



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

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

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

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

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Folding Shutter Corporation
7089 Hemstreet Place
West Palm Beach ,FL 33413

Your application for Notice of Acceptance (NOA) of:

"Titan II" 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 NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time 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 by 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.: 01-0118.03
EXPIRES: 04/09/2006

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 Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 03/29/2001

Folding Shutter Corporation

ACCEPTANCE No. : 01-0118.03

APPROVED : 03/29/2001

EXPIRES : 04/09/2006

NOTICE OF ACCEPTANCE: SPECIFIC CONDITIONS

1. SCOPE

This renews the Notice of Acceptance No. 96-1112.02, which was issued on April 9, 1998. It approves an aluminum accordion type 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 accordion type shutter and its components shall be constructed in strict compliance with the following documents: Drawing No. 94-63, titled "Titan II Folding Shutter", prepared by Al-Farooq Corporation, dated August 25, 1994, last revision E dated March 19, 1998, sheets 1 through 5 of 5, signed and sealed by Humayoun Farooq, P.E., bearing the Miami-Dade County Product Control Approval and Renewal stamps with the Notice of Acceptance numbers and approval dates 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 accordion type 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".

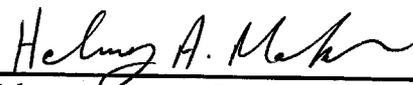
6. BUILDING PERMIT REQUIREMENTS

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

Folding Shutter Corporation

ACCEPTANCE No. : 01-0118.03

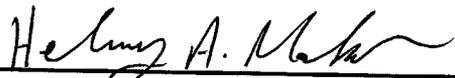
APPROVED : 03/29/2001

EXPIRES : 04/09/2006

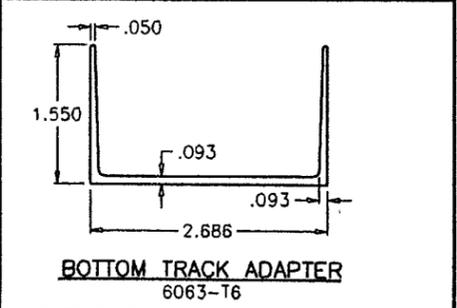
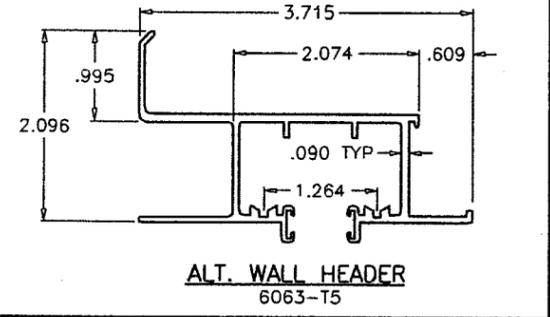
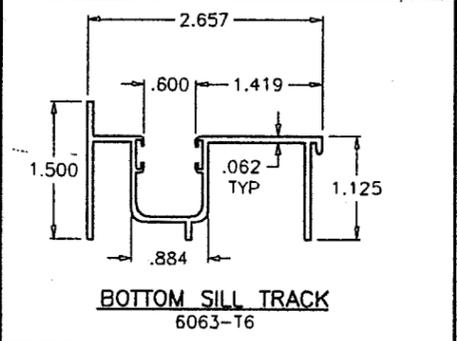
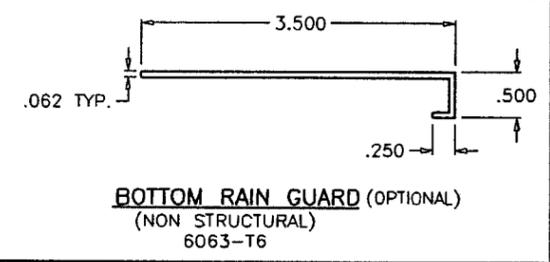
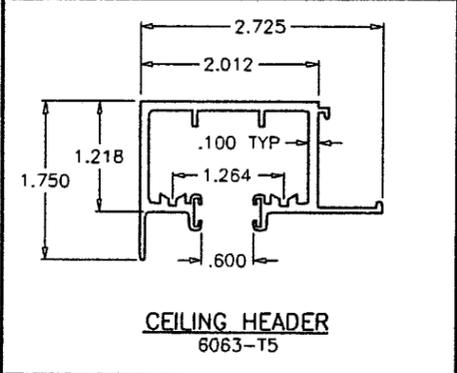
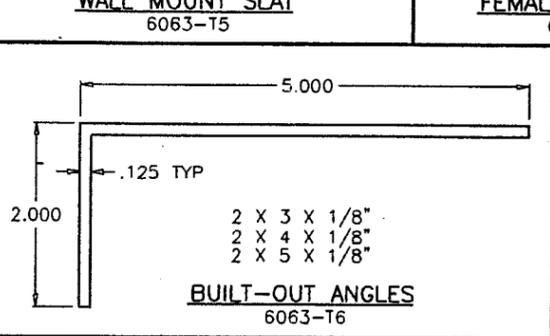
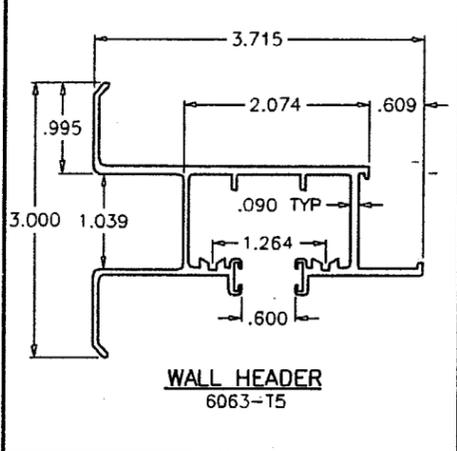
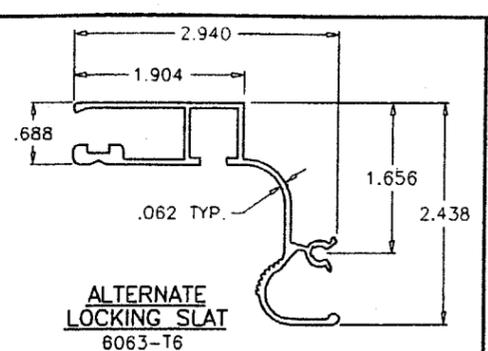
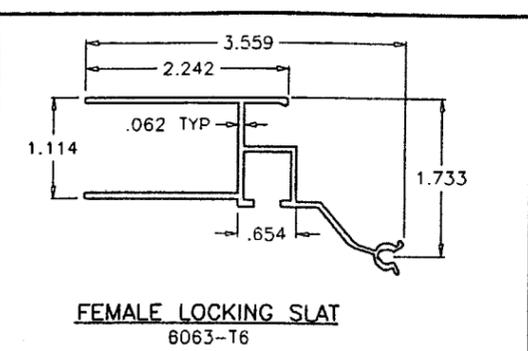
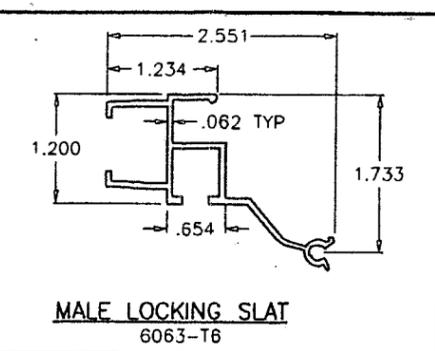
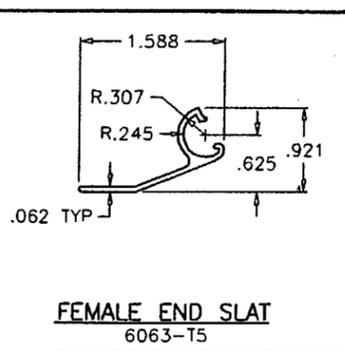
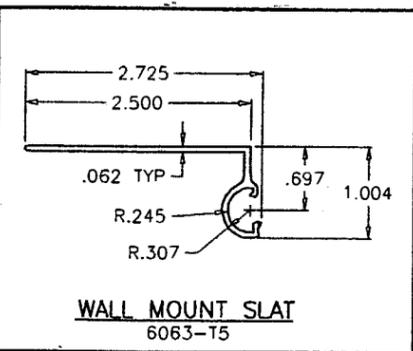
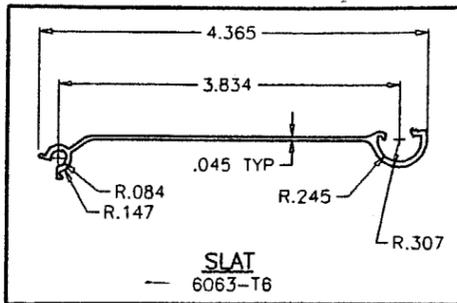
NOTICE OF ACCEPTANCE: STANDARD CONDITIONS

