

Force Engineering & Testing

19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603 FAX: (281) 540-9966
Website: www.forceengineeringtesting.com

Product Evaluation Report
E.F. BAVIS & ASSOCIATES, INC.

5' Fixed Window

Florida Product Approval # 6587.4 R8

Florida Building Code 2023

Per Rule 61G20-3

Method: 1 -D

Category: Windows

Subcategory: Fixed

Compliance Method: 61G20-3.005(1)(d)

HVHZ

Product Manufacturer:

E.F. Bavis & Associates, Inc.

201 Grandin Road

Maineville, Ohio 45039

Engineer Evaluator:

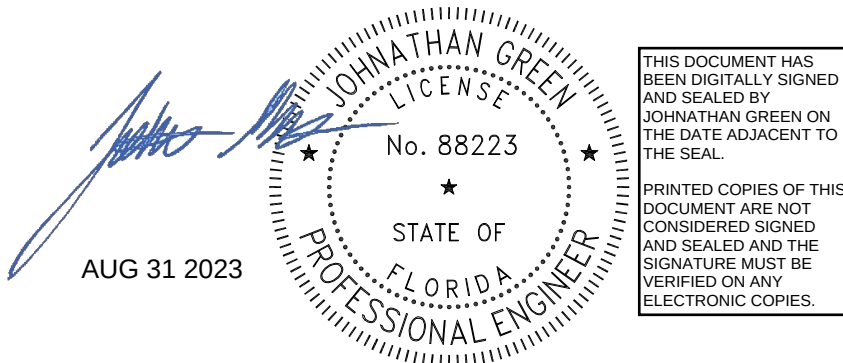
Johnathan Green, P.E. #88223

Florida Evaluation ANE ID: 12901

Contents:

Evaluation Report: Page 1 - 3

Installation Detail: Page 4 - 19



AUG 31 2023

THIS DOCUMENT HAS
BEEN DIGITALLY SIGNED
AND SEALED BY
JOHNATHAN GREEN 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.



Compliance Statement:	The product as described in this report has demonstrated compliance with the Florida Building Code 2023 including High Velocity Hurricane Zone.
Product Description:	5' Fixed Window Model #12103992.
Window Frame Size:	4'-8" wide x 2'-8 ¾" high x 6 7/8" deep
Window Frame:	Material: 14 Ga. ASTM A653 Grade 50, Galvannealed A60 Frame Coating: Nominal 3 mils Powder Coat
Glazing:	1 ¼" (nominal) thick bullet resistant glass. The glass consists of 3/32" annealed on interior face, 3/8" annealed, ½" annealed and ¼" annealed on the exterior side. A layer of 0.030" Kuraray Trosifol PVB is placed between each layer of glass.
Glazing Interlayer:	Kuraray America, Inc. 0.030" Kuraray Trosifol PVB Interlayer Miami Dade NOA NO: 23-0717.28
Window Frame Anchorage:	Header: Four fasteners equally spaced, 7 ¼" from each end then 13 13/16" O.C. Sill: Six fasteners located in pairs of two at 2" apart, 8 ¼" from each end and at center. Jamb: Three fasteners located 6", 17 ¼" and 28 ½" from bottom of frame for each jamb. All fasteners shall be corrosion resistance per Florida Building Code 2023.
Substrate:	Minimum 14 Ga. Stud framed opening or Minimum Grout filled C90 Concrete Block Nominal 8" or Minimum No 2 S.P.F. Wood frame Substrate must be designed in accordance w/ Florida Building Code 2023.
Anchor Edge Distance:	Minimum ¾" edge distance for 14 Ga. steel framing Minimum 3" edge distance for Grout filled C90 Concrete Block Nominal 8" Minimum 1 ¼" edge distance for No 2 S.P.F. Wood frame
Design Wind Pressures:	+ / - 75.0 psf



Performance Standards:

The product described herein has demonstrated compliance with:

- TAS 201-94: Large Missile Impact Test.
- TAS 202-94: Criteria for Testing Impact and Non-Impact Resistance Building Envelope Components Using Static Air Pressure.
- TAS 203-94: Criteria for Testing Products Subject to Cyclic Wind Pressure Loading.
- ASTM F588: Type D Hand & Tool Manipulation Test

Reference Data:

1. Test Reports T195-08
Farabaugh Engineering & Testing, Inc.
2. Anchor Calculations
Terrence E. Wolfe, P.E. # 44923
3. Certificate of Independence
By Johnathan Green, P.E. (No. 88223) @ Force Engineering & Testing
(FBC Organization # ANE ID: 12901)

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005(3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

Installation:

Install per manufacturer's recommended details.

Design Procedure:

