



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Protective Shutter Systems, Inc.
1631 South Dixie Highway, E-3
Pompano Beach, Florida 33060

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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: SSA / (6.8) Aluminum Accordion Shutter

APPROVAL DOCUMENT: Drawing No. 08-228, titled " 6.8 Accordion Shutter ", sheets 1 through 11 of 11, prepared by Knezevich Associates Consulting Engineers, dated October 20, 2008, signed and sealed by V. J. Knezevich, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", 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 # **06-0717.01** and consists of this page 1, evidence submitted pages E-1, E-2, E-3 & E-4 as well as approval document mentioned above.

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



Helmy A. Makar
 12/04/2008

NOA No. 08-0722.04
Expiration Date: 06/22/2013
Approval Date: 12/04/2008

Protective Shutter Systems, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-0310.04

A. DRAWINGS

1. *Drawing No. 00-912, prepared by Knezevich & Associates, Inc., titled " 6.8" Accordion Shutter", dated December 8, 1998, last revision #2 dated April 13, 2000, sheets 1 through 6 of 6, signed and sealed by V. J. Knezevich, P.E.*

B. TESTS

1. *See Association's generic approval number 00-0047.*

C. CALCULATIONS

1. *See Association's generic approval number 00-0047.*

D. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 00-0047.*

E. STATEMENTS

1. *Release letter issued by the Southern Shutter Association, Inc., dated June 21, 2000, certifying this product to meet the criteria of product tested and approved, and allowing Protective Shutter Systems, Inc. to use the test results approved under Dade County Approval No. 00-0047, signed by Tom Johnson.*
2. *Acknowledgment letter by Protective Shutter Systems, Inc., dated May 12, 2000, signed by Mr. Dale Maloney.*
3. *Letter by Knezevich & Associates, Inc., dated February 29, 2000, certifying that the drawing (No. 00-912) prepared for Protective Shutter Systems, Inc., signed and sealed by V.J. Knezevich, P.E., is engineering wise identical to Southern Shutter Association, Inc generic drawing (No. 98-254).*
4. *Acceptance Letter issued to Mr. Dale Maloney on May 11, 2000 and returned signed by Mr. Dale Maloney on June 21, 2000, indicating to please issue the proposed Notice of Acceptance as submitted and reviewed.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 01-0326.06

A. DRAWINGS

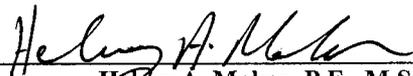
1. *Drawing No. 01-857, prepared by Knezevich & Associates, Inc., titled " 6.8 - HR Accordion Shutter", dated December 8, 1998, last revision #6 dated February 8, 2001, sheets 1 through 11 of 11, signed and sealed by V. J. Knezevich, P.E.*

B. TESTS

1. *See Association's generic approval number 00-0086.*

C. CALCULATIONS

1. *See Association's generic approval number 00-0086.*



Helmy A. Makar, P.E., M.S.

Product Control Examiner

NOA No. 08-0722.04

Expiration Date: 06/22/2013

Approval Date: 12/04/2008

Protective Shutter Systems, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

D. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 00-0086.*

E. STATEMENTS

1. *Release letter issued by the Southern Shutter Association, Inc., dated March 15, 2001, certifying this product to meet the criteria of product tested and approved, and allowing Protective Shutter Systems, Inc. to use the test results approved under Miami-Dade County Approval No. 00-0086, signed by Mr. Tim O'Connor.*
2. *Acknowledgment letter by Protective Shutter Systems, Inc dated March 9, 2001, signed by Mr. Dale Maloney.*
3. *Letter by Knezevich & Associates, Inc., dated March 14, 2001, certifying that the drawing (No. 01-857) prepared for Protective Shutter Systems, Inc, signed and sealed by V.J. Knezevich, P.E., is engineering wise identical to Southern Shutter Association, Inc generic drawing (No. 98-254).*
4. *Acceptance Letter issued to Mr. Dale Maloney on May 30, 2001, and returned signed by Mr. Dale Maloney on June 1, 2001, indicating to please issue the proposed Notice of Acceptance as submitted and reviewed.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #03-0617.01

A. DRAWINGS

1. *Drawing No. 03-902, titled " 6.8 – HR Accordion Shutter ", sheets 1 through 12 of 12, prepared by Knezevich & Associates, Inc., dated April 09, 2003, last revision #2 dated July 29, 2003, signed and sealed by V.J. Knezevich, P.E.*

B. TESTS

1. *None. See Association's generic approval number 03-0118.*

C. CALCULATIONS

1. *None. See Association's generic approval number 03-0118.*

D. MATERIAL CERTIFICATIONS

1. *None. See Association's generic approval number 03-0118.*

E. STATEMENTS

1. *Letter by Knezevich & Associates, Inc. certifying that the drawing (No. 03-902) prepared for Protective Shutter Systems, Inc. signed and sealed by Orlando L. Blanco, P.E., is engineering wise identical to Southern Shutter Association, Inc generic drawing (No. 03-258).*



Helmy A. Makar, P.E., M.S.

Product Control Examiner

NOA No. 08-0722.04

Expiration Date: 06/22/2013

Approval Date: 12/04/2008

Protective Shutter Systems, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #06-0717.01

A. DRAWINGS

1. *Drawing No. 06-389, titled " 6.8 – HR Accordion Shutter ", sheets 1 through 13 of 13, prepared by Thornton-Tomasetti Group, dated June 30, 2005, last revision #1 dated December 16, 2005, signed and sealed by J. W. Knezevich, P.E.*

B. TESTS

1. *See Association's generic approval number 05-0217.*

C. CALCULATIONS

1. *See Association's generic approval number 05-0217.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval number 05-0217.*

F. STATEMENTS

1. *Release letter issued by the Southern Shutter Association, Inc., dated May 11, 2006, certifying this product to meet the criteria of product tested and approved, and allowing Protective Shutter Systems, Inc. to use the test results approved under Miami-Dade County Approval No. 05-0217, signed by Mr. Thomas B. Johnston.*
2. *Acknowledgment letter by Protective Shutter Systems, Inc dated April 27, 2006, signed by Mr. Dale Maloney.*
3. *Letter by Thornton-Tomasetti Group, dated May 09, 2006, certifying that the drawing (No. 06-389) prepared for Protective Shutter Systems, Inc, signed and sealed by J. W. Knezevich, P.E., is engineering wise identical to Southern Shutter Association, Inc generic drawing (No. 05-376).*

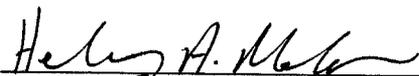
5. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 08-228, titled " 6.8 Accordion Shutter ", sheets 1 through 11 of 11, prepared by Knezevich Associates Consulting Engineers, dated October 20, 2008, signed and sealed by V. J. Knezevich, P.E.*

B. TESTS

1. *See Association's generic approval under 08-0725.*



Helmy A. Makar, P.E., M.S.
Product Control Examiner
NOA No. 08-0722.04
Expiration Date: 06/22/2013
Approval Date: 12/04/2008

Protective Shutter Systems, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS

1. *See Association's generic approval under 08-0725.*

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval under 08-0725.*

F. STATEMENTS

1. *Release letter issued by the Southern Shutter Association, Inc., dated June 30, 2008, certifying this product to meet the criteria of product tested and approved, and allowing Protective Shutter Systems, Inc. to use the test results approved under Miami-Dade County Approval No. 08-0725, signed by Mr. Thomas B. Johnston.*
2. *Acknowledgment letter by Protective Shutter Systems, Inc., dated June 30, 2008, signed by Mr. Dale Maloney.*
3. *Letter by Knezevich Associates Consulting Engineers, dated July 07, 2008, certifying that the drawing (No. 08-228) prepared for Protective Shutter Systems, Inc., signed and sealed by Mr. V. John Knezevich, P.E., is engineering wise identical to SSA's generic drawing (08-0224).*



Helmy A. Makar, P.E., M.S.

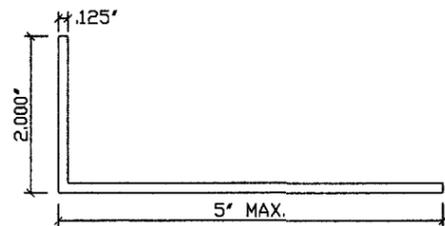
Product Control Examiner

NOA No. 08-0722.04

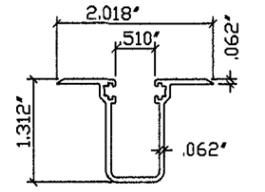
Expiration Date: 06/22/2013

Approval Date: 12/04/2008

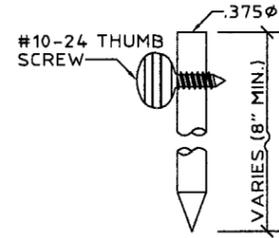
6.8 ACCORDION SHUTTER



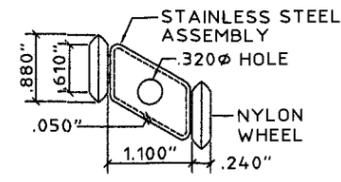
19 ANGLE
SCALE: HALF SIZE



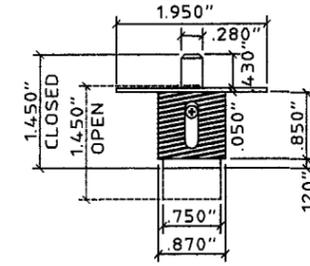
20 RECESS SILL
SCALE: HALF SIZE



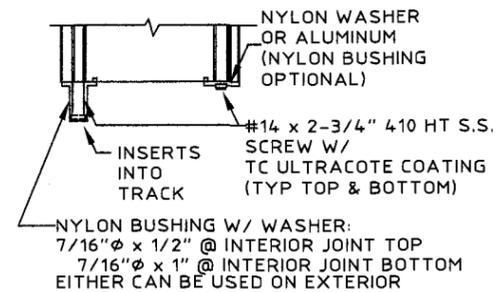
21 SLIDE ROD
SCALE: HALF SIZE
FOR USE WITH 23 AND 24 ONLY



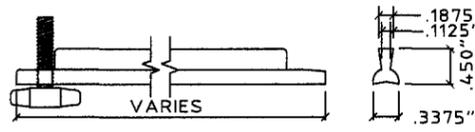
22 ROLLER ASSEMBLY
SCALE: HALF SIZE
TYP. AT EVERY OTHER INSIDE JOINT AT TOP.



