

W. W. Schaefer Engineering & Consulting, P.A.

25601 Aysen Drive
Punta Gorda, FL 33983
Phone 561-346-5638

ENGINEER'S EVALUATION REPORT #WWS-252

Prepared for:

Hope's Windows, Inc.
84 Hopkins Ave.
Jamestown, NY 14702-0580
Phone: 716-665-5124

Prepared by:

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

Manufacturer: Hope's Windows, Inc.

Product Category: Windows

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

Product model & name: SS30 Impact Detention Window

Documents that must accompany this report:

1. W. W. Schaefer Engineering & Consulting drawing No. 1880

Window size restrictions and assembly requirements:

See drawing NO. 1880

Maximum allowable design pressure:

+/-80 PSF

Installation requirements:

See drawing No. 1880

Code compliance:

Code section(s) considered with this evaluation:
FBC Chapter 17

Coatings (Applicable to galvanized windows only; Not applicable to stainless steel windows):

Coating of steel window members complies with FBC.
Steel coatings have been tested in accordance with ASTM D1654, D714, D4585, B117, G85, D5894 & D4541.

Glass:

All glass meets the current ASTM E1300 standard.

Mullions:

Mullion conditions stated in this approval have been tested in accordance with all required standards and meet the requirements of FBC.

Test Standards applicable to the testing of these windows:

TAS-201, 202 & 203, ASTM E1886 & E1996, & AAMA/WDMA/CSA101/I.S.2/A440

Test Laboratory: Element Material Technology & Intertek

Test report numbers: Element reports ESP016682P-1556 & ESP016682P-1556.2; Intertek reports Q8375.01-201-18 R0 & Q8375.02-201-18 R0

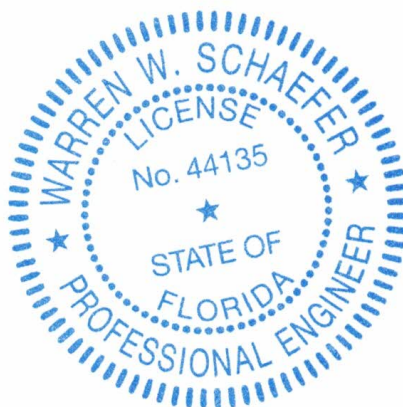
Note: All HVHZ test reports have been signed & sealed by a Florida PE.

General report notes & system limitations:

1. All size & installation conditions shown in this report and the referenced drawing No. 1880 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 level "D" & "E" impact rated for use in wind zone 4 locations. See glass options in drawing 1880 for level "D" vs. level "E" impact use.
6. These windows may be used within essential facilities when level "E" glass is used.
7. These windows need not be shuttered.

Quality Assurance Entity: National Accreditation and Management Institute (NAMI)

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



Digitally signed
by Warren W
Schaefer
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