



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

MIAMI-DADE COUNTY, FLORIDA
 METRO-DADE FLAGLER BUILDING

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

www.buildingcodeonline.com

NOTICE OF ACCEPTANCE (NOA)

MetalTech, Inc.
 7635 West 2nd Court
 Hialeah, Florida 33014

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: 0.031" (min.) Steel Storm Panels Shutter

APPROVAL DOCUMENT: Drawing No. 98001, titled "Maximum Impact Storm Panel", sheets 1 through 7 of 7, prepared by Ramms Engineering, Inc., dated January 10, 1998, last revision dated January 06, 2006, signed and sealed by Robert S. Monsour, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and expiration 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 revises & renews NOA # 01-1224.07 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

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



Helmy A. Makar
 06/01/2006

NOA No 06-0110.04
 Expiration Date: 03/22/2011
 Approval Date: 06/01/2006
 Page 1

MetalTech, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #98-0304.03

A. DRAWINGS:

1. *Drawing No. 98001, titled "24 ga. maximum impact storm panel", prepared by Ramms Engineering, Inc., dated January 10, 1998, last revised on August 14, 1998, sheets 1 through 7 of 7, signed and sealed by Robert S. Monsour, P.E.*

B. TESTS:

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of a 24 ga. steel storm panels, prepared by Construction Testing Corporation, Report No. 98-003, dated 02/27/98, signed and sealed by Christopher G. Tyson, P.E.*
2. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of aluminum storm panels, prepared by Construction Testing Corporation, Report No. 98-005, dated 05/21/98, signed and sealed by Christopher G. Tyson, P.E.*

C. CALCULATIONS:

1. *Comparative Analysis, dated February 18, 1998, pages 1 through 4, prepared by Ramms Engineering, Inc., signed and sealed by Robert S. Monsour, P.E.*
2. *Revised calculations for Comparative Analysis and Anchor Spacing Analysis, dated June 4, 1998, pages 1 through 49, prepared by Ramms Engineering, Inc., signed and sealed by Robert S. Monsour, P.E.*
3. *Revised calculations for Anchor Spacing Analysis, dated August 3, 1998, pages 1 through 35, prepared by Ramms Engineering, Inc., signed and sealed by Robert S. Monsour, P.E.*
4. *Revised calculations for Anchor Spacing Analysis, dated September 1, 1998, pages 1 through 94, prepared by Ramms Engineering, Inc., signed and sealed by Robert S. Monsour, P.E.*

D. MATERIAL CERTIFICATION:

1. *Mill Certified Inspection Report dated December 10, 1997, prepared by Kieh Co., for steel panel.*
2. *Certified Tensile Test Report by Certified Testing Laboratories, Report No. CTL-076D, dated 02/04/98, signed and sealed by Ramesh Patel, P.E.*



Helmy A. Makar, P. E.

Product Control Examiner

NOA No 06-0110.04

Expiration Date: 03/22/2011

Approval Date: 06/01/2006

MetalTech, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #00-1207.03

A. DRAWINGS:

1. *Drawing No. 98001, titled "24 ga. maximum impact storm panel", prepared by Ramms Engineering, Inc., dated January 10, 1998, last revised on December 15, 2000, sheets 1 and 5 of 7, August 14, 1998, sheets 2, 3, 6, and 7 of 7, and on December 4, 2000, sheet 4 of 7, all signed and sealed by Robert S. Monsour, P.E. on December 22, 2000.*

B. TESTS:

1. *None.*

C. CALCULATIONS:

1. *None.*

D. MATERIAL CERTIFICATION:

1. *None.*

3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #01-0205.01

A. DRAWINGS:

1. *Drawing No. 98001, titled "24 ga. maximum impact storm panel", prepared by Ramms Engineering, Inc., dated January 10, 1998, last revised on January 17, 2001, signed and sealed by Robert S. Monsour, P.E. on January 29, 2001.*

B. TESTS:

1. *None.*

C. CALCULATIONS:

1. *None.*

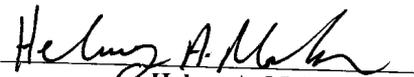
D. MATERIAL CERTIFICATION:

1. *None.*

4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 01-1224.07

A. DRAWINGS

1. *Drawing No. 98001, titled "Maximum Impact Storm Panel", sheets 1 through 7 of 7, prepared by Ramms Engineering, Inc., dated January 10, 1998, last revision dated September 09, 2002 signed and sealed by Robert S. Monsour, P.E.*


Helmy A. Makar, P. E.

Product Control Examiner

NOA No 06-0110.04

Expiration Date: 03/22/2011

Approval Date: 06/01/2006

MetalTech, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

B. TESTS

1. *Test reports on Large Missile Impact Test per SFBC, PA 201-94 along with installation diagram of Steel Storm Panel Shutter, prepared by American Test Lab of South Florida, Test Report No. 0 502.02-02, dated May 09, 2002, signed and sealed by William R. Mehner, P.E.*
2. *Addendum to Test reports on Large Missile Impact Test per SFBC, PA 201-94 of Steel Storm Panel Shutter, prepared by American Test Lab of South Florida, Test Report No. 0.502.02-02, dated July 09, 2002, signed and sealed by William R. Mehner, P.E.*

C. CALCULATIONS

1. *Comparative analysis, prepared by prepared by Ramms Engineering, Inc., dated January 14, 2002, signed and sealed by Robert S. Monsour, P.E.*

D. MATERIAL CERTIFICATIONS

1. *None.*

5. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 98001, titled " Maximum Impact Storm Panel ", sheets 1 through 7 of 7, prepared by Ramms Engineering, Inc., dated January 10, 1998, last revision dated January 06, 2006, signed and sealed by Robert S. Monsour, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

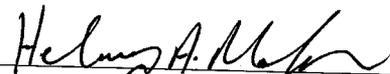
1. *Revised calculations for Anchor Spacing Analysis, dated January 06, 2006, 88 pages, prepared by Ramms Engineering, Inc., signed and sealed by Robert S. Monsour, P.E.*

D. QUALITY ASSURANCE

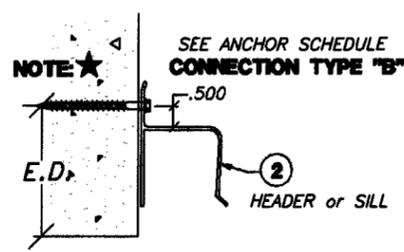
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

