

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED DETAILS	05/16/26	R.L.

NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE FLORIDA BUILDING CODE INCLUDING THE HVHZ.
2. WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
3. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
4. ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
5. FRAME MATERIAL: ALUMINUM 6063-T6 AND 6005A-T5.
6. UNITS MUST BE GLAZED PER ASTM E1300, SEE SHEET 4 FOR GLASS DETAILS.
7. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
8. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 3/8".
9. FOR ANCHORING INTO WOOD FRAMING OR 2X BUCK USE #14 WOOD SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
10. FOR ANCHORING INTO MASONRY/CONCRETE USE 1/4" TAPCONS WITH SUFFICIENT LENGTH TO ACHIEVE A 1 1/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
11. FOR ANCHORING INTO METAL STRUCTURE USE #14 SMS OR SELF DRILLING SCREWS WITH SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM BEYOND STRUCTURE INTERIOR WALL. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
12. ALL FASTENERS TO BE CORROSION RESISTANT.
13. INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BELOW:

A. WOOD – MINIMUM SPECIFIC GRAVITY OF G=0.42

B. CONCRETE – MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

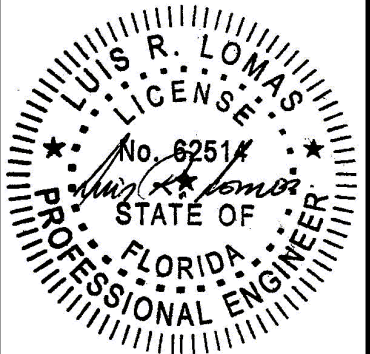
C. MASONRY – STRENGTH CONFORMANCE TO ASTM C-90, GRADE N, TYPE 1 (OR GREATER).

D. METAL STRUCTURE: STEEL 18GA, 33KSI OR ALUMINUM 6063-T5 .125" THICK MINIMUM

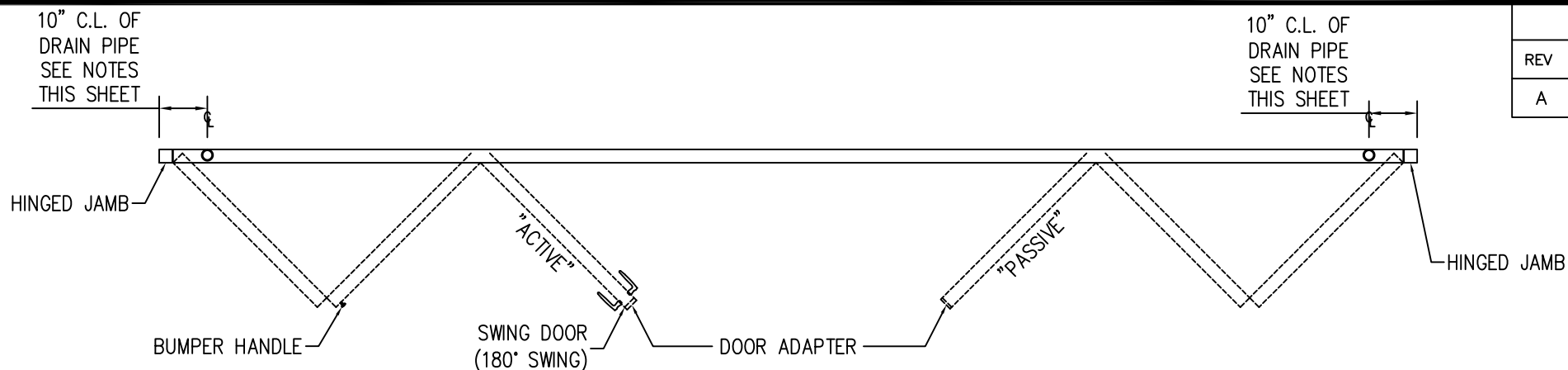
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THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM NOTES		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 1 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		

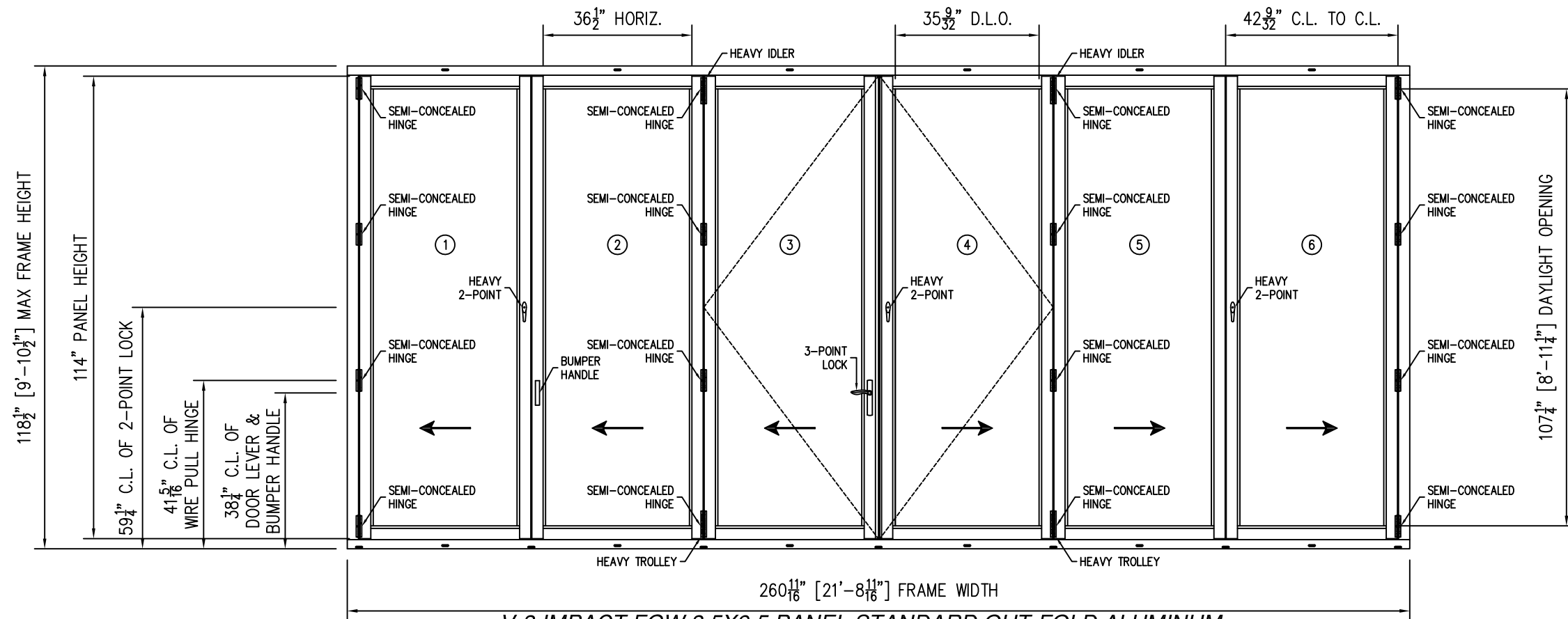
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Luis R. Lomas P.E.
FL No.: 62514



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DESIGN PRESSURE RATING	IMPACT RATING
±70.0PSF	LARGE AND SMALL MISSILE IMPACT
MISSILE LEVEL D, WIND ZONE 4, AND HVHZ SEE CHART #1 SHEET 3	

DESIGN PRESSURE RATING	IMPACT RATING
±55.0PSF	LARGE AND SMALL MISSILE IMPACT
MISSILE LEVEL D, WIND ZONE 4, AND HVHZ UNITS WITH FLUSH SILL SEE CHART #2 SHEET 3	

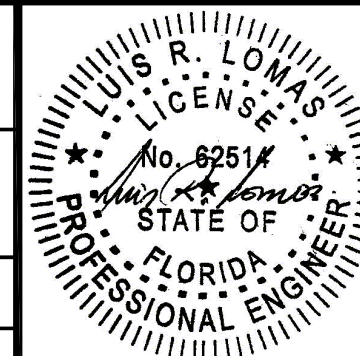
DESIGN PRESSURE RATING	IMPACT RATING
±55.0PSF	LARGE AND SMALL MISSILE IMPACT
MISSILE LEVEL D, WIND ZONE 4, AND HVHZ UNITS WITH NON-THERMAL PANELS SEE CHART #2 SHEET 3	

HARDWARE SCHEDULE
A. SEMI-CONCEALED HINGE BY THERMA-TRU
B 2 POINT HANDLE & LOCK MS000487-XX BY THERMA-TRU
C 3 POINT HANDLE & LOCK BY THERMA-TRU
D SURFACE MOUNT HINGE BY THERMA-TRU

- NOTES:
- PANEL SIZE: 42" X 114"
 - PANEL D.L.O.: 39 1/4" X 107 1/4"
 - DRAIN TUBE IS ONLY INSTALLED WITH RECESSED SILL TYPES

THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM ELEVATIONS		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 2 OF 13
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Chart #1

Maximum Design pressure (psf)										
Panel Height (in)	Single Panel Width (in)									
	24.00		30.00		36.00		42.00		48.00	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
78.00	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
84.00	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
90.00	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	77.6	77.6
96.00	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	72.7	72.7
102.00	80.0	80.0	80.0	80.0	80.0	80.0	78.2	78.2	-	-
108.00	80.0	80.0	80.0	80.0	80.0	80.0	73.9	73.9	-	-
114.00	80.0	80.0	80.0	80.0	79.1	79.1	70.0	70.0	-	-
120.00	80.0	80.0	80.0	80.0	68.7	68.7	-	-	-	-
126.00	80.0	80.0	70.3	70.3	59.2	59.2	-	-	-	-
132.00	75.7	75.7	61.0	61.0	51.3	51.3	-	-	-	-
138.00	66.2	66.2	53.3	53.3	-	-	-	-	-	-
144.00	58.2	58.2	46.8	46.8	-	-	-	-	-	-
150.00	51.4	51.4	41.4	41.4	-	-	-	-	-	-
156.00	45.7	45.7	36.7	36.7	-	-	-	-	-	-

Chart #2

Maximum Design pressure (psf)										
Panel Height (in)	Single Panel Width (in)									
	24.00		30.00		36.00		42.00		48.00	
	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg	Pos	Neg
78.00	60.0	80.0	60.0	80.0	60.0	80.0	60.0	80.0	60.0	70.3
84.00	60.0	80.0	60.0	80.0	60.0	80.0	60.0	74.6	60.0	65.3
90.00	60.0	80.0	60.0	80.0	60.0	80.0	60.0	69.7	60.0	61.0
96.00	60.0	80.0	60.0	80.0	60.0	76.2	60.0	65.3	57.1	57.1
102.00	60.0	80.0	60.0	80.0	60.0	71.0	60.0	61.5	-	-
108.00	60.0	80.0	60.0	77.0	60.0	66.3	58.1	58.1	-	-
114.00	60.0	80.0	60.0	72.3	60.0	62.2	55.0	55.0	-	-
120.00	60.0	79.4	60.0	64.1	54.0	54.0	-	-	-	-
126.00	60.0	68.5	55.2	55.2	46.5	46.5	-	-	-	-
132.00	59.5	59.5	47.9	47.9	40.3	40.3	-	-	-	-
138.00	52.0	52.0	41.9	41.9	-	-	-	-	-	-
144.00	45.7	45.7	36.8	36.8	-	-	-	-	-	-
150.00	40.4	40.4	32.5	32.5	-	-	-	-	-	-
156.00	35.9	35.9	28.9	28.9	-	-	-	-	-	-

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THERMA-TRU

1750 INDIAN WOOD CIRCLE
MAUMEE, OH 43537

SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL
STANDARD OUT-FOLD ALUMINUM
DESIGN PRESSURE CHARTS

DRAWN:
R.L.

