



**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)

**Shutter-Tech of Miami, Inc.
1793 W 37th Street, Bay 8
Hialeah, Florida 33012**

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: 0.037” (min.) Galvanized Steel Storm Panel Shutter

APPROVAL DOCUMENT: Drawing No. 01-38, titled “ 20 ga. Galvanized Steel Storm Panel ”, sheets 1 through 5 of 5, prepared by Al-Farooq Corporation, dated August 13, 2001, last revised #A dated March 26, 2002, 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.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each panel 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.

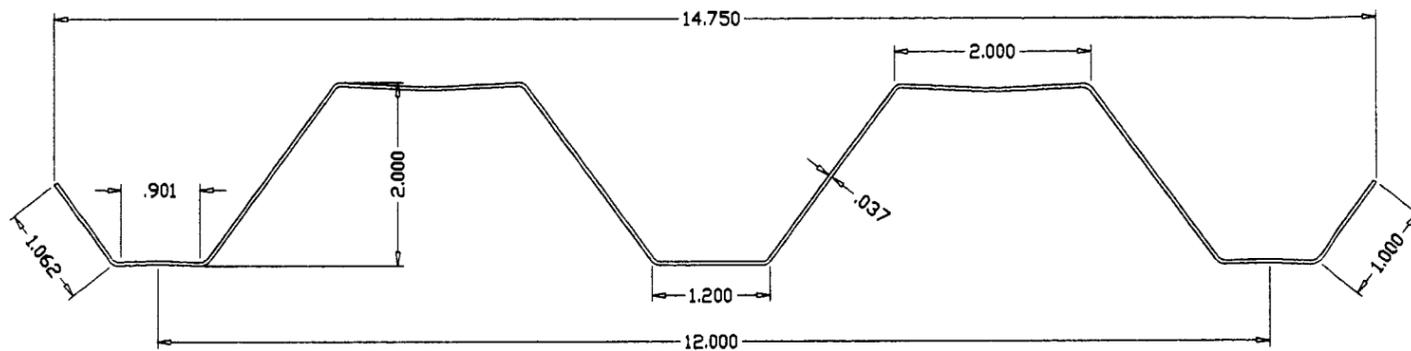
ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

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.

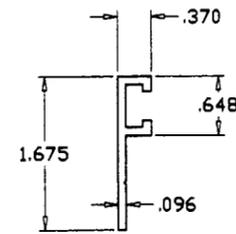
This NOA consists of this page 1 as well as approval document mentioned above.
The submitted documentation was reviewed by **Helmy A. Makar, P.E.**



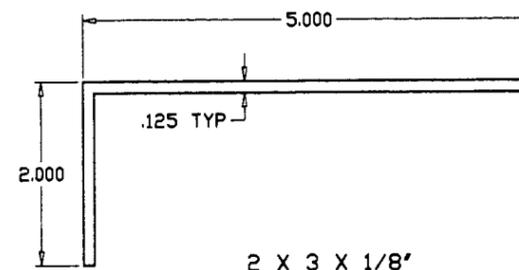
**NOA No 02-0304.02
Expiration Date 06/06/2007:
Approval Date 06/06/2002:
Page 1**



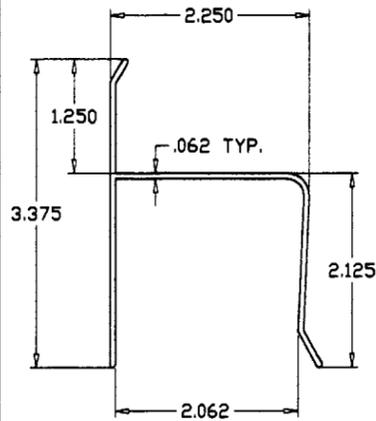
ROLL FORMED PANEL
20 GA. STEEL (0.037" MIN)
YIELD STRENGTH = 42 KSI



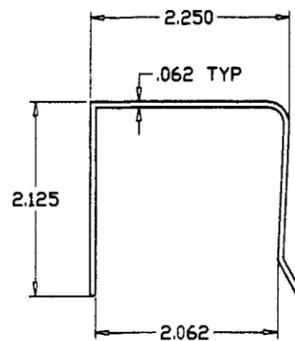
F-TRACK
6063-T5



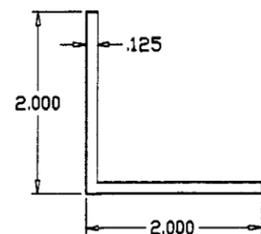
BUILT-OUT ANGLES
2 X 3 X 1/8"
2 X 4 X 1/8"
2 X 5 X 1/8"
6063-T5