23 BRASS PUSH LOCK
SCALE: HALF SIZE

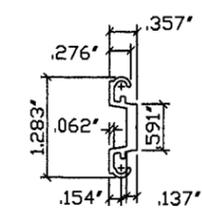


24 BUSHING ASSEMBLY DETAIL
SCALE: HALF SIZE

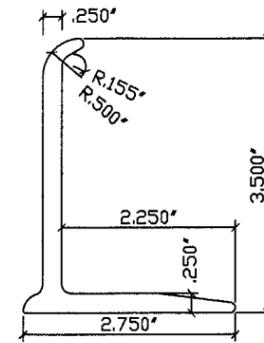


WHERE LOCK PINS ARE USED, THEY ARE ENGAGED IN THE STACKED POSITION & AREN'T REQ'D IN THE CLOSED POSITION.

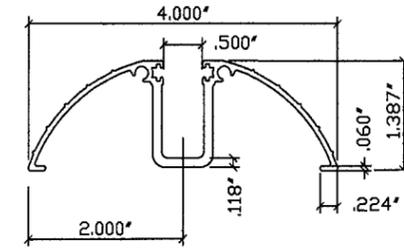
25 OPTIONAL ALUMINUM OR PVC LOCK PIN FOR 29A+29B
SCALE: HALF SIZE



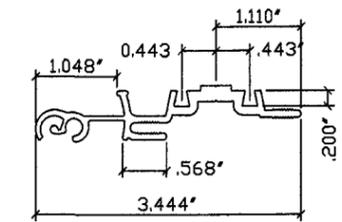
26 BOX CENTER INSERT
SCALE: HALF SIZE



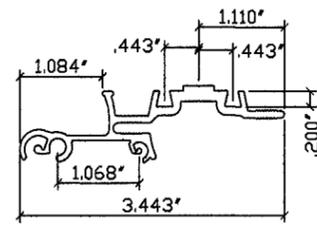
27 RAINGUARD
SCALE: HALF SIZE



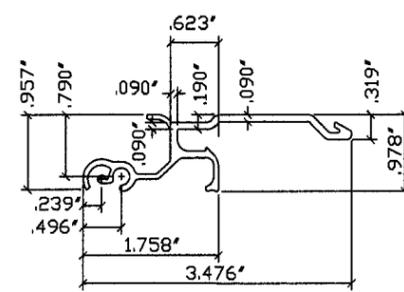
28 DECORATIVE FLOOR TRACK
SCALE: HALF SIZE



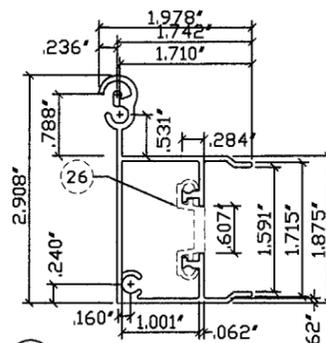
29a OLD 6.8 CENTER MATE
SCALE: HALF SIZE



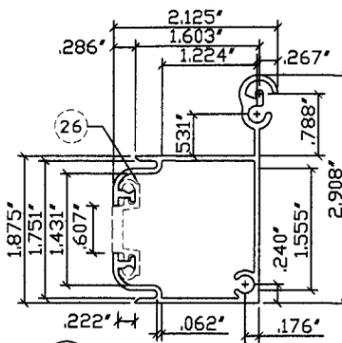
29b 2003 6.8 CENTER MATE
SCALE: HALF SIZE



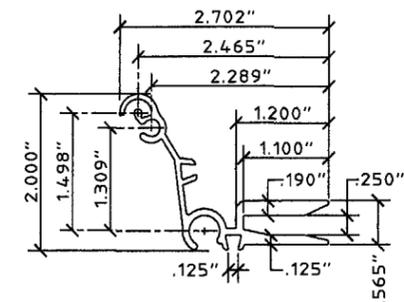
30 UNIMATE LOCK
SCALE: HALF SIZE



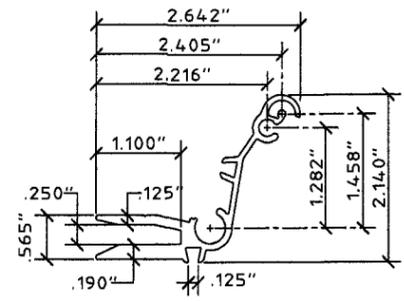
31 MALE BOX CENTER
SCALE: HALF SIZE



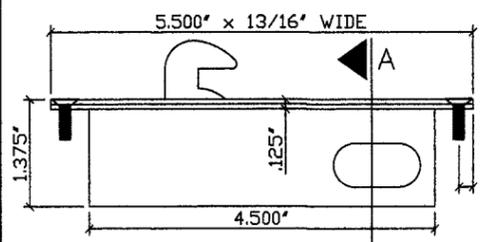
32 FEMALE BOX CENTER
SCALE: HALF SIZE



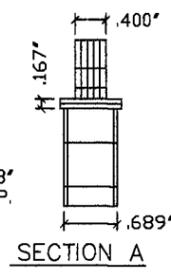
33 OUTSIDE CENTER MATE
SCALE: HALF SIZE



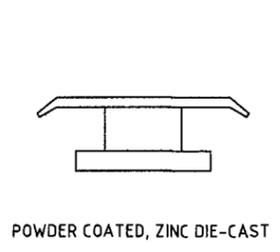
34 INSIDE CENTER MATE
SCALE: HALF SIZE



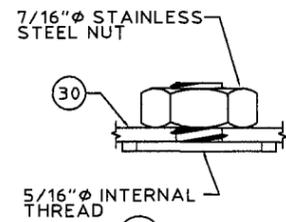
35 BOX LOCK
SCALE: HALF SIZE



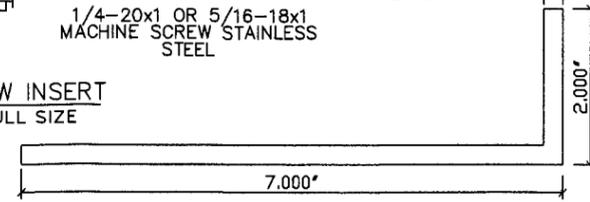
36 T-LOCK ADAPTER (OPTIONAL)
SCALE: HALF SIZE



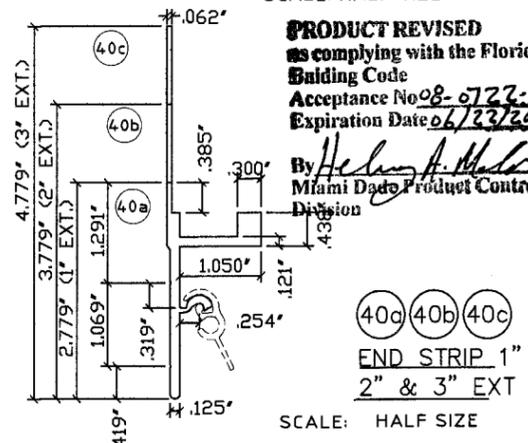
37 T-SCREW INSERT
SCALE: FULL SIZE



38 THUMB SCREW
SCALE: FULL SIZE



39 2X7 ANGLE
SCALE: HALF SIZE



PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 08-0722-04
Expiration Date 06/23/2012

V.J. Knezevich
Professional Engineer
License No.: PE 0010983
FLORIDA COA No.: 27989

