



Listing A Duly Authenticated Report from an Approved Agency

Report No: 2408-116



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Fall Protection Systems KITE Anchor Point

Trade Secret Report Holder:

ROTHO BLAAS SRL

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CSI Designations: DIVISION: 11 00 00 - EQUIPMENT MANUFACTURE		CESSING AND HANDLING EQUIPMENT MANUFACTURERS
Section: 11 81 29 - Facility Fall Protection	Section: 41 67 16 - Plant Fall Protection	

1 Innovative Product Evaluated¹

1.1 KITE Anchor Point

2 Product Description and Materials

2.1 The innovative product evaluated in this report is shown in **Figure 1** and **Figure 2**.



Figure 1. KITE Anchor





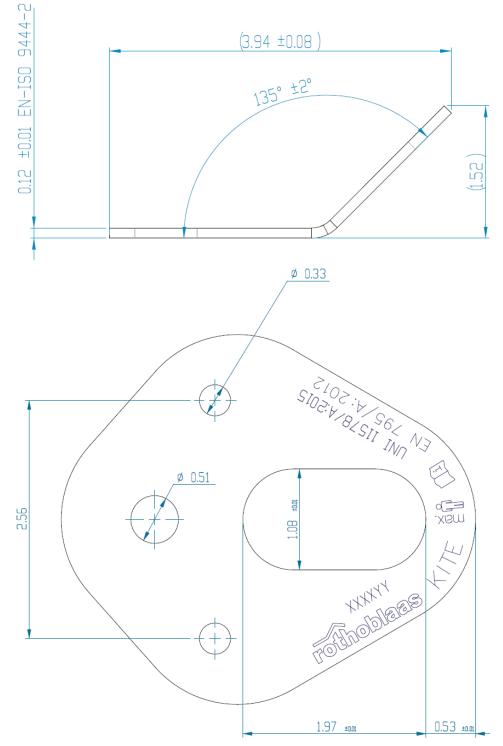


Figure 2. KITE Anchor - Dimensions

- 2.2 KITE Anchor Point is a fall arrest and restraint anchor device that may be installed onto inclined, flat, or vertical surfaces.
 - 2.2.1 Compatible substrates are timber, concrete, and steel surfaces as shown in Figure 3.





- 2.3 KITE Anchor Point is manufactured from 11-gauge (3 mm) AISI 430 stainless steel (tensile strength, F_u, 65 ksi; yield strength, F_y, 37 ksi)
- 2.4 Overall width, length, and height of KITE Anchor Point is 4" x 4" x 1¹/₂" (102 mm x 102 mm x 38 mm), respectively.



Figure 3. Compatible Substrates for Installation

2.5 As needed, review material properties for design in **Section 6**.

3 Definitions

- 3.1 <u>New Materials</u>² are defined as building materials, equipment, appliances, systems, or methods of construction not provided for by prescriptive and/or legislatively adopted regulations, known as alternative materials.³ The <u>design strengths</u> and permissible stresses shall be established by tests⁴ and/or engineering analysis.⁵
- 3.2 <u>Duly authenticated reports</u>⁶ and <u>research reports</u>⁷ are test reports and related engineering evaluations, which are written by an <u>approved agency</u>⁸ and/or an <u>approved source</u>.⁹
 - 3.2.1 These reports contain intellectual property and/or trade secrets, which are protected by the <u>Defend Trade</u> <u>Secrets Act</u> (DTSA).¹⁰
- 3.3 An <u>approved agency</u> is *"approved"* when it is <u>ANAB ISO/IEC 17065 accredited</u>. DrJ Engineering, LLC (DrJ) is listed in the <u>ANAB directory</u>.
- 3.4 An approved source is *"approved"* when a professional engineer (i.e., <u>Registered Design Professional</u>) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the <u>state legislature</u> via its professional engineering regulations.¹¹
- 3.5 Testing and/or inspections conducted for this <u>duly authenticated report</u> were performed by an <u>ISO/IEC 17025</u> <u>accredited testing laboratory</u>, an <u>ISO/IEC 17020 accredited inspection body</u> and/or a licensed <u>Registered</u> <u>Design Professional (RDP)</u>.
 - 3.5.1 The <u>Center for Building Innovation</u> (CBI) is <u>ANAB¹² ISO/IEC 17025</u> and ISO/IEC 17020 accredited.
- 3.6 The regulatory authority shall <u>enforce</u>¹³ the specific provisions of each legislatively adopted regulation. If there is a non-conformance, the specific regulatory section and language of the non-conformance, shall be provided in <u>writing</u>¹⁴ stating the non-conformance and the path to its cure.
- 3.7 The regulatory authority shall accept <u>duly authenticated reports</u> from an <u>approved agency</u> and/or an <u>approved</u> <u>source</u>, with respect to the quality and manner of use of new materials or assemblies as provided for in regulations regarding the use of alternative materials, designs, or methods of construction.¹⁵





- 3.8 ANAB is an <u>International Accreditation Forum</u> (IAF) <u>Multilateral Recognition Arrangement</u> (MLA) signatory where recognition of certificates and validation and verification statements issued by conformity assessment bodies accredited by all of the signatories of the IAF MLA with the appropriate scope, shall be approved.¹⁶ Therefore, all ANAB ISO/IEC 17065 <u>duly authenticated reports</u> are approval equivalent.¹⁷
- 3.9 Approval equity is a fundamental commercial and legal principle.¹⁸

