



MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

BUILDING CODE COMPLIANCE OFFICE
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Sunshine Aluminum Specialties, Inc.
5420 Maule Way
West Palm Beach FL 33407

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT SECTION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

Your application for Product Approval of:

6.8" Aluminum Accordion Shutter

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime from a jobsite or manufacturer's plant for quality control testing.

If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

Acceptance No.: 00-0609.02

Expires: 07/27/2003

Raul Rodriguez
Chief Product Control Division

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS

BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director

Miami-Dade County
Building Code Compliance Office

Approved: 07/27/2000

1 of 3



Sunshine Aluminum Specialties, Inc.

ACCEPTANCE No. : 00-0609.02

APPROVED : JUL 27 2000

EXPIRES : JUL 27 2003

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This approves an Aluminum Extruded 6.8" Accordion Shutter, as described in Section 2 of this Notice of Acceptance, designed to comply with the South Florida Building Code, 1994 Edition for Miami-Dade County, for the locations where the pressure requirements, as determined by SFBC Chapter 23, do not exceed the Design Pressure Rating values indicated in the approved drawings.

2. PRODUCT DESCRIPTION

This Aluminum Extruded 6.8" Accordion Shutter and its components shall be constructed in strict compliance with the following documents: Drawing No. 00-918, titled "6.8" Accordion Shutter", prepared by Knezevich & Associates, Inc., dated December 8, 1998, last revision #2 dated April 13, 2000, sheets 1 through 6 of 6, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by the Miami-Dade County Product Control Division. These documents shall hereinafter be referred to as the approved drawings.

3. LIMITATIONS

All permanent set components, included but not limited to embedded anchor bolts, threaded cones, metal shields, headers and sills, must be protected against corrosion, contamination and damage at all times.

4. INSTALLATION

This Aluminum Extruded 6.8" Accordion Shutter and its components shall be installed in strict compliance with the approved drawings.

5. 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".

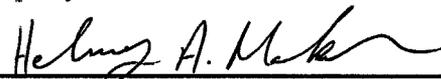
6. BUILDING PERMIT REQUIREMENTS

6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance.

6.1.2 Duplicate copies of the approved drawings, as identified in Section 2 of this Notice of Acceptance, clearly marked to show the components selected for the proposed installation.

6.1.3 Any other documents required by the Building Official or the South Florida Building Code (SFBC) in order to properly evaluate the installation of this system.



Helmy A. Makar, P.E.- Product Control Examiner
Product Control Division

Sunshine Aluminum Specialties, Inc.

ACCEPTANCE No. : 00-0609.02

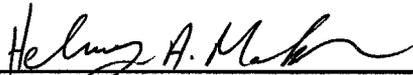
APPROVED : JUL 27 2000

EXPIRES : JUL 27 2003

NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

1. Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documents, including test-supporting data, engineering documents, are no older than eight (8) years.
2. Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
3. Renewals of Acceptance will not be considered if:
 - a. There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes.
 - b. The product is no longer the same product (identical) as the one originally approved.
 - c. If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product.
 - d. The engineer, who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
4. Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
5. Any of the following shall also be grounds for removal of this Acceptance:
 - a. Unsatisfactory performance of this product or process.
 - b. Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
6. The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
7. A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all time. The engineer needs not reseal the copies.
8. Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
9. This Notice of Acceptance consists of pages 1, 2 and this last page 3.

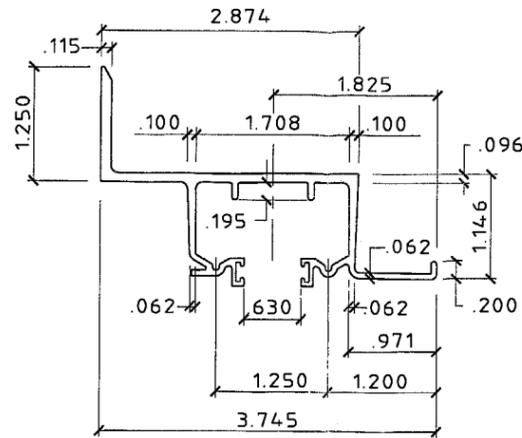
END OF THIS ACCEPTANCE



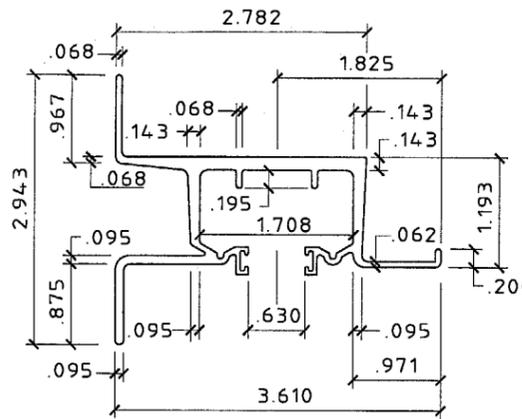
Helmy A. Makar, P.E.- Product Control Examiner
Product Control Division

NOTES:

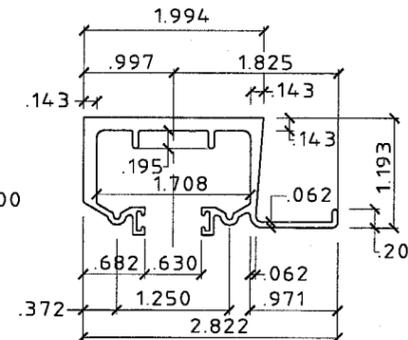
1. THIS ACCORDION SHUTTER SYSTEM IS DESIGNED IN ACCORDANCE WITH THE SOUTH FLORIDA BUILDING CODE, MIAMI-DADE COUNTY 1994 EDITION.
2. POSITIVE AND NEGATIVE DESIGN PRESSURE CALCULATIONS SHALL BE PERFORMED FOR SPECIFIC JOBS IN ACCORDANCE WITH ASCE 7-88 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES". TABLES MUST BE REFERENCED AT APPROPRIATE DESIGN LOADS.
3. ALL EXTRUSIONS SHOWN SHALL BE 6063-T6 ALUMINUM ALLOY, U.O.N.
4. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED AT THE BOTTOM END OF THE LOCKING SLAT AS FOLLOWS:
SUNSHINE ALUMINUM SPECIALTIES, INC.
MANGONIA PARK, FLORIDA
MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED
5. ALL BOLTS AND WASHERS SHALL BE STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 K.S.I., U.O.N. POP RIVETS SHALL BE 3/16" ϕ 5052 ALUMINUM ALLOY.
6. THE DETAILS AND SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED FOR IMPACT, CYCLIC AND UNIFORM STATIC AIR PRESSURE IN CONFORMANCE WITH DADE COUNTY PROTOCOLS PA 201, 202, AND 203.
7. DESIGN IS BASED ON CONSTRUCTION TESTING CORPORATION (C.T.C.) TEST REPORT No. 98-050.
8. FLOORS TRACKS MAY BE REMOVABLE AT NON-STACKING LOCATIONS. USE CALK-IN REMOVABLE ANCHORS.
9. ALL SHUTTERS SHALL HAVE A LOCKING MECHANISM CONSISTING OF THUMBSCREW OR PUSH LOCK AT CENTER OR SIDE CLOSURE.
10. TOP AND BOTTOM DETAILS MAY BE INTERCHANGED AS FIELD CONDITIONS REQUIRE.



