



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

Elco Construction Products, Div. of Infastech
 1304 Kerr Drive
 Decorah, IA 52101

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: Aggre-Gator 300 Series Stainless Steel Concrete and Masonry Anchor

APPROVAL DOCUMENT: Drawing No. 13-ECP-01, titled "Aggre-Gator Fasteners 300 Series Stainless Steel Concrete & Masonry Screw", sheet 1 of 1, dated 09/17/2013, 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: None

LABELING: Each box shall bear a permanent label with the manufacturer's name or logo, city, state, model/series and following statement: "Miami-Dade County Product Control Approved or MDCPCA", 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 renews and revises NOA # 08-0813.06 and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

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



[Signature]
 11/19/2013

NOA No. 13-0924.02
 Expiration Date: October 9, 2018
 Approval Date: November 28, 2013
 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. 13-ECP-01, titled "Aggre-Gator Fasteners 300 Series Stainless Steel Concrete & Masonry Screw", sheet 1 of 1, dated 09/17/2013, prepared by Engineering Express, signed and sealed by Frank L. Bennardo, P.E.

B. TESTS "Submitted under NOA # 08-0813.06"

| | <u>Test Report</u> | <u>Standard</u> | <u>Date</u> | <u>Signature</u> |
|-----|--------------------|-----------------|-------------|-----------------------|
| 1. | HETI-08-A242 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 2. | HETI-08-A248 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 3. | HETI-08-A236 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 4. | HETI-08-A230 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 5. | HETI-08-A260 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 6. | HETI-08-A275 | ASTM E488 | 03/17/08 | Candido F. Font, P.E. |
| 7. | HETI-08-A277 | ASTM E488 | 03/17/08 | Candido F. Font, P.E. |
| 8. | HETI-08-A222 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 9. | HETI-08-A226 | ASTM E488 | 02/28/08 | Candido F. Font, P.E. |
| 10. | HETI-08-C102A | ASTM C39 | 03/25/08 | Candido F. Font, P.E. |
| 11. | HETI-08-C101A | ASTM C39 | 03/25/08 | Candido F. Font, P.E. |
| 12. | HETI-08-C100A | ASTM C39 | 03/25/08 | Candido F. Font, P.E. |
| 13. | STTS 08001 | TAS 114, App. E | 05/25/08 | Mark Mosbat, P.E. |
| 14. | STTS 08003 | TAS 114, App. E | 06/21/08 | Mark Mosbat, P.E. |

C. CALCULATIONS

1. Anchor allowable load capacities calculation prepared by Engineering Express, dated 09/11/2013, 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. Drawing No. 13-ECP-01 statement of code conformance to 2010 FBC issued by Engineering Express, dated 09/17/2013, signed and sealed by Frank L. Bennardo, P.E.
2. Statement letter of no financial interest issued by Engineering Express, dated 09/10/2013, signed and sealed by Frank L. Bennardo, P.E.

"Submitted under NOA # 08-0813.06"

3. Distributor Agreement dated 08/11/2008.



11/19/2013

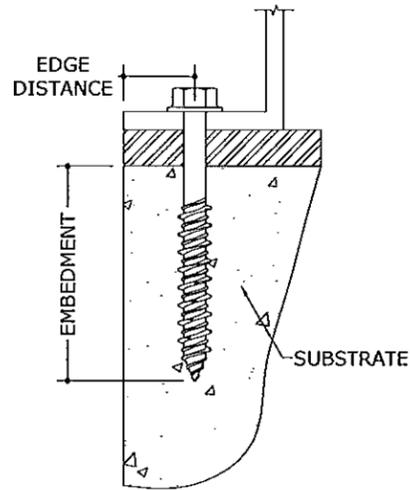
Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 13-0924.02

Expiration Date: October 9, 2018
Approval Date: November 28, 2013

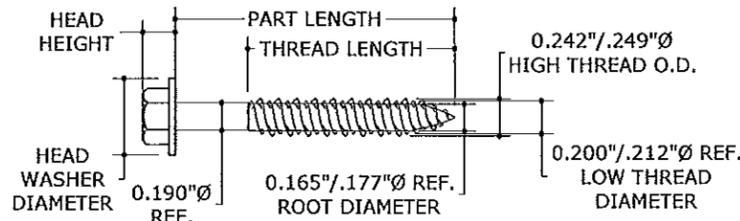
F:\01 Project Files\Elico Construction Products-Infastech (ECP)\2013\13-ECP-01 Concrete Aggregator Screw Anchor\01 - Initial Miami D13-ECP-01 Anchor (NOA).dwg 09/17/2013 - 11:35am chen

