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FIBERGLASS OPAQUE

SINGLE DOOR

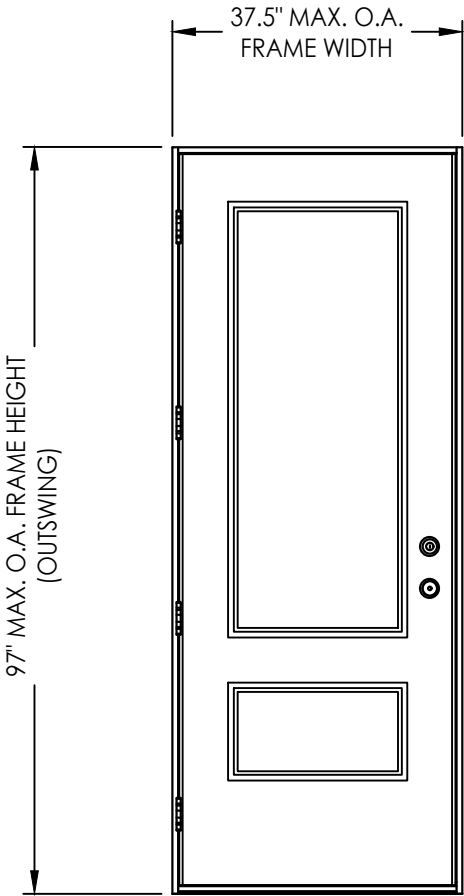
OUTSWING

HVHZ "IMPACT"

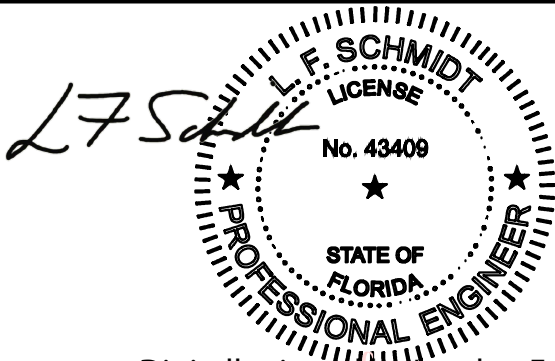
GENERAL NOTES

1. This product has been evaluated and is in compliance with the 9th Edition (2026) 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 material shall be beyond wall dressing or stucco.
3. When used in the "HVHZ" this product complies with Section 1626 of the Florida Building Code and does not require an impact resistant covering.
4. When used in areas outside of the "HVHZ" requiring wind borne debris protection, this product complies with FBC Sections 1609.1.2 & R301.2.1.2 and does not require an impact resistant covering. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E 1996.
5. For 2x stud construction, anchoring of these units shall be the same as that shown for 2x buck masonry construction.
6. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
7. Outswing configurations meet water infiltration requirements for "HVHZ".

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical Elevations, Design Pressures & General Notes
2	Door Panel Details
3	Elevations
4	Horizontal & Vertical Cross Sections (2X Buck)
5	Horizontal & Vertical Cross Sections (1X Buck)
6	Buck & Frame Anchoring
7	Bill of Materials & Components



CONFIGURATION	DESIGN PRESSURE (PSF) (Water Infiltration Required)		DESIGN PRESSURE (PSF) (Water Infiltration Not Required)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
X	+50.0	-75.0	+75.0	-75.0



Digitally signed by Lyndon F Schmidt
Date: 2026.07.22 17:26:20 -04'00'

This item has been digitally signed and sealed by L. F. Schmidt, P.E. on the date adjacent to the seal.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

THIS PRODUCT APPROVAL IS VALID ONLY FOR THE STATE OF FLORIDA

Documents Prepared By:
Lyndon F. Schmidt
P.E. No. 43409

PRODUCT:
MASTERGRAIN
FIBERGLASS DOOR

DATE: 10/14/19

SCALE: N.T.S.

DWG. BY: TRJ

CHK. BY: LFS

DRAWING NO.: FL-21852.19

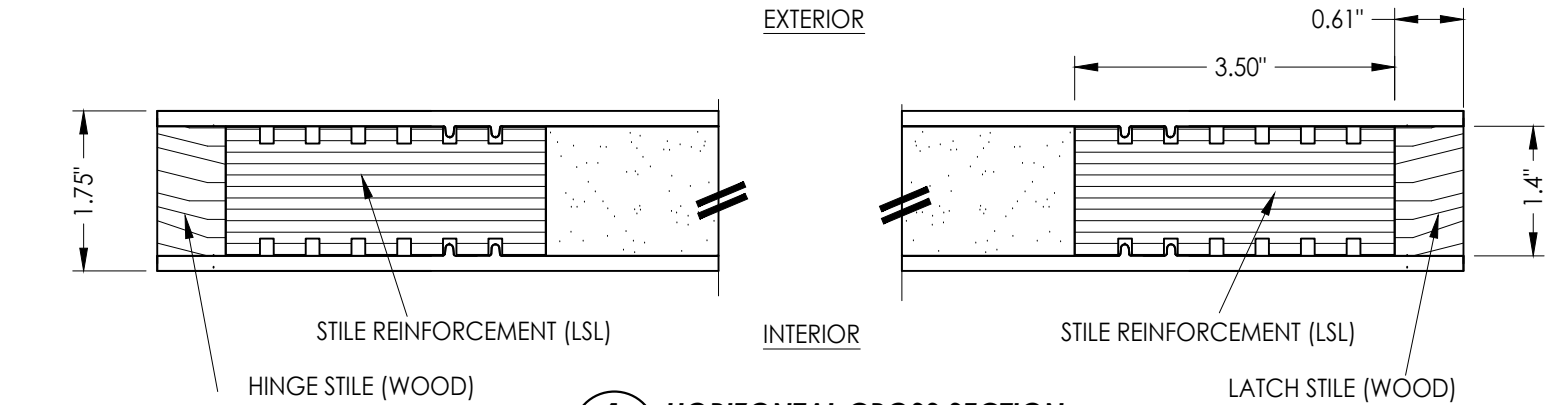
SHEET 1 OF 7

Building Consultants, Inc.
P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry License No. 9813