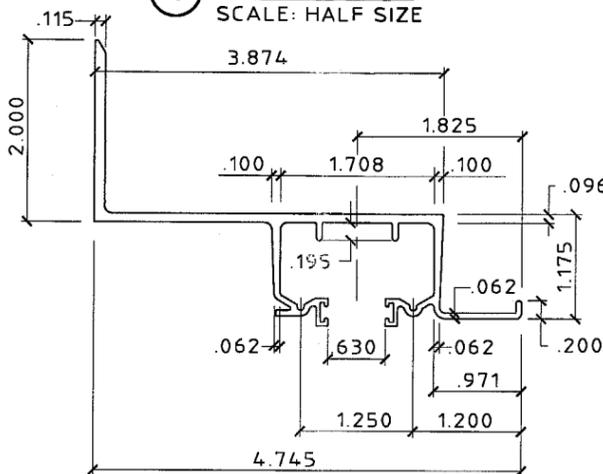
1 WALL HEADER
SCALE: HALF SIZE



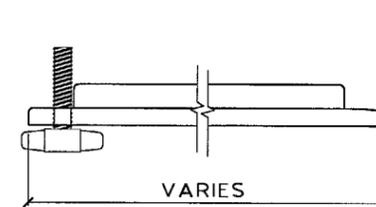
2 WALL HEADER
SCALE: HALF SIZE



3 HEADER
SCALE: HALF SIZE

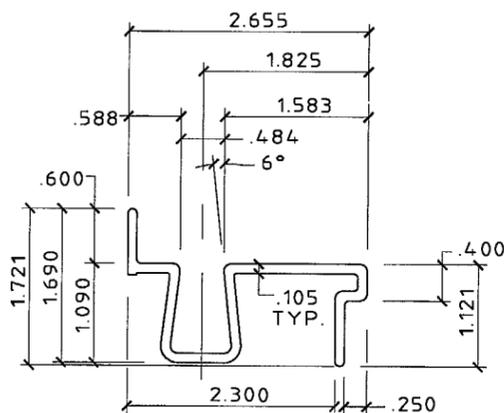


4 BUILD OUT WALL HEADER
SCALE: HALF SIZE

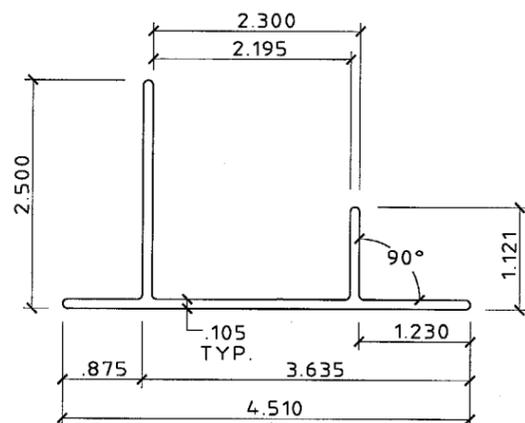


15 ALUMINUM OR PVC LOCK PIN (NOT REQUIRED)
SCALE: HALF SIZE

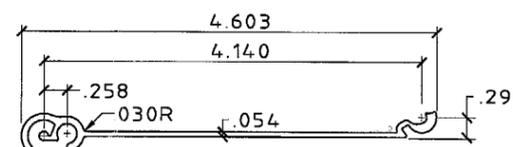
WHERE LOCK PINS ARE USED, THEY ARE ENGAGED IN THE STACKED POSITION AND ARE NOT REQ'D IN THE CLOSED POSITION.



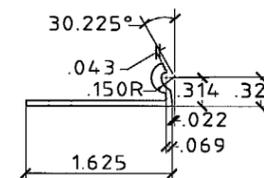
5 BASE SILL
SCALE: HALF SIZE



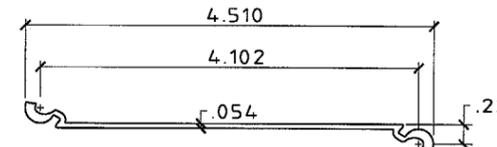
6 BASE TRACK
SCALE: HALF SIZE



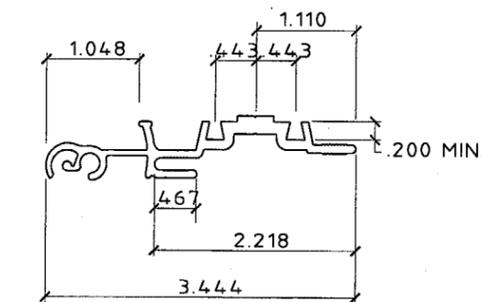
7 TYP. SLAT
SCALE: HALF SIZE



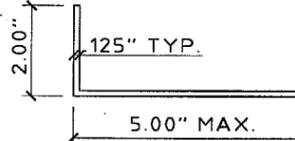
8 STARTER
SCALE: HALF SIZE



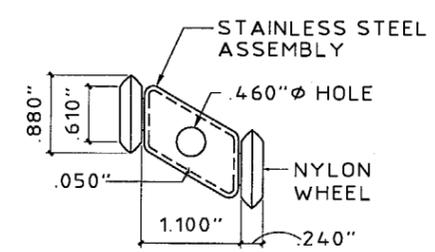
9 ALT. SLAT
SCALE: HALF SIZE



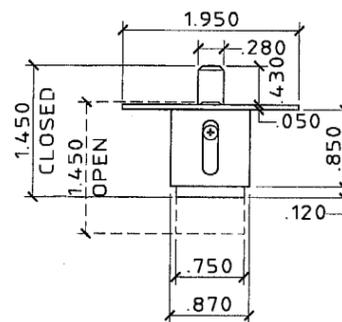
10 MALE/FEMALE LOCK
SCALE: HALF SIZE



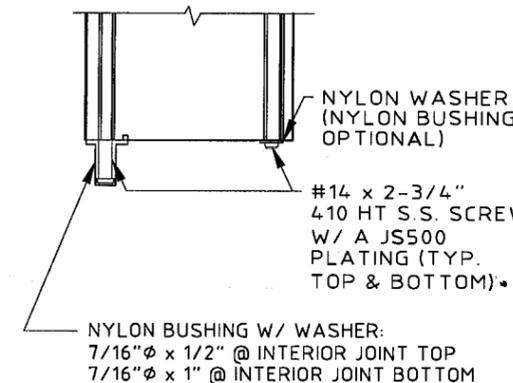
11 ANGLE
SCALE: 3" = 1' - 0"



12 ROLLER ASSEMBLY
SCALE: HALF SIZE



13 BRASS PUSH LOCK
SCALE: HALF SIZE



14 BUSHING ASSEMBLY DETAIL
SCALE: HALF SIZE



KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
TEL: (954) 382-2800 • FAX: (954) 382-2889 • FLORIDA COA #3205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KAG@KNEZEVICH.COM
COPYRIGHT © 2000 KNEZEVICH & ASSOCIATES, INC.
6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

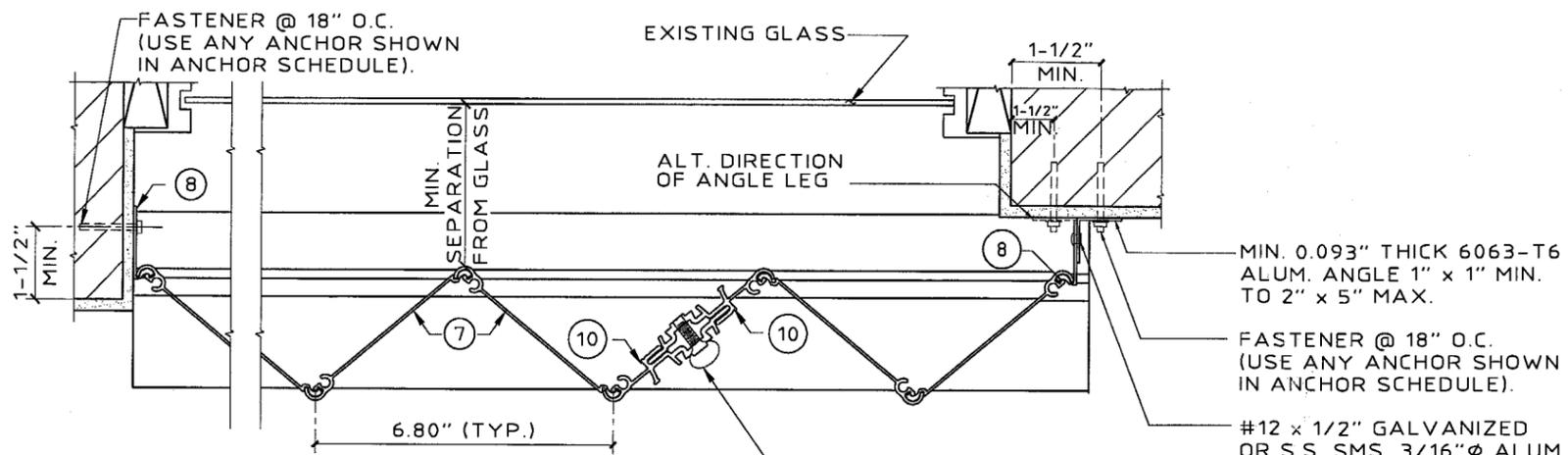
6.8" ACCORDION SHUTTER
SUNSHINE ALUMINUM SPECIALTIES, INC.
5420 MAULE WAY
MANGONIA PK., FL 33407
TEL: (561) 842-3643 FAX: (561) 881-8004
SUNSHINE ALUMINUM

no.	date	by	description
1	03/19/99	VJK	COUNTY COMMENTS
2	04/13/00	VJK	GENERAL REVISIONS

SSA I.D.# 06050098254D

V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No: PE 0070983
APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE July 27, 2000
BY Helmut A. Mark
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0609.02
JUN 05 2000
date 12/08/98
scale AS NOTED
drawn by MC
design by VJK
checked by VJK
drawing no. 00-918
sheet 1 of 6

00-0609.02



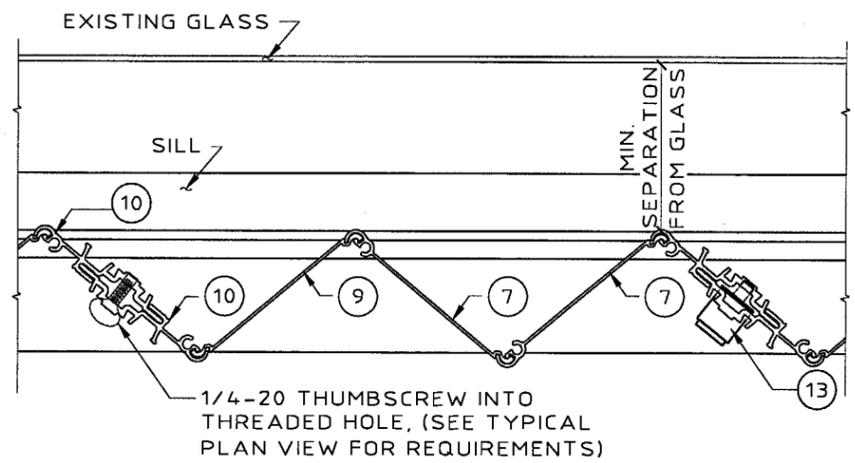
TYPICAL PLAN VIEW
SCALE: 3" = 1'-0"

