



**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)**

[www.miamidade.gov](http://www.miamidade.gov)

**USA Shutter Company, LLC**  
**1455 Rail Head Blvd., Unit 6**  
**Naples, Florida 34110**

**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: Maestrosshield Maestran Security Shield**

**APPROVAL DOCUMENT:** Drawing No. FL 00084, titled "Maestrosshield Maestran Security Shield", sheets 1 through 5 of 5, prepared by L. Roberto Lomas, P.E., dated 02/26/2007, last revision B dated 08/07/07, signed and sealed by Luis R. Lomas, P.E. on 10/02/2007, bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and approval date by Miami-Dade County Product Control Division.

**MISSILE IMPACT RATING: Large and Small Missile Impact**

**LABELING:** Each mesh 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, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



*Helmy A. Makar*  
 12/20/2007

**NOA No. 07-0404.02**  
**Expiration Date: 12/20/2012**  
**Approval Date: 12/20/2007**  
 Page 1

**USA Shutter Company, LLC**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. FL 00084, titled " Maestrosshield Maestran Security Shield ", sheets 1 through 5 of 5, prepared by L. Roberto Lomas, P.E., dated 02/26/2007, last revision B dated 08/07/07, signed and sealed by Luis R. Lomas, P.E. on 10/02/2007.*

**B. TESTS**

1. *Test report on Large Missile Impact Test, Cyclic Wind Pressure Test, and Uniform Static Air Pressure Test of Mesh Hurricane Barrier System, prepared by Hurricane Test Laboratory, LLC, Report No. 0432-0115-07, dated February 21, 2007, signed and sealed by Vinu J. Abraham, P.E.*

**C. CALCULATIONS**

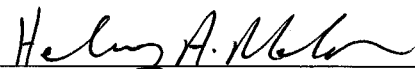
1. *Anchor analysis dated 03/22/2007, 2 Pages, prepared by Luis R. Lomas, P.E., signed and sealed by Luis R. Lomas, P.E.*
2. *Revised Anchor Calculations dated 08/17/2007, 22 pages, prepared by Luis R. Lomas, P.E., signed and sealed by Luis R. Lomas, P.E.*
3. *Revised Anchor Calculations dated 10/02/2007, 27 pages, prepared by Luis R. Lomas, P.E., signed and sealed by Luis R. Lomas, P.E.*

