

Z:\2023 FBC Drawings\Metal Mfg Industries\FL-12166 R5\FL-12166.1-9.dwg



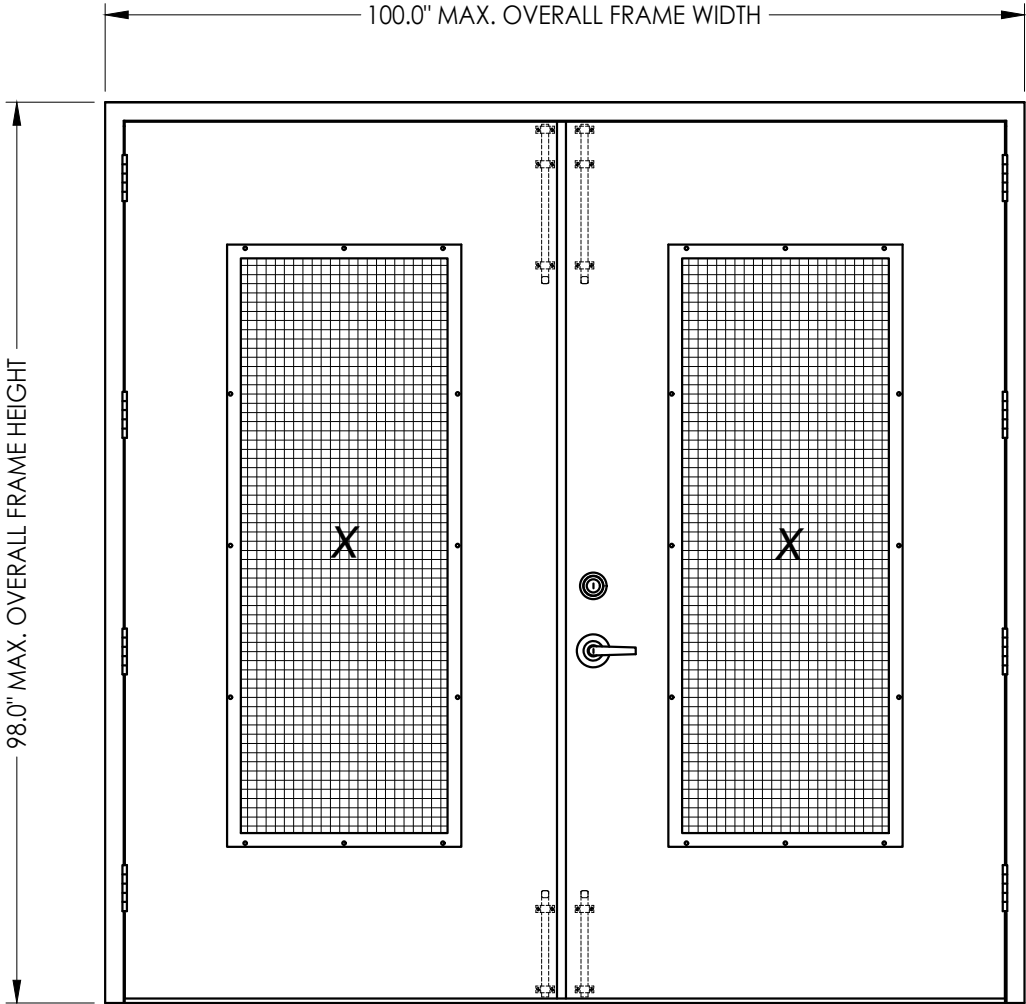
PRIV. DE RIO SANTIAGO #30
COL. LA RAZA
SOLEDAD DE GRACIANO SANCHEZ
SAN LUIS POTOSI, C.P. 78433

"N" SERIES COMMERCIAL STEEL DOOR OUTSWING "IMPACT"

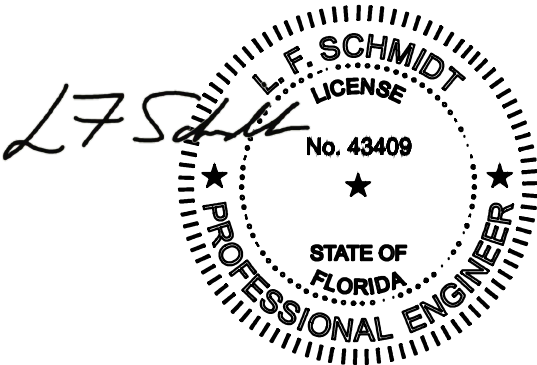
GENERAL NOTES

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 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.
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 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.
7. The "N" door achieves a Class III stiffness classification per Section 8.2.2 of ANSI A250.13 (based on opaque door).
8. When used in the "HVHZ", steel must be protected as specified in FBC Section 2222.6.
9. Louvered doors do not meet the air infiltration requirements of ASTM E 283.

TABLE OF CONTENTS	
SHEET #	DESCRIPTION
1	Typical elevation, design pressures & general notes
2	Door panel details
3	Horizontal & vertical cross sections
4	Anchoring details
5	Components
6	Bill of materials & components



OVERALL FRAME DIMENSION	DESIGN PRESSURE (PSF)	
	POSITIVE	NEGATIVE
100.0" x 98.0"	+75.0	-75.0



Digitally signed by
Lyndon F Schmidt
Date: 2026.07.23
17:08:32 -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

