

July 12, 2016

Attorney General Kamala D. Harris
Office of the Attorney General
1300 "I" Street
Sacramento, CA 95814-2919

Ms. Mia Marvelli
Executive Director
California Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833

Mr. Ric Moore (Executive Officer)
Board for Professional Engineers, Land Surveyors, and Geologists
2535 Capitol Oaks Drive, Suite 300
Sacramento, CA 95833-2944

Dear Attorney General Harris, Ms. Marvelli and Mr. Moore:

Please find a quick introduction of the Structural Building Components Association (SBCA) in [Appendix A](#). Our goal with this letter is to set forth California (CA) law of which we are aware and define a systematic approach for any new product manufacturer to implement the code provisions related to alternative materials, designs or methods of construction that are supported by the law. This should be readily adopted by California Building Officials/Building Official "Contractor Staff"¹ (CABO) and also by California Registered Design Professionals (RDPs).

California Product Evaluation Process for Code Compliance

The CA law that is germane to implementation of the typical building code provision called alternative materials, designs or methods of construction generally follows the [standard language of IBC Section 104.11](#). The specific CA Residential and Building Code language^{2,3,4,5} can be found in its entirety in [Appendix B](#).

Given this background, an "alternative material, design or method of construction to that found in the building code" can be evaluated and be acceptable for use pursuant to the [California Code](#) in the following ways:

1. A [CA licensed professional or specialty engineer](#) is allowed to use proprietary testing information and generally accepted engineering practice for certifying compliance with the building specifications adopted by CA.

¹ California Building Departments are hiring plan review and inspection companies under contract to act as their agents in performance code mandated plan review and inspections.

² Index of the 2013 California Residential Code.

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20RESIDENTIAL%20CODE,%20SUPPLEMENT%20JULY%202015/Index.pdf

³ Section 1.8.7 of the 2013 California Residential Code.

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20RESIDENTIAL%20CODE,%20SUPPLEMENT%20JULY%202015/Chapter%201%20-%20Scope%20and%20Application.pdf

⁴ Index of the 2013 California Building Code.

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20BUILDING%20CODE%20VOL%202,%20SUPPLEMENT%20JULY%202015/Index.pdf

⁵ Section 104.11 of the 2013 California Building Code.

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20BUILDING%20CODE%20VOL%201,%20SUPPLEMENT%20JULY%202015/Chapter%201%20-%20Administration.pdf

Supporters of Advancements in Engineering Innovations

2. A product evaluation service accredited and certified to be in compliance with ISO Guide 65, "General Requirements for Bodies Operating Product Certification Programs" ([see section 3.3 of DSA IR A-5](#)⁶), can provide a [research or product evaluation report \(section 1703.4.2\)](#)⁷ for code approval.
 - a. Today "ISO Guide 65" means an [ANSI ISO/IEC 17065 accreditation](#)⁸.
3. The generic terms "ICC report," "ICC evaluation report," "ICC-ES [technical evaluation](#)" or "ICC-ES Report" mean and are synonymous with a report created by an [ANSI ISO/IEC 17065 accredited product certification listed body](#)⁹.
 - a. There are over 80 organizations that provide certified product evaluation reports.
 - b. Each organization complies with the approval requirements of "[IBC Section 1703 Approvals](#)." Section 1703 is adopted into CA law through the [CA adoption of the IBC language](#)¹⁰.
 - c. It is assumed that CA law does not intend to designate a monopoly or oligopoly position where a select group of private companies are given preferential treatment with respect to providing a set of professional services. This would limit competition and mean that some of the more than 80 companies could be discriminated against.
 - d. Therefore, all 80 plus firms can certify compliance with the building specifications adopted by CA and be accepted by CABOs and RDPs as valid "ICC [product evaluation reports \(i.e. an ANSI Product Certification Report\)](#)"

Given the CA Building Code (CBC) and CA Residential Code language (CRC), the following approach to code compliance is confirmed:

