STRUCTURAL SOLUTIONS, P.A.

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GARAGE DOOR EVALUATION REPORT

Garage Door No.:	**IBC-1309-150-15-I**	Amarr	2741	Report Date:	10/5/2023
Design Pressures:	**+32.55 psf, -38.3 psf**	Test Pressures:	**+48.9 psf, -57.45 psf**		Project No. 14-006
Static Test Date:	**2/16/2015**	Static Test Location:	Amarr, 165 Carriage Ct., Winston-Salem, NC		
Impact Test Date:	**3/23-3/25/2015**	Impact Test Location:	American Test Lab, Inc., Brevard, NC		
ASCE 7-22 Criteria:	**Up to 5 Feet of Door Width in Zone 5; Roof Slope ≤ 10°; Enclosed Building**				
	Exp. B, 30' MRH	**Exp. C, 15' MRH**	**Exp. C, 25' MRH**	**Exp. D, 15' MRH**	**Exp. D, 25' MRH**
	194 mph	**176 mph**	**168 mph**	**160 mph**	**154 mph**

Reference Drawing and Test Report(s):

- Amarr Drawing number IBC-1309-150-15-I dated 03/03/2015
- Structural Solutions, P.A. report for IBC-1309-150-15-I dated 10/05/2023
  - Static Air Pressure Test witnessed by Thomas L. Shelmerdine, PE
- American Test Lab, Inc. report number ATLNC 0323.02-15 dated 04/21/2015 and Addendum dated 07/10/2012
  - 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 9'-2" wide x 8'-0" high x 1 3/8" thick sectional garage door, Amarr 2741. All sections were made of 27 ga exterior / 27 ga interior galvanized steel sheet. The test unit is further described on Drawing IBC-1309-150-15-I.

Test Standards and Report Conclusions:

The above referenced Test Reports state the following:

- The tests were conducted in accordance with ANSI/DASMA 108-17; ASTM E330-14; ASTM E1886-05 E1996-09 F588-07; ANSI/DASMA 115-05
- 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 9.3 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 9'-2"x8'-0" Amarr 2741 door as described on drawing IBC-1309-150-15-I meets or exceeds the testing criteria as described above. By comparison to the construction of the 9'-2"x8'-0" Amarr 2741, the following doors also meet or exceed the above testing criteria, when constructed in accordance with drawing IBC-1309-150-15-I:

- 9'-2" x 8' Amarr 2742 doors (which are 2" thick in lieu of 1 3/8" thick)
- 9'-2" x 8' Amarr 2042 doors (which are 2" thick with 20ga exterior skin, in lieu of 1 3/8" thick with 27ga exterior skin)
- 9'-2" x 8' Amarr 2442 doors (which are 2" thick with 24ga exterior skin, in lieu of 1 3/8" thick with 27ga exterior skin)
- Amarr 2741, 2742, 2042 and 2442 doors with widths up to 9'-2" and heights up to 24'-0"

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: 2023.10.05 11:14:31 -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.

FL

STRUCTURAL SOLUTIONS, P.A.

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