



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

American Metal Fabricators, Inc. dba AMF Building
9040 Belvedere Road
West Palm Beach, Florida 33411

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Extruded Aluminum Bahama Shutter

APPROVAL DOCUMENT: Drawing No. AMF003, titled "Aluminum Bahama Shutter", sheets 1 through 3 of 3 prepared by Building Drops, Inc., dated June 27, 2015, last revised on December 17, 2020, signed & sealed by Hermes F. Norero, P.E., on December 17, 2020 bearing Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA #18-0719.01 and consists of this page 1, evidence submitted pages E-1, E-2 & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**

H.A.M.
03/11/21

NOA No 20-1223.10
Expiration Date:
Approval Date:
Page 1

American Metal Fabricators, Inc. dba AMF Building

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-0822.09

A. DRAWINGS

1. *Drawing No. 99-262, titled "Bahama Shutter", prepared by Knezevich & Associates, Inc., dated July 24, 2000, last revision #1 dated November 6, 2000, sheets 1 through 3 of 3, signed and sealed by V. J. Knezevich, P.E.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of Bahama Shutters, prepared by Construction Testing Corporation, Report No. 00-026, dated 07/25/2000, signed and sealed by Christopher G. Tyson, P.E.*

C. CALCULATIONS

1. *Comparative analysis and Anchor calculation, dated August 3, 2000, sheets 1 through 6, prepared by Knezevich & Associates, Inc., signed and sealed by V. J. Knezevich, P.E.*

D. MATERIAL CERTIFICATIONS

1. *Customer Extrusions by Metal Industries, Inc.*
2. *Tensile Test Report issued by Certified Testing Laboratories, dated August 28, 2000, Report No. CTL-797F.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #04-1020.01

A. DRAWINGS

1. *Drawing No. 07-301, titled "Bahama Shutter", sheets 1 through 3 of 3, prepared by Thornton Tomasetti, dated February 07, 2007, last revision #0 dated February 07, 2007, signed & sealed by J. W. Knezevich, P.E.,*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Revised Anchor analysis and calculations dated February 04, 2007, 14 Pages, prepared by Thornton Tomasetti, signed and sealed by John W. Knezevich, P.E. on Februar 04, 2007.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No 20-1223.10
Expiration Date:
Approval Date:

American Metal Fabricators, Inc. dba AMF Building

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #12-0913.12

A. DRAWINGS

1. *Drawing No. 12-145, titled "Bahama Shutter", sheets 1 through 3 of 3, prepared by Knezevich Associates Consulting Engineers, dated March 14, 2012, signed & sealed by V. J. Knezevich, P.E., on May 14, 2012.*

B. TESTS

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of Bahama Shutters, prepared by Blackwater Testing, Inc., Report No. BT-AE-12-004, dated 09/07/2012, signed and sealed by Yamil G. Kuri, P.E.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #15-1207.05

A. DRAWINGS

1. *Drawing No. AMF003, titled "Aluminum Bahama Shutter", sheets 1 through 3 of 3 prepared by Building Drops, Inc., dated June 27, 2015, signed & sealed by Hermes F. Norero, P.E., on June 02, 2016.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Revised Anchor analysis and calculations dated June 02, 2016, 4 Pages, prepared by Building Drops, Inc., dated June 27, 2015, signed & sealed by Hermes F. Norero, P.E., on June 02, 2016.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No 20-1223.10
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American Metal Fabricators, Inc. dba AMF Building

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #18-0719.01

A. DRAWINGS

1. *None.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. OTHERS

1. *Florida Building Code, 2017 Edition, compliance letter dated 08/21/2017 issued by Building Drops, signed and sealed by Hermes F. Norero, P.E., on 10/24/2017.*

6. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. AMF003, titled "Aluminum Bahama Shutter", sheets 1 through 3 of 3 prepared by Building Drops, Inc., dated June 27, 2015, last revised on December 17, 2020, signed & sealed by Hermes F. Norero, P.E., on December 17, 2020.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. OTHERS

1. *Florida Building Code, 2020 Edition, compliance letter dated 11/02/20 issued by Building Drops, signed and sealed by Hermes F. Norero, P.E., on 12/17/20.*

Helmy A. Makar, P.E., M.S.
Product Control Section Supervisor
NOA No 20-1223.10
Expiration Date:
Approval Date:



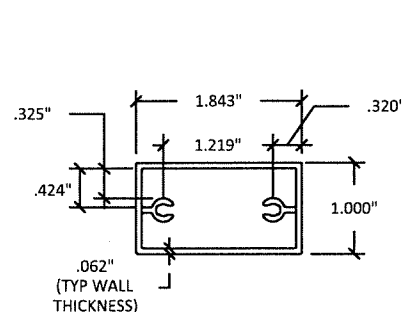
AMERICAN METAL FABRICATORS, INC.
 1501 53rd Street
 Mangonia Park, FL 33407
 PH: (561)790-5799
 FAX: (561)790-2320

