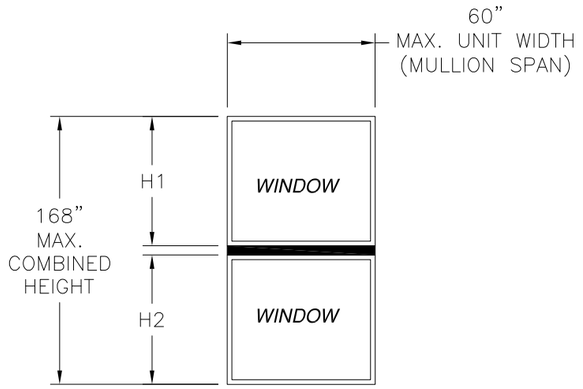
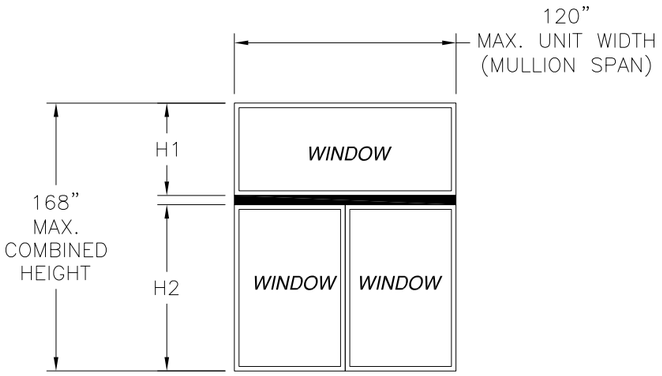




REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

NOTES:
1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2018 IBC AND THE 2018 IRC.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
4. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS UP TO WIND ZONE 3
5. DESIGN PRESSURE AND INSTALLATION DETAILS SHOWN IN THIS DOCUMENT APPLY ONLY TO THE MULLION. WINDOWS MUST BE APPROVED UNDER SEPARATE APPROVAL.
6. SINGLE UNITS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. SINGLE UNITS TO BE MULLED TOGETHER MUST BE MANUFACTURED BY MI WINDOWS AND DOORS
7. DESIGN PRESSURE OF MULLED UNIT SHALL BE CONTROLLED BY THE LESSER DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL WINDOW UNIT.
8. VERTICAL MULLIONS USED FOR THIS APPROVAL ARE M-2285 MULLIONS AND ARE PART OF THIS APPROVAL.
9. FOR ADDITIONAL APPROVED CONFIGURATIONS SEE SHEET 2.

Maximum design presssure (psf)

Tributary height (in)	Mullion span (in)							
	18.00	*24.00*	*30.00*	*36.00*	*42.00*	*48.00*	*54.00*	*60.00*
18.00	120.0	120.0	120.0	120.0	120.0	120.0	114.1	100.7
24.00	120.0	120.0	120.0	120.0	120.0	107.0	91.7	80.3
30.00	120.0	120.0	120.0	120.0	114.1	93.4	79.0	68.5
36.00	120.0	120.0	120.0	120.0	107.0	85.6	71.3	61.1
42.00	120.0	120.0	120.0	120.0	104.8	81.5	66.7	55.1
48.00	120.0	120.0	120.0	120.0	104.8	80.3	64.2	51.2
54.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	49.1
60.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	48.4
66.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	48.4
72.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	48.4
78.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	48.4
84.00	120.0	120.0	120.0	120.0	104.8	80.3	63.4	48.4

LARGE AND SMALL MISSILE IMPACT, LEVEL D, WIND ZONE 3
DIMENSIONS IN CHART ARE FRAME DIMENSIONS AND DO NOT INCLUDE FLANGE

Maximum design pressure capacity chart (psf)

Tributary Height (in)	Mullion Span and individual unit width (in)							
	36.00	*48.00*	*60.00*	*72.00*	*84.00*	*96.00*	*108.00*	*120.00*
	18.00	*24.00*	*30.00*	*36.00*	*42.00*	*48.00*	*54.00*	*60.00*
18.00	120.0	120.0	100.7	75.4	55.3	41.5	29.0	21.1
24.00	120.0	107.0	80.3	57.0	41.7	31.6	22.0	16.0
30.00	120.0	92.5	67.3	46.1	33.6	25.6	17.9	-
36.00	120.0	82.8	57.2	38.9	28.3	21.5	15.1	-
42.00	118.1	76.1	50.2	33.9	24.5	18.6	-	-
48.00	110.5	71.3	45.1	30.2	21.8	16.4	-	-
54.00	103.8	67.6	41.4	27.5	19.6	-	-	-
60.00	97.8	64.2	38.7	25.3	18.0	-	-	-
66.00	91.1	61.1	36.5	23.7	16.7	-	-	-
72.00	76.2	58.1	34.6	22.4	15.6	-	-	-
78.00	64.8	49.3	32.8	21.3	-	-	-	-
84.00	55.7	42.3	31.2	20.4	-	-	-	-