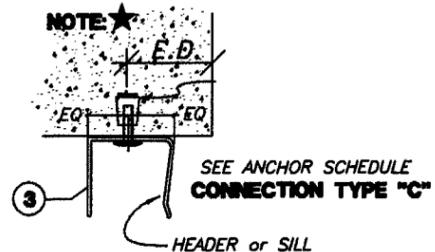
1. *None.*



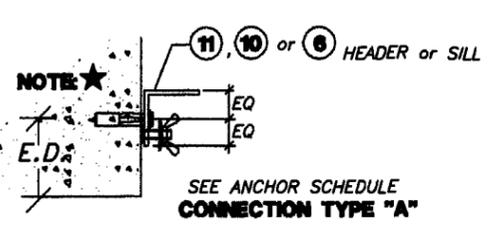
Helmy A. Makar, P. E.
Product Control Examiner
NOA No 06-0110.04
Expiration Date: 03/22/2011
Approval Date: 06/01/2006



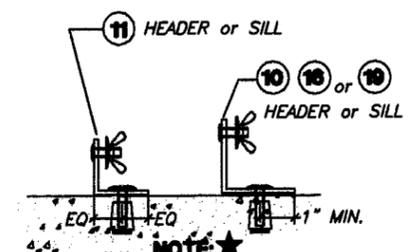
DETAIL 1



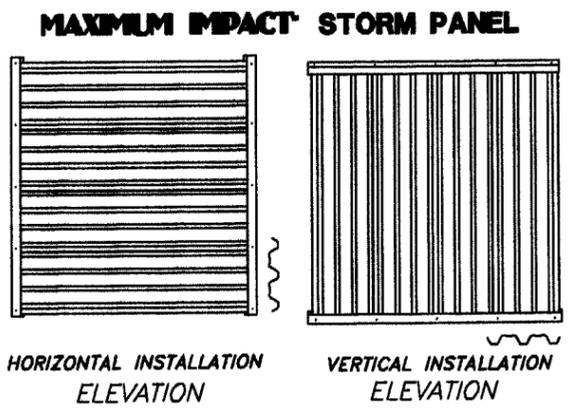
DETAIL 2



DETAIL 3

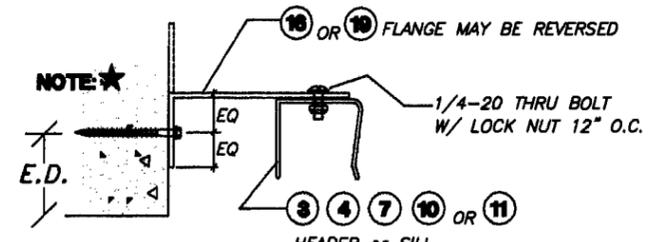


DETAIL 4

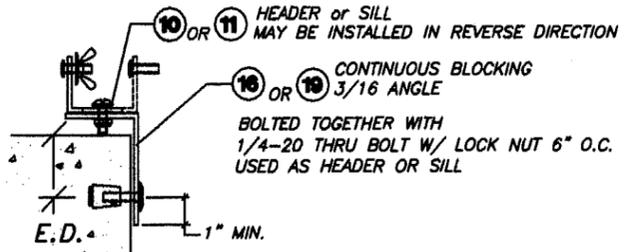


HORIZONTAL INSTALLATION ELEVATION

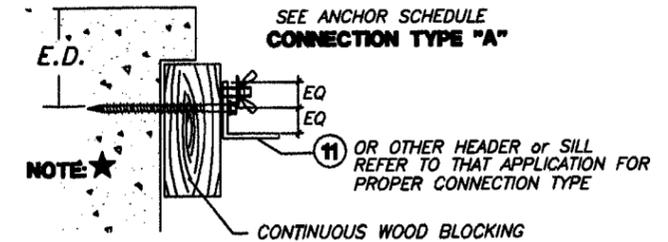
VERTICAL INSTALLATION ELEVATION



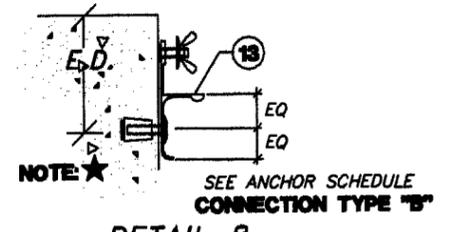
DETAIL 5



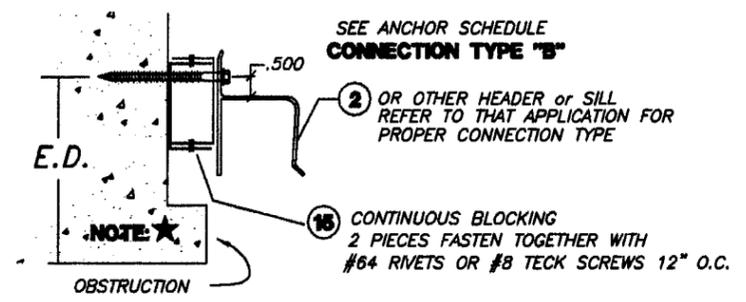
DETAIL 6



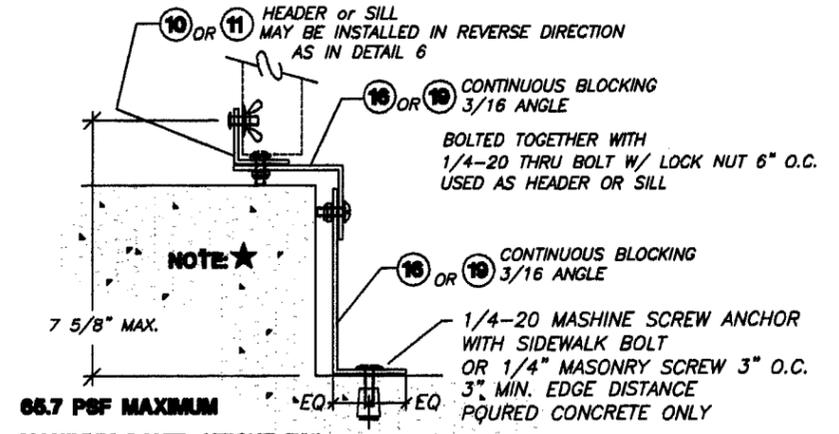
DETAIL 7



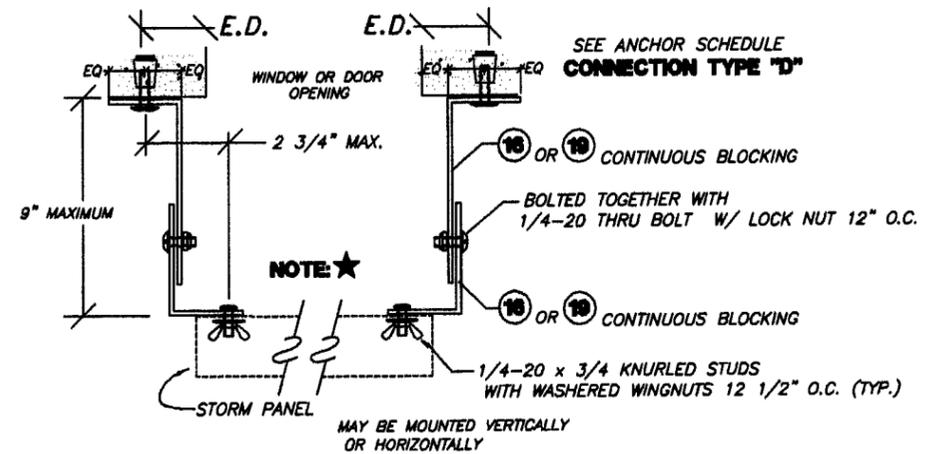
DETAIL 8



DETAIL 9



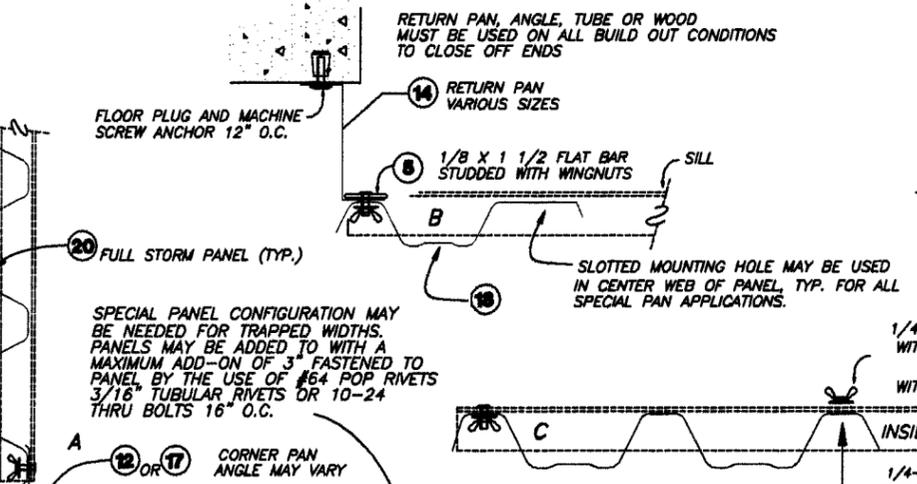
DETAIL 10



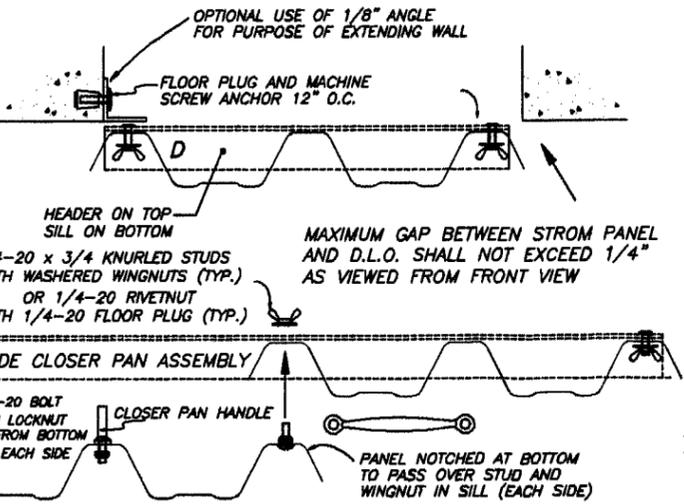
DETAIL 11

NOTE: ★
