



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
 BOARD AND CODE ADMINISTRATION DIVISION  
**NOTICE OF ACCEPTANCE (NOA)**

MIAMI-DADE COUNTY  
 PRODUCT CONTROL SECTION  
 11805 SW 26 Street, Room 208  
 Miami, Florida 33175-2474  
 T (786) 315-2590 F (786) 315-2599  
[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**High Velocity Hurricane Protection Systems, Inc.**  
 3827 Progress Ave.  
 Naples, FL 34104

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

**DESCRIPTION: Category 5 Aluminum Hurricane Abatement System – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. 14-2099, titled "Category 5 Rolling Hurricane Curtain", sheets 1 through 5 of 5, dated 04/15/2009, with last revision dated 03/17/2015, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 14-0811.18 and consists of this page 1 and evidence pages E-1 and E-2, as well as approval document mentioned above.

The submitted documentation was reviewed by Carlos M. Utrera, P.E.



*[Handwritten Signature]*  
 06/12/2015

NOA No. 15-0324.05  
 Expiration Date: August 12, 2019  
 Approval Date: June 18, 2015  
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **14-2099**, titled "Category 5 Rolling Hurricane Curtain", sheets 1 through 5 of 5, dated 04/15/2009, with last revision dated 03/17/2015, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS "*Submitted under NOA # 10-0831.07*"

1. Test reports on Uniform Static Air Pressure Test per TAS 202 of Category 5 Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-10-3000**, dated 02/12/2010, signed and sealed by Candido F. Font, P.E.
2. Test reports on Large Missile Impact Test per TAS 201-94 and Cyclic Wind Loading Test per TAS 203-94 of Category 5 Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-10-3001**, dated 02/12/2010, signed and sealed by Candido F. Font, P.E.

*"Submitted under NOA # 09-0511.02"*

3. Test reports on Uniform Static Air Pressure Test per TAS 202 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2503A**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.
4. Test reports on Large Missile Impact Test per TAS 201-94 and Cyclic Wind Loading Test per TAS 203-94 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2503B**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.
5. Test reports on Uniform Static Air Pressure Test per TAS 202 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2504A**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.
6. Test reports on Large Missile Impact Test per TAS 201-94 and Cyclic Wind Loading Test per TAS 203-94 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2504B**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.
7. Test reports on Uniform Static Air Pressure Test per TAS 202 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2505A**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.



06/12/2015

---

Carlos M. Utrera, P.E.  
Product Control Examiner  
NOA No. 15-0324.05  
Expiration Date: August 12, 2019  
Approval Date: June 18, 2015

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

**B. TESTS (Continued)**

8. Test reports on Large Missile Impact Test per TAS 201-94 and Cyclic Wind Loading Test per TAS 203-94 of Category 5 Dual End Retention Rolling Hurricane Curtain, prepared by Hurricane Engineering & Testing, Inc., Report No. **HETI-09-2505B**, dated 01/30/2009, signed and sealed by Candido F. Font, P.E.
9. Test report on Tensile Test of Category 5 Dual End Retention Rolling Hurricane Curtain Slats, Test Report No. **HETI-09-T100**, prepared by Hurricane Engineering & Testing, Inc., dated 01/30/2009, signed and sealed by Candido F. Font, P.E.

**C. CALCULATIONS**

1. Anchoring calculations and comparative analysis prepared Engineering Express, dated 03/17/2015, signed and sealed by Frank L. Bennardo, P.E.  
  
*"Submitted under NOA # 14-0811.18"*
2. Anchoring calculations and comparative analysis prepared Engineering Express, dated 08/07/2014, signed and sealed by Frank L. Bennardo, P.E.  
  
*"Submitted under NOA # 10-0831.07"*
3. Anchoring calculations and comparative analysis prepared Engineering Express, sheets 1 through 12 of 12, dated 08/25/2010, signed and sealed by Frank L. Bennardo, P.E.

**D. QUALITY ASSURANCE**

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

**E. MATERIAL CERTIFICATIONS**

1. None.

**F. STATEMENTS**

1. Statement letter of code conformance to the 5<sup>th</sup> edition (2014) FBC issued by Engineering Express, dated 03/17/2015, signed and sealed by Frank L. Bennardo, P.E.  
  
*"Submitted under NOA # 14-0811.18"*
2. Statement letter of code conformance to FBC 2010 issued by Engineering Express, dated 10/03/2013, signed and sealed by Frank L. Bennardo, P.E.  
  
*"Submitted under NOA # 10-0831.07"*
3. No financial interest letter issued by Engineering Express, dated 08/25/2010, signed and sealed by Frank L. Bennardo, P.E.

