

**TITLE 16. CALIFORNIA ARCHITECTS BOARD
DEPARTMENT OF CONSUMER AFFAIRS**

INITIAL STATEMENT OF REASONS

Hearing Date: No hearing has been scheduled for the proposed action.

Subject Matter of Proposed Regulations: Zero Net Carbon Design (ZNCD) Continuing Education (CE) for Architects.

Section(s) Affected: Adopt Article 10, Section 166 to California Code of Regulations¹ (CCR), Title 16, Division 2.

Background and Statement of the Problem:

Statutory authority: The California Architects Board (Board) licenses, regulates, and investigates complaints against architects in California, totaling approximately 22,000 licensees. It is the Board's duty to enforce and administer the Architects Practice Act, (Business & Professions Code (BPC) Chapter 3 (commencing with section 5500) of Division 3 (Act)). The Board is authorized to establish necessary rules and regulations for the enforcement of the Act and the laws subject to its jurisdiction (BPC section 5526). In 2021, BPC section 5600.05 (a)(2)(B) was added to the existing statute and requires architects to complete five hours of CE coursework on ZNCD.

Existing regulations: The Board currently does not have any regulation establishing qualifications for ZNCD courses and course providers as required by BPC section 5600.05 (a)(2)(B).

Background: In 2021, the Legislature passed Assembly Bill (AB) 1010 (Chapter 176, Statutes of 2021), amending BPC section 5600.05 to add subsection (a), paragraph (2), subparagraph (B) requiring architects to complete five hours of CE coursework on ZNCD. The statute requires the Board to develop regulations to implement the requirement for architects to complete five hours of coursework regarding ZNCD as a condition of license renewal occurring on or after January 1, 2023. The statute requires the Board to promulgate regulations to establish qualifications for courses and course providers by July 1, 2024. This bill was sponsored by the American Institute of Architects, California (AIA CA).

At the September 18, 2020 Board meeting, Bill Leddy, Chair for the Committee on the Environment and Vice President for Climate Action, AIA CA, gave a presentation to the Board on their proposed CE requirement and highlighted current efforts to decrease carbon dioxide emissions statewide including California code and grassroot efforts such as Building Electrification Action Plans and Architecture 2030's Zero Code for California. The Board discussed ZNCD CE and directed the matter to the

¹ All CCR references are to title 16 unless otherwise noted.

Professional Qualifications Committee (PQC) for consideration.

The PQC discussed this requirement at meetings in 2020 and 2022. At the October 30, 2020 PQC meeting, Mr. Leddy highlighted for members the global scope and impact of climate change upon architectural design and the built environment (Agenda Item E). During the January 25, 2022 joint meeting of the PQC, the Regulatory and Enforcement committee, and the Communications committee, ZNCD was discussed in context of the newly adopted strategic plan and AB 1010. At the March 30, 2022 PQC meeting, the committee reviewed and discussed the draft proposed regulatory language to implement AB 1010 (Agenda Item 5) and heard and discussed public comments received during the meeting.

The Board approved proposed regulatory text during the June 8, 2022 Board meeting (Agenda Item J).

Problem: The statute does not identify any specific material, other than the broad category of ZNCD that a licensee must study in CE courses to fulfill the ZNCD CE requirement. In addition, ambiguities exist as to the time period for coursework completion; which standards govern ZNCD requirements; qualifications and requirements for courses and providers; provider and licensee responsibilities for coursework documentation and recordkeeping; and consequences for architects who are found to be noncompliant with the ZNCD CE requirements.

This lack of clarity makes it difficult for architects to determine whether a course or its content would fulfill the statutory mandate. The Board seeks to provide the needed clarity through the adoption of regulations that provide clear guidance to architects and CE providers regarding what ZNCD CE will fulfill the statutory mandate of BPC section 5600.05 (a)(2)(B).

Pursuant to the authority vested by BPC section 5556 to promulgate regulations and to implement, interpret, or make specific BPC section 5600.05(a)(2)(B) the Board is considering adding section 166 in article 10 of division 2 of title 16 of the CCR to specify all requirements in regulation.

