



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

NOTICE OF ACCEPTANCE (NOA)

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

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: Series "Titan II" Aluminum Accordion Shutter

§

APPROVAL DOCUMENT: Drawing No. 94-63, titled "Titan II Folding Shutter", sheets 1 through 5 of 5, prepared, signed and sealed by Humayoun Farooq, P.E., dated 3/19/98, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance numbers and approval dates 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 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.

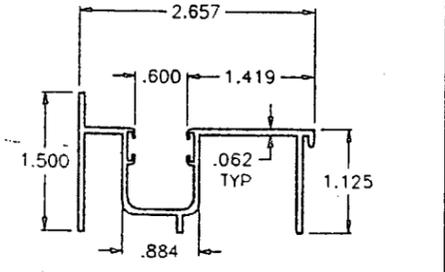
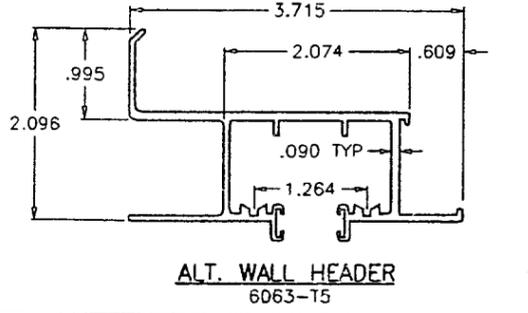
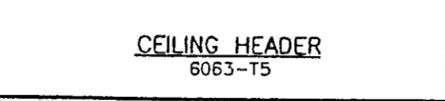
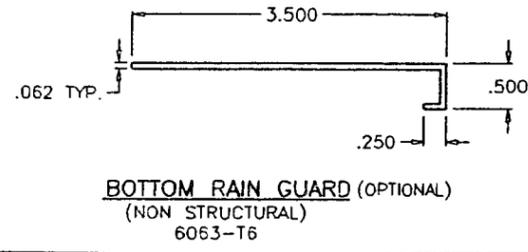
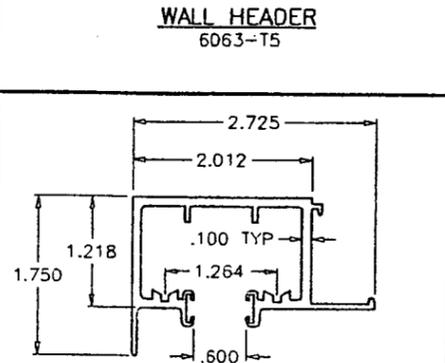
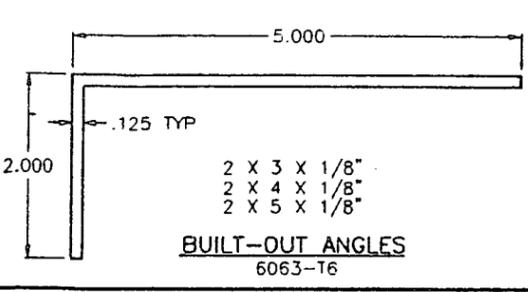
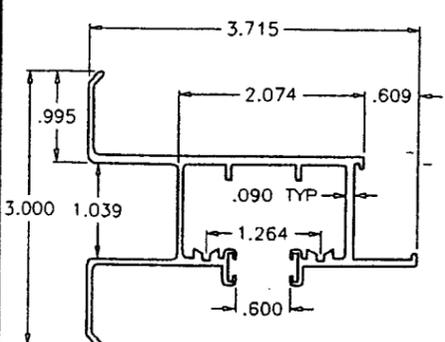
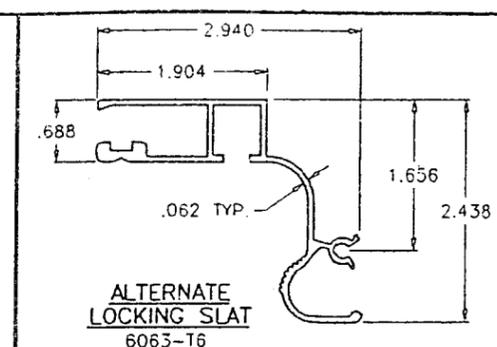
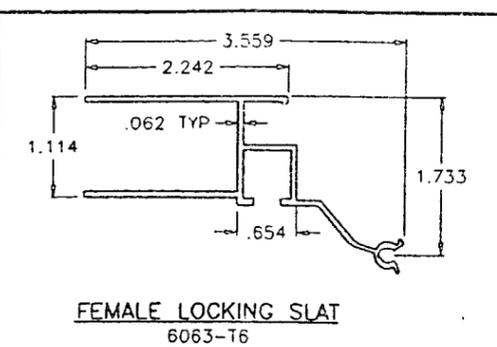
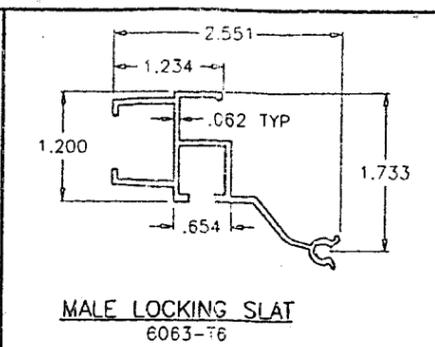
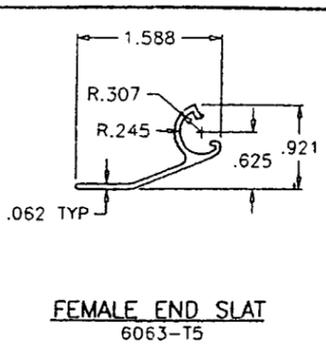
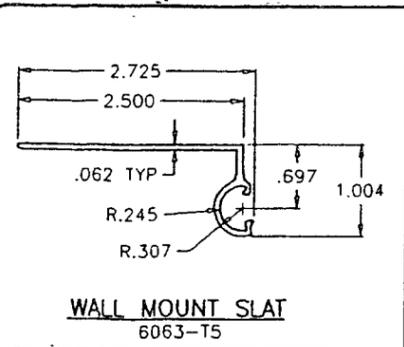
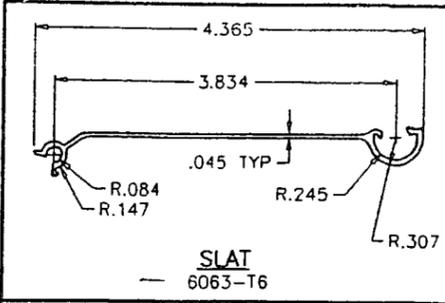
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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.

