



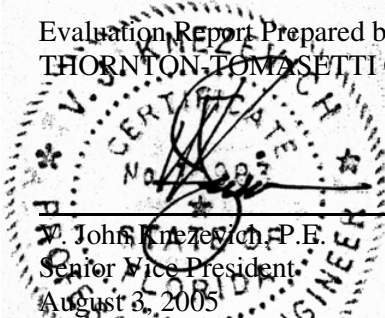
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FBC EVALUATION REPORT NO.: FL5074
CODE: Florida Building Code 2004
PRODUCT CATEGORY: Shutters
PRODUCT SUB-CATEGORY: Storm Panel
PRODUCT NAME: 0.063" Aluminum Storm Panel
 18 and 20 Gage Steel Storm Panels
 Southern Metal Products, LLC – D.B.A.
MANUFACTURER: All Broward Hurricane Panel
 450 West McNab Road
 Fort Lauderdale, FL 33309

1. PURPOSE OF EVALUATION REPORT

This is an Evaluation Report issued by V. John Knezevich, P.E. (System ID No. 1801), to All Broward Hurricane Panel, based on Rule Chapter No. 9B-72.070, Method 1(d) Product Approval, Florida Building Commission, Department of Community Affairs. These 18 & 20 Gage Steel and 0.063" Aluminum Storm Panels have been evaluated and found to be in compliance with the Code and that these products are, for the purpose intended, at least equivalent to that required by the Code.

Re-evaluation of this Evaluation Report is required, following any code changes, to maintain its validity.

Evaluation Report Prepared by:
 THORNTON-TOMASETTI GROUP, INC

 V. John Knezevich, P.E.
 Senior Vice President
 August 3, 2005
 Florida License No. PE 10983
 Florida COA No. 7519



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2. SUBSTANTIATING DATA

2.1 PRODUCT EVALUATION DOCUMENT

- All Broward Hurricane Panel 0.063" Aluminum Storm Panel, Drawing No. 05-422, with revision zero, dated August 2, 2005, Sheets 1 through 6, prepared by Thornton-Tomasetti Group Inc.(TTG, Inc), signed, dated and sealed by V. John Knezevich, P.E. is an integral part of this Evaluation Report.
- All Broward Hurricane Panel 18 Ga. Steel Storm Panel, Drawing No. 05-419, with revision zero, dated August 2, 2005, Sheets 1 through 6, prepared by Thornton-Tomasetti Group Inc.(TTG, Inc), signed, dated and sealed by V. John Knezevich, P.E. is an integral part of this Evaluation Report.
- All Broward Hurricane Panel 20 Ga. Steel Storm Panel, Drawing No. 05-420, with revision zero, dated August 2, 2005, Sheets 1 through 7, prepared by Thornton-Tomasetti Group Inc.(TTG, Inc), signed, dated and sealed by V. John Knezevich, P.E. is an integral part of this Evaluation Report.

2.2 TEST REPORTS

- Test report for Uniform Static Air Pressure in accordance with TAS 202, and meets ASTM E330-02. Test report for Large Missile Impact and Cyclic Testing in accordance with TAS 201 and TAS 203.
- Tensile Capacity of aluminum alloy extrusions was determined in accordance with ASTM E8-03/A370-03.

2.3 STRUCTURAL ENGINEERING CALCULATIONS

Prepared Rational and Comparative Analyses of the Storm Panel performance, as well as anchor calculations. From these analyses, Maximum Shutter Span vs. Design Load (PSF) Schedules were prepared for the 18 & 20 Gage Steel and 0.063" Aluminum Storm Panels. Anchor spacing vs. design load (PSF) schedules were also prepared, indicating maximum anchor spacing for given span conditions at specific design loads (PSF) for each type of anchor used during testing.

No increase in allowable stress has been used in the design of these products.

3. IMPACT RESISTANCE

These Storm Panel Systems satisfactorily passed the large missile impact testing, in accordance with TAS 201. These Storm Panel systems may be used to protect glazed openings from windborne debris in High Velocity Hurricane Zones, when installed in accordance with the referenced drawing.



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4. WIND LOAD RESISTANCE

These Storm Panel systems have been designed to resist wind pressures as indicated by the Span Schedules of the referenced drawings.

5. ANCHORS

The maximum anchor spacing for each type of anchor, shutter span and design wind load is found in the Anchor Schedule of their respective referenced drawing.

6. INSTALLATION

These Storm Panel systems are to be installed in accordance with the typical details, general notes, schedules and material specifications found in their respective referenced drawings.

7. MATERIAL SPECIFICATIONS

See General Notes, unless otherwise noted, and additional material notes of the referenced drawing. All dimensions of components are indicated in the reference drawings. Anchor specifications including acceptable substrate, minimum embedment, edge distance and manufacturer are indicated in their respective referenced drawings.

8. LIMITATIONS AND CONDITIONS OF USE

- Use of these products shall be in strict conformance with the requirements of the reference drawings prepared by TTG, Inc. and comply with chapter 61G15-23 of the Florida Administrative Code.
- These products are suitable for installation in the High Velocity Hurricane Zone (HVHZ) with the exception that they may not be used in Miami-Dade County.
- These products may only be installed on concrete, hollow concrete block or wood substrates. For all other conditions site specific design shall be by this office or our delegated engineer.
- These products must be installed in accordance with the Minimum Shutter Separation From Glass Schedule of the referenced drawing.



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9. CERTIFICATE OF INDEPENDENCE

- This Florida Professional Engineer does not have, nor does he intend to acquire or will he acquire, a financial interest in any company manufacturing or distributing products tested or labeled by the agency.
- This Florida Professional Engineer is not owned, operated or controlled by any company manufacturing or distributing products he tests or labels.
- This Florida Professional Engineer performing an evaluation does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.
- This Florida Professional Engineer performing an evaluation does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.