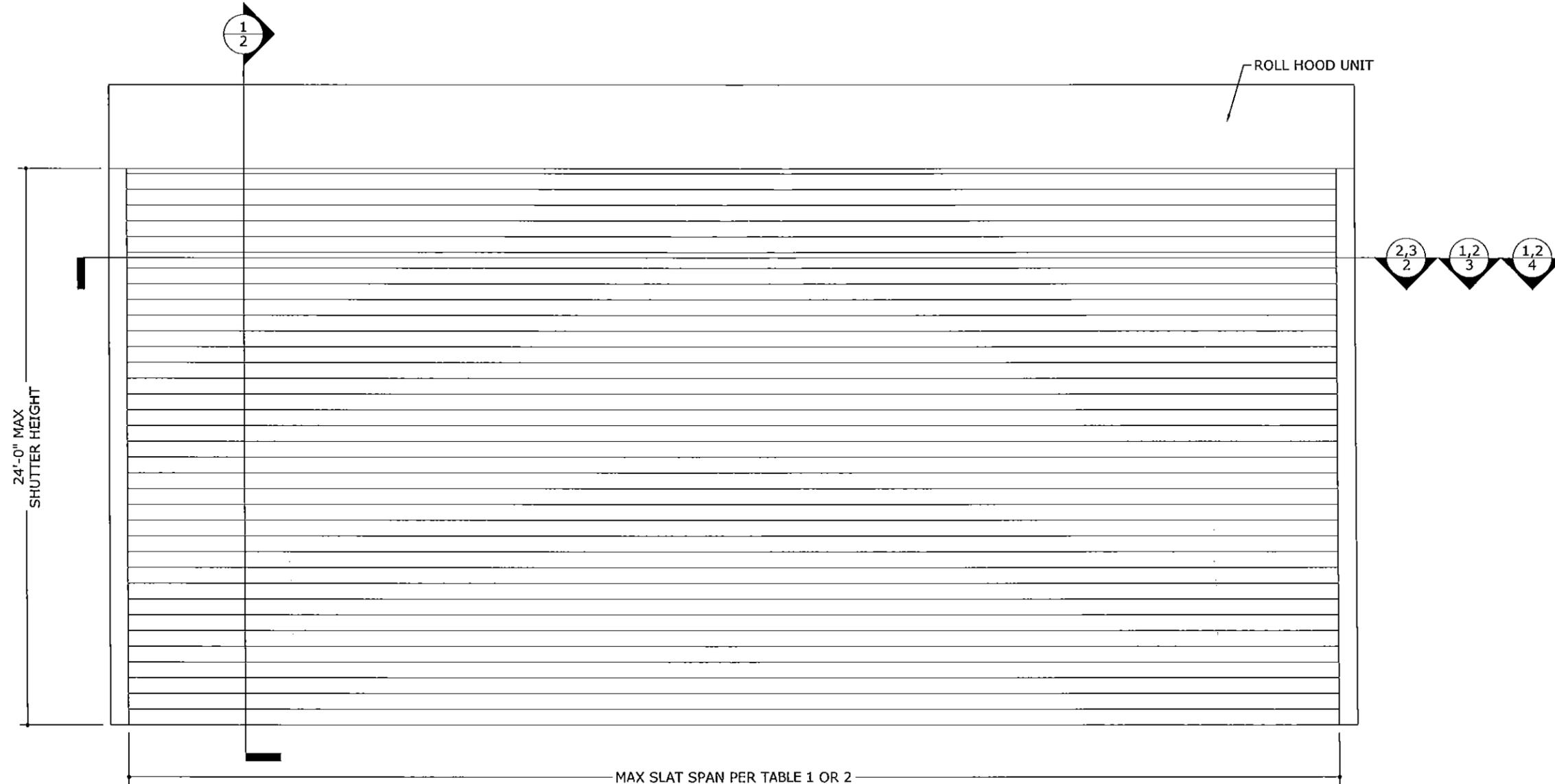


06/12/2015

Carlos M. Utrera, P.E.  
Product Control Examiner  
NOA No. 15-0324.05  
Expiration Date: August 12, 2019  
Approval Date: June 18, 2015

# CATEGORY 5 ROLLING HURRICANE CURTAIN

LARGE MISSILE IMPACT RESISTANT  
FOR USE WITHIN AND OUTSIDE THE HVHZ



## GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED AS AN IMPACT RESISTANT HURRICANE ABATEMENT PRODUCT IN ACCORDANCE WITH THE FLORIDA BUILDING CODE FIFTH EDITION (2014), FOR USE INSIDE AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203 TEST STANDARDS.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-10 AND CHAPTER 1609 OF THE FLORIDA BUILDING CODE FIFTH EDITION (2014) SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
6. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS.
7. ALL EXTRUSIONS SHALL BE OF THE MATERIALS INDICATED HEREIN.
8. ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI, UNLESS OTHERWISE NOTED HEREIN.
9. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.

1 TYPICAL ELEVATION  
1 N.T.S. EXTERIOR ELEV

FRANK L. BENNARDO, P.E.  
LICENSE  
03/20/2015  
NO. 46949

STATE OF FLORIDA  
ENGINEERING OR ARCHITECTURE  
PROFESSIONAL SEAL

ENGINEERING EXPRESS  
160 SW 12th AVENUE #105  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-6943  
WWW.ENGEXP.COM  
CERT OF AUTH #8985  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

HIGH VELOCITY HURRICANE  
3827 PROGRESS AVENUE  
NAPLES, FL 34104  
PHONE: (239) 403-2650

CATEGORY 5 ROLLING HURRICANE CURTAIN  
LARGE MISSILE IMPACT RESISTANT  
FOR USE WITHIN AND OUTSIDE THE HVHZ

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	04/15/09
REV. PER ADDL. TESTING	KL	FLB	06/03/10
REV. PER BCCO COMMENTS	KL	FLB	11/10/10
2010 FBC (05-HVH-0001_06)	KL	FLB	01/15/12
FBC 5TH EDITION	CSL	TSB	03/17/15

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 15-0324-05  
Expiration Date 08/12/2019