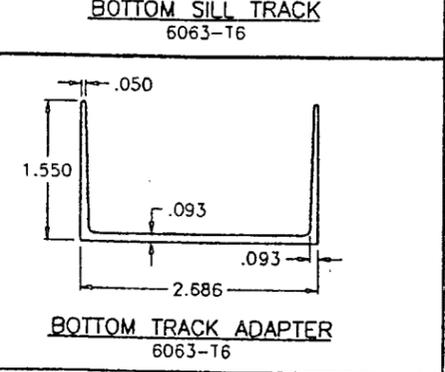
This NOA revises NOA # 01-0118.03 and, consists of this page 1 as well as approval document mentioned above. The submitted documentation was reviewed by **Raul Rodriguez**.



NOA No 02-0226.02
Expiration Date: April 9, 2006
Approval Date: March 28, 2002
Page 1

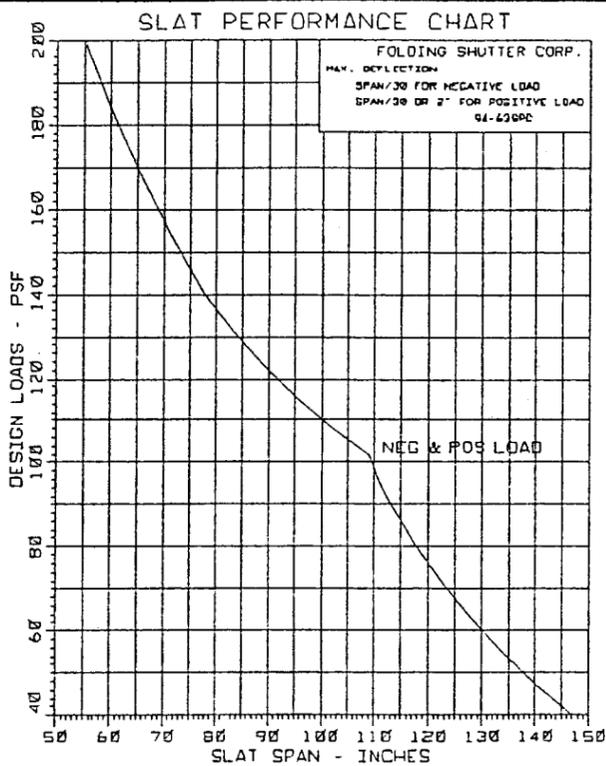
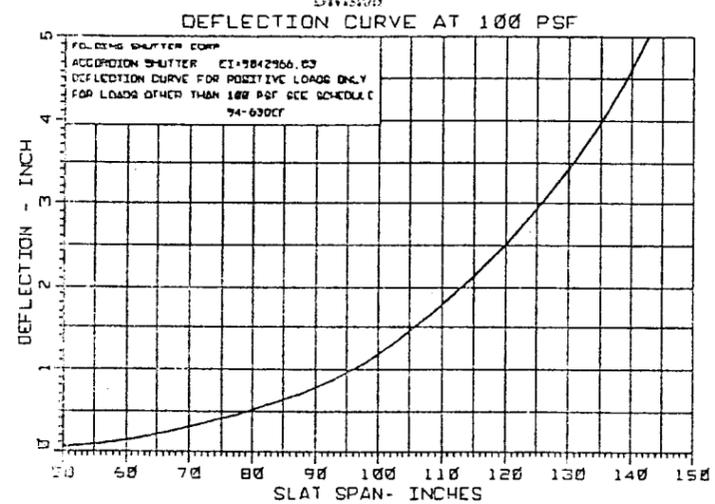


- GENERAL NOTES**
- THIS STRUCTURE IS DESIGNED AS PER THE SOUTH FLORIDA BUILDING CODE 1994 EDITION FOR DADE COUNTY. ALSO FOR WIND LOADS AS PER ASCE 7-88 USING CORRESPONDING LOADS.
 - DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION 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.



PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No 02-0226.02
 Expiration Date APRIL 9-2006

By *[Signature]*
 Miami Dade Product Control Division



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 *[Signature]*
 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.	147"	3-1/4"
READING FROM SPAN D. CURVE = D =	IN.	-	-
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 *[Signature]*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE NO. 96-112.02

MAR 21 1998



AL-FAROOQ CORPORATION
 ENGINEERS, PLANNERS & PRODUCT DESIGN
 1235 SW 87 AVE
 MIAMI, FLORIDA 33174
 TEL. (305) 264-8100 FAX. (305) 262-6978
 ACCORDION\94-63FSC