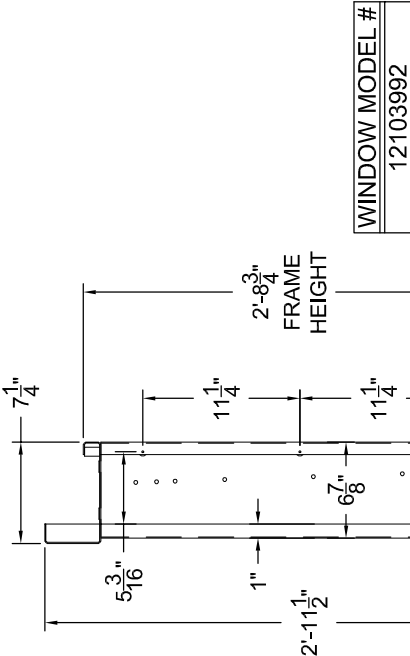
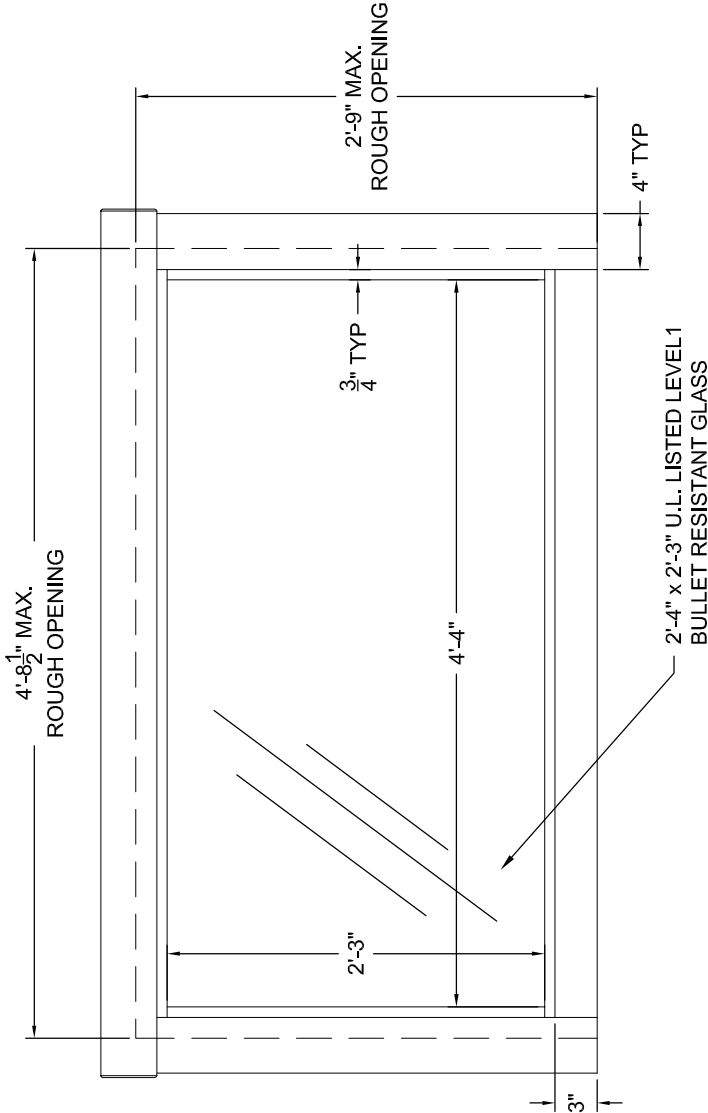
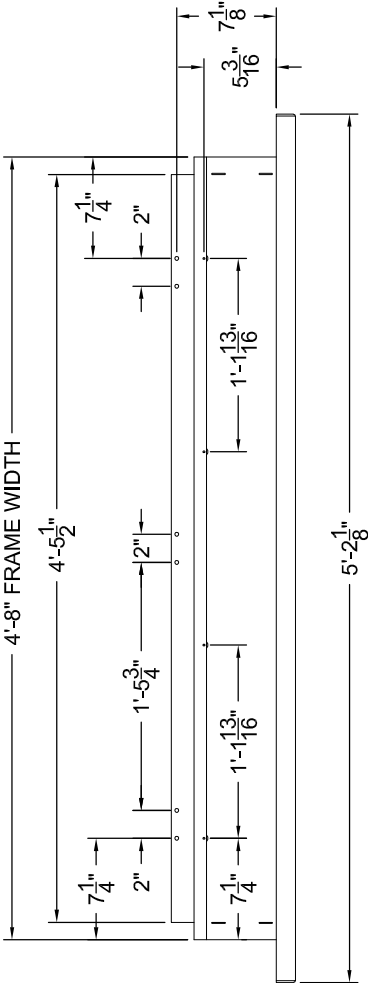
Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2023 for wall cladding wind loads. These component wind loads for wall cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to the structure. Support framing must be in compliance with Florida Building Code 2023.

REVISION RECORD			DR	CK
DATE	ECN	UPDATE FILE NUMBER AND CODE VERSION	MC	MB
12/16/15	16996	UPDATE CODE VERSION	MC	MB
07/09/18	18729	UPDATE CODE VERSION	MC	MB
10/01/20	21150	UPDATE CODE VERSION	MC	MB
08/19/22	22741	UPDATE BOM	MC	DM
01/24/23	23575	UPDATE GLASS MANUFACTURER'S UL FILE NUMBER	MC	DM

FOR INSTALLATION AND MOUNTING REQUIREMENTS,
GO TO THE FLORIDA BUILDING CODE WEBSITE AT:
http://www.floridabuilding.org/pr/pr_app_srch.aspx

SEARCH:
CODE VERSION: 2023
FL#: 6587

CATEGORY: WINDOWS
SUBCATEGORY: FIXED
APPLICATION STATUS: APPROVED



WINDOW MODEL #
12103992

PROPRIETARY

THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC., INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F. BAVIS & ASSOC., INC.

E.F.BAVIS & ASSOCIATES INC.
201 GRANDIN RD.
MAINEVILLE, OH 45039
T: 513-677-0500 F: 513-677-0552 E: info@bavfs.com www.bavfs.com