4 Applicable Standards for the Listing; Regulations for the Regulatory Evaluation¹⁹

4.1 Standards

- 4.1.1 EN 364: Personal Protection Equipment Against Galls from a Height Test Methods
- 4.1.2 EN 795: Personal Fall Protection Equipment Anchor Devices
- 4.1.3 ISO 9227: Corrosion Tests in Artificial Atmospheres Salt Spray Tests
- 4.1.4 OSHA 1926.592(d)(15)(i): Personal Fall Arrest Systems

5 Listed²⁰

5.1 Equipment, materials, products, or services included in a List published by a <u>national recognized testing</u> <u>laboratory</u> (i.e., CBI), <u>approved agency</u> (i.e., CBI and DrJ), and/or <u>approved source</u> (i.e., DrJ), or other organization concerned with product evaluation (i.e., DrJ) that maintains periodic inspection (i.e., CBI) of production of listed equipment or materials, and whose listing states either that the equipment or material meets national recognized standards or has been tested and found suitable for use in a specified manner.

6 Tabulated Properties Generated from Nationally Recognized Standards

- 6.1 Structural Applications
 - 6.1.1 KITE Anchor Point was evaluated for static strength performance and dynamic strength performance.
 - 6.1.1.1 Evaluated substrates included timber, concrete, and steel.
 - 6.1.2 Static Strength:
 - 6.1.2.1 KITE Anchor Point, when installed in wood, concrete, or steel, can sustain a load of 2,700 lb (12 kN) for 3 minutes.
 - 6.1.2.2 See **Figure 4** for evaluated load directions.
 - 6.1.2.3 KITE Anchor Point, when installed in wood, concrete, or steel, can sustain a load of 157 lb (0.7 kN) for 1 minute without exceeding a deformation of ³/₈" (10 mm).
 - 6.1.3 Dynamic Strength:
 - 6.1.3.1 Dynamic strength evaluation of KITE Anchor Point consisted of a 220 lb (100 kg) mass attached to the anchor device with a 1 m rope.
 - 6.1.3.1.1 The test mass was not detached from KITE Anchor Point after releasing the test mass from freefall height of 1.5 m.
 - 6.1.3.1.2 Furthermore, the anchor device was able to keep the test mass suspended.
 - 6.1.3.1.3 See **Figure 4** for evaluated load directions.





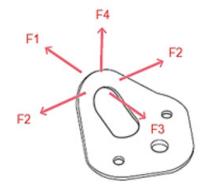


Figure 4. Load Directions

6.2 Corrosion Resistance

- 6.2.1 KITE Anchor Point was evaluated in accordance with ISO 9227 (neutral salt spray test).
 - 6.2.1.1 KITE Anchor Point met the criteria set forth in ISO 9227, as no evidence of corrosion of the base material was apparent.
- 6.3 Where the application falls outside of the performance evaluation, conditions of use and/or installation requirements set forth herein, alternative techniques shall be permitted in accordance with accepted engineering practice and experience. This includes but is not limited to the following areas of engineering: mechanics or materials, structural, building science, and fire science.

7 Certified Performance²¹

- 7.1 All construction methods shall conform to accepted engineering practices to ensure durable, livable, and safe construction and shall demonstrate acceptable workmanship reflecting journeyman quality of work of the various trades.²²
- 7.2 The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load testes to simulate the actual loads and conditions of application that occur.²³

8 Installation

- 8.1 Installation shall comply with the approved construction documents, the manufacturer installation instructions, this report, and the applicable building code.
- 8.2 In the event of a conflict between the manufacturer installation instructions and this report, the more restrictive shall govern.
- 8.3 Before beginning work, measures shall be taken to prevent falling objects of any kind.
 - 8.3.1 The area directly underneath the worksite (i.e., sidewalk, etc.) shall be kept clear.

8.4 Timber Installation

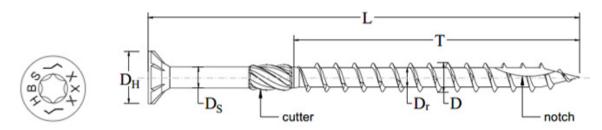
- 8.4.1 Timber species shall have a minimum nominal specific gravity of 0.42, and shall have a minimum cross section of 4" x 4" (102 mm x 102 mm).
- 8.4.2 Screws required for fastening KITE Anchor Point to the structure shall be ⁷/₁₆" (11 mm) diameter, one VGS screw in the center of the beam, and two ⁵/₁₆" (8 mm) diameter HBS screws.
 - 8.4.2.1 VGS screws are fully threaded and HBS screws are partially threaded.
 - 8.4.2.2 Length of both screw types shall be 4" (102 mm).
 - 8.4.2.3 Fastener specifications are listed in **Table 1**, and are presented in **Figure 5** and **Figure 6**.