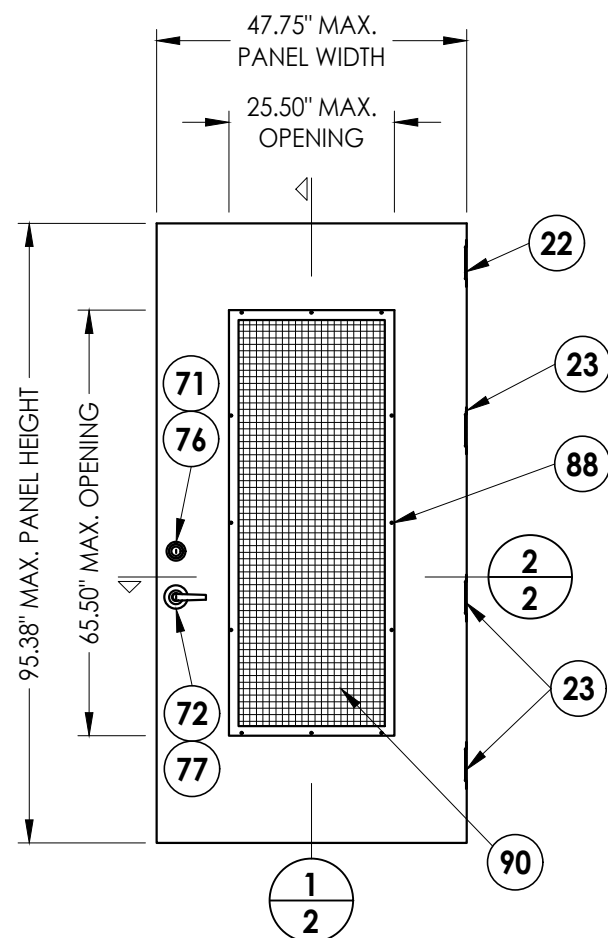
PRODUCT:
METAL MANUFACTURING INDUSTRIES
"N" STEEL DOOR
PART OR ASSEMBLY:
TYPICAL ELEVATION, DESIGN PRESSURES & GENERAL NOTES

5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS
4	7/11/23	UPDATE TO 8TH ED. (2023)	FBC	LFS
3	7/30/20	UPDATE TO 7TH ED. (2020)	FBC	DAC
2	7/19/17	UPDATE TO 6TH ED. (2017)	FBC	LFS
1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK
NO.	DATE			BY
REVISIONS				

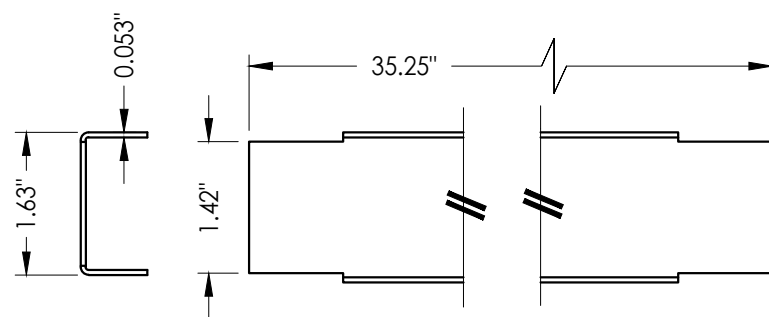
DATE: 2/23/09
SCALE: N.T.S.
DWG. BY: AL
CHK. BY: LFS
DRAWING NO.: FL-12166.1
SHEET 1 OF 6

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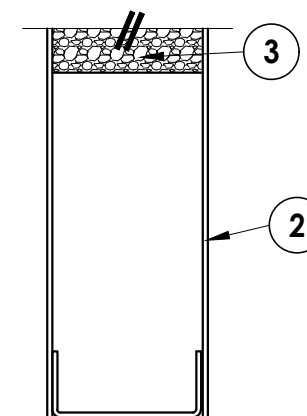
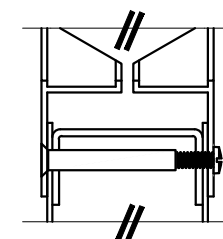
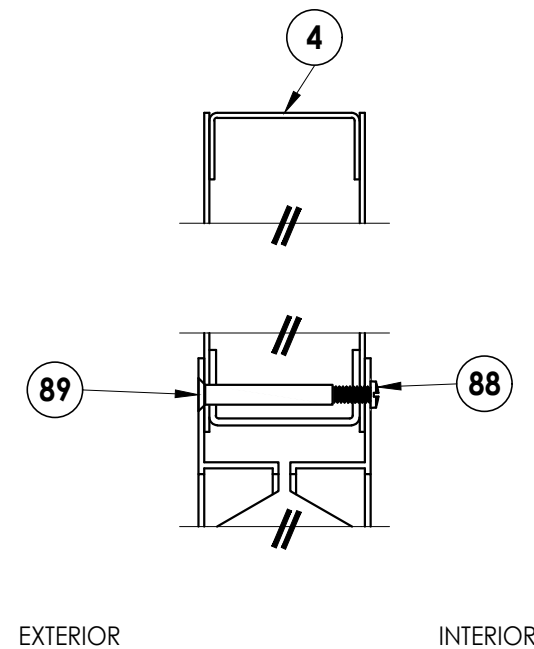
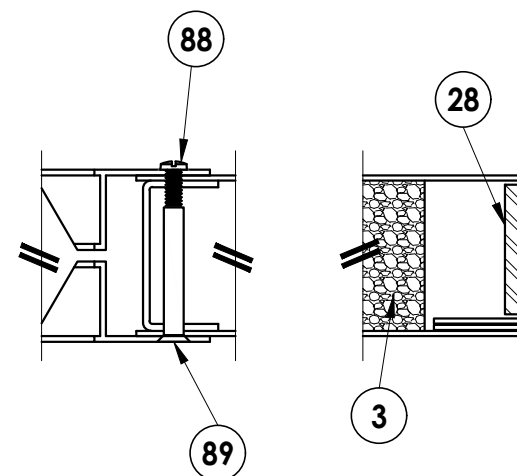
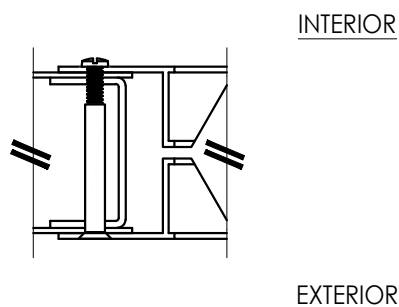
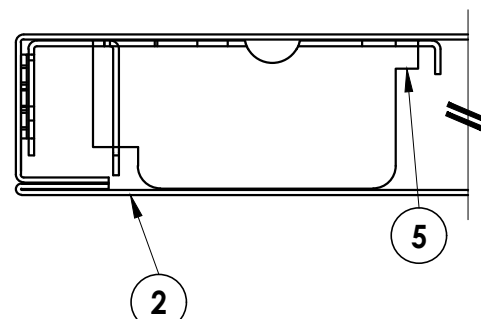
RW BUILDING CONSULTANTS, INC.
P.O. Box 230, Vairico, FL 33595
Phone No.: 813.659.9197
FBPE Registry No. 9813