DWG NO.
08-03865

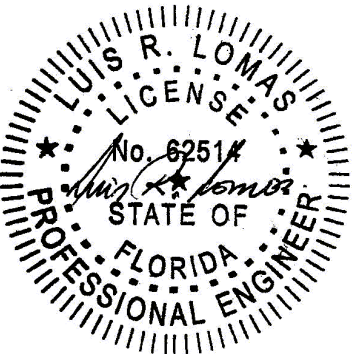
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A

SCALE NTS

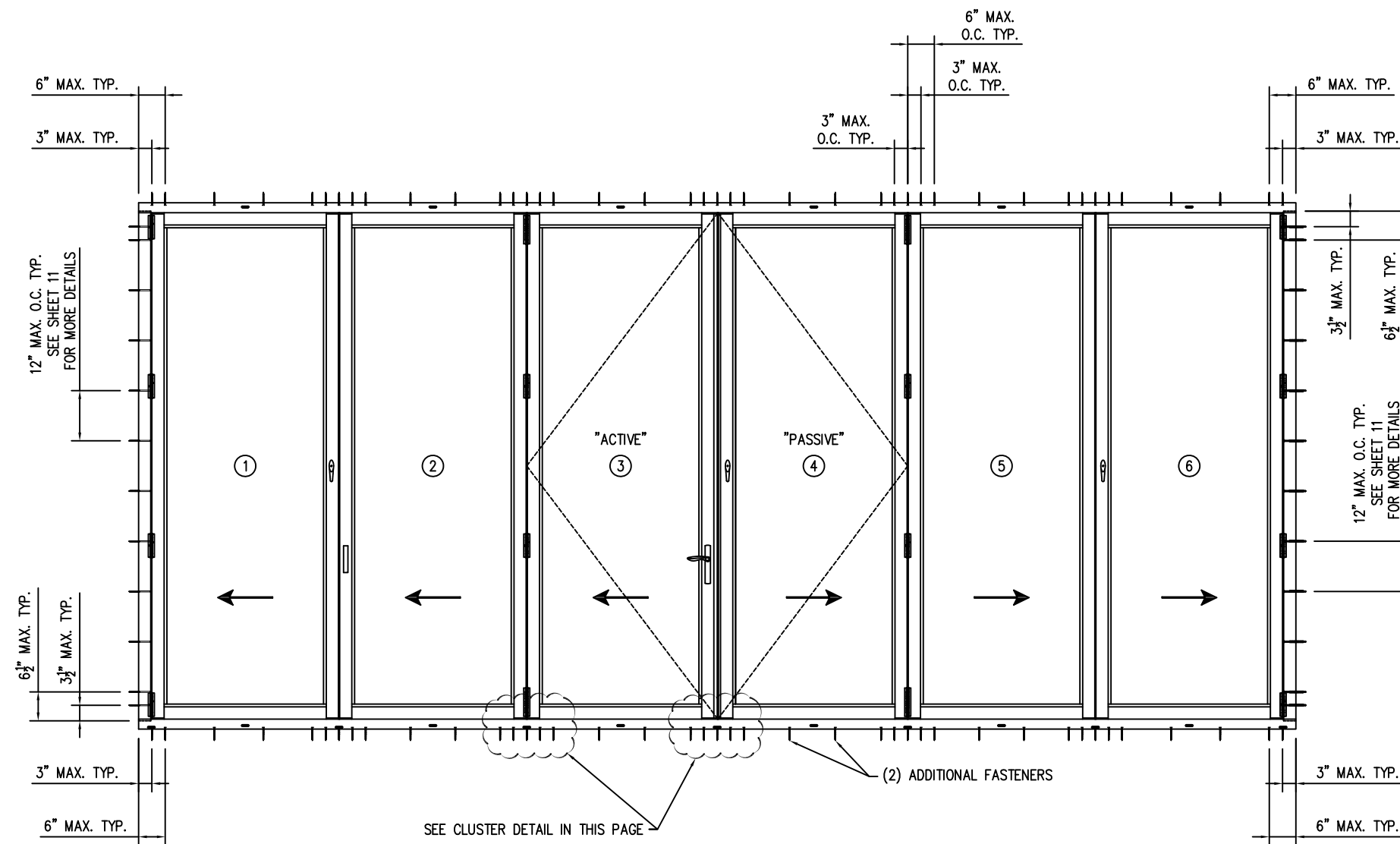
DATE 11/03/22

SHEET 3 OF 13

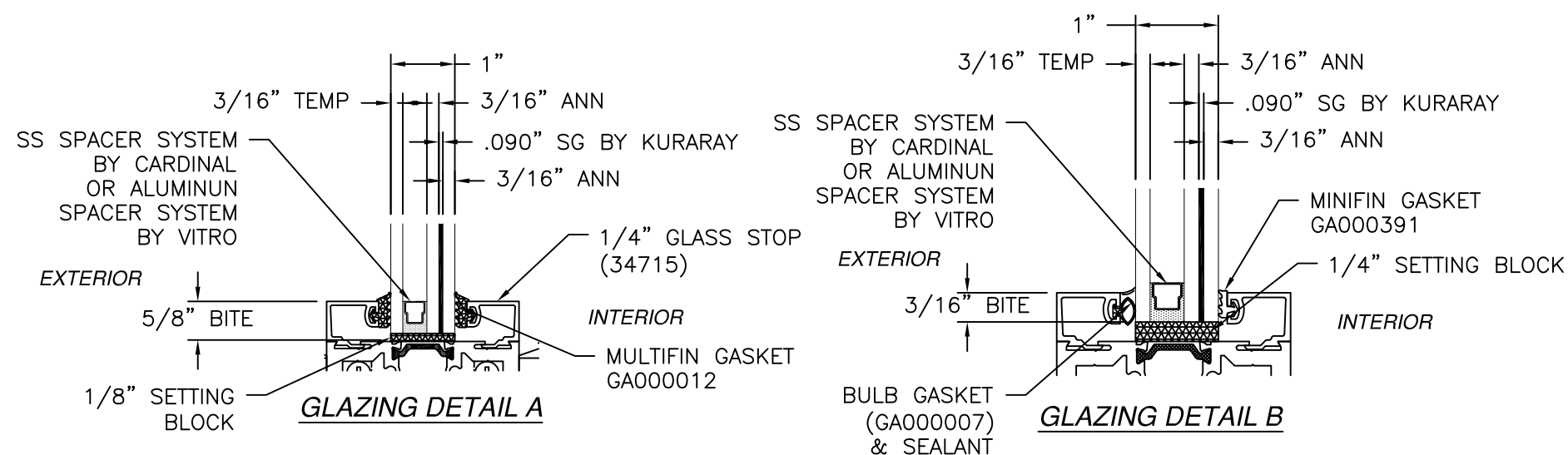
L. ROBERTO LOMAS P.E.
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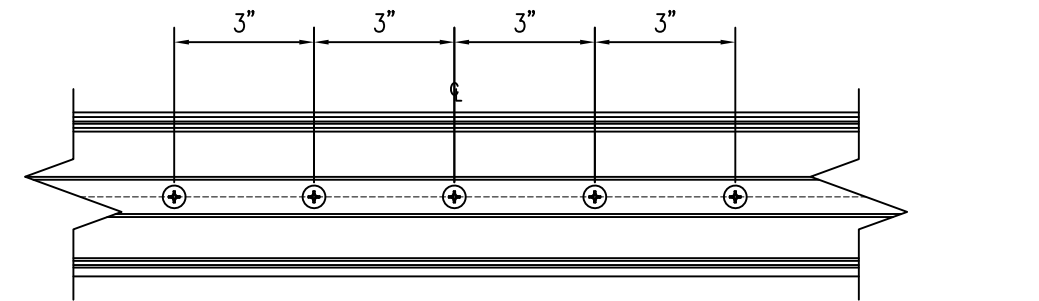
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FL No.: 62514



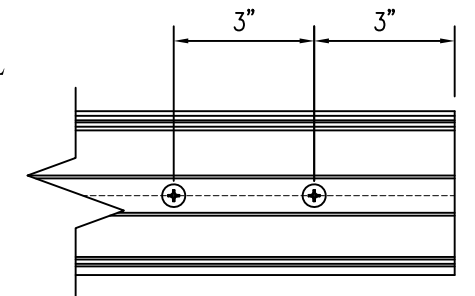
ANCHOR LAYOUT
APPLICABLE TO ALL CONFIGURATIONS.



