

Z:\2023 FBC Drawings\Metal Mfg Industries\FL-12184 R4\FL-12184.1-2.dwg



PRIV. DE RIO SANTIAGO #30
COL. LA RAZA
SOLEDAD DE GRACIANO SANCHEZ
SAN LUIS POTOSI, C.P. 78433

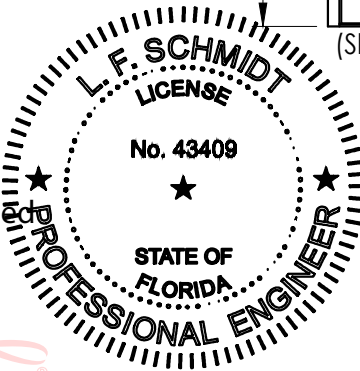
"N" SERIES
SINGLE OPAQUE DOOR
OUTSWING
"IMPACT"

GENERAL NOTES

1. This product has been evaluated and is in compliance with the 8th Edition (2023) 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 Section 1609.1.2 of the FBC and does not require an impact resistant covering. This product meets missile level "D" and includes Wind Zone 4 as defined in ASTM E1996 and Section 1609.1.2.2 of the FBC.
5. Site conditions that deviate from the details of this drawing require further engineering analysis by a licensed engineer or registered architect.
6. Outswing configurations using high water dam threshold item #78 meet water infiltration requirements for "HVHZ".
7. Outswing configurations using sill item #40, #41 and #42 do not meet the water infiltration requirements for the "HVHZ" and shall be installed only in non-habitable areas or at habitable locations protected by an overhang or canopy such that the angle between the edge of canopy or overhang to sill is less than 45 degrees.
8. The "N" door achieves a Class III stiffness classification per Section 8.2.2 of ANSI A250.13 (based on opaque door).
9. When used in the "HVHZ", steel must be protected as specified in FBC Section 2222.6.

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SHEET #	DESCRIPTION
1	Typical elevations, design pressures, & general notes
2	Door panel sections 161 lock prep
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4	Horizontal cross sections
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6	Horizontal cross sections
7	Vertical cross sections
8	Frame anchoring
9	Anchoring details
10	Components
11	Bill of materials & components

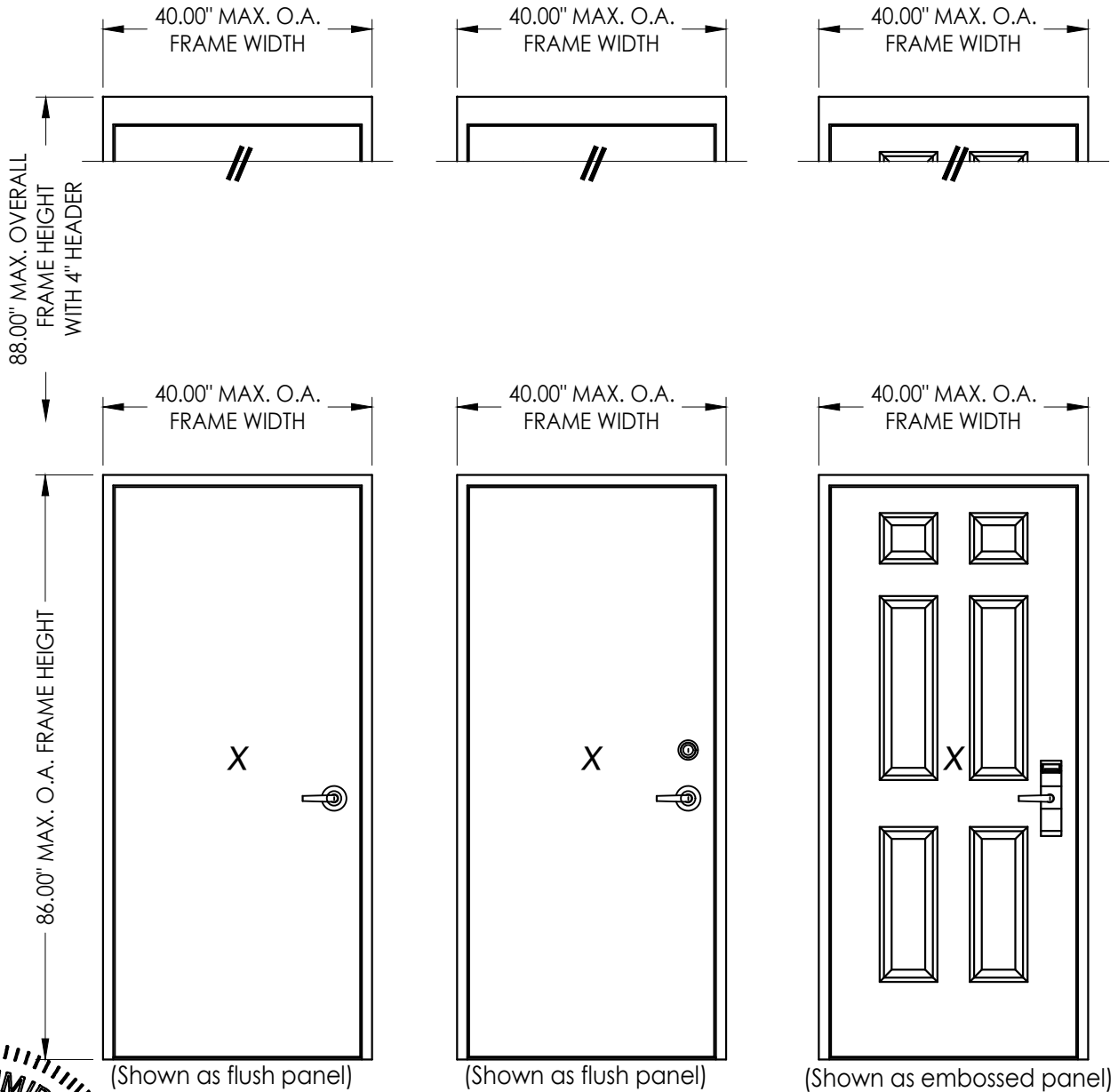
Digitally signed
by Lyndon F
Schmidt
Date:
2023.07.10
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This item has been digitally signed and sealed by
L. F. Schmidt, P.E. on the date adjacent to the seal.

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



"N" DOOR
(w/ 161 latch)

"N" DOOR
(w/ 161 latch and deadbolt)

"N" DOOR
(w/ mortise lock)

OVERALL FRAME DIMENSION	LOCK TYPE	DESIGN PRESSURE (PSF)	
		POSITIVE	NEGATIVE
40.00" x 86.00"	161 LATCH (SCHLAGE)	+55.0	-55.0
40.00" x 86.00"	161 LATCH & DEADBOLT (DESIGN HARDWARE)	+70.0	-70.0
40.00" x 86.00"	86E MORTISE LOCK (ONITY)	+60.0	-60.0

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

RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Vairico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813

PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR
PART OR ASSEMBLY:
TYPICAL ELEVATIONS, DESIGN
PRESSURES & GENERAL NOTES

		REVISIONS					
		NO.	DATE	BY	JK	LFS	DAC
		4	7/10/23	UPDATE TO 8TH ED. (2023)	FBC	LFS	
		3	7/30/20	UPDATE TO 7TH ED. (2020)	FBC	DAC	
		2	7/17/17	UPDATE TO 6TH ED. (2017)	FBC	LFS	
		1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK	

DATE: 2/23/09

SCALE: N.T.S.

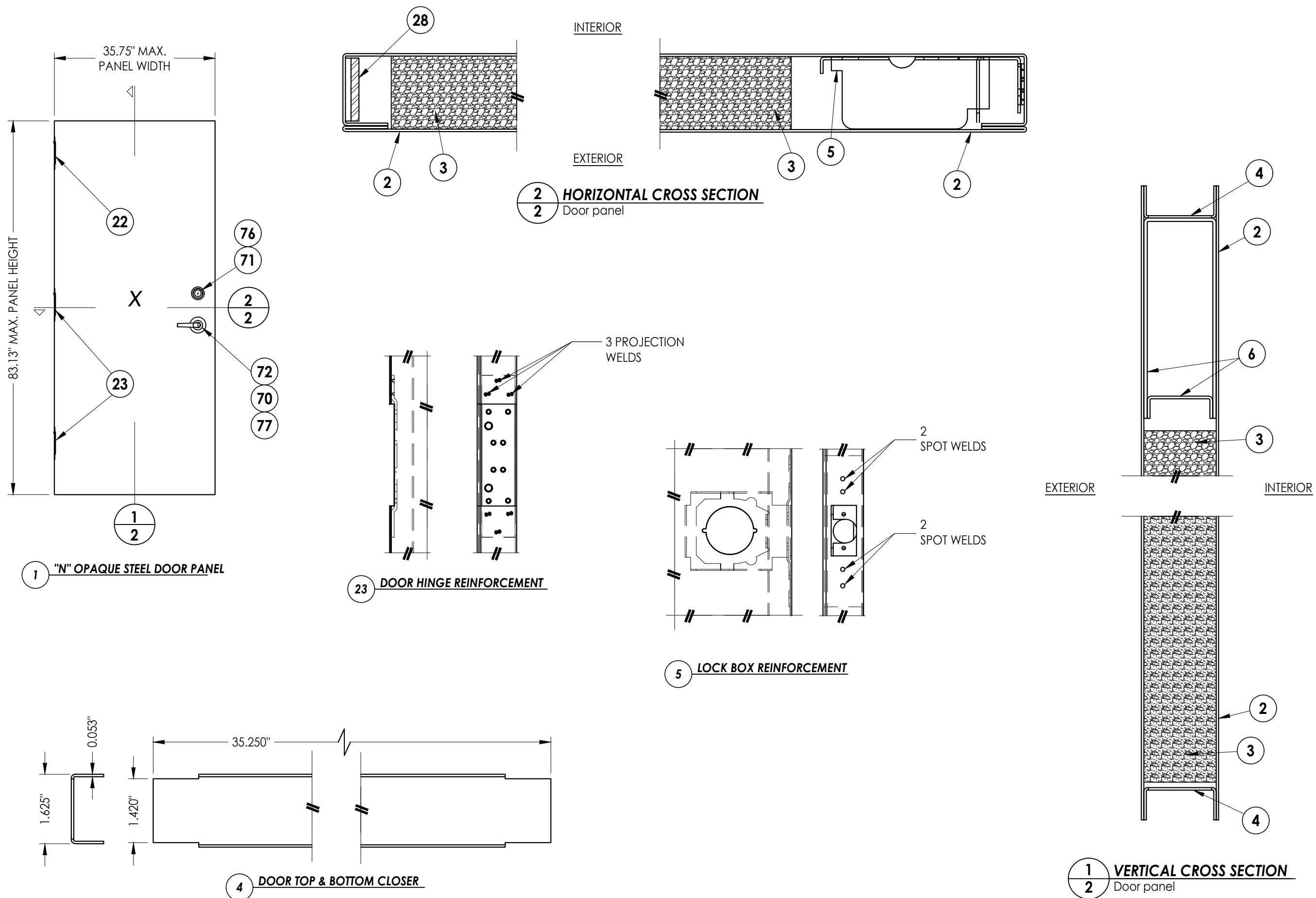
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CHK. BY: LFS

