MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
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www.miamidade.gov/economy

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Brighton Best International, Inc.
12801 Leffingwell Avenue
Santa Fe Springs, CA 90670

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: US Anchor Ultrawedge+ Anchor

APPROVAL DOCUMENT: Drawing No. **1**, titled "US Anchor Ultrawedge+ Anchor", sheets 1 through 3 of 3, prepared by manufacturer, dated on 05/13/2021, signed and sealed by Jay A. Dorst, 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, Yuyao City, Zhejiang Province, China 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 **revises NOA # 20-1202.03** and consists of this page 1, evidence pages E-1, E-2, E-3 and E-4, as well as approval document mentioned above.

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

MIAMI-DADE COUNTY APPROVED

NOA No: 21-0615.02
Expiration Date: February 25, 2026
Approval Date: August 12, 2021

Brighton Best International, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS NOA'S

A. DRAWINGS *"Submitted under NOA # 14-0902.09"*

1. Drawing No. **1**, titled "US Anchor Ultrawedge Anchor", sheets 1 through 3 of 3, dated 11/17/2015, prepared by manufacture, signed and sealed by Lee W. Mattis, P.E.

B. TESTS *"Submitted under NOA # 14-0902.09"*

1. Test report on Tension and Shear Strength Design Values of 1/2", 5/8" and ¾" diameters US Anchor Ultrawedge Anchors per AC193, ACI 355.2 and ASTM E 488, prepared by CEL Consulting, Inc., Test Report No. **15B269**, dated 03/06/2015, revised on 04/03/2015, signed and sealed by Lee W. Mattis, P.E.

2. Test report on Tension and Shear Strength Design Values of 3/8" diameter US Anchor Ultrawedge Anchors per AC193, ACI 355.2 and ASTM E 488, prepared by CEL Consulting, Inc., Test Report No. **14B256A**, dated 12/08/2014, revised on 12/15/2014 signed and sealed by Lee W. Mattis, P.E.

3. Test report on Corrosion Resistance of 5/8" Ultrawedge Anchors per ASTM G 85, Annex 5 and TAS 114, Appendix E, prepared by Element Materials Technology, Test Report No. **ESP020309P**, dated 07/31/2015, signed by Thomas A. Kolden, P.E.

4. Test report on Corrosion Resistance of 3/8", ½" and ¾" Ultrawedge Anchors per ASTM G 85, Annex 5 and TAS 114, Appendix E, prepared by Element Materials Technology, Test Report No. **ESP019482P**, dated 04/21/2015, signed by Thomas A. Kolden, P.E.

C. CALCULATIONS

1. None.

D. MATERIAL CERTIFICATIONS

1. None.

E. QUALITY ASSURANCE

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

F. STATEMENTS *"Submitted under NOA # 14-0902.09"*

1. Statement letter of code conformance to the 5th edition (2014) FBC and no financial interest issued by CEL Consulting, Inc., dated 11/17/2015, signed and sealed by Lee W. Mattis, P.E.

2. Articles of incorporation of Brighton Best International, Inc., dated 07/19/2010, signed by Glenn Kurosaki.

3. Distributor agreement dated 12/02/2015.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No: 21-0615.02
Expiration Date: February 25, 2026
Approval Date: August 12, 2021

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. EVIDENCE SUBMITTED UNDER NOA # 18-0403.04

A. DRAWINGS

1. Drawing No. **1**, titled "US Anchor Ultrawedge & Ultrawedge+ Anchors", sheets 1 through 5 of 5, dated 05/03/2018, prepared by manufacturer, signed and sealed by Lee W. Mattis, P.E.

B. TESTS

1. Test report on Tension and Shear Strength Design Values of 3/8", 1/2", 5/8" and 3/4" diameters US Anchor Ultrawedge+ Wedge Anchors per AC193, ACI 355.2 and ASTM E 488, prepared by CEL Consulting, Inc., Test Report No. **17B353**, dated 06/16/2017, signed and sealed by Lee W. Mattis, P.E.

2. Test report on Tension and Shear Strength Design Values of 3/8", 1/2", 5/8" and 3/4" diameters US Anchor Ultrawedge+ Wedge Anchors per AC193, ACI 355.2 and ASTM E 488, prepared by CEL Consulting, Inc., Test Report No. **17B353 Supplement**, dated 09/01/2017, revised on 09/18/2017 signed and sealed by Lee W. Mattis, P.E.

3. Test report drawings of 3/8", 1/2", 5/8" and 3/4" diameters US Anchor Ultrawedge+ Wedge Anchors, prepared by CEL Consulting, Inc., Test Report No. **17B353 Supplement**, dated 09/29/2017, signed and sealed by Lee W. Mattis, P.E.