LARGE AND SMALL MISSILE IMPACT, LEVEL D, WIND ZONE 3
DIMENSIONS IN CHART ARE FRAME DIMENSIONS AND DO NOT INCLUDE FLANGE

DESIGN PRESSURE TABLE INSTRUCTIONS:
1. DEFINE REQUIRED DESIGN LOAD PER TEXAS BUILDING CODE CHAPTER 16.
2. DETERMINE TRIBUTARY HEIGHT AND MULLION SPAN BASED ON PRODUCT TO BE INSTALLED. SEE FORMULA FOR TRIBUTARY HEIGHT.
3. LOCATE MULLION SPAN (UNIT WIDTH) AND TRIBUTARY HEIGHT. AT THE INTERSECTION OF COLUMN AND ROW CONTAINING THE MULLION SPAN AND TRIBUTARY WIDTH RESPECTIVELY IS THE MULLION RATING FOR PRODUCT IN STEP 2.
   MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.

$$\text{TRIBUTARY HEIGHT} = \frac{H1 + H2}{2}$$

SIGNED: 05/11/2020

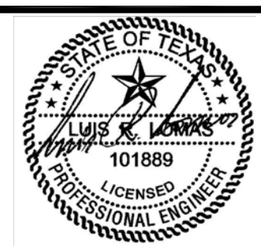
TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1, 2	ELEVATION, NOTES AND DESIGN PRESSURE CHARTS
3 – 4	INSTALLATION DETAILS
5	COMPONENTS

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

M-2285 HORIZONTAL MULLION
SINGLE, TWIN AND TRIPLE WITH TRANSOM
ELEVATION AND GENERAL NOTES

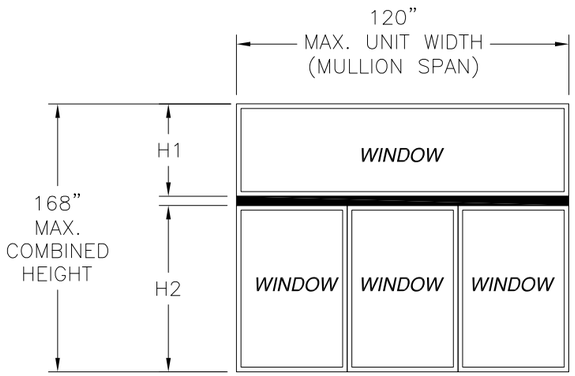
DRAWN:	DWG NO.	REV
A.R.	08-03262	–
SCALE NTS	DATE 06/04/18	SHEET 1 OF 5

L. ROBERTO LOMAS P.E.
1432 WOODFORD RD LEWISVILLE, NC 27023
434-688-0609 rllomas@lrlomaspe.com



Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



Maximum design pressure capacity chart (psf)

Tributary Height (in)	ullion Span and individual unit width (i				
	54.00	***72.00***	***90.00***	***108.00***	***120.00***
	18.00	***24.00***	***30.00***	***36.00***	***40.00***
18.00	114.1	74.4	47.0	29.6	21.5
24.00	90.9	57.0	35.9	22.4	16.3
30.00	76.7	46.7	29.2	18.1	-
36.00	67.1	39.7	24.8	15.3	-
42.00	60.4	34.8	21.6	-	-
48.00	55.5	31.2	19.2	-	-
54.00	51.9	28.4	17.4	-	-
60.00	48.9	26.3	16.0	-	-
66.00	46.3	24.7	-	-	-
72.00	43.9	23.4	-	-	-
78.00	41.8	22.4	-	-	-
84.00	39.8	21.4	-	-	-

LARGE AND SMALL MISSILE IMPACT, LEVEL D, WIND ZONE 3
DIMENSIONS IN CHART ARE FRAME DIMENSIONS AND DO NOT INCLUDE FLANGE

DESIGN PRESSURE TABLE INSTRUCTIONS:

