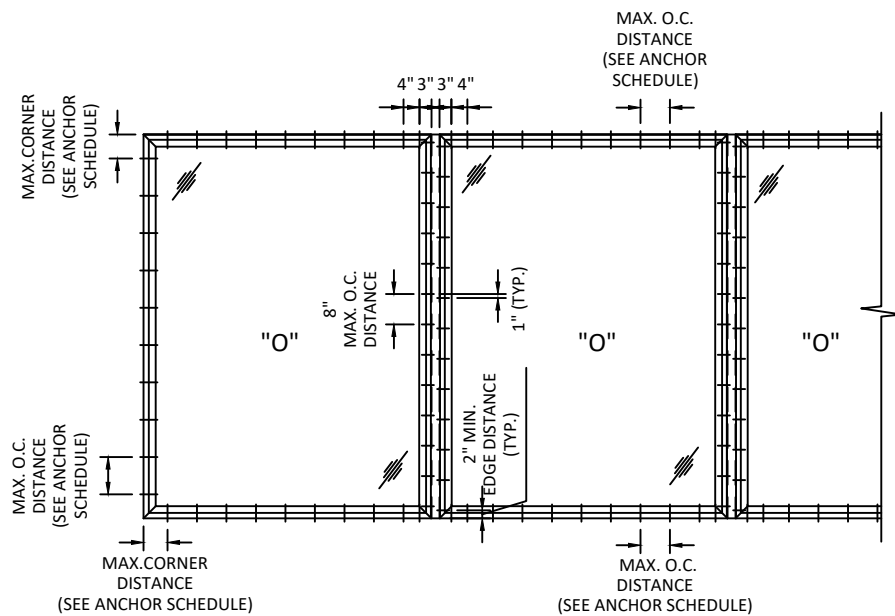
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SCALE: **NTS**

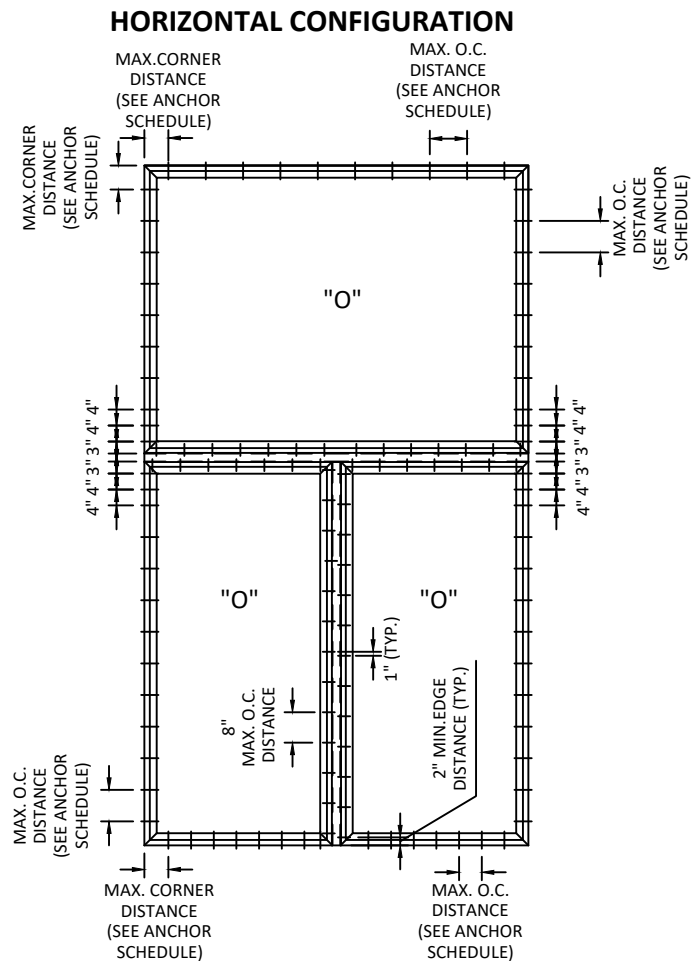
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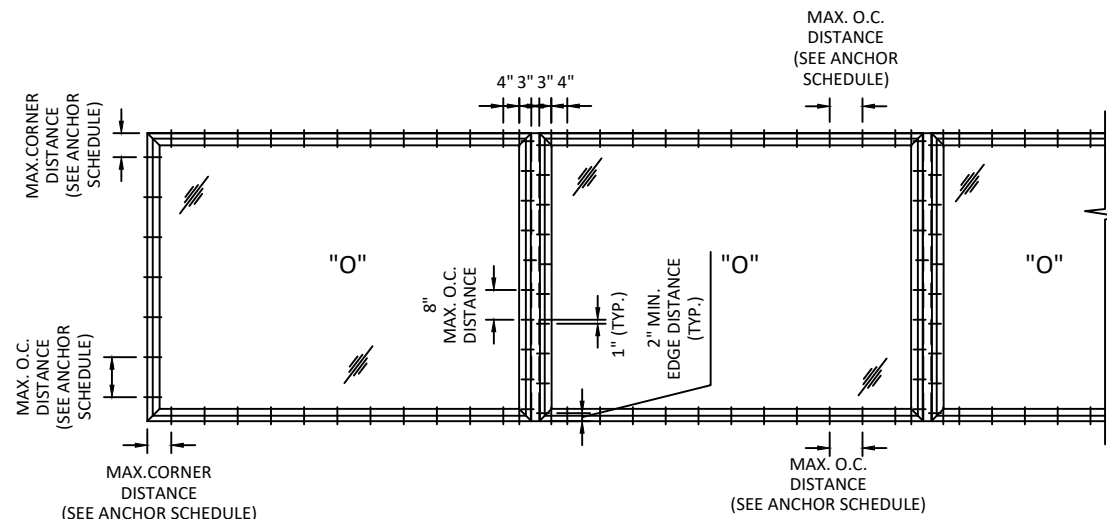
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**STRAP/FASTENER THROUGH FRAME ANCHORING**  
**MULLED UNIT**  
**HORIZONTAL CONFIGURATION**

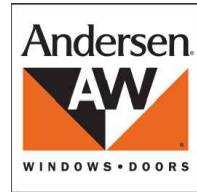


**STRAP/FASTENER THROUGH FRAME ANCHORING**  
**MULLED UNIT**  
**HORIZONTAL WITH TRANSOM CONFIGURATION**



**STRAP/FASTENER THROUGH FRAME ANCHORING**  
**MULLED UNIT**  
**HORIZONTAL CONFIGURATION**

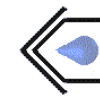
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100 FOURTH AVE NORTH  
 BAYPORT, MN 55003-1096  
 PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
 MULLED ANCHOR LAYOUTS

PREPARED BY:  
**BUILDING DROPS, INC.**  
 398 E. DANIA BEACH BLVD., STE. 338  
 DANIA BEACH, FL 33004  
 PH: (954)395-8478  
 FAX: (954)744.4738  
 WEB: www.buildingdrops.com



REMARKS	BY	DATE
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ADDED MULL & DP CHARTS	LL	7.15.19

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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**

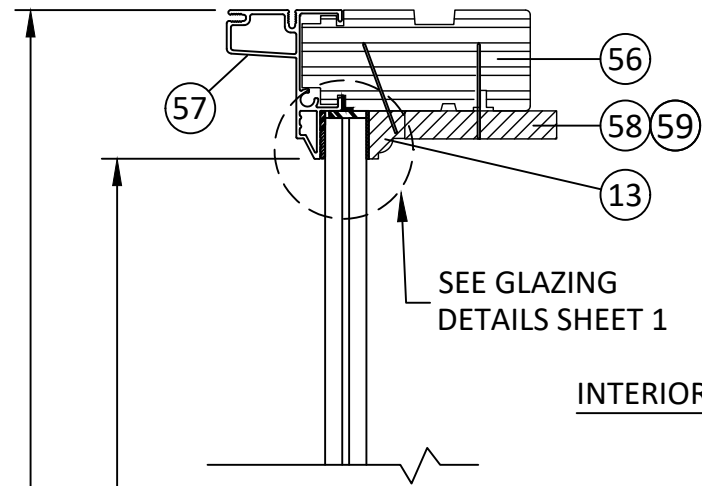
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SCALE: **NTS**

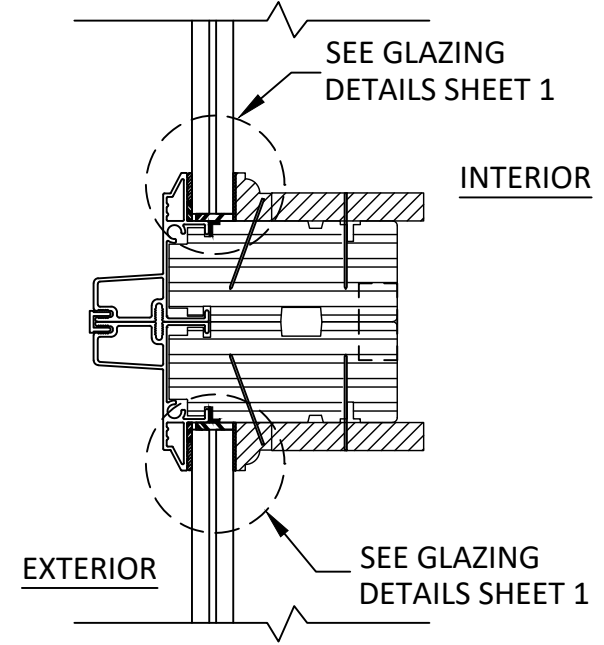
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SHEET:  
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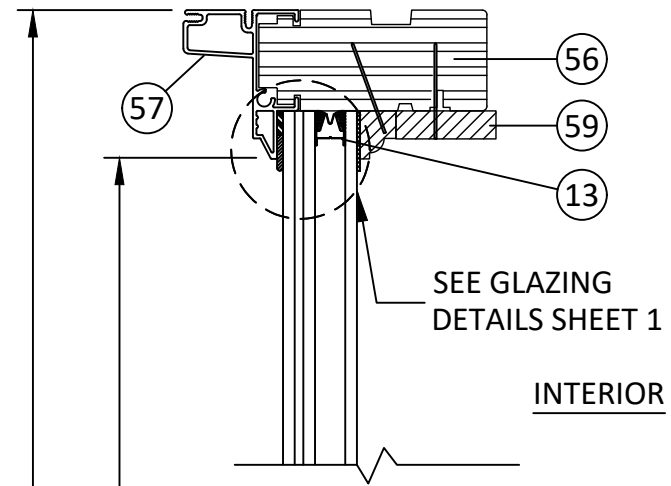
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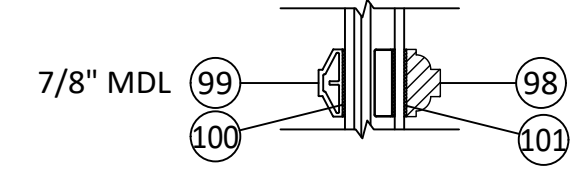
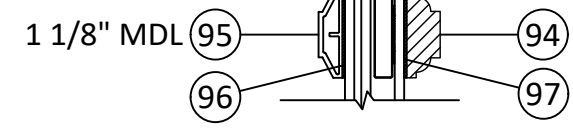
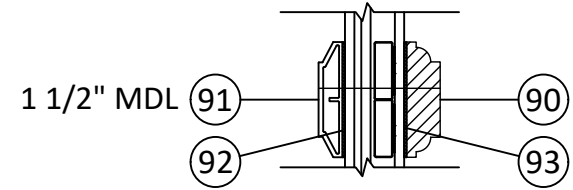
**A**  
**6** **VERTICAL SECTION**  
MONOLITHIC GLASS