By *Helmut A. Madala*
Miami Dade Product Control
Division

Oct 20, 2008

drawn by wbs scale AS NOTED
date 10/20/2008
project no. 08-228

PAGE 4 of 11

K&P
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Engineers
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ROTECTIVE
HUTTER
SYSTEMS, INC.
1631 South Dixie Highway, E-3
Pompano Beach, FL 33060
Tel: (954) 781-6656
FAX: (954) 783-7429

no.	description	by	date

6.8 ACCORDION SHUTTER

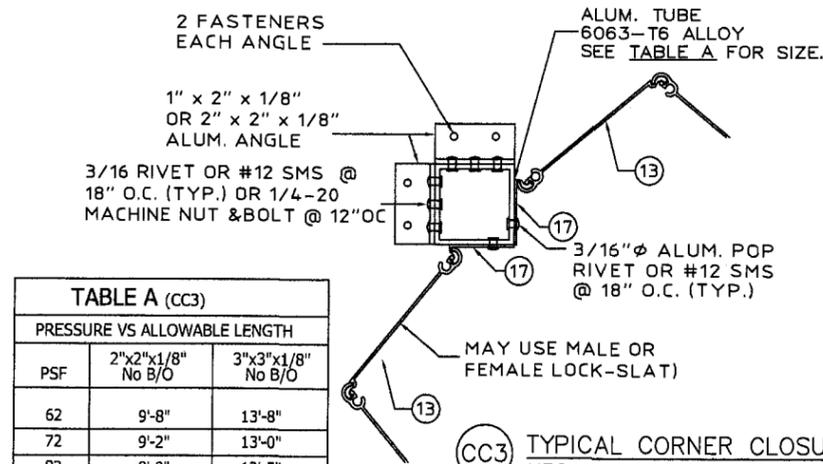
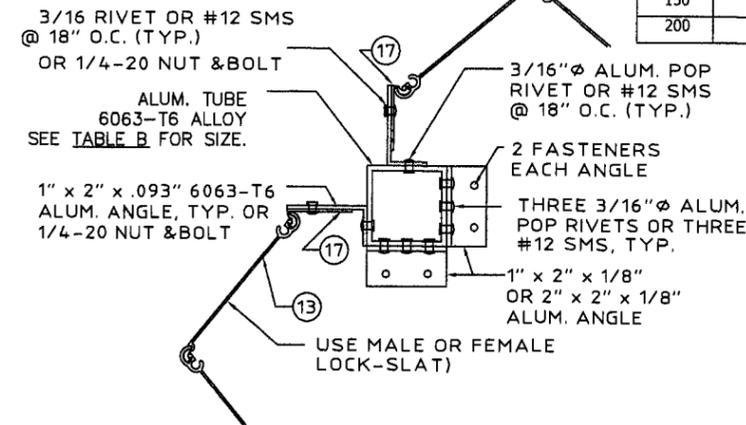


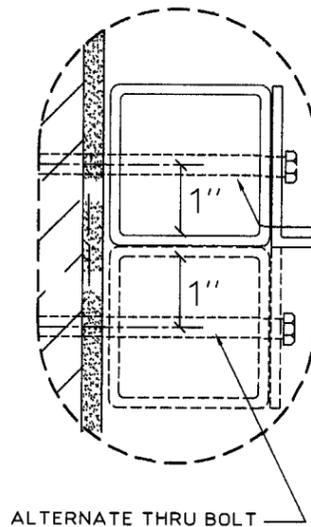
TABLE A (CC3)		
PRESSURE VS ALLOWABLE LENGTH		
PSF	2"x2"x1/8" No B/O	3"x3"x1/8" No B/O
62	9'-8"	13'-8"
72	9'-2"	13'-0"
82	8'-9"	12'-5"
92	8'-5"	11'-11"
102	8'-2"	11'-7"
120	7'-9"	10'-11"
150	7'-2"	10'-2"
200	6'-6"	9'-3"

CC3 TYPICAL CORNER CLOSURE DETAILS NTS

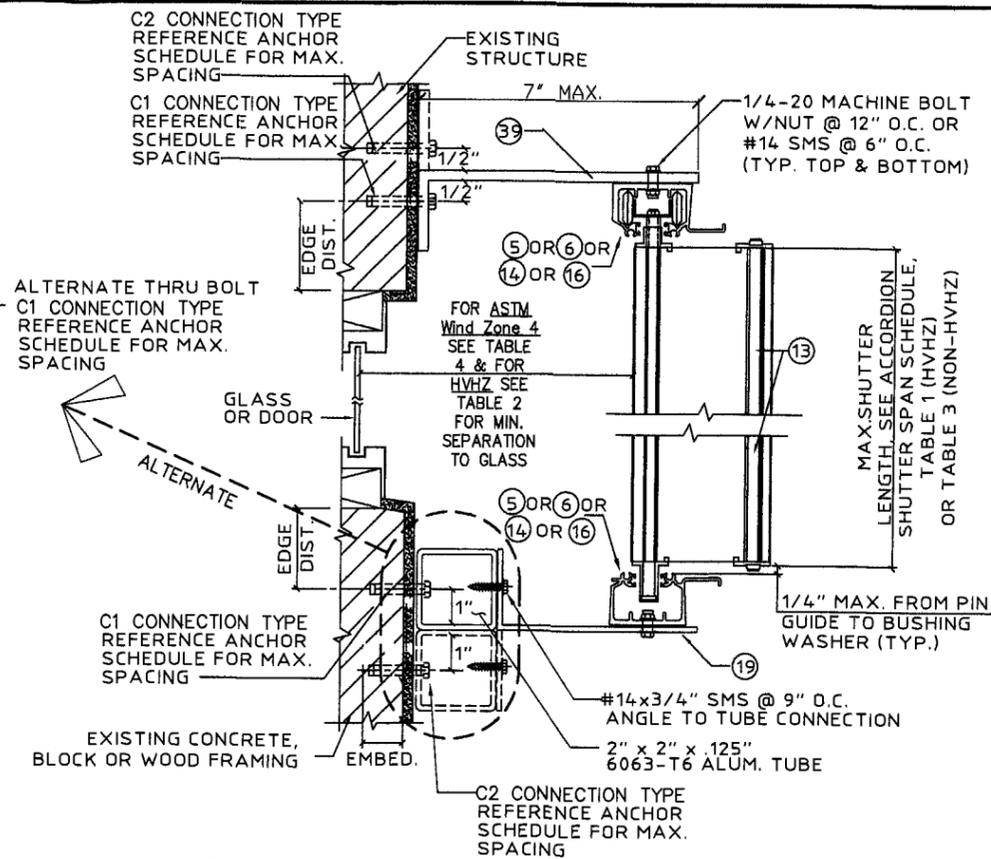
TABLE B (CC4)		
PRESSURE VS ALLOWABLE LENGTH		
PSF	2"x2"x1/8" WITH B/O	3"x3"x1/8" WITH B/O
62	8'-3"	12'-4"
72	7'-10"	11'-9"
82	7'-6"	11'-3"
92	7'-3"	10'-10"
102	7'-0"	10'-5"
120	6'-7"	9'-11"
150	6'-2"	9'-2"
200	5'-7"	8'-4"



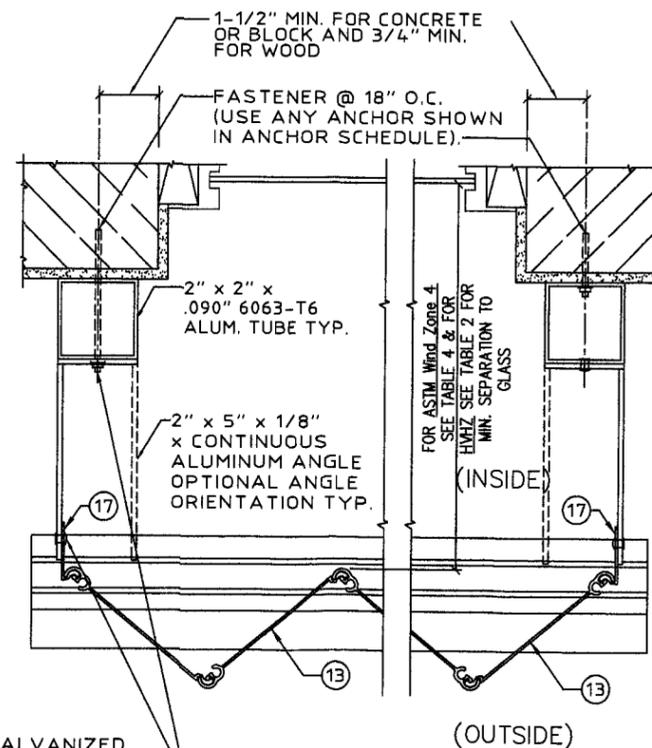
CC4 TYPICAL CORNER CLOSURE DETAILS NTS



ALTERNATE THRU BOLT C2 CONNECTION TYPE REFERENCE ANCHOR SCHEDULE FOR MAX. SPACING



CB ALTERNATE BUILD OUT MOUNT SECTION SCALE: 3" = 1'-0"



SIDE CLOSURE OPTIONS SCALE: 3" = 1'-0"

PRODUCT REVISED as complying with the Florida Building Code Acceptance No. 08-0722-04 Expiration Date 06/22/2013

By *Helmut A. Knezevich*
Miami Dade Product Control Division



KNEZEVICH ASSOCIATES
Consulting Engineers
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(954) 871-6656 * F (954) 452-7960 * COA 27989
www.knezevich.com * email: vk@knezevich.com