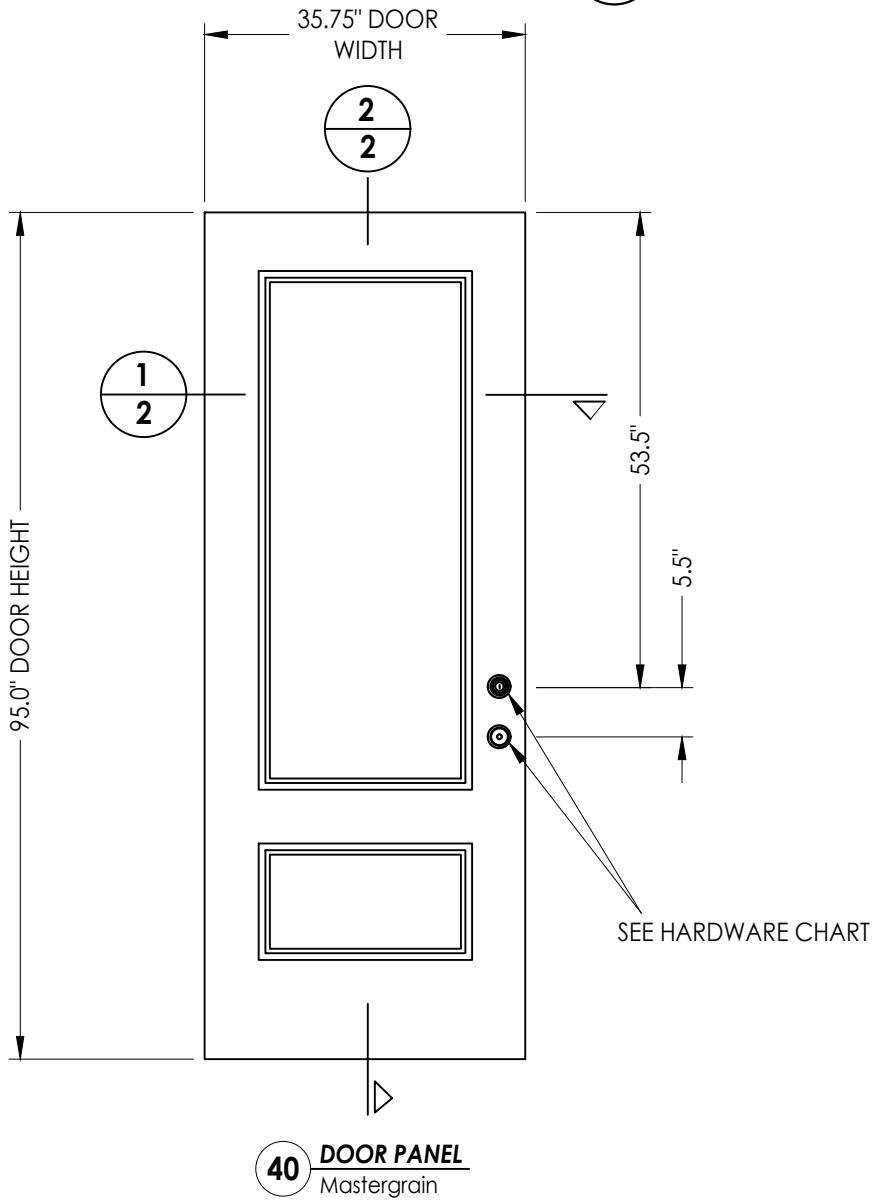
PART OR ASSEMBLY:
TYPICAL ELEVATION, DESIGN
PRESSURES & GENERAL NOTES

REVISIONS

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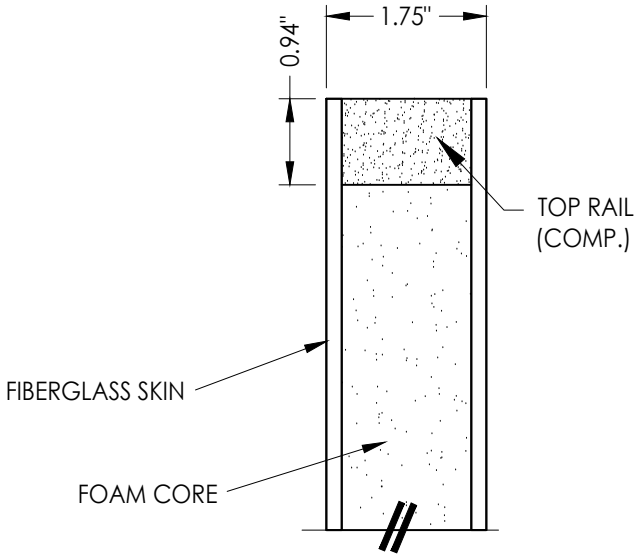


1
2 **HORIZONTAL CROSS SECTION**

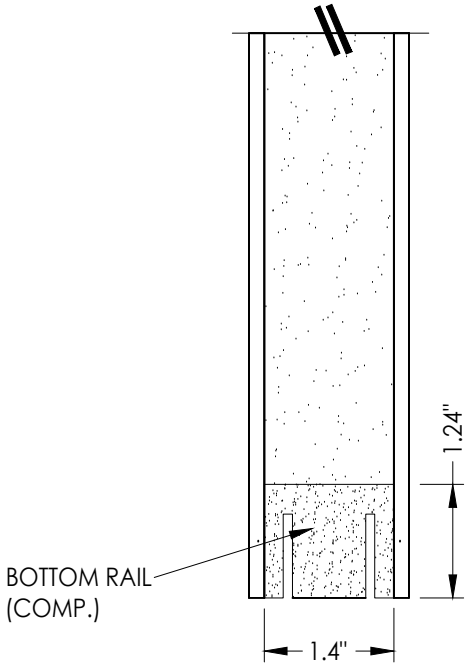


HARDWARE TABLE		
MANUFACTURER	MODEL	
Kwikset	Knob:	Signature Series
	Deadbolt:	Signature Series (980)

FIBERGLASS DOOR SKIN: 0.175" MIN. THK. (MIN. F_T = 8520 PSI)
FOAM CORE: POLYURETHANE - 1.9 PCF MIN.