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



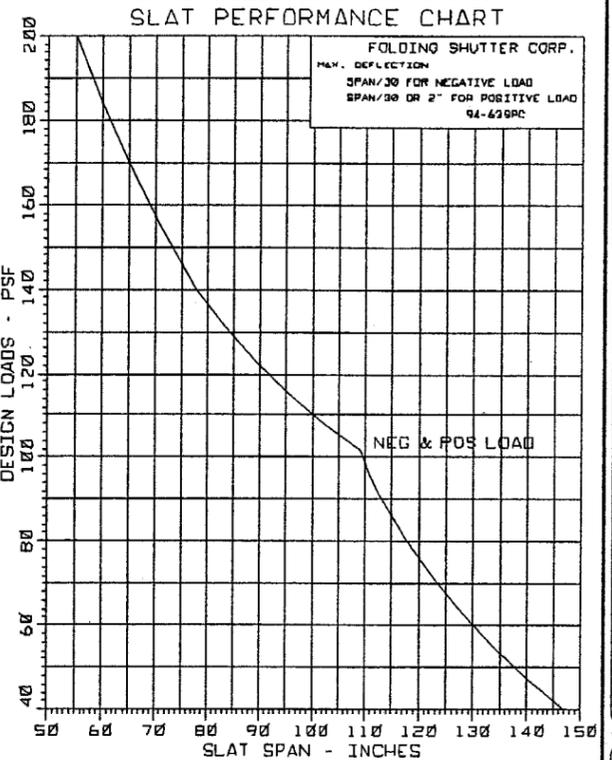
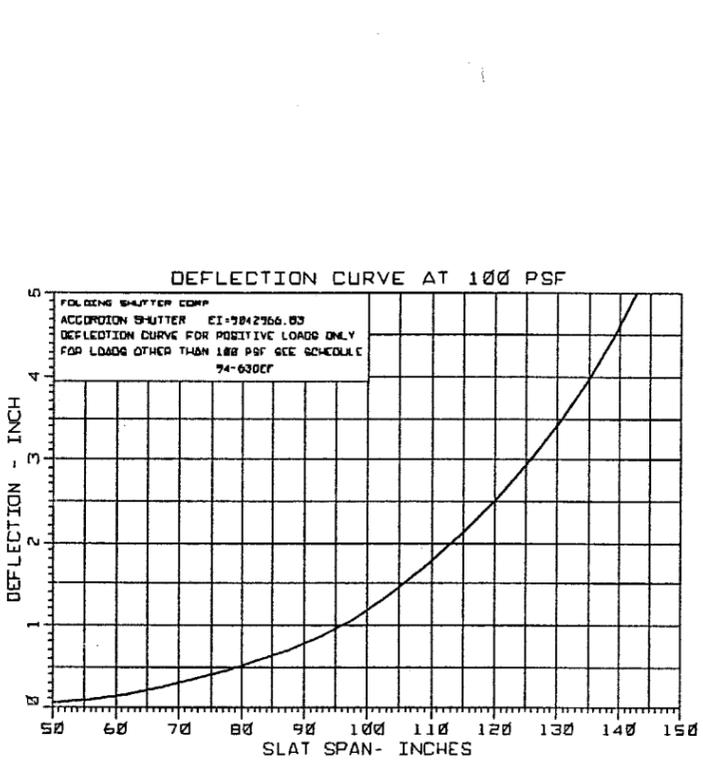
Helmy A. Makar, P.E.- Product Control Examiner
Product Control Division



GENERAL NOTES

- THIS STRUCTURE IS DESIGNED AS PER THE SOUTH FLORIDA BUILDING CODE 1994 EDITION FOR DADE COUNTY. ALSO FOR WIND LOADS AS PER ASCE 7-88 USING CORRESPONDING LOADS.
- DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
- ALL EXTRUSIONS SHALL BE ALLOYS AS SHOWN ON DETAILS.
- STEEL SURFACES TO BE PLACED IN CONTACT WITH ALUMINUM SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPEC. NO. TTP-645, OR BE GALVANIZED.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL OR ALUMINUM ALLOY 2024-T4 OR 7075-T6.
- DESIGN CRITERIA FOR SLATS: MAX DEFLECTION $\leq L/30$ FOR NEGATIVE PRESSURE AND THE LESSER OF $L/30$ OR 2" FOR POSITIVE PRESSURE.
- ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

DESIGN LOADS SHALL BE CALCULATED AS PER REQUIREMENTS OF ASCE 7-88, BASED ON 110 MPH WIND VELOCITY.



USE SLAT PERFORMANCE CHART TO VERIFY SLAT CAPACITY FOR THE REQUIRED DESIGN LOAD FOR THE PARTICULAR LOCATION. USE SPAN DEFLECTION CHART TO CALCULATE SEPARATION FROM GLASS.

PRODUCT RENEWED

ACCEPTANCE No. 01-0118.03
 EXPIRATION DATE 04/09/2006
 By Heung A. Mak
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

MINIMUM SEPARATION FROM GLASS			
SEPARATION REQD. DUE TO WIND LOAD		SEPARATION REQD. DUE TO LARGE MISSILE IMPACT	
SHUTTER SPAN = H =	IN.	SLAT SPAN UPTO	SEPARATION
DESIGN LOAD = Pd =	PSF	96-1/2"	2-1/4"
FACTOR = K = Pd/100 =	IN.		
READING FROM SPAN D. CURVE = D =	IN.	147"	3-1/4"
DEFLECTION AT Pd = K*D =	IN.		
MIN. SEPARATION REQD. = K*D+1" =	IN.		