REVISION
10/01/20

DRAWN
M. CRAVEN

DATE
10/27/14

SCALE
A

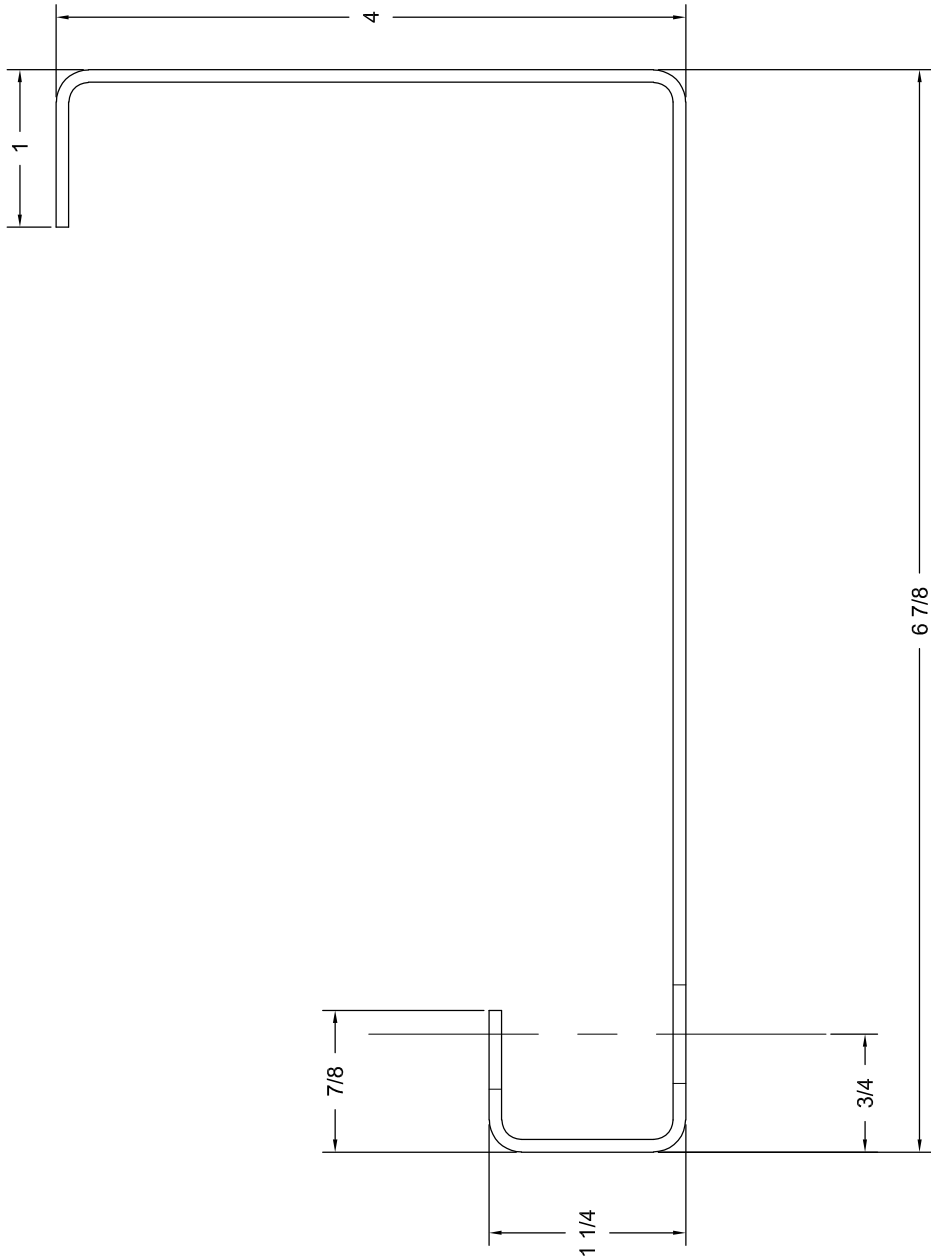
DRAWING NO
12103992

SHEET
1 OF 1

FT & INCHES
UNLESS OTHERWISE SPECIFIED

TITLE
HVHZ 5' TRIMMED WINDOW

E F E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32" ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		5' FIXED WINDOW		MODEL 12103992		PAGE 2 OF 15	
THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG. 5' WT-HUR		DATE CREATED: 12/16/04		BAP	
				REV. DATE: 06/27/08		MJC		COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.	
VERTICAL FRAME CROSS SECTION, FOR PLANT QUALITY CONTROL									

