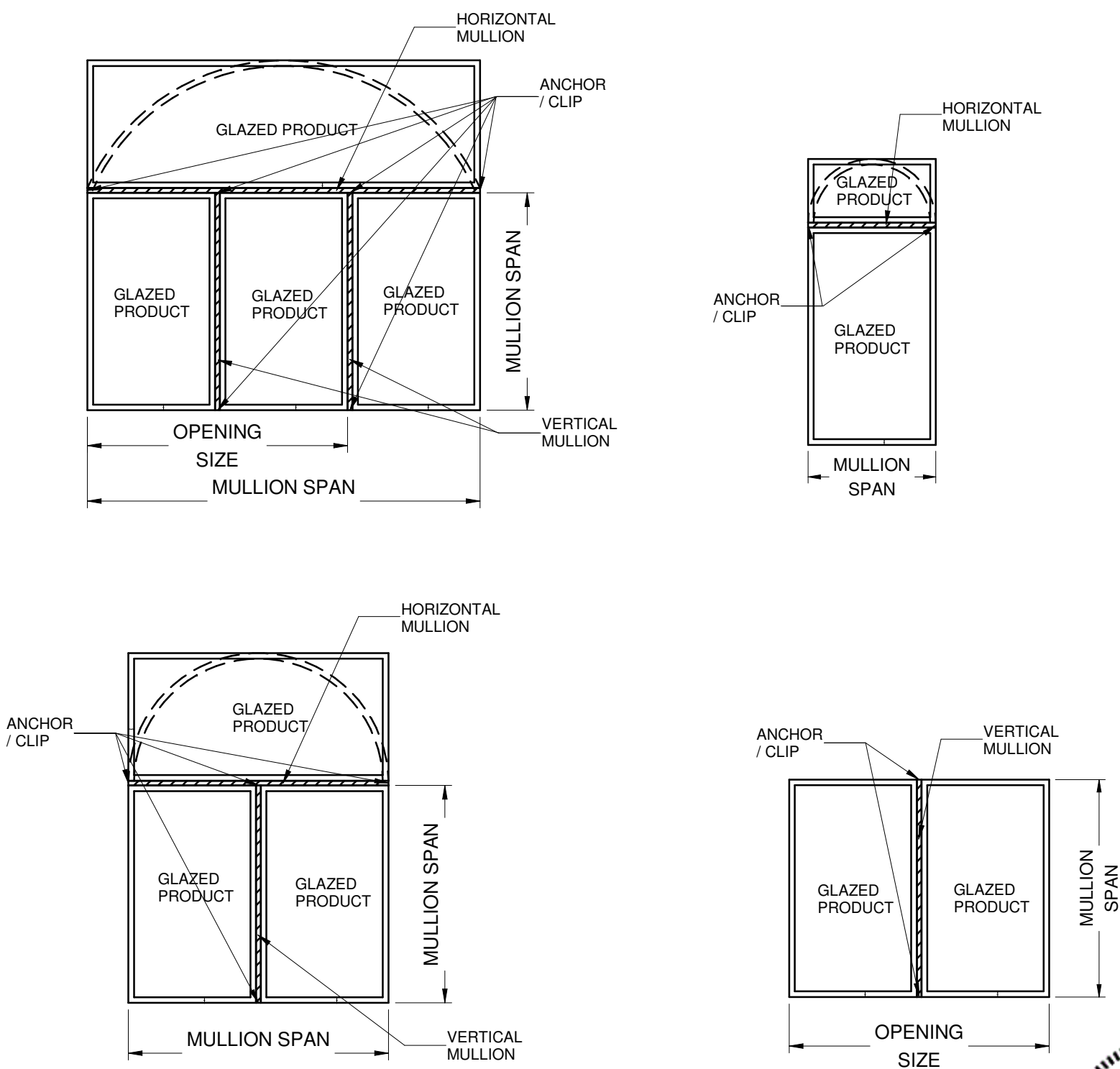
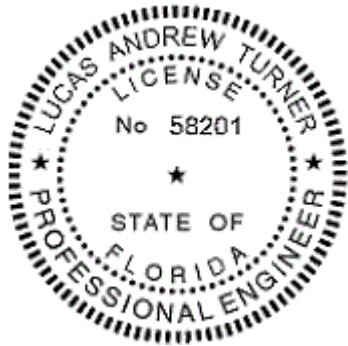


MULLION, BOTH NON-IMPACT AND LARGE MISSILE IMPACT



TYPICAL MULLION ARRANGEMENTS

Lucas
Turner
2019-10-18
10:18+19:00



- GENERAL NOTES:
- 1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE FLORIDA BUILDING CODE (FBC), CURRENT EDITION INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND IS RATED FOR WIND ZONE 4 MISSILE LEVEL D IMPACT USE AS DEFINED IN ASTM E 1996 PER THE FBC.
 - 2. CONFIGURATIONS: VERTICAL AND HORIZONTAL.
 - 3. SEE MULLION CHARTS FOR MAX. DESIGN PRESSURES AND LENGTH. (SEE SHEETS 2-9)
 - 4. ANCHORAGE: THE 33 1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. SEE SHEET 11 FOR ANCHOR DETAILS. WINDLOAD DURATION FACTOR Cd = 1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
 - 5. CONFIGURATIONS NOTED AS IMPACT RESISTANT IN THIS DRAWING ARE APPROVED FOR IMPACT RESISTANCE, INCLUDING HVHZ, AND SHUTTERS ARE NOT REQUIRED. CONFIGURATIONS NOTED AS NON-IMPACT IN THIS DRAWING REQUIRE IMPACT PROTECTIVE SYSTEMS IN WINDBORNE DEBRIS REGIONS..
 - 6. DESIGN PRESSURE OF MULLED UNITS SHALL BE CONTROLLED BY THE LESSOR DESIGN PRESSURE OF THE MULLION OR THE INDIVIDUAL WINDOW UNITS.
 - 7. DESIGN PRESSURES AND INSTALLAION DETAILS SHOWN IN THIS DOCUMENT APPLY ONLY TO THE MULLION. WINDOWS MUST BE APPROVED UNDER SEPARATE APPROVAL.
 - 8. RESPONSIBILITY OF SELECTING FENESTRATION PRODUCTS TO MEET ANY APPLICABLE LOCAL LAWS, BUILDING CODES, ORDINANCES OR OTHER SAFETY REQUIREMENTS RESTS SOLEY WITH THE ARCHITECT, ENGINEER OF RECORD, BUILDING OWNER OR CONTRACTOR.
 - 9. SINGLE UNITS TO BE MULLED ARE NOT LIMITED TO THOSE SHOWN IN THIS DRAWING. SINGLE UNITS TO BE MULLED TOGETHER MUST BE MANUFACTURED BY LAWSON INDUSTRIES, INC. AND MUST BE MADE OUT OF VINYL PVC OR EXTRUDED ALUMINUM.
 - 10. VERTICAL MULLED UNITS MAY BE MULLED INDEFINITELY AS LONG AS THE SINGLE UNIT WIDTH AND HEIGHT ARE NOT EXCEEDED AND MULLIONS ARE ANCHORED AS SHOWN HEREIN.
 - 11. HORIZONTAL MULLION SHALL EXTEND THE ENTIRE WIDTH OF THE MULLED UNIT. VERTICAL MULLION IS USED TO MULL SIDE BY SIDE UNITS TOGETHER.
 - 12. ALL GLAZED PRODUCTS USED WITH THESE MULLIONS MUST HAVE THEIR OWN PRODUCT APPROVAL.

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8501 N. W. 90th Street
Medley, FL 33166

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

TITLE: GENERAL NOTES & ELEVATIONS		
SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 1 OF 24

		2-1/2" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	28	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	32	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	36	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	40	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	44	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	48	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	50	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	56	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	60	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	63	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	68	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	72	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	75 3/8	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	38.4	36.8	35.4	34.4
	76	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.3	37.4	35.8	34.5	33.4

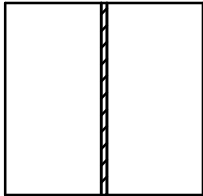
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 2 1/2" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

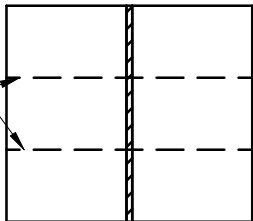
		2-1/2" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	28	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	32	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	36	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	40	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	44	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	48	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	50	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	56	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	60	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	63	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	68	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
	72	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
	75 3/8	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0



NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES OF NON-INTERSECTED AND INTERSECTED MULLIONS.

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10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
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8501 N. W. 90th Street
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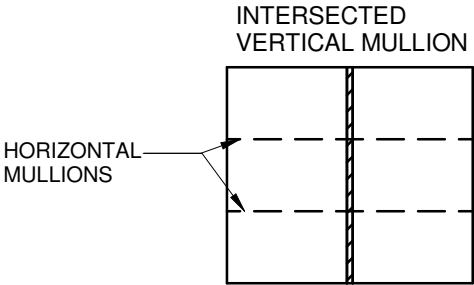
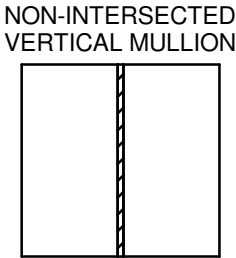
TITLE: 2 1/2" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, IMPACT		
SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 2 OF 24

		2-1/2" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	28	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	32	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	36	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	40	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	44	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	48	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	50	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	56	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	60	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	64.7
	63	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	63.2	61.5	60.2	59.3
	68	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	72	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	75 3/8	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	38.4	36.8	35.4	34.4
	76	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.3	37.4	35.8	34.5	33.4

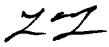
NOTE:

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		2-1/2" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	28	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	32	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	36	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	40	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	44	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	48	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	50	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	56	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0
	60	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	64.7	64.2	64.1
	63	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	65.0	63.2	61.5	60.2	59.3	58.6	58.5
	68	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
	72	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
	75 3/8	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.



10/3/2019
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Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 2 1/2" MULL DP CHARTS, CMU, IMPACT

SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 3 OF 24

		2-1/2" Non-Intersected Non-Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	93.6
	28	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	84.3
	32	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	91.5	83.6	77.7
	36	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	96.4	86.7	78.9	72.9
	40	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	93.7	83.6	75.5	69.5
	44	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.6	81.9	73.4	67.2
	48	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.5	81.3	72.3	65.7
	50	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.5	81.3	72.1	65.3
	56	97.5	97.5	97.5	97.5	97.5	96.8	92.2	89.7	88.6	85.8	83.7	81.3	72.0	65.0
	60	97.5	97.5	97.5	97.5	93.5	87.9	83.4	81.0	79.9	77.0	74.8	73.0	71.7	65.0
	63	97.5	97.5	97.5	94.4	87.6	82.2	77.9	75.5	74.4	71.5	69.2	67.4	66.0	65.0
	68	60.0	60.0	60.0	60.0	60.0	60.0	58.6	56.7	55.8	53.5	51.6	50.0	44.3	40.0
	72	60.0	60.0	60.0	60.0	60.0	56.6	52.7	50.5	49.5	46.9	44.8	42.9	41.5	40.0
	75 3/8	60.0	60.0	60.0	58.3	53.1	48.9	45.5	43.6	42.7	40.4	38.4	36.8	35.4	34.4
	76	60.0	60.0	60.0	56.8	51.7	47.7	44.3	42.5	41.6	39.3	37.4	35.8	34.5	33.4

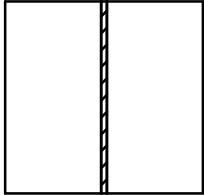
NOTE:

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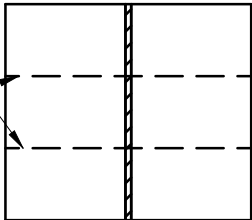
		2-1/2" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
	28	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	95.6	88.5	87.9
	32	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	94.9	88.1	81.3	80.6
	36	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	89.5	82.7	75.9	75.3
	40	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	94.9	85.7	78.9	72.1	71.5
	44	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.9	83.3	76.2	69.3	68.7
	48	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.3	82.0	74.6	67.4	66.7
	50	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.3	81.8	74.1	66.7	66.0
	56	97.5	97.5	97.5	97.5	97.5	97.5	93.5	91.0	89.8	87.0	84.8	83.3	81.7	73.8	65.7	65.0
	60	97.5	97.5	97.5	97.5	94.7	89.1	84.6	82.1	81.0	78.1	75.8	74.0	72.7	71.8	65.7	65.0
	63	97.5	97.5	97.5	95.7	88.8	83.3	78.9	76.5	75.4	72.5	70.2	68.1	66.4	65.2	64.2	64.1
	68	45.0	45.0	45.0	45.0	45.0	45.0	44.6	43.1	42.4	40.7	39.2	38.0	37.0	34.0	30.3	30.0
	72	45.0	45.0	45.0	45.0	45.0	43.8	41.3	39.9	39.2	37.5	36.0	34.8	33.8	33.1	30.3	30.0
	75 3/8	45.0	45.0	45.0	45.0	44.3	41.3	38.9	37.5	36.8	35.1	33.7	32.5	31.6	30.8	30.1	30.0



NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES OF NON-INTERSECTED AND INTERSECTED MULLIONS.

ZZ

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 2 1/2" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, NON-IMPACT

SERIES: MULLION DRAWN BY: MCL DATE: 08/09/19

MODEL: SCALE: N.T.S. DWG. NO. LAW-ML-1901

REV. LETTER: SHEET SHT 4 OF 24

		2-1/2" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	93.6
	28	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	84.3
	32	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	91.5	83.6	77.7
	36	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	96.4	86.7	78.9	72.9
	40	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	93.7	83.6	75.5	69.5
	44	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.6	81.9	73.4	67.2
	48	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.5	81.3	72.3	65.7
	50	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	96.8	94.6	92.5	81.3	72.1
	56	97.5	97.5	97.5	97.5	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	72.0	65.0
	60	97.5	97.5	97.5	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7
	63	97.5	97.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3
	68	60.0	60.0	60.0	60.0	60.0	60.0	58.6	56.7	55.8	53.5	51.6	50.0	44.3	40.0
	72	60.0	60.0	60.0	60.0	60.0	56.6	52.7	50.5	49.5	46.9	44.8	42.9	41.5	40.0
	75 3/8	60.0	60.0	60.0	58.3	53.1	48.9	45.5	43.6	42.7	40.4	38.4	36.8	35.4	34.4
	76	60.0	60.0	60.0	56.8	51.7	47.7	44.3	42.5	41.6	39.3	37.4	35.8	34.5	33.4

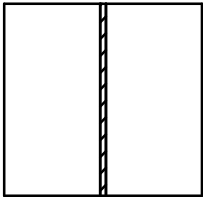
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 2 1/2" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

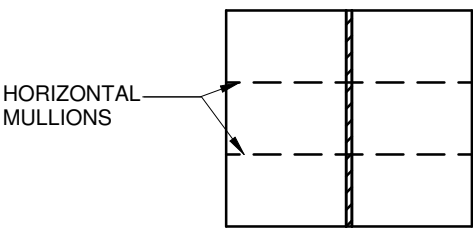
		2-1/2" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
	28	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	95.6	88.5	87.9
	32	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	94.9	88.1	81.3	80.6
	36	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	89.5	82.7	75.9	75.3
	40	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	94.9	85.7	78.9	72.1	71.5
	44	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.9	83.3	76.2	69.3	68.7
	48	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	92.3	82.0	74.6	67.4	66.7
	50	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	96.8	94.6	93.1	92.3	81.8	74.1	66.7	66.0
	56	97.5	97.5	97.5	97.5	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6	65.7	65.0
	60	97.5	97.5	97.5	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7	64.2	64.1
	63	97.5	97.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3	58.6	58.5
	68	45.0	45.0	45.0	45.0	45.0	45.0	44.6	43.1	42.4	40.7	39.2	38.0	37.0	34.0	30.3	30.0
	72	45.0	45.0	45.0	45.0	45.0	43.8	41.3	39.9	39.2	37.5	36.0	34.8	33.8	33.1	30.3	30.0
	75 3/8	45.0	45.0	45.0	45.0	44.3	41.3	38.9	37.5	36.8	35.1	33.7	32.5	31.6	30.8	30.1	30.0



