



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. 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 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 & renews NOA #04-1020.01 and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

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



Helmy A. Makar
11/28/2013

NOA No 12-0913.12
Expiration Date: 11/28/2018
Approval Date: 11/28/2013
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 Unit Supervisor
NOA No 12-0913.12
Expiration Date: 11/28/2018
Approval Date: 11/28/2013

American Metal Fabricators, Inc. dba AMF Building

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. NEW EVIDENCE SUBMITTED

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.*



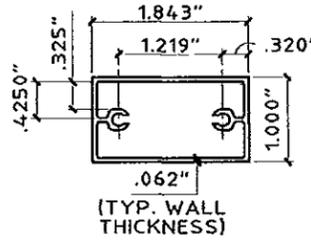
Helmy A. Makar, P.E., M.S.
Product Control Unit Supervisor
NOA No 12-0913.12
Expiration Date: 11/28/2018
Approval Date: 11/28/2013

GENERAL NOTES:

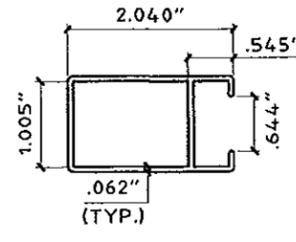
- THESE PRODUCT EVALUATION DOCUMENTS REPRESENT A SHUTTER SYSTEM ANALYZED WITH THE PROVISION SET FOR THE ISSUANCE OF A NOTICE OF ACCEPTANCE (NOA) BY MIAMI-DADE COUNTY PRODUCT CONTROL SECTION FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ) OF THE FLORIDA BUILDING CODE 2010 (FBC).
- NO INCREASE IN ALLOWABLE 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.
- USE OF THESE PRODUCT EVALUATION DOCUMENTS SHALL COMPLY WITH CHAPTER 61G15-23 OF THE FLORIDA ADMINISTRATIVE CODE.
- 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 SECTION.

WHEN THE SITE CONDITION DEVIATIONS 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, 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:

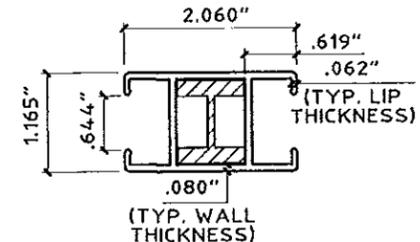
AMF BUILDING PRODUCTS
WEST PALM BEACH, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
- ALL SCREWS, BOLTS AND WASHERS TO BE 2024-T4 ALUMINUM ALLOY OR 300 SERIES STAINLESS STEEL WITH A 60 K.S.I. MINIMUM TENSILE STRENGTH. ALL POP RIVETS SHALL 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 DESIGNATED BY THE U.S. WEATHER BUREAU AS BEING HURRICANE WARNING OR ALERT.



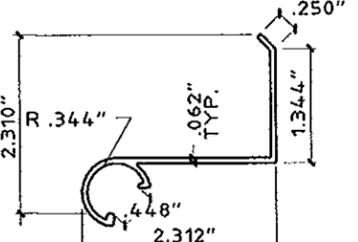
1 "H" TUBE
SCALE: HALF SCALE



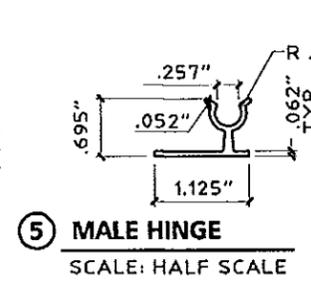
2 JAMB
SCALE: HALF SCALE



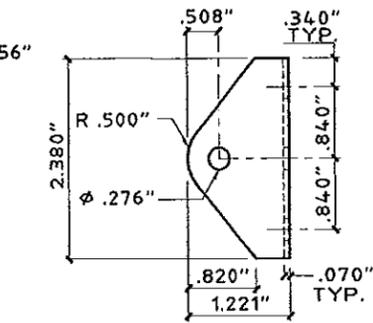
3 DOUBLE JAMB W/ INSERT
SCALE: HALF SCALE