EXTERIOR INTERIOR



2
2 **VERTICAL CROSS SECTION**

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P.E. No. 43409

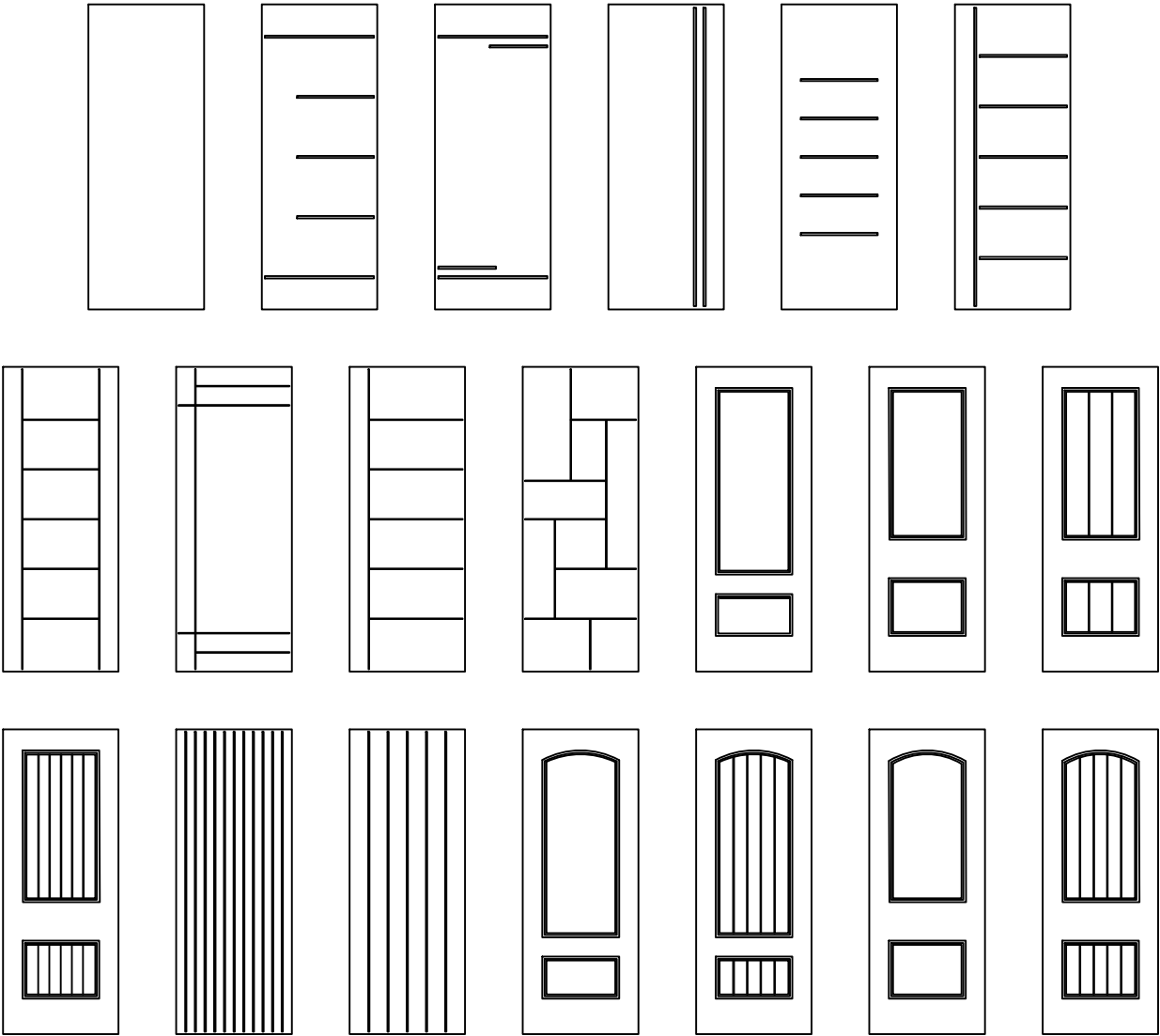
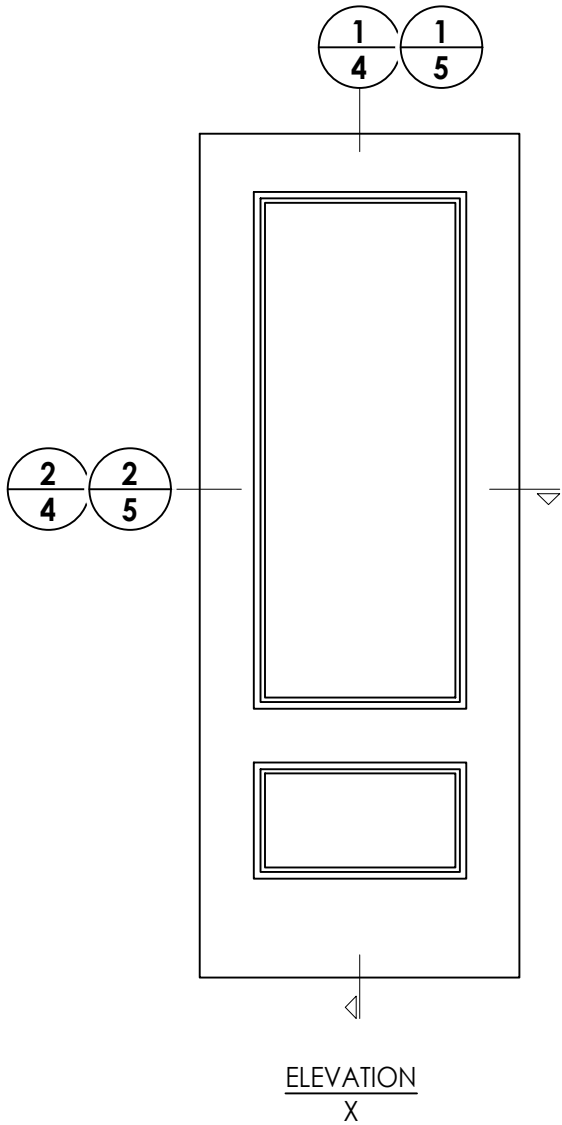
RW BUILDING CONSULTANTS, INC.