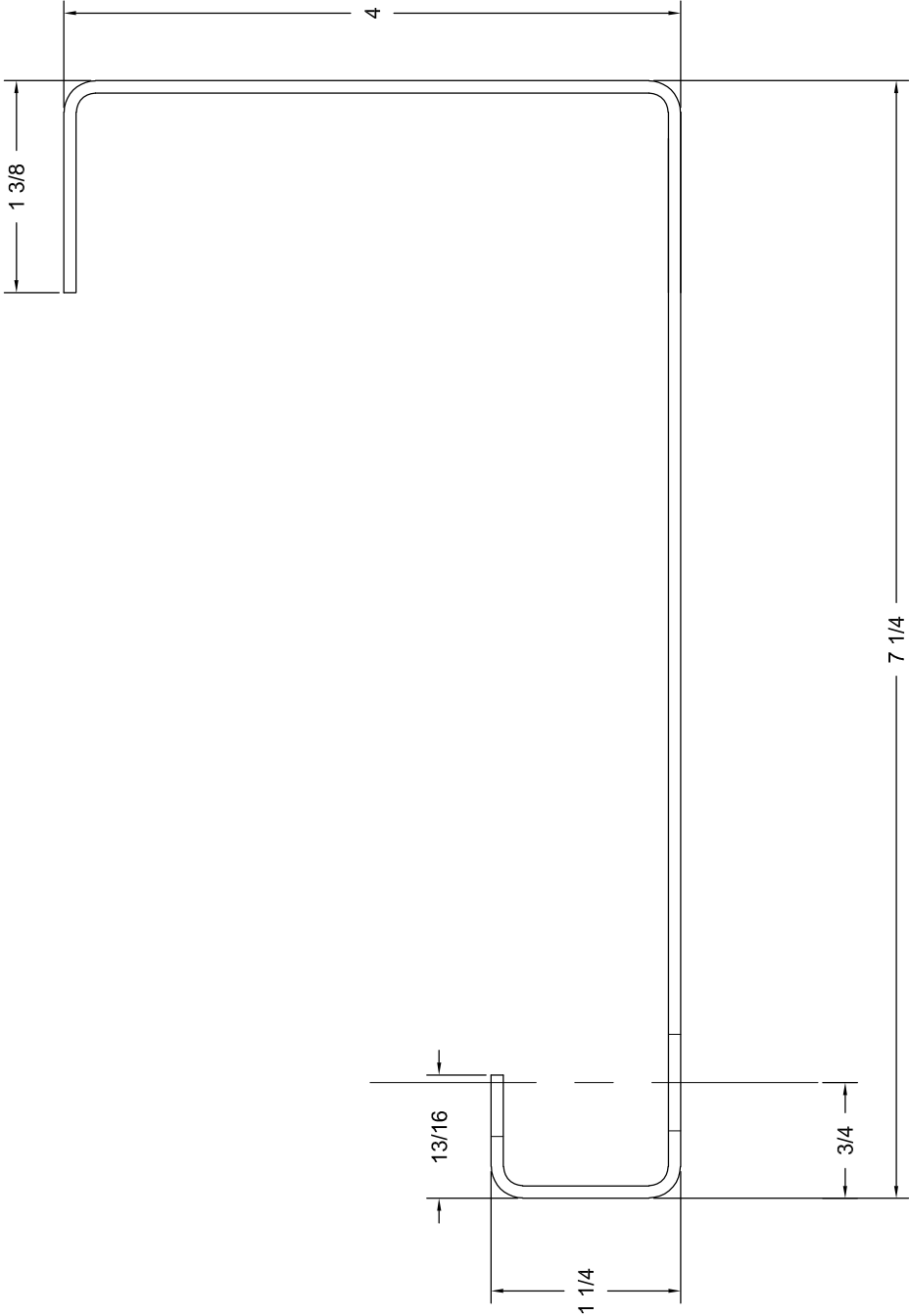


ITEM - 1

MATERIAL: ASTM A653 .0785 (14 GAUGE) GALVANNEALED A60

	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		5' FIXED WINDOW		MODEL	12103992	PAGE 3 OF 15	
	201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG.	5' WT-HUR	DATE CREATED:	12/16/04 BAP
							REV.	06/27/08	MJC	COPYRIGHT 1996,2002 E.F.Bavis & Assoc. Inc.
							DATE:			

TOP FRAME CROSS SECTION, FOR PLANT QUALITY CONTROL



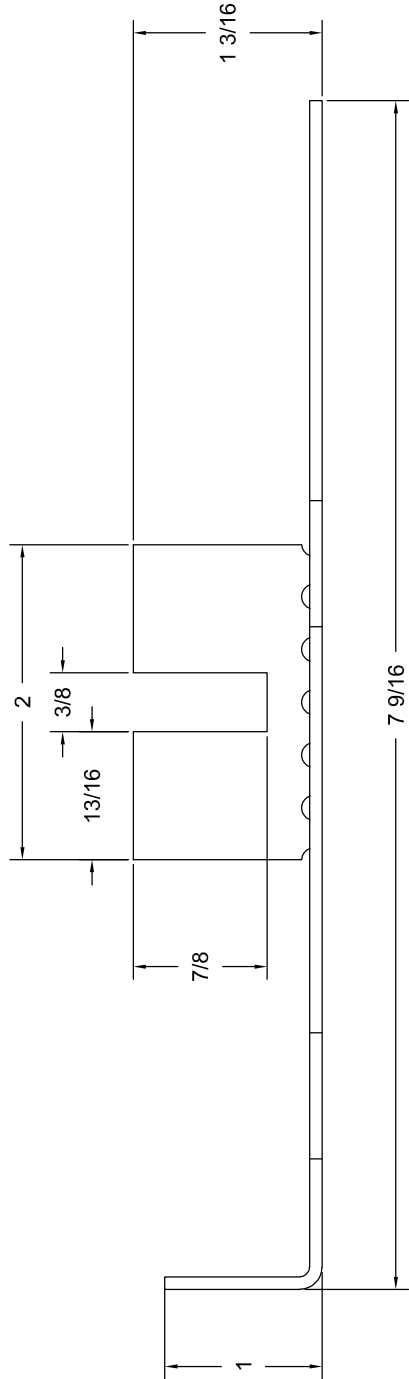
ITEM - 2

MATERIAL: ASTM A653 .0785 (14 GAUGE) GALVANNEALED A60

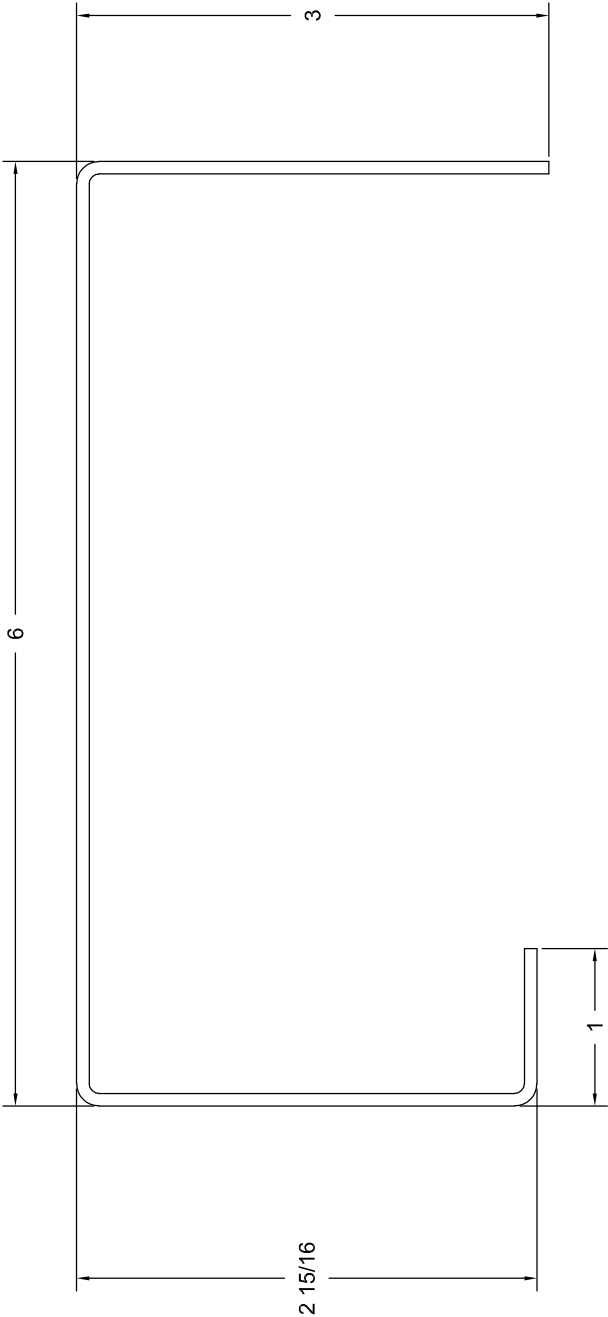
	E.F.BAVIS & ASSOC. INC.		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX ± .01 ; .XXX ± .005 FRACTIONS: + - 1/32" ANGLES: ± .30° REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		MODEL 12103992		PAGE 4 OF 15
	201 GRANDIN RD. P.O. BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.		DWG. 5' WT-HUR		DATE CREATED: 12/16/04 BAP
					REV.		COPYRIGHT 1986,2002 E.F.Bavis & Assoc. Inc.
					DATE:		