By *[Signature]*  
Miami Dade Product Control

14-2099

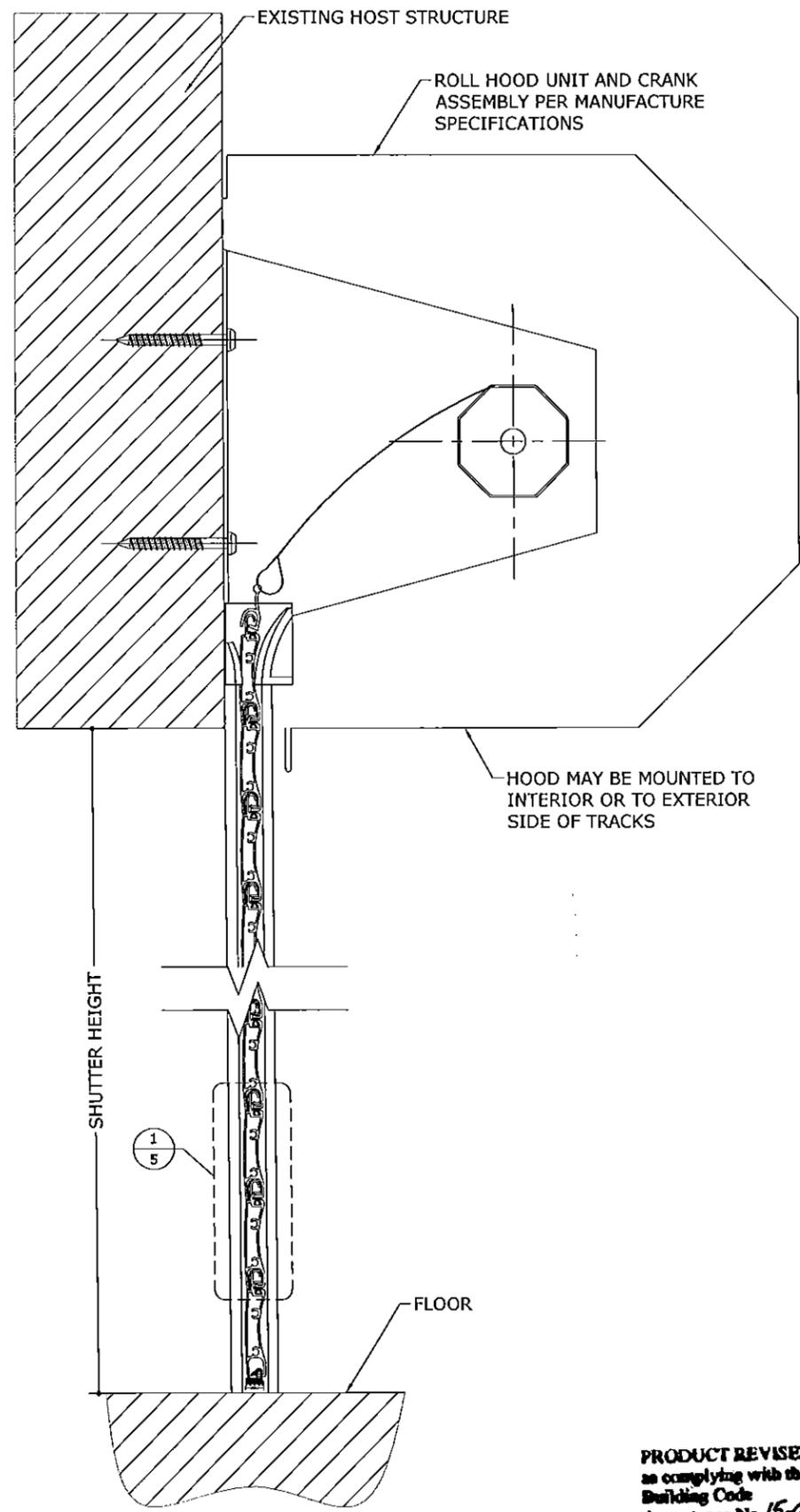
SCALE: -

PAGE DESCRIPTION:

1

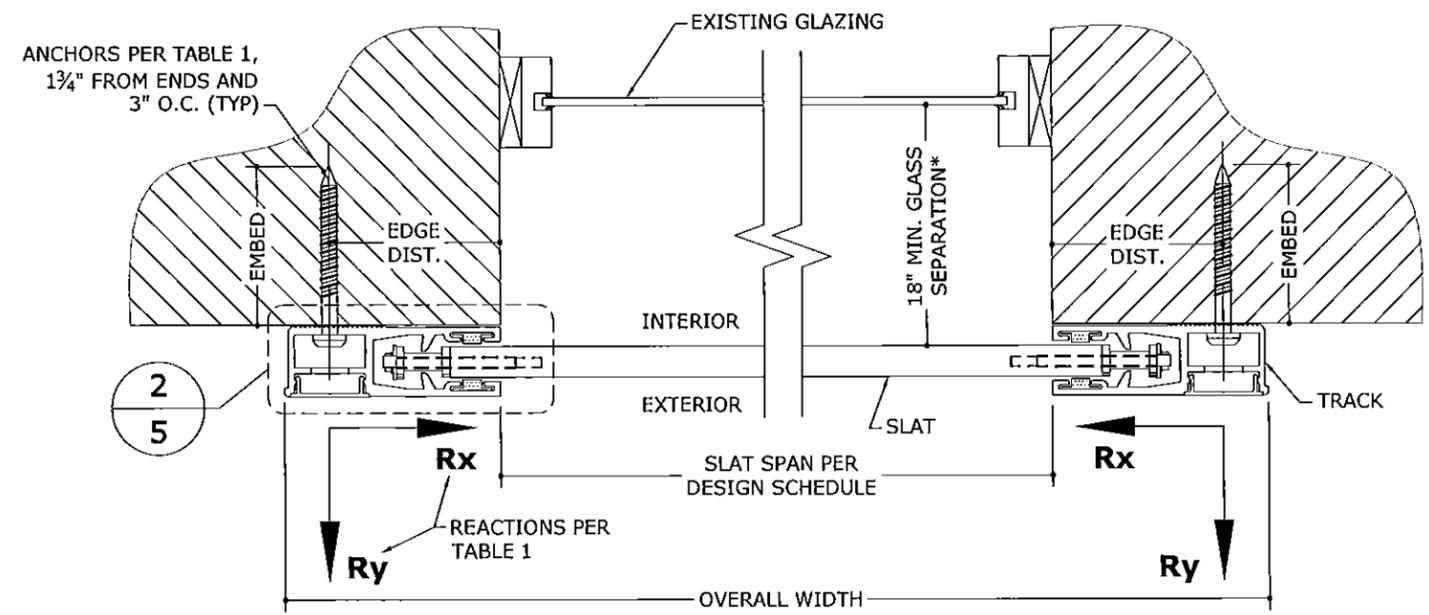
V:\Projects\14-2099 NOA-Update 10.0831-07 (05-HVH-0001) Cat5 Rolling Curtain-FBC Update\WP14-2099\_c End-Retention Roll-Up (NOA).dwg  
 03/20/2015 - 9:30am chen

V:\Projects\14-2099 NOA-Update\0.0831-07 (09-HV-0001) Cat5 Rolling Curtain-FBC Update\WP14-2099\_c-End-Retention Roll-Up (NOA).dwg  
 03/20/2015 - 9:30am chen