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
DATE: July 27, 2000
BY: Helmut A. M...
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0609-02

1/4-20 THUMBSCREW INTO THREADED HOLE. LOCATED AT 1/3 TO 1/2 DISTANCE FROM BOTTOM OF SHUTTER FOR BLADES ≤ 8'-3". USE TWO THUMBSCREWS ON BLADES > 8'-3", ONE AT 1/3 AND ONE AT 2/3 FROM BOTTOM OF BLADE, TYPICAL. FOR LOCKING SHUTTERS, A BRASS PUSH LOCK MAY BE SUBSTITUTED

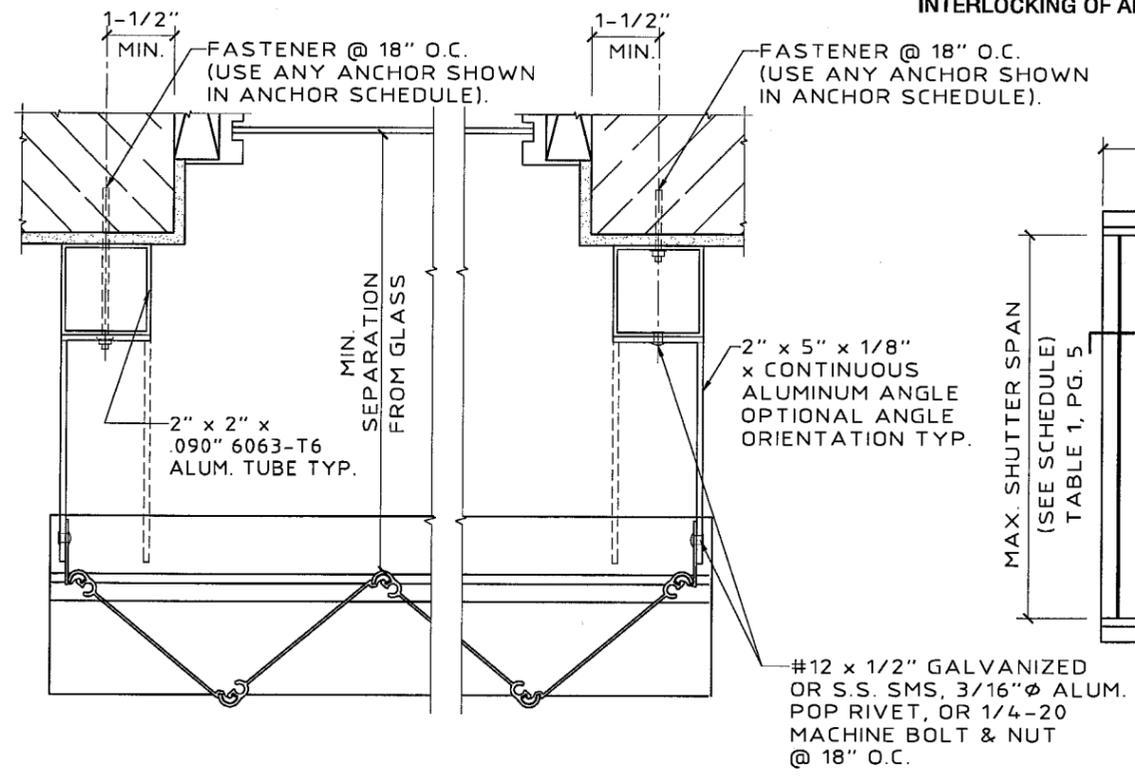
MIN. 0.093" THICK 6063-T6 ALUM. ANGLE 1" x 1" MIN. TO 2" x 5" MAX.
FASTENER @ 18" O.C. (USE ANY ANCHOR SHOWN IN ANCHOR SCHEDULE).
#12 x 1/2" GALVANIZED OR S.S. SMS, 3/16" Ø ALUM. POP RIVET, OR 1/4-20 MACHINE BOLT & NUT @ 18" O.C.

NOTE:
STARTERS (8) MUST BE LOCATED TO INSURE FULL DEPLOYMENT OF SHUTTER AND COMPLETE INTERLOCKING OF ADJACENT BLADES.

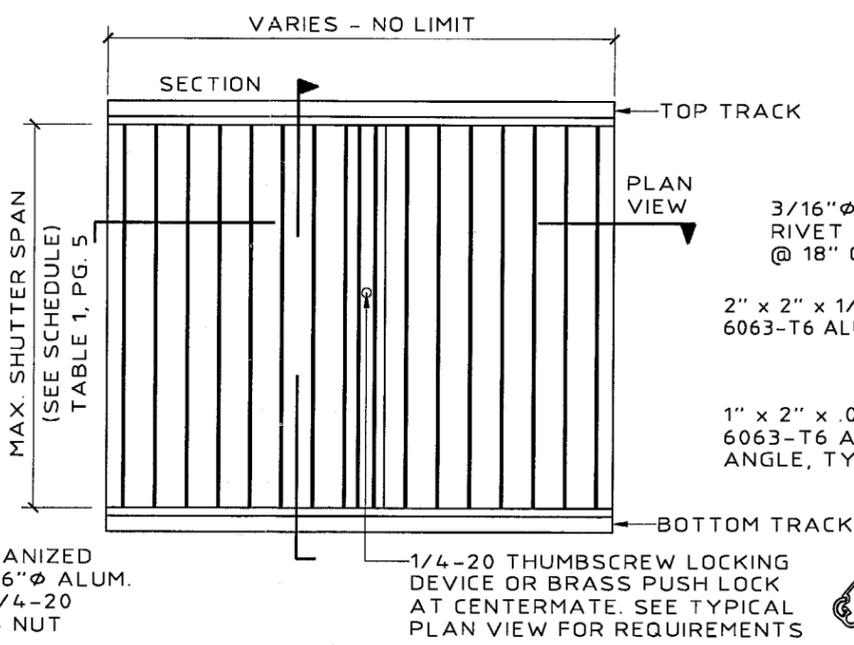


MULTIPLE SHUTTER ASSEMBLY
SCALE: 3" = 1'-0"

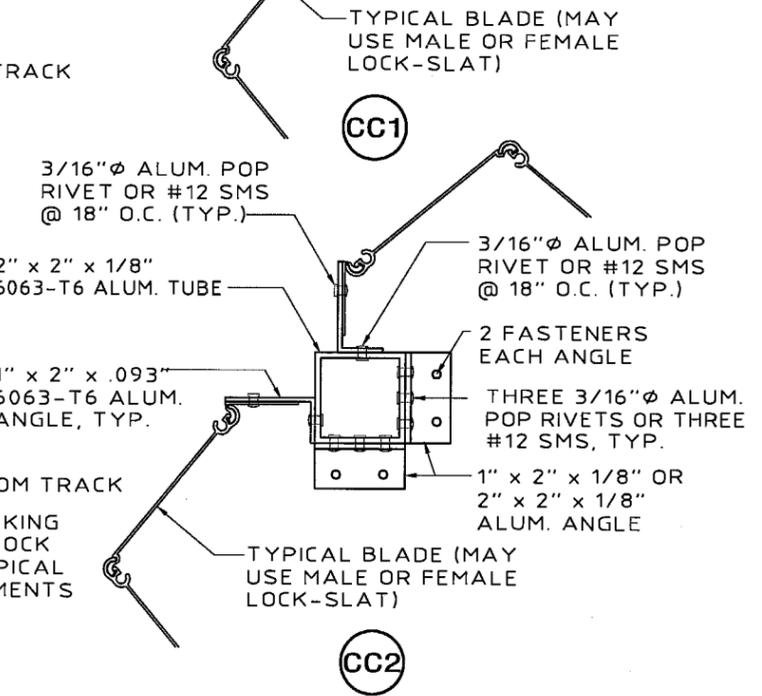
2 FASTENERS EACH ANGLE
2" x 2" x 1/8" ALUM. TUBE 6063-T6 ALLOY
1" x 2" x 1/8" OR 2" x 2" x 1/8" ALUM. ANGLE
3/16" Ø ALUM. POP RIVET OR #12 SMS
3/16" Ø ALUM. POP RIVET OR #12 SMS @ 18" O.C. (TYP.)



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



TYPICAL ELEVATION
N.T.S.



