



2501 Northchase Parkway SE
Wilmington, NC 28405
Phone: (910) 452-1845
Fax: (910) 452-1848

SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM
OUTSWING, IMPACT (X, XO, O/XO)

GENERAL NOTES

1. THIS PRODUCT HAS BEEN EVALUATED AND IS IN COMPLIANCE WITH THE 8TH EDITION (2023) FLORIDA BUILDING CODE (FBC) REQUIREMENTS INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND HAS BEEN TESTED TO THE FOLLOWING IN TESTING EVALUATION LABORATORIES REPORT NO. 02291411.
1.1. TAS 201-1994
1.2. TAS 202-1994
1.3. TAS 202-1994
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. THIS PRODUCT DOES NOT MEET THE WATER INFILTRATION REQUIREMENTS OF THE FBC AND SHALL BE INSTALLED ONLY IN NON-HABITABLE AREAS OR AT HABITABLE LOCATIONS PROTECTED BY AN OVERHANG OR CANOPY SUCH THAT THE OVERHANG RATIO (OH) = OH LENGTH / OH HEIGHT IS EQUAL TO OR GREATER THAN 1.
7. ALL STEEL SHALL BE PROTECTED AS SPECIFIED IN SECTION 2222.6 OF THE FBC.
8. SEE CURRENT MIAMI-DADE NOTICE OF ACCEPTANCE (NOA) FOR CARPENTER CO. PREFORMED BLOCK TYPE EPS INSULATION COMPONENT APPROVAL.
9. SEE CURRENT MIAMI-DADE NOTICE OF ACCEPTANCE (NOA) FOR EASTMAN CHEMICAL CO. SAFLEX PVB INTERLAYER COMPONENT APPROVAL.
10. POWER TRANSFER PREPS, DOOR POSITION SWITCH AND ELECTRICAL HINGE PREPS ARE ALLOWED AS LONG AS THE STRUCTURAL INTEGRITY OF THE DOOR PANEL IS NOT AFFECTED.

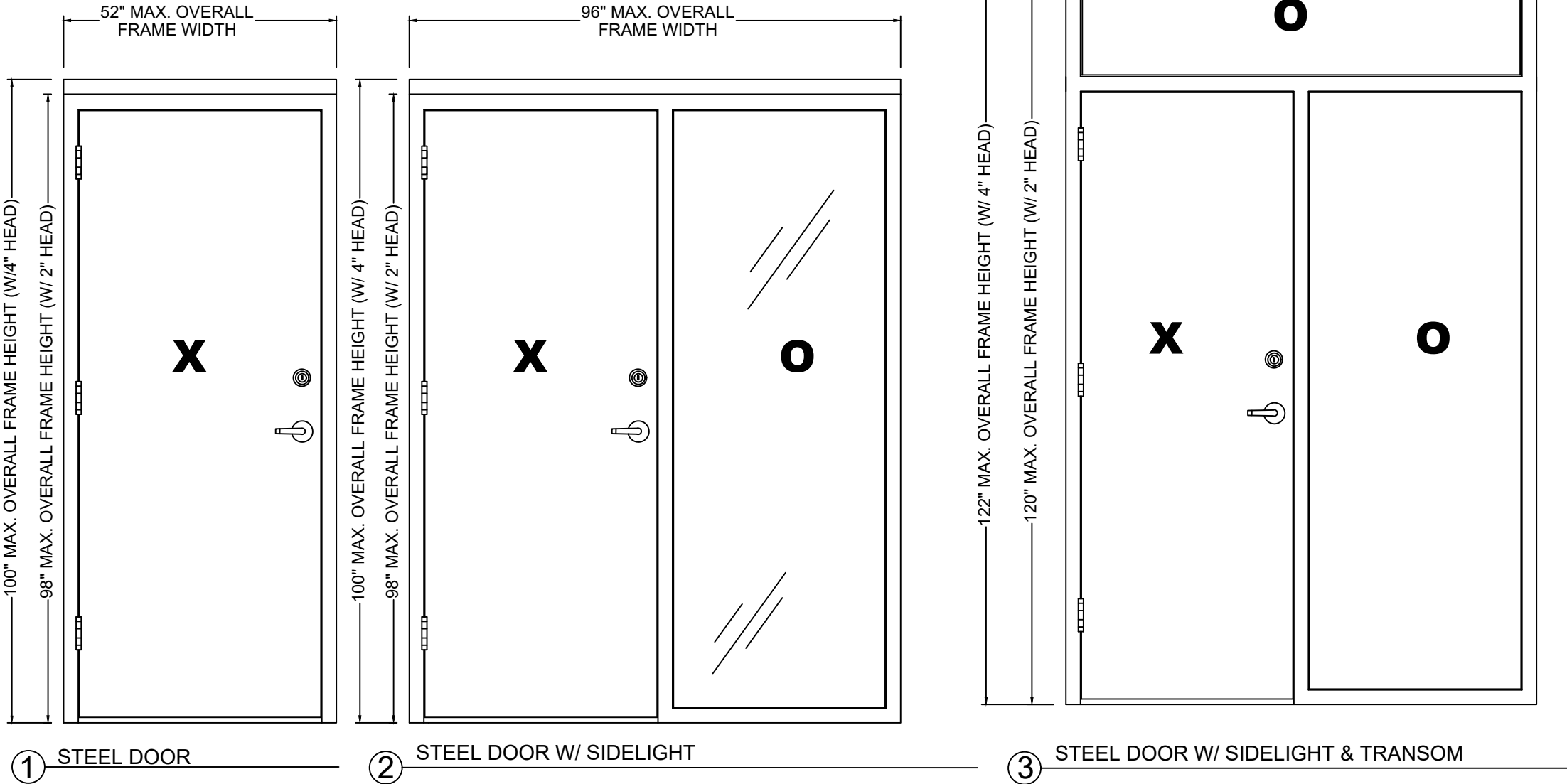


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NOTE:
PANEL AND/OR FRAME DIMENSIONS SHOWN ARE FOR THE AS-TESTED DOOR CONFIGURATIONS. ALTERNATE HARDWARE SELECTIONS SHOWN ON SHEET 3 MAY LIMIT WIDTHS AND HEIGHTS TO A SMALLER SIZE. SEE SHEET 3 FOR DETAILS.

DOOR TYPES	MAXIMUM OVERALL SIZE			DESIGN PRESSURE (PSF) *	
	DOOR FRAME	OPERABLE PANEL	GLAZED FIXED PANEL D.L.O.	POSITIVE	NEGATIVE
SINGLE DOOR	52" x 98"	47.75" x 95.5"	n/a	+65	-70
SINGLE DOOR W/SIDELIGHT	96" x 98"	47.75" x 95.5"	40.75" x 92.75"	+65	-70
SINGLE DOOR W/SIDELIGHT & TRANSOM	96" x 122"	47.75" x 95.5"	SIDELIGHT: 40.75" x 92.75" TRANSOM: 90.75" x 18.75"	+65	-70
IMPACT RATING: LARGE AND SMALL MISSILE - HVHZ & WIND ZONE 4, MISSILE LEVEL D					
* SEE SHEET 2 FOR HARDWARE SELECTIONS AND DESIGN PRESSURE LIMITATIONS					

HMF EXPRESS
2501 NORTHCHASE
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SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS	DATE	BY	DATE			
	2/27/2019	DWN BY: DAS/RJA	RJA	1/29/26		
	NO.	REVISION DESCRIPTION	ADD ALTERNATE LOCKING HARDWARE			
	C					

ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM

Digitally signed
by Robert J Amoruso
Date: 2026.01.31 12:20:05 -05'00'

PROJECT#: ACE-2025-126
DWG/REV: HMF0003, Rev C
SHT: 1 of 15

AS-TESTED HARDWARE (SEE TABLE NOTES BELOW)

Company Name	Type of Hardware	Hardware Model (used in testing) (6)	HMZ (Y/N) (2)	Impact Tested (Y/N) (2)	Water Infiltration (Y/N) (1)	Swing Type (In/Out)	Single/Pair	DP (Positive) (psf) (1)	DP (Negative) (psf) (1)	Max Panel Width (in) (3)	Max Panel Height (in) (3)	Skin Thickness (6)
Corbin/Ruswin	161 w/ TB+DB	3500 Series Lockset w/ 3200 Series DB	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA

HARDWARE TABLE NOTES
(SEE APPROVED HARDWARE TABLES ON SHEET 3)

1. DESIGN PRESSURE AND WATER INFILTRATION TESTING
- 1.1. AS-TESTED HARDWARE TABLE: DESIGN PRESSURE AND WATER INFILTRATION IS BASED ON HMF EXPRESS TESTING.

1.2. APPROVED HARDWARE TABLE: DESIGN PRESSURE AND WATER INFILTRATION IS BASED ON THE LOWER OF THE HMF EXPRESS TESTING OR THE REFERENCED PRODUCT APPROVAL.

1.3. IF THE PRODUCT DOES NOT MEET THE WATER INFILTRATION REQUIREMENTS OF THE FBC IT SHALL BE INSTALLED ONLY IN NON-HABITABLE AREAS OR IN HABITABLE LOCATIONS PROTECTED BY AN OVERHANG OR CANOPY SUCH THAT THE OVERHANG RATIO (OH) = OH LENGTH / OH HEIGHT IS EQUAL TO OR GREATER THAN 1.
2. PRODUCT TESTED FOR HVHZ AND/OR IMPACT MARKED WITH "Y" FOR YES. IF "N" FOR NO, PRODUCT TESTED FOR NON-HVHZ AND/OR NON-IMPACT USE ONLY.
3. MAX. PANEL WIDTH & HEIGHT BASED ARE SMALLER OF AS-TESTED HMF EXPRESS DOOR OR THE ALTERNATE HARDWARE DOOR IN THE REFERENCED PRODUCT APPROVAL.
4. SEE PRODUCT EVALUATION REPORT NO. 1167 FOR A LIST OF FLORIDA PRODUCT APPROVAL NUMBERS USED IN THE EVALUATION FOR HARDWARE SUBSTITUTIONS SHOWN IN THE "APPROVED HARDWARE" TABLE
5. REINFORCEMENT REQUIREMENTS OF THE REFERENCED FLORIDA PRODUCT APPROVAL WHICH SUBSTITUTION IS BASED ON AND LISTED IN PRODUCT EVALUATION REPORT NO. 1167 WILL BE MET WHEN ALTERNATE LOCKING HARDWARE IS USED.
6. HARDWARE SHOWN TESTED WITH THIS HMF EXPRESS PRODUCT AND DOCUMENTED TESTING EVALUATION LABORATORIES REPORT NO. TEL 02991411 SHOWN IN "AS-TESTED HARDWARE" TABLE AT THE DOOR PANEL SKIN THICKNESS SHOWN.
7. IMPACT RATING FOR HVHZ LARGE AND SMALL MISSILE IMPACT PER TAS 201/203 ENVELOPE MISSILE LEVEL D/WIND ZONE 4 PER ASTM E1886/E1996.
8. DOOR PANEL SKIN THICKNESS REQUIRED BY THE TESTED ALTERNATE HARDWARE DOOR LISTED IN PRODUCT EVALUATION REPORT NO. 1167.

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DATE
1/29/26

BY
RJA

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ADD ALTERNATE LOCKING HARDWARE

NO.
C

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DWN BY:
DAS/RJA

CHK BY:
RJA

SCALE:
NONE

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ORMOND BEACH, FL 32174
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LICENSE
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STATE OF
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Digitally signed
by Robert J
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Date: 2026.01.31
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APPROVED HARDWARE
(SEE SHEET 2 FOR TABLE NOTES)

Company Name	Type of Hardware	Hardware Model (4)	HMZ (Y/N) (2)	Impact Tested (Y/N) (2)	Water Infiltration (Y/N) (1)	Swing Type (In/Out)	Single/Pair	DP (Positive) (psf) (1)	DP (Negative) (psf) (1)	Max Panel Wdth (in) (3)	Max Panel Height (in) (3)	Skin Thickness (8)
Cal-Royal Products	161 w/ TB	Genysis Series	Y	Y	N	Outswing	Single	65	70	35.75	83.125	18 GA
Allegion-Schlage	161 w/ TB	Falcon B Series	Y	Y	N	Outswing	Single	65	60	36	84	18 GA
Allegion-Schlage	161 w/ TB	Falcon T & TM Series	Y	Y	N	Outswing	Single	65	70	36	84	18 GA
Allegion-Schlage	161 w/ TB	Schlage D, ND, NDE Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	16 GA
Dormakaba	161 w/ TB	Best 9K	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Dormakaba	161 w/ TB	Dorma C100 Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Cal-Royal Products	161 w/ TB + DB	Pioneer Series + T300 Series	Y	Y	N	Outswing	Single	65	70	35.75	83.125	18 GA
Cal-Royal Products	161 w/ TB + DB	Pioneer Series + T300 Series	Y	Y	N	Outswing	Single	65	70	47.75	95	18 GA
Dormakaba	161 w/ TB + DB	Dorma QCL 100 Series + QDB 100 Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Dormakaba	161 w/ TB + DB	Dorma QCL 100 Series + QDB 200 Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Dormakaba	161 w/ TB + DB	Dorma QCL 200 Series + QDB 100 Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Dormakaba	161 w/ TB + DB	Dorma QCL 200 Series + QDB 200 Series	Y	Y	N	Outswing	Single	65	70	47.75	95.5	18 GA
Hager Companies	161 w/ TB + DB	2500/3400/3500 Series + 3100/3200 Series	N	Y	N	Outswing	Single	65	65	47.75	95.5	18 GA
Allegion-Schlage	Mortise Exit Device	Von Duprin 8875	Y	Y	N	Outswing	Single	65	70	47.75	95.5	16 GA
Cal-Royal Products	Mortise Lock	M Series	Y	Y	N	Outswing	Single	65	70	35.75	83.125	18 GA
Allegion-Schlage	Mortise Lock	Falcon MA-Series	Y	Y	N	Outswing	Single	65	70	36	84	18 GA
Dormakaba	Mortise Lock	Best 45H & 47H	Y	Y	N	Outswing	Single	60	60	47.75	95.5	18 GA
Schlage	Mortise Lock	Schlage L9000 MORTISE LOCK SERIES WITH ASA STRIKE (4-7/8")	Y	Y	N	Outswing	Single	60	60	47.75	95.5	16 GA
Allegion-Schlage	Mortise Lock + DB	Schlage L/LV 9400 + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Allegion-Schlage	Mortise Lock + DB	Falcon MA-Series + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Allegion-Schlage	Mortise Lock + DB	Schlage AD-MD & CO-MD + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Allegion-Schlage	Mortise Lock + DB	Schlage LE & LEB + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Allegion-Schlage	Mortise Lock + DB	Schlage XE360-M-D + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Allegion-Schlage	Mortise Lock + DB	Schlage PM400 + Deadbolt	Y	Y	N	Outswing	Single	65	70	36	84	16 GA
Dormakaba	Mortise Lock + DB	Best 45H & 47H with Deadbolt	Y	Y	N	Outswing	Single	60	60	47.75	95.5	18 GA
Dormakaba	Mortise Lock + DB	Best 48H & 49H with Deadbolt	Y	Y	N	Outswing	Single	40.5	40.5	47.75	95.5	18 GA
Hager Companies	Mortise Lock + DB	3800 Series	N	Y	N	Outswing	Single	65	65	47.75	95.5	18 GA
Allegion-Schlage	Mortise Rim Exit	Falcon F-25-M	Y	Y	N	Outswing	Single	65	70	47.75	95.5	16 GA
Cal-Royal Products	Rim Exit	7700 Series	Y	Y	N	Outswing	Single	65	70	36	84	18 GA
Allegion-Schlage	Rim Exit	Falcon F-25-R	Y	Y	N	Outswing	Single	65	55	47.75	95.5	16 GA
Dormakaba	Rim Exit	Best ARM-A-DOR	Y	Y	N	Outswing	Single	65	70	47.75	86	16 GA
Dormakaba	Rim Exit	Best HC2100	Y	Y	N	Outswing	Single	65	70	47.75	86	16 GA
Von Duprin	Rim Exit	Von Duprin Rim Exit No. 98/99 SERIES	Y	Y	N	Outswing	Single	65	70	47.75	95.5	16 GA