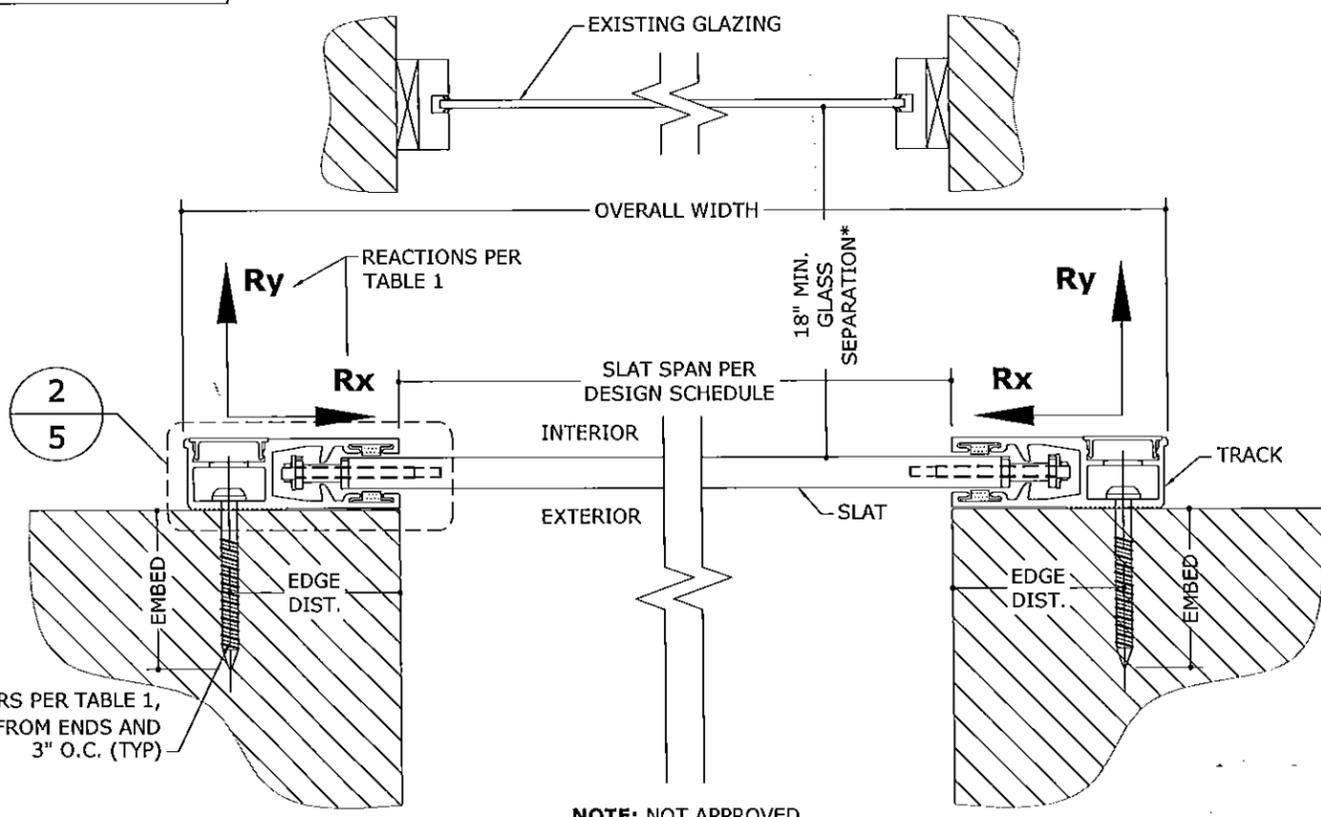
**1** TYPICAL SECTION  
**2** N.T.S. VERT SECTION

**PRODUCT REVISED**  
 as complying with the Florida  
 Building Code  
 Acceptance No **15-0324-05**  
 Expiration Date **08/12/2019**  
 By *[Signature]*  
 Miami Upde Product Control



**2** TYPICAL EXTERIOR MOUNT  
**2** N.T.S. HORIZ SECTION

\*NOTE: NO MINIMUM SEPARATION  
 FROM GLASS REQUIRED FOR USE  
 OUTSIDE THE HVHZ AND OUTSIDE  
 ASTM WIND ZONE 4.



**3** TYPICAL INTERIOR MOUNT  
**2** N.T.S. HORIZ SECTION

NOTE: NOT APPROVED  
 FOR USE WITH 26'-0\"/>

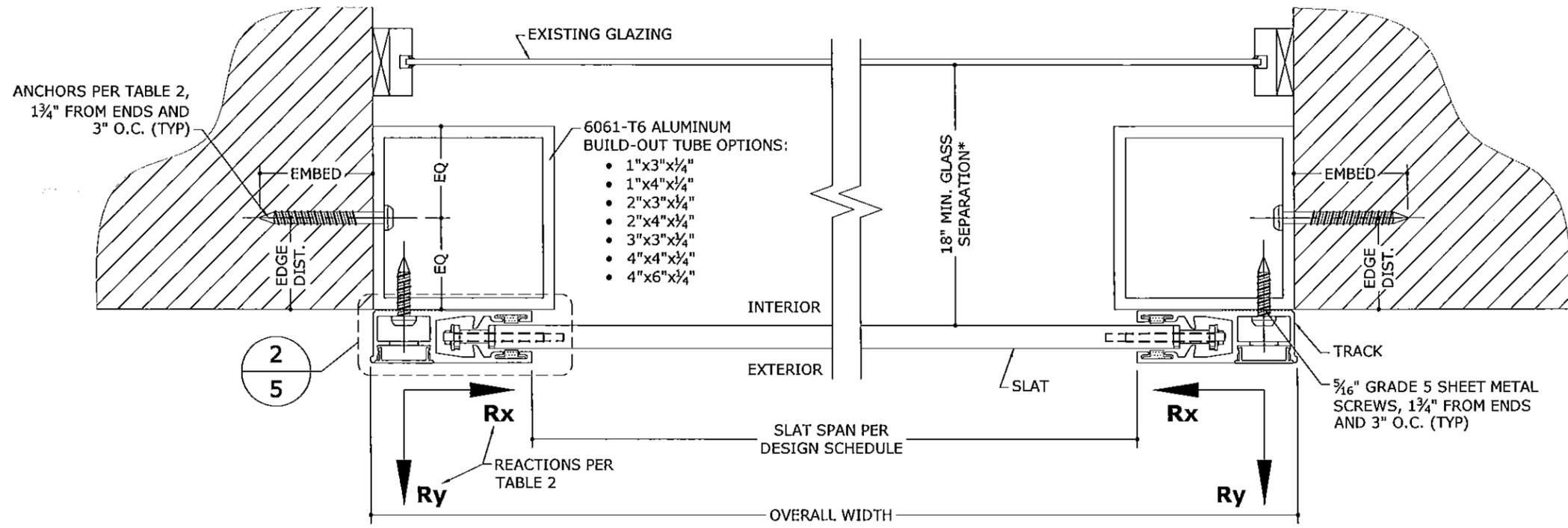
FRANK L. BENARDO, P.E.  
 LICENSE No. 46249  
 03/20/2015  
 STATE OF FLORIDA  
**ENGINEERING EXPRESS**  
 160 SW 12th AVENUE, #106  
 DEERFIELD BEACH, FL 33442  
 PH: (954) 354-0660 FAX: (954) 354-0643  
 WWW.ENGP.CC.COM  
 A FRANK L. BENARDO, P.E., INC. INDEPENDENT REGISTERED PROFESSIONAL ENGINEER

**HIGH VELOCITY HURRICANE**  
 3827 PROGRESS AVENUE  
 NAPLES, FL 34104  
 PHONE: (239) 403-2650  
 CATEGORY 5 ROLLING HURRICANE CURTAIN  
 LARGE MISSILE IMPACT RESISTANT  
 FOR USE WITHIN AND OUTSIDE THE HVHZ

