


**CertWorks** it works

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**Engineering Evaluation – PER # 1004**

**Manufacturer:** Exclusive Wood Door  
 1950 N. W. 70<sup>th</sup> Ave.  
 Miami, FL 33126

**Product:** 66 3/8" x 131 3/4" Mahogany Inswing Double Door with Radius Top Transom

**Client:** [REDACTED] Residence (P.O. #10455)  
 409 3<sup>rd</sup> St.  
 Palmetto, FL 34221

**Compliance:**

This report is issued to comply with the requirements of the Florida Department of Community Affairs for Statewide Acceptance per rule 9B-72.040. The product listed herein has demonstrated compliance with the 2007 Florida Building Code, chapter 16 and 17. This is a one of a kind analysis and is applicable only to the address and the product described herein.

**Scope:**

The purpose of this report is to determine if the Exclusive Wood Doors products to be installed will withstand the effects of the applied design pressure of +40.5 / -50.8 psf.

**Analysis and Findings:**

The proposed door for the [REDACTED] Residence is 66 3/8" x 131 3/4" overall consisting of two door panels (32" x 93 7/16" ea.) with a 66 1/4" x 33 1/8" radius top transom.

This unit was analyzed by calculating the induced stresses and deflection caused by the predetermined design pressure and a 1.5 safety factor. Calculated results were compared with adjusted allowable design values to determine if item is able to withstand the load produced by the design pressure. Loads were defined according to AAMA-203-03 and comply with the 2007 FBC. Allowable stress values were adjusted with a wind/earthquake load duration factor of 1.6, per NDS 2005.

Since this particular door has only been tested using Brazilian Oak wood and not Mahogany, we can only compare the Meeko Residence door with a door that has been certified. The best comparable door can be found under the current NOA 08-1202.09 issued to Signature Doors, Inc.

*Kristina S. Oaugherty*  
 8-27-10  
 Kristina S. Oaugherty, P.E.  
 Florida No. 68455

Page 1 of 4



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Listed below are the physical characteristics used to compare the Exclusive Mahogany Double Doors to the approved Signature Doors, Inc. Door under NOA 08-1202.09:

Signature Doors Mahogany Door 74.25" X 137.56"	Characteristic	Exclusive Wood Door 66.38" X 131.75"
Mahogany	Wood Grain Material	Mahogany
1.69"	Door Panel Thickness	2.75"
2	Dowels at Top Rail	2
2	Dowels at Mid Rail	2
3	Dowels at Bottom Rail	3
7/16" Laminated - Annealed	Impact Glass	9/16" Laminated-Annealed
Dow 995	Glazing Compound	Dow 995
25.75" X 82.69"	Day Lite Opening	24" X 78"

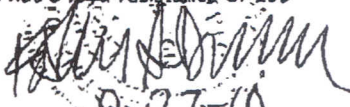
The Signature Door Inc. door performed at + 65/-80 PSF with Large and Small Missile Impact ratings at an overall size of 74.25" x 137.56". Being that the Exclusive door is smaller in size and is only required to perform at +40.5 / -50.8 PSF, we can determine that this will perform equivalently under impact conditions. Furthermore, we can reinforce this statement by observing that the door panel thickness, frame jamb size and wood grain used at the Meekoff Residence are of combined greater strength than that used in the Signature Door Inc. test specimen.

The transoms are assembled using a horizontal jamb to jamb mullion. A similar reinforced mullion is approved under NOA 08-1202.09 for Signature Doors Inc. The maximum span of 66.38" required for the jobsite is within the maximum approved span of 74.25". Therefore a reinforced mullion similar to that approved under NOA 08-1202.09 is required at this jobsite.

We have reviewed the information provided in reference to the exterior doors proposed for the Meekoff Residence. In review of the component materials, methods of assembly and overall construction, we have concluded that the products presented meet or exceed the requirements of the best comparable door that is approved for Signature Doors Inc. under NOA 08-1202.09. The Exclusive Door product is qualified to withstand the maximum design load of +40.5 / -50.8 PSF, in accordance with Florida Building Code 2007, for the above mentioned address only.