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DWN BY:
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CHK BY:
RJA

SCALE:
NONE

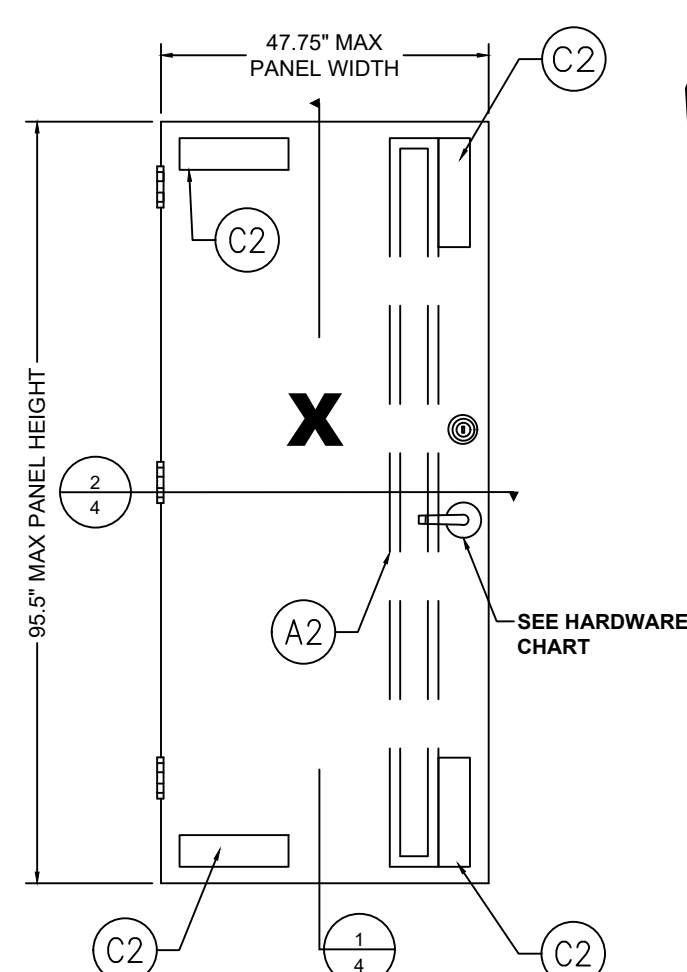
NO.	C	REVISION DESCRIPTION	DATE	1/29/26			
			BY	RJA			
			ADD ALTERNATE LOCKING HARDWARE				

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AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM

ROBERT JAMES AMORUSO
LICENSE
No 49752
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

Digitally signed
by Robert J
Amoruso
Date: 2026.01.31
12:21:06 -05'00'

PROJECT#: ACE-2025-126
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SHT: 3 of 15



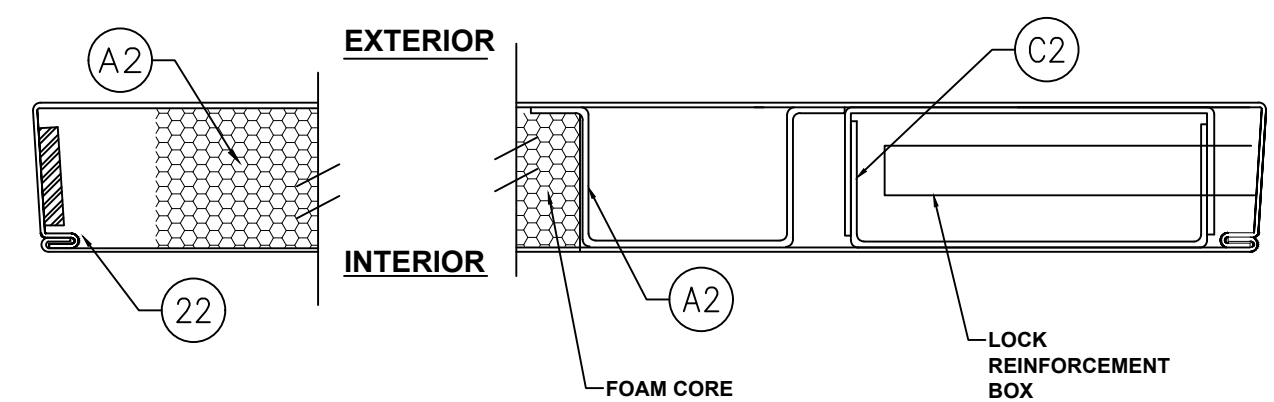
1 OPAQUE STEEL DOOR PANEL

STEEL DOOR SKIN: 18 GA. A60 GALV.
(MIN. 0.0478" THK., Fy=36,800 PSI MIN.)
CORE MATERIAL: EPS FOAM
(POLYSTYRENE - 1.0PCF MIN. DENSITY)

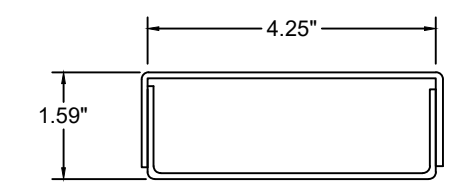
CHANNELS: 16 GA.
(MIN. 0.058" THK.)

NOTE:

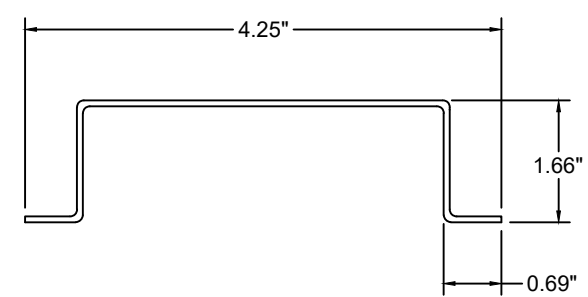
PANEL AND/OR FRAME DIMENSIONS SHOWN
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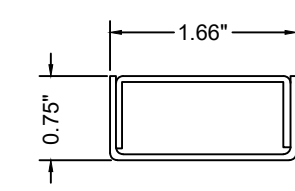
**2/4 HORIZONTAL CROSS SECTION
DOOR PANEL**



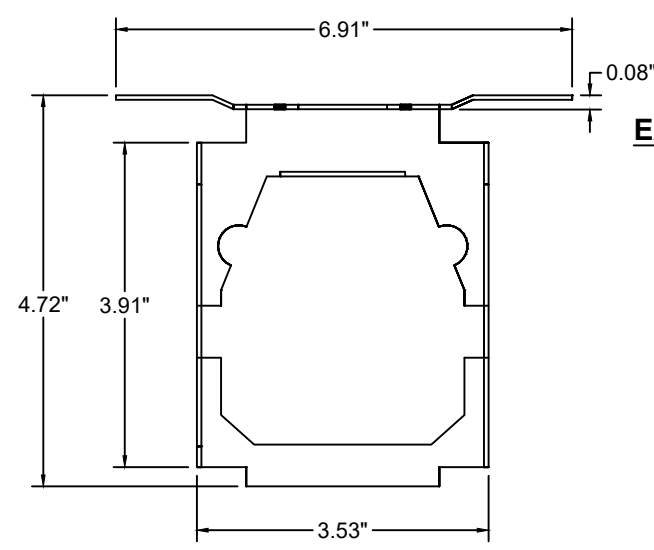
**C2 BOX CHANNEL REINFORCEMENT
A60 GALV. STEEL(15" LONG)**



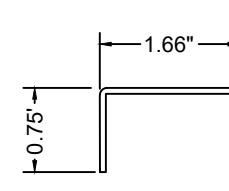
**A2 RIB STIFFENER
A60 GALV. STEEL**



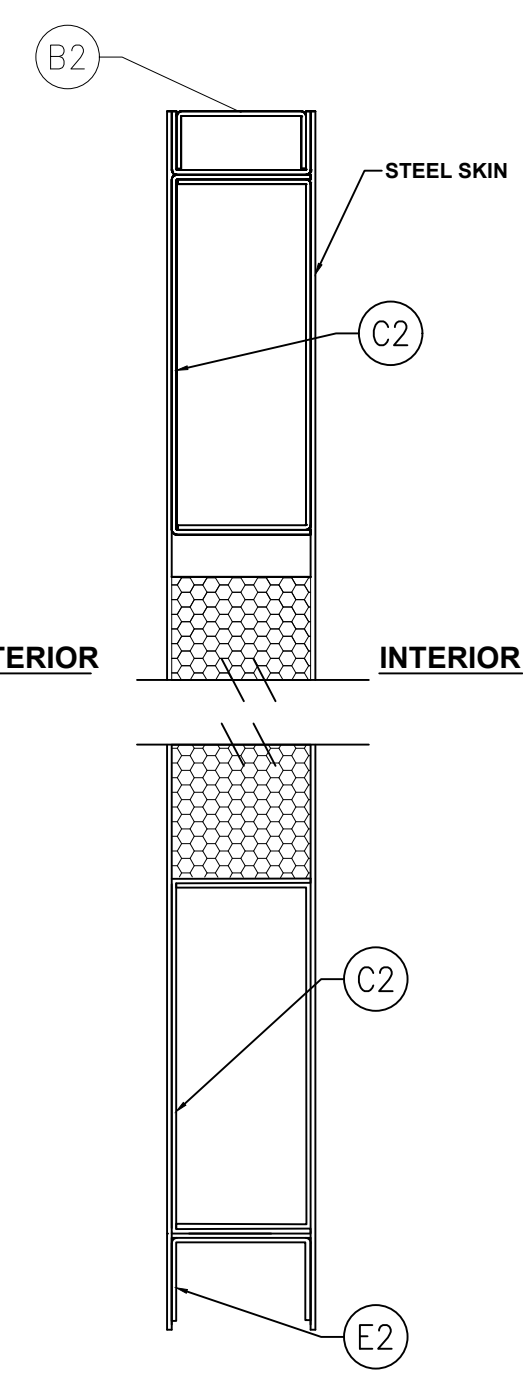
**B2 TOP CHANNEL
A60 GALV. STEEL**



D2 LOCK BOX



**E2 BOTTOM CHANNEL
A60 GALV. STEEL**



1/4 VERTICAL CROSS SECTION

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RJA

SCALE:
NONE

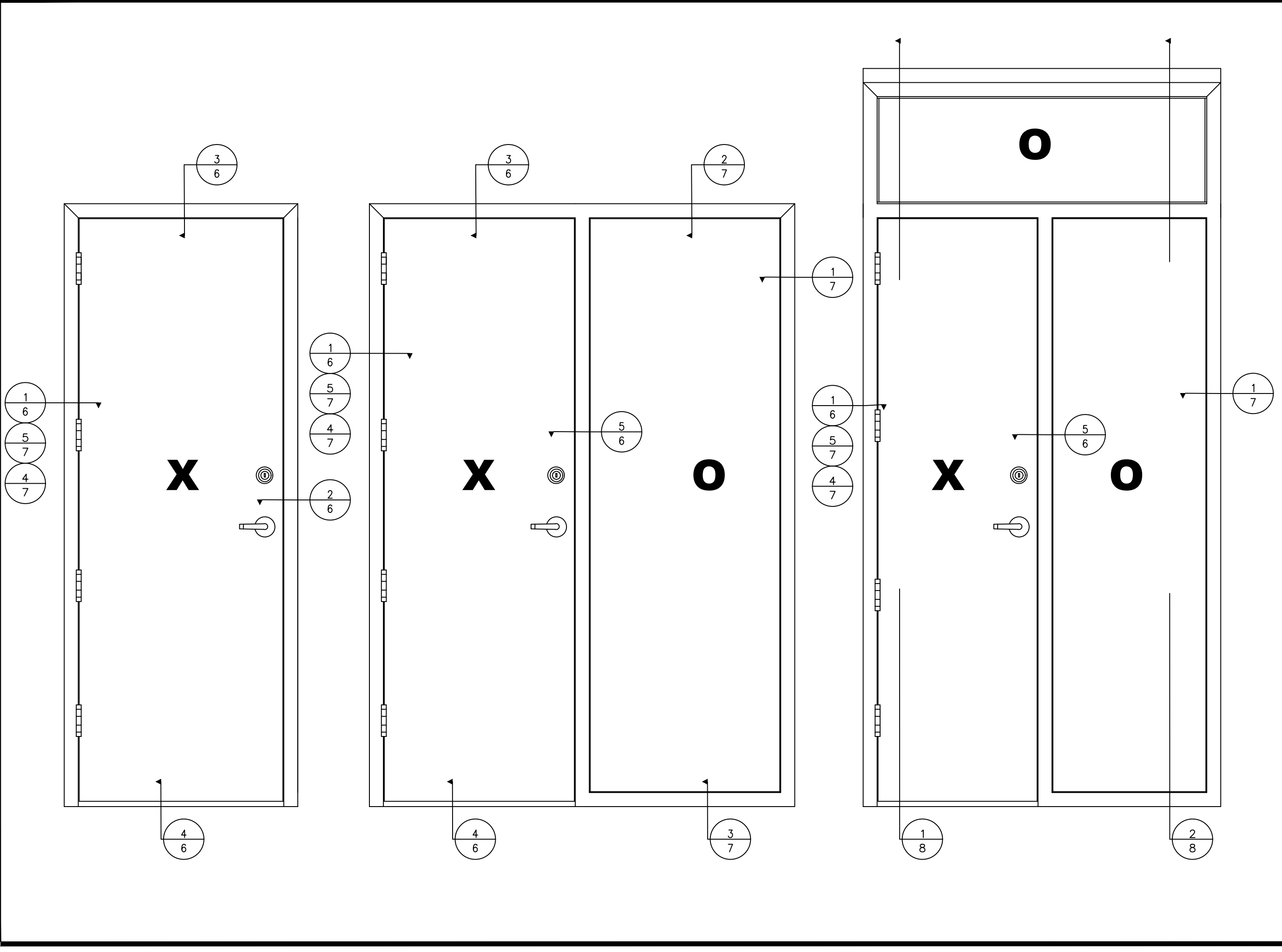
ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM

Digitally signed
by Robert J
Amoruso
Date: 2026.01.31
12:21:26 -05'00'

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SHT: 4 of 15



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Digitally signed
by Robert J
Amoruso
Date: 2026.01.31
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SHT: 5 of 15

