

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

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ENGINEER'S EVALUATION REPORT #WWS-348

Prepared for:

Pella Corporation
8291 Forshee Drive; Unit 4
Jacksonville, FL 32219
Phone: 904-632-7400

Prepared by:

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

Manufacturer: Pella Windows & Doors

Product Category: Windows

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

Product model & name: Pella Impact Aluminum Direct Glaze Fixed Windows

Documents that must accompany this report:

1. W. W. Schaefer Engineering & Consulting drawing No. 1951

Window size & configuration restrictions and assembly requirements:

See drawing No. 1951 for size & configuration restrictions. Unless noted otherwise, window assembly is the full responsibility of each the manufacturer and their applicable quality assurance and shall be quality assured in accordance with the here-in referenced test reports.

Maximum allowable design pressure:

See drawing No. 1951

Installation requirements:

See drawing No. 1951

Code compliance:

Code section(s) considered with this evaluation:

FBC Chapters 17 & 24

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: ESP030193P (direct set & tube mullion reports)

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

Compliance statement:

This product & its installations have been evaluated as required by the applicable Florida product approval rule and the Florida Building Code (FBC) and are found to be in compliance with each the rule, the Florida Building Code & all code required standards referenced here-in.

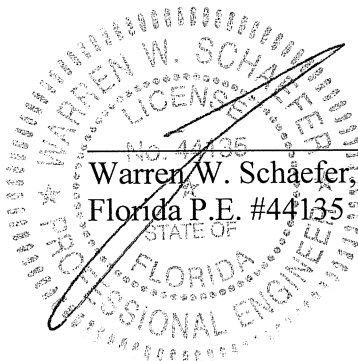
General report notes & system limitations:

1. All size, configuration & installation conditions shown in this report and the referenced drawing No. 1951 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. When applicable, all safety glass requirements must be met per FBC.
7. Any change to this product's components and/or assembly without the knowledge & consent of W. W. Schaefer Engineering & Consulting, P.A. and Warren W. Schaefer, P.E. shall void this evaluation/certification and thus the products Florida approval.

Quality Assurance Entity: Keystone Certifications, Inc.

Disclaimers:

1. The parts, components, assembly & performance of this product, and liability there-of are the sole responsibility of the manufacturer and their quality assurance and shall be as tested unless stated otherwise in this evaluation report or the uploaded approval drawing No. 1951. Neither W. W. Schaefer Engineering & Consulting, P.A. nor Warren W. Schaefer, P.E. claim any responsibility for said parts, components, assembly or performance and shall be deemed responsible only for the evaluation of the product as stated here-in.


Warren W. Schaefer, P.E.
Florida P.E. #44135
JUL 02 2019