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	04/15/09
REV. PER ADD'L TESTING	KL	FLB	06/03/10
REV. PER BCCO COMMENTS	KL	FLB	11/10/10
2010 FBC (09-HV-0001_06)	KL	FLB	01/15/12
FBC 5TH EDITION	CSL	TSB	03/17/15

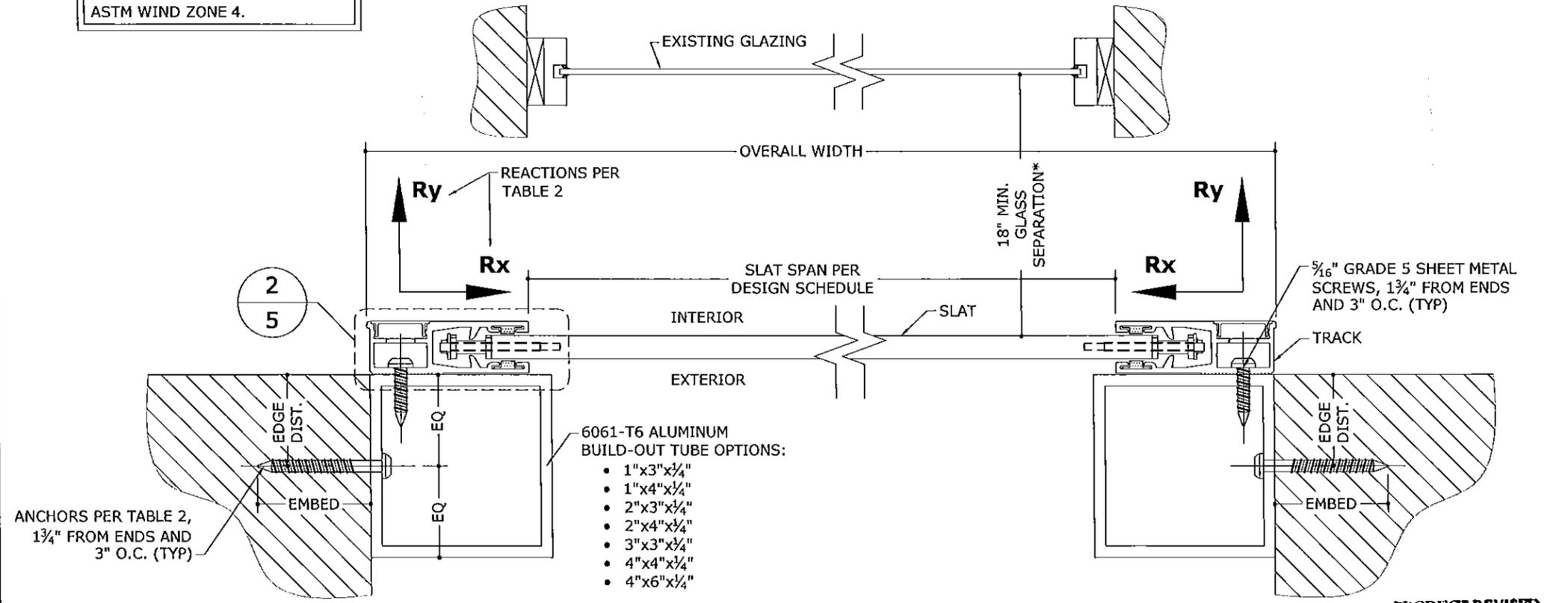
14-2099  
 SCALE:  
 PAGE DESCRIPTION:

03/20/2015 - 9:30am chen V:\Projects\14-2099 NOA-Update 10.0831-07 (09-HVH-0001) Cat5 Rolling Curtain-FBC Update\WP14-2099\_c End-Retention Roll-Up (NOA).dwg



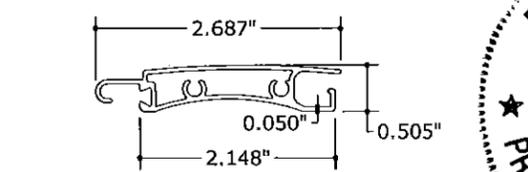
**1** TYPICAL EXTERIOR BUILD-OUT TUBE MOUNT  
**3** N.T.S. HORIZ SECTION

\*NOTE: NO MINIMUM SEPARATION FROM GLASS REQUIRED FOR USE OUTSIDE THE HVHZ AND OUTSIDE ASTM WIND ZONE 4.

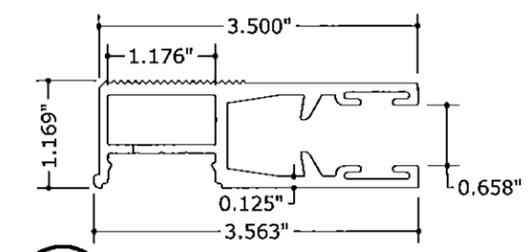


**2** TYPICAL INTERIOR BUILD-OUT TUBE MOUNT  
**3** N.T.S. HORIZ SECTION

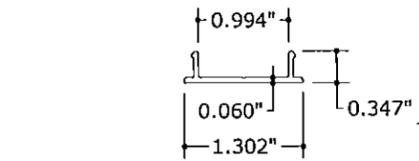
NOTE: NOT APPROVED FOR USE WITH 26'-0" SPAN



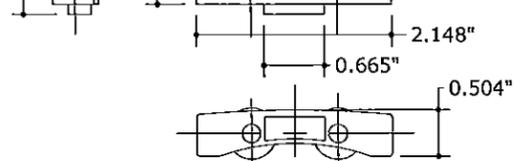
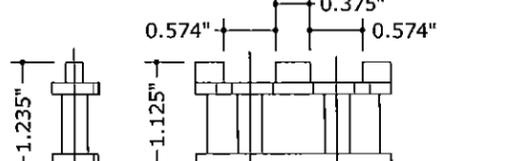
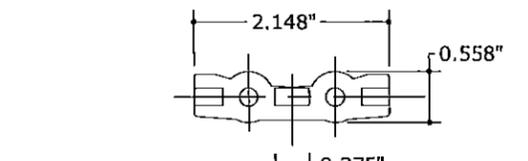
**3** SLAT  
**3** 6063-T6 ALUM. ALLOY  
 6" = 1'-0"



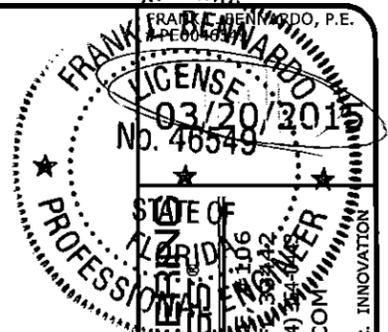
**4** TRACK  
**3** 6063-T6 ALUM. ALLOY  
 6" = 1'-0"