5' FIXED WINDOW

LOWER SILL CROSS SECTION, FOR PLANT QUALITY CONTROL



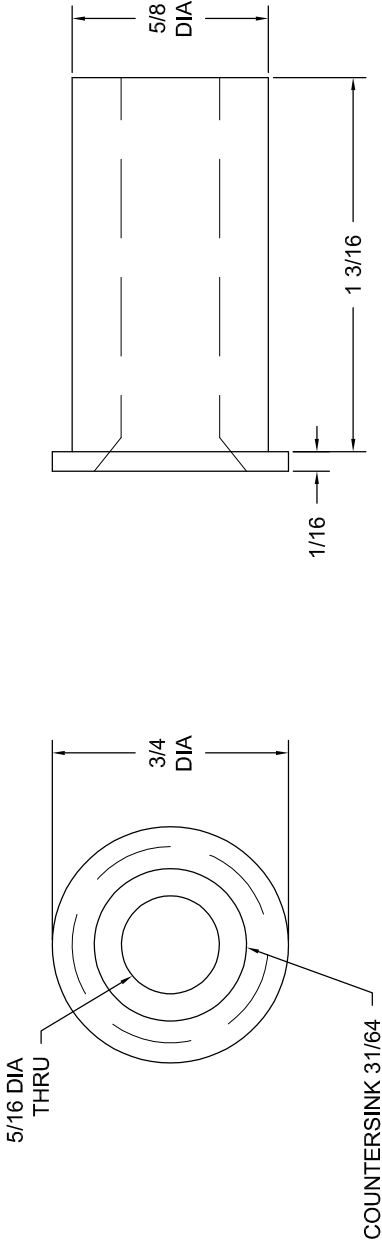
E F E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + -.30° REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		5' FIXED WINDOW		MODEL 12103992		PAGE 5 OF 15	
		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG. 5' WT-HUR		DATE CREATED: 12/16/04 BAP	
						REV.		COPYRIGHT 1996,2002 E.F.Bavis & Assoc. Inc.	
						DATE:			
UPPER SILL CROSS SECTION, FOR PLANT QUALITY CONTROL									



ITEM - 4

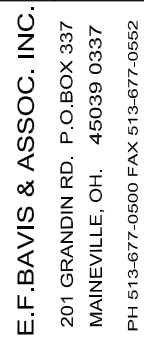
MATERIAL: ASTM A653 .0785 (14 GAUGE) GALVANNEALED A60

E F E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01 ; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + -.30° REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX. THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.		5' FIXED WINDOW		MODEL12103992 DWG.5' WT-HUR REV. DATE:		PAGE6 OF 15 DATE CREATED:12/16/04 BAP	
WINDOW FILLER PLUG, FOR PLANT QUALITY CONTROL									