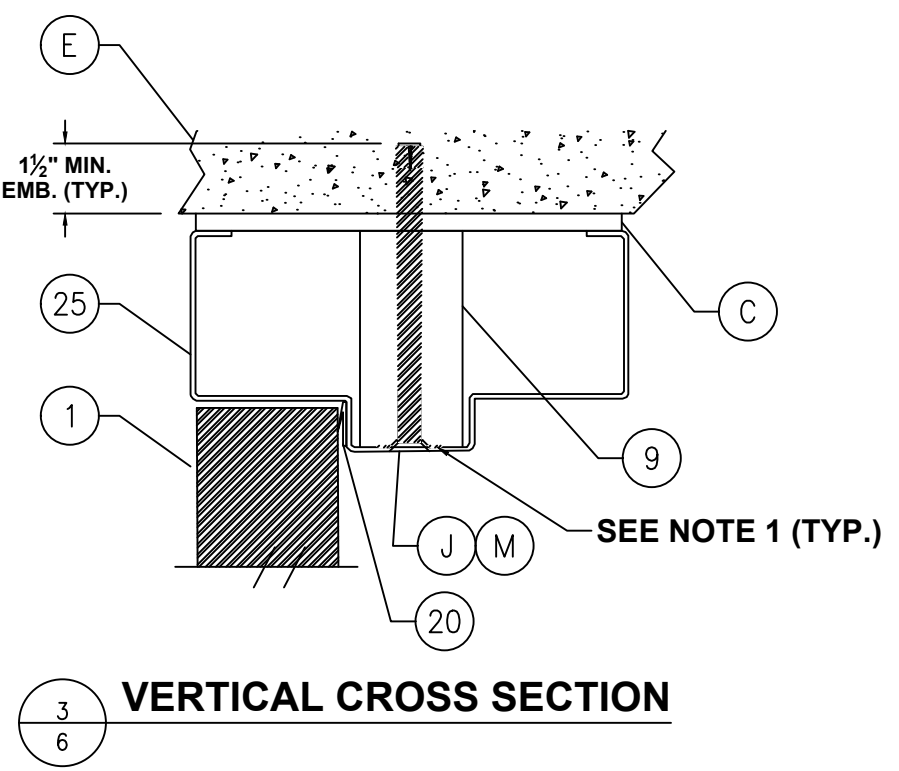
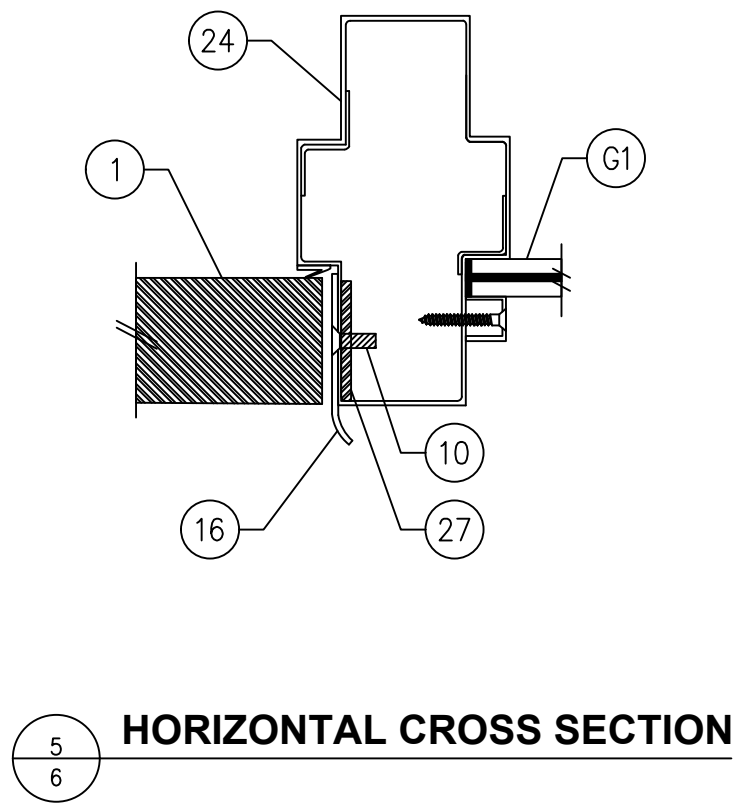
SERIES HP STEEL DOOR W/WO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS				
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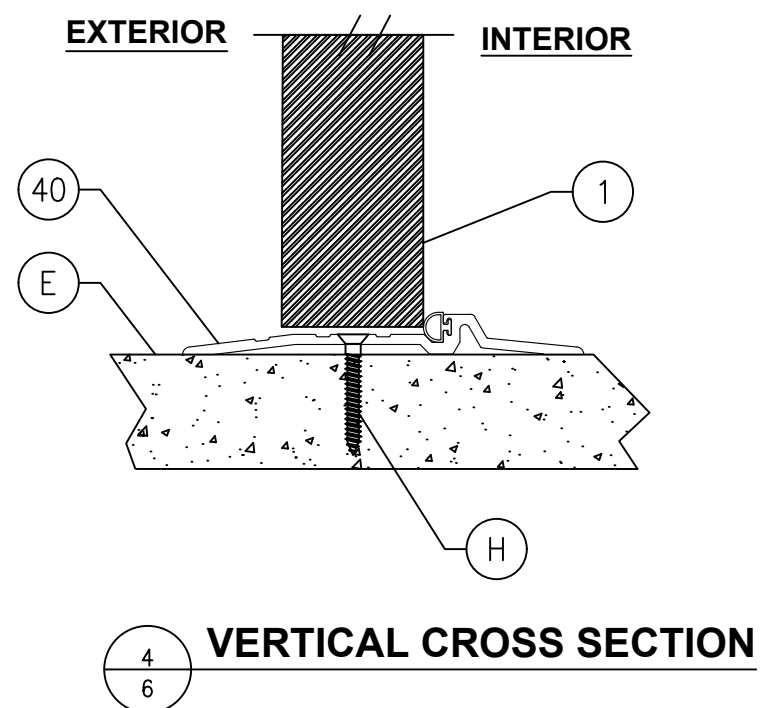
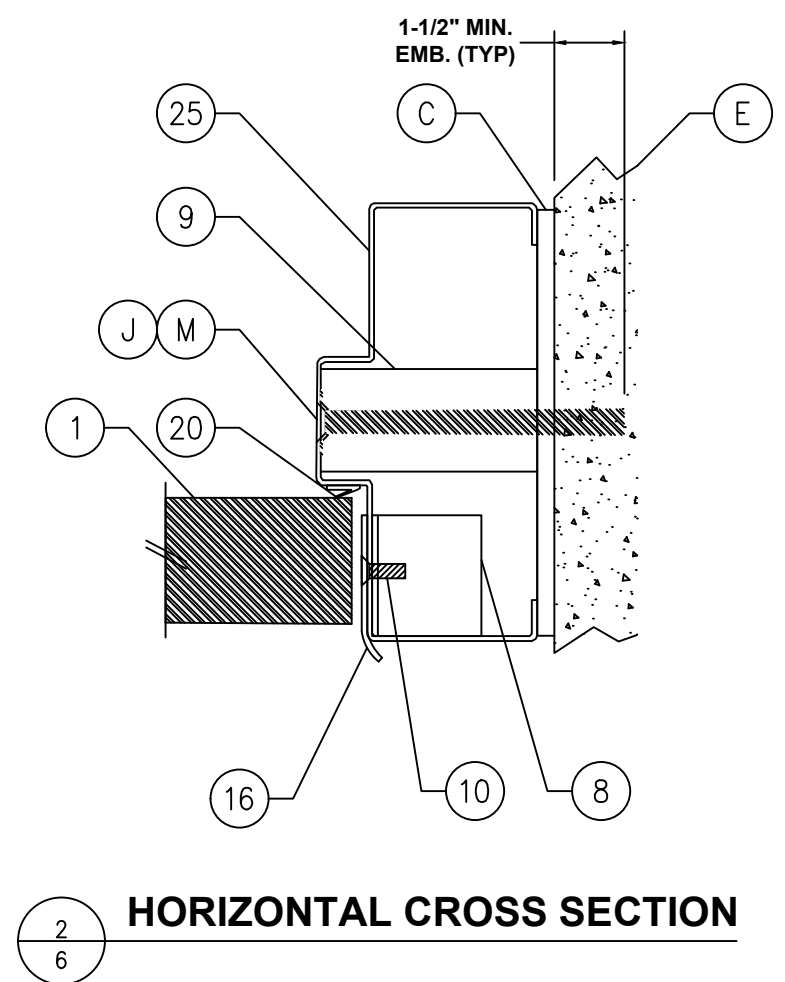
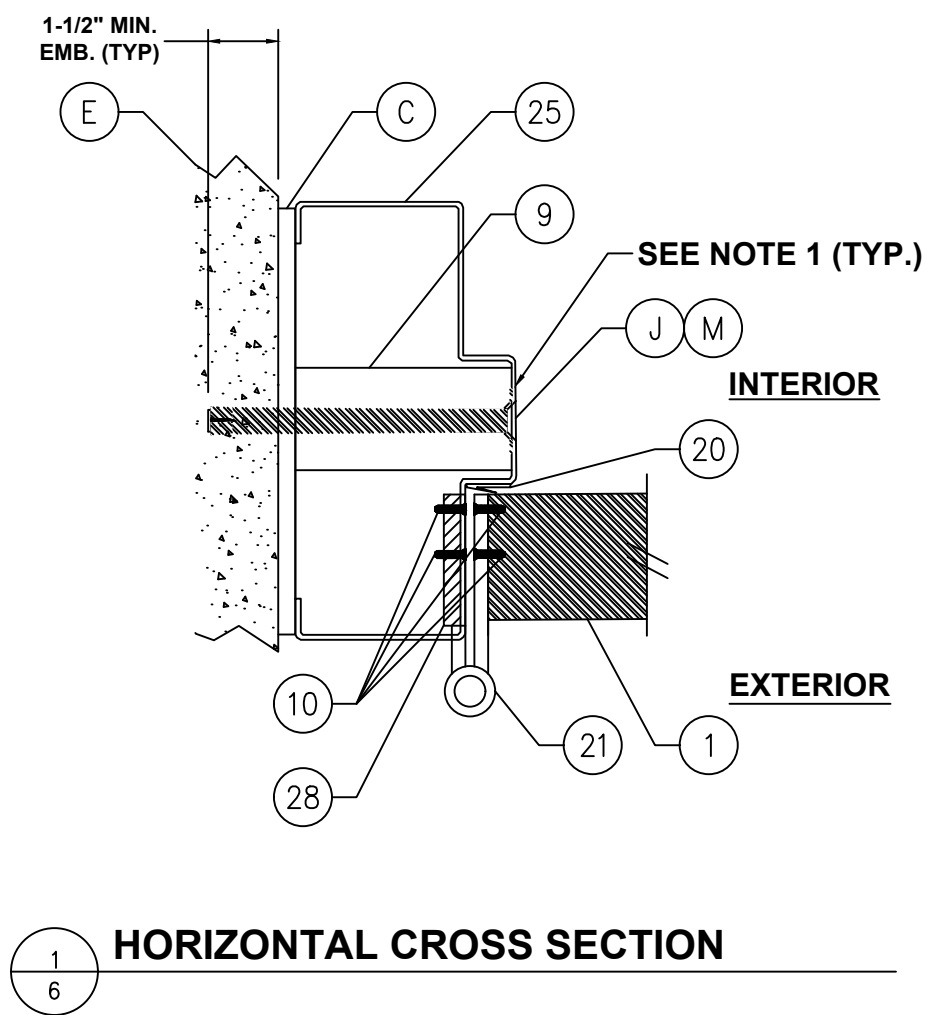
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Date: 2026.01.31
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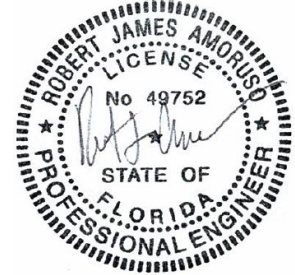
NOTE:
1. SPOT WELD ANCHOR BRACKET TO FRAME. 2 WELDS PER FLANGE (4 TOTAL PER BRACKET). ALTERNATIVELY MIG WELD, 1 PER FLANGE (2 TOTAL PER BRACKET).