**5** TRACK COVER  
**3** 6063-T5 ALUM. ALLOY  
 6" = 1'-0"



**6** WINDLOCK  
**3** REINF. NYLON (MFD BY M&M PLASTICS)  
 6" = 1'-0"



**ENGINEERING EXPRESS**  
 160 SW 12th Avenue, Suite 106  
 Deerfield Beach, FL 33442  
 PH: (954) 354-0660 FAX: (954) 354-0661  
 WWW.ENGINEERINGEXPRESS.COM  
 CERT OF AUTH #9885  
 A FRANK L. BENARDO, P.E., INC. INNOVATION

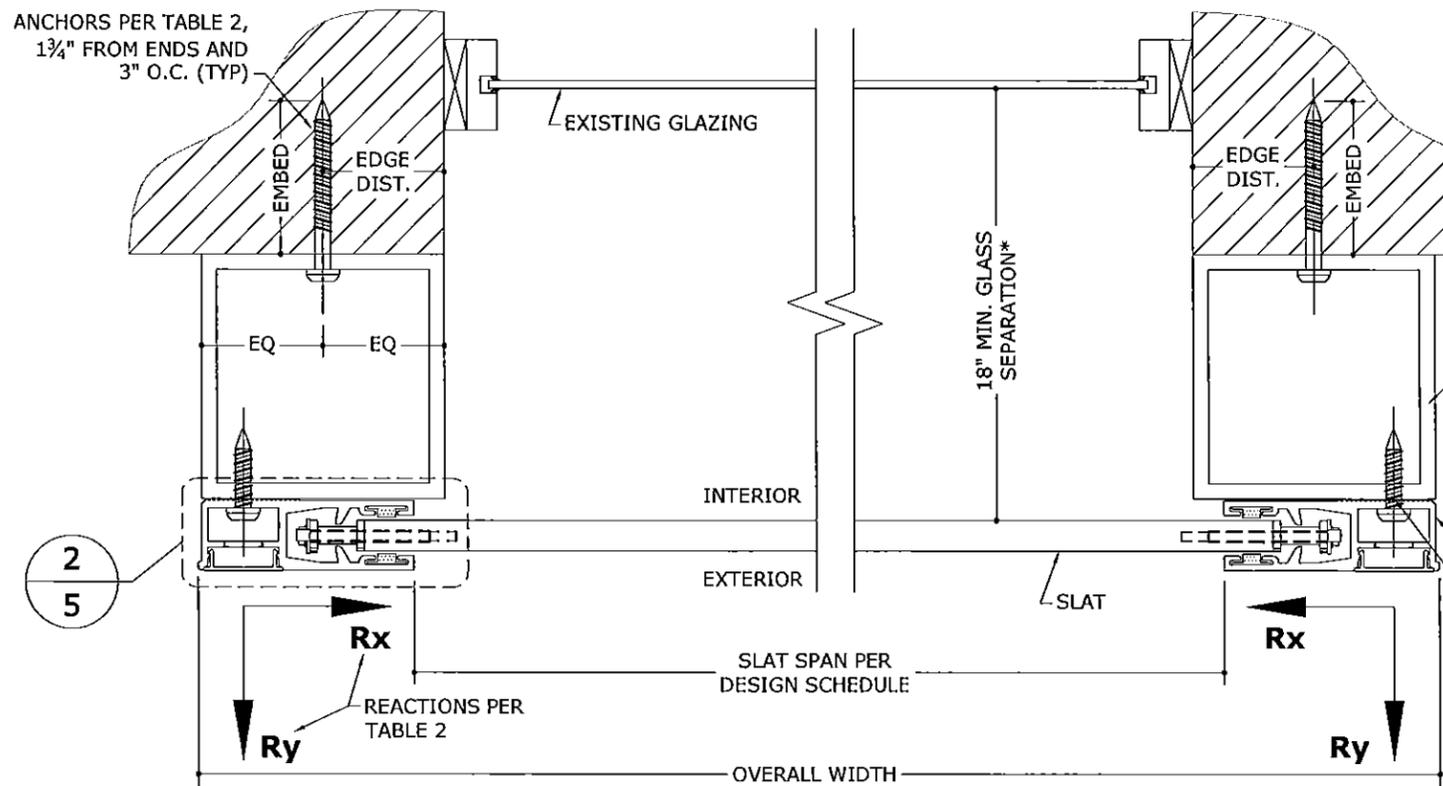
**HIGH VELOCITY HURRICANE**  
 3827 PROGRESS AVENUE  
 NAPLES, FL 34104  
 PHONE: (239) 403-2650  
 CATEGORY 5 ROLLING HURRICANE CURTAIN  
 LARGE MISSILE IMPACT RESISTANT  
 FOR USE WITHIN AND OUTSIDE THE HVHZ

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	04/15/09
REV. PER ADDL TESTING	KL	FLB	06/03/10
REV. PER BCCO COMMENTS	KL	FLB	11/10/10
2010 FBC (09-HVH-0001_05)	KL	FLB	01/15/12
FBC 5TH EDITION	CSL	TSB	03/17/15