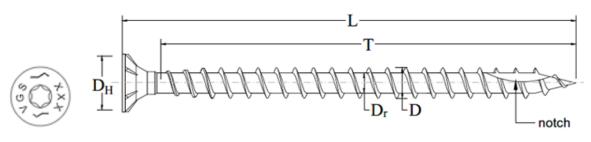
Parameter		Fastener	
		HBS	
in	4	4	
in	31/2	2 ¹ / ₁₆	
in	0.433	0.315	
in	0.26	0.213	
lb	3,200	2,040	
psi	170,000	180,000	
lb/in	171	125	
	in in in in lb psi	VGS in 4 in 31/2 in 0.433 in 0.26 lb 3,200 psi 170,000	

Table 1. VGS and HBS Fastener Specifications¹

SI: 1 in = 25.4 mm, 1 lb = 4.45 N, 1 psi = 0.0069 MPa, 1 lb/in = 0.18 N/mm









8.4.2.4 As an alternative, should longer fastening screws be required, two ⁵/₁₆" (8 mm) diameter, HBS wood screws, 4" to 19¹¹/₁₆" (102 mm to 500 mm) long, with or without washer, and one fully threaded, ⁷/₁₆" (11 mm) diameter, VGS screw, 4" to 23⁵/₈" (102 mm to 600 mm) long, with or without washer.







8.5 Concrete Installation

- 8.5.1 Concrete shall have a minimum slab thickness of 5¹/₂" (140 mm), and a minimum compressive strength of 2,900 psi (20 MPa).
- 8.5.2 Post-installed concrete anchors may be used in the installation of the KITE Anchor Point onto concrete substrates.
 - 8.5.2.1 One 4" (102 mm) ROTHO BLAAS AB1 expansion screw (or equivalent) may be used to install KITE Anchor Point in cracked or uncracked concrete. See **Figure 7**.
 - 8.5.2.1.1 When using AB1 expansion screw:
 - 8.5.2.1.1.1 A $\frac{1}{2}$ " (13 mm) diameter hole shall be drilled to a minimum depth of $\frac{31}{2}$ " (90 mm).
 - 8.5.2.1.1.2 Minimum edge distance shall be $4^{1}/_{8}$ " (105 mm).
 - 8.5.2.1.1.3 Concrete anchor shall be torqued to 37 lb·ft (50 N·m).

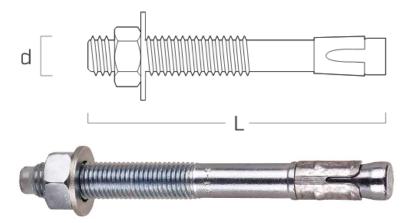


Figure 7. ROTHO BLAAS AB1 Heavy-Duty Expansion Anchor

8.6 Steel Installation

- 8.6.1 Steel structure shall have a minimum yield strength of 34 ksi (235 MPa), and a minimum thickness of ³/₁₆" (5 mm).
- 8.6.2 One M12 steel bolt (DIN Strength Grade 8.8) with a self-locking nut may be used to install KITE Anchor Point onto steel structures.
 - 8.6.2.1 DIN Strength Grade 8.8 has a tensile strength of 120 ksi (830 MPa).

9 Substantiating Data

- 9.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:
 - 9.1.1 Fall arrest system anchor testing in accordance with EN 795
- 9.2 Information contained herein may include the result of testing and/or data analysis by sources that are <u>approved agencies</u>, <u>approved sources</u> and/or <u>RDP</u>s. Accuracy of external test data and resulting analysis is relied upon.
- 9.3 Where pertinent, testing and/or engineering analysis are based upon provisions that have been codified into law through state or local adoption of regulations and standards. The developers of these regulations and standards are responsible for the reliability of published content. DrJ's engineering practice may use a regulation-adopted provision as the control. A regulation-endorsed control versus a simulation of the conditions of application to occur, establishes a new material as <u>being equivalent</u> to the regulatory provision in terms of quality, <u>strength</u>, effectiveness, <u>fire resistance</u>, durability, and safety.





- 9.4 The accuracy of the provisions provided herein, may be reliant upon the published properties of raw materials, which are defined by the grade mark, grade stamp, mill certificate, or <u>duly authenticated reports</u> from <u>approved</u> <u>agencies</u> and/or <u>approved sources</u> provided by the supplier. These are presumed to be minimum properties and relied upon to be accurate. The reliability of DrJ's engineering practice, as contained this this <u>duly</u> <u>authenticate report</u>, may be dependent upon published design properties by others.
- 9.5 Testing and engineering analysis: The strength, rigidity and/or general performance of component parts and/or the integrated structure, are determined by suitable tests that simulate the actual conditions of application that occur and/or by accepted engineering practice and experience.²⁴
- 9.6 Where additional condition of use and/or regulatory compliance information is required, please search for KITE Anchor Point on the <u>DrJ Certification</u> website.

