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Product Approval
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[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

OFFICE OF THE
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FL #	FL812-R7														
Application Type	Revision														
Code Version	2014														
Application Status	Approved														
Comments															
Archived	<input type="checkbox"/>														
Product Manufacturer	Armor Screen Corp.														
Address/Phone/Email	2744 Hillsboro Road West Palm Beach, FL 33405 (561) 841-8890 doug@armorscreen.com														
Authorized Signature	Douglas Turner doug@armorscreen.com														
Technical Representative															
Address/Phone/Email															
Quality Assurance Representative															
Address/Phone/Email															
Category	Impact Protective Systems														
Subcategory	Removable														
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer <input checked="" type="checkbox"/> Evaluation Report - Hardcopy Received														
Florida Engineer or Architect Name who developed the Evaluation Report	Theodore Berman, P.E.														
Florida License	PE-09814														
Quality Assurance Entity	National Accreditation & Management Institute														
Quality Assurance Contract Expiration Date	12/31/2018														
Validated By	Simon Segal, P.E. <input checked="" type="checkbox"/> Validation Checklist - Hardcopy Received														
Certificate of Independence	FL812_R7_COI_Certification_of_Independence.SS.pdf														
Referenced Standard and Year (of Standard)	<table border="0"> <thead> <tr> <th>Standard</th> <th>Year</th> </tr> </thead> <tbody> <tr> <td>ASTM E 1996</td> <td>2005</td> </tr> <tr> <td>ASTM E 1886</td> <td>2005</td> </tr> <tr> <td>ASTM E 330</td> <td>2002</td> </tr> <tr> <td>TAS 201</td> <td>1994</td> </tr> <tr> <td>TAS 202</td> <td>1994</td> </tr> <tr> <td>TAS 203</td> <td>1994</td> </tr> </tbody> </table>	Standard	Year	ASTM E 1996	2005	ASTM E 1886	2005	ASTM E 330	2002	TAS 201	1994	TAS 202	1994	TAS 203	1994
Standard	Year														
ASTM E 1996	2005														
ASTM E 1886	2005														
ASTM E 330	2002														
TAS 201	1994														
TAS 202	1994														
TAS 203	1994														
Equivalence of Product Standards Certified By															

Sections from the Code

Product Approval Method Method 1 Option D

Date Submitted 04/24/2015
 Date Validated 04/27/2015
 Date Pending FBC Approval 04/28/2015
 Date Approved 06/23/2015

Summary of Products

FL #	Model, Number or Name	Description
812.1	Armor Screen Series 2000	Flexible Wind Abatement / Impact Protection System
Limits of Use Approved for use in HVHZ: No Approved for use outside HVHZ: Yes Impact Resistant: Yes Design Pressure: +130/-130 Other: This system is not for use in the high velocity hurricane zone (H.V.H.Z.). Glass separation is required for installations within wind zone 4 and on essential facilities. The un-breached envelope criterion is met since the system is considered 'non-porous' and remains intact under impact and air pressure loading. The system is to enclose the protected opening all around.		Installation Instructions FL812_R7_II_Installation_Instructions-Armor_Screen_Series_2000.pdf Verified By: Theodore Berman, P.E. No. 09814 Created by Independent Third Party: No Evaluation Reports FL812_R7_AE_Evaluation_Report_No._TBA_15-0423.02.pdf Created by Independent Third Party: Yes

[Back](#)

[Next](#)

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Product Approval Accepts:



ARMOR SCREEN INSTALLATION INSTRUCTIONS:

Armor Screen is a flexible wind abatement and impact protection system utilizing a woven monofilament geotextile that fulfills the Florida Building Code 5th Edition (2014) requirement for opening protection. This system is for use outside the high velocity hurricane zone (HVHZ - Miami-Dade & Broward Counties). For information on use of this system within the HVHZ, refer to Armor Screen's Miami-Dade Notice of Acceptance (NOA) available on the Miami-Dade Product Control website. Separation from glass is required only when system is installed within wind zone 4 and on essential facilities.

Geosynthetic hurricane screen: The hurricane screen shall be produced from a polypropylene, woven monofilament geotextile fabric with individual filaments woven into a basket weave network and calendered such that the filaments retain dimensional stability relative to each other. The woven monofilament geotextile fabric shall have the following minimum average roll values:

Grab Tensile Strength	(ASTM D4632)	425 x 325 LBS
Puncture Strength	(ASTM D4833)	130 LBS
Mullen Burst	(ASTM D3786)	675 PSI
Trapezoidal Tear	(ASTM D4533)	150 x 125 LBS
Wide Width Tensile Strength	(ASTM D4595)	225 x 205 LBS/IN
Wide Width Elongation	(ASTM D4595)	22 x 21%
Apparent Opening Size		30 US STD SIEVE.
Percentage of Open Area		5%

The pores in Armor Screen are small enough that the surface tension of water causes the barrier screen to become solid in the presence of rain, and prevents damaging voluminous water intrusion, even from torrential rains.

In dry conditions, the pores remain open, and based on testing, allow approximately 3% of the wind to pass through.

Barrier can be mounted with opposing primary anchored perimeters in vertical, horizontal or any alignment appropriate to the structure being protected.

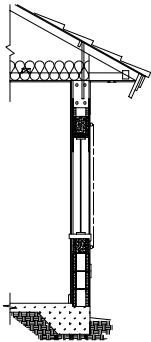
Design loads calculated to ASCE 7-10 as required by the prevailing building code.