FOR INSTALLATIONS UPTO 30' OF GRADE USE MAXIMUM OF WIND LOAD OR IMPACT LOAD REQUIREMENTS SHOWN ABOVE
 FOR INSTALLATIONS ABOVE 30' OF GRADE IGNORE LARGE MISSILE IMPACT REQUIREMENT.
 NOTE: NO PART OF SHUTTER SHALL BE UNDER 30' ABOVE GRADE TO WAIVE LARGE MISSILE IMPACT REQUIREMENT.

PRODUCT MARKING

A LABEL SHALL BE AFFIXED ON LOCKING MEMBER OF UNIT ABOVE THE LOCK WITH FOLLOWING STATEMENT
 FOLDING SHUTTER CORP. WEST PALM BEACH, FL
 TITAN II FOLDING SHUTTER
 "DADE COUNTY PRODUCT CONTROL APPROVED"

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557

APPROVED AS COMPLYING WITH THE SOUTH FLORIDA BUILDING CODE
 DATE: APRIL 9 1998
 BY: Heung A. Mak
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 96-1112.02

MAR 21 1998

AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
 1235 SW 87 AVE
 MIAMI, FLORIDA 33174
 TEL. (305) 284-8100 FAX. (305) 262-6978
 ACCORDION\94-63FSC

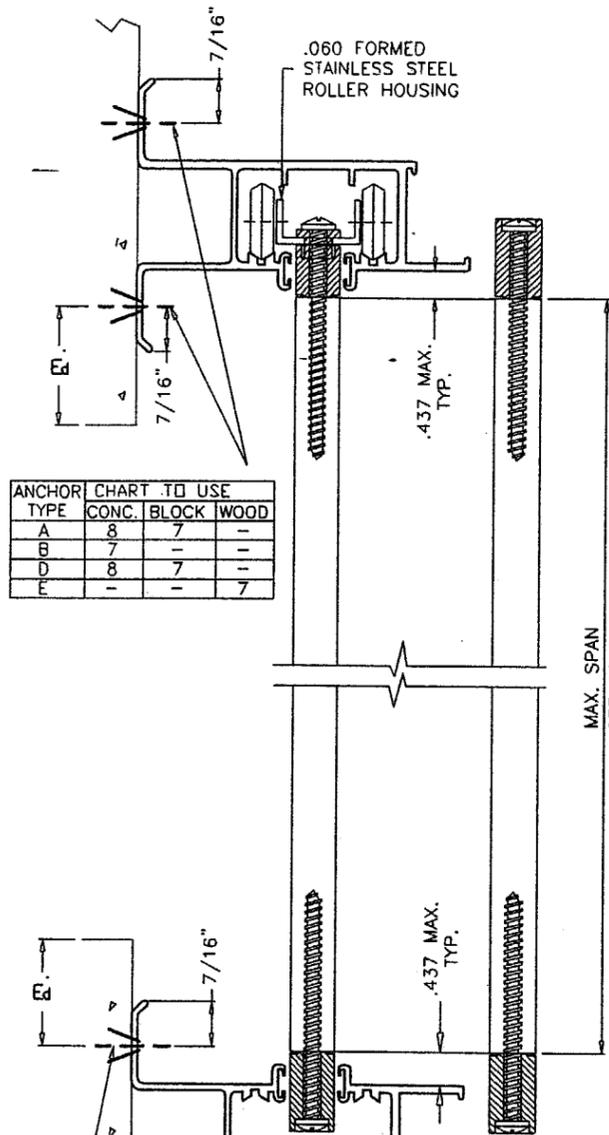
TITAN II FOLDING SHUTTER
 FOLDING SHUTTER CORP.
 7089 HEMSTREET PLACE
 WEST PALM BEACH, FL 33406
 TEL.(561) 683-4811 FAX.(561) 640-8204

no.	date	by	description
A	10.05.94	H	GENERAL REVISION
B	08.24.96	H	GENERAL REVISION
C	10.17.96	H	ANCHOR TABLES REV.
D	10.15.97	H	GENERAL REVISION
E	03.19.98	H	GENERAL REVISION

date: 08-25-94
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

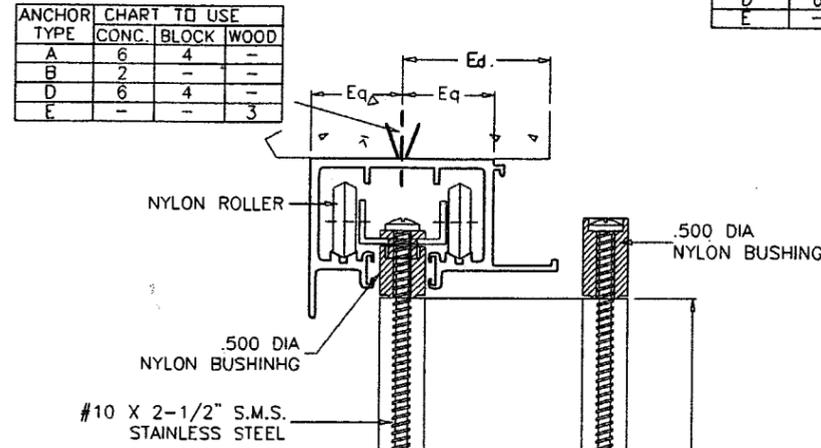
drawing no. **94-63**
 sheet 1 of 5

WALL MOUNTS

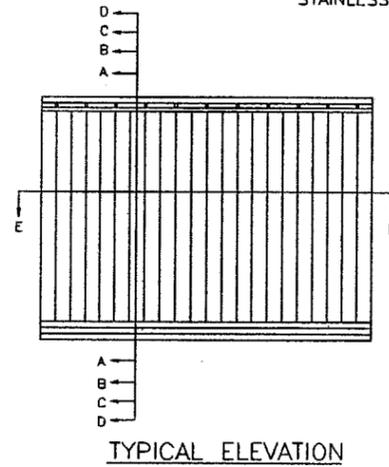


ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD
A	8	7	-
B	7	-	-
D	8	7	-
F	-	-	7

