MIAMI-DADE COUNTY
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Rubb, Inc.
1 Rubb Lane
Sanford, Maine 04073

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section 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: Ferrari Precontraint 1202 Tensioned Arch. Textile Fabric Membrane

APPROVAL DOCUMENT: Drawing No. 47847, titled " Fabric Testing, Test Sheets ", one sheet, dated July 08, 2010, last revision #G dated August 18, 2022, and Drawing No. 47881, titled " Fabric Testing, Pocket Tubes ", one sheet, dated July 21, 2010, last revision #D dated October 26, 2016, both drawings signed and sealed by Brian E. Lewis, P.E., on September 19, 2022, bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each structure 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 #16-1026.01** 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., M.S.**

Helmy A. Makar
04/20/2023

MIAMI-DADE COUNTY APPROVED

NOA No. 21-0916.03
Expiration Date: 10/27/2026
Approval Date: 04/20/2023

Rubb, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0518.05

A. DRAWINGS

1. *Drawing No. 47847, titled " Fabric Testing, Test Sheets ", one sheet, dated July 08, 2010, last revision #D dated February 21, 2011, and Drawing No. 47881, titled " Fabric Testing, Pocket Tubes ", one sheet, dated July 21, 2010, last revision #A dated February 21, 2010, both drawings signed and sealed by Gary E. Sutryn, P.E., on October 12, 2011.*

B. TESTS

1. *Test report on Large Missile Impact per TAS 201 and Cyclic Wind Pressure per TAS 203 on Tension Membrane Roof, prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-3107, dated October 04, 2010, signed and sealed by Candido Font, P.E.*
2. *Test report on Large Missile Impact per TAS 201 and Cyclic Wind Pressure per TAS 203 on Tension Membrane Roof, prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-3110, dated October 04, 2010, signed & sealed by Candido Font, P.E.*
3. *Test report on Accelerated Weathering Testing of Coating 4500 hours per ASTM G 155-05a, prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-A114, dated October 15, 2010, signed and sealed by Candido Font, P.E.*
4. *Test report on Accelerated Weathering Testing of Coating 4500 hours per ASTM G 155-05a, prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-A117, dated December 06, 2010, signed and sealed by Candido Font, P.E.*
5. *Test report on Uniform Static Pressure per TAS 202 on Tension Membrane Roof prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-3109, dated October 04, 2010, signed and sealed by Candido Font, P.E.*
6. *Test report on Uniform Static Pressure per TAS 202 on Tension Membrane Roof prepared by Hurricane Engineering & Testing, Inc., Report # HETI-10-3105, dated October 04, 2010, signed and sealed by Candido Font, P.E.*

C. CALCULATIONS

1. *Calculations titled "Calculations for Membrane Tension" prepared by Gary E. Sutryn, P.E., dated February 21, 2011, 5 sheets, signed and sealed by Gary E. Sutryn, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs.*

E. MATERIAL CERTIFICATIONS

1. *Tension Test for Grommet Bearing Strength, prepared by Hurricane Engineering & Testing, Inc., report # HETI-10-T131, dated October 04, 2010, signed and sealed by Candido Font, P.E.*

Helmy A. Makar, P.E., M.S.
Product Control Section supervisor
NOA No. 21-0916.03
Expiration Date: 10/27/2026
Approval Date: 04/20/2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. *Tensile Test for Seam Tensile Strength, prepared by Hurricane Engineering & Testing, Inc., report # HETI-10-T132, dated October 04, 2010, signed and sealed by Candido Font, P.E.*
3. *Tensile Test, prepared by Hurricane Engineering & Testing, Inc., report # HETI-10-T133, dates October 04, 2010, signed and sealed by Candido Font, P.E.*
4. *Tension Test for Welded Pocket Tensile Strength, prepared by Hurricane Engineering & Testing, Inc., report # HETI-10-T134, dated October 04, 2010, signed and sealed by Candido Font, P.E.*
5. *Self-Ignition Temperature per ASTM D 1929, Rate and Extent of Burn per ASTM D 635, and Smoke Density Test per ASTM D 2843 of White Ferrari Material, prepared by Hurricane Engineering & Testing, Inc., report # HETI-10-F504, dated October 04, 2010, signed and sealed by Candido Font, P.E.*

F. OTHERS

1. *Letter from Gary E. Sutryn, P.E., dated February 21, 2011, signed and sealed by Gary E. Sutryn, P.E., stating that he is the Engineer of Record on this product, he is still practicing engineering in Florida, and this product in compliance with the current Florida Building Code.*