**C**  
**6** **VERTICAL SECTION**  
INSULATED GLASS  
ZERO MULLION



**B**  
**6** **VERTICAL SECTION**  
INSULATED GLASS



**OPTIONAL MUNTIN BAR  
ATTACHEMENT TO GLASS**



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

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
VERTICAL SECTIONS

PREPARED BY:  
**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 395-8478  
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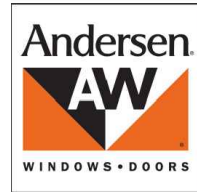


HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

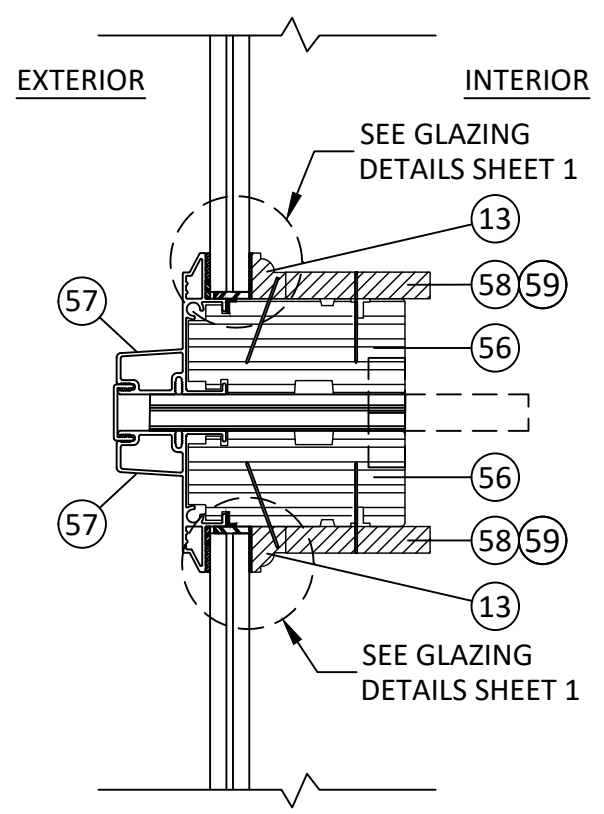
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DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>

SHEET:  
**6**  
OF 29

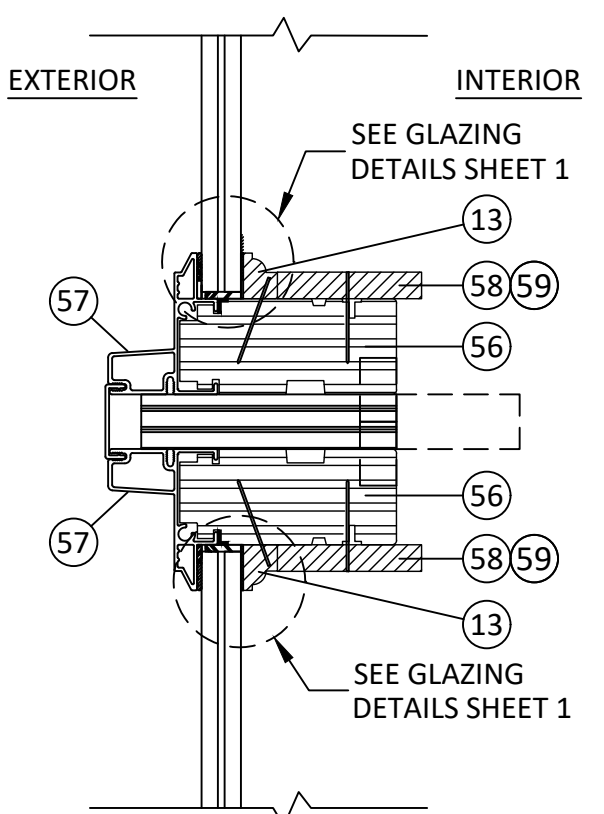
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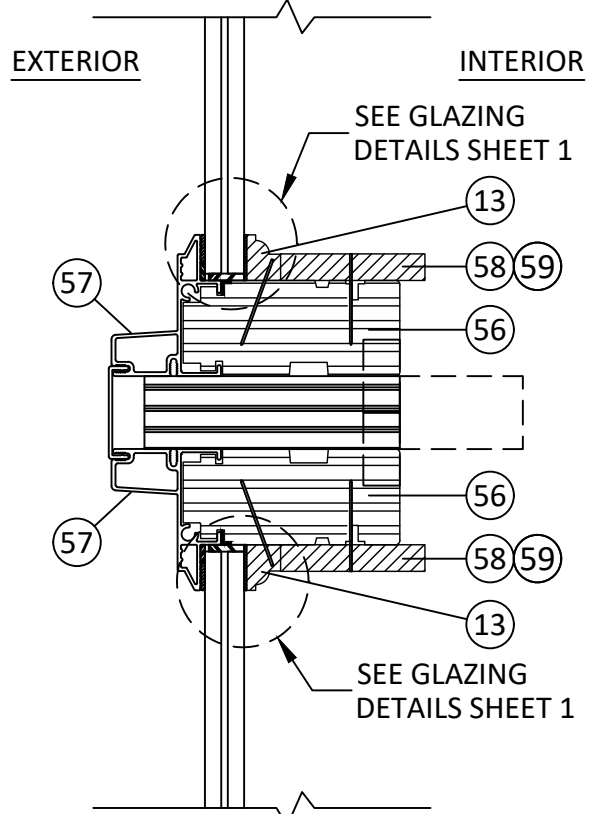
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485



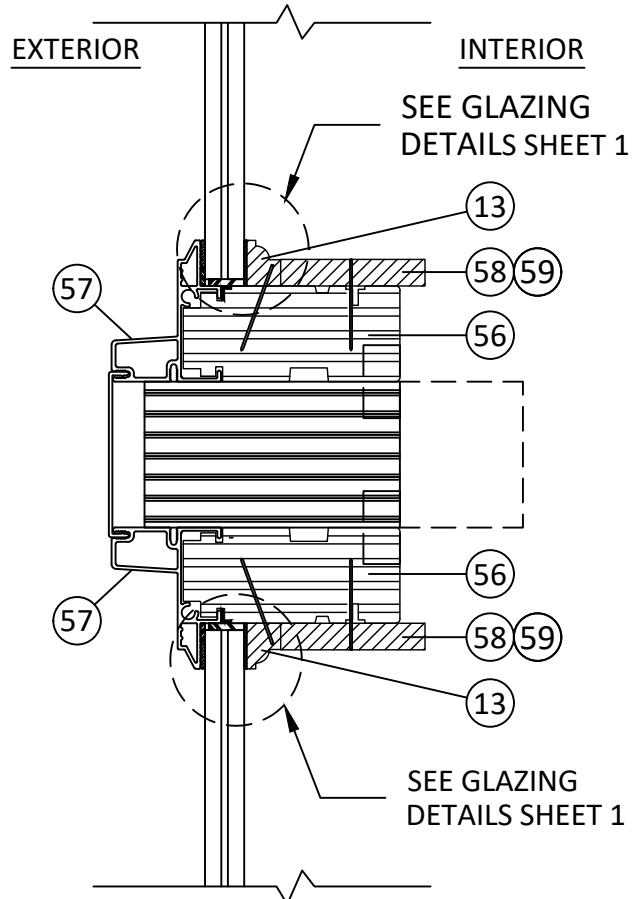
**A**  
**7**  
**VERTICAL SECTION**  
MONOLITHIC GLASS  
1/2" x 3 1/2" MULLION  
OR 1/2" x 5 3/16"



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



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



**D**  
**7**  
**VERTICAL SECTION**  
MONOLITHIC 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

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (WZ3) (IMPACT)  
MULLED VERTICAL SECTIONS  
PREPARED BY: BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954)395-8478  
FAX: (954)744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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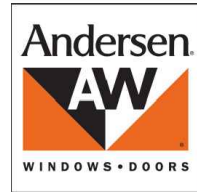


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398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

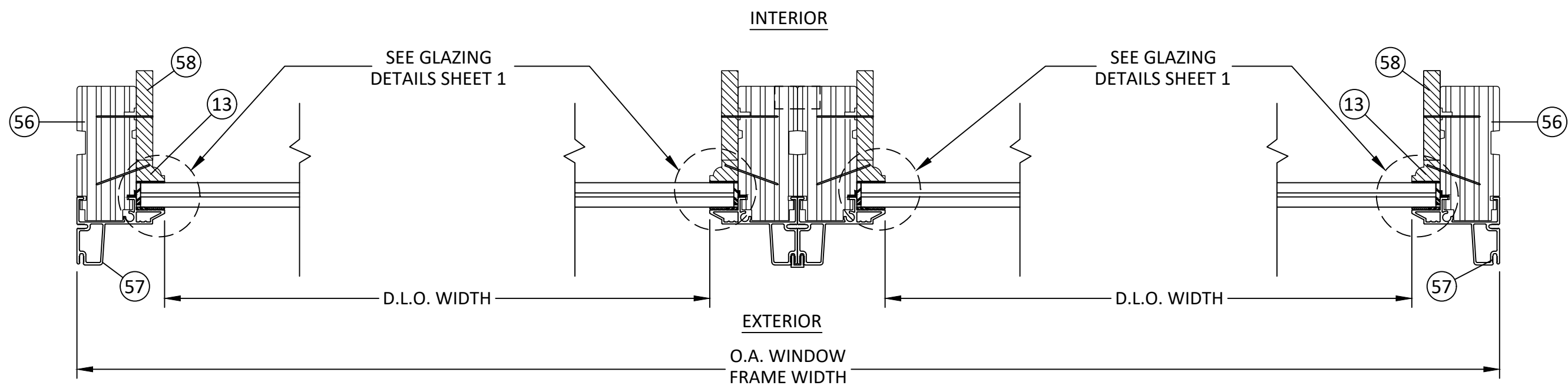
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DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>
SHEET:	<b>7</b>