Anticipated benefits from this regulatory action:

CCR, Title 16, Division 2, Article 10, Section 166

The anticipated benefits of this regulation are healthier buildings with reduced carbon emissions for the public. This regulation aligns with Governor Newsom's climate change policy goal relating to clean and healthy buildings – a goal of 3 million climate-ready and climate-friendly homes by 2030 and 7 million by 2035, supplemented by 6 million heat pumps by 2030, and directing 50 percent of investments to low-income and disadvantaged communities. Requiring architects to learn about ZNCD in architecture and to keep their knowledge current will contribute to the creation of clean and healthy buildings.

Architects will benefit from this regulation by regularly updating their knowledge of ZNCD in architecture. For architects licensed in multiple states, this can be an enhanced benefit as California is leading the nation in this area of architecture and climate action.

This regulatory proposal benefits the state's environment because it will lead to reduction in the release of greenhouse gases, specifically carbon, into the environment.

The regulation promotes fairness and social equity in the following ways by: (1) including in the definition of "zero net carbon design requirement" in subsection (a)(2) and the term "equitably procures" in describing procuring offsite carbon-free renewable energy, and (2) allowing courses on environmental justice in subsection (c). Minority communities are exposed to disproportionate concentrations of environmental toxicities, which are often the result of building design, location of industry, materials used, and other factors that are impacted by architects and architecture. Environmental justice goals seek to treat all people and communities fairly and to ameliorate these disproportionate conditions. The US Environmental Protection Agency (EPA) defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies and defines fair treatment to mean no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. Applying the EPA's definition of environmental justice to this proposed ZNCD CE regulation means that during the lifecycle of the building, from extraction to recycling or disposal of materials, all people and communities should be treated fairly, and no one should bear a disproportionate share of toxins or other polluting byproducts in the quest for zero net carbon building design.

Specific purpose of, and rationale for, each adoption:

1. Adopt Section 166, subsection (a)

Purpose: Subsection (a) provides definitions of terms used in the proposed regulation. Subsection (a), paragraph (1) would define "trainers or educators with knowledge and expertise in zero net carbon design" as a person with a minimum of three projects within the last ten years in the designing of carbon neutral architecture and who meets one of the three additional requirements of subsection (f).

The Board has determined the proposed definition for trainers or educators includes the minimum criteria and knowledge required for an architect to plan sites and design buildings, or groups of building and structures (BPC section 5550.1) to achieve a ZNCD.

Subsection (a), paragraph (2) would define "zero net carbon design requirement" to mean architectural designs including resilient designs of new construction and/or existing facilities that produce on-site, or equitably procure from offsite, enough carbon-free renewable energy to meet building operations energy consumption over the building project's lifecycle. This also includes architectural design responsive to embodied carbon

reduction and resilient performance of a facility that results in reduced embodied carbon or minimized carbon.

Subsection (a)(2)(A) would define resilient performance as the capacity of a system, for example: a community, society, or ecosystem, to withstand physical calamities and continue to function.

Subsection (a)(2)(B) would define the term “equitability procures from offsite” to ensure consideration of environmental justice goals.

Rationale: This subsection’s definitions would assist the Board, licensees, and the public in determining if a ZNCD CE course properly covers ZNCD material sufficiently to fulfill the mandated biennial CE requirement for licensees. It is necessary to address trainer or educator qualifications so that licensees take courses from qualified providers and trainers and that those educators and trainers are aware of the standards. This subsection is necessary as it clarifies the meaning of terms that will help identify eligible courses, and trainer and educator qualifications.

The Assembly Committee on Business and Profession’s bill analysis of AB 1010 indicates “to achieve zero net carbon a balance between the greenhouse gases put into the atmosphere and those taken out occurs. This state is also referred to as carbon neutral.”

The Resilient Design Institute defines resilient design as “the intentional design of buildings, landscapes, communities, and regions in response to these vulnerabilities.” Resiliency can be built into buildings by considering all possible and likely natural disaster scenarios (e, g, fire, flood, earthquake, extreme cold/heat) and sources of general everyday stress and begin the design process with those considerations in mind to increase the chances of a building surviving those disasters and to expand the building’s lifespan. A resilient building is a building that can adapt to changes in the environment, including a natural disaster. For example, a resilient building in an earthquake zone isn’t necessarily designed not to get damaged—it may get damaged but will not be destroyed, because it is designed not to fall apart. Resilient building design, as described here, fosters resilient performance.