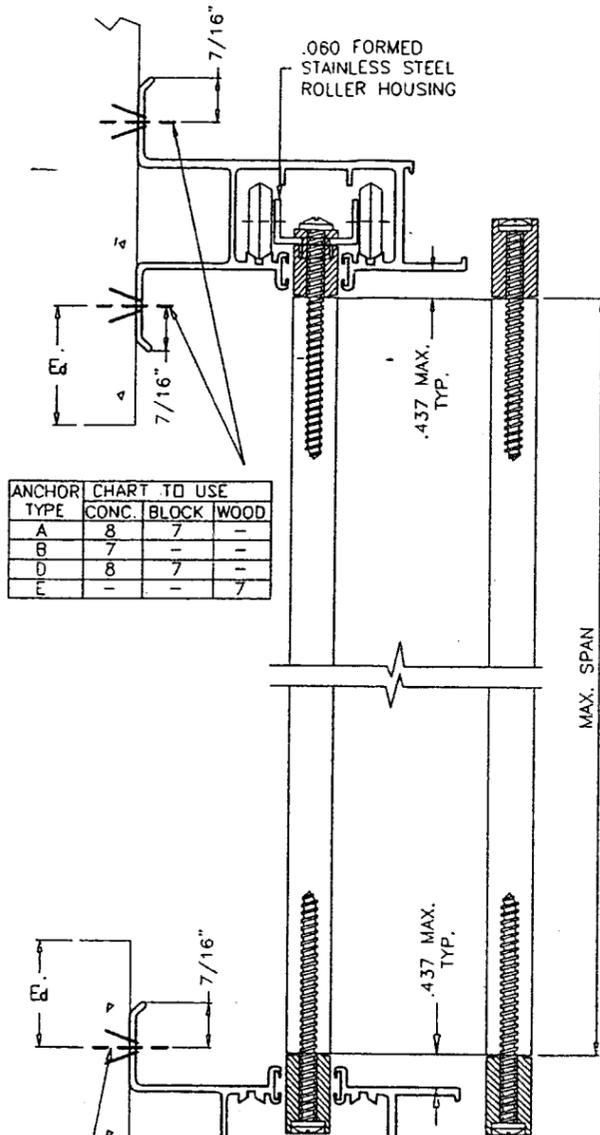
TITAN II FOLDING SHUTTER
 FOLDING SHUTTER CORP.
 7089 HEMSTREET PLACE
 WEST PALM BEACH, FL 33406
 TEL.(561) 683-4811 FAX.(561) 640-8204

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

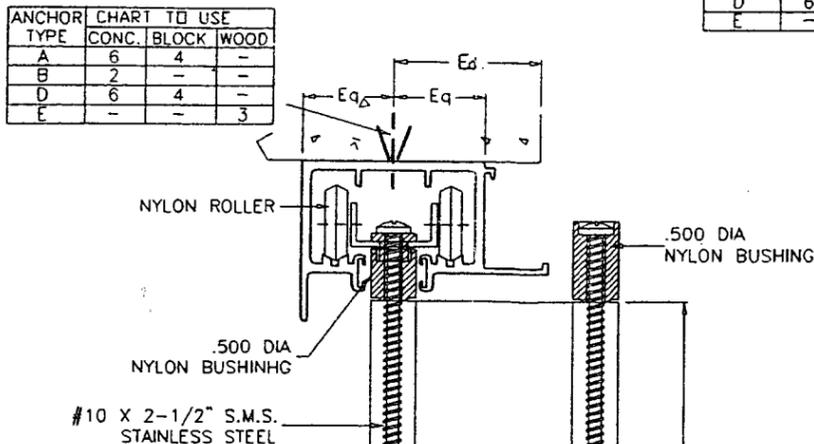
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 scale: 1/2" = 1"
 dr. by: HAMID
 chk. by:

drawing no.
94-63
 sheet 1 of 5

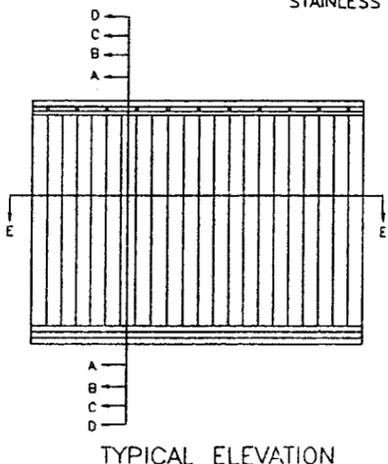
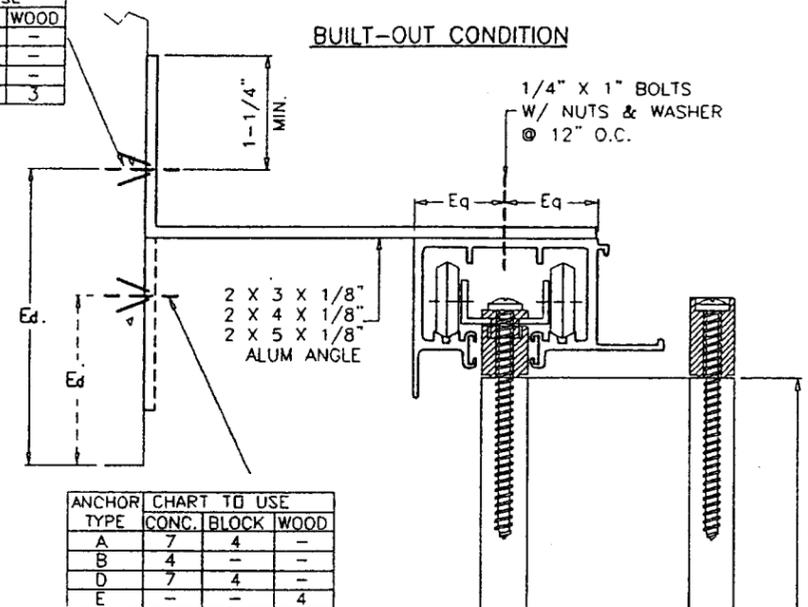
WALL MOUNTS



INSIDE MOUNTS



BUILT-OUT CONDITION



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

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

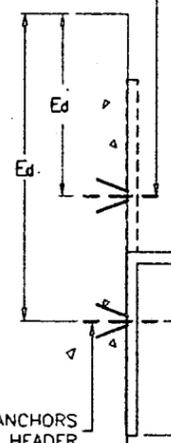
SECTION B-B

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No. 02-0226-02
 Expiration Date April 9, 2006
 By *MS*
 Miami Dade Product Control Division

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.

ANCHORS SAME AS HEADER



SECTION C-C

Engr: DR. HUMAYOUN FAROOD
 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

MAR 21 1998

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.