NON-INTERSECTED
VERTICAL MULLION



INTERSECTED
VERTICAL MULLION



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

LT

10/3/2019
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FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 2 1/2" MULL DP CHARTS, CMU, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO.
LAW-ML-1901

REV. LETTER:

SHEET
SHT 5 OF 24

		3-1/4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	63	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	68	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	72	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	75 3/8	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	76	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

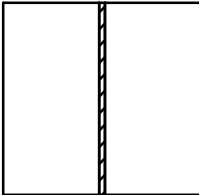
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS, DO NOT USE THE FASTENERS IN THE TWO MIDDLE HOLES IN THE CLIP. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

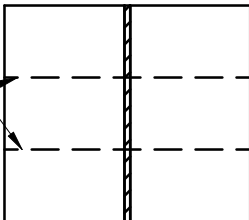
		3-1/4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	63	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	68	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
	72	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
	75 3/8	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0



NON-INTERSECTED
VERTICAL MULLION



INTERSECTED
VERTICAL MULLION



HORIZONTAL
MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
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ZZ

10/3/2019
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8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO.
LAW-ML-1901

REV. LETTER:

SHEET
SHT 6 OF 24

		3-1/4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6
	60	90.0	90.0	90.0	90.0	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7
	63	90.0	90.0	90.0	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3
	68	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.4	56.3	54.5	53.1	52.1
	72	60.0	60.0	60.0	60.0	60.0	60.0	59.3	57.2	56.3	53.8	51.7	50.0	48.6	47.5
	75 3/8	60.0	60.0	60.0	60.0	60.0	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.3	44.2
	76	60.0	60.0	60.0	60.0	60.0	58.7	55.2	53.2	52.3	49.9	47.9	46.2	44.7	43.7

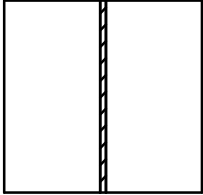
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS, DO NOT USE THE FASTENERS IN THE TWO MIDDLE HOLES IN THE CLIP. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

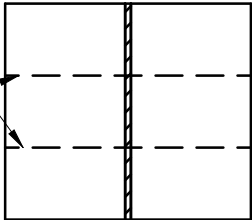
		3-1/4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6	73.5	73.5
	60	90.0	90.0	90.0	90.0	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7	64.2	64.1
	63	90.0	90.0	90.0	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3	58.6	58.5
	68	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	54.5	53.1	52.1	51.2	51.1
	72	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	53.8	51.7	50.0	48.6	47.5	46.5	46.4
	75 3/8	55.0	55.0	55.0	55.0	55.0	55.0	55.0	53.8	52.9	50.4	48.4	46.7	45.3	44.2	43.2	43.1



NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES OF NON-INTERSECTED AND INTERSECTED MULLIONS.

LT

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, CMU, 4 ANCHORS, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 7 OF 24

		3-1/4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	63	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	68	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	72	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	75 3/8	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
	76	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0

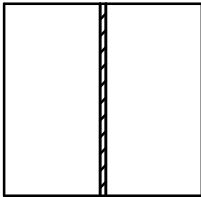
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

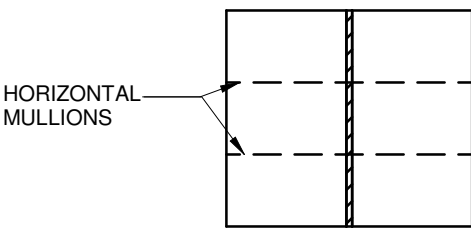
		3-1/4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	28	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	32	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	36	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	40	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	44	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	48	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	50	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	56	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	60	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
	63	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	87.9	87.8
	68	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
	72	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0
	75 3/8	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0	55.0



NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

ZZ

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, CMU, 6 ANCHORS, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO.
LAW-ML-1901

REV. LETTER:

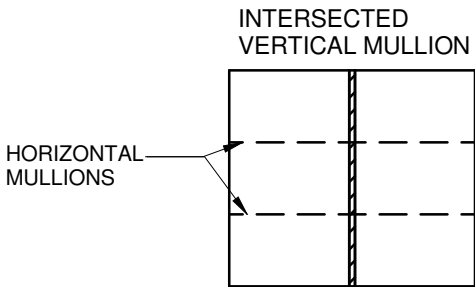
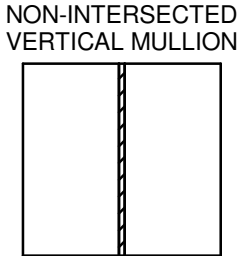
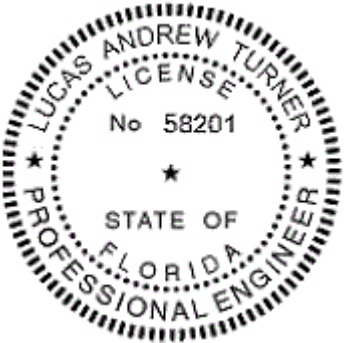
SHEET
SHT 8 OF 24

		3-1/4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.6
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	125.2	116.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	126.7	115.8	107.6
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	133.4	120.1	101.0
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.7	115.8	96.3
	44	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.2	113.4	93.0
	48	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.1	112.6	91.0
	50	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.1	112.6	90.4
	56	135.0	135.0	135.0	135.0	135.0	134.0	127.7	124.3	122.7	118.8	115.9	112.6	99.7	90.0
	60	135.0	135.0	135.0	135.0	129.4	121.7	115.5	112.1	110.6	106.7	103.5	101.1	99.3	90.0
	63	135.0	135.0	135.0	130.7	121.3	113.8	107.8	104.5	103.0	99.0	95.9	93.3	91.3	90.0
	68	90.0	90.0	90.0	90.0	90.0	90.0	88.0	85.0	83.7	80.2	77.3	75.0	66.5	60.0
	72	90.0	90.0	90.0	90.0	90.0	86.5	81.5	78.6	77.3	73.9	71.1	68.7	66.5	60.0
	75 3/8	90.0	90.0	90.0	90.0	87.4	81.5	76.7	73.9	72.7	69.3	66.5	64.2	62.3	60.0
	76	90.0	90.0	90.0	90.0	86.5	80.6	75.8	73.1	71.9	68.5	65.8	63.4	61.5	60.0

NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS, DO NOT USE THE FASTENERS IN THE TWO MIDDLE HOLES IN THE CLIP. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

		3-1/4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	132.4	122.6	121.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	122.0	112.5	111.7
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	123.9	114.6	105.2	104.3
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	118.7	109.2	99.8	98.9
	44	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.6	115.3	105.6	95.9	95.1
	48	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	127.8	113.6	103.3	93.3	92.4
	50	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	127.8	113.2	102.6	92.3	91.4
	56	135.0	135.0	135.0	135.0	135.0	135.0	129.4	125.9	124.4	120.5	117.5	115.3	113.2	102.1	91.0	90.0
	60	135.0	135.0	135.0	135.0	131.2	123.4	117.1	113.7	112.1	108.1	104.9	102.5	100.6	99.5	91.0	90.0
	63	135.0	135.0	135.0	132.5	123.0	115.4	109.3	105.9	104.4	100.4	97.2	94.6	92.6	91.2	90.1	90.0
	68	82.5	82.5	82.5	82.5	82.5	82.5	81.7	79.0	77.8	74.5	71.9	69.7	67.9	62.4	55.6	55.0
	72	82.5	82.5	82.5	82.5	82.5	80.3	75.7	73.1	71.9	68.7	66.1	63.9	62.0	60.7	55.6	55.0
	75 3/8	82.5	82.5	82.5	82.5	81.2	75.7	71.2	68.7	67.5	64.4	61.8	59.7	57.8	56.5	55.1	55.0



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

ZZ

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON

INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 9 OF 24

		3-1/4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.6
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	125.2	116.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	126.7	115.8	107.6
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	133.4	120.1	109.2	101.0
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.7	115.8	104.6	96.3
	44	135.0	135.0	135.0	135.0	132.4	126.9	123.1	121.3	120.6	119.3	119.0	113.4	101.7	93.0
	48	135.0	135.0	133.3	123.7	116.4	110.8	106.7	104.5	103.6	101.6	100.4	100.0	100.0	91.0
	50	135.0	135.0	126.3	116.9	109.7	104.2	100.0	97.8	96.8	94.6	93.1	92.3	92.2	90.4
	56	135.0	120.6	109.1	100.4	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6
	60	125.5	110.8	100.0	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7
	63	118.5	104.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3
	68	90.0	90.0	85.7	78.3	72.5	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.1	52.1
	72	90.0	89.2	80.0	72.9	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.6	47.5
	75 3/8	90.0	84.6	75.7	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.3	44.2
	76	90.0	83.8	75.0	68.3	63.0	58.7	55.2	53.2	52.3	49.9	47.9	46.2	44.7	43.7

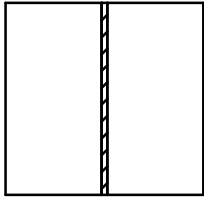
NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS, DO NOT USE THE FASTENERS IN THE TWO MIDDLE HOLES IN THE CLIP. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

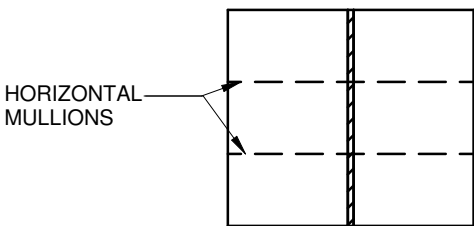
		3-1/4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	132.4	122.6	121.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	122.0	112.5	111.7
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	123.9	114.6	105.2	104.3
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	118.7	109.2	99.8	98.9
	44	135.0	135.0	135.0	135.0	132.4	126.9	123.1	121.3	120.6	119.3	119.0	119.0	115.3	105.6	95.9	95.1
	48	135.0	135.0	133.3	123.7	116.4	110.8	106.7	104.5	103.6	101.6	100.4	100.0	100.0	100.0	93.3	92.4
	50	135.0	135.0	126.3	116.9	109.7	104.2	100.0	97.8	96.8	94.6	93.1	92.3	92.2	92.2	92.2	91.4
	56	135.0	120.6	109.1	100.4	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6	73.5	73.5
	60	125.5	110.8	100.0	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.5	64.7	64.2	64.1
	63	118.5	104.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.2	59.3	58.6	58.5
	68	82.5	82.5	82.5	78.3	72.5	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.1	52.1	51.2	51.1
	72	82.5	82.5	80.0	72.9	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.6	47.5	46.5	46.4
	75 3/8	82.5	82.5	75.7	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.3	44.2	43.2	43.1



NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES OF NON-INTERSECTED AND INTERSECTED MULLIONS.

22

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, CMU, 4 ANCHORS, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

DWG. NO.
LAW-ML-1901

REV. LETTER:

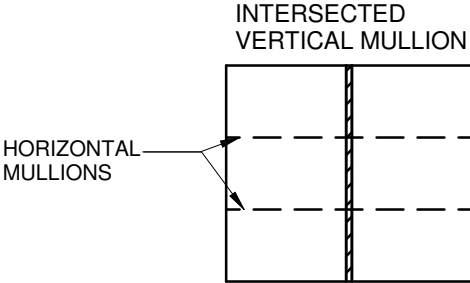
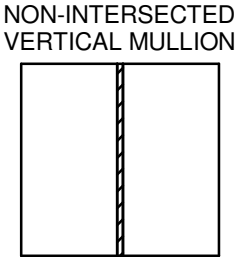
SHEET
SHT 10 OF 24

		3-1/4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23													
		Opening Size (in.) (W1 + W2 + 1.375")													
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.6
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	125.2	116.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	126.7	115.8	107.6
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	133.4	120.1	109.2	101.0
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	129.7	115.8	104.6	96.3
	44	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.2	113.4	101.7	93.0
	48	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.1	112.6	100.1	91.0
	50	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.1	112.6	99.8	90.4
	56	135.0	135.0	135.0	135.0	135.0	132.6	126.3	122.9	121.4	117.6	114.6	112.5	99.7	90.0
	60	135.0	135.0	135.0	135.0	128.0	120.4	114.3	110.9	109.4	105.5	102.4	100.0	98.2	90.0
	63	135.0	135.0	135.0	129.3	120.0	112.6	106.7	103.3	101.9	98.0	94.8	92.3	90.4	90.0
	68	90.0	90.0	90.0	90.0	90.0	90.0	88.0	85.0	83.7	80.2	77.3	75.0	66.5	60.0
	72	90.0	90.0	90.0	90.0	90.0	86.5	81.5	78.6	77.3	73.9	71.1	68.7	66.5	60.0
	75 3/8	90.0	90.0	90.0	90.0	87.4	81.5	76.7	73.9	72.7	69.3	66.5	64.2	62.3	60.0
	76	90.0	90.0	90.0	90.0	86.5	80.6	75.8	73.1	71.9	68.5	65.8	63.4	61.5	60.0

NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 3 1/4" MULL CLIPS AS SHOWN ON SHEETS 18 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

		3-1/4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	102	107 3/8	113 3/4	114 3/8
Mull Length (in.)	24	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0
	28	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	132.4	122.6	121.7
	32	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	122.0	112.5	111.7
	36	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	123.9	114.6	105.2	104.3
	40	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	131.4	118.7	109.2	99.8	98.9
	44	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	128.6	115.3	105.6	95.9	95.1
	48	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	127.8	113.6	103.3	93.3	92.4
	50	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	135.0	127.8	113.2	102.6	92.3	91.4
	56	135.0	135.0	135.0	135.0	135.0	132.6	126.3	122.9	121.4	117.6	114.6	112.5	111.1	102.1	91.0	90.0
	60	135.0	135.0	135.0	135.0	128.0	120.4	114.3	110.9	109.4	105.5	102.4	100.0	98.2	97.1	91.0	90.0
	63	135.0	135.0	135.0	129.3	120.0	112.6	106.7	103.3	101.9	98.0	94.8	92.3	90.4	90.0	87.9	87.8
	68	82.5	82.5	82.5	82.5	82.5	82.5	81.7	79.0	77.8	74.5	71.9	69.7	67.9	62.4	55.6	55.0
	72	82.5	82.5	82.5	82.5	82.5	80.3	75.7	73.1	71.9	68.7	66.1	63.9	62.0	60.7	55.6	55.0
	75 3/8	82.5	82.5	82.5	82.5	81.2	75.7	71.2	68.7	67.5	64.4	61.8	59.7	57.8	56.5	55.1	55.0



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

22

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON

INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

TITLE: 3 1/4" MULL DP CHARTS, CMU, 6 ANCHORS, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

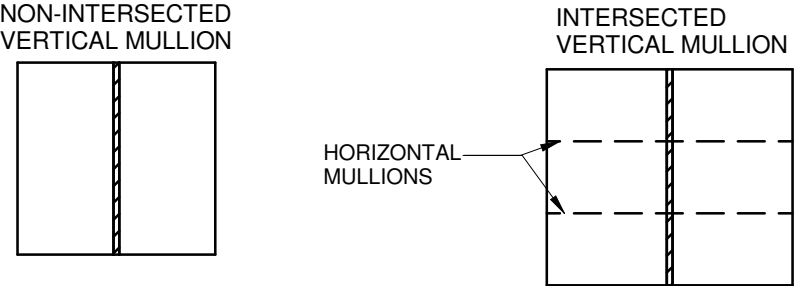
SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 11 OF 24

		4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood/ Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38
Mull Length (in.)	Up to 50	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	56	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	60	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	63	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	68	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	n/a	n/a
	72	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	n/a	n/a
	75.375	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	n/a	n/a
	76	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	n/a	n/a	n/a	n/a
	78	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	n/a	n/a	n/a	n/a
	80	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	n/a	n/a	n/a	n/a
	84	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	n/a	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.6	37.4	35.7	n/a	n/a	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.1	n/a	n/a	n/a	n/a	n/a



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood/ Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38
Mull Length (in.)	Up to 50	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	56	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	60	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	63	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	68	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	72	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	75.375	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	76	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	78	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	80	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	84	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.6	37.4	35.7	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.1	n/a	n/a	n/a

NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING
4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO
ATTACH TO OPENING SUBSTRATE, USING THE TYPE
AND QUANTITY OF FASTENERS AS INDICATED IN
CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS,
DO NOT USE THE FASTENERS IN THE TWO MIDDLE
HOLES IN THE CLIP. ATTACH MULLIONS TO
OTHER MULLIONS USING "U"-CLIP AS SHOWN ON
SHEETS 18 AND 22, USING TWO #12 x ³/₄" TEK SCREWS.