The regulation incorporates the term “equitably procures” into the definition of “zero net carbon design requirement” in subsection (a), paragraph (2) in describing procuring offsite carbon-free renewable energy. Because minority communities are exposed to disproportionate concentrations of environmental toxicities, which are often the result of building design, location of industry, materials used, and other factors that architects and architecture impact, the Board has chosen to address equity and treating people and communities fairly in this regulation, to support the environmental justice goals discussed above under “Anticipated benefits from this regulatory action.”

Carbon-free renewable energy is renewable energy that produces no carbon emissions. Carbon-free energy refers to energy produced with sources that generate no carbon emissions whereas renewable energy is energy produced from sources like the sun,

wind, and biowaste that are naturally replenished, do not run out, and produce zero emissions. All renewable energy is considered carbon free but not all carbon-free energy is renewable.

The ZNCD requirement definition applies to the building project's entire lifecycle, including embodied carbon. A building project's lifecycle spans from material extraction to the disposal or recycling of materials. The U.S. General Services Administration (GSA) includes the following nine phases of the lifecycle: (1) extraction of raw material, (2) transport, (3) manufacture, (4) distribution, (5) construction or installation, (6) operate, maintain, (7) demolish, (8) haul, and (9) dispose or recycle. Embodied carbon is included in this model and according to the US GSA, refers to the greenhouse gas emissions (mostly carbon dioxide) resulting from the mining, harvesting, processing, manufacturing, transportation, and installation of materials.

The phrase "equitably procures from offsite" in subsection (a), paragraph (2), subparagraph (A) is defined in reference to environmental justice. The Board has a strong commitment to equity. It is well documented that minority communities are exposed to disproportionate concentrations of environmental toxicities often the result of building design, location of industry, materials used, and other factors that are impacted by architects and architecture. Subsection (a), paragraph (2), subparagraph (A) supports the environmental justice goals discussed above under "Anticipated benefits from this regulatory action."

2. Adopt Section 166, subsection (b)

Purpose: Subsection (b) clarifies the number of CE hours required as well as the two-year period during which the mandated five hours of ZNCD CE must be completed. Subsection (b) also clarifies that when a licensee is renewing on a delinquent basis, the mandated ZNCD CE completion must have occurred during the 24 months immediately preceding their delinquent renewal. This further clarifies that a licensee cannot use completion of the same CE coursework to fulfill the CE requirement for multiple renewal periods. Subsection (b) clarifies that credit towards the CE requirements will not qualify if a licensee is unable to maintain, and upon request of the Board make available, a certificate of completion, records, or other evidence showing completion of the CE requirement, and that the completed coursework meets the criteria specified in the proposed regulation.

Rationale: It is a condition of license renewal that licensees complete five hours of CE on ZNCD. Specifying the precise number of hours required eliminates the need for licensees to research BPC section 5600.05 to understand the exact requirement. Each licensee has the same time, the 24 months immediately prior to their license renewal, to complete their ZNCD CE coursework, regardless of when a licensee chooses to renew their license. Not allowing credit for coursework previously used to fulfill the CE requirement for a prior renewal ensures that licensees take new courses each renewal period for any overlapping license renewals. This enhances public protection by requiring licensees to keep current with the latest information related to the field of ZNCD in architecture. Requiring a certificate, records, or other evidence of completion

allows the Board to ensure licensees comply with the specified time frames for when coursework can be completed. If a licensee is unable to provide the required documentation when requested by the Board, the Board's authority to deny a licensee credit towards fulfillment of their CE requirement is made clear. This assists the Board in fulfilling its mandate to protect the public.

3. Adopt Section 166, subsection (c)

Subsection (c) clarifies that course materials must be pertinent to architecture and ZNCD. Subsection (c) also clarifies which course topics that will fulfill the ZNCD CE requirement by including examples of allowable topics.

The Board has determined the example list of courses provided is sufficient for trainers or educators to prepare eligible course offerings to fulfill the need for ZNCD CE among California's architects.

Rationale: This section is necessary to clarify that the CE course and materials must be pertinent to architecture and ZNCD because there are many professions that may address carbon reduction. Specifying that ZNCD CE courses must relate to the profession of architecture eliminates confusion for architects, trainers, and educators.

