



TTG PROJECT NO.: KK5421.00

DATE: August 3, 2005

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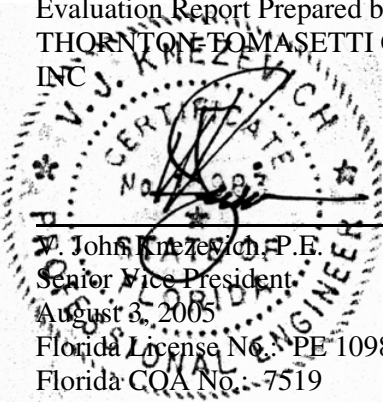
**FBC EVALUATION REPORT NO.:** FL4982  
**CODE:** Florida Building Code 2004  
**PRODUCT CATEGORY:** Shutters  
**PRODUCT SUB-CATEGORY:** Storm Panels  
**PRODUCT NAME:** 24 Gage Steel Storm Panel  
Southern Metal Products, LLC – D.B.A.  
**MANUFACTURER:** All Broward Hurricane Panel  
450 West McNab 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. This Storm Panel has been evaluated and found to be in compliance with the Code and that 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 CQA No. 7519



## 2. SUBSTANTIATING DATA

### 2.1 PRODUCT EVALUATION DOCUMENT

- All Broward Hurricane Panel 24 Ga. Steel Storm Panel Drawing No. 05-421, with a zero revision, dated August 2, 2005, Sheets 1 through 4, 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 ASTM E330-02 and successful testing of impact resistance in conformance with SSTD 12-99. Reports were prepared by Construction Testing Corporation (CTC), and are listed in the referenced drawings.
- 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 Storm Panel performance, as well as anchor calculations. From these analyses, Maximum Panel Span vs. Design Load (PSF) Schedule was prepared for the Steel Storm Panel Maximum Span Schedule (Tables 1 in Drawing No. 05-421). An anchor spacing vs. design load (PSF) schedule was also prepared, indicating maximum anchor spacing for given span conditions at specific design loads (PSF) for each type of anchor used during testing, for both metals.

No increase in allowable stress has been used in the design of this product.

## 3. IMPACT RESISTANCE

The Storm Panel satisfactorily passed the large missile impact testing, in accordance with SSTD 12-99. This Storm Panel may be used to protect glazed openings from windborne debris when installed in accordance with the limitations indicated in the referenced drawing, prepared by Thornton-Tomasetti Group, Inc.

## 4. WIND LOAD RESISTANCE

This Storm Panel has been designed to resist wind pressures as indicated by the Span Schedule of the referenced drawing.

## 5. ANCHORS

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

## 6. INSTALLATION

This Storm Panel is to be installed in accordance with the typical details, general notes, schedules and material specifications found in each respective referenced drawing.



### **7. MATERIAL SPECIFICATIONS**

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

### **8. LIMITATIONS AND CONDITIONS OF USE**

- Use of this product shall be in strict conformance with the requirements of the reference drawing prepared by TTG, Inc. and comply with chapter 61G15-23 of the Florida Administrative Code.
- These products are NOT suitable for installation in the High Velocity Hurricane Zone (HVHZ).
- This product 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.
- Panel spans less than those noted in the Minimum Panel Length Schedule of the reference drawing are not acceptable per the provisions of SSTD 12-99.

### **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.