14-2099  
 SCALE:  
 PAGE DESCRIPTION:  
 3

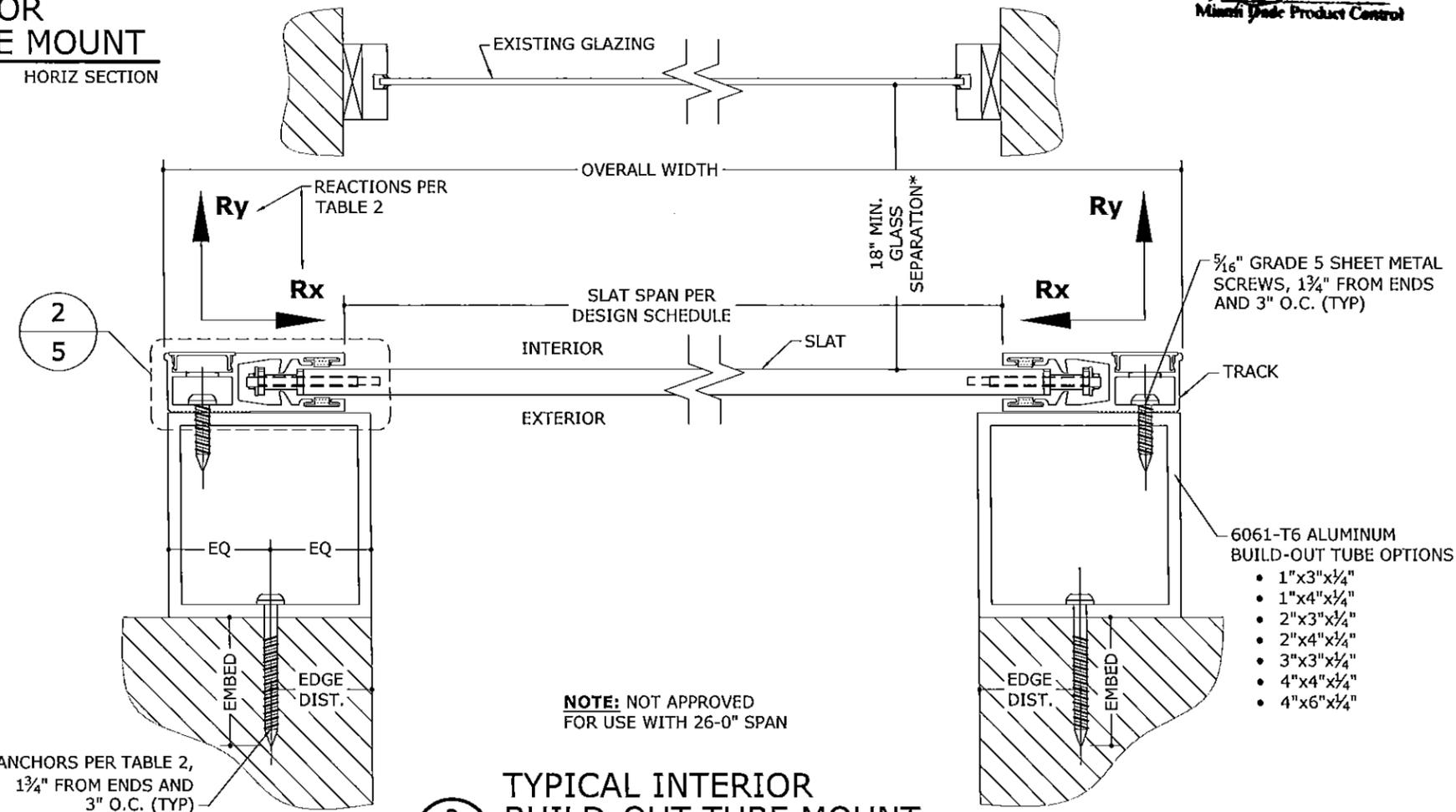
PRODUCT REVISED to comply with the Florida Building Code  
 Acceptance No 15-0324-05  
 Expiration Date 08/12/2019  
 By *[Signature]*  
 Miami Dade Product Control

03/20/2015 - 9:30am chen V:\Projects\14-2099 NOA-Update 10.0831-07 (09-HVH-0001) Cat5 Rolling Curtain-FBC Update\WP14-2099\_c End-Retention Roll-Up (NOA).dwg



**1**  
**4** N.T.S. **TYPICAL EXTERIOR BUILD-OUT TUBE MOUNT** HORIZ SECTION

\*NOTE: NO MINIMUM SEPARATION FROM GLASS REQUIRED FOR USE OUTSIDE THE HVHZ AND OUTSIDE ASTM WIND ZONE 4.



**2**  
**4** N.T.S. **TYPICAL INTERIOR BUILD-OUT TUBE MOUNT** HORIZ SECTION

NOTE: NOT APPROVED FOR USE WITH 26-0" SPAN

FRANK L. BENNARDI, P.E.  
LICENSE NO. 46549  
03/20/2019  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
EXPRESS  
160 SW 12th AVENUE, SUITE 1106  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-0662  
WWW.ENGGEXP.COM  
CERT. OF AUTH. #8885  
A FRANK L. BENNARDI, P.E., INC. INNOVATION

PRODUCT REVISED  
as complying with the Florida Building Code  
Acceptance No 15-0324-05  
Expiration Date 03/12/2019  
By *[Signature]*  
Mitsubishi Product Control

**HIGH VELOCITY HURRICANE**  
3827 PROGRESS AVENUE  
NAPLES, FL 34104  
PHONE: (239) 403-2650  
CATEGORY 5 ROLLING HURRICANE CURTAIN  
LARGE MISSILE IMPACT RESISTANT  
FOR USE WITHIN AND OUTSIDE THE HVHZ

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	04/15/09
REV. PER ADD'L TESTING	KL	FLB	06/03/10
REV. PER BCCO COMMENTS	KL	FLB	11/10/10
2010 FBC (09-HVH-0001_06)	KL	FLB	01/15/12
FBC 5TH EDITION	CSL	TSB	03/17/15

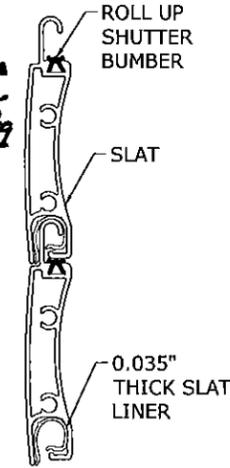
14-2099  
SCALE:  
PAGE DESCRIPTION:  
**4**