DRAWING NO.:

FL-12184.2

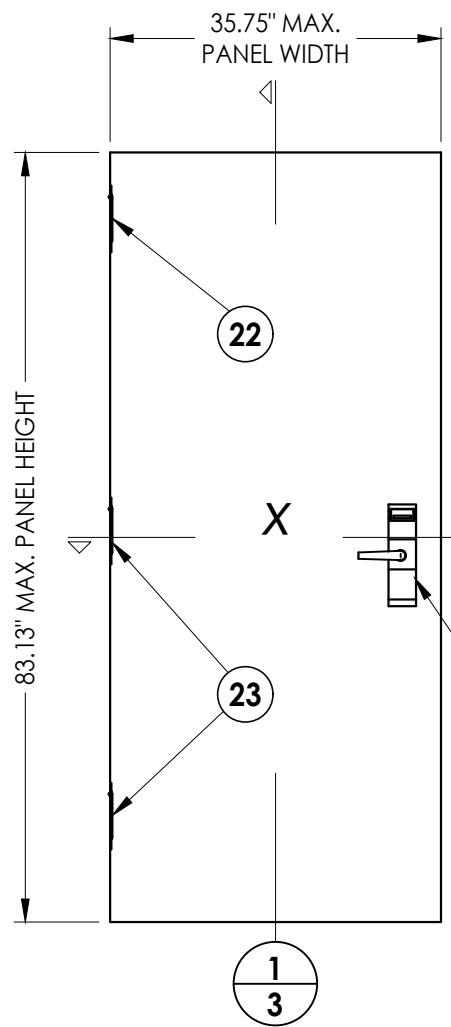
SHEET 1 OF 11



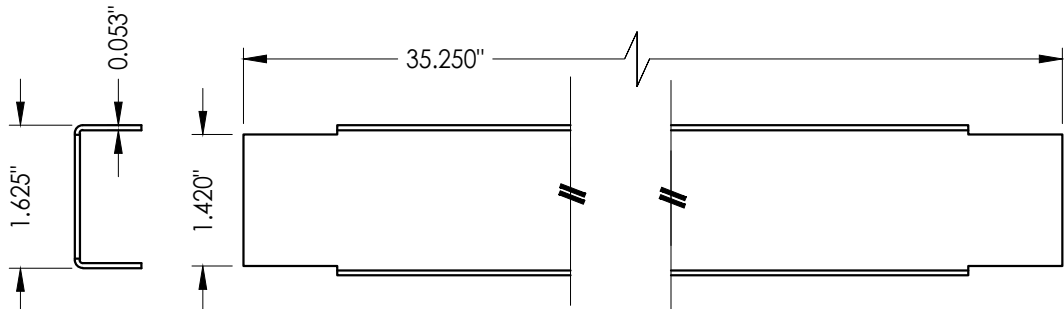
NOTE: ALL WELDING TO CONFORM w/ AMERICAN WELDING SOCIETY, ANSI/AWS AS PER FBC SECTION 2214.3.4.

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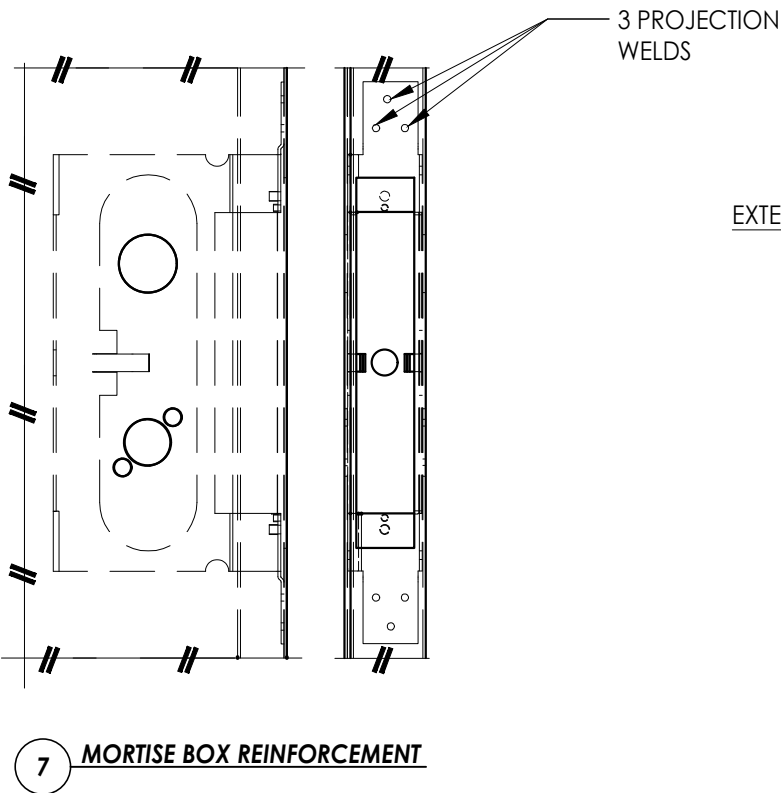
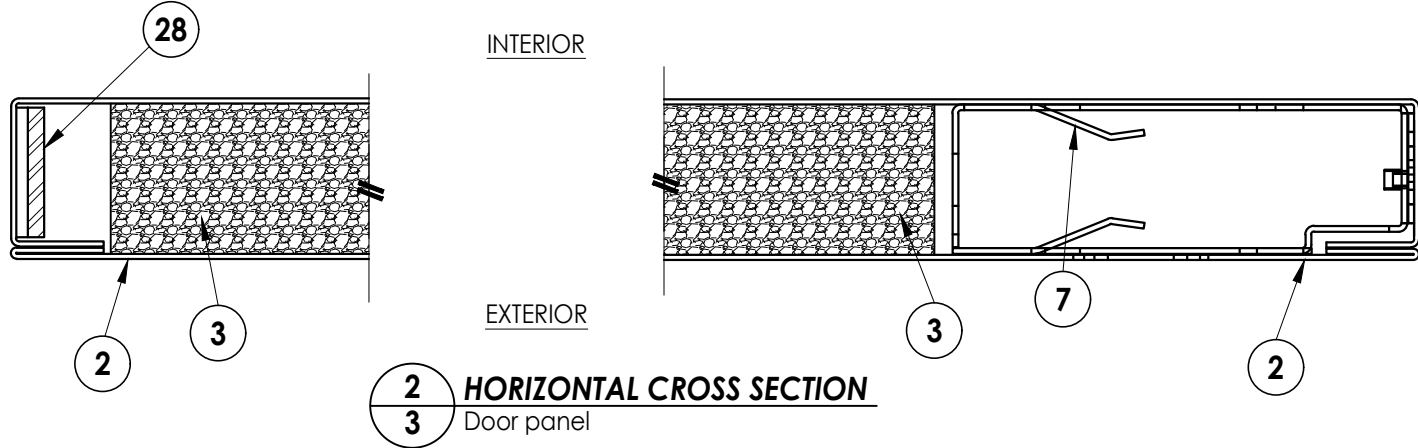
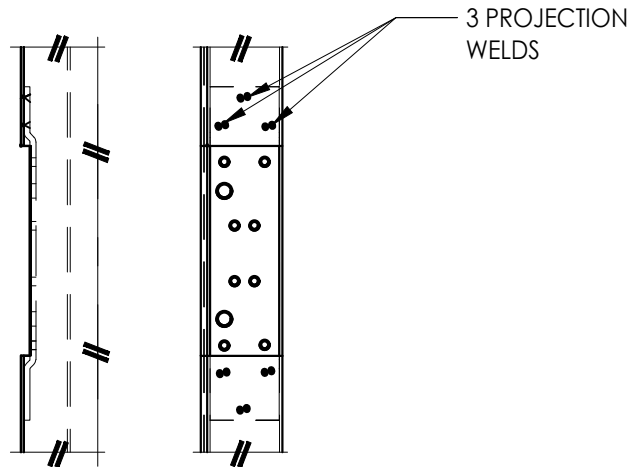