**D. QUALITY ASSURANCE**

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

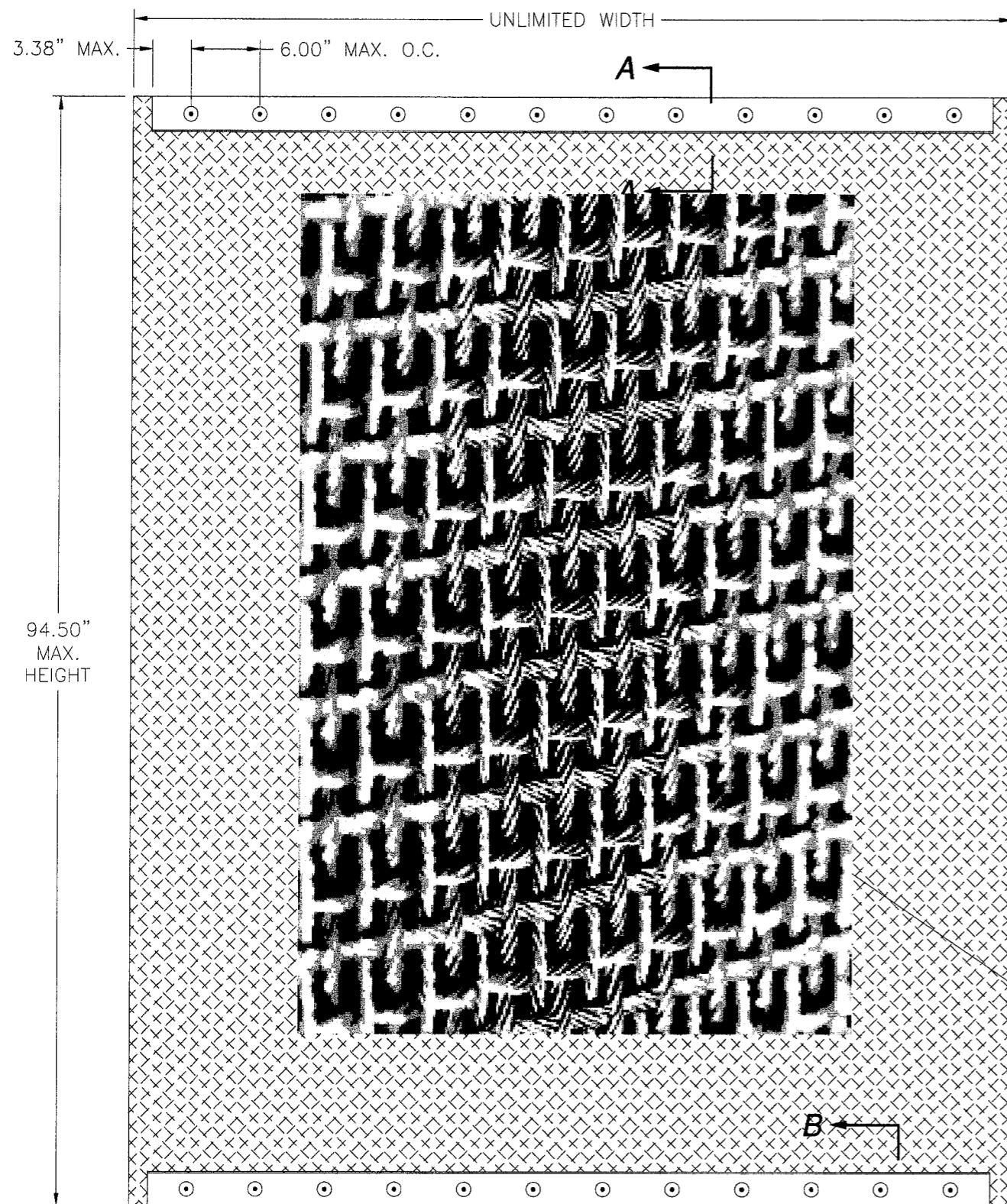
**E. MATERIAL CERTIFICATIONS**

1. *MaestroShield Mesh Specification.*



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**Helmy A. Makar, P.E., M.S.**  
**Product Control Examiner**  
**NOA No. 07-0404.02**  
**Expiration Date: 12/20/2012**  
**Approval Date: 12/20/2007**



**SECURITY SHIELD**  
 VERTICAL INSTALLATION  
 EXTERIOR VIEW

**DESIGN PRESSURE RATING**  
 ±95 PSF

**LARGE MISSILE IMPACT RESISTANT**

CLOSE UP  
 FOR PROPER  
 ORIENTATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER MD COMMENTS	6/12/07	R.L.
B	REVISED PER MD COMMENTS	8/07/07	R.L.

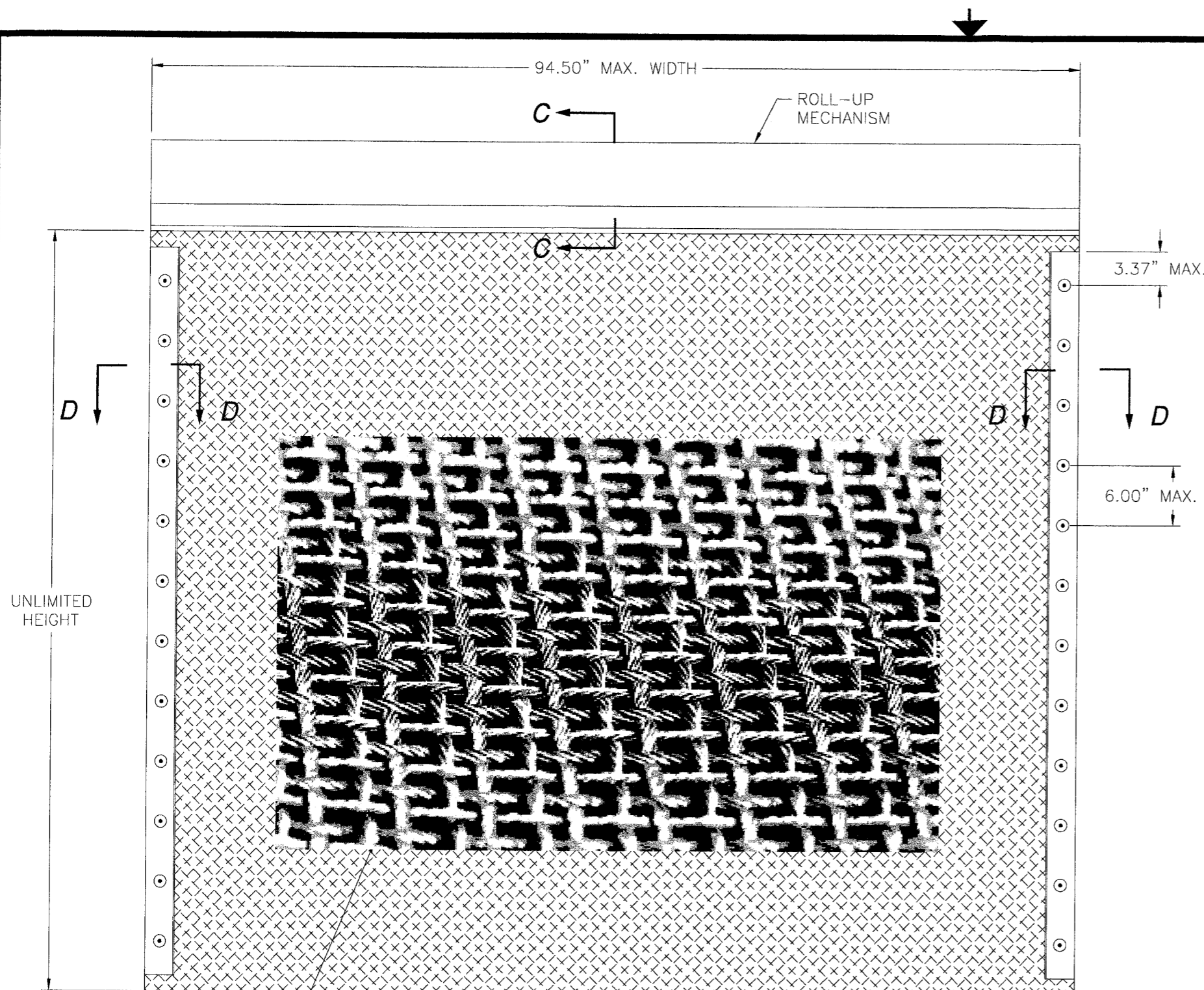
NOTES:

- 1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE 2004 FLORIDA BUILDING CODE, INCLUDING THE HVHZ AND ALL CURRENT SUPPLEMENTS.
- 2) WOOD FRAMING AND MASONRY OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND MASONRY OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
- 3) CONTRACTOR IS RESPONSIBLE FOR MAINTAINING STRUCTURAL INTEGRITY OF WINDOW OPENING AND ALL WOOD FRAMING AROUND WINDOW.
- 4) ALL EXTRUSIONS ARE 6063-T5 ALUMINUM ALLOY, UNLESS OTHERWISE NOTED.
- 5) ALL FASTENERS, NUTS AND WASHERS SHALL BE GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60KSI.
- 6) APPLICABLE TEST REPORT: HTL 0432-0115-07
- 7) REFER TO ANCHOR DETAILS FOR ANCHOR TYPE, SUBSTRATE TYPE, EDGE DISTANCE AND MINIMUM EMBEDMENT.
- 8) FOR MINIMUM REQUIRED SEPARATION BETWEEN PRODUCT AND EXISTING GLASS SEE CHART ON SHEET 2 AND INSTALLATION DETAILS ON SHEETS 3 AND 4.
- 9) FABRIC MATERIAL TO BE ARAMID FIBER AND STAINLESS STEEL STRANDS. FABRIC CONSISTS OF 520 X 390 STRANDS PER SQUARE METER WITH 27% OPEN AREA. STRANDS CONSIST OF 1500 DENIER ARAMID FIBER CORE SURROUNDED BY SIX (6), 0.2MM DIAMETER GRADE 304 STAINLESS STEEL STRANDS. ORIENTATE MESH WITH THE STRAIGHT WOVEN STRAND (VERSUS THE WAVY STRAND) RUNNING FROM ANCHORED EDGE TO ANCHORED EDGE FOR MINIMUM DEFLECTION PERFORMANCE.
- 10) FOR VERTICAL INSTALLATION: ALONG THE ENTIRE LENGTH OF THE TOP AND BOTTOM EDGE OF THE HURRICANE BARRIER THE MESH BASE SUPPORT IS PLACED OVER THE FABRIC AND THE FABRIC IS FORCED BACK OVER THE MESH BASE SUPPORT. PLACE A 1/16" BUNA-N-RUBBER STRIP BENEATH EACH TOP AND BOTTOM EDGE OF THE FABRIC ENCLOSED MESH BASE SUPPORT PRIOR TO INSTALLATION.  
 FOR HORIZONTAL INSTALLATION DO THE SAME ON THE RIGHT AND LEFT ENDS OF THE FABRIC.
- 11) ROLLUP MECHANISM IS NOT PART OF THIS APPROVAL. CARE SHOULD BE TAKEN WHEN SECURITY SHIELD IS IN MOTION TO ENSURE THAT PERSONAL INJURY OR DAMAGE TO THIS PRODUCT DOES NOT OCCUR.
- 12) FOR ANCHOR TYPES AND MAXIMUM DESIGN PRESSURES BASED ON ANCHOR CAPACITY REFER TO SHEET 2.

TABLE OF CONTENTS	
SHEET NO.	DESCRIPTION
1	VERTICAL ELEVATION ANCHORING AND GENERAL NOTES
2	HORIZONTAL ELEVATION AND ANCHORING
3 - 4	INSTALLATION DETAILS
5	COMPONENTS

Approved as complying with the Florida Building Code Date <u>12/20/2007</u> NOA# <u>07-0404.02</u> Miami Code Product Council Division <u>Helmut A. M...</u> By <u>Helmut A. M...</u>	<b>USA SHUTTER COMPANY LLC</b> 1455 RAIL HEAD BLVD, UNIT 6 NAPLES, FL 34110	 <u>10/02/07</u> Luis R. Lomas P.E. Florida No. 62514
	<b>MAESTROSHIELD MAESTRAN SECURITY SHIELD</b> VERTICAL ELEVATION, ANCHORING AND NOTES	
SCALE NTS DATE 02/26/07 SHEET 1 OF 5		

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER MD COMMENTS	6/12/07	R.L.
B	REVISED PER MD COMMENTS	8/07/07	R.L.



Glass separation requirements	
With straight woven strands running from anchored edge to anchored edge	3.00 in
With straight woven strands running from edge without anchors to edge without anchors	6.50 in

**ANCHORS CHART**

Anchor type	Substrate	Min. emb. (in)	Min. edge distance (in)	Max. O.C. (in)	Max. Design pressure	
1/4" Elco Tapcon	Concrete 3,000 psi min.	1.75	2.50	6.00	95.0	
1/4" ITW Tapcon		1.75	2.50	6.00	95.0	
1/4" Elco Crete-Flex		1.75	1.75	6.00	95.0	
1/4" Panelmate Male		1.75	2.50	6.00	95.0	
1/4" Panelmate Female		1.75	2.50	6.00	95.0	
1/4" ITW Dynabolt Sleeve anchor		1.13	1.50	6.00	95.0	
1/4" Powers Calk-in		0.88	3.00	6.00	95.0	
1/4" Drop-in bolt		1.00	3.50	6.00	95.0	
1/4" All points solid set		0.88	3.00	6.00	95.0	
1/4" Elco Tapcon		Hollow block	1.25	2.50	6.00	95.0
1/4" Elco Crete-Flex	1.25		2.50	6.00	95.0	
1/4" Panelmate Male	1.25		2.00	6.00	95.0	
1/4" Panelmate Female	1.25		3.00	6.00	95.0	
1/4" ITW Dynabolt Sleeve anchor	1.13		1.50	6.00	95.0	
1/4" Powers Calk-in	0.88		3.00	6.00	95.0	
1/4" All points solid set	0.88		3.00	6.00	95.0	
1/4" Lag screw	Wood .53 min. specific gravity		2.00	0.75	6.00	95.0
#14 Wood screw			2.88	0.75	6.00	95.0
1/4" Panelmate Male			1.88	0.75	6.00	95.0
1/4" Panelmate Female		1.88	0.75	6.00	95.0	