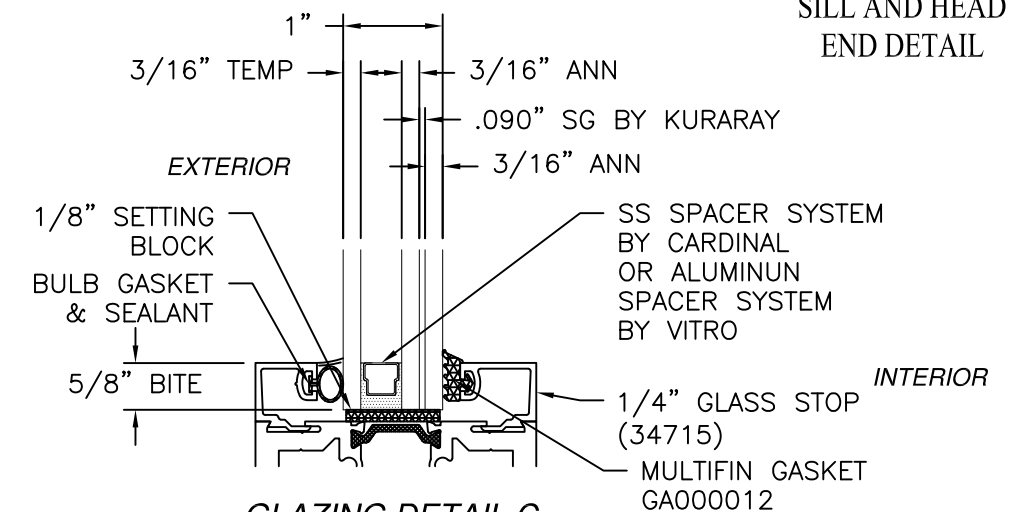
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**SILL AND HEAD
CLUSTER DETAIL**



**SILL AND HEAD
END DETAIL**



GLAZING DETAIL C

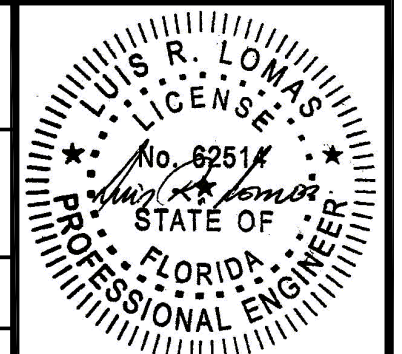
SIGNED: 05/17/2026

THERMA-TRU
1750 INDIAN WOOD CIRCLE
MAUMEE, OH 43537

SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL
STANDARD OUT-FOLD ALUMINUM
ANCHOR LAYOUT AND GLAZING DETAIL

DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 4 OF 13

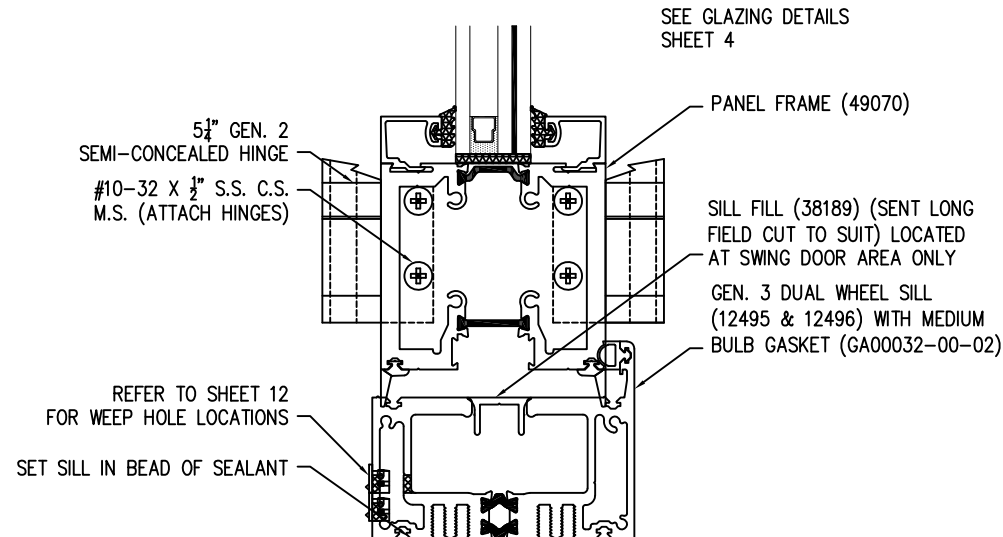
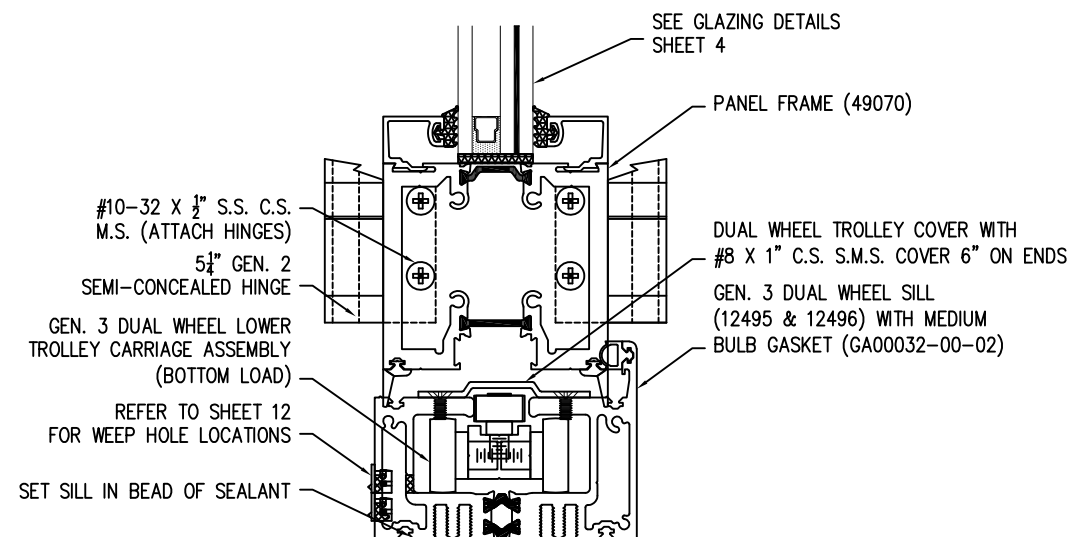
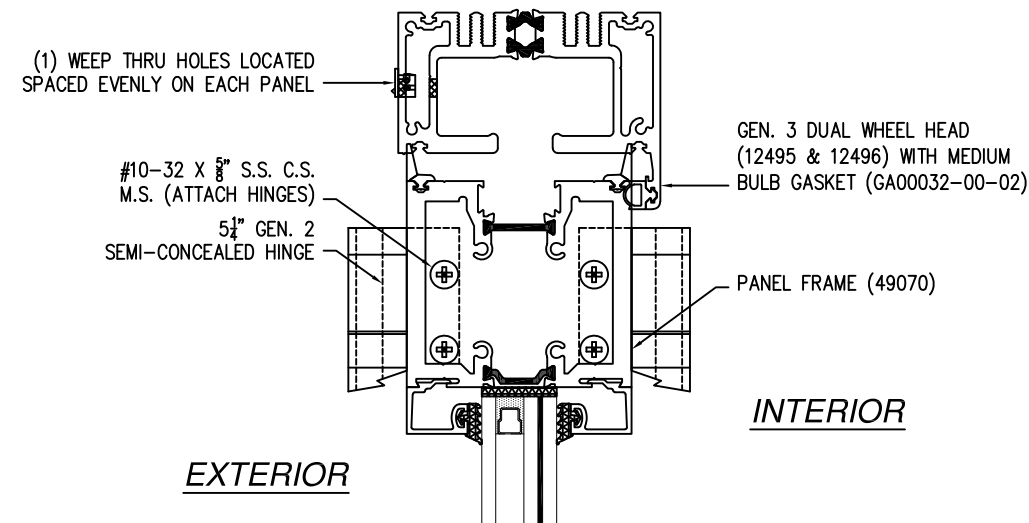
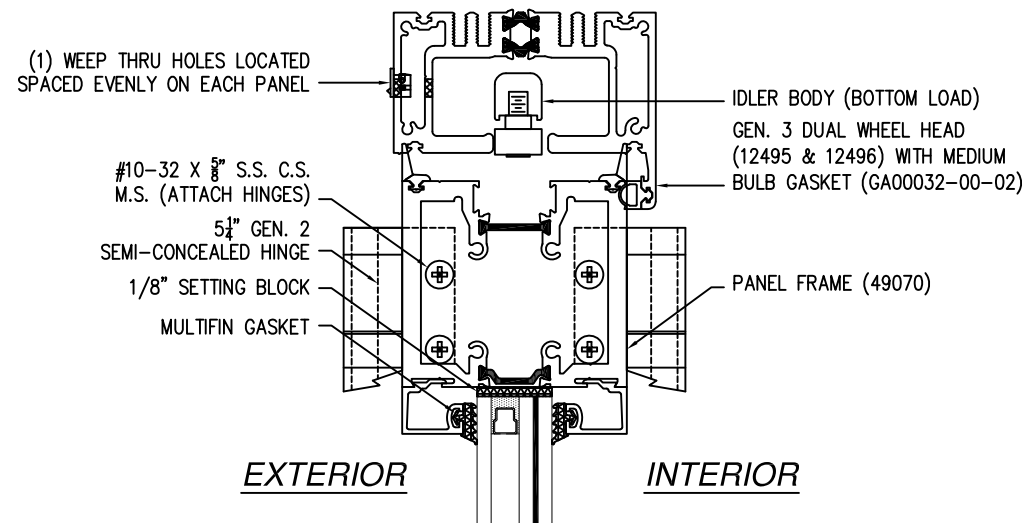
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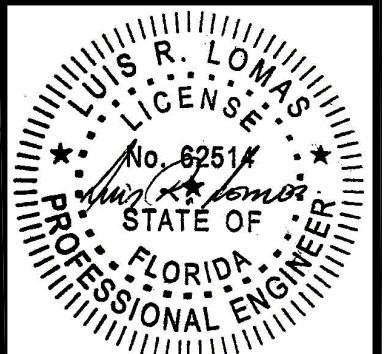
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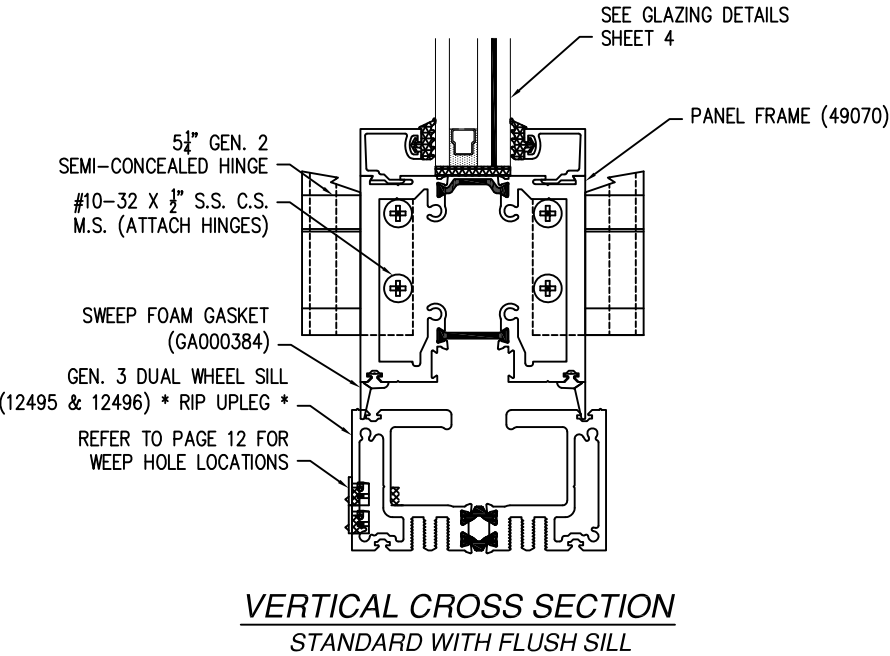
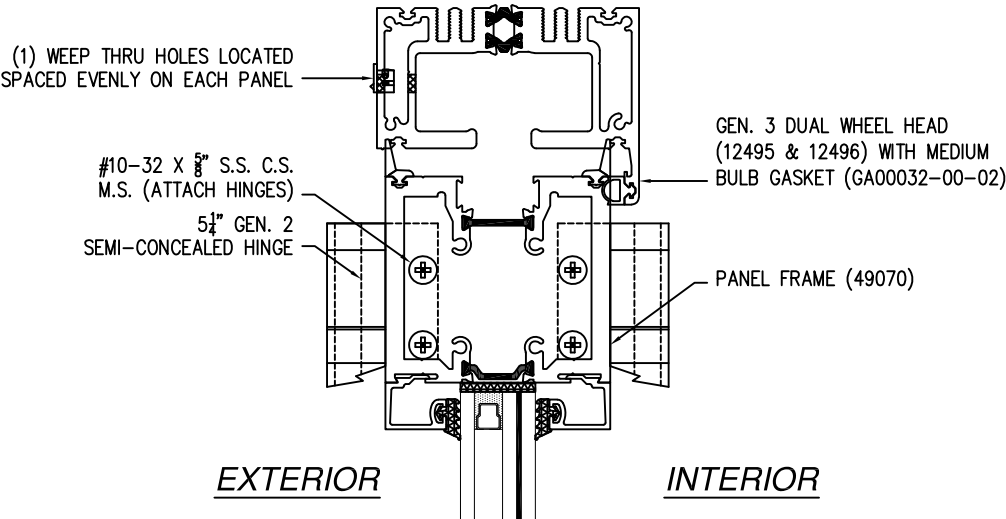
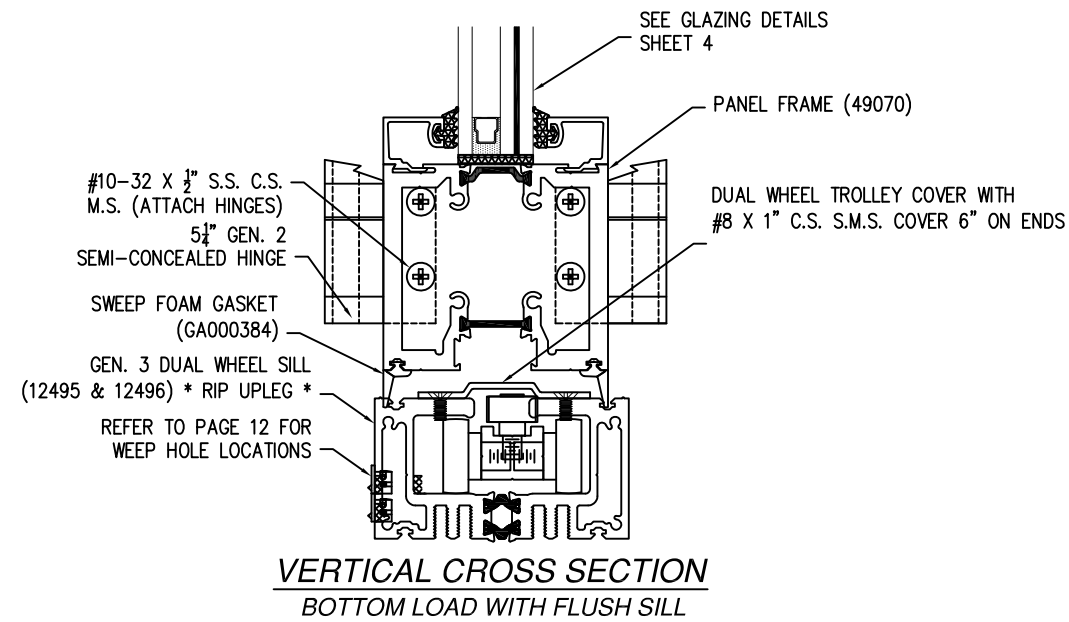
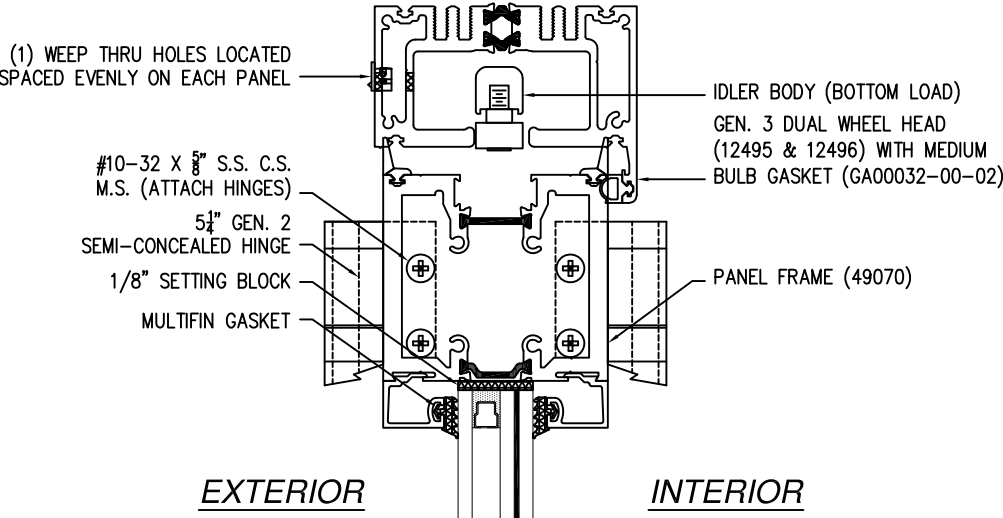
THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM VERTICAL CROSS SECTIONS		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 5 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		