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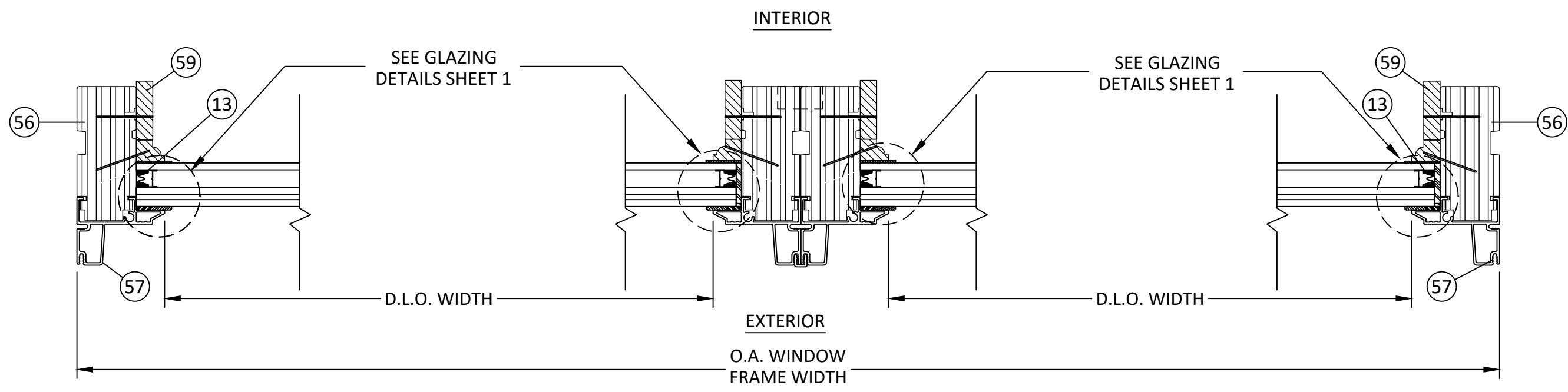
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BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485




**A**  
**8** **HORIZONTAL SECTION**  
MONOLITHIC GLASS  
ZERO MULLION



**B**  
**8** **HORIZONTAL SECTION**  
INSULATED GLASS  
ZERO MULLION

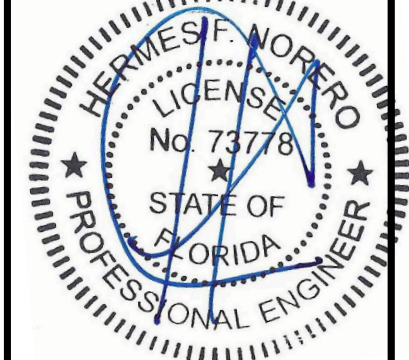
TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)

HORIZONTAL SECTIONS

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

REMARKS	BY	DATE
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ADDED MULL & DP CHARTS	LL	7.15.19

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FBPE CERT. OF AUTHORIZATION No. 29578

FL #: **FL24230**

DATE: **10.12.17**

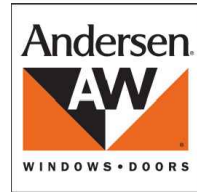
DWG. BY: **AG**      CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **AWD210**

SHEET: **8**

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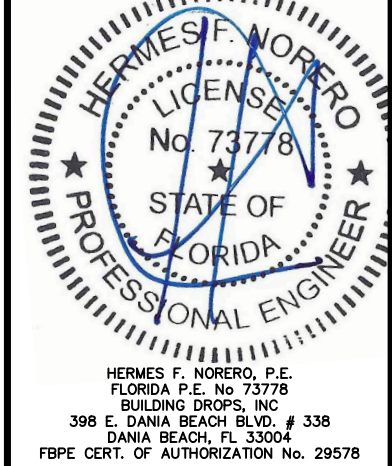


100 FOURTH AVE NORTH  
 BAYPORT, MN 55003-1096  
 PH: (651) 264-5150 FX: (651) 264-5485

**TITLE:** E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
**MULLED HORIZONTAL SECTIONS**  
**PREPARED BY:** BUILDING DROPS, INC.  
 398 E. DANIA BEACH BLVD., STE. 338  
 DANIA BEACH, FL 33004  
 PH: (954) 395-8478  
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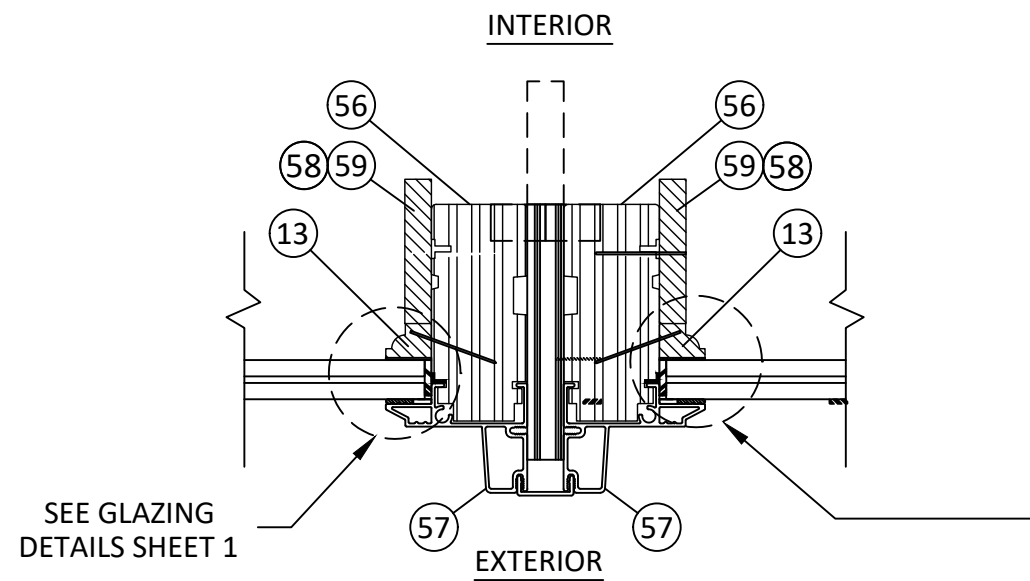
REMARKS	BY	DATE
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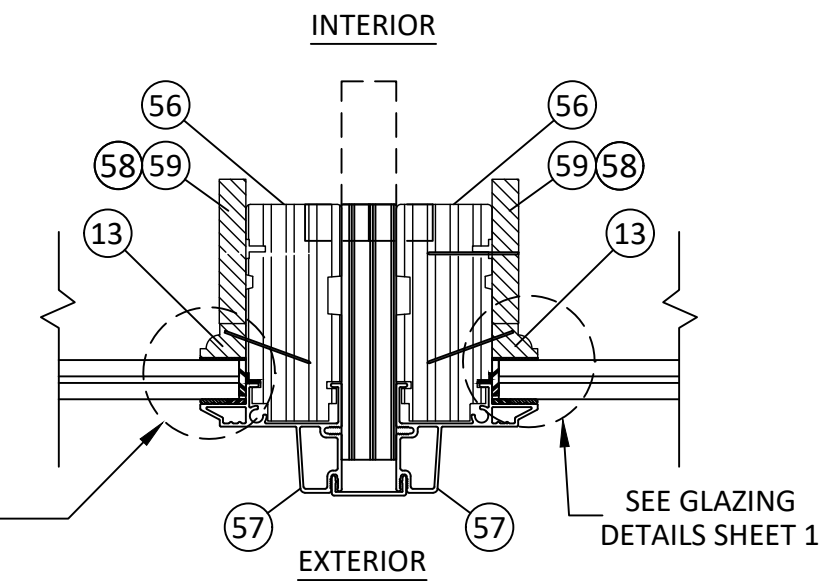
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DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>

SHEET:  
9  
 OF 29



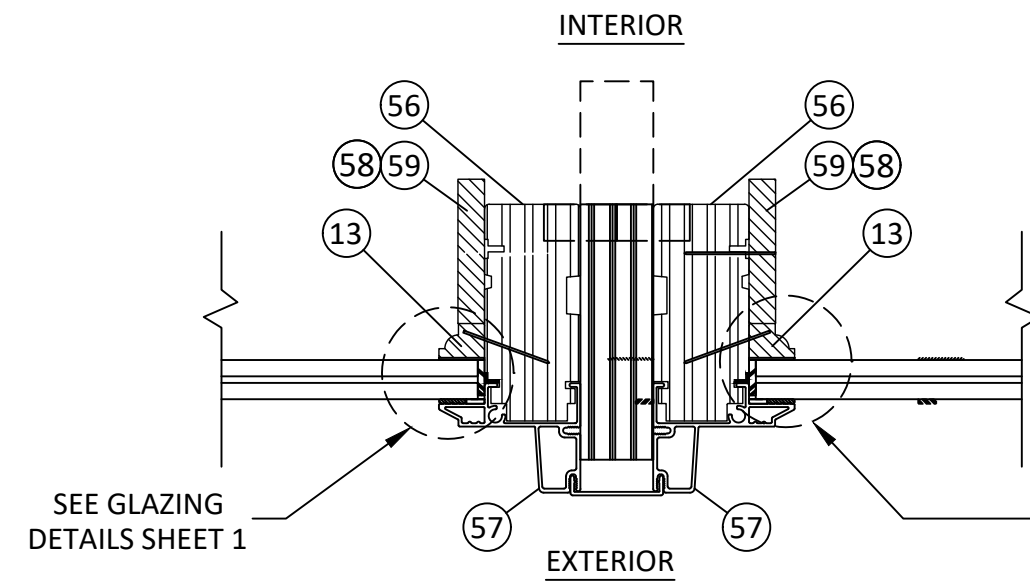
**A HORIZONTAL SECTION**  
**9**  
 MONOLITHIC GLASS  
 1/2" x 3 1/2" MULLION  
 OR 1/2" x 5 3/16"