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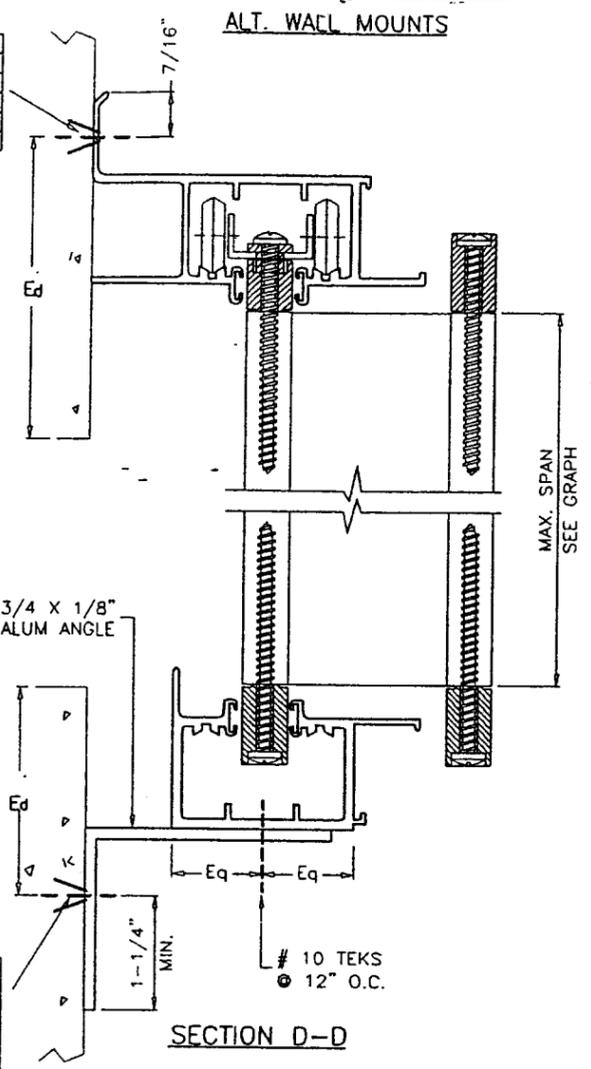
TITAN II FOLDING SHUTTER
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revisions:	no.	date	by	description

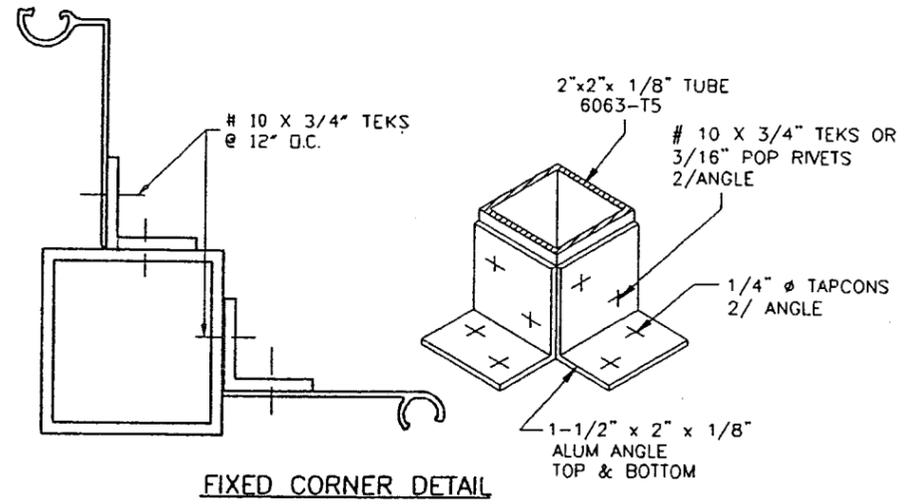
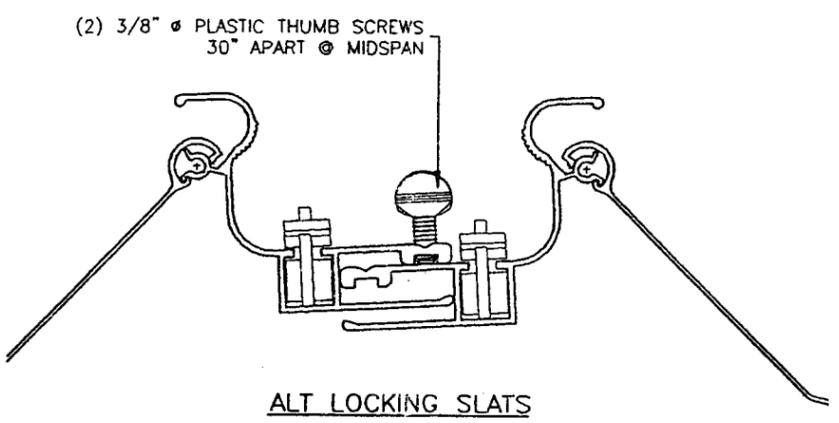
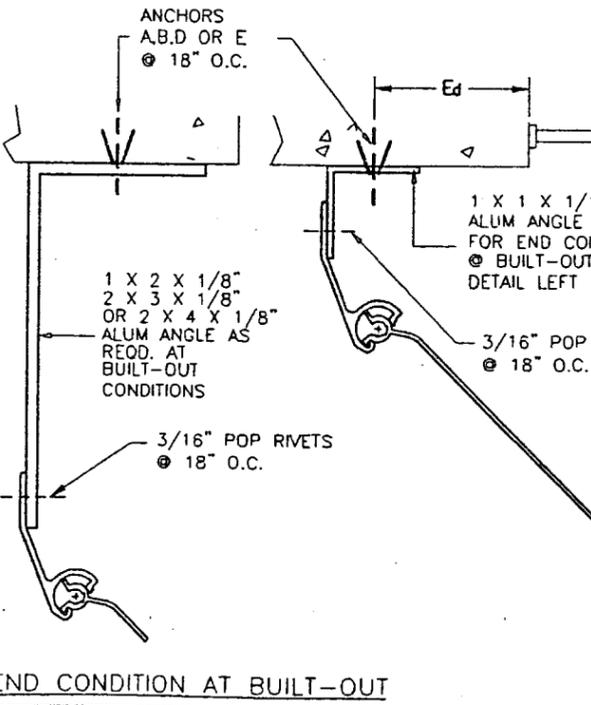
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 dr. by: HAMID
 chk. by:

drawing no. **94-63**
 sheet 2 of 5

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

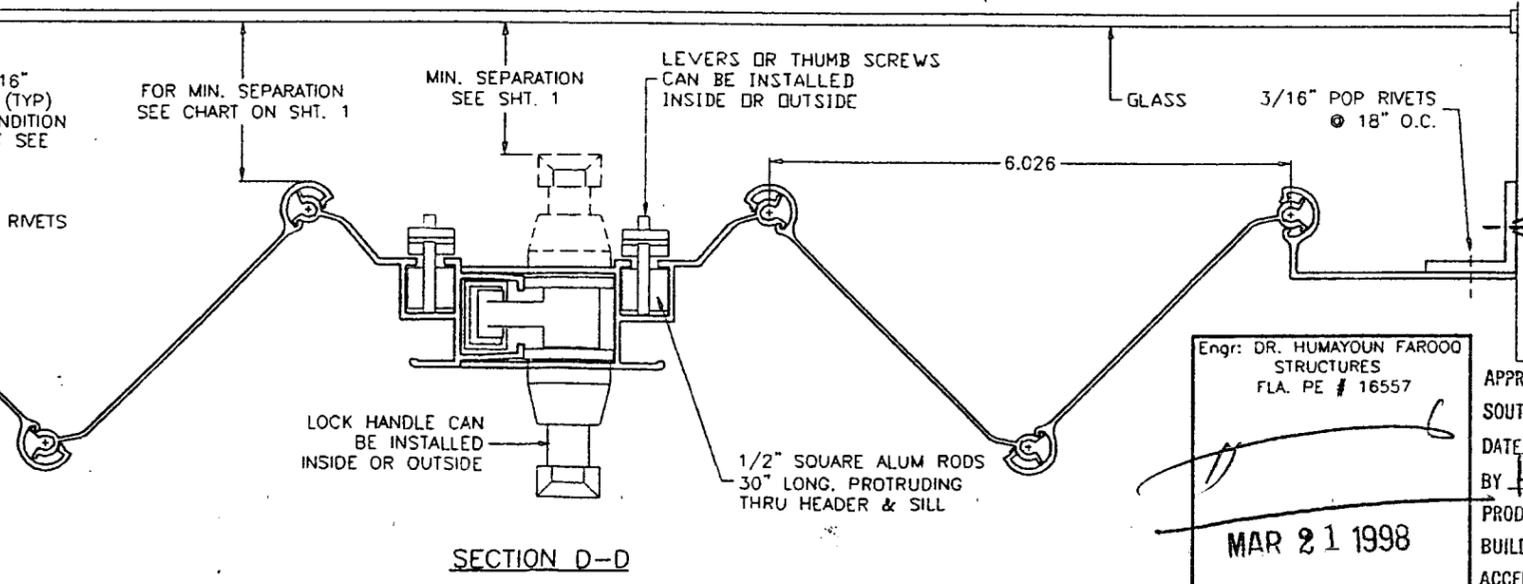


ANCHOR TYPE	CHART TO USE		
	CONC.	BLOCK	WOOD
A	5	2	-
B	2	-	-
D	5	2	-
E	-	-	2



PRODUCT REVISED
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 By: *[Signature]*
 Product Control Division

PRODUCT RENEWED
 ACCEPTANCE No. 01-0118-03
 EXPIRATION DATE 04/09/2006
 By: *[Signature]*
 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: *[Signature]*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE
 ACCEPTANCE No. 96-1112.02
 MAR 21 1998

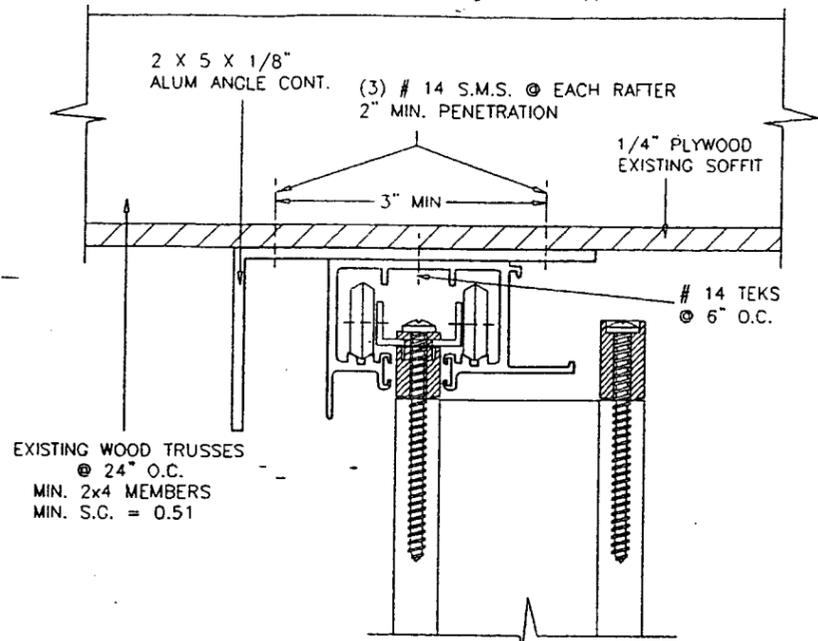
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AL-FAROOQ CORPORATION
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 1235 SW 87 AVE
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 TEL. (305) 264-8100 FAX. (305) 267-6978
 ACCORDION 94-63FSC

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

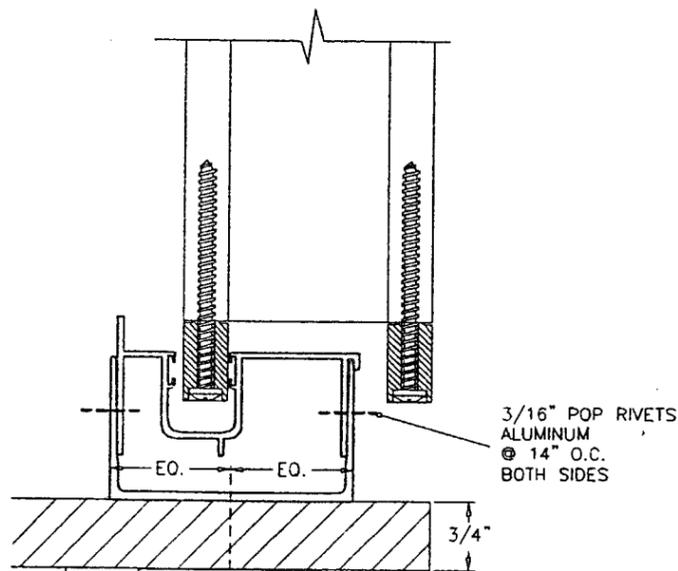
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 chk. by:
 drawing no. 94-63
 sheet 3 of 5