P.O. Box 230, Valrico, FL 33595
Phone No.: 813.659.9197
FBPE Registry License No. 9813

PRODUCT:	MASTERGRAIN FIBERGLASS DOOR	
	PART OR ASSEMBLY: DOOR PANEL DETAILS	

NO.	DATE	REVISIONS			
		DATE	BY	DESCRIPTION	REVISIONS
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS	
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS	
3	7/09/20	UPDATE TO 7TH ED. (2020)	FBC	LFS	
2	10/14/19	ADD DOOR PANEL OPTIONS	TRJ	LFS	
1	9/11/18	ADD FIBERGLASS TENSILE STR.	LFS	LFS	

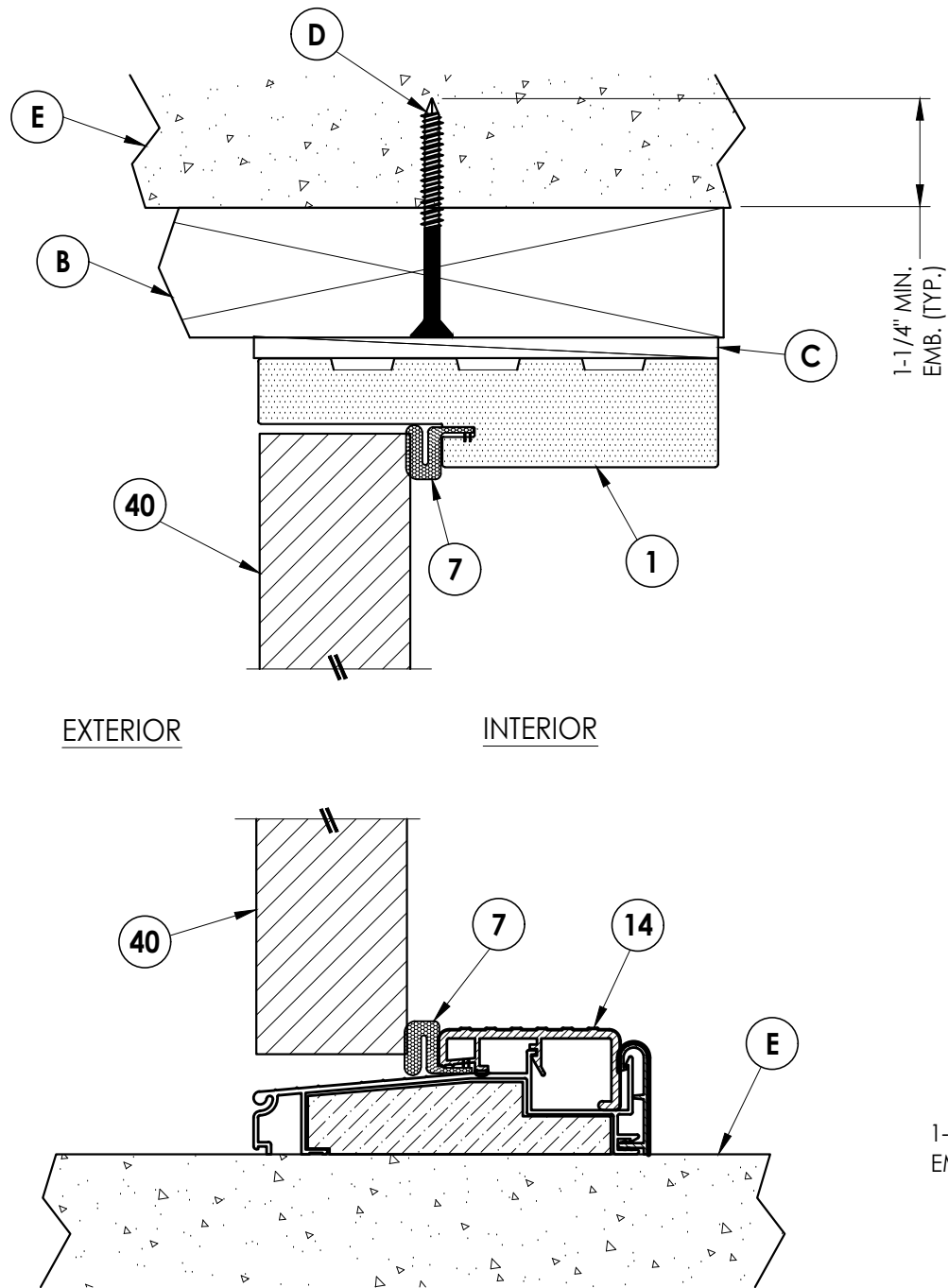
DATE:	10/14/19
SCALE:	N.T.S.
DWG. BY:	TRJ
CHK. BY:	LFS
DRAWING NO.:	FL-21852.19
SHEET	2 OF 7