SEE GLAZING DETAILS SHEET 1



**B HORIZONTAL SECTION**  
**9**  
 MONOLITHIC GLASS  
 3/4" x 3 1/2" MULLION  
 OR 3/4" x 5 3/16"

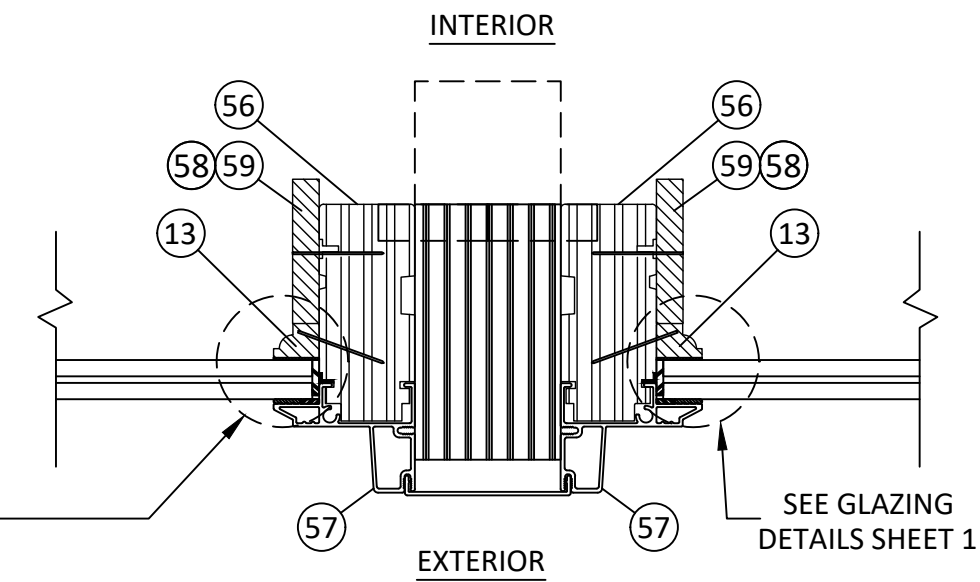
SEE GLAZING DETAILS SHEET 1



**C HORIZONTAL SECTION**  
**9**  
 MONOLITHIC GLASS  
 1" x 3 1/2" MULLION  
 OR 1" x 5 3/16"

SEE GLAZING DETAILS SHEET 1

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



**D HORIZONTAL SECTION**  
**9**  
 MONOLITHIC GLASS  
 2" x 3 1/2" MULLION  
 OR 2" x 5 3/16"

SEE GLAZING DETAILS SHEET 1

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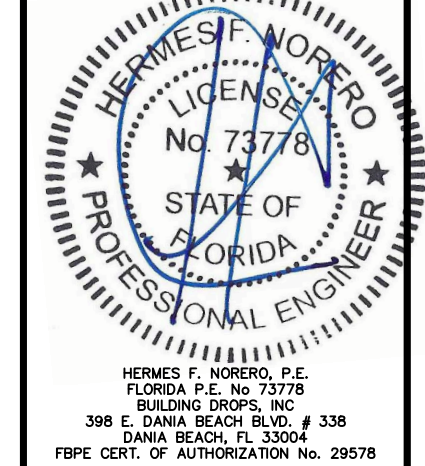


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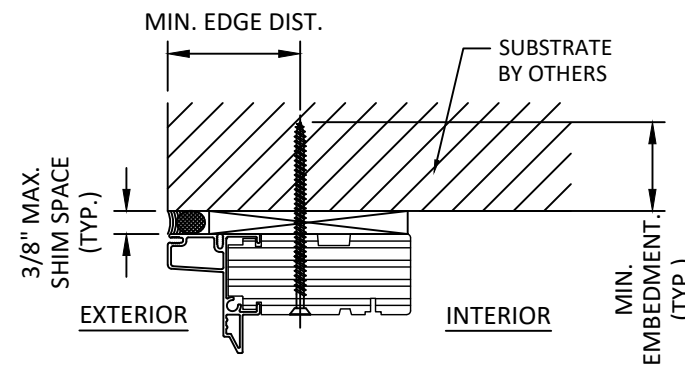
TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
 ANCHOR DETAILS  
 PREPARED BY: BUILDING DROPS, INC.  
 398 E. DANIA BEACH BLVD., STE. 338  
 DANIA BEACH, FL 33004  
 PH: (954) 395-8478  
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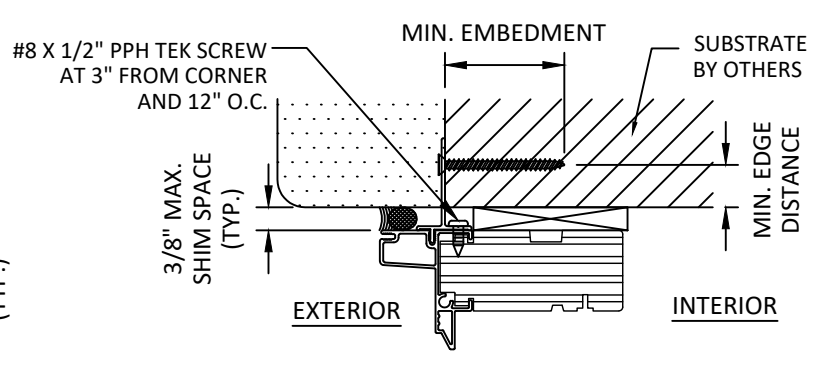


FL #: **FL24230**  
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 DWG. #: **AWD210**  
 SHEET: **10**  
 OF 29



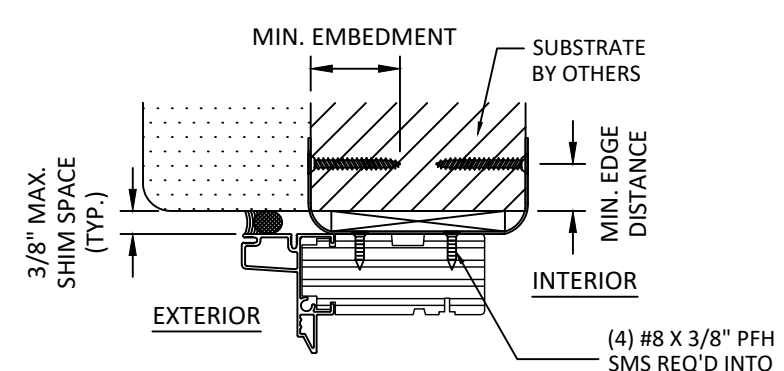
**A**  
**10** ANCHOR DETAIL  
 THROUGH FRAME

SILL & JAMB HAVE A SIMILAR DETAIL.



**B**  
**10** ANCHOR DETAIL  
 ALUMINUM NAIL FIN

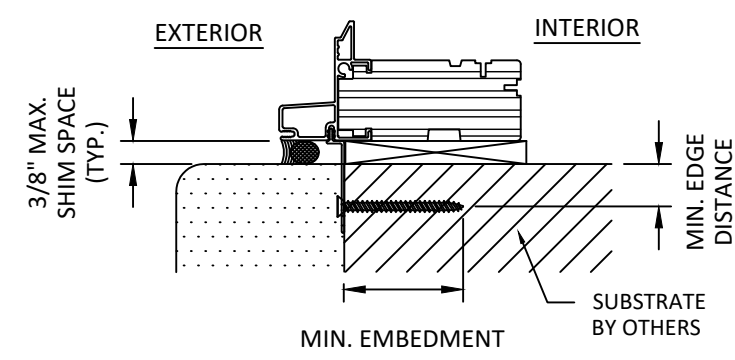
SILL & JAMB HAVE A SIMILAR DETAIL.



**C**  
**10** ANCHOR DETAIL  
 STRAP ANCHOR (WITH 2X BUCK)

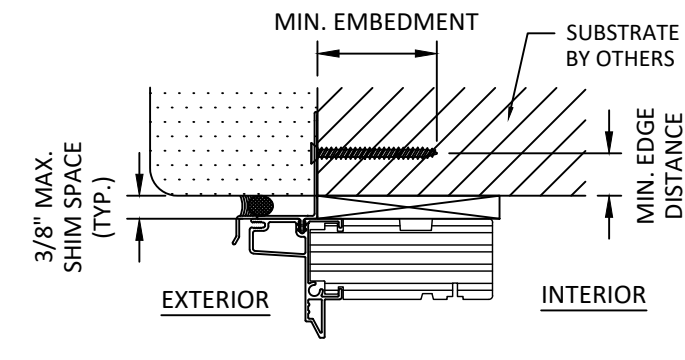
SILL & JAMB HAVE A SIMILAR DETAIL.

(4) #8 X 3/8" PFH SMS REQ'D INTO FRAME AT EACH STRAP



**D**  
**10** ANCHOR DETAIL  
 VINYL NAIL FIN

JAMB HAVE A SIMILAR DETAIL.



**E**  
**10** ANCHOR DETAIL  
 VINYL NAIL FIN W/ DRIP EDGE

HEAD DETAIL.

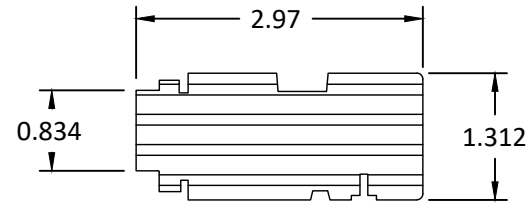
**INSTALLATION NOTES:**

- 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 ±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.
- 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.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
- 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.

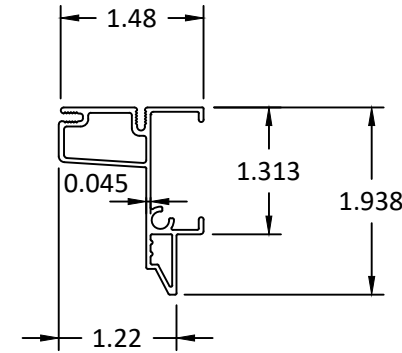
ANCHOR SCHEDULE								
INSTALLATION TYPE	ANCHOR QTY PER LOCATION	SUBSTRATE	ANCHOR TYPE	EMBEDMENT (IN.)	EDGE DISTANCE (IN.)	MAX. HEAD/SILL O.C. DISTANCE (IN.)	MAX. JAMB O.C. DISTANCE (IN.)	MAX. CORNER DISTANCE (IN.)
THRU STRAP	2	WOOD : MIN. SG=0.55	#8 WOOD SCREW	1.5	0.75	16.0	18.0	6.0
	2	METAL : 20 GAUGE STEEL, MIN. F <sub>y</sub> =33KSI	#10 TEK SCREW	3 THREADS MIN PENETRATION	0.5			
THRU FRAME	1	WOOD : MIN. SG=0.55	#10 WOOD SCREW	0.75	0.75	16.0	18.0	6.0
	1	METAL : 20 GAUGE STEEL, MIN. F <sub>y</sub> =33KSI	#10 TEK SCREW	3 THREADS MIN PENETRATION	0.5			
	1	CONCRETE : f' <sub>c</sub> =3000PSI	1/4" ITW TAPCON	1	2.5			
	1	CMU : f' <sub>c</sub> =1500PSI, PER ASTM C94	1/4" ITW TAPCON	1	2.5			
THRU VINYL NAIL FIN	1	WOOD : MIN. SG=0.55	#8 WOOD SCREW	0.75	0.75	3.5	3.5	3.0
	1	METAL : 20 GAUGE STEEL, MIN. F <sub>y</sub> =33KSI	#10 TEK SCREW	3 THREADS MIN PENETRATION	0.5			
THRU ALUMINUM NAIL FIN	1	WOOD : MIN. SG=0.55	#8 WOOD SCREW	0.75	0.75	12.0	12.0	3.0
	1	METAL : 20 GAUGE STEEL, MIN. F <sub>y</sub> =33KSI	#10 TEK SCREW	3 THREADS MIN PENETRATION	0.5			