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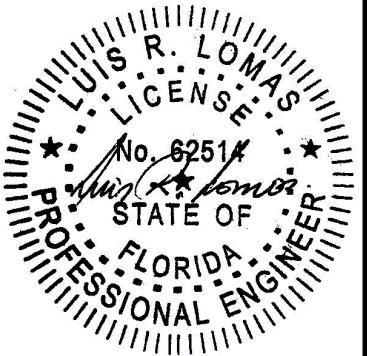
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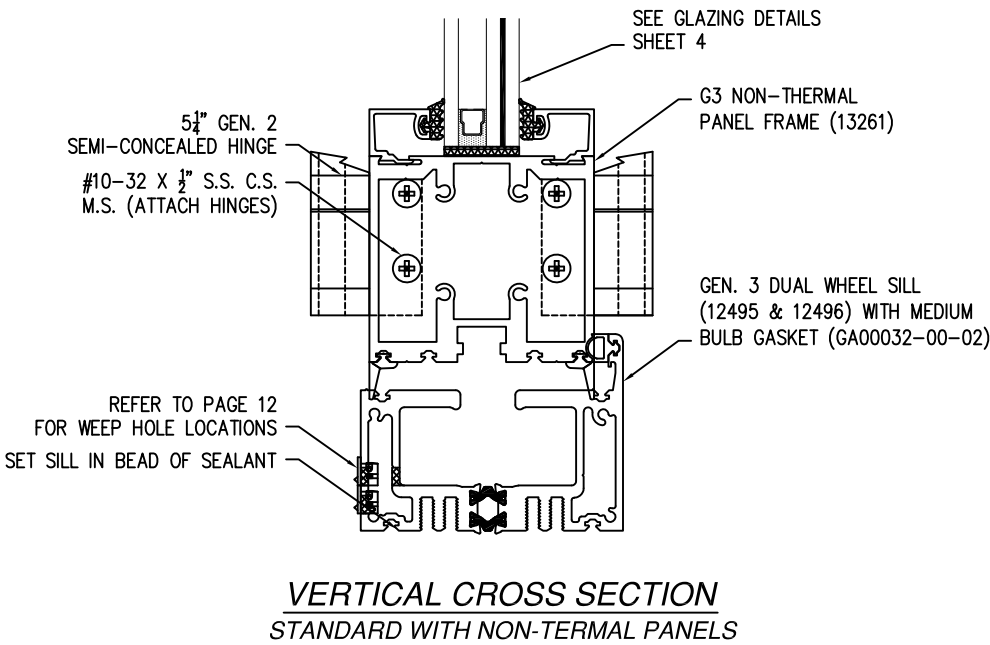
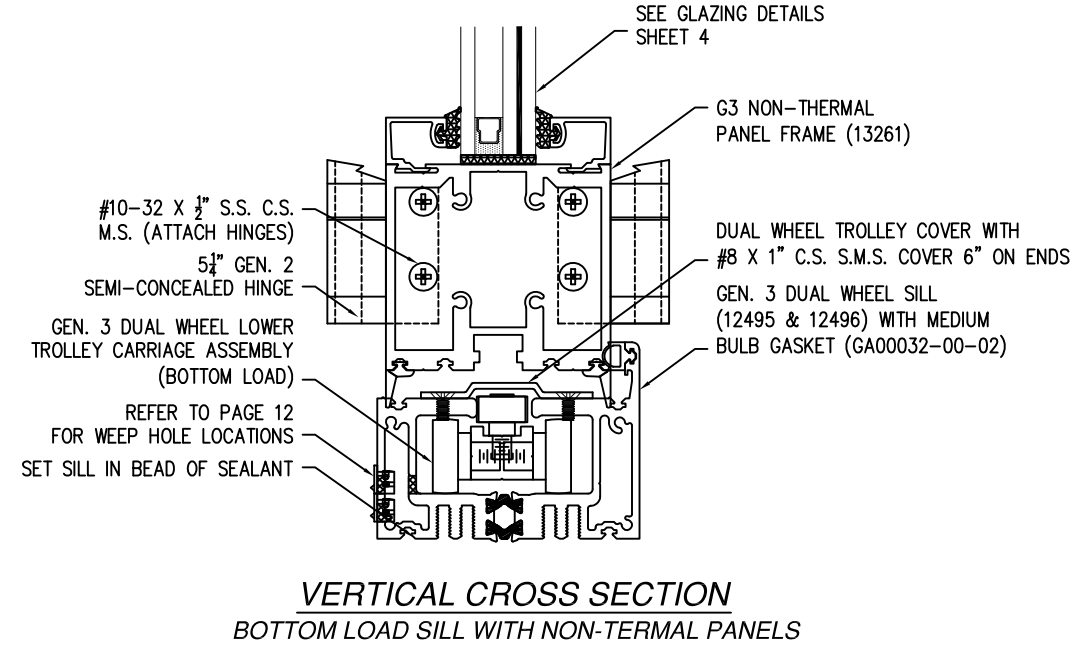
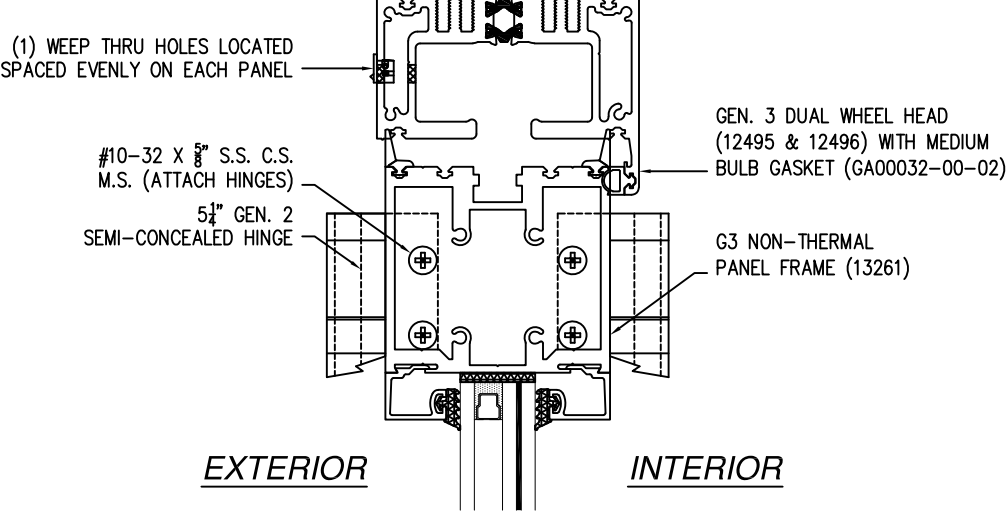
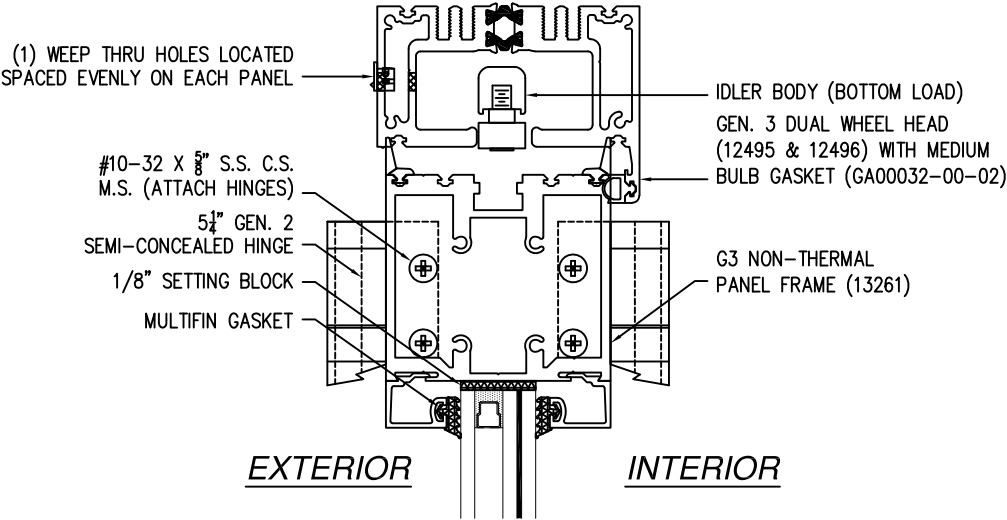
THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM VERTICAL CROSS SECTIONS		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 6 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		