WALL MOUNT HEADER
6063-T5

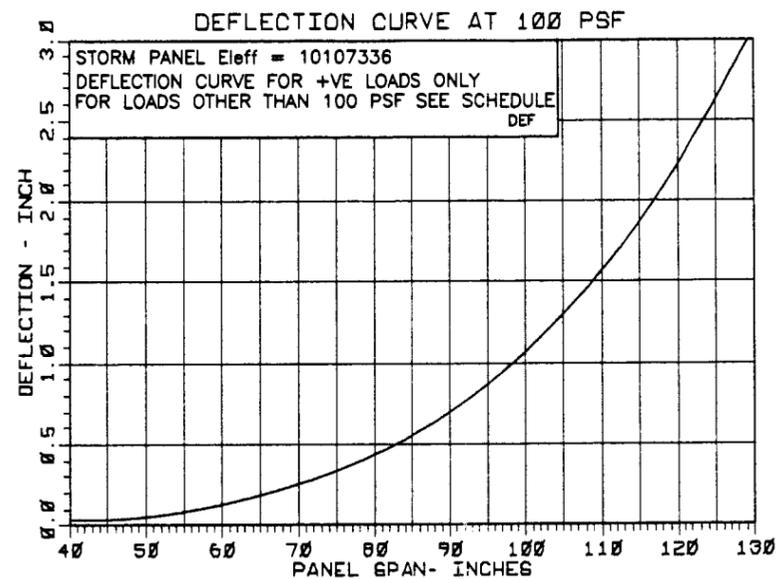


CEILING MOUNT HEADER
6063-T5



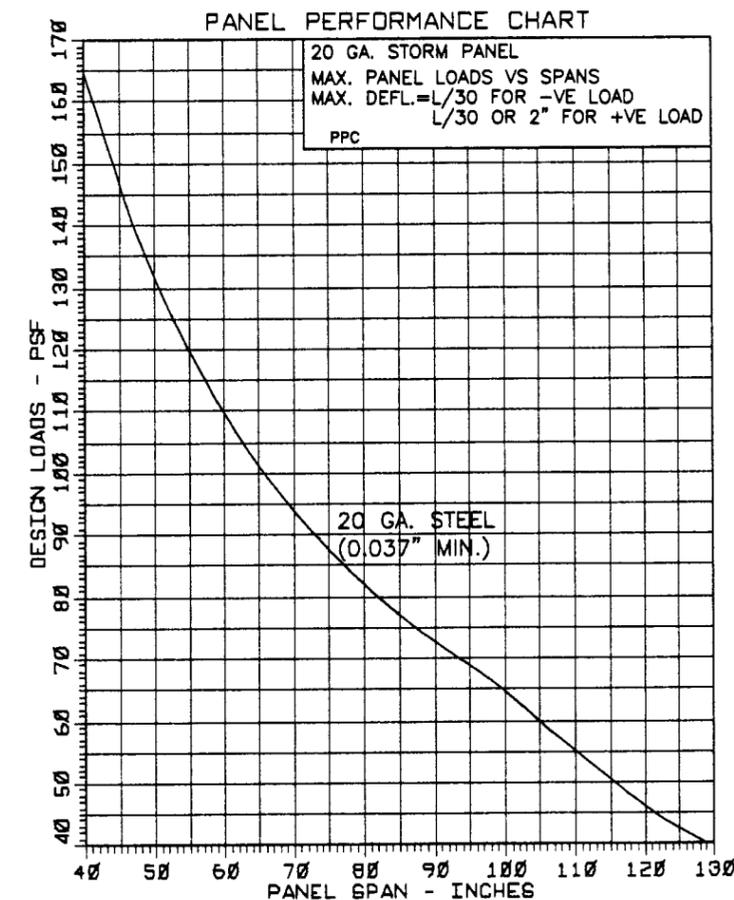
BASE ANGLE
6063-T5

G90 Galvanized



MINIMUM SEPARATION FROM GLASS			
SEPARATION REQD. DUE TO WIND LOAD		SEPARATION REQD. DUE TO LARGE MISSILE IMPACT	
SHUTTER SPAN = H =	IN.	FOR PANEL SPANS UPTO	SEPARATION
DESIGN LOAD = Pd =	PSF	128"	4-3/8"
FACTOR = K = Pd/100 =	IN.		
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.



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

PRODUCT MARKING

A LABEL SHALL APPEAR ON EVERY PANEL WITH THE FOLLOWING STATEMENT.
SHUTTER-TECH OF MIAMI INC., MIAMI, FL.
"MIAMI DADE COUNTY PRODUCT CONTROL APPROVED"

Approved as complying with the Florida Building Code
Date 06/06/2002
NOA# 02-0304-02
Miami Dade Product Control Division
By *Helmy A. Alkhatib*

Engr: DR. HUMAYOUN FAROOQ
STRUCTURES
FLA. PE # 15557
H
MAR 28 2002

FOR INSTALLATION DETAILS SEE SHEET 2, 3 & 4.
FOR ANCHOR REQUIREMENTS SEE SHEET 5 OF 5.

GENERAL NOTES

- THIS PRODUCT IS DESIGNED AS PER THE 2001 FLORIDA BUILDING CODE ALSO FOR WIND LOADS AS PER ASCE 7 USING CORRESPONDING LOADS.
- DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.
- ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY 6063-T5.
- ANCHORS SHALL BE AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ALL BOLTS SHALL BE STAINLESS STEEL, ALUMINUM ALLOY 2024-T4 OR 7075-T6, OR PLATED STEEL. WING NUTS TO BE OF ZINC ALLOY.
- THE DESIGN AT ANY GIVEN ELEVATION SHALL COMPLY WITH THE TABLES PERTAINING TO THE EXPOSURE/ZONE.
- DESIGN CRITERIA FOR PANELS: MAX DEFLECTION $\leq L/30$ OR 2".
- ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

afc

AL-FAROOQ CORPORATION
ENGINEERS, PLANNERS & PRODUCT DESIGN
1235 SW 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
PANELS\01-38ST

20 GA. GALVANIZED STEEL STORM PANEL
SHUTTER-TECH OF MIAMI INC.
1793 W 37TH STREET, BAY 8
HIALEAH, FL. 33012
TEL. (305) 823-1023 FAX. (305) 823-4678

no	date	description	REV. PER BCCO COMMENTS
A	03.26.02		

date: 08-13-01
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
01-38
sheet 1 of 5

WALL MOUNTS

INSIDE MOUNTS

BUILT-OUT

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	4	1	-
D	4	2	-
E	-	-	3
F	3	1	4

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	5	2	-
D	6	3	-
E	-	-	3
F	5	3	4