1 "N" OPAQUE STEEL DOOR PANEL

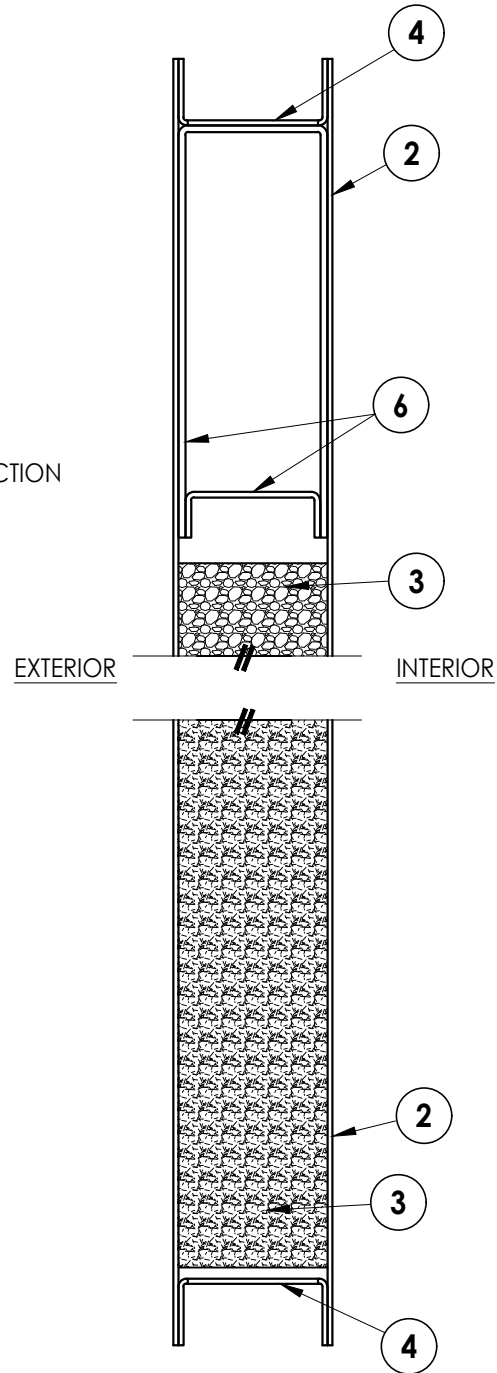


4 DOOR TOP & BOTTOM CLOSER

23 DOOR HINGE REINFORCEMENT



7 MORTISE BOX REINFORCEMENT



1 3 VERTICAL CROSS SECTION
Door panel

NO.	DATE	REVISIONS			
4	7/10/23	UPDATE TO 8TH ED.	(2023)	FBC	LFS
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2	7/17/17	UPDATE TO 6TH ED.	(2017)	FBC	LFS
1	10/14/16	UPDATE TO 5TH ED.	(2014)	FBC	JK

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FL-12184.2

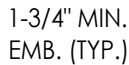
SHEET 3 OF 11

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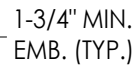
PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR

PART OR ASSEMBLY:
DOOR PANEL SECTIONS
86E MORTISE LOCK PREP

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EXTERIOR

$$\frac{1}{4}$$


DATE: 2/23/09

SCALE: *N.T.S.*

DWG. BY: AL

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DRAWING NO.:

SHEET 4 OF 1

PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR

PART OR ASSEMBLY:

HORIZONTAL CROSS SECTIONS

REVISIONS

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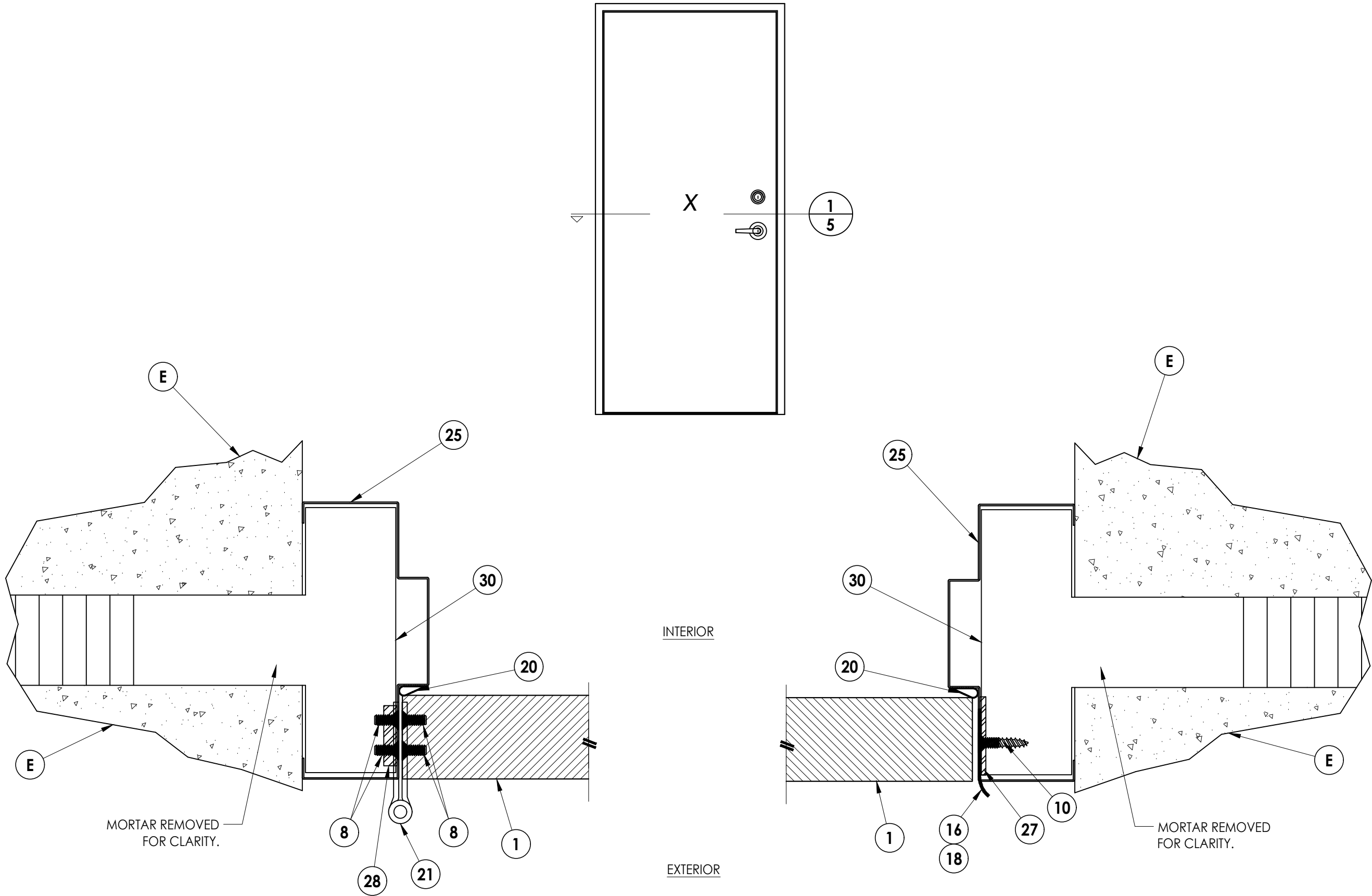
Rea Building Consultants, Inc.