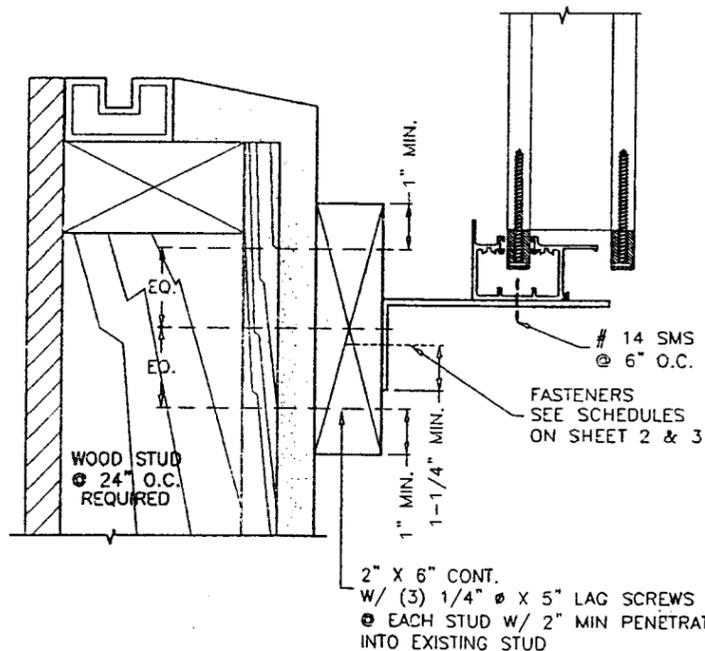
HEADER CONNECTION TO WOOD TRUSSES

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



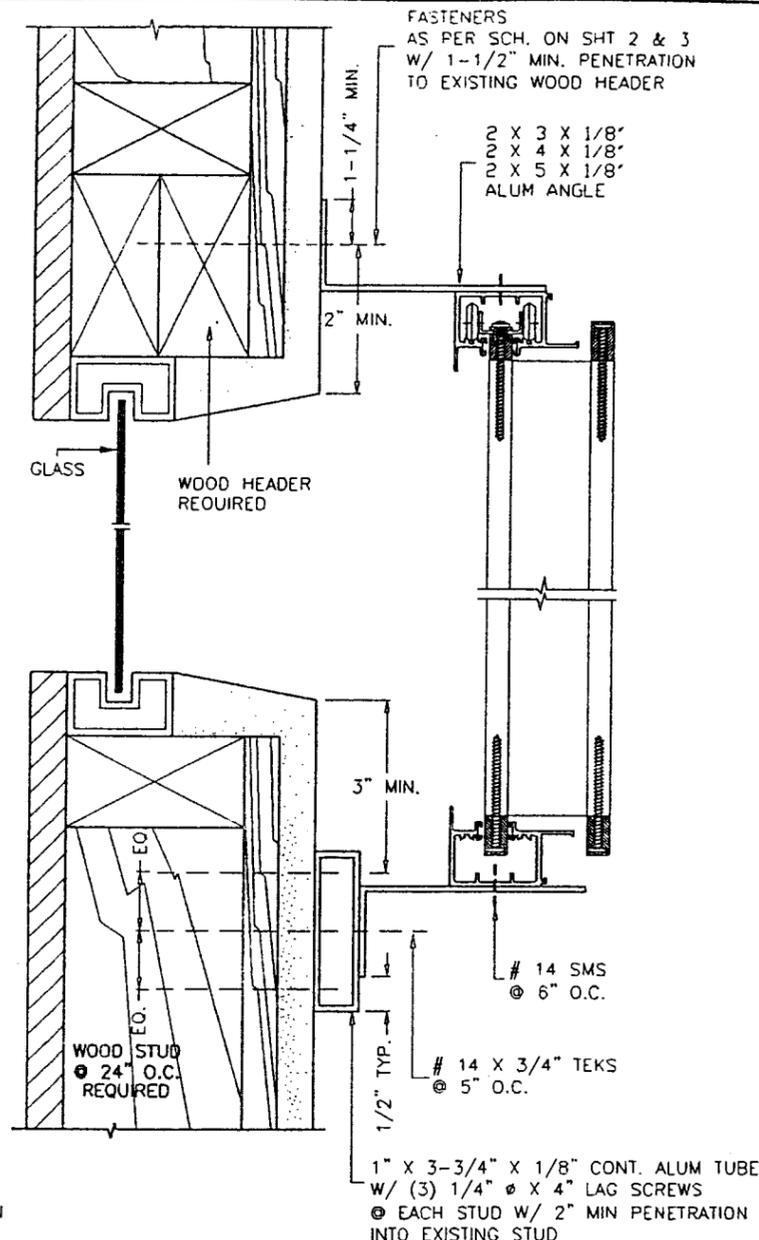
ANCHOR TYPE	ANCHOR SPACING INCHES					
	UPTD 50 PSF		UPTD 70 PSF			
	CONC	BLOCK	WOOD	CONC	BLOCK	WOOD
A	16	5	-	12	3.8	-
B	7	-	-	5	-	-
D	18	7	-	13	5	-
E	-	-	7	-	-	5

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



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. Maher*
 PRODUCT CONTROL DIVISION
 BUILDING CODE COMPLIANCE OFFICE

PRODUCT REVISED
 as complying with the Florida Building Code
 Acceptance No. 02-0226.02
 Expiration Date April 9, 2006

