Listing

A Duly Authenticated Report from an Approved Agency

Report No: 2307-07

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Subject to Renewal: October 1, 2026

Performance Characteristics of Owens Corning® Lumber – Structural Composite Posts

Trade Secret Report Holder:

Owens Corning® (OC™)

Phone: 1-800-GET-PINK Website: www.owenscorning.com/en-us Email: oclumber@owenscorning.com

CSI Designations:

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

Section: 06 50 00 - Structural Plastics

Section: 06 51 13 - Plastic Lumber

Section: 06 52 00 - Plastic Structural Assemblies

Section: 06 70 00 - Structural Composites

Section: 06 82 00 - Glass-Fiber-Reinforced Plastic

1 Innovative Product Evaluated[1]

1.1 Owens Corning Lumber – Structural Composite Posts (OCL-SCP)

1.1.1 OCL-SCP 6 x 6

1.1.2 OCL-SCP 4 x 4

2 Product Description and Materials

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

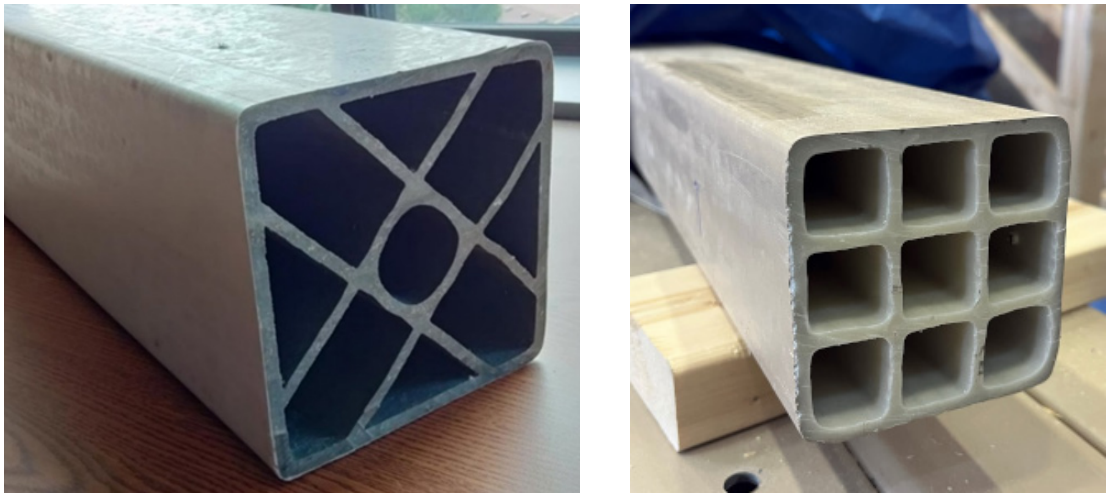

Figure 1. Owens Corning Lumber - Structural Composite Posts (OCL-SCP) Approved Core Options

2.2 OCL-SCP is described in **Table 1**.

Table 1. Description of OCL-SCP

Property	Description[1]
Material Composition	Chopped fiberglass reinforced PVC extrusion with an acrylic surface coating: ≥ 15% of overall total weight is fibrous glass < 2.5% by weight of organic surface binder
Dimension	Cross-Section: OCL-SCP 6 x 6: nominal $5^1/_2$" x $5^1/_2$" OCL-SCP 4 x 4: nominal $3^1/_2$" x $3^1/_2$" Standard Length: 9'
Core	Semi-hollow core with one of two approved core shapes for additional strength and reinforcement: Dual diagonal Checkerboard
Purpose	Posts to support residential deck frames

SI: 1 in = 25.4 mm

1. See **Figure 2** for available colors.

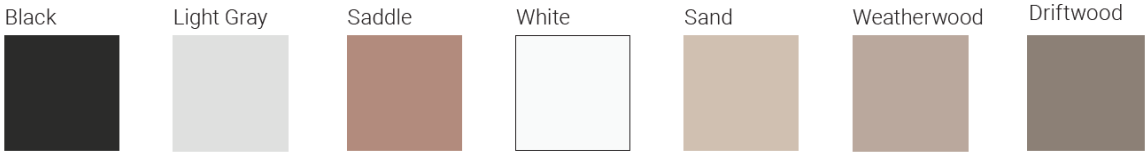

Figure 2. Available Colors for OCL-SCP

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

3 Definitions

3.1 New Materials[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 design strengths and permissible stresses shall be established by tests[4] and/or engineering analysis.[5]

3.2 Duly authenticated reports[6] and research reports[7] are test reports and related engineering evaluations that are written by an approved agency[8] and/or an approved source.[9]

3.2.1 These reports utilize intellectual property and/or trade secrets to create public domain material properties for commercial end-use.