The example list of allowable coursework topics is partially derived from the Senate Floor Analysis of AB 1010 amended June 8, 2021 (highly insulated building envelope design, deep energy retrofits of existing structures, natural ventilation and daylighting, passive solar design, advanced energy efficiency strategies, renewable energy strategies). Furthermore, the California Department of General Services, CALGreen - Title 24, Part 11, of the CCR, sets out mandatory green building standards to reduce greenhouse gases and ZNCD CE courses based on these standards are aligned with legislative intent. The course topics of climate sustainability, resilient design, and environmental justice reflect the Board's commitment to advancing solutions that while promoting social justice and equity are not pursued at the expense of vulnerable communities. These three course topics are reflected in the definitions contained in subsection (a) and were discussed during the March 2022, and June 2022 PQC meetings and approved at the June 8, 2022 Board meeting.

4. Adopt Section 166, subsection (d)

Purpose: Subsection (d) establishes minimum quality standards that ZNCD CE courses must meet by requiring the educational objective(s) of the course be in subject matters identified in subsection (c), the material logically organized and presented, and the material be presented by qualified educators or trainers who meet the qualifications in subsection (f).

Rationale: The Board seeks to ensure that the ZNCD CE courses taken by licensees provide material that adequately covers the subject matter. The Board considered and condensed a commonly used instructional design model that was developed in the 1970s in connection with training in the military called the Analysis, Design,

Development, Implementation, and Evaluation (ADDIE) model. The acronym comes from five phases to consider in creating an effective training. The first four phases of the ADDIE model, analysis, design, development, and implementation are integrated into subsection (d)'s first two requirements: identifiable learning objectives and logical organization and presentation of material. When educators articulate clear and identifiable learning objectives, this enables the Board, licensees, and the public to verify that the subject matter covered in a ZNCD CE course pertains to and sufficiently covers ZNCD requirements. The phases of analysis, design, and development are covered when logical presentation of course material demonstrates consideration and forethought were used in formulating the course curriculum and this will assist students in organizing and retaining core concepts and understanding how core concepts interrelate and are applied to architectural challenges. The phase of implementation is met by the third requirement of subsection (d), that ZNCD course material must be presented by individuals who meet the qualifications in subsection (f). This requirement seeks to ensure the development and presentation of the course material is done by qualified individuals for the benefit of the licensees required to take such courses, and the public who use buildings designed by those licensees.

5. Adopt Section 166, subsection (e)

Purpose: Subsection (e) establishes the two conditions under which a certificate of completion is provided. A certificate of completion is provided for (1) completing an in-person or live webinar course or (2) for completing a recorded webinar course and passing a post-course test demonstrating proficiency in the CE coursework with a minimum cumulative score of at least 70%.

Rationale: At its June 8, 2022 Board meeting, the Board discussed the conditions under which a certificate of completion and post-course test should be provided and agreed to only require a test demonstrating proficiency for recorded webinar courses. A test at the conclusion of a recorded course helps to demonstrate that licensees understand and retain the information presented in the absence of a live instructor. In-person or live webinars offer opportunities for robust interactive learning with the instructor which may facilitate understanding and retention. Certificate of completions are provided to those individuals completing eligible in-person or live webinar courses and to individuals who complete eligible recorded courses and pass a test of proficiency at the end of the course with a score of 70% or more.

The US Department of Education, International Affairs Office describes criterion-referenced grading systems where students are evaluated against an absolute scale where 90-100 is excellent, 80-89 is good, 70-79 is fair, 60-69 is poor, and 59 or below is failure. Academic grading in the US establishes that the score on an examination that represents a "C" grade is correctly answering between 70-79% of the material being tested. Additionally, the AIA, the professional organization for architects, only recognizes CE taken by an on-demand webinar (pre-recorded webinar) if the individuals pass a test on the material with a score of 70% or above. The Board chooses to set a passing score of 70% or higher on the ZNCD CE post-test for recorded courses and believes this is the minimum score to demonstrate sufficient proficiency.

6. Adopt Section 166, subsection (f)

Purpose: Subsection (f) establishes a trainer or educator’s minimum qualifications for knowledge and expertise required to teach ZNCD CE coursework.

Rationale: BPC section 5600.05 does not clarify the minimum knowledge and expertise that trainers or educators need to teach ZNCD CE courses. As set out in subsection (f) paragraph (1), the Board instead lists the occupations in which an individual maintains updated knowledge and skills on ZNCD CE requirements (BPC section 5600.05 (a)(2)(B)). The Board believes that architects, and professional civil, mechanical, and structural engineers who have 3 years of demonstrable direct experiences in the field have the requisite training and expertise to teach the ZNCD CE courses.