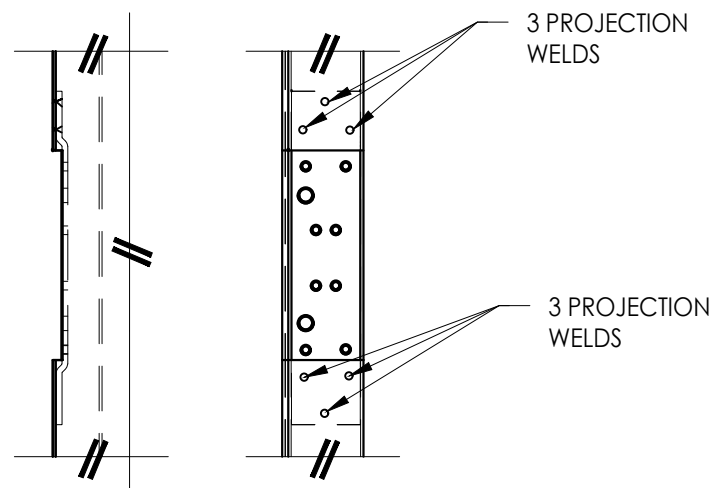
1 "N" STEEL DOOR PANEL



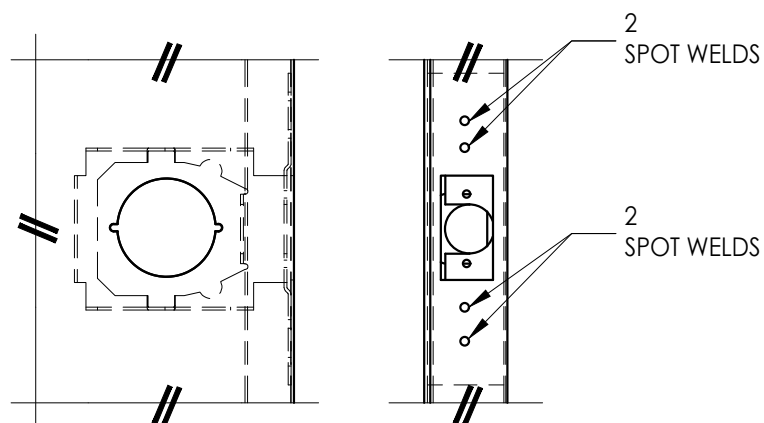
4 DOOR TOP & BOTTOM CLOSER



1 VERTICAL CROSS SECTION



23 DOOR HINGE REINFORCEMENT

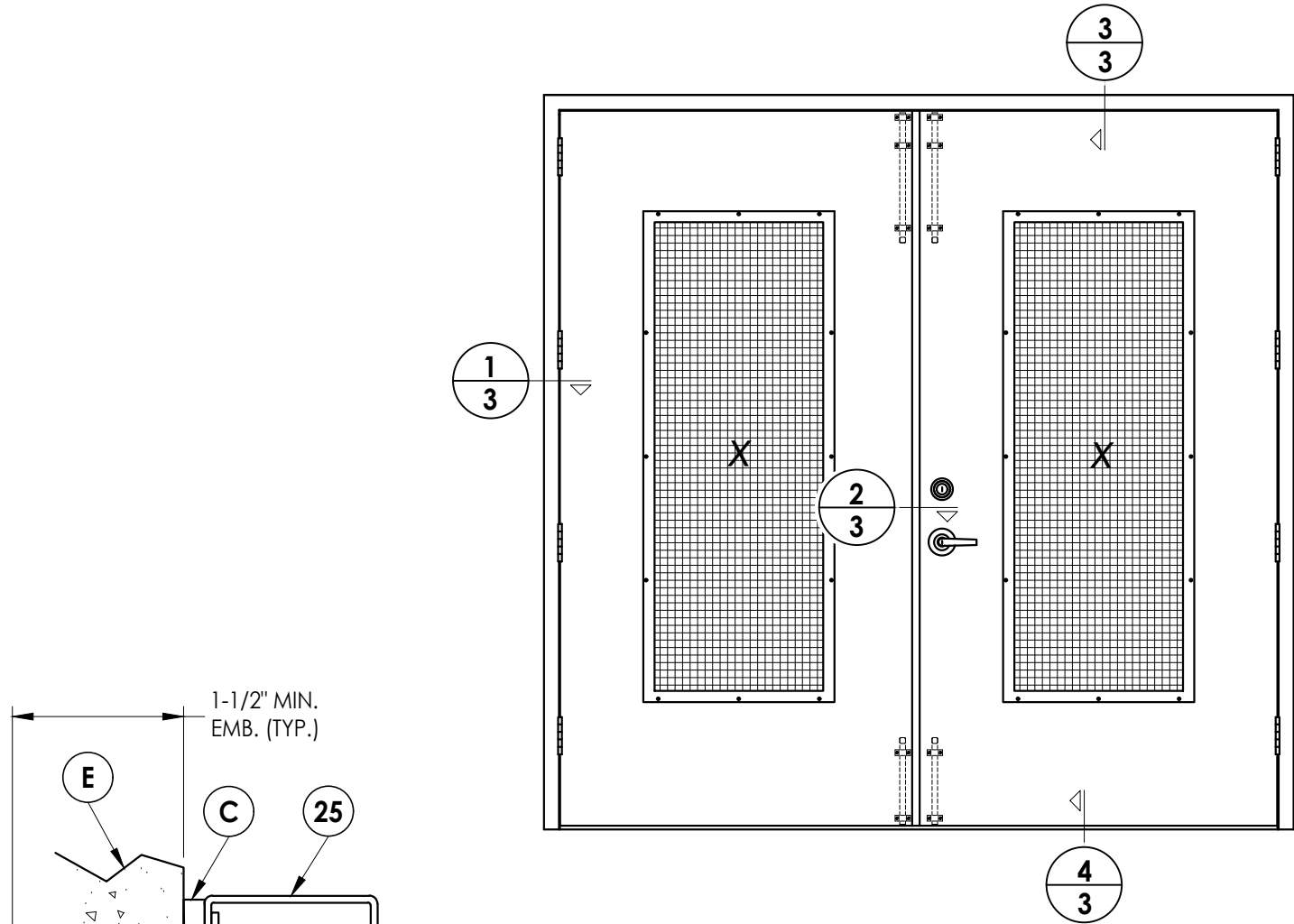


5 LOCK BOX REINFORCEMENT

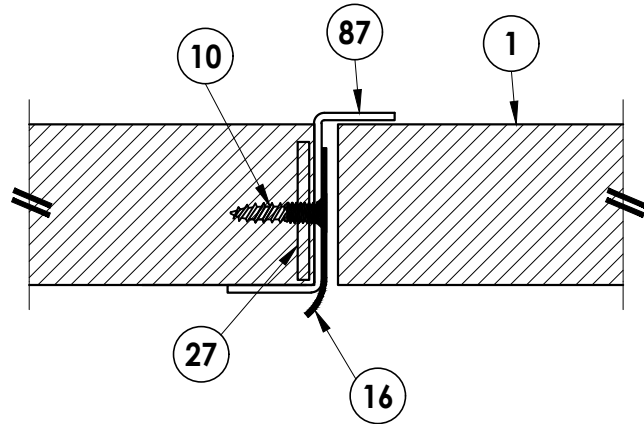
NOTE: ALL WELDING TO CONFORM w/ AMERICAN WELDING SOCIETY, ANSI/AWS AS PER FBC SECTION 2214.3.4.

PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		PART OR ASSEMBLY: DOOR PANEL DETAILS	
DOCUMENTS PREPARED BY: Lyndon F. Schmidt P.E. No. 43409			
BUILDING CONSULTANTS, INC. P.O. Box 230, Valrico, FL 33595 Phone No.: 813.659.9197 FBPE Registry No. 9813			

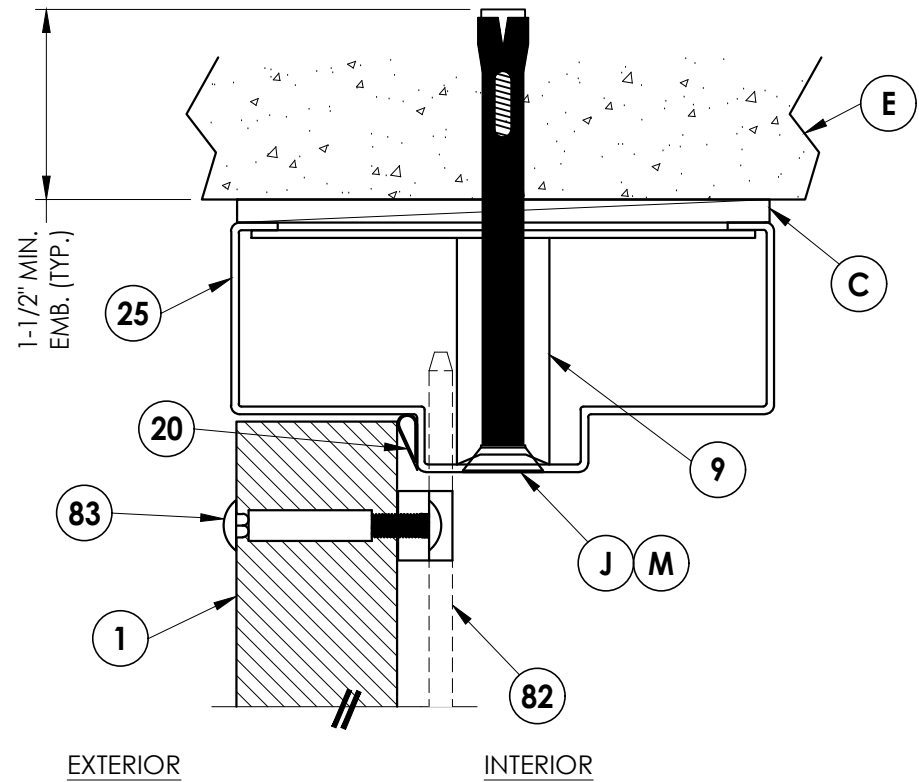
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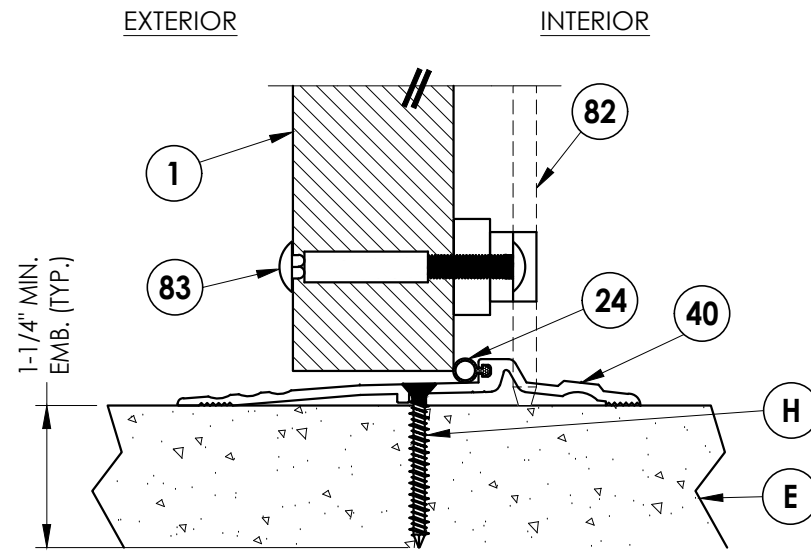
1
3 HORIZONTAL CROSS SECTION