10 Findings

- 10.1 As outlined in **Section 6**, KITE Anchor Point has performance characteristics that were tested, and/or meet applicable regulations and are suitable for use pursuant to its specified purpose.
- 10.2 When used and installed in accordance with this <u>duly authenticated report</u> and the manufacturer installation instructions, KITE Anchor Point shall be approved for the following applications:
 - 10.2.1 As an anchor device in a fall arrest system for fall protection.
 - 10.2.2 OSHA Regulation 29 CFR § 1926.502(d) (15): Personal Fall Arrest Systems
 - 10.2.2.1 Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and are capable of supporting at least 5,000 pounds (22.2 kN) per employee attached. KITE Anchor Point shall be designed, installed, and used as follows:
 - 10.2.2.1.1 As part of a complete personal fall arrest system which maintains a safety factor of at least two.
 - 10.2.2.1.2 Under the supervision of a qualified person.
 - 10.2.2.1.3 29 CFR § 1926.502(d)(15) requires the anchorages to support 5,000 pounds per employee or as an alternative (d)(15)(i) requires maintaining a factor of safety of at least two, to the maximum fall arresting force of the personal fall arrest system. Maximum fiber stresses, based on either a 5,000 pound load per employee attached, or two times the maximum fall arresting force of the system, are limited by the yield strength of the supporting member (when permanent deformation first begins).
- 10.3 Unless exempt by state statute, when KITE Anchor Point is to be used as a structural and/or building envelope component in the design of a specific building, the design shall be performed by an <u>RDP</u>.
- 10.4 Any application specific issues not addressed herein can be engineered by an <u>RDP</u>. Assistance with engineering is available from ROTHO BLAAS SRL.
- 10.5 <u>IBC Section 104.11</u> (IRC Section R104.11 and <u>IFC Section 104.10²⁵ are similar</u>), in pertinent part states:

104.11 Alternative materials, design and methods of construction and equipment. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code. Where the alternative material, design or method of construction is not approved, the building official shall respond in writing, stating the reasons the alternative was not approved.





- 10.6 Approved:²⁶ Building regulations require that the building official shall accept duly authenticated reports.²⁷
 - 10.6.1 An <u>approved agency</u> is "approved" when it is <u>ANAB ISO/IEC 17065 accredited</u>.
 - 10.6.2 An <u>approved source</u> is *"approved"* when an <u>RDP</u> is properly licensed to transact engineering commerce.
 - 10.6.3 Federal law, <u>Title 18 US Code Section 242</u>, requires that where the alternative products, material, service, design, assembly, and/or method of construction is not approved, the building official shall respond in writing, stating the reasons why the alternative was not approved. Denial without written reason deprives a protected right to free and fair competition in the marketplace.
- 10.7 DrJ is a licensed engineering company, employs licensed <u>RDP</u>s and is an <u>ANAB Accredited Product</u> <u>Certification Body</u> – <u>Accreditation #1131</u>.
- 10.8 Through the <u>IAF Multilateral Arrangement</u> (MLA), this <u>duly authenticated report</u> can be used to obtain product approval in any <u>jurisdiction</u> or <u>country</u> because all ANAB ISO/IEC 17065 <u>duly authenticate reports</u> are equivalent.²⁸

11 Conditions of Use

- 11.1 Material properties shall not fall outside the boundaries defined in Section 6.
- 11.2 As defined in **Section 6**, where material and/or engineering mechanics properties are created for load resisting design purposes, the resistance to the applied load shall not exceed the ability of the defined properties to resist those loads using the principles of accepted engineering practice.
- 11.3 As listed herein, KITE Anchor Point shall not be used:
 - 11.3.1 As an anchor device for a horizontal lifeline.
 - 11.3.2 As an anchor point for more than one person.
 - 11.3.3 For any other purpose other than an anchor point in a personal fall arrest system.
 - 11.3.3.1 Undefined loads shall not be attached to the system.
- 11.4 Prior to use, check for visible defects and the vertical clearance under the user at the work level.
 - 11.4.1 Defects may include loose screws, warping, wear, corrosion, etc.
- 11.5 Attaching to KITE Anchor Point shall occur via the eyelet using a snap-hook.
- 11.6 KITE Anchor Point shall not be altered or modified in any way.
- 11.7 Installers shall verify that the substrate is suitable for securement of the KITE Anchor Point.
 - 11.7.1 Substrates not specified in this report are outside the scope of this report and shall be designed by a registered engineer.
- 11.8 Stainless steel shall not come into contact with steel grinding dust or steel tools in order to prevent galvanic corrosion.
- 11.9 When required by adopted legislation and enforced by the <u>building official</u>, also known as the Authority Having Jurisdiction (AHJ), in which the project is to be constructed:
 - 11.9.1 Any calculations incorporated into the construction documents, shall conform to accepted engineering practice and, when prepared by an <u>approved source</u>, shall be approved when signed and sealed.
 - 11.9.2 This report and the installation instructions shall be submitted at the time of permit application.
 - 11.9.3 This innovative product has an internal quality control program and a third-party quality assurance program.
 - 11.9.4 At a minimum, this innovative product shall be installed per **Section 8** of this report.
 - 11.9.5 The review of this report by the AHJ shall comply with IBC Section 104 and IBC Section 105.4.