INSIDE MOUNTS



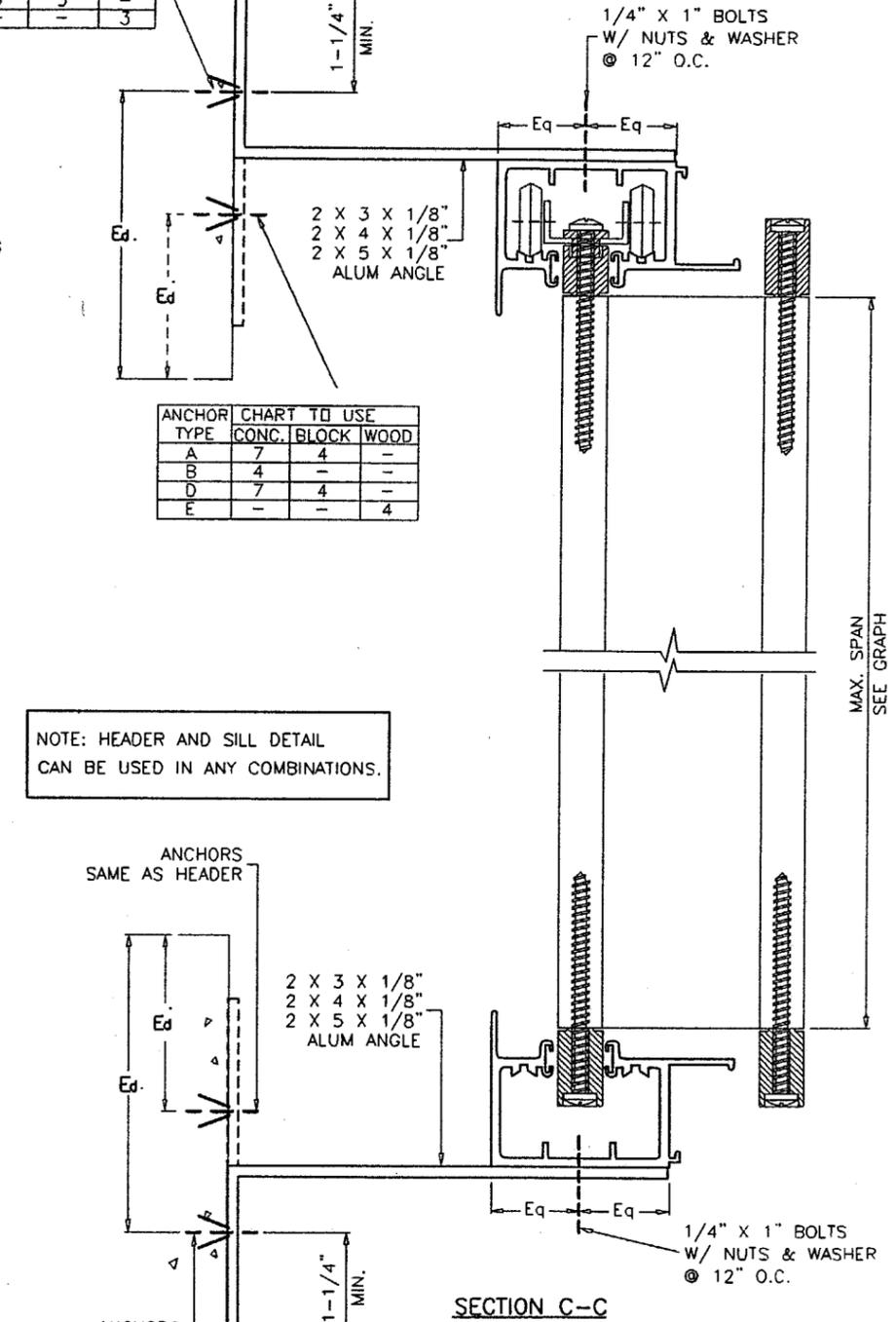
ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD
A	6	4	-
B	2	-	-
D	6	4	-
E	-	-	3



SECTION B-B

ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD
A	7	5	-
B	3	-	-
D	7	5	-
E	-	-	4

BUILT-OUT CONDITION



ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD
A	7	4	-
B	4	-	-
D	7	4	-
E	-	-	4

NOTE: HEADER AND SILL DETAIL CAN BE USED IN ANY COMBINATIONS.

ANCHORS SAME AS HEADER

SECTION A-A

PRODUCT RENEWED

ACCEPTANCE No. 01-0118.03

EXPIRATION DATE 04/09/2006

By *Helmy A. Matar*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE

OPTIONAL RAIN GUARD
NON STRUCTURAL

3/16" POP RIVETS
ALUMINUM
@ 14" O.C.
BOTH SIDES

ANCHORS
SAME AS HEADER

ANCHORS
SAME AS HEADER

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 16557

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE APRIL 9 1998
BY *Helmy A. Matar*
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 96-1112.02

FOR GENERAL NOTES AND EXTRUSION DETAILS SEE SHEET 1 OF 5.
FOR WOOD INSTALLATIONS SEE SHEET 4 OF 5.
FOR ANCHOR CHARTS SEE SHEET 5 OF 5.

ANCHORS: EMBEDMENT & EDGE
DISTANCES SHOWN ARE BEYOND
THE WALL & FLOOR COVERING
(STUCCO, TILES, ETC.)

Ed = TYPICAL EDGE DISTANCE
CONC. & BLOCK = 12d (12 ANCHOR DIAMETERS)
WOOD = 5d
FOR LESSER EDGE DISTANCES SEE SHEET 5 OF 5.

MAR 21 1998

afsc
AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978

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TEL. (561) 683-4811 FAX. (561) 640-8204

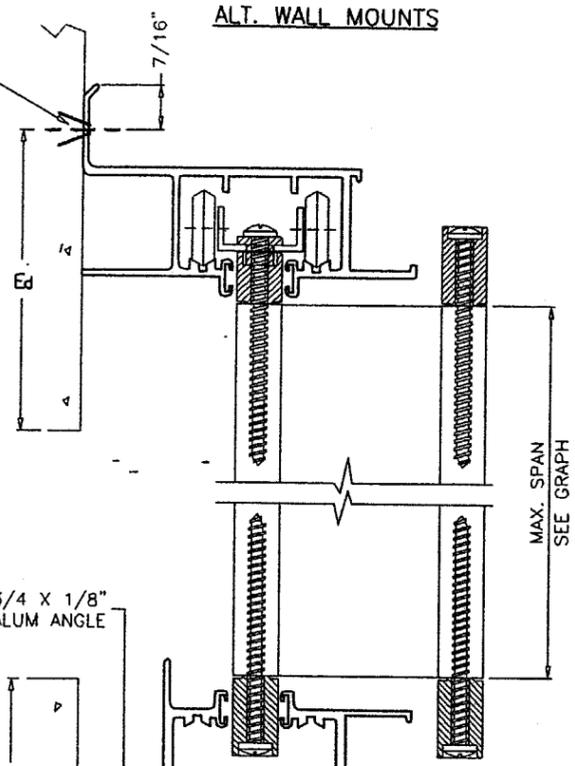
revisions:	no	date	by	description

date: 08-25-94
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
94-63
sheet 2 of 5

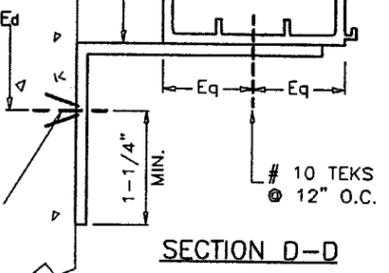
ACCORDION 94-63FSC

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	2	1	-
B	1	-	-
D	3	1	-
E	-	-	1



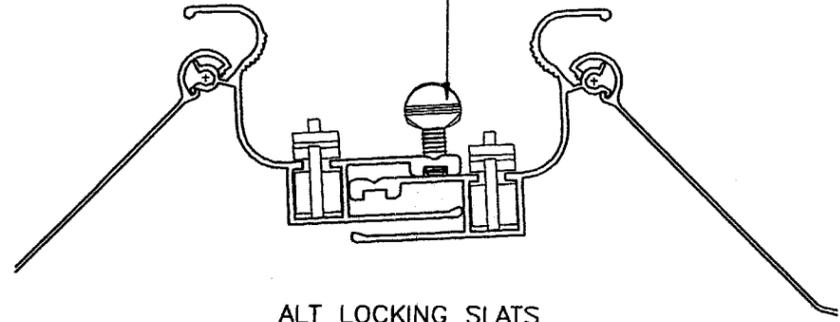
2 X 2-3/4 X 1/8" ALUM ANGLE

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	5	2	-
B	2	-	-
D	5	2	-
E	-	-	2