1. DEFINE REQUIRED DESIGN LOAD PER TEXAS BUILDING CODE CHAPTER 16.
2. DETERMINE TRIBUTARY HEIGHT AND MULLION SPAN BASED ON PRODUCT TO BE INSTALLED. SEE FORMULA FOR TRIBUTARY HEIGHT.
3. LOCATE MULLION SPAN (UNIT WIDTH) AND TRIBUTARY HEIGHT. AT THE INTERSECTION OF COLUMN AND ROW CONTAINING THE MULLION SPAN AND TRIBUTARY WIDTH RESPECTIVELY IS THE MULLION RATING FOR PRODUCT IN STEP 2.
   MULLION RATING MUST BE EQUAL OR GREATER THAN REQUIRED DESIGN PRESSURE OBTAINED IN STEP 1.

$$\text{TRIBUTARY HEIGHT} = \frac{H1 + H2}{2}$$

SIGNED: 05/11/2020

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

M-2285 HORIZONTAL MULLION
SINGLE, TWIN AND TRIPLE WITH TRANSOM
ELEVATION AND DP CHART

DRAWN:	DWG NO.	REV
A.R.	08-03262	-

SCALE	DATE	SHEET
NTS	06/04/18	2 OF 5

L. ROBERTO LOMAS P.E.
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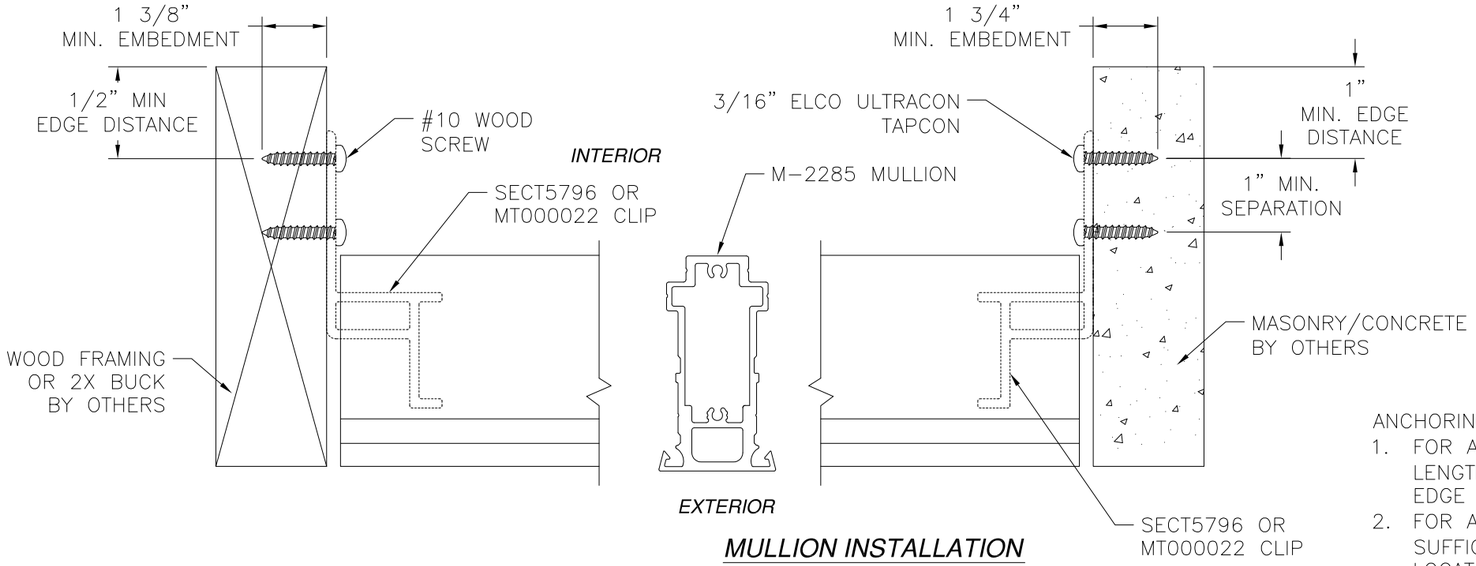
434-688-0609 rllomas@lrlomaspe.com