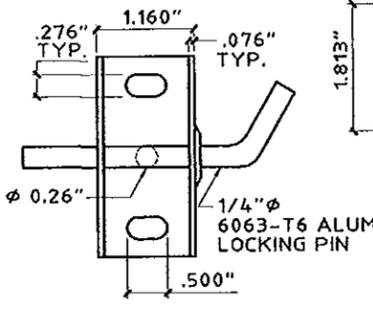
4 FEMALE HINGE
SCALE: HALF SCALE



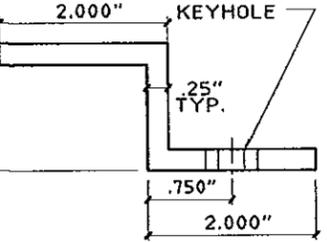
5 MALE HINGE
SCALE: HALF SCALE



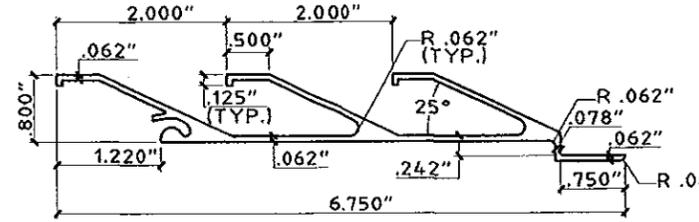
6 CAMEL BACK HINGE
SCALE: HALF SCALE



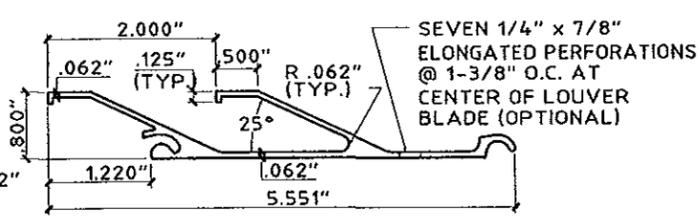
7a "Z" BAR (4-1/2" LONG)
7b "Z" BAR (7" LONG)
SCALE: HALF SCALE



NOTE: KEYHOLE ACCEPTABLE IN ALL BUT ONE HOLE. PROVIDE ONE 5/16" ϕ HOLE FOR FASTENING, TYPICAL ALL Z BARS.

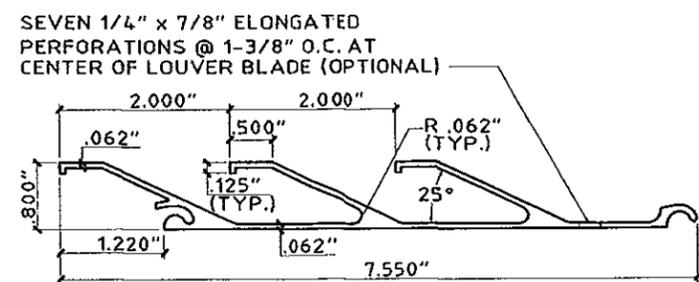


8 STARTER BLADE
SCALE: HALF SCALE

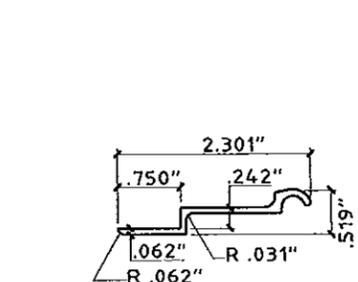


9 STANDARD 2 LOUVER BLADE
SCALE: HALF SCALE

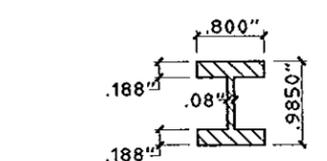
SEVEN 1/4" x 7/8" ELONGATED PERFORATIONS @ 1-3/8" O.C. AT CENTER OF LOUVER BLADE (OPTIONAL)



10 STANDARD 3 LOUVER BLADE
SCALE: HALF SCALE

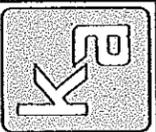


11 CLOSURE STRIP
SCALE: HALF SCALE



12 INSERT
SCALE: HALF SCALE

PRODUCT REVISED as complying with the Florida Building Code
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By *[Signature]*
Miami Dade Product Control



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BAHAMA SHUTTER

AMF Building Products
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Tel: (561) 790-5799