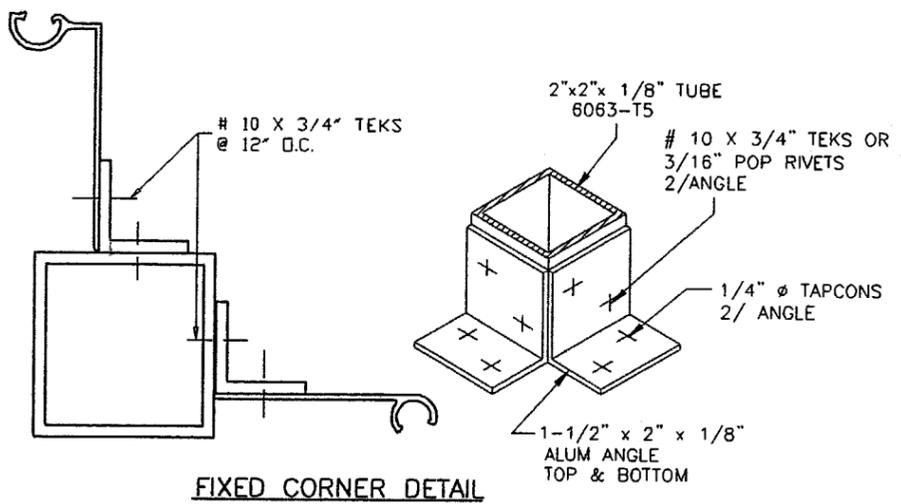


SECTION D-D

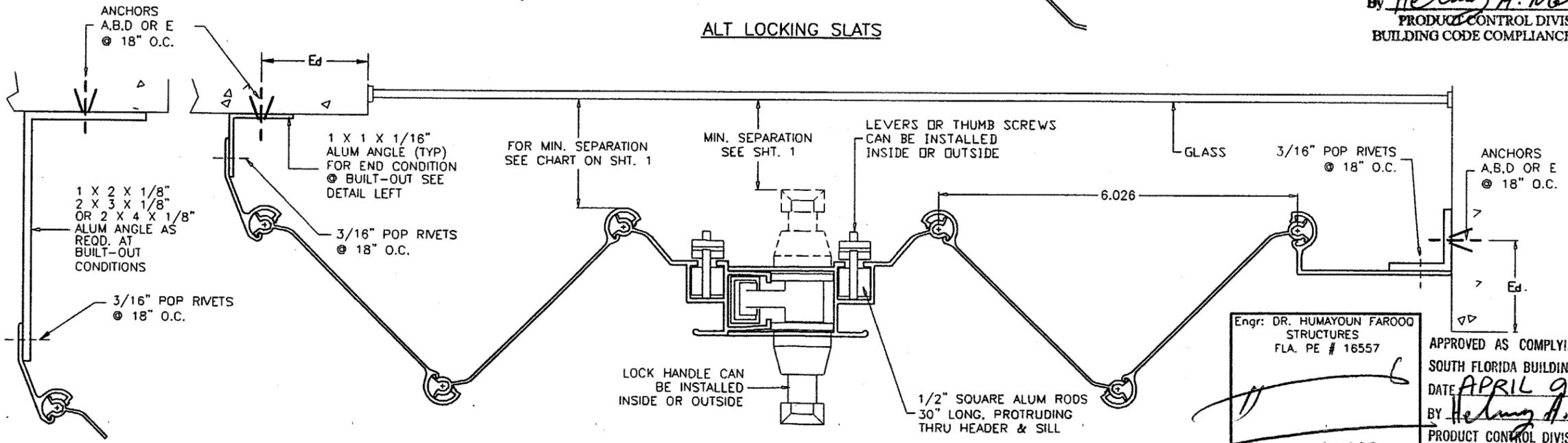
(2) 3/8" Ø PLASTIC THUMB SCREWS 30" APART @ MIDSPAN



ALT LOCKING SLATS



FIXED CORNER DETAIL



END CONDITION AT BUILT-OUT

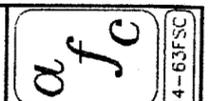
SECTION D-D

PRODUCT RENEWED
 ACCEPTANCE No. 01-0118-03
 EXPIRATION DATE 04/09/2006
 By *Helmy A. Matar*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE
 DATE APRIL 9 1998
 BY *Helmy A. Matar*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
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MAR 21 1998



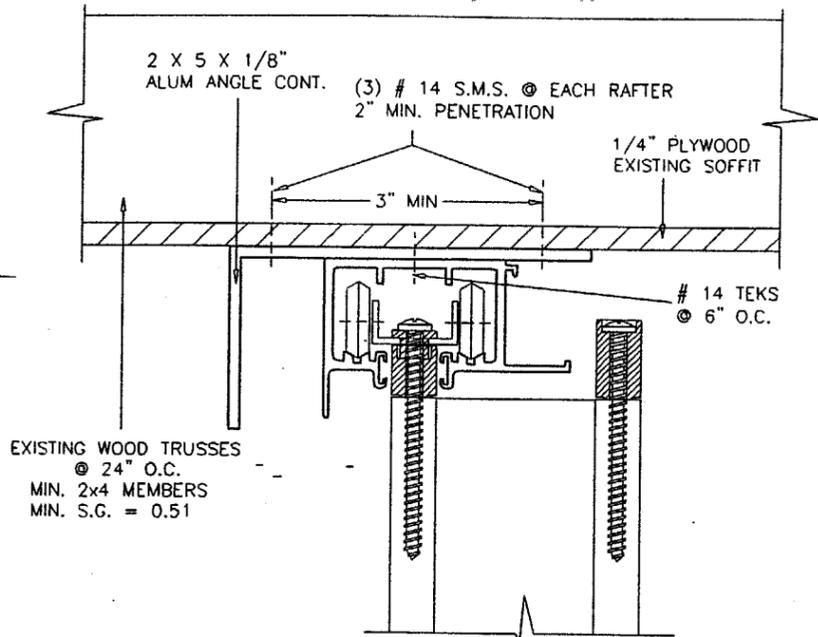
AL-FAROOQ CORPORATION
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no.	date	description

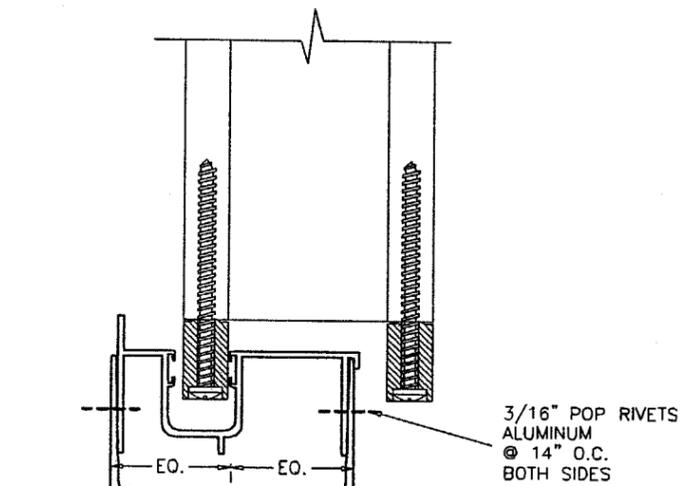
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 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
94-63
 sheet 3 of 5