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO WITHSTAND THE ADDITIONAL LOADS AND INSURE PROPER ANCHORAGE. SHUTTER SYSTEM MAY BE INSTALLED INTO WOOD, CONCRETE, MASONRY.

WHEN ANCHORING TO WOOD, THE WOOD MUST BE A MINIMUM 2 X 4 EQUAL TO #2 SOUTHERN PINE WITH 0.55 SPECIFIC GRAVITY AND STRUCTURALLY PART OF THE FRAMING STRUCTURE OR SECURELY ATTACHED TO FRAMING STRUCTURE



**PLAN VIEWS
DETAIL 12
A, B, C & D**



Robert S. Monsour
1/16/1955
ROBERT S. MONSOUR, PE
EB-0006024
RAMPS ENGINEERING, INC.

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 06-0110-04
Expiration Date: 03/22/2011
By: *Helmut A. Meier*
Miami Dade Product Control Division

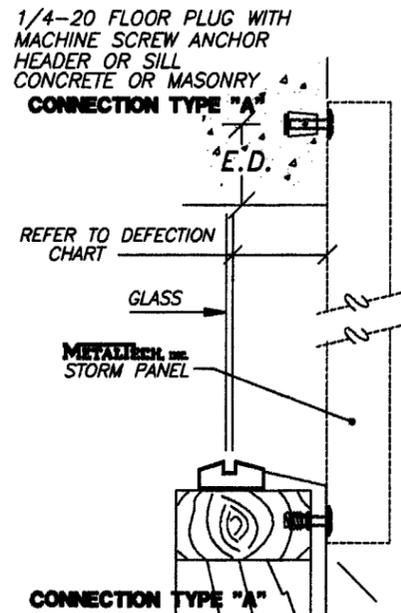
BUILDING CODE COMPLIANCE

REVISIONS	BY
03/20/98	SP
06/12/98	SP
08/14/98	SP
01/17/01	SP
01/06/06	SP

RAMPS ENGINEERING, INC.
Structural Design
2100 W. 76th STREET, SUITE 311
HALEAH, FLORIDA 33016
EB 0006024