ELCO AGGRE-GATOR®

300 SERIES STAINLESS STEEL BI-METAL CONCRETE & MASONRY SCREW



1 TYPICAL SECTION
1 N.T.S. SECTION



2 1/4"Ø AGGRE-GATOR SCREW
1 N.T.S. SIDE VIEW

AGGRE-GATOR THREAD LENGTHS:

| LENGTH CODE* | LENGTH RANGE OF SCREW ANCHOR | AGGRE-GATOR PART LENGTH | AGGRE-GATOR TREAD LENGTH |
|--------------|------------------------------|-------------------------|--------------------------|
| A | 1½" < 2" | 1-3/4" | 1-3/4" |
| B | 2" < 2½" | 2-1/4" | 1-3/4" |
| C | 2½" < 3" | 2-3/4" | 1-3/4" |
| D | 3" < 3½" | 3-1/4" | 1-3/4" |
| E | 3½" < 4" | 3-3/4" | 1-3/4" |
| F | 4" < 4½" | 4" | 1-3/4" |

*LENGTH CODE IS MARKED ON TOP OF FASTENER HEAD, SEE ILLUSTRATION BELOW



HEAD MARKING GUIDE:
 "3" - 300 SERIES (18-8) STAINLESS STEEL DESIGNATION
 "A" - LENGTH CODE
 - ELCO LOGO

1/4"Ø AGGRE-GATOR ALLOWABLE LOAD CAPACITIES:

| | EDGE DISTANCE | SPACING | EMBEDMENT | TENSION (LB) | SHEAR (LB) |
|-----------------------------|---------------|---------|-----------|--------------|------------|
| HOLLOW BLOCK | 2" | 3" | 1-1/4" | 156 | 187 |
| | 4" | 3" | 1-1/4" | 176 | 211 |
| GROUT FILLED BLOCK | 2" | 3" | 1-1/4" | 166 | 207 |
| | 4" | 1-1/2" | 2" | 325 | 473 |
| CONCRETE (2220 PSI MIN.) | 1-1/4" | 3" | 1-1/4" | 149 | 282 |
| | | | 2" | 403 | 477 |
| | | | 1" | 118 | N/A |
| | 1-1/2" | 3" | 1-3/8" | 289 | N/A |
| | | | 1-3/4" | 294 | N/A |
| | | | 1" | 118 | 204 |
| | 2-1/2" | 1-1/2" | 1-3/8" | 289 | 259 |
| | | | 1-3/4" | 294 | 305 |
| | | | 1" | 194 | 204 |
| | 3" | 3" | 1-3/8" | 251 | 259 |
| | | | 1-3/4" | 319 | 305 |
| | | | 1-1/2" | N/A | 200 † |
| CONCRETE (3275 PSI MIN.) | 1-1/4" | 3" | 1-3/4" | 199 †† | 413 |
| | | | 1" | 194 | 226 |
| | | | 1-3/8" | 251 | 413 |
| | 1-1/2" | 3" | 1-3/4" | 319 | 488 |
| | | | 1" | 248 | N/A |
| | | | 1-3/8" | 294 | N/A |
| | 2-1/2" | 1-1/2" | 1-3/4" | 294 | N/A |
| | | | 1" | 248 | 255 |
| | | | 1-3/8" | 294 | 305 |
| | 3" | 1-1/2" | 1-3/4" | 294 | 305 |
| | | | 1" | 251 | 255 |
| | | | 1-3/8" | 251 | 305 |
| 3" | 1-1/2" | 1-3/4" | 319 | 305 | |
| | | 1" | 251 | 226 | |
| | | 1-3/8" | 251 | 510 | |
| 3" | 1-1/2" | 1-3/4" | 319 | 515 | |

NOTE:

- HOLLOW & GROUT FILLED BLOCK SHALL CONFORM TO ASTM C-90 MINIMUM BLOCK.
- AGGRE-GATOR ALLOWABLE LOAD CAPACITIES LISTED HEREIN ARE **NOT** VALID FOR CRACKED CONCRETE SUBSTRATES AS DETAILED IN ACI 355.2.

† EMBEDMENT DEPTH INTO 2220 PSI CONCRETE, WITH ¾" MAX THICK WOOD BUCK LOCATED BETWEEN THE CONCRETE AND SIDE MEMBER.

†† EMBEDMENT DEPTH INTO 2220 PSI CONCRETE, WITH 1½" MAX THICK WOOD BUCK LOCATED BETWEEN THE CONCRETE AND SIDE MEMBER.