As set out in subsection (f), paragraph (2), the Board, through practitioner members’ experience, considers individuals holding a faculty appointment at an accredited educational institution, or an educational institution approved by the Bureau for Private Postsecondary Education, with direct responsibility for the teaching of carbon reduction, carbon neutral, and/or high performance or passive building topics as having sufficient expertise to instruct licensees on ZNCD CE requirements. For clarity, the term accredited is defined in this paragraph to mean “recognition from an accrediting agency recognized by the Secretary of the United States Department of Education.”

In subsection (f), paragraph (3), the Board specifies that individuals with International Code Council (ICC) California certification in the areas of CALGreen Inspector/Plans Examiner, California Commercial Building Inspector, and California Building Plans Examiner are qualified to be trainers or educators. This is because those certifications provide the instructor with sufficient expertise to be able to effectively teach ZNCD CE courses.

7. Adopt Section 166, subsection (g)

Purpose: This subsection clarifies that a licensee cannot fulfill their CE requirement through self-teaching, self-directed activities, or by teaching, instructing, or presenting a course on ZNCD requirements.

Rationale: The Board holds the view that licensees who teach ZNCD CE courses must still fulfill their personal CE requirements by completing approved ZNCD CE courses taught by other CE providers. This creates an equitable situation where all licensees must meet the mandated ZNCD CE requirement. Another benefit of requiring participation in ZNCD courses taught by other CE providers is that trainers or educators may improve the content of their own course curriculum and teaching, instruction, and/or presentations. Once the Board decided to not allow providers to self-certify, the Board decided it was necessary to also prohibit self-certification by architects who are not ZNCD CE course providers.

8. Adopt Section 166, subsection (h)

Purpose: Subsection (h) specifies course providers must maintain for three years course completion records that include the information specified in BPC section 5600.05(b).

Rationale: The Board is requiring CE providers to maintain records of participant attendance and course completion for three years to ensure such records are reasonably available when the Board audits renewing licensees for compliance with the ZNCD CE requirement. Licensees must self-certify their CE compliance upon license renewal every two years by checking a box on the renewal form. Requiring CE providers to maintain records for three years ensures that licensees' records are maintained long enough so that licensees can prove their CE compliance if audited. Records maintained beyond three years would not be useful for the next renewal cycle, so three-years was determined to be the most appropriate length of time for records retention. Under BPC section 5600.05(d), the Board must audit a minimum of 3% of the license renewals that it receives each year to ensure compliance with the CE requirement. The proposed provider requirement for record retention of participant completion in subsection (h) ensures the ability of the Board to efficiently conduct CE audits and meet its statutory burden to assess licensee compliance with the CE requirements.

9. Adopt Section 166, subsection (i)

Purpose: Subsection (i) requires course providers, within ten business days, to issue to a licensee who requests this information, a certificate of completion that includes the information specified in BPC section 5600.05(b). This subsection helps to ensure that CE providers and licensees will be able to provide the completion documentation that the Board will require during ZNCD CE audits.

Rationale: It is common for course providers of all types to provide certificates of attendance or completion to participants. The most common and effective way to provide participants a certificate of completion is to hand out the certificates to participants at the conclusion of an in-person or live webinar course. Because the Board requires passing a post-course test with a score of at least 70% for those who complete a recorded course not presented live or which is presented by recorded webinar, handing out certificates at the course's conclusion could be problematic for CE course trainers or educators. If the post-course test is the last activity of the course, a trainer or instructor might not be able to determine the grades of each participant quickly enough to distribute certificates of completion before the participants leave. The Board decided to give CE providers an additional ten business days to grade the post-course test, determine which course participants earned a passing score of 70% or above, and provide those participants with certificates of completion.

To ensure compliance with the CE requirement of BPC section 5600.05, the Board must audit at least 3% of the license renewals that it receives each year. The proposed requirement that the provider must give participants who pass the course a certificate of completion within ten business days considers holidays, while ensuring no more than a week goes by from course completion to a provider-issued certificate of completion. The

Board seeks to ensure it can conduct the statutorily mandated CE audits and assess licensee compliance with the CE requirements in a timely manner.