METALTECH, INC.
7635 W. SECOND CT. HIALEAH, FL 33014
EST. 1957

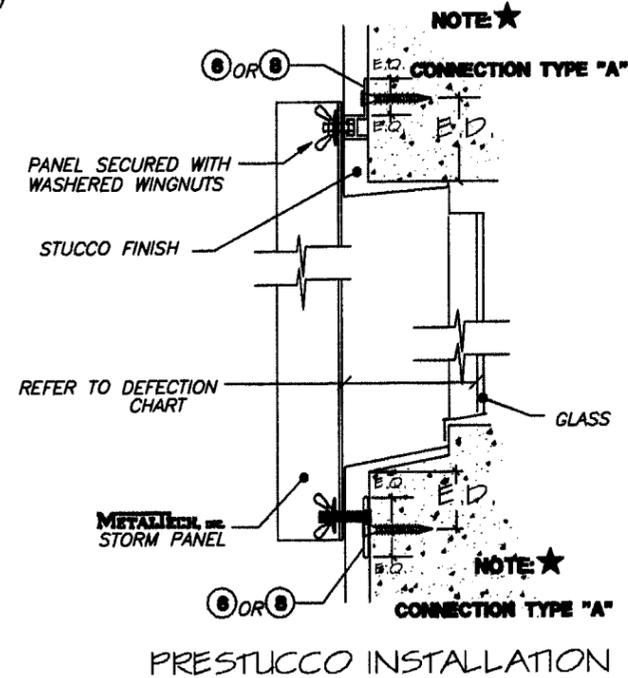
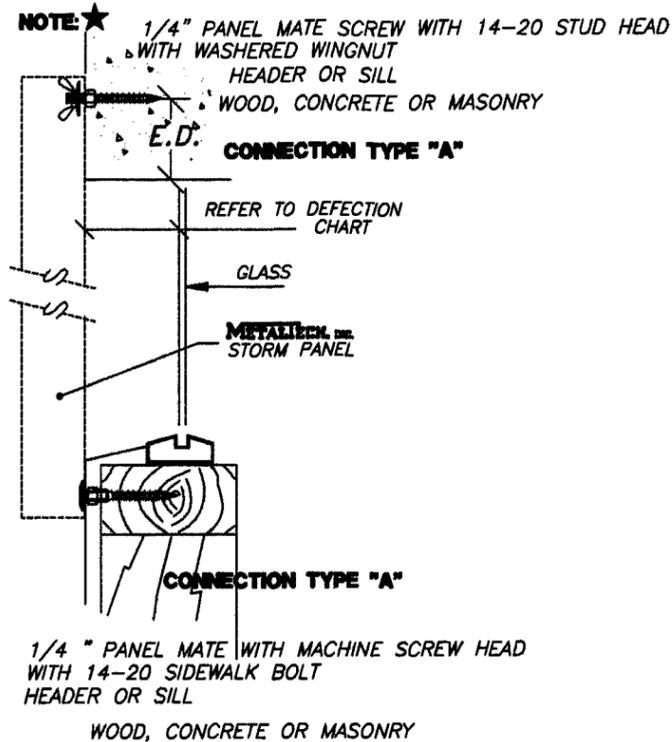
REVISED	BY
SEP / JRB / RSM	
DATE	01/10/98
REVISION	SHOWN
REV	98001
REV	2
REV	7



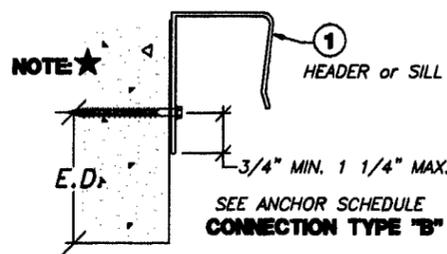
NOTE:
 THE METALTECH STORM PANEL MAY BE INSTALLED WITHOUT THE USE OF AN EXTRUDED HEADER OR SILL. THE SHUTTER MAY BE ANCHORED DIRECTLY TO THE STRUCTURE WITH THE USE OF ONE OR A COMBINATION OF DETAIL 13

NOTE ★

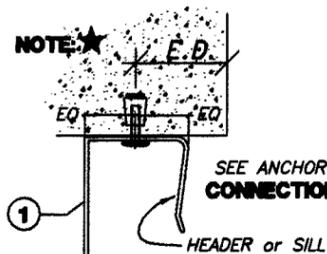
DETAIL 13



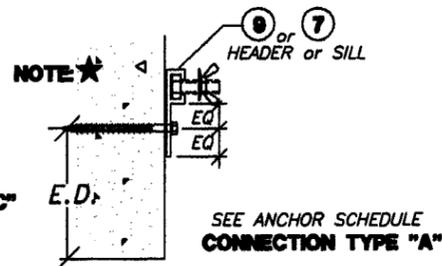
DETAIL 14



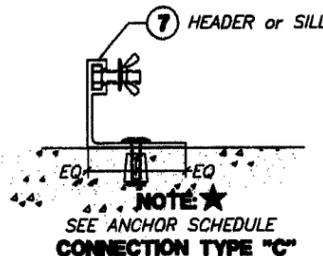
DETAIL 15



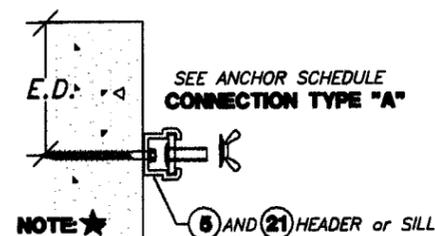
DETAIL 16



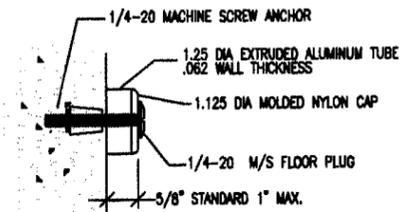
DETAIL 17



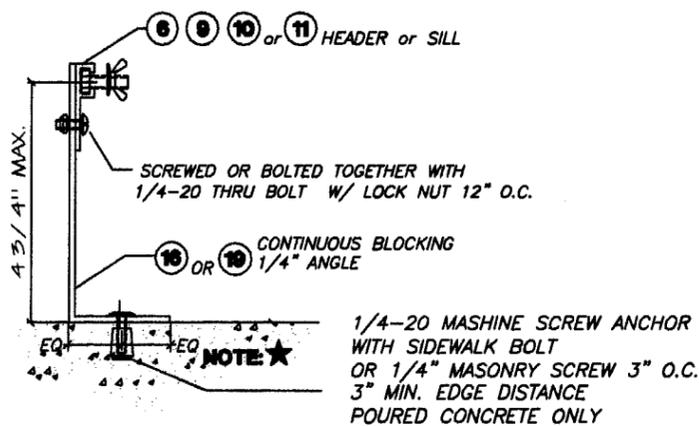
DETAIL 18



DETAIL 19



DETAIL 20



59.5 PSF MAXIMUM / PANEL HEIGHT 100" MAXIMUM

DETAIL 21

ADJUSTABLE HEADER OR SILL

NOTE: ★

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO WITH STAND THE ADDITIONAL LOADS AND INSURE PROPER ANCHORAGE. SHUTTER SYSTEM MAY BE INTSALL INTO WOOD, CONCRETE, MASONRY.

WHEN ANCHORING TO WOOD, THE WOOD MUST BE A MINIMUM 2 X 4 EQUAL TO #2 SOUTHERN PINE WITH 0.55 SPECIFIC GRAVITY AND STRUCTURALLY PART OF THE FRAMING STRUCTURE OR SUCURELY ATTACHED TO FRAMING STRUCTURE

Robert S. Monsour
 11/20/05

ROBERT S. MONSOUR, PE
 EB-0006024
 RAMMS ENGINEERING, INC.