CLOSE-UP FOR PROPER ORIENTATION

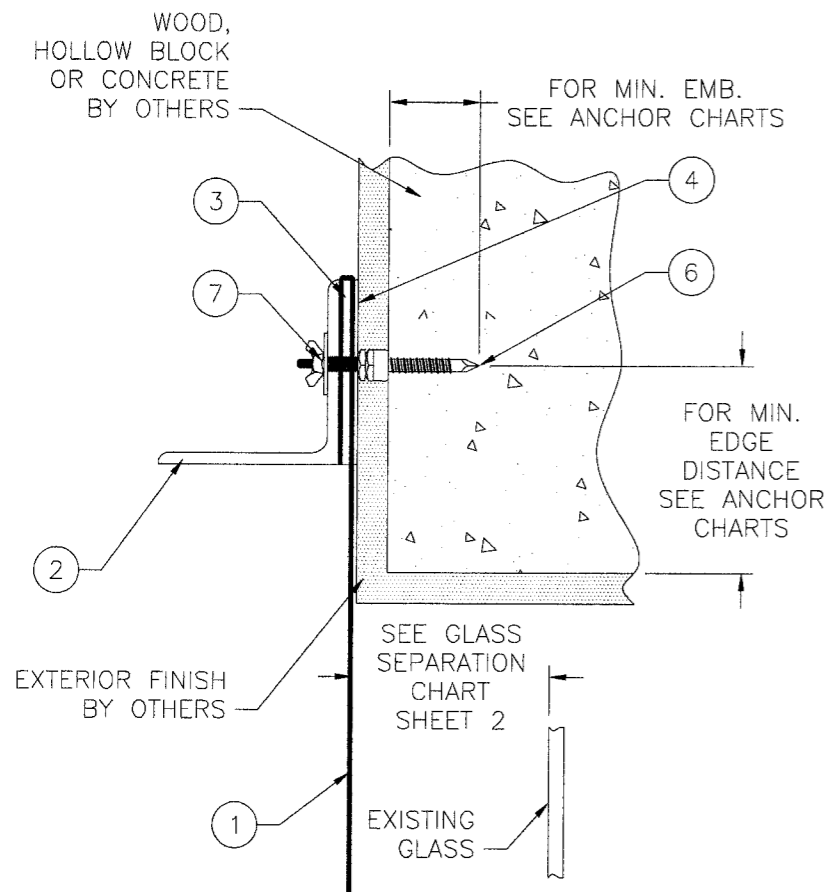
**SECURITY SHIELD**  
HORIZONTAL INSTALLATION  
EXTERIOR VIEW

**DESIGN PRESSURE RATING**  
±95 PSF

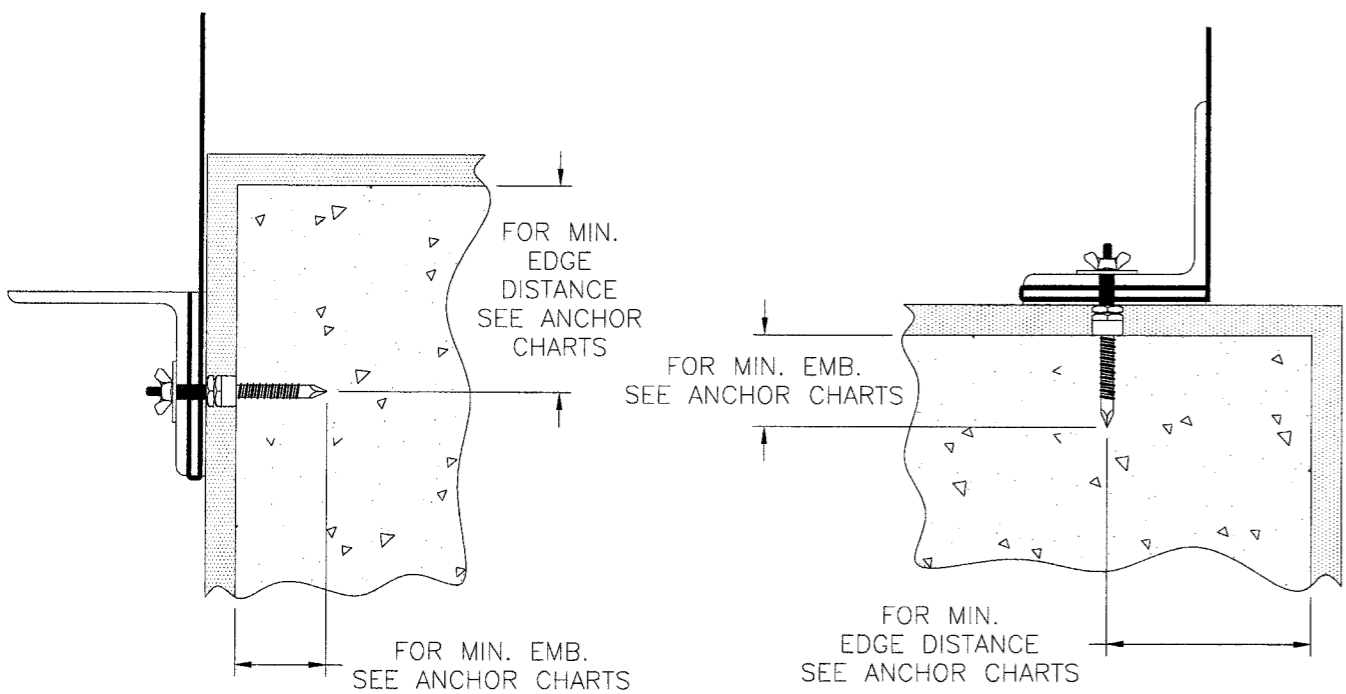
**LARGE MISSILE IMPACT RESISTANT**

<b>USA SHUTTER COMPANY LLC</b> 1455 RAIL HEAD BLVD, UNIT 6 NAPLES, FL 34110		 10/02/07 Luis R. Lomas P.E. Florida No. 62514
<b>MAESTROSHIELD MAESTRAN SECURITY SHIELD</b> HORIZONTAL ELEVATION AND ANCHORS CHART		
