

MIDWEST FASTENER CORP.

1/4" DIRECT MOUNT ANCHOR

VALID FOR USE INSIDE AND OUTSIDE THE HVHZ (SEE LIMITATIONS HERIN)

THIS IS A NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE STRUCTURAL PROVISIONS OF THE FLORIDA BUILDING CODE NINTH EDITION (2026), FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, AND THE FOLLOWING STANDARDS: ASTM E488 & ASTM G85.
2. ANCHOR INSTALLATION SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS AND THIS PRODUCT APPROVAL.
3. CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS, WITH STRENGTH PROPERTIES AS SPECIFIED HEREIN.
4. ANCHORS REPRESENTED HEREIN ARE MANUFACTURED FROM HEAT-TREATED STEEL WITH AN ANCHOR YIELD STRENGTH $F_y=177$ KSI, ULTIMATE STRENGTH $F_u=199$ KSI. ANCHORS SHALL HAVE CORROSION-RESISTANT COATINGS AS DESCRIBED BELOW IN COMPLIANCE WITH THE FLORIDA BUILDING CODE.
5. FOR PERMANENT OUTDOOR INSTALLATIONS, ALL EXPOSED ANCHORS, FASTENERS, CONNECTORS, AND METAL PLATES SHALL BE CORROSION RESISTANT. CORROSION RESISTANCE MAY BE PROVIDED BY INHERENT MATERIAL COMPOSITION OR, WHERE PERMITTED BY CODE, BY AN APPROVED PROTECTIVE COATING OR GALVANIZATION. WHERE APPLICABLE NEAR A SALTWATER COASTLINE, SUCH COMPONENTS SHALL COMPLY WITH FBC SECTION 1711, INCLUDING APPLICABLE REQUIREMENTS FOR EXPOSED, PROTECTED, OR ENCLOSED CONDITIONS. MATERIALS, COATINGS, AND FINISHES SHALL BE COMPATIBLE WITH CONNECTED MATERIALS, AND PROTECTIVE COATINGS SHALL BE CONTINUOUS OVER EXPOSED SURFACES. FASTENERS USED WITH ALUMINUM MEMBERS SHALL ALSO COMPLY WITH SECTION J.3.7.2 OF THE ALUMINUM DESIGN MANUAL, "SPECIFICATION FOR ALUMINUM STRUCTURES." SUBSTITUTION OF COMPONENTS FROM ALTERNATE MANUFACTURERS, OR WITH DIFFERENT MATERIALS, COATINGS, OR FINISHES, SHALL NOT BE ASSUMED EQUIVALENT AND MAY REQUIRE ADDITIONAL ENGINEERING REVIEW OR SITE-SPECIFIC ANALYSIS.
6. PILOT HOLES FOR ALL INSTALLATIONS SHALL HAVE A DEPTH $1/4"$ LONGER THAN INDICATED EMBEDMENT DEPTH WITH $7/32"$ PILOT HOLES. REFER TO FASTENER MANUFACTURER'S PUBLISHED DATA SHEETS AND RECOMMENDATIONS FOR FASTENER INSTALLATION INSTRUCTIONS.
7. ENGINEER SEAL AFFIXED HERETO VALIDATE STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
8. ALLOWABLE LOAD SHOWN=ULTIMATE LOAD DIVIDED BY 4.0 FOR SOLID NON-CRACKED CONCRETE SUBSTRATES. NO ALLOWABLE STRESS INCREASE HAS BEEN USED IN PREPARATION OF THIS DOCUMENT.
9. ANCHORS SHALL NOT BE INSTALLED IN CRACKED CONCRETED SUBSTRATES, AS DEFINED IN ACI 355.
10. ANCHOR EDGE DISTANCES, EMBEDMENTS, AND SPACINGS BELOW THOSE SHOWN IN DESIGN TABLES HEREIN ARE NOT ACCEPTABLE.
11. 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.