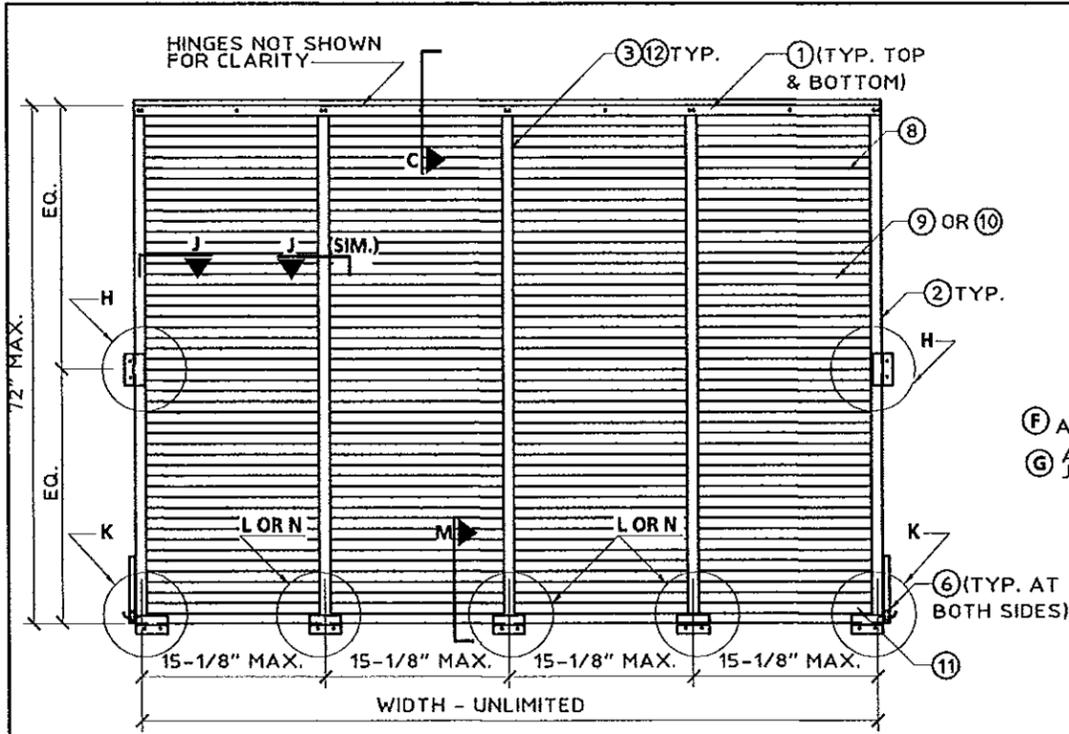
no.	description	date

V.J. Knezevich
Professional Engineer
FL License No.: PE 0010993

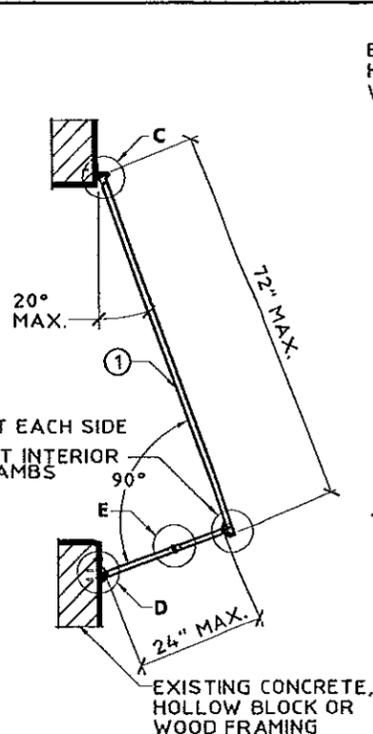
[Signature]