PROTECTIVE SHUTTERS, INC.
1631 South Dixie Highway, E-3
Pompano Beach, FL 33060



no.	description	date	by

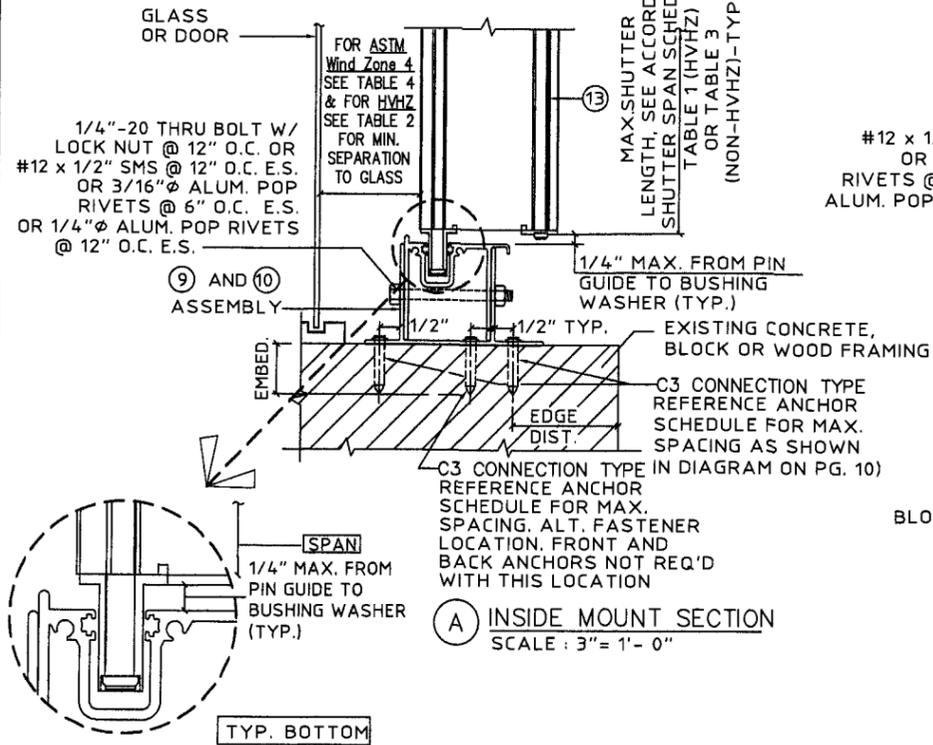
V.J. Knezevich
Professional Engineer
FL License No.: PE 0010983
FLORIDA COA No.: 27989

Oct 20, 2008

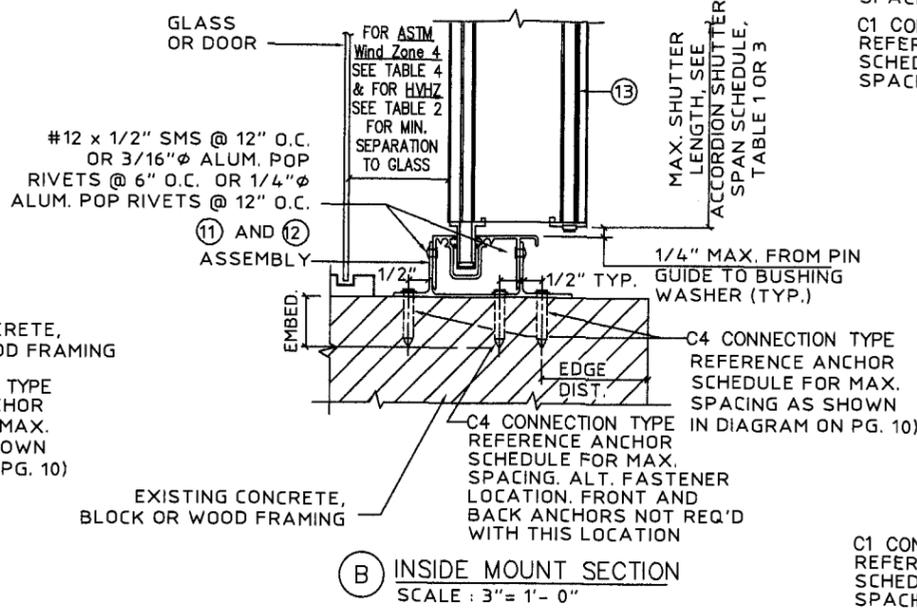
drawn by wbs scale AS NOTED
date 10/20/2008

project no. 08-228

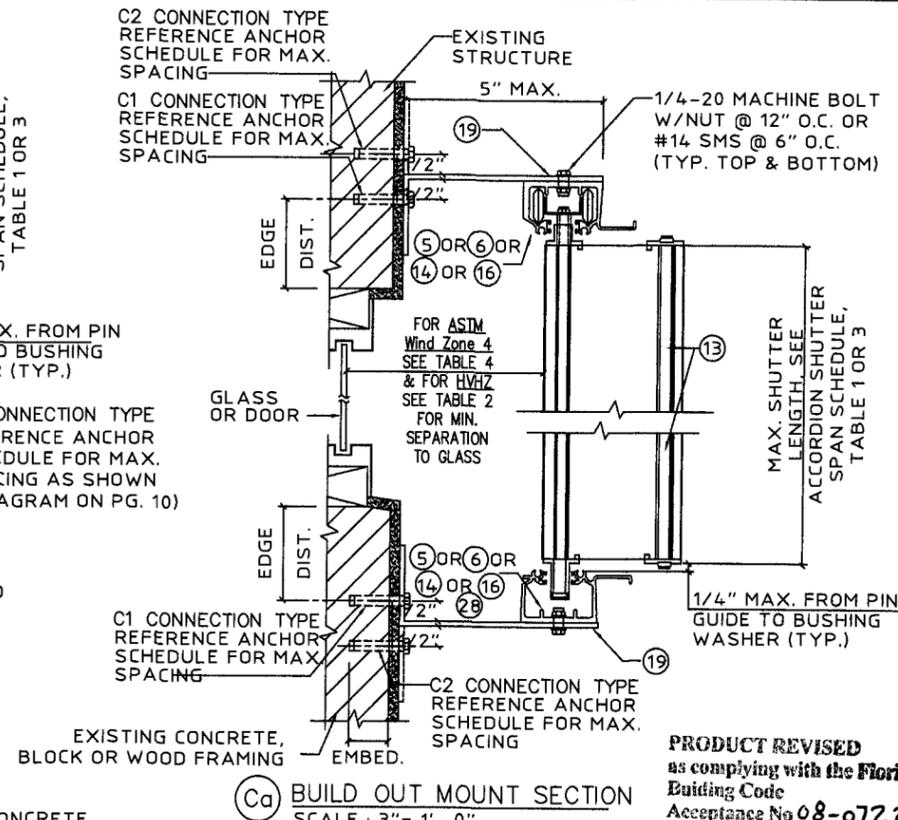
6.8 ACCORDION SHUTTER



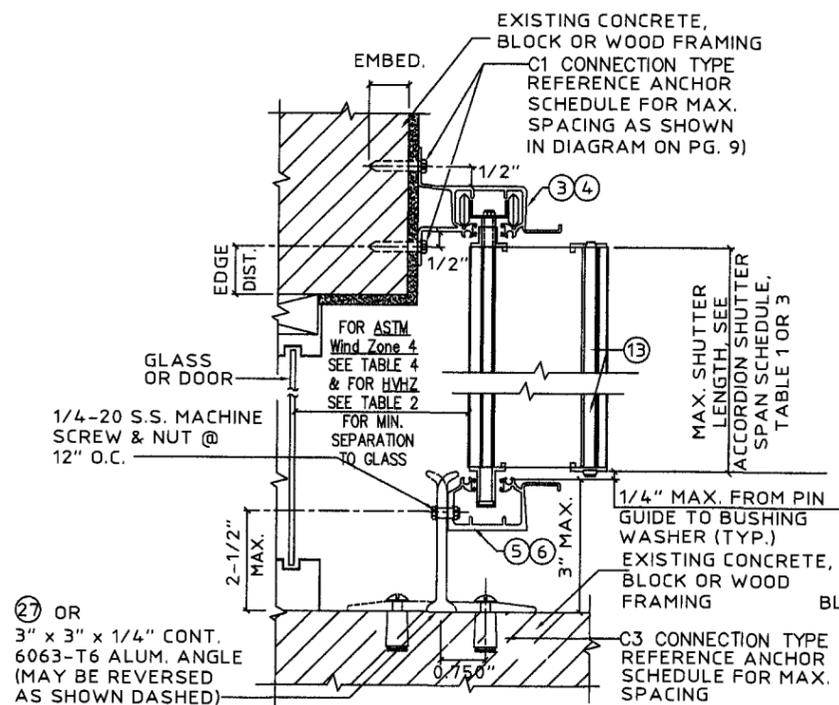
A INSIDE MOUNT SECTION
SCALE: 3" = 1'-0"



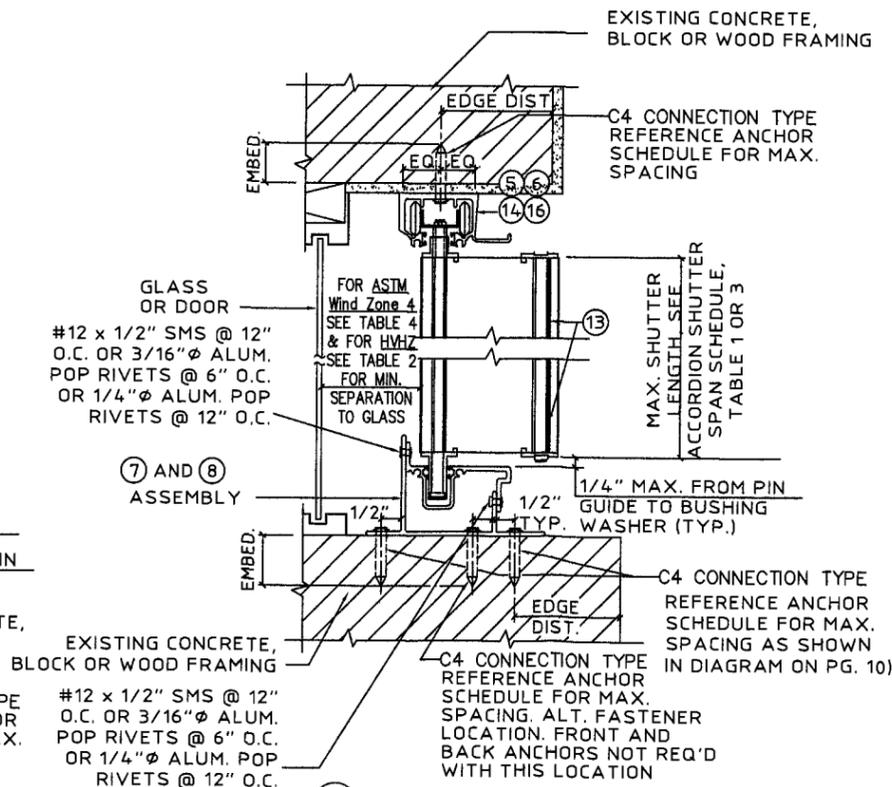
B INSIDE MOUNT SECTION
SCALE: 3" = 1'-0"