PRODUCT REVISED as complying with the Florida Building Code
 Acceptance No. 06-0119.04
 Expiration Date 03/22/2011
 By *Helmut A. Miller*
 Miami Dade Product Control Division

BUILDING CODE COMPLIANCE

REVISIONS	BY
03/20/98	SP
04/20/98	SP
06/12/98	SP
08/14/98	SP
01/17/01	SP
01/11/02	SP
01/06/06	SP

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 76th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

METALTECH, INC.
 7635 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957
 WORLD-WIDE

DATE	BY
SEP / JRB / RSM	
01/10/97	
SHOWN	
98001	
3	
7	

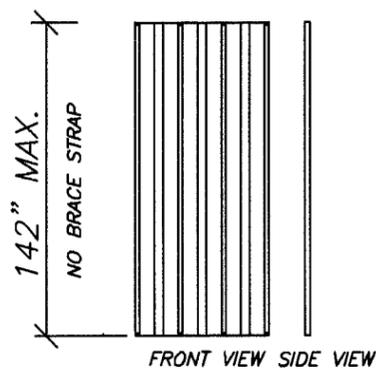
24 ga. STEEL

DESIGN PRESSURE	PANEL SPAN
21.93	142"
25.51	139"
29.99	136"
35.36	132"
37.44	130"
39.10	129"
40.77	127"
44.40	124"
47.81	123
51.23	119"
58.06	112"
61.47	109"
66.85	104"
71.46	100"
75.30	95"
81.45	88"
86.83	82"
91.44	78"

USE 59.5 P.S.F. COLUMN AND 124" PANEL SPAN ON ANCHOR SCHEDULE FOR ANCHOR SPACING FOR SPANS OVER 124"

THE METALTECH STORM PANELS MAY BE INSTALLED WITH OR WITHOUT THE HORIZONTAL BRACE STRAP. REFER TO PANEL DEFLECTION CHARTS.

24 GA MAXIMUM IMPACT STEEL STORM PANEL

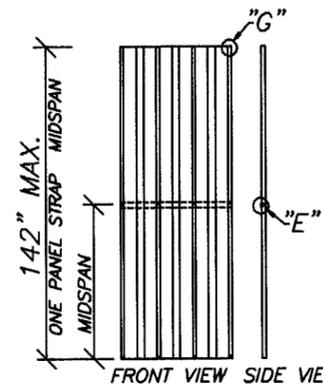


142" MAX. PANEL HEIGHT
NO PANEL STRAP IS REQUIRED

**HIGH VELOCITY HURRICANE ZONE
PANEL DEFLECTION CHART
WITHOUT HORIZONTAL STRAP**

PANEL HEIGHT	0"-90"	90"-142"
WALL MOUNT	2 5/8"	3 1/2"
INSIDE MOUNT	2 5/8"	3 1/2"
BUILD OUT	2 5/8"	3 1/2"

MINIMUM DISTANCE BETWEEN GLASS AND PANEL



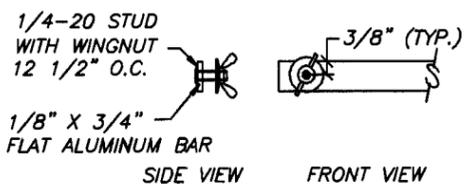
142" MAX. PANEL HEIGHT
ONE PANEL STRAP LOCATED MIDSPAN

**HIGH VELOCITY HURRICANE ZONE
PANEL DEFLECTION CHART
WITH HORIZONTAL STRAP**

PANEL HEIGHT	0"-104"	104"-142"
WALL MOUNT	2"	2 1/4"
INSIDE MOUNT	2"	2 1/4"
BUILD OUT	2"	2 1/4"

MINIMUM DISTANCE BETWEEN GLASS AND PANEL

HORIZONTAL BRACE STRAP



DETAIL "E"

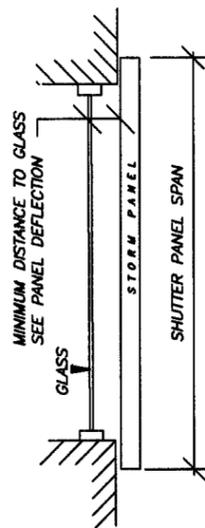


MAXIMUM GAP BETWEEN PANEL AND HEADER IS 1/4" (TYP.)

DETAIL "F"

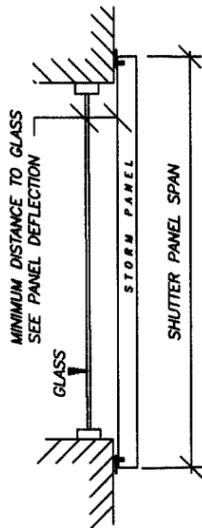
HEADER AND SILL TYPE MAY VARY, DEPENDING ON APPLICATION

DETAIL 13 ON SHEET 3



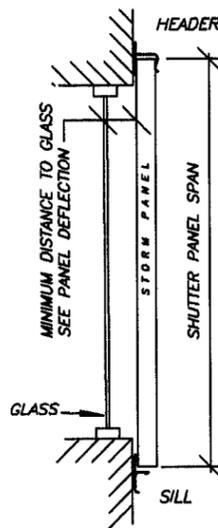
DETAIL 13 ON SHEET 3

DETAIL 3,4, & 8 ON SHEET 2



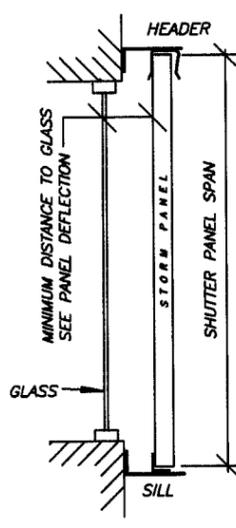
DETAIL 3,4, & 8 ON SHEET 2

DETAIL 1 ON SHEET 2
DETAIL 15 ON SHEET 3



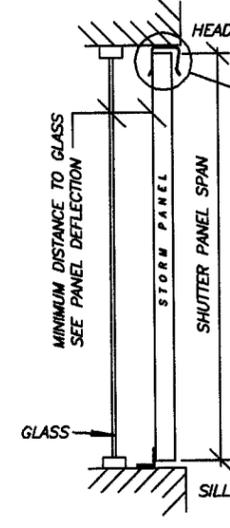
DETAILS 3,4 AND 8 ON SHEET 2

DETAILS 5,7,9,10 AND 11 ON SHEET 2

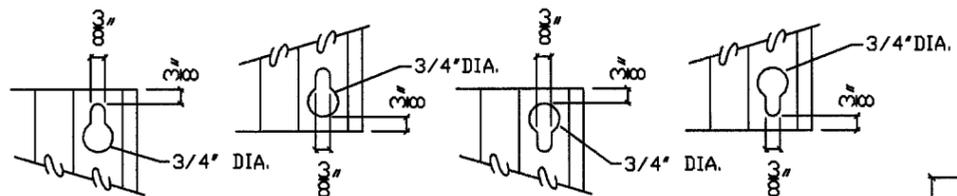


DETAILS 5,7,9,10 AND 11 ON SHEET 2

DETAIL 2 ON SHEET 2
DETAIL 16 ON SHEET 3



DETAIL 4 ON SHEET 2



FASTENER MUST BE IN NARROW PORTION OF KEY HOLE, IF NOT A KEY HOLE WASHER SHOULD BE USED
MOUNTING HOLE MAY ALSO BE A 9/16" DIA. CIRCLE