3.2.1.1 This report protects confidential Intellectual Property and trade secretes under the regulation, 18.US.Code.90, also known as Defend Trade Secrets Act of 2016 (DTSA).[10]

3.3 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited. DrJ Engineering, LLC (DrJ) is accredited and listed in the ANAB directory.

3.4 An approved source is *"approved"* when a professional engineer (i.e., Registered Design Professional, hereinafter RDP) is properly licensed to transact engineering commerce. The regulatory authority governing approved sources is the state legislature via its professional engineering regulations.[11]

3.5 Testing and/or inspections conducted for this duly authenticated report were performed by an ISO/IEC 17025 accredited testing laboratory, an ISO/IEC 17020 accredited inspection body, and/or a licensed RDP.

3.5.1 The Center for Building Innovation (CBI) is ANAB[12] ISO/IEC 17025 and ISO/IEC 17020 accredited.

3.6 The regulatory authority shall enforce[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 writing[14] stating the nonconformance and the path to its cure.

3.7 The regulatory authority shall accept duly authenticated reports from an approved agency and/or an approved source, 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 International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA) signatory. Therefore, recognition of certificates and validation statements issued by conformity assessment bodies accredited by all other signatories of the IAF MLA with the appropriate scope shall be approved.[16] Thus, all ANAB ISO/IEC 17065 duly authenticated reports are approval equivalent,[17] and can be used in any country that is an MLA signatory found at this link: https://iaf.nu/en/recognised-abs/

3.9 Approval equity is a fundamental commercial and legal principle.[18]

4 Applicable Standards for the Listing[19]

4.1 *Standards*

4.1.1 *ASTM D198: Standard Test Methods of Static Tests of Lumber in Structural Sizes*

4.1.2 *ASTM D1761: Standard Test Methods for Mechanical Fasteners in Wood and Wood-Based Materials*

4.1.3 *ASTM D5764: Standard Test Method for Evaluating Dowel-Bearing Strength of Wood and Wood-Based Products*

5 Listed[20]

5.1 Equipment, materials, products, or services included in a List published by a nationally recognized testing laboratory (i.e., CBI), an approved agency (i.e., CBI and DrJ), and/or and approved source (i.e., DrJ), or other organization(s) 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 nationally 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 Properties*

6.1.1 OCL-SCPs were tested and/or evaluated for the following:

6.1.1.1 *Compression Resistance:*

6.1.1.1.1 Parallel to length of post

6.1.1.2 *Bearing Capacity:*

6.1.1.2.1 Notched post-to-beam connection to support 2-ply and 3-ply OC lumber beams (see **Figure 3**)

6.1.1.2.2 Post-base anchor

6.1.1.3 *Uplift Capacity:*

6.1.1.3.1 Post-cap inserts to support for 2-ply or 3-ply OC lumber beam

6.1.1.3.2 Side-mounted, single ply connection

6.1.1.3.3 Post-base anchor

6.1.1.4 Flexural bending properties

6.1.1.5 Bolted connection joints under compression (dowel bearing strength)

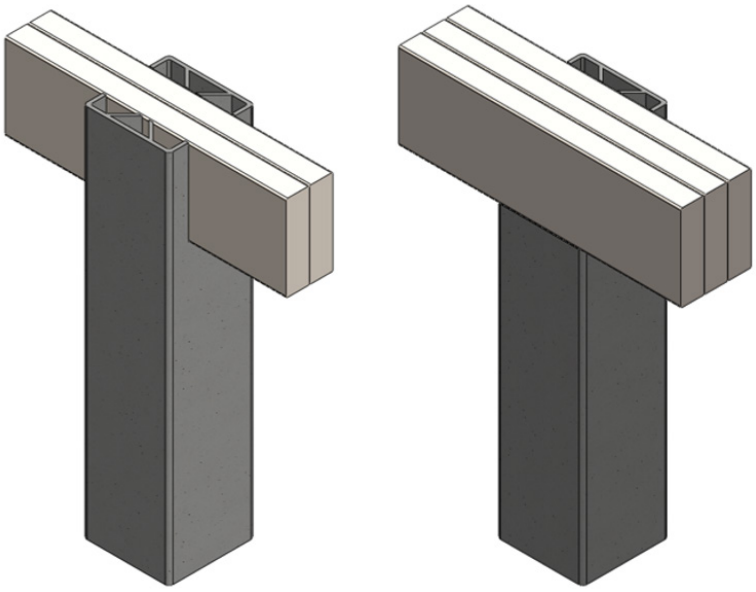

Figure 3. OCL-SCP Notched for 2-Ply and 3-Ply Beams

6.2 Allowable bearing capacity of OCL-SCPs are presented in **Table 2**:

Table 2. Allowable Bearing Capacity of OCL-SCP[1,2]