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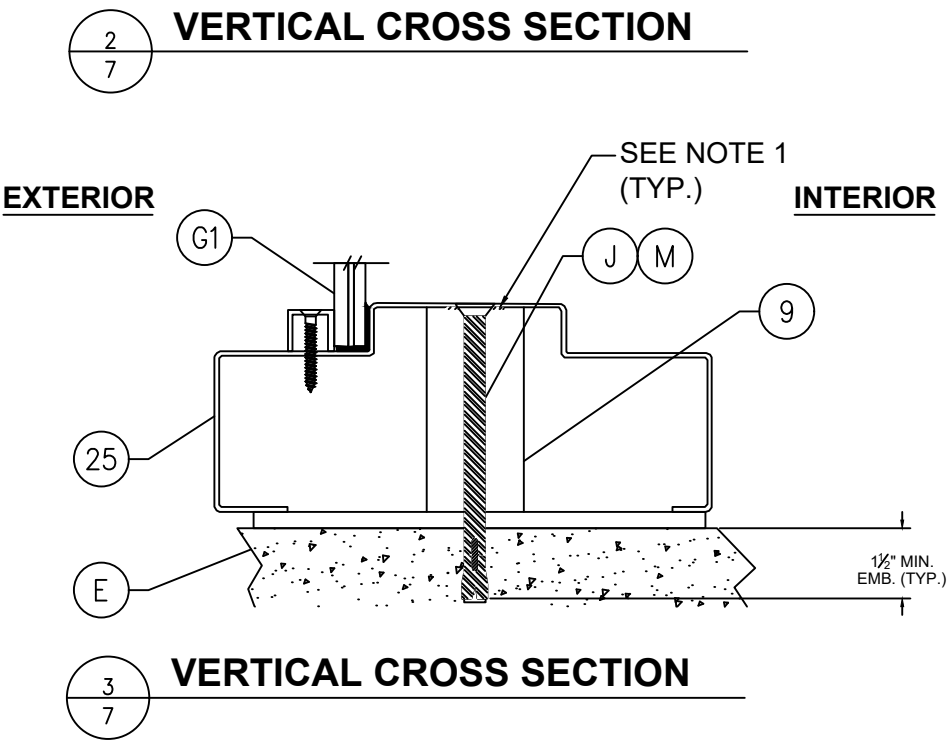
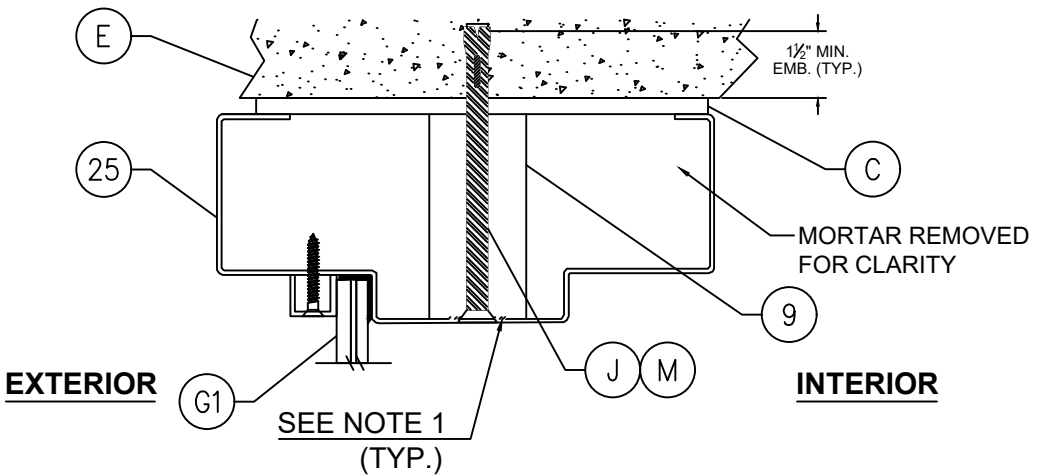
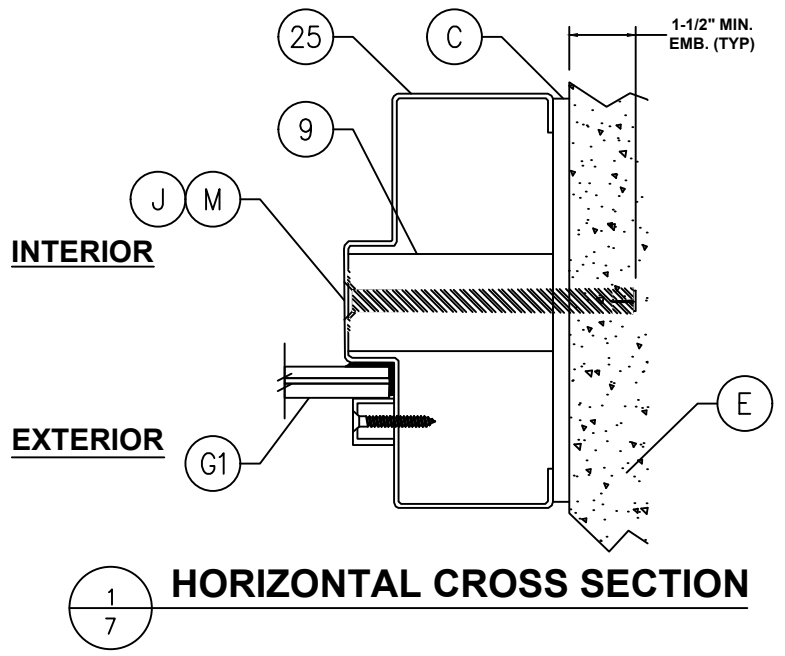
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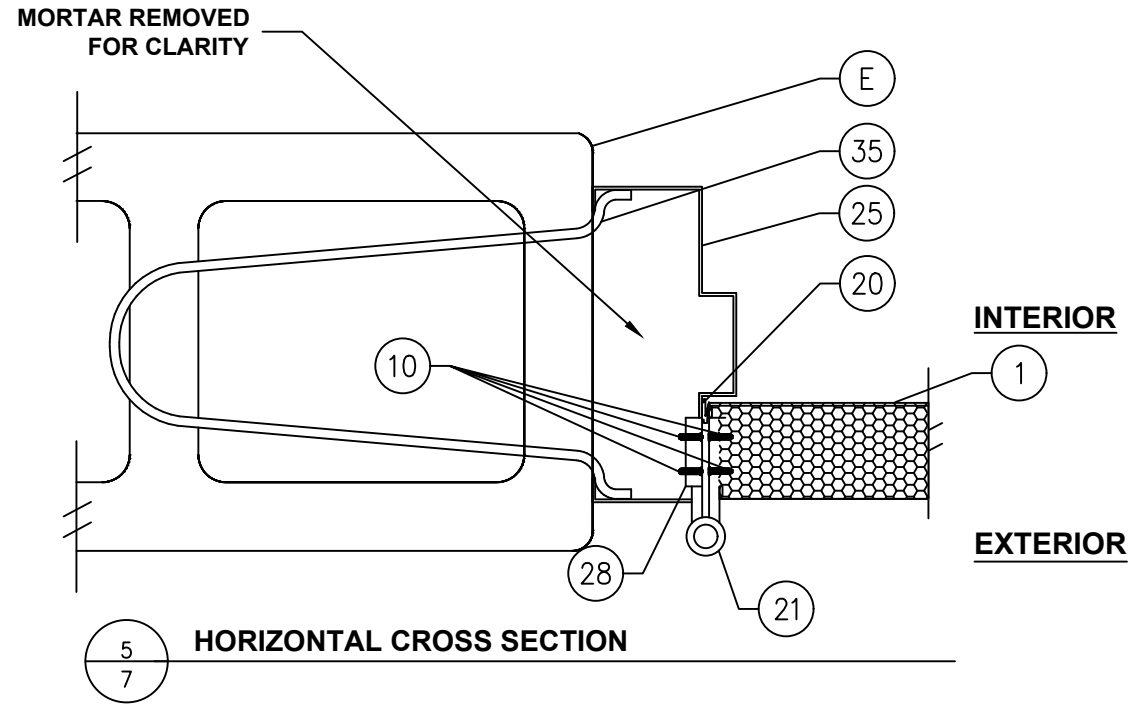
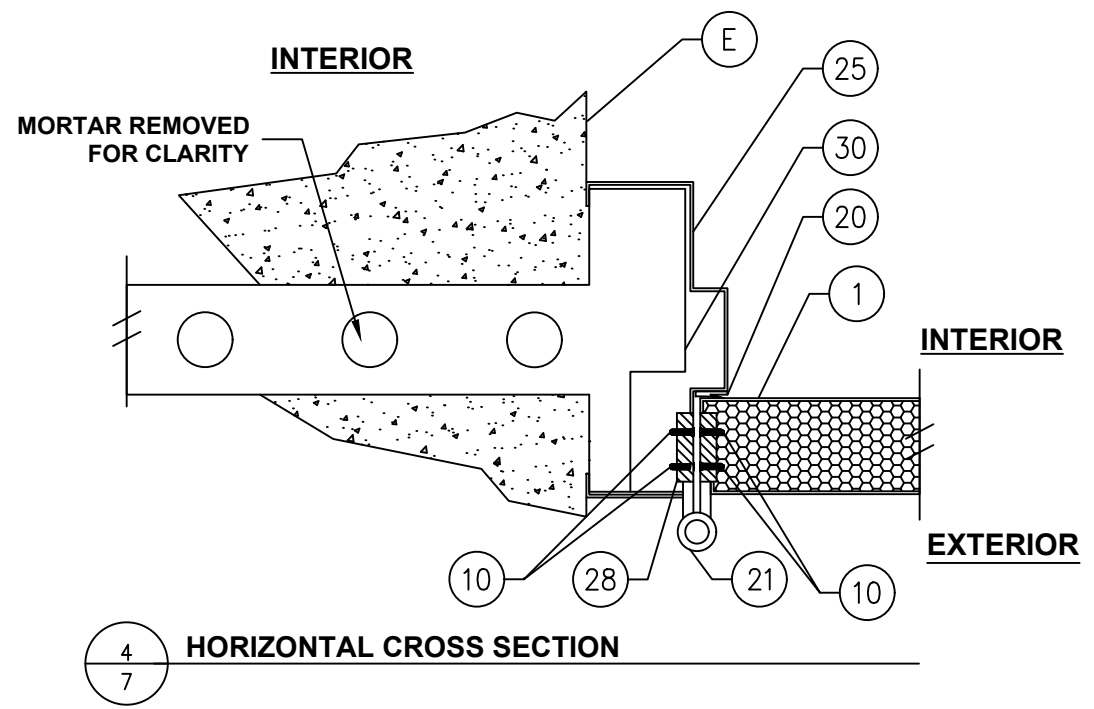


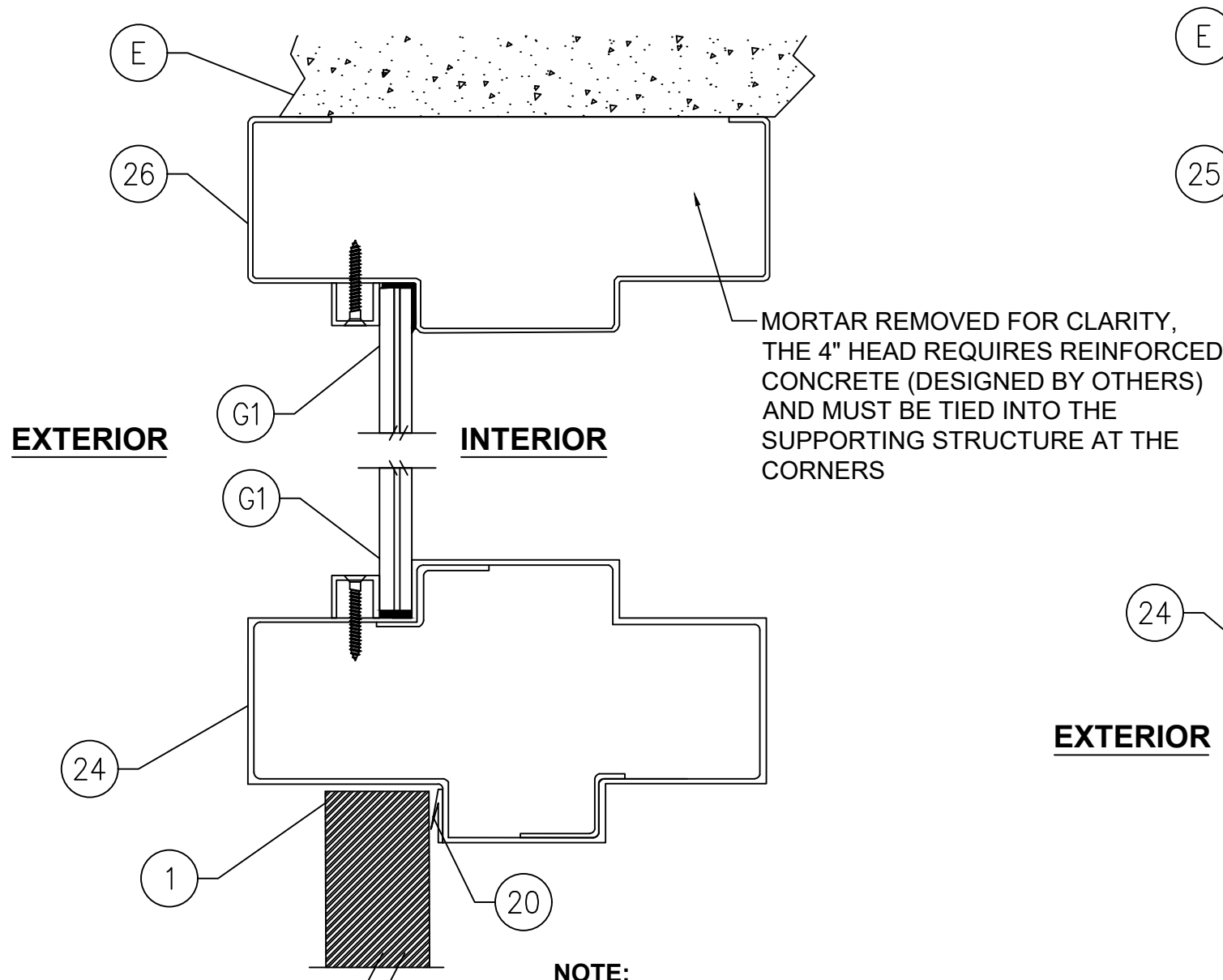
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DWG/REV:	HMF0003, Rev C
SHT:	7 of 15

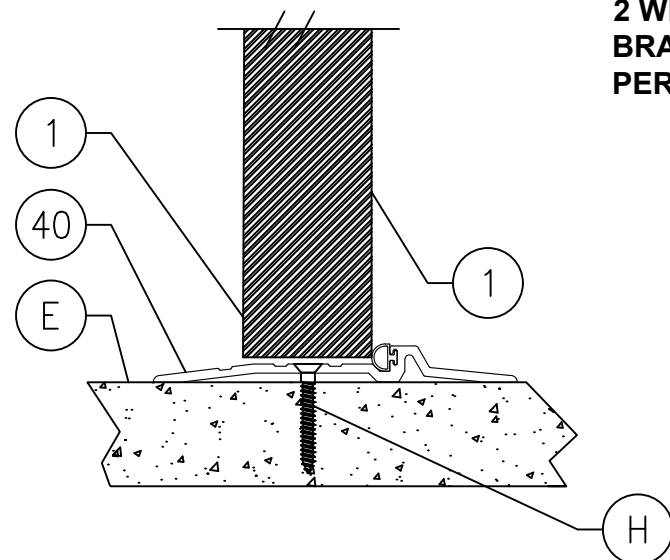


NOTE:
1. SPOT WELD ANCHOR BRACKET TO
FRAME. 2 WELDS PER FLANGE (4 TOTAL
PER BRACKET). ALTERNATIVELY MIG
WELD, 1 PER FLANGE (2 TOTAL PER
BRACKET).

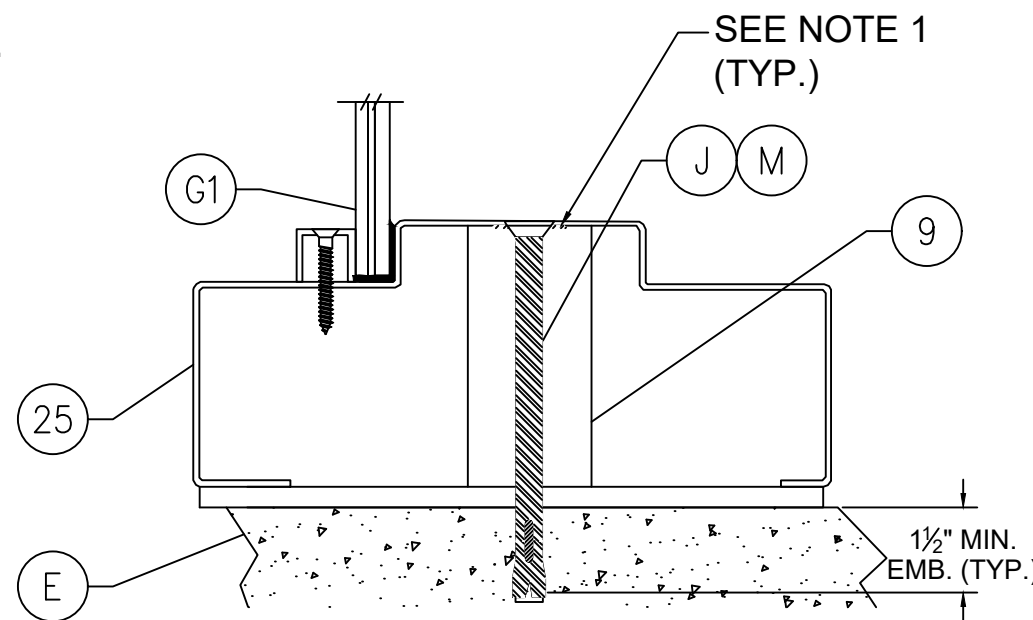
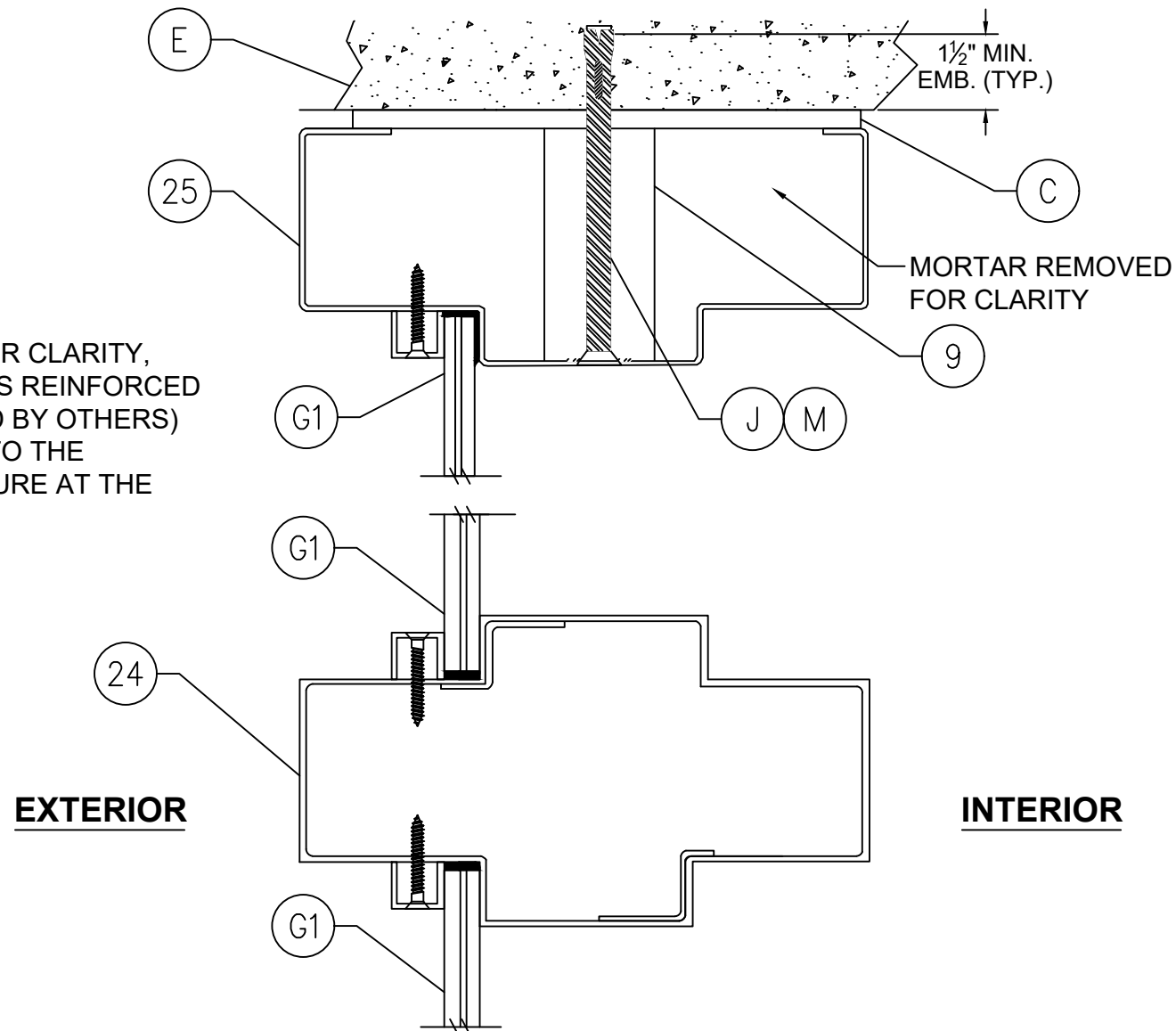




NOTE:
 1. SPOT WELD ANCHOR BRACKET TO FRAME. 2 WELDS PER FLANGE (4 TOTAL PER BRACKET). ALTERNATIVELY MIG WELD, 1 PER FLANGE (2 TOTAL PER BRACKET).