HEADER CONNECTION TO WOOD TRUSSES

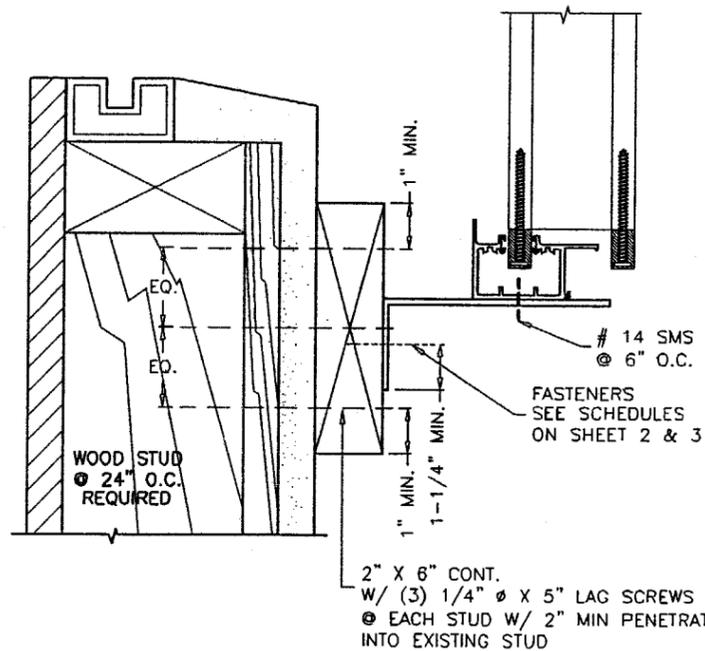
FOR SHUTTER HEIGHT OF 108", MAX. DESIGN LOAD = 65 PSF
 FOR SHUTTER HEIGHT OF 96", MAX. DESIGN LOAD = 73 PSF



COUNTER TOP CONDITION

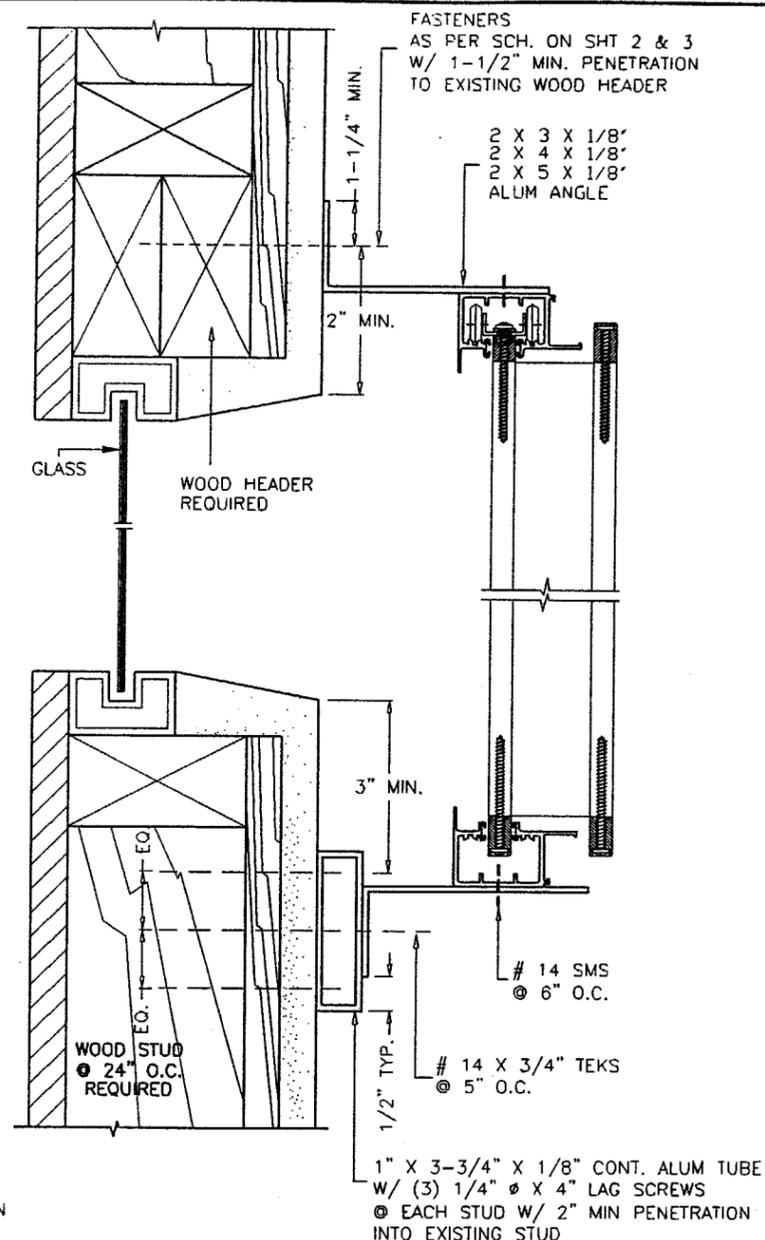
(PASS THRU WINDOW)
 MAX SHUTTER HEIGHT = 6 FT.
 MAX WIND LOAD = 70 PSF

ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTO 50 PSF		UPTO 70 PSF			
	CONC	BLOCK	WOOD	CONC	BLOCK	WOOD
A	16	5	-	12	3,8	-
B	7	-	-	5	-	-
D	18	7	-	13	5	-
E	-	-	7	-	-	5



INSTALLATION DETAIL ON EXISTING WOOD BUCKS

SCALE: 1/4"=1"
 FOR SHUTTER HEIGHT OF 108" MAX. DESIGN LOAD = 46 PSF
 FOR SHUTTER HEIGHT OF 96" MAX. DESIGN LOAD = 51 PSF
 FOR HEADER/SILL DETAILS CONNECTED TO CONTINUOUS WOOD MEMBERS SEE SHEETS 2 & 3.