ZZ

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON
INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

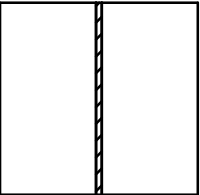
DWG. NO. LAW-ML-1901

REV. LETTER:

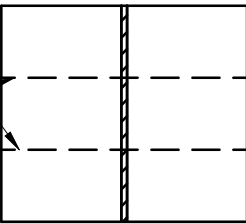
SHEET SHT 12 OF 24

		4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMUMasonry, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38
Mull Length (in.)	Up to 50	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	56	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	78.4	76.4	75.0	74.1	73.6	70.0	70.0	30.0	30.0
	60	80.0	80.0	80.0	80.0	80.0	80.0	76.2	73.9	72.9	70.3	68.3	66.7	65.6	64.7	64.2	64.1	30.0	30.0
	63	80.0	80.0	80.0	80.0	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.4	59.3	58.6	58.5	30.0	30.0
	68	80.0	80.0	80.0	78.3	72.5	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.3	52.1	51.2	51.1	n/a	n/a
	72	80.0	80.0	80.0	72.9	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.7	47.5	46.5	46.4	n/a	n/a
	75.375	80.0	80.0	75.7	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.4	44.2	43.2	43.1	n/a	n/a
	76	80.0	80.0	75.0	68.3	63.0	58.7	55.2	53.2	52.3	49.9	47.9	46.2	44.9	43.7	n/a	n/a	n/a	n/a
	78	80.0	80.0	72.7	66.1	61.0	56.8	53.3	51.4	50.5	48.1	46.1	44.4	43.2	41.9	n/a	n/a	n/a	n/a
	80	80.0	78.9	70.6	64.2	59.1	55.0	51.6	49.7	48.8	46.5	44.5	42.9	41.6	40.4	n/a	n/a	n/a	n/a
	84	80.0	74.6	66.7	60.5	55.7	51.7	48.5	46.6	45.8	43.5	41.6	40.0	38.7	37.5	n/a	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.1	37.5	36.3	n/a	n/a	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.8	37.9	36.4	35.2	n/a	n/a	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.4	38.6	36.6	34.8	33.3	32.2	n/a	n/a	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	39.0	37.4	36.7	34.7	33.0	31.6	30.4	n/a	n/a	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	38.2	35.6	34.1	33.4	31.5	29.9	28.6	27.5	n/a	n/a	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	38.9	35.9	33.4	32.0	31.3	29.6	28.1	26.7	25.7	n/a	n/a	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.6	29.0	27.3	25.9	24.6	23.7	n/a	n/a	n/a	n/a	n/a

NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMUMasonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38
Mull Length (in.)	Up to 50	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	56	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	60	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	68.3	66.7	65.6	64.7	64.2	64.1
	63	70.0	70.0	70.0	70.0	70.0	70.0	70.0	68.9	67.9	65.3	63.2	61.5	60.4	59.3	58.6	58.5
	68	70.0	70.0	70.0	70.0	70.0	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.3	52.1	51.2	51.1
	72	70.0	70.0	70.0	70.0	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.7	47.5	46.5	46.4
	75.375	70.0	70.0	70.0	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.4	44.2	43.2	43.1
	76	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	78	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	80	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	84	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	38.7	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.1	37.5	36.3	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.8	37.9	36.4	35.2	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.4	38.6	36.6	34.8	33.3	32.2	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	39.0	37.4	36.7	34.7	33.0	31.6	30.4	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	38.2	35.6	34.1	33.4	31.5	29.9	28.6	27.5	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	38.9	35.9	33.4	32.0	31.3	29.6	28.1	26.7	25.7	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.1	n/a	n/a	n/a

NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING
4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO
ATTACH TO OPENING SUBSTRATE, USING THE TYPE
AND QUANTITY OF FASTENERS AS INDICATED IN
CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS,
DO NOT USE THE FASTENERS IN THE TWO MIDDLE
HOLES IN THE CLIP. ATTACH MULLIONS TO
OTHER MULLIONS USING "U"-CLIP AS SHOWN ON
SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.



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10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, CMU, 4 ANCHORS, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

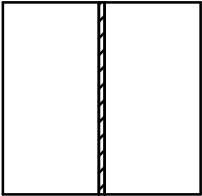
DWG. NO. LAW-ML-1901

REV. LETTER:

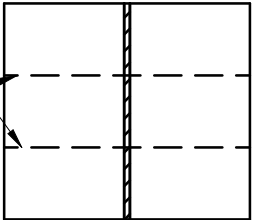
SHEET SHT 13 OF 24

		4" Non-Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMUMasonry, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38
Mull Length (in.)	Up to 50	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	56	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	60	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	63	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	70.0	70.0	30.0	30.0
	68	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	79.9	78.2	70.0	70.0	n/a
	72	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	77.6	75.0	73.1	71.3	69.7	69.6	n/a
	75.375	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	79.3	75.7	72.6	70.1	68.1	66.3	64.7	64.6	n/a	n/a
	76	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	79.8	78.4	74.8	71.8	69.2	67.3	65.5	n/a	n/a	n/a
	78	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	77.1	75.7	72.2	69.2	66.7	64.7	62.9	n/a	n/a	n/a
	80	80.0	80.0	80.0	80.0	80.0	80.0	77.4	74.5	73.2	69.7	66.8	64.3	62.4	60.6	n/a	n/a	n/a	n/a
	84	80.0	80.0	80.0	80.0	80.0	77.6	72.7	70.0	68.7	65.3	62.4	60.0	58.1	56.3	n/a	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.1	n/a	n/a	n/a	n/a	n/a

NON-INTERSECTED VERTICAL MULLION



INTERSECTED VERTICAL MULLION



HORIZONTAL MULLIONS

NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Impact Resistant Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMUMasonry, see Table 1, Sheet 23															
		Opening Size (in.) (W1 + W2 + 1.375")															
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38
Mull Length (in.)	Up to 50	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	56	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
	60	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	68.3	66.7	65.6	64.7	64.2	64.1
	63	70.0	70.0	70.0	70.0	70.0	70.0	70.0	68.9	67.9	65.3	63.2	61.5	60.4	59.3	58.6	58.5
	68	70.0	70.0	70.0	70.0	70.0	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.3	52.1	51.2	51.1
	72	70.0	70.0	70.0	70.0	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.7	47.5	46.5	46.4
	75.375	70.0	70.0	70.0	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.4	44.2	43.2	43.1
	76	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	78	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	80	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	n/a	n/a	n/a
	84	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	38.7	n/a	n/a	n/a
	88	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.1	37.5	36.3	n/a	n/a	n/a
	90	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.8	37.9	36.4	35.2	n/a	n/a	n/a
	96	40.0	40.0	40.0	40.0	40.0	40.0	40.0	39.4	38.6	36.6	34.8	33.3	32.2	n/a	n/a	n/a
	100	40.0	40.0	40.0	40.0	40.0	40.0	39.0	37.4	36.7	34.7	33.0	31.6	30.4	n/a	n/a	n/a
	108	40.0	40.0	40.0	40.0	40.0	38.2	35.6	34.1	33.4	31.5	29.9	28.6	27.5	n/a	n/a	n/a
	113.75	40.0	40.0	40.0	40.0	38.9	35.9	33.4	32.0	31.3	29.6	28.1	26.7	25.7	n/a	n/a	n/a
	121.38	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	29.1	n/a	n/a	n/a

NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING
4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO
ATTACH TO OPENING SUBSTRATE, USING THE TYPE
AND QUANTITY OF FASTENERS AS INDICATED IN
CHARTS ON THIS SHEET. ATTACH MULLIONS TO
OTHER MULLIONS USING "U"-CLIP AS SHOWN ON
SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.



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10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, CMU, 6 ANCHORS, IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

SCALE: N.T.S.

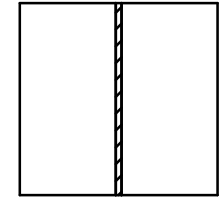
DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 14 OF 24

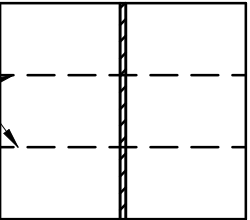
		4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23																		
		Opening Size (in.) (W1 + W2 + 1.375")																		
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38	
Mull Length (in.)	24	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.2	105.0	105.0	45.0	45.0	
	28	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.2	103.8	95.3	94.7	42.9	42.3
	32	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.6	103.9	95.6	87.5	86.8	39.2	38.6
	36	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	118.6	106.8	98.0	89.7	81.8	81.1	36.5	35.9
	40	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.3	102.9	93.9	85.6	77.6	77.0	34.5	33.9
	44	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.8	91.3	82.7	74.6	73.9	33.0	32.5
	48	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	90.0	80.9	72.5	71.9	32.0	31.4
	50	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.4	71.8	71.1	31.6	31.0
	56	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.0	70.8	70.0	30.8	30.2
	60	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.0	70.8	70.0	30.7	30.0
	63	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.0	70.8	70.0	30.0	30.0
	68	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.0	70.8	70.0	n/a	n/a
	72	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	119.9	114.6	110.2	100.1	89.8	80.0	70.8	70.0	n/a	n/a
	75.375	120.0	120.0	120.0	120.0	120.0	120.0	118.9	114.6	112.7	107.5	103.2	99.5	89.8	80.0	70.2	70.0	n/a	n/a	
	76	120.0	120.0	120.0	120.0	120.0	120.0	117.6	113.3	111.4	106.3	102.0	98.4	89.8	80.0	n/a	n/a	n/a	n/a	
	78	120.0	120.0	120.0	120.0	120.0	120.0	113.7	109.5	107.6	102.5	98.3	94.7	89.8	80.0	n/a	n/a	n/a	n/a	
	80	120.0	120.0	120.0	120.0	120.0	117.1	110.0	105.9	104.0	99.1	94.9	91.3	88.6	80.0	n/a	n/a	n/a	n/a	
	84	120.0	120.0	120.0	120.0	118.6	110.2	103.3	99.4	97.6	92.8	88.7	85.2	82.6	80.0	n/a	n/a	n/a	n/a	
	88	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a	
	90	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a	
	96	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	56.9	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a	
	100	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.2	57.1	54.0	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a	
	108	60.0	60.0	60.0	60.0	60.0	59.4	55.3	53.0	51.9	49.1	46.5	44.1	40.0	n/a	n/a	n/a	n/a	n/a	
	113.75	60.0	60.0	60.0	60.0	57.2	52.4	48.3	46.0	44.9	42.0	39.6	37.4	35.7	n/a	n/a	n/a	n/a	n/a	
	121.38	45.0	45.0	45.0	45.0	45.0	42.2	39.2	37.5	36.8	34.4	32.3	30.5	29.1	n/a	n/a	n/a	n/a	n/a	

NON-INTERSECTED
VERTICAL MULLION



INTERSECTED
VERTICAL MULLION

HORIZONTAL
MULLIONS



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 1" min. edge, Solid Conc / Wood / Metal: 1/4" Elco Ultracon in Solid Concrete or Wood, or #12 in Wood or Metal, see Table 1, Sheet 23																
		Opening Size (in.) (W1 + W2 + 1.375")																
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	
Mull Length (in.)	24	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	
	28	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.0	95.3	94.7	
	32	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.1	94.9	87.5	86.8
	36	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	97.3	89.1	81.8	81.1
	40	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	102.2	93.2	84.9	77.6	77.0
	44	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	100.1	90.7	82.1	74.6	73.9
	48	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.4	80.3	72.5	71.9
	50	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.1	79.8	71.8	71.1
	56	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.1	79.4	70.8	70.0
	60	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.1	79.4	70.8	70.0
	63	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	102.8	99.4	89.1	79.4	70.8	70.0
	68	105.0	105.0	105.0	105.0	105.0	105.0	105.0	104.0	100.6	99.0	94.9	91.5	88.7	86.6	79.4	70.8	70.0
	72	105.0	105.0	105.0	105.0	105.0	105.0	102.3	96.3	93.0	91.5	87.4	84.1	81.3	79.2	77.2	70.8	70.0
	75.375	105.0	105.0	105.0	105.0	103.4	96.4	90.7	87.4	85.9	82.0	78.7	75.9	73.8	71.9	70.2	70.0	
	76	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	78	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	80	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	84	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	88	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	90	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a
	96	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	56.9	50.8	44.6	40.0	n/a	n/a	n/a
	100	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.2	57.1	54.0	50.8	44.6	40.0	n/a	n/a	n/a
	108	60.0	60.0	60.0	60.0	60.0	59.4	55.3	53.0	51.9	49.1	46.5	44.1	40.0	n/a	n/a	n/a	n/a
	113.75	60.0	60.0	60.0	60.0	57.2	52.4	48.3	46.0	44.9	42.0	39.6	37.4	35.7	n/a	n/a	n/a	n/a
	121.38	45.0	45.0	45.0	45.0	45.0	42.2	39.2	37.5	36.8	34.4	32.3	30.5	29.1	n/a	n/a	n/a	n/a



NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING
4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO
ATTACH TO OPENING SUBSTRATE, USING THE TYPE
AND QUANTITY OF FASTENERS AS INDICATED IN
CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS,
DO NOT USE THE FASTENERS IN THE TWO MIDDLE
HOLES IN THE CLIP. ATTACH MULLIONS TO
OTHER MULLIONS USING "U"-CLIP AS SHOWN ON
SHEETS 18 AND 22, USING TWO #12 x ³/₄" TEK SCREWS.