## BILL OF MATERIALS

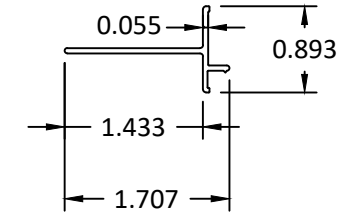
ITEM	DESCRIPTION	MATERIAL
A	3/8" MAX. SHIM SPACE	WOOD
C	1X BUCK (SG>=0.55)	WOOD
D	2X BUCK (SG>=0.55)	WOOD
E	1/4" X 2-3/4" PFH ELCO OR ITW CONCRETE SCREW	STEEL
F	MASONRY - 3,000 PSI MIN CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	1/4" X 3-3/4" PFH WOOD SCREW	STEEL
H	#10 X 3" PFH WOOD SCREW	STEEL
4	18GA X 1-1/4" BRAD TRIM NAIL	STEEL
13	GLASS STOP (PINE)	WOOD
27	POLYETHYLENE FOAM TAPE	-
29	STRAP ANCHOR	STEEL
37	#8 X 5/8" PFH SMS	STEEL
38	#8 X 2" PFH SMS	STEEL
46	GLAZING TAPE .094" x 2.65" BUTYL TAPE	-
56	AUXILIARY FRAME	LVL
57	STD. FRAME CLADDING	6063-T5
58	SECONDARY STOP (PINE)	WOOD
59	SECONDARY STOP (PINE)	WOOD
70	ALUMINUM NAIL FIN	6063-T5
71	#8 X 1-1/2" PFH SMS	STEEL
72	#8 X 1/2" PPH TEK SCREW	STEEL
90	1-1/2" INTERIOR COLONIAL MDL BAR	WOOD
91	1-1/2" EXTERIOR MDL BAR	6063-T5
92	1-1/2" MDL ADHESIVE TAPE (EXTERIOR FACE)	POLYETHYLENE
93	1-1/2" MDL ADHESIVE TAPE (INTERIOR FACE)	POLYETHYLENE
94	1-1/8" INTERIOR COLONIAL MDL BAR	WOOD
95	1-1/8" EXTERIOR MDL BAR	6063-T5
96	1-1/8" MDL ADHESIVE TAPE (EXTERIOR FACE)	POLYETHYLENE
97	1-1/8" MDL ADHESIVE TAPE (INTERIOR FACE)	POLYETHYLENE
98	7/8" INTERIOR COLONIAL MDL BAR	WOOD
99	7/8" EXTERIOR MDL BAR	6063-T5
100	7/8" MDL ADHESIVE TAPE (EXTERIOR FACE)	POLYETHYLENE
101	7/8" MDL ADHESIVE TAPE (INTERIOR FACE)	POLYETHYLENE
102	VINYL NAIL FIN W/ DRIP EDGE	VINYL
103	VINYL NAIL FIN	VINYL



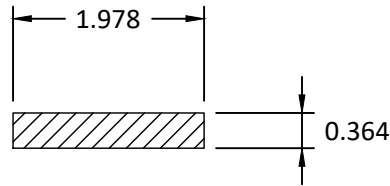
56) AUXILLARY FRAME



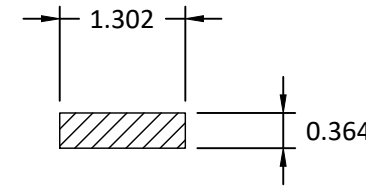
57) STD. FRAME CLADDING



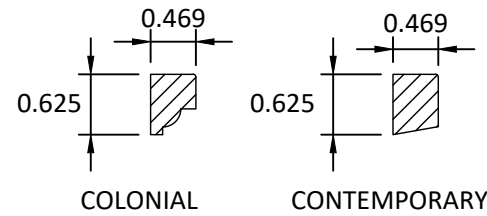
70) NAIL FIN ALUMINUM



58) SECONDARY STOP  
1-13/16" NOMINAL GLASS



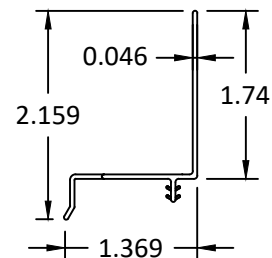
59) SECONDARY STOP  
1-1/4" NOMINAL GLASS



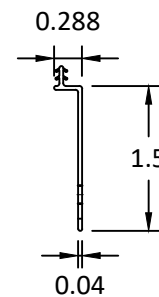
13) GLASS STOP



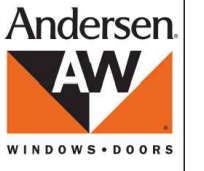
29) STRAP ANCHOR



102) NAIL FIN W/ DRIP EDGE  
VINYL



103) NAIL FIN  
VINYL



100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
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TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)

COMPONENTS AND BILL OF MATERIALS

PREPARED BY:

**BUILDING DROPS, INC.**  
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DANIA BEACH, FL 33004  
PH: (954) 395-8478  
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ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG**      CHK. BY: **HFN**

SCALE: **NTS**

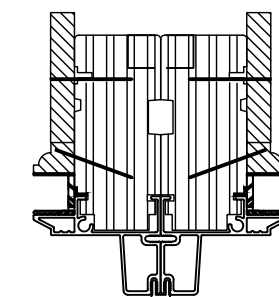
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SHEET: **11**

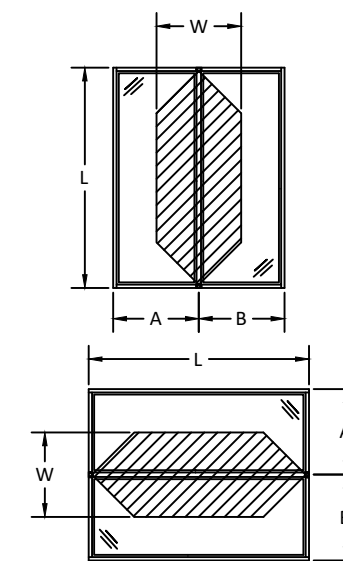
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**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
ZERO STRUCTURAL MULLION (ONE-WAY) CONFIGURATION**

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	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**



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

**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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
- 5) MULLION CHART APPLIES TO THE 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.

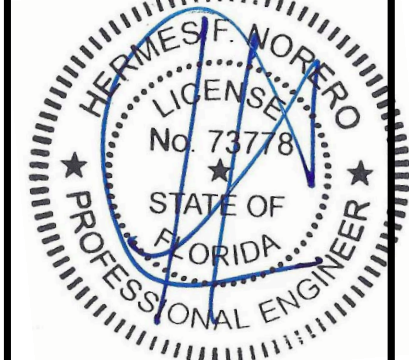


100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (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

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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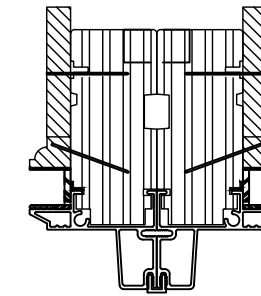
HERMES F. NORERO, P.E.  
FLORIDA P.E. No. 73778  
BUILDING DROPS, INC  
398 E. DANIA BEACH BLVD. # 338  
DANIA BEACH, FL 33004  
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	<b>FL24230</b>
DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>
SHEET:	<b>12</b>

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**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
ZERO STRUCTURAL MULLION (TWO-WAY) CONFIGURATION**

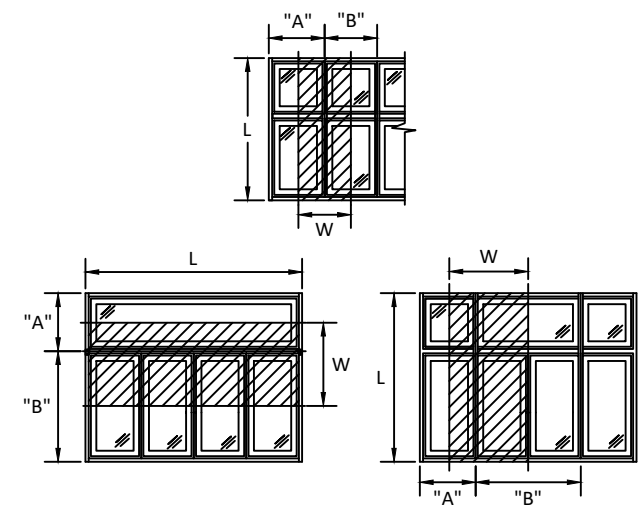
L - Mull Length (in)	W - Tributary Width (in)														
	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0	144.0	156.0	168.0	180.0	192.0
24.0	75.00	75.00	75.00	75.00	63.52	54.45	47.64	42.35	38.11	34.65	31.76	29.32	27.22	25.41	23.82
30.0	75.00	75.00	60.98	48.78	40.65	34.85	30.49	27.10	24.39	22.17	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



**ZERO MULLION PROFILE**

- 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE INSTALLATION CONDITIONS LISTED ON SHEET 10
  - 6) TRIBUTARY WIDTH =  $W = (A+B)/2$
  - 8) 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.