P.O. Box 230, Valrico, FL 33595

Phone No.: 813.639.9191
EBPF Registry No 9813

FBPE Registry No. 9813

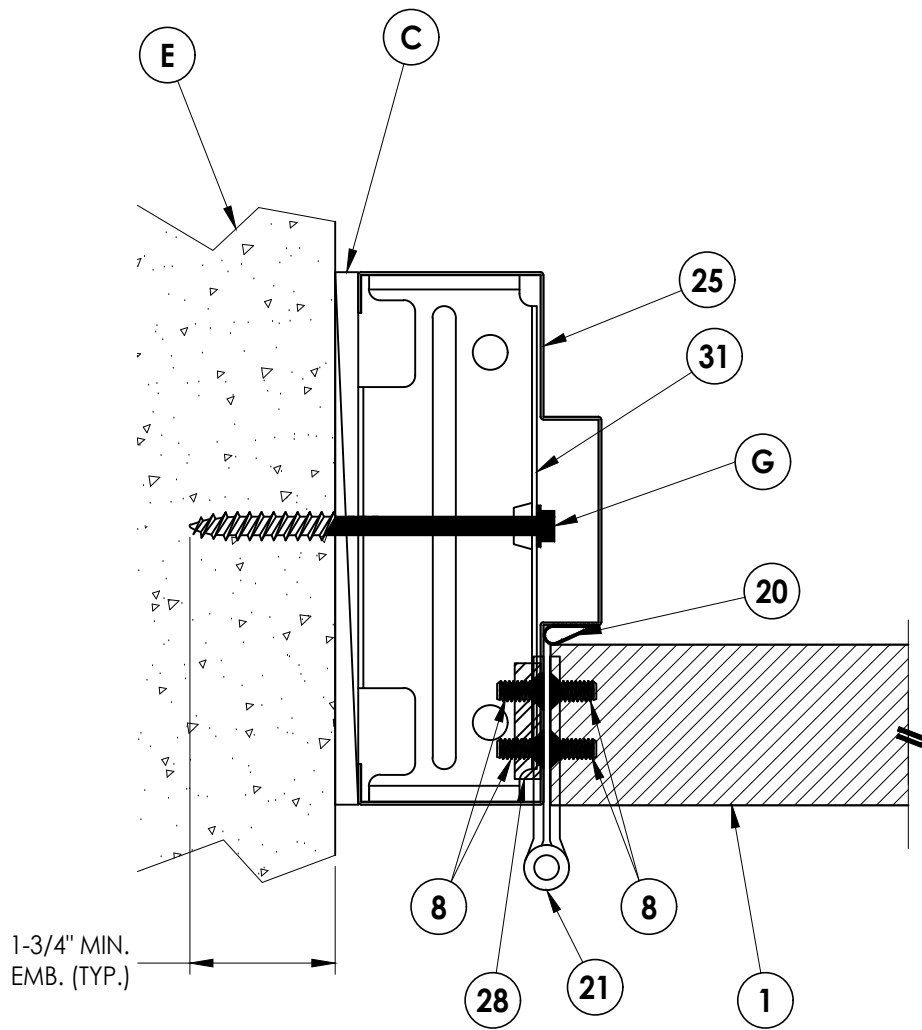
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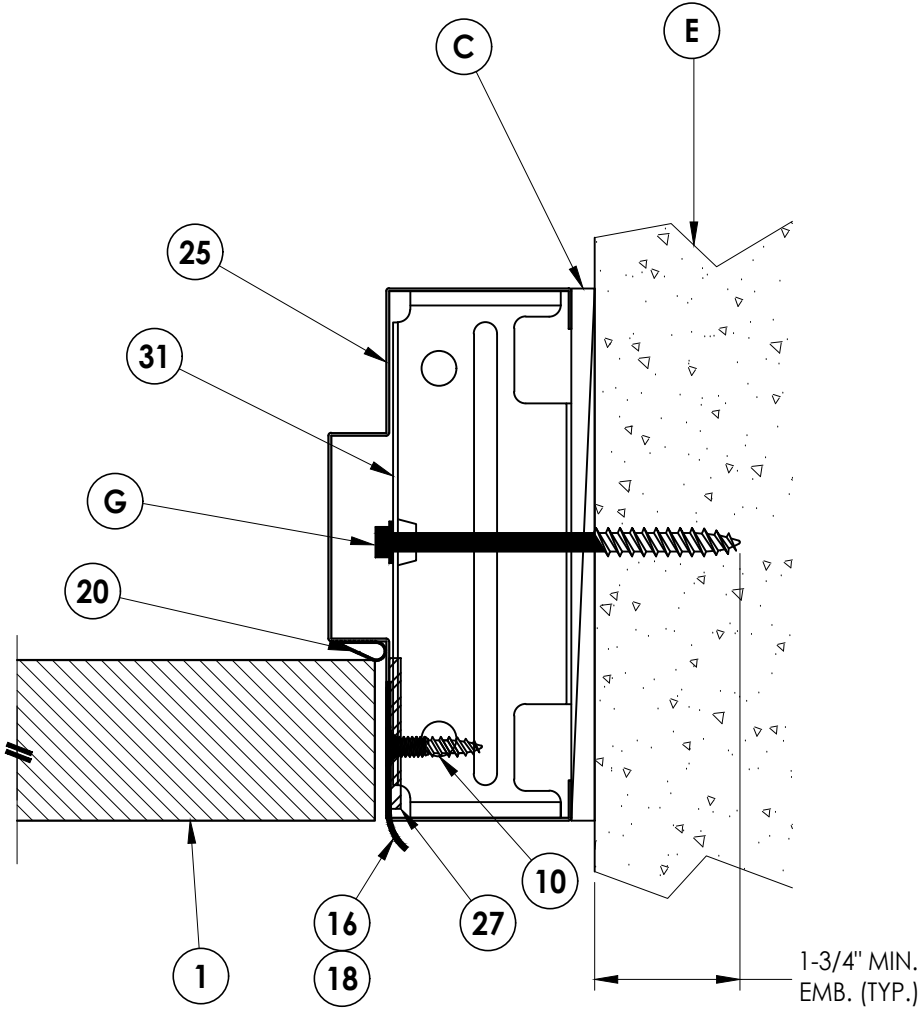
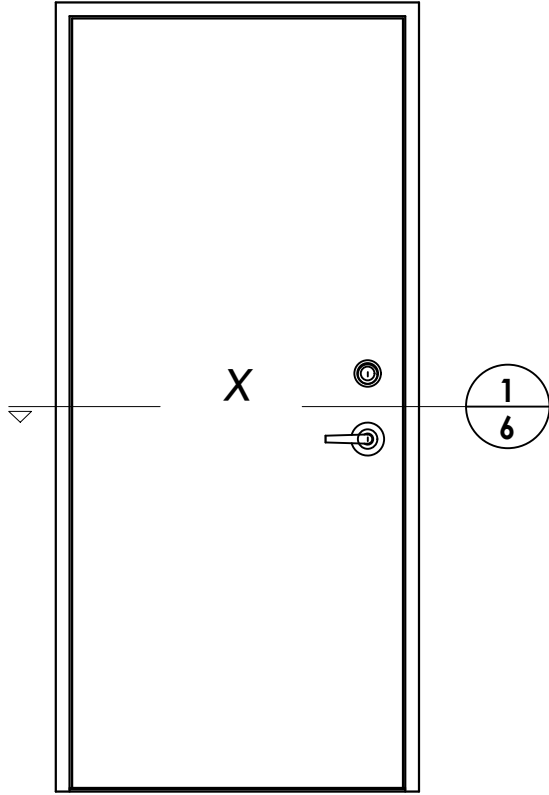
1/5 HORIZONTAL CROSS SECTION

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PRODUCT:		METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		PART OR ASSEMBLY: HORIZONTAL CROSS SECTIONS	
		4 7/10/23 UPDATE TO 8TH ED. (2023) FBC LFS		REVISIONS	
		3 7/30/20 UPDATE TO 7TH ED. (2020) FBC DAC			
		2 7/17/17 UPDATE TO 6TH ED. (2017) FBC LFS			
		1 10/14/16 UPDATE TO 5TH ED. (2014) FBC JK			
		NO. DATE			
DATE:		2/23/09			
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SHEET		5 OF 11			

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1
6 HORIZONTAL CROSS SECTION



DATE: 2/23/09

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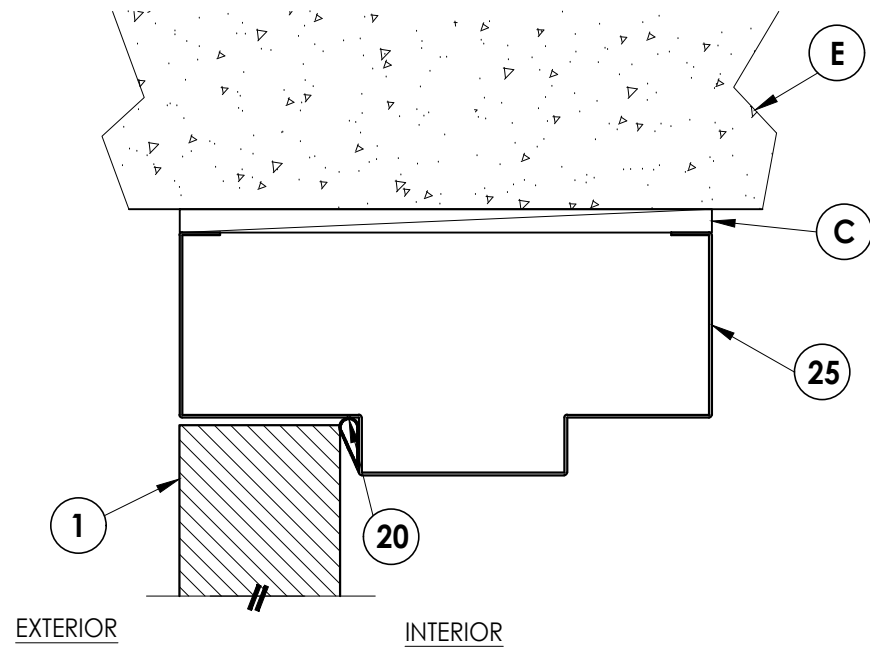
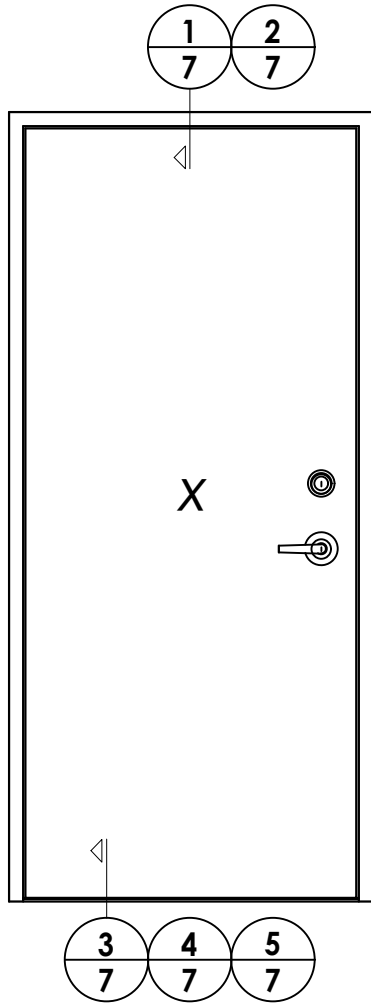
SHEET 6 OF 11

PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR

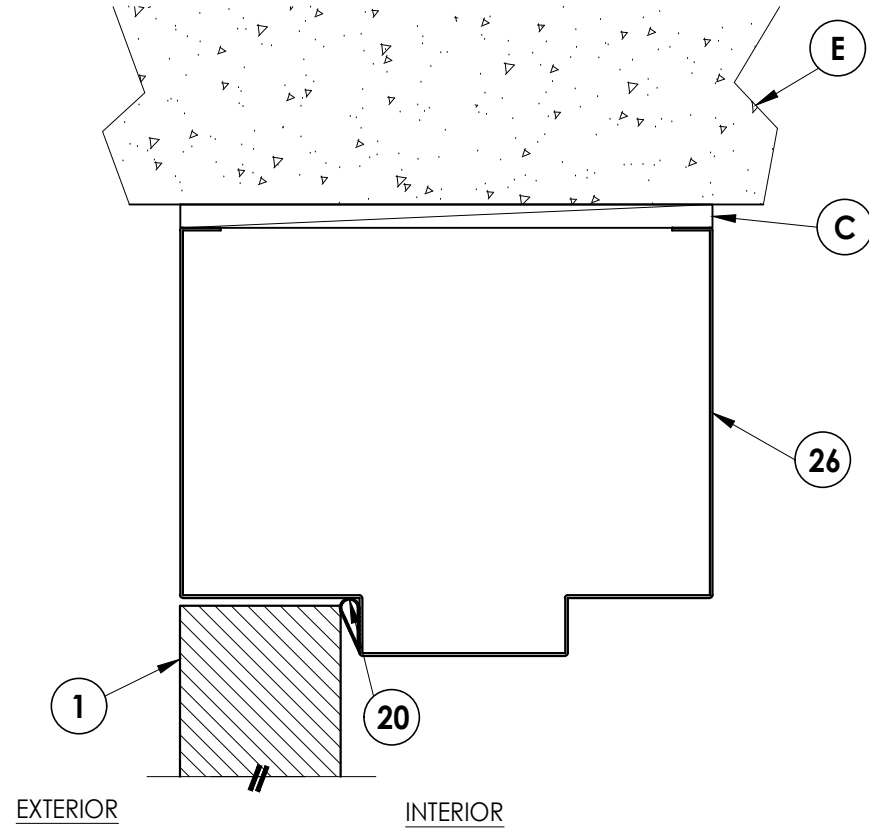
PART OR ASSEMBLY:
HORIZONTAL CROSS SECTIONS

Documents Prepared By:
Lyndon F. Schmidt
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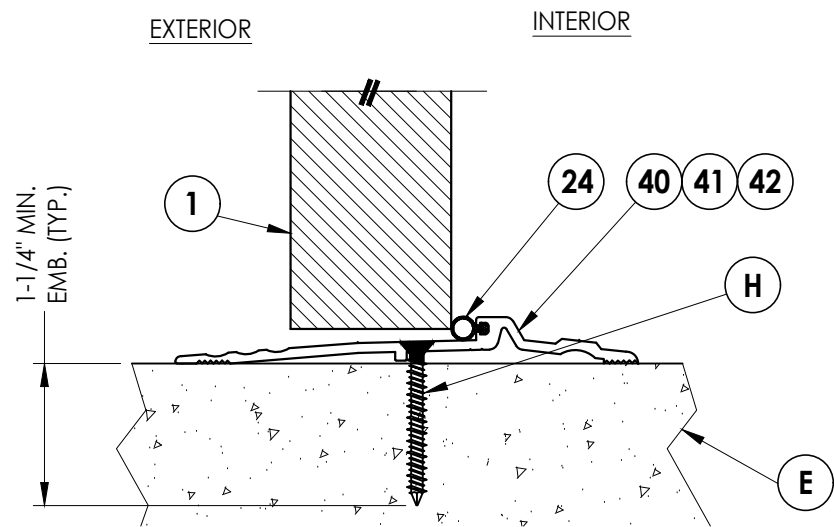
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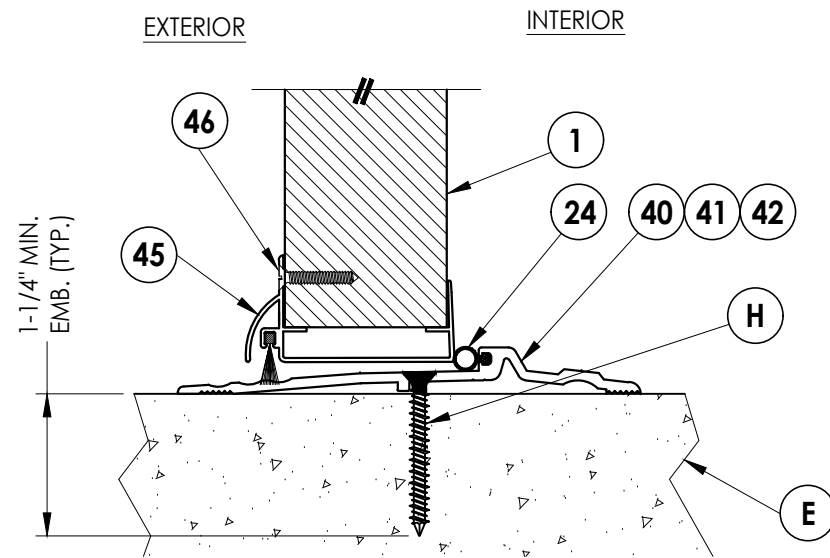
1 7 VERTICAL CROSS SECTION



2 VERTICAL CROSS SECTION
7

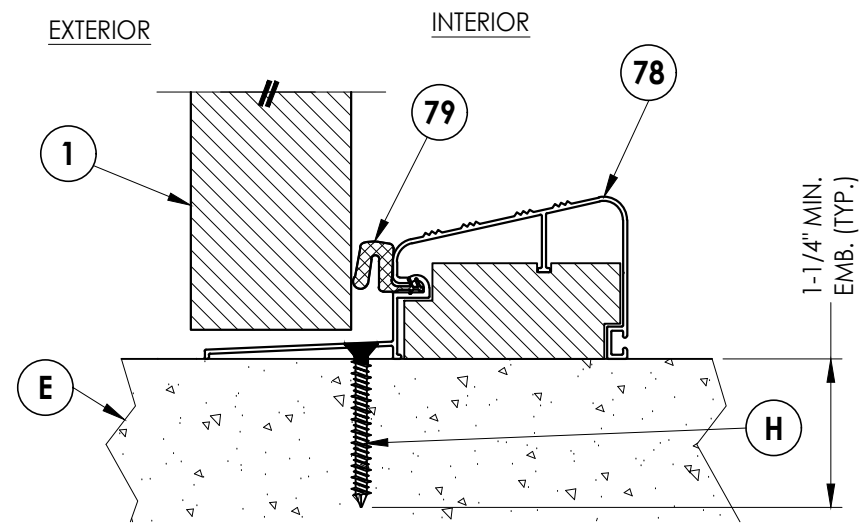


3 **VERTICAL CROSS SECTION**
7 Outswing configuration
 see general notes, sheet 1
 for "HVHZ" water infiltration
 requirements



4 7 **VERTICAL CROSS SECTION**

Outswing configuration
see general notes, sheet 1
for "HVHZ" water infiltration
requirements



5 VERTICAL CROSS SECTION

7

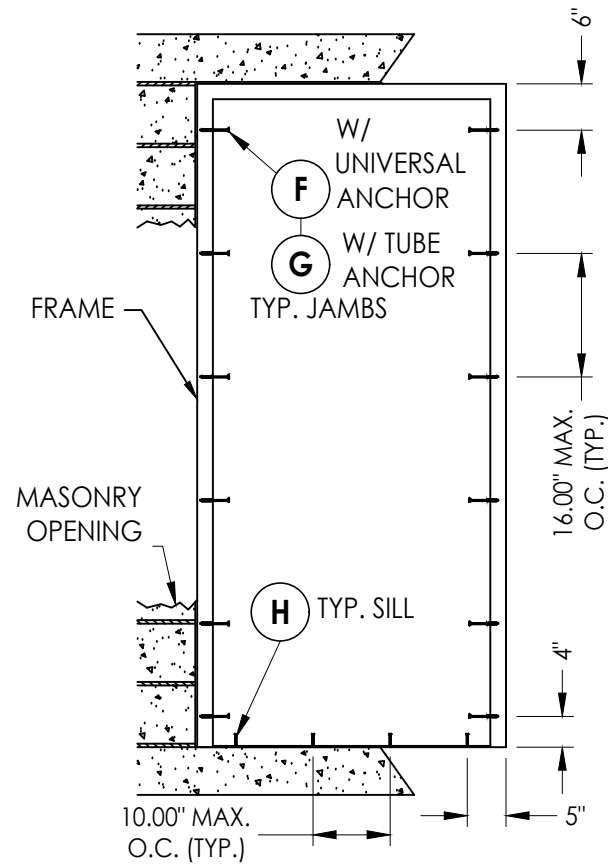
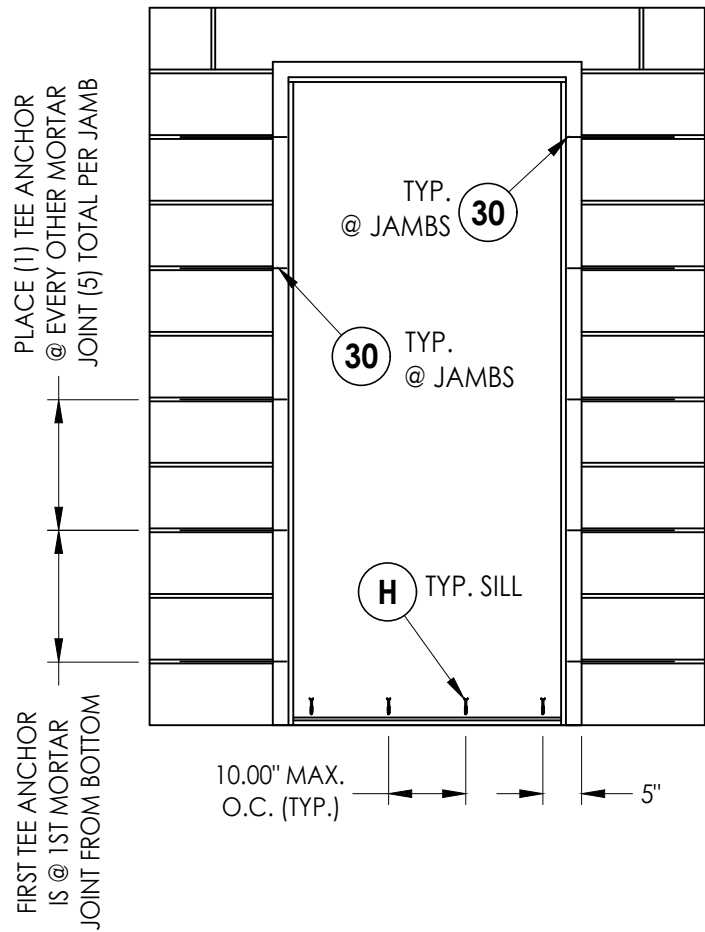
Outswing configuration
see general notes, sheet 1
for "HVHZ" water infiltration
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CONCRETE ANCHOR NOTES:

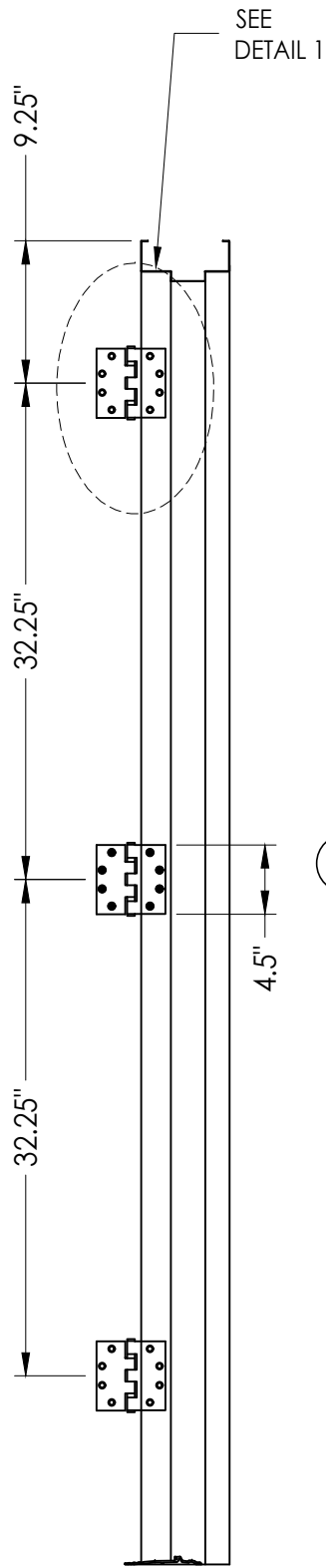
- Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
- Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. ON CENTER" dimension are not exceeded.
- 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"	2-1/2"	4"
DeWALT ULTRACON®	1/4"	1-1/4"	2-1/2"	4"
ITW TAPCON® XL	5/16"	1-3/4"	2-1/2"	5"
DeWALT ULTRACON®	5/16"	1-3/4"	3-1/8"	5"

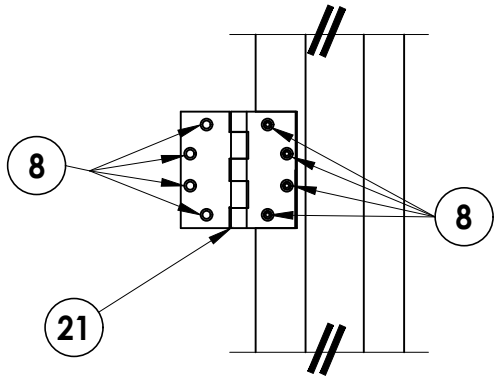
- Embedment may be through 1-1/4" face shell of hollow block.