DRAWN: R.L. SCALE: NTS	DWG NO.: FL 00084 DATE: 02/26/07	REV: B SHEET 2 OF 5

Approved as complying with the Florida Building Code  
 Date: 12/20/2007  
 NDAB 07-6464-02  
 Miami Code Product Control  
 Division  
 By: Helmy A. Mub



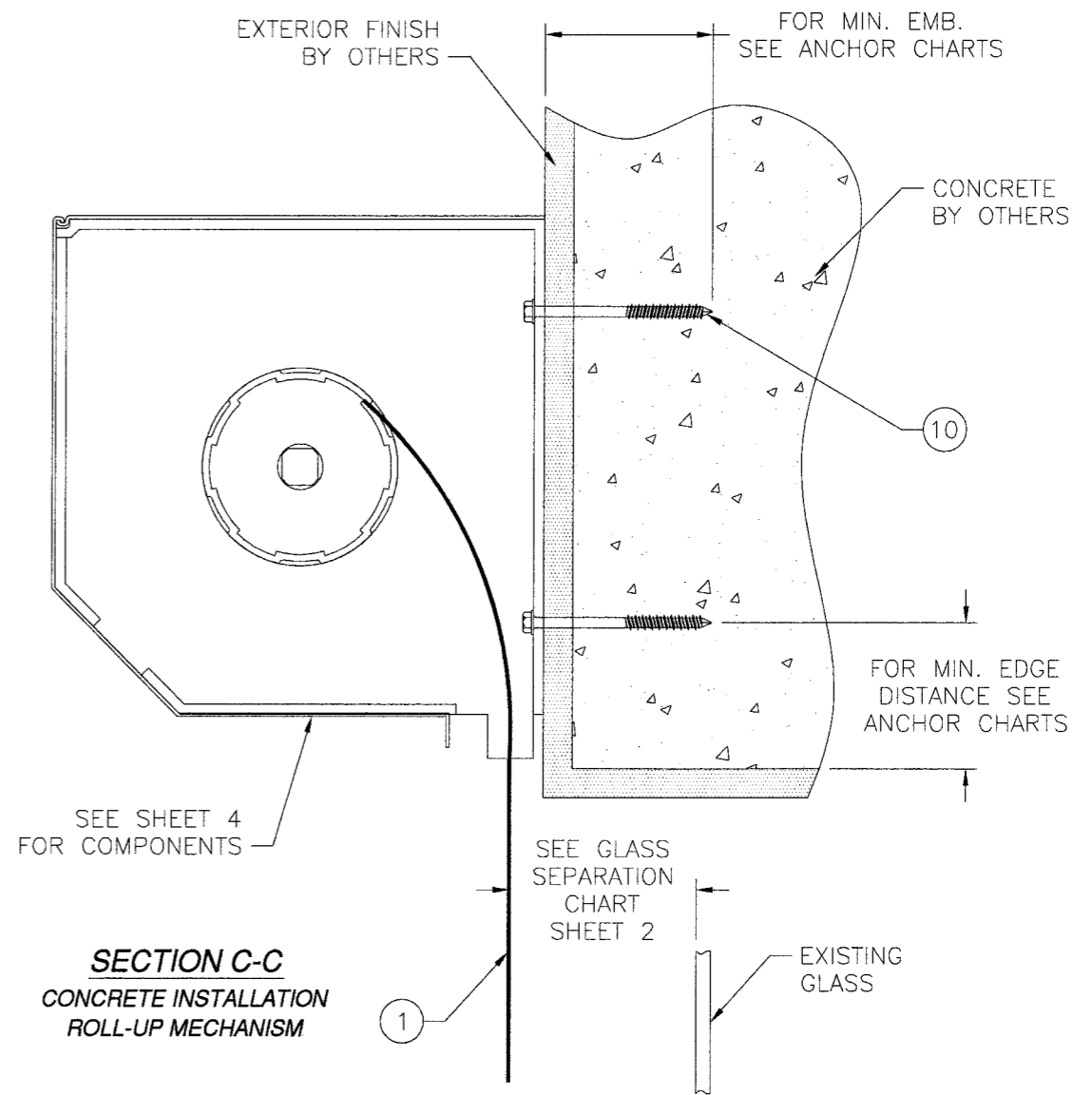
**SECTION A-A**



**SECTION B-B**

**SECTION B-B**

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER MD COMMENTS	6/12/07	R.L.
B	REVISED PER MD COMMENTS	8/07/07	R.L.