ZZ

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, SOLID CONCRETE/WOOD/METAL, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

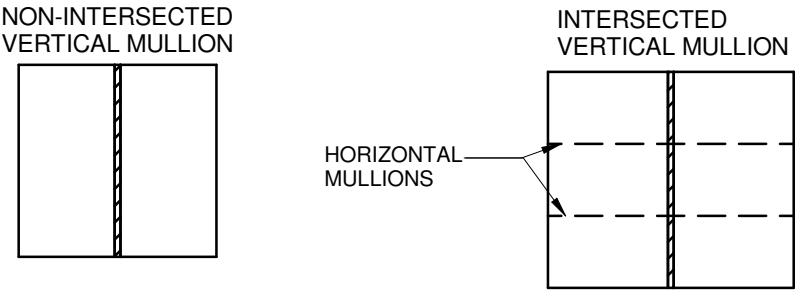
SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 15 OF 24

		4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23																		
		Opening Size (in.) (W1 + W2 + 1.375")																		
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38	
Mull Length (in.)	24	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.2	105.0	105.0	45.0	45.0	
	28	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.2	103.8	95.3	94.7	42.9	42.3
	32	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.6	103.9	95.6	87.5	86.8	39.2	38.6
	36	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	118.6	106.8	98.0	89.7	81.8	81.1	36.5	35.9
	40	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.3	102.9	93.9	85.6	77.6	77.0	34.5	33.9
	44	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	119.3	113.9	100.8	91.3	82.7	74.6	73.9	33.0	32.5
	48	120.0	120.0	120.0	120.0	116.4	110.8	106.7	104.5	103.6	101.6	100.4	100.0	90.0	80.9	72.5	71.9	32.0	31.4	
	50	120.0	120.0	120.0	116.9	109.7	104.2	100.0	97.8	96.8	94.6	93.1	92.3	89.8	80.4	71.8	71.1	31.6	31.0	
	56	120.0	120.0	109.1	100.4	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6	70.8	70.0	30.8	30.2	
	60	120.0	110.8	100.0	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.6	64.7	64.2	64.1	30.7	30.0	
	63	118.5	104.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.4	59.3	58.6	58.5	30.0	30.0	
	68	108.5	95.4	85.7	78.3	72.5	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.3	52.1	51.2	51.1	n/a	n/a	
	72	101.6	89.2	80.0	72.9	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.7	47.5	46.5	46.4	n/a	n/a	
	75.375	96.4	84.6	75.7	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.4	44.2	43.2	43.1	n/a	n/a	
	76	95.5	83.8	75.0	68.3	63.0	58.7	55.2	53.2	52.3	49.9	47.9	46.2	44.9	43.7	n/a	n/a	n/a	n/a	
	78	92.8	81.3	72.7	66.1	61.0	56.8	53.3	51.4	50.5	48.1	46.1	44.4	43.2	41.9	n/a	n/a	n/a	n/a	
	80	90.1	78.9	70.6	64.2	59.1	55.0	51.6	49.7	48.8	46.5	44.5	42.9	41.6	40.4	n/a	n/a	n/a	n/a	
	84	85.3	74.6	66.7	60.5	55.7	51.7	48.5	46.6	45.8	43.5	41.6	40.0	38.7	37.5	n/a	n/a	n/a	n/a	
	88	60.0	60.0	60.0	57.3	52.6	48.8	45.7	43.9	43.1	40.9	39.1	37.5	36.3	n/a	n/a	n/a	n/a	n/a	
	90	60.0	60.0	60.0	55.8	51.2	47.5	44.4	42.7	41.9	39.8	37.9	36.4	35.2	n/a	n/a	n/a	n/a	n/a	
	96	60.0	60.0	57.1	51.7	47.4	43.9	41.0	39.4	38.6	36.6	34.8	33.3	32.2	n/a	n/a	n/a	n/a	n/a	
	100	60.0	60.0	54.5	49.3	45.2	41.8	39.0	37.4	36.7	34.7	33.0	31.6	30.4	n/a	n/a	n/a	n/a	n/a	
	108	60.0	56.3	50.0	45.1	41.3	38.2	35.6	34.1	33.4	31.5	29.9	28.6	27.5	n/a	n/a	n/a	n/a	n/a	
	113.75	60.0	53.1	47.2	42.6	38.9	35.9	33.4	32.0	31.3	29.6	28.1	26.7	25.7	n/a	n/a	n/a	n/a	n/a	
	121.38	45.0	45.0	43.9	39.6	36.1	33.3	31.0	29.6	29.0	27.3	25.9	24.6	23.7	n/a	n/a	n/a	n/a	n/a	



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 4 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38		
Mull Length (in.)	24	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0		
	28	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.0	95.3	94.7		
	32	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.1	94.9	87.5	86.8		
	36	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	97.3	89.1	81.8	81.1		
	40	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	102.2	93.2	84.9	77.6	77.0		
	44	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	100.1	90.7	82.1	74.6	73.9		
	48	105.0	105.0	105.0	105.0	105.0	105.0	105.0	104.5	103.6	101.6	100.4	99.4	89.4	80.3	72.5	71.9		
	50	105.0	105.0	105.0	105.0	105.0	104.2	100.0	97.8	96.8	94.6	93.1	92.3	89.1	79.8	71.8	71.1		
	56	105.0	105.0	105.0	100.4	93.7	88.4	84.2	81.9	80.9	78.4	76.4	75.0	74.1	73.6	70.8	70.0		
	60	105.0	105.0	100.0	91.8	85.3	80.3	76.2	73.9	72.9	70.3	68.3	66.7	65.6	64.7	64.2	64.1		
	63	105.0	104.5	94.1	86.2	80.0	75.1	71.1	68.9	67.9	65.3	63.2	61.5	60.4	59.3	58.6	58.5		
	68	105.0	95.4	85.7	78.3	72.5	67.8	64.0	61.9	60.9	58.4	56.3	54.5	53.3	52.1	51.2	51.1		
	72	101.6	89.2	80.0	72.9	67.4	62.9	59.3	57.2	56.3	53.8	51.7	50.0	48.7	47.5	46.5	46.4		
	75.375	96.4	84.6	75.7	69.0	63.6	59.3	55.8	53.8	52.9	50.4	48.4	46.7	45.4	44.2	43.2	43.1		
	76	60.0	60.0	60.0	60.0	60.0	58.7	55.2	53.2	52.3	49.9	47.9	44.6	40.0	n/a	n/a	n/a		
	78	60.0	60.0	60.0	60.0	60.0	56.8	53.3	51.4	50.5	48.1	46.1	44.4	40.0	n/a	n/a	n/a		
	80	60.0	60.0	60.0	60.0	59.1	55.0	51.6	49.7	48.8	46.5	44.5	42.9	40.0	n/a	n/a	n/a		
	84	60.0	60.0	60.0	60.0	55.7	51.7	48.5	46.6	45.8	43.5	41.6	40.0	38.7	n/a	n/a	n/a		
	88	60.0	60.0	60.0	57.3	52.6	48.8	45.7	43.9	43.1	40.9	39.1	37.5	36.3	n/a	n/a	n/a		
	90	60.0	60.0	60.0	55.8	51.2	47.5	44.4	42.7	41.9	39.8	37.9	36.4	35.2	n/a	n/a	n/a		
	96	60.0	60.0	57.1	51.7	47.4	43.9	41.0	39.4	38.6	36.6	34.8	33.3	32.2	n/a	n/a	n/a		
	100	60.0	60.0	54.5	49.3	45.2	41.8	39.0	37.4	36.7	34.7	33.0	31.6	30.4	n/a	n/a	n/a		
	108	60.0	56.3	50.0	45.1	41.3	38.2	35.6	34.1	33.4	31.5	29.9	28.6	27.5	n/a	n/a	n/a		
	113.75	60.0	53.1	47.2	42.6	38.9	35.9	33.4	32.0	31.3	29.6	28.1	26.7	25.7	n/a	n/a	n/a		
	121.38	45.0	45.0	43.9	39.6	36.1	33.3	31.0	29.6	29.0	27.3	25.9	24.6	23.7	n/a	n/a	n/a		



NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING 4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO ATTACH TO OPENING SUBSTRATE, USING THE TYPE AND QUANTITY OF FASTENERS AS INDICATED IN CHARTS ON THIS SHEET. WHEN USING 4 ANCHORS, DO NOT USE THE FASTENERS IN THE TWO MIDDLE HOLES IN THE CLIP. ATTACH MULLIONS TO OTHER MULLIONS USING "U"-CLIP AS SHOWN ON SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

22

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON

INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, CMU, 4 ANCHORS, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

MODEL:

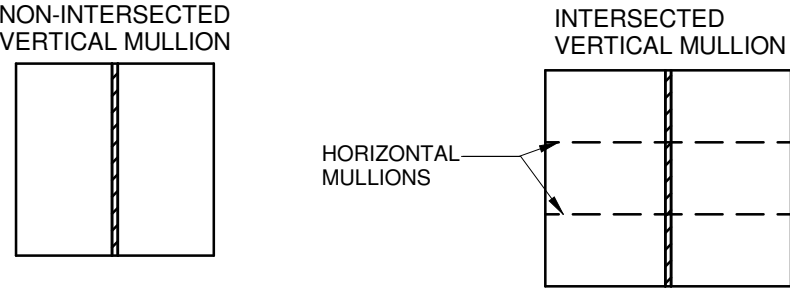
SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 16 OF 24

		4" Non-Intersected Non-Impact Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38	120	121.38
Mull Length (in.)	24	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.2	105.0	105.0	45.0	45.0
	28	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.2	103.8	95.3	42.9	42.3
	32	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	112.6	103.9	95.6	87.5	39.2	38.6
	36	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	118.6	106.8	98.0	89.7	81.8	36.5	35.9
	40	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	115.3	102.9	93.9	85.6	77.6	77.0	34.5	33.9
	44	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.8	91.3	82.7	74.6	73.9	33.0	32.5
	48	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	90.0	80.9	72.5	71.9	32.0	31.4
	50	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	113.9	100.1	89.8	80.4	71.8	71.1	31.6	31.0
	56	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	117.6	113.9	100.1	89.8	80.0	70.8	70.0	30.8	30.2
	60	120.0	120.0	120.0	120.0	120.0	120.0	114.3	110.9	109.4	105.5	102.4	100.0	89.8	80.0	70.8	70.0	30.7	30.0
	63	120.0	120.0	120.0	120.0	120.0	112.6	106.7	103.3	101.9	98.0	94.8	92.3	89.8	80.0	70.8	70.0	30.0	30.0
	68	120.0	120.0	120.0	117.4	108.7	101.7	96.0	92.8	91.4	87.5	84.4	81.8	79.9	78.2	70.8	70.0	n/a	n/a
	72	120.0	120.0	120.0	109.4	101.1	94.3	88.9	85.8	84.4	80.7	77.6	75.0	73.1	71.3	69.7	69.6	n/a	n/a
	75.375	120.0	120.0	113.6	103.4	95.4	88.9	83.7	80.7	79.3	75.7	72.6	70.1	68.1	66.3	64.7	64.6	n/a	n/a
	76	120.0	120.0	112.5	102.4	94.4	88.0	82.8	79.8	78.4	74.8	71.8	69.2	67.3	65.5	n/a	n/a	n/a	n/a
	78	120.0	120.0	109.1	99.2	91.4	85.1	80.0	77.1	75.7	72.2	69.2	66.7	64.7	62.9	n/a	n/a	n/a	n/a
	80	120.0	118.4	105.9	96.2	88.6	82.5	77.4	74.5	73.2	69.7	66.8	64.3	62.4	60.6	n/a	n/a	n/a	n/a
	84	120.0	112.0	100.0	90.8	83.5	77.6	72.7	70.0	68.7	65.3	62.4	60.0	58.1	56.3	n/a	n/a	n/a	n/a
	88	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a
	90	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a
	96	60.0	60.0	60.0	60.0	60.0	60.0	60.0	59.1	57.9	54.9	50.8	44.6	40.0	n/a	n/a	n/a	n/a	n/a
	100	60.0	60.0	60.0	60.0	60.0	60.0	58.5	56.1	55.0	52.1	49.5	44.6	40.0	n/a	n/a	n/a	n/a	n/a
	108	60.0	60.0	60.0	60.0	60.0	57.2	53.3	51.1	50.1	47.3	44.9	42.9	40.0	n/a	n/a	n/a	n/a	n/a
	113.75	60.0	60.0	60.0	60.0	57.2	52.4	48.3	46.0	44.9	42.0	39.6	37.4	35.7	n/a	n/a	n/a	n/a	n/a
	121.38	45.0	45.0	45.0	45.0	45.0	42.2	39.2	37.5	36.8	34.4	32.3	30.5	29.1	n/a	n/a	n/a	n/a	n/a



NOTE:
SEE SHEET 23 FOR OTHER EXAMPLES
OF NON-INTERSECTED AND INTERSECTED
MULLIONS.

		4" Intersected Non-Impact Mull Design Pressure Chart (PSF) - 6 Anchors 1.5" min. on center, 2.5" min. edge: 1/4" Elco Ultracon in CMU Masonry, see Table 1, Sheet 23																	
		Opening Size (in.) (W1 + W2 + 1.375")																	
		36	42	48	54	60	66	72	76	78	84	90	96	101.38	107.38	113.75	114.38		
Mull Length (in.)	24	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0		
	28	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.0	95.3	94.7		
	32	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.1	94.9	87.5	86.8		
	36	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	97.3	89.1	81.8	81.1		
	40	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	102.2	93.2	84.9	77.6	77.0		
	44	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	100.1	90.7	82.1	74.6	73.9		
	48	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.4	80.3	72.5	71.9		
	50	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.1	79.8	71.8	71.1		
	56	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	99.4	89.1	79.4	70.8	70.0		
	60	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	102.4	99.4	89.1	79.4	70.8	70.0		
	63	105.0	105.0	105.0	105.0	105.0	105.0	105.0	103.3	101.9	98.0	94.8	92.3	89.1	79.4	70.8	70.0		
	68	105.0	105.0	105.0	105.0	105.0	101.7	96.0	92.8	91.4	87.5	84.4	81.8	79.9	78.2	70.8	70.0		
	72	105.0	105.0	105.0	105.0	101.1	94.3	88.9	85.8	84.4	80.7	77.6	75.0	73.1	71.3	69.7	69.6		
	75.375	105.0	105.0	105.0	103.4	95.4	88.9	83.7	80.7	79.3	75.7	72.6	70.1	68.1	66.3	64.7	64.6		
	76	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	78	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	80	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	84	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	88	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	90	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	58.3	50.8	44.6	40.0	n/a	n/a	n/a		
	96	60.0	60.0	60.0	60.0	60.0	60.0	60.0	59.1	57.9	54.9	50.8	44.6	40.0	n/a	n/a	n/a		
	100	60.0	60.0	60.0	60.0	60.0	60.0	58.5	56.1	55.0	52.1	49.5	44.6	40.0	n/a	n/a	n/a		
	108	60.0	60.0	60.0	60.0	60.0	57.2	53.3	51.1	50.1	47.3	44.9	42.9	40.0	n/a	n/a	n/a		
	113.75	60.0	60.0	60.0	60.0	57.2	52.4	48.3	46.0	44.9	42.0	39.6	37.4	35.7	n/a	n/a	n/a		
	121.38	45.0	45.0	45.0	45.0	45.0	42.2	39.2	37.5	36.8	34.4	32.3	30.5	29.1	n/a	n/a	n/a		



NOTE:

CHARTS ON THIS SHEET APPLICABLE WHEN USING
4" MULL CLIPS AS SHOWN ON SHEETS 19 AND 22 TO
ATTACH TO OPENING SUBSTRATE, USING THE TYPE
AND QUANTITY OF FASTENERS AS INDICATED IN
CHARTS ON THIS SHEET. ATTACH MULLIONS TO
OTHER MULLIONS USING "U"-CLIP AS SHOWN ON
SHEETS 18 AND 22, USING TWO #12 x 3/4" TEK SCREWS.

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

8501 N. W. 90th Street
Medley, FL 33166

TITLE: 4" MULL DP CHARTS, CMU, 6 ANCHORS, NON-IMPACT

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

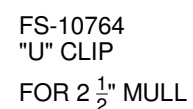
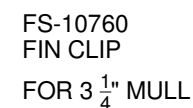
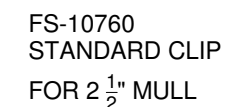
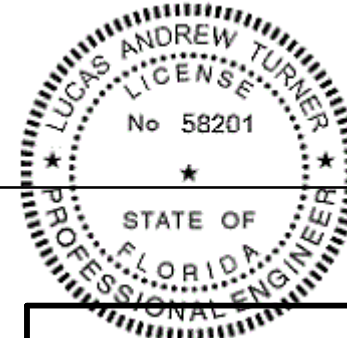
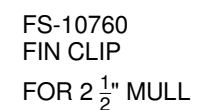
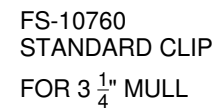
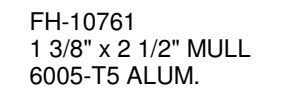
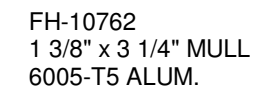
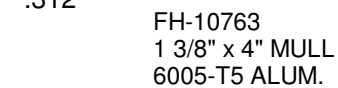
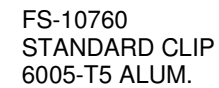
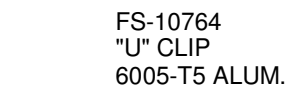
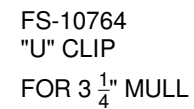
MODEL:

SCALE: N.T.S.