MAY 14 2012

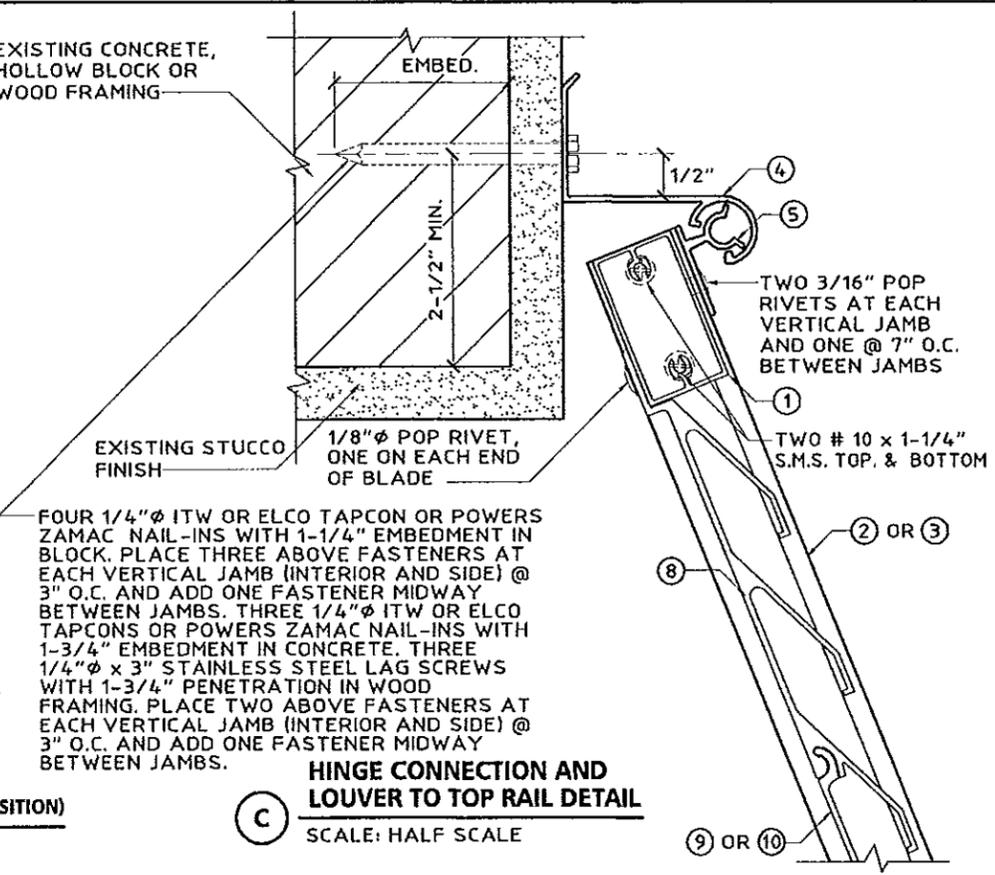
drawn by ARV scale AS NOTED
date 03/14/2012
drawing no. **12-145**
sheet 1 of 3



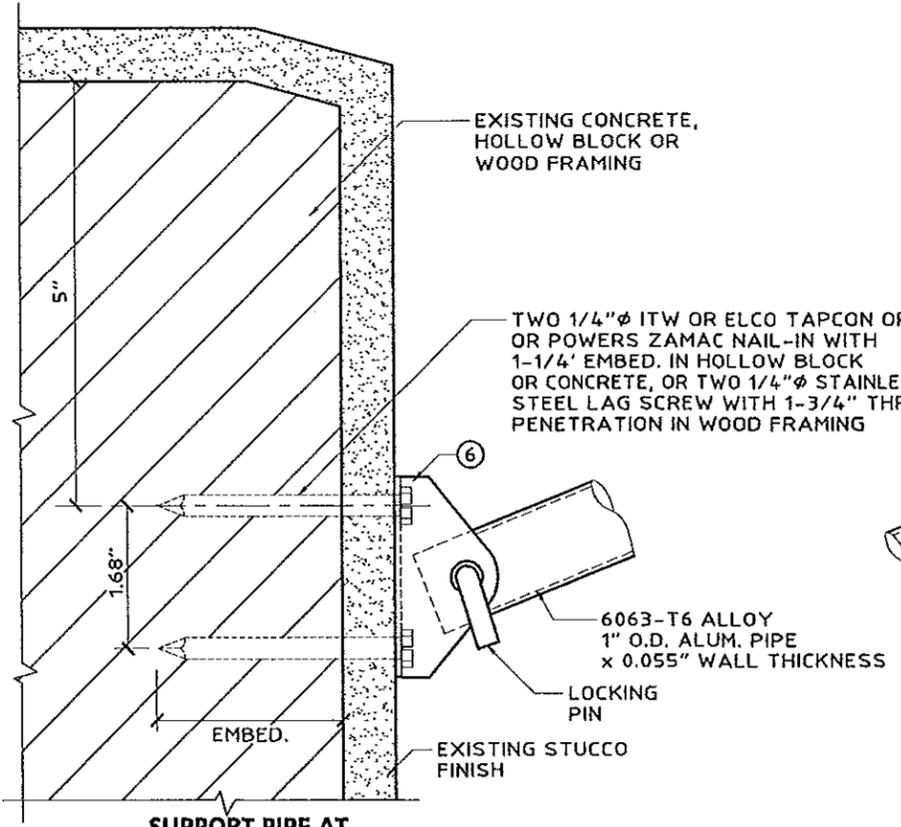
A **TYPICAL ELEVATION (CLOSED POSITION)**
SCALE: 3/8" = 1' - 0"



