

**INITIAL STATEMENT OF REASONS**  
**FOR**  
**PROPOSED BUILDING STANDARDS**  
**OF THE**  
**DIVISION OF THE STATE ARCHITECT – STRUCTURAL SAFETY (DSA-SS)**  
  
**REGARDING THE CALIFORNIA GREEN BUILDING STANDARDS CODE,**  
**CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 11**  
  
**2013 CALIFORNIA GREEN BUILDING STANDARDS CODE**

The Administrative Procedure Act requires that an Initial Statement of Reasons be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

**STATEMENT OF SPECIFIC PURPOSE, PROBLEM, RATIONALE and BENEFITS:**

This proposed action by DSA-SS adopts and amends mandatory and voluntary green building standards for occupancies within its authority. The proposed actions further build upon a framework of voluntary measures adopted by DSA-SS in 2008 and make minor modifications and clarifications to the 2010 code and its recently published supplement, which became effective on July 1, 2012. The intent of the code continues to be: (1) Address the problem of greenhouse gas emissions from buildings; (2) Promote environmentally responsible, cost-effective, healthier places to live and work; and (3) Respond to the directives by the Governor in 2008 to develop a green building code for 2010.

The proposed standards are amendments to Parts 2, 3, 4, 5, and 6 of Title 24 and are being placed into Title 24, Part 11, the California Green Building Standards Code, to provide clarity to users designing or constructing to the green building standards. It is the intent of CBSC to integrate these standards into their respective parts at a future date.

The proposed changes to the building standards with statewide application will lead to substantial environmental benefits through reduction in the use of energy, water, and raw materials; improved public and building occupant health due to improved indoor air quality; and overall reduced detrimental environmental impacts.

**Specific Proposed Regulatory Actions:** DSA-SS proposes to amend the 2010 California Green Building Standards (*CALGreen* Code) in a new triennial 2013 edition. The rationale for each adoption by chapter, division, and section is listed below. Significant proposals which cut across the entire nonresidential *CALGreen* are:

- To modify the application to include new buildings on an existing site.
- To decrease the adoption of voluntary measures and indicate that the nonresidential voluntary measures can be utilized as a guideline.
- To add two code measures: Section 5.106.4 Bicycle Parking, Section 5.507.4 Acoustical Control.
- To change format, coordinated with the Office of Statewide Planning and Development (OSHPD), to move all of OSHPD's voluntary measures for medical facilities into a single division in Appendix A6.

It is further DSA-SS's intent to provide clarity to the code user in consistent reference nomenclature to other parts of Title 24, for example, the 2013 California Energy Code, which was requested by that agency. Not all such reference changes are shown in the express terms and none is justified below, because they are editorial in nature, having no regulatory effect, and will be coordinated in the codification of the new edition.

## CHAPTER 1 -- ADMINISTRATION

### 101.3.1. State-regulated buildings, structures and applications (Amended)

DSA-SS proposes to amend 101.3.1 to delete a reference to 'as referenced in the Matrix Adoption Tables and' to determine a state agency's authority to regulate certain buildings or applications. The problem has been that some code users cite the tables as regulatory indicators of authority, when the tables are meant to be road maps or aids to code use. In addition, the tables frequently contain errors and often are not modified to keep up with code changes. This change is being proposed by DSA-SS and other agencies in all parts of Title 24 with this Chapter 1 language.

### 105.1.1. Application--Public elementary and secondary schools and community colleges (Amended)

DSA-SS proposes to amend 105.1.1 to require new buildings on existing sites to meet the provisions of the *CALGreen* Code. This additional requirement for new construction is a logical next step for the type of buildings required to be designed to these sustainability requirements. Additions and alterations are not yet required to meet the *CALGreen* Code. Notes for existing sites are proposed regarding requirements for site work related to Grading and Paving and Bicycle Parking.

## CHAPTER 2 -- DEFINITIONS

### 202. Definitions (relocated)

DSA-SS proposes to amend 202 to relocate from individual chapters definitions for terms used in more than one chapter to provide clarity for the code user. Some are being coordinated with the Department of Housing and Community Development (HCD) as they expand the residential provisions to certain additions and high-rise buildings. Others, such as GRAYWATER and RAINWATER, are statutory definitions.

The definition of 'Residential Building' is proposed to be amended to include both 'Low-rise or High-rise Residential Buildings' when defining the definition of a 'Residential Building'.