DWG. NO. LAW-ML-1901

REV. LETTER:

SHEET SHT 17 OF 24



11

10/3/2019
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Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON
INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

01	TITLE: EXTRUSIONS
----	-------------------

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

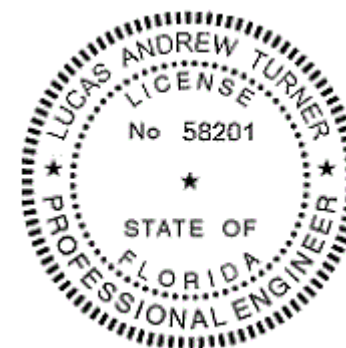
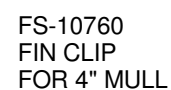
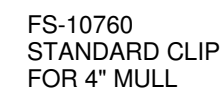
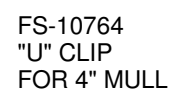
MODEL:

SCALE: N.T.S.

DWG. NO.	LAW ML 1001
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REV. LETTER:

SHEET SHT 18 OF 24



22

10/3/2019
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Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



LAWSON
INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

01 TITLE: EXTRUSIONS

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

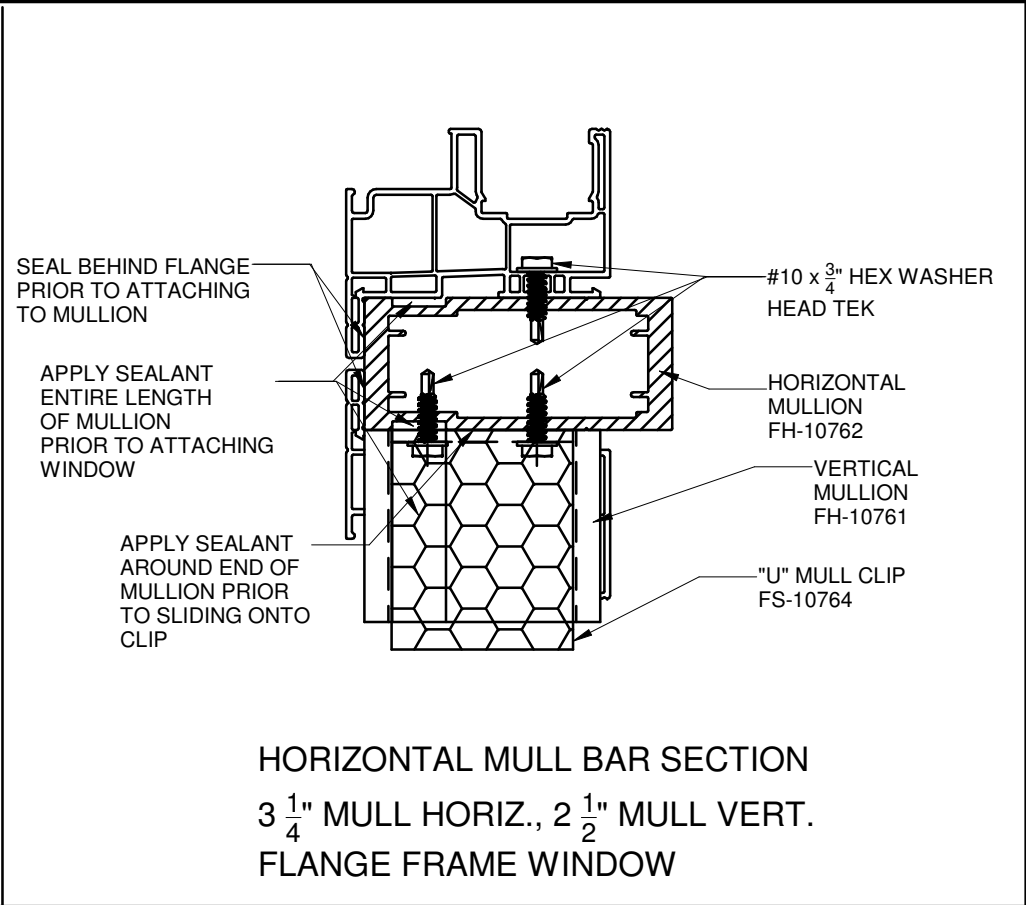
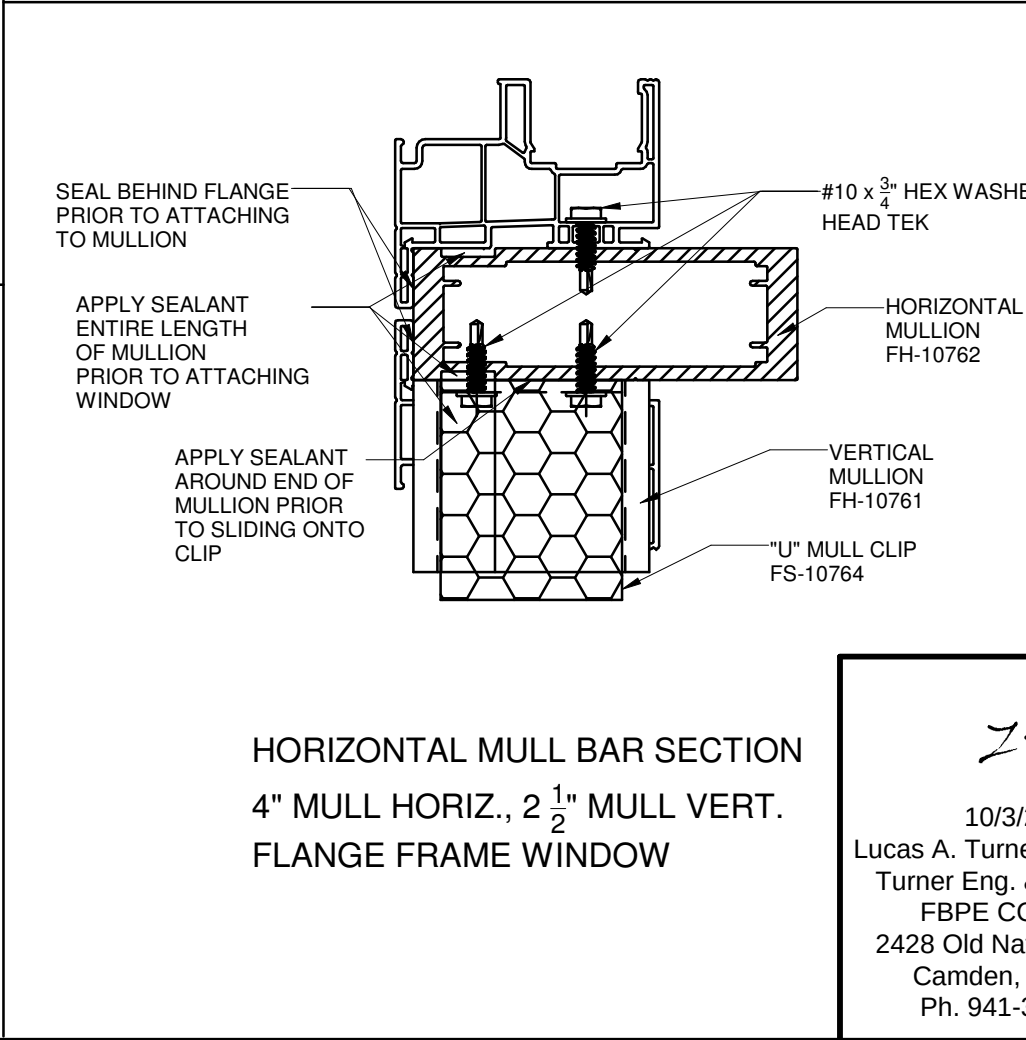
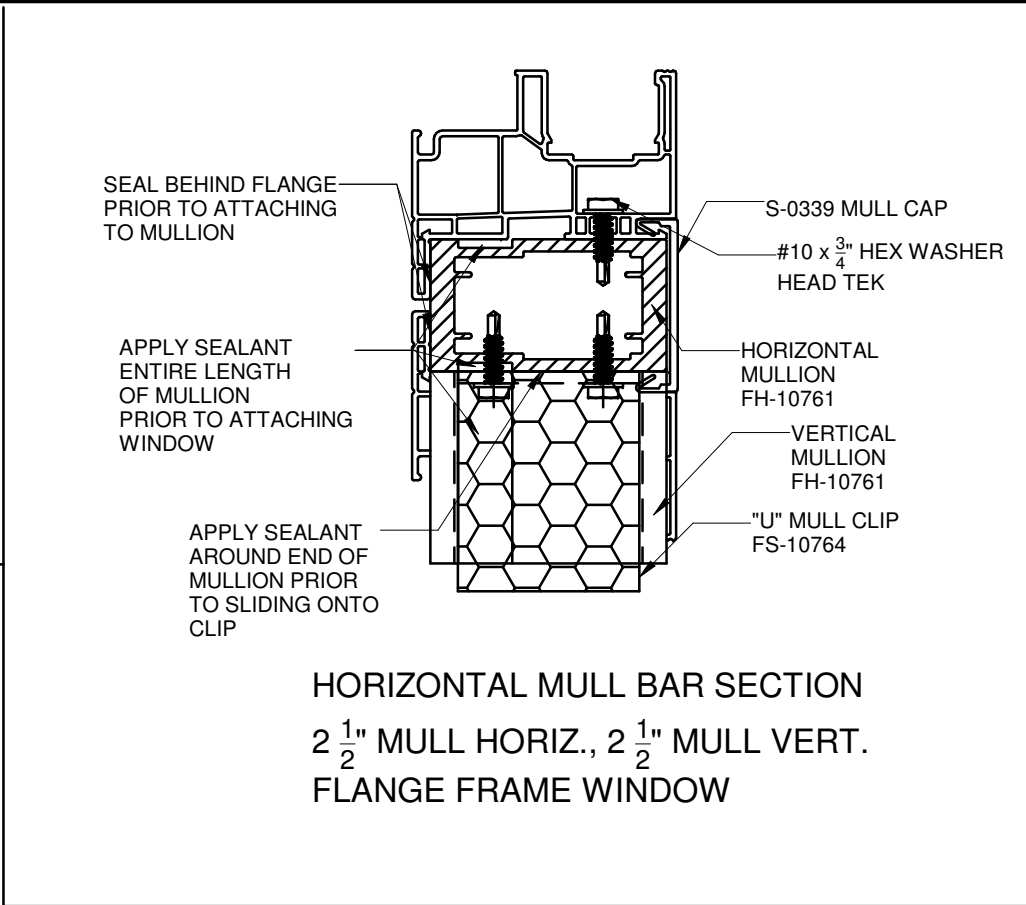
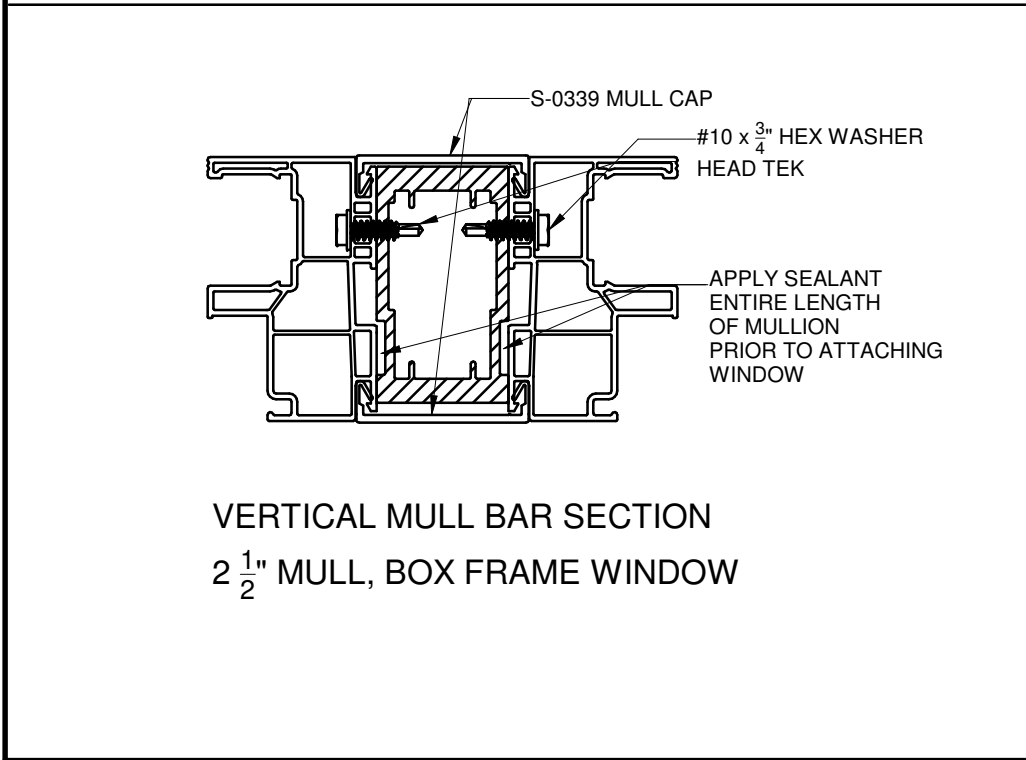
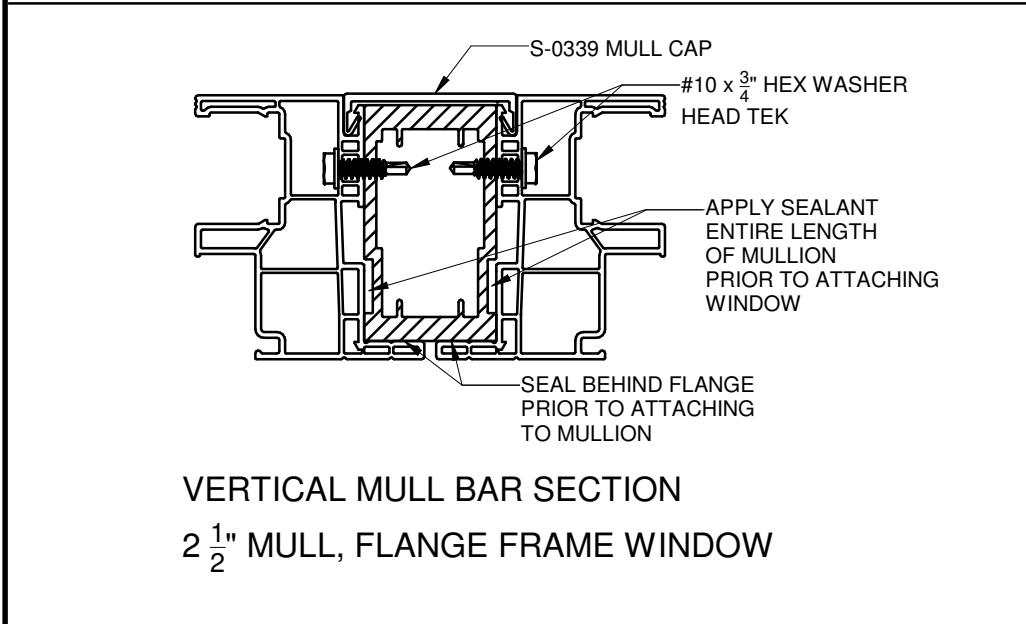
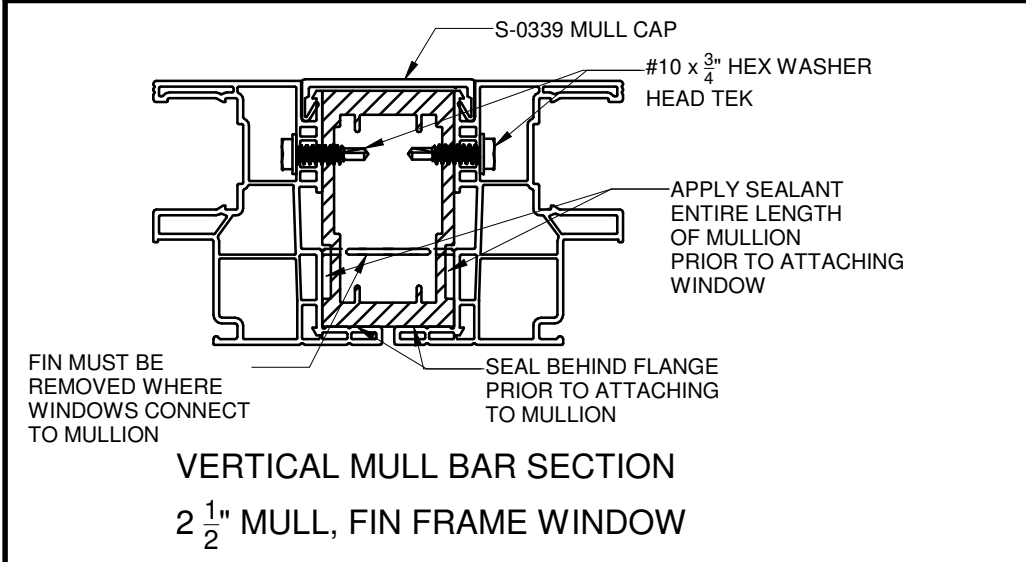
MODEL:

SCALE: N.T.S.