Product	Allowable Compression Load (lb)					
	Post Height (Above Grave)					
	≤ 9 ft	10 ft	11 ft	12 ft	13 ft	14 ft
OCL-SCP 6 x 6[3]	18,500	15,250	12,500	10,500	9,000	7,750
OCL-SCP 4 x 4[4]	4,500	3,500	3,000	2,500	2,250	1,750

SI: 1 in = 25.4 mm, 1 ft = 0.3048 m, 1 lbf = 4.448 N

1. Maximum post height is 14 ft above grade.
2. Where required, post shall be braced to prevent side-sway and buckling.
3. These results may be applied to all loading scenarios (i.e., full bearing, notched, post-cap/base).
4. These results may be applied only to full bearing loading scenarios.

6.3 Allowable uplift capacity of OCL-SCPs and OC Lumber attached to OC post connectors are shown in **Table 3**.

Table 3. Allowable Uplift Capacity of OCL-SCP with OC Post-Caps/Bases/Connectors[1,2]

Product	Post-Cap/Base to OCL-SCP Fastener	Quantity	Post-Cap/Base to Beam Fastener	Quantity	Allowable Uplift Load (lb)
Post-Cap	Minimum 1/4" x 1 1/2" Structural Wood Screw	4	Minimum 1/4" x 3" Structural Wood Screw	8	1,850
Post-Base Anchor		4		N/A	2,800
Single Ply Side Connector		2		5	2,950

SI: 1 lb = 4.448 N, 1 in = 25.4 mm

1. See **Section 8** for additional connection details.
2. Allowable uplift loads are applicable when installed with the minimum specified fastener and size.

6.4 Engineering properties for OCL-SCPs are found in **Table 4**.

Table 4. Allowable Engineering Properties of OCL-SCP[1]

Product	F_b (psi)	F_c (psi)	EI (lb-in^2)	MOE (psi)	I_x (in^4)	S_x (in^3)	A (in^2)
OCL-SCP 6 x 6	1,530	1,600	18,900,000	250,000	75.9	27.6	29.9
OCL-SCP 4 x 4	2,100	1,600	5,300,000	420,000	12.5	7.1	12.2

SI: 1 psi = 0.00689 MPa, 1 in = 25.4 mm

1. I_x and S_x calculations are based on the nominal dimensions of the product.
2. F_c and A are based on the full cross sectional area of the post.

6.5 Allowable dowel bearing capacity of OCL-SCPs are shown in **Table 5**.

Table 5. Allowable Dowel Bearing Capacity of OCL-SCP, (lb)[3]

Product	Fastener	Minimum Edge Distance (in)	Spacing Between Fasteners (in)	
			2 5/8	3 1/4
OCL-SCP 6 x 6[1]	Minimum 1/2" Diameter Bolt	1 1/2	3,700	3,900
OCL-SCP 4 x 4[2]			3,100	3,100

SI: 1 lb = 4.448 N, 1 in = 25.4 mm

1. Two rows of fasteners with 2 1/2" spacing between fastener rows.
2. One row of fasteners.
3. Values are for double shear connections where the load is applied to a member attached to both sides of the post. For bolt specifications, see **Section 8.7**. Testing indicated significant bolt deformation prior to reaching the ultimate load; this should be considered by the designer for serviceability.

6.6 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 Performance[21]

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 tests 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, contact the manufacturer for counsel on the proper installation method.

8.3 For installation details regarding guard post attachments, refer to Figure 25 and Figure 26 of AWC DCA-6.

8.4 Notched posts shall be cut as shown in **Figure 3**.

8.4.1 *2-Ply Beam:*

8.4.1.1 Six #10 x 4" multipurpose screws (three on each side, staggered) shall be used to secure 2-ply beams to OCL-SCP 6 x 6.