GENERAL NOTES

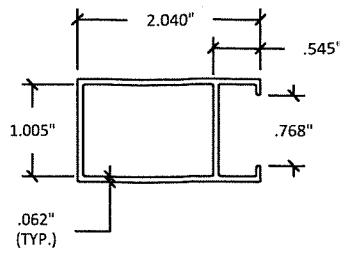
- THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISIONS SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCTS CONTROL DIVISION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE 7TH EDITION FLORIDA BUILDING CODE.
- NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR $C_d = 1.6$ WAS USED FOR WOOD SCREW DESIGN.
- DETERMINE THE POSITIVE AND NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH ASCE 7-10. A DIRECTIONALITY FACTOR OF $K_d = 0.85$ SHALL BE USED.
- THESE PRODUCT EVALUATION DOCUMENTS ARE GENERIC AND DO NOT INCLUDE INFORMATION FOR SITE-SPECIFIC APPLICATION OF THIS SHUTTER SYSTEM.
- THESE PRODUCT EVALUATION DOCUMENTS ARE INTENDED FOR USE ONLY BY A LICENSED CONTRACTOR, PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT AND ARE SUITABLE TO BE APPLIED BY THE CONTRACTOR PROVIDED THE CONTRACTOR DOES NOT DEVIATE FROM THE CONDITIONS DETAILED HEREIN AND THE CONTRACTOR VERIFIES THAT THE EXISTING STRUCTURE DOES NOT DEVIATE IN EITHER FORM OR MATERIAL FROM THE STRUCTURAL SUBSTRATES DETAILED HEREIN. CONTRACTOR SHALL VERIFY EXISTING STRUCTURE CAN WITHSTAND SUPERIMPOSED LOAD OF SHUTTER.
- ANY MODIFICATIONS OR ADDITIONS TO THESE PRODUCT EVALUATION DOCUMENTS WILL VOID THE PRODUCT EVALUATION DOCUMENTS.
- WHEN THE SITE CONDITIONS DEVIATE FROM THESE PRODUCT EVALUATION DOCUMENTS, THE BUILDING OFFICIAL MAY ELECT ONE OF THE FOLLOWING OPTIONS.
 - REQUIRE THAT SITE SPECIFIC DOCUMENTS BE PREPARED, SIGNED, DATED AND SEALED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT, WHICH DETAIL AND JUSTIFY THE DEVIATION. SAID DOCUMENTS SHALL BE SUBMITTED TO THE PRODUCT ENGINEER FOR REVIEW AS A CONDITION TO THE BUILDING OFFICIAL GRANTING HIS/HER APPROVAL.
 - REQUIRE THAT A ONE TIME SITE SPECIFIC APPROVAL BE APPLIED FOR AND SECURED FROM THE MIAMI-DADE COUNTY PRODUCT CONTROL DIVISION.

WHEN THE SITE CONDITION DEVIATION OCCUR WITHIN THE HIGH VELOCITY HURRICANE ZONE AREAS ONLY OPTION "B" SHALL BE ACCEPTED BY THE BUILDING OFFICIAL
- THE DETAILS AND SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED FOR IMPACT. CYCLIC AND UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH FLORIDA BUILDING CODE TEST PROTOCOLS FOR HVHZ TAS 201, 202, AND 203 WITH DESIGN LOADS AS FOLLOWS:
 - OPEN POSITION INSTALLATIONS
 - NON-HURRICANE, SHADE CONDITION
 - POSITIVE DESIGN LOAD: 45.1 P.S.F.
 - NEGATIVE DESIGN LOAD: 45.1 P.S.F.
 - CLOSED POSITION INSTALLATIONS
 - HURRICANE SHUTTER CONDITION
 - POSITIVE DESIGN LOAD: 97.0 P.S.F.
 - NEGATIVE DESIGN LOAD: 97.0 P.S.F.
 - MIN. SEPARATION FROM GLASS: 3-9/16"
- EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS:

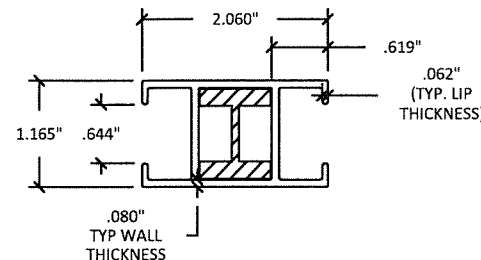
AMF BUILDING PRODUCTS
 WEST PALM BEACH, FLORIDA
 MIAMI-DADE COUNTY PRODUCT CONTROL SECTION APPROVED
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- ALL SCREWS, BOLTS AND WASHERS TO BE 2024-T4 ALUMINUM ALLOY OR 300 SERIES STAINLESS STEEL WITH A 60 K.S.I MINIMUM TENSILE STRENGTH. ALL POP RIVETS SHALL BE 3/16" DIAMETER 5052 ALUMINUM ALLOY.
- THIS SHUTTER SHALL BE PROVIDED WITH A PERMANENT LABEL INSTRUCTING THE OWNER OR TENANT TO CLOSE AND FASTEN THE SHUTTER TO THE WALL DURING PERIODS OF TIME THAT ARE DESIGNED BY THE U.S. WEATHER BUREAU AS BEING HURRICANE WARNING OR ALERT.
- INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
 - CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 - GROUT-FILLED CMU - UNIT STRENGTH CONFORMS TO ASTM C-90 WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AND GROUT CONFORMS TO ASTM C 476, MINIMUM GROUT COMPRESSIVE STRENGTH OF 2000 PSI.
 - HOLLOW BLOCK CMU - UNIT STRENGTH CONFORMS TO ASTM C-90 WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI.