2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 16-1026.01

A. DRAWINGS

1. *Drawing No. 47847, titled " Fabric Testing, Test Sheets ", one sheet, dated July 08, 2010, last revision #F dated October 26, 2016, and Drawing No. 47881, titled " Fabric Testing, Pocket Tubes ", one sheet, dated July 21, 2010, last revision #C dated October 26, 2016, both drawings signed and sealed by N. Dennis Eryou, P.E., on February 01, 2017.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources (RER).*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. OTHERS

1. *Letter signed and sealed by N. Dennis Eryou, P.E., dated October 27, 2016, certified this product in compliance with the Florida Building Code, 2014 Edition.*

Helmy A. Makar, P.E., M.S.
Product Control Section supervisor
NOA No. 21-0916.03
Expiration Date: 10/27/2026
Approval Date: 04/20/2023

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 47847, titled " Fabric Testing, Test Sheets ", one sheet, dated July 08, 2010, last revision #G dated August 18, 2022, and Drawing No. 47881, titled " Fabric Testing, Pocket Tubes ", one sheet, dated July 21, 2010, last revision #D dated October 26, 2016, both drawings signed and sealed by Brian E. Lewis, P.E., on September 19, 2022.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *Calculations titled "Calculations for Membrane Tension" prepared by Brian E. Lewis, P.E., dated September 19, 2022, 5 sheets, signed and sealed by Brian E. Lewis, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Department of Regulatory and Economic Resources (RER).*

E. MATERIAL CERTIFICATIONS

1. *None.*

F. OTHERS

1. *Letter signed and sealed by Brian E. Lewis, P.E., dated September 20, 2022, certified this product in compliance with the Florida Building Code, 2020 Edition.*

Helmy A. Makar, P.E., M.S.
Product Control Section supervisor
NOA No. 21-0916.03
Expiration Date: 10/27/2026
Approval Date: 04/20/2023

PRECONTRAINT® 1202 FORMULA S

Spécifications techniques	Technical specifications	Précontraint® 1202 Formule S	Normes Norms
Fil	Yarn	PES HT 1100/1670 Dtex	TERSUISSE
Masse totale	Total mass	1050 g/sqm 31 oz/sqyd	NF EN ISO 2286-2
Largeur	Width	180 cm	(-1mm/+1mm)
Resistance traction (chaine/trame)	Tensile strength (warp/weft)	560/560 daN/5 cm 580/580 Lbs	NF EN ISO 1421 FTMS 191 A Method 5102
Resistance déchirure (chaine/trame)	Tear strength (warp/weft)	80/65 daN 100/60 Lbs	DIN 53.363 ASTM D 5733-95 Trapezoid
Adherence	Adhesion	12 daN/5 cm	NF EN ISO 2411
Reaction au feu	Flame retardancy	B1/DIN 4102 - NFPA 701 - SIS 650082 - SN 198898 BS 7837 - CSFM NFP 92.503 M2 sur demande speciale a 1250 g/sqm	
Traitement de surface	Surface Treatment	FORMULE S : Alliage PVDF CALIBRE / CALIBRATED PVDF alloy	

Les données de la fiche technique ci-dessus sont des valeurs moyennes avec une tolerance de +/- 5%. / The technical data here above are average values with a +/- 5% tolerance.

Informations complémentaires	Additionnal informations		
Epaisseur d'enduction en crete des fils	Coating thickness at the top of the yarns	270 microns	
Epaisseur totale	Total thickness	0,78 mm	
Passage lumineux "Methode artus/artus" proche de la perception de l'oeil humain.	Light transmission "Deuso/artus" method, close to human eye perception.	10%	NFP 38-511
Indice de blanc	White index	82 %	CIE: Commission Internationale de l'Eclairage
Valeurs thermiques Transmission solaire Reflexion solaire Absorption solaire Facteur solaire	Thermal values Transmission Reflexion Absorption Shading coefficient	 Ts 7 % Rs 77 % As 16 % Fs 13 %	ASHRAE standard 74-1988
Transmission UV	Transmission UV	T-UV 0%	Eppley Solar & Sky U-V radiometer
Conductance thermique globale Position verticale Position horizontale	Global thermal conductivity Vertical position Horizontal position	 U= 5,6W/sqm/°C U= 6,4W/sqm/°C	

Les données U sont des valeurs obtenues par calcul lors de simulations des conditions moyennes d'utilisation et sont données comme ordre de grandeur.
The U data are obtained by calculation through simulations of the average conditions of use, these values must be considered as approximation.