PRODUCT:		METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		PART OR ASSEMBLY: FRAME ANCHORING		REVISIONS		DATE: 2/23/09	
								SHEET 8 OF 11	
Documents Prepared By:		Lyndon F. Schmidt P.E. No. 43409		RW BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813					
		4	7/10/23	UPDATE TO 8TH ED. (2023)	FBC	LFS			
		3	7/30/20	UPDATE TO 7TH ED. (2020)	FBC	DAC			
		2	7/17/17	UPDATE TO 6TH ED. (2017)	FBC	LFS			
		1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK			
		NO.	DATE			BY			

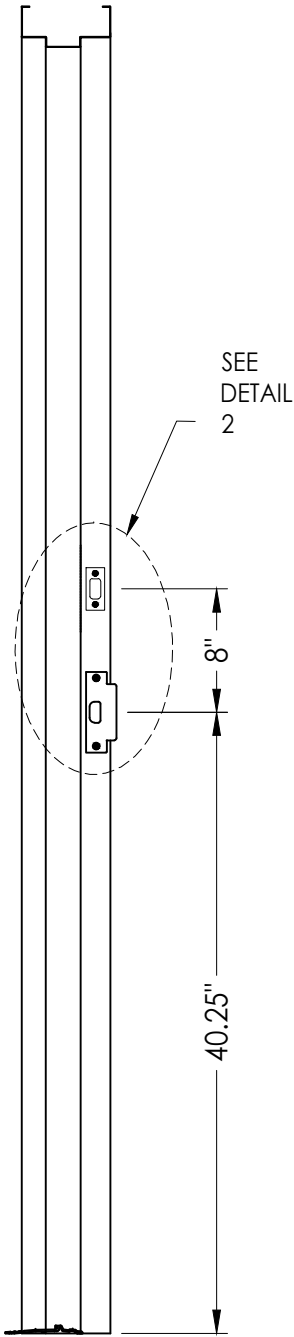
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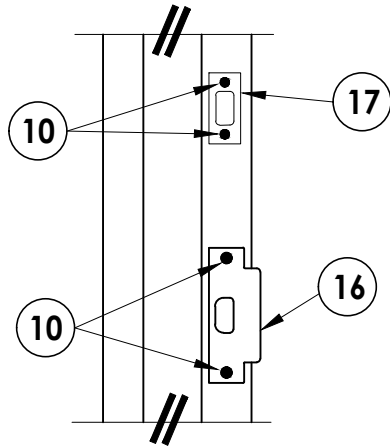
HINGE JAMB



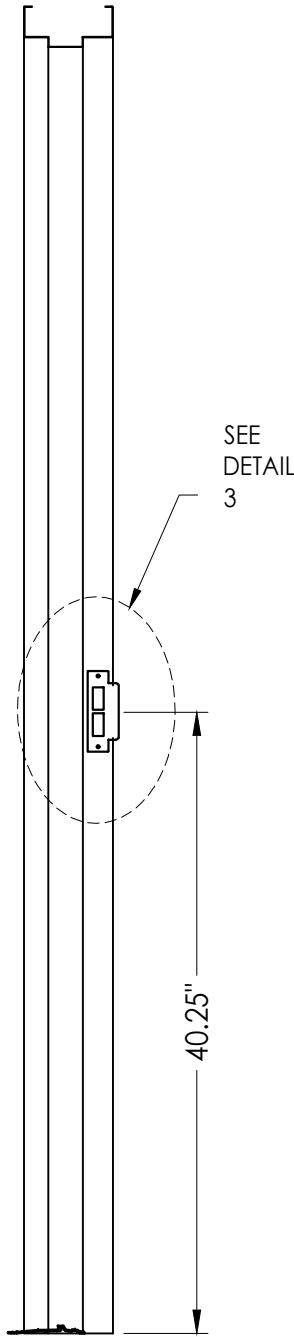
DETAIL 1



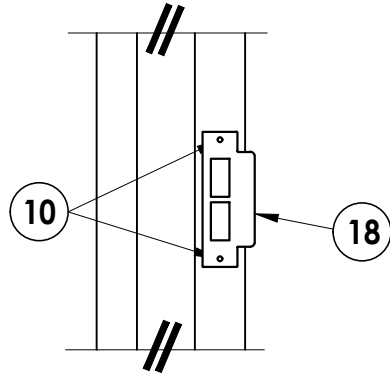
STRIKE JAMB
ANSI STRIKE & DEADBOLT STRIKE



DETAIL 2



STRIKE JAMB
MORTISE STRIKE



DETAIL 3

NO.		DATE	REVISIONS			
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3	7/30/20	UPDATE TO 7TH ED.	(2020)	FBC	DAC	
2	7/17/17	UPDATE TO 6TH ED.	(2017)	FBC	LFS	
1	10/14/16	UPDATE TO 5TH ED.	(2014)	FBC	JK	
					BY	