#### Glazing analysis:

Unit is glazed with a 9/16" Impact Laminated Glass consisting of: 1/4" Annealed Glass - 0.090" Saflex HP-PVB Interlayer - 1/4" Annealed Glass with a maximum DLO of 24" x 78". This glass has a ball resistance of 199 PSF in accordance with ASTM E1300-04.

  
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Page 2 of 4



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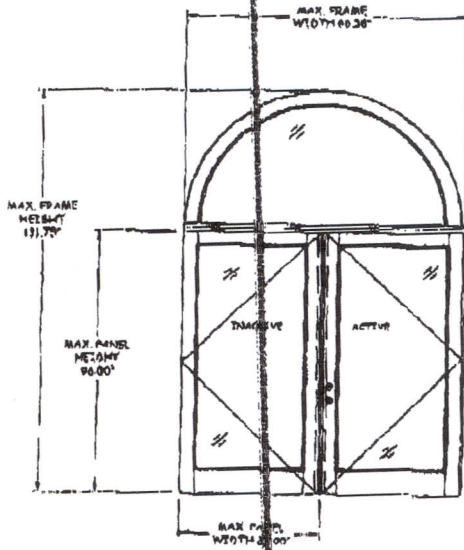
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### Limitations and Conditions of use:

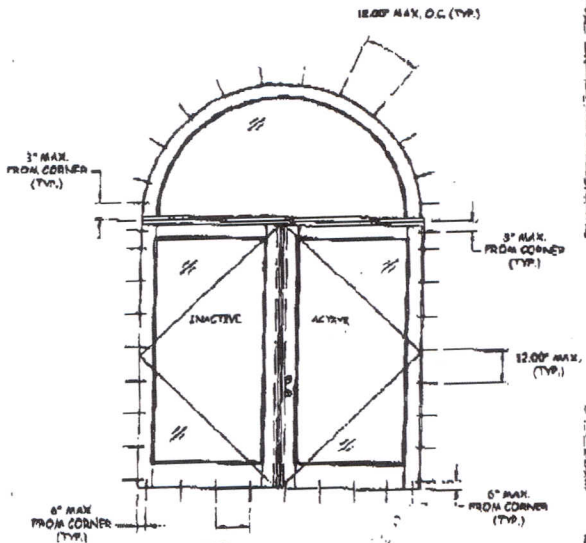
- Design Pressure rating +40.5 / -50.8 PSF.
- Hardware used at the above mentioned jobsite should be equal to or greater than the tested hardware, as shown on the manufacturer's installation instructions and as listed below:
  - 4" stainless steel hinges
  - Surface bolts on top and bottom of inactive leaf
  - Passage lock with deadbolt of grade 2 or greater
- This evaluation applies only to the address and the product listed herein.

### Installation:

For concrete/masonry framing installation, unit must be anchored as follows:  
Use 1/2" diameter Titecoons with sufficient length to achieve a 1 1/2" minimum embedment into substrate and a 2 1/2" minimum edge distance. See sketch below for anchor locations.



ELEVATION



ANCHOR LAYOUT

*[Handwritten Signature]*  
8-27-10

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Page 3 of 4





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In my opinion, the door in question at the [redacted] Residence, if tested under the same conditions as the door presented in NOA 08-1202.09 would meet or exceed the impact ability of the certified door from Signature Doors Inc.

I trust that this will satisfy your needs, however feel free to call if you have any questions.

Respectfully,

Kristina S. Daugherty, P.E.  
Florida Registered Professional Engineer #68455

**Certification of Independence:**

Please note that I do not have nor will I acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, I do not have nor will I acquire a financial interest in any other entity involved in the approval process of the listed product(s).

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Page 4 of 4