ITEM - 5

MATERIAL: 12L14 STEEL

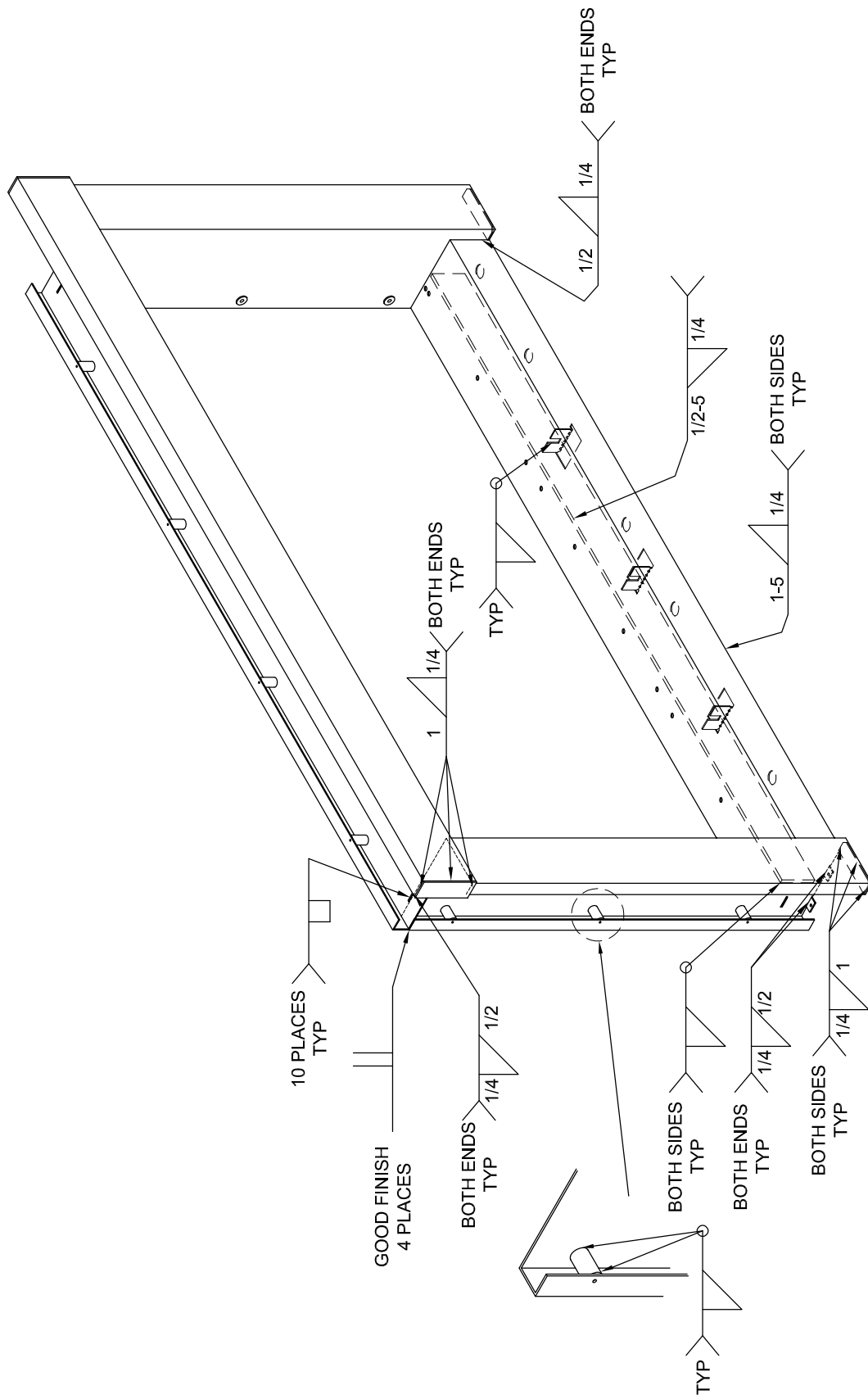


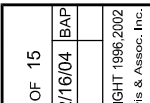
THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. IN.

5' FIXED WINDOW

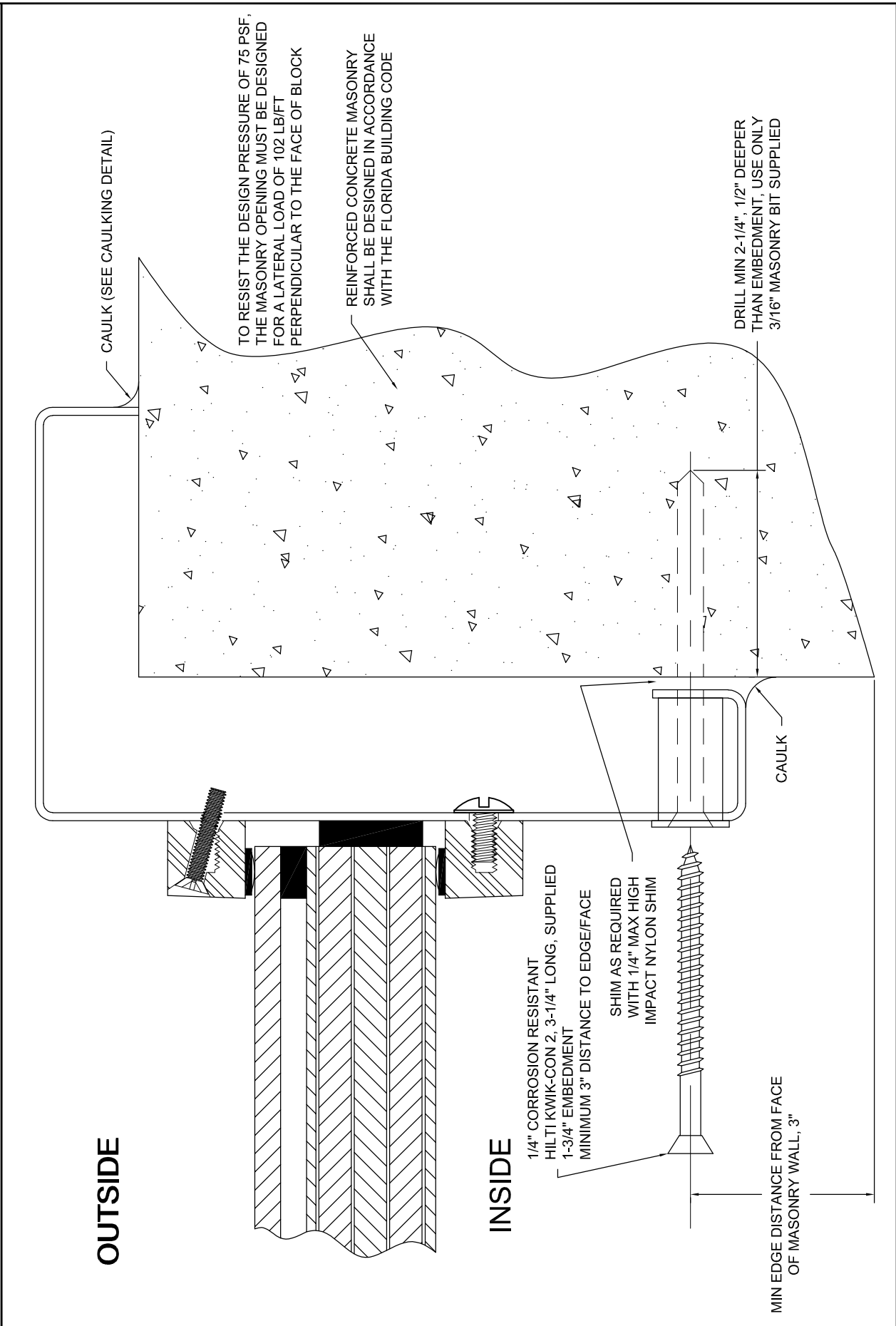
MODEL	12103992	PAGE 7 OF 15	
DWG.	5' WT-HUR	DATE ORDERED	12/16/04 BAP
REV.	04/11/14	MJC	COPYRIGHT 1996 2002 E.F.Baylis & Assoc., Inc.