By *[Signature]*
 Product Control Division

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

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

MAR 21 1998

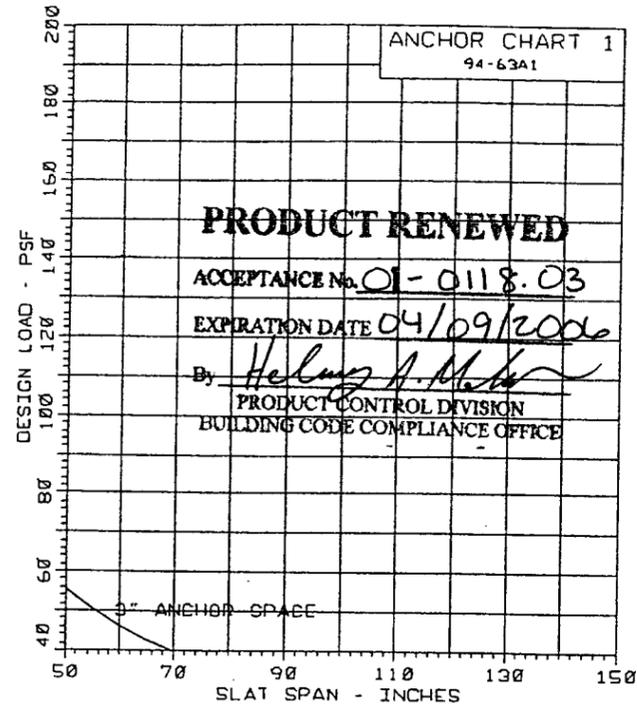
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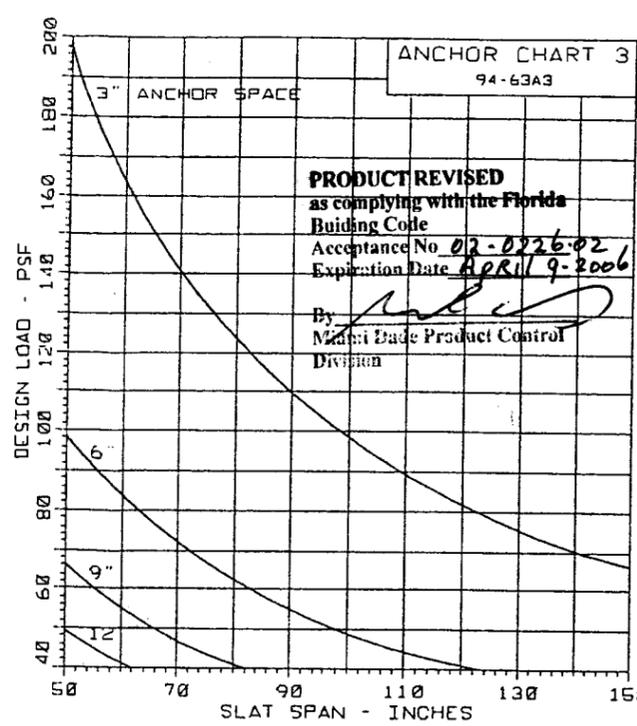
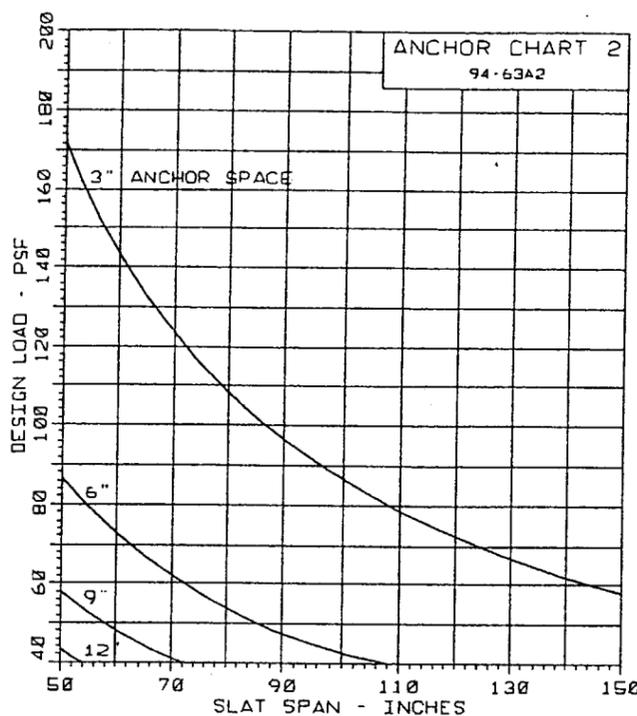
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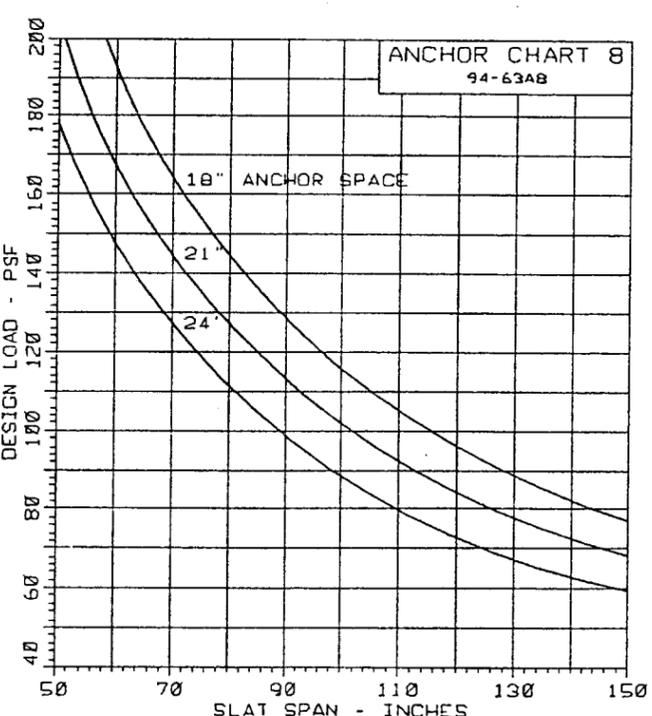
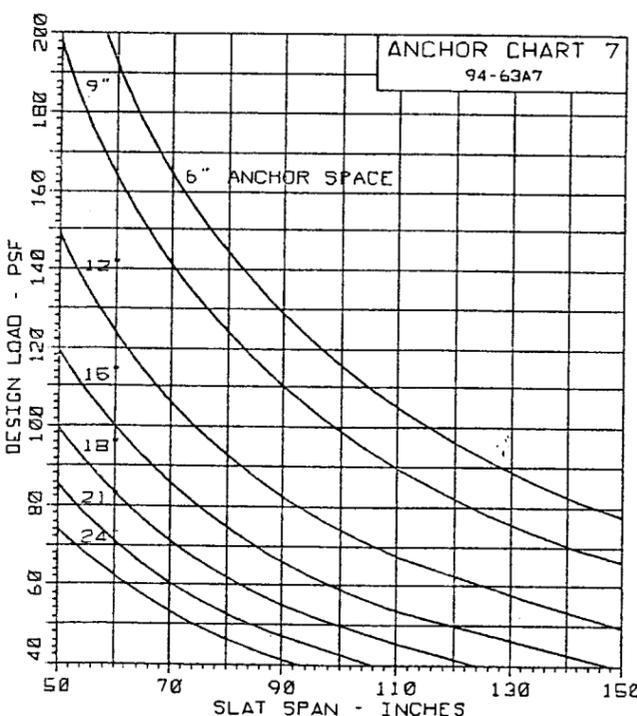
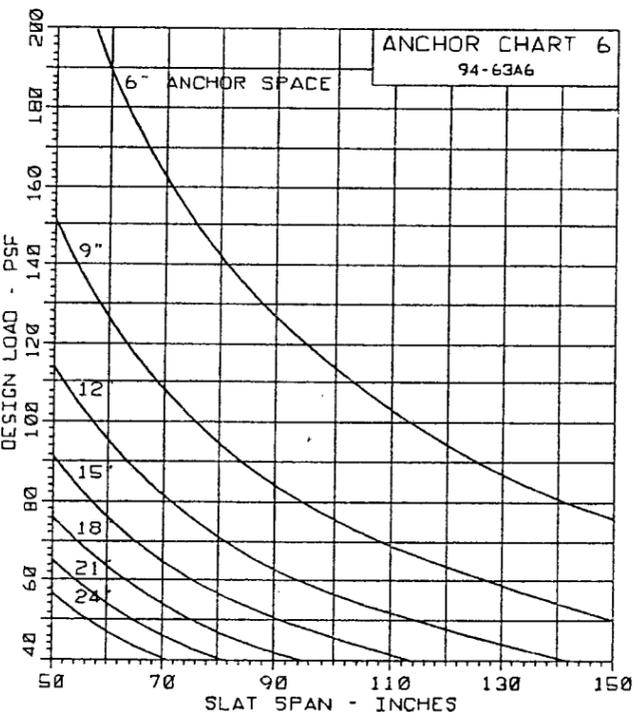
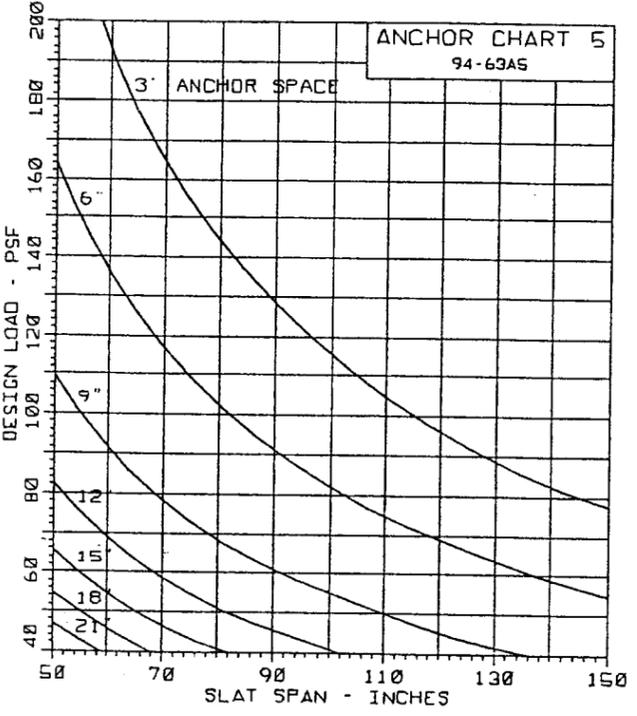