Indice d'affaiblissement acoustique	Acoustical weakening index	Rw: 15 dBA Tolerance +/- 1 dBA	ISO 717
Temperatures extremes supportees ponctuellement par la membrane installee Maximum temporary temperatures sustained by the installed membrane			-30°C/+ 70°C
Management de la qualite selon	Quality management according to		ISO 9001

FERRARI PRE-CONTRAINT 1202S

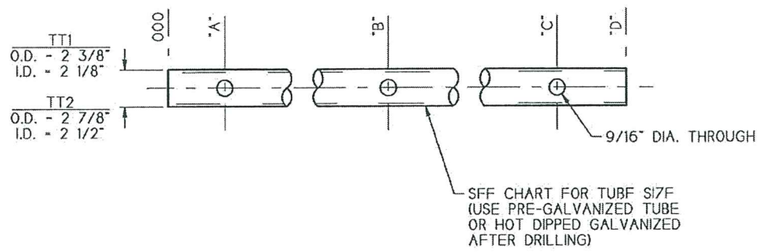
This is to confirm that Ferrari composite materials are made of:

- High Tenacity Polyester base cloth which provides the mechanical strength to the fabric
- Plasticized PVC coating both sides for waterproofness, UV resistance, fungicide treatment, flame retardency treatment
- Surface treatments, top and back side, which can be made of various formulations of acrylic and PVDF based varnishes. The surface treatment provides some resistance to dirt build up and allows efficient cleaning over time.
  - Typically the S and S2 surface treatment are approximately 5 to 7 microns thick and are made of a calibrated PVDF/ACRYLIC alloy, weldable by high frequency machines.
  - The FLUOTOP T2 surface treatment is approximately 12 to 15 microns thick and is made with a higher concentration of PVDF. This treatment is not weldable as such and needs an abrasion process of the edge prior to high frequency welding.

A given type of material, identified under a product code such as PRECONTRAINT 1202 complies with all the mechanical characteristics stated in the corresponding data sheet which is audited under ISO 9001. The surface treatment does not interfere with the mechanical characteristics nor the flame retardency rating.

SUMMARY OF RESULTS

DESCRIPTION	TEST STANDARDS	TEST RESULT	MIAMI-DADE COUNTY CRITERIA
SELF IGNITION TEMPERATURE (T_s)	ASTM D 1929	830°F	ACCEPTBLE IF T_s>650°F
RATE OF BURNING	ASTM D 635	---	PASSED (C-1: < 1.0 in/min)
AVERAGE TIME OF BURN	ASTM D 635	5 SEC	---
AVERAGE EXTENT OF BURN	ASTM D 635	---	---
SMOKE DENSITY (S_d)	ASTM D 2843	44.22%	ACCEPTBLE IF S_d<75%
ACCELERATED WEATHERING	ASTM G 155-05a	PASS	ACCEPTBLE IF < 10%



POCKET TUBE DETAIL

10x SCALE

BRIAN E. LEWIS LICENSE No. 81001 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/19/22

NOTE:
1.) BREAK SHARP CORNERS FOR PVC.
2.) BILL OF MATERIALS IS FOR TOTAL QUANTITY REQUIRED.
3.) MEETS 2020 FLORIDA BUILDING CODE.

ASS'Y	QTY.	SIZE	"A"	"B"	"C"	"D"	MATERIAL SPEC.
TT1	2	HSS 2 3/8" x 0.125"	15 1/8"	54 3/4"	93 3/4"	108 3/4"	A500, FY-50ksi
TT2	2	HSS SCH. 40 PIPE	8 1/4"	47 3/4"	87"	95"	A53, FY-35ksi

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 21-0916.03
Expiration Date 10/27/2026
By Hedy A. Marin
Miami Dade Product Control

REV.	DESCRIPTION	DRAWN	APP.	DATE
D	UPDATED BUILDING CODE IN NOTE #3	RH	GES	10-26-16
C	ADDED NOTE #3	AR	GES	10-26-16
B	REVISED PER MIAMI-DADE COMMENTS	MRB	GES	10-12-11
A	REVISED TO SHOW FINAL CONFIGURATION	LBC	-	-