Product marking - a label shall be affixed to the barrier with the following statement:

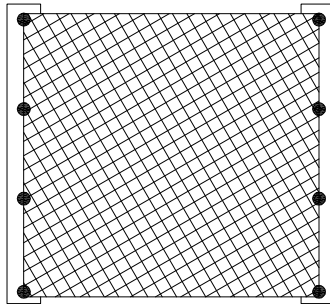
"Armor Screen Corporation, Florida Building Code Approved"

ALL GEOSYNTHETIC HURRICANE SCREEN ASSEMBLY INSTALLATION DETAILS DEPICTED WITHIN THESE DRAWINGS ARE TYPICAL FOR THE INSTALLATION OF THIS WIND ABATEMENT AND IMPACT PROTECTION SYSTEM ONLY. ALL OTHER BUILDING COMPONENTS SHOWN HEREIN ARE DEPICTED AS EXISTING, AND NOT CONSTRUCTED BY THE SCREEN COMPANY.

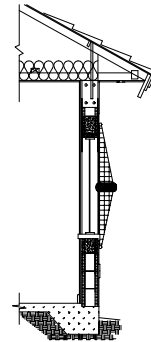
EXAMPLES OF TYPICAL INSTALLATIONS



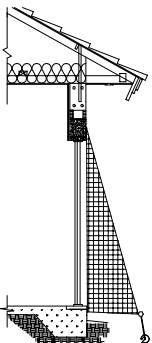
FLUSH



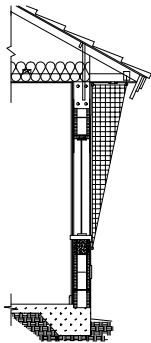
HORIZONTAL



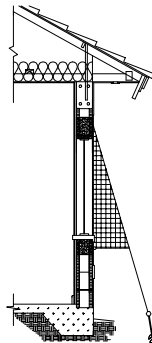
STORM BAR



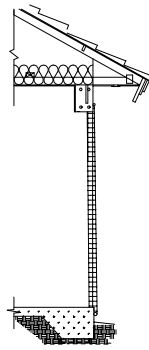
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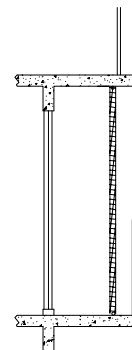
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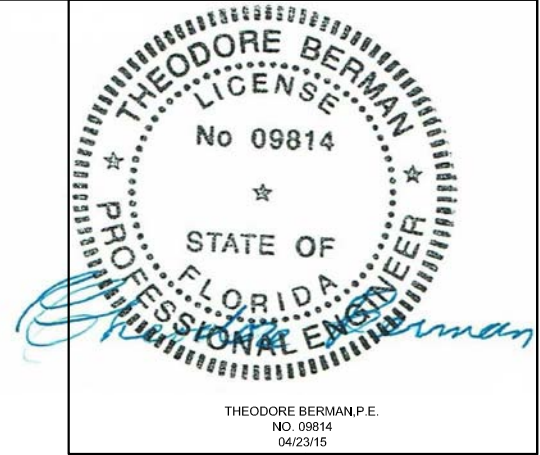
WINDOW



STRAIGHT



BALCONY



THEODORE BERMAN, P.E.
NO. 09814
04/23/15

ARMOR SCREEN
SERIES 2000 FLEXIBLE WIND ABATEMENT/
IMPACT PROTECTION SYSTEM

ARMOR SCREEN, Inc.
2744 Hillsboro Road
West Palm Beach, FL 33405
(561) 841-8890 www.armorscreen.com

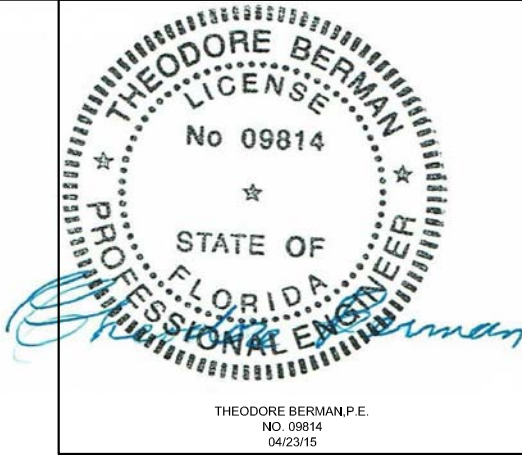
Ted Berman and Associates, LLC
Certificate of Authorization # 27502
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Miami Beach, FL 33140
(305) 868-4707
www.flproductapproval.com

Engineering
Review By:

DATE: 04/23/15

SCALE: N.T.S.

SHEET: 1 of 9



THEODORE BERMAN, P.E.
NO. 09814
04/23/15

Table 1 Anchor Spacing Anchor Choices *

Span in feet	Anchor Spacing		Anchor Choices *			
	1' O/C Design Pressure**	2' O/C	1 * 3/8" open eye	2 * 3/8" bolt	3 * 1/2" open eye	4 * 1/2" bolt
4'	130	65	X	X	X	X
6'	130	65		X	X	X
6'	92.75	46	X	X	X	X
8'	130	90				X
8'	130	65			X	X
8'	115	58		X	X	X
8'	68.75	34	X	X	X	X
10'	130	90				X
10'	130	65		X	X	X
10'	94.75	47	X	X	X	X
12'	130	90				X
12'	130	65			X	X
12'	120	60		X	X	X
12'	69.75	35	X	X	X	X
14'	130	80				X
14'	130	65			X	X
14'	120	60		X	X	X
14'	64.75	32	X	X	X	X
16'	130	75				X
16'	130	65			X	X
16'	110	55		X	X	X
16'	60	34.25	X	X	X	X
20'	58	29			X	X
24'	48	24			X	X