C. CALCULATIONS

1. None.

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 6th edition (2017) FBC and of no financial interest, issued by CEL Consulting, Inc., dated 05/03/2018, signed and sealed by Lee W. Mattis, P.E.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No: 21-0615.02
Expiration Date: February 25, 2026
Approval Date: August 12, 2021

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

3. EVIDENCE SUBMITTED UNDER NOA # 20-1202.03

A. DRAWINGS

1. Drawing No. **1**, titled "US Anchor Ultrawedge & Ultrawedge+ Anchors", sheets 1 through 5 of 5, dated 05/03/2018, prepared by manufacturer, signed and sealed by Lee W. Mattis, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. None.

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 7th edition (2020) FBC and of no financial interest, issued by CEL Consulting, Inc., dated 12/22/2020, signed and sealed by Lee W. Mattis, P.E.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No: 21-0615.02
Expiration Date: February 25, 2026
Approval Date: August 12, 2021

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

4. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing No. **1**, titled "US Anchor Ultrawedge+ Anchors", sheets 1 through 3 of 3, prepared by manufacturer, dated on 05/13/2021, signed and sealed by Jay A. Dorst, P.E.

B. TESTS

1. Test report on Torque Reduction and Corner Tests of 3/8", 1/2", 5/8" and 3/4" diameters US Anchor Ultrawedge+ Wedge Anchors per AC193, ACI 355.2 and ASTM E 488, prepared by Atlas Consulting Group, Test Report No. **20B452**, dated 05/13/2021, signed and sealed by Jay A. Dorst, P.E.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

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

E. MATERIAL CERTIFICATIONS

1. None.

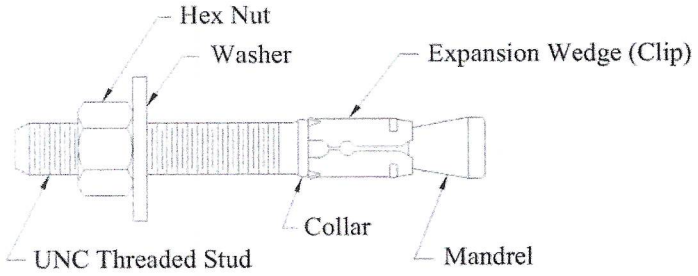
F. STATEMENTS

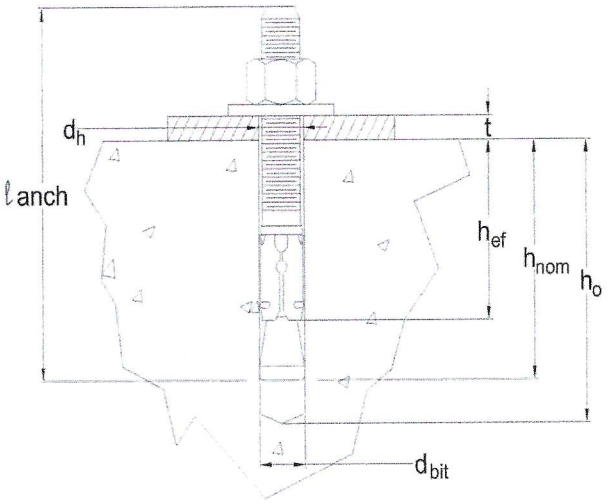
1. Statement letter of code conformance to the 7th edition (2020) of the FBC and of no financial interest, issued by Atlas Consulting Group, dated 06/01/2021, signed and sealed by Jay A. Dorst, P.E.

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No: 21-0615.02
Expiration Date: February 25, 2026
Approval Date: August 12, 2021

US Anchor Ultrawedge+ Anchor

Description: The Ultrawedge+ Wedge Anchor is a torque-controlled wedge anchor consisting of a threaded steel stud with a cone mandrel at the embedded end. A clip expander is fitted on the mandrel. The anchor is installed by driving into a hole drilled with a carbide bit of the same nominal diameter as the anchor. The anchor is set by tightening the nut against an attached fixture, forcing the clip outward against the concrete hole wall with increasing pressure as the cone mandrel is drawn upwards. Resistance to withdrawal is developed by a combination of friction and local crushing of the concrete hole wall. The anchor bodies are manufactured from UNS G10350 steel. The clips are manufactured from Chinese steel standard GB/T3522 Grade 50 (UNS G001050) steel subsequently through hardened to Rockwell HRC 28-32. All steels are Chinese-sourced meeting the AISI requirements. The anchor bodies and clips have an electroplated zinc coating in conformance to ASTM B633, SC1, Type III. The zinc plated nuts and washers have a proprietary friction-reducing and corrosion-resisting coating applied over the zinc plating.