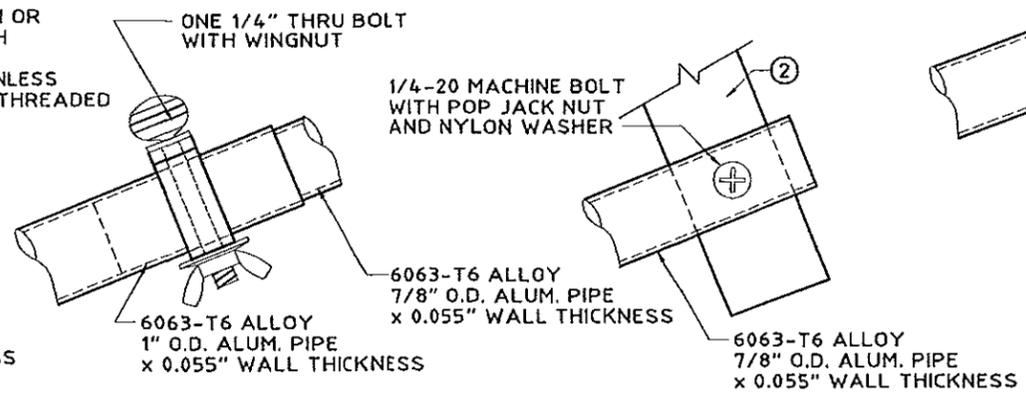
B **TYPICAL SIDE VIEW (OPEN POSITION)**
SCALE: 3/8" = 1' - 0"



