

SERIES 4500
DOUBLE HUNG WINDOW – BALANCE – "IMPACT"
BY OWW LLC

DESIGN PRESSURE = VARIES – SEE CHART AT BOTTOM OF THIS SHEET

GENERAL NOTES

1. This product has been evaluated and is in compliance with 7th Edition (2020) Florida Building Code (FBC) structural requirements including the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment to base materials shall be beyond wall dressing or stucco. All anchors used shall be of a material or have a coating compatible with pressure treated wood if used, and all other window materials.
3. When used in the "HVHZ" this product complies with Section 1626 of the FBC and does not require an impact resistant covering.
4. The opening substrate materials (framing, masonry, bucks) are by others and must be properly designed and installed to transfer superimposed loads to the structure. For 2X stud framing construction, anchoring of these units shall be the same as that shown for 2X buck masonry construction. Wood bucks over masonry, if used, shall be pressure treated, with either a treatment or coating compatible with this product and anchors.
5. All window frame wood to be Sapele (Specific Gravity = 0.55).
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
7. This product has been laboratory tested to meet the water infiltration requirements for "HVHZ." Sealing and flashing strategies for overall water infiltration resistance of the field-installed product shall be the responsibility of others and are not addressed by this document.

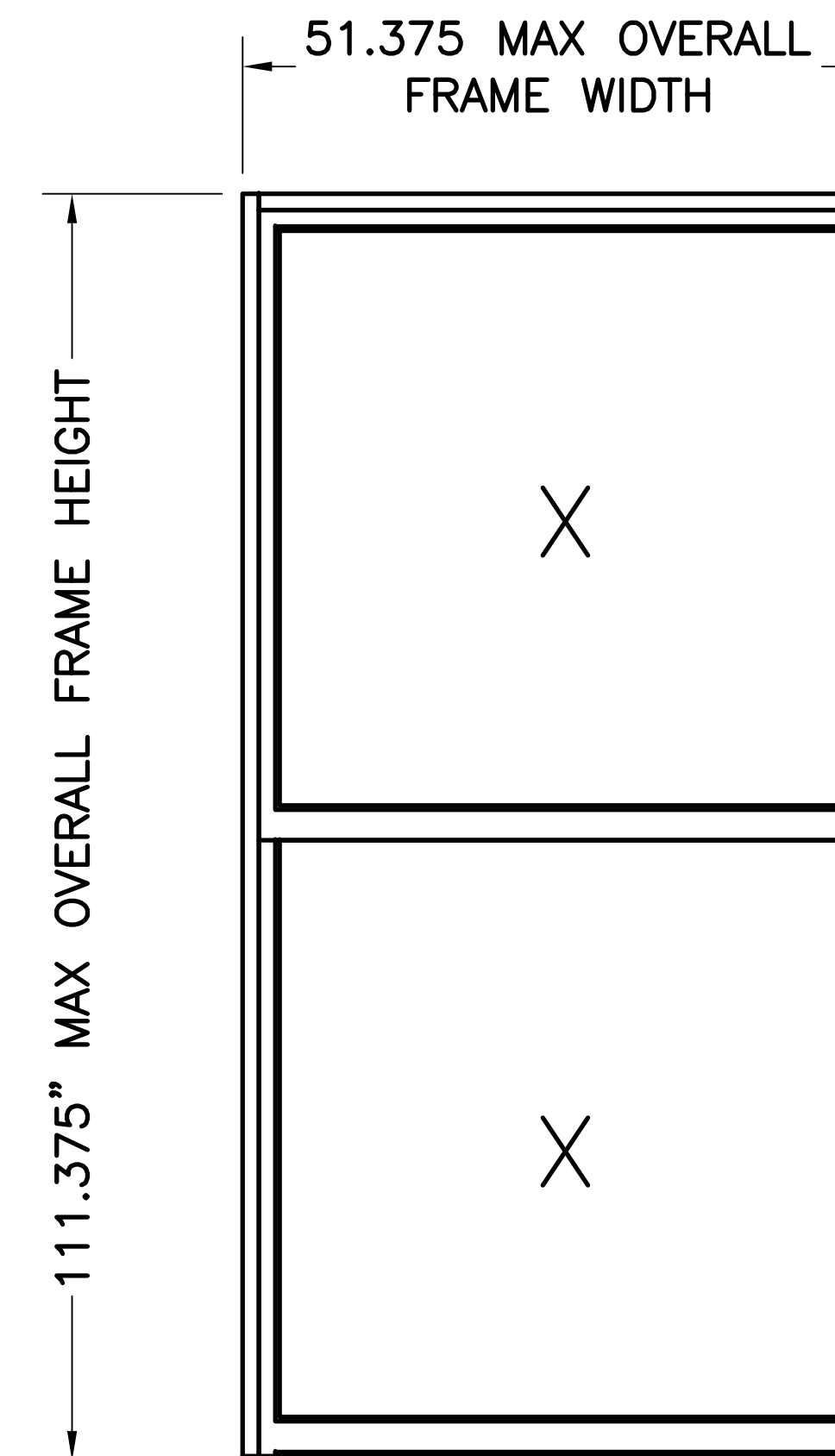
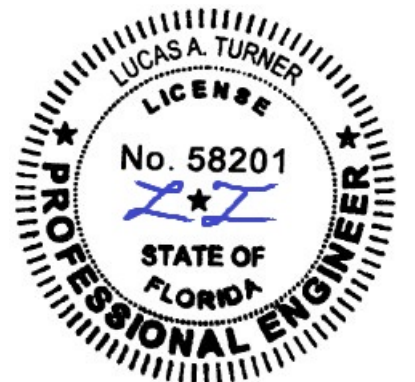


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2	Horizontal cross sections
3	Vertical cross sections
4	Frame details
5	Buck and frame anchoring
6	Components
7	Bill of materials, components & glazing details

TABLE 1. QUALIFIED ANCHOR INFORMATION

ID	SUBSTRATE	ANCHOR	MIN. EMBEDMENT	MIN. EDGE DISTANCE
A	SOLID UNCRACKED CONCRETE (2850 PSI MIN.)	1/4" ELCO COATED CARBON STEEL	1 3/8"	1"
B	GROUT-FILLED CMU (ASTM C-90) (JAMBS ONLY)	1/4" ELCO COATED CARBON STEEL	1 3/4"	2 1/2"
C	SOLID UNCRACKED CONCRETE (2000 PSI MIN.)	1/4" ITW COATED CARBON STEEL TAPCON	1 1/2"	1 1/2"
D	HOLLOW CMU (117 PCF MIN.) (JAMBS ONLY)	1/4" ITW COATED CARBON STEEL TAPCON	1"	2"
E	CONCRETE (3000 PSI MIN)	1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II	1"	2 1/2"
F	HOLLOW OR GROUT-FILLED CMU (ASTM C-90)	1/4" HILTI COATED CARBON STEEL OR STAINLESS STEEL KWIK-CON II	1"	2 1/2"
G	2x MIN. SOUTHERN PINE WOOD (G=0.55 MIN)	#12 GRADE 5 WOOD SCREW	1 1/2"	1"
H	16 GAUGE (0.060") MIN. STEEL STUD (33 KSI YIELD MIN.) OR 1/8" MIN. ALUMINUM (6063-T5	#14 ITW TEKS SELF-DRILLING SCREW	FULL + 3 THREADS	1/2"

OVERALL FRAME DIMENSION	OVERALL D.L.O DIMENSION	GLASS TYPE	DESIGN PRESSURE (PSF)	
			POSITIVE	NEGATIVE
51.375" X 111.375"	43.0" X 50.5"	G1	+ 50.0	- 50.0
		G2	+ 60.0	- 65.0



02/16/2021

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LUCAS A. TURNER, P.E. FL PE 58201
TURNER ENGINEERING & CONSULTING, INC.
FBPE COA #29779 PH. 941-380-1574
2428 OLD NATCHEZ TRACE TRAIL
CAMDEN, TN 38320

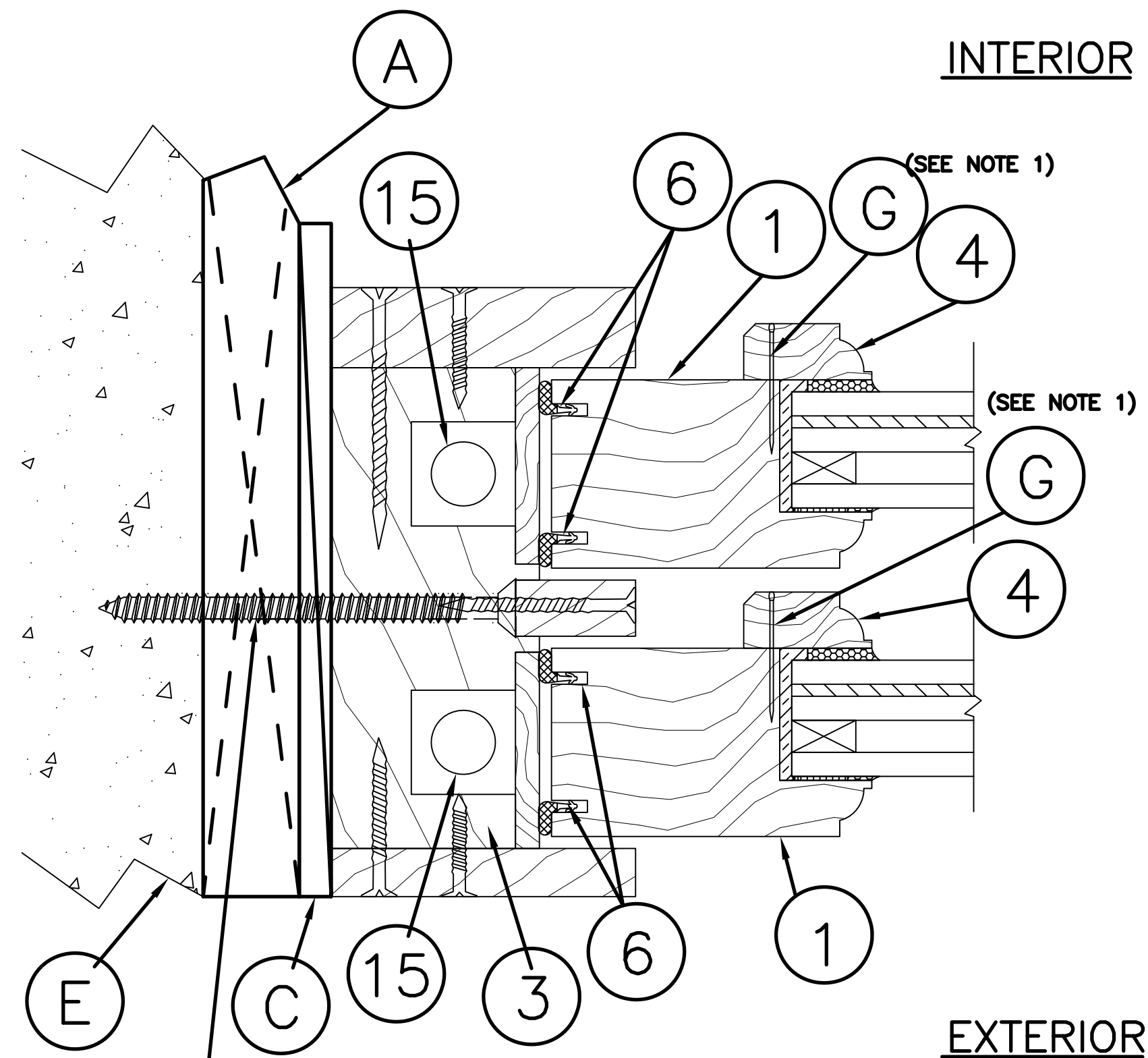
OWW LLC
3001 Tuxedo Ave., West Palm Beach, FL 33405
Ph. 561-478-7233 Fax 561-478-7858

DOUBLE HUNG BALANCE WINDOW
TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