**SECTION C-C  
CONCRETE INSTALLATION  
ROLL-UP MECHANISM**

ROLLUP MECHANISM AND ITS ATTACHMENT TO ALL SUBSTRATES ARE NOT PART OF THIS APPROVAL AND SHALL BE REVIEWED BY THE CORRESPONDING BUILDING DEPARTMENT.

Approved as complying with the Florida Building Code  
 Date: 12/20/2007  
 NCAS 07-0404.02  
 Division: *Helena A. Miller*

**USA SHUTTER COMPANY LLC**  
 1455 RAIL HEAD BLVD, UNIT 6  
 NAPLES, FL 34110

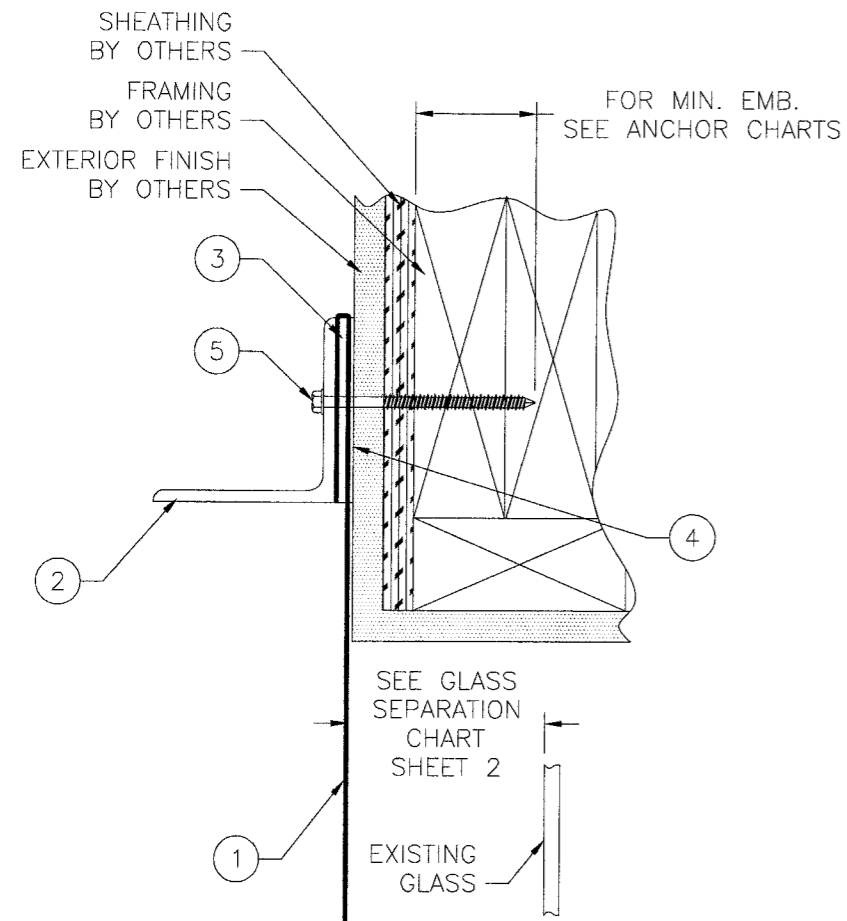
**MAESTROSHIELD MAESTRAN SECURITY SHIELD  
 INSTALLATION DETAILS**

DRAWN: R.L.	DWG NO. FL 00084	REV B
SCALE NTS	DATE 02/26/07	SHEET 3 OF 5

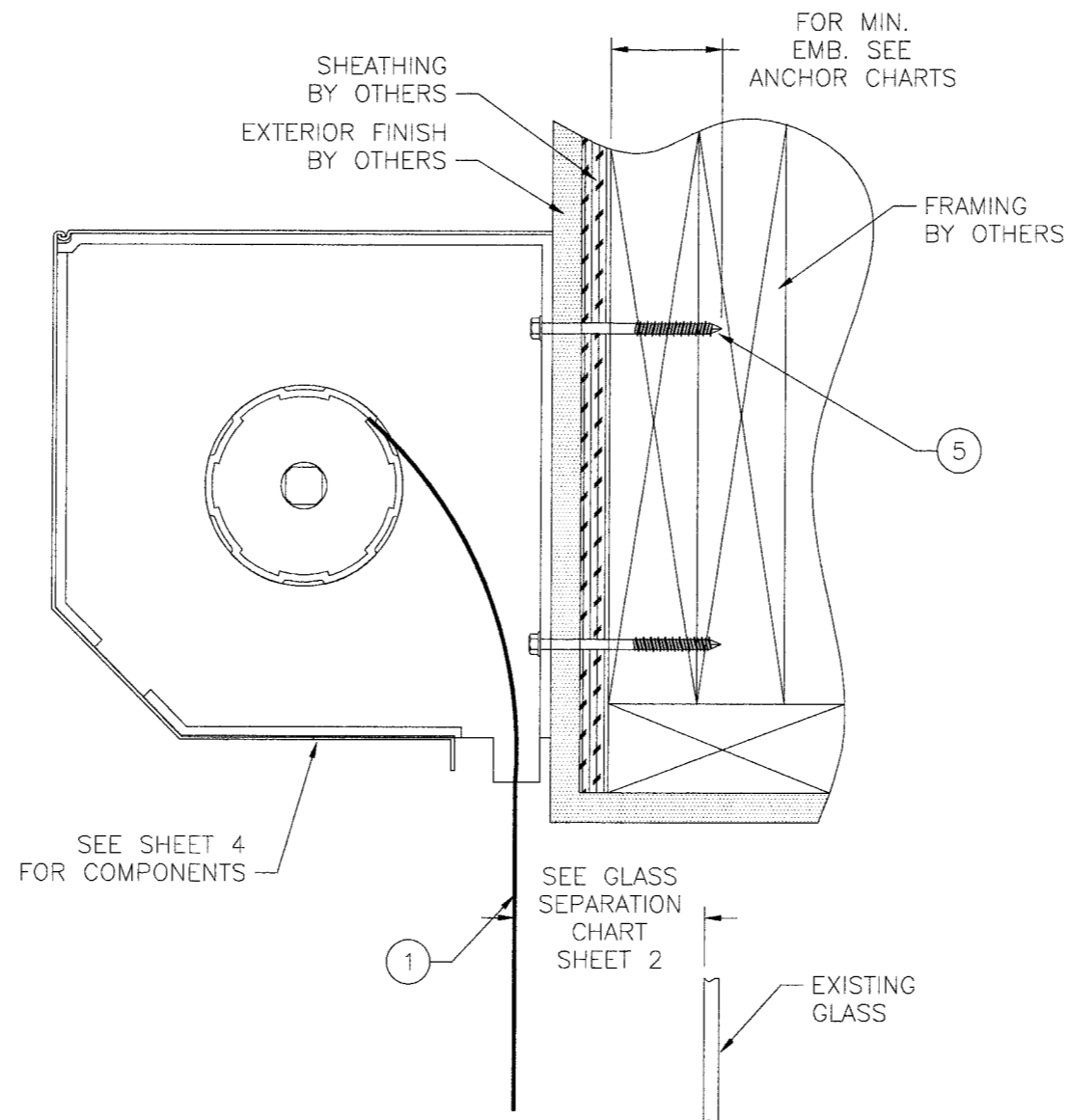
*Luis R. Lomas*  
 10/02/07

Luis R. Lomas P.E.  
 Florida No. 62514

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER MD COMMENTS	6/12/07	R.L.
B	REVISED PER MD COMMENTS	8/07/07	R.L.



**SECTION A-A**  
FRAMING INSTALLATION  
THIS IS A PERMANENT INSTALLATION