TYPICAL CORNER CLOSURE DETAILS
SCALE: 3" = 1'-0"

KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33302
TEL: (954) 382-2900 • FAX: (954) 382-2989 • FLORIDA COA #3205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
COPYRIGHT © 2000 KNEZEVICH & ASSOCIATES, INC.
6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

6.8" ACCORDION SHUTTER
SUNSHINE ALUMINUM SPECIALTIES, INC.
5420 MAULE WAY
MANGONIA PK., FL 33407
TEL: (561) 842-3643 FAX: (561) 881-8004
SUNSHINE ALUMINUM

no	date	by	description
1	03/19/99	VJK	COUNTY COMMENTS
2	04/13/00	VJK	GENERAL REVISIONS

SSA I.D.# 06050098254D

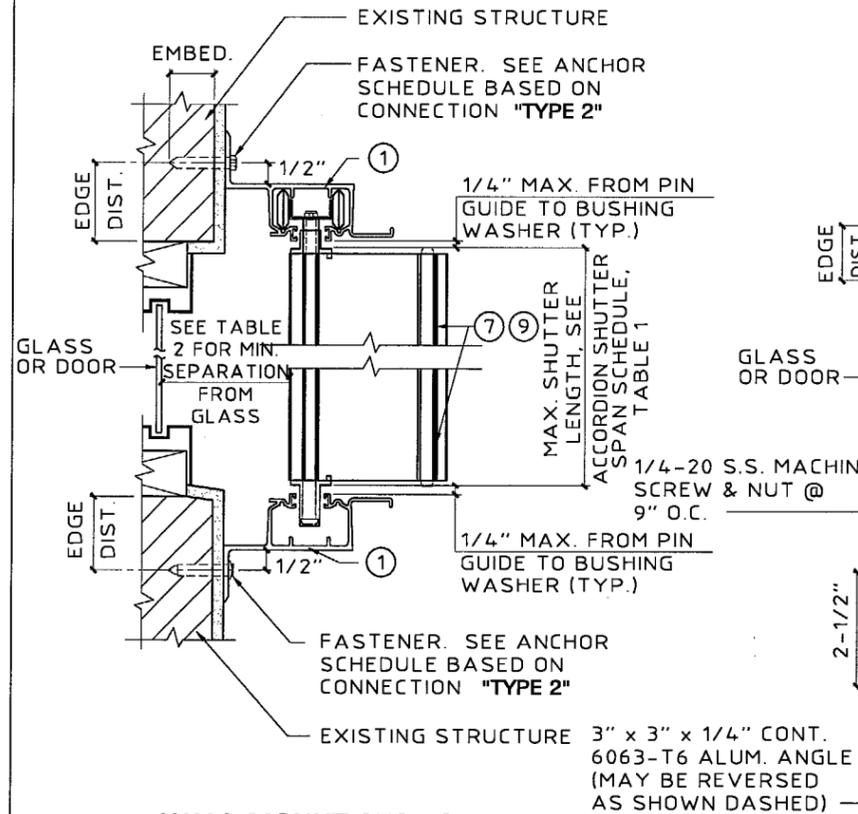
V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No: PE 0010983

JUN 05 2000
date 12/08/98

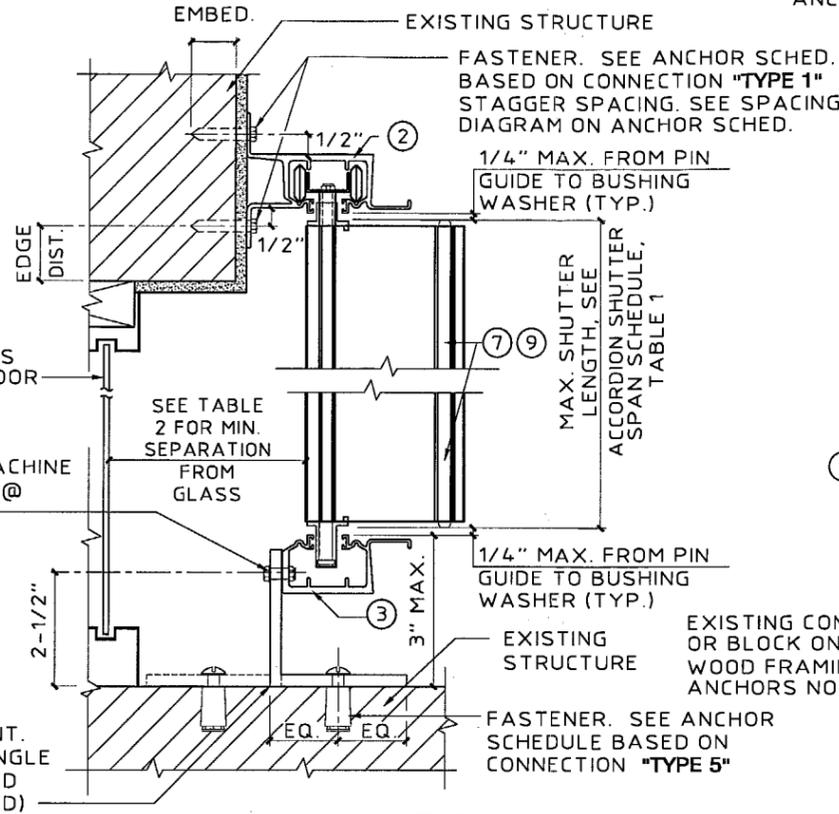
AS NOTED drawn by MC
design by VJK checked by VJK