DWG. NO.	LAW ML 1001
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REV. LETTER:

	LAW-ME-1901
SHEET	OUT 10 OF 24



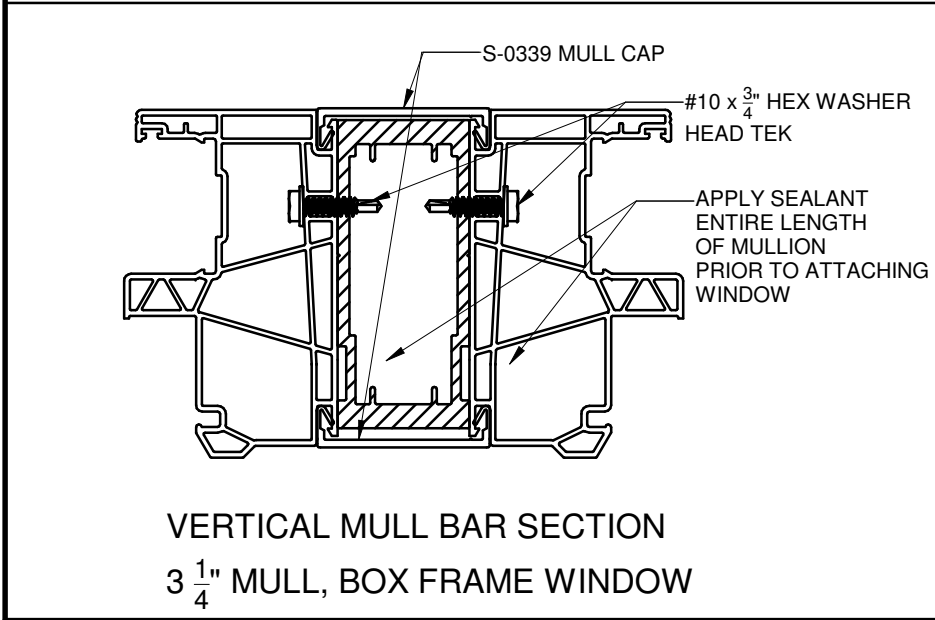
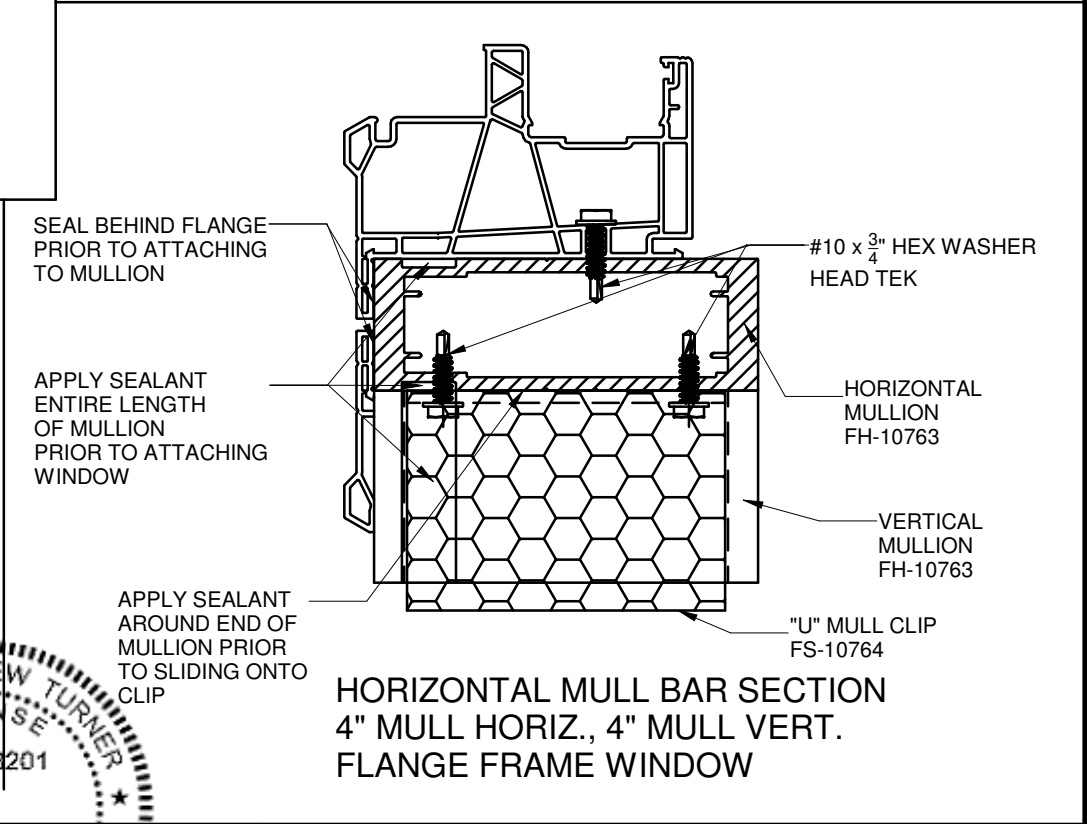
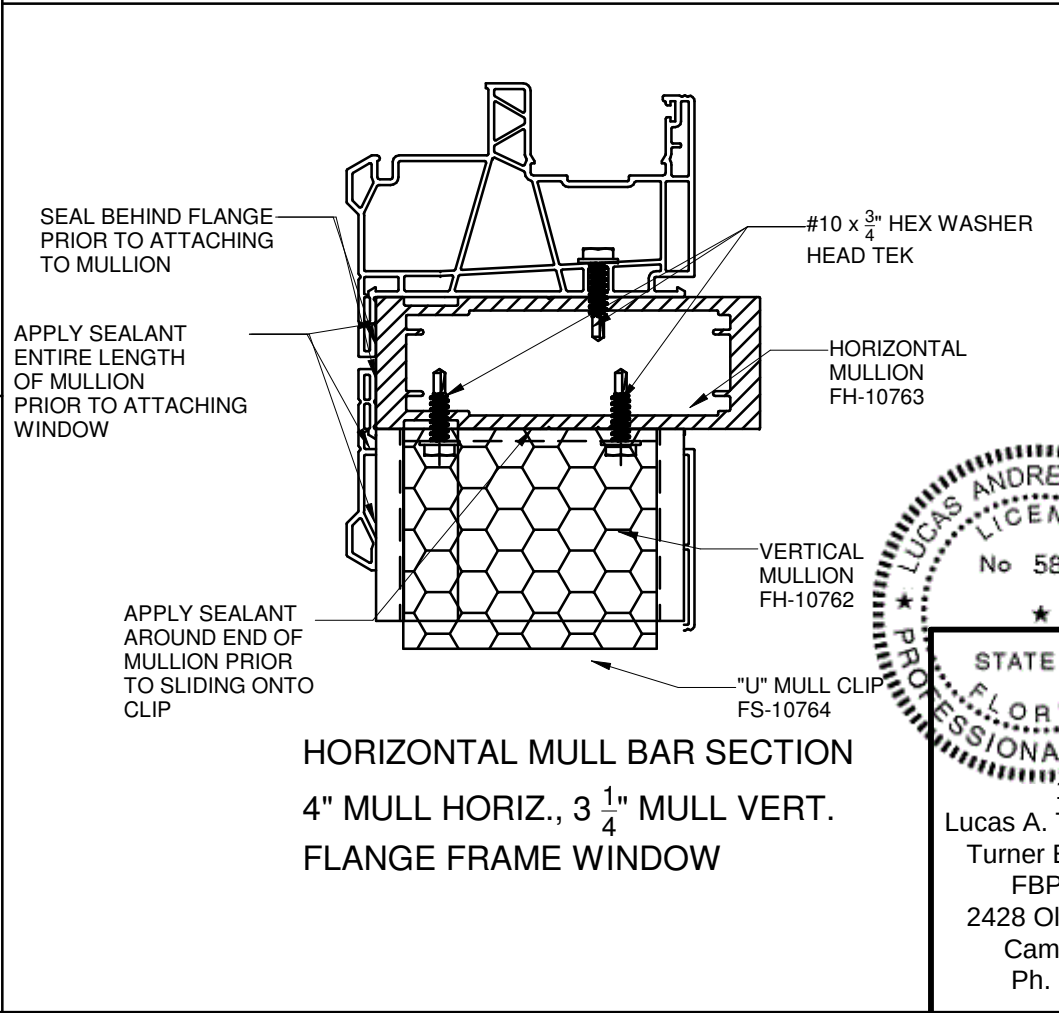
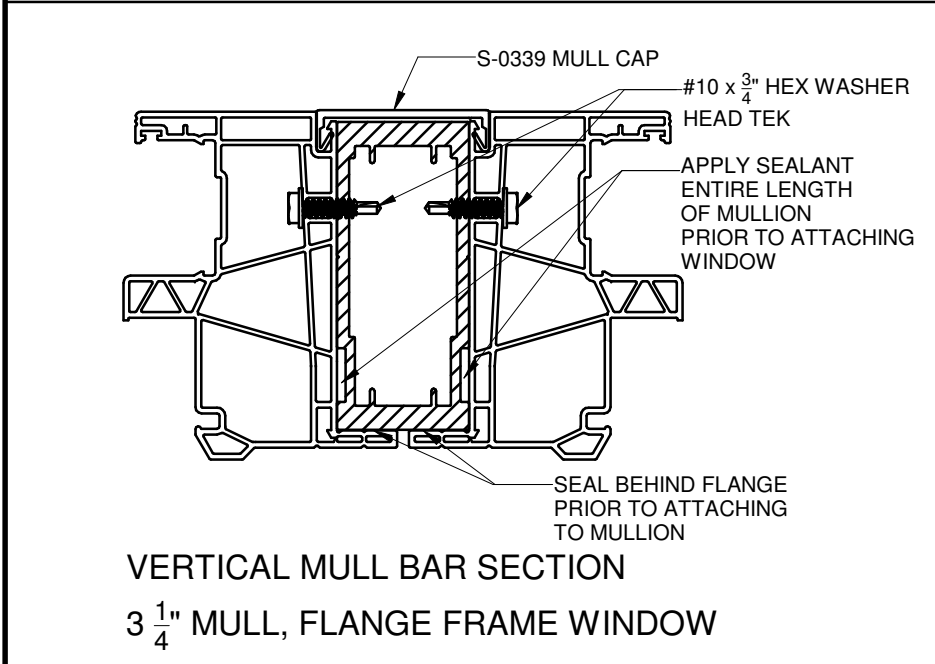
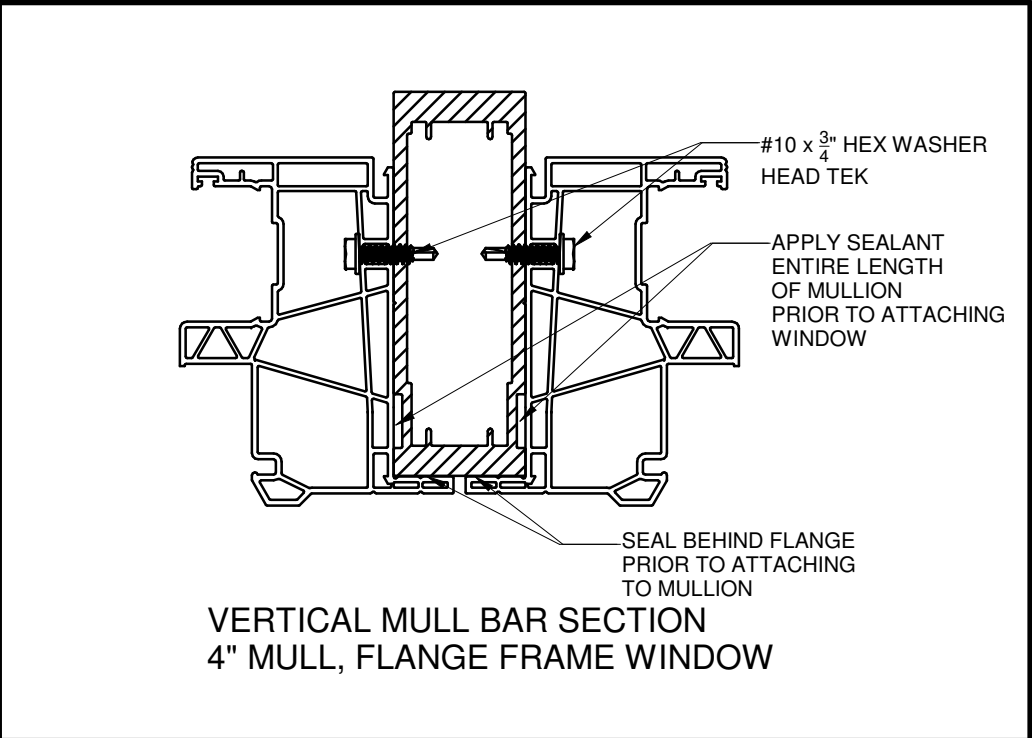
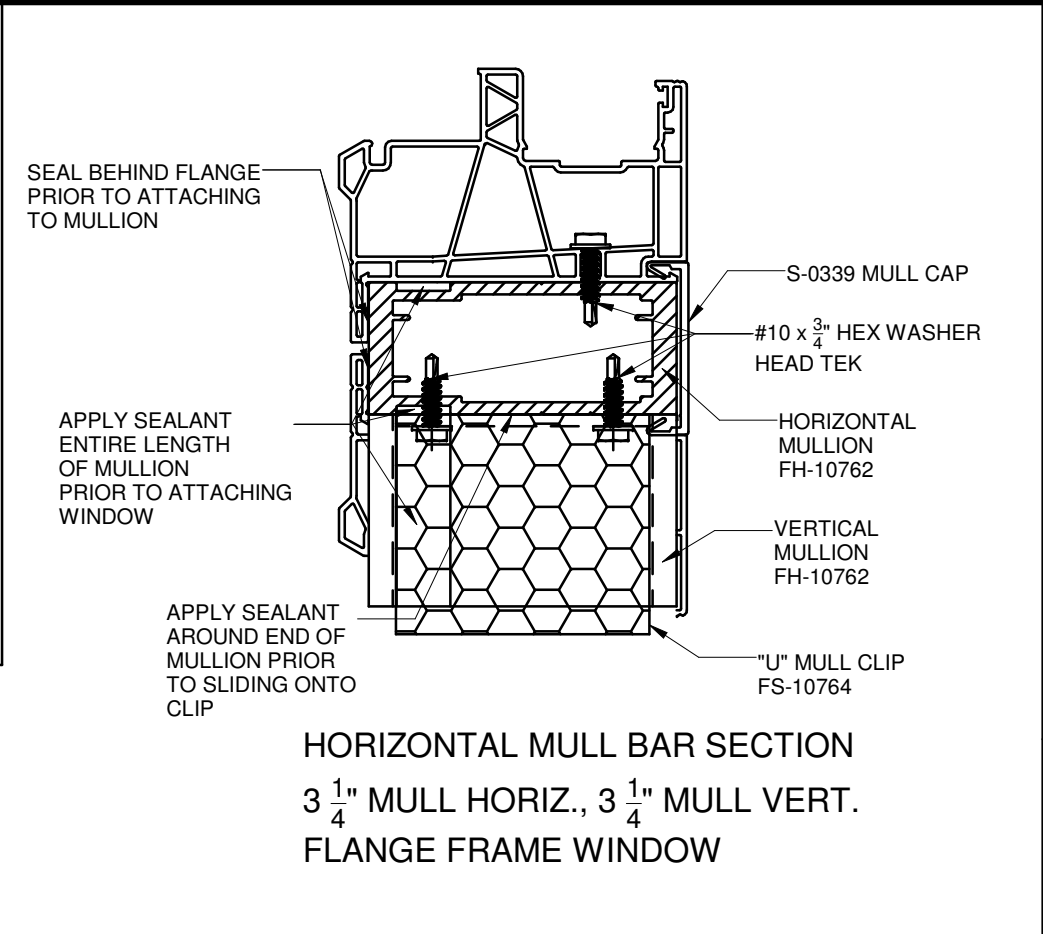
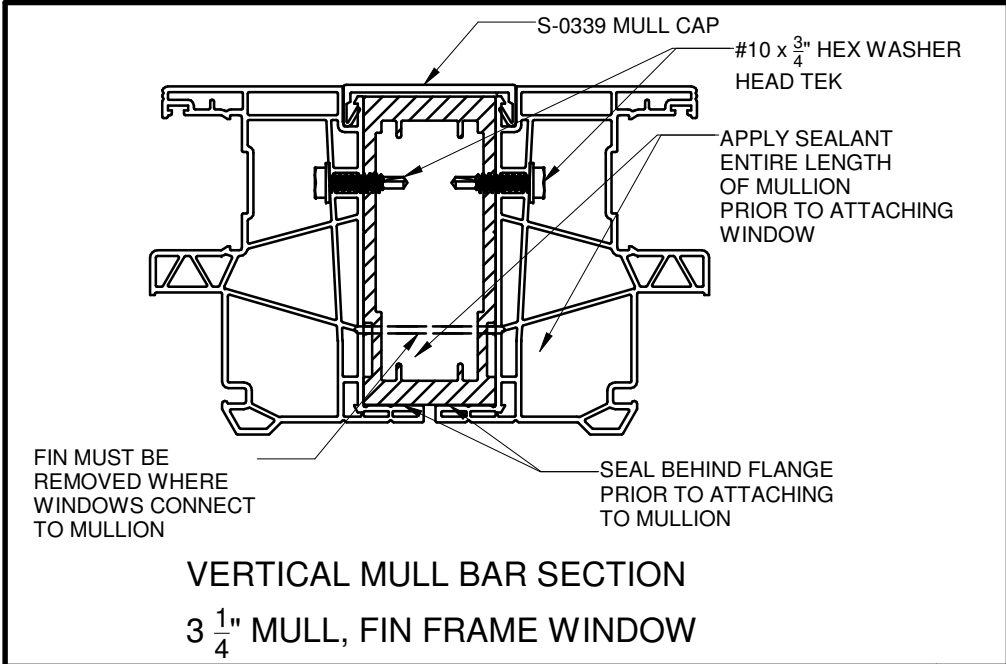
LT