1
VERTICAL CROSS SECTION
 2" HEAD SHOWN. 4" HEAD APPROVED.



2
VERTICAL CROSS SECTION
 2" HEAD SHOWN. 4" HEAD APPROVED.

HMF EXPRESS
 2501 NORTHCHASE
 PARKWAY SE
 WILMINGTON, NC 28405

SERIES HP STEEL DOOR W/WO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS			
NO.	REVISION DESCRIPTION	BY	DATE
C	ADD ALTERNATE LOCKING HARDWARE	RJA	1/29/26

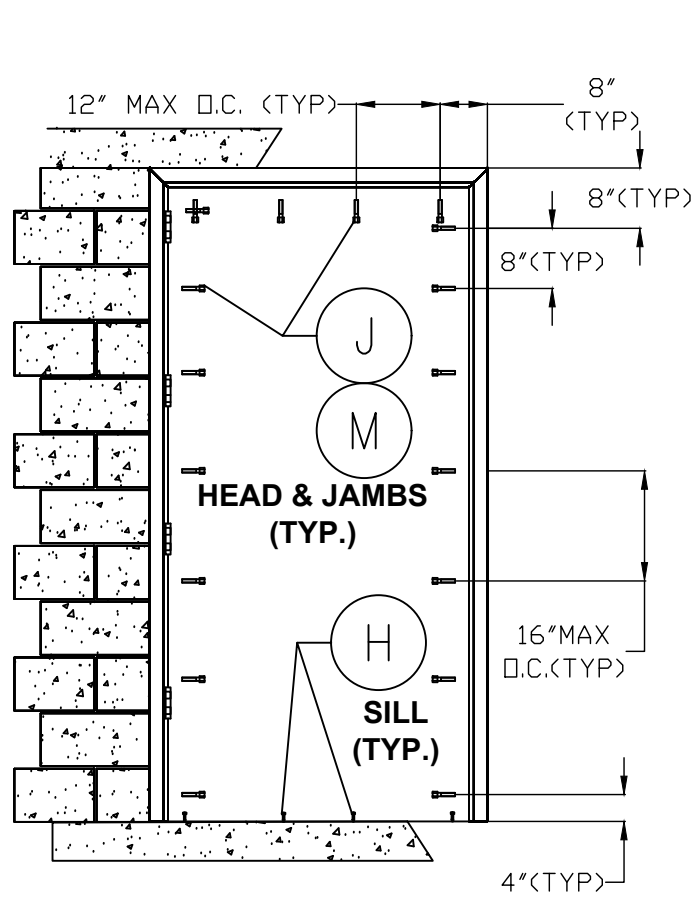
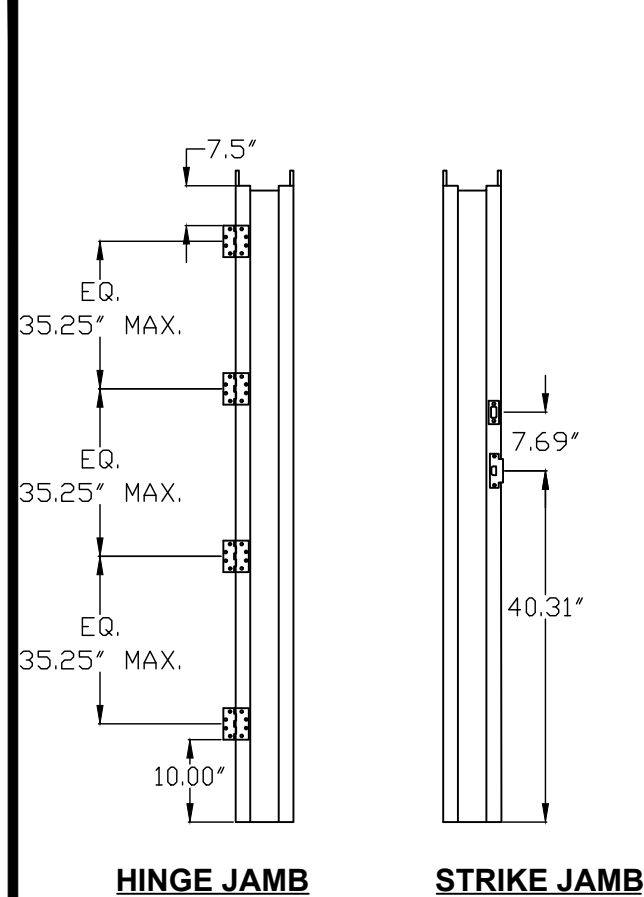
DATE: 2/27/2019	DWN BY: DAS/RJA	CHK BY: RJA	SCALE: NONE
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ROBERT J. AMORUSO, P.E. #49752
 AMORUSO CONSULTING ENG., LLC
 FBPE REGISTRATION NO. 38327
 226 N NOVA RD, NO. 142
 ORMOND BEACH, FL 32174
 RJAENGPE@GMAIL.COM

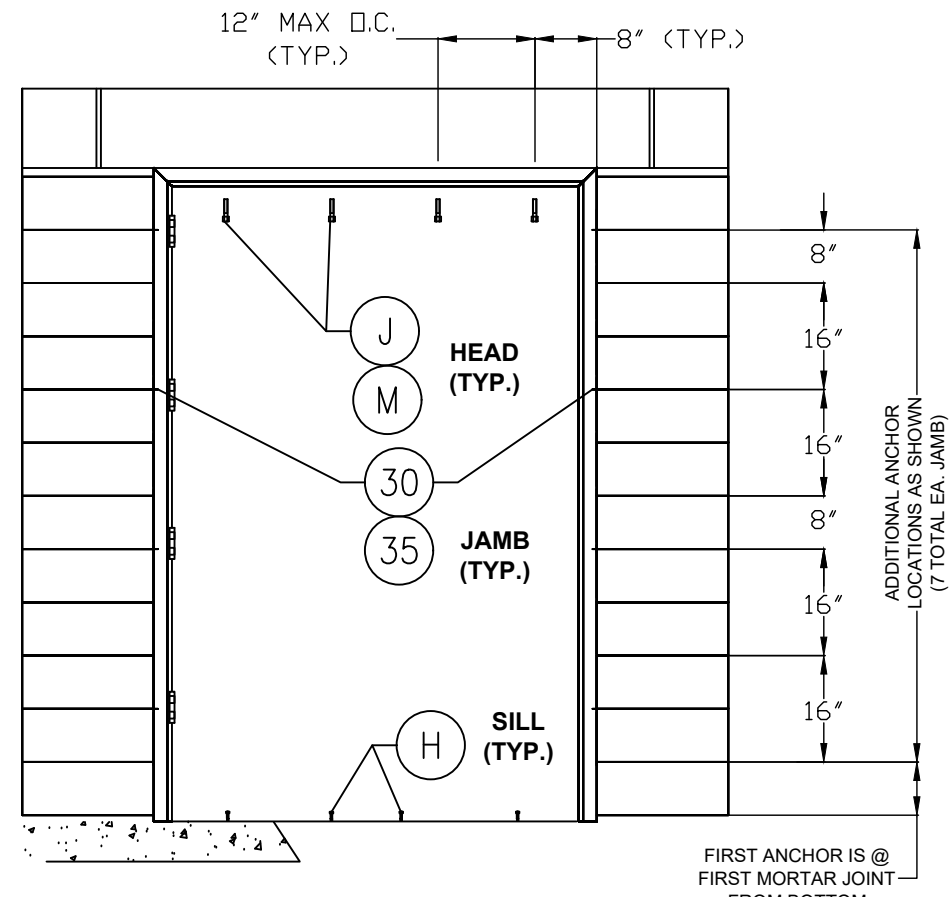


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 by Robert J
 Amoruso
 Date: 2026.01.31
 12:22:17 -05'00'

PROJECT#:	ACE-2025-126
DWG/REV:	HMF0003, Rev C
SHT:	8 of 15



FRAME ANCHORING
MASONRY CONSTRUCTION
CONCRETE ANCHORS



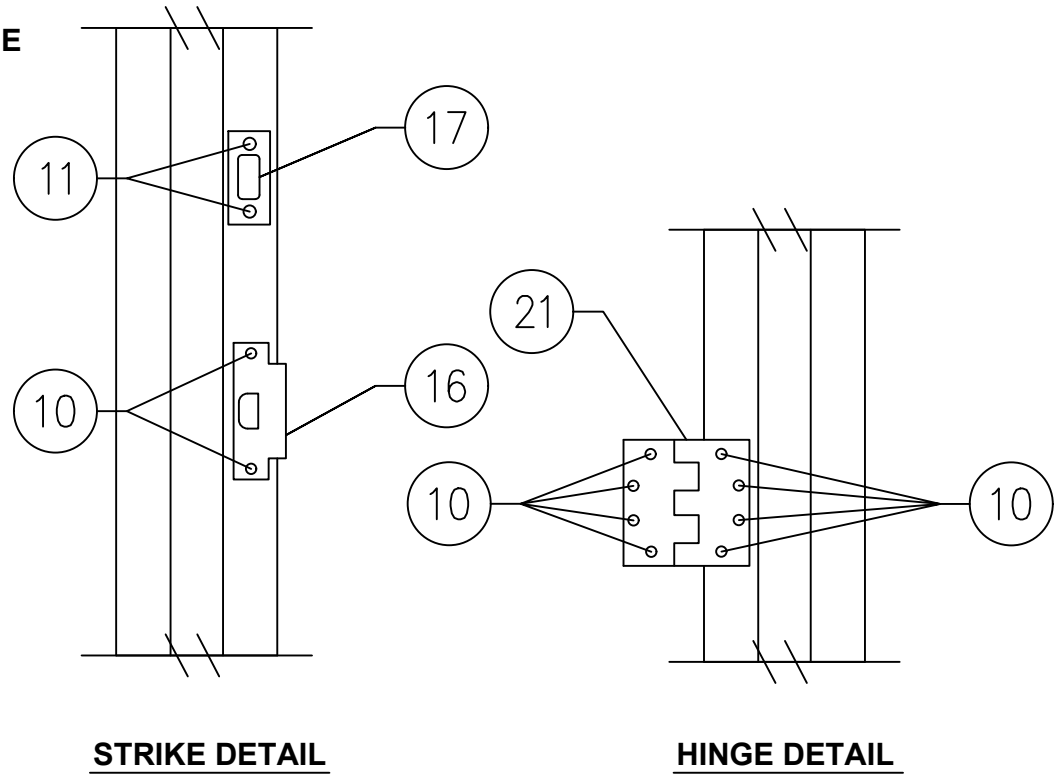
FRAME ANCHORING
MASONRY CONSTRUCTION
MASONRY ANCHORS

CONCRETE ANCHOR NOTES:

1. CONCRETE SCREW LOCATIONS MAY BE ADJUSTED TO MAINTAIN A MINIMUM 1" EDGE DISTANCE TO MORTAR JOINTS. IF CONCRETE SCREW LOCATIONS NOTED AS "MAX. O.C." MUST BE ADJUSTED TO MAINTAIN THE MINIMUM EDGE DISTANCE TO MORTAR JOINTS, ADDITIONAL CONCRETE SCREWS MAY BE REQUIRED TO ENSURE THE MAXIMUM ON CENTER DIMENSION IS NOT EXCEEDED.

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ANCHOR TYPE	ANCHOR LOCATION	ANCHOR SIZE	MANUFACTURER	MIN. EDGE DISTANCE	MIN. EMBEDMENT
CONCRETE ANCHOR SCREW	JAMBS	3/8"	LDT TAPCON (ITW BUILDEX)	3"	1-1/2"
	SILL	1/4"	TAPCON (ITW BUILDEX) ULTRACON CRETE FLEX (ELCO)	2-1/2"	1-1/4"
			TAPPER+ (POWERS)	2-1/2"	1-3/4"
CONCRETE SLEEVE ANCHOR	JAMBS	3/8"	DYNABOLT SLEEVE ANCHOR (ITW REDHEAD)	2-1/4"	1-1/2"

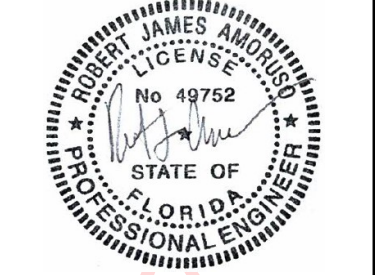


NOTE:
ANCHORAGE AND HINGE LOCATION DIMENSIONS SHOWN ARE FOR THE AS-TESTED DOOR CONFIGURATIONS. ALTERNATE HARDWARE SELECTIONS SHOWN ON SHEET 3 MAY LIMIT WIDTHS AND HEIGHTS OF THE FRAME TO A SMALLER SIZE. IN SUCH CASES, THE ANCHORAGE AND HINGE HARDWARE SPACING SHALL BE ADJUSTED BY DECREASING SPACING TO ACCOUNT FOR SMALLER FRAME WIDTH AND/OR HEIGHT. ANCHORAGE OR HINGE QUANTITIES CANNOT BE DECREASED. SEE SHEET 3 FOR DETAILS.