drawing no. **00-918**

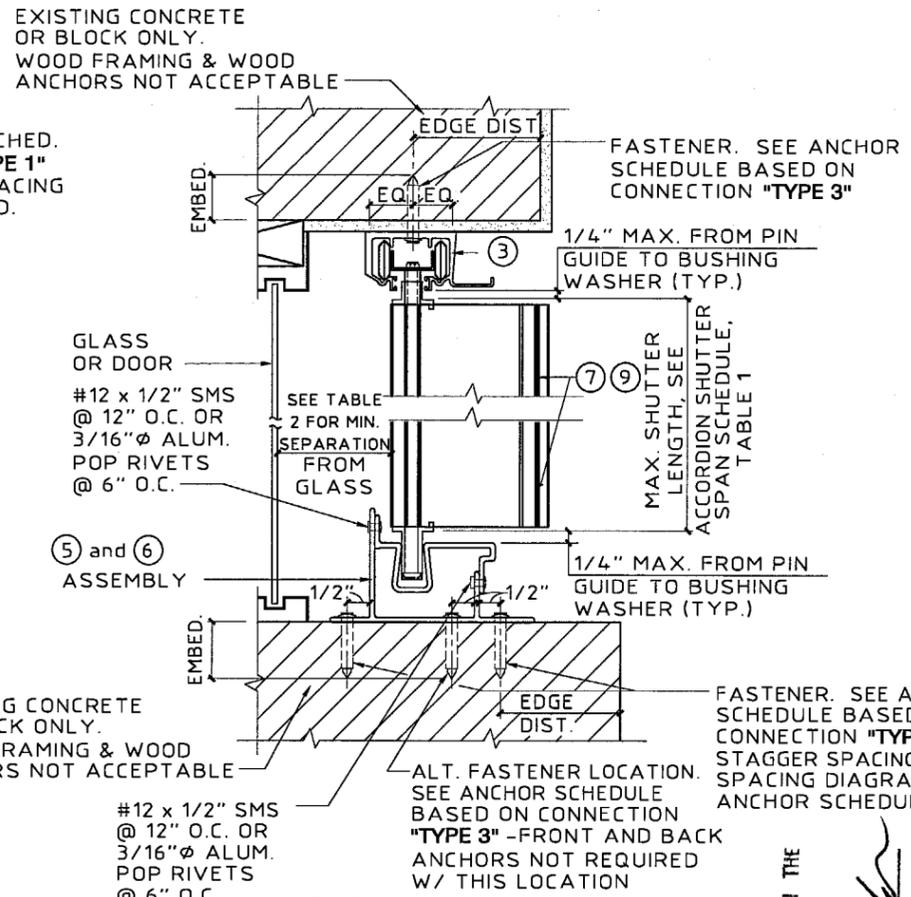
sheet 2 of 6



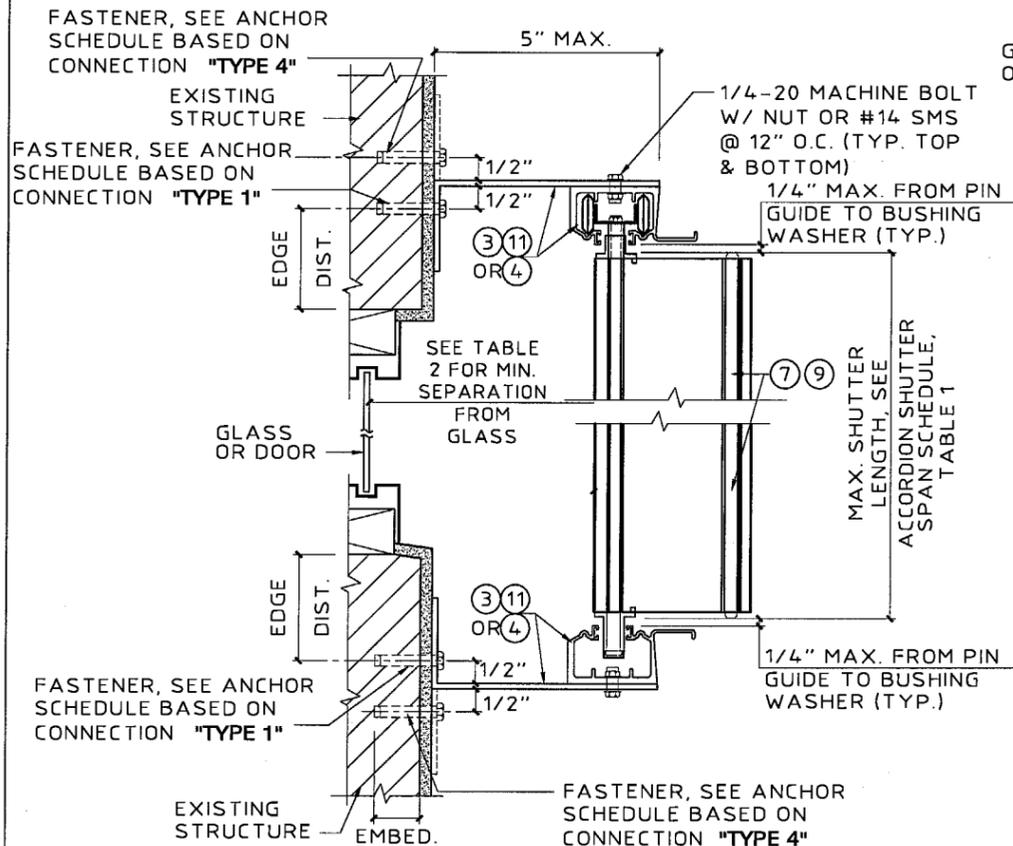
A WALL MOUNT SECTION
SCALE: 3" = 1'-0"



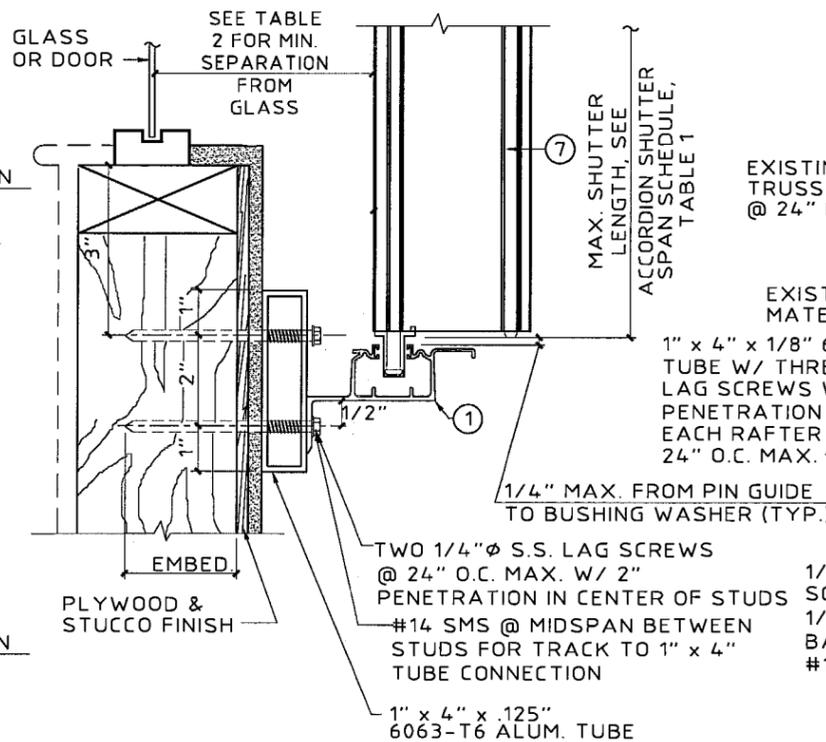
B WALL MOUNT SECTION
SCALE: 3" = 1'-0"



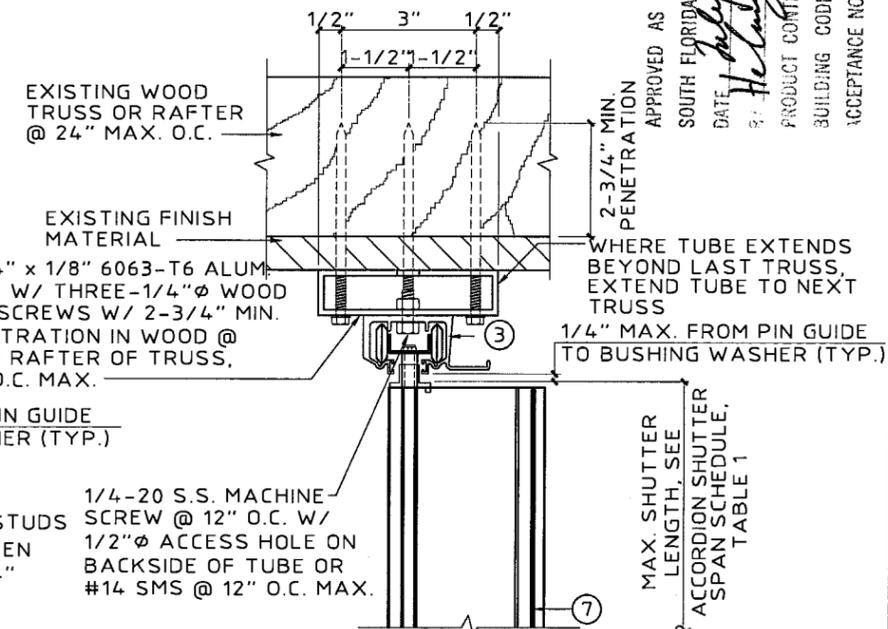
C CEILING/INSIDE MOUNT SECTION
SCALE: 3" = 1'-0"



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



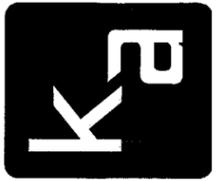
E WALL MOUNT SECTION
SCALE: 3" = 1'-0"



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

NOTE: THIS DETAIL MAY BE USED AT TOP
MAX. DESIGN LOAD = 72 P.S.F.

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE: July 27, 2000
BY: *[Signature]*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 00-0609.02



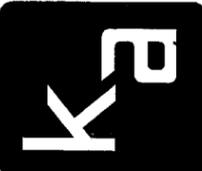
KNEZEVICH & ASSOCIATES, INC.
CONSULTING ENGINEERS • PRODUCT TESTING
1280 N. UNIVERSITY DRIVE, SUITE 100 • FORT LAUDERDALE, FL 33322
TEL: (954) 382-2800 • FAX: (954) 382-2889 • FLORIDA COA #3205
WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
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6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

6.8" ACCORDION SHUTTER
SUNSHINE ALUMINUM SPECIALTIES, INC.
MANGONIA PK., FL 33407
5420 MAULE WAY
TEL: (861) 842-9643 FAX: (861) 881-8004
SUNSHINE ALUMINUM

revisions	
no.	description
1	03/19/99/VJK COUNTY COMMENTS
2	04/13/00/VJK GENERAL REVISIONS

SSA I.D.# 06050098254D

V.J. KNEZEVICH
PROFESSIONAL ENGINEER
FL License No: PE 0010983
JUN 05 2000
date 12/08/98
scale AS NOTED drawn by MC
design by VJK checked by VJK
drawing no. 00-918
sheet 3 of 6