## CHAPTER 3 -- GREEN BUILDING

### 306. *CALGreen* Tier 1 and *CALGreen* Tier 2 (amended)

#### 306.1 Purpose (amended)

##### 306.1.1 (amended)

##### 306.1.2 (adopted)

##### 306.1.3 (adopted)

DSA-SS proposes to amend 306, 306.1, 306.1.1 and adopt 306.1.2 and 306.1.3 to depart from the adoption of voluntary measures due to public comment. Instead, the DSA-SS will encourage public schools and community colleges to use the nonresidential voluntary measures as a guideline for green building standards that exceed the code.

## CHAPTER 4 -- RESIDENTIAL MANDATORY MEASURES

DSA-SS is not proposing adoption of Chapter 4.

## CHAPTER 5 -- NONRESIDENTIAL MANDATORY MEASURES

### DIVISION 5.1 -- PLANNING AND DESIGN

#### 5.101.1 Scope (amended)

DSA-SS proposes to amend the title of 5.101.1 from Purpose to 'Scope'.

#### 5.106.4.2 Bicycle parking (adopt)

##### 5.106.4.2.1 Short-Term bicycle parking (adopt)

##### 5.106.4.2.2 Long-Term bicycle parking (adopt)

DSA-SS proposes to adopt 5.106.4.2, 5.106.4.2.1 and 5.106.4.2.2 code measure for Public Schools and Community Colleges. Bicycle transportation provides an alternative to vehicular use which creates

environmental advantages. Changing rooms are not required in this particular code provision. Bicycle racks (short-term parking) are generally included in any school or college program planning; and although there is a cost associated with implementing the long-term bicycle parking regulations, the impact is minimal when compared to the overall construction cost.

The benefits of implementing a bicycle parking regulation would promote bicycle ridership, with the resulting benefits:

- Reducing the number of vehicles from the roadways and therefore reducing greenhouse gas emissions.
- Also, such a regulation would promote some indirect benefits such as biking, running, walking and other forms of aerobic exercising during breaks or during the lunch hour which would promote health and wellness.
- The health benefits both mental and physical of riding a bicycle and other forms of exercise are well documented and could reduce health-related costs borne by business owners.

These, along with increased employee and student productivity, clearly outweigh the insignificant cost associated with implementing such a regulation.

#### 5.106.8 Light pollution reduction [N] (amended)

DSA-SS proposes to adopt the acronym 'N'. Becoming mandatory on July 1, 2012, this section is being modified to indicate its applicability only to newly constructed projects, limiting the scope of this new standard as code users get used to it. It is also being updated to reflect the correct name of its referenced standard, IES TM-15-11, to provide clarity.

#### Table 5.106.8 Maximum Allowable Backlight, Uplight and Glare (BUG) Ratings (amend)

DSA-SS proposes to amend the Matrix Adoption Table by adding Table 5.106.8 to the Matrix Adoption Table for clarity and format consistency. DSA-SS is not proposing any adoption, amendment or repeal for Table 5.106.8.

#### 5.106.8.1 Effective Date (Repeal)

DSA-SS proposes to repeal 5.106.8.1 because this date expired and no longer applies.

### DIVISION 5.2 -- ENERGY EFFICIENCY

DSA-SS is not proposing any adoption, amendment or repeal to Division 5.2.

### DIVISION 5.3 - WATER EFFICIENCY AND CONSERVATION

#### 5.302.1 Definitions (repeal/relocate)

DSA-SS proposes to repeal 5.302.1 definitions and has relocated definitions to Chapter 2 for terms used in more than one chapter to provide clarity for the code user.

#### 5.303.2.1 Multiple showerheads serving one shower (amended/renumbered)

DSA-SS proposes to renumber 5.303.2.1 as 5.303.2.2 and amend this provision to clarify that; when a shower is served by more than one '*newly installed*' showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed the maximum flow rate.

#### Table 5.303.2.3 Fixture Flow Rates (amended)

DSA-SS proposes to amend Table 5.303.2.3 to eliminate the mandatory 20% reduction for a nonresidential lavatory faucet. Set at 0.5 gpm, currently this is the lowest flow rate available without use of special aerators or other devices. A coordinated proposal omits the footnote concerning use of aerators to achieve 0.4 gpm or lower. These changes are intended to assist code users with compliance until lower-flow faucet technology is developed and readily available. The footnote is moved to the voluntary table in Appendix A5 for 30% or greater water use reduction.

#### 5.303.4 Wastewater reduction [N] (amended)

DSA-SS proposes to adopt the acronym 'N' to designate "new" construction.

5.303.6 Standards for plumbing fixtures and fittings (amended)

DSA-SS proposes to amend 5.303.6 to meet the current standards of the California Plumbing Code.

Table 5.303.6 Standards for Plumbing Fixtures and Fixture Fittings (repeal)

DSA-SS proposes to repeal Table 5.303.6 to coordinate with new language of 5.303.6 and reference the table in the current standards of California Plumbing Code.