WALL MOUNT

ANCHORING PANEL TOP & BOTTOM NO HDR. OR SILL

WALL MOUNT

ANCHORING PANEL TOP & BOTTOM WITH STUDDED HDR/SILL

WALL MOUNT

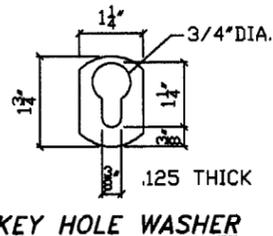
WITH HDR. AND SILL

BUILD OUT

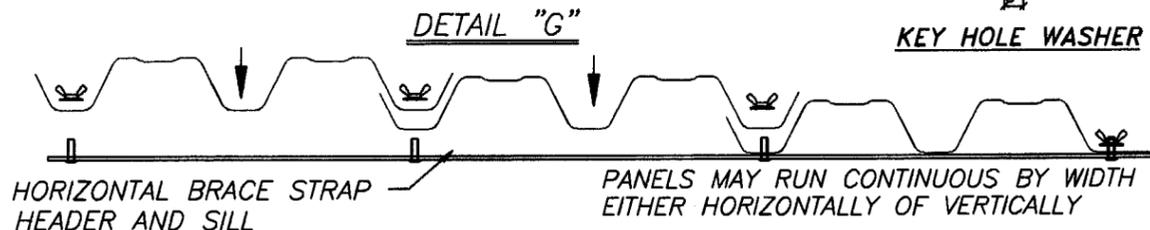
WITH HDR. AND SILL

INSIDE MOUNT

WITH HDR. AND SILL



KEY HOLE WASHER



EXPLODED ASSEMBLY

TYPICAL SECTION VIEWS

LICENSE
NO. 11000
11/10/05
11/10/05

ROBERT S. MONSOUR, PE
EB-0006024
RAMMS ENGINEERING, INC.

PRODUCT REVISED as complying with the Florida Building Code
Acceptance No. 06-0110.04
Expiration Date 03/22/2011
By Helmut A. Mohr
Miami Dade Product Control Division

BUILDING CODE COMPLIANCE

REVISIONS	BY
03/20/98	SP
06/12/98	SP
08/14/98	SP
12/04/00	SP
01/17/01	SP
01/11/02	SP
09/09/02	SP

RAMMS ENGINEERING, INC.

Structural Design

2100 W. 79th STREET, SUITE 311
HALEAH, FLORIDA 33016

EB 0006024

METALTECH, INC.

7635 W. SECOND CT. HIALEAH, FL 33014



DATE	APPROVED
01/10/98	SHOWN
98001	4
7	

ANCHOR SCHEDULE

REVISIONS	BY
03/20/98	SP
06/12/98	SP
08/14/98	SP
12/15/00	SP
01/17/01	SP
01/05/06	SP

NOTES:

SPANS AND LOADS SHOWN IN THIS SCHEDULE ARE FOR DETERMINING ANCHOR SPACING ONLY. FOR ALLOWABLE SPANS VS. DESIGN LOADS REFER TO SHEET 4.

MINIMUM ENBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO AND/OR WALL FINISHES.

SHADED AREAS REPRESENT ANCHOR CONDITIONS THAT ARE NOT ACCEPTABLE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO WITH STAND THE ADDITIONAL LOADS AND INSURE PROPER ANCHORAGE. SHUTTER SYSTEM MAY BE INTSALL INTO WOOD, CONCRETE OR MASONRY .

ANCHOR SPACING vs DESIGN PRESSURE AND CONNECTION TYPE			UP TO 59.6 PSF										UPTO 71.5 PSF									
			POURED CONCTETE					CONCRETE BLOCK					POURED CONCTETE					CONCRETE BLOCK				
			CONECTION TYPE					CONECTION TYPE					CONECTION TYPE					CONECTION TYPE				
ANCHOR TYPE	PANEL	E.D.	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
	68" SPAN	3"	16	13	8	13	13	16	13	10	13	13	16	13	7	13	13	16	13	8	13	13
		2"	16	13	7	13	13	16	13	8	13	13	16	13	5	13	13	16	13	6	13	13
		1 1/4"	16	13	5	13	13	16	13	6	13	13	14	13	4	13	13	14	13	4	13	13
	88" SPAN	3"	16	13	6	13	13	16	13	7	13	13	14	6	5	9	10	14	6	6	9	10
		2"	15	11	5	13	13	15	11	6	13	13	12	6	4	8	9	12	6	5	8	9
		1 1/4"	13	10	4	13	13	13	10	5	13	13	11	5	3	7	8	11	5	4	7	8
	105" span	3"	14	6	5	9	10	14	7	6	9	10	11	4	4	5	4	12	4	5	5	4
		2"	12	6	4	8	9	12	6	5	8	9	10	4	4	5	4	10	4	4	5	4
		1 1/4"	11	5	3	7	8	11	5	4	7	8	9	3	3	4	4	9	3	3	4	4
	124" span	3"	11	4	4	5	4	12	4	5	5	4										
		2"	10	4	4	5	4	10	4	4	5	4										
		1 1/4"	9	3	3	4	3	9	3	3	4	3										
	68" SPAN	3"	16	13	7	13	13	13	13	6	13	13	15	13	6	13	13	11	11	5	11	11
		2"	15	13	6	13	13	12	12	5	12	12	13	13	5	13	13	10	10	4	10	10
		1 1/4"	14	13	5	13	13	10	10	4	10	10	12	12	4	12	12	9	9	3	9	9
	88" SPAN	3"	13	10	6	13	13	10	8	5	10	10	11	5	5	7	8	8	4	4	5	6
		2"	12	9	5	12	12	9	7	4	9	9	10	5	4	6	7	7	3	3	5	5
		1 1/4"	11	8	4	11	11	8	6	3	8	8	9	4	3	6	6	7	3	3	4	5
	105" span	3"	11	5	5	7	8	8	4	4	5	6	9	3	4	4	3	7		3	3	3
		2"	10	5	4	7	7	7	4	3	5	6	8	3	3	4	3	6		3	3	
		1 1/4"	9	4	3	6	7	7	3	3	4	5	8	3	3	4	3	6		3	3	
	124" span	3"	9	3	4	4	3	7		3	3	3										
		2"	8	3	3	4	3	6		3	3											
		1 1/4"	8	3	3	4	3	6		3												
	68" SPAN	3"	16	13	11	13	13	16	13	7	13	13	16	13	9	13	13	13	13	6	13	13
		2"	16	13	9	13	13	14	13	6	13	13	16	13	8	13	13	12	12	5	12	12
		1 1/4"	16	13	8	13	13	13	13	5	13	13	16	13	6	13	13	10	10	4	10	10
	88" SPAN	3"	16	13	9	13	13	12	9	5	12	12	16	8	7	11	12	10	5	4	6	7
		2"	16	13	7	13	13	11	8	4	11	11	15	7	6	10	11	9	4	4	6	6
		1 1/4"	16	13	6	13	13	10	7	4	10	10	14	7	5	9	10	8	4	3	5	6
	105" span	3"	16	8	7	11	13	10	5	4	7	8	15	5	6	7	5	8	3	4	4	3
		2"	16	7	6	10	12	9	4	4	6	7	13	5	5	6	5	8	3	3	4	3
		1 1/4"	14	7	5	9	10	8	4	3	5	6	12	4	4	5	4	7		3	3	
	124" span	3"	15	5	6	7	5	8	3	4	4	3										
		2"	13	5	5	6	5	8	3	3	4	3										
		1 1/4"	12	4	4	5	4	7		3	3											
	68" SPAN	3"	16	13	12	13	13	16	13	7	13	13	16	13	10	13	13	13	13	6	13	13
		2.5"	16	13	10	13	13	14	13	6	13	13	16	13	9	13	13	12	12	5	12	12
		2"	16	13	8	13	13	13	13	5	13	13	16	13	7	13	13	10	10	4	10	10
	88" SPAN	3"	16	13	9	13	13	12	9	5	12	12	16	10	8	13	13	10	5	4	6	7
		2.5"	16	13	8	13	13	11	8	5	11	11	16	9	7	12	13	9	4	4	6	6
		2"	16	13	6	13	13	10	7	4	10	10	16	8	5	11	12	8	4	3	5	6
	105" span	3"	16	10	8	13	13	10	5	4	7	8	16	6	7	8	3	8	3	4	4	3
		2.5"	16	9	7	13	13	9	4	4	6	7	16	6	6	8	3	8	3	3	4	3
		2"	16	8	5	11	13	8	4	3	5	6	14	5	4	7	3	7		3	3	3
	124" span	3"	16	6	7	8	7	8	3	4	4	3										
		2.5"	16	6	6	8	6	8	3	3	4	3										
		2"	14	5	4	7	5	7		3	3											