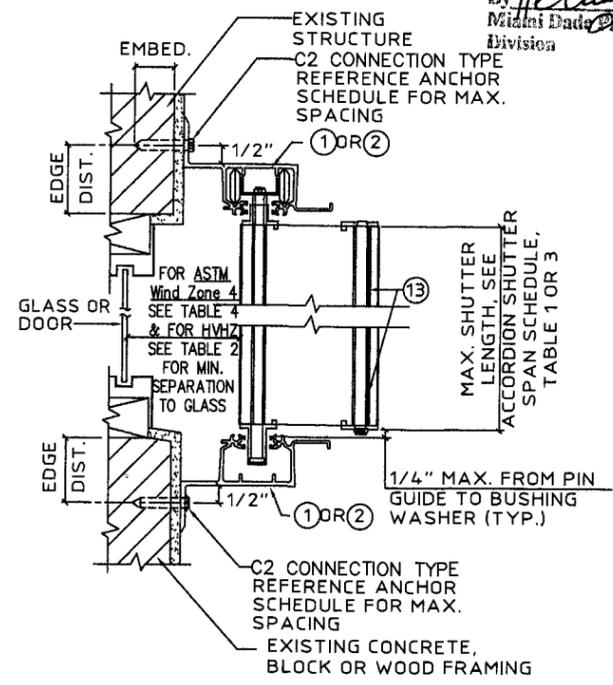
C BUILD OUT MOUNT SECTION
SCALE: 3" = 1'-0"



D WALL MOUNT SECTION
SCALE: 3" = 1'-0"



E CEILING / INSIDE MOUNT SECTION
SCALE: 3" = 1'-0"



F WALL/BUILD OUT SECTION
SCALE: 3" = 1'-0"

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No 08-0722-04
Expiration Date 06/22/2013
By *Helmut A. Knezevich*
Miami Data Product Control Division



KNEZEVICH ASSOCIATES
Consulting Engineers
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www.knezevich.com • email: vk@knezevich.com

ROTective Tel: (954) 781-6656
HUTTER Fax: (954) 783-7429
SYSTEMS, INC. 1631 South Dixie Highway, E-3
Pompano Beach, FL 33060

no.	date	description

V.J. Knezevich
Professional Engineer
FL License No.: PE 0010983
FLORIDA COA No.: 27989

