TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY

WALTER A. TILLIT, JR., P.E.

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FL P.E. License No. 44167
FL C.A. License No. 0006719

PRODUCT EVALUATION REPORT

REPORT NO.:	**23-0728.01**
DATE:	July 28, 2023
PRODUCT CATEGORY:	Impact Protective System
PRODUCT SUB-CATEGORY:	Operable
PRODUCT NAME:	**40 MM END RETENTION SLAT BERTHA IMPACT PROTECTIVE ROLLING SYSTEM**
SUBMITTED BY:	**American Shutter Systems Association, Inc.** 4268 West Roads Drive West Palm Beach, FL 33407

1. PURPOSE OF EVALUATION:

This is a Product Evaluation Report issued by **Walter A. Tillit, Jr., P.E.** (System ID # 1906) to **American Shutter Systems Association, Inc** based on **Rule Chapter No. 61G20-3, Method 1D of the Florida Department of Business and Professional Regulation**.

This product is being issued an Evaluation Report as described herein, and has been verified for compliance in accordance with the 2023 8th Edition of the Florida Building Code, and to verify that the product is for the purpose intended at least equivalent to that required by the Code.

This Product Evaluation Report shall be subject to review and revision in case of a Building Code Change that may affect its limitations and conditions.

2. EVIDENCE SUBMITTED:

2.1. PRODUCT EVALUATION DOCUMENT (P.E.D.):

Drawing No. **23-137**, titled "**40 MM END RETENTION SLAT BERTHA IMPACT PROTECTIVE ROLLING SYSTEM**", sheets 1 thru 29 of 29, prepared by **Tilteco, Inc.**; signed and sealed by **Walter A. Tillit, Jr., P.E.**; dated **7/28/2023**. This drawing is an integral part of this Evaluation Report.

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2.2. TEST REPORTS:

Large missile impact and cyclic loading under TAS 201 & TAS 203 Protocols, as per section 1626 of the Florida Building Code. Uniform Static loads in accordance with Protocol TAS 202 of the Florida Building Code. Test Reports prepared by **American Test Lab of South Florida, Report No. 0730.01-13**, signed and sealed by Stephen W. Walter, P.E. dated 01/21/14, with **Addendum # 1** dated 8/5/14, signed and sealed by Mr. Stephen W. Walter, P.E. **Report No. 0612.01-14,** signed and sealed By Mr. Stephen W. Walter, P.E., dated 6/24/14, **Report # 0530.01-14,** dated 7/13/14, signed and sealed by Mr. Stephen W. Walter, P.E. with **Addendum # 1,** dated 10/12/14, signed and sealed by Mr. Stephen W. Walter, P.E., **Report # 0917.01-14,** signed and sealed by Mr. Stephen W. Walter, P.E., dated 10/6/14, and new Report # 1211.01-14, signed and sealed by Mr. Stephen W. Walter, P.E., dated 12/11/14.

Impact Test of Mullion per TAS 201, per **American Test Lab of South Florida, Report No. 0404.01-08,** signed and sealed by Henry Hattem, P.E., dated 04/04/08.

2.3. STRUCTURAL ENGINEERING CALCULATIONS:

On "**40 mm End Retention Slat Bertha Impact Protective Rolling System**" for slat span vs. design wind load, as well as anchor spacing vs. design wind load and slat span including mullions, based on rational and comparative analysis, and in accordance with sections 1616 and 2003 of the Florida Building Code.

Calculations prepared by Tilteco, Inc., dated 02/20/14, 06/25/14 and 7/15/14 signed and sealed by Walter A. Tillit, Jr., P.E., and on August 18, 2017.

3. MISSILE IMPACT RESISTANCE:

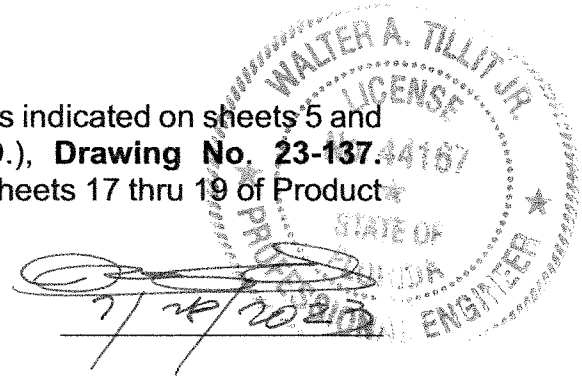
Large missile impact under section 1626 of the Florida Building Code, as per TAS 201 Hight Velocity Hurricane Zones Protocol. 50ft/sec, 2" x 4".

4. WIND LOADS RESISTANCE:

"**40 mm End Retention Slat Bertha Impact Protective Rolling System**", has been verified to sustain wind pressures. Slat Span shall be as indicated on sheets 17, 18 and 19 of Product Evaluation Document (P.E.D.), **Drawing No. 23-137** Maximum Anchor Spacing shall be as indicated on sheets 20 thru 23 of Product Evaluation Document (P.E.D.), **Drawing No.23-137** Mullion span shall be as indicated on sheets 24 thru 29 of Product Evaluation Document (P.E.D.), **Drawing No. 23-137.**

5. INSTALLATION:

Shall be strictly performed in accordance with the details indicated on sheets 5 and 7 thru 15 of Product Evaluation Document (P.E.D.), **Drawing No. 23-137.** Minimum separation to glass shall be as indicated on sheets 17 thru 19 of Product Evaluation Document (P.E.D.), **Drawing No.23-137.**



6. MATERIAL CHARACTERISTICS AND SPECIFICATIONS:

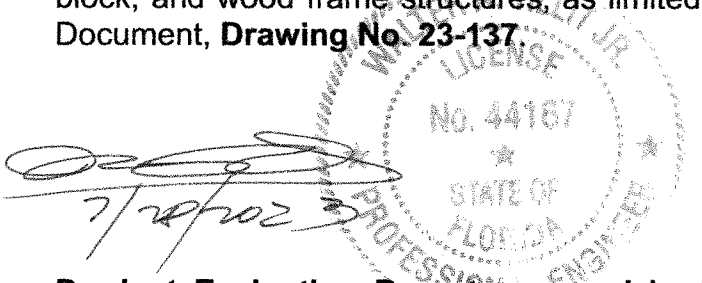
Shall be strictly in accordance with General Notes and Components indicated on sheets 1, 3 and 4 of Product Evaluation Document (P.E.D.), **Drawing No. 23-137**. Anchor specifications shall be as indicated on sheets 1, 12 thru 15 of Product Evaluation Document (P.E.D.), **Drawing No. 23-137**.

7. LIMITATIONS AND CONDITIONS OF USE:

7.1. Shall be strictly in compliance with General Notes No. 1 and 7 thru 12, indicated on sheet 1, Product Evaluation Document (P.E.D.), **Drawing No. 23-137 prepared** by Tilteco, Inc. and signed and sealed by Walter A. Tillit, Jr., P.E.

7.2. Product **may** be installed within HIGH VELOCITY HURRICANE ZONES as defined on section 202of the Florida Building Code.

7.3. Product **shall only** be installed into poured concrete, grouted filled concrete block, and wood frame structures, as limited and defined on Product Evaluation Document, **Drawing No. 23-137.**



Product Evaluation Report prepared by Walter A. Tillit, Jr., P.E. (Florida License No. 44167), President of Tilteco, Inc. (Florida CA-0006719).

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