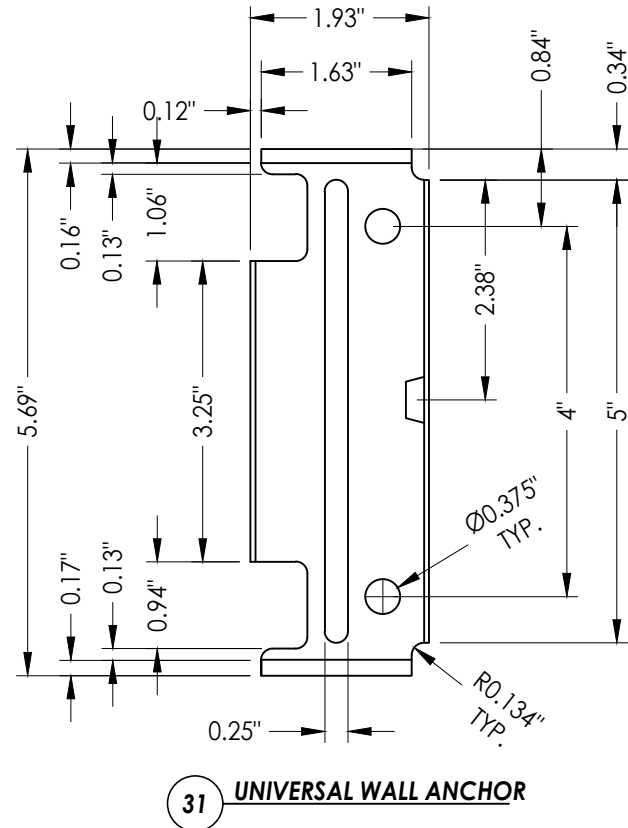
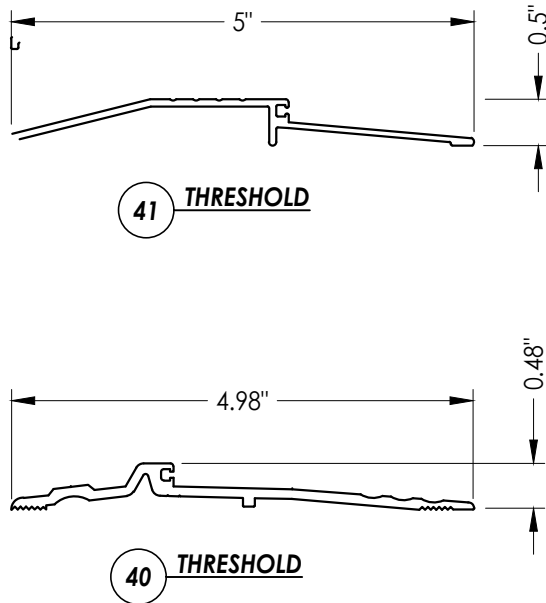
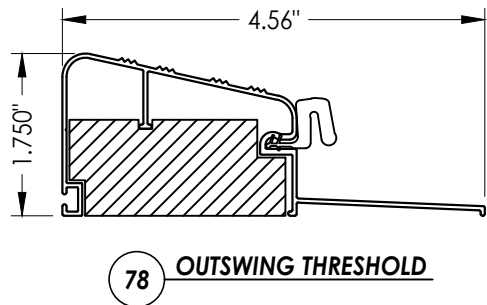
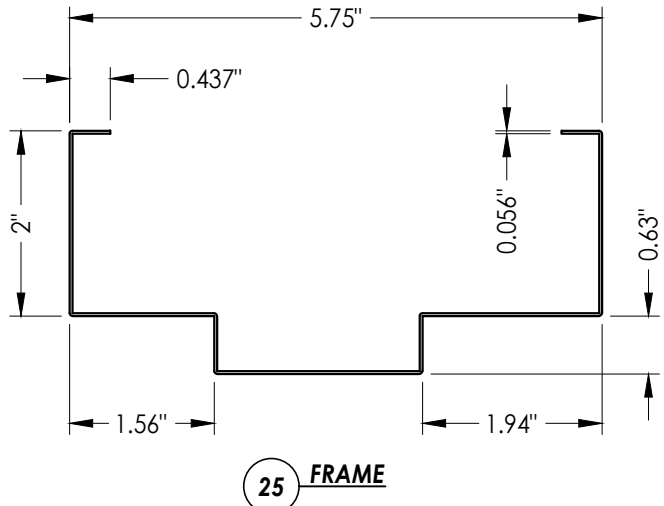
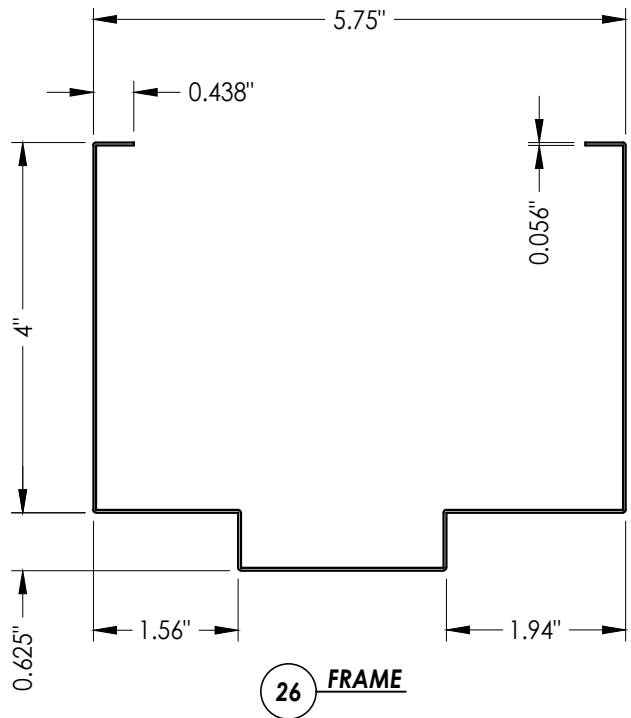
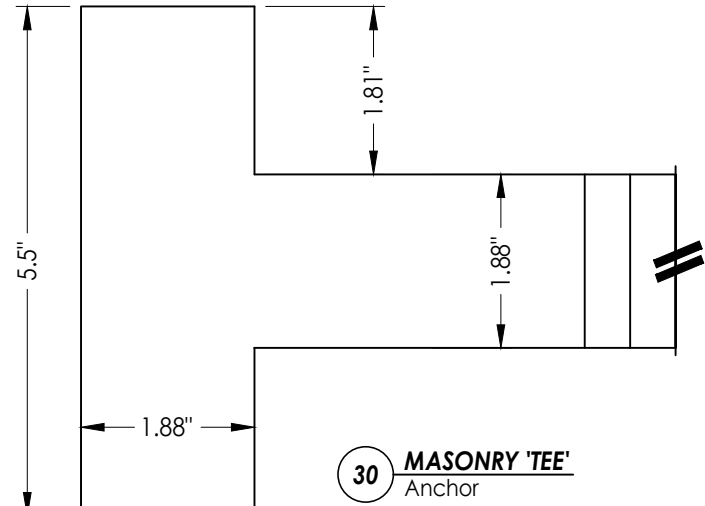
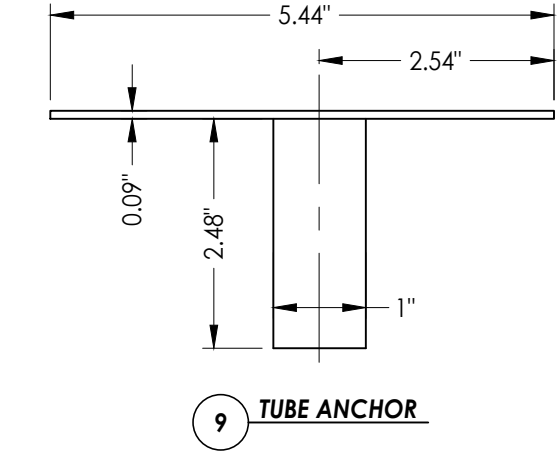
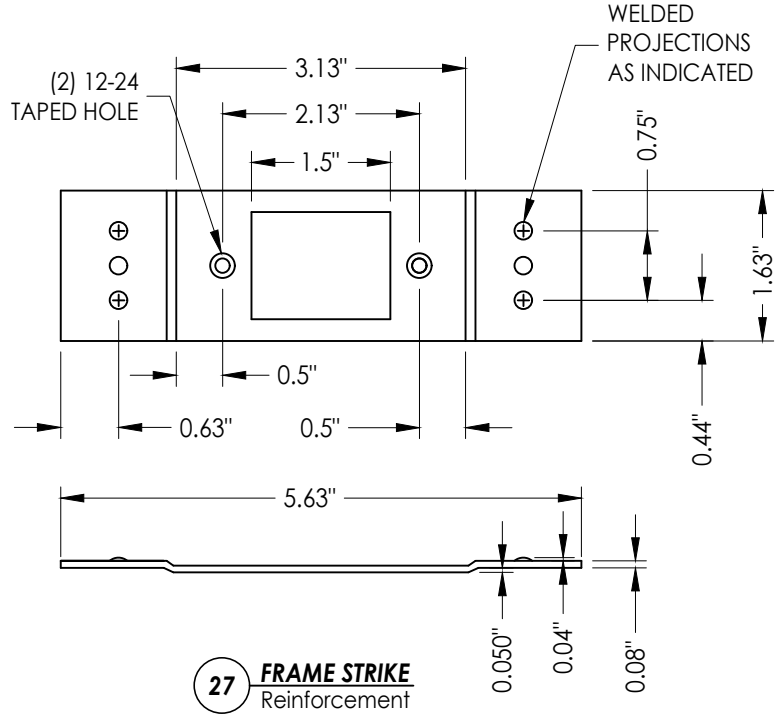
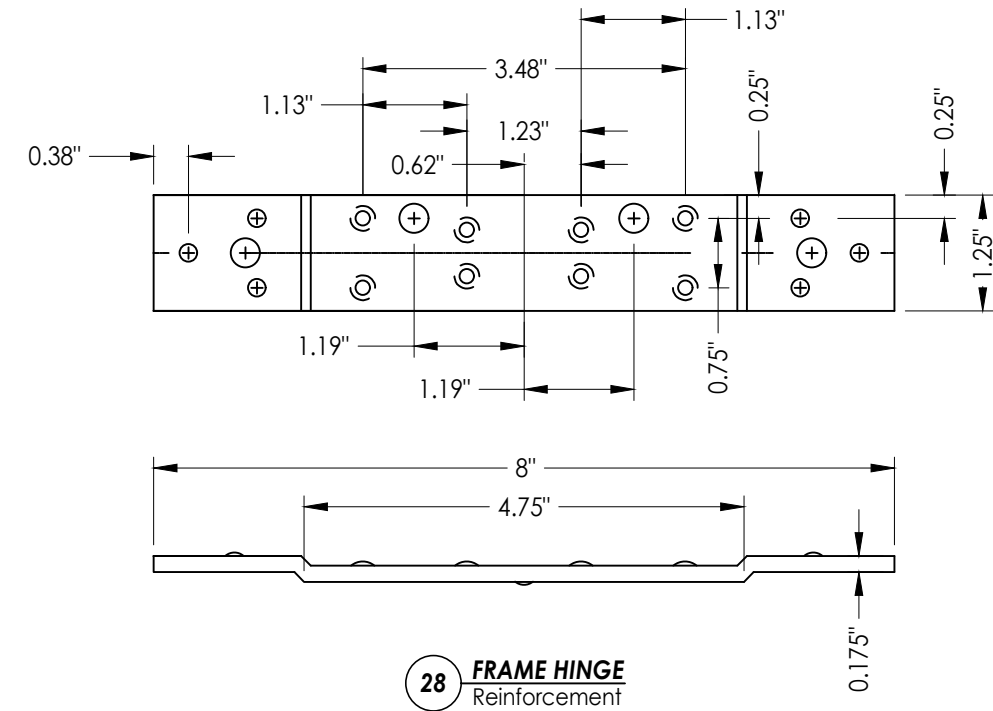
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SCALE:	N.T.S.
DWG. BY:	AL
CHK. BY:	LFS
DRAWING NO.:	FL-12184.2
SHEET	9 OF 11

PRODUCT:	METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR
	PART OR ASSEMBLY: ANCHORING DETAILS

Documents Prepared By:
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FBPE Registry No. 9813