PRODUCT RENEWED

ACCEPTANCE No. 01-0118.03

EXPIRATION DATE 04/09/2006

By *Helmy A. Mark*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

Engr: DR. HUMAYOUN FAROOQ
 STRUCTURES
 FLA. PE # 16557

APPROVED AS COMPLYING WITH THE
 SOUTH FLORIDA BUILDING CODE

DATE APRIL 9, 1998

BY *Helmy A. Mark*
 PRODUCT CONTROL DIVISION

BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE No. 96-1112.02

MAR 21 1998

afc

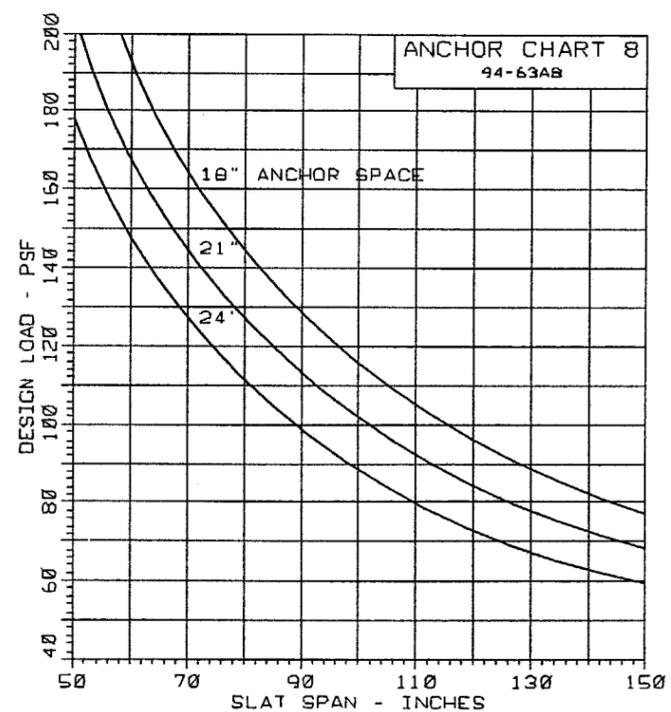
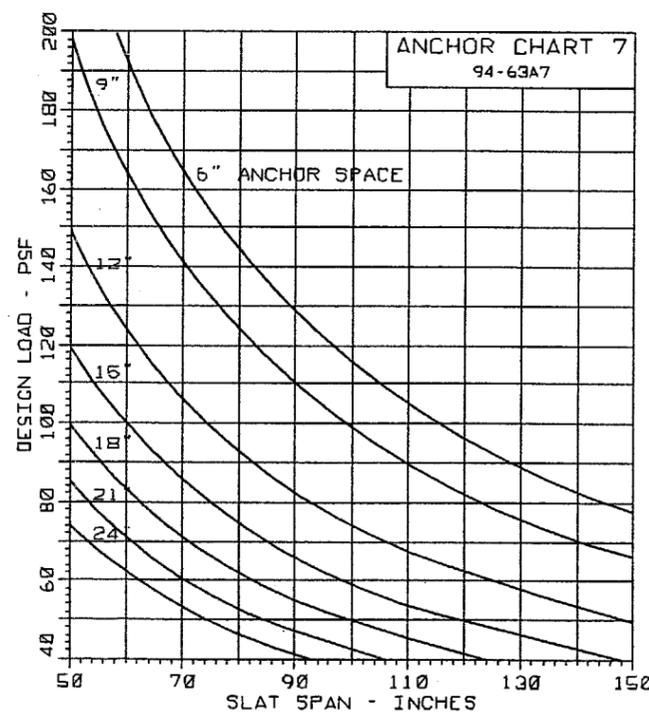
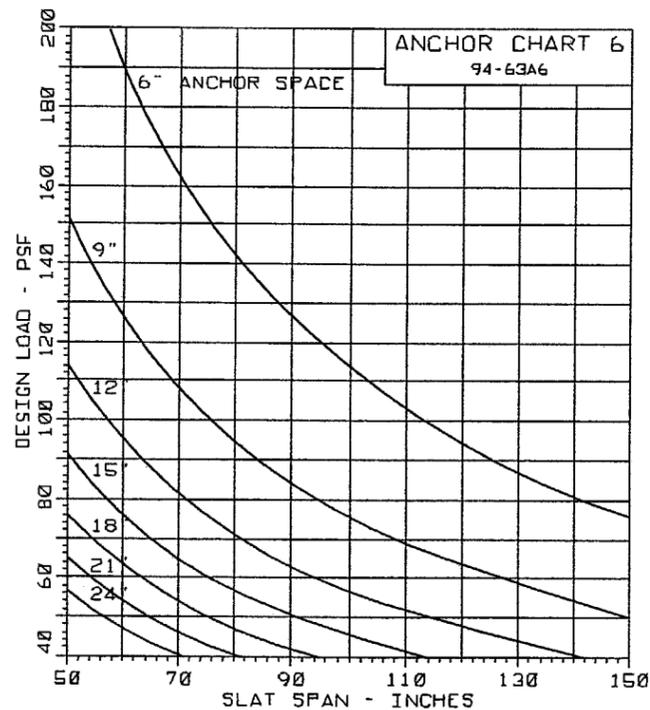
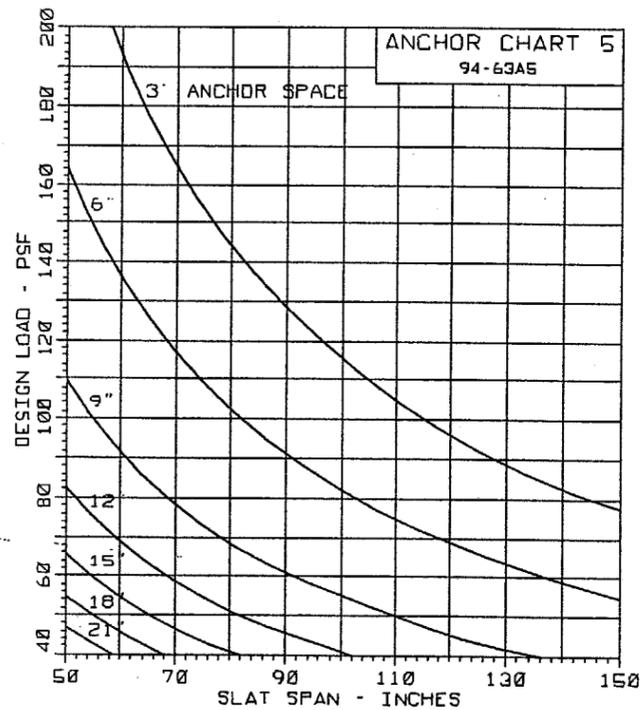
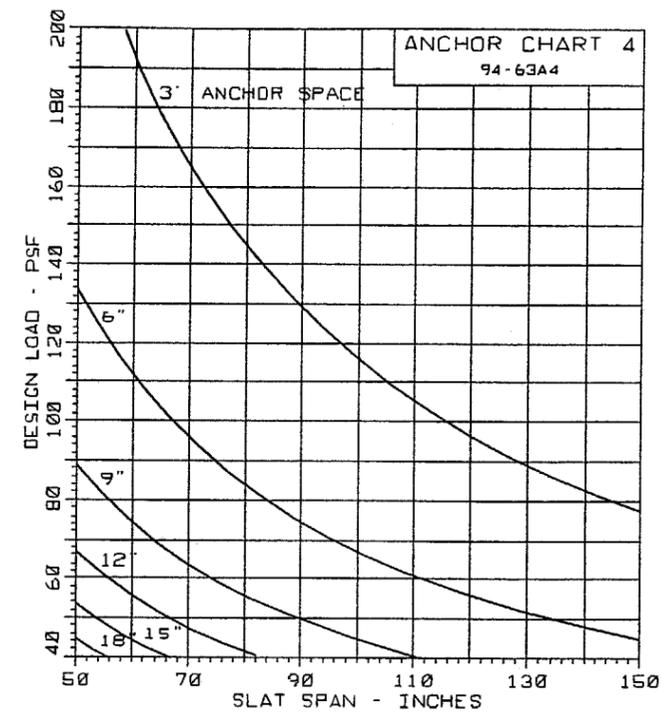
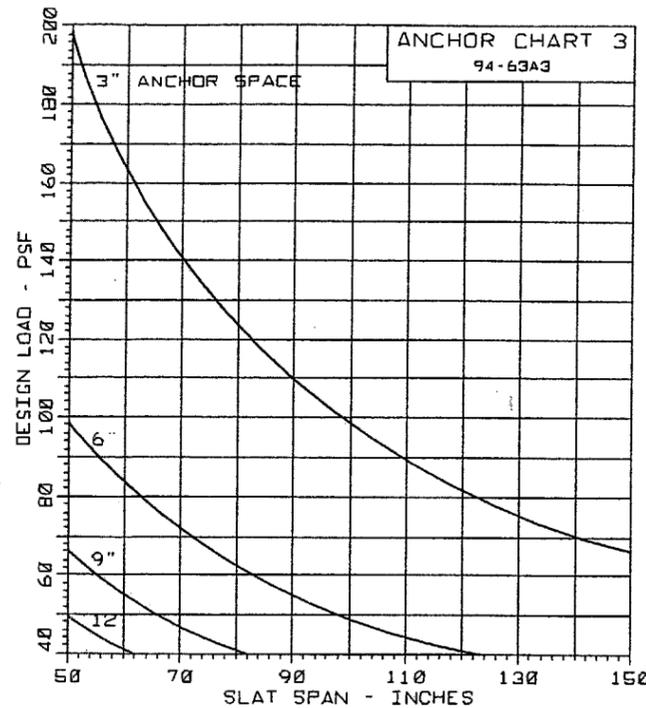
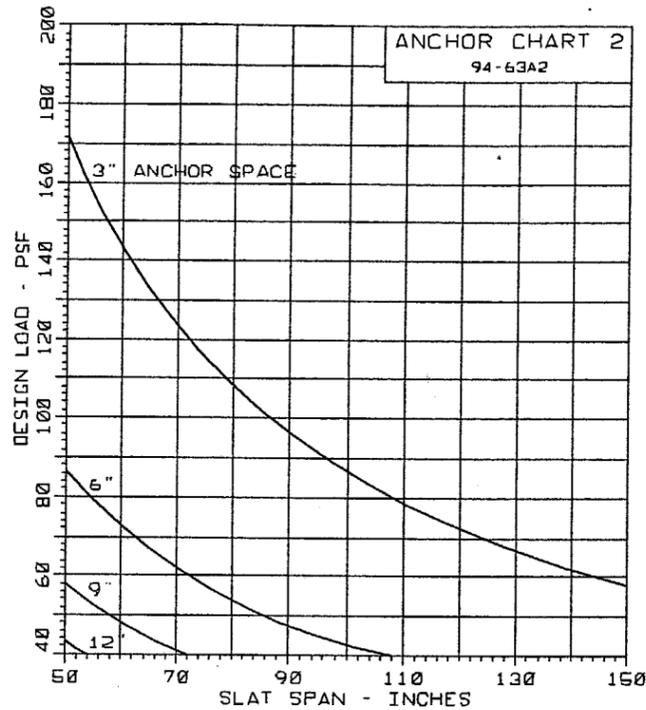
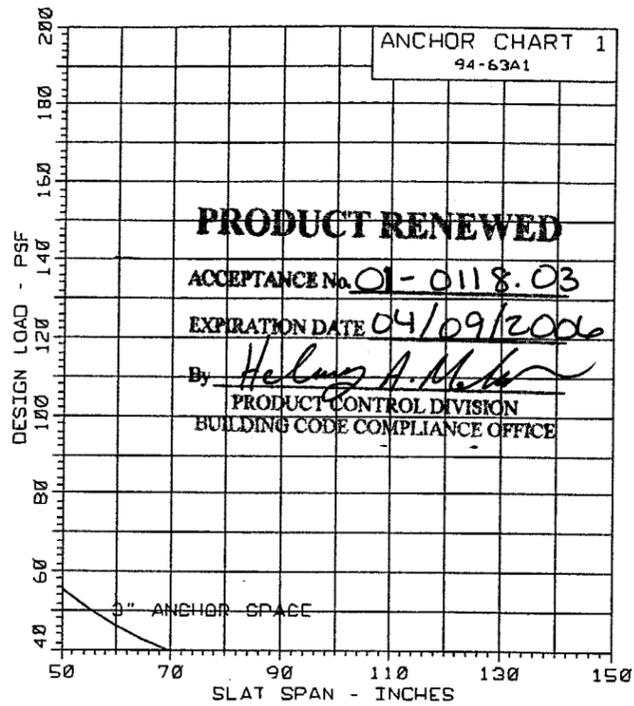
AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
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TITAN II FOLDING SHUTTER
FOLDING SHUTTER CORP.
 7089 HEMSTREET PLACE
 WEST PALM BEACH, FL 33406
 TEL.(561) 683-4811 FAX.(561) 640-8204