4. Professional engineering and the building code are intended to encourage innovation and IP¹¹ creation, which promotes the [California concept of free, fair, vigorous and competitive marketplaces](#).
5. The business logic path that follows suggests that, in all cases where an [ANSI accredited firm](#) or a [CA licensed professional or specialty engineer](#) is involved:
 - a. A [product evaluation report](#) shall gain immediate CABO or RDP [approval](#) as an "alternative material, design or method of construction to that found in the building code" via an [ANSI ISO/IEC 17065 product certification](#) or via a sealed design/report by an RDP, which is then [CBC Section 1703 compliant and CRC compliant](#)¹².
 - b. One of the functions of a [research or product evaluation report](#), as defined in Chapter 17 of the CBC, is founded on the premise of protecting proprietary knowledge/IP and not divulging it to competitors. Any testing, engineering analysis, software development, etc. undertaken is proprietary and to protect this work it is reviewed and affirmed by an [ANSI ISO/IEC 17065](#) report, which can then be approved.

⁶ http://www.documents.dgs.ca.gov/dsa/pubs/IR_A-5_rev10-05-12.pdf

⁷ Technical evaluations = product evaluation report = technical evaluation reports = 1703.4.2 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

⁸ <https://www.ansi.org/Accreditation/product-certification/DirectoryListingAccredited.aspx?menuID=1&prgID=1>. Along with testing and 3rd party inspection bearing the label or listed by an [ISO/IEC 17025 testing laboratory](#) or [ISO/IEC 17020 quality assurance agency](#). It is a conflict of interest and risk to partiality to undertake both [ANSI ISO/IEC 17065 product certification](#) and [ISO/IEC 17020 quality assurance](#).

⁹ Ibid.

¹⁰

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20BUILDING%20CODE%20VOL%202,%20SUPPLEMENT%20JULY%202015/Chapter%2017%20-%20Structural%20Tests%20and%20Special%20Inspections.pdf

¹¹ IP = intellectual property

¹²

http://codes.iccsafe.org/app/book/content/2015_CALIFORNIA/2013%20CALIFORNIA%20BUILDING%20CODE%20VOL%202,%20SUPPLEMENT%20JULY%202015/Chapter%2017%20-%20Structural%20Tests%20and%20Special%20Inspections.pdf

Supporters of Advancements in Engineering Innovations

- c. This approach is intended to certify compliance with the relevant CA building code or building specifications adopted by the local jurisdiction.
- d. To amplify:
 - i. The work of an [ANSI accredited firm](#) or a [CA licensed professional or specialty engineer](#) shall be approved by a CABO or the registered design professional (RDP). This is true unless a CABO or RDP, upon denial of an [ANSI evaluation report](#) or sealed design/report, provides in writing the key provisions of the administrative law, building code, and/or or professional engineering law that have not been complied with.
 - 1. This includes all specific citations along with commentary on what section of the law are non-compliant.
 - 2. Appropriate evidence supporting non-compliance shall be provided as well.
 - ii. The building code and any administrative law is a legal contract. Given this, a CABO or RDP shall also provide the specific path to cure any deficiency so that the [ANSI accredited firm](#) or a [CA licensed professional or specialty engineer](#) can take actions to cure.
 - 1. Failure to approve without providing actions to cure can be a denial of an ANSI accredited firm's or a [professional or specialty engineer's](#) license to work in their area of expertise, which restrains trade.
 - iii. When each deficient element is fully cured, approval shall be granted. If not fully cured, approval will remain denied until cured.

This is a review of the CBC, CRC, California Administrative law and CA Engineering law. Given this review, implementing an "alternative material, design or method of construction to that found in the building code" shall be evaluated and approved by a CABO or RDP via a technical evaluation report through any group listed on the [ANSI Accredited Product Certification Body website](#) or by any [CA licensed professional or specialty engineer](#) using the process defined above. The goal is to ensure that all [ANSI 17065 accredited organizations](#) or [CA licensed professional or specialty engineers](#) are treated consistently and in the spirit of [California's concept of a free, fair, vigorous and competitive marketplace](#).

Please let me know if any of the above information is incorrect. Otherwise SBCA will encourage our members to expect that this assessment is accurate, will take action accordingly and will expect outcomes accordingly as well.