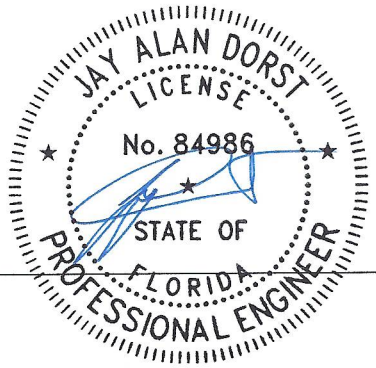




INSTALLATION INSTRUCTIONS

1. Drill the hole perpendicular to the surface with a carbide tipped bit that meets ANSI B212.15 specification using a rotary hammer drill with percussion. The drill bit size will be the same as the anchor diameter that is being installed.
2. Drill the hole deeper than the specified nominal embedment, h_{nom} as specified in Table 2 on Sheet 4.
3. Blow out the hole with compressed air or a blow-out bulb
4. Assemble the nut and washer on the anchor and insert through the hole in the material to be fastened
5. Drive the anchor into the drilled hole with a hammer to at least the required nominal embedment, h_{nom}
6. Torque to the specified installation torque

Part #	Size x Length (inches)	Part #	Size x Length (inches)	Part #	Size x Length (inches)
157060	3/8 x 2 1/4	157230	1/2 x 7	157360	5/8 x 10
157070	3/8 x 2 3/4	157240	1/2 x 8 1/2	157370	5/8 x 12
157080	3/8 x 3	157250	1/2 x 10	157380	3/4 x 4 1/4
157090	3/8 x 3 3/4	157260	1/2 x 12	157390	3/4 x 4 3/4
157100	3/8 x 5	157300	5/8 x 3 1/2	157400	3/4 x 5 1/2
157110	3/8 x 6 1/2	157310	5/8 x 4 1/2	157410	3/4 x 6 1/4
157180	1/2 x 2 3/4	157320	5/8 x 5	157420	3/4 x 7
157190	1/2 x 3 3/4	157330	5/8 x 6	157430	3/4 x 8 1/2
157200	1/2 x 4 1/4	157340	5/8 x 7	157440	3/4 x 10
157210	1/2 x 4 1/2	157350	5/8 x 8 1/2	157450	3/4 x 12
157220	1/2 x 5 1/2				



PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 21-0615.02
Expiration Date 02/25/2026
By
Miami-Dade Product Control

Title: US Anchor Ultrawedge+ Anchor
Drawing No: 1
5/13/21 By: JD
8/10/21 A

Brighton Best International, Inc.
12801 Leffingwell Avenue
Santa Fe Springs, California 90670

TABLE 1—DATA FOR US ANCHOR ULTRAWEDGE+ ANCHORS FOR USE IN CRACKED & UNCRACKED CONCRETE [1,2]