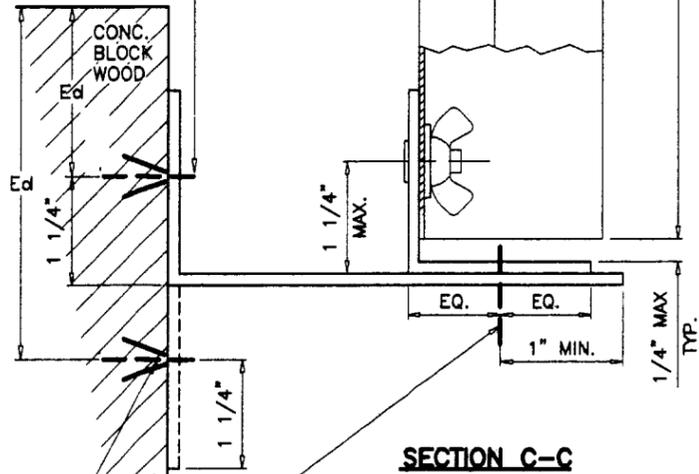
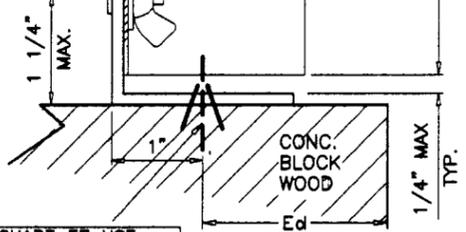
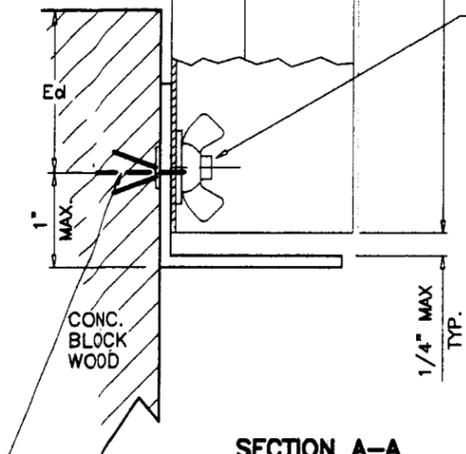
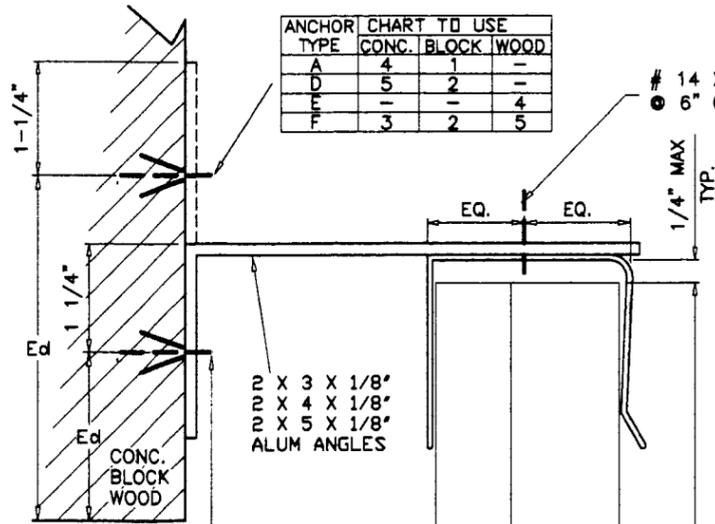
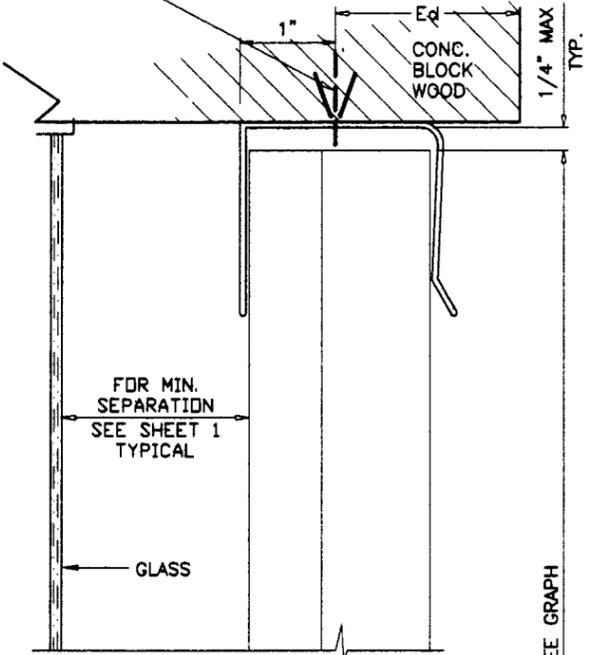
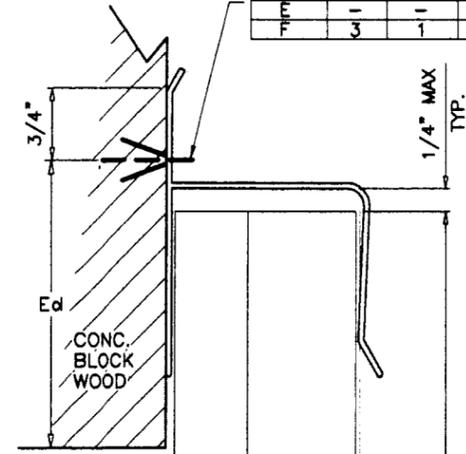
ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	4	1	-
D	5	2	-
E	-	-	4
F	3	2	5

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

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	6	1	-
D	6	3	-
E	-	-	6
F	6	3	6

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

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	3	1	-
D	4	1	-
E	-	-	3
F	3	1	4



SECTION A-A

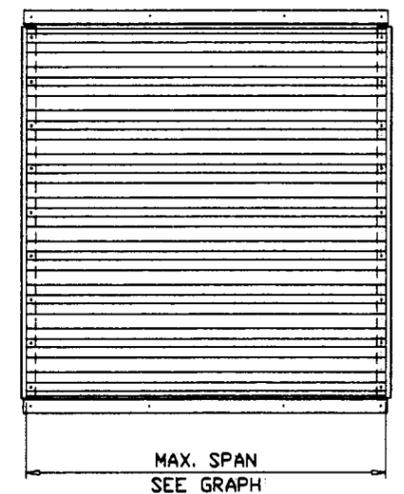
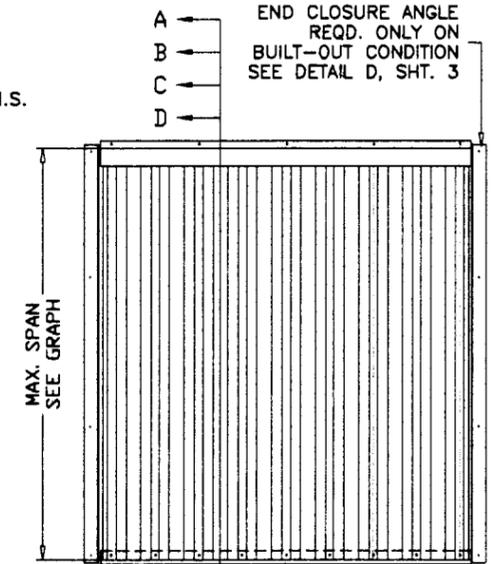
SECTION B-B

SECTION C-C

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

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

HEADER AND SILL DETAILS CAN BE USED IN ANY COMBINATIONS.