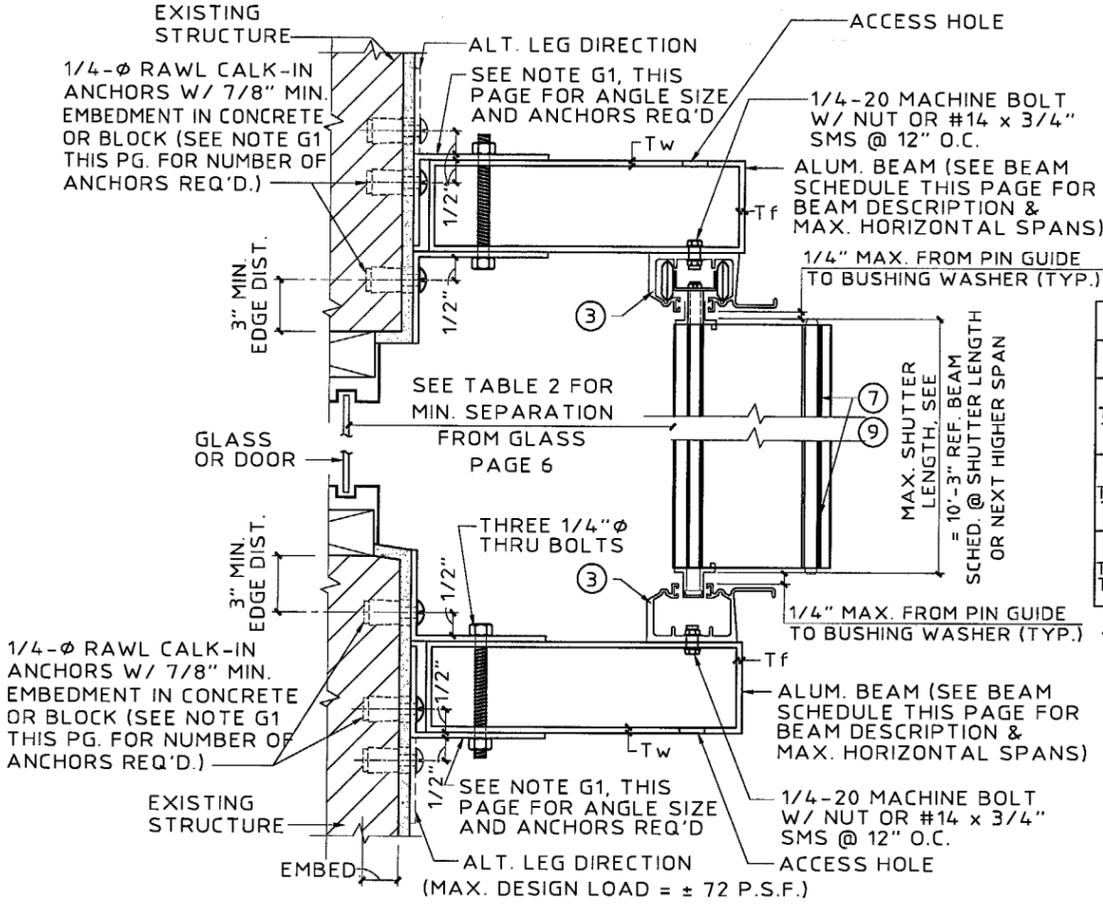
KNEZEVICH & ASSOCIATES, INC.
 CONSULTING ENGINEERS • PRODUCT TESTING
 1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
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 WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
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 6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

6.8" ACCORDION SHUTTER
 SUNSHINE ALUMINUM SPECIALTIES, INC.
 5420 MAULE WAY
 MARGONIA PK., FL 33407
 TEL: (813) 842-3643
 FAX: (813) 881-8004
 SUNSHINE ALUMINUM

REVISIONS	
NO.	DESCRIPTION
1	03/19/99 VJK COUNTY COMMENTS
2	04/13/00 VJK GENERAL REVISIONS

SSA I.D.# 06050098254D

V.J. KNEZEVICH
 PROFESSIONAL ENGINEER
 FL License No: PE 0010983
 DATE: July 27, 2000
 BY: *Helmut A. Mader*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 00-0609.02
 date 12/08/98
 Scale AS NOTED drawn by MC
 design by VJK checked by VJK
 drawing no. 00-918
 sheet 4 of 6

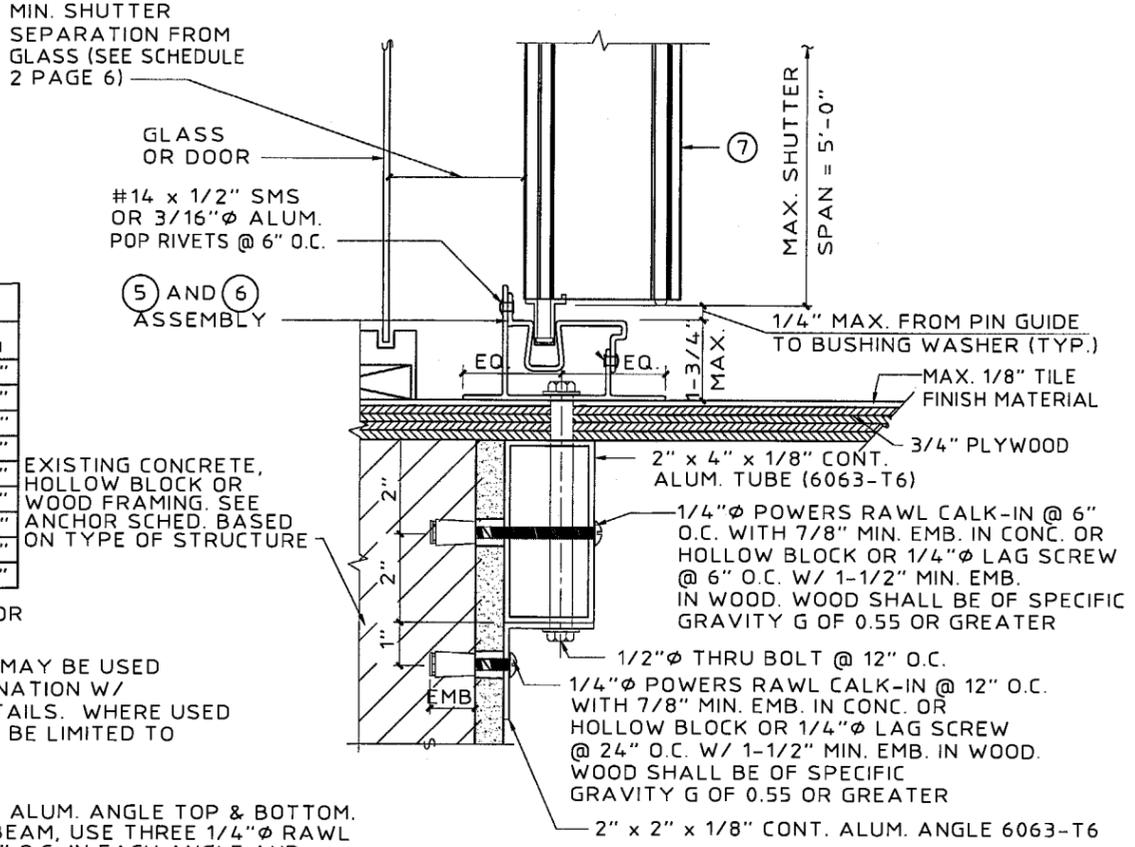


G BUILD-OUT MOUNT SECTION
 SCALE: 3" = 1'-0"

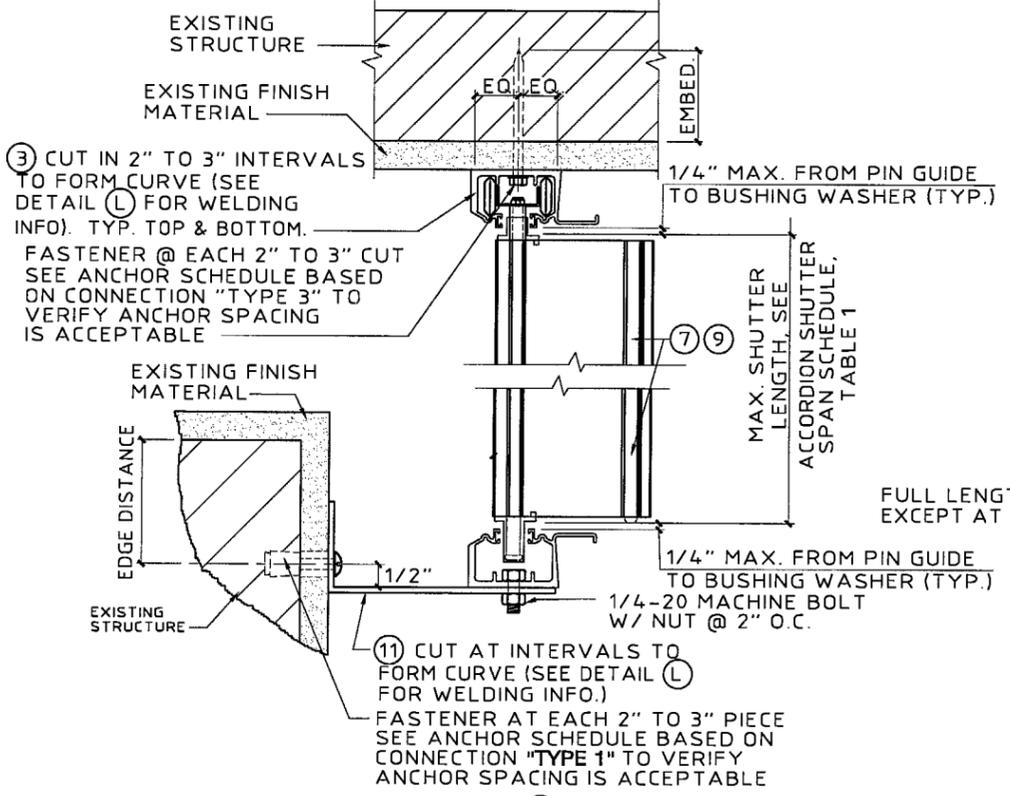
*** BEAM SCHEDULE**

DESCRIPTION	SHUTTER SPAN	BOTTOM BEAM	TOP BEAM
2" x 5"	5'-0"	9'-5"	9'-0"
T _w = .125"	8'-0"	8'-1"	8'-0"
T _f = .125"	10'-3"	7'-4"	7'-4"
2" x 7"	5'-0"	11'-4"	8'-5"
T _w = .072"	8'-0"	9'-8"	7'-6"
T _f = .130"	10'-3"	8'-9"	7'-0"
2" x 9"	5'-0"	15'-5"	9'-4"
T _w = .072"	8'-0"	13'-2"	8'-4"
T _f = .224"	10'-3"	11'-11"	7'-9"

