July 20, 2023

Cornell Iron Works
24 Elmwood Ave
Mountaintop, PA 18707
Attn: Christopher Rebarchak

RE: ***Review, Evaluation, and Certification of Code Compliance***
Project #CIW-FBC2023-FL: Exterior Rolling Overhead Doors – StormDefender
Includes non-insulated doors rated for 80 FPS impact velocity conditions

To whom it may concern:
Moment Engineering + Design has performed a comprehensive structural review of the Cornell Iron Works Rolling Overhead Door product lines described above, for typical installations in the State of Florida.

Statement of Compliance:
When constructed and installed per the conditions and design criteria described herein, the Rolling Overhead Door product lines described above are compliant with applicable sections of the design reference documents noted below.

Design Reference Documents:

- 2023 Florida Building Code
- 2018 International Building Code
- FBC Test Protocols TAS 201, 202, and 203
- ASCE/SEI 7-22 – Minimum Design Loads and Associated Criteria for Buildings and Other Structures
- Proprietary load test data and evaluation (see technical documentation below)
- Proprietary sections and materials properties as noted

Overview:
The doors described in this report consist of a continuous door panel made of interlocking cold-formed steel door slats suspended from an overhead drum roller. The drum roller serves to store the curtain in a coiled configuration when the door is opened. Note that evaluation of the drum roller assembly is not included in this report.

The sides of the curtain are constrained from lateral movement along their vertical edges by steel guides attached to the door jambs. This constraint provides resistance to lateral wind forces. Various guide configurations are used for the different door styles included in this report. The lateral wind forces are transferred from the curtain to the guides and then through the attachment elements to the door jamb. The door jambs are part of the main wind force resisting system of the existing structure and are usually constructed of steel, concrete, or concrete masonry units. Resistance of existing structures to design loads from proposed overhead rolling doors is not included in the scope of this analysis and should be evaluated by a registered design professional where required by the authority having jurisdiction.

Details of door assembly and associated components appear in the following documents:

- Drawing: ES 16-80-CIW, dated 03/03/2020, detail sheets 1-7
- Installation Instructions, ES 10-464 Defender Series Door, Rev 0, dated 07/03/2019.

Door Slats:
Slats may be manufactured using steel sheet, ASTM A1011 CS Type "B" (minimum 40 ksi); ASTM A1011 SS grade 40; ASTM A1011 HSLAS grade 40 or ASTM A1011 HSLAS-F, grade 40. Stainless steel slats may use ASTM 666 Type 304 or 316 alloys with minimum specified yield strength of 40 ksi.

StormDefender CP1356 Slats:
All non-insulated doors covered by this report use a CP1356 slat (12 gauge) with a minimum thickness of 0.1084" or 0.105" (stainless). The nominal dimensions of the formed slat are approximately 4" height by 1 ½" depth for all CP1356 slats.

The door configurations present in the above referenced drawings are of tested configurations with tested and alternate anchor types verified through analysis.

Technical Documentation:
Test results were used to substantiate the analysis procedure. The following information was considered in a comparative analysis of the design:

Door Tests with Non-Insulated Slats:
TAS 201, TAS 202, and TAS 203 testing of the Defender/StormDefender, Rolling Garage Door per FBC HVHZ and Miami Dade County requirements. Parameters: 14'-0" width, 10' height, design wind pressures of +/- 200 psf and large missile impact testing. Conducted by Intertek Building & Construction. Report No: H7081.02-109-18, dated 05/14/18. Miami Dade Notification No.: ATI 17064

Test reports were completed by Architectural Testing Inc. (acquired by Intertek), at the location of the designated testing facility noted below.

Intertek York – Building Products & Building Sciences
130 Derry Court
York, PA 17406-8405

Impact Resistance:
Doors with CP1356 slats have passed the FBC Protocols TAS 201 and TAS 203 for impact ono both sides of the door, permitting installation on either the inside or the outside of the wall. These tests were conducted on the lightest slat gage curtains shown in the detail drawings designed for impact resistance. All doors referenced herein are considered to be impact resistant.

Limitations and Conditions of use:
The use of the door is limited to buildings for which the design wind loads for wall components and cladding – determined in accordance with Section 1609 of the 8th Edition (2023) Florida Building Code – do not exceed the rated design wind loads of the door as shown on the referenced drawings.

The maximum width limitations for each style are shown in the attached drawings. The maximum height for all doors is limited to 30 ft. The doors covered by this report are not designated for use in the High Velocity Hurricane Zone (HVHZ). Manufacturing of doors described in this report are limited to those plants that have met the Product Approval quality assurance requirements.

Certification of Independence:
I, Shawn P. Kelley, President, certify that Moment Engineering + Design, operates as an independent limited liability company providing professional engineer services. Neither I nor Moment Engineering + Design has a financial interest in – nor intent to obtain financial interest in – any company manufacturing or distributing products for which it has issued or will issue evaluation or code-compliance reports.

Neither I nor Moment Engineering + Design has nor will acquire a financial interest in any other entity involved in the approval process for this product.

We appreciate the opportunity to assist you with this project. Should you have any further questions regarding this review, please feel free to contact me directly at 703-988-2350.

Best Regards,

SHAWN PATRICK KELLEY
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PROFESSIONAL ENGINEER

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