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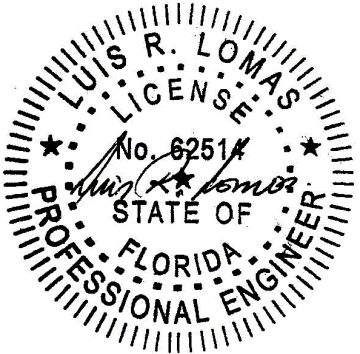
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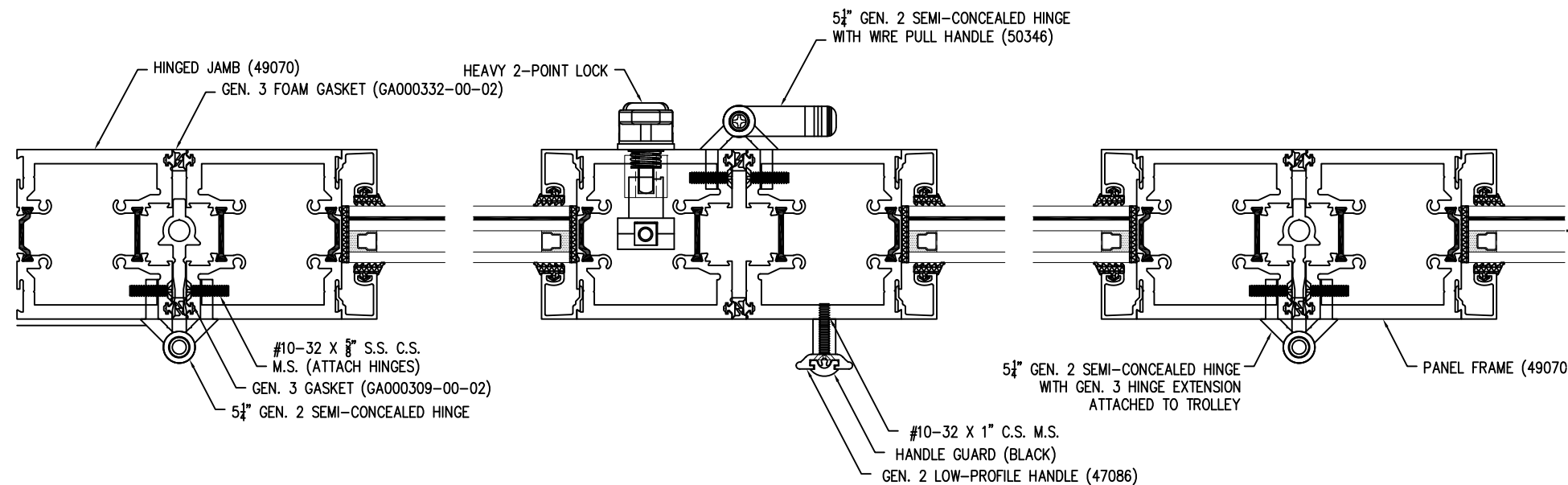


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SCALE NTS	DATE 11/03/22	SHEET 7 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		

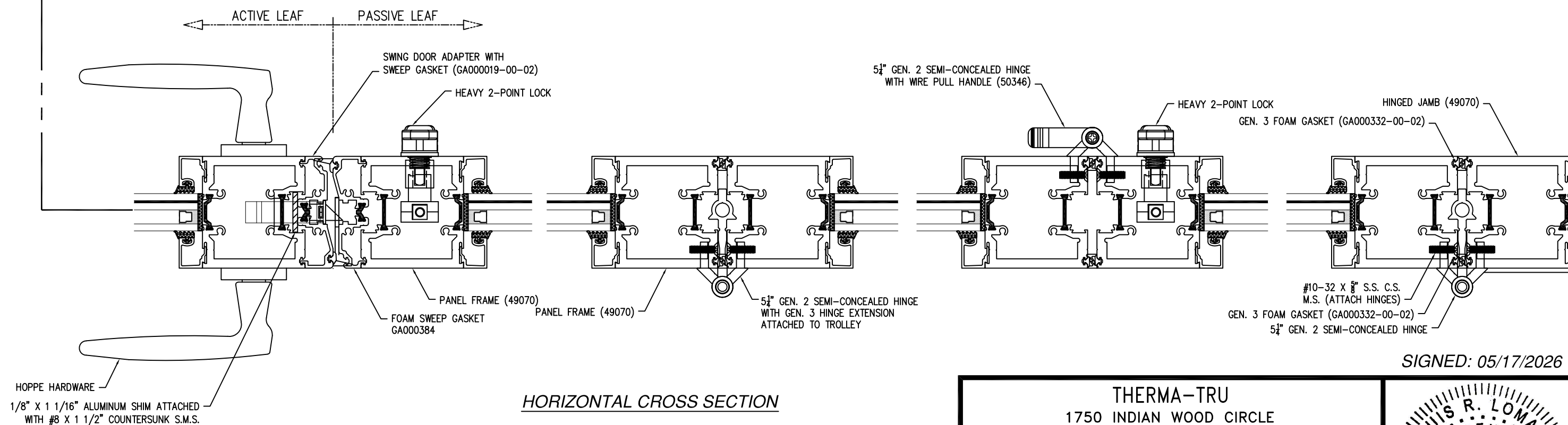


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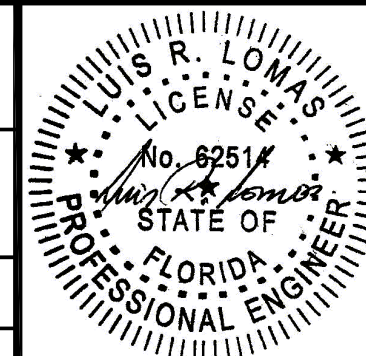
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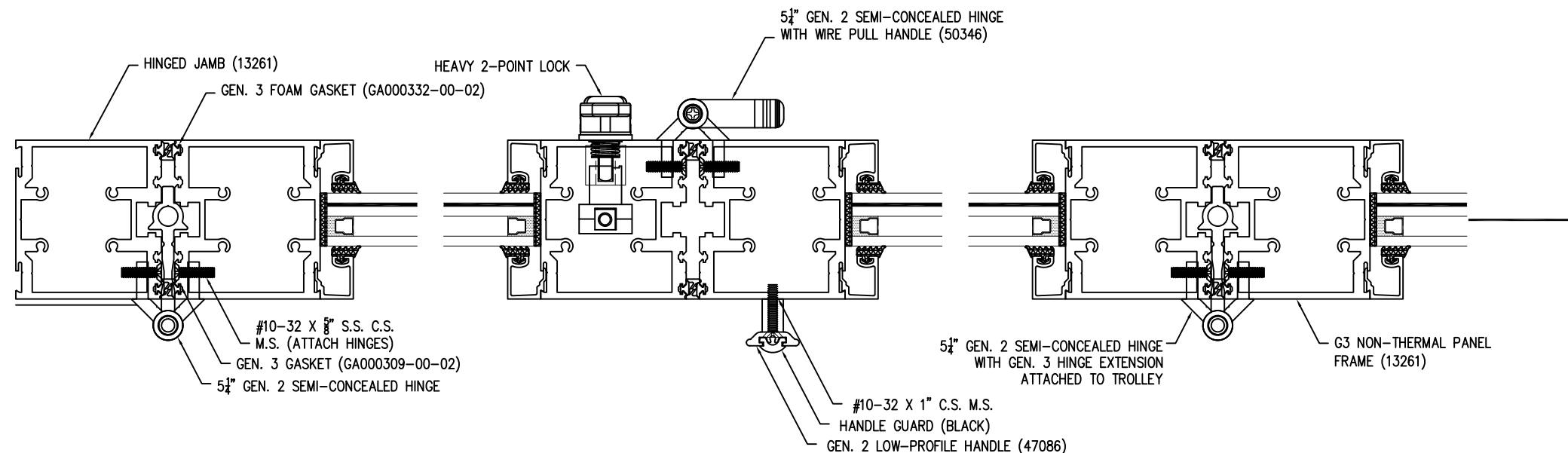
HORIZONTAL CROSS SECTION