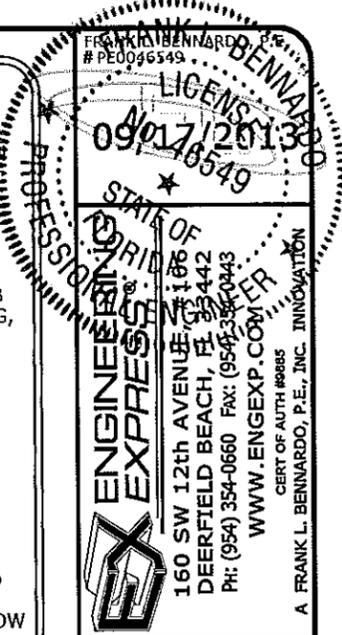
AGGRE-GATOR HEAD DIMENSIONS:

| HEAD STYLE | WASHER DIAMETER | HEAD HEIGHT | ACROSS FLATS |
|-----------------------|-----------------|-------------|--------------|
| HEX WASHER HEAD | 0.420" | 0.190" | 0.312" |
| HEX FLANGE HEAD | 0.620" | 0.225" | 0.312" |
| PHILLIPS TRIMFIT HEAD | 0.430" | 0.155" | N/A |

*DIAMETER AT FLAT PORTION OF TRIMFIT HEAD

GENERAL NOTES:

- THIS PRODUCT HAS BEEN DESIGNED & TESTED ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE 2010 FLORIDA BUILDING CODE FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, AND THE FOLLOWING STANDARDS: ASTM E488, ASTM C39, TAS 114.
- AGGRE-GATOR SCREW ANCHORS SHALL BE 300 SERIES (18-8) STAINLESS STEEL WITH A STALGARD GB (GALVANIC BARRIER) CORROSION RESISTANT COATING, ANCHOR YIELD STRENGTH Fy=57 KSI, ANCHOR ULTIMATE STRENGTH Fu=96 KSI.
- ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS NOTICE OF ACCEPTANCE.
- PILOT HOLES FOR ANCHORS TESTED WERE MADE WITH A 3/16" DRILL BIT WITH A DIAMETER OF 0.206"Ø (+0.000/-0.008).
- ALLOWABLE LOADS SHOWN HEREIN HAVE BEEN CALCULATED DIRECTLY FROM THE TEST REPORTS REFERENCED BELOW PER THE FOLLOWING:
 - ULTIMATE LOAD DIVIDED BY 4.0 FOR SOLID NON-CRACKED CONCRETE SUBSTRATES.
 - ULTIMATE LOAD DIVIDED BY 5.0 FOR HOLLOW BLOCK & GROUT FILLED BLOCK SUBSTRATES.
- NO ALLOWABLE STRESS INCREASE HAS BEEN USED IN PREPARATION OF THIS DOCUMENT.
- CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS, WITH STRENGTH PROPERTIES AS SPECIFIED HEREIN. HOLLOW AND GROUT-FILLED CONCRETE BLOCK SHALL CONFORM TO ASTM C-90.
- ANCHOR EDGE DISTANCE AND SPACING SHALL BE MEASURED FROM THE CENTERLINE OF EACH ANCHOR.
- ANCHOR EDGE DISTANCES, EMBEDMENT, AND SPACING BELOW THOSE SHOWN IN DESIGN TABLES HEREIN ARE NOT ACCEPTABLE.
- ALLOWABLE LOAD CAPACITIES TO SUBSTRATES THAT ARE NOT SHOWN IN THE DESIGN TABLES LISTED HEREIN ARE OUTSIDE THE SCOPE OF THIS CERTIFICATION AND SHALL BE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER.
- ANCHOR VALUES LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMED.
- REFERENCE THE FOLLOWING TEST REPORTS:
 - HURRICANE ENGINEERING & TESTING, INC.
 - #HETI-08-A222 (02/28/08)
 - #HETI-08-A226 (02/28/08)
 - #HETI-08-A230 (02/28/08)
 - #HETI-08-A236 (02/28/08)
 - #HETI-08-A242 (02/28/08)
 - #HETI-08-A248 (02/28/08)
 - #HETI-08-A260 (02/28/08)
 - #HETI-08-A275 (03/17/08)
 - #HETI-08-A277 (03/17/08)
 - #HETI-08-C100A (03/25/08)
 - #HETI-08-C101A (03/25/08)
 - #HETI-08-C102A (03/25/08)
 - SUB-TROPICAL TESTING SERVICE.
 - #STTS 08001 (05/25/08)
 - #STTS 08003 (06/21/08)
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.



ELCO

ELCO CONSTRUCTION PRODUCTS, INFASTECH (DECORAH) LLC
 1304 KERR DRIVE
 DECORAH, IA 52101

AGGRE-GATOR CONCRETE & MASONRY SCREWS
 MIAMI-DADE NOTICE OF ACCEPTANCE

| REMARKS | DATE |
|------------|----------|
| INIT ISSUE | 09/09/13 |

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13-ECP-01

SCALE: 1 OF 1
 PAGE DESCRIPTION: 1

PRODUCT REVISED
 as complying with the Florida
 Building Code
 Acceptance No 13-0924.02
 Expiration Date 10/09/2018

By
 Miami Dade Product Control