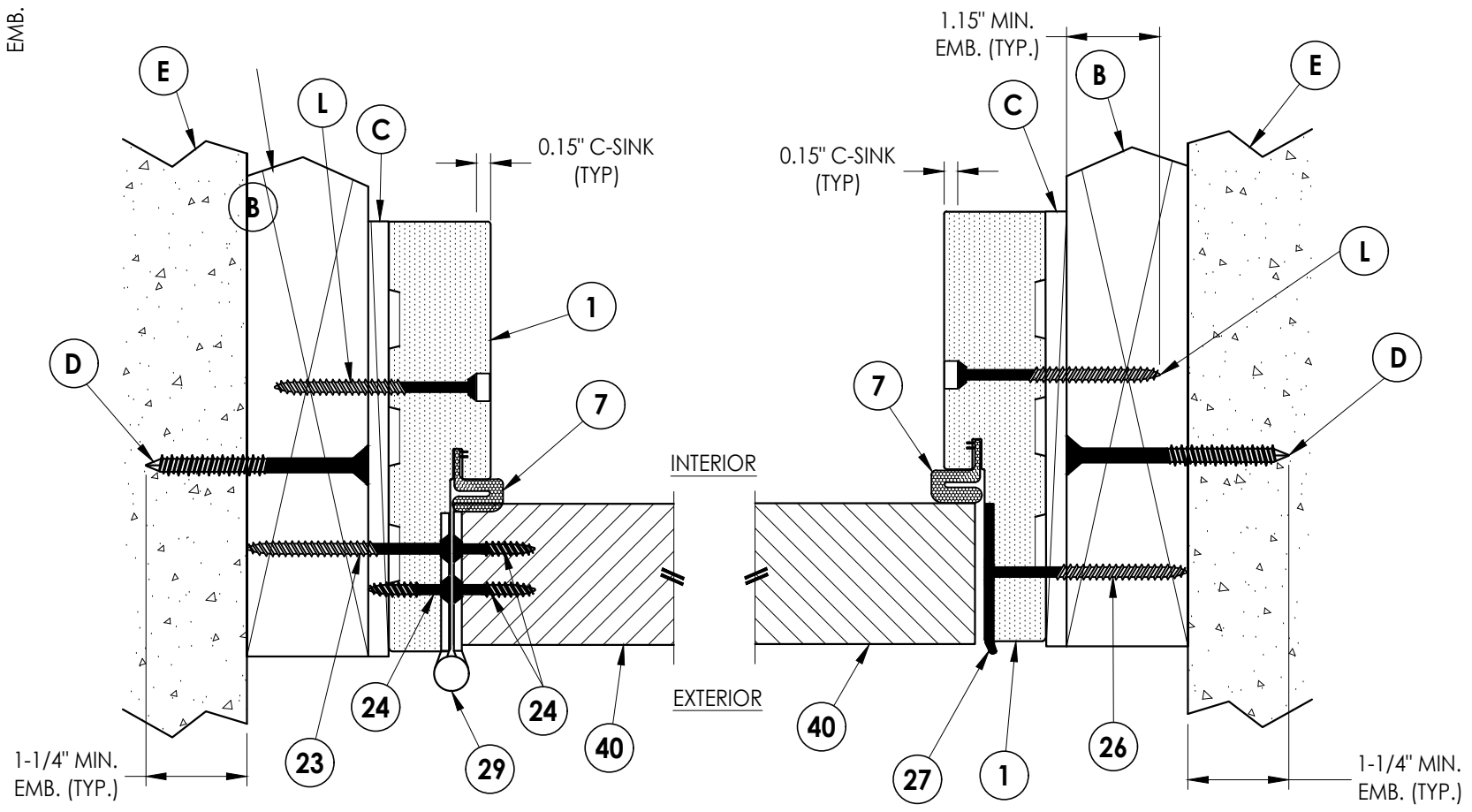
Mastergrain Door Panel Options
Panel options shown are for illustration and are representative only,
Panels shown are 8'-0", similar 6'-8" panels are also available.
(similar opaque panel configurations are allowed)

DATE: 10/14/19		REVISIONS		PRODUCT: MASTERGRAIN FIBERGLASS DOOR		Documents Prepared By: Lyndon F. Schmidt P.E. No. 43409	
SCALE: N.T.S.				PART OR ASSEMBLY: ELEVATIONS		BUILDING CONSULTANTS, INC.	
DWG. BY: TRJ						P.O. Box 230, Valrico, FL 33595	
CHK. BY: LFS						Phone No.: 813.659.9197	
DRAWING NO.: FL-21852.19						FBPE Registry License No. 9813	
SHEET 3 OF 7							

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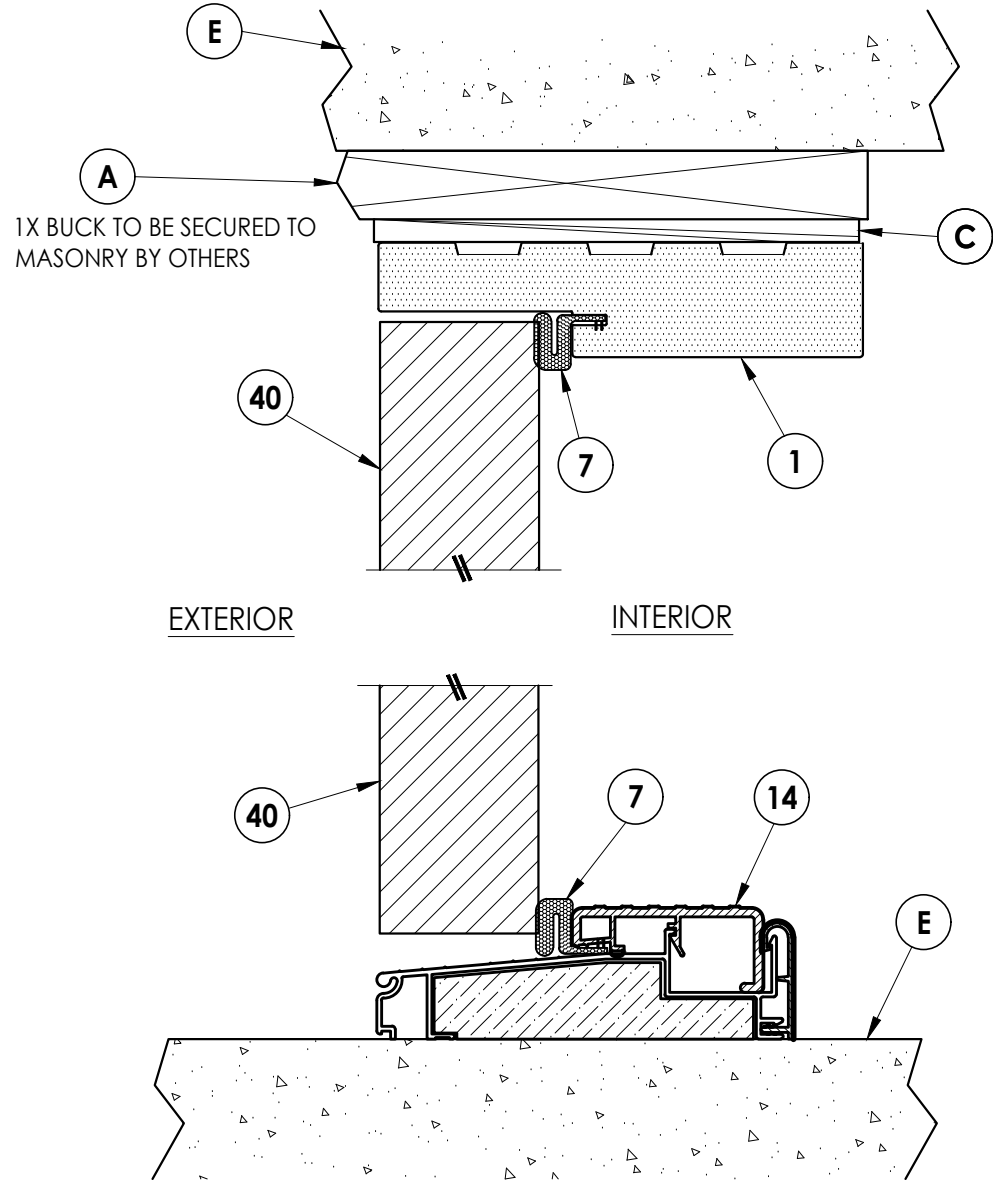
1
4 **VERTICAL CROSS SECTION**
Shown w/ 2X Buck