Product: SERIES 4500
Date: 05-07-14
Scale: None
Drawn: JDS

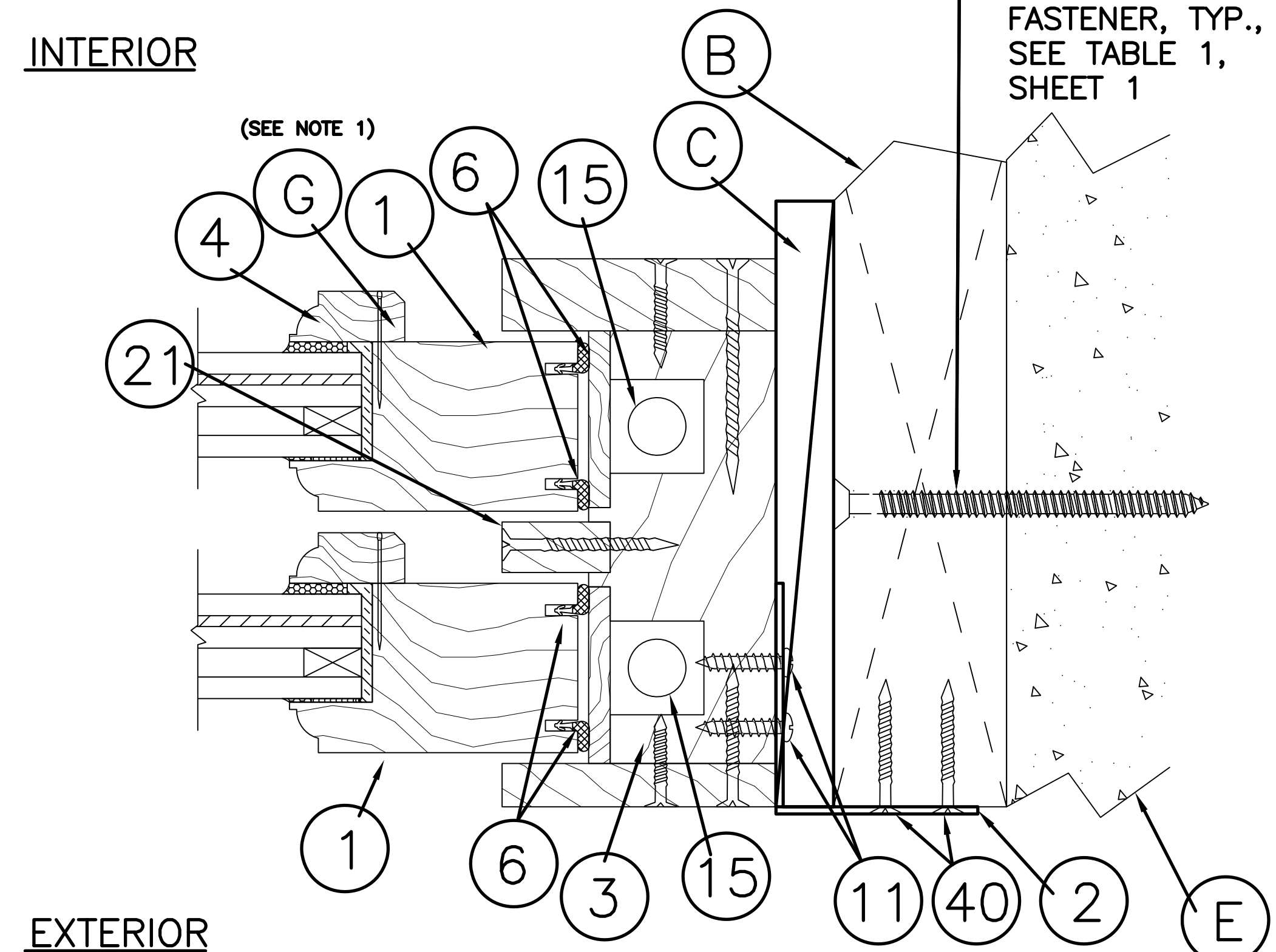
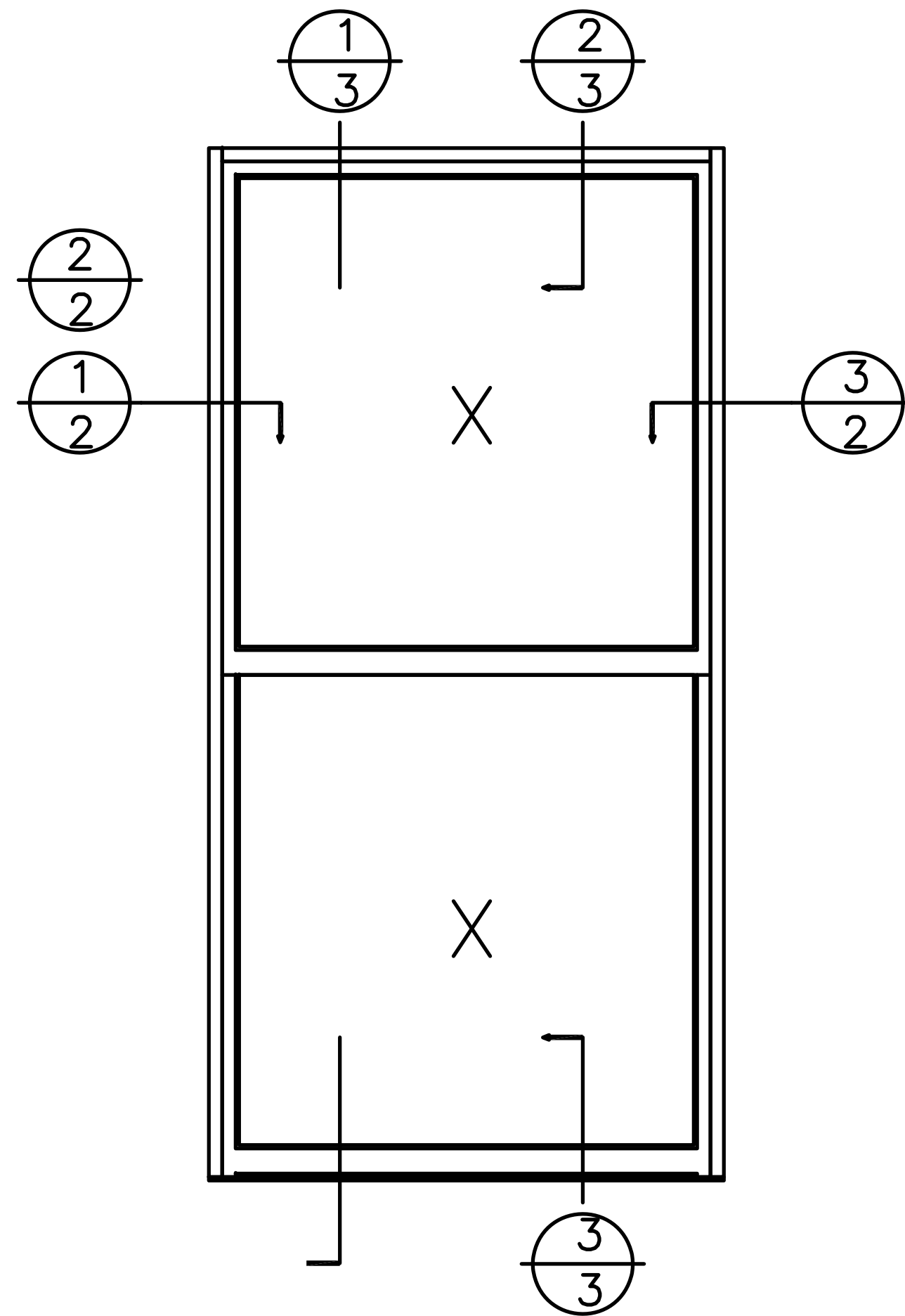
Dwg. DH-Bal
FL34941.4

Sheet No.
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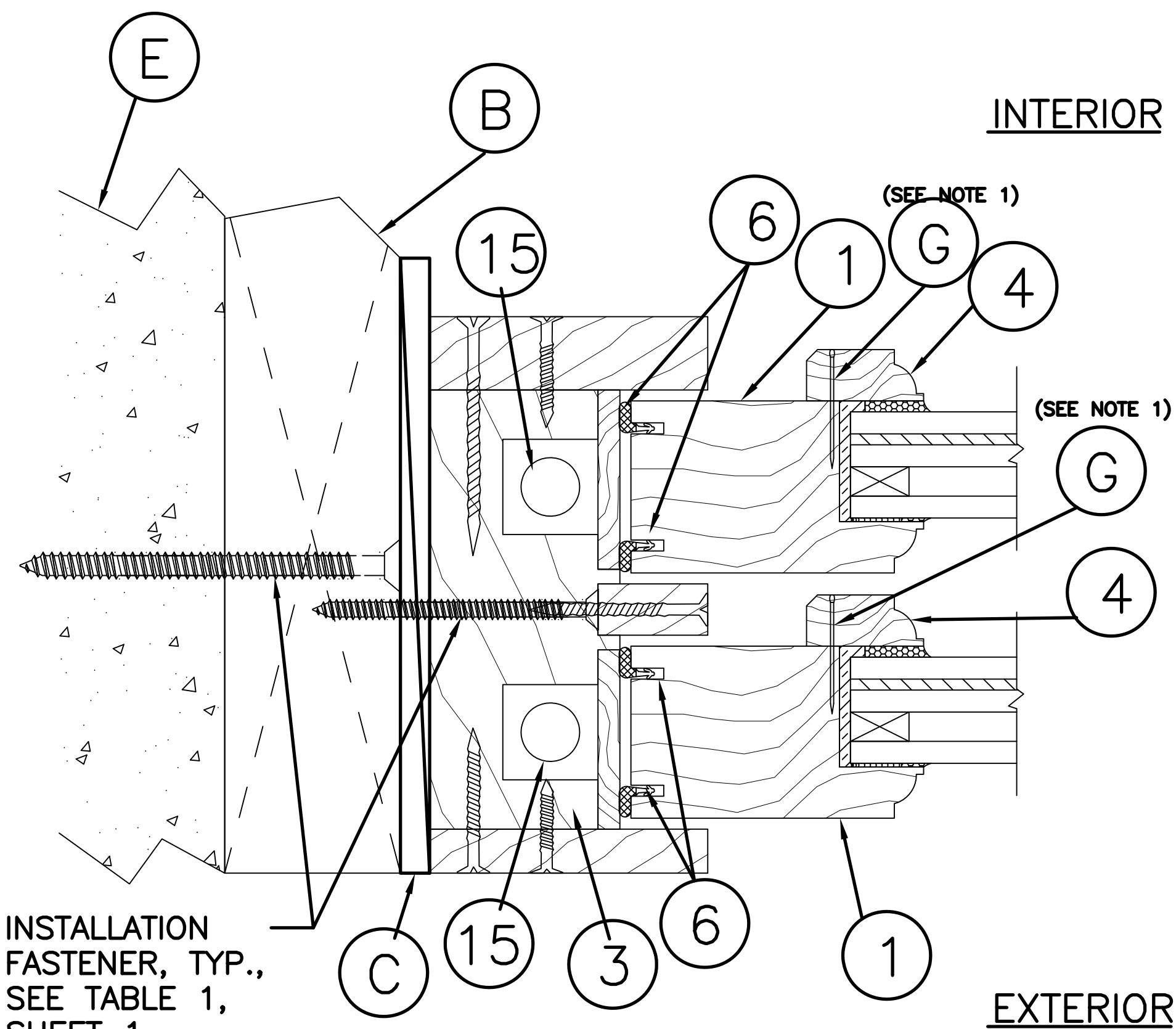
INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1

1 2 HORIZONTAL CROSS SECTION
1X Buck Construction (Thru-the-Frame Installation)



INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1

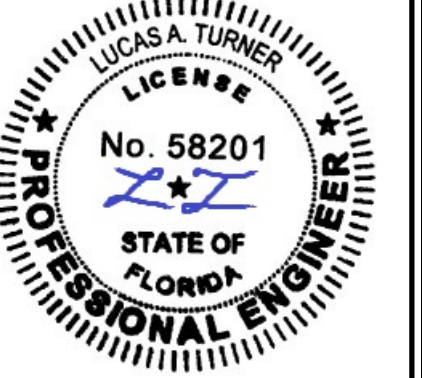
3 2 HORIZONTAL CROSS SECTION
2X Buck Construction (Anchor Clip Installation)



INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1

2 2 HORIZONTAL CROSS SECTION
2X Buck Construction (Thru-the-Frame Installation)

NOTE:
1. Item #G located 1" from each end then 10" on center.



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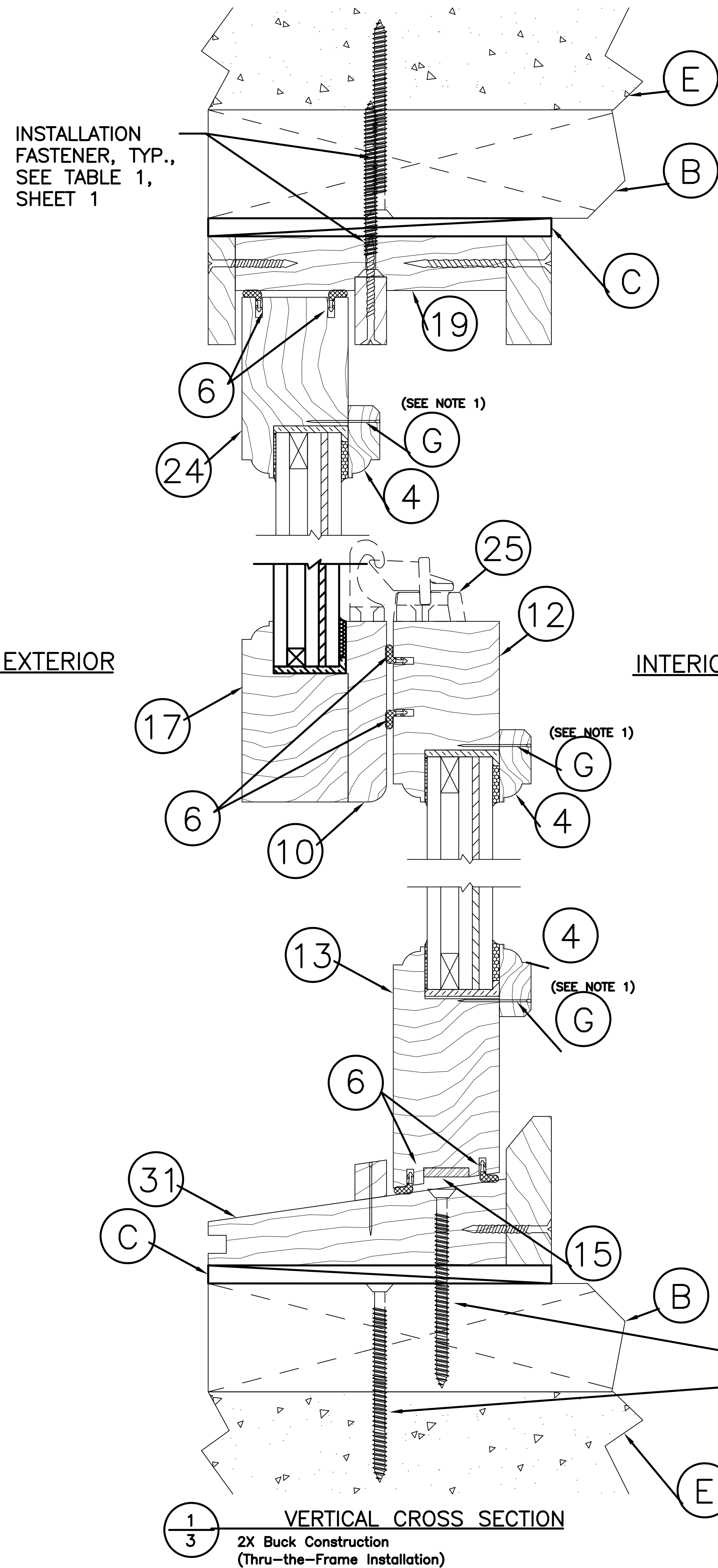
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SERIES: DOUBLE HUNG BALANCE WINDOW