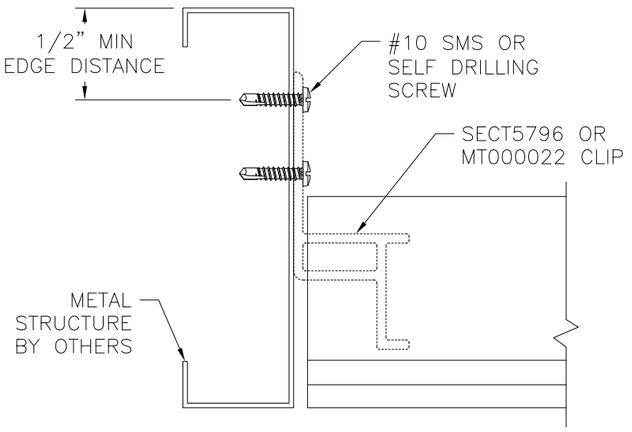
Luis R. Lomas P.E.
TX No.: 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



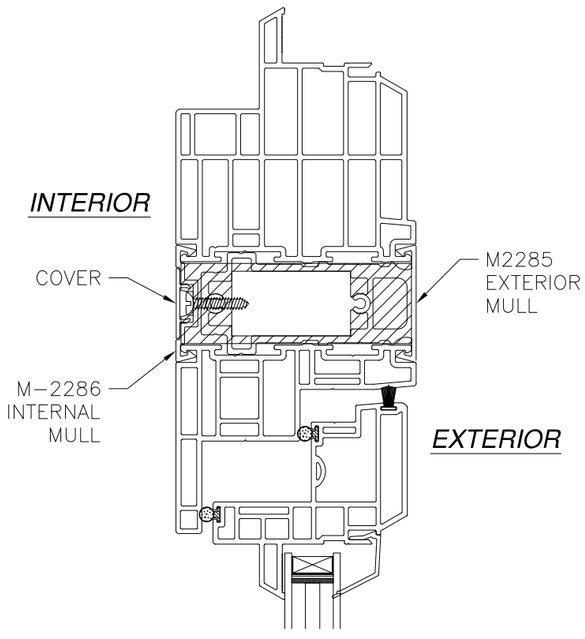
MULLION INSTALLATION

WOOD & CONCRETE



MULLION INSTALLATION

METAL



WINDOW & MULLION ASSEMBLY

REFERENCE ONLY

ANCHORING NOTES:

1. FOR ANCHORING INTO CONCRETE USE 3/16" ELCO ULTRACON TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 1'' MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
2. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #10 WOOD SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/8" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
3. FOR ANCHORING INTO METAL STRUCTURE USE #10 SMS OR SELF DRILLING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
4. FOR ATTACHING WINDOW UNITS TO MULLION USE #10 SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A MINIMUM EMBEDMENT OF THREE THREADS PAST THE MULLION WALL. LOCATE SCREWS 6" FROM EACH MULLION END AND 12" MAX. O.C. THEREAFTER. STAGGER SCREWS AT EACH WINDOW.
5. FOR WINDOW UNITS ANCHORING SCHEDULE REFER TO WINDOW APPROVED INSTALLATION INSTRUCTIONS.
6. ALL FASTENERS TO BE CORROSION RESISTANT.
7. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:
   A. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42
   B. CONCRETE – MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.
   C. METAL – STEEL 18GA (.048") FY=33KSI/FU=52 OR ALUMINUM 6063–T5 FU=30KSI .0625" THICK MINIMUM.

SIGNED: 05/11/2020

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030–0370

M–2285 HORIZONTAL MULLION
SINGLE, TWIN AND TRIPLE WITH TRANSOM
INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
A.R.	08–03262	–