TYPICAL ELEVATION

PANELS CAN BE INSTALLED VERTICALLY OR HORIZONTALLY USING APPLICABLE ANCHORING DETAILS.

Approved as complying with the Florida Building Code
Date 06/06/2002
NOA# 02-0309-02
Miami Dade Product Control Division
By Helmy A. Helmy

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

MAR 28 2002

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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revisions:	no	date	by	description

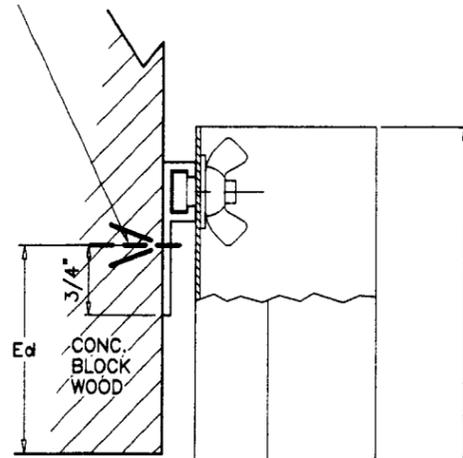
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dr. by: HAMID	chk. by:

drawing no.
01-38
sheet 2 of 5

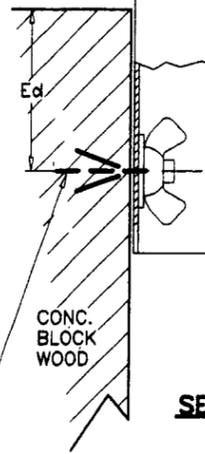
PANELS\01-38ST

WALL MOUNTS

ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	6	3	-
D	6	4	-
E	-	-	6
F	5	3	6

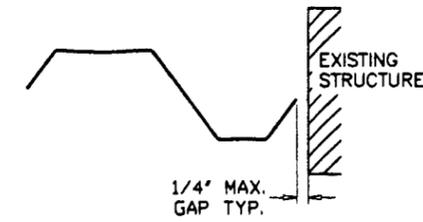
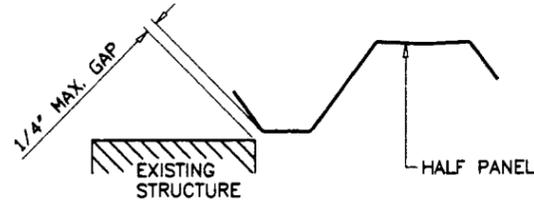
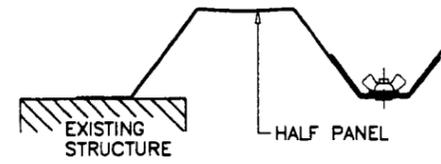
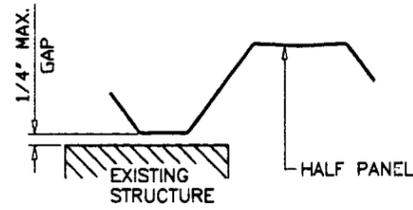


MAX. SPAN SEE GRAPH



SECTION D-D

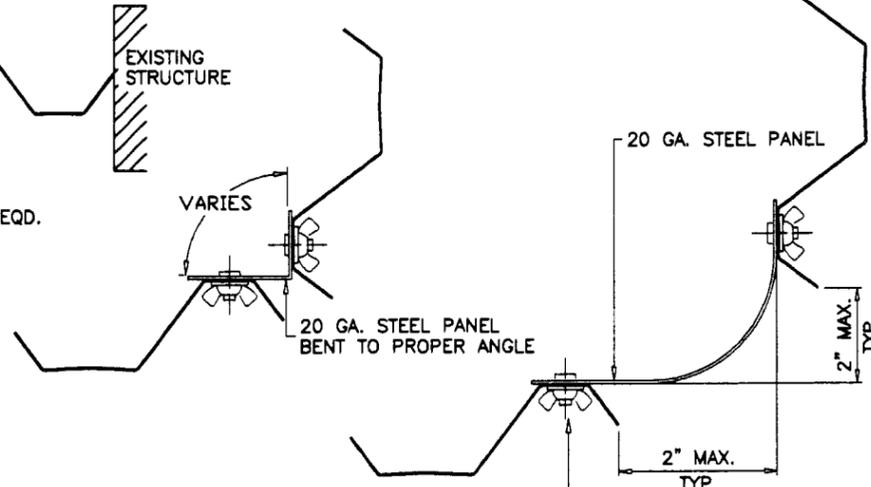
ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
D	6	6	-
E	-	-	6
F	6	5	6



PANELS FASTENED AT LAP JOINTS WITH 1/4" Ø X 1/2" STUDS WITH WING NUT & WASHER @ 24" O.C.