HORIZONTAL
CROSS SECTIONS

Date: 05-07-14
Scale: None
Drawn: JDS

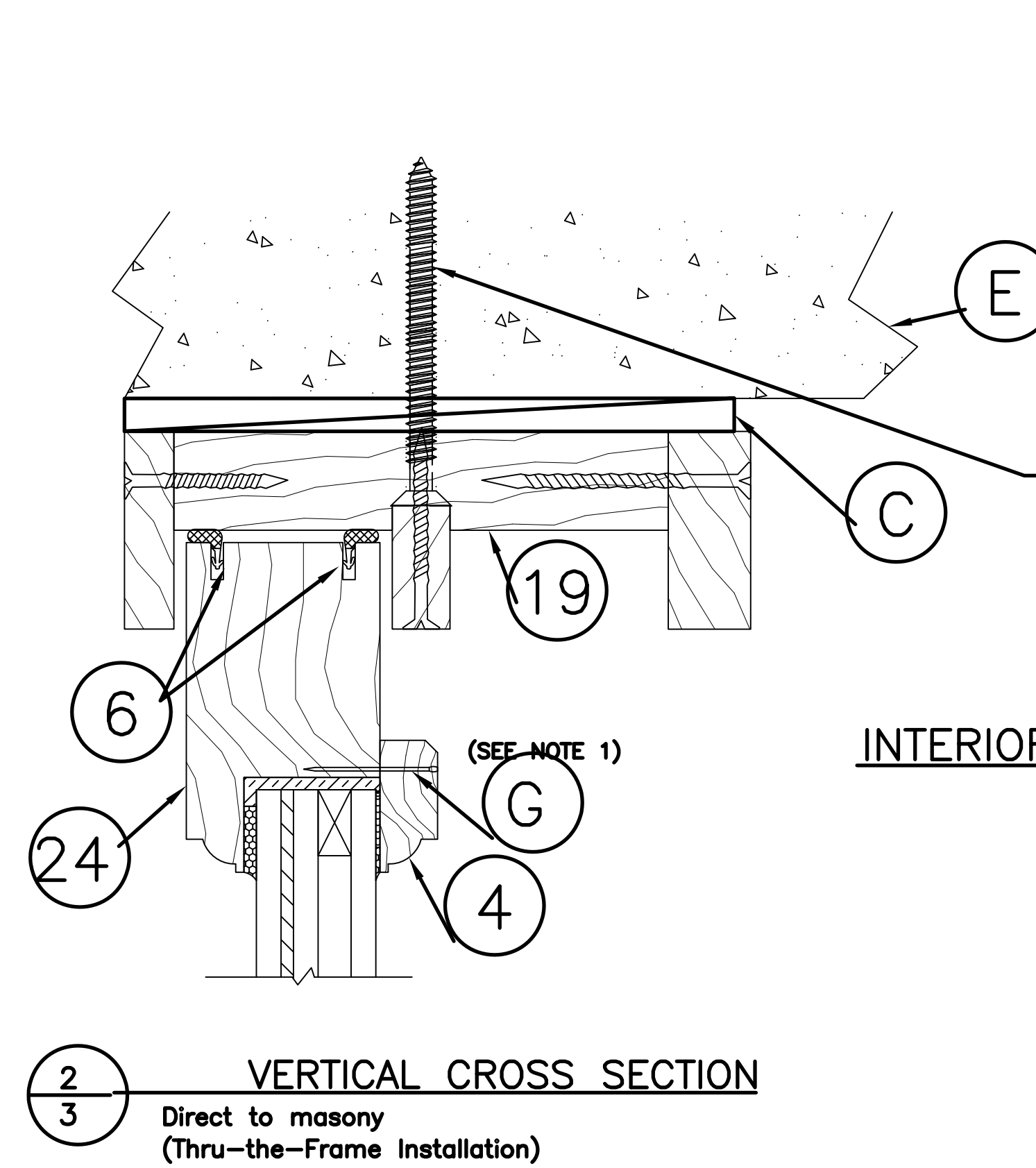
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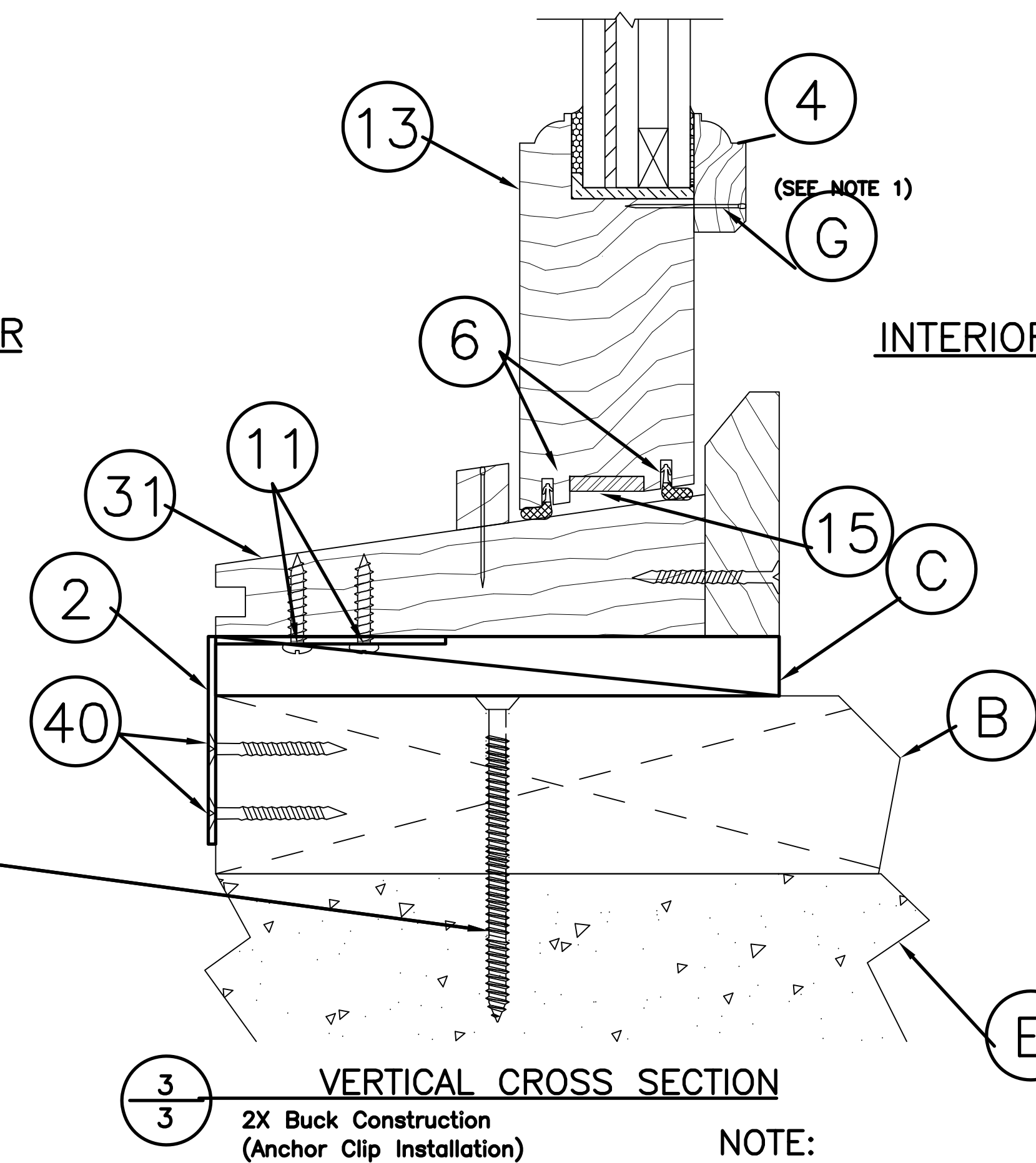


INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1

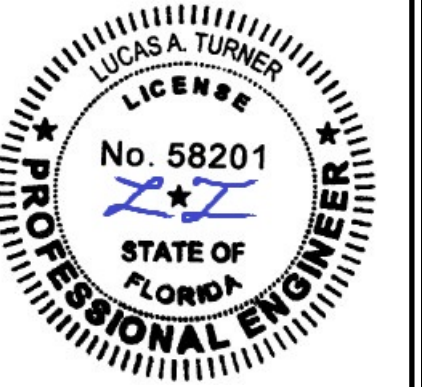
EXTERIOR



EXTERIOR



NOTE:
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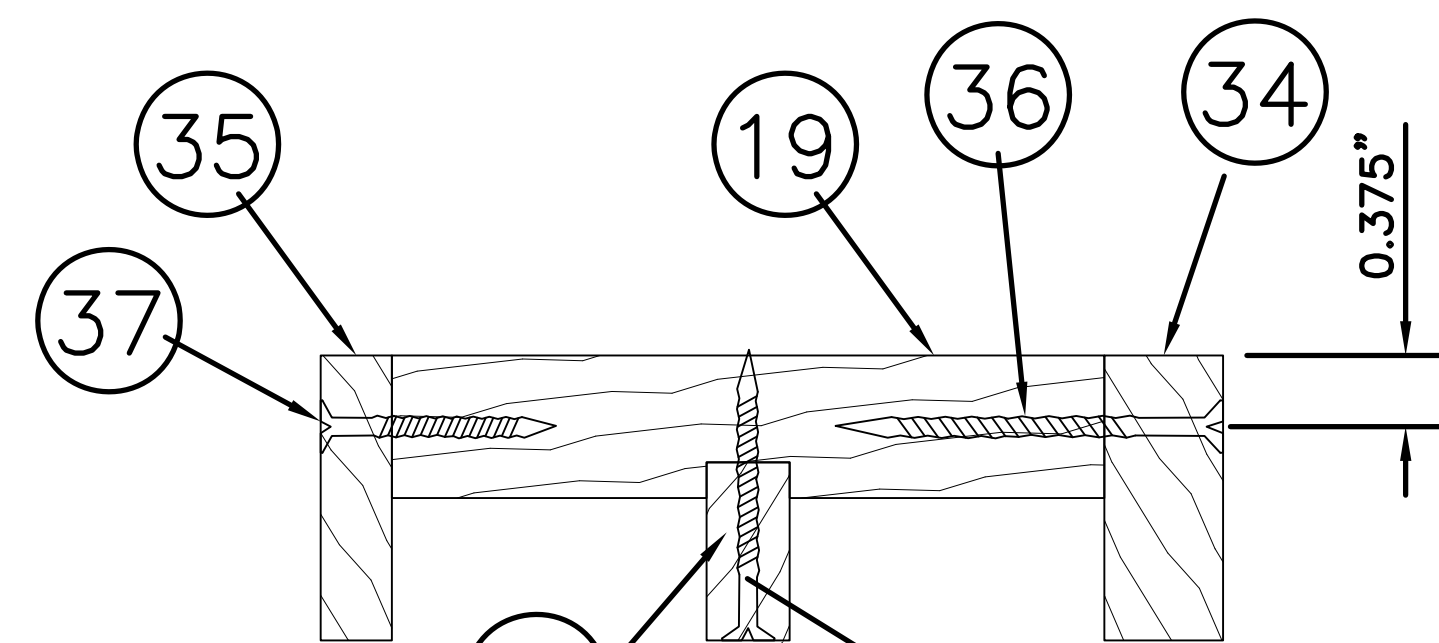
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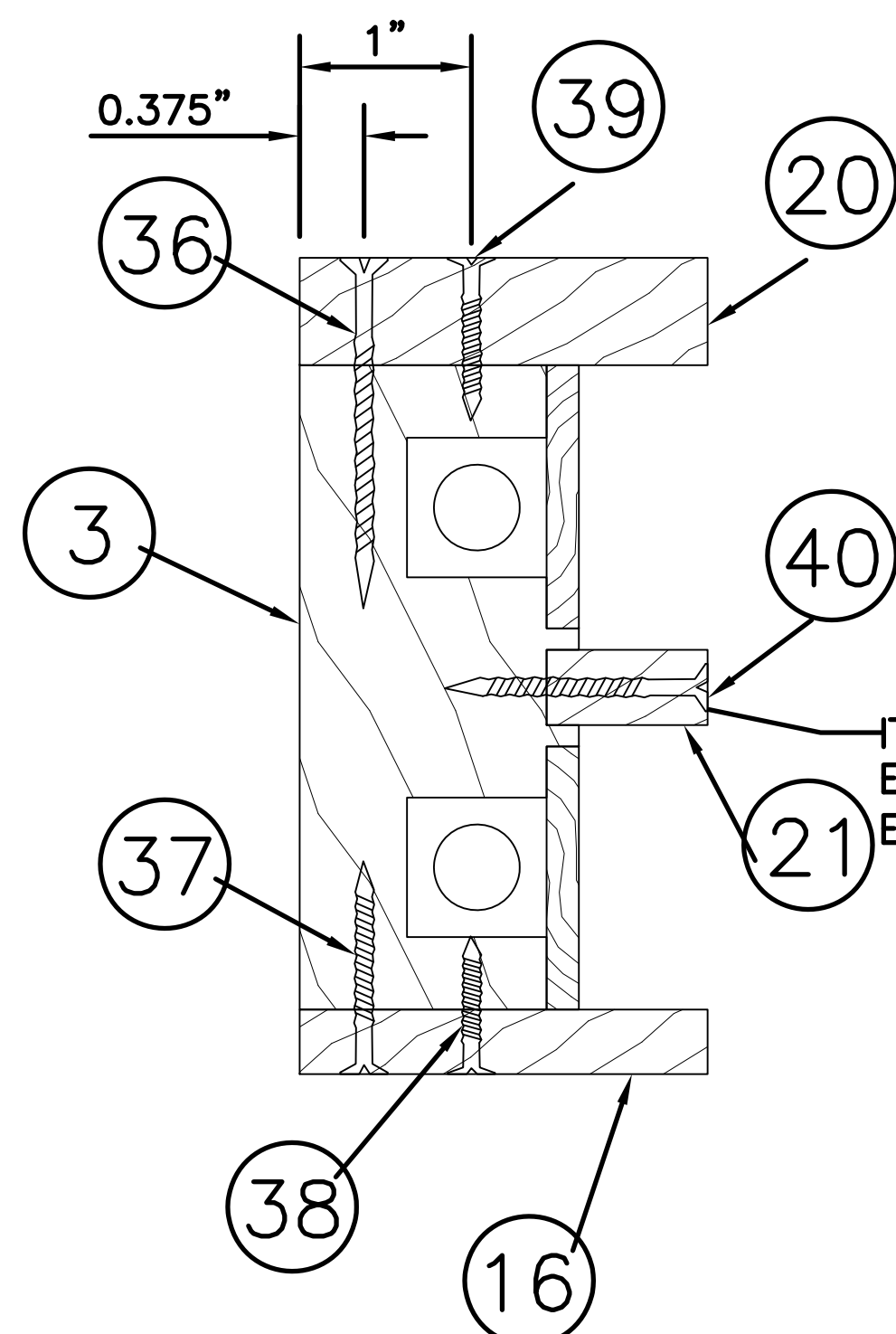
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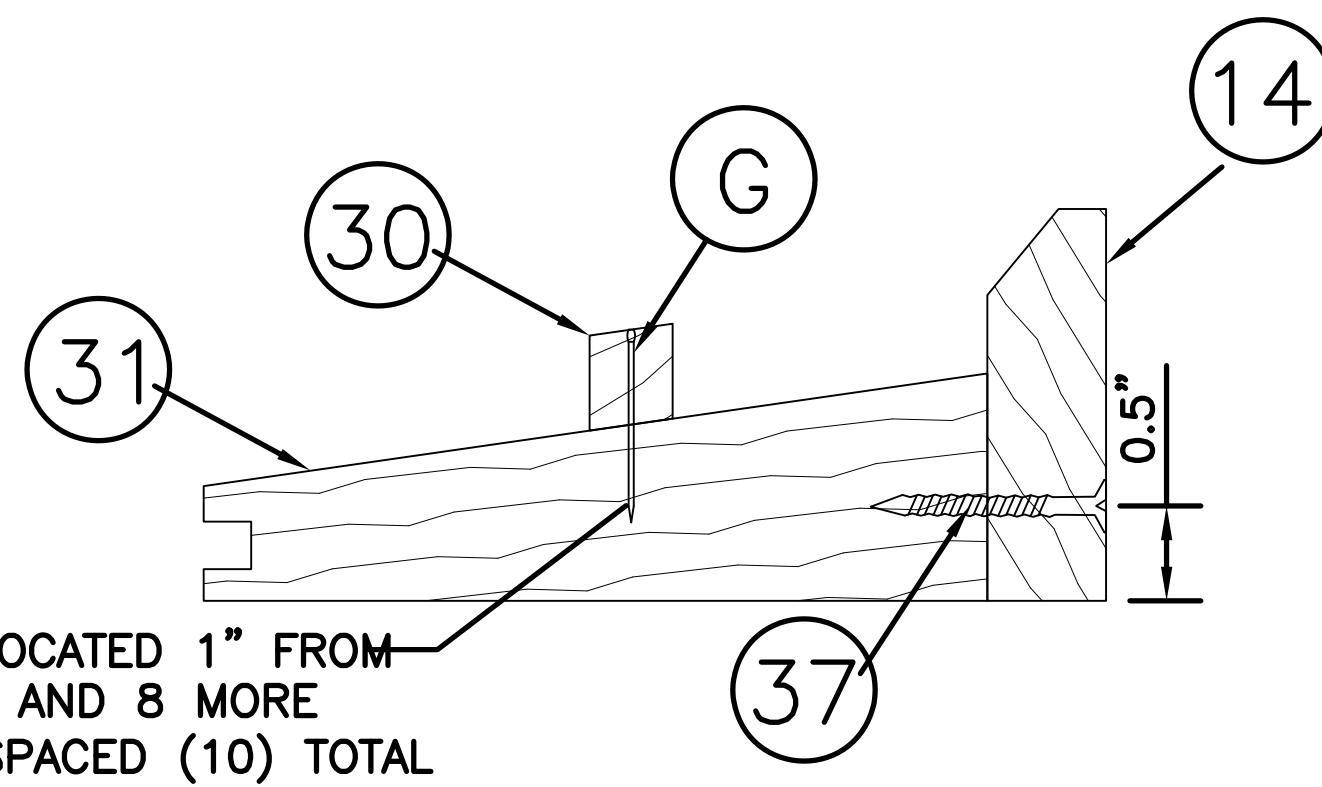
VERTICAL
CROSS SECTIONS



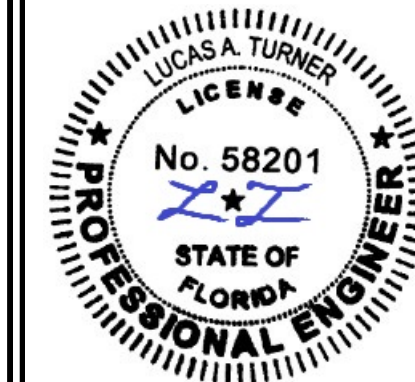
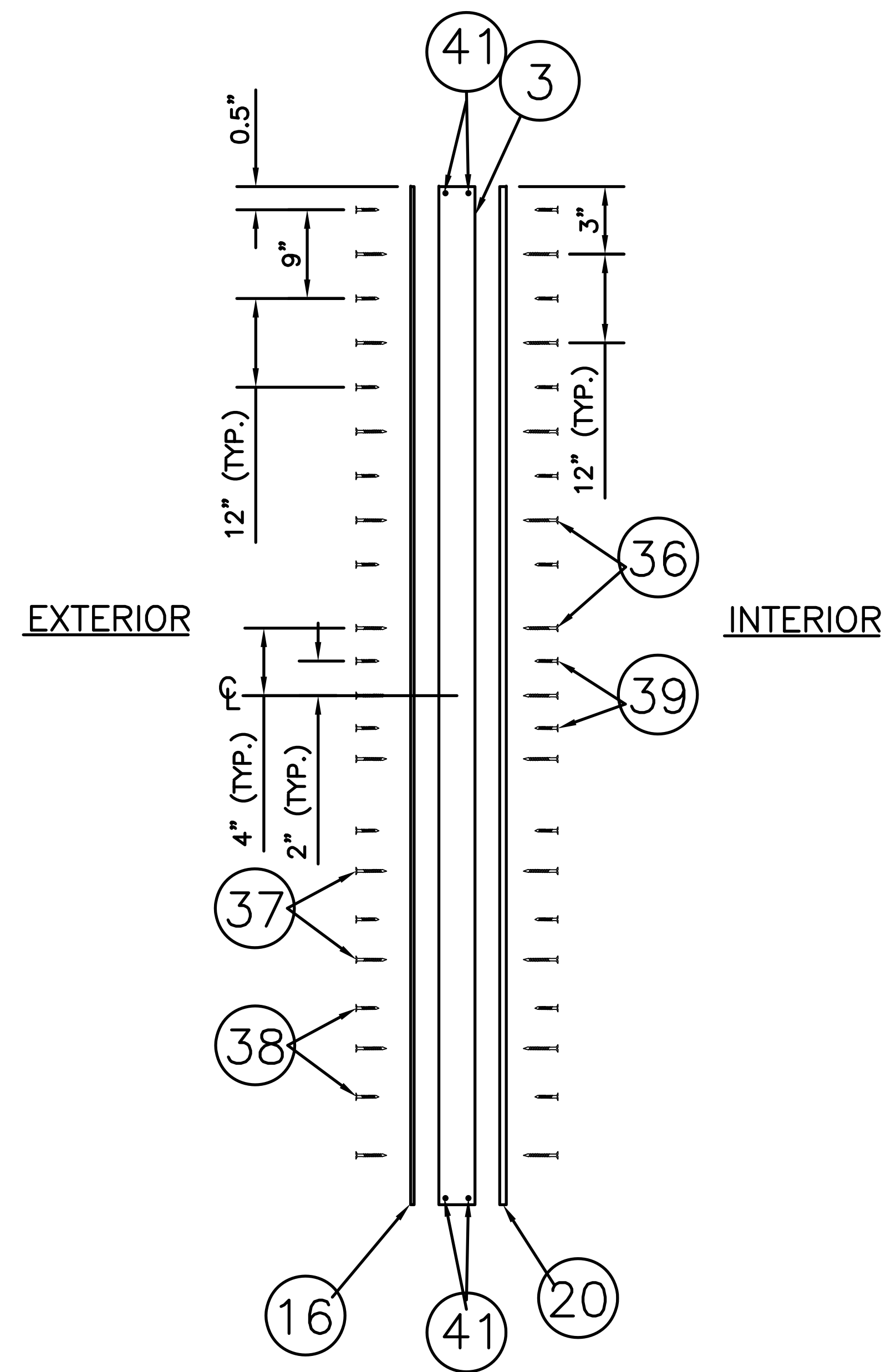
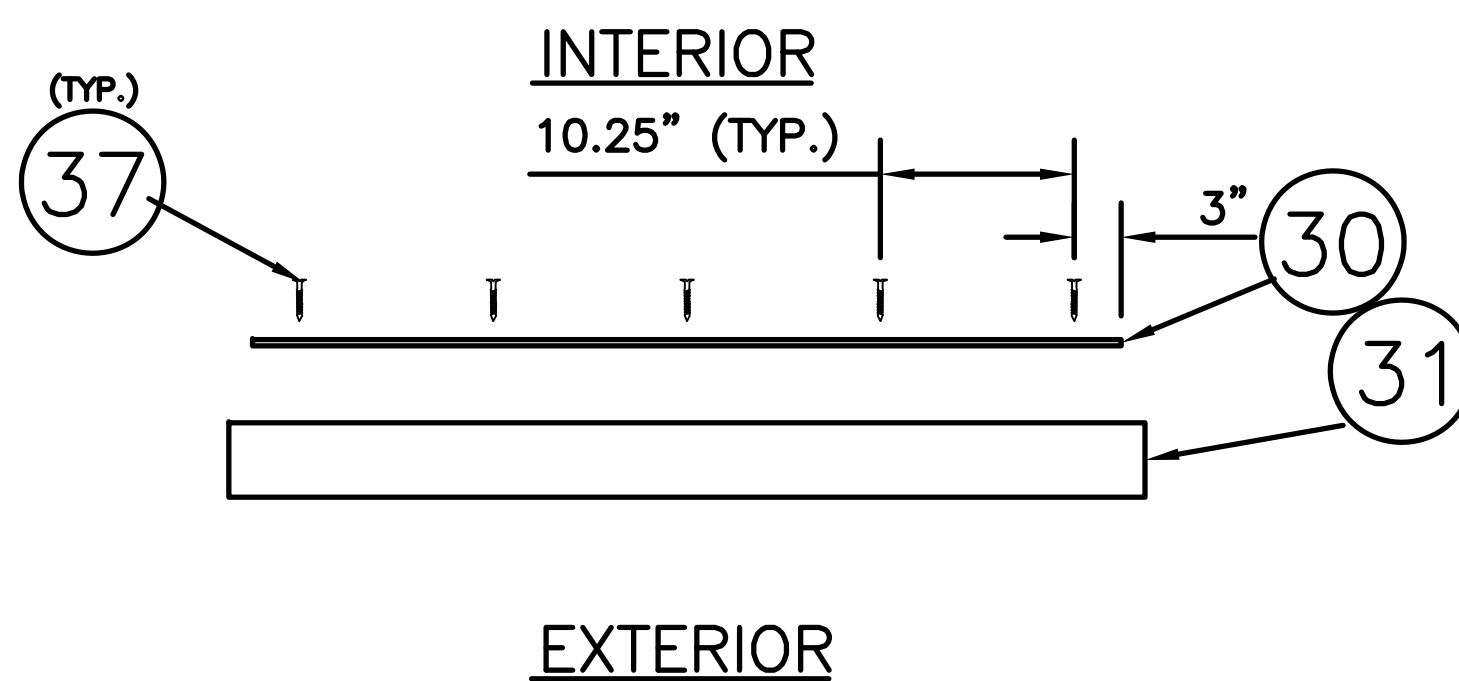
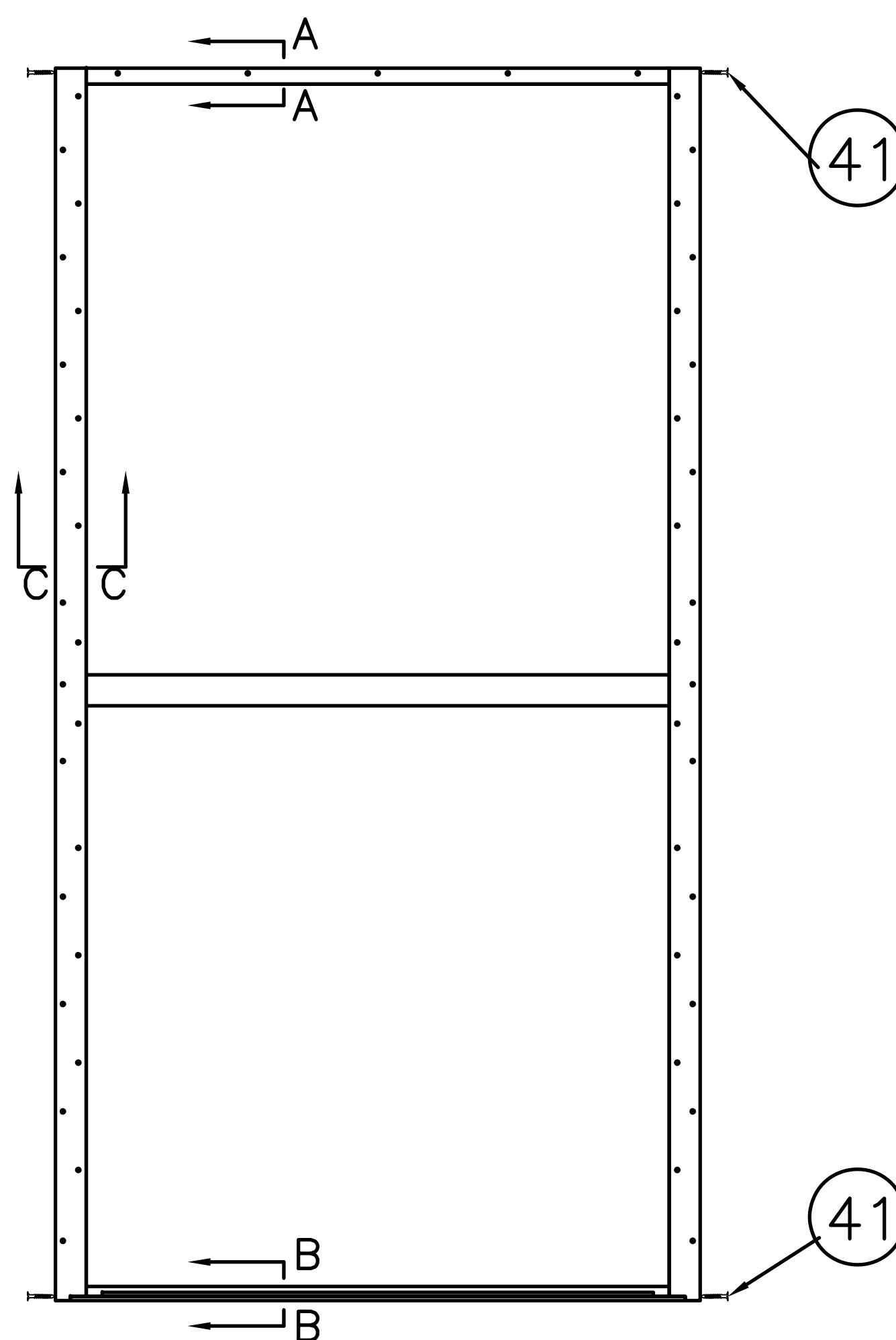
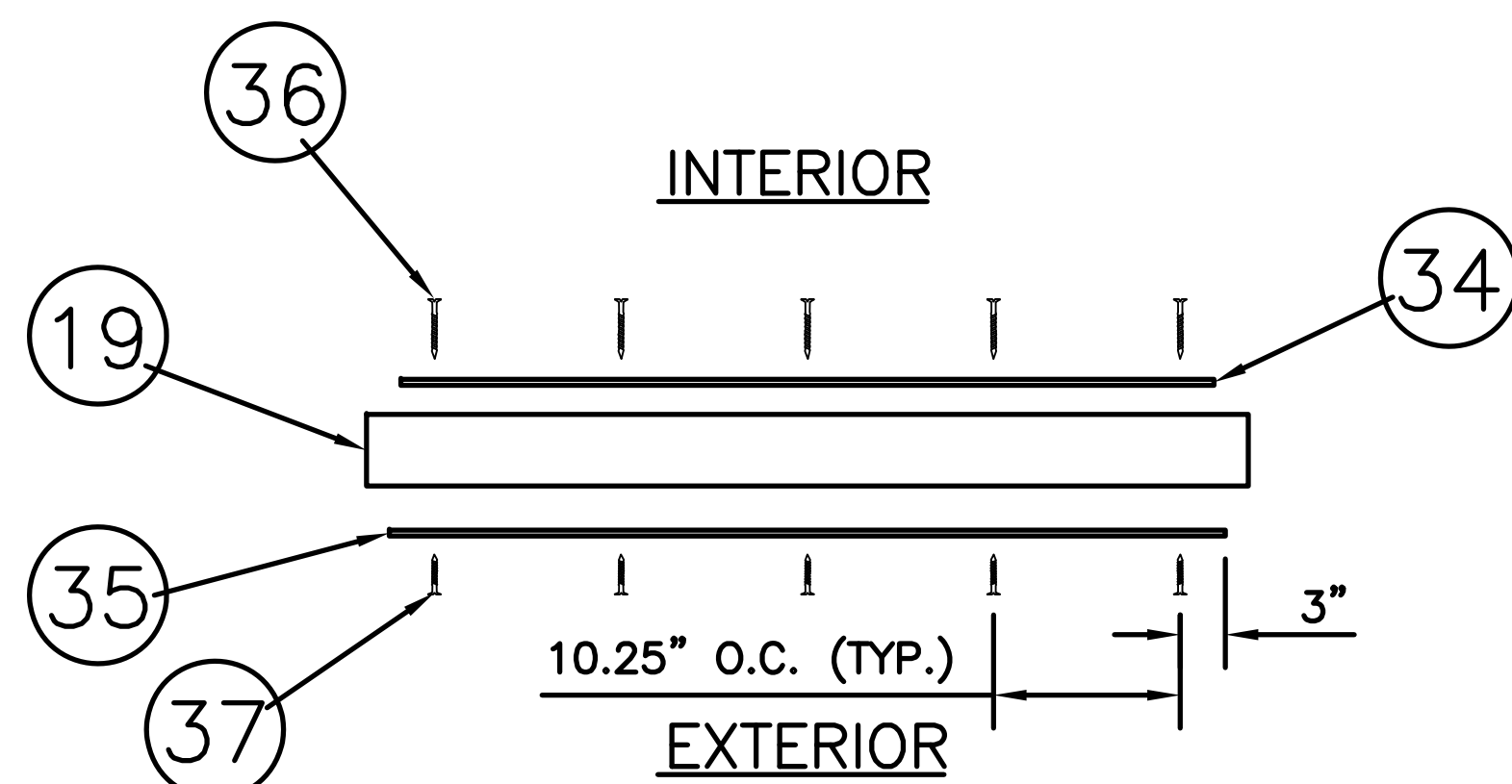
SECTION A-A
ITEM #40 LOCATED 4" FROM EACH END AND 2 MORE EQUALLY SPACED (4) TOTAL