2
3 HORIZONTAL CROSS SECTION



3
3 VERTICAL CROSS SECTION



4
3 VERTICAL CROSS SECTION

NO.	DATE	REVISIONS					
		DATE	BY	CHK	APP	DESCRIPTION	
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS			
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3	7/30/20	UPDATE TO 7TH ED. (2020)	FBC	DAC			
2	7/19/17	UPDATE TO 6TH ED. (2017)	FBC	LFS			
1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK			

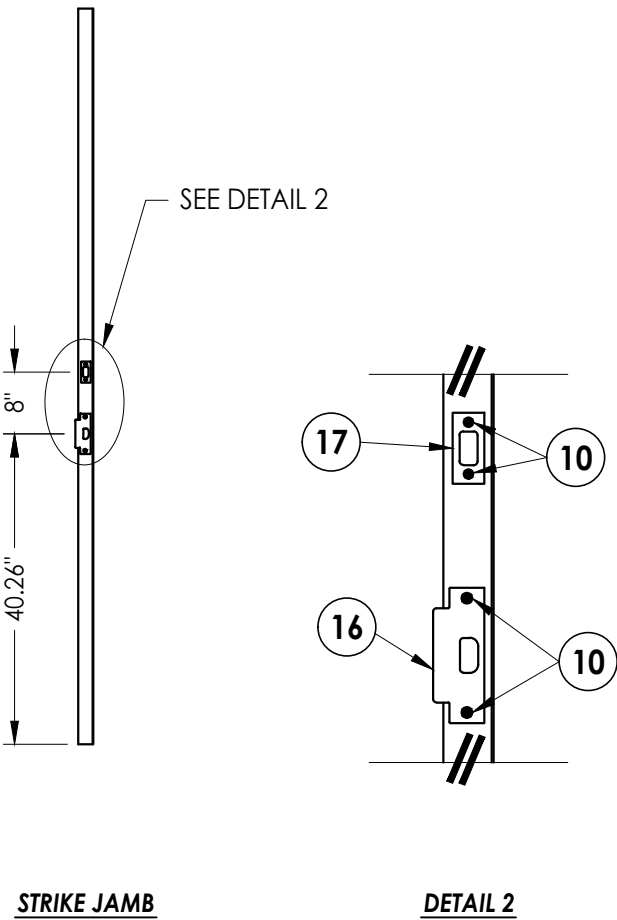
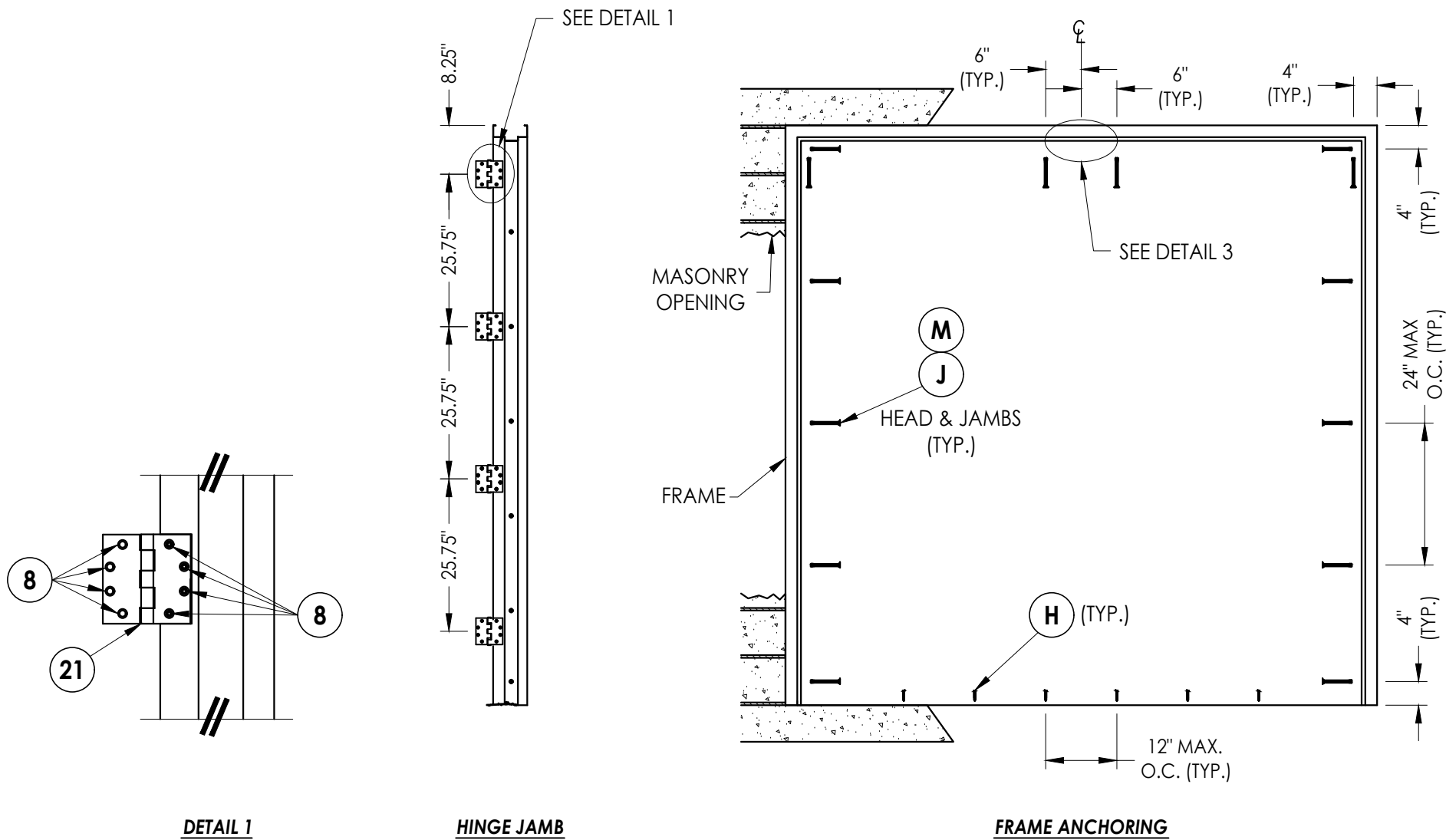
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DWG. BY: AL
CHK. BY: LFS
DRAWING NO.: FL-12166.1
SHEET 3 OF 6

PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR
PART OR ASSEMBLY: HORIZONTAL & VERTICAL CROSS SECTIONS

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

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FBPE Registry No. 9813

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CONCRETE ANCHOR NOTES:

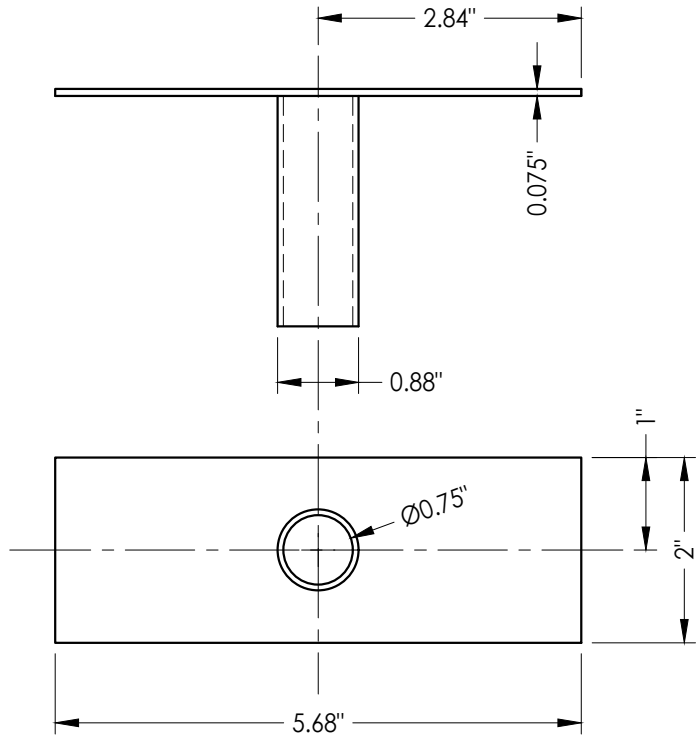
1. Concrete anchor locations at the corners may be adjusted to maintain the min. edge distance to mortar joints.
2. Concrete anchor locations noted as "MAX. ON CENTER" must be adjusted to maintain the min. edge distance to mortar joints, additional concrete anchors may be required to ensure the "MAX. 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"	2-1/2"	4"
DYNABOLT SLEEVE ANCHOR	3/8"	1-1/2"	2-1/4"	4-1/2"
TAPPER	3/8"	1-1/2"	4-1/4"	6"

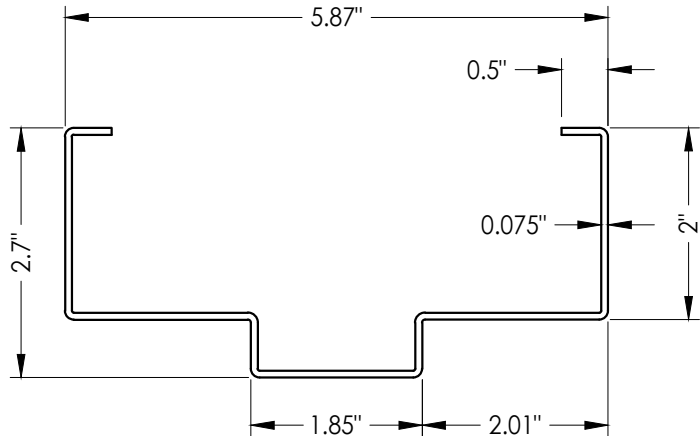
4. Embedment may be through 1-1/4" face shell of hollow block.

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PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR					PART OR ASSEMBLY: ANCHORING DETAILS				
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC	LFS	REVISIONS				
4	7/11/23	UPDATE TO 8TH ED. (2023)	FBC	LFS					
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1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK					
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DWG. BY: AL									
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DRAWING NO.: FL-12166.1									
SHEET 4 OF 6									

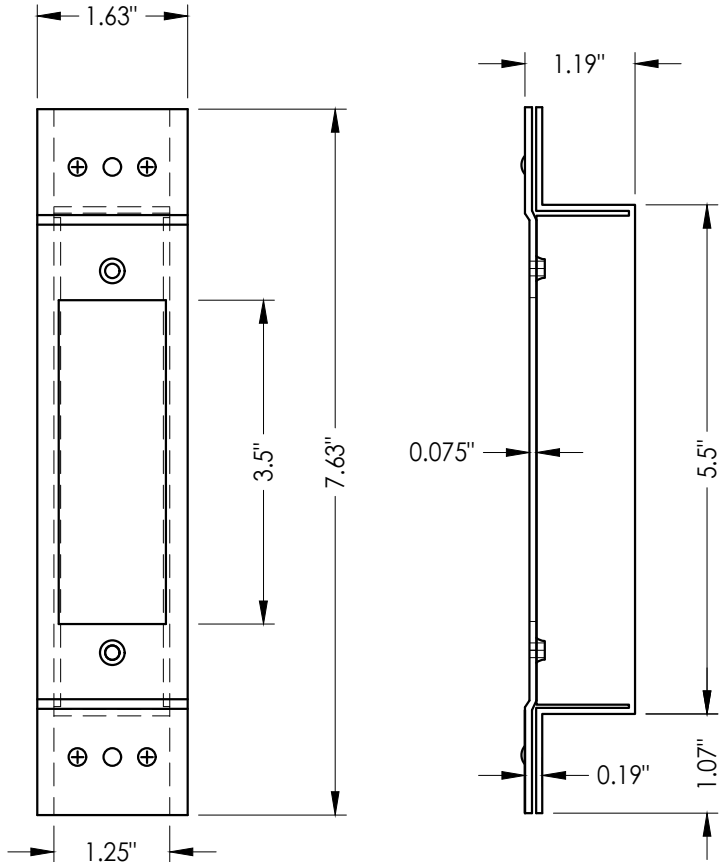
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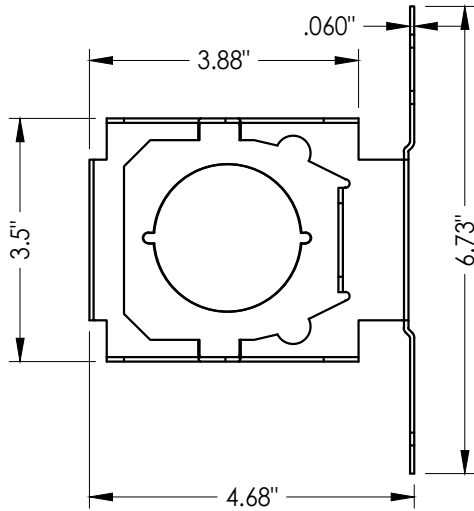
9 TUBE ANCHOR