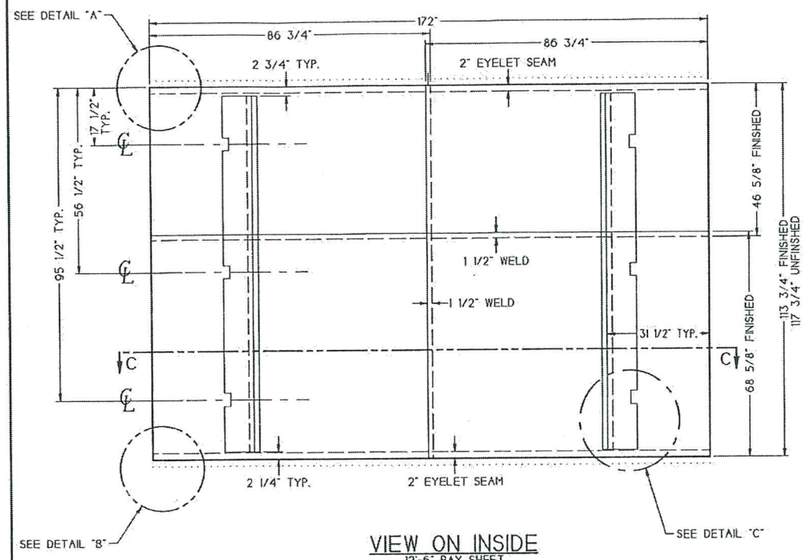
We Cover The World
RUBB BUILDING SYSTEMS

TITLE: FABRIC TESTING POCKET TUBES

DRAWN: MAG 07-21-10
APP.: GES 07-21-10
DATE:
SCALE: 1 : 30
JOB #: 10030
JOB NAME: -

RUBB, INC. SANFORD MAINE 04073
TEL: 207-324-2877 FAX 207-324-2347

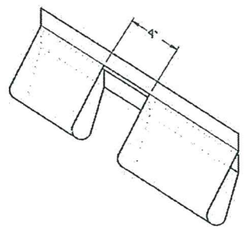
DRAWING NO. 47881



VIEW ON INSIDE
12'-6" BAY SHEET

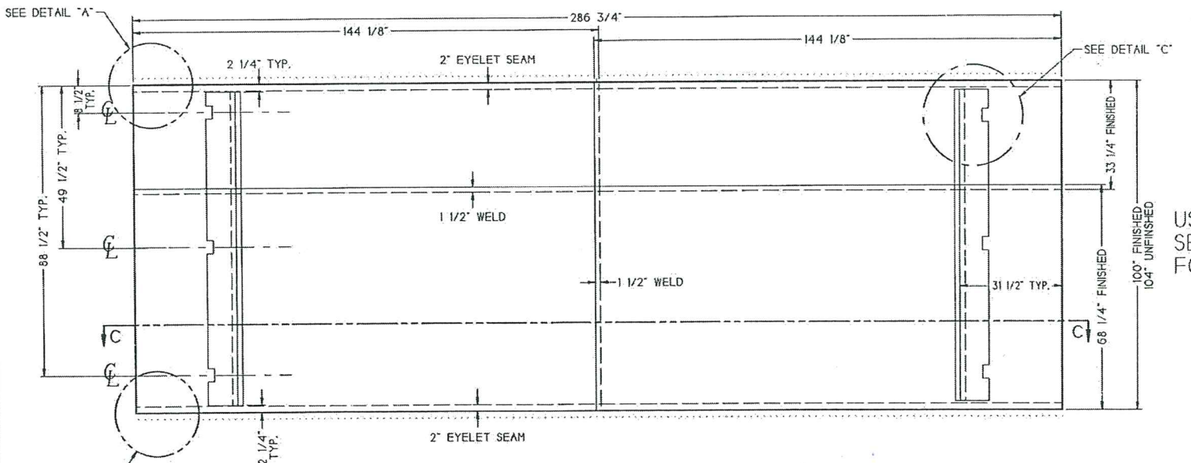
USED POCKET TUBE TT1.
SEE DRAWING 47881
FOR DETAILS.

GENERAL NOTES:
1.) ACTUAL PROJECTS SHALL USE POCKET TUBES TO SUPPORT THE FABRIC. THE SUPPORTING TUBE AND ALL OF THE HARDWARE AS WELL AS THE TENSION IN THE FABRIC SHALL BE DESIGNED BY A FLORIDA REGISTERED ENGINEER ON A CASE BY CASE BASIS AND REVIEWED BY THE CORRESPONDING BUILDING PLANS EXAMINER. THE TUBE SHALL BE CONTINUOUS.
2.) THE MAXIMUM DESIGN TENSION IN FABRIC = 130.0 #/IN.
3.) THE WIDTH OF THE FABRIC IS UNLIMITED.
4.) THIS MEMBRANE FABRIC IS TESTED IN ACCORDANCE WITH THE FOLLOWING:
TAS 201 - IMPACT TEST (LARGE MISSILE)
TAS 202 - UNIFORM STATIC WIND PRESSURE TEST.
TAS 203 - CYCLIC WIND PRESSURE TEST.

