



TTG PROJECT NO.: KK5355.00

DATE: September 22, 2005

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FBC EVALUATION REPORT NO.: FL2668 - R1
CODE: Florida Building Code 2004
PRODUCT CATEGORY: Shutters
PRODUCT SUB-CATEGORY: Bahama
PRODUCT NAME: Bahama Shutter
Town and Country Industries, Inc.
A Division of ABC Supply Co., Inc.
MANUFACTURER: 400 West McNab Road
Fort Lauderdale, FL 33309

1. PURPOSE OF EVALUATION REPORT

This is an Evaluation Report issued by Thornton-Tomasetti Group Inc., and John W. Knezevich, P.E. (System ID No. 1754), to Town and Country Industries, Inc., based on Rule Chapter No. 9B-72.070, Method 1(d) Product Approval, Florida Building Commission, Department of Community Affairs. This Bahama Shutter has been evaluated and found to be in compliance with the Code and that this product is, 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

NO. 41961
STATE OF FLORIDA
Professional Engineer
John W. Knezevich, P.E.
Vice President
September 22, 2005
Florida License No.: PE 41961
Florida COA No.: 7519



2. SUBSTANTIATING DATA

2.1 PRODUCT EVALUATION DOCUMENT

- Town and Country Industries, Inc. Bahama Shutter, Drawing No. 05-355, with revision one, dated September 22, 2005, Sheets 1 through 3, prepared by Thornton-Tomasetti Group Inc.(TTG, Inc), signed, dated and sealed by John W. 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 and cyclic pressure loading in conformance with ASTM E 1996-02 and E 1886-02. Test Reports are listed in the referenced drawing.
- Tensile Capacity of aluminum alloy extrusions was determined in accordance with ASTM E8-03/A370-03.

2.3 STRUCTURAL ENGINEERING CALCULATIONS

Maximum Shutter Projection and Mullion Spacing are based on uniform load testing in accordance with ASTM E 330-02 and analysis in accordance with Aluminum Design Manual (ADM) 2000 of The Aluminum Association.

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

3. IMPACT RESISTANCE

The Bahama Shutter satisfactorily passed the large missile impact testing, in accordance with ASTM E 1996 and E 1886 Standards. This Bahama Shutter system may be used to protect glazed openings from windborne debris when installed in accordance with the limitations indicated in the referenced drawing, prepared by TTG, Inc.

4. WIND LOAD RESISTANCE

This Bahama Shutter system has been designed to resist wind pressures as indicated in the referenced drawing.

5. ANCHORS

The maximum anchor spacing for each type of anchor and shutter projection at the tested design wind load is found in the Anchor Notes of the referenced drawing.

6. INSTALLATION

This Bahama Shutter system is to be installed in accordance with the typical details, general notes, schedules and material specifications found in the referenced drawing.



7. MATERIAL SPECIFICATIONS

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

8. LIMITATIONS AND CONDITIONS OF USE

- Maximum allowable design pressure = +/- 50 PSF for 6'-11" span shutter, and maximum allowable design pressure = +/- 37.5 PSF for 8'-0" span shutter.
- The Bahama Shutter does not provide impact protection in the open position or in the closed position with open louver blades. To provide impact protection, the shutter must be in the closed position and the louver blades must be locked closed.
- Maximum Bahama Shutter projection = 8'-0". See reference drawing for allowable angles of operation for varying projections.
- Maximum Bahama Shutter louver blade span = 3'-2".
- This product is NOT suitable for installation in the High Velocity Hurricane Zone.
- 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.

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.