

PRODUCT APPROVAL EVALUATION REPORT

<p><u>Product Manufacturer:</u> NCCL Corporation, Inc. 9960 NW 79th Ave. Hialeah Gardens, FL 33016</p>	<p><u>Product Name/Model & Description:</u> Series GSS-1 Genesis Accordion Shutter System Accordion Shutter System (LMI & SMI)</p>
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Scope: This product has been evaluated by the below-signed Florida Professional Engineer for compliance with the Code noted herein and is, for the purpose intended, at least equivalent to that required by the Code, in accordance with section 553.842 F.S. & chapter 61G20-3.005 F.A.C. Re-evaluation of this product shall be required following applicable Code modifications or revisions.

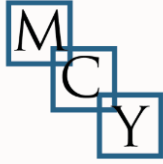
Code: **2014 Florida Building Code**, inclusive of all Supplements effective as of this report date.

Compliance Method: 61G20-3.005 (1)(d) – Evaluation Report from a licensed Professional Engineer

Product Description: Product Approval **Drawings #AD15-11(LMI & SMI)** prepared by MCY Engineering, signed and sealed by Yiping Wang, P.E., is an integral part of this Evaluation Report.

Limitations & Conditions of Use:

- This product has been evaluated for use **inside/outside the HVHZ** (High Velocity Hurricane Zone)
- Impact Resistance: **Large Missile and Small Missile Impact**
- Refer to Product Approval Drawing noted above for:
 - Maximum allowable wind loads at related maximum allowable size(s).
 - Other load limitations applicable to the product, if any.
 - Overall dimensions and material/grade of main product components, accessories, etc.
 - Illustrated diagrams of the attachment of the product to the structure.
 - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.



Detailed Product Description:

Maximum Shutter Width: See Charts on Installation drawings

Maximum Shutter Height: 180"

Maximum Load: +150psf / -200psf (Large Missile Impact)

Reference Drawings # AD15-11

This Product complies with the High Velocity Hurricane Zone (HVHZ) testing requirements.

The above maximum parameters may not occur simultaneously.
Refer to installation drawings for design loads

Mandatory Tests (Tested in accordance with AAMA 101/1.S.2/NAFS-02/TAS-202/AAMA 501)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #
ASTM E283-02	Air Infiltration Leakage	N/A		
ASTM E331-00 OR ASTM 547-00 & TAS 202	Water Penetration	N/A		
ASTM E330-02 & TAS 202	Uniform Static Air Pressure	Hurricane Engineering & Testing Inc.	6-18-13	HETI-13-4028, 4038, 4030, 4032, 4034, 4036, 4050, 4053 (See Attached Test Recap)
AAMA1302.5-76 & 1303.5-76	Forced Entry	N/A		

Comparative Analysis used Yes No As per guidelines for HVHZ for Dade County.

Supplemental Tests (Tested in accordance with TAS-203)

TEST	DESCRIPTION	TEST LOCATION	TEST REPORT DATE	TEST REPORT #
FBC 1626.2 (TAS201&203) ASTM E1886 ASTM E1996-02	Large Missile Impact & Cyclic	Hurricane Engineering & Testing Inc.	6-18-13	HETI-13-4039, 4051, 4037, 4035, 4033, 4031, 4029 & 4054 (See Attached Test Recap)

Engineering Analysis: The following engineering analyses and/or calculations have been performed:

- No comparative analysis has been performed for conditions other than those tested.
- No rational analysis has been performed.
- Anchor calculations are based on manufacturer's published anchor capacity, anchor Notice of Acceptance by Miami Dade County, or ASTM TIR A9-91.
- No increase in allowable stress has been used in the evaluation of this product.



February 27th, 2015