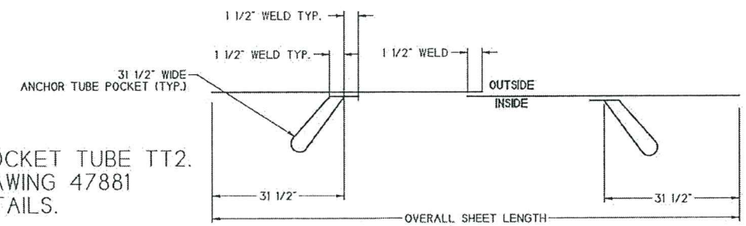


DETAIL "C"
(NOT TO SCALE)

PRODUCT REVISED
as complying with the Florida Building Code
Acceptance No. 21-0916.03
Expiration Date 10/27/2026
By Miami Dade Product Control

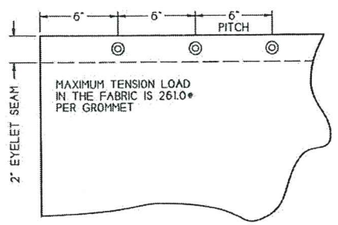


USED POCKET TUBE TT2.
SEE DRAWING 47881
FOR DETAILS.

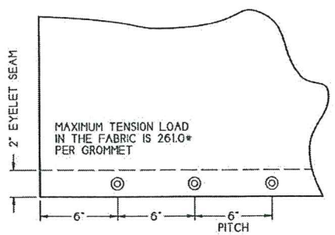


TYPICAL SECTION "C-C"
NOT TO SCALE

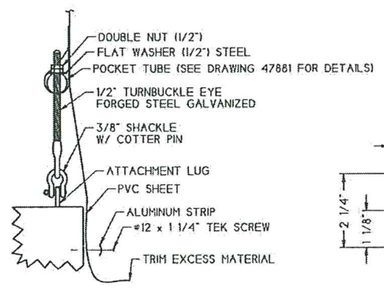
VIEW ON INSIDE
22'-0" BAY SHEET



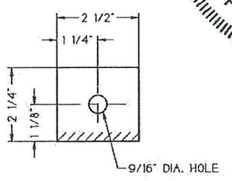
EYELET SPACING DETAIL "A"
4x SCALE



EYELET SPACING DETAIL "B"
4x SCALE



ATTACHMENT DETAIL
NOT TO SCALE



ATTACHMENT LUG
1/2" THICK, A36 MAT'L.
10x SCALE

BRIAN E. LEWIS
LICENSE
No. 81001
9/19/22
STATE OF FLORIDA
PROFESSIONAL ENGINEER

NOTES:
1.) MATERIAL TO BE FERRARI PRECONTRAINT 1202S.
2.) SEE DRAWING 47881 FOR GALVANIZED STEEL POCKET TUBES.
3.) MEETS 2020 FLORIDA BUILDING CODE.

REV.	DESCRIPTION	DRAWN	APP.	DATE
G	UPDATED BUILDING CODE IN NOTE #3	RH	GES	8-18-22
F	ADDED NOTE #3	AR	GES	10-26-16
E	REVISED PER MIAMI-DADE COMMENTS	MRB	GES	10-12-11
D	REVISED TO SHOW AS TESTED CONFIGURATION	LBC	AR	2/21/11
C	REVISED TO SHOW FINAL CONFIGURATION	MAG	-	-
B	ADDED DIMENSIONS TO CUTOUTS	MAG	-	-
A	REVISED FOR FABRICATION	MAG	GES	07-21-10

We Cover The World
RUBB BUILDING SYSTEMS

TITLE: FABRIC TESTING TEST SHEETS

DRAWN: MAG 07-08-10
APP.: -
DATE:
SCALE: 1 : 20
JOB #: 10030
JOB NAME: -

RUBB, INC. SANFORD MAINE 04073
TEL: 207-324-2877 FAX 207-324-2347

DRAWING NO. 47847