Thank you for your consideration of these concepts, your timely feedback if anything presented is incorrect and any further insight/counsel that can be provided so that SBCA members assuredly comply with California laws.

Respectfully yours,



Kirk Grundahl, P.E.
Executive Director

Supporters of Advancements in Engineering Innovations

Appendix A

SBCA is a national trade association of companies that produce and sell innovative engineered floor, wall and roof structural components and related building envelope oriented products. Currently SBCA's membership includes 415 companies and 925 manufacturing locations in the U.S. and Canada, along with a variety of suppliers. SBCA represents approximately 90% of the more than \$8 billion (best estimate in 2015) in building components sold in the U.S. Our industry deploys many professional engineers and works closely with building departments across the country to implement new and innovative products that use generally accepted engineering practice concepts for acceptance into the market.

The only way to market for new products, when professionally engineered and for code compliance, is through section 104.11 of the building code, which most state laws acknowledge through language similar in concept to that stated in the [2015 IBC](#) as follows:

[A] 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, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety. Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons why the alternative was not *approved*.

Professional engineering and the building code are intended to encourage innovation and promote the [California's concept of a free, fair, vigorous and competitive marketplace](#), which expands the value to California consumers. Unfortunately, there are times when artificial constraints are put in the way of implementing the use of innovative products through generally accepted engineering practice and provisions in the law that encourage engineering innovation. SBCA's goal is to ensure that all [ANSI 17065 accredited organizations](#) or a [CA licensed professional or specialty engineer](#) are treated consistently and in the spirit of [California's concept of a free, fair, vigorous and competitive marketplace](#).

[\[back to letter\]](#)

Appendix B

2013 California Residential Code (includes July 2015 Supplement and Errata)

ALTERNATE MATERIALS

(see MATERIALS) 1.8.7, R104.11

SECTION 1.8.7

**ALTERNATE MATERIALS, DESIGNS,
TESTS AND METHODS OF CONSTRUCTION**

1.8.7.1 General. The provisions of this code as adopted by the Department of Housing and Community Development are not intended to prevent the use of any alternate material, appliance, installation, device, arrangement, design or method of construction not specifically prescribed by this code. Consideration and approval of alternates shall comply with Section 1.8.7.2 for local building departments and Section 1.8.7.3 for the Department of Housing and Community Development.

1.8.7.2 Local building departments. The building department of any city, county, or city and county may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal, demolition or arrangement of an apartment house, hotel, motel, lodging house, dwelling or an accessory structure, except for the following:

1. Structures located in mobilehome parks as defined in California Health and Safety Code Section 18214.
2. Structures located in special occupancy parks as defined in California Health and Safety Code Section 18862.43.
3. Factory-built housing as defined in California Health and Safety Code Section 19971.

1.8.7.2.1 Approval of alternates. The consideration and approval of alternates by a local building department shall comply with the following procedures and limitations:

1. The approval shall be granted on a case-by-case basis.
2. Evidence shall be submitted to substantiate claims that the proposed alternate, in performance, safety and protection of life and health, conforms to, or is at least equivalent to, the standards contained in this code and other rules and regulations promulgated by the Department of Housing and Community Development.
3. The local building department may require tests performed by an approved testing agency at the expense of the owner or owner's agent as proof of compliance.

4. If the proposed alternate is related to accessibility in covered multifamily dwellings or in facilities serving "COVERED MULTIFAMILY DWELLINGS" as defined in CBC Chapter 11A, the proposed alternate must also meet the threshold set for "EQUIVALENT FACILITATION" as defined in CBC Chapter 11A.

For additional information regarding approval of alternates by a building department pursuant to the State Housing Law, see California Health and Safety Code Section 17951(e) and California Code of Regulations, Title 25, Division 1, Chapter 1, Subchapter 1.