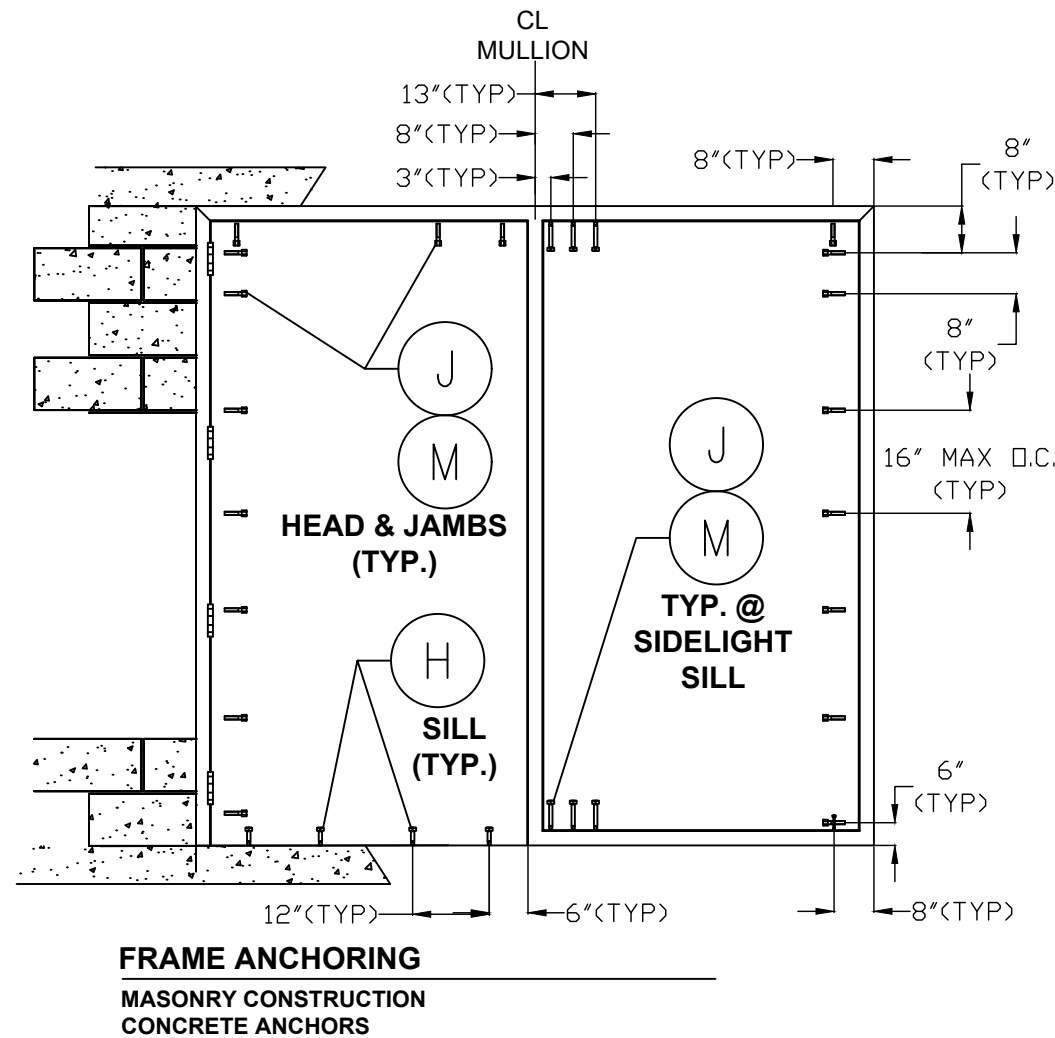
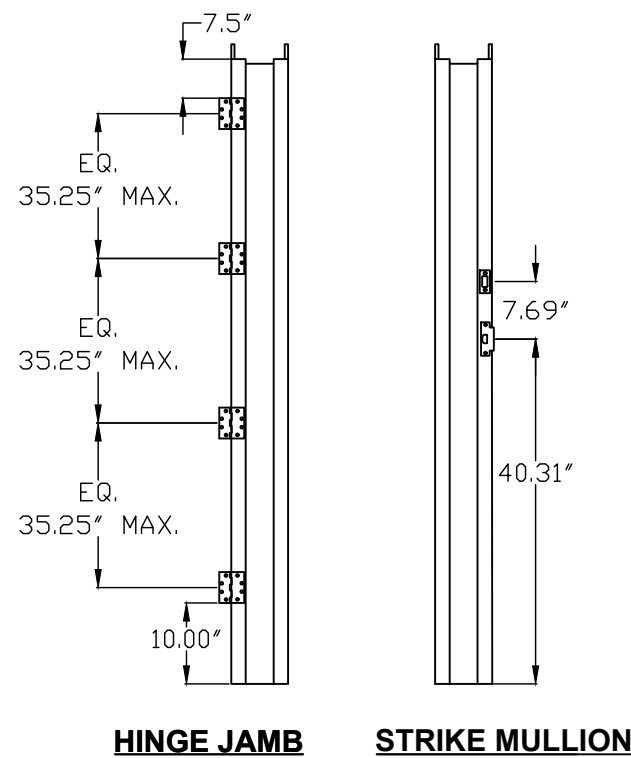
NO.	REVISION DESCRIPTION	BY	DATE	1/29/26		
C	ADD ALTERNATE LOCKING HARDWARE	RJA				

DATE: 2/27/2019	DWN BY: DAS/RJA	CHK BY: RJA	SCALE: NONE
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ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM



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Amoruso
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12:22:36 -05'00'



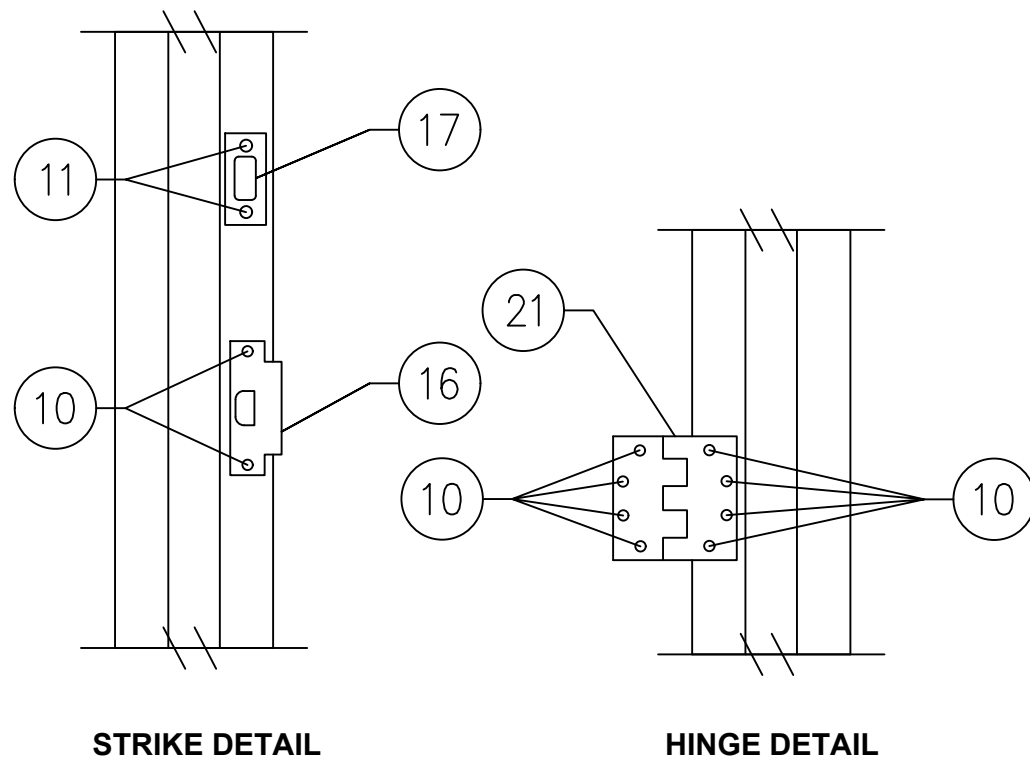
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SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS	DATE	BY	DATE			
	REVISION DESCRIPTION	NO.	ADD ALTERNATE LOCKING HARDWARE			
		C				
DATE:	DWN BY:	CHK BY:	SCALE:			
2/27/2019	DAS/RJA	RJA	NONE			

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ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM



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Amoruso
Date: 2026.01.31
12:22:52 -05'00'

SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM

OUTSWING, IMPACT (X, XO, O/XO)

INSTALLATION ANCHORAGE DETAILS

DATE

BY

REVISION DESCRIPTION

NO.

DATE

DWN BY:

DAS/RJA

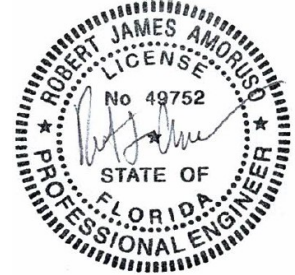
CHK BY:

RJA

SCALE:

NONE

ROBERT J. AMORUSO, P.E. #49752
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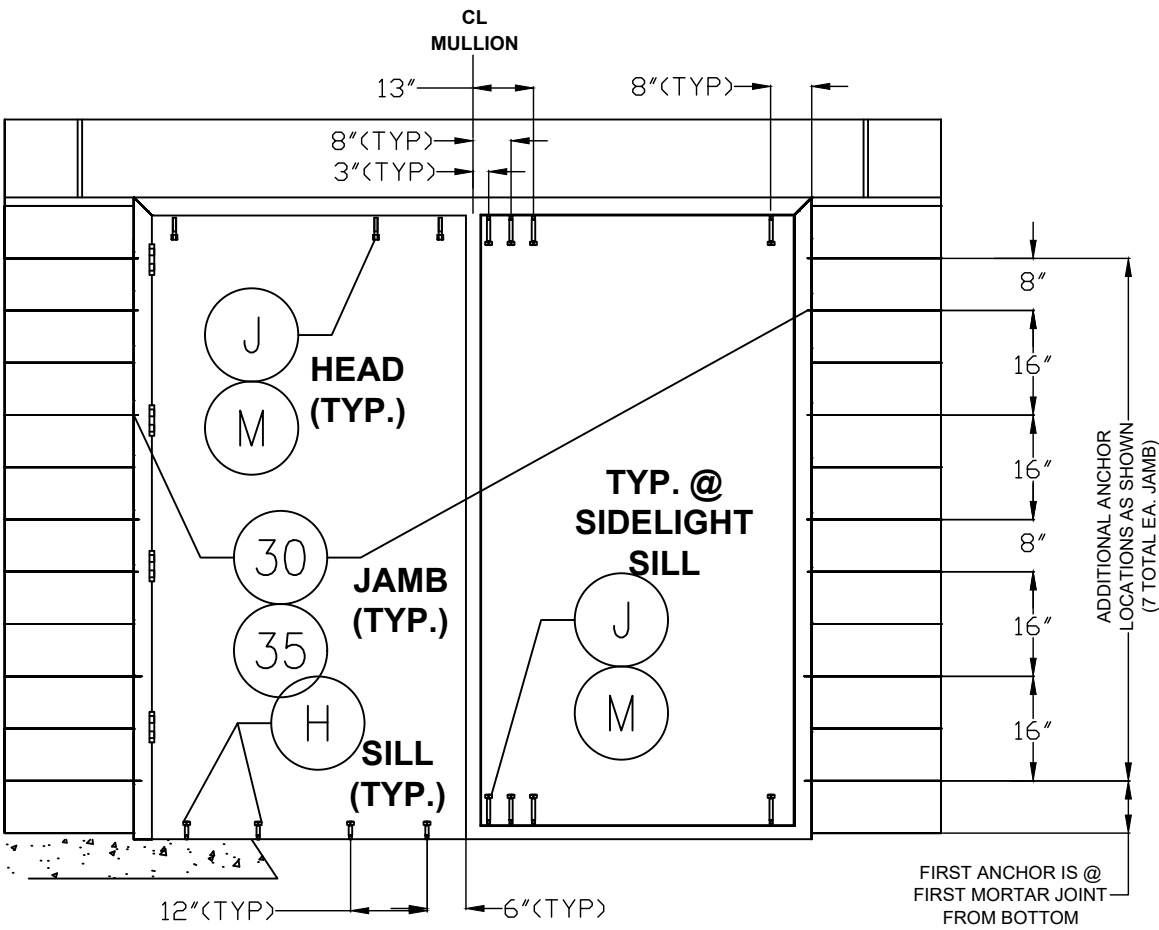
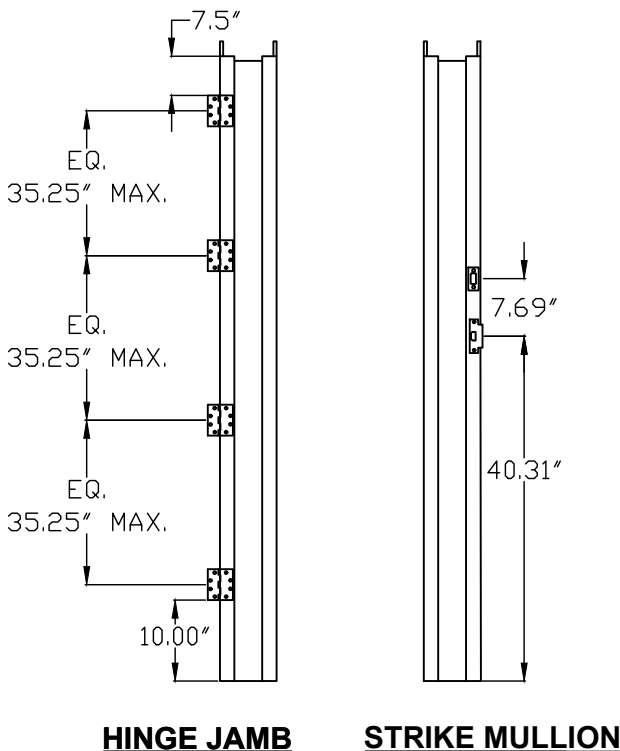


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Amoruso
Date: 2026.01.31
12:23:08 -05'00'

PROJECT#: ACE-2025-126

DWG/REV: HMF0003, Rev C

SHT: 11 of 15



NOTE:
ANCHORAGE AND HINGE LOCATION DIMENSIONS SHOWN ARE FOR THE AS-TESTED DOOR CONFIGURATIONS. ALTERNATE HARDWARE SELECTIONS SHOWN ON SHEET 3 MAY LIMIT WIDTHS AND HEIGHTS OF THE FRAME TO A SMALLER SIZE. IN SUCH CASES, THE ANCHORAGE AND HINGE HARDWARE SPACING SHALL BE ADJUSTED BY DECREASING SPACING TO ACCOUNT FOR SMALLER FRAME WIDTH AND/OR HEIGHT. ANCHORAGE OR HINGE QUANTITIES CANNOT BE DECREASED. SEE SHEET 3 FOR DETAILS.

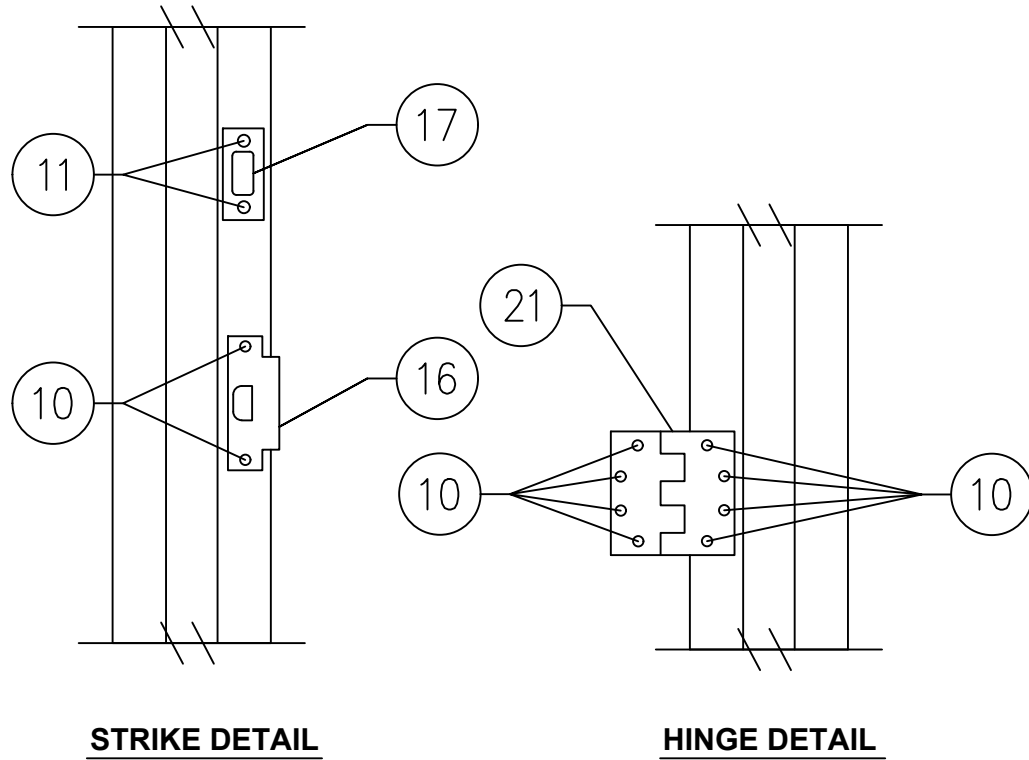
FRAME ANCHORING
MASONRY CONSTRUCTION
MASONRY ANCHORS

CONCRETE ANCHOR NOTES:

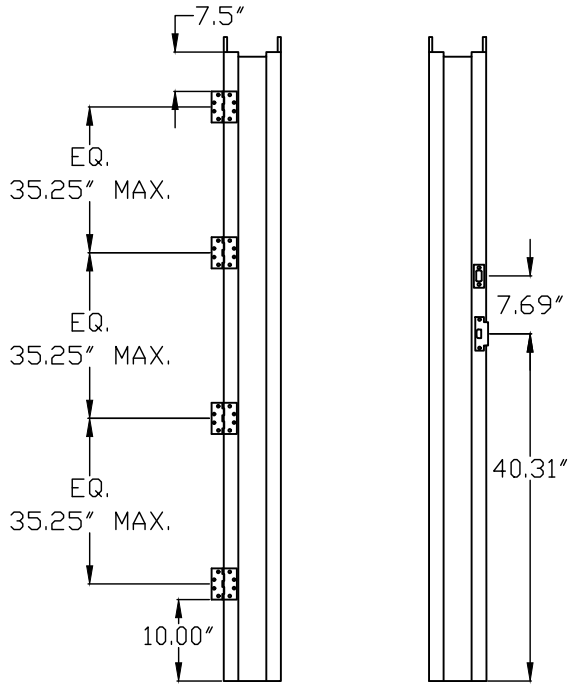
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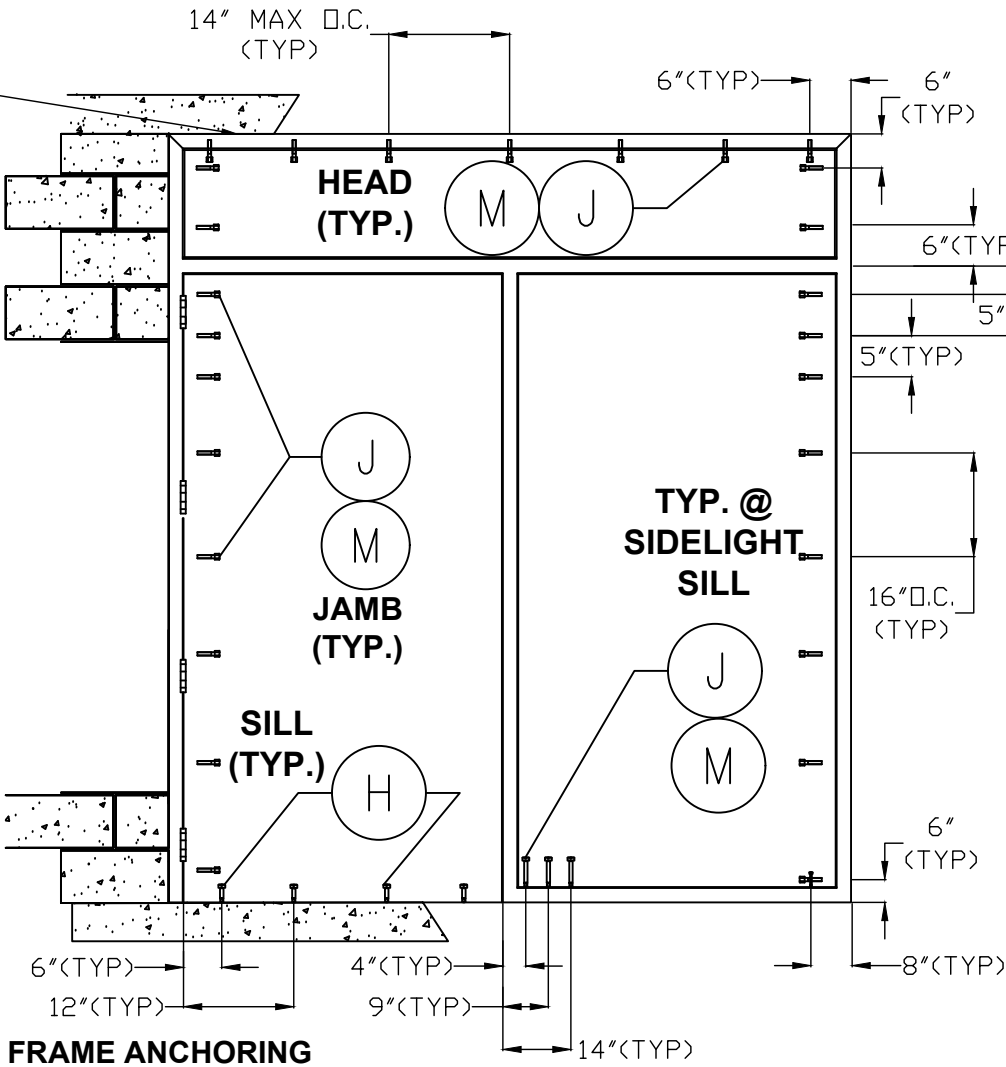


NOTE: CONCRETE ANCHORS THROUGH THE HEAD JAMB ARE REQUIRED FOR THE 2" HEAD ONLY. THE 4" HEAD MUST BE TIED INTO THE CORNERS WITH REINFORCED CONCRETE INTO THE SUPPORTING HEADER



HINGE JAMB

STRIKE MULLION



FRAME ANCHORING
MASONRY CONSTRUCTION
CONCRETE ANCHORS

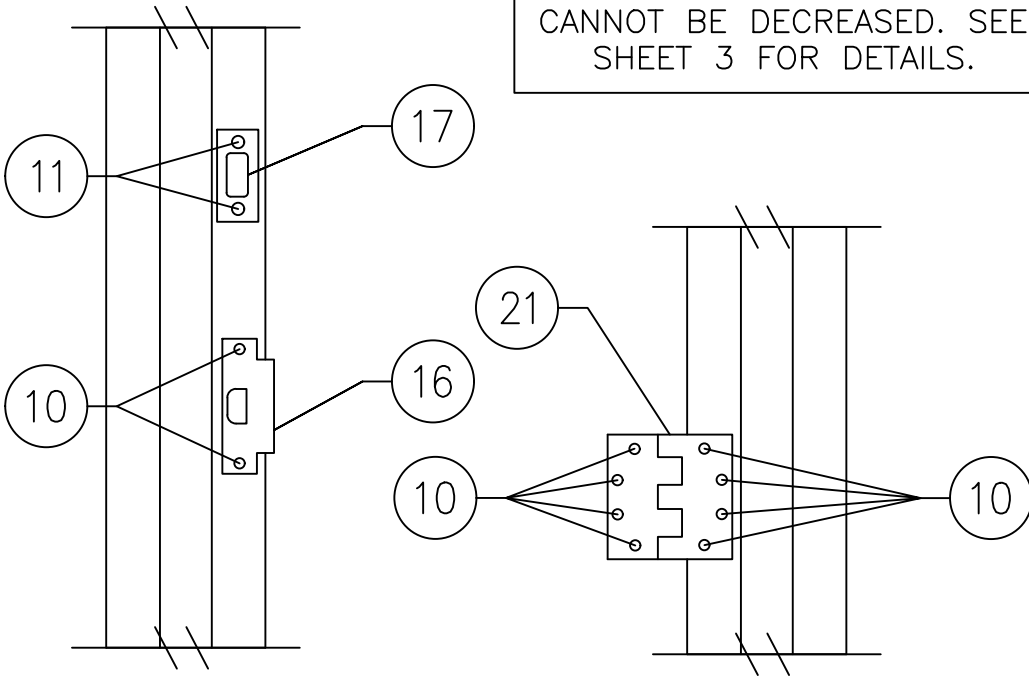
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STRIKE DETAIL

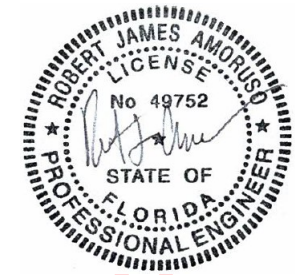
HINGE DETAIL

HMF EXPRESS
2501 NORTHCHASE
PARKWAY SE
WILMINGTON, NC 28405

SERIES HP STEEL DOOR W/WO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS	DATE	BY	NO.	REVISION DESCRIPTION
	1/29/26	RJA	C	ADD ALTERNATE LOCKING HARDWARE

DATE: 2/27/2019	DWN BY: DAS/RJA	CHK BY: RJA	SCALE: NONE
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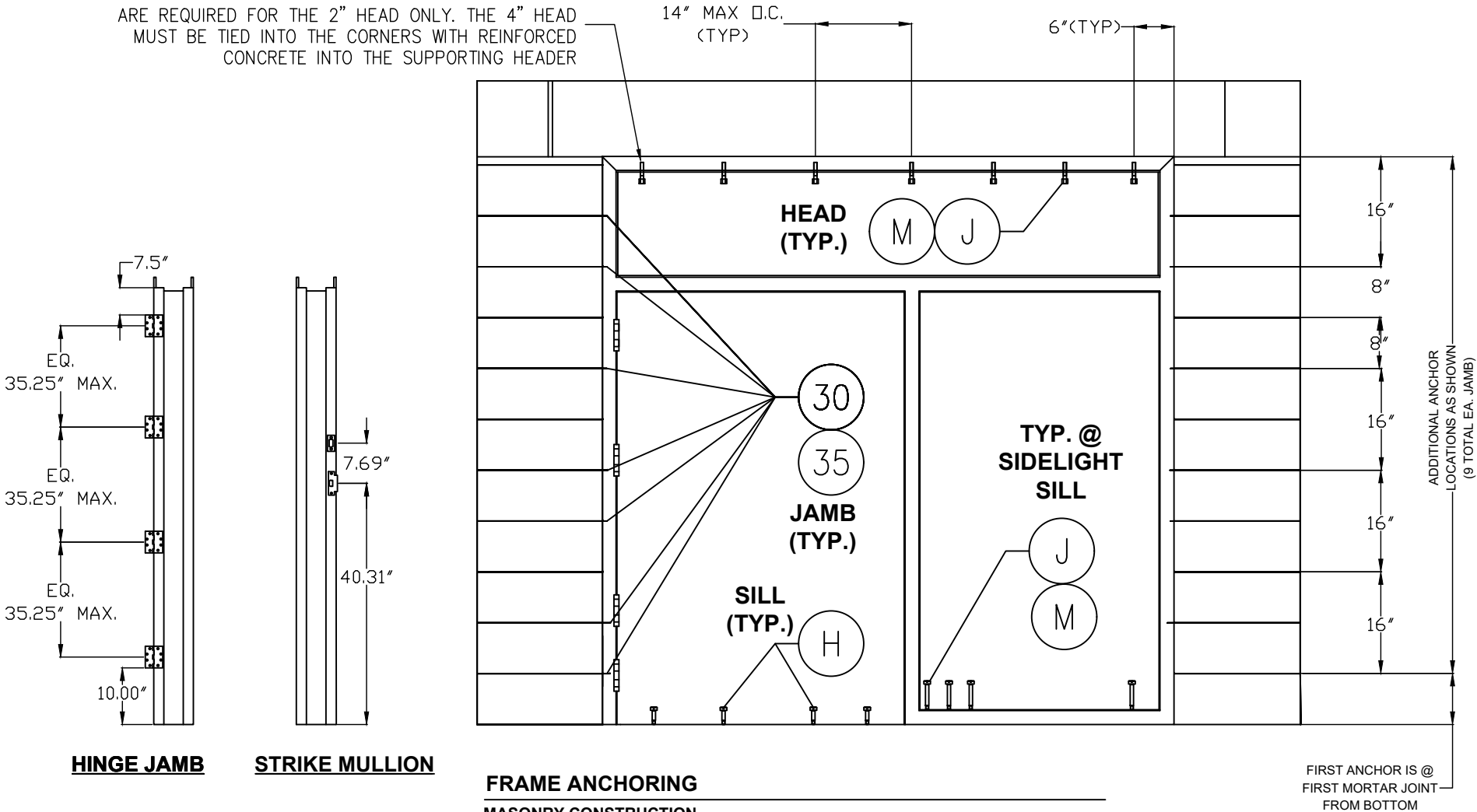
ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM



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Amoruso
Date: 2026.01.31
12:23:20 -05'00'

PROJECT#:	ACE-2025-126
DWG/REV:	HMF0003, Rev C
SHT:	12 of 15

NOTE: CONCRETE ANCHORS THROUGH THE HEAD JAMB ARE REQUIRED FOR THE 2" HEAD ONLY. THE 4" HEAD MUST BE TIED INTO THE CORNERS WITH REINFORCED CONCRETE INTO THE SUPPORTING HEADER



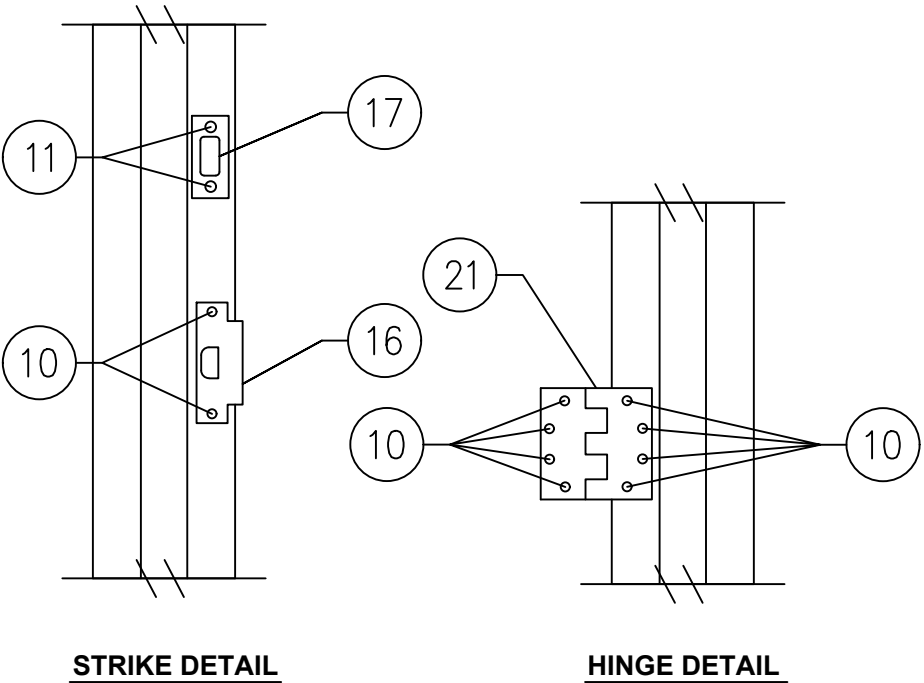
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HMF EXPRESS
2501 NORTHCHASE
PARKWAY SE
WILMINGTON, NC 28405

SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS	DATE	BY	DATE			
	NO.	REVISION DESCRIPTION	NO.	BY	DATE	
	C	ADD ALTERNATE LOCKING HARDWARE		RJA	1/29/26	

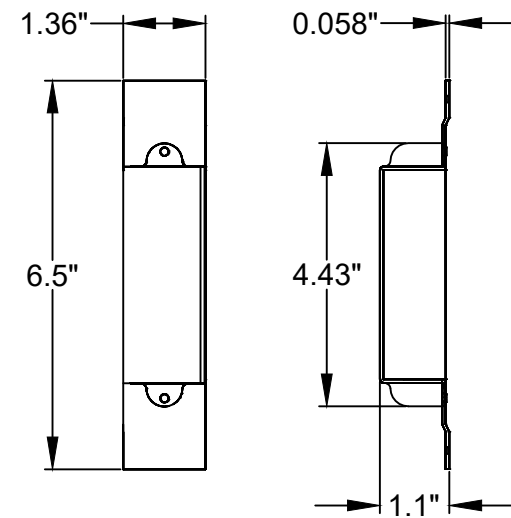
DATE: 2/27/2019	DWN BY: DAS/RJA	CHK BY: RJA	SCALE: NONE
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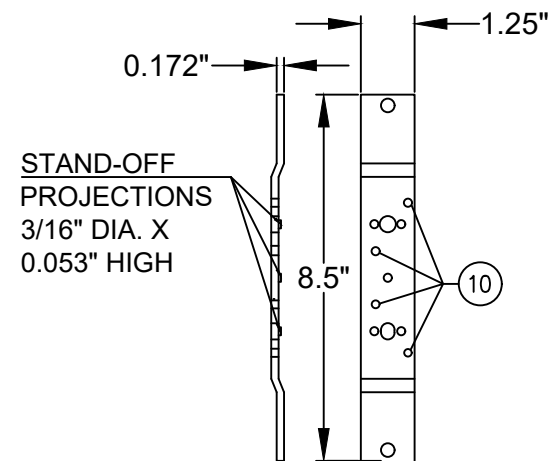