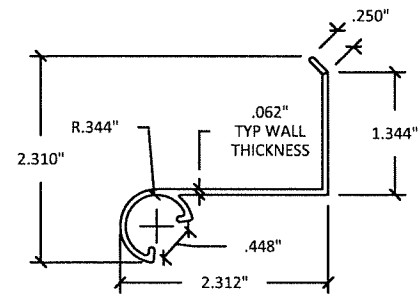
① **"H" TUBE**
SCALE: HALF SCALE



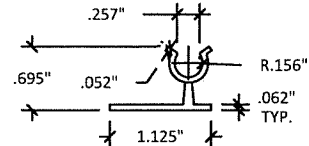
② **JAMB**
SCALE: HALF SCALE



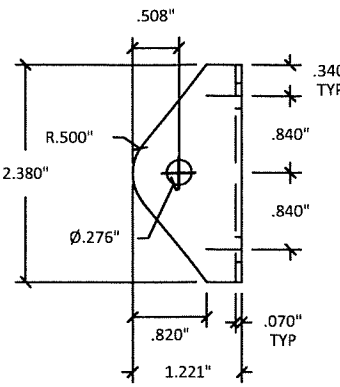
③ **DOUBLE JAMB W/ INSERT**
SCALE: HALF SCALE



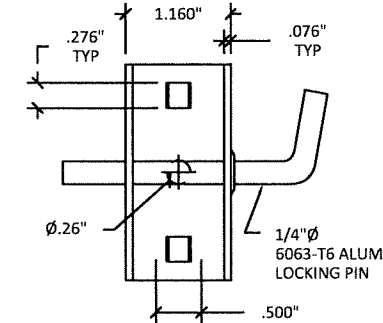
④ **FEMALE HINGE**
SCALE: HALF SCALE



⑤ **MALE HINGE**
SCALE: HALF SCALE

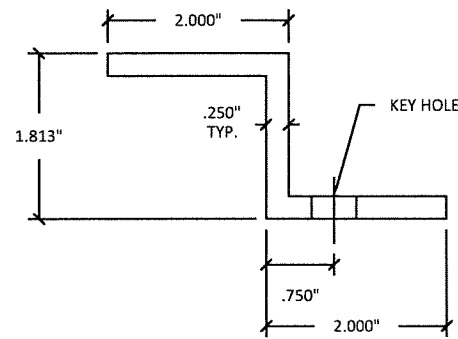


⑥ **CAMEL BACK HINGE** ⑫
SCALE: HALF SCALE

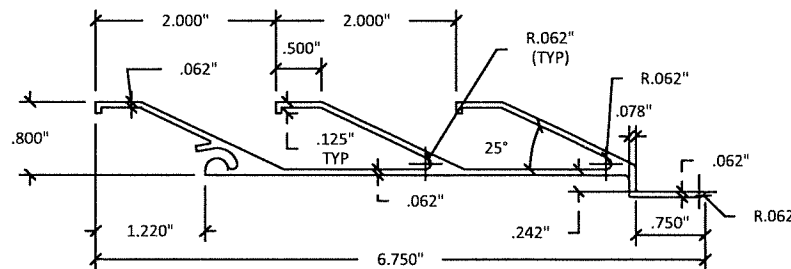


7a **"Z" BAR (4 1/2\"/>**

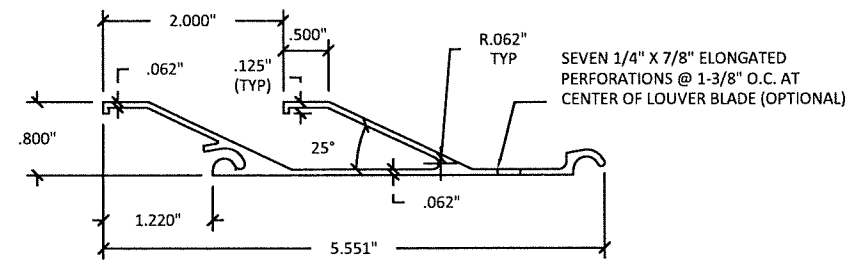
7b **"Z" BAR (7\"/>**



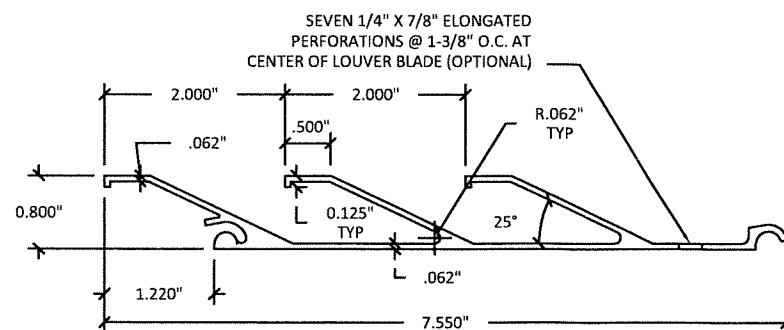
NOTE:
KEYHOLE ACCEPTABLE IN ALL BUT ONE HOLE. PROVIDE ONE 5/16\"/>



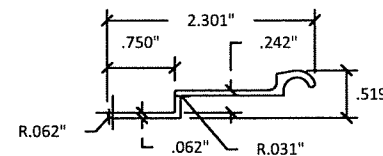
⑧ **STARTER BLADE**
SCALE: HALF SCALE



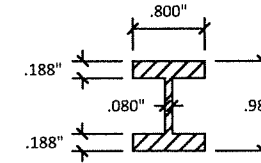
⑨ **STANDARD 2 LOUVER BLADE**
SCALE: HALF SCALE



⑩ **STANDARD 3 LOUVER BLADE**
SCALE: HALF SCALE



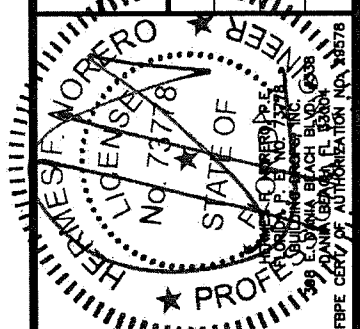
⑪ **CLOSURE STRIP**
SCALE: HALF SCALE



⑫ **INSERT**
SCALE: HALF SCALE

TITLE: ALUMINUM BAHAMA SHUTTER
 GENERAL NOTES
 PREPARED BY: BUILDING DROPS, INC.
 398 E. DANIA BEACH BLVD. #338
 DANIA BEACH, FL 33004
 PH: (954) 399-8478 FX: (954) 744-4738