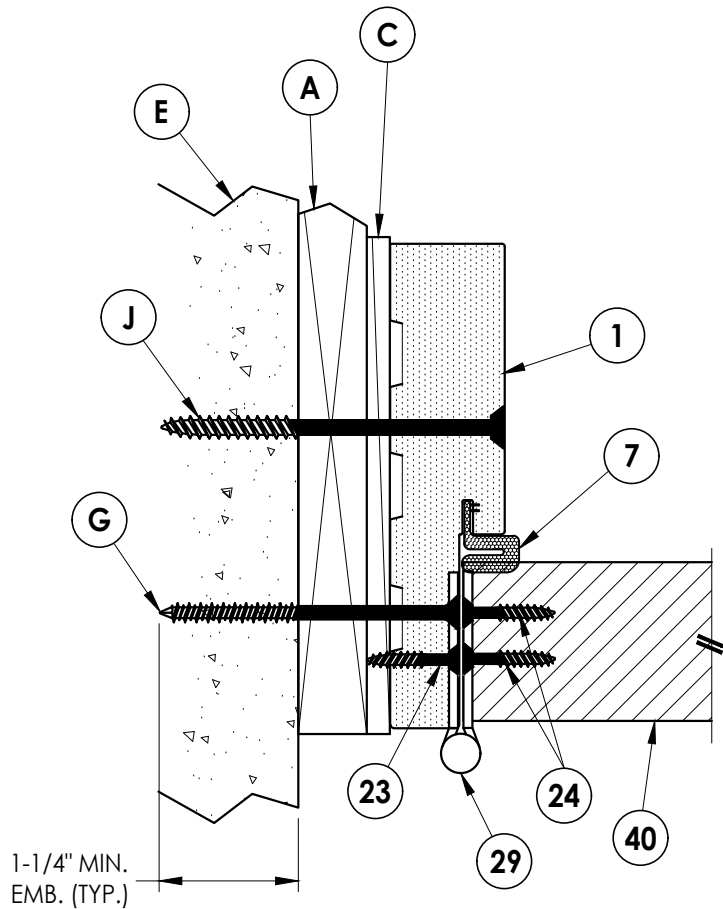
2
4 **HORIZONTAL CROSS SECTION**
Shown w/ 2X Buck

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PRODUCT: MASTERGRAIN FIBERGLASS DOOR				PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS (2X BUCK)			
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS			
4	7/01/23	UPDATE TO 8TH ED. (2023)	FBC	LFS			
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1	9/11/18	ADD FIBERGLASS TENSILE STR.	TRJ	LFS			
NO.	DATE						
REVISIONS							
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DWG. BY: TRJ							
CHK. BY: LFS							
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SHEET 4 OF 7							

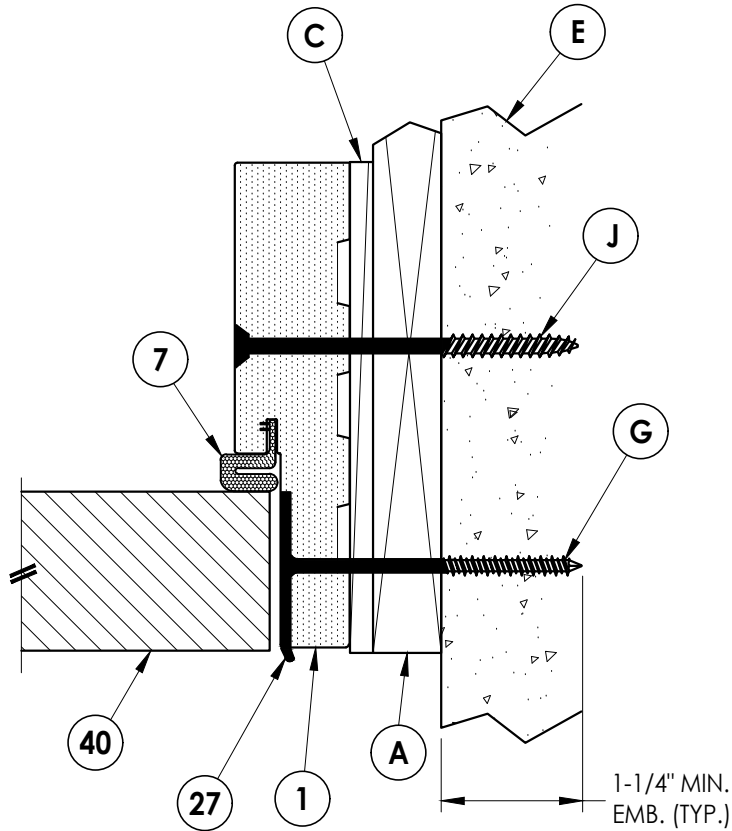
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1 VERTICAL CROSS SECTION
5 Shown w/ 1X Buck