SCALE	DATE	SHEET
NTS	06/04/18	3 OF 5

L. ROBERTO LOMAS P.E.
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434-688-0609 rllomas@lrlomaspe.com

Luis R. Lomas P.E.
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REVISIONS			
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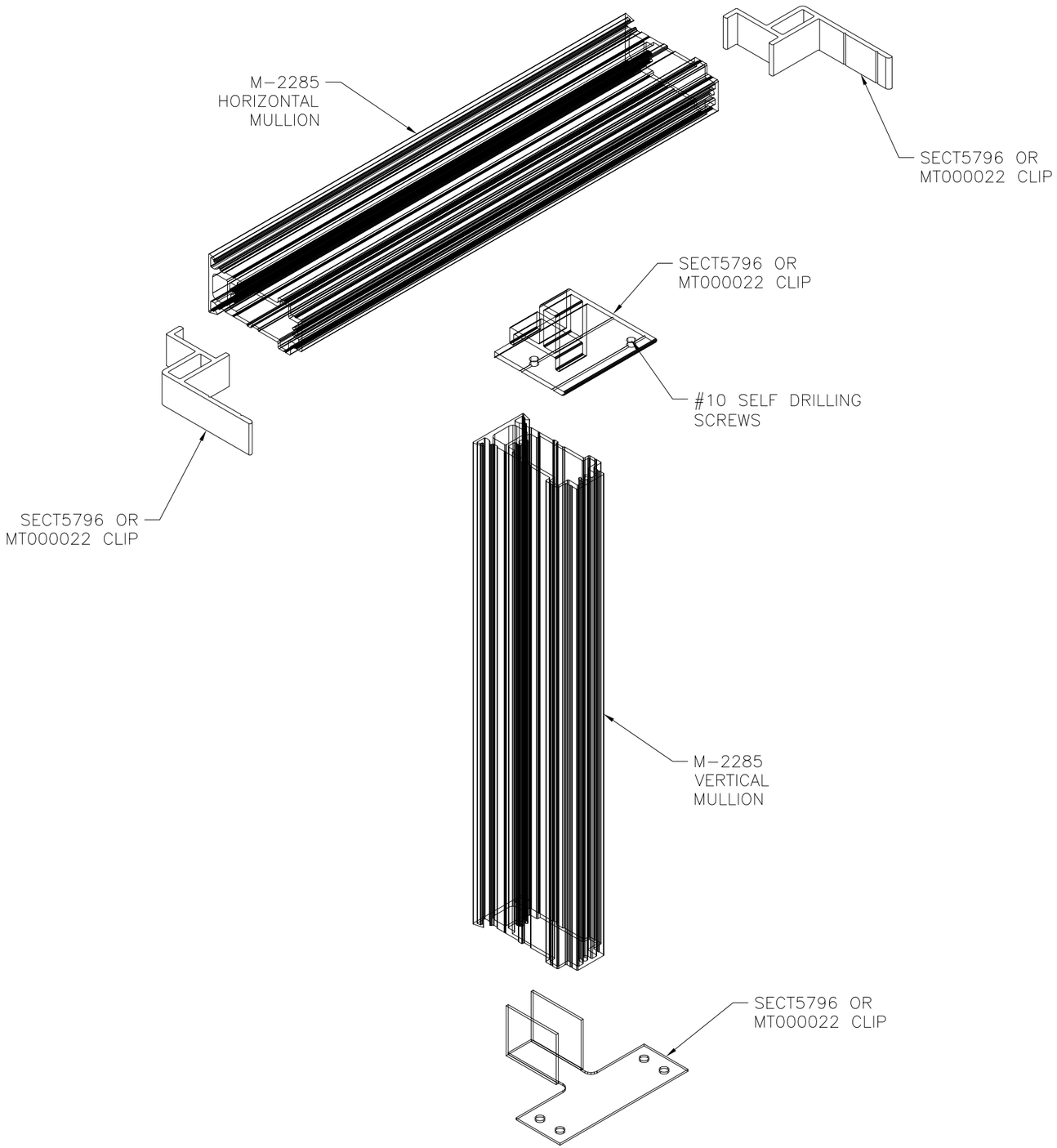