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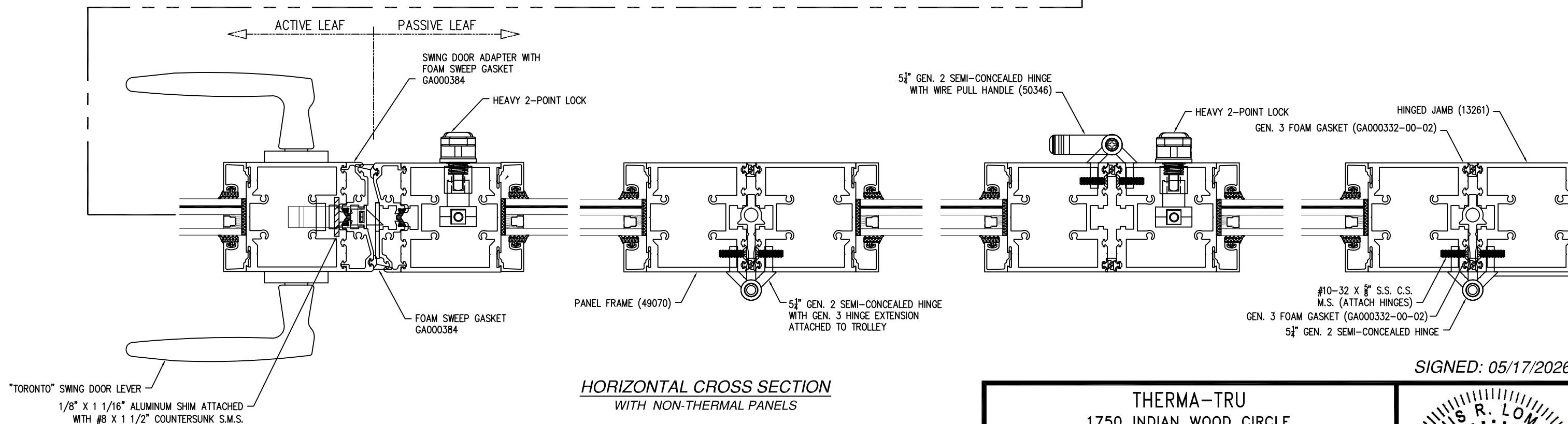
THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM HORIZONTAL CROSS SECTIONS		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 8 OF 13
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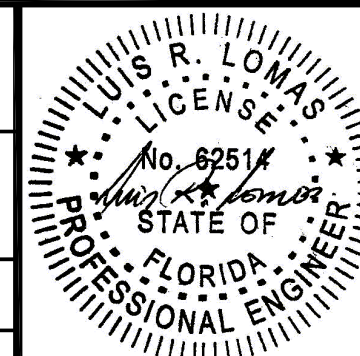
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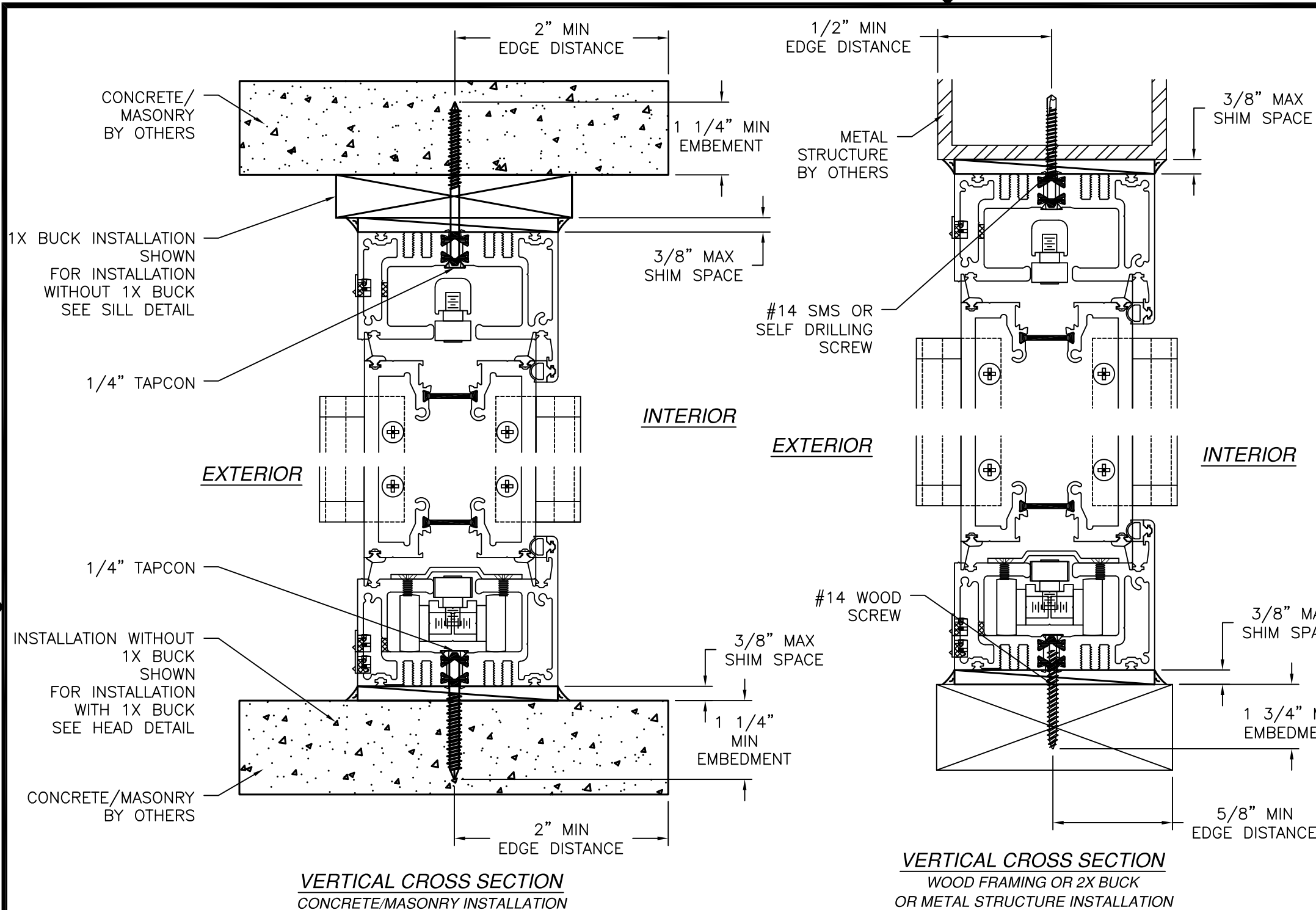
**HORIZONTAL CROSS SECTION
WITH NON-THERMAL PANELS**

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THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM HORIZONTAL CROSS SECTION		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 9 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		



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NOTES:
 1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