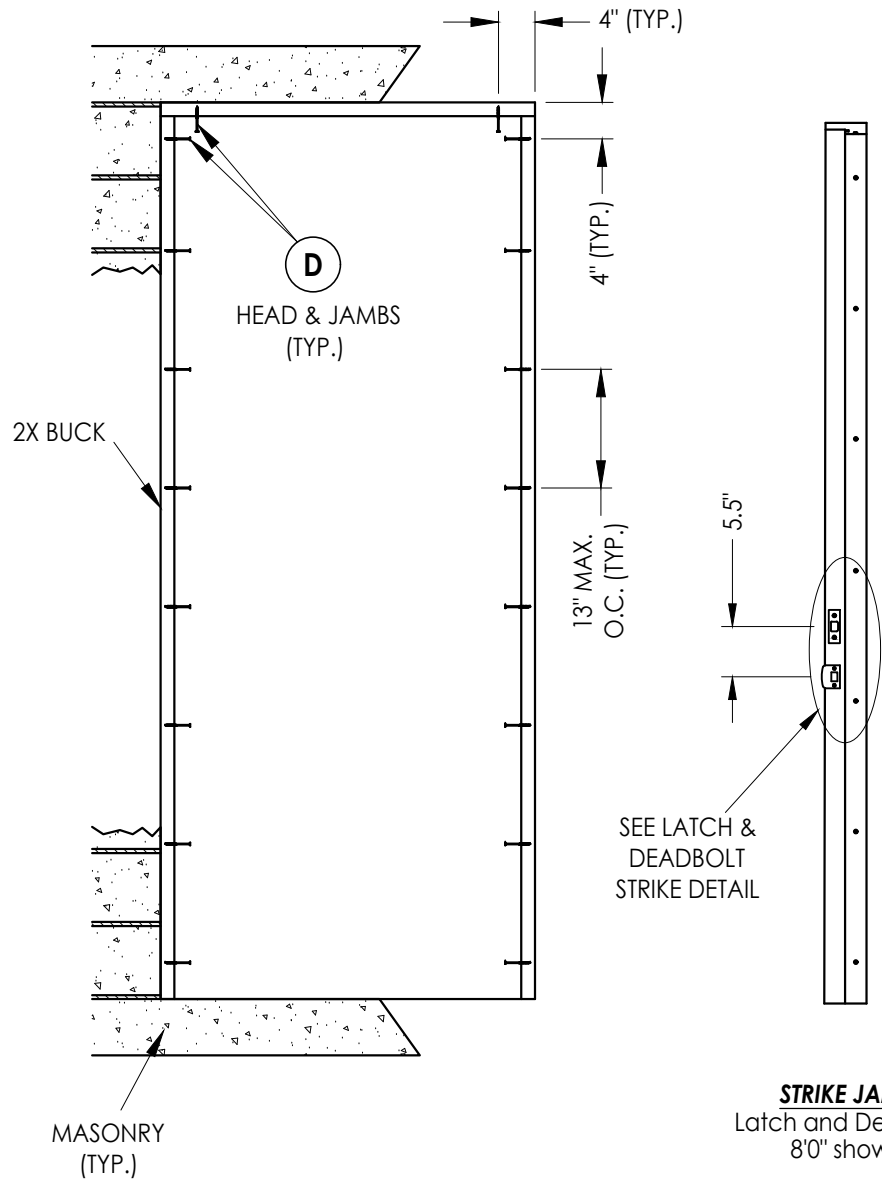


2 HORIZONTAL CROSS SECTION
5 Shown w/ 1X Buck

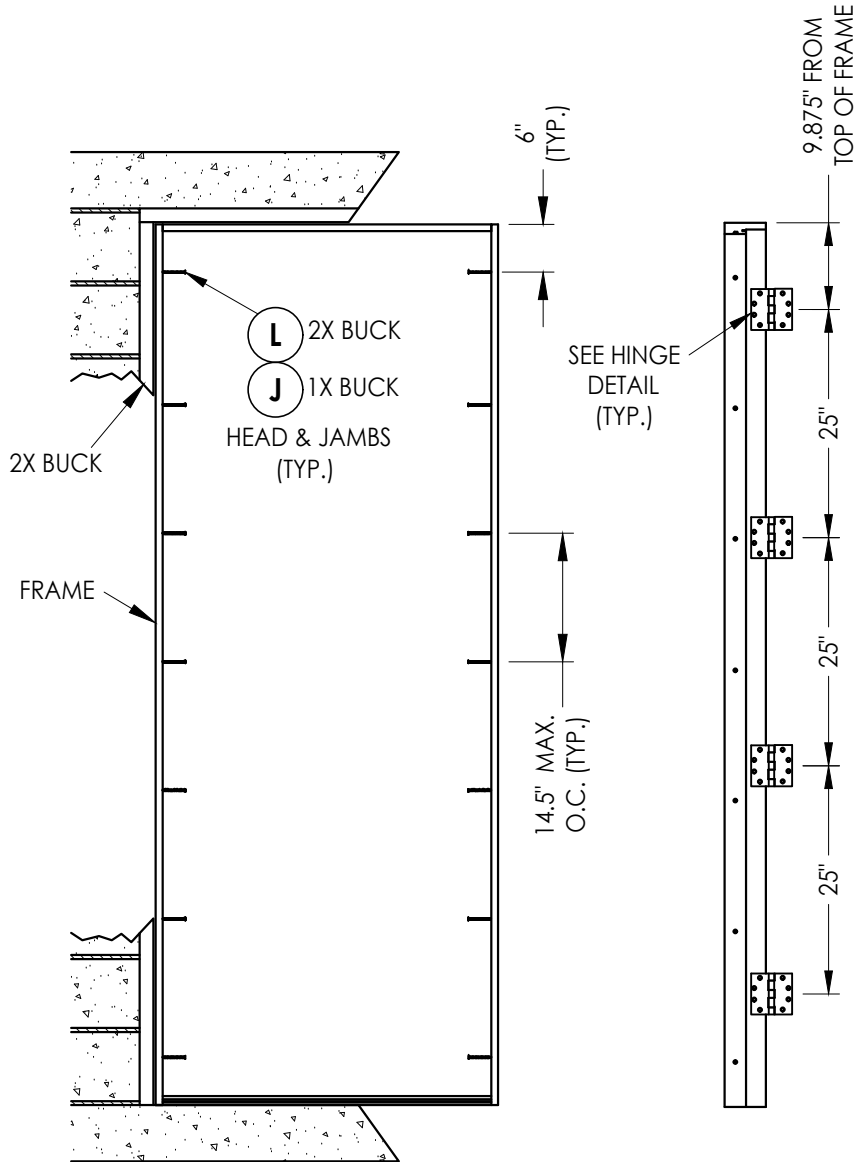


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DWG. BY: TRJ							
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DRAWING NO.: FL-21852.19							
SHEET 5 OF 7							

