

W. W. Schaefer Engineering & Consulting, P.A. (CA #6809)

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Palm Beach Gardens, FL 33418
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ENGINEER'S EVALUATION REPORT #WWS-291

Prepared for:

St. Cloud Window, Inc.
390 Industrial Blvd.
Sauk Rapids, MN 56379
Phone: 320-251-9311

Prepared by:

Warren W. Schaefer, P.E.
Florida Professional Engineer #44135

Manufacturer: St. Cloud Window, Inc.

Product Category: Windows

Evaluation Method: 1-D (Engineer's evaluation)

Product model & name: 3500 Impact Fixed Windows

Documents that must accompany this report:

1. W. W. Schaefer Engineering & Consulting drawing No. 1912

Window size restrictions and assembly requirements:

See drawing No. 1912

Maximum allowable design pressure:

+/-70 psf

Installation requirements:

See drawing No. 1912

Code compliance:

Code section(s) considered with this evaluation:

FBC Chapters 17, 24 & 26

Glass:

All glass meets the current ASTM E1300 standard.

Mullions:

Mullion conditions stated in this approval have been tested in accordance with TAS-201, 202 & 203 and meet the requirements of FBC.

Test Standards applicable to the testing of these windows:

TAS-201, 202 & 203

Test Laboratory: Element Material Technology

Test report numbers: ESP021872P-1844

Note: All HVHZ test reports have been signed & sealed by a Florida PE.

General report notes & system limitations:

1. All size & installation conditions shown in this report and the referenced drawing No. 1912 are based off the referenced test reports and/or engineering analysis in accordance with the Florida Building Code.
2. Windows shall be constructed in accordance with the descriptions in this report, and the manufacturer's state approved quality assurance entity specifications.
3. This product is approved for use in & outside of the High Velocity Hurricane Zones (HVHZ).
4. Job required design wind pressure shall be calculated in accordance with the Florida Building Code Chapter 16 and ASCE 7 Minimum Design Loads for Buildings and Other Structures (0.85 directionality factor may apply per the current ASCE 7 standard).
5. These windows are both small & large missile impact rated for use in wind zone 4 & missile level "D" locations and need not be shuttered.
6. Dry glazing gaskets are in accordance with ASTM C864 per FBC chapter 24.
7. Debridging/thermal breaks are in accordance with ASTM G26, D638, D2843, D635 & D1929 per FBC chapter 26.

Quality Assurance Entity: (ATI) Architectural Testing, Inc., York, PA

Warren W. Schaefer, P.E.
Florida P.E. #44135

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