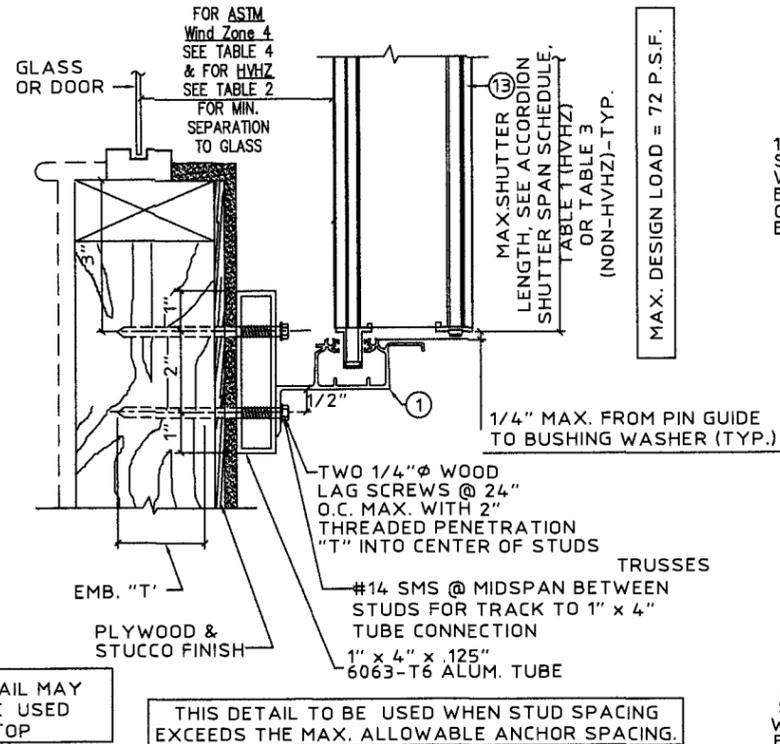
Oct 20, 2008

drawn by wbs scale AS NOTED

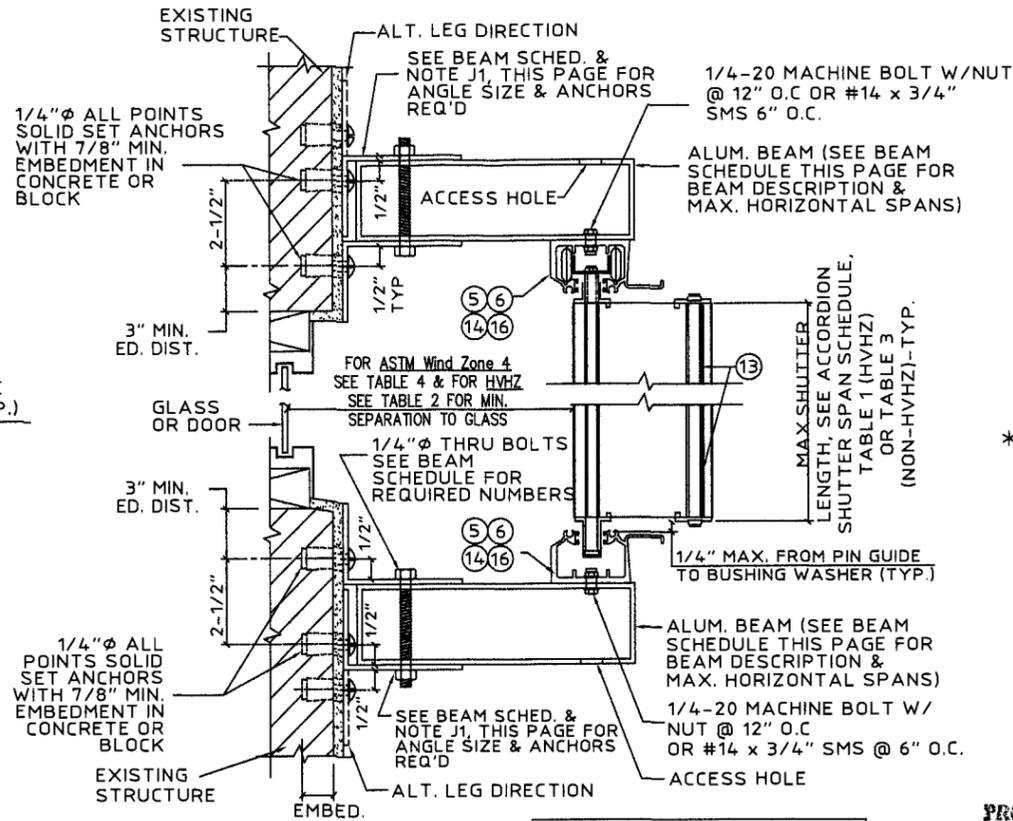
date 10/20/2008

project no. 08-228

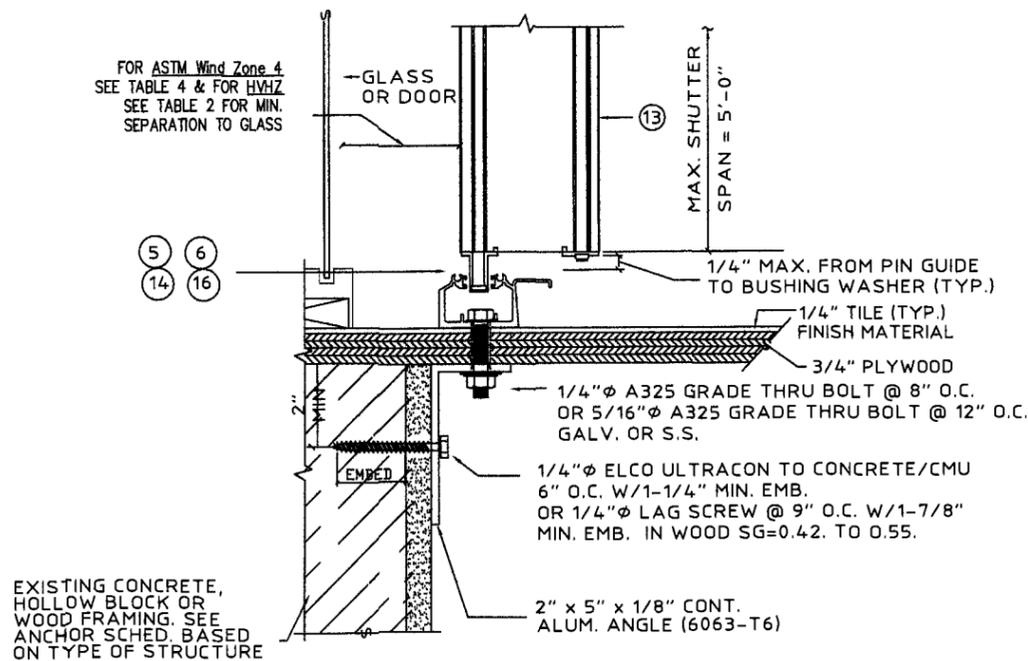
6.8 ACCORDION SHUTTER



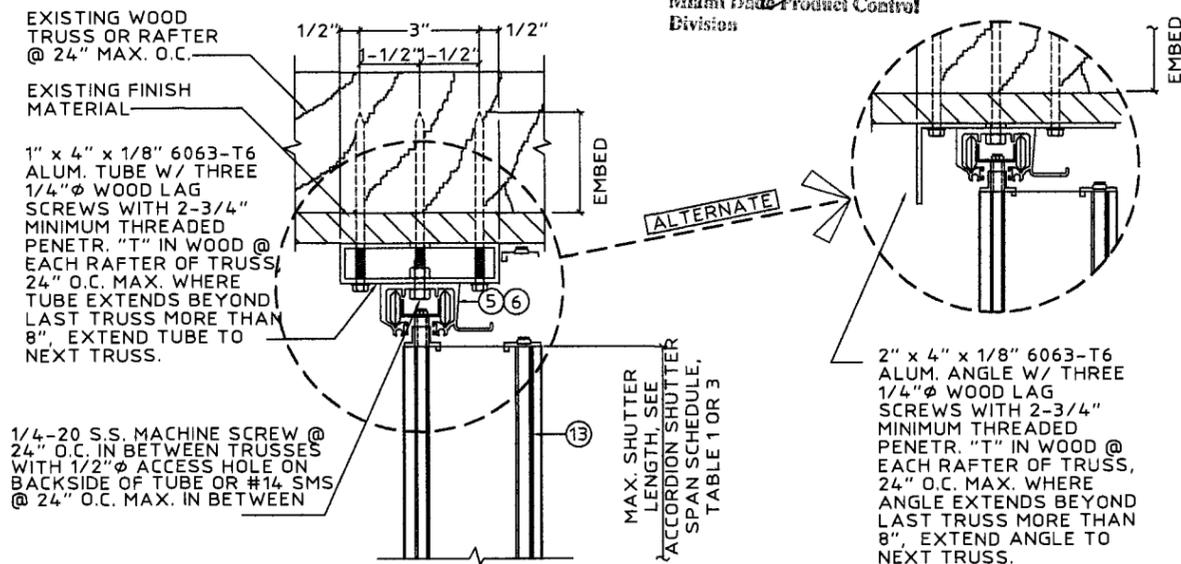
G WALL MOUNT SECTION
SCALE : 3" = 1'- 0"



J BEAM SPAN SECTION
SCALE : 3" = 1'- 0"



H PASS THRU DETAIL
SCALE : 3" = 1'- 0"



K TRUSS MOUNT SECTION
SCALE : 3" = 1'- 0"

*** BOX BEAM SCHEDULE**

BOX BEAM	SHUTTER SPAN	TOP BEAM	BOT. BEAM	# OF THRU BOLT		# OF 1/4\"/>	
				TOP BEAM	BOT. BEAM	TOP BEAM	BOT. BEAM

* USE 2X3X1/4 OR 2X5X1/4 ANGLES FOR 2X5 & 2X6 BEAMS
USE 2X5X1/4 ANGLES FOR 2X8 & 2X10 BEAMS

BEAM SCHEDULE NOTES:

- J1. USE BEAM SCHEDULE FOR DETAIL J.
- J2. TOP & BOTTOM BEAMS MAY BE USED TOGETHER OR IN COMBINATION WITH OTHER CONNECTION DETAILS. WHERE USED TOGETHER, BEAM MUST BE LIMITED TO TOP BEAM SPANS.
- J3. LAP BEAMS ARE NOT ALLOWED.
- J4. ALL BEAMS & ANGLES TO BE 6063-T6 ALLOY.

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 08-0722.04
Expiration Date 06/22/2013
By *Helmut A. Knezevich*
Miami Product Control Division

ALTERNATE



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no.	description	date	by

V.J. Knezevich
Professional Engineer
FL License No.: PE 0010983
FLORIDA COA No.: 27989

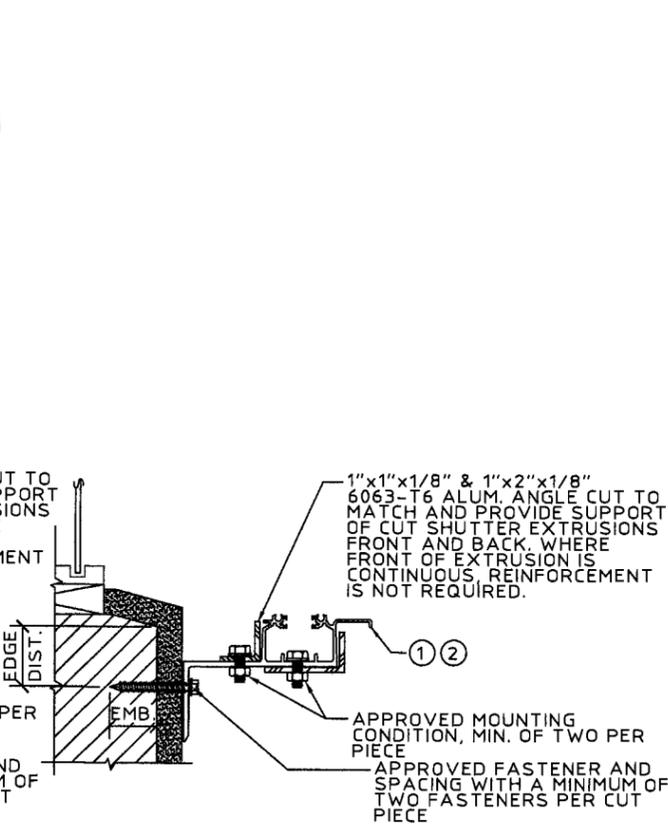
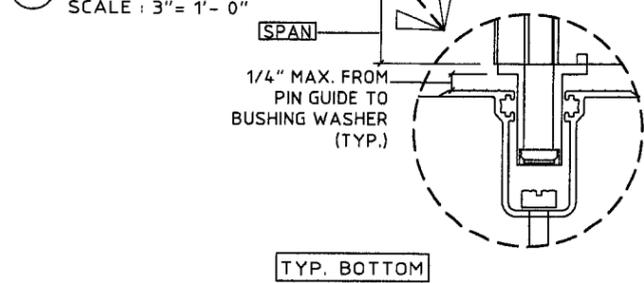
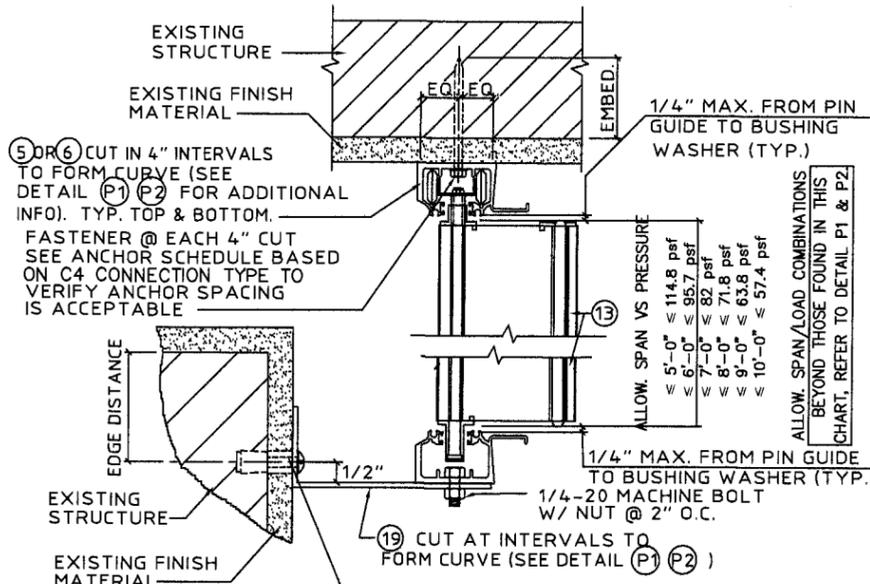
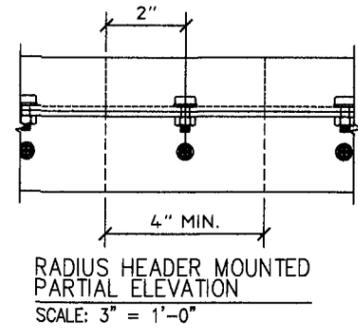
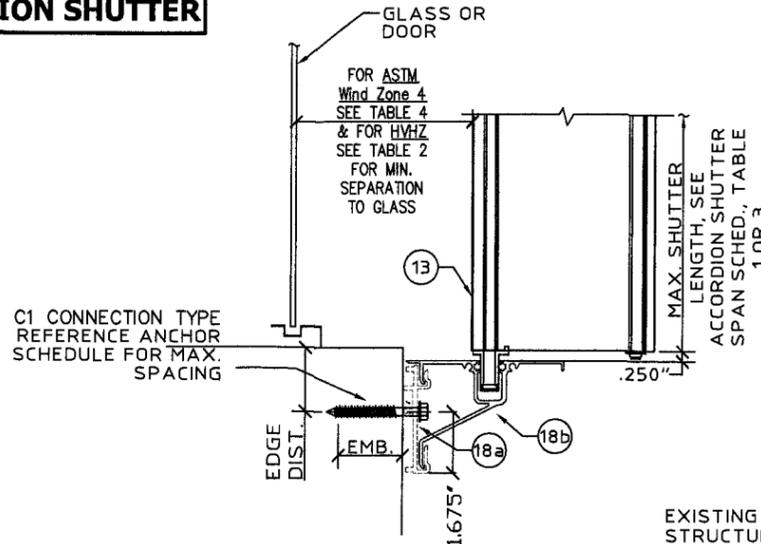
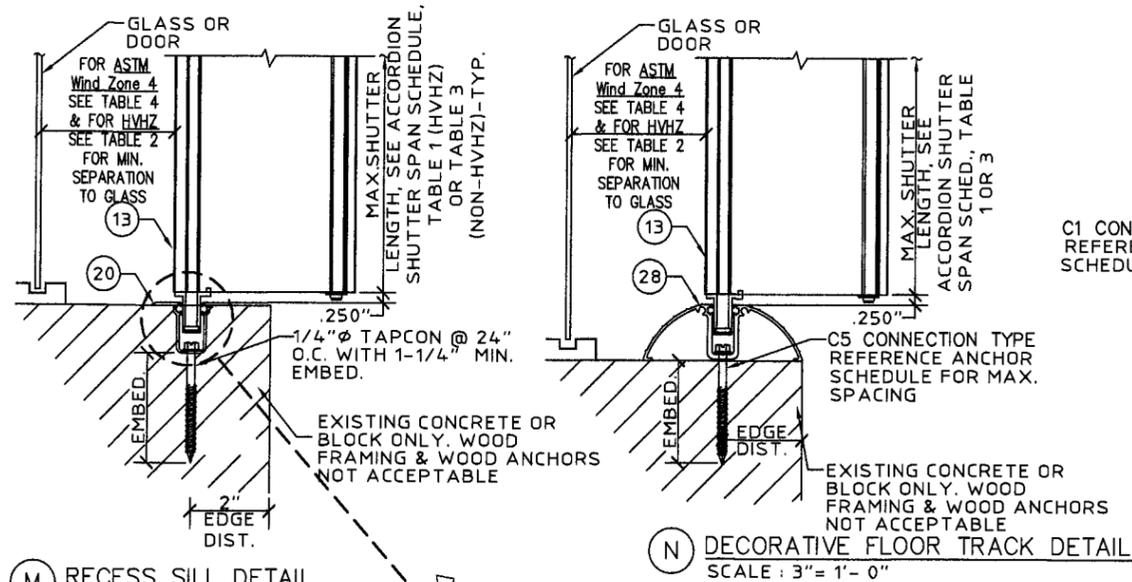
V.J. Knezevich