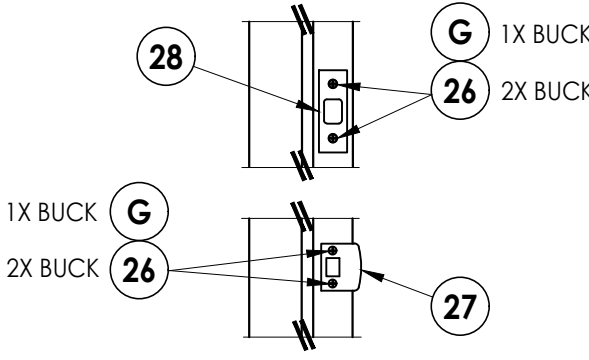
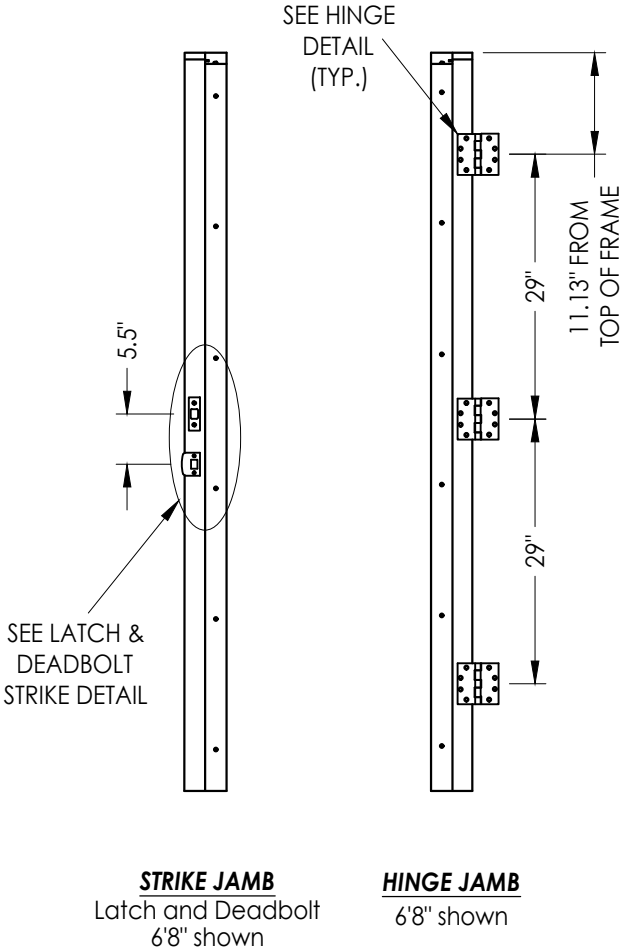
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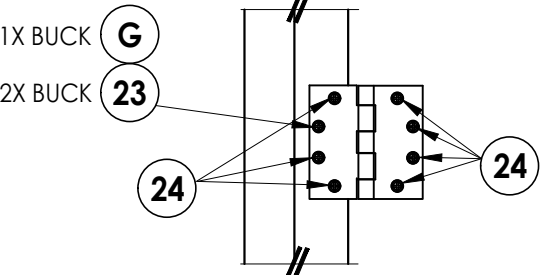
2X BUCK ANCHORING



FRAME ANCHORING



LATCH & DEADBOLT DETAIL



HINGE DETAIL

NOTE:
1. ALL FRAME CORNERS SECURED WITH (3) #8 X 2-1/2" FH DEEP THREAD WOOD SCREWS @ HEAD & SILL.

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PRODUCT: MASTERGRAIN FIBERGLASS DOOR				PART OR ASSEMBLY: BUCK & FRAME ANCHORING			

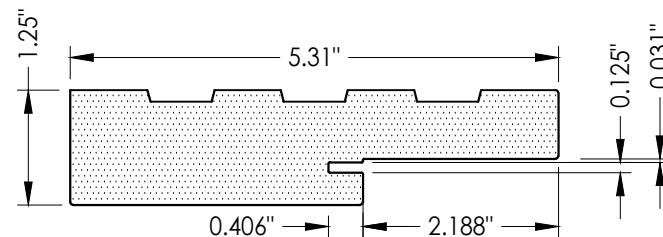
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BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERIAL
A	1X BUCK (SG >= 0.55)	WOOD
B	2X BUCK (SG >= 0.55)	WOOD
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
G	3/16" X 3-1/4" PFH ITW CONCRETE SCREW	STEEL
J	1/4" X 3-3/4" PFH DeWALT OR ITW CONCRETE SCREW	STEEL
L	#10 X 2-1/2" PFH WOOD SCREW (1.15" MIN. EMBEDMENT)	STEEL
1	COMPOSITE JAMB	COMP
7	WEATHERSTRIP	FOAM
8	SWEEP	VINYL
14	OUTSWING BUMP THRESHOLD	ALUM/COMP
23	#12 X 2-1/2" PFH WOOD SCREW	STEEL
24	#12 x 1-1/4" PFH WOOD SCREW	STEEL
26	#8 X 2-1/2" PFH WOOD SCREW	STEEL
27	LATCH STRIKE PLATE	STEEL
28	DEADBOLT STRIKE PLATE	STEEL
29	4.5" X 4.5" HINGE	STEEL
40	DOOR PANEL	-

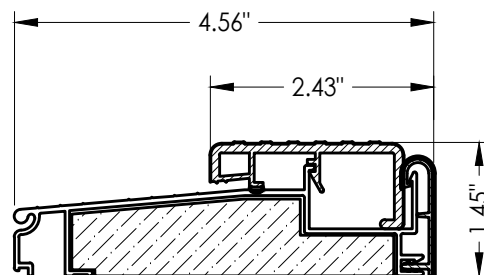
1. Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
2. Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.
3. Concrete anchor table:

ANCHOR TYPE	ANCHOR SIZE	MIN. EMBEDMENT	MIN. CLEARANCE TO MASONRY EDGE	MIN. CLEARANCE TO ADJACENT ANCHOR
ITW TAPCON®	1/4"	1-1/4"	2"	4"
DeWALT ULTRACON+	1/4"	1-1/4"	1"	4"
ITW TAPCON®	3/16"	1-1/4"	3"	1-1/2"

1. Maintain a minimum 5/8" edge distance, 1" end distance, & 1" o.c. spacing of wood screws to prevent the splitting of wood.



1 COMPOSITE JAMB



14 OUTSWING THRESHOLD

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2	10/14/19	ADD DOOR PANEL OPTIONS	TRJ	TRJ
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NO.	DATE			
REVISIONS				

DATE:	10/14/19
SCALE:	N.T.S.
DWG. BY:	TRJ
CHK. BY:	LFS
DRAWING NO.:	FL-21852.19
SHEET	7 OF 7

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