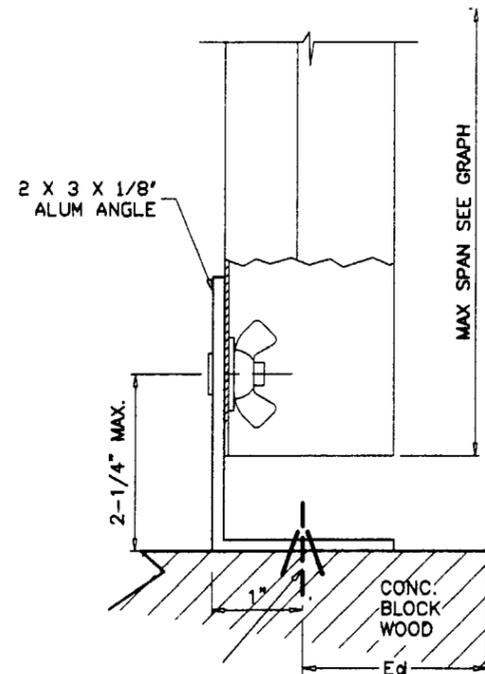


TRAP WINDOW DETAIL
HALF PANEL TO BE USED IN SHORTER OPENING AS REQD.



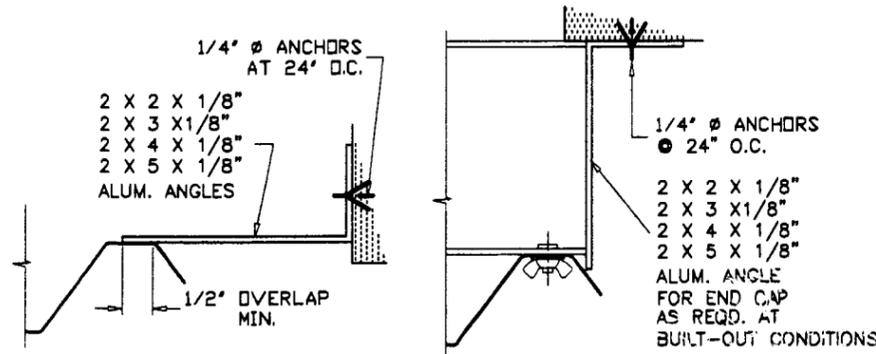
CORNER DETAILS

1/4" Ø X 1/2" STUDS WITH WING NUT & WASHER @ 24" O.C.



ANCHOR CHART TO USE			
TYPE	CONC.	BLOCK	WOOD
A	4	1	-
D	5	3	-
E	-	-	2
F	4	2	4

ALT. ANGLE HEADER SIMILAR



DETAIL D END CAP BUILT-OUT CONDITION

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

MAR 28 2002

Approved as complying with the Florida Building Code
Date 06/06/2002
NOA# 02-0304-02
Miami Dade Product Control Division
By Helmy A. Hader

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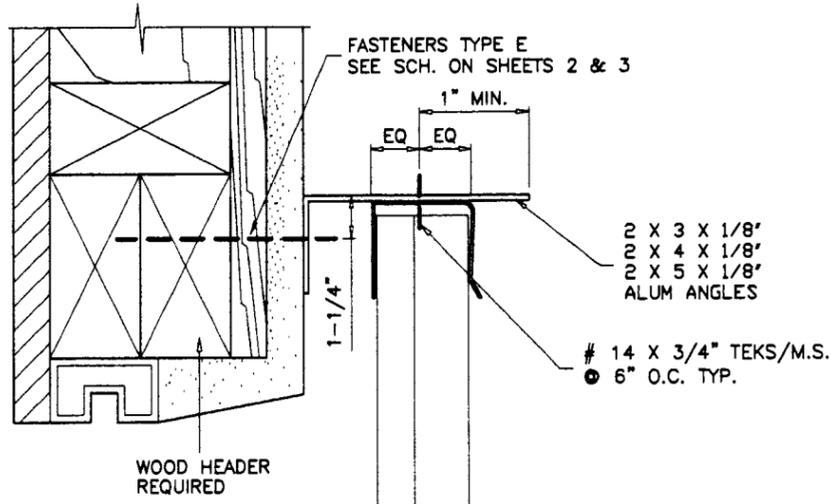
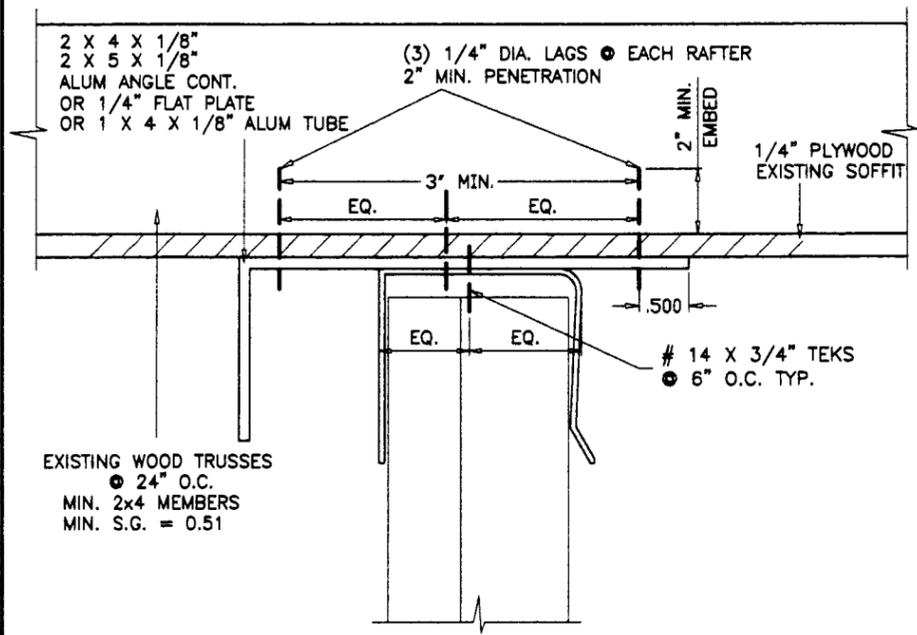
20 GA. GALVANIZED STEEL STORM PANEL
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1793 W 37TH STREET, BAY 8
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TEL. (305) 823-1023 FAX. (305) 823-4678