CONCRETE: * Table is intended for drop-in and LDT anchors in concrete.
WOOD: Lag anchoring (incl. LDT) into wood as follows
Column 1*: 3/8" thread, 1.75" penetration into SYP (0.55 sg)
Column 2*: 3/8" thread, 3.1" penetration into SYP
Column 3*: 1/2" thread, 3.0" penetration into SYP
Column 4*: 1/2" thread, 3.7" penetration into SYP
EARTH: * Specified earth anchor may be used with any of table choices.
HOLLOW BLOCK: Column 1*, approved epoxy anchoring system for 3/8" & 1/2" thread.
NOTE: ** Design pressure may be increased by 5% for negative loads
TRACK SYSTEM: Table applies to track system, anchored with two 5/16" fasteners per cleat, as follows:
- into hollow block, min. 1 1/4" embed can be installed as in column 1*
- into concrete, min. 1 3/4" embed can be installed as in column 3*
- into concrete, min. 2" embed can be installed as in column 4*
- into wood (SYP. sg. 0.55), min. 1" embed can be installed as in column 1*
- into wood (SYP. sg. 0.55), min. 2" embed installed as in column 3*

NOTES:
Anchor Spacing: varies inversely with pressure and is subject to rational analysis.
Span: is measured anchor to anchor.
ANCHOR SPECIFICATION:
Part numbers: 3/8" Lag Anchor (AS9038S)
1/2" Lag Anchor (AS9012S)
Tapcon 5/16", 3/8", and 1/2" LDT can anchor in both wood and concrete
Drop-in Anchor: 3/8" Steel Drop-in anchor in 3000 PSI (min.) concrete, 1 5/8" min. embedment (H3038S)
1/2" Steel Drop-in Anchor in 3000 PSI (min.) concrete, 2" min. embedment (H3012S)
Earth Anchor: Proprietary System: Stabilized 1/2" x 30" shaft with 4" helix
Working load 3150 LBS. (E7912P)
Soil Class: 5 (medium dense coarse sand)
Epoxy Anchor: Equal to Red Head umbrella inserts and screens with C7 adhesive.

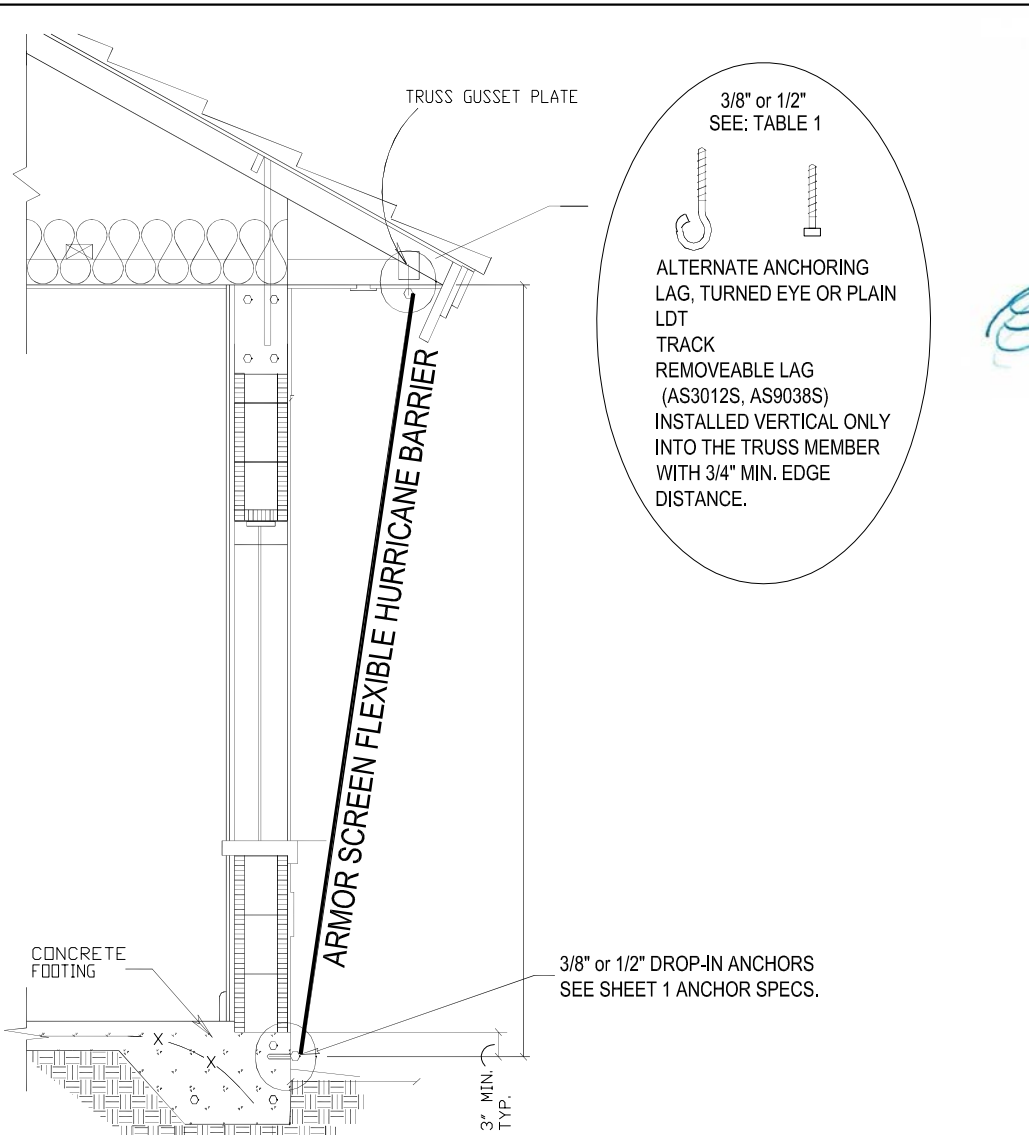
ARMOR SCREEN
SERIES 2000 FLEXIBLE WIND ABATEMENT/
IMPACT PROTECTION SYSTEM

ARMOR SCREEN, Inc.
2744 Hillsboro Road
West Palm Beach, FL 33405
(561) 841-8890 www.armorsscreen.com

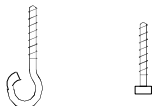
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SHEET: 2 of 9