**TABLE 1: DIRECT MOUNT INSTALLATION**

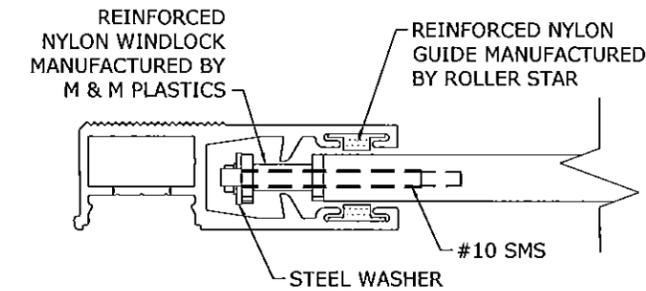
SUBSTRATE	ANCHOR TYPE	SLAT SPAN															
		12'-0"				16'-0"				20'-0"				26'-0"			
		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)	
+	-	Ry	Rx	+	-	Ry	Rx	+	-	Ry	Rx	+	-	Ry	Rx		
A36 STEEL (3/16" MIN)	5/16" GRADE 5 SHEET METAL SCREW	80.0	80.0	480.0	2560.0	80.0	80.0	640.0	3014.7	61.4	55.9	613.6	3808.3	37.5	44.8	582.4	3875.4
6061-T6 ALUMINUM (1/4" MIN)	5/16" GRADE 5 SHEET METAL SCREW	80.0	80.0	480.0	2560.0	70.3	73.1	585.0	2647.5	44.7	40.7	447.5	2772.6	27.2	32.6	424.4	2815.2
CONCRETE (3000 PSI MIN)	5/16" ITW TAPCON WITH 2-1/4" MIN EMBED AND 3-1/8" MIN EDGE DISTANCE	59.2	59.6	357.7	1895.7	49.3	51.3	410.5	1859.6	31.6	28.7	315.6	1958.4	19.3	23.0	299.5	1992.3
	3/8" HILTI HIT-RE 500 EPOXY ANCHOR WITH 4-1/2" MIN EMBED, 4" MIN EDGE DISTANCE AND S.S. HAS ROD	80.0	80.0	480.0	2560.0	80.0	80.0	640.0	3014.7	80.0	80.0	800.0	5454.5	50.0	60.0	780.0	5173.5
	3/8" POWERS WEDGE-BOLT WITH 3-1/2" MIN EMBED AND 3" MIN EDGE DISTANCE	80.0	80.0	480.0	2560.0	80.0	80.0	640.0	3014.7	50.5	45.7	504.6	3113.5	30.4	36.7	477.4	3144.6
GROUT-FILLED BLOCK	5/16" ITW TAPCON WITH 2-1/4" MIN EMBED AND 4" MIN EDGE DISTANCE	54.3	54.7	328.0	1738.0	45.3	47.1	377.2	1707.5	28.9	26.3	288.9	1790.7				

\*NOTE: 26'-0" SPAN IS NOT APPROVED FOR INTERIOR MOUNT CONDITIONS

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 15-0324-05 Expiration Date 08/12/2019 By Miami Plastic Product Control



**1 SLAT ASSEMBLY**  
6" = 1'-0" VERT SECTION



**2 TRACK ASSEMBLY**  
6" = 1'-0" HORIZ SECTION

**TABLE 2: BUILD-OUT TUBE MOUNT INSTALLATION**

SUBSTRATE	ANCHOR TYPE	SLAT SPAN															
		12'-0"				16'-0"				20'-0"				26'-0"			
		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)		ALLOWABLE DESIGN PRESSURES (PSF)		REACTIONS (LB/FT)	
+	-	Ry	Rx	+	-	Ry	Rx	+	-	Ry	Rx	+	-	Ry	Rx		
A36 STEEL (3/16" MIN)	5/16" GRADE 5 SHEET METAL SCREW	80.0	80.0	480.0	2560.0	70.3	73.1	585.0	2647.5	44.7	40.7	447.5	2772.6	27.2	32.6	424.4	2815.2
6061-T6 ALUMINUM (1/4" MIN)	5/16" GRADE 5 SHEET METAL SCREW	80.0	80.0	480.0	2560.0	70.3	73.1	585.0	2647.5	44.7	40.7	447.5	2772.6	27.2	32.6	424.4	2815.2
CONCRETE (3000 PSI MIN)	5/16" ITW TAPCON WITH 2-1/4" MIN EMBED AND 3-1/8" MIN EDGE DISTANCE	59.2	59.6	357.7	1895.7	49.3	51.3	410.5	1859.6	31.6	28.7	315.6	1958.4	19.3	23.0	299.5	1992.3
	3/8" HILTI HIT-RE 500 EPOXY ANCHOR WITH 4-1/2" MIN EMBED, 4" MIN EDGE DISTANCE AND S.S. HAS ROD	80.0	80.0	480.0	2560.0	70.3	73.1	585.0	2647.5	44.7	40.7	447.5	2772.6	27.2	32.6	424.4	2815.2
	3/8" POWERS WEDGE-BOLT WITH 3-1/2" MIN EMBED AND 3" MIN EDGE DISTANCE	80.0	80.0	480.0	2560.0	70.3	73.1	585.0	2647.5	44.7	40.7	447.5	2772.6	27.2	32.6	424.4	2815.2
GROUT-FILLED BLOCK	5/16" ITW TAPCON WITH 2-1/4" MIN EMBED AND 4" MIN EDGE DISTANCE	54.3	54.7	328.0	1738.0	45.3	47.1	377.2	1707.5	28.9	26.3	288.9	1790.7				

\*NOTE: 26'-0" SPAN IS NOT APPROVED FOR INTERIOR MOUNT CONDITIONS

**TABLE NOTES:**

1. DETERMINE WHICH MOUNTING CONDITION IS APPLICABLE AND SELECT TABLE 1 OR 2 ACCORDINGLY.
2. TO DETERMINE THE ALLOWABLE DESIGN PRESSURES AND REACTIONS, MATCH THE ANCHOR TYPE WITH THE CORRESPONDING SLAT SPAN.
3. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
4. EDGE DISTANCE OF 1/2" IS ACCEPTABLE FOR ANCHORS TO STEEL OR ALUMINUM.
5. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
6. MACHINE SCREWS SHALL BE INSTALLED WITH FULL ENGAGEMENT OF THREADS INTO METAL HOST STRUCTURE AND MAY HAVE EITHER A FLAT HEAD, PAN HEAD, TRUSS HEAD, OR OTHER HEAD STYLES.
7. DENOTES CONDITIONS NOT APPROVED FOR USE.

FRANK L. BENNARDO, P.E.  
LICENSE No. 03/20/2015 No. 46549  
PROFESSIONAL ENGINEER  
EXPRESS  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-0661  
WWW.ENGP.COM  
CERT OF AUTH #9885  
A. FRANK L. BENNARDO, P.E., INC. INNOVATION

**HIGH VELOCITY HURRICANE**  
3827 PROGRESS AVENUE  
NAPLES, FL 34104  
PHONE: (239) 403-2650  
CATEGORY 5 ROLLING HURRICANE CURTAIN  
LARGE MISSILE IMPACT RESISTANT  
FOR USE WITHIN AND OUTSIDE THE HVHZ

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	04/15/09
REV. PER ADDL TESTING	KL	FLB	06/03/10
REV. PER 8000 COMMENTS	KL	FLB	11/10/10
2010 FCC (05-HVH-0001_06)	KL	FLB	01/15/12
FCC 5TH EDITION	CSL	TSB	03/17/15

14-2099  
SCALE:  
PAGE DESCRIPTION:

V:\Projects\14-2099\_NDA-Update 10.0831-07 (09-HVH-0001) Cat5 Rolling Curtain-FBC Update\VP14-2099\_c\_End-Retention Roll-Up (NDA).dwg cten 03/20/2015 - 9:30am