SECTION C-C
ITEM #40 LOCATED 4" FROM EACH END AND 8 MORE EQUALLY SPACED (10) TOTAL



SECTION B-B
ITEM #G LOCATED 1" FROM EACH END AND 8 MORE EQUALLY SPACED (10) TOTAL



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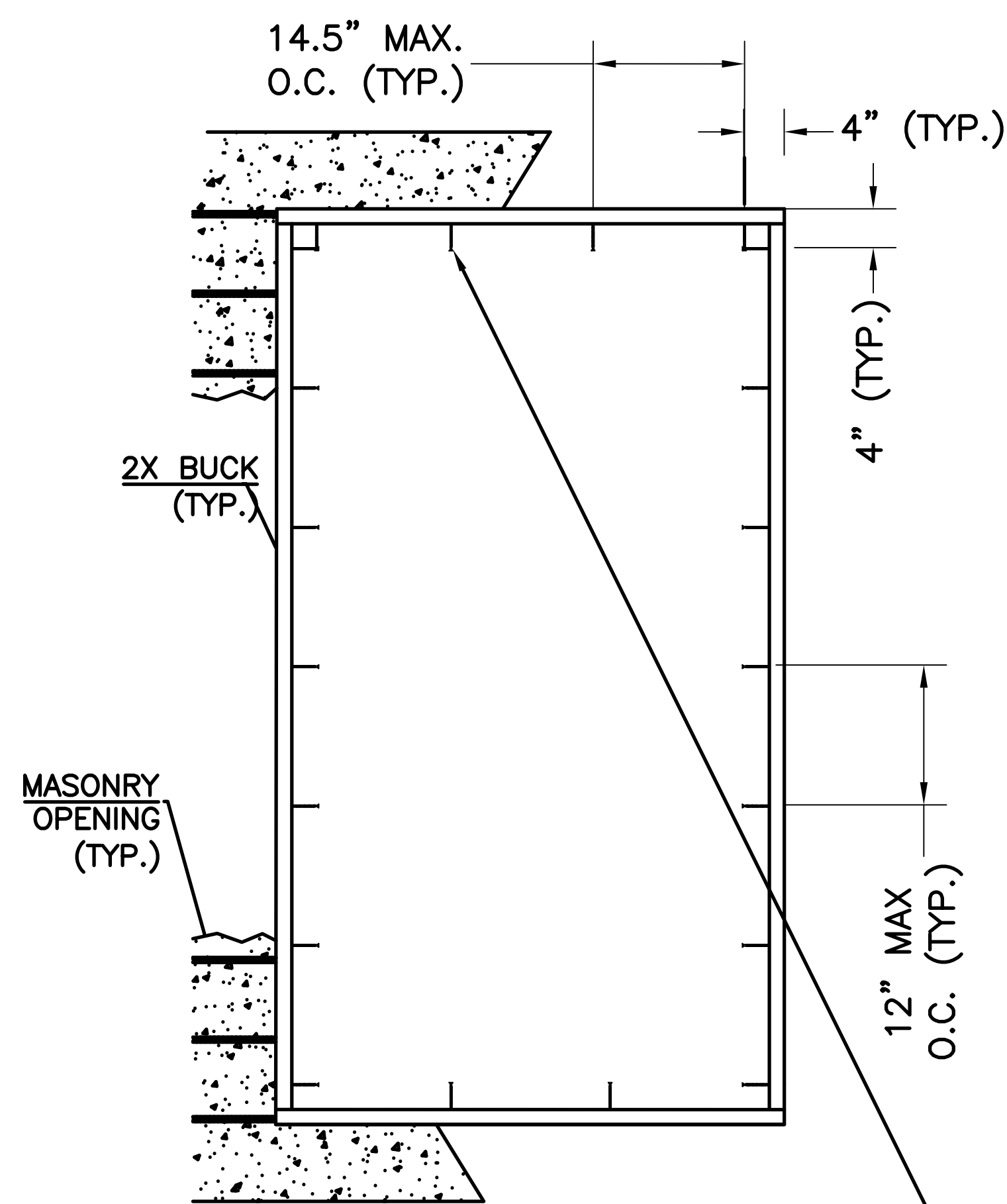
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Ph. 561-478-7233 Fax 561-478-7858

Product: 4500
SERIES: DOUBLE HUNG BALANCE WINDOW
Date: 05-07-14
Scale: None
Drawn: JDS