10. Adopt Section 166, subsection (j)

Purpose: Subsection (j) requires course providers to issue, within ten business days of receiving a request from a licensee who is subject to a CE audit, copies of coursework documentation described in subsection (h). This subsection also makes clear that obtaining such records and providing them to the Board is the responsibility of the licensee who is the subject of a CE audit. Subsection (j) also places an affirmative duty on licensees to cooperate and take all steps needed to obtain the required information, specifying signing any authorization or consent needed to release records.

Rationale: A short response window exists for a licensee to produce evidence of their compliance with the CE requirement when selected for an audit. The Board chose ten business days for the timeframe for a CE course provider's response in these circumstances and believes this to be a reasonable timeframe for the CE provider to furnish a copy of the completion certificate to the licensee who must comply with the Board's audit requests. This regulation does not impose response timelines for a CE provider receiving a request for a duplicate certificate from a participant who is not the subject of an audit.

Subsections (e), (i) and (j) require that a CE provider must issue a certificate of completion, when combined with the subsection (h) requirement to maintain course records for three years. This makes it clear to CE providers that they must be ready to comply with subsections (e), (h), (i), and (j). The proposal also establishes that the licensee, not the Board, has the burden of responsibility to obtain coursework documentation from CE providers in relation to a CE audit. When a licensee is undergoing an audit, it is the licensee's sole responsibility to provide (and to obtain from the CE provider if needed) the requested records to the Board.

11. Adopt Section 166, subsection (k)

Purpose: Subsection (k) establishes that a licensee found not in compliance is required to remedy the deficiency during the current renewal period. The subsection clarifies that the CE requirement must also be completed for the current renewal period before the end of that renewal period.

Rationale: This subsection encourages licensees to fulfill their CE requirement every two years as required so they are not completing this requirement twice during the current renewal period.

Underlying Data

1. Assembly Bill (AB) 1010 (Chapter 176, Statutes of 2021)
2. AIA Presentation, September 28, 2020
3. September 18, 2020 Board meeting Agenda; relevant Meeting Materials: and Meeting Minutes (Agenda Item E)
 - a. Agenda
 - b. Agenda Item E – Cover Sheet
 - c. September 18, 2020 Board meeting minutes (see pages 3-4)
4. October 30, 2020 PQC Meeting Agenda; relevant Meeting Materials: and Meeting Minutes (Agenda Item E)
 - a. Agenda
 - b. Agenda Item E – Cover Sheet
 - c. October 30, 2020 PQC Meeting minutes (see pages 3-4)
5. January 25, 2022 PQC, Regulatory and Enforcement, and Communications Committee Joint Meeting Agenda; relevant Meeting Materials; and Meeting Minutes
 - a. Joint PQC, Regulatory and Enforcement, and Communications Committee Joint Meeting Agenda
 - b. Agenda Item E – Cover Sheet
 - c. January 25, 2022 Meeting Minutes (see page 5)
6. March 30, 2022 PQC Meeting Agenda; relevant Meeting Materials; and Meeting Minutes (Agenda Item 5)
 - a. Agenda
 - b. Agenda Item 5 – Cover Sheet
 - c. Attachment 1 – ZNCD CE Discussion document
 - d. Attachment 2 – ZNCD CE Draft Proposed Regulatory Text
 - e. March 30, 2022 PQC meeting minutes (see pages 2-9 of Draft Minutes [Pending Board approval])
7. June 8, 2022 Board Meeting Agenda; Relevant Meeting Materials: and Meeting Minutes (Agenda Item J)
 - a. Agenda
 - b. Agenda Item J – Cover Sheet
 - c. Agenda Item J Attachment – ZNCD Proposed Regulatory Text
 - d. Handout 1 – Text changes identified
 - e. Handout 2 – Text changes not identified
 - f. Handout 3 – Alternate definition
 - g. June 8, 2022 Board Meeting Minutes (see pages 5, 9-18)
8. Governor Newsom Calls for Bold Actions to Move Faster Toward Climate Goals. (Publication date: July 22, 2022) <https://www.gov.ca.gov/2022/07/22/governor-newsom-calls-for-bold-actions-to-move-faster-towards-climate-goals/>
9. U.S. Environmental Protection Agency (EPA). *Learn About Environmental Justice* <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>
10. Assembly Committee on Business Professions bill analysis. Hearing date: March 23, 2021.
11. *Resilient Design Institute, Is Resilience the New Sustainability?* December 14,