REVISIONS	DESCRIPTION	BY	DATE
7a	"Z" BAR (4 1/2" LONG)	LL	12/20
7b	"Z" BAR (7" LONG)	LL	12/20
	FBC 2020 UPDATE		

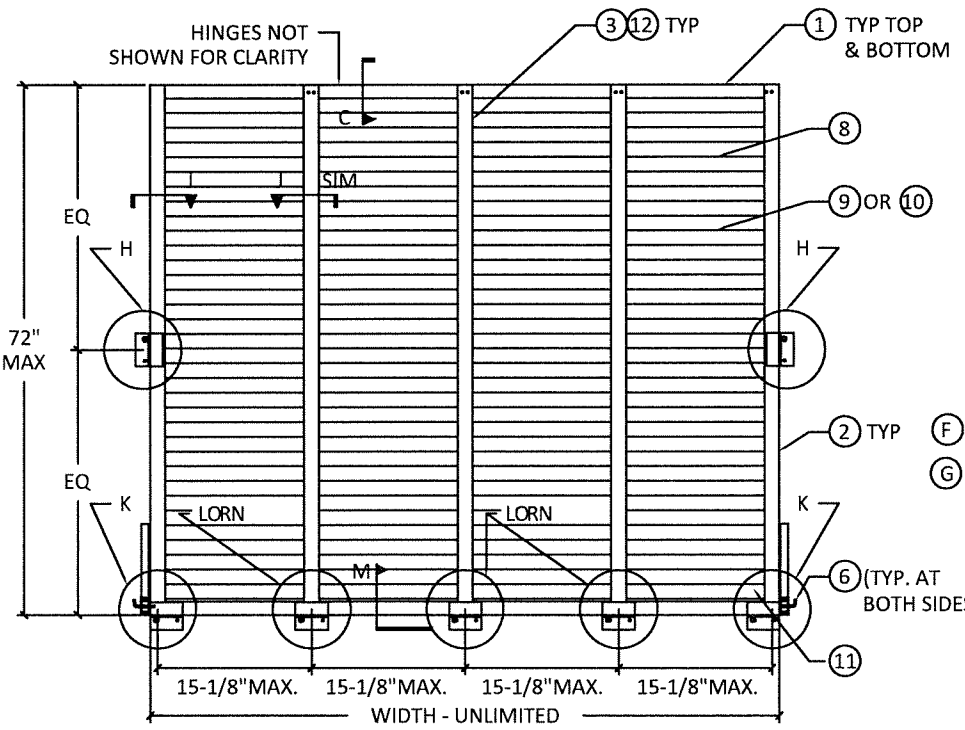


DATE: 06.27.15
 DWN BY: LS
 CHK BY: HFN
 SCALE: NTS
 DWG #: AMF003
 SHEET: 1 OF 3

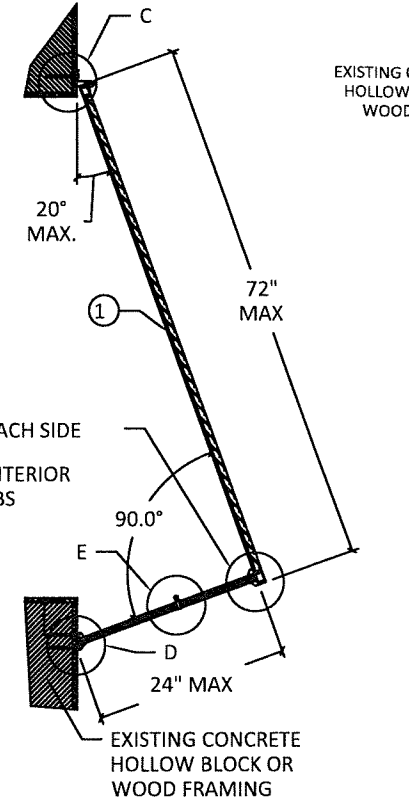
Digitally signed by Hermes F Norero
 Reason: I am approving this document
 Date: 2020.12.17 19:42:08 -05'00'