10/3/2019
Lucas A. Turner, FLPE #58201
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FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

LAWSON
INDUSTRIES, INC.

8501 N. W. 90th Street
Medley, FL 33166

TITLE: SECTION VIEWS		
SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 20 OF 24



LUCAS ANDREW TURNER
LICENSE
No 58201
STATE OF FLORIDA
PROFESSIONAL ENGINEER

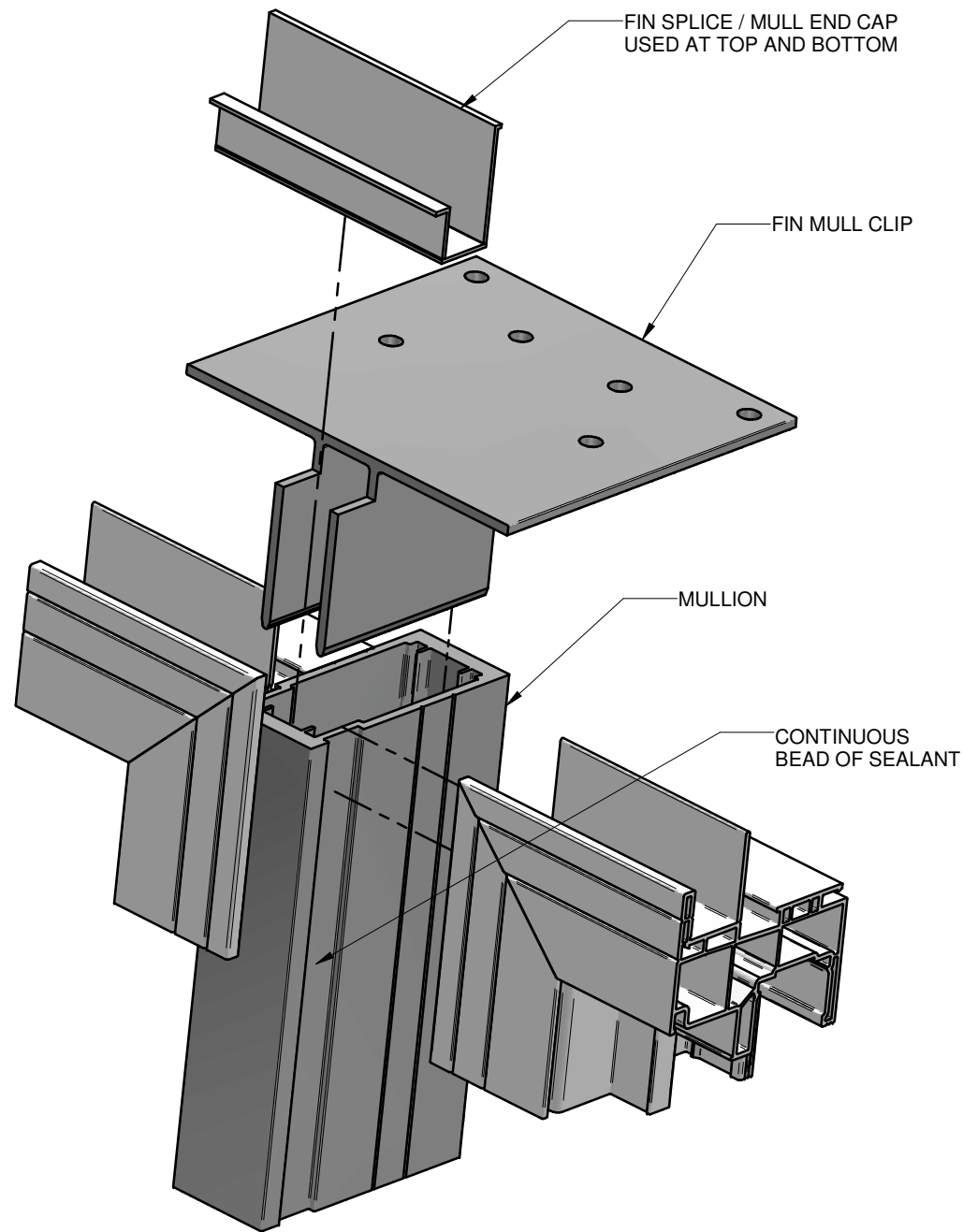
22

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574

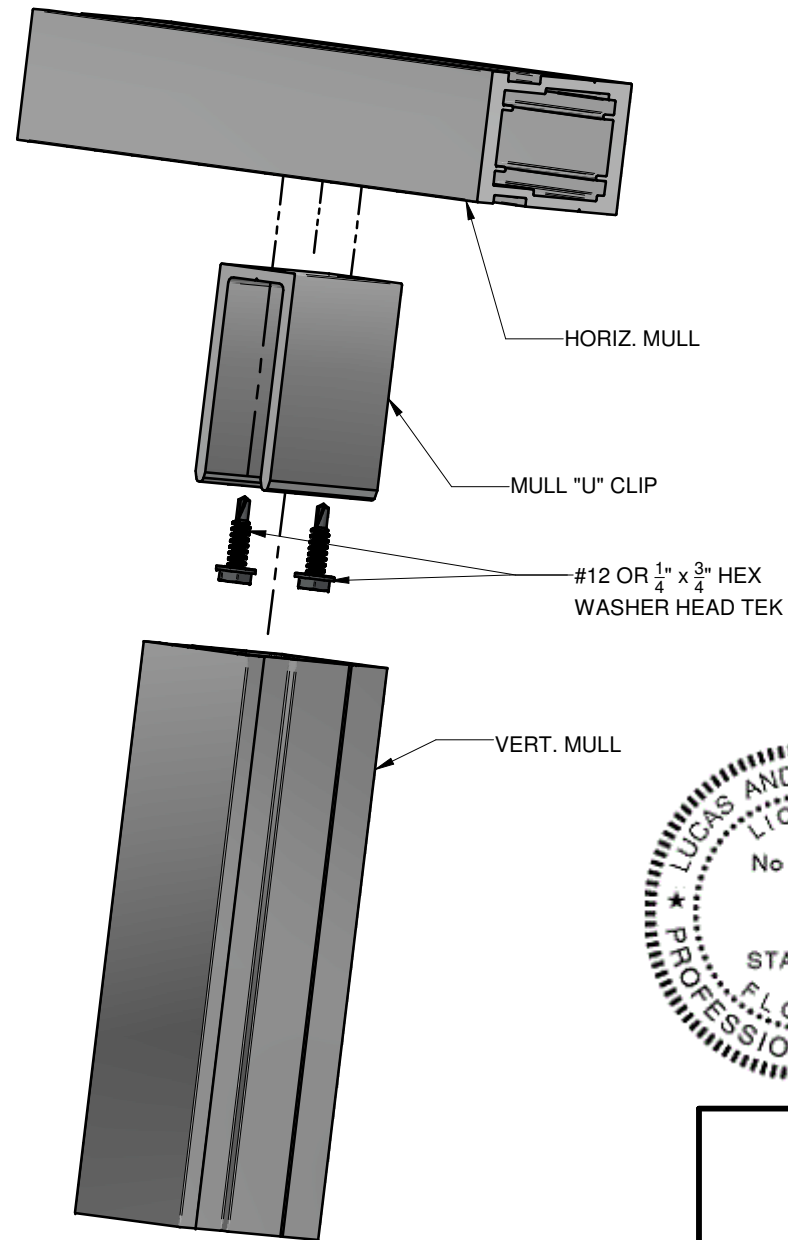


8501 N. W. 90th Street
Medley, FL 33166

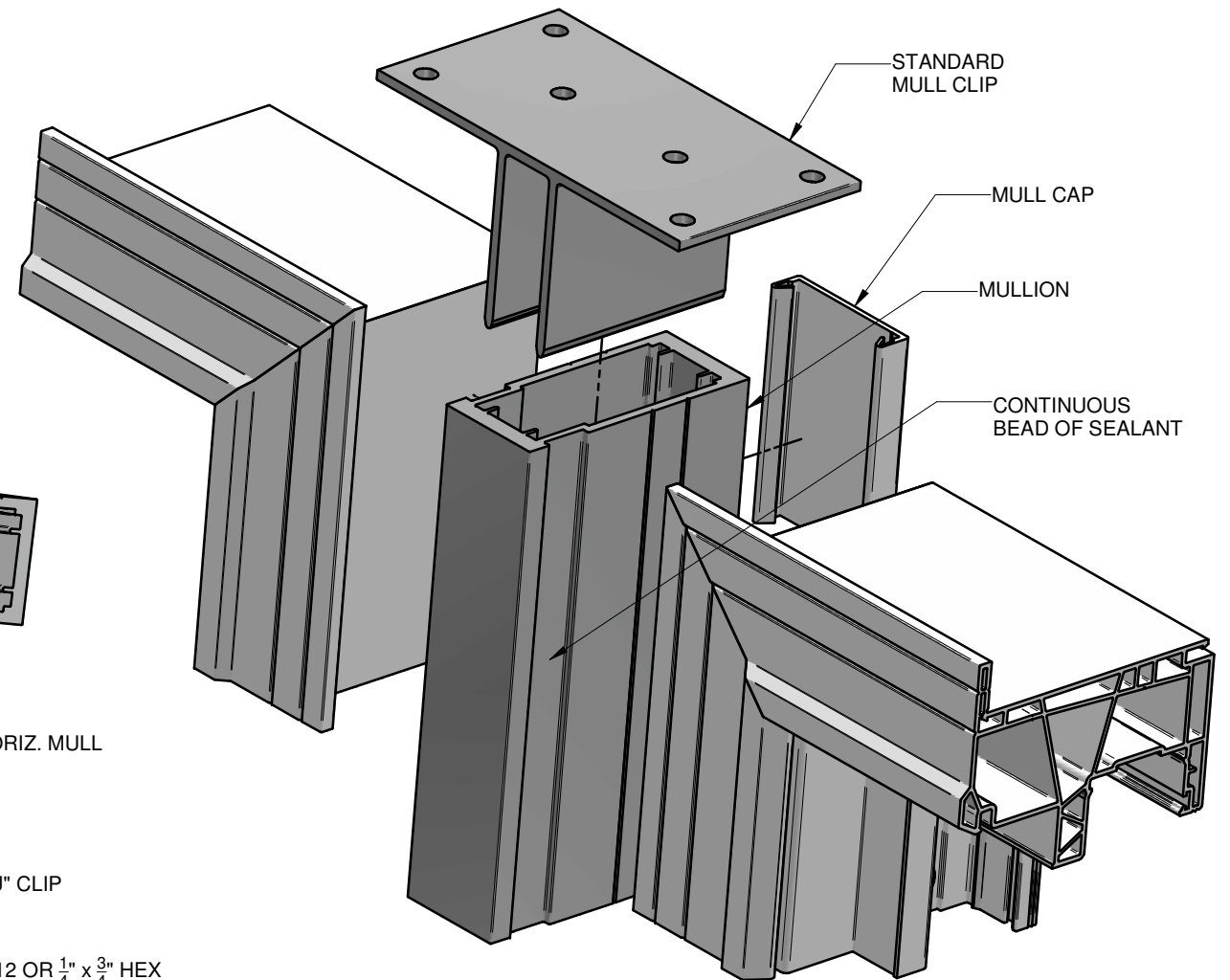
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MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 21 OF 24