Oct 20 2008

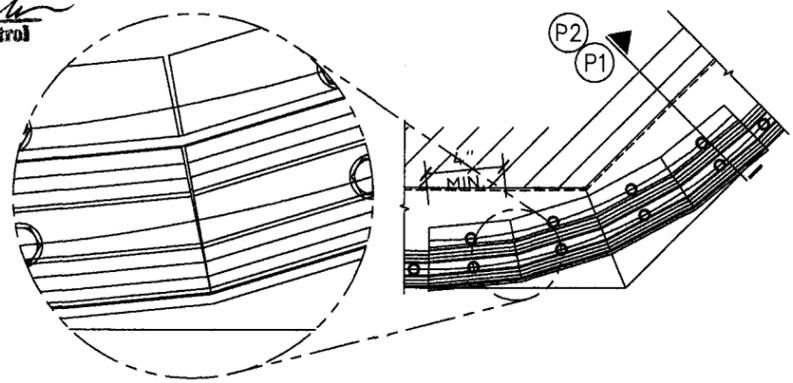
drawn by: wbs scale: AS NOTED
date: 10/20/2008 project no.: 08-228

PAGE 8 of 11

6.8 ACCORDION SHUTTER



PRODUCT REVISED
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By *Helmut A. Knezevich*
Miami Dade Product Control Division





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no.	description	date	by

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Professional Engineer
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FLORIDA COA No.: 27989

V.J. Knezevich

Oct 20, 2008

drawn by *wbs* scale AS NOTED
date 10/20/2008
project no. **08-228**

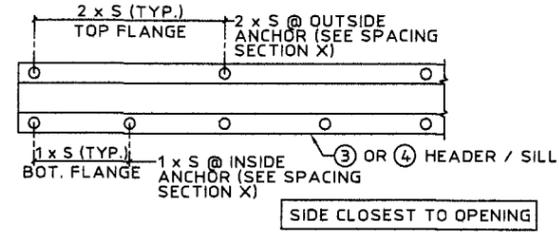
PAGE 9 of 11

6.8 ACCORDION SHUTTER

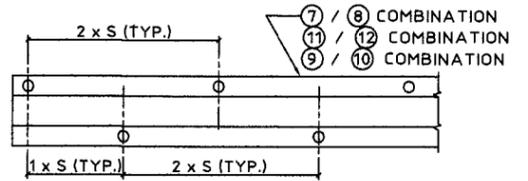
ANCHOR SCHEDULE FOR CONCRETE

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM CONCRETE REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 1" EDGE DISTANCE										MIN. 2-1/2" EDGE DISTANCE																								
		SPANS UP TO 6'-0"					SPANS UP TO 8'-8"					SPANS UP TO 13'-0"					SPANS UP TO 6'-0"					SPANS UP TO 8'-8"					SPANS UP TO 13'-0"									
		(SEE NOTE 1)					(SEE NOTE 1)					(SEE NOTE 1)					(SEE NOTE 1)					(SEE NOTE 1)					(SEE NOTE 1)									
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)									
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
	48.0	16	16	6	7	8	16	16	4	5	5	16	16	3	3	3	16	16	13	16	16	16	16	9	12	15	16	16	6	8	10					
	62.0	16	16	5	5	6	16	16	3	4	4	15	9				3	16	16	10	14	16	16	16	7	9	12	16	10	4	6	8				
	72.0	16	16	4	5	5	16	16	3	3	3	13	6				16	16	8	12	15	16	16	6	8	10	14	7	4	5	7					
	110.0	16	16		3	3	12	6					11	4				16	16	5	7	10	14	6	4	5	6	12	4	3	4	5				
	200.0	11	4				11	4					11	4				12	4	3	4	6	12	4	3	4	5	12	4	3	4	5				
	48.0	16	16	9	12	14	16	16	6	8	10	16	16	4	5	8	16	16	12	16	16	16	16	8	12	16	16	16	5	8	11					
	62.0	16	16	7	9	11	16	16	5	6	7	13	8	3	4	5	16	16	9	13	16	16	16	6	9	12	14	8	4	6	8					
	72.0	16	16	6	8	9	16	16	4	5	6	11	5				3	4	16	16	8	11	15	16	16	5	8	11	12	5	3	5	7			
	110.0	16	16	4	5	6	11	5				3	4	9	3			3	3	16	16	5	7	10	11	5	3	5	7	10	4	3	4	6		
	200.0	9	3		3	3	9	3				3	3	9	3			3	3	10	4	3	4	6	10	4	3	4	6	10	4	3	4	6		
	48.0																16	16	16	16	16	16	16	12	16	16	16	16	8	11	16					
	62.0																16	16	13	16	16	16	16	9	13	16	16	11	6	9	12					
	72.0																16	16	11	16	16	16	16	8	11	16	16	7	5	7	10					
	110.0																16	16	7	11	15	15	7	5	7	10	13	5	4	6	8					
	200.0																13	5	4	6	8	13	5	4	6	8	13	5	4	6	8					
	48.0	16	16	7	9	11	16	16	4	6	8	12	12	3	4	5	16	16	14	16	16	16	16	10	14	16	16	16	6	9	13					
	62.0	16	16	5	7	9	14	14	3	5	6	9	5				3	4	16	16	11	16	16	16	8	11	15	16	9	5	7	10				
	72.0	16	16	4	6	7	12	12	3	4	5	8	4				3	16	16	9	14	16	16	16	6	9	13	13	6	4	6	9				
	110.0	11	11	3	4	5	8	3				3	7				3	16	16	6	9	12	13	6	4	6	8	11	4	3	5	7				
200.0	7				3	7					3	7				3	11	4	3	5	7	11	4	3	5	7	11	4	3	5	7					
	48.0	16	16	16	16	16	16	12	16	16	16	16	8	11	15	16	16	16	16	16	16	16	16	16	16	16	16	16	11	16	16					
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	48.0	16	16	16	16	16	16	12	16	16	16	16	8	12	16	16	16	16	16	16	16	16	13	16	16	16	16	8	13	16						
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	200.0	12	5	4	6	9	12	5	4	6	9	12	5	4	6	9	14	5	5	7	10	14	5	5	7	10	14	5	5	7	10					



NOTE: "S" INDICATES ANCHOR SCHEDULE SPACING.
 SPACING DIAGRAM FOR C1 CONNECTION TYPE:
 - C1 CONNECTION TYPE USING PIECE 3 OR 4