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



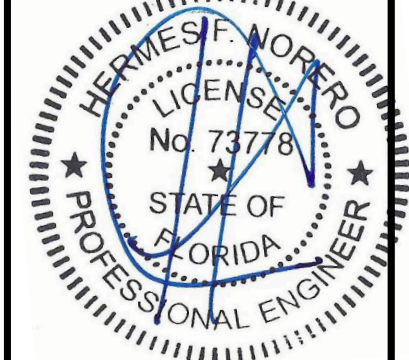
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT) ZERO MULLION LOADS TABLE TWO WAY

PREPARED BY: BUILDING DROPS, INC.  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG** CHK. BY: **HFN**

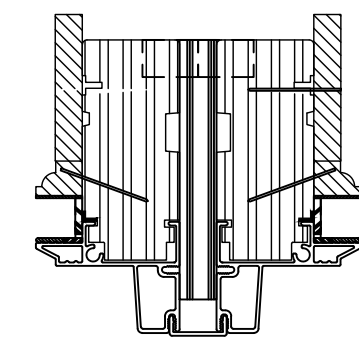
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DWG. #: **AWD210**

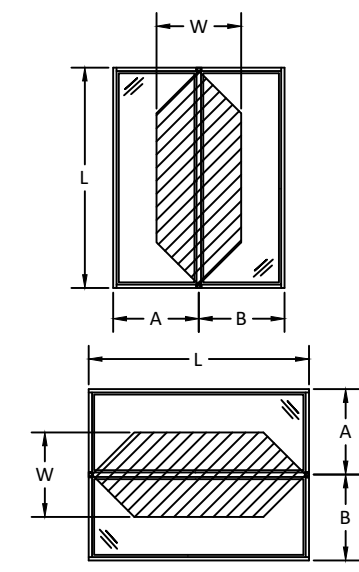
SHEET: **13**

**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)**  
**1/2" 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	74.58	70.42	70.42	70.42	70.42	70.42	70.42	70.42	70.42	70.42	70.42	70.42	70.42
66.0	75.00	71.75	58.85	53.56	52.91	52.91	52.91	52.91	52.91	52.91	52.91	52.91	52.91	52.91	52.91
72.0	75.00	59.25	47.81	42.41	40.75	40.75	40.75	40.75	40.75	40.75	40.75	40.75	40.75	40.75	40.75
78.0	66.62	46.64	37.50	32.98	31.07	30.82	30.82	30.82	30.82	30.82	30.82	30.82	30.82	30.82	30.82
84.0	53.05	36.89	29.37	25.45	23.52	22.91	22.91	22.91	22.91	22.91	22.91	22.91	22.91	22.91	22.91
90.0	42.94	29.70	23.46	20.10	18.29	17.50	17.39	17.39	17.39	17.39	17.39	17.39	17.39	17.39	17.39
96.0	35.26	24.28	19.05	16.18	14.55	13.71	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43
102.0	29.30	20.11	15.70	13.23	11.78	10.96	10.59	10.54	10.54	10.54	10.54	10.54	10.54	10.54	10.54
108.0	24.62	16.85	13.09	10.97	9.69	8.93	8.52	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39
114.0	20.89	14.26	11.04	9.20	8.08	7.38	6.97	6.78	6.75	6.75	6.75	6.75	6.75	6.75	6.75
120.0	17.88	12.17	9.40	7.80	6.81	6.18	5.79	5.57	5.50	5.50	5.50	5.50	5.50	5.50	5.50
126.0	15.42	10.48	8.07	6.68	5.80	5.23	4.86	4.65	4.54	4.53	4.53	4.53	4.53	4.53	4.53
132.0	13.39	9.09	6.98	5.76	4.98	4.47	4.13	3.92	3.80	3.76	3.76	3.76	3.76	3.76	3.76
138.0	11.71	7.93	6.08	5.00	4.32	3.86	3.55	3.34	3.22	3.15	3.15	3.15	3.15	3.15	3.15
144.0	10.29	6.96	5.33	4.38	3.76	3.35	3.07	2.87	2.75	2.68	2.65	2.65	2.65	2.65	2.65
150.0	9.10	6.15	4.70	3.85	3.30	2.93	2.67	2.49	2.37	2.30	2.26	2.25	2.25	2.25	2.25
156.0	8.08	5.46	4.16	3.41	2.91	2.58	2.34	2.18	2.06	1.99	1.94	1.93	1.93	1.93	1.93
162.0	7.21	4.86	3.71	3.03	2.59	2.28	2.07	1.91	1.80	1.73	1.68	1.66	1.66	1.66	1.66
168.0	6.46	4.35	3.32	2.70	2.31	2.03	1.84	1.69	1.59	1.52	1.47	1.44	1.43	1.43	1.43
174.0	5.81	3.91	2.98	2.42	2.06	1.82	1.64	1.51	1.41	1.34	1.29	1.26	1.25	1.24	1.24
180.0	5.25	3.53	2.68	2.18	1.86	1.63	1.47	1.35	1.26	1.19	1.14	1.11	1.09	1.09	1.09
186.0	4.75	3.20	2.43	1.97	1.68	1.47	1.32	1.21	1.12	1.06	1.02	0.99	0.97	0.95	0.95
192.0	4.32	2.90	2.20	1.79	1.52	1.33	1.19	1.09	1.01	0.95	0.91	0.88	0.86	0.84	0.84



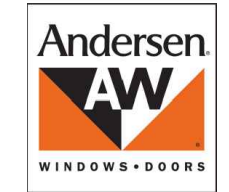
**1/2" X 3 1/2"**  
**LVL MULLION PROFILE**



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

**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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
- 5) MULLION CHART APPLIES TO THE 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.



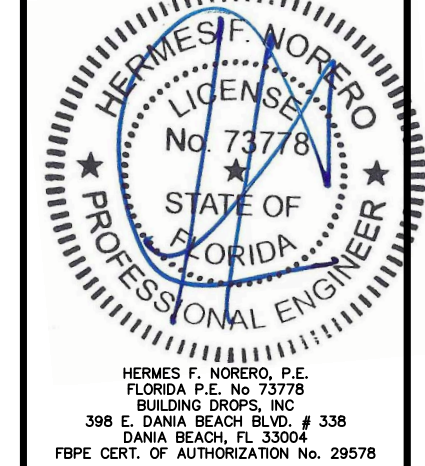
100 FOURTH AVE NORTH  
 BAYPORT, MN 55003-1096  
 PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (WZ3) (IMPACT)  
 1/2" 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) 395-8478  
 FAX: (954) 744-4738  
 WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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: **AG**      CHK. BY: **HFN**

SCALE: **NTS**

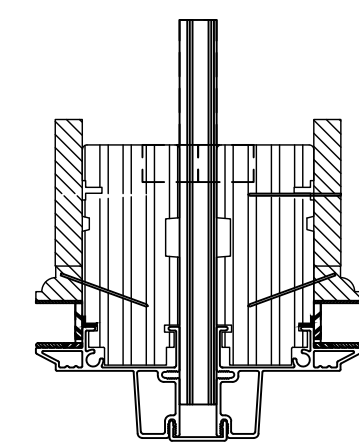
DWG. #: **AWD210**

SHEET:  
**14**  
 OF 29

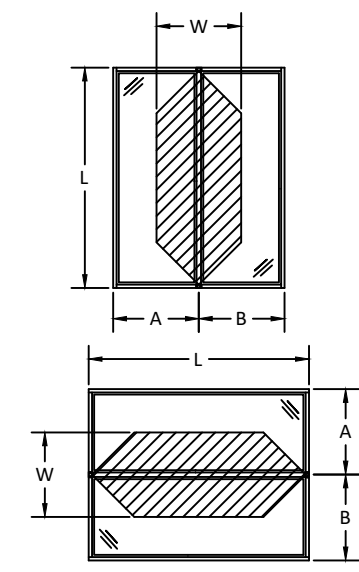


**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)**  
**1/2" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION**

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 MULLION 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
- 5) MULLION CHART APPLIES TO THE 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.



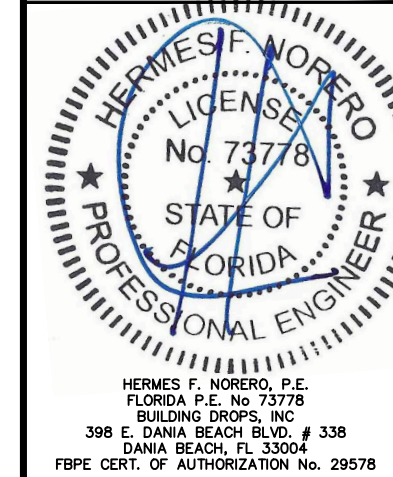
100 FOURTH AVE NORTH  
 BAYPORT, MN 55003-1096  
 PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (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) 395-8478  
 FAX: (954) 744-4738  
 WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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FL #:  
**FL24230**

DATE: **10.12.17**

DWG. BY: **AG**      CHK. BY: **HFN**

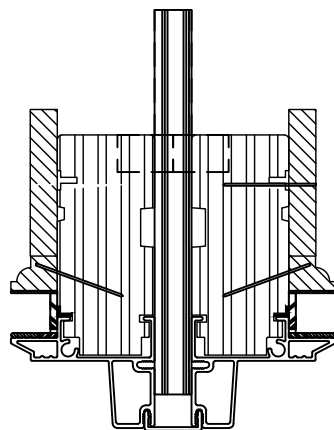
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DWG. #: **AWD210**

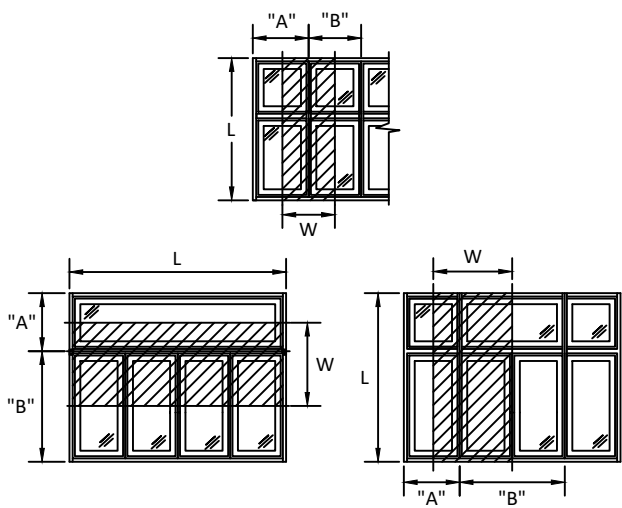
SHEET:  
**16**  
 OF 29

**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 MULLION 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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 SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (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
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG**      CHK. BY: **HFN**

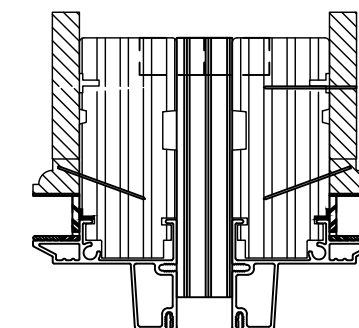
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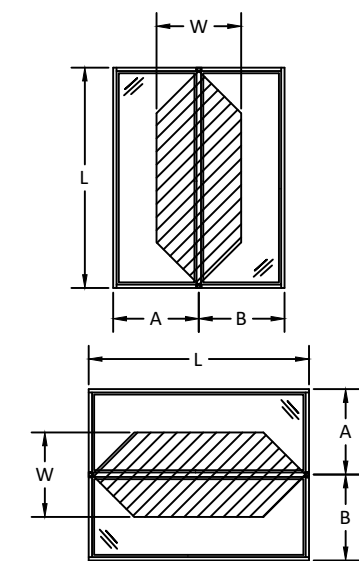
SHEET:  
**17**  
 OF 29

**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



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



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

- NOTE:**
- 1) MULLION CHART APPLIES TO 3/4" 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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 SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (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  
 FAX: (954) 744-4738  
 WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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.