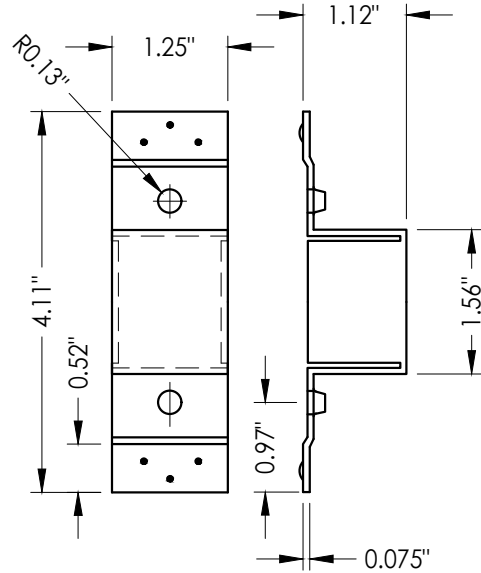
25 HOLLOW METAL FRAME



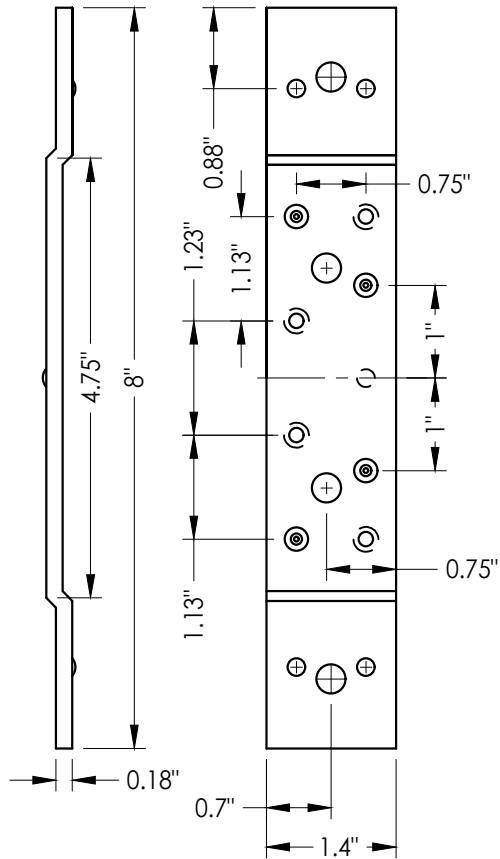
27 LATCH STRIKE REINFORCEMENT



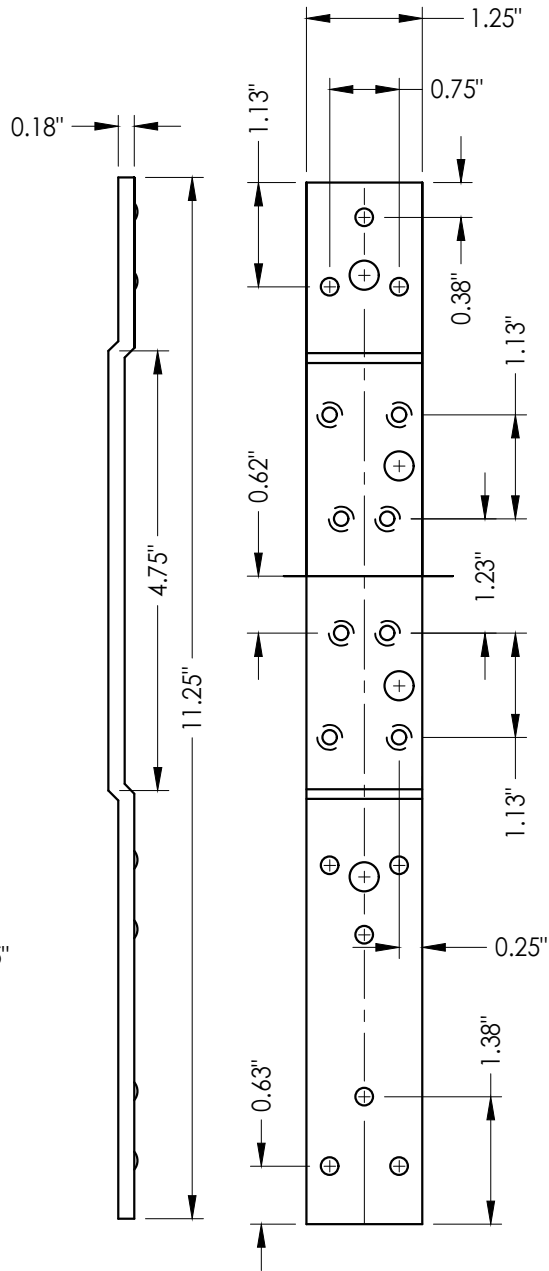
5 LOCK BOX REINFORCEMENT



19 DEADBOLT STRIKE REINFORCEMENT



23 STANDARD (SHORT) DOOR HINGE
Reinforcement middle and bottom hinge



22 STANDARD (LONG) DOOR HINGE
Reinforcement top hinge

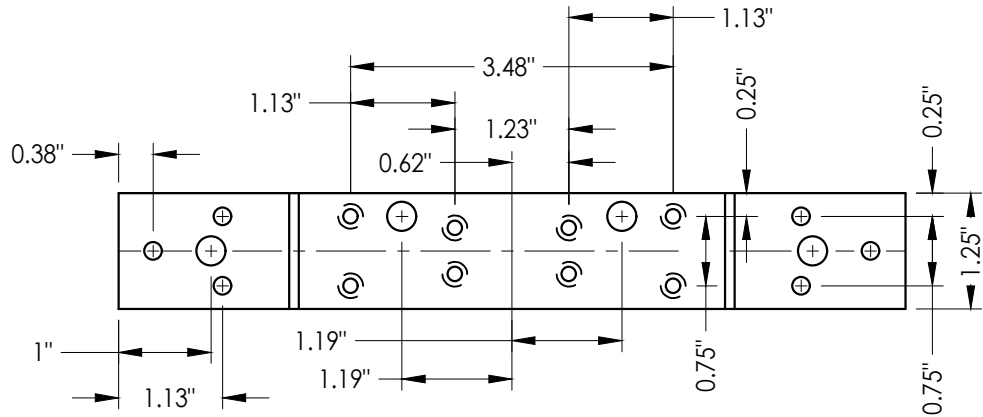
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DWG. BY:		3	7/30/20	UPDATE TO 7TH ED. (2020)	FBC	DAC
CHK. BY:		2	7/19/17	UPDATE TO 6TH ED. (2017)	FBC	LFS
DRAWING NO.:		1	10/14/16	UPDATE TO 5TH ED. (2014)	FBC	JK
SHEET		NO.	DATE	REVISIONS		
		5		OF	6	

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

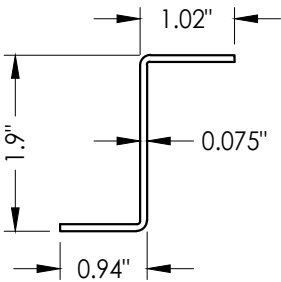
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		P.O. Box 230, Vairico, FL 33595	
		Phone No.: 813.659.9197	
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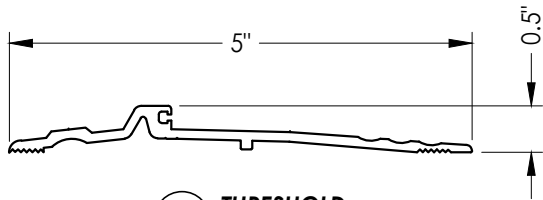
BILL OF MATERIALS		
ITEM	DESCRIPTION	MATERIAL
C	MAX. 1/4" SHIM SPACE	-
E	MASONRY - 3,000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
H	1/4" x 1-3/4" PFH ITW CONCRETE SCREW	STEEL
J	3/8" X 5" PFH ITW DYNABOLT SLEEVE ANCHOR	STEEL
M	3/8" X 5" PFH TAPPER CONCRETE SCREW BY POWERS FASTENERS	STEEL
1	"N" OPAQUE STEEL DOOR PANEL	-
2	DOOR SKIN - 16GA (0.060" THK. STEEL, Fy = 40,300 PSI MIN.)	STEEL
3	FOAM 1.0 PCF MIN. DENSITY	POLYSTYRENE
4	DOOR TOP & BOTTOM CLOSER	STEEL