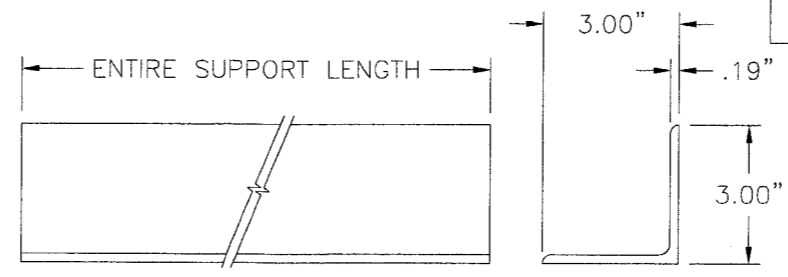


**SECTION A-A**  
FRAMING INSTALLATION  
ROLL-UP MECHANISM

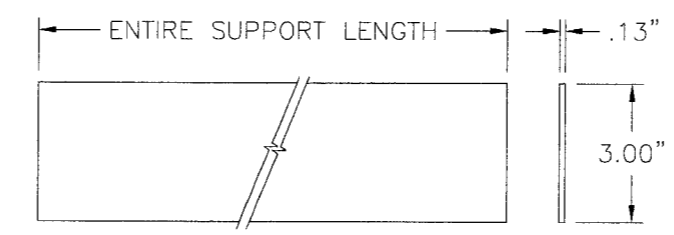
ROLLUP MECHANISM AND ITS ATTACHMENT TO ALL SUBSTRATES ARE NOT PART OF THIS APPROVAL AND SHALL BE REVIEWED BY THE CORRESPONDING BUILDING DEPARTMENT.

Approved as complying with the Florida Building Code Date <u>12/20/2007</u> NCAS <u>01-0404.02</u> Miami Building Department Division <u>Helmut A. Keller</u> By <u>Helmut A. Keller</u>	USA SHUTTER COMPANY LLC 1455 RAIL HEAD BLVD, UNIT 6 NAPLES, FL 34110		 <u>10/02/07</u> Luis R. Lomas P.E. Florida No. 62514
	MAESTROSHIELD MAESTRAN SECURITY SHIELD INSTALLATION DETAILS		
DRAWN: R.L.	DWG NO. FL 00084	REV B	
SCALE NTS	DATE 02/26/07	SHEET 4 OF 5	

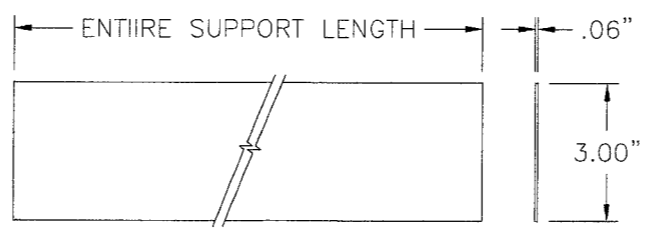
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	REVISED PER MD COMMENTS	6/12/07	R.L.
B	REVISED PER MD COMMENTS	8/07/07	R.L.