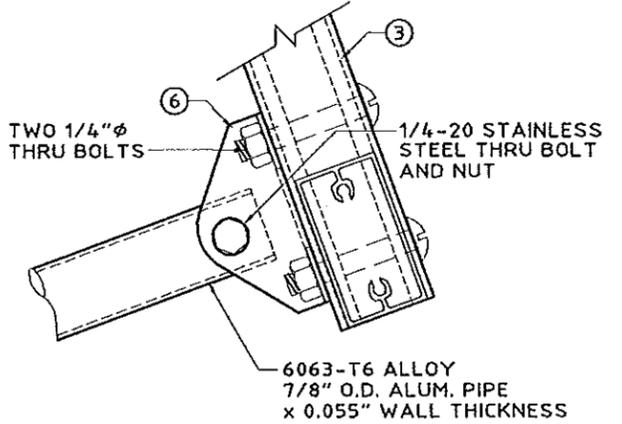
C **HINGE CONNECTION AND LOUVER TO TOP RAIL DETAIL**
SCALE: HALF SCALE



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



E **SUPPORT PIPE OVER LAP**
SCALE: HALF SCALE



F **SUPPORT PIPE AT JAMB**
SCALE: HALF SCALE

G **SUPPORT PIPE AT DOUBLE JAMB**
SCALE: HALF SCALE

PRODUCT REVISED
as complying with the Florida
Building Code
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By *[Signature]*
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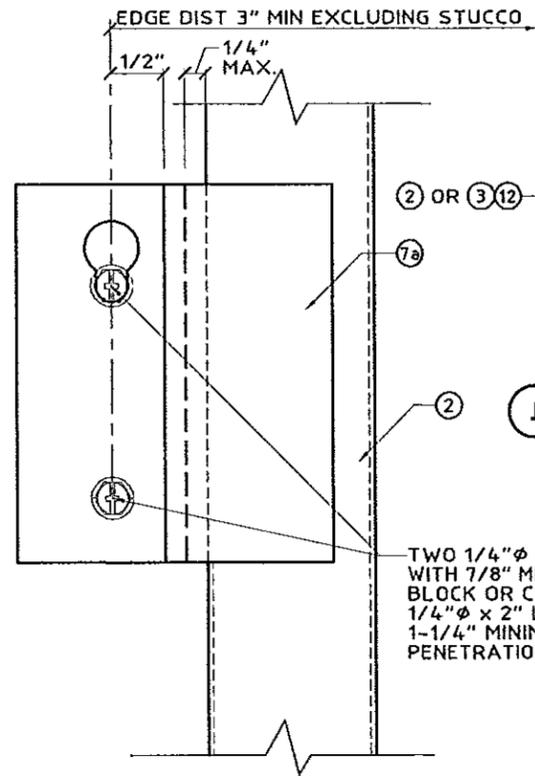
no	date	by	description

V.J. Knezevich
Professional Engineer
FL License No. 12017533

[Signature]
MAY 14 2012

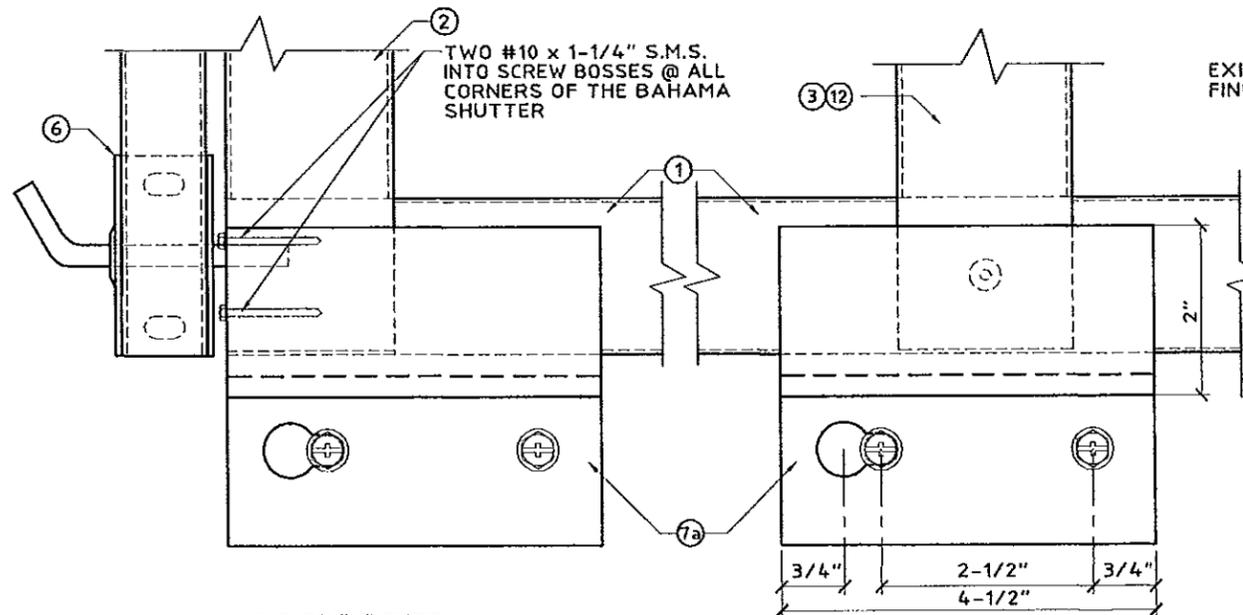
drawn by ARV scale AS NOTED
date 03/14/2012

12-145
sheet 2 of 3



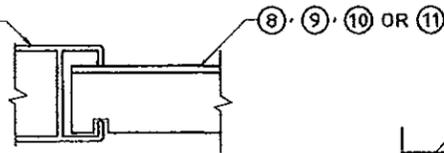
H SIDE JAMB "Z" BAR DETAIL
SCALE: HALF SCALE

TWO 1/4" ϕ POWERS-CALK-IN WITH 7/8" MIN. EMBEDMENT IN BLOCK OR CONCRETE OR TWO 1/4" ϕ x 2" LAG SCREWS WITH 1-1/4" MINIMUM THREADED PENETRATION IN WOOD FRAMING

