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GARAGE DOOR EVALUATION REPORT

Garage Door No.:	**IRC-6216-140-24-I**	Model #	625	Report Date:	9/22/2023
Design Pressures:	**+29.7 psf, -33.8 psf**	Test Pressures:	**+44.6 psf, -50.7 psf**		Project No. 20-004
Static Test Date:	**1/29/2020**	Static Test Location:	Amarr, 165 Carriage Ct., Winston-Salem, NC		
Impact Test Date:	**3/19-3/24/2020**	Impact Test Location:	American Test Lab, Inc., Brevard, NC		
ASCE 7-22 Criteria:	**Up to 5 Feet of Door Width in Zone 5; Any Roof Slope; Enclosed Building**				
	Exp. B, 30' MRH	**Exp. C, 15' MRH**	**Exp. C, 25' MRH**	**Exp. D, 15' MRH**	**Exp. D, 25' MRH**
	181 mph	**164 mph**	**156 mph**	**149 mph**	**143 mph**

Reference Drawing and Test Report(s):

- Amarr Drawing number IRC-6216-140-24-I dated 05/20/2020
- Structural Solutions, P.A. report for IRC-6216-140-24-I dated 09/22/2023
  - Static Air Pressure Test witnessed by Thomas L. Shelmerdine, PE
- American Test Lab, Inc. report number ATLNC 0319.01-20 dated 06/03/2020
  - Tests witnessed and certified by David Johnson, PE (FL PE #61915) for:
    - Large Missile Impact Test • Forced Entry Test • Cyclical Test

Description of Test Specimen:

A 16'-0" wide x 7'-0" high x 2" thick sectional garage door, Model # 625. All sections were made of 25 ga galvanized steel sheet. The test unit is further described on Drawing IRC-6216-140-24-I.

Test Standards and Report Conclusions:

The above referenced Test Reports state the following:

- The tests were conducted in accordance with ANSI/DASMA 108-12; ASTM E330-14; ASTM E1886-05 E1996-09 F588-07; ANSI/DASMA 115-17
- The tests were witnessed and certified by:
  Static Test: Thomas L. Shelmerdine, PE
  Other Tests: David Johnson, PE (FL PE #61915)
- The weight of the missile used for the Large Missile Impact Test was 9 lbs.
- The maximum cycle time noted in the report is less than the maximum permitted based on the formula: (area of specimen -75) x (F) + 3, where F= 0.06 for sectional doors.
- All tests passed the referenced Test Standards.
- The Amarr test facility is accredited by the American Association for Laboratory Accreditation, Cert. #2595.01.
- The test facility at American Test Lab, Inc. is accredited by IAS, Certification #TL-423.

Summary:

The 16'-0"x7'-0" Model # 625 door as described on drawing IRC-6216-140-24-I meets or exceeds the testing criteria as described above. By comparison to the construction of the 16'-0"x7'-0" Model # 625, the following doors also meet or exceed the above testing criteria, when constructed in accordance with drawing IRC-6216-140-24-I:

- 16' x 7' Model 675 doors, which have alternate embossment patterns in the skin
- 16' x 7' Model 950 doors, which have thicker 24ga steel skin
- 16' x 7' Amarr Lincoln 1000, Hillcrest 1000, & Heritage 1000 doors (which are alternate names for Models 625, 675 & 950)
- 16' x 7' Amarr Lincoln 1500 & 2000, Hillcrest 1500 & 2000, and Heritage 1500 & 2000 doors (which are Models 625, 675 & 950 with insulation)
- Model 625, 675, 950, Amarr Lincoln, Hillcrest & Heritage 1000, 1500 & 2000 doors, with widths up to 16'-0" and heights up to 14'-0"
- 8 windows (18-1/8" x 10-5/8" x 5/16" annealed glass with PVB interlayer) may be installed in 1 section.
- Windows are not required to be installed in any section.

To the best of my knowledge, the above garage door conforms to the requirements of the Florida Building Code 8th Edition (2023). I certify that I have no financial interest in the testing lab(s) that performed the tests, nor in Amarr Garage Doors.

Submitted By:

Thomas L Shelmerdine

Digitally signed by Thomas L Shelmerdine
DN: c=US, o=North Carolina, dnQualifier=A01410D000001856487A7B100125CE2, cn=Thomas L Shelmerdine
Date: 2023.09.22 13:52:41 -04'00'

THOMAS L. SHELMERDINE
LICENSE
No. 48579
STATE OF FLORIDA
PROFESSIONAL ENGINEER
See Digital Signature

This document has been digitally signed & sealed by Thomas L. Shelmerdine, PE on the date shown. Printed copies of this document are not considered signed & sealed, and the signature must be verified on any electronic copies.

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STRUCTURAL SOLUTIONS, P.A.

Thomas L. Shelmerdine, PE (Florida PE #0048579) (dba Structural Solutions of North Carolina, Inc., Florida Firm #29412)

5921-G West Friendly Avenue ▪ Greensboro, North Carolina 27410 ▪ (336) 856-2686 ▪ www.sspa.biz ▪ NC Firm #C-1096