FRAME DETAILS

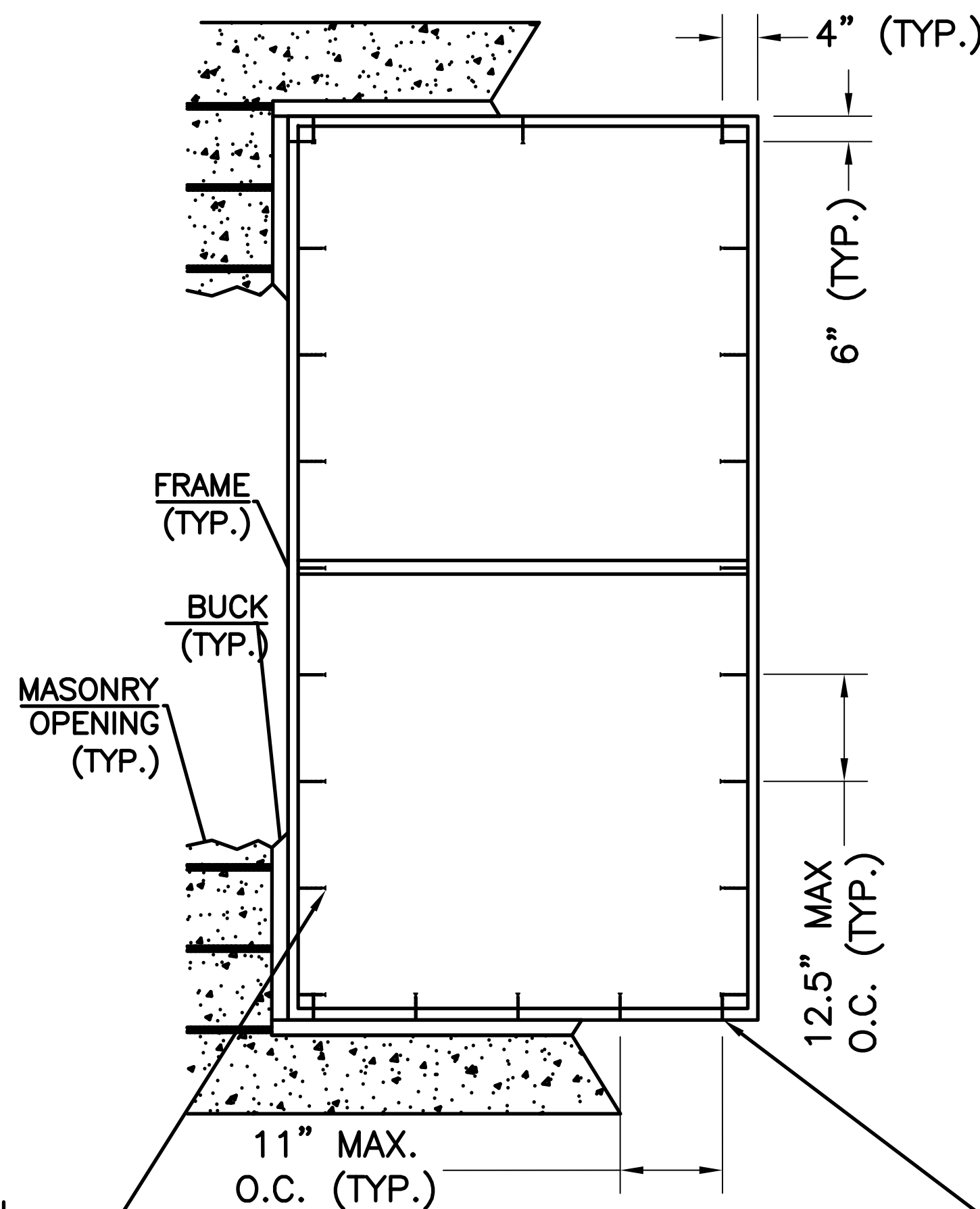
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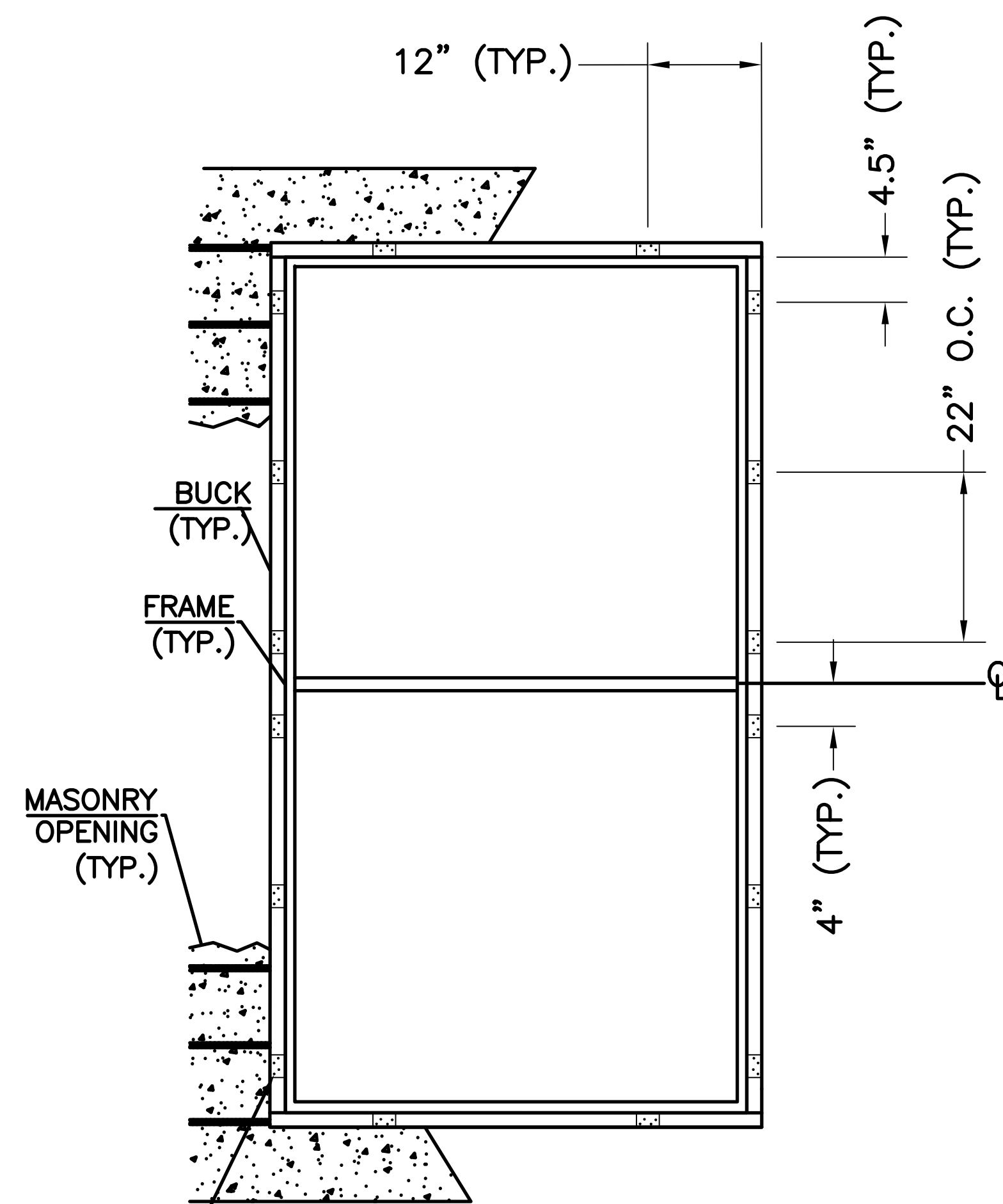
BUCK ANCHORING
Masonry construction

INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1



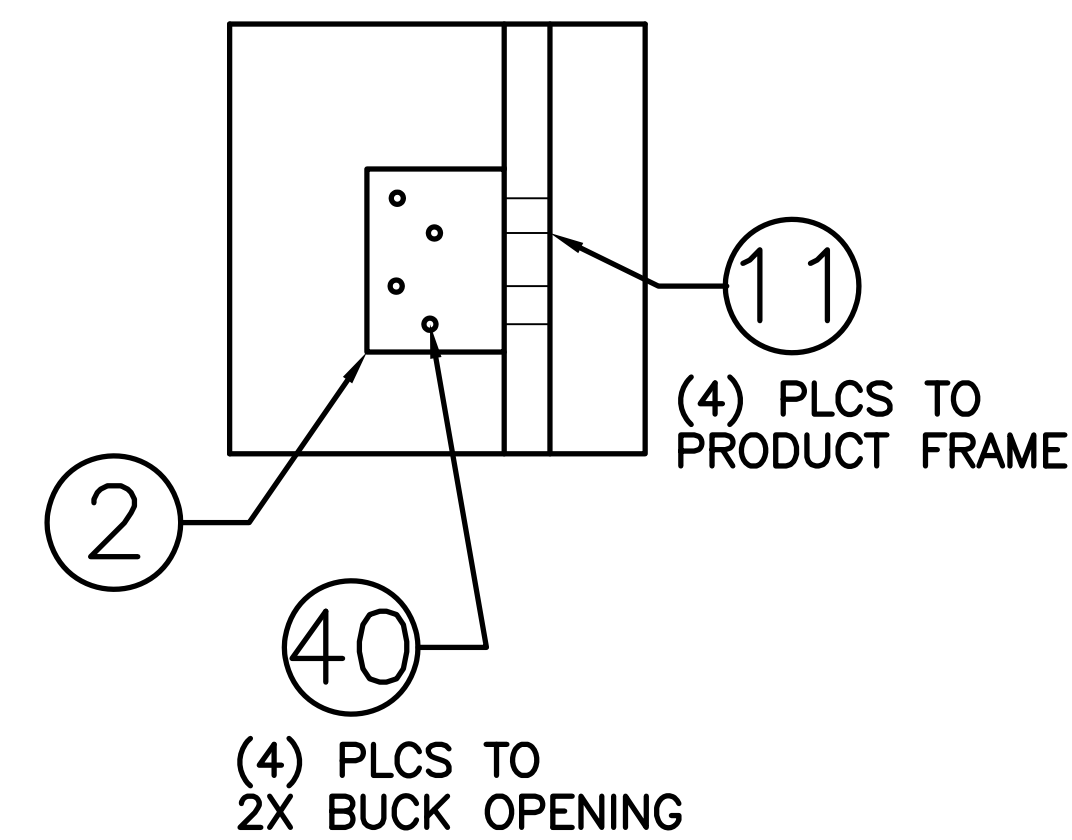
FRAME ANCHORING
Through-the-Frame Installation

INSTALLATION FASTENER, TYP., SEE TABLE 1, SHEET 1

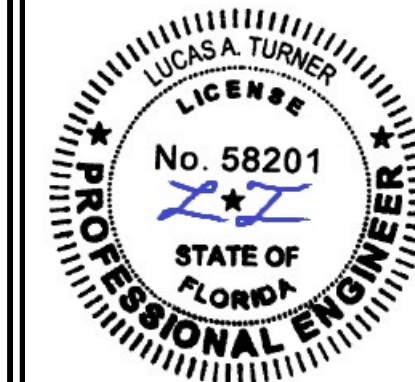


FRAME ANCHORING
Anchor Clip Installation

NOTE: STAGGER ANCHORS AS NEEDED TO ENSURE 4" MIN. SEPARATION BETWEEN ANY TWO BUCK AND/OR THROUGH-FRAME ANCHORS, WHILE NOT EXCEEDING MAX. ANCHOR SPACINGS NOTED IN DETAILS (MAY NEED ADDITIONAL FASTENERS).



ANCHOR CLIP DETAIL



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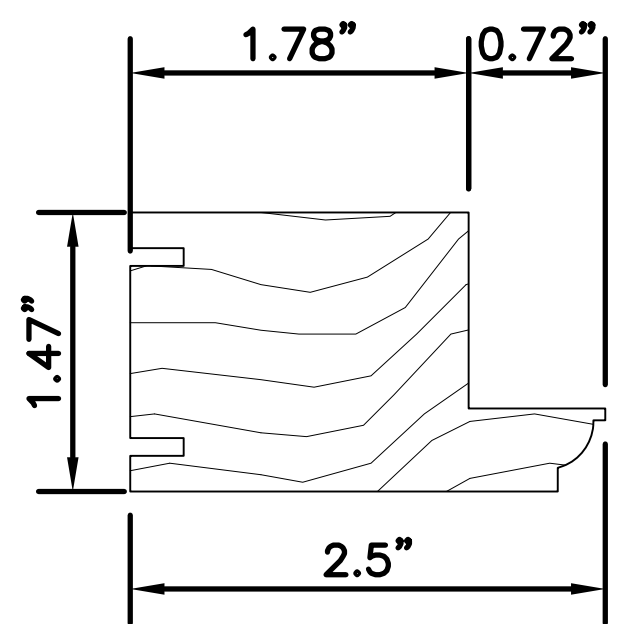
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DOUBLE HUNG BALANCE WINDOW

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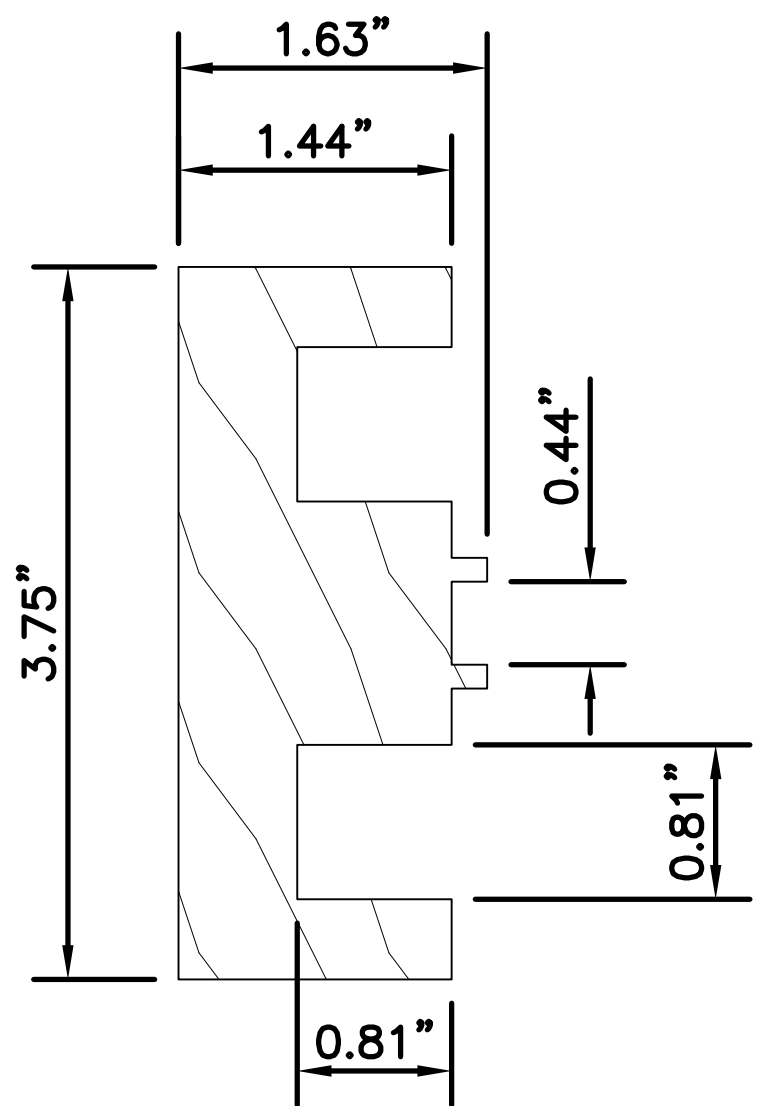
BUCK & FRAME ANCHORING

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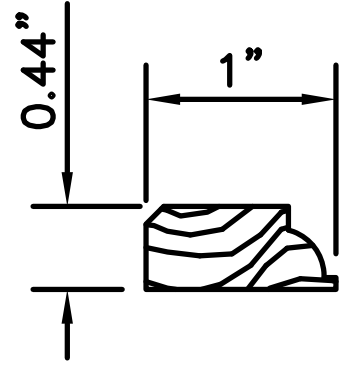
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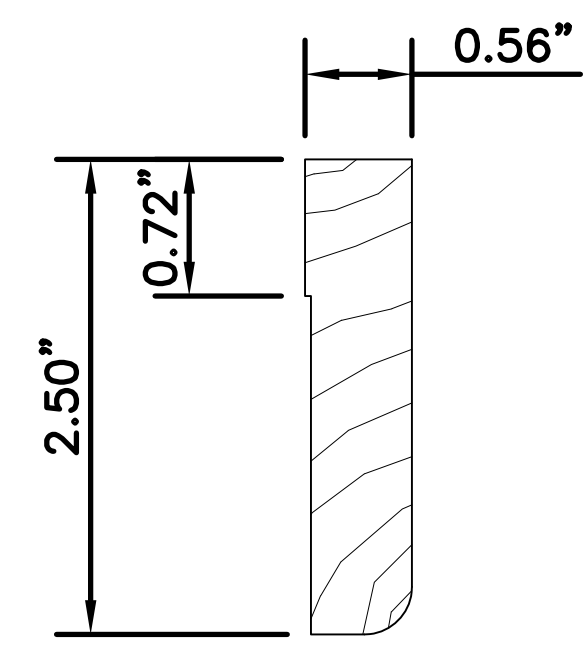
① SASH STILE