- 11.9.6 This innovative product has an internal quality control program and a third party quality assurance program, in accordance with IBC Section 104.4, IBC Section 110.4, IBC Section 1703, IRC Section R104.4, and IRC Section R109.2.
- 11.9.7 The application of this innovative product in the context of this report is dependent upon the accuracy of the construction documents, implementation of installation instructions, inspection as required by <u>IBC</u> <u>Section 110.3</u>, <u>IRC Section R109.2</u>, and any other regulatory requirements that may apply.
- 11.10 The approval of this report by the AHJ shall comply with <u>IBC Section 1707.1</u>, where legislation states in part, *"the <u>building official</u> shall accept duly authenticated reports from <u>approved agencies</u> in respect to the quality and manner of <u>use</u> of new material or assemblies as provided for in <u>Section 104.11</u>", all of <u>IBC Section 104</u> and <u>IBC Section 105.4</u>.*
- 11.11 <u>Design loads</u> shall be determined in accordance with the regulations adopted by the jurisdiction in which the project is to be constructed and/or by the building designer (i.e., <u>owner</u> or <u>RDP</u>).
- 11.12 The actual design, suitability and use of this report for any particular building, is the responsibility of the <u>owner</u> or the authorized agent of the owner.

12 Identification

- 12.1 The innovative product listed in **Section 1.1** is identified by a label on the board or packaging material bearing the manufacturer name, product name, this report number, and other information to confirm code compliance.
- 12.2 Additional technical information can be found at <u>www.rothoblaas.com</u>.

13 Review Schedule

- 13.1 This report is subject to periodic review and revision. For the latest version, visit <u>www.drjcertification.org</u>.
- 13.2 For information on the status of this report, please contact <u>DrJ Certification</u>.

14 Approved for Use Pursuant to U.S. and International Legislation Defined in Appendix A

14.1 KITE Anchor Point is included in this report published by an <u>approved agency</u> that is concerned with evaluation of products or services, maintains periodic inspection of the production of listed materials, or periodic evaluation of services. This report states either that the material, product, or service meets recognized standards or has been tested and found suitable for a specified purpose. This report meets the legislative intent and definition of being acceptable to the AHJ.





Appendix A

1 Legislation that Authorizes AHJ Approval

- 1.1 **Fair Competition:** State legislatures have adopted Federal regulations for the examination and approval of building codes referenced and alternative products, materials, designs, services, assemblies, and/or methods of construction that:
 - 1.1.1 Advance innovation,
 - 1.1.2 Promote competition so all businesses have the opportunity to compete on price and quality in an open market on a level playing field, unhampered by anticompetitive constraints, and
 - 1.1.3 Benefit consumers through lower prices, better quality, and greater choice.
- 1.2 **Adopted Legislation:** The following local, state, and federal regulations affirmatively authorize these products to be approved by AHJs, delegates of building departments, and/or delegates of an agency of the federal government:
 - 1.2.1 Interstate commerce is governed by the <u>Federal Department of Justice</u> to encourage the use of innovative products, materials, design, services, assemblies, and/or methods of construction. The goal is to *"protect economic freedom and opportunity by promoting free and fair competition in the marketplace."*
 - 1.2.2 <u>Title 18 US Code Section 242</u> affirms and regulates the right of individuals and businesses, to freely and fairly have new products, materials, designs, services, assemblies, and/or methods of construction approved for use in commerce. Disapproval of alternatives shall be based upon non-conformance with respect to specific provisions of adopted legislation and shall be provided in writing, <u>stating the reason why the alternative was not approved</u>, with reference to the specific legislation violated.
 - 1.2.3 The <u>federal government</u> and each state have a <u>public records act</u>. In addition, each state also has legislation that mimics the federal <u>Defend Trade Secrets Act 2016</u> (DTSA),²⁹ where providing test reports, engineering analysis, and/or other related Intellectual Property (IP) and Trade Secrets (TS), is subject to prison of not more than ten years,³⁰ and/or a \$5,000,000 fine or three times the value of³¹ the IP/TS.
 - 1.2.3.1 Compliance with public records and trade secret legislation requires approval through the use of Listings, certified reports, Technical Evaluation Reports, duly authenticated reports, and/or research reports prepared by approved agencies and/or approved sources.
 - 1.2.4 For <u>new materials</u>³² that are not specifically provided for in any regulation, the <u>design strengths and</u> permissible stresses shall be established by <u>tests</u> where <u>suitable load tests simulate the actual loads and</u> conditions of application that occur.
 - 1.2.5 The <u>design strengths and permissible stresses</u> of any structural material shall <u>conform</u> to the specifications and methods of design using accepted engineering practice.³³
 - 1.2.6 The commerce of <u>approved sources</u> (i.e., registered PEs) is regulated by <u>professional engineering</u> <u>legislation</u>. Professional engineering <u>commerce shall always be approved</u> by AHJs, except where there is evidence provided in writing, that specific legislation have been violated by an individual registered PE.
 - 1.2.7 The AHJ shall accept <u>duly authenticated reports</u> from <u>approved agencies</u> in respect to the quality and manner of use of new materials or assemblies as provided for in <u>IBC Section 104.11</u>.³⁴