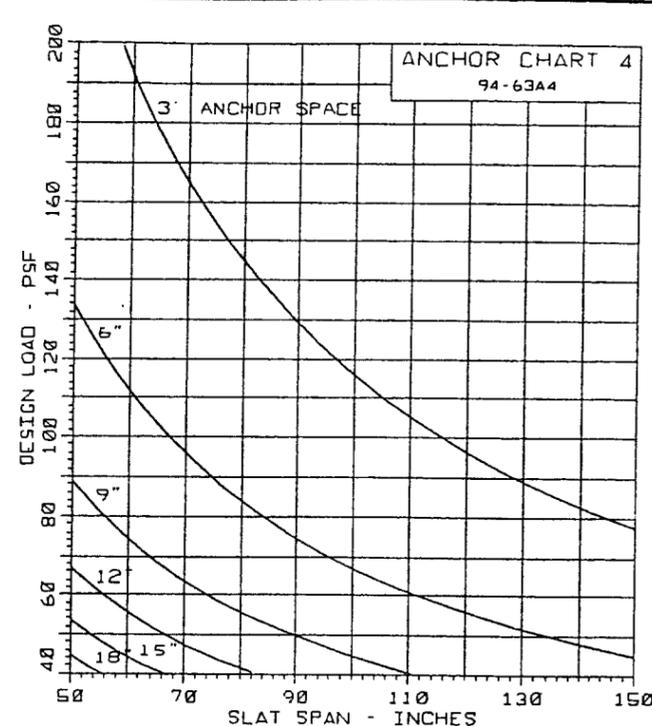
drawing no. 94-63
 sheet 4 of 5



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



PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 02-0226.02
 Expiration Date April 9, 2006
 By [Signature]
 Miami Dade Product Control
 Division



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

[Signature]
 MAR 21 1998

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

afc

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 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: [Signature]

drawing no.
94-63
 sheet 5 of 5