#### DIVISION 5.4 -- MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

5.407.2.2 Entries and openings (amended)

5.407.2.2.1 Exterior door protection (adopted)

5.407.2.2.2 Flashing (adopted)

DSA-SS proposes to amend 5.407.2.2 and adopt 5.407.2.2.1 and 5.407.2.2.2 for coordination with HCD's residential provisions as recommended by Air Resources Board (ARB) staff. It clarifies for the code user what is required without the use of explanatory notes.

5.408.1 Construction waste management (amended)

5.408.1.1 Construction waste management plan (amended)

5.408.1.2 Waste management company (amended)

DSA-SS proposes to amend 5.408.1 and subsections (5.408.1.1 and 5.408.1.2) to add demolition waste diversion of 50% for nonresidential projects as promulgated by CBSC and HCD.

- Interested parties such as CARB, which includes demolition waste in its estimate of greenhouse gas reduction from the mandatory code, and StopWaste.org have long requested that CBSC include demolition waste. And, in the early development of mandatory standards for the 2010 *CALGreen* Code, CBSC staff based its cost/benefit analysis on combined construction and demolition (C&D) waste. It found a relatively modest cost of on a small nonresidential project for a detailed C&D plan to be projected at less than 1% of construction cost, and the same for larger projects. However, because all mandatory provisions were applicable to newly constructed projects, CBSC did not include demolition waste in its 50% diversion requirements although HCD always has.

5.408.2 Isolated jobsites (repealed)

DSA-SS proposes to repeal 5.408.2 because this language is not incorporated into Section 5.408.1. Matrix Adoption Table is renumbered to reflect repeal of 5.408.2.

5.410.1 Recycling by occupants (amended)

DSA-SS proposes to amend 5.410.1.1 to modify this section to recognize that stricter local recycling ordinances may apply, and to clarify for the code user how this section would be triggered for a building alteration or addition, as required elsewhere in law.

5.410.1.1 Sample ordinance (renumbered)

DSA-SS proposes to renumber 5.410.1 as 5.410.1.2.

#### DIVISION 5.5 -- ENVIRONMENTAL QUALITY

DSA-SS proposes that most of the changes proposed for this division resulted from comments received from CARB. They are intended to provide clarity and accuracy for the code user, ratcheting up the compliance levels for resilient flooring now possible because of availability and economy of products, and adding a new section for mandatory refrigeration system leak reduction for large supermarkets.

5.502.1 Definitions (adopted)

DSA-SS proposes to adopt new definitions in 5.502.1 which are added that provide clarity to the code user in the interpretation of the new mandatory refrigeration system leak reduction measures. New definitions proposed for adoption are: BTU/HOUR; Chlorofluorocarbon (CFC); Global Warming Potential (GWP); Global

Warming Potential Value (GWP VALUE); Halon; High-GWP Refrigerant; Long Radius Elbow; Low-DWP Refrigerant; PSIG; Schrader Access Valves; Short Radius Elbow; and Supermarket.

#### 5.504.3 Matrix Adoption Table (amended)

#### 5.504.4 (Matrix Adoption Table (amended)

DSA-SS proposes to amend the Matrix Adoption Table to include '*and subsections*' to 5.504.3 and 5.504.4 (remove 5.504.1, Table 5.504.4.1 & 5.504.4.2, 5.504.3, 5.504.3.1, Table 5.504.4.3 & .504.3.2 as these are now included by adding the words '*and subsections*' to 5.504.4) for format and consistency with the format in Matrix Adopt Tables. No new changes are proposed.

#### 5.504.4.5 Composite wood products (amended)

#### Table 5.504.4.5 Formaldehyde Limits (amended)

DSA-SS proposes to amend 5.504.5 and Table 5.504.4.5 by updating the referenced standards as suggested by CARB to their current limits of compliance. On July 1, 2012, the last of the phased limits kicked in and now all subject materials must comply. This is primarily a formatting improvement for clarity for the code user.

#### 5.504.4.6 Resilient flooring systems (amended)

DSA-SS proposes to amend 5.504.4.6 by updating the compliance level suggested by CARB from 50 percent to 80 percent of floor area receiving resilient flooring. In its request to make this standard more stringent, CARB staff researched several large flooring manufacturers for availability of product meeting one or more of the referenced standards.