- 1.3 Approved³⁵ by Los Angeles: The Los Angeles Municipal Code (LAMC) states in pertinent part that the provisions of LAMC are not intended to prevent the use of any material, device, or method of construction not specifically prescribed by LAMC. The Department shall use Part III, Recognized Standards in addition to Part II, Uniform Building Code Standards of <u>Division 35</u>, <u>Article 1</u>, <u>Chapter IX</u> of the LAMC in evaluation of products for approval where such standard exists for the product or the material and may use other approved standards that apply. Whenever tests or certificates of any material or fabricated assembly are required by <u>Chapter IX</u> of the LAMC, such tests or certification shall be made by a <u>testing agency</u> approved by the Superintendent of Building to conduct such tests or provide such certifications. The testing agency shall publish the scope and limitation(s) of the listed material or fabricated assembly.³⁶ The Superintendent of Building <u>Approved Testing Agency Roster</u> is provided by the Los Angeles Department of Building and Safety (LADBS). The Center for Building Innovation (CBI) Certificate of Approval License is <u>TA24945</u>. Tests and certifications found in a <u>DrJ Listing</u> are LAMC approved. In addition, the Superintendent of Building shall accept <u>duly authenticated reports</u> from <u>approved agencies</u> in respect to the quality and manner of use of new materials or assemblies as provided for in the <u>California Building Code</u> (CBC) <u>Section 1707.1</u>.³⁷
- 1.4 **Approved by Chicago:** The <u>Municipal Code of Chicago</u> (MCC) states in pertinent part, that an <u>approved</u> <u>agency</u> is a Nationally Recognized Testing Laboratory (NRTL) acting within its recognized scope and/or a certification body accredited by the <u>American National Standards Institute</u> (ANSI) acting within its accredited scope. Construction materials and test procedures shall conform to the applicable standards listed in the MCC. Sufficient technical data shall be submitted to the building official to substantiate the proposed use of any product, material, service, design, assembly, and/or method of construction not specifically provided for in the MCC. This technical data shall consist of research reports from approved sources (i.e., MCC defined <u>Approved Agencies</u>).
- 1.5 Approved by New York City: The 2022 NYC Building Code (NYCBC) states in part that an approved agency shall be deemed³⁸ an approved testing agency via <u>ISO/IEC 17025 accreditation</u>, an approved inspection agency via <u>ISO/IEC 17020 accreditation</u> and an approved product evaluation agency via <u>ISO/IEC 17065 accreditation</u>. Accrediting agencies, other than federal agencies, must be members of an internationally recognized cooperation of laboratory and inspection accreditation bodies subject to a mutual recognition agreement³⁹ (i.e., <u>ANAB</u>, <u>International Accreditation Forum</u> (IAF), etc.).
- 1.6 **Approved by Florida:** <u>Statewide approval</u> of products, methods, or systems of construction shall be approved without further evaluation by:
 - 1.6.1 A certification mark or listing of an approved certification agency,
 - 1.6.2 A test report from an approved testing laboratory,
 - 1.6.3 A product evaluation report based upon testing or comparative or rational analysis, or a combination thereof, from an approved product evaluation entity, or
 - 1.6.4 A product evaluation report based upon testing, comparative or rational analysis, or a combination thereof, developed, signed and sealed by a professional engineer or architect, licensed in Florida.
- 1.7 For local product approval, products or systems of construction shall demonstrate compliance with the structural wind load requirements of the Florida Building Code (FBC) through one of the following methods:
 - 1.7.1 A certification mark, listing or label from a commission-approved certification agency indicating that the product complies with the code,
 - 1.7.2 A test report from a commission-approved testing laboratory indicating that the product tested complies with the code,
 - 1.7.3 A product-evaluation report based upon testing, comparative or rational analysis, or a combination thereof, from a commission-approved product evaluation entity which indicates that the product evaluated complies with the code,





- 1.7.4 A product-evaluation report or certification based upon testing or comparative or rational analysis, or a combination thereof, developed and signed and sealed by a Florida professional engineer or Florida registered architect, which indicates that the product complies with the code, or
- 1.7.5 A statewide product approval issued by the Florida Building Commission.
- 1.8 The <u>Florida Department of Business and Professional Regulation</u> (DBPR) website provides a listing of companies certified as a <u>Product Evaluation Agency</u> (i.e., EVLMiami 13692), a <u>Product Certification Agency</u> (i.e., CER10642) and as a <u>Florida Registered Engineer</u> (i.e., ANE13741).
- 1.9 **Approved by Miami-Dade County (i.e., Notice of Acceptance [NOA]):** A Florida statewide approval is a NOA. A NOA is a Florida local product approval. By Florida law, Miami-Dade County shall accept the statewide and local Florida Product Approval as provided for in Florida legislation <u>553.842</u> and <u>553.8425</u>.
- 1.10 Approved by New Jersey: Pursuant to the 2018 Building Code of New Jersey in <u>IBC Section 1707.1</u> <u>General</u>,⁴⁰ it states: "In the absence of approved rules or other approved standards, the building official shall accept duly authenticated reports from <u>approved agencies</u> in respect to the quality and manner of use of new materials or assemblies as provided for in the administrative provisions of the Uniform Construction Code (<u>N.J.A.C. 5:23</u>)".⁴¹ Furthermore N.J.A.C 5:23-3.7 states: "Municipal approvals of alternative materials, equipment, or methods of construction."
 - 1.10.1 **Approvals:** Alternative materials, equipment, or methods of construction shall be approved by the appropriate subcode official, provided the proposed design is satisfactory and that the materials, equipment, or methods of construction are suitable for the intended use, and are at least the equivalent in quality, strength, effectiveness, fire resistance, durability, and safety of those conforming with the requirements of the regulations.
 - 1.10.1.1 A field evaluation label and report or letter issued by a nationally recognized testing laboratory verifying that the specific material, equipment, or method of construction meets the identified standards or has been tested and found to be suitable for the intended use, shall be accepted by the appropriate subcode official as meeting the requirements of the above.
 - 1.10.1.2 Reports of engineering findings issued by nationally recognized evaluation service programs such as but not limited to, the Building Officials and Code Administrators (BOCA), the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), the International Code Council (ICC) and the National Evaluation Service, Inc., shall be accepted by the appropriate subcode official as meeting the requirements of the above.
 - 1.10.2 The <u>New Jersey Department of Community Affairs</u> has confirmed that technical evaluation reports, from any accredited entity listed by <u>ANAB</u>, meets the requirements of items in the previous paragraph, given that the listed entities are no longer in existence and/or do not provide *"reports of engineering findings"*.
- 1.11 **Approved by the Code of Federal Regulations Manufactured Home Construction and Safety Standards:** Pursuant to Title 24, Subtitle B, Chapter XX, <u>Part 3282.14</u>⁴² and <u>Part 3280</u>,⁴³ the Department encourages innovation and the use of new technology in manufactured homes. The design and construction of a manufactured home shall conform to the provisions of Part 3282 and Part 3280 where key approval provisions in mandatory language follow:
 - 1.11.1 "All construction methods shall be in conformance with accepted engineering practices."
 - 1.11.2 "The strength and rigidity of the component parts and/or the integrated structure shall be determined by engineering analysis or by suitable load tests to simulate the actual loads and conditions of application that occur."
 - 1.11.3 "The design stresses of all materials shall conform to accepted engineering practice."