2 ANGLE BRACKET  
ALUMINUM

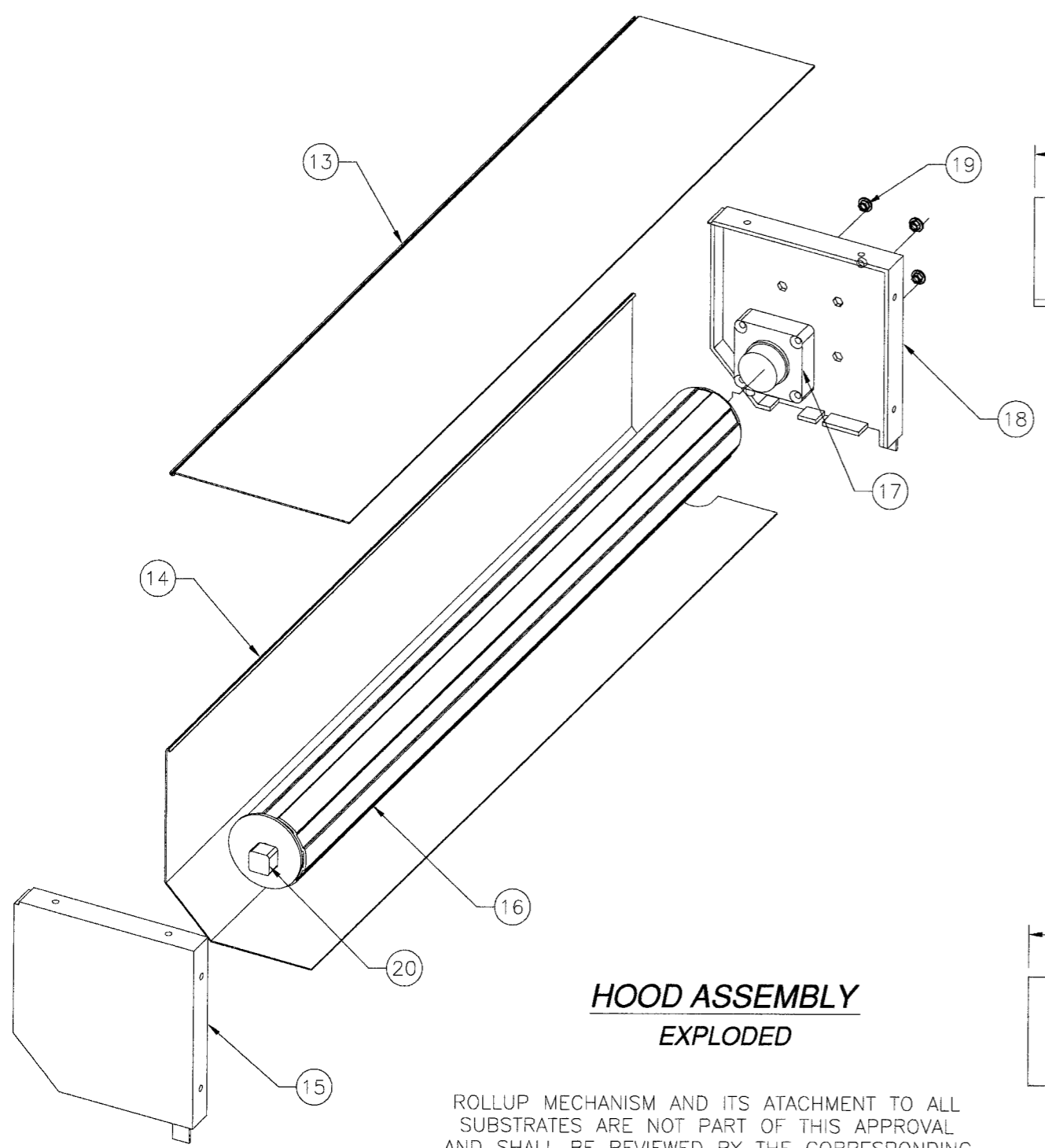


3 MESH BASE SUPPORT  
ALUMINUM



4 RUBBER STRIP  
RUBBER

PARTS LIST		
NO.	PART NUMBER	DESCRIPTION
1		MESH
2		ANGLE BRACKET (6061-T6 ALUMINUM)
3		MESH BASE SUPPORT (6061-T6 ALUMINUM)
4		RUBBER STRIP (BUNA-N RUBBER)
5		1/4" X 3 1/2" LAG SCREW
6		PANELMATE FEMALE
7		1/4-20 SIDEWALK BOLT
8		1/4-20 x 1" HH BOLT
9		1/4-20 WASHERED WINGNUT
10		1/4" TAPCON
11		NOT USED
12		NOT USED
13		HOOD, ALUMINUM
14		HOOD FRONT, ALUMINUM
15		BRACKET RIGHT, ALUMINUM
16		MOTOR TUBE, ALUMINUM
17		MOTOR
18		BRACKET LEFT, ALUMINUM
19		MOTOR MOUNT NUTS, STAINLESS STEEL
20		BEARING HOUSING



HOOD ASSEMBLY  
EXPLODED

ROLLUP MECHANISM AND ITS ATTACHMENT TO ALL SUBSTRATES ARE NOT PART OF THIS APPROVAL AND SHALL BE REVIEWED BY THE CORRESPONDING BUILDING DEPARTMENT.

Approved as complying with the Florida Building Code Date 12/20/2007 NOA# 01-0404.02 Miami Code Project Control Division By <i>Helmy A. Almet</i>	USA SHUTTER COMPANY LLC 1455 RAIL HEAD BLVD, UNIT 6 NAPLES, FL 34110		<i>Luis R. Lomas</i> 10/02/07 Luis R. Lomas P.E. Florida No. 62514
	MAESTROSHIELD MAESTRAN SECURITY SHIELD COMPONENTS		
	DRAWN: R.L.	DWG NO. FL 00084	
SCALE NTS	DATE 02/26/07	SHEET 5 OF 5	