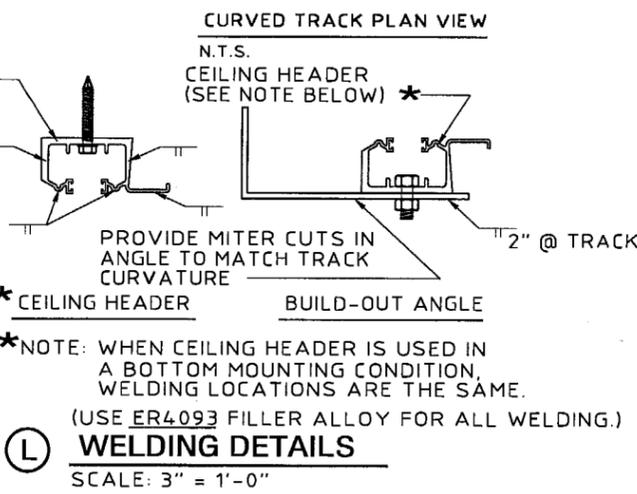
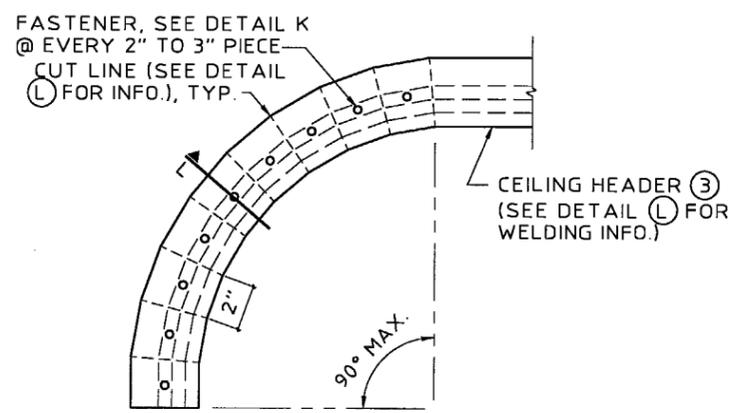
***USE BEAM SCHEDULE FOR DETAIL G.**
 TOP & BOTTOM BEAMS MAY BE USED TOGETHER OR IN COMBINATION W/ OTHER CONNECTION DETAILS. WHERE USED TOGETHER, BEAM MUST BE LIMITED TO TOP BEAM SPANS.
NOTE G1:
 2" x 3" x 1/4" 6063-T6 ALUM. ANGLE TOP & BOTTOM. FOR 2" x 5" & 2" x 7" BEAM, USE THREE 1/4" Ø RAWL CALK-IN ANCHORS @ 3" O.C. IN EACH ANGLE AND USE 8" LONG ANGLES. FOR 2" x 9" BEAM, USE FOUR 1/4" Ø CALK-IN ANCHORS @ 3" O.C. IN EACH ANGLE AND USE 11" LONG ANGLES



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



K CURVED TRACK DETAIL
 SCALE: 3" = 1'-0"



L WELDING DETAILS
 SCALE: 3" = 1'-0"

ANCHOR SCHEDULE

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

EXISTING STRUCTURE	ANCHOR TYPE	LOAD (W) P.S.F. MAX. (SEE NOTE 1)	MIN. 2" EDGE DISTANCE															MIN. 3" EDGE DISTANCE																			
			SPANS UP TO 6' - 0" (SEE NOTE 1)					SPANS UP TO 8' - 8" (SEE NOTE 1)					SPANS UP TO 12' - 10" (SEE NOTE 1)					SPANS UP TO 6' - 0" (SEE NOTE 1)					SPANS UP TO 8' - 8" (SEE NOTE 1)					SPANS UP TO 12' - 10" (SEE NOTE 1)									
			CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE									
			1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
CONCRETE	1/4" Ø ITW OR ELCO TAPCON W/ 1-3/4" MIN. EMBEDMENT (MIN. 3,000 P.S.I. CONCRETE)	48.0	12	12	12	12	11	12	12	10	12	7	12	12	6	12	5	12	12	12	12	12	12	12	12	9	12	12	8	12	6						
		62.0	12	12	11	12	8	12	12	7	12	5	12	8	5	10	4	12	12	12	12	10	12	12	10	12	7	12	9	6	12	4					
		72.0	12	12	9	12	7	12	12	6	12	5	11	5	4	7	3	12	12	12	12	9	12	12	8	12	6	12	6	5	8	4					
		110.0	12	12	6	12	4	10	5	4	7	3	9	3	3	5	12	12	8	12	5	12	5	5	8	4	10	4	4	6	3						
	200.0	9	3	3	5	9	3	3	5	9	3	3	5	10	4	4	6	3	10	4	4	6	3	10	4	4	6	3	10	4	6	3					
	3/8" Ø POWERS RAWL DROP-IN & 3/8" Ø STAINLESS STEEL BOLT WITH 1-9/16" MIN. EMBEDMENT (MIN. 3,000 P.S.I. CONCRETE)	48.0	12	12	12	12	16	12	12	12	12	16	12	12	12	12	12	12	12	12	12	16	12	12	12	12	16	12	12	12	12	16					
		62.0	12	12	12	12	16	12	12	12	12	14	12	12	12	12	9	12	12	12	12	16	12	12	12	12	16	12	12	12	12	14					
		72.0	12	12	12	12	16	12	12	12	12	12	12	12	10	12	8	12	12	12	12	16	12	12	12	12	16	12	12	12	12	12					
		110.0	12	12	12	12	11	12	12	10	12	7	12	9	8	12	6	12	12	12	12	16	12	12	12	12	12	12	12	12	12	10					
	200.0	12	9	8	12	6	12	9	8	12	6	12	9	8	12	6	12	12	12	12	10	12	12	12	12	10	12	12	12	12	10						
	* 1/4" Ø POWERS FASTENING CALK-IN W/ 7/8" EMBED. & 1/4"-20 STAINLESS STEEL MACHINE SCREW (MIN. 3,000 P.S.I. CONCRETE)	48.0	12	12	12	12	12	12	10	12	8	12	12	7	12	5	12	12	12	12	12	12	12	12	12	12	12	12	11	12	8						
		62.0	12	12	11	12	9	12	12	8	12	6	12	10	5	12	4	12	12	12	12	12	12	12	12	12	12	12	9	12	8						
72.0		12	12	10	12	8	12	12	7	12	5	12	7	4	10	3	12	12	12	12	12	12	12	12	12	12	12	11	12	8							
110.0		12	12	6	12	5	12	6	4	9	3	12	4	3	7	3	12	12	10	12	8	12	8	7	11	5	12	5	6	8	4						
200.0	12	4	3	7	3	12	4	3	7	3	12	4	3	7	3	12	5	6	8	4	12	5	6	8	4	12	5	6	8	4							
1/4" Ø ELCO CRETE FLEX W/ 1-3/4" MIN. EMBEDMENT (MIN. 3,000 P.S.I. CONCRETE)	48.0	12	12	12	12	12	12	12	12	12	12	12	11	12	8	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11							
	62.0	12	12	12	12	12	12	12	12	9	12	12	9	12	6	12	12	12	12	12	12	12	12	12	12	12	12	12	11	12	8						
	72.0	12	12	12	12	12	12	12	11	12	8	12	8	7	12	5	12	12	12	12	12	12	12	12	12	12	12	12	10	12	7						
	110.0	12	12	11	12	8	12	8	7	11	5	12	5	6	8	4	12	12	12	12	10	12	9	10	12	7	12	7	8	10	6						
200.0	12	5	6	8	4	12	5	6	8	4	12	5	6	8	4	12	7	8	10	6	12	7	8	10	6	12	7	8	10	6							
HOLLOW CONCRETE BLOCK	1/4" Ø ITW OR ELCO TAPCON W/ 1-1/4" MIN. EMBEDMENT	48.0	12	12	8	12	5	10	10	5	10	3	7	7	3	7	12	12	9	12	6	11	11	6	11	4	7	7	4	7	3						
		62.0	11	11	6	11	4	8	8	4	8	3	5	3	4	12	12	7	12	5	9	9	5	9	3	6	3	3	5	12							
		72.0	10	10	5	10	3	7	7	3	7	4	4	3	3	11	11	6	11	4	7	7	4	7	3	5	3	3	12	12							
		110.0	6	6	3	6	4	4	3	3	3	3	7	7	4	7	5	3	3	4	4	4	4	4	4	4	4	4	4	4	4						
	200.0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3						
	* 1/4" Ø POWERS FASTENING CALK-IN W/ 7/8" EMBED. & 1/4"-20 STAINLESS STEEL MACHINE SCREW	48.0	12	12	8	12	6	12	12	6	12	4	9	9	4	9	3	12	12	12	12	9	12	12	9	12	6	11	11	6	11	4					
		62.0	12	12	6	12	5	10	10	4	10	3	7	4	3	5	12	12	10	12	7	12	12	7	12	5	8	5	4	7	3						
		72.0	12	12	5	12	4	9	9	4	9	6	6	4	4	4	12	12	9	12	6	11	11	6	11	4	7	3	4	5	12						
		110.0	8	8	3	8	5	5	5	3	5	5	5	5	5	5	10	10	5	10	4	7	3	4	4	6	3	3	3	3	3						
	200.0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5						
	1/4" Ø ELCO CRETE FLEX W/ 1-1/4" MIN. EMBEDMENT	48.0	12	12	12	12	11	12	12	11	12	7	12	12	7	12	5	12	12	12	12	11	12	12	11	12	8	12	12	7	12	5					
		62.0	12	12	12	12	8	12	12	8	12	6	11	7	5	9	4	12	12	12	12	9	12	12	8	12	6	12	7	5	10	4					
72.0		12	12	10	12	7	12	12	7	12	5	9	4	4	6	3	12	12	10	12	7	12	12	7	12	5	10	5	5	7	3						
110.0		12	12	6	12	4	9	4	4	6	3	8	3	4	4	12	12	7	12	5	10	4	4	6	3	8	3	4	5	3							
200.0	8	3	4	4	8	3	4	4	8	3	4	4	8	3	4	4	8	3	4	5	3	8	3	4	5	3	8	3	4	5	3						