1.8.7.3 Department of Housing and Community Development. The Department of Housing and Community Development may approve alternates for use in the erection, construction, reconstruction, movement, enlargement, conversion, alteration, repair, removal or demolition of an apartment house, hotel, motel, lodging house, dwelling or an accessory thereto and permanent buildings in mobilehome parks and special occupancy parks. The consideration and approval of alternates shall comply with the following:

1. The department may require tests at the expense of the owner or owner's agent to substantiate compliance with the California Building Standards Code.
2. The approved alternate shall, for its intended purpose, be at least equivalent in performance and safety to the materials, designs, tests or methods of construction prescribed by this code.

2013 California Building Code (includes July 2015 Supplement and Errata)

ALTERNATIVE MATERIALS,

DESIGN AND METHODS 104.11

1.2.2 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 has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and

that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

1.2.2.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

1.2.2.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

1.2.3 Adopting agency identification. The provisions of this code applicable to buildings identified in this section will be identified in the Matrix Adoption Tables under the acronym BSC.

1.11.2.4 Request for alternate means of protection. Requests for approval to use an alternative material, assembly or materials, equipment, method of construction, method of installation of equipment or means of protection shall be made in writing to the enforcing agency by the owner or the owner's authorized representative and shall be accompanied by a full statement of the conditions. Sufficient evidence or proof shall be submitted to substantiate any claim that may be made regarding its conformance. The enforcing agency may require tests and the submission of a test report from an approved testing organization as set forth in Title 19, California Code of Regulation, to substantiate the equivalency of the proposed alternative means of protection.

When a request for alternate means of protection involves hazardous materials, the authority having jurisdiction may consider implementation of the findings and recommendations identified in a Risk Management Plan (RMP) developed in accordance with Title 19, Division 2, Chapter 4.5, Article 3.

Approval of a request for use of an alternative material, assembly of materials, equipment, method of construction, method of installation of equipment or means of protection made pursuant to these provisions shall be limited to the particular case covered by request and shall not be construed as establishing any precedent for any future request.

shall be forwarded to the enforcement agency for review and approval.

The instruments shall be interconnected for common start and common timing. Each instrument shall be located so that access is maintained at all times and is unobstructed by room contents. A sign stating "MAIN-TAIN CLEAR ACCESS TO THIS INSTRUMENT" shall be posted in a conspicuous location.

The Owner of the building shall be responsible for the implementation of the instrumentation program. Maintenance of the instrumentation and removal/processing of the records shall be the responsibility of the enforcement agency or its designated agent.

[A] 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, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety. *[DSA-SS & DSA-SS/CC, OSHPD 1, 2 & 4] Alternative system shall satisfy ASCE 7 Section 1.3, unless more restrictive requirements are established by this code for an equivalent system.*

Alternative systems also satisfy the California Administrative Code, Section 7-104. [OSHPD 1, 2 & 4] and Section 4-304 [DSA-SS & DSA-SS/CC].

[A] 104.11.1 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from approved sources.

[A] 104.11.2 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the building official shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the building official shall approve the testing procedures. Tests shall be performed by an approved agency. Reports of such tests shall be retained by the building official for the period required for retention of public records.

104.11.3 Peer review. *[OSHPD 1 & 4] When peer review is required, it shall be performed pursuant to Section 3414A.*

104.11.4 Earthquake monitoring instruments. *[OSHPD 1 & 4] The enforcement agency may require earthquake monitoring instruments for any building that receives approval of an alternative system for the Lateral Force Resisting System (LFRS). There shall be a sufficient number of instruments to characterize the response of the building during an earthquake and shall include at least one tri-axial free field instrument or equivalent. A proposal for instrumentation and equipment specifications*

shall be forwarded to the enforcement agency for review and approval.

The instruments shall be interconnected for common start and common timing. Each instrument shall be located so that access is maintained at all times and is unobstructed by room contents. A sign stating "MAINTAIN CLEAR ACCESS TO THIS INSTRUMENT" shall be posted in a conspicuous location.

The Owner of the building shall be responsible for the implementation of the instrumentation program. Maintenance of the instrumentation and removal/processing of the records shall be the responsibility of the enforcement agency or its designated agent.

[\[back to letter\]](#)

[\[back to letter\]](#)