8.4.2 *3-Ply Beam:*

8.4.2.1 Three #10 x 4" multipurpose screws shall be used to secure 3-ply beams to OCL-SCP 6 x 6.

8.4.2.2 Screws shall be installed through OCL-SCP 6 x 6 into the OC Lumber beam.

8.5 *Post-Caps/Base/Side Connector to OCL-SCP*

8.5.1 For the post-caps/base, one 1/4" x 1 1/2" structural wood screw on each side into interior tabs of post-cap/base.

8.5.2 For the single ply, side connector, two 1/4" x 1 1/2" structural wood screws into side of post.

8.6 *Post-Caps/Base/Side Connector to OC Lumber Beam*

8.6.1 For the 2-ply post-cap, four 1/4" x 1 1/2" structural wood screws into face of beam on each side of the connector.

8.6.2 For the 3-ply post-cap, two 1/4" x 1 1/2" structural wood screws into bottom edge of each beam.

8.6.3 For the single-ply side connector, four 1/4" x 1 1/2" structural wood screws through beam into post, and one 1/4" x 1 1/2" structural wood screw into bottom edge of beam.

8.7 Bolts used shall be minimum SAE J429 Grade 2 and shall have a minimum nominal diameter of 1/2".

8.7.1 Bolts shall have washers under the head and nut.

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 Compressive strength in accordance with ASTM D198

9.1.2 Uplift resistance in accordance with ASTM D1761

9.1.3 Flexural properties in accordance with ASTM D198

9.1.4 Dowel bearing strength in general accordance with ASTM D1761 and ASTM D5764

9.2 Information contained herein may include the result of testing and/or data analysis by sources that are approved agencies, approved sources, and/or an RDP. Accuracy of external test data and resulting analysis is relied upon.

9.3 Where applicable, 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 being equivalent to the regulatory provision in terms of quality, strength, effectiveness, fire resistance, 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 duly authenticated reports from approved agencies and/or approved sources 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 in this duly authenticated report, may be dependent upon published design properties by others.

9.5 *Testing and Engineering Analysis:*

9.5.1 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 Owens Corning Lumber – Structural Composite Posts on the DrJ Certification website.

10 Findings

10.1 As outlined in **Section 6**, OCL-SCP has performance characteristics that were tested and/or meet applicable regulations. In addition, they are suitable for use pursuant to its specified purpose.

10.2 When used and installed in accordance with this duly authenticated report and the manufacturer installation instructions, OCL-SCP shall be approved for the following applications:

10.2.1 Use as structural posts to support residential deck framing as permitted in **Table 2**, **Table 3**, and **Table 5** of this report.

10.3 Unless exempt by state statute, when OCL-SCP 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 RDP.

10.4 Any application specific issues not addressed herein can be engineered by an RDP. Assistance with engineering is available from Owens Corning.

10.5 IBC Section 104.2.3 (IRC Section R104.2.2 and IFC Section 104.2.3[25] are similar) in pertinent part state:

> **104.2.3 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, provided that any such alternative is not specifically prohibited by this code and has been approved.

10.6 **Approved:**[26] Building regulations require that the building official shall accept duly authenticated reports.[27]

10.6.1 An approved agency is *"approved"* when it is ANAB ISO/IEC 17065 accredited.

10.6.2 An approved source is *"approved"* when an RDP is properly licensed to transact engineering commerce.

10.6.3 Federal law, Title 18 US Code Section 242, requires that, where the alternative product, 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 RDPs and is an ANAB Accredited Product Certification Body – Accreditation #1131.

10.8 Through the IAF Multilateral Arrangement (MLA), this duly authenticated report can be used to obtain product approval in any jurisdiction or country because all ANAB ISO/IEC 17065 duly authenticated reports 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, OCL-SCP shall be used:

11.3.1 As support posts for deck framing:

11.3.1.1 The maximum post height is 14' 0".

11.3.1.2 All posts shall be braced to prevent side-sway and/or buckling.

11.3.1.3 Decks shall be supported on concrete footings or other approved structural systems designed to accommodate all loads in accordance with IRC Section R301.

11.3.1.3.1 Footing size shall comply with IRC Section R507.3.

11.3.1.4 Fasteners used with OCL-SCP 6 x 6 Posts shall be in accordance with IRC Section R304.3.3[29] and IRC Table R507.2.3.

11.3.1.4.1 Where beams are installed on the side of the posts using bolted connections, loads transferred shall not exceed the double shear values in **Table 5**. The values are applicable for a connection where members of equal thickness are bolted to each side of the post.

11.3.2 For more information, see the manufacturer installation instructions or contact Owens Corning Technical Support.

11.4 Where the beams are mounted on the top of the posts using post cap connectors, they shall be centered on the post.

11.5 OCL-SCP applications that require professional engineering are those conditions where the column application is outside of the prescriptive values provided in **Table 2**, **Table 3**, **Table 4**, or **Table 5** of this report (i.e., higher applied loads, non-axial loading conditions, heights greater than 14', etc.).