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Amoruso
Date: 2026.01.31
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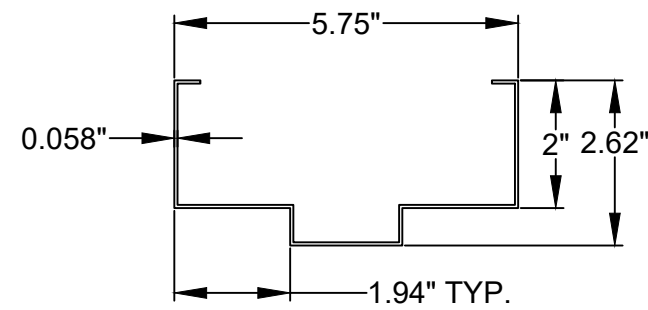
PROJECT#:	ACE-2025-126
DWG/REV:	HMF0003, Rev C
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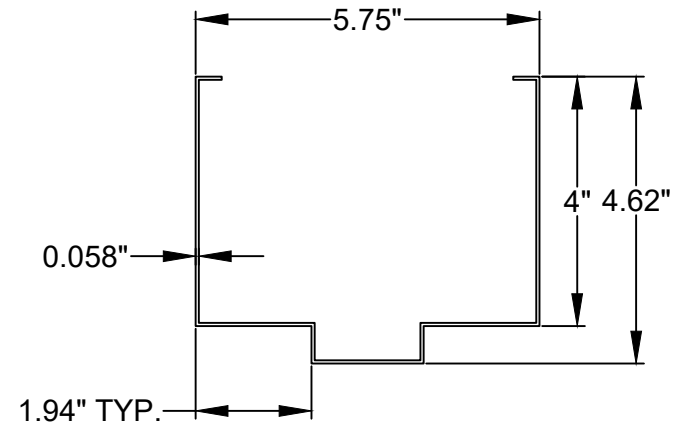
8 DUST BOX



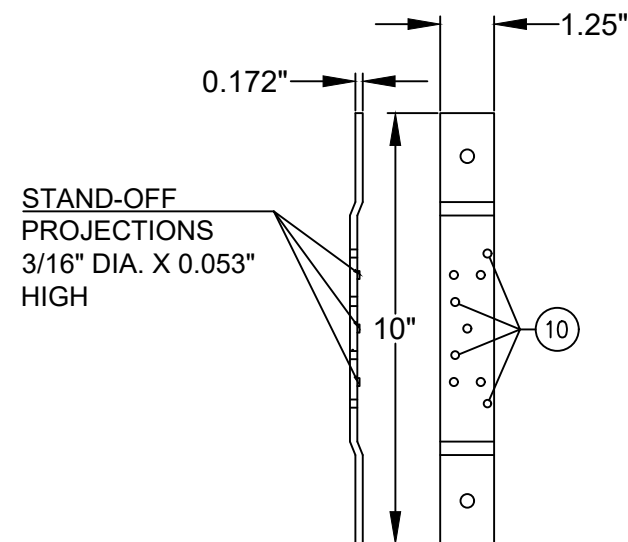
22 DOOR HINGE REINFORCEMENT
7 GAUGE STEEL



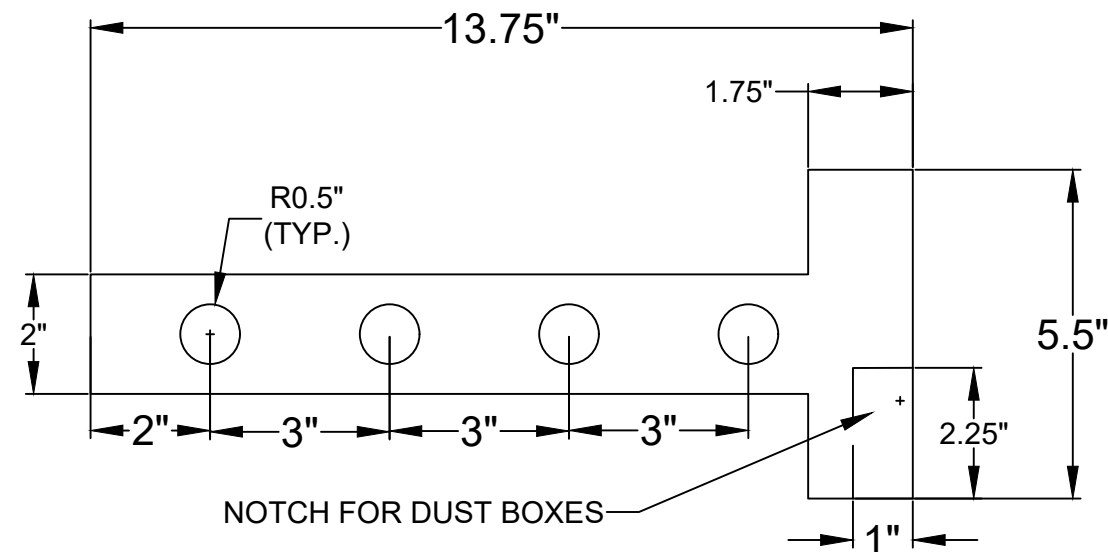
25 HOLLOW METAL FRAME
2" FACE JAMB



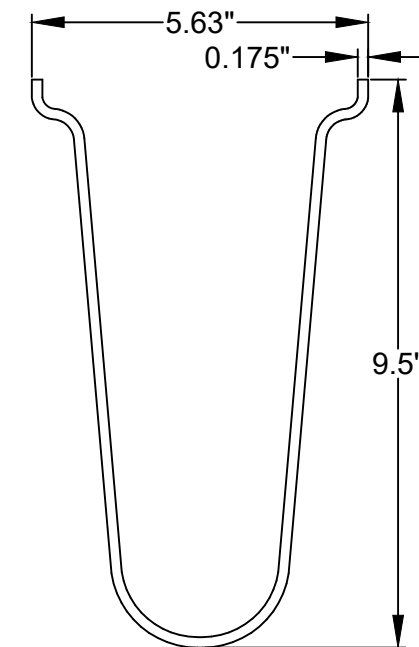
26 HOLLOW METAL FRAME
4" FACE JAMB



28 FRAME HINGE REINFORCEMENT
7 GAUGE STEEL



30 "T" ANCHOR
0.058" THICK STEEL



35 WIRE ANCHOR

HMF EXPRESS
2501 NORTHCHASE
PARKWAY SE
WILMINGTON, NC 28405

NO.	REVISION DESCRIPTION	BY	DATE
C	ADD ALTERNATE LOCKING HARDWARE	RJA	1/29/26

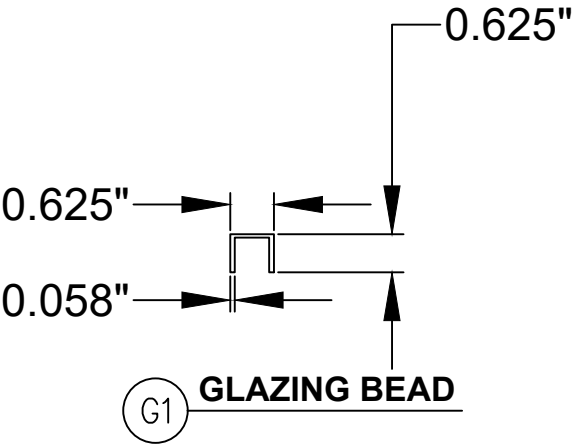
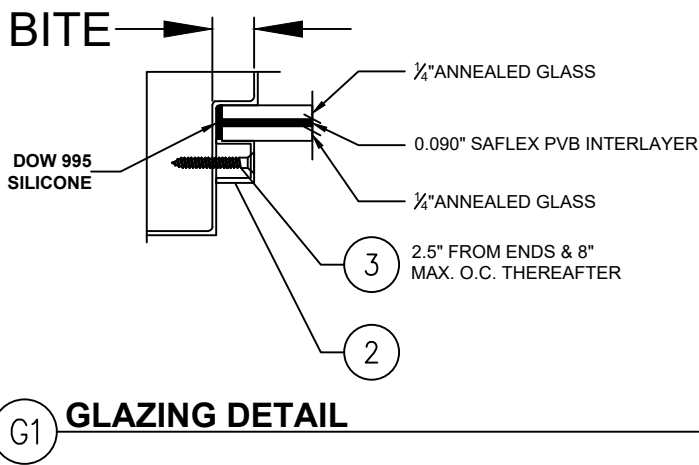
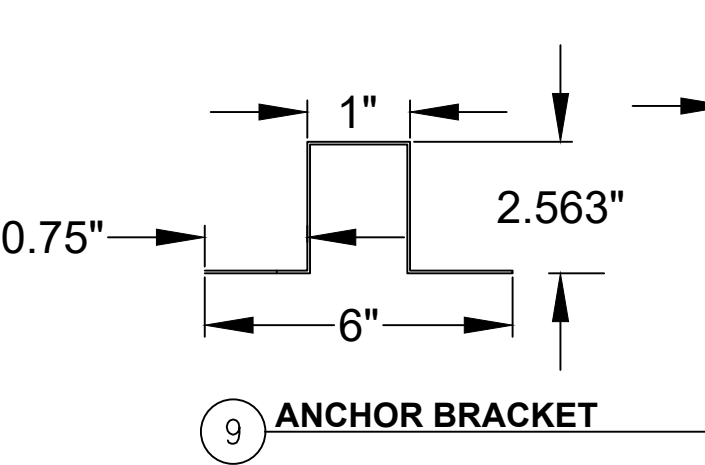
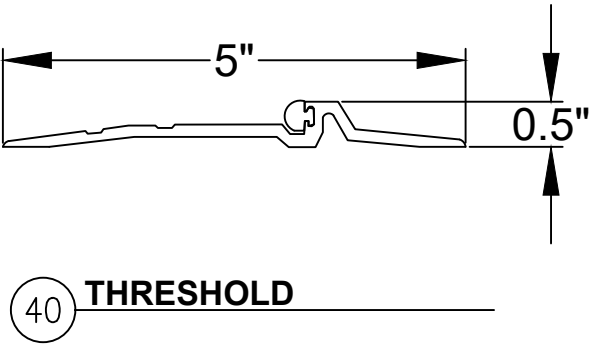
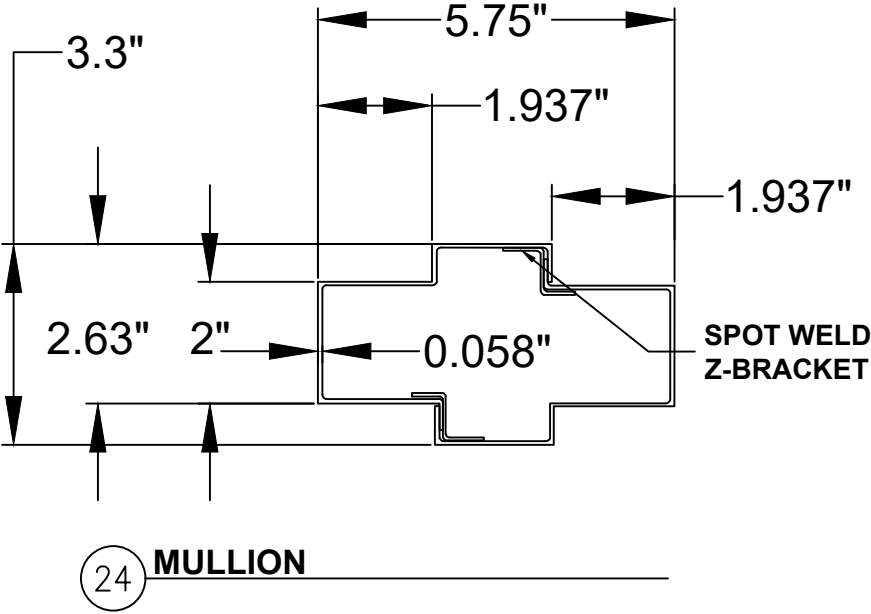
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by Robert J
Amoruso
Date: 2026.01.31
12:23:44 -05'00'

PROJECT#: ACE-2025-126
DWG/REV: HMF0003, Rev C
SHT: 14 of 15



BILL OF MATERIALS		
ITEM #	DESCRIPTION	MATERAILS
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2 3/4" ELCO OR ITW CONCRETE SCREW	STEEL
E	MASONRY - 2,500 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK (GROUT FILLED) CONFORMING TO ASTM C90	CONCRETE
H	1/4" DIA, PFH CONCRETE SCREW (SEE ANCHOR TABLE ON SHEETS 7 THRU 11)	STEEL
J	3/8" DIA, PFH DYNABOLT SLEEVE ANCHOR (SEE ANCHOR TABLE ON SHEETS 7 THRU 11)	STEEL
M	3/8" DIA, LDT TAPCON CONCRETE SCREW (SEE ANCHOR TABLE ON SHEETS 7 THRU 11)	STEEL
1	STEEL DOOR PANEL	-
2	GLAZING BEAD	STEEL
3	#6 X 1-1/4" PFH SELF-DRILLING TEK SCREW	STEEL
8	DUST BOX	STEEL
9	ANCHOR BRACKET	STEEL
10	#12-24 X 1/2" PFH MACHINE SCREW	STEEL
11	#8 X 3/4" COMBINATION WOOD/MACHINE SCREW	STEEL
16	ANSI LATCH STRIKE	STEEL
17	DEADBOLT STRIKE	STEEL
19	DEADBOLT STRIKE REINFORCEMENT	STEEL
20	WEATHERSTRIP (HAGER #720)	NEOPRENE
21	4 1/2" X 4 1/2" HINGE	STEEL
22	DOOR HINGE REINFORCEMENT	STEEL
24	MULLION - 16GA. (0.058"THK)	STEEL
25	HOLLOW FRAME (2" FACE JAMB)-16 GA. (0.058"THK)	STEEL
26	HOLLOW FRAME (4" FACE HEAD)-16 GA. (0.058"THK)	STEEL
28	FRAME HINGE REINFORCEMENT	STEEL
30	MASONARY "T" ANCHOR	STEEL
35	WIRE ANCHOR	STEEL
40	THRESHOLD (HAGER #520S)	ALUMINIUM

HMF EXPRESS
2501 NORTHCHASE
PARKWAY SE
WILMINGTON, NC 28405

SERIES HP STEEL DOOR W/NO SIDELIGHT & TRANSOM OUTSWING, IMPACT (X, XO, O/XO) INSTALLATION ANCHORAGE DETAILS	DATE			
	BY	RJA		
	REVISION DESCRIPTION	ADD ALTERNATE LOCKING HARDWARE		
	NO.	C		

DATE: 2/27/2019	DWN BY: DAS/RJA	CHK BY: RJA	SCALE: NONE
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ROBERT J. AMORUSO, P.E. #49752
AMORUSO CONSULTING ENG., LLC
FBPE REGISTRATION NO. 38327
226 N NOVA RD, NO. 142
ORMOND BEACH, FL 32174
RJAENGPE@GMAIL.COM



Digitally signed
by Robert J
Amoruso
Date: 2026.01.31
12:23:56 -05'00'

PROJECT#:	ACE-2025-126
DWG/REV:	HMF0003, Rev C
SHT:	15 of 15