2013. <https://inhabitat.com/resilient-design-is-resilience-the-new-sustainability/>
12. U.S. General Services Administration (GSA), *Life Cycle Perspective: Life Cycle Thinking*. <https://sftool.gov/plan/399/life-cycle-perspective-life-cycle-thinking>
13. U.S. GSA, *The Embodied Carbon Imperative: GSA's Next Big Sustainability Opportunity*. (April 5, 2021). <https://www.gsa.gov/blog/2021/04/04/the-embodied-carbon-imperative-gsas-next-big-sustainability-opportunity>
14. Senate Floor Analysis of AB 1010, amended June 8, 2021.
15. California Department of General Services, Building Standards Commission. *CALGreen*. <https://www.dgs.ca.gov/BSC/CALGreen>.
16. InstructionalDesignin.org, *ADDIE Model*. <https://www.instructionaldesign.org/models/addie>
17. U.S. Department of Education, International Affairs Office, *Structure of the U.S. Education System: U.S. Grading Systems*. <https://www.instructionaldesign.org/models/addie>

Business Impact:

The Board has made the initial determination that the proposed regulations would not have a significant, statewide adverse economic impact directly affecting business, including the inability of California businesses to compete with businesses in other states. This initial determination is based on the following:

This regulatory proposal would impose the following reporting, recordkeeping, or other compliance requirements:

- ZNCD CE course providers are required to keep proof of course completion including course completion records and other records of completion that contain information specified in BPC section 5600.05 for at least three years from the date of course completion.
- CE providers are required to issue a certificate of completion to each ZNCD CE course participant who successfully completes the course within ten days from the completion of the course.
- Upon written request by a licensee who is subject of a ZNCD CE audit, the provider must provide a copy of the requested records within ten days of the date of the request.
- If selected for audit by the Board, a licensee is responsible to obtain provider records requested by the Board and to make them available to the Board.

Economic Impact Assessment:

This regulatory action will have the following effects:

- It will not create jobs within the State of California because while it is anticipated that the existing CE providers might expand to offer additional courses to meet the ZNCD CE requirements, the five-unit requirement is unchanged from that imposed by existing law. It will not eliminate jobs within the State of California.

- It is not expected to create new businesses nor affect the expansion of businesses currently doing business within the State of California because while existing CE providers may offer additional courses to meet the ZNCD CE requirements, the five-unit requirement is unchanged from that imposed by existing law.
- It will not affect the expansion of businesses currently operating within the State of California. This proposal establishes subject matter and instructor qualifications for existing ZNCD CE requirements that are not expected to lead to an expansion of businesses, as sufficient businesses already exist that provide ZNCD CE courses to architects. The Board does not maintain data on the number of CE provider businesses that exist and is unable to determine the number of jobs, new businesses, and expansion of businesses that will be impacted.
- This regulatory proposal does affect the health and welfare of California residents because it will lead to healthier buildings with reduced carbon emissions for the public. Requiring architects to learn about ZNCD in architecture and to keep their knowledge current will contribute to the creation of clean and healthy buildings and therefore healthier people.
- This regulatory proposal does not affect worker safety because it does not involve worker safety.
- This regulatory proposal does affect the state's environment because requiring architects to learning about ZNCD in architecture and keeping their knowledge current will lead to a reduction of greenhouse gases, specifically, carbon, in the environment.

The Board notes, the regulations do not require educational institutions to provide ZNCD courses and ZNCD courses are currently readily available.

The Board further notes, any economic impacts to comply with the five-unit ZNCD CE requirement is a result of current law.

Specific Technologies or Equipment:

This regulation does not mandate the use of specific technologies or equipment.

Consideration of Alternatives:

No reasonable alternative to the regulatory proposal would be either more effective in carrying out the purpose for which the action is proposed or would be as effective or less burdensome to affected private persons and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the law being implemented or made specific.

No such alternatives have been proposed, however, the Board welcomes comments from the public.

Description of reasonable alternatives to the regulation that would lessen any adverse impact on small business:

No such alternatives have been proposed, however, the Board welcomes comments from the public.