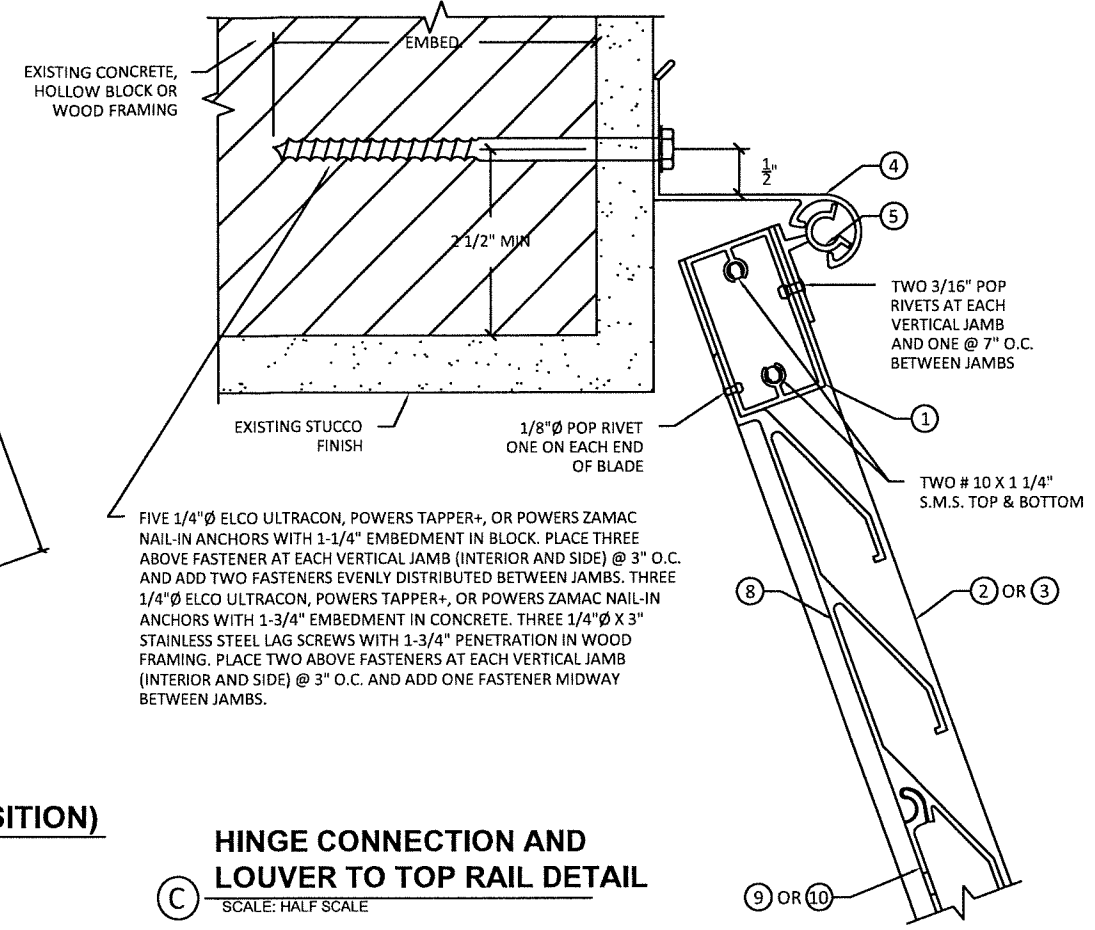
AMERICAN METAL FABRICATORS, INC.
 1501 53rd Street
 Mangonia Park, FL 33407
 PH: (561)790-5799
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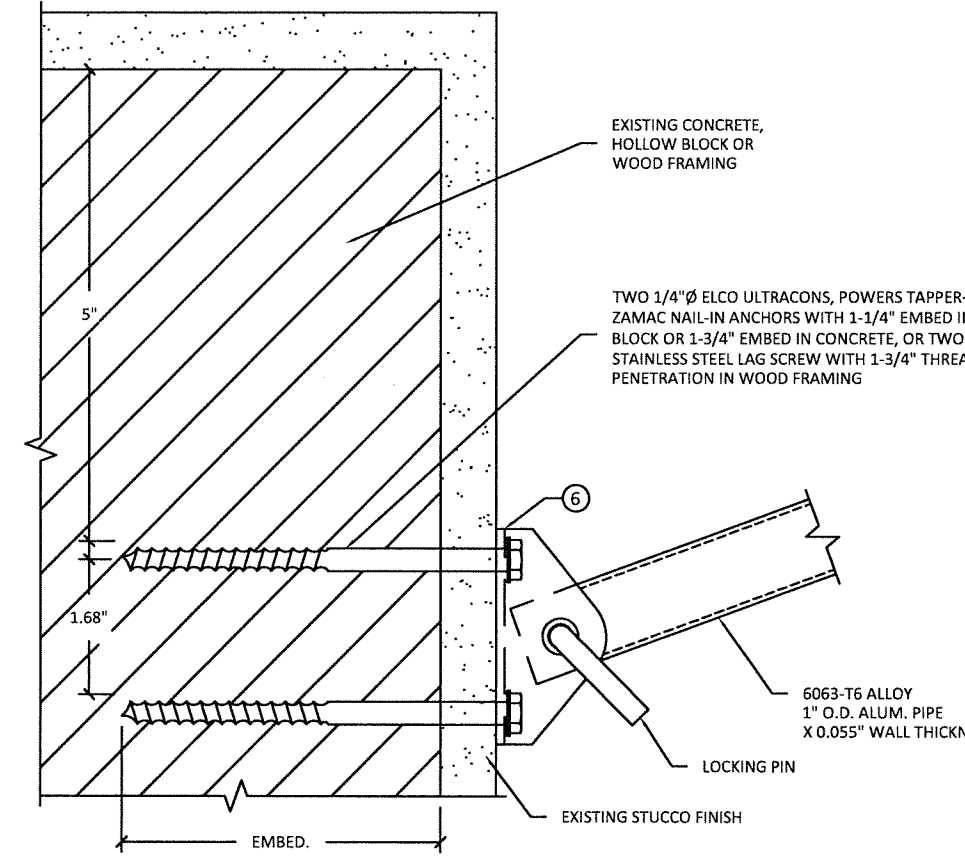
(A) TYPICAL ELEVATION (CLOSED POSITION)
 SCALE: 3/8" = 1'-0"
 ADD DOUBLE JAMB PIPE SUPPORTS AS REQUIRED TO ACCOMMODATE UNLIMITED WIDTHS



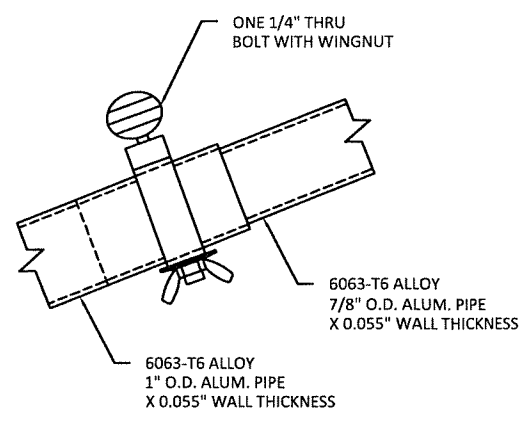
(B) TYPICAL SIDE VIEW (OPEN POSITION)
 SCALE: 3/8" = 1'-0"
 (F) AT EACH SIDE
 (G) AT INTERIOR JAMBS