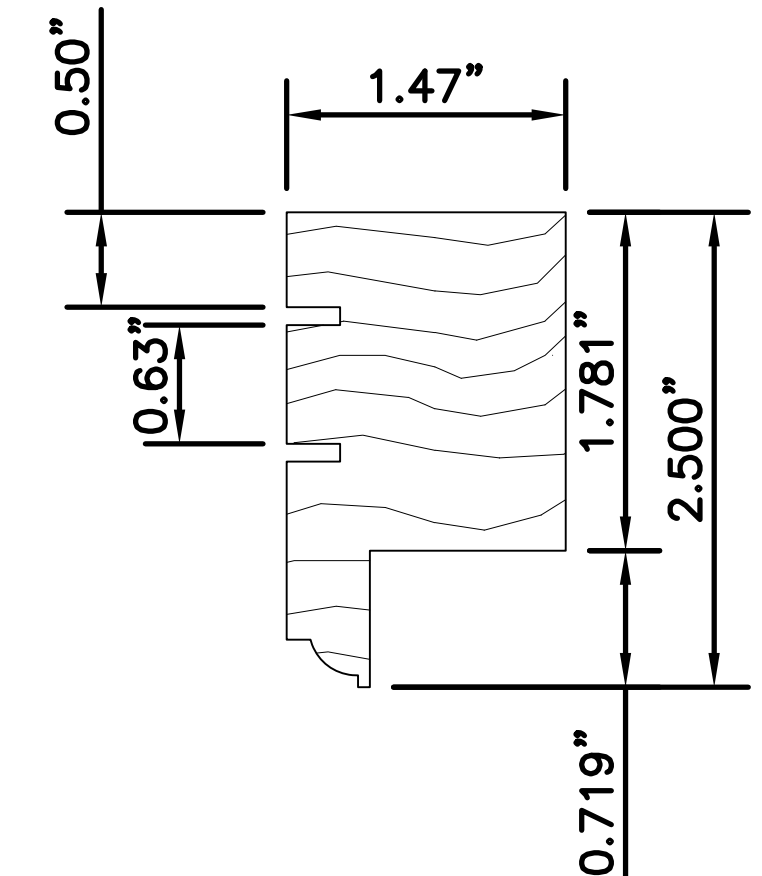
③ JAMB



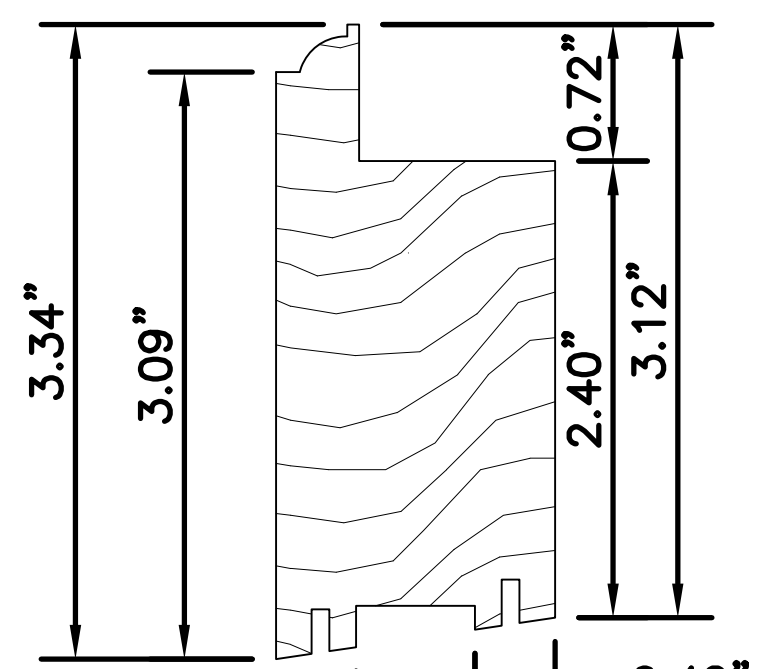
④ GLAZING BEAD



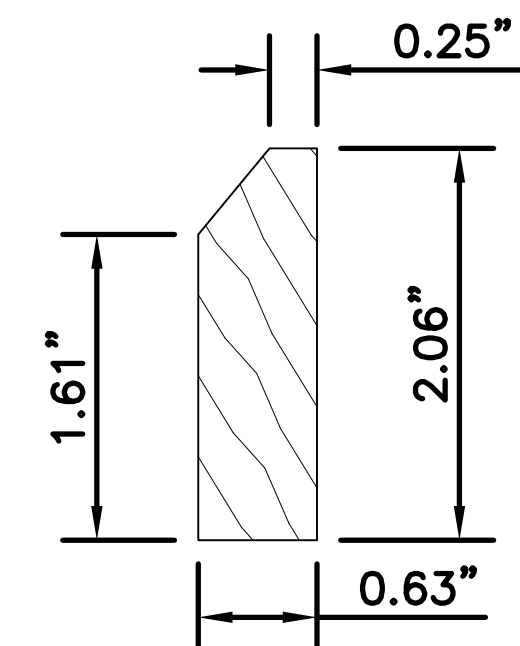
⑩ MEETING RAIL



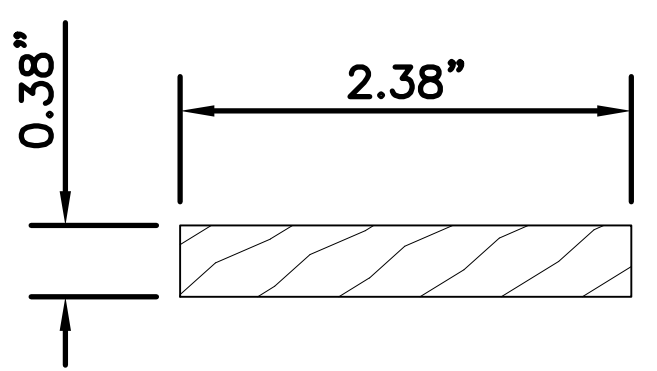
⑫ TOP RAIL
Bottom Sash



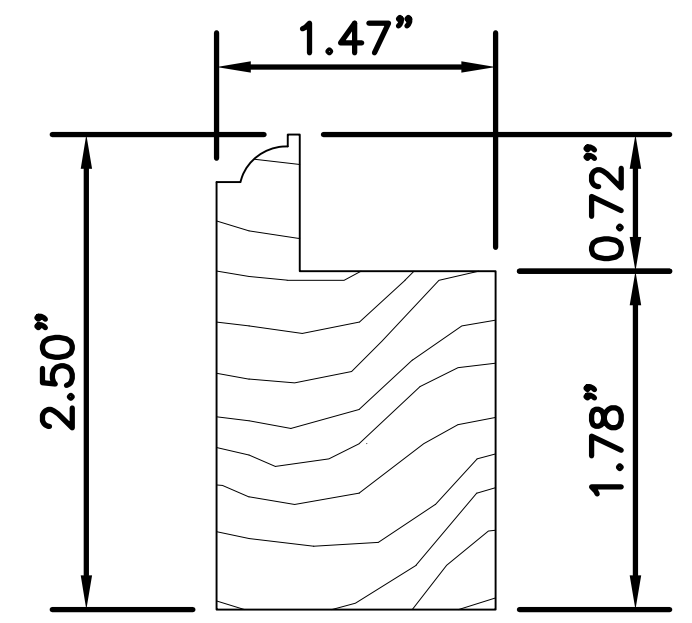
⑬ BOTTOM RAIL
Bottom Sash



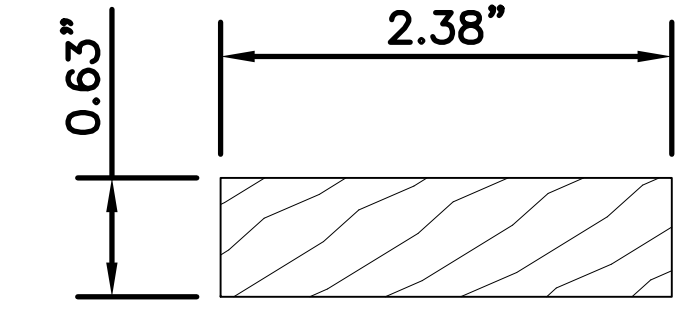
⑭ SILL EXTENDER



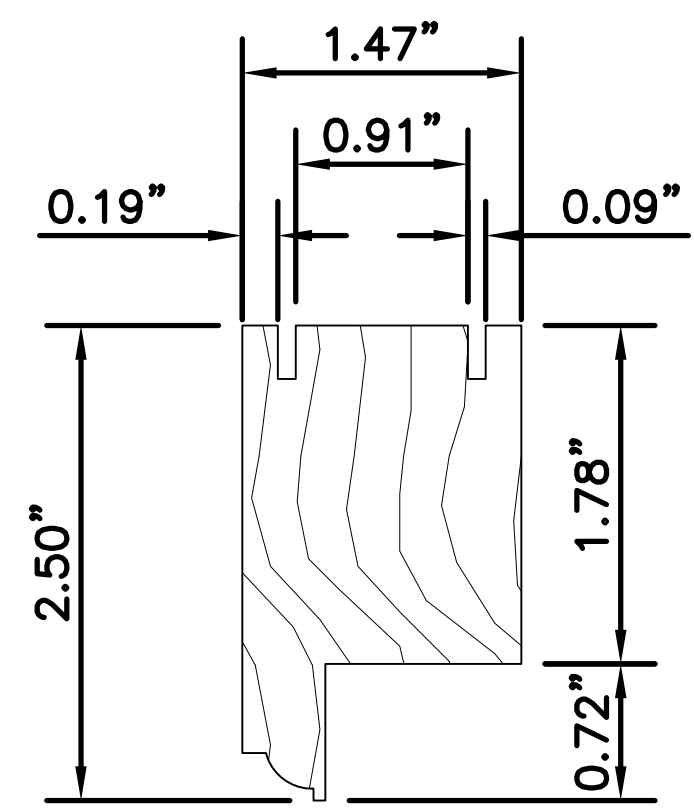
⑯ JAMB EXTERIOR SASH STOP



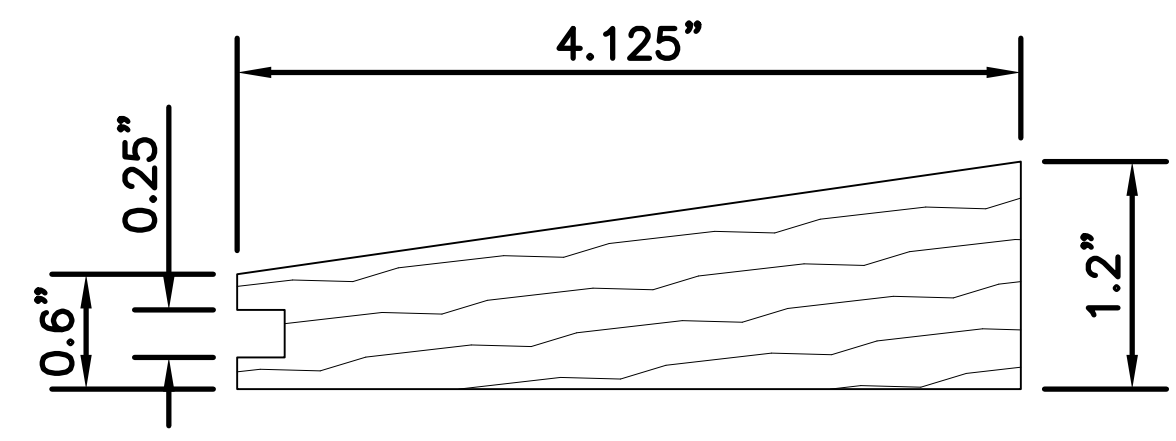
⑰ BOTTOM RAIL
Top Sash



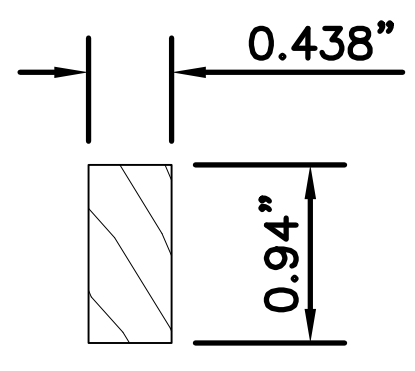
⑳ JAMB INTERIOR SASH STOP



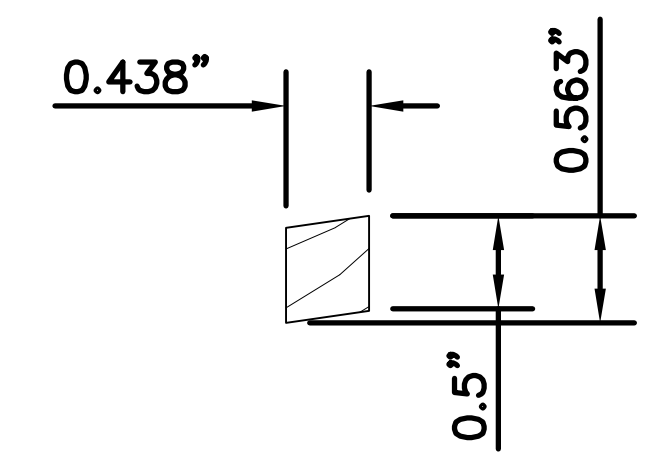
⑳ TOP RAIL
Top Sash



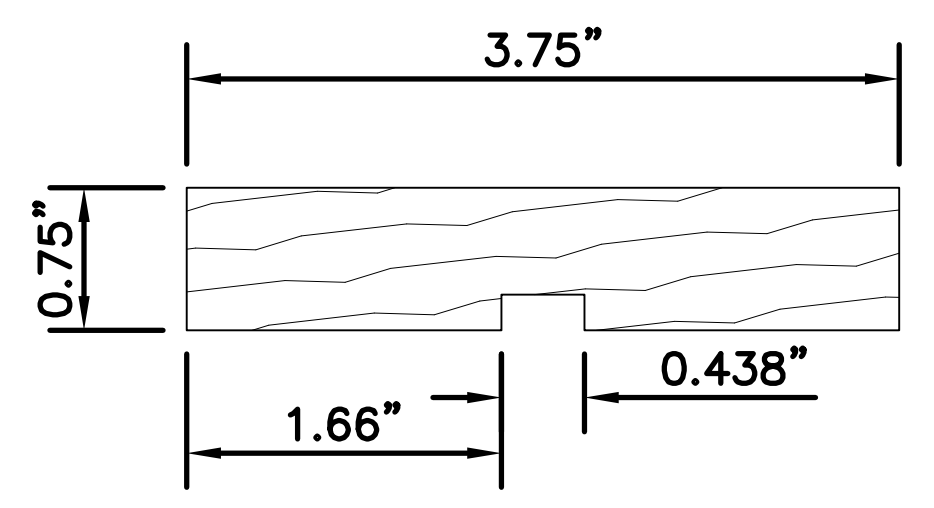
㉑ SILL



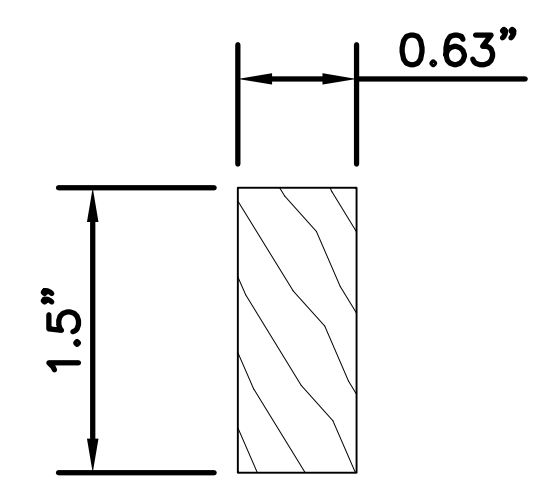
㉒ PARTING STOP



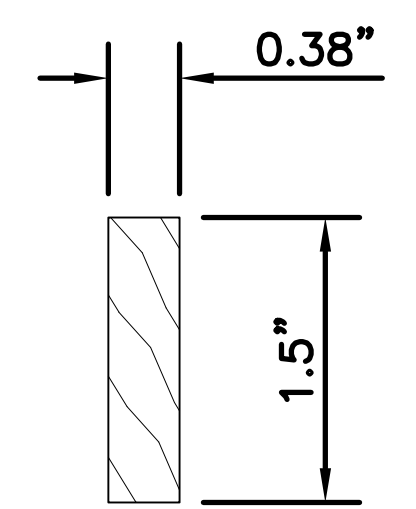
㉓ BOTTOM RAIL STOP



㉔ FRAME HEADER



㉕ HEADER INTERIOR SASH STOP



㉖ HEADER EXTERIOR SASH STOP



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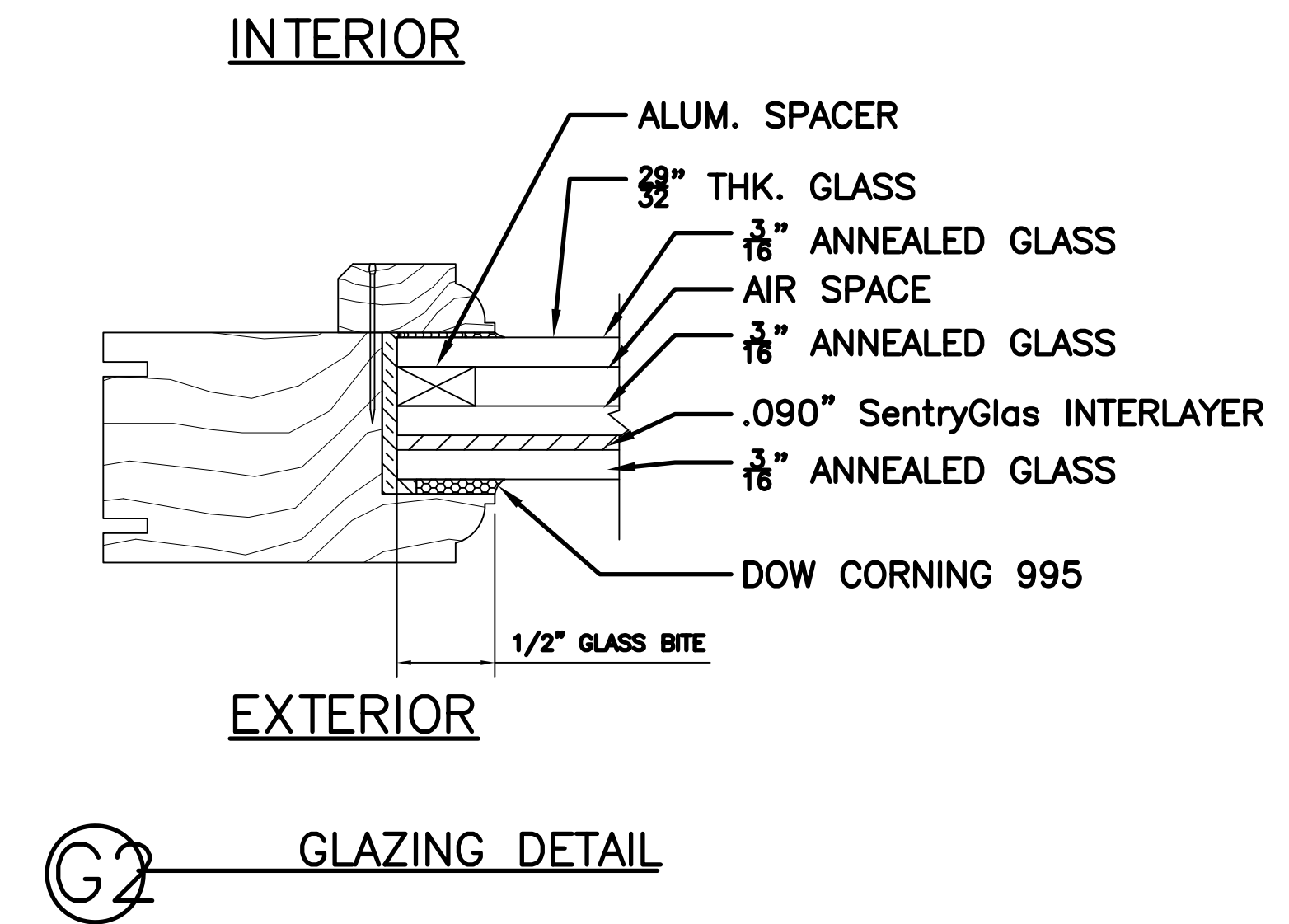
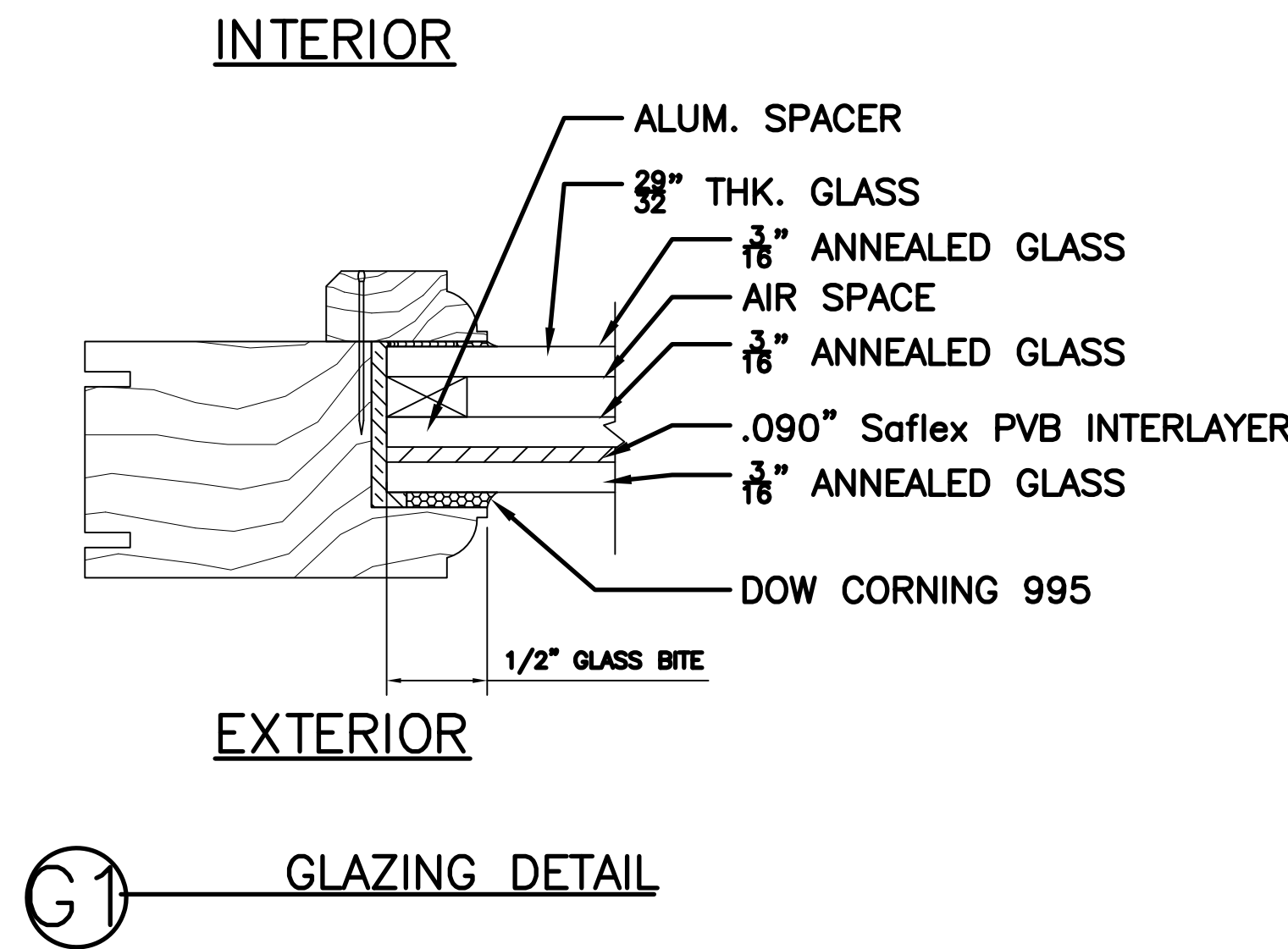
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Sheet No.
6D OF 7

COMPONENTS

BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG>=0.42)	WOOD
B	2X BUCK (SG>=0.42)	WOOD
C	1/4" MAX.SHIM SPACE	-