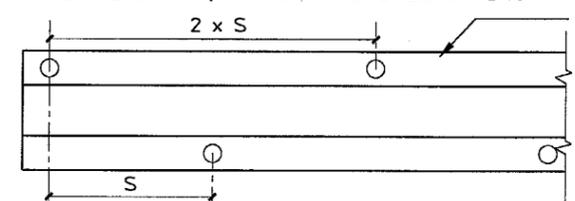
ANCHOR SCHEDULE

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

EXISTING STRUCTURE	ANCHOR TYPE	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 12' - 10" (SEE NOTE 1)																		
			CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE																		
			1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5									
WOOD	1/4" Ø WOOD LAG W/ 1-3/4" MIN. THREAD EMBED. SHEAR PARALLEL OR PERPENDICULAR TO WOOD GRAIN	48.0	12	12	10	12	8	12	12	7	12	6	12	12	4	12	4	12	6	3	9	11	4	7	7	7	7	7	7	7	
		62.0	12	12	8	12	6	12	12	5	12	4	12	10	3	12	6	3	9	11	4	7	7	7	7	7	7	7	7	7	7
		72.0	12	12	7	12	5	12	12	4	12	4	12	6	3	9	11	4	7	7	7	7	7	7	7	7	7	7	7	7	7
		110.0	12	12	4	12	3	12	6	3	9	11	4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	200.0	11	4	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	
	* 7/16" Ø WOOD BUSHING W/ 7/8" MIN. EMBEDMENT STAINLESS STEEL MACHINE SCREW	48.0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		62.0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
		72.0	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
110.0		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
200.0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	

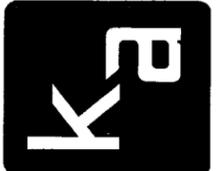
ANCHOR NOTES:

- SPANS & LOADS SHOWN HERE ARE FOR DETERMINING ANCHOR SPACING ONLY. ALLOWABLE SHUTTER SPANS FOR SPECIFIC LOADS MUST BE LIMITED TO THOSE SHOWN IN TABLE 1.
- ENTER TABLE 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.
- EXISTING STRUCTURE MAY BE CONCRETE, HOLLOW 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.
- ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES WALL FINISH OR STUCCO.
- 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"x4" (MIN.) WOOD STUD. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR WOOD FRAMING. WOOD STUD SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY. 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 ANCHOR CONDITIONS WHICH ARE REMOVABLE BY REMOVING MACHINE SCREW, NUT OR WASHERED WINGNUT.



NOTE: "S" INDICATES ANCHOR SCHEDULE SPACING.
SPACING DIAGRAM FOR CONNECTION TYPE 1 W/ PIECE (2) AND TYPE 3 W/ OUTSIDE ANCHORS ON PIECE (6)
 SCALE: 3" = 1'-0"

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE: July 27, 2000
 BY: [Signature]
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 00-0609.02



KNEZEVICH & ASSOCIATES, INC.
 CONSULTING ENGINEERS • PRODUCT TESTING
 1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
 TEL: (954) 382-2800 • FAX: (954) 382-2889 • FLORIDA COA #3205
 WEBSITE: WWW.KNEZEVICH.COM • E-MAIL: KA@KNEZEVICH.COM
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 6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

6.8" ACCORDION SHUTTER



TABLE 2	MINIMUM SEPARATION FROM GLASS		
	POSITIVE DESIGN LOAD (W) (P.S.F.)	ACTUAL SHUTTER SPAN (L) (FT. - IN)	MIN. SEPARATION FROM GLASS FOR INSTALLATIONS LESS THAN OR EQUAL TO 30' ABOVE GRADE (IN.)
40.0	8'-3"	3-1/8	1-5/8
	10'-0"	3-3/4	2-1/8
	11'-11"	3-3/4	3
50.0	8'-3"	3-1/8	1-3/4
	10'-0"	3-3/4	2-3/8
	11'-4"	3-3/4	3
60.0	5'-0"	3-1/8	1-1/4
	8'-3"	3-1/8	1-7/8
	10'-9"	3-3/4	3
70.0	5'-0"	3-1/8	1-1/8
	8'-3"	3-1/8	1-7/8
	10'-5"	3-3/4	3
80.0	6'-0"	3-1/8	1-3/8
	8'-3"	3-1/8	2-1/8
	9'-4"	3-3/4	2-5/8
90.0	5'-0"	3-1/8	1-3/8
	7'-0"	3-1/8	1-5/8
	8'-3"	3-1/8	2-1/8
100.0	5'-0"	3-1/8	1-3/8
	7'-0"	3-1/8	1-3/4
	8'-3"	3-1/8	2-1/4
110.0	5'-0"	3-1/8	1-3/8
	7'-0"	3-1/8	1-7/8
	8'-3"	3-1/8	2-3/8
120.0	5'-0"	3-1/8	1-3/8
	7'-0"	3-1/8	1-7/8
	8'-3"	3-1/8	2-1/4
130.0	5'-0"	3-1/8	1-3/8
	7'-0"	3-1/8	1-7/8
	8'-3"	3-1/8	2-1/2

TABLE 1 NOTES:

1. ENTER TABLE 1 WITH NEGATIVE DESIGN LOAD TO DETERMINE MAXIMUM SHUTTER SPAN. POSITIVE LOADS LESS THAN OR EQUAL TO THE NEGATIVE LOAD ARE ACCEPTABLE.
2. FOR DESIGN LOADS BETWEEN TABULATED VALUES, USE NEXT HIGHER LOAD OR LINEAR INTERPOLATION MAY BE USED TO DETERMINE ALLOWABLE SPANS.

TABLE 1	ACCORDION SHUTTER SPAN SCHEDULE	
	NEGATIVE DESIGN LOAD W (P.S.F.)	FOR ALL MOUNTING CONDITIONS L max. (FT-IN)
30.0	12-10	
35.0	12-4	
40.0	11-11	
45.0	11-7	
50.0	11-3	
55.0	11-0	
60.0	10-9	
65.0	10-6	
70.0	10-4	
72.0	10-3	
75.0	10-2	
80.0	9-11	
90.0	9-7	
100.0	9-3	
110.0	9-0	
120.0	8-8	
130.0	8-4	
133.0	8-3	
140.0	7-11	
150.0	7-5	
160.0	6-11	
170.0	6-6	
180.0	6-2	
190.0	5-10	
200.0	5-6	

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
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 BUILDING CODE COMPLIANCE OFFICE
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 1260 N. UNIVERSITY DRIVE, SUITE 180 • FORT LAUDERDALE, FL 33322
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 6.8 SYSTEM LICENSED BY SOUTHERN SHUTTER ASSOCIATION

6.8" ACCORDION SHUTTER
 SUNSHINE ALUMINUM SPECIALTIES, INC.
 5420 MAULE WAY
 MANGONIA PK., FL 33407
 TEL: (861) 842-3643 FAX: (861) 881-8004
 SUNSHINE ALUMINUM

no.	date	by	description
1	03/19/99	VJK	COUNTY COMMENTS
2	04/13/00	VJK	GENERAL REVISIONS

SSA I.D.# 06050098254D

V.J. KNEZEVICH
 PROFESSIONAL ENGINEER
 FL License No: PE/0010983

JUN 05 2000
 date 12/08/98
 scale AS NOTED drawn by MC
 design by VJK checked by VJK
 drawing no. 00-918
 sheet 6 of 6