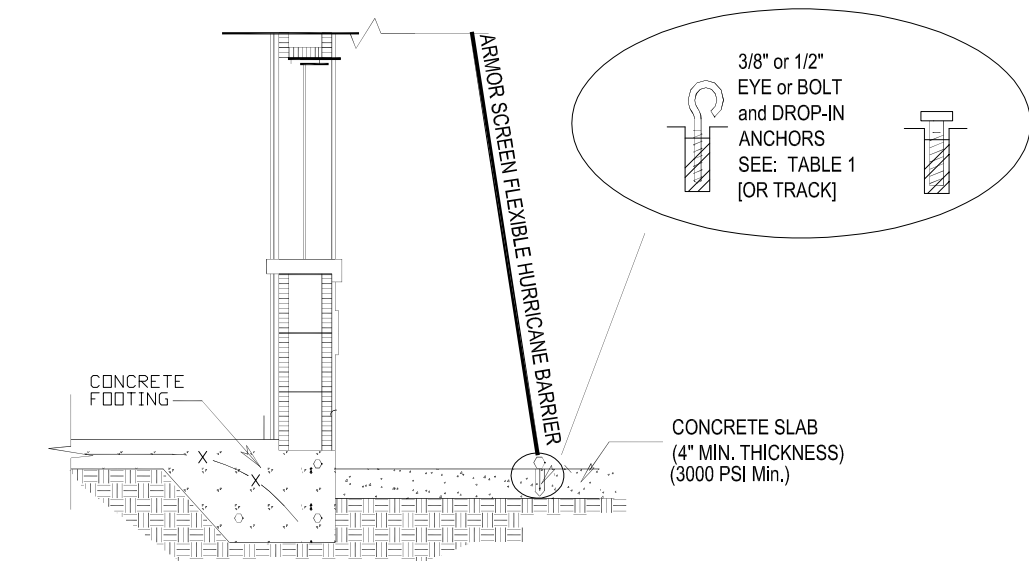
3/8" or 1/2"
SEE: TABLE 1



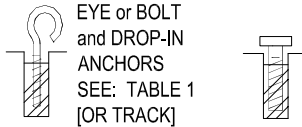
ALTERNATE ANCHORING
LAG, TURNED EYE OR PLAIN
LDT
TRACK
REMOVEABLE LAG
(AS3012S, AS9038S)
INSTALLED VERTICAL ONLY
INTO THE TRUSS MEMBER
WITH 3/4" MIN. EDGE
DISTANCE.

3/8" or 1/2" DROP-IN ANCHORS
SEE SHEET 1 ANCHOR SPECS.

TYPICAL ONE STORY ASSEMBLY
INSTALLATION



3/8" or 1/2"
EYE or BOLT
and DROP-IN
ANCHORS
SEE: TABLE 1
[OR TRACK]



CONCRETE SLAB
(4" MIN. THICKNESS)
(3000 PSI Min.)

