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Lewisville TX 75056

John E. Scates, Professional Engineer

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September 10, 2020

Raynor Garage Door
1101 East River Rd.
Dixon, IL 61021

Re: FL 21372-R2
Evaluation Report for AV300 Aluminum Doors

To Whom It May Concern:

At the request of Raynor Garage Door, I have reviewed the drawing and test listed below. The test was conducted by Underwriters Laboratories according to TAS 201/202/203-94 (and -09) test procedures. The pressures listed on the drawing is the direct result of this tests or conservative engineering rational analysis from the actual tests, except that no extrapolation of impact pressures was used. I have concluded that the construction shown on this drawing complies with the structural requirements of the 7th Edition (2020) Florida Building Code. I certify that I meet the requirements of "independence" as detailed in Florida Statutes.

Testing included all aspects of the TAS process, including:

1. Static pressure testing.
2. Impact and cyclic testing.
3. Meeting the deflection recovery requirements.
4. Meeting the forced entry requirement.
5. The aluminum extrusions were tested for hardness per ASTM B647, test report SV30712-20161010-Report, dated 10/10/2016. This testing was included in the UL test report

Additional HVHZ requirements were met:

1. The door is made of Aluminum extrusions with nominal wall thicknesses of 0.063" and 0.075", exceeding the minimum 24 gauge required.
2. The door is made of Aluminum extrusions. G90 galvanizing does not apply.
3. This door contains no plastic/insulation. Flame Spread & Smoke ratings do not apply.

Drawing

P-3338-Rev A Model AV300 up to 16'-2" wide, +42.0/-52.0 PSF

Test Report

Test Report

UL Report No: "SV30712-20161004-Report"
also designated as Miami-Dade Report No: "UL16007"

Testing was conducted per **TAS 201/202/203-94** (and -09).
This test report was dated 10/10/2016, with a 10-year retention period.
The test report was signed/sealed by a Florida P.E.

Test Facility

The test facility was located at:

UL LLC
750 Anthony Trail
Northbrook, IL 60062

Calculations

The tested jamb attachment was confirmed via calculations:

The fastener loads to attach the guide to the building were computed for comparison to the tested door configuration. For attachment to a concrete wall, the Kwik-Bolt 3 anchor limits were determined using ACI 318 methods. Wood fasteners (lag screws) were computed using National Design Standard for Wood Construction (NDS). Steel screw allowable loads were taken from tabulated results in ICC ESR-1976. The minimum spacing of the wall fasteners were chosen as the least result from the Test and the Calculations.

Installation Instructions

Anchorage Requirements:

The door drawing includes means to attach the door to Wood, Steel, or Concrete building structure as detailed on Sheet 3.

This Evaluation Report does not address design of the wall/jambs themselves, but provides the anticipated jamb loads that will be generated by this product, also tabulated on Sheet 3.

Model Descriptions

This Evaluation is for "AV300" Aluminum Full Vision Doors by Raynor. Door rails and vertical end stiles are constructed of aluminum extrusions with nominal 0.075" thickness. The vertical center stiles are constructed of aluminum extrusions with nominal 0.063" thick extrusions. Aluminum is 6063-T6. The shapes of these extrusions are shown on the drawing.

Maximum section height is 26-3/16".

Glazing is impact resistant glass consisting of two pieces of 1/8" tempered glass with a 0.090" thick PVB inner layer. The glazing is attached with aluminum retainers secured to the door with #10 x 1-12" screws on 9.27" max spacing. Additionally, a PVC lip ("glazing channel") is secured to the perimeter of the glazing with 3M 540 adhesive to assist in glass retention.

Maximum glass size is 43-5/16" wide x 17-3/4" tall, resulting in a "clear opening" of 41-15/16" x 16-3/8".

Additional Limitations

The drawing cited above is an explicit part of this evaluation report. The text of this report does not attempt to address all design details but relies upon the illustrations and text of these drawings and instructions as well.

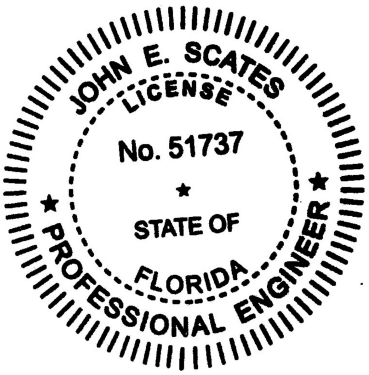
Each door should be chosen based on the design "psf" requirement determined for a specific installation or locale. (The psf ratings for garage doors are test results with an overload/safety factor included, and thus are ASD results.)

The maximum opening width approved with this report is 16'-2".
The maximum door height approved with this report is 24' nominal.

Door width may not exceed the tested door width. However, doors narrower than tested width are allowed, but carry the same psf as the tested product to maintain its impact rating.

The rated pressures may not be achieved unless the door is held closed during the wind event. Both edges must be engaged with a lock prior to the wind event.

These doors have been evaluated for use in the Florida High Velocity Hurricane Zone (HVHZ).



Digitally signed by John E. Scates, P.E.
Date: 2020.09.11 10:31:10 -05'00'

John E. Scates, P.E.
Florida PE # 51737

The digitally signed file is the original. Printed copies are not originals (just as copies of paper-signed documents are not originals).