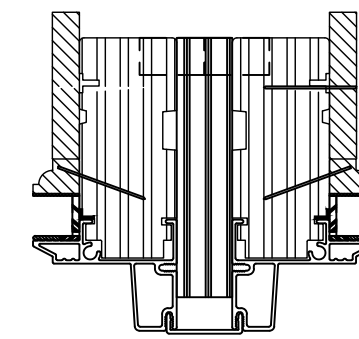


HERMES F. NORERO, P.E.  
 FLORIDA P.E. No. 73778  
 BUILDING DROPS, INC  
 398 E. DANIA BEACH BLVD. # 338  
 DANIA BEACH, FL 33004  
 FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	<b>FL24230</b>
DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>
SHEET:	<b>18</b>

**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
3/4" X 3-1/2" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION**

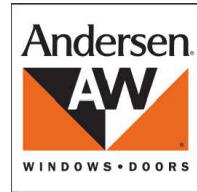
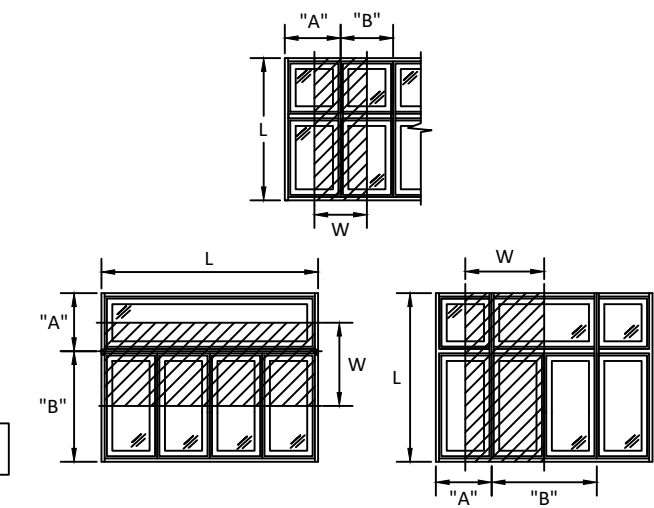
L - Mull Length (in)	W - Tributary Width (in)														
	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0	144.0	156.0	168.0	180.0	192.0
24.0	75.00	75.00	75.00	75.00	75.00	66.86	58.50	52.00	46.80	42.55	39.00	36.00	33.43	31.20	29.25
30.0	75.00	75.00	75.00	74.88	62.40	53.49	46.80	41.60	37.44	34.04	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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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.

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



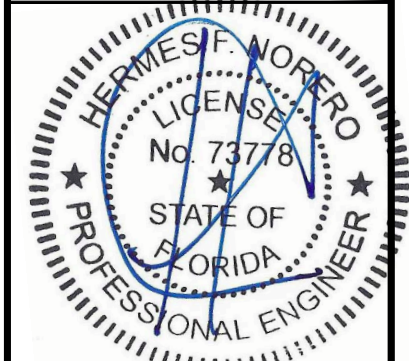
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
3/4" 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) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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

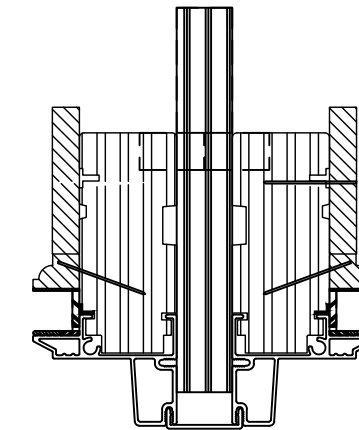
FL #:	<b>FL24230</b>
DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>

SHEET:  
**19**  
OF 29

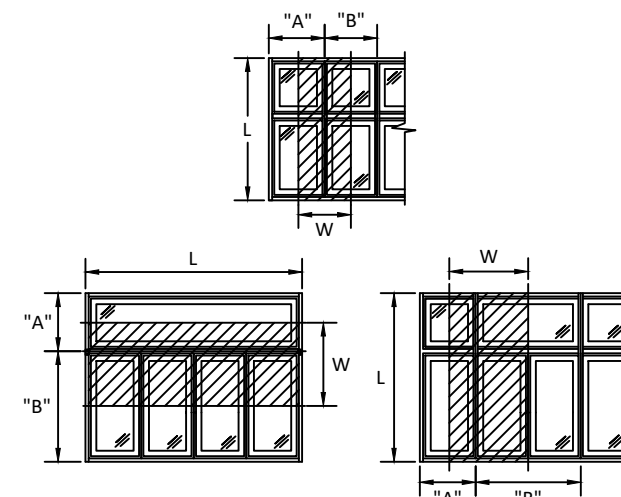


**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
3/4" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION**

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 MULLION 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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 SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
3/4" 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) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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 #:	<b>FL24230</b>
DATE:	<b>10.12.17</b>
DWG. BY:	<b>AG</b>
CHK. BY:	<b>HFN</b>
SCALE:	<b>NTS</b>
DWG. #:	<b>AWD210</b>

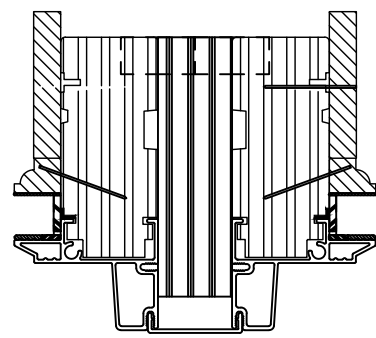
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OF 29



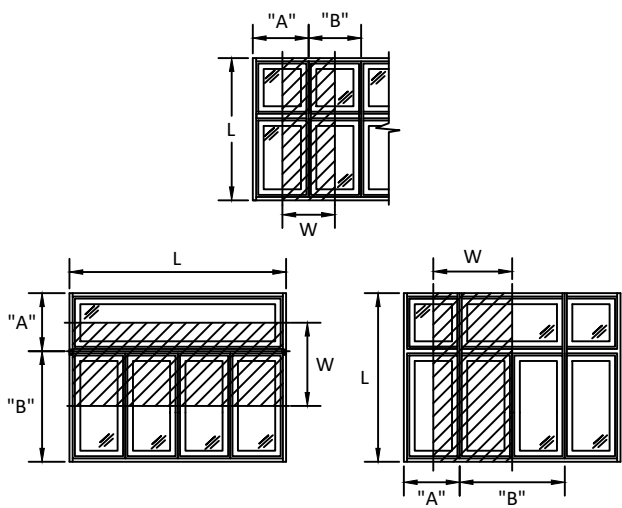
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s:\projects\andersen windows\lbc-19-0548.2 - fbc submittal - e-series mullion-revisions\dwg\1024230.1 & 1.1\awd210 - 11540-auxiliary-fixed-impact-(hwhb).dwg

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 MULLION 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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 SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
1" 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) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG** CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **AWD210**

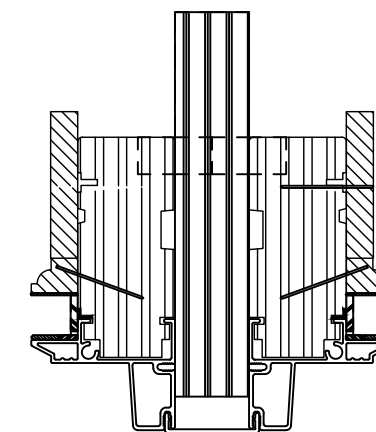
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OF 29

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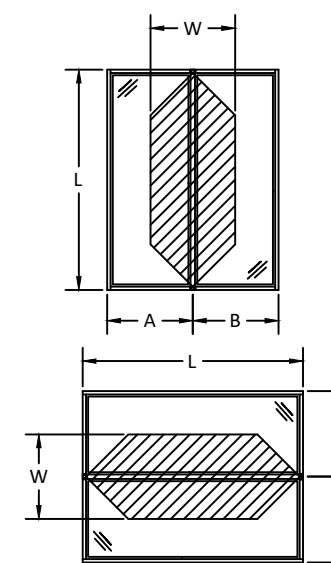
MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)															
1" X 5-3/16" STRUCTURAL MULLION (ONE-WAY) CONFIGURATION															
L - Mull Length (in)	W - Tributary Width (in)														
	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0	144.0	156.0	168.0	180.0	192.0
24.0	75.00	75.00	75.00	75.00	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:**

- 1) MULLION CHART APPLIES TO 1" 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
- 5) MULLION CHART APPLIES TO THE 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 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

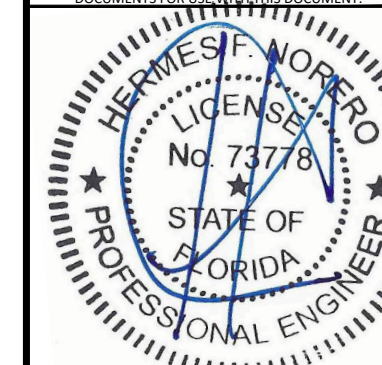
TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
1" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

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
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG**      CHK. BY: **HFN**

SCALE: **NTS**

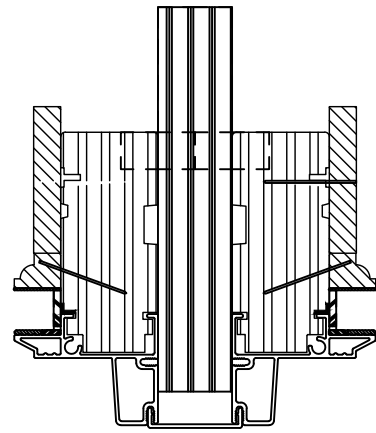
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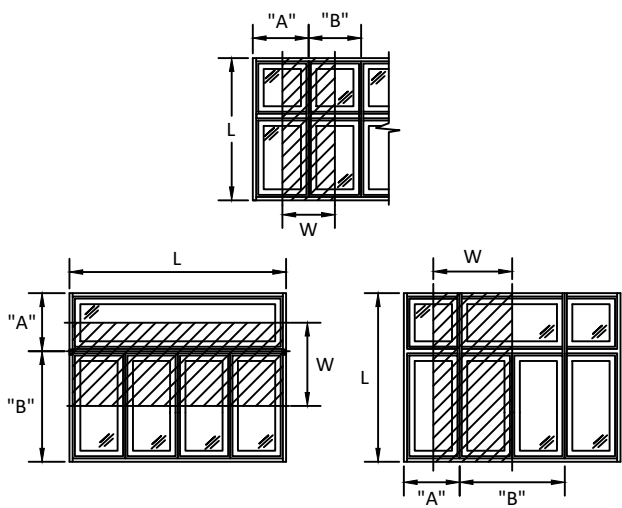
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MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)															
1" X 5-3/16" STRUCTURAL MULLION (TWO-WAY) CONFIGURATION															
L - Mull Length (in)	W - Tributary Width (in)														
	24.0	36.0	48.0	60.0	72.0	84.0	96.0	108.0	120.0	132.0	144.0	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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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 SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
1" 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) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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: **AG**      CHK. BY: **HFN**