NOTE: "S" INDICATES ANCHOR SCHEDULE SPACING.
 SPACING DIAGRAM FOR C3 & C4 CONNECTION TYPE:
 - C3 CONNECTION TYPE USING PIECE 10 WITH OUTSIDE ANCHORS ONLY
 - C4 CONNECTION TYPE USING PIECE 8 OR 12 WITH OUTSIDE ANCHORS ONLY

- ANCHOR NOTES:**
- SPANS AND LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE STORM SHUTTER SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN TABLE 1 & 3 (Pg 1).
 - ENTER ANCHOR SCHEDULE BASED ON THE EXISTING STRUCTURE MATERIAL, ANCHOR TYPE AND EDGE DISTANCE. SELECT DESIGN LOAD GREATER THAN OR EQUAL TO NEGATIVE DESIGN LOAD ON SHUTTER AND SELECT SPAN GREATER THAN OR EQUAL TO SHUTTER SPAN.
 - SEE MOUNTING SECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
 - EXISTING STRUCTURE MAY BE CONCRETE, ASTM C-90 HOLLOW CONCRETE BLOCK OR WOOD FRAMING. REFERENCE ANCHOR SCHEDULE FOR PROPER ANCHOR TYPE BASED ON TYPE OF EXISTING STRUCTURE AND APPROPRIATE CONNECTION TYPE. SEE CONNECTION DETAILS FOR IDENTIFICATION OF CONNECTION TYPE.
 - THE CONTRACTOR IS RESPONSIBLE TO ENSURE THE ANCHORS ARE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS. EMBEDMENT LENGTHS SHALL BE AS NOTED AND DO NOT INCLUDE STUCCO OR OTHER FINISHES.
 - WHERE EXISTING STRUCTURE IS WOOD FRAMING, WOOD FRAMING CONDITIONS VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT PLYWOOD. FASTENING TO PLYWOOD IS ACCEPTABLE ONLY FOR SIDE CLOSURE PIECES.
 - WHERE LAG SCREWS FASTEN TO NARROW FACE OF STUD FRAMING, FASTENER SHALL BE LOCATED IN CENTER OF NOMINAL 2" x 4" (MIN.) WOOD STUD. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING. LAG SCREWS SHALL HAVE PHILLIPS PAN HEAD OR HEX HEAD.
 - MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFER HEAD (SIDEWALK BOLT), U.O.N.
- DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE USES.
- DESIGNATES ANCHORS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHER WINGNUT.
- FOR 5/16" ELCO CRETE FLEX, CONCRETE $f_c=3.35$ KSI, FOR ELCO ULTRACON, CONCRETE $f_c=3.5$ KSI, FOR ITW TAPCON, CONCRETE $f_c=3.2$ KSI, OTHERWISE MIN. $f_c \leq 3$ KSI.

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No. 08-0722.04
 Expiration Date: 06/22/2013
 By: *Heather A. Miller*
 Miami Dad Product Control Division

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no.	date	by	description

V.J. Knezevich
 Professional Engineer
 FL License No.: PE 0010883
 FLORIDA COA No.: 27989

Oct 20, 2008

drawn by: *AS NOTED*
 scale: *AS NOTED*
 date: 10/20/2008
 project no.: **08-228**

PAGE 10 of 11

6.8 ACCORDION SHUTTER

ANCHOR SCHEDULE FOR CONCRETE BLOCK

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM BLOCK REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 1" EDGE DISTANCE					MIN. 2-1/2" EDGE DISTANCE																												
		SPANS UP TO 6'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 13'-0" (SEE NOTE 1)																							
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)																							
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5																			
	48.0	7	7	3	4	5	5	3	3	3	12	12	4	7	10	8	8	3	5	7	5	5	3	5											
	62.0	5	5	3	4	4					9	9	3	5	8	6	6	3	5	4				3											
	72.0	5	5	3	3	3					8	8	3	4	7	5	5	3	5	3				3											
	110.0	3	3								5	5	3	4	3				3	3															
	200.0										3																								
	48.0	14	14	4	6	9	10	10	3	4	6	6	6	3	4	14	14	5	9	13	10	10	3	6	9	6	6	4	6						
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	72.0	9	9	3	4	6	6	6	3	4	4					9	9	3	6	9	6	6	4	6	4					4					
	110.0	6	6			4	4					3				6	6	3	6	4				4	3					3					
	200.0	3				3						3				3			3	3				3	3					3					
	MIN. 1-1/4" EDGE DISTANCE					MIN. 2" EDGE DISTANCE					C1					C2					C3					C4					C5				
	48.0	16	16	5	6	8	12	12	3	4	6	8	8	3	4	16	16	8	11	14	16	16	5	8	10	13	13	3	5	6					
	62.0	13	13	3	5	6	9	9	3	4	6	3			3	16	16	6	8	11	15	15	4	6	7	10	6	3	4	5					
	72.0	11	11	3	4	5	7	7	3	4	5					16	16	5	7	9	13	13	3	5	6	9	4			3	4				
	110.0	7	7	3	3	5					4					13	13	3	5	6	9	4		3	4	7	3			3					
200.0	4				4					4					7	3		3	7	3			3	7	3					3					
	MIN. 3" EDGE DISTANCE					MIN. 4" EDGE DISTANCE					C1					C2					C3					C4					C5				
	48.0															16	16	8	13	16	15	15	5	9	14	10	10	3	6	9					
	62.0															16	16	6	10	16	11	11	4	7	11	7	4	3	4	7					
	72.0															14	14	5	9	13	10	10	3	6	9	6	3			4	6				
	110.0															9	9	3	5	9	6	3		4	6	5			3	5					
200.0															5		3	5	5				3	5	5			3	5						
	MIN. 1-9/16" EDGE DISTANCE					MIN. 3-1/8" EDGE DISTANCE					C1					C2					C3					C4					C5				
	48.0	16	16	6	8	10	14	14	4	5	7	9	9	3	4	16	16	8	12	16	16	16	5	8	12	11	11	3	5	8					
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	72.0	14	14	4	5	6	9	9	3	4	6	3			3	15	15	5	8	11	10	10	3	5	8	7	3		3	5					
	110.0	9	9	3	4	6					3	5				10	10	3	5	7	7	3		3	5	6			3	4					
200.0	5				5					5					6		3	4	6				3	4	6			3	4						

PRODUCT REVISED as complying with the Florida Building Code
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 Expiration Date 06/23/2013
 By *Heather A. M...*
 Miami Dade Product Control Division

ANCHOR NOTES:
 SEE PAGE 10 of 11

ANCHOR SCHEDULE FOR WOOD SG = 0.55 MIN.

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 3/4" EDGE DISTANCE																							
		SPANS UP TO 6'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 13'-0" (SEE NOTE 1)													
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)													
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5									
	48.0	16	16	12	14	16	16	8	10	11	16	16	8	10	11	16	16	5	6	7	16	16	5	6	7
	62.0	16	16	9	11	12	16	16	6	7	8	16	13	4	5	5									
	72.0	16	16	8	9	11	16	16	5	6	7	16	9	3	4	5	16	6	3	3	4				
	110.0	16	16	5	6	7	16	9	3	4	5	16	6	3	3	4									
	200.0	16	6	3	3	4	16	6	3	3	4	16	6	3	3	4									
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	62.0	13	13								9	9				6	3								
	72.0	11	11								7	7				5									
	110.0	7	7								5					4									
	200.0	4									4					4									
	48.0	16	16	11	15	16	16	8	10	12	16	16	5	7	8	15	7	3	4	5	13	5	3	3	4
	62.0	16	16	9	11	14	16	16	6	8	9	16	11	4	5	6									
	72.0	16	16	7	10	12	16	16	5	7	8	15	7	3	4	5	13	5	3	3	4				
	110.0	16	16	5	6	7	15	7	3	4	5	13	5	3	3	4									
	200.0	13	5	3	3	4	13	5	3	3	4	13	5	3	3	4									

ANCHOR SCHEDULE FOR WOOD SG = 0.42 MIN.

MAXIMUM FASTENER SPACING (INCHES) REQUIRED FOR VARIOUS DESIGN LOADS AND SPANS

ANCHOR TYPE & MINIMUM REQUIREMENTS	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 3/4" EDGE DISTANCE														
		SPANS UP TO 6'-0" (SEE NOTE 1)					SPANS UP TO 8'-8" (SEE NOTE 1)					SPANS UP TO 13'-0" (SEE NOTE 1)				
		CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)					CONNECTION TYPE (SEE NOTE 3)				
		C1	C2	C3	C4	C5	C1	C2	C3	C4	C5	C1	C2	C3	C4	C5
	48.0	16	16	9	11	13	16	16	6	8	9	16	16	4	5	6
	62.0	16	16	7	9	10	16	16	5	6	7	15	9	3	4	4
	72.0	16	16	6	7	9	16	16	4	5	6	13	6		3	3
	110.0	16	16	4	5	6	12	6		3	4	10	4		3	3
	200.0	10	4		3	3	10	4		3	3	10	4		3	3
	48.0	16	16	8	10	13	16	16	5	7	9	13	13	3	4	6
	62.0	16	16	6	8	10	15	15	4	5	7	10	6		3	4
	72.0	16	16	5	7	9	13	13	3	4	6	9	4		3	4
	110.0	12	12	3	4	5	8	4		3	4	7	3		3	
	200.0	7	3		3	7	3			3	7	3			3	



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 Oct 20/2008

drawn by: scale: AS NOTED
 date: 10/20/2008
 project no.: 08-228