revisions:	no	date	by	description

date: 08-13-01
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

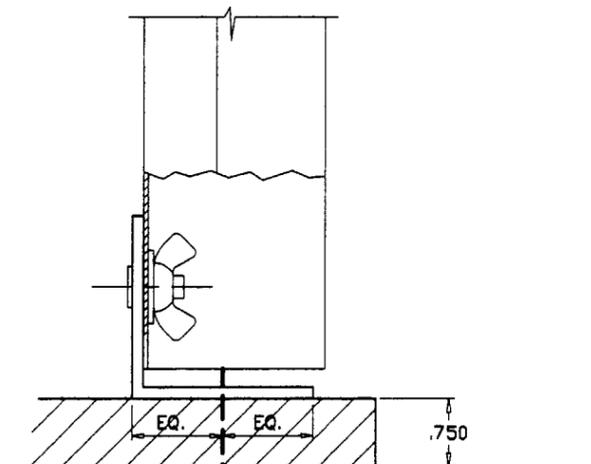
drawing no.
01-38
sheet 3 of 5

PANELS\01-38ST



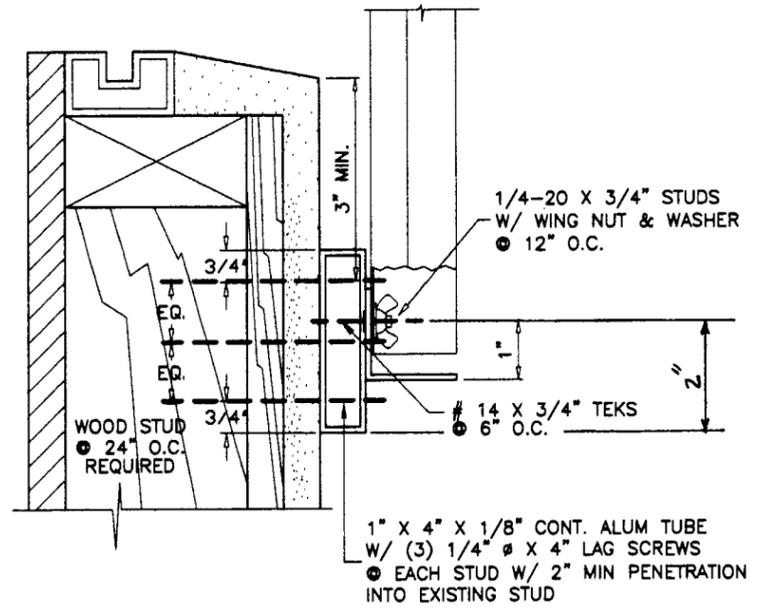
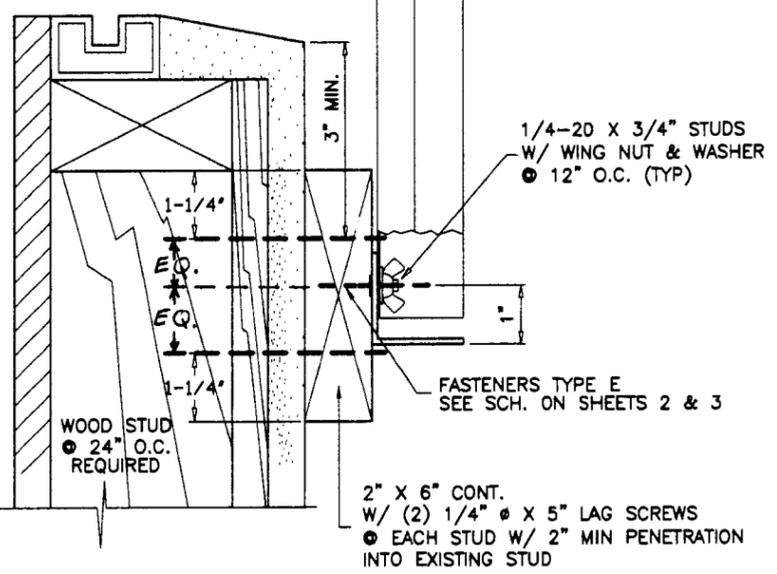
HEADER CONNECTION TO WOOD TRUSSES

FOR SHUTTER HEIGHT OF 110" MAX. DESIGN LOAD = 37 PSF
 FOR SHUTTER HEIGHT OF 8 FT. MAX. DESIGN LOAD = 42 PSF
 FOR SHUTTER HEIGHT OF 7 FT. MAX. DESIGN LOAD = 48 PSF
 FOR SHUTTER HEIGHT OF 6 FT. MAX. DESIGN LOAD = 57 PSF
 FOR SHUTTER HEIGHT OF 5 FT. MAX. DESIGN LOAD = 68 PSF



ANCHOR TYPE	UPTD 40 PSF			UPTD 70 PSF		
	CONC.	BLOCK	WOOD	CONC.	BLOCK	WOOD
A	12	7.7	-	12	4.4	-
D	12	6.8	-	9.4	3.9	-
E	-	-	12	-	-	8.1
F	12	10	12	9.6	5.7	12

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



INSTALLATION DETAIL ON EXISTING WOOD STUDS (1/4"-1")

FOR SHUTTER HEIGHT OF 128" MAX. DESIGN LOAD = 40 PSF
 FOR SHUTTER HEIGHT OF 9 FT. MAX. DESIGN LOAD = 55 PSF
 FOR SHUTTER HEIGHT OF 8 FT. MAX. DESIGN LOAD = 67 PSF

ABOVE DETAILS SHOWS CONNECTION OF 2X6 BUCK & 1X4 ALUM TUBE TO WOOD STUDS TO PROVIDE A CONTINUOUS SURFACE FOR SHUTTER INSTALLATION.
 FOR INSTALLATION DETAILS OF HEADER/SILL TO CONTINUOUS WOOD MEMBERS SEE SHEETS 2 & 3.