- 1.12 **Approval by US, Local and State Jurisdictions in General:** In all other local and state jurisdictions, the adopted building code legislation states in pertinent part that:
 - 1.12.1 For <u>new materials</u> that are not specifically provided for in this code, the <u>design strengths and permissible</u> <u>stresses</u> shall be established by tests.⁴⁴
 - 1.12.2 For innovative <u>alternatives</u> and/or methods of construction, the building official shall accept <u>duly</u> <u>authenticated reports</u> from <u>approved agencies</u> with respect to the quality and manner of use of <u>new</u> <u>materials or assemblies</u>.⁴⁵
 - 1.12.2.1 An <u>approved agency</u> is *"approved"* when it is <u>ANAB ISO/IEC 17065 accredited</u>. DrJ Engineering, LLC (DrJ) is in the <u>ANAB directory</u>.
 - 1.12.2.2 An <u>approved source</u> is *"approved"* when an <u>RDP</u> is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the <u>state legislature</u> via its professional engineering regulations.⁴⁶
 - 1.12.3 The <u>design strengths and permissible stresses</u> of any structural material...shall conform to the specifications and methods of design of accepted engineering practice performed by an <u>approved</u> source.⁴⁷
- 1.13 **Approval by International Jurisdictions:** The <u>USMCA</u> and <u>GATT</u> agreements provide for approval of innovative materials, designs, services and/or methods of construction through the <u>Agreement on Technical</u> <u>Barriers to Trade</u> and the <u>IAF Multilateral Recognition Arrangement</u> (MLA), where these agreements:
 - 1.13.1 State that <u>conformity assessment procedures</u> (i.e., ISO/IEC 17020, 17025, 17065, etc.) are prepared, adopted, and applied so as to grant access for suppliers of like products originating in the territories of other Members under conditions no less favourable than those accorded to suppliers of like products of national origin or originating in any other country, in a comparable situation.
 - 1.13.2 **Approved:** The <u>purpose of the MLA</u> is to ensure mutual recognition of accredited certification and validation/verification statements between signatories to the MLA, and subsequently, acceptance of accredited certification and validation/verification statements in many markets based on one accreditation for the timely approval of innovative materials, designs, services, and/or methods of construction.
 - 1.13.3 ANAB is an <u>IAF-MLA</u> signatory where recognition of certificates, validation and verification statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA, with the appropriate scope, shall be approved.⁴⁸
 - 1.13.4 Therefore, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent.⁴⁹
- 1.14 Approval equity is a fundamental commercial and legal principle.⁵⁰