SIGNED: 05/17/2026

THERMA-TRU
 1750 INDIAN WOOD CIRCLE
 MAUMEE, OH 43537

SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL
 STANDARD OUT-FOLD ALUMINUM
 INSTALLATION DETAILS

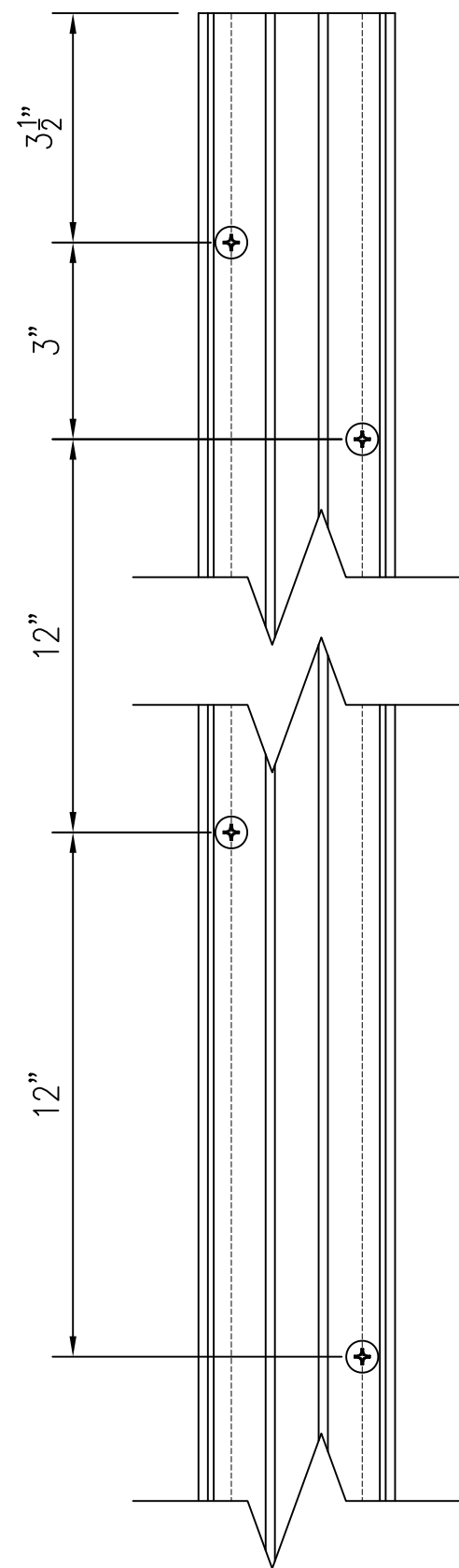
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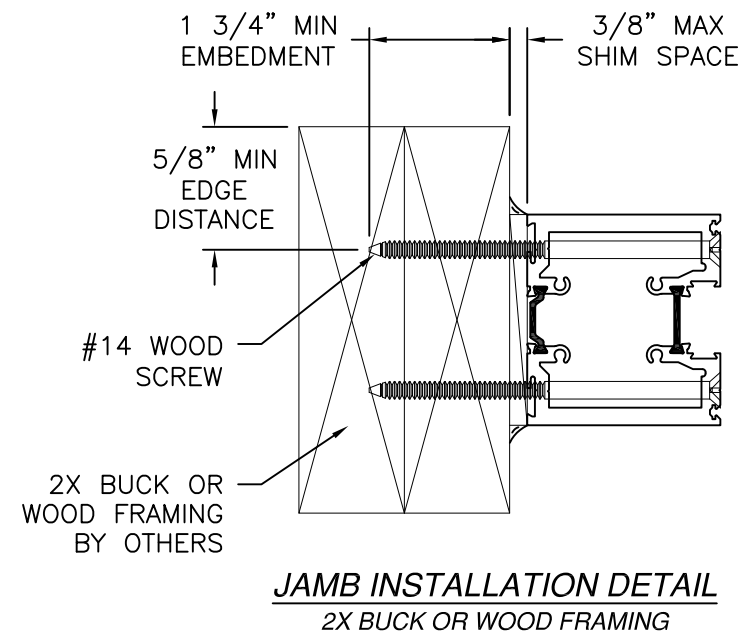
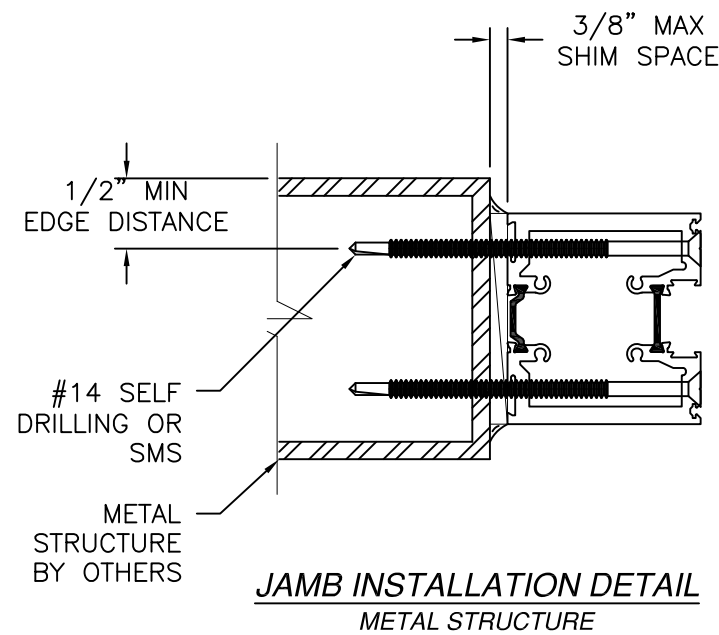
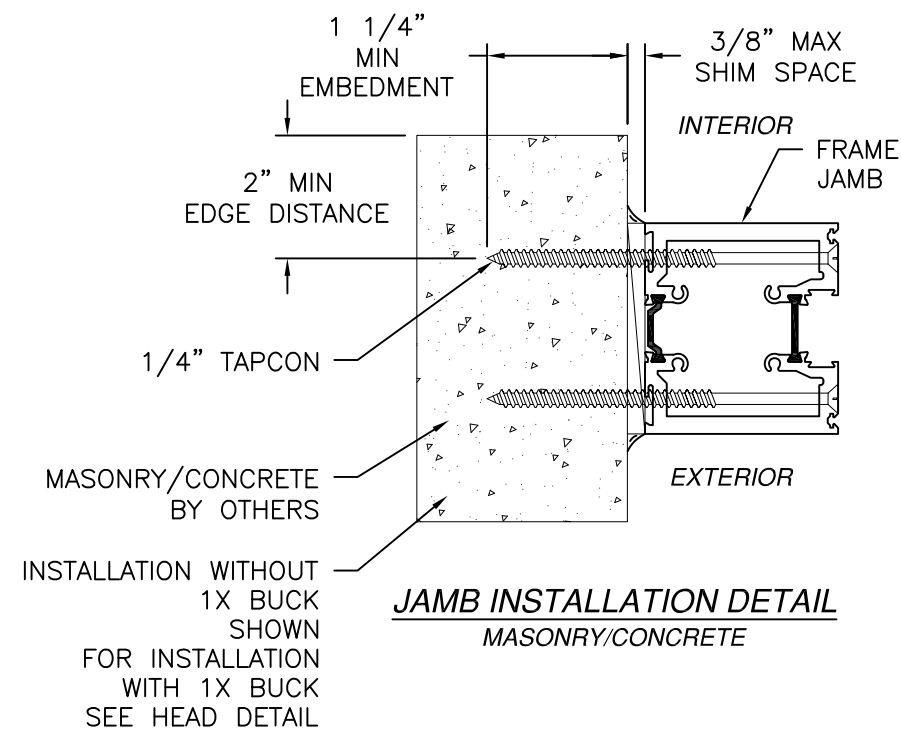
Professional Engineer
 LUIS R. LOMAS
 No. 62514
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER

Luis R. Lomas P.E.
 FL No.: 62514

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED DETAILS	05/16/26	R.L.



JAMB ANCHOR LOCATIONS
DETAIL



- NOTES:
1. INTERIOR AND EXTERIOR FINISHES, BY OTHERS, NOT SHOWN FOR CLARITY.
 2. PERIMETER AND JOINT SEALANT BY OTHERS TO BE DESIGNED IN ACCORDANCE WITH ASTM E2112

SIGNED: 05/17/2026

THERMA-TRU

1750 INDIAN WOOD CIRCLE
MAUMEE, OH 43537

SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL

STANDARD OUT-FOLD ALUMINUM

INSTALLATION DETAILS

DRAWN: R.L.

DWG NO. 08-03865

REV A

SCALE NTS

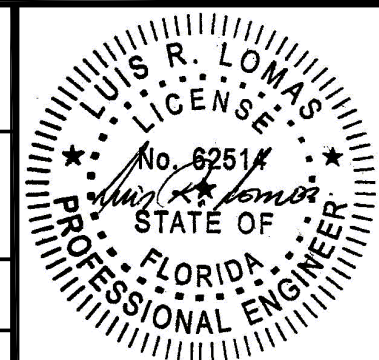
DATE 11/03/22

SHEET 11 OF 13

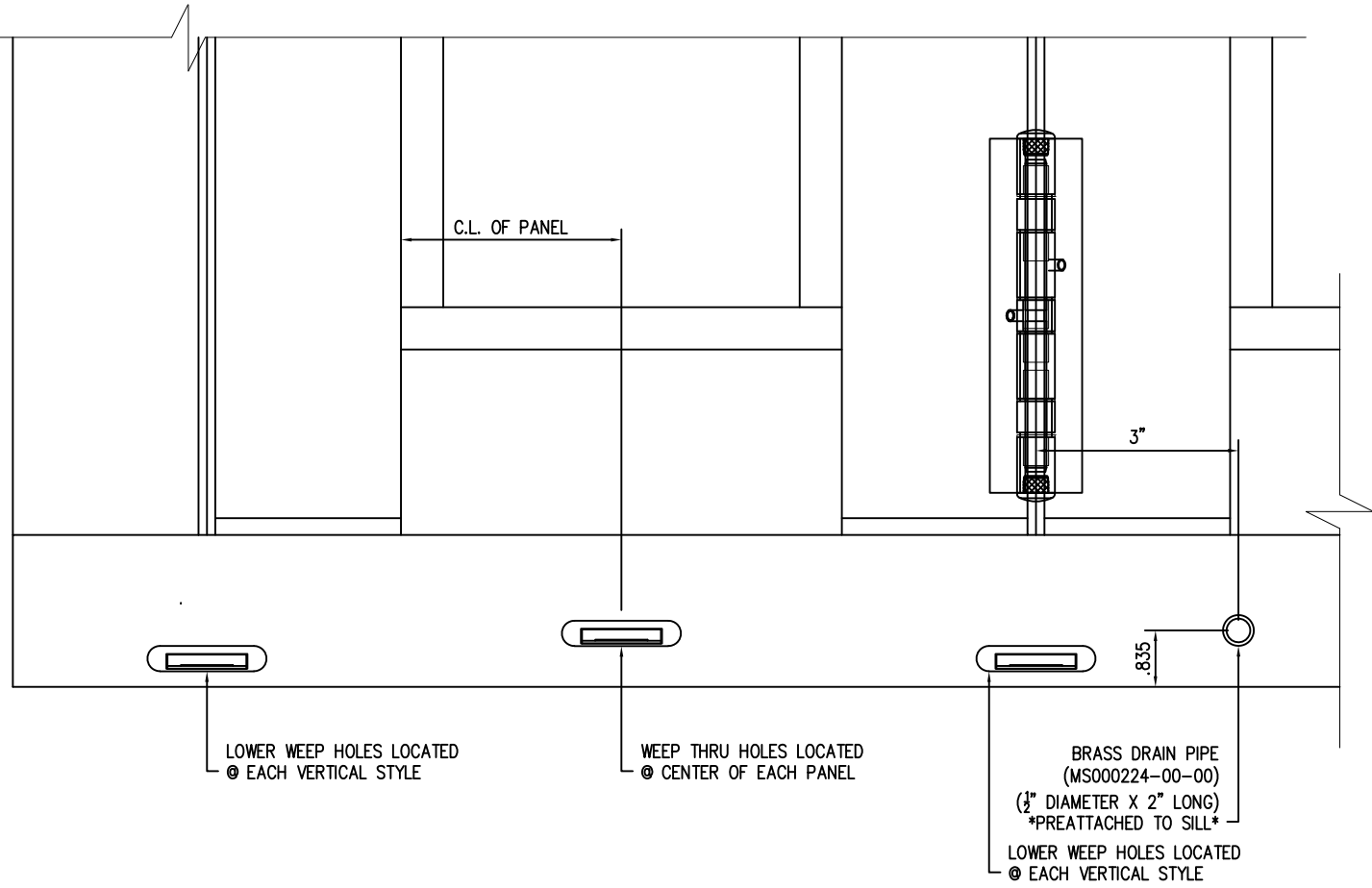
L. ROBERTO LOMAS P.E.