5	LOCK BOX REINFORCEMENT	STEEL
8	#12-24 x 1/2" SELF TAPPER	STEEL
9	TUBE ANCHOR	STEEL
10	#12-24 X 1" COMBINATION MACHINE / WOOD SCREW	STEEL
16	ANSI LATCH STRIKE	STEEL
17	DEADBOLT STRIKE	STEEL
19	DEADBOLT STRIKE REINFORCEMENT	STEEL
20	WEATHERSTRIP	NEOPRENE
21	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL
22	STANDARD (LONG) DOOR HINGE TOP HINGE REINFORCEMENT	STEEL
23	STANDARD (SHORT) DOOR HINGE MIDDLE BOTTOM REINFORCEMENT	STEEL
24	WEATHERSTRIP (THRESHOLD)	NEOPRENE
25	FRAME - 14GA (0.075" THK)	STEEL
27	LATCH STRIKE REINFORCEMENT	STEEL
28	FRAME HINGE REINFORCEMENT	STEEL
40	THRESHOLD NATIONAL GUARD PRODUCTS, INC. #896	ALUMINUM
71	DESIGN HARDWARE D1-S SERIES DEADBOLT	STEEL
72	DESIGN HARDWARE "Z" SERIES ENTRY	STEEL
76	DESIGN HARDWARE D2-S SERIES DEADBOLT	STEEL
77	DESIGN HARDWARE "X" SERIES ENTRY	STEEL
82	SURFACE BOLT	STEEL
83	1/4" X 2-1/2" PPH MS	STEEL
87	Z ASTRAGAL	STEEL
88	#8 X 1-1/2" PPH MS	STEEL
89	SCREW COVER	STEEL
90	LOUVER (MODEL 1500-A-HRC BY AIR LOUVERS)	STEEL
91	SURFACE BOLT PLATE	STEEL
92	#8 X 1-1/4" PPH SELF TAPPER	STEEL



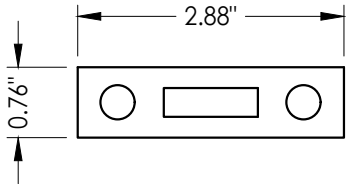
28 FRAME HINGE
Reinforcement



87 Z ASTRAGAL



40 THRESHOLD



91 SURFACE BOLT PLATE

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PRODUCT: METAL MANUFACTURING INDUSTRIES "N" STEEL DOOR		PART OR ASSEMBLY: BILL OF MATERIALS & COMPONENTS	
5	7/01/26	UPDATE TO 9TH ED. (2026)	FBC
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SHEET 6 OF 6			