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	23GA X 1" BRAD	STEEL
1	SASH STILE	WOOD
2	ANCHOR BRACKET (Simpson Strong-Tie A23Z)	STEEL
3	JAMB	WOOD
4	GLAZING BEAD	WOOD
6	WEATHERSTRIP QEZD100 BY SCHLEGEL	FOAM
10	MEETING RAIL	WOOD
11	#8 X 3/4" LATH SCREWS	WOOD
12	BOTTOM SASH TOP RAIL	WOOD
13	BOTTOM SASH BOTTOM RAIL	WOOD
14	SILL EXTENDER	WOOD
15	ULTRA-LIFT SPIRAL TUBE BALANCE BY CALDWELL	-
16	EXTERIOR SASH STOP	WOOD
17	TOP SASH BOTTOM RAIL	WOOD
19	FRAME HEADER	WOOD
20	INTERIOR SASH STOP	WOOD
21	PARTING STOP	WOOD
24	TOP SASH TOP RAIL	WOOD
25	GATE HOUSE SASH LOCK, MOD #837773	-
30	BOTTOM RAIL STOP	WOOD
31	SILL	WOOD
34	HEADER INTERIOR SASH STOP	WOOD
35	HEADER EXTERIOR SASH STOP	WOOD
36	#8 X 2" PFH WOOD SCREW	STEEL
37	#8 X 1-1/4" PFH WOOD SCREW	STEEL
38	#8 X 3/4" PFH WOOD SCREW	STEEL
39	#8 X 1" PFH WOOD SCREW	STEEL
40	#8 X 1-1/2" PFH WOOD SCREW	STEEL
41	#8 X 2-1/2" PFH WOOD SCREW	STEEL



NOTE: GLAZING LARGER THAN 36" WIDE REQUIRES TWO (2) SETTING BLOCKS CONFORMING TO FBC SECTION 2411.3.3.1.



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DOUBLE HUNG BALANCE WINDOW
 BILL OF MATERIALS, COMPONENTS
 & GLAZING DETAILS

Product: 4500
 SERIES: 4500
 DOUBLE HUNG BALANCE WINDOW
 Date: 05-07-14
 Scale: None
 Drawn: JDS

Dwg. DH-Bal
 FL34941.4

Sheet No.
 7D OF 7