Approved as complying with the Florida Building Code
 Date 06/06/2002
 NOA# 02-0809-02
 Miami Dade Product Control Division
 By *Helmy A. Webb*

Engr. DR. HUMAYUN FAROOQ
 STRUCTURES
 FLA. PE # 16557
 MAR 28 2002

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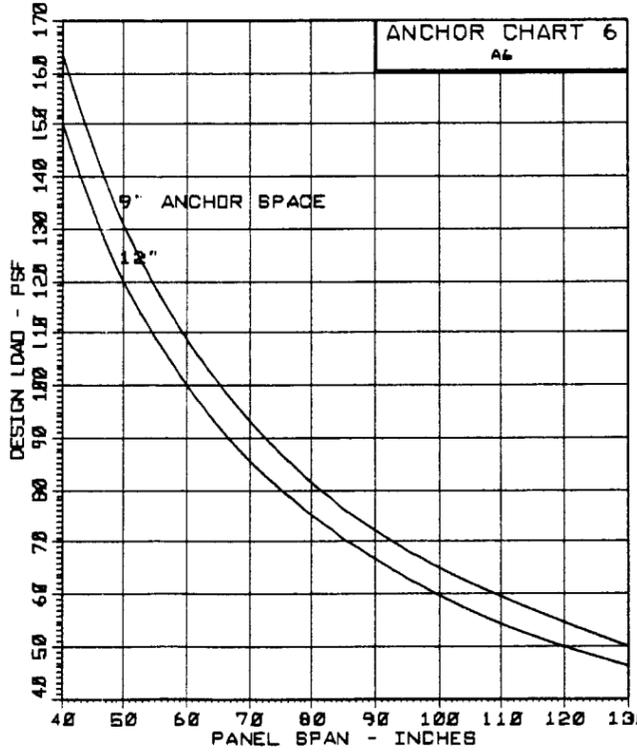
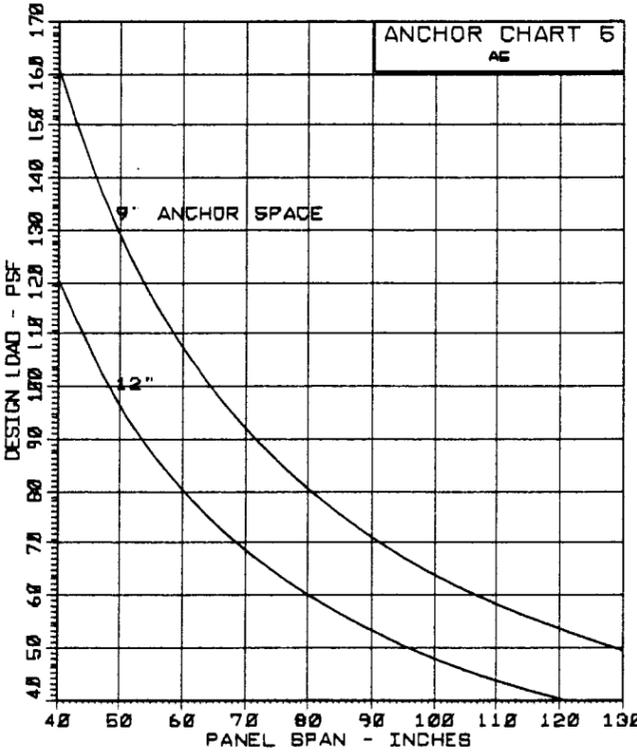
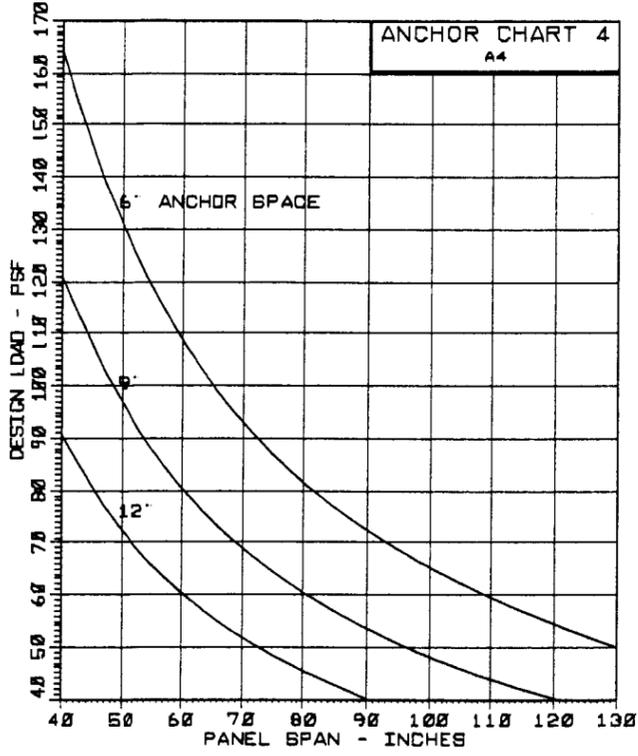
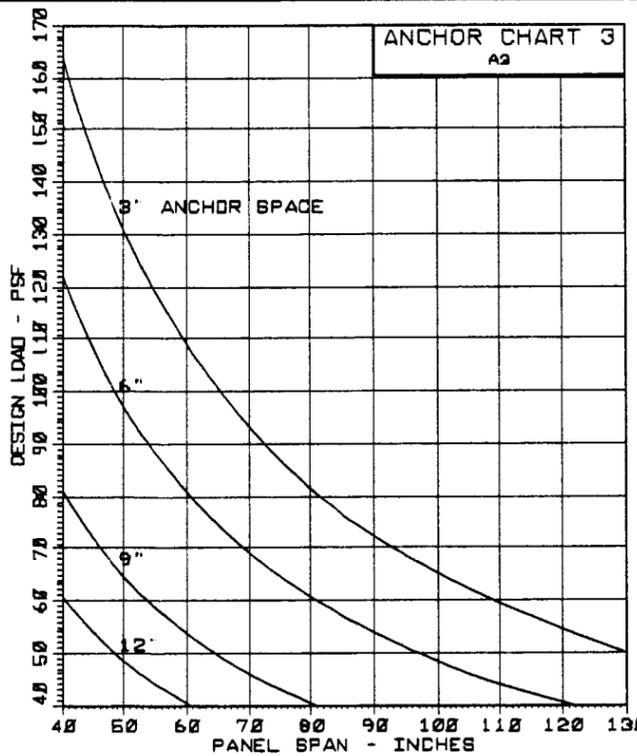
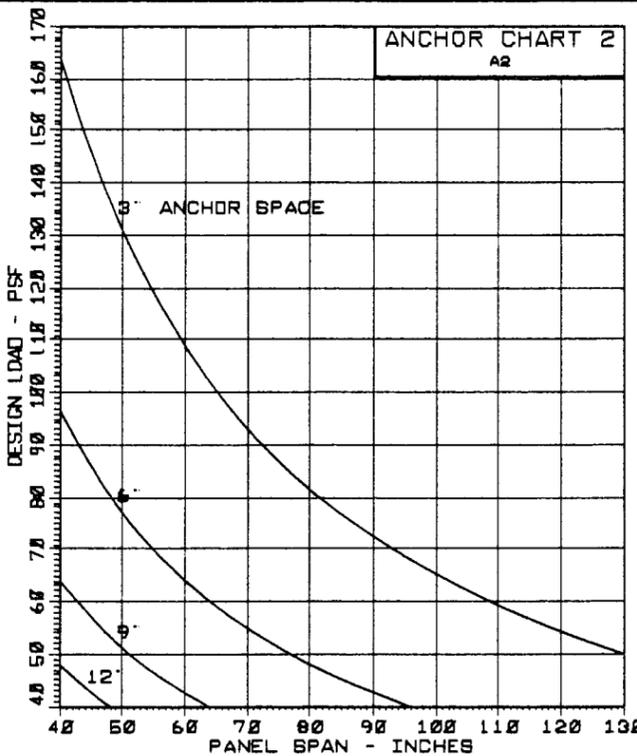
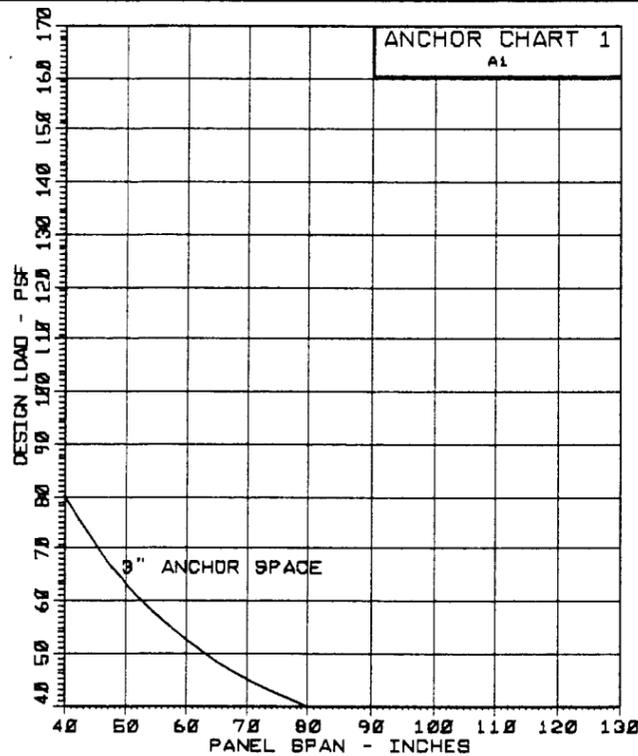
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 PANELS\01-38ST