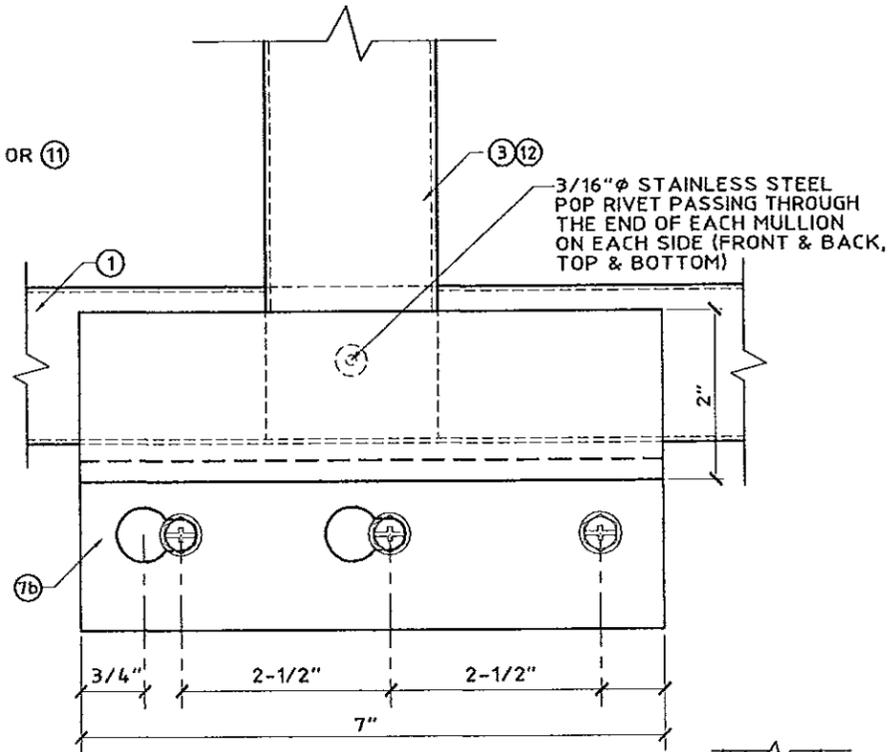


K JAMB TO "H" TUBE BOTTOM DETAIL (CLOSED POSITION)
SCALE: HALF SCALE

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

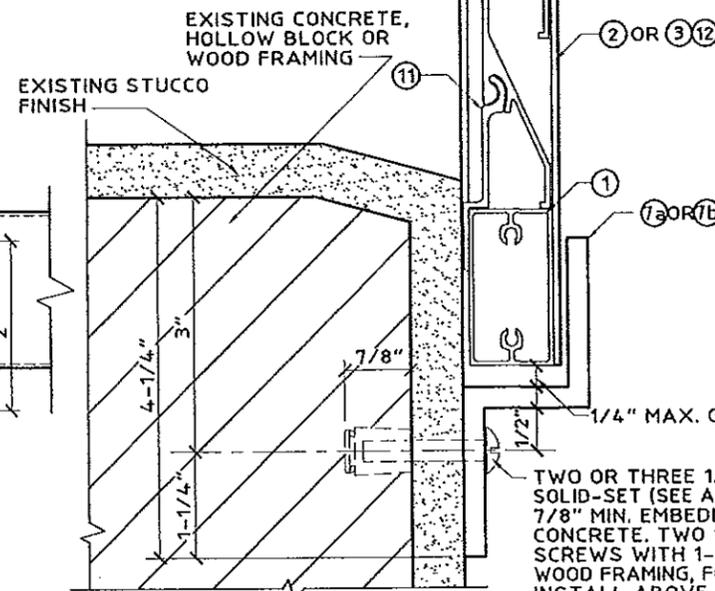


J LOUVER TO JAMB DETAIL
SCALE: HALF SCALE



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

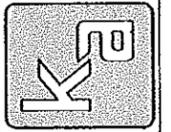
3/16" ϕ STAINLESS STEEL POP RIVET PASSING THROUGH THE END OF EACH MULLION ON EACH SIDE (FRONT & BACK, TOP & BOTTOM)



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

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

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no.	date	by	description

V.J. Knezevich
Professional Engineer
FL License No. PE 0010983

MAY 14 2012

drawn by ARV scale AS NOTED

date 03/14/2012

drawing no. **12-145**

sheet 3 of 3