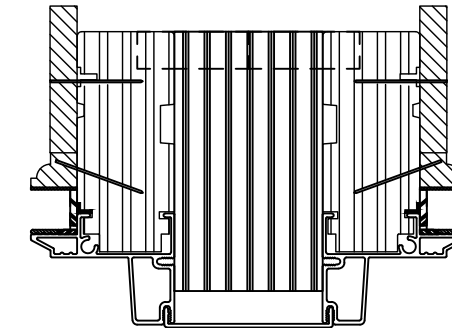
SCALE: **NTS**

DWG. #: **AWD210**

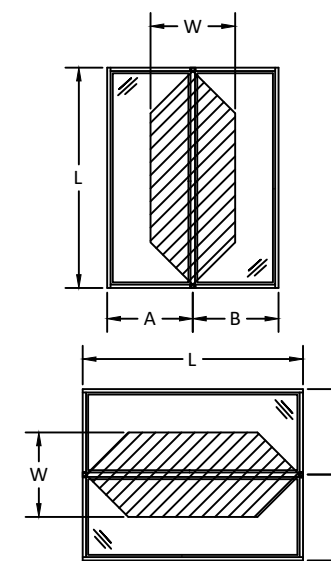
SHEET: **25**

**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
2" 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	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 MULLION PROFILE**



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

- 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
  - 5) MULLION CHART APPLIES TO THE 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.



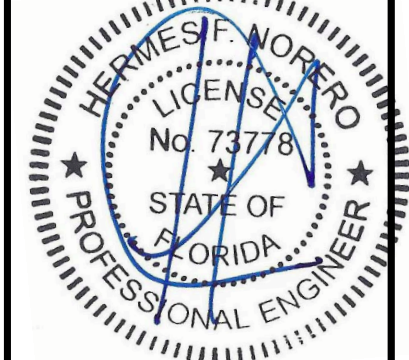
100 FOURTH AVE NORTH  
BAYPORT, MN 55003-1096  
PH: (651) 264-5150 FX: (651) 264-5485

TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (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) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com

REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG**      CHK. BY: **HFN**

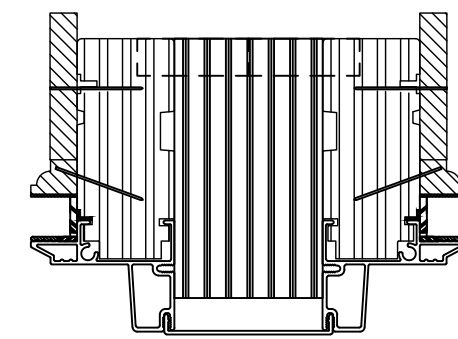
SCALE: **NTS**

DWG. #: **AWD210**

SHEET:  
**26**  
OF 29

8/14/2019 6:44 PM  
s:\projects\andersen windows\lbc-19-0548.2 - fbc submittal - e-series mullion revisions\dwg\24230.1 & 1.2\awd210 - 11540-auxiliary fixed-impact-(hwh).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

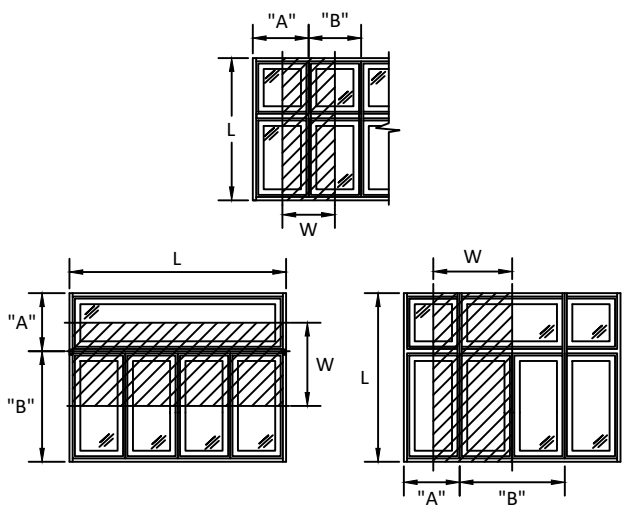


**2" X 3 1/2"  
LVL MULLION PROFILE**

**NOTE:**

- 1) MULLION CHART APPLIES TO 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 E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
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$$\frac{A + B}{2} = W$$



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

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REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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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: **AG**      CHK. BY: **HFN**

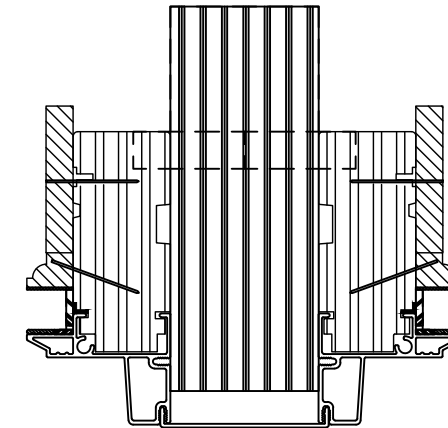
SCALE: **NTS**

DWG. #: **AWD210**

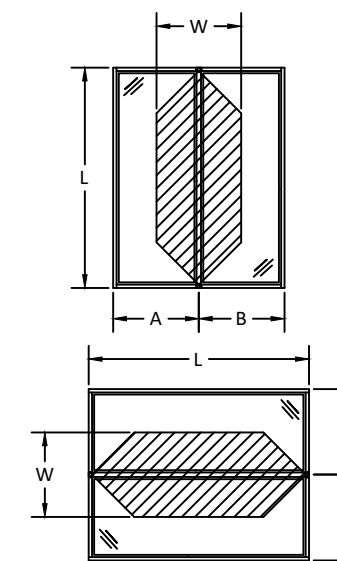
SHEET:  
**27**

**MAXIMUM DESIGN PRESSURE CAPACITY CHART (PSF)  
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**



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

**NOTE:**

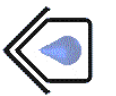
- 1) MULLION CHART APPLIES TO 2" X 5 3/16" LVL MULL ASSEMBLIES, WHEN MULLED IN ONE-WAY CONFIGURATIONS.
- 2) DESIGN PRESSURE VALUES ARE POSITIVE AND NEGATIVE IN PSF.
- 3) MAXIMUM DEFLECTION HAS BEEN LIMITED TO L/175.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
- 5) MULLION CHART APPLIES TO THE 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

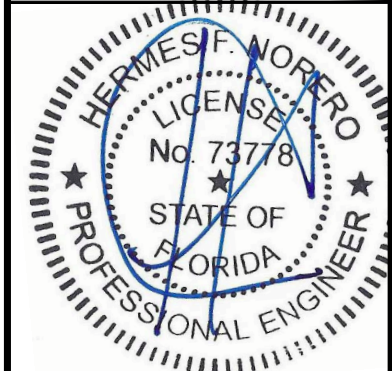
TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
2" X 5-3/16" MULLION LOADS TABLE  
ONE WAY

PREPARED BY:  
**BUILDING DROPS, INC.**  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
PH: (954) 395-8478  
FAX: (954) 744-4738  
WEB: www.buildingdrops.com



REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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FBPE CERT. OF AUTHORIZATION No. 29578

FL #: **FL24230**

DATE: **10.12.17**

DWG. BY: **AG**      CHK. BY: **HFN**

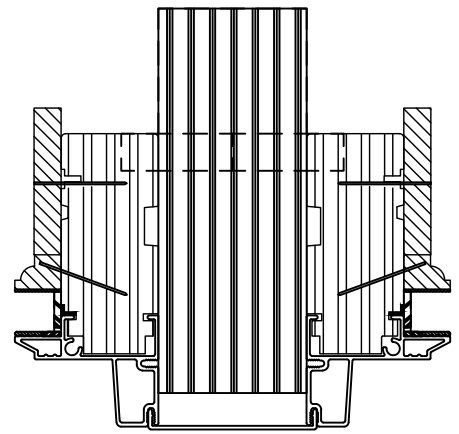
SCALE: **NTS**

DWG. #: **AWD210**

SHEET: **28**

8/14/2019 6:44 PM  
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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

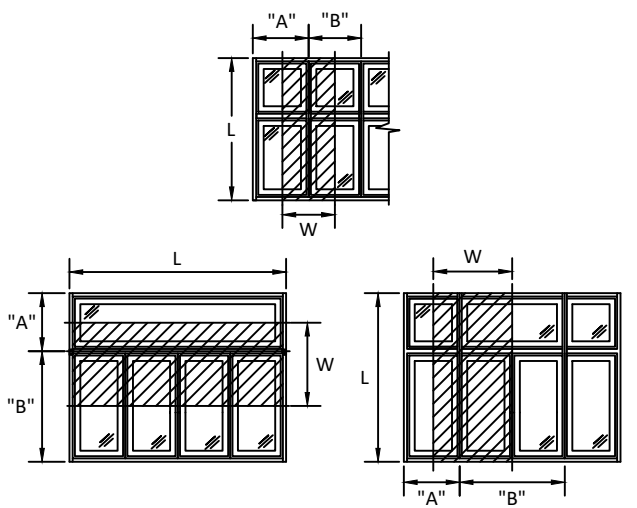


**2" X 5 3/16"  
LVL MULLION PROFILE**

**NOTE:**

- 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.
- 4) DESIGN PRESSURE OF ASSEMBLY IS LIMITED TO THE LESSER DESIGN PRESSURE OF THE MULLION ASSEMBLY OR THE INDIVIDUAL UNIT OF INSTALLATION. ADJACENT E-SERIES WINDOWS OR DOORS SHALL BE UNDER SEPARATE FL APPROVAL.
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$$\frac{A + B}{2} = W$$



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BAYPORT, MN 55003-1096  
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TITLE: E-SERIES SPECIALTY (AUXILIARY) FIXED WINDOW (W23) (IMPACT)  
2" X 5-3/16" MULLION LOADS TABLE  
TWO WAY

PREPARED BY:  
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REMARKS	BY	DATE
ADDED ZERO, 1/2", 1" & 2" MULL	HR	4.12.19
ADDED MULL & DP CHARTS	LL	7.15.19

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SCALE: **NTS**

DWG. #: **AWD210**

SHEET: **29**