ALTERNATE ASSEMBLY
INSTALLATION
AT EXTERIOR SLAB



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SHEET: 3 of 9

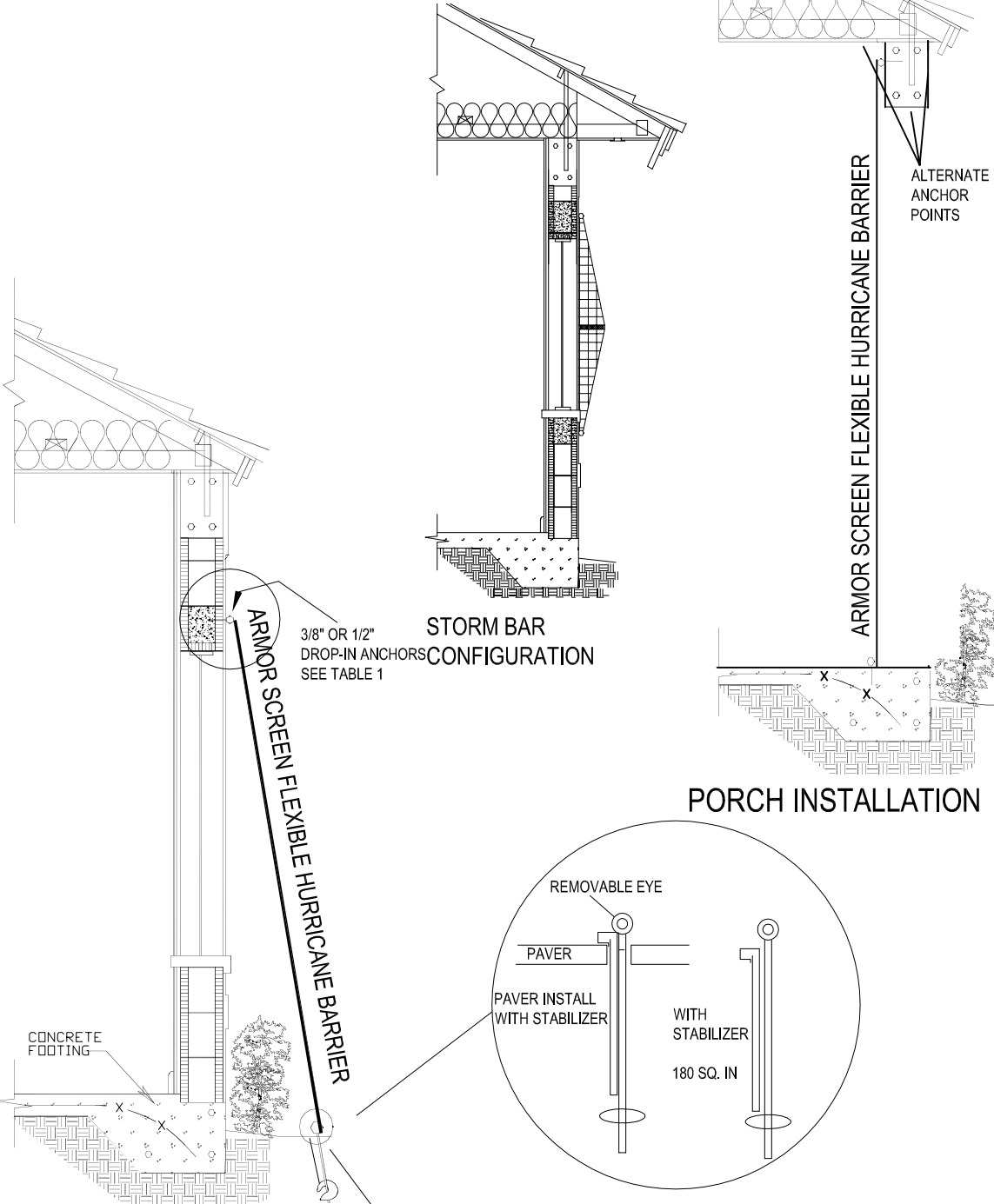
STORM BAR

SPAN	4'	5'	6'	8'	9' 9"
MAX. PSF	135	86	60	135	60
DEFLECTION	5.5"	6.1"	6.7"	8.5"	16"
SYP 2" X 6"	X	X	X		
ALUM. TUBE 2" x 6" x 1/8"				X	
SYP 4" X 8"					X

- DEFLECTION: ACHIEVED BY ONE OR MORE STORM BARS AND MAY BE INCREASED WITH BLOCKING
- ALUM. TUBE TO BE TYPE 6061-T6
- ANCHOR ENDS WITH 5/16" X 1-1/2" TAPCON MIN. OR WITH ALUM. MTD BRACKET AND TWO 1/4" X ONE 1/2" TAPCON
- SUBJECT TO RATIONAL ANALYSIS



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INTO EARTH
ALTERNATE ASSEMBLY INSTALLATION

EARTH ANCHOR, 4" DIAM. HELIX
HORIZONTALLY STABILIZED
24" O.C. SEE: TABLE 1

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IMPACT PROTECTION SYSTEM

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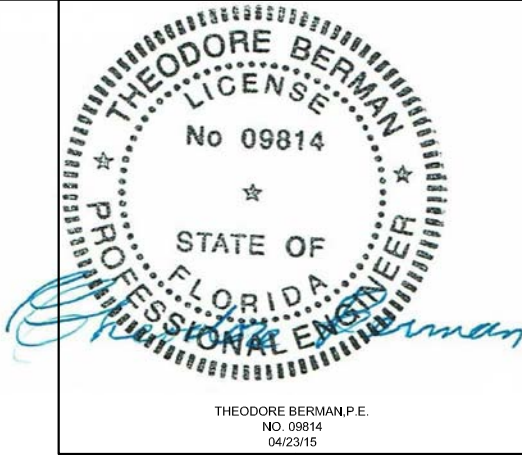
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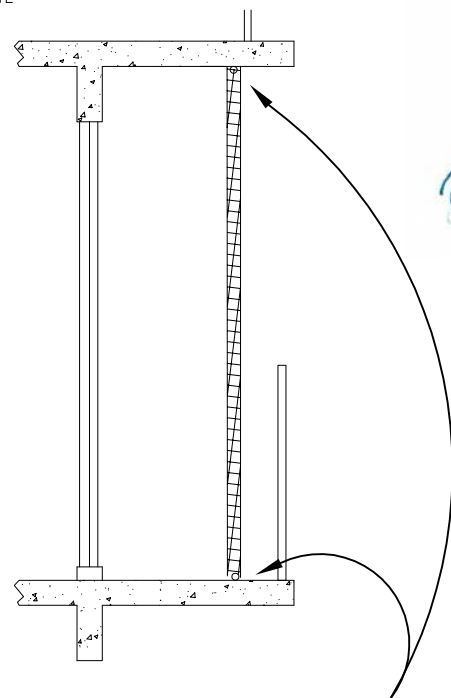


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 NO. 09814
 04/23/15

Typical of wall anchors

EXISTING WD ROOF TRUSSES
 AT 24" O.C.
 TRUSS GUSSET PLATE

ARMOR SCREEN FLEXIBLE HURRICANE BARRIER
 (ALTERNATE TO TIE BEAM)



FOR ANCHOR INSTALLATION
 MAINTAIN AT LEAST MIN.
 EDGE DISTANCE AND FULL
 CAPACITY SPACING FROM
 HANDRAIL ANCHORS

BALCONY SCREEN

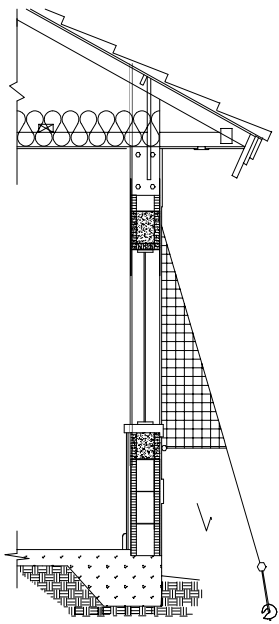
ALTERNATE
 ASSEMBLY
 INSTALLATION

3" MIN.