WINDOW WELDMENT DETAIL, FOR PLANT QUALITY CONTROL

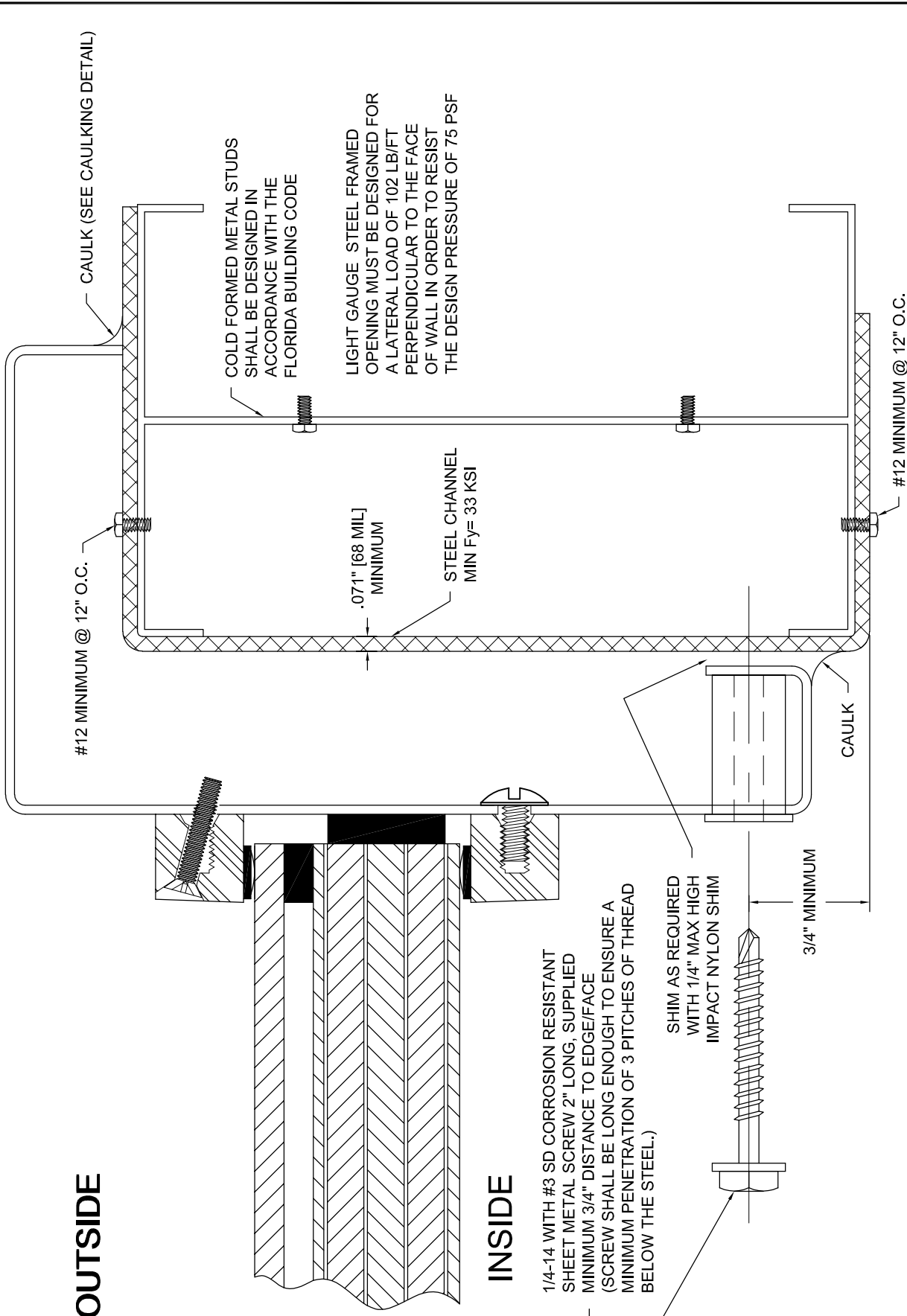


	E.F. BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O. BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX ± .01 ; .XXX ± .005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX. THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.	5' FIXED WINDOW	MODEL: 12103992 PAGE: 9 OF 15 DWG. 5' WT-HUR DATE: 12/16/04 BAP REV. DATE: COPYRIGHT 1996,2002 E.F.Bavis & Assoc. Inc.
--	---	--	------------------------	---