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 78th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

METALTECH, INC.
 7835 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957

BUILDING CODE COMPLIANCE

ROBERT S. MONSOUR, PE
 EB-0006024
 RAMMS ENGINEERING, INC.

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 06-0110.04
 Expiration Date 03/22/2011
 By Helmut A. Mohr
 Miami Data Product Control
 Division

DATE
SEP/JRB
 APPROVED
 DATE
01/10/98
 SCALE
 SHOWN
 JOB
 98001
 SHEET
5
 7

ANCHOR SCHEDULE

REVISIONS	BY
03/20/98	SP
06/12/98	SP
08/14/98	SP
01/17/01	SP
01/05/06	SP

NOTES:

SPANS AND LOADS SHOWN IN THIS SCHEDULE ARE FOR DETERMINING ANCHOR SPACING ONLY. FOR ALLOWABLE SPANS VS. DESIGN LOADS REFER TO SHEET 4.

MINIMUM ENBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO AND/OR WALL FINISHES.

SHADED AREAS REPRESENT ANCHOR CONDITIONS THAT ARE NOT ACCEPTABLE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO WITH STAND THE ADDITIONAL LOADS AND INSURE PROPER ANCHORAGE. SHUTTER SYSTEM MAY BE INTALL INTO WOOD, CONCRETE OR MASONRY.

ANCHOR SPACING vs DESIGN PRESSURE AND CONNECTION TYPE			UP TO 81.5 PSF										UPTO 91.4 PSF									
			POURED CONCTETE					CONCRETE BLOCK					POURED CONCTETE					CONCRETE BLOCK				
			CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE					CONNECTION TYPE				
ANCHOR TYPE	PANEL	E.D.	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
	68" SPAN	3"	15	10	6	13	13	16	10	7	13	13	13	7	5	9	11	13	7	6	9	11
		2"	14	9	5	13	13	14	9	6	13	13	12	6	4	8	9	12	6	5	8	10
		1 1/4"	12	8	4	12	12	12	8	4	12	12	11	5	3	7	9	11	5	4	7	9
	88" SPAN	3"	12	4	5	6	5	12	5	5	6	5	11	3	4	5	3	11	4	5	5	3
		2"	11	4	4	5	4	11	4	4	5	5	9	3	3	4	3	10	3	4	4	3
		1 1/4"	10	4	3	5	4	10	4	3	5	4	9	3	3	4	3	9	3	3	4	3
	105" span	3"																				
		2"																				
		1 1/4"																				
	124" span	3"																				
		2"																				
		1 1/4"																				
	68" SPAN	3"	13	8	5	12	13	9	6	4	9	9	11	5	5	8	9	8	4	4	6	7
		2"	11	7	5	11	11	8	5	4	8	8	10	5	4	7	8	8	4	3	5	6
		1 1/4"	10	7	4	10	10	8	5	3	7	8	9	4	3	6	7	7	3	3	4	5
	88" SPAN	3"	10	4	4	5	4	7	3	3	4	3	9	3	4	4	3	7		3	3	
		2"	9	3	3	4	4	7		3	3	3	8	3	3	3		6		3		
		1 1/4"	8	3	3	4	3	6		3	3		7		3	3		5				
	105" span	3"																				
		2"																				
		1 1/4"																				
	124" span	3"																				
		2"																				
		1 1/4"																				
	68" SPAN	3"	16	13	8	13	13	11	7	5	11	11	16	8	7	12	13	10	5	4	7	8
		2"	16	11	7	13	13	10	6	4	10	10	16	8	6	10	12	9	4	4	6	7
		1 1/4"	16	10	6	13	13	9	6	3	9	9	14	7	5	9	11	8	4	3	5	6
	88" SPAN	3"	15	6	6	8	6	9	3	4	4	4	14	4	6	6	4	8	3	3	3	3
		2"	14	5	5	7	6	8	3	3	4	3	12	4	5	5	4	7		3	3	
		1 1/4"	12	5	4	6	5	7	3	3	4	3	11	4	4	5	3	6			3	
	105" span	3"																				
		2"																				
		1 1/4"																				
	124" span	3"																				
		2"																				
		1 1/4"																				
	68" SPAN	3"	16	13	9	13	13	11	7	5	11	11	16	10	8	13	13	10	5	4	7	8
		2.5"	16	13	7	13	13	10	7	4	10	10	16	9	7	13	13	9	4	4	6	7
		2"	16	12	6	13	13	9	6	3	9	9	16	8	5	12	13	8	4	3	5	6
	88" SPAN	3"	16	7	7	9	8	9	3	4	4	4	16	5	6	7	5	8	3	3	3	3
		2.5"	16	6	6	8	7	8	3	3	4	3	15	5	5	6	5	7		3	3	
		2"	15	6	4	8	6	7	3	3	4	3	13	4	4	6	4	6			3	
	105" span	3"																				
		2.5"																				
		2"																				
	124" span	3"																				
		2.5"																				
		2"																				