12. ANCHOR VALUES LISTED HEREIN ARE DETERMINED THROUGH TESTING REPORT DATA AND CHECKED FOR CONSISTENCY WITH EACH TEST PERFORMED. TEST REPORTS ARE LISTED IN THE EVALUATION REPORT SUBMITTED WITH THIS DRAWING.
13. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO EXISTING STRUCTURE.
14. 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.
15. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
16. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
17. ALTERATIONS ADDITIONS OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

ANCHOR PERFORMANCE DERIVATION

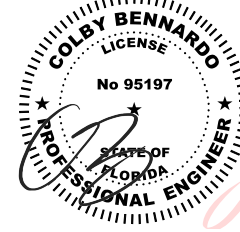
SYSTEM PERFORMANCE DERIVED FROM CERTIFIED TEST REPORTS
#HETI-19-A3015, #HETI-19-C103, #HETI-19-M524 BY HURRICANE
ENGINEERING AND TESTING, INC. PER ASTM E488-18, ASTM C39-18,
ASTM G85-11 AND ASTM F606-16 TEST STANDARDS, RESPECTFUL^{LY}.

TERMINOLOGY:

THE FOLLOWING ABBREVIATIONS MAY APPEAR IN THIS APPROVAL:

"CORP." FOR "CORPORATION", "ALUM" FOR "ALUMINUM", "ASD" FOR "ALLOWABLE STRESS DESIGN", "ASTM" FOR "AMERICAN SOCIETY FOR TESTING AND MATERIALS", "CS" FOR "CARBON STEEL", "CONN" FOR "CONNECTION", "EMBED" FOR "EMBEDMENT", "DIST." FOR "DISTANCE", "GA" FOR "GAUGE", "HVHZ" FOR "HIGH-VELOCITY HURRICANE ZONE", "LB" FOR "POUND", "MAX" FOR "MAXIMUM", "N.T.S." FOR "NOT TO SCALE", "PSF" FOR "POUNDS PER SQUARE FOOT (lb/ft²)", "SPECS" FOR "SPECIFICATIONS", "&" FOR "AND", "MAX" FOR "MAXIMUM", "W/" FOR "WITH", "EXIST" FOR "EXISTING", "STRUCT" FOR "STRUCTURE", "CONC." FOR "CONCRETE".
VISIT [**ECALC.IO/GLOSSARY**](https://www.ecalc.io/glossary) OR CONTACT ENGINEERING EXPRESS FOR ADDITIONAL ABBREVIATION/TERMINOLOGY CLARIFICATIONS.

COLBY BENNARDO, PE
PE# 95197 CA# 9885



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Colby Bennardo
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PAGE INDEX:

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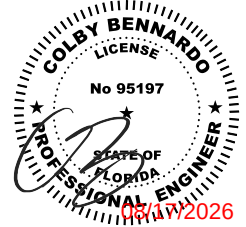
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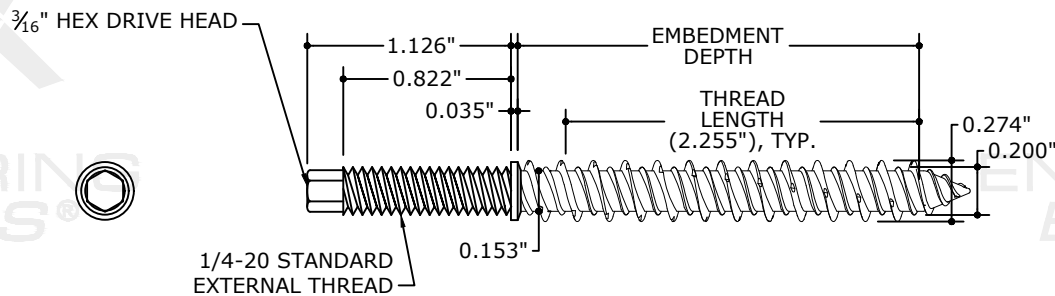
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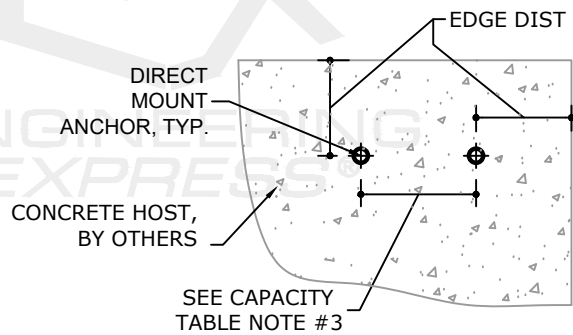
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1/4" DIRECT MOUNT ANCHOR FLORIDA BUILDING CODE NINTH EDITION (2026) FLORIDA STATEWIDE APPROVAL (FSA)					
REMARKS	DRWN	CHKD	DATE		
2020 FBC UPDATE (20-28854)	CCB	RWN	07/28/20		
2023 FBC UPDATE (23-62040)	MRT	RWN	09/27/23		
2026 FBC UPDATE	CJB/JER	CCB	08/17/20	-	-
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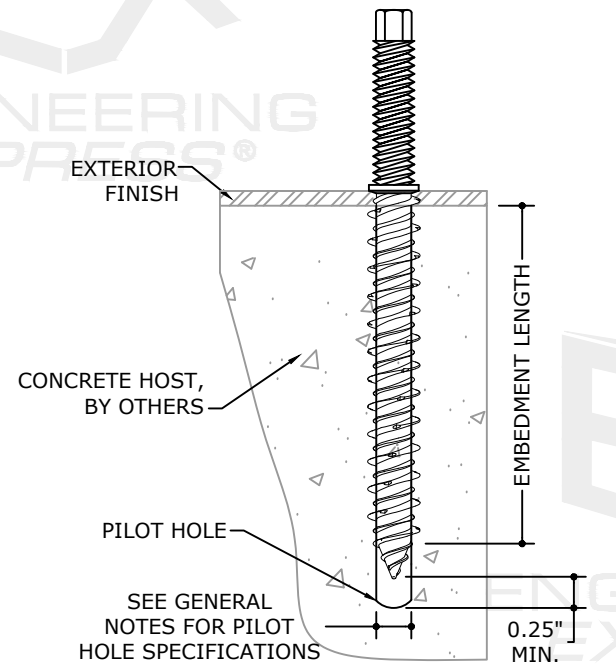
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1 DIRECT MOUNT SCREW
2 1:1 SCALE TOP & SIDE VIEWS



3 EDGE DIST. & SPACING
2 N.T.S. PLAN VIEW



2 TYPICAL SECTION
2 1:1 SCALE SIDE VIEW

TABLE 1: ALLOWABLE (ASD) ANCHOR CAPACITIES TO CONCRETE

CONC. COMPRESSIVE STRENGTH (f'c)	EMBEDMENT	3.00" EDGE DISTANCE		1-1/4" EDGE DISTANCE	
		TENSION	SHEAR	TENSION	SHEAR
2700 psi	1 3/4"	404 lb	591 lb	354 lb	169 lb

TABLE 1: NOTES:

1. ALLOWABLE LOAD SHOWN=ULTIMATE LOAD DIVIDED BY 4.0 FOR SOLID NON-CRACKED CONCRETE.
2. EMBEDMENT VALUES LISTED CONSIDER FULL EMBEDMENT INTO THE CONCRETE SUBSTRATE. EMBEDMENT DEPTHS DO NOT CONSIDER THE THICKNESS OF WOOD BUCKS, STUCCO OR ANY EXTERIOR FINISHES. ALL FINISHES SHALL BE BY OTHERS AND SHALL NOT EXCEED 1/4" MAXIMUM, OTHERWISE THEY SHALL BE SEPARATELY CERTIFIED TO TRANSFER ALL LOADING TO THE PROJECT SUPERSTRUCTURE.
3. ANCHORS SHALL BE INSTALLED A MINIMUM OF 6.00" ON CENTER FOR 100% ANCHOR CAPACITY (AS LISTED IN TABLES).

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FLORIDA BUILDING CODE NINTH EDITION (2026)
FLORIDA STATEWIDE APPROVAL (FSA)

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2026 FBC UPDATE	CJBER	CCB	08/17/20

26-99400

SCALE: NTS UNLESS NOTED

2 OF 2