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no.	date	by	description

date: 08-13-01
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drawing no.
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 sheet 4 of 5



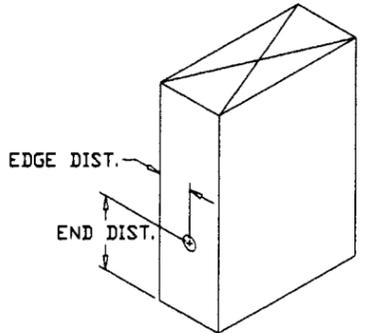
FASTENER SPACING IN MASONRY

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 = 3/4"
TYPICAL END DISTANCE IN WOOD = 1"
NO REDUCTION FACTOR IS REQUIRED



- TYPICAL ANCHORS:**
- ANCHOR (A) = 1/4" DIA. TAPCONS (BY ELCO) OR EQUIV. CONC. ANCHOR HOLDING CURRENT N.O.A.
1-3/4" EMBEDMENT INTO 3000 PSI CONC.
1-1/4" EMBEDMENT INTO C-90 BLOCK
- ANCHOR (D) = 1/4" RAWL CALK-IN
TOTAL ANCHOR BODY INTO 3000 PSI CONC. OR C-90 BLOCK
- ANCHOR (E) = 1/4" DIA. SMS/LAG SCREWS
1-1/2" MIN PENETRATION INTO WOOD (S.G.=0.55)
- ANCHOR (F) = 1/4" DIA. PANELMATE ANCHORS (ELCO-TEXTRON)
1-7/8" EMBEDMENT INTO 3000 PSI CONC.
1-1/4" EMBEDMENT INTO C-90 BLOCK
1-7/8" MIN PENETRATION INTO WOOD (S.G.=0.55)

NOTE: ANCHORS EMBEDMENT SHOWN IS BEYOND WALL & FLOOR COVERINGS (STUCCO, TILES, ETC.)

USE CHARTS 1 THRU 6 TO VERIFY ANCHOR REQUIREMENTS AND STRESS LIMITATIONS OF LOAD/SPAN COMBINATIONS FOR HEADER AND SILL.

Approved as complying with the Florida Building Code
Date 06/06/2002
NOA# 02-6309-02
Miami Dade Product Control
Division
By Helmy A. M...

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

H

MAR 28 2002

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ENGINEERS, PLANNERS & PRODUCT DESIGN
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20 GA. GALVANIZED STEEL STORM PANEL
SHUTTER-TECH OF MIAMI INC.
1793 W 37TH STREET, BAY 8
HIALEAH, FL. 33012
TEL. (305) 823-1023 FAX. (305) 823-4678

revisions:	no	date	by	description

date: 08-13-01
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
01-38

sheet 5 of 5

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