11.6 When required by adopted legislation and enforced by the building official, also known as the Authority Having Jurisdiction (AHJ) in which the project is to be constructed:

11.6.1 Any calculations incorporated into the construction documents shall conform to accepted engineering practice and, when prepared by an approved source, shall be approved when signed and sealed.

11.6.2 This report and the installation instructions shall be submitted at the time of permit application.

11.6.3 This innovative product has an internal quality control program and a third-party quality assurance program.

11.6.4 At a minimum, this innovative product shall be installed per **Section 8** of this report.

11.6.5 The review of this report by the AHJ shall comply with IBC Section 104.2.3.2 and IBC Section 105.3.1.

11.6.6 This innovative product has an internal quality control program and a third party quality assurance program in accordance with IBC Section 104.7.2, IBC Section 110.4, IBC Section 1703, IRC Section R104.7.2, and IRC Section R109.2.

11.6.7 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 IBC Section 110.3, IRC Section R109.2, and any other regulatory requirements that may apply.

11.7 The approval of this report by the AHJ shall comply with IBC Section 1707.1, where legislation states in part, *"the building official shall make, or cause to be made, the necessary tests and investigations; or the building official shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 104.2.3"*, all of IBC Section 104, and IBC Section 105.3.

11.8 Design loads 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., owner or RDP).

11.9 The actual design, suitability, and use of this report for any particular building, is the responsibility of the owner 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 www.owenscorning.com/en-us.

13 Review Schedule

13.1 This report is subject to periodic review and revision. For the latest version, visit www.drjcertification.org.

13.2 For information on the status of this report, please contact DrJ Certification.

Notes

1 For more information, visit 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 https://www.justice.gov/atr/mission and https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11

4 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

5 The design strengths 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

6 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

10 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 federal government and each state have a public records act. To follow DTSA and comply state public records and trade secret legislation requires approval through ANAB ISO/IEC 17065 accredited certification bodies or approved sources. For more information, please review this website: Intellectual Property and Trade Secrets.

11 https://www.nspe.org/resources/issues-and-advocacy/professional-policies-and-position-statements/regulation-professional AND https://apassociation.org/list-of-engineering-boards-in-each-state-archive/

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

14 https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#104.11:~:text=Where%20the%20alternative%20material%2C%20design%20or%20method%20of%20construction%20is%20not%20approved%2C%20the%20building%20official%20shall%20respond%20in%20writing%2C%20stating%20the%20reasons%20why%20the%20alternative%20was%20not%20approved AND https://up.codes/viewer/colorado/ibc-2021/chapter/1/scope-and-administration#105.3.1:~:text=If%20the%20application%20or%20the%20construction%20documents%20do%20not%20conform%20to%20the%20requirements%20of%20pertinent%20laws%2C%20the%20building%20official%20shall%20reject%20such%20application%20in%20writing%2C%20stating%20the%20reasons%20therefore

15 https://up.codes/viewer/colorado/ibc-2021/chapter/17/special-inspections-and-tests#1707.1:~:text=the%20building%20official%20shall%20accept%20duly%20authenticated%20reports%20from%20approved%20agencies%20in%20respect%20to%20the%20quality%20and%20manner%20of%20use%20of%20new%20materials%20or%20assemblies%20as%20provided%20for%20in%20Section%20104.11

16 https://iaf.nu/en/about-iaf-mla/#:~:text=it%20is%20required%20to%20recognise%20certificates%20and%20validation%20and%20verification%20statements%20issued%20by%20conformity%20assessment%20bodies%20accredited%20by%20all%20other%20signatories%20of%20the%20IAF%20MLA%2C%20with%20the%20appropriate%20scope

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 2024 version of the codes and the standards referenced therein. This material, product, design, service, and/or method of construction also complies with the 2000-2024 versions of the referenced codes and the standards referenced therein.

20 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 https://up.codes/viewer/colorado/ibc-2021/chapter/2/definitions#labeled

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%20livable%2C%20and%20safe%20housing%20and%20shall%20demonstrate%20acceptable%20workmanship%20reflecting%20journeyman%20quality%20of%20work%20of%20the%20various%20trades

23 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%20engineering%20analysis%20or%20by%20suitable%20load%20tests%20to%20simulate%20the%20actual%20loads%20and%20conditions%20of%20application%20that%20occur

24 See Code of Federal Regulations (CFR) Title 24 Subtitle B Chapter XX Part 3280 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 https://up.codes/viewer/wyoming/ibc-2021/chapter/17/special-inspections-and-tests#1707.1

28 Multilateral approval is true for all ANAB accredited product evaluation agencies and all International Trade Agreements.

29 2021 IRC Section R317.3.3