3000 PSI CONCRETE
 STRUCTURAL MEMBER

ARMOR SCREEN FLEXIBLE HURRICANE BARRIER

CONCRETE
 FOOTING



CLOSED ON SIDES AND
 BOTTOM
 ANCHORED AT LOWER CORNERS

WINDOW SCREEN

ARMOR SCREEN
 SERIES 2000 FLEXIBLE WIND ABATEMENT/
 IMPACT PROTECTION SYSTEM

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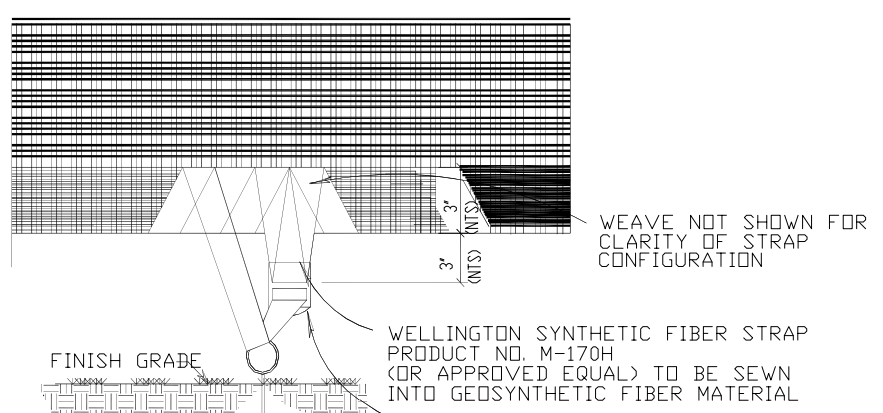
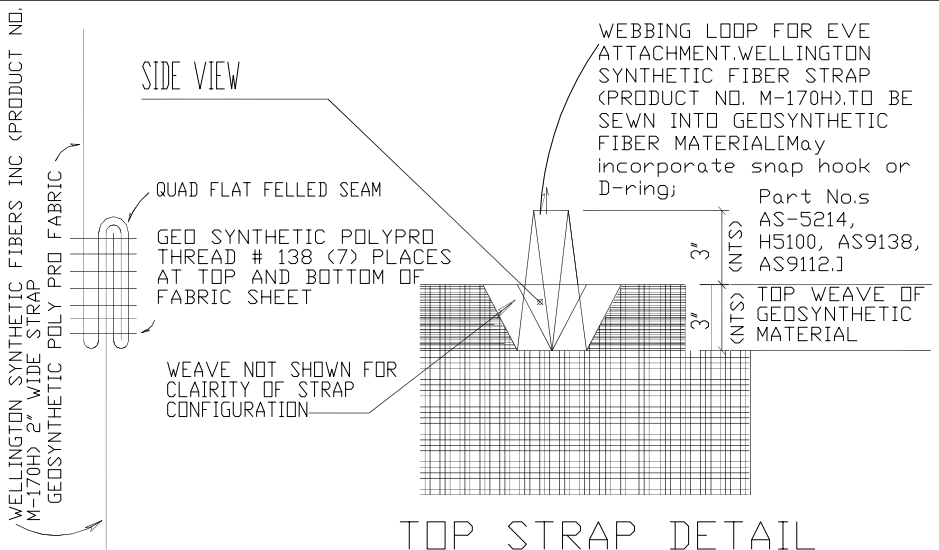
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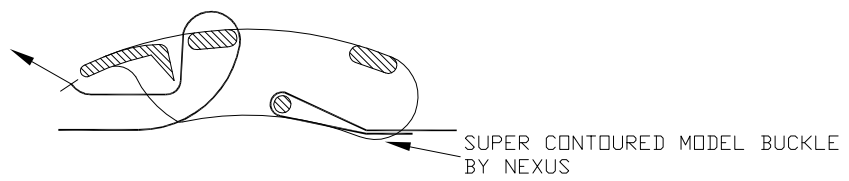
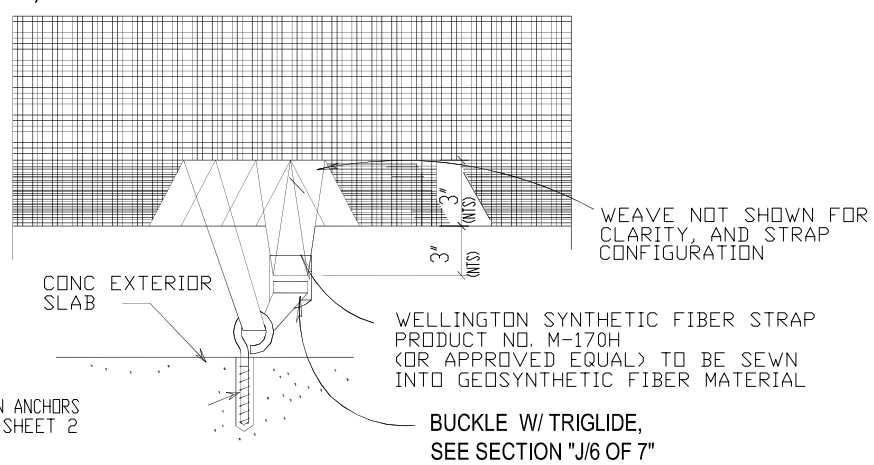
DATE: 04/23/15

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SHEET: 5 of 9



EARTH ANCHOR, SEE ANCHOR SPECIFICATIONS ON SHEET 2 OF 9. SOIL SHALL BE MIN. CLASS 5 (MEDIUM DENSE COURSE SAND).



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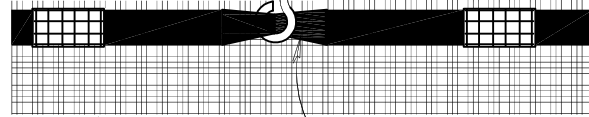
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DATE: 04/23/15
SCALE: N.T.S.
SHEET: 6 of 9

GED SYNTHETIC MULTI FILAMENT
TEX 135 THREAD (8) PLACES
AT TOP AND BOTTOM OF
FABRIC SHEET

WELLINGTON SYNTHETIC FIBERS, INC.
(PRODUCT NO. M-170H) 2" WIDE STRAP

3/8" STEEL LAG
LAG THREAD TURNED
EYE BOLT 1 3/4" MIN
EMBED.