- Most manufacturers canvassed indicated at least 90 percent of their product is FloorScore certified, with one large manufacturer not reporting a percentage. That particular manufacturer has a reported product line of 10 categories that are FloorScore certified. CARB received assurance that more products are being certified all the time, because manufacturers are finding that the public is demanding low VOC flooring.
- CARB addressed the issue of certified product cost and found a mixed bag that showed a tendency for thinner, lower quality flooring with no or very limited warranties not to be certified or to be cheaper than the certified equivalent. Higher end, thicker, longer-warranted flooring is comparable in cost, with instances of the certified product's being less expensive. Since most commercial projects designers will opt for durable furnishings, it would appear that the cost should not be a factor in requiring 80 percent compliance for nonresidential.

A report from CARB will be made available during DSA-SS's rulemaking as relied-on documentation, with cost data supplementary to the economic and fiscal impact statement.

#### 5.504.5.3 Filters (adopted)

#### 5.504.5.3.1 Labeling (adopted)

DSA-SS proposes to adopt 5.504.5.3 and 5.504.5.3.1 in response to comment, rewording an exception for certain ductless HVAC equipment which is incompatible with the MERV 8 filter requirement, but which is highly efficient and provides other benefits to a building operator. The new language is intended to provide clarity to the code user in determining the class of equipment which qualifies for the exemption and what filter rating is permissible. The labeling requirement for MERV filter ratings is proposed in coordination with standards proposed by HCD.

#### 5.507 Environmental Comfort (adopted)

#### 5.507.4 Acoustical control (adopted)

#### 5.507.4.1 Exterior noise transmission, prescriptive method (adopted)

#### 5.507.4.1.1 Noise exposure where noise contours are not readily available (adopted)

#### 5.507.4.2 Performance method (adopted)

#### 5.507.4.2.1 Site features (adopted)

#### 5.507.4.2.2 Documentation of compliance (adopted)

#### 5.507.4.3 Interior sound transmission (adopted)

DSA-SS proposes to adopt 5.507 through 5.507.4.3 that public schools and community colleges are required to design and plan spaces with good acoustics. This is generally requested by the facility planners and is known to enhance student learning. Promulgated by the CBSC, cost information on exterior walls meeting the requirement for at least STC 50 includes:

- Many common exterior wall assemblies meet the STC 50 rating; it is simply a matter of choosing one to meet the STC 50 or better, resulting in no extra cost.
- Specifying STC 30 windows may or may not add cost depending on the quality of the windows, allowing choices that could result in no extra cost.
- For interior party walls with an STC rating of 50, this can be achieved with a sound assembly using resilient channels, which CBSC learned would cost about 15% more than a similar assembly with no sound rating. After public comment from industry representatives, CBSC has lowered the rating to 40, which is more readily achievable than 50 and should be adequate for commercial application. If the walls in question have a fire rating, most assemblies exceed 40. STC 50 is largely dependent on staggered studs and resilient channels, and is required primarily in multi-family housing, where people need privacy and quiet for rest and relaxation.
- Any other method of achieving the required STC is allowable provided it is shown to achieve the required rating.

These are no- or low-cost requirements that would provide a positive health and psychological impact on building occupants subject to the provisions of these sections. The provisions potentially save employers, the state, and health insurer's money through healthy work and student attendance, increased productivity, and better learning environments.

#### DIVISION 5.7 – ADDITIONS AND ALTERATIONS TO EXISTING NONRESIDENTIAL BUILDINGS

DSA-SS is not proposing adoption of Division 5.7.

#### CHAPTER 6 -- REFERENCED ORGANIZATIONS AND STANDARDS (amended)

DSA-SS proposes to amend the standards table in 601.1 to provide clarity to the code user regarding an IES standard which has been added as a reference elsewhere. This proposal also repeals the following organizations from the table: AABC, NEBB, and TABB. New or renumbered section references have been included in this table to coordinate with sections adopted by DSA-SS.

#### CHAPTER 7 -- INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS

DSA-SS is not proposing any new adoptions, amendments or repeals to Chapter 7.

#### CHAPTER 8 -- COMPLIANCE FORMS AND WORKSHEETS

WS 1 Baseline Water Use (amended)

WS 2 Reduction Water Use Calculation Table (amended)

WS 3 30%, 35%, 40% Reduction Water use Calculation Table (amended)

DSA-SS proposes modification of the Water Use Worksheets to provide clarity to the code user on proper flow rates, and conform Worksheets WS-2 and WS-3 to the omission of nonresidential lavatory faucets from the 20% reduction requirement. This action is proposed in coordination with those in Division A5.3 for 30% savings.

#### DIVISION A4 -- RESIDENTIAL VOLUNTARY MEASURES

DSA-SS is not proposing adoption of Division A4.

## CHAPTER A5 – NONRESIDENTIAL VOLUNTARY MEASURES

### DIVISION A5.1 -- PLANNING AND DESIGN (repealed)

DSA-SS proposes to repeal (decease) the “adoption” of