Notes

- ¹ For more information, visit www.drjcertification.org or call us at 608-310-6748.
- ² https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1702
- ³ Alternative Materials, Design and Methods of Construction and Equipment: The provisions of any regulation code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by a regulation. Please review <u>https://www.justice.gov/atr/mission and</u> https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11
- 4 <u>https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706:~:text=the%20design%20strengths%20and%20permissible%20stresses%20shall%20be%20established%20by%20tests%20as</u>
- ⁵ The <u>design strengths</u> and permissible stresses of any structural material shall conform to the specifications and methods of design of accepted engineering practice. https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-
- tests#1706:~:text=shall%20conform%20to%20the%20specifications%20and%20methods%20of%20design%20of%20accepted%20engineering%20practice https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-
- tests#1707.1:~:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies
- 7 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1703.4.2
- 8 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_agency
- 9 https://up.codes/viewer/wyoming/ibc-2021/chapter/2/definitions#approved_source
- https://www.law.cornell.edu/uscode/text/18/1832 (b) Any organization that commits any offense described in subsection (a) shall be fined not more than the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided. The <u>federal government</u> and each state have a <u>public records act</u>. To follow DTSA and comply state public records and trade secret legislation requires approval through <u>ANAB ISO/IEC 17065 accredited certification bodies</u> or <u>approved sources</u>. For more information, please review this website: <u>Intellectual Property and Trade Secrets</u>.
- ¹¹ <u>https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineeringboards-in-each-state-archive/</u>
- 12 https://www.cbitest.com/accreditation/
- 13 https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104:~:text=to%20enforce%20the%20provisions%20of%20this%20code
- https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-andadministration#104.11:~:text=Where%20the%20alternative%20material%2C%20design%20or%20method%20of%20construction%20is%20not%20approved%2C%20the%20buildi ng%20official%20shall%20respond%20in%20writing%2C%20stating%20the%20reasons%20why%20the%20alternative%20was%20not%20approved https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-andadministration#105.3.1:~:text=If%20the%20application%20or%20the%20construction%20documents%20do%20not%20conform%20to%20the%20requirements%20of%20pertinen t%20laws%2C%20the%20building%20official%20shall%20reject%20such%20application%20in%20writing%2C%20stating%20the%20reasons%20therefore
- https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-andtests#1707.1:~:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20 guality%20and%20manner%20of%20use%20of%20new%20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.11
- 16 <u>https://iaf.nu/en/about-iaf-mla/#:~:text=it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessmen t%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope</u>
- ¹⁷ True for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- 18 https://www.justice.gov/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission
- ¹⁹ Unless otherwise noted, all references in this Listing are from the 2021 version of the codes and the standards referenced therein. This material, product, design, service and/or method of construction also complies with the 2000-2021 versions of the referenced codes and the standards referenced therein.
- 20 <u>https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#p-3280.2(Listed%20or%20certified); https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#listed AND <u>https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#labeled</u></u>
- ²¹ https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1703.4
- 22 https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-
- 3280#:~:text=All%20construction%20methods%20shall%20be%20in%20conformance%20with%20accepted%20engineering%20practices%20to%20insure%20durable%2C%20liv able%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the% 20various%20trades
- https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280#:~:text=The%20strength%20and%20rigidity%20of%20the%20component%20parts%20and/or%20the%20integrated%20structure%20shall%20be%20determined%20by%20 engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur
 Soc Code of Endoral Populations (CEP) Title 24 Subtitle P. Chapter XX Part 3280 for definition
- ²⁴ See Code of Federal Regulations (CFR) <u>Title 24 Subtitle B Chapter XX Part 3280</u> for definition.
- 25 2018 IFC Section 104.9
- ²⁶ Approved is an adjective that modifies the noun after it. For example, Approved Agency means that the Agency is accepted officially as being suitable in a particular situation. This example conforms to IBC/IRC/IFC Section 201.4 where the building code authorizes sentences to have an ordinarily accepted meaning such as the context implies.
- 27 <u>https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1</u>
- ²⁸ Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- ²⁹ http://www.drjengineering.org/AppendixC AND https://www.drjcertification.org/cornell-2016-protection-trade-secrets
- ³⁰ https://www.law.cornell.edu/uscode/text/18/1832#:~:text=imprisoned%20not%20more%20than%2010%20years





- 31 https://www.law.cornell.edu/uscode/text/18/1832#:~:text=Any%20organization%20that,has%20thereby%20avoided
- 32 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1706.2
- 33 IBC 2021, Section 1706.1 Conformance to Standards
- ³⁴ IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General
- ³⁵ See **Section 10** for the distilled building code definition of Approved.
- ³⁶ Los Angeles Municipal Code, SEC. 98.0503. TESTING AGENCIES
- ³⁷ <u>https://up.codes/viewer/california/ca-building-code-2022/chapter/17/special-inspections-and-tests#1707.1</u>
- 38 New York City, The Rules of the City of New York, § 101-07 Approved Agencies
- ³⁹ New York City, The Rules of the City of New York, § 101-07 Approved Agencies
- ⁴⁰ <u>https://up.codes/viewer/new_jersey/ibc-2018/chapter/17/special-inspections-and-tests#1707.1</u>
- 41 https://www.nj.gov/dca/divisions/codes/codreg/ucc.html
- ⁴² https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3282/subpart-A/section-3282.14
- ⁴³ <u>https://www.ecfr.gov/current/title-24/subtitle-B/chapter-XX/part-3280</u>
- 44 IBC 2021, Section 1706 Design Strengths of Materials, 1706.2 New Materials, Adopted law pursuant to IBC model code language 1706.2.
- 45 IBC 2021, Section 1707 Alternative Test Procedure, 1707.1 General, Adopted law pursuant to IBC model code language 1707.1.
- 46 <u>https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional_AND_https://apassociation.org/list-of-engineeringboards-in-each-state-archive/</u>
- 47 IBC 2021, Section 1706 Design Strengths of Materials, Section 1706.1 Conformance to Standards Adopted law pursuant to IBC model code language 1706.1.
 48 https://jef.nu/ep/about.iaf.
- 48 <u>https://iaf.nu/en/about-iaf-mla/#:~:text=it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessmen t%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope</u>
- ⁴⁹ True for all ANAB accredited product evaluation agencies and all International Trade Agreements.
- ⁵⁰ https://www.justice.gove/crt/deprivation-rights-under-color-law AND https://www.justice.gov/atr/mission