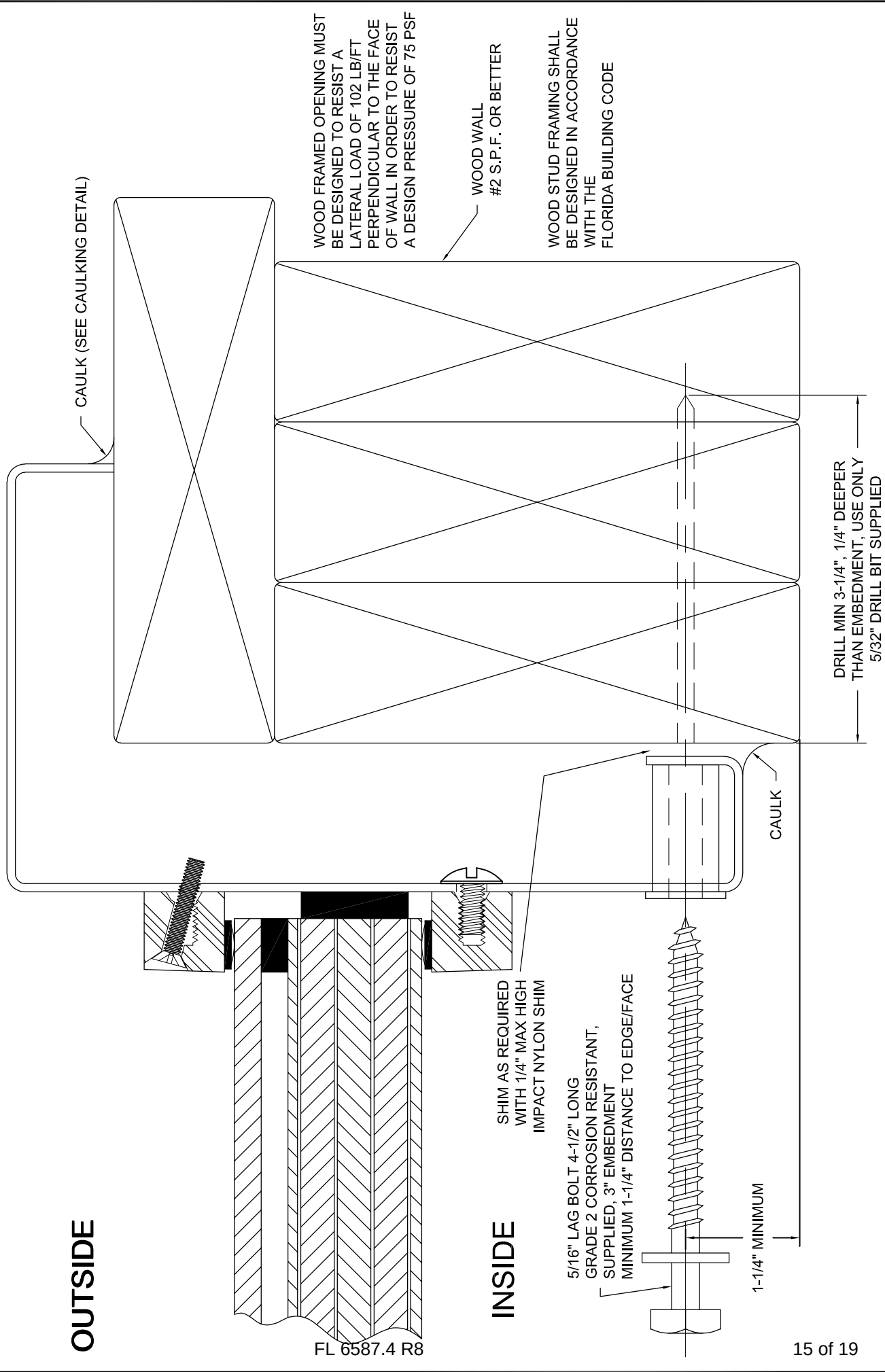
FASTENER INSTALLATION DETAIL: MASONRY, HEAD & JAMB



FASTENER INSTALLATION DETAIL: METAL, HEAD AND JAMB, FIELD VERIFIED



FASTENER INSTALLATION DETAIL: WOOD, HEAD AND JAMB, FIELD VERIFIED

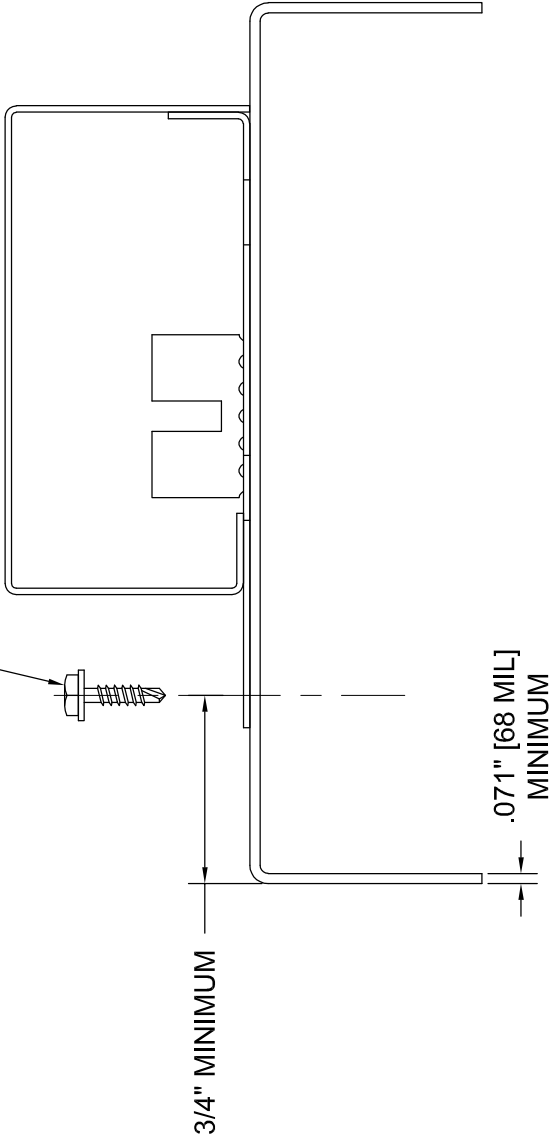


	E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O. BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + - 1/32; ANGLES: + - 30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		5' FIXED WINDOW		MODEL	12103992	PAGE	13 OF 15
		THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG.	5' WT-HUR	DATE CREATED:	12/16/04 BAP
						REV.			
FASTENER INSTALLATION DETAIL: SILL, METAL WALL, FIELD VERIFIED									

COLD FORMED METAL STUDS
SHALL BE DESIGNED IN
ACCORDANCE WITH CHAPTER 22
OF FBC

LIGHT GAUGE STEEL FRAMED
OPENING MUST BE DESIGNED FOR
A LATERAL LOAD OF 102 LB/FT
PERPENDICULAR TO THE FACE
OF WALL IN ORDER TO RESIST
THE DESIGN PRESSURE OF 75 PSF

1/4-14 WITH #3 SD SHEET METAL SCREW 1" LONG, SUPPLIED
MINIMUM 3/4" DISTANCE TO EDGE/FACE
(SCREW SHALL BE LONG ENOUGH TO ENSURE A MINIMUM
PENETRATION OF 3 PITCHES OF THREAD BELOW THE STEEL.)



	E.F.BAVIS & ASSOC. INC. 201 GRANDIN RD. P.O.BOX 337 MAINEVILLE, OH. 45039 0337 PH 513-677-0500 FAX 513-677-0552		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES DECIMALS: .XX +-.01; .XXX +-.005 FRACTIONS: + 1/32; ANGLES: +-.30' REMOVE ALL BURRS AND SHARP EDGES TO R .02 OR .02 X .02 CHAMFER MAX.		5' FIXED WINDOW		MODEL 12103992		PAGE 15 OF 15	
			THIS DOCUMENTATION AND INFORMATION CONTAINED ARE THE SOLE PROPERTY OF E.F.BAVIS & ASSOC. INC. IT SHALL BE RETURNED UPON REQUEST AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART, OR DISCLOSED TO ANYONE ELSE, OR USED, WITHOUT WRITTEN CONSENT OF E.F.BAVIS & ASSOC. INC.				DWG. 5' WT-HUR		DATE CREATED: 12/16/04 BAP	
							REV. 06/27/08		MJC E.F.Bavis & Assoc. Inc. COPYRIGHT 1986,2002	

FINISH CAULKING, FIELD VERIFIED