no.	date	description

date: 08-25-94
 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
94-63
 sheet 4 of 5



FASTENER SPACING IN MASONRY

CHARTS ARE BASED ON TYPICAL EDGE DISTANCE = 12d.
FOR LESSER EDGE DISTANCE DECREASE SPACING BY
MULTIPLYING WITH THE FACTOR BELOW

EDGE DIST.	12d=3"	10d=2-1/2"	8d=2"	6d=1-1/2"	5d=1-1/4"
FACTOR	1.00	0.86	0.71	0.57	0.50

EXAMPLE: FOR 3" EDGE DIST. SPACING = 12" O.C. (FROM CHART)
FOR 2" EDGE DIST. SPACING = 12 X .71 = 8.5 O.C.

TYPICAL EDGE DISTANCE IN WOOD = 1-1/4"
NO REDUCTION FACTOR IS REQUIRED

TYPICAL ANCHORS

- ANCHOR (A) = 1/4" TAPCON (BY ITW RAMSET/RED HEAD NOA # 96-1226.03)
1-3/4" EMBEDMENT TO CONCRETE
1-1/4" EMBEDMENT TO BLOCK
- ANCHOR (B) = #14 S.M.S. W/ RAWL SCRU-LEAD INTO CONCRETE
1-1/2" EMBEDMENT.
- ANCHOR (D) = 1/4" RAWL CALK-IN.
TOTAL ANCHOR BODY INTO CONCRETE OR BLOCK.
- ANCHOR (E) = #14 S.M.S./LAG SCREWS INTO WOOD. (S.G. = 0.47)
1-1/2" MIN. PENETRATION.

USE CHARTS 1 THRU 8 TO VERIFY ANCHOR
REQUIREMENTS AND STRESS LIMITATIONS OF
LOAD/SPAN COMBINATIONS FOR HEADER AND SILL.

NOTE: ANCHORS, USE FULL EMBEDMENT IN CONCRETE BEYOND
THE COVERING (STUCCO, TILES, ETC.)

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 16557

APPROVED AS COMPLYING WITH THE
SOUTH FLORIDA BUILDING CODE
DATE APRIL 9 1998
BY: Helmy A. M. M.
PRODUCT CONTROL DIVISION
BUILDING CODE COMPLIANCE OFFICE
ACCEPTANCE NO. 96-1112.02

MAR 21 1998

afc

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revisions:

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ACCORDION 94-63FSC