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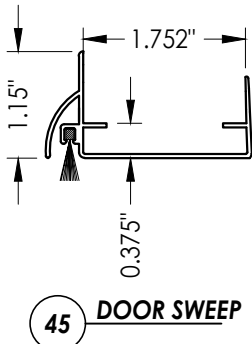
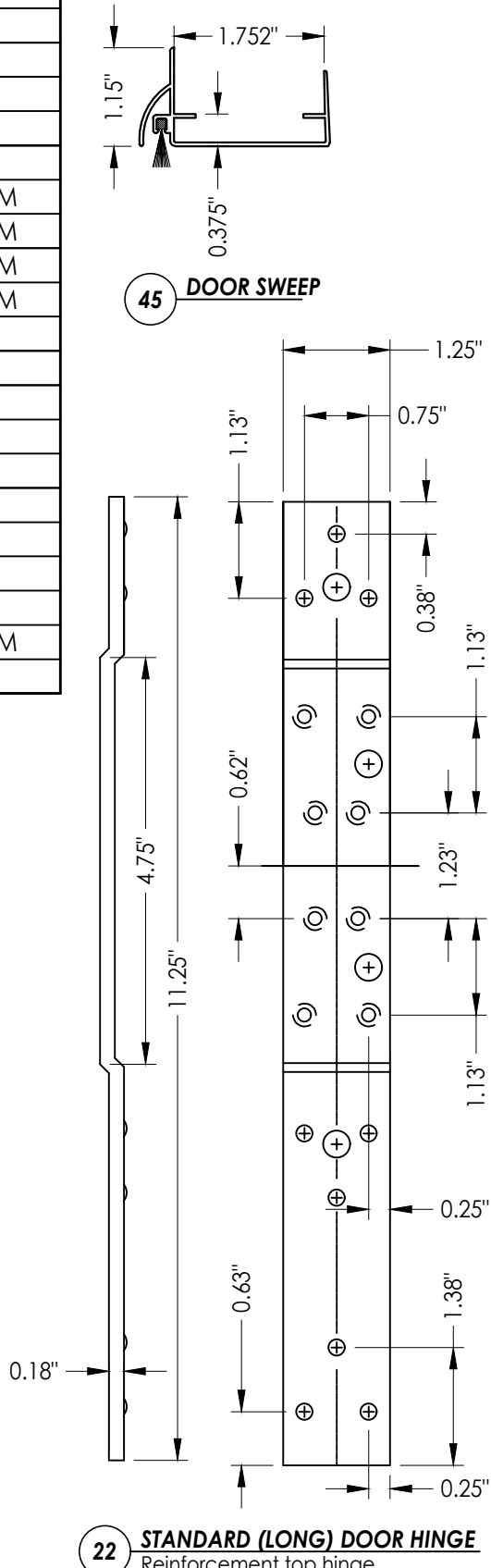
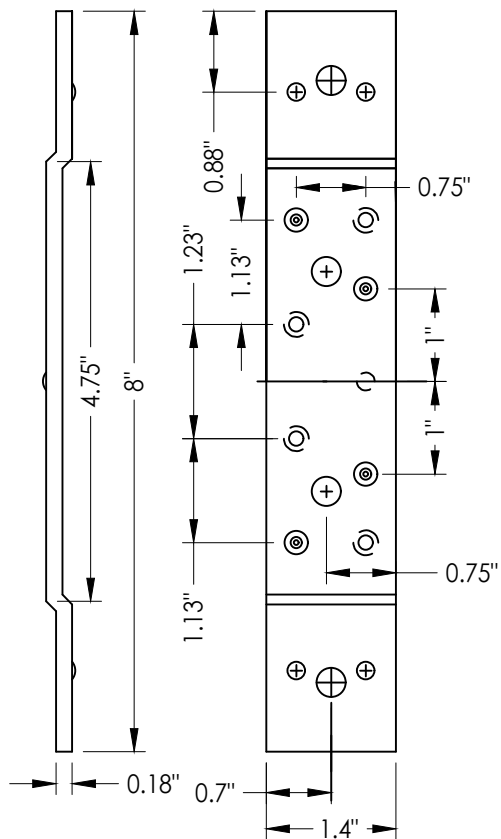
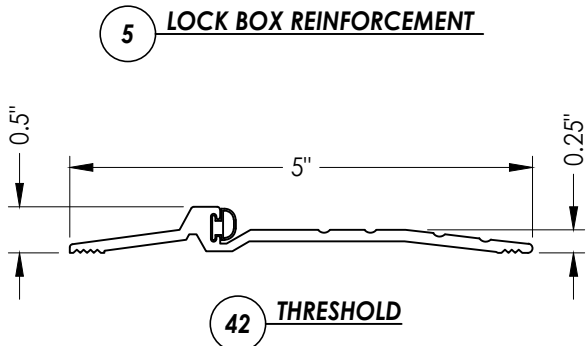
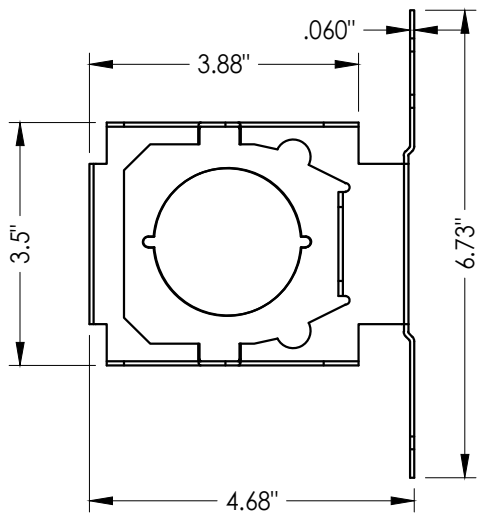
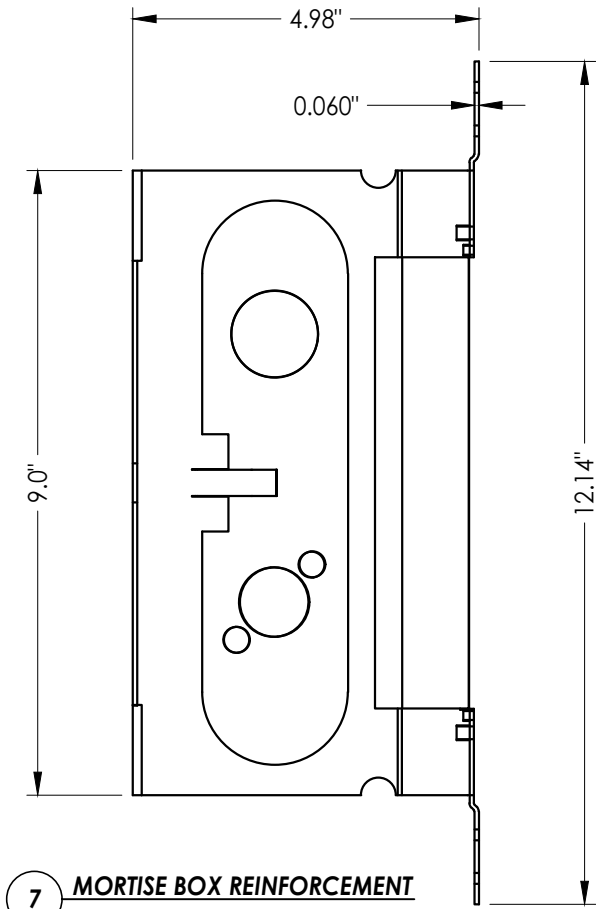
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SCALE:		N.T.S.
DWG. BY:		AL
CHK. BY:		LFS
DRAWING NO.:		FL-12184.2
SHEET		10 OF 11

PRODUCT:		METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR
PART OR ASSEMBLY:		COMPONENTS

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BILL OF MATERIALS					
ITEM	DESCRIPTION	MATERIAL	ITEM	DESCRIPTION	MATERIAL
C	MAX. 1/4" SHIM SPACE	-	23	STANDARD (SHORT) DOOR HINGE MIDDLE BOTTOM REINFORCEMENT	STEEL
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE	24	WEATHER STRIP (THRESHOLD)	NEOPRENE
			25	FRAME 5-3/4" MIN. (0.056" THK)	STEEL
F	5/16" X 5" PFH ITW OR DeWALT CONCRETE SCREW	STEEL	26	FRAME 5-3/4" MIN. WITH 4" HEAD	STEEL
G	5/16" X 4" HWH ITW OR DeWALT CONCRETE SCREW	STEEL	27	STRIKE REINFORCEMENT	STEEL
H	1/4" X 1-3/4" PFH ITW OR DeWALT CONCRETE SCREW	STEEL	28	FRAME HINGE REINFORCEMENT	STEEL
1	"N" OPAQUE STEEL DOOR PANEL	-	30	MASONRY 'TEE' ANCHOR (PFMT5)	STEEL
2	DOOR SKIN (0.042" THK. STEEL, Fy = 40,300 PSI MIN.)	STEEL	31	UNIVERSAL WALL ANCHOR	STEEL
3	FOAM 1.0 PCF MIN. DENSITY	POLYSTYRENE	40	THRESHOLD NATIONAL GUARD PRODUCTS, INC. #896	ALUMINUM
4	DOOR TOP & BOTTOM CLOSER	STEEL	41	THRESHOLD NATIONAL GUARD PRODUCTS, INC. #950	ALUMINUM
5	LOCK BOX REINFORCEMENT	STEEL	42	THRESHOLD PEMKO #2005V	ALUMINUM
6	CLOSER REINFORCEMENT	STEEL	45	95WHA DOOR SWEEP NATIONAL GUARD PRODUCTS, INC.	ALUMINUM
7	MORTISE BOX REINFORCEMENT	STEEL	46	#6 X 3/4" PHILIPS HEAD SMS	STEEL
8	#12-24 x 1/2" SELF TAPPING	STEEL	70	SCHLAGE LOCK SET ASSEMBLY ND53PD	STEEL
9	TUBE ANCHOR	STEEL	71	DESIGN HARDWARE D1-S SERIES DEADBOLT	STEEL
10	#12-24 x 1.0" COMBINATION MACHINE / WOOD SCREW	STEEL	72	DESIGN HARDWARE "Z" SERIES ENTRY	STEEL
16	ANSI LATCH STRIKE	STEEL	73	86E MORTISE LOCK- ONITY CT SERIES	STEEL
17	DEADBOLT STRIKE	STEEL	74	86E MORTISE LOCK- ONITY HT SERIES	STEEL
18	ANSI MORTISE STRIKE	STEEL	75	86E MORTISE LOCK- ONITY ADVANCE SERIES	STEEL
20	WEATHER-STRIP	NEOPRENE	76	DESIGN HARDWARE D2-S SERIES DEADBOLT	STEEL
21	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL	77	DESIGN HARDWARE "X" SERIES ENTRY	STEEL
22	STANDARD (LONG) DOOR HINGE TOP HINGE REINFORCEMENT	STEEL	78	OUTSWING THRESHOLD BY DLP #QOSH	ALUMINUM
			79	WEATHER-STRIP	FOAM



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

PRODUCT:
METAL MANUFACTURING
INDUSTRIES
"N" STEEL DOOR

PART OR ASSEMBLY:
BILL OF MATERIALS
& COMPONENTS

DATE: 2/23/09

SCALE: N.T.S.

DWG. BY: AL

CHK. BY: LFS

DRAWING NO.: FL-12184.2

SHEET 11 OF 11

REVISIONS

NO. DATE

4 7/10/23 UPDATE TO 8TH ED. (2023) FBC LFS

3 7/30/20 UPDATE TO 7TH ED. (2020) FBC DAC

2 7/17/17 UPDATE TO 6TH ED. (2017) FBC LFS

1 10/14/16 UPDATE TO 5TH ED. (2014) FBC JK

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