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 78th STREET, SUITE 311
 HIALEAH, FLORIDA 33016
 EB 0006024

METALTECH, INC.
 7635 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957
 EXPANDED WORLD-WIDE

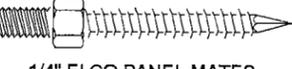
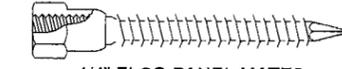
ROBERT S. MONSOUR, PE
 EB-0006024
 RAMMS ENGINEERING, INC.

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 06-0110-04
 Expiration Date 03/22/2011
 By Helmy A. M. M.
 Miami Dade District Control
 Division

BUILDING CODE COMPLIANCE

SEP/JRB/RSM
 APPROVED
 DATE: 01/10/98
 SCALE: SHOWN
 JOB: 98001
 SHEET: **6**
 7

ANCHOR SCHEDULE

WOOD APPLICATIONS			UP TO 59.5 PSF CONNECTION TYPE					UP TO 71.5 PSF CONNECTION TYPE					UP TO 81.5 PSF CONNECTION TYPE					UP TO 91.4 PSF CONNECTION TYPE						
ANCHOR TYPE	DIA.	SPAN	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E		
 BRASS WOOD BUSHING 1" MIN. PENETRATION	1/4-20	68" SPAN	14	13	5	13	13	12	12	5	12	12	10	7	4	10	10	9	4	4	6	7		
		88" SPAN	11	8	4	11	11	9	4	3	6	7	8	3	3	4	3				3	3		
		105" SPAN	9	4	4	6	7																	
		124" SPAN	8	3	3	4	3																	
 WOOD LAGS 1" MINIMUM TREAD PENETRATION	1/4"	68" SPAN	16	13	8	13	13	15	13	6	13	13	14	9	6	13	13	12	6	5	8	9		
		88" SPAN	14	11	6	13	13	12	6	5	8	9	10	4	4	5	4							
		105" SPAN	12	6	5	8	9	10	4	4	5	4												
		124" SPAN	10	4	3	5	4																	
 WOOD LAGS 1" MINIMUM TREAD PENETRATION	5/16"	68" SPAN	16	13	10	13	13	16	13	8	13	13	16	10	7	13	13	14	7	6	9	11		
		88" SPAN	16	13	7	13	13	14	7	6	9	10	12	5	5	6	5	11	4	5	5	3		
		105" SPAN	14	7	6	9	10	12	4	5	6	4												
		124" SPAN	12	4	5	6	4																	
 WOOD LAGS 1" MINIMUM TREAD PENETRATION	3/8"	68" SPAN	16	13	11	13	13	16	13	9	13	13	16	12	8	13	13	16	8	7	11	13		
		88" SPAN	16	13	9	13	13	16	8	7	10	12	14	5	6	7	6	13	4	6	5	4		
		105" SPAN	16	8	7	11	12	14	5	6	6	5												
		124" SPAN	13	5	6	6	5																	
 WOOD LAGS 1" MINIMUM TREAD PENETRATION	7/16	68" SPAN	16	13	12	13	13	16	13	10	13	13	16	13	9	13	13	16	9	8	12	13		
		88" SPAN	16	13	9	13	13	16	8	8	12	13	16	6	7	8	7	14	5	6	6	4		
		105" SPAN	16	9	8	12	13	15	5	7	7	6												
		124" SPAN	15	5	7	7	6																	
 1/4" ELCO PANEL MATES 1 7/8" MIN. THREAD PENETRATION	1/4"	68" SPAN	16	13	8	13	13	15	13	6	13	13	14	9	6	13	13	12	6	5	8	9		
		88" SPAN	14	11	6	13	13	12	6	5	8	9	10	4	4	5	4	9	3	4	4	3		
		105" SPAN	12	6	5	8	9	10	4	4	5	4												
		124" SPAN	10	4	3	5	4																	
 VERIOUS HEAD TYPES 1/4" MASONRY SCREWS 1 7/8" MIN. THREAD PENETRATION	1/4"	68" SPAN	16	13	8	13	13	15	13	6	13	13	14	9	6	13	13	12	6	5	8	9		
		88" SPAN	14	11	6	13	13	12	6	5	8	9	10	4	4	5	4	9	3	4	4	3		
		105" SPAN	12	6	5	8	9	10	4	4	5	4												
		124" SPAN	10	4	3	5	4																	

NOTES:

SPANS AND LOADS SHOWN IN THIS SCHEDULE ARE FOR DETERMINING ANCHOR SPACING ONLY. FOR ALLOWABLE SPANS VS. DESIGN LOADS REFER TO SHEET 4.

WHEN ANCHORING TO WOOD, THE WOOD MUST BE A MINIMUM 2 X 4 EQUAL TO #2 SOUTHERN PINE 0.55 SPECIFIC GRAVITY AND STRUCTURALLY PART OF THE FRAMING STRUCTURE OR SUCURELY ATTACHED TO FRAMING STRUCTURE

SHADED AREAS REPRESENT ANCHOR CONDITIONS THAT ARE NOT ACCEPTABLE.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE TO WITH STAND THE ADDITIONAL LOADS AND INSURE PROPER ANCHORAGE. SHUTTER SYSTEM MAY BE INTSALL INTO WOOD, CONCRETE OR MASONRY.


ROBERT S. MONSOUR, PE
EB-0006024
 RAMMS ENGINEERING, INC.

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No. 06-0110-04
 Expiration Date 03/22/2011
 By Heather A. M...
 Miami Dade Product Control
 Division

BUILDING CODE COMPLIANCE

REVISIONS	BY
08/14/98	SP
01/17/01	SP
01/05/06	SP

RAMMS ENGINEERING, INC.
Structural Design
 2100 W. 76th STREET, SUITE 311
 HIALEAH, FLORIDA 33015
 EB 0006024

METALTECH, INC.
 7635 W. SECOND CT. HIALEAH, FL 33014
 EST. 1957
 EXPANDED WORLD-WIDE

SEP/JRB/RSM	APPROVED
DATE	01/10/98
SCALE	AS SHOWN
PROJECT	98001
7	