CLIP INSTALLATION

SIGNED: 05/11/2020

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030–0370

M–2285 HORIZONTAL MULLION
SINGLE, TWIN AND TRIPLE WITH TRANSOM
INSTALLATION DETAILS

DRAWN:	DWG NO.	REV
A.R.	08–03262	–
SCALE NTS	DATE 06/04/18	SHEET 4 OF 5

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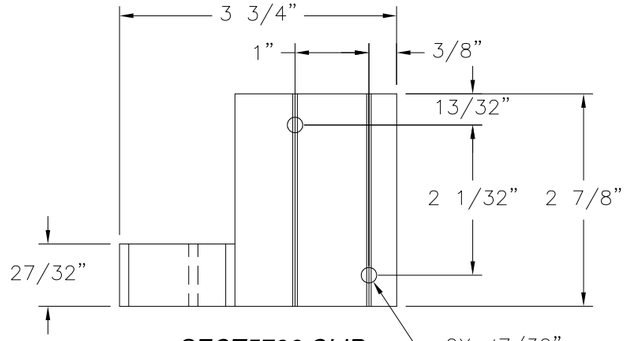
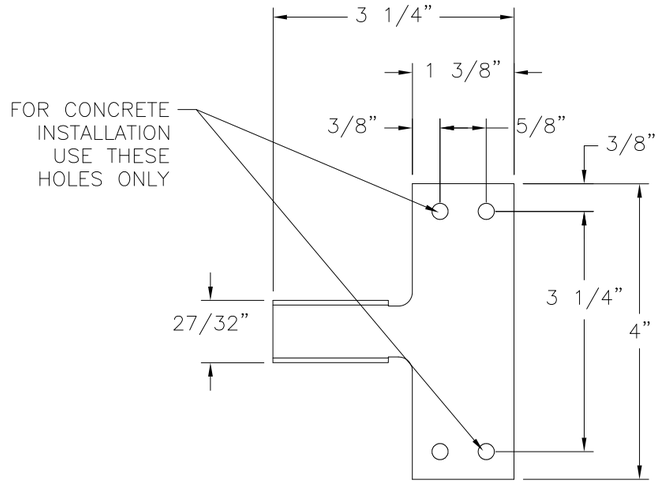
STATE OF TEXAS
LUIS R. LOMAS
101889
LICENSED
PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
TX No.: 101889

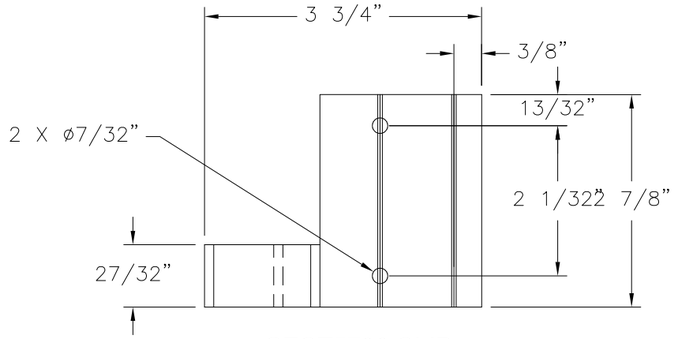
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



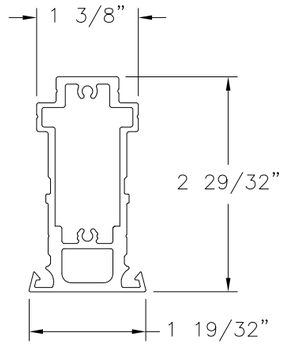
SECT5796 CLIP
FOR CONCRETE INSTALLATION
ALUMINUM 6063-T5 .125" THICK



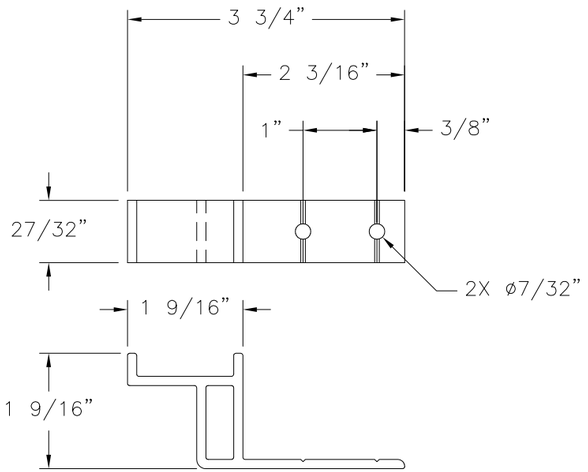
MT000022 CLIP
16GA (.063") GALVANIZED STEEL
FOR WOOD AND METAL FRAMING INSTALL (4) ANCHORS PER CLIP
FOR MASONRY/CONCRETE INSTALLATION USE (2) ANCHORS PER CLIP AS SHOWN



SECT5796 CLIP
FOR CONCRETE INSTALLATION
ALUMINUM 6063-T5 .125" THICK



M-2285 MULLION
ALUMINUM 6063-T5 .125" THICK



SECT5796 CLIP
FOR WOOD AND METAL FRAMING INSTALLATION
ALUMINUM 6063-T5 .125" THICK

SIGNED: 05/11/2020

MI WINDOWS AND DOORS, LLC
650 WEST MARKET STREET
GRATZ, PA 17030-0370

M-2285 HORIZONTAL MULLION
SINGLE, TWIN AND TRIPLE WITH TRANSOM COMPONENTS

DRAWN:	DWG NO.	REV
A.R.	08-03262	-

SCALE	DATE	SHEET
NTS	06/04/18	5 OF 5

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