TYPICAL FIN MULL ASSEMBLY
HEAD SHOWN, SILL AND JAMBS SIMILAR



TYPICAL MULL INTERSECTION ASSEMBLY



TYPICAL FLANGE MULL ASSEMBLY
HEAD SHOWN, SILL AND JAMBS SIMILAR



ZZ
10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: ASSEMBLY VIEWS

SERIES: MULLION

DRAWN BY: MCL

DATE: 08/09/19

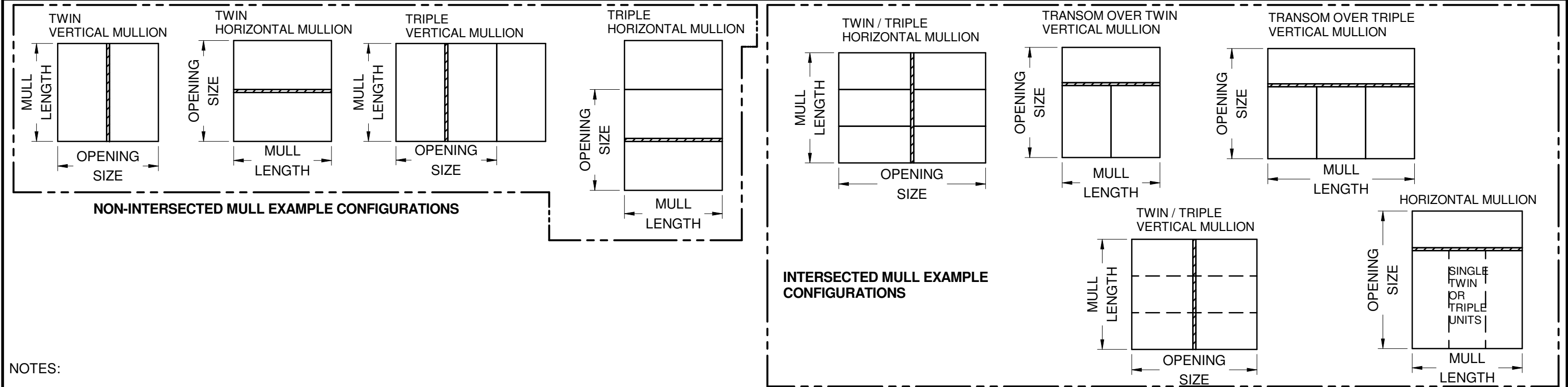
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DWG. NO.
LAW-ML-1901

REV. LETTER:

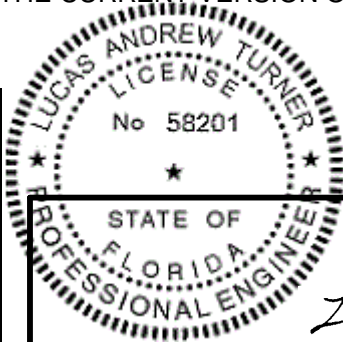
SHEET
SHT 22 OF 24



NOTES:

1. AT MULLION LOCATION, ATTACH WINDOW UNIT(S) TO MULLBAR THRU FRAME AS SPECIFIED IN WINDOW UNIT APPROVAL DOCUMENTS. IF ALUMINUM ATTACHMENT IS NOT SPECIFIED IN THE WINDOW UNIT APPROVAL DOCUMENTS, FOLLOW THE ANCHOR SPACING AS INDICATED IN THE WINDOW APPROVAL FOR ATTACHMENT TO WOOD SUBSTRATE, USING A HEX WASHER HEAD TEK SCREW OF THE SAME SIZE (#10 OR # 12) AS THE WOOD SCREW INDICATED IN THE WINDOW APPROVAL. TEK SCREWS SHALL BE LONG ENOUGH TO ENSURE THREE (3) THREADS OF PENETRATION BEYOND THE INSIDE WALL OF THE MULLBAR.
2. MULL CLIP INSTALLATION ANCHOR TYPE, SIZE, SPACING AND EMBEDMENT SHALL BE AS SPECIFIED IN THESE DRAWINGS, SEE TABLE 1, SHEET 15.
3. ALL MULL CLIP INSTALLATION ANCHORS MUST BE MADE OF OR PROTECTED WITH A CORROSION RESISTANT MATERIAL OR COATING. DISSIMILAR METALS OR MATERIALS IN CONTACT WITH PRESSURE TREATED WOOD MUST BE PROTECTED TO PREVENT REACTION.
4. INSTALLATION ANCHORS SHALL BE IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USE IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM SPECIFIED IN TABLE 1, SHEET 15.
5. ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL DRESSING OR STUCCO. FOR CONCRETE/CMU OPENINGS, EMBEDMENT SHALL BE BEYOND WOOD BUCKS, IF USED, INTO SUBSTRATE - 1x BUCKS ARE OPTIONAL.
6. A MINIMUM CENTER-TO-CENTER SPACING SHALL BE MAINTAINED AS INDICATED BY THE PRE-DRILLED HOLES AS SHOWN IN THE CLIP LAYOUTS ON SHEETS 10-11.
7. WOOD OR MASONRY OPENINGS, BUCKS AND BUCK FASTENERS SHALL BE PROPERLY DESIGNED BY THE ARCHITECT OR ENGINEER OF RECORD AND INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE. SUBSTRATES SHALL MEET THE MINIMUM STRENGTH REQUIREMENTS AS SHOWN IN TABLE 1 SHEET 15. CONCRETE AND MASONRY SUBSTRATES MAY NOT BE CRACKED.
8. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS FOLLOWING THE CURRENT VERSION OF THE REFERENCE DOCUMENTS: FMA/AAMA 100 (FIN WINDOWS), FMA/AAMA 200 (FLANGE WINDOWS), FMA/WDMA 250 (BOX WINDOWS), FMA/AAMA/WDMA 300 (EXTERIOR DOORS).

TABLE 1: APPROVED INSTALLATION FASTENERS				
THRU	SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBEDMENT	MIN. EDGE DIST.
CLIP	CONCRETE (2.0 KSI MIN.)	1/4" ELCO ULTRACON	1 3/4"	1"
CLIP	HOLLOW OR GROUT-FILLED CMU (117 PCF MIN.)	1/4" ELCO ULTRACON	1 3/4"	2 1/2"
CLIP	CONCRETE (2.85 KSI MIN.)	1/4" ELCO ULTRACON	1 "	1"
CLIP	GROUT-FILLED CMU (ASTM C-90)	1/4" ELCO ULTRACON	1 3/4"	2 1/2"
CLIP	2x MIN. SOUTHERN PINE (G-0.55)	#12 WOOD SCREW	1 3/8"	1"
CLIP	16 GAUGE (0.060) MIN. STEEL STUD (33 KSI YIELD MIN.)	#12 HILTI KWIK-FLEX OR ITW TEKS-SELF DRILLING SCREW	FULL THREAD THRU 0.060	1/2"
CLIP	1/8" ALUM. (6063-T5 MIN.) OR 1/8" STEEL (33 KSI MIN.)	#12 GRADE 5 SELF-TAPPING / DRILLING SCREW	FULL THREAD THRU 0.125	1/2"

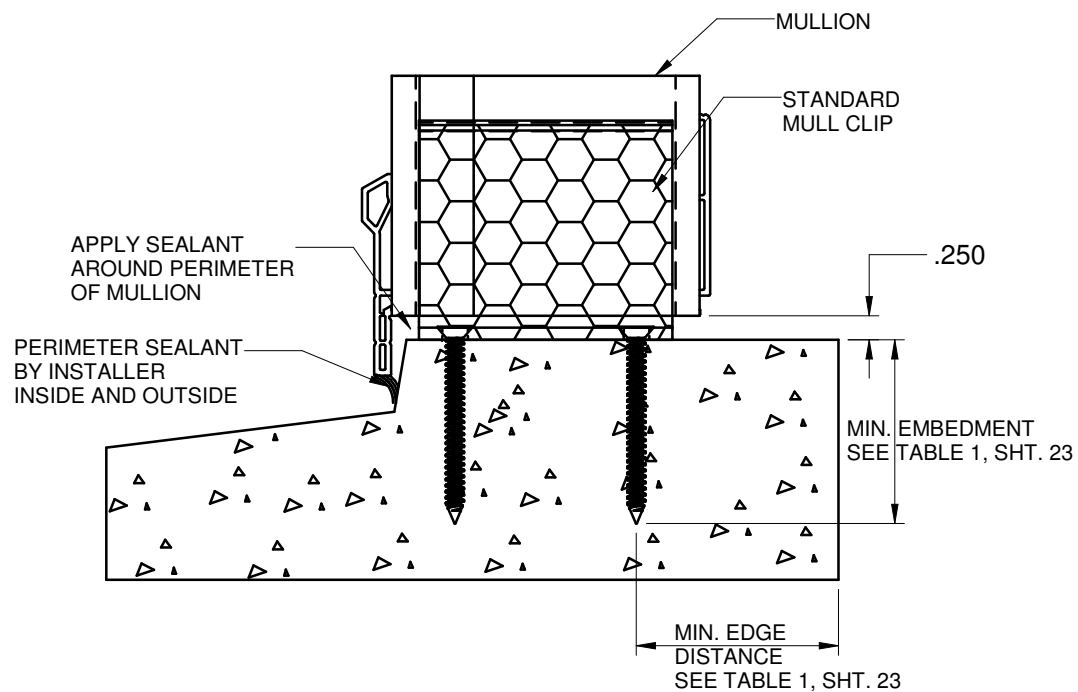
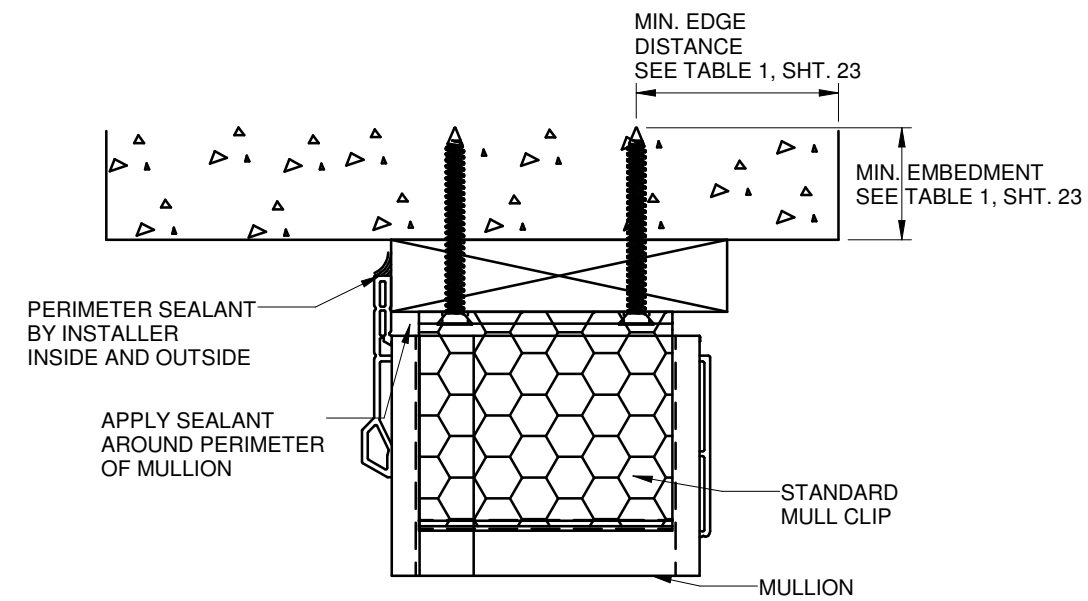

10/3/2019
Lucas A. Turner, FLPE #58201
Turner Eng. & Cons., Inc.,
FBPE COA #29779
2428 Old Natchez Trc. Trl.
Camden, TN 38320
Ph. 941-380-1574



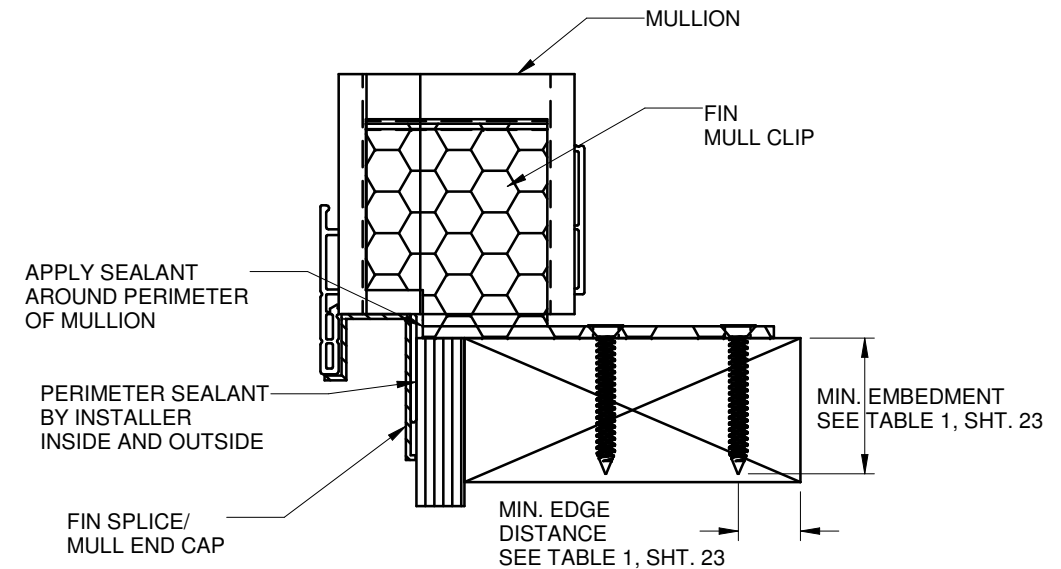
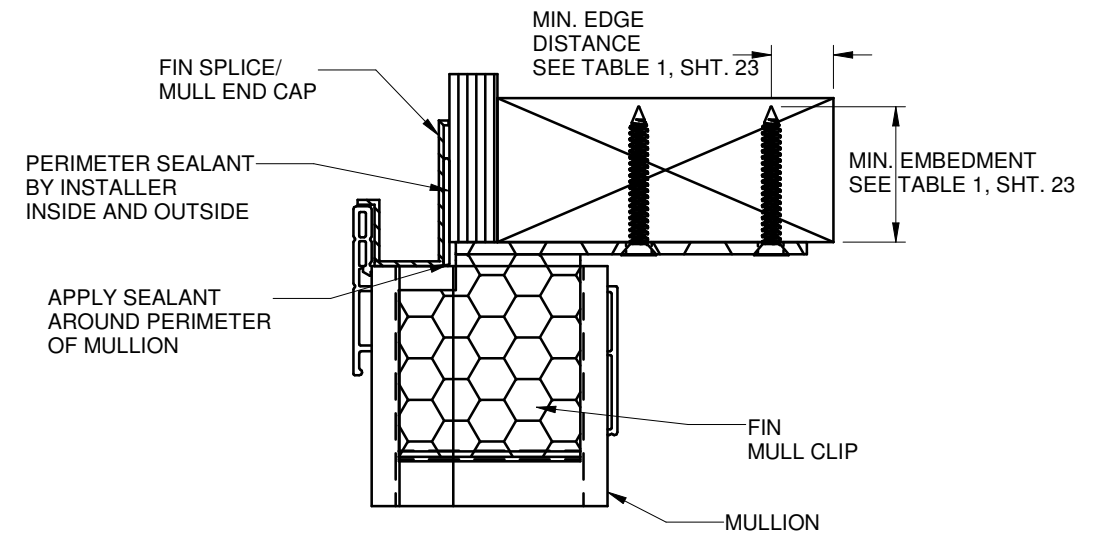
8501 N. W. 90th Street
Medley, FL 33166

TITLE: CONFIGURATIONS & ANCHOR NOTES

SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 23 OF 24



DETAIL OF MULLION WITH STANDARD CLIP
ATTACHED THROUGH MASONRY



DETAIL OF MULLION WITH FIN CLIP
ATTACHED THROUGH WOOD



LT
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Camden, TN 38320
Ph. 941-380-1574



8501 N. W. 90th Street
Medley, FL 33166

TITLE: INSTALLATION DETAILS

SERIES: MULLION	DRAWN BY: MCL	DATE: 08/09/19
MODEL:	SCALE: N.T.S.	DWG. NO. LAW-ML-1901
	REV. LETTER:	SHEET SHT 24 OF 24