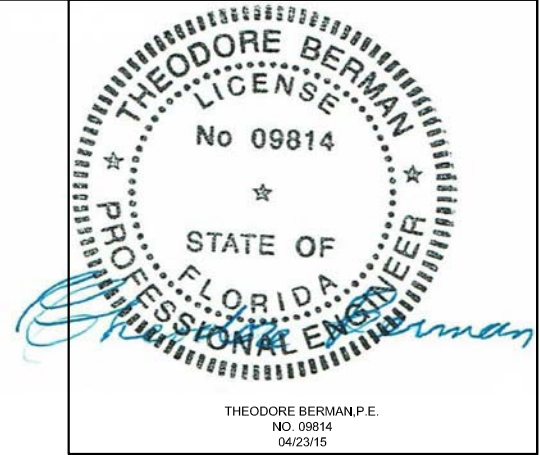


ALTERNATE 3/8" DIAM
DROP-IN ANCHOR

GED SYNTHETIC HURRICAN SCREEN

ALTERNATE TOP STRAP DETAIL

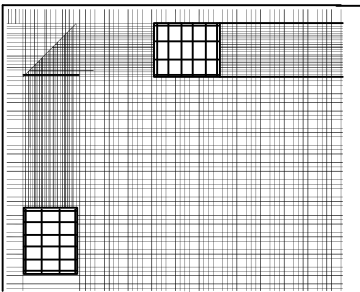
FOR OPENING 10 FEET OR LESS



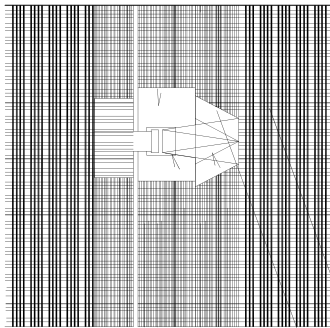
THEODORE BERMAN, P.E.
NO. 09814
04/23/15

ALTERNATE CORNER DETAIL

N.T.S.



ADJACENT SCREENS



TYPICAL ADJACENT
SCREENS ARE
OVERLAPPED ONE
ANCHOR SPACING.

SCREEN THREAD NOT SHOWN
FOR CLARITY

3' (NTS) 3' (NTS) 3' (NTS)

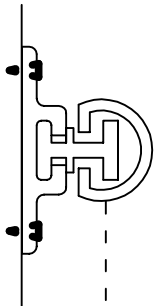
STRAP DETAIL

BUCKLE W/ STRAP AND TRIGLIDE
SEE SECTION 'J/6 OF 7'

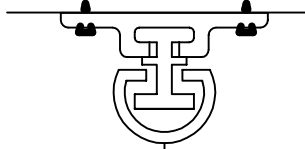
WELLINGTON SYNTHETIC FIBER STRAP
PRODUCT NO. M-170H
(OR APPROVED EQUAL) TO BE SEWN
INTO GEOSYNTHETIC FIBER MATERIAL
(1 Anchor Overlap)

NOTE: SCREENS MAY BE GROMMETED.

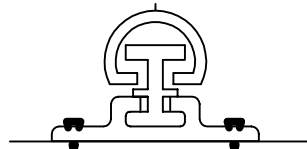
TRACK DETAIL



WALL
MOUNT



INSIDE MOUNT CEILING



INSIDE MOUNT
FLOOR

ARMOR SCREEN
SERIES 2000 FLEXIBLE WIND ABATEMENT/
IMPACT PROTECTION SYSTEM

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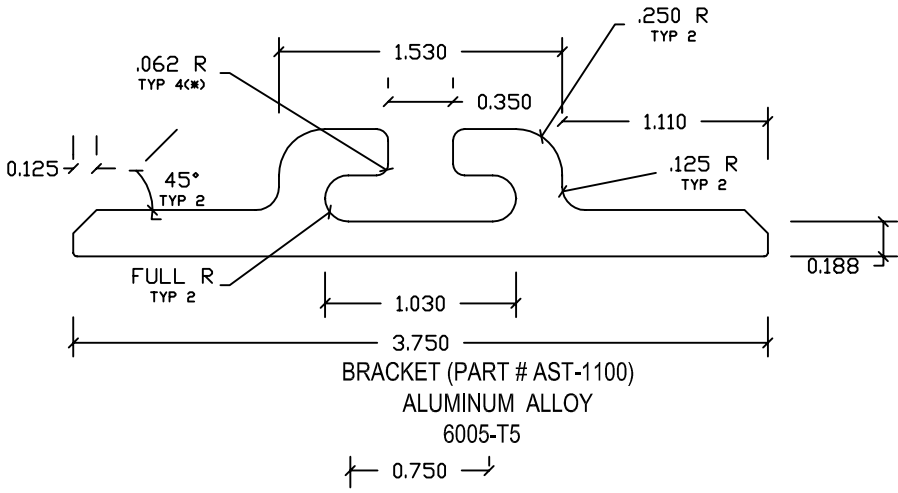
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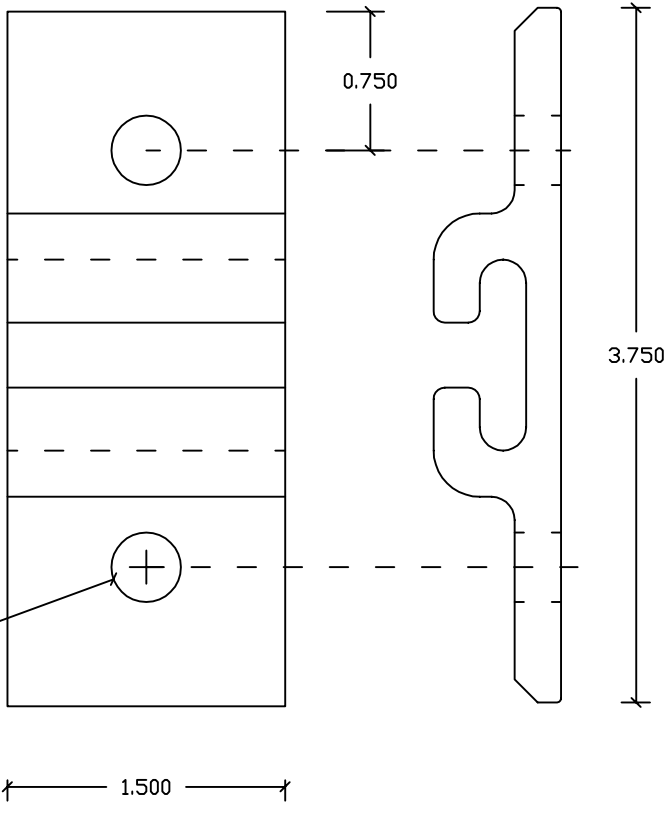
SHEET: 7 of 9