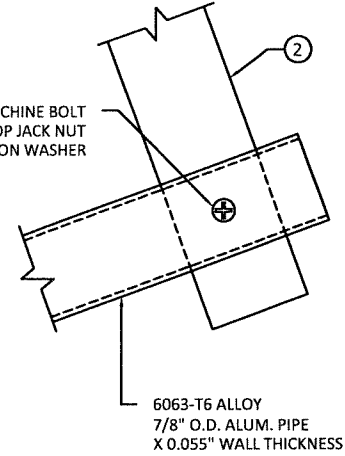
(C) HINGE CONNECTION AND LOUVER TO TOP RAIL DETAIL
 SCALE: HALF SCALE



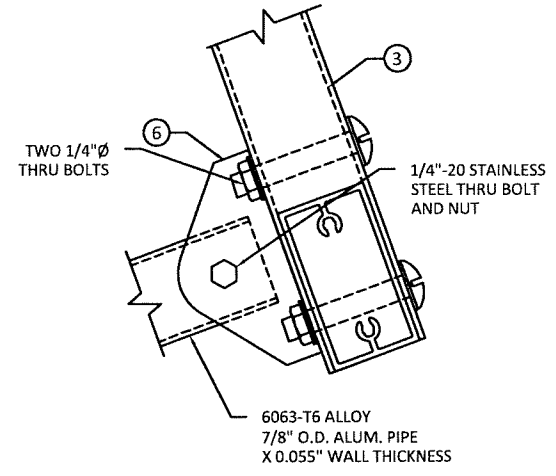
(D) SUPPORT PIPE AT CAMEL BACK HINGE TO WALL
 SCALE: HALF SCALE



(E) SUPPORT PIPE OVERLAP
 SCALE: HALF SCALE



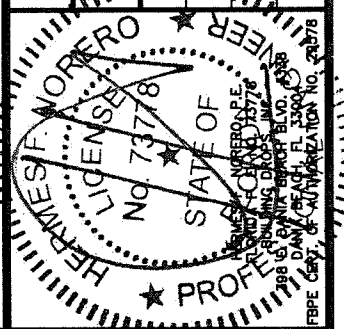
(F) SUPPORT PIPE AT JAMB
 SCALE: HALF SCALE



(G) SUPPORT PIPE AT DOUBLE JAMB
 SCALE: HALF SCALE

TITLE: ALUMINUM BAHAMA SHUTTER
 OPEN POSITION DETAILS
 PREPARED BY: BUILDING DROPS, INC.
 398 E. DANIA BEACH BLVD. #338
 DANIA BEACH, FL 33004
 PH: (954) 399-8478 FX: (954) 744-4738