Characteristic	Symbol	Units	Nominal Anchor Diameter			
			3/8 inch	1/2 inch	5/8 inch	¾ inch
Installation Information						
Anchor diameter	d_a	in.	3/8	1/2	5/8	3/4
Minimum diameter of hole clearance in fixture	d_h	in.	7/16	9/16	11/16	13/16
Nominal drill bit diameter	d_{bit}	in.	3/8	1/2	5/8	3/4
Minimum nominal embedment depth	h_{nom}	in.	2 3/8	3	3 9/16	4 1/8
Minimum effective embedment depth	h_{ef}	in.	2	2 1/2	3	3 1/2
Minimum hole depth	h_o	in.	2 3/4	3 1/4	3 3/4	4 1/2
Installation torque	-	ft-lb	29	40	80	110
Minimum edge distance	c_{min}	in.	4 / 2 1/2	2 3/4	4	5
	for s ≥		6 / 5	6	6	9
Minimum spacing	s_{min}	in.	6 / 2 1/2	3	3 3/4	5
	for c ≥		4 / 4	4	6	9
Minimum concrete thickness	h_{min}	in.	4 1/2 / 6	6	6 1/2	
Critical edge distance	c_{ac}	in.	8 / 5	8	13	11
Anchor Design Data						
Category number	1,2,or 3	——	1	1	1	1
Yield strength of anchor steel	f_y	lb/in²	87,200	84,000	81,600	81,600
Ultimate strength of anchor steel	f_{uta}	lb/in²	109,000	105,000	102,000	102,000
Tension						
Effective tensile stress area (neck)	$A_{se,N}$	in²	0.056	0.103	0.164	0.238
Steel strength in tension	N_{sa}	lb/in²	6104	10,815	16,728	24,276
Reduction factor for steel failure modes	ϕ	-	0.75			
Effectiveness factor for concrete breakout, cracked	k_{cr}	-	17	21	21	24
Effectiveness factor for concrete breakout, uncracked	k_{uncr}	-	24	24	27	27
Reduction factor for concrete breakout	ϕ	-	0.65 (Condition B)			
Pull-out resistance, cracked concrete	$N_{p,cr}$	lb.	N/A	2970	4037	N/A
Pull-out resistance, uncracked concrete	$N_{p,uncr}$	lb.	3013	3394	N/A	N/A
Pull-out resistance, seismic loads	$N_{p,eq}$	lb.	N/A	2970	4037	N/A
Reduction factor for pull-out	ϕ	-	0.65 (Condition B)			
Axial stiffness in service load range (cracked)	β_{cr}	lb/in	37,300	44,600	40,300	55,800
Axial sifffness in service load range (uncracked	β_{uncr}	lb/in	277,400	230,400	105,700	401,200
Shear						
Effective shear stress area (threads)	$A_{se,V}$	in²	0.078	0.142	0.226	0.334
Load-bearing length of anchor	l_e	in.	2	2	3	3 1/2
Reduction factor for concrete breakout or pryout	ϕ	-	0.70 (Condition B)			
Coefficient for pryout strength	k_{cp}	-	2,00			
Steel strength in shear, non-seismic	V_{sa}	lb	2508	5500	9923	18,317
Steel strength in shear, seismic	$V_{sa,eq}$	lb	2006	4400	7938	16,485
Reduction factor for steel failure	ϕ	-	0.65			

For **SI:** 1 in = 25.4 mm, 1 in² = 6.451×10⁻⁴ m, 1 ft-lb = 1.356 Nm, 1 lb/in² = 6.895 kPa. Additional footnotes on Sheet 3

JAY ALAN DORST LICENSE No. 84986 STATE OF FLORIDA PROFESSIONAL ENGINEER

Title: US Anchor Ultrawedge+ Anchor
Drawing No: 1
5/13/2021 By: JD
8/10/21

PRODUCT REVISED
as complying with the Florida Building Code
NOA-No. 21-0615.02
Expiration Date 02/25/2026
By
Miami-Dade Product Control

Brighton Best International, Inc.
12801 Leffingwell Avenue
Santa Fe Springs, California 90670

Footnotes to Table 1

[1] The information presented in this table must be used in conjunction with the design criteria of ACI 318-14 Chapter 17 or ACI 318 Appendix D as applicable.

[2] Installation must comply with the manufacturer's published installation instructions

[3] N/A denotes that that this Pull-out resistance does not control for design.

[4] Anchors are considered to be manufactured using ductile steel in accordance with ACI 318-14 Section 2.3 or ACI 318 (-11, -08) Appendix D.1, as applicable. Strength reduction factors are for use with the load combinations of ACI 318-14 Section 5.3, ACI 318 (-11, -08) Section 9.2, IBC Section 1605.2 or FBC provisions, as applicable.

[5] Condition B applies where supplementary reinforcement in conformance with ACI 318-14 Section 17.3.3(c) or ACI 318-11 Appendix D.4.3 (c) or ACI 318-08 Appendix D4.4 (c), as applicable, is not provided, or where pull-out or pry-out strength governs. For cases where supplementary reinforcement can be verified, the strength reduction factors associated with Condition A may be used. Strength reduction factors are for use with the load combinations of applicable ACI 318-14 Section 5.3, ACI 318 (-11, -08) Section 9.2, IBC Section 1605.2 or FBC provisions, as applicable.

[6] Tabulated values must be used for design since these values are lower than those calculated with ACI 318-14 Eq. (17.5.1.2b), ACI 318-11 Eq. (D-29) or ACI 318-08 Eq. (D-20), as applicable.

TABLE 2—US ANCHOR ULTRAWEDGE & ULTRAWEDGE+ ANCHOR LENGTH CODE IDENTIFICATION SYSTEM

Length ID marking on threaded stud head		**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**
Overall anchor length, ℓ_{anch}, (inches)	From	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	11
	Up to but not including	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	11	12

For **SI**: 1 inch = 25.4 mm.

JAY ALAN DORST LICENSE No. 84986 STATE OF FLORIDA PROFESSIONAL ENGINEER

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Title: US Anchor Ultrawedge & Ultrawedge+ Anchors
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Brighton Best International, Inc.
12801 Leffingwell Avenue
Santa Fe Springs, California 90670
Sheet 3 of 3