BRACKET (PART # AST-1100)
ALUMINUM ALLOY
6005-T5

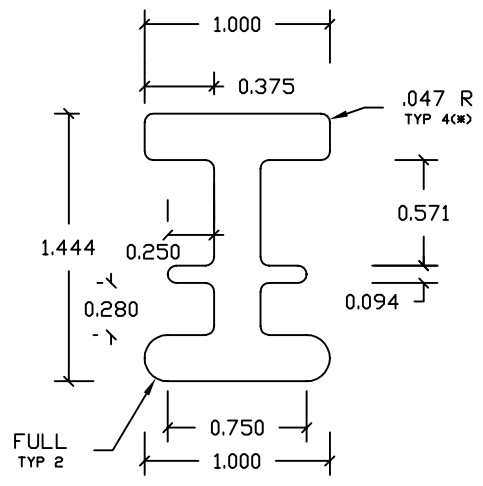
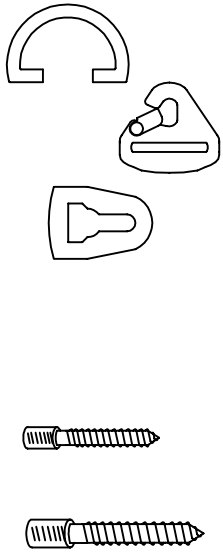


THEODORE BERMAN, P.E.
NO. 09814
04/23/15



.375 DIA
TYP 2

- D-RING CARRIERS (AS-5214)
- SPRING CLIPS (H-5100)
- 3/8" KEYHOLE CLIPS (AS9138)
- 1/2" KEYHOLE CLIPS (AS9112)
- 5/16" TAPCONS (FT1556)
- 3/8" TAPCONS (FT1538)
- 1/2" TAPCONS (FT1512)
- 3/8" LAG ANCHOR (AS9038S)
- 3/8" CARRIAGE BOLT
- 1/2" LAG ANCHOR (AS9112S)
- 1/2" CARRIAGE BOLT



"I" TRACK (PART # AS-1000)
ALUMINUM ALLOY
6005-T5

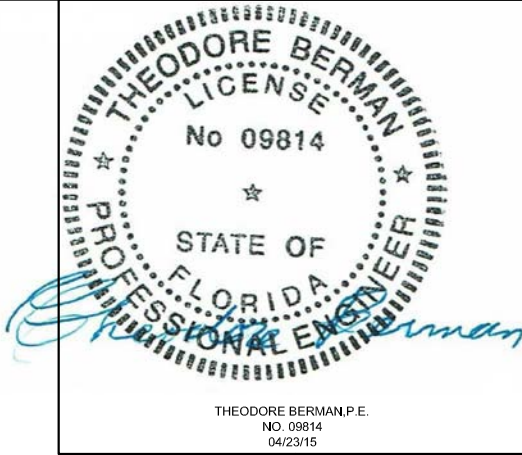
ARMOR SCREEN
SERIES 2000 FLEXIBLE WIND ABATEMENT/
IMPACT PROTECTION SYSTEM

ARMOR SCREEN, Inc.
2744 Hillsboro Road
West Palm Beach, FL 33405
(561) 841-8890 www.armorscreen.com

Ted Berman and Associates, LLC
Certificate of Authorization # 27502
925 Arthur Godfrey Rd. Suite 104
Miami Beach, FL 33140
(305) 868-4707
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Engineering
Review By:

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SHEET: 8 of 9



THEODORE BERMAN, P.E.
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SCREEN LOADING ON STRUCTURE (PER LINEAR FOOT)									
SCREEN SPAN (FT.)	DESIGN LOAD (PSF)								
	30	40	50	60	70	90	110	130	
4	180	217	246	276	284	332	358	401	
5	224	275	312	342	355	416	447	500	
6	268	327	372	408	426	500	536	599	
7	311	380	437	480	503	579	625	704	
8	355	438	497	546	574	663	715	802	
9	399	491	557	617	644	747	804	901	
10	447	543	625	683	715	832	893	1013	
11	491	602	683	749	786	910	982	1105	
12	535	654	743	821	857	994	1072	1203	
13	579	712	808	887	928	1079	1155	1302	
14	622	760	868	959	999	1165	1244	1401	
15	666	818	928	1025	1070	1241	1333	1506	
16	715	870	994	1091	1141	1325	1423	1604	
17	758	923	1054	1162	1212	1410	1512	1703	
18	802	981	1114	1228	1283	1494	1601	1802	
19	846	1034	1180	1300	1359	1572	1690	1907	
20	890	1086	1240	1366	1430	1657	1780	2005	
21	933	1144	1305	1432	1501	1741	1869	2104	
22	977	1197	1365	1504	1572	1825	1958	2203	
23	1026	1250	1425	1570	1643	1903	2047	2308	
24	1069	1308	1491	1642	1714	1988	2137	2406	

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Notes:

- Span is measured anchor to anchor.