208 7th Ave, INDIALANTIC, FL 32903

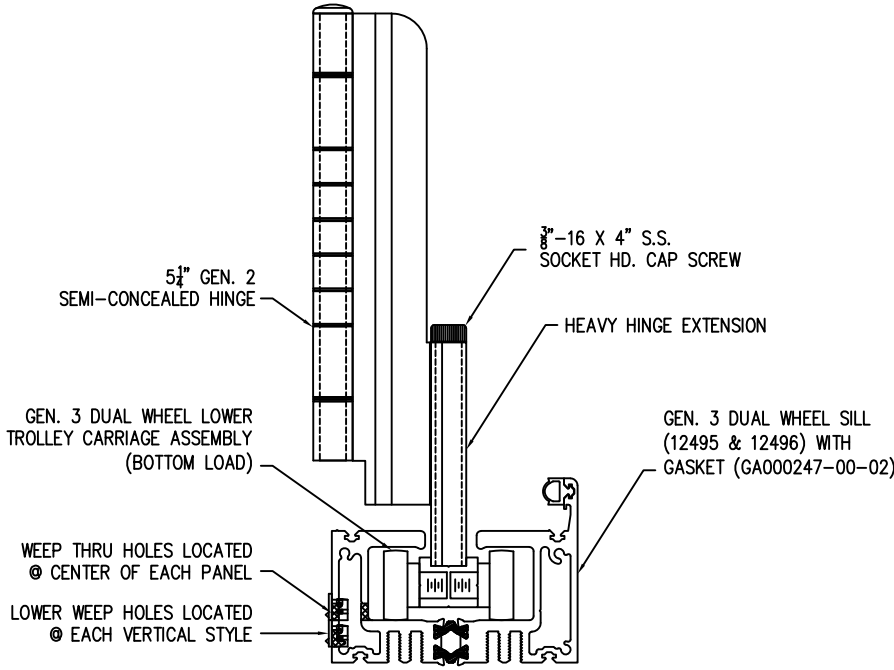
434-688-0609 rllomas@lrlomaspe.com



Luis R. Lomas P.E.
FL No.: 62514

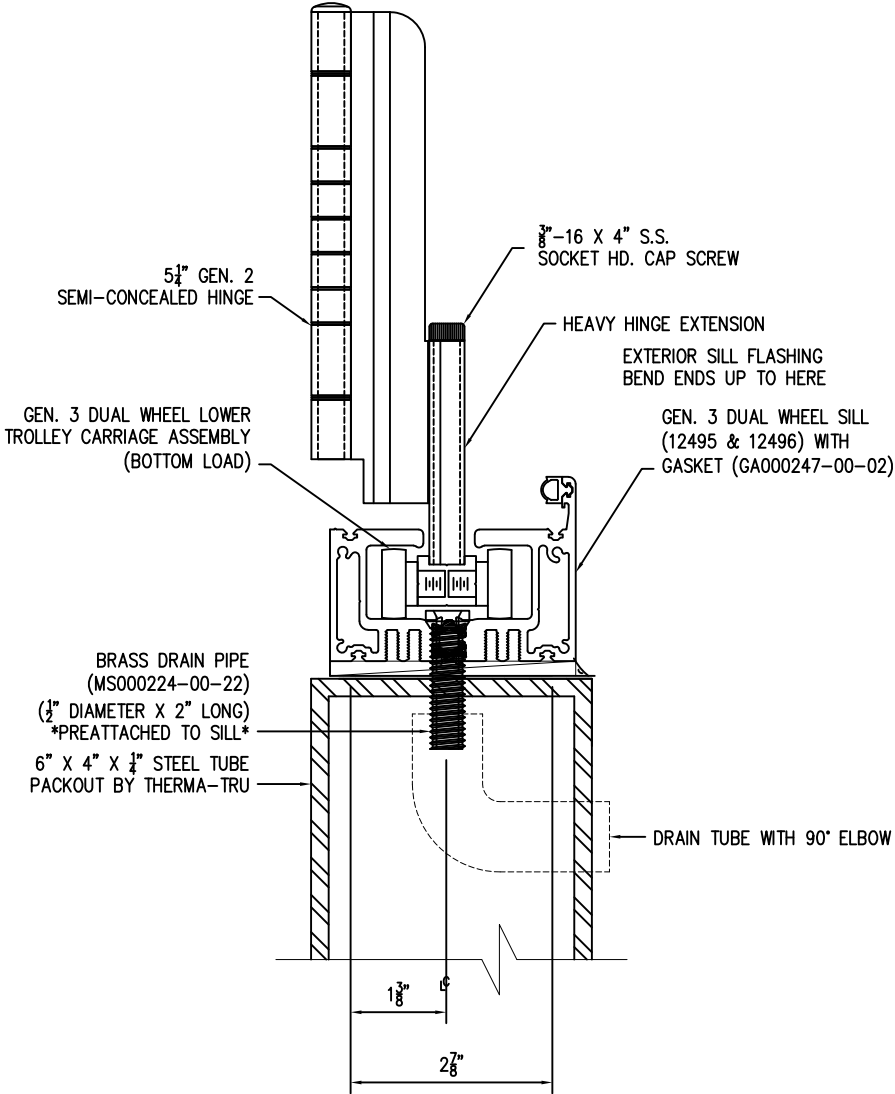


WEEP HOLES DETAILS



WEEP HOLES AND HINGE EXTENSION
DETAIL

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED DETAILS	05/16/26	R.L.



DRAIN PIPE AND HINGE EXTENSION
DETAILS

THERMA-TRU

1750 INDIAN WOOD CIRCLE
MAUMEE, OH 43537

SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL
STANDARD OUT-FOLD ALUMINUM
INSTALLATION DETAILS

DRAWN:
R.L.

DWG NO.
08-03865

REV
A

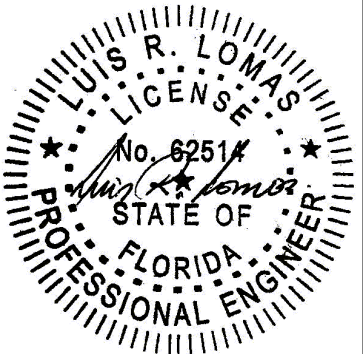
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NTS

DATE
11/03/22

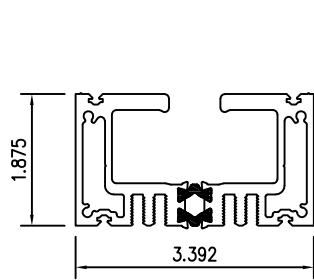
SHEET
12 OF 13

L. ROBERTO LOMAS P.E.
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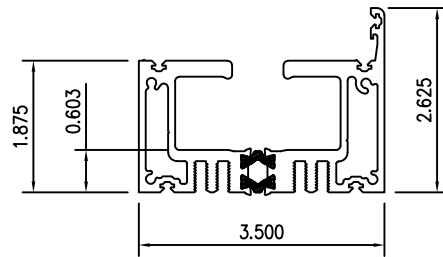
SIGNED: 05/17/2026



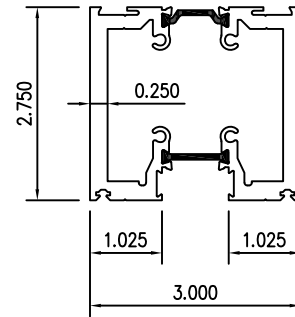
Luis R. Lomas P.E.
FL No.: 62514



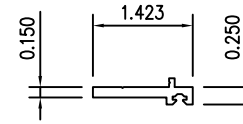
FLUSH
SILL



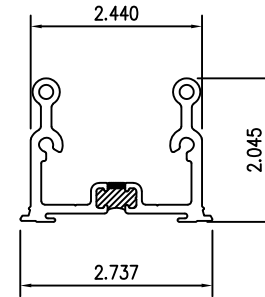
DUAL WHEEL
HEAD / SILL



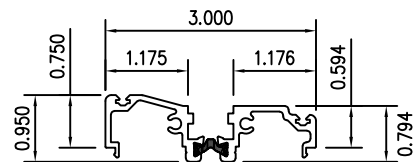
FRAME



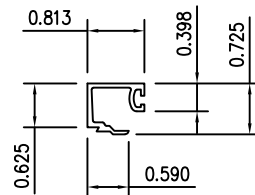
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CAP



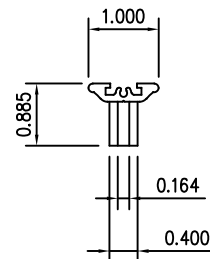
FRAME
LUG



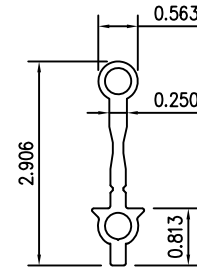
3rd GENERATION
DOOR ADAPTOR



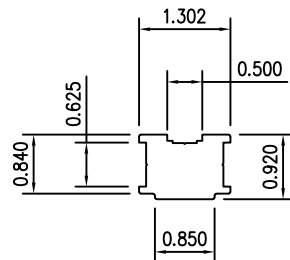
1/4" GLASS
STOP



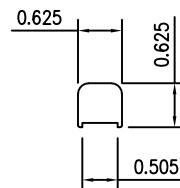
2nd GENERATION
HANDLE



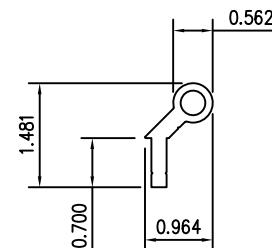
HINGE
EXTENSION



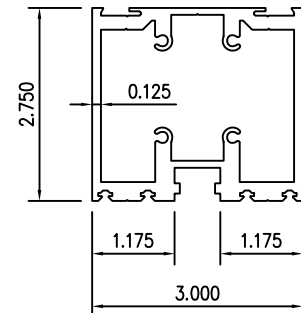
TROLLEY
BODY



IDLER
BODY



5 1/4" SEMI-
CONCEALED HINGE



NON-THERMAL
FRAME

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED DETAILS	05/16/26	R.L.

SIGNED: 05/17/2026

THERMA-TRU 1750 INDIAN WOOD CIRCLE MAUMEE, OH 43537		
SERIES V-3 IMPACT FGW 3.5 X 9.5 PANEL STANDARD OUT-FOLD ALUMINUM INSTALLATION DETAILS		
DRAWN: R.L.	DWG NO. 08-03865	REV A
SCALE NTS	DATE 11/03/22	SHEET 13 OF 13
L. ROBERTO LOMAS P.E. 208 7th Ave, INDIALANTIC, FL 32903 434-688-0609 rllomas@lrlomaspe.com		

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