REVISIONS	DESCRIPTION	BY	DATE
		LL	12/20
	FBC 2020 UPDATE		

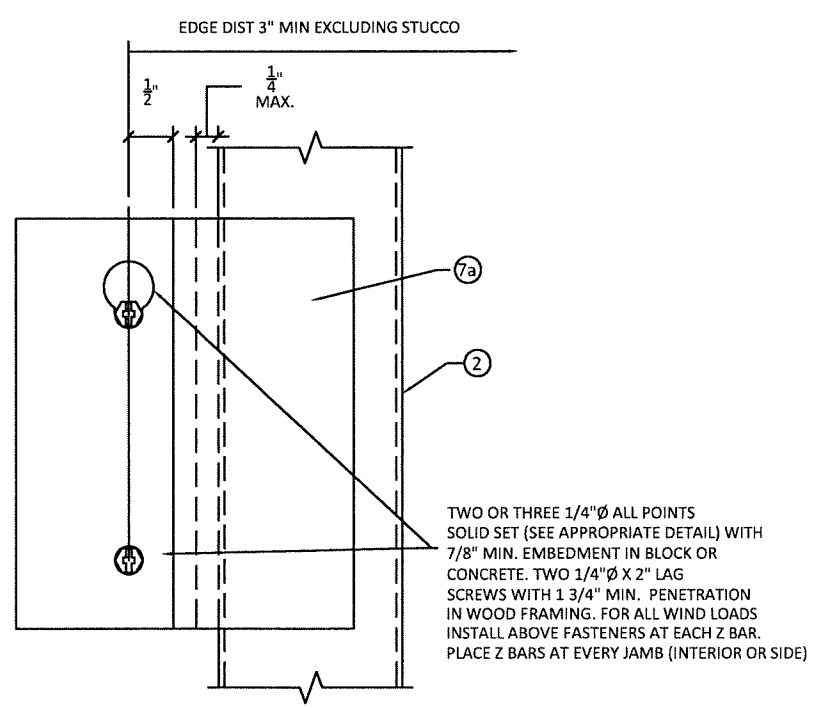


DATE: 06.27.15
 DWN BY: LS
 CHK BY: HFN
 SCALE: NTS
 DWG #: AMF003
 SHEET: 2 OF 3



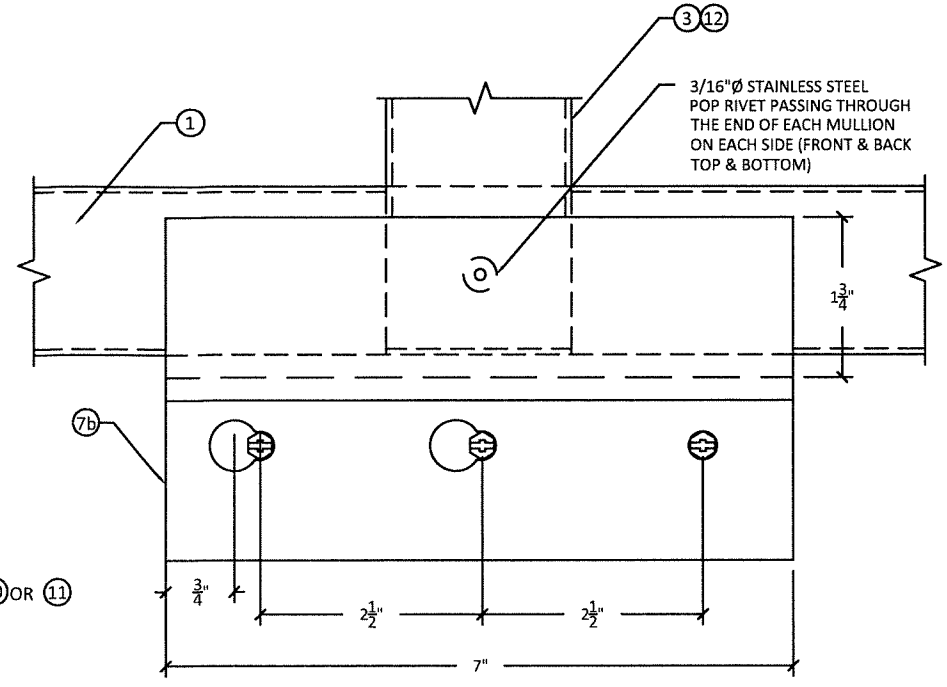
AMERICAN METAL FABRICATORS, INC.
 1501 53rd Street
 Mangonia Park, FL 33407
 PH: (561)790-5799
 FAX: (561)790-2320

TITLE: ALUMINUM BAHAMA SHUTTER
 CLOSED POSITION DETAILS
 PREPARED BY: BUILDING DROPS, INC.
 398 E. DANIA BEACH BLVD. #338
 DANIA BEACH, FL 33004
 PH: (954) 399-8478 FX: (954) 744-4738



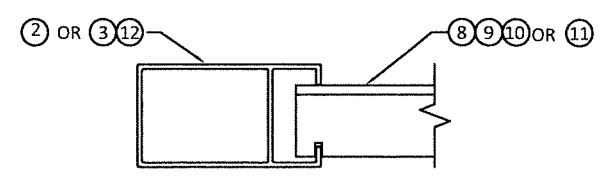
H SIDE JAMB "Z" BAR DETAIL
 SCALE: HALF SCALE

TWO OR THREE 1/4" Ø ALL POINTS SOLID SET (SEE APPROPRIATE DETAIL) WITH 7/8" MIN. EMBEDMENT IN BLOCK OR CONCRETE. TWO 1/4" Ø X 2" LAG SCREWS WITH 1 3/4" MIN. PENETRATION IN WOOD FRAMING. FOR ALL WIND LOADS INSTALL ABOVE FASTENERS AT EACH Z BAR. PLACE Z BARS AT EVERY JAMB (INTERIOR OR SIDE)

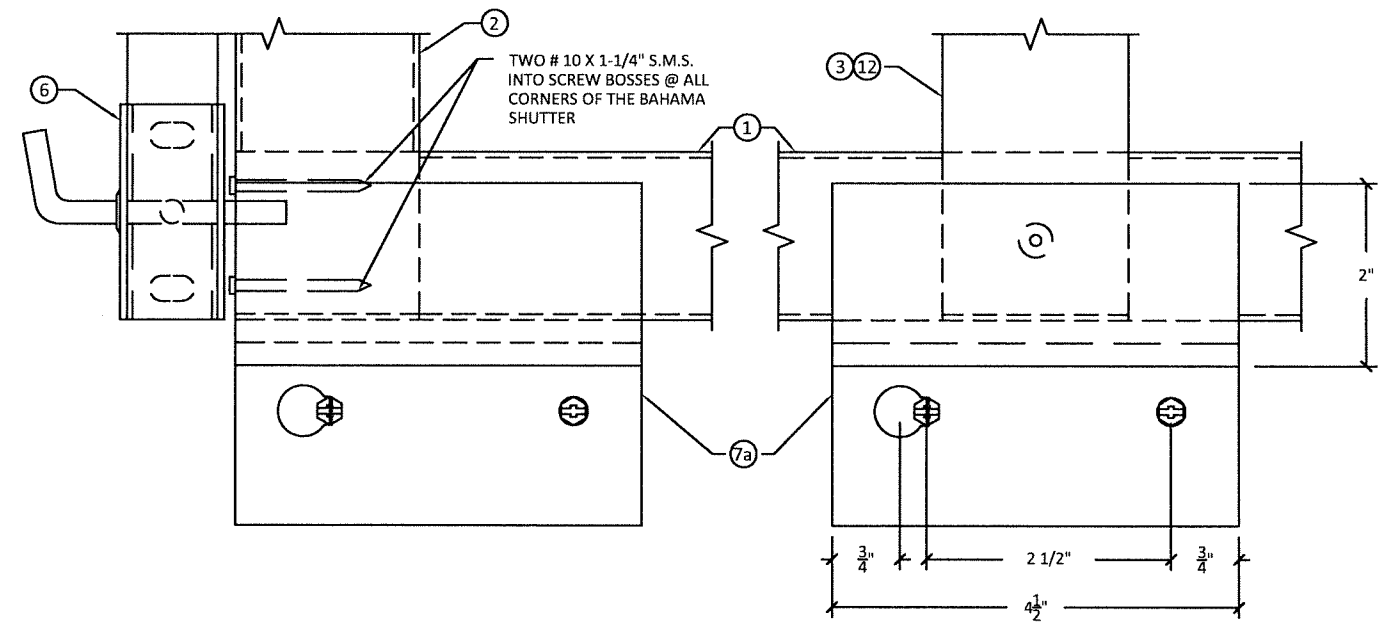


N DOUBLE JAMB TO "H" TUBE DETAIL (CLOSED POSITION)
 SCALE: HALF SCALE

3/16" Ø STAINLESS STEEL POP RIVET PASSING THROUGH THE END OF EACH MULLION ON EACH SIDE (FRONT & BACK TOP & BOTTOM)



J LOUVER TO JAMB DETAIL
 SCALE: HALF SCALE



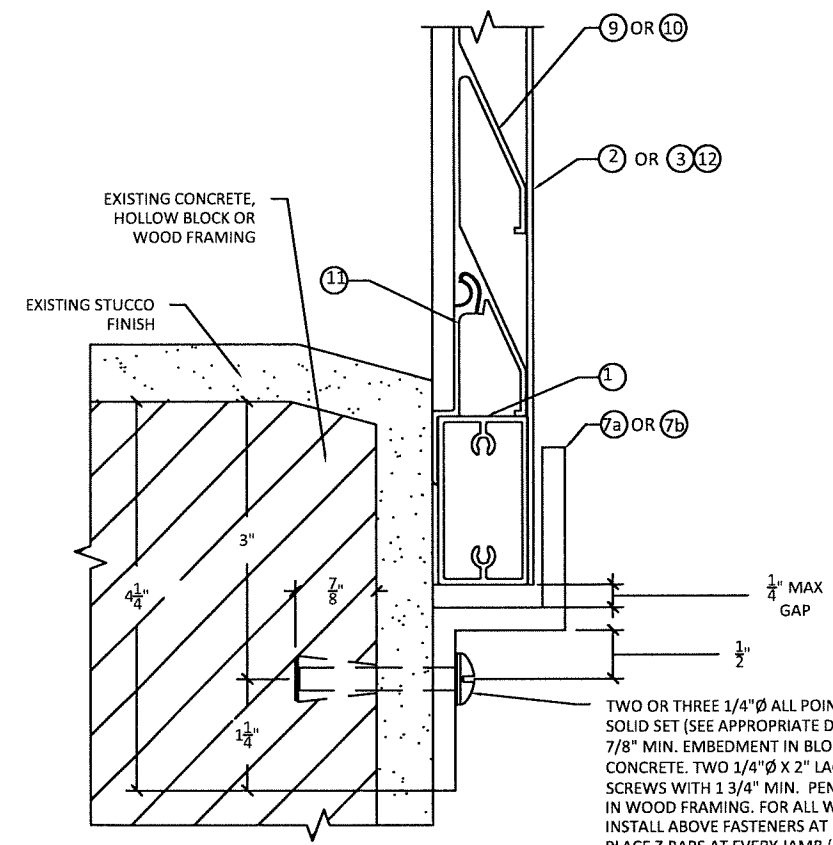
K JAMB TO "H" TUBE BOTTOM DETAIL (CLOSED POSITION)
 SCALE: HALF SCALE

TWO # 10 X 1-1/4" S.M.S. INTO SCREW BOSSES @ ALL CORNERS OF THE BAHAMA SHUTTER

L DOUBLE JAMB TO "H" TUBE BOTTOM DETAIL (CLOSED POSITION)
 SCALE: HALF SCALE

NOTE: KEY HOLE ACCEPTABLE IN ALL BUT ONE HOLE PROVIDE ONE 5/16" Ø ROUND HOLE FOR FASTENING. TYPICAL ALL Z BARS

MAX DESIGN LOAD FOR DETAIL L IS 62 P.S.F. FOR LOADS ABOVE 62 P.S.F. UP TO 97 P.S.F. SEE DETAIL N

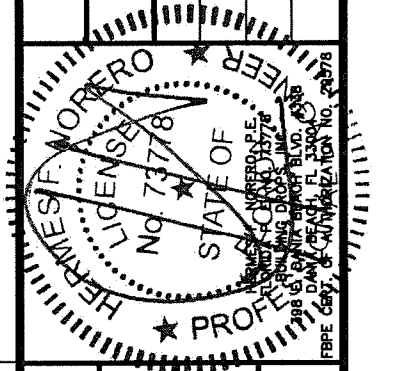


M TYPICAL "Z" BAR WALL MOUNT DETAIL (CLOSED POSITION)
 SCALE: HALF SCALE

TWO OR THREE 1/4" Ø ALL POINTS SOLID SET (SEE APPROPRIATE DETAIL) WITH 7/8" MIN. EMBEDMENT IN BLOCK OR CONCRETE. TWO 1/4" Ø X 2" LAG SCREWS WITH 1 3/4" MIN. PENETRATION IN WOOD FRAMING. FOR ALL WIND LOADS INSTALL ABOVE FASTENERS AT EACH Z BAR. PLACE Z BARS AT EVERY JAMB (INTERIOR OR SIDE)

REVISIONS

DESCRIPTION	DATE	BY
FBC 2020 UPDATE	12/20	LL



DATE: 06.27.15
 DWN BY: LS
 CHK BY: HFN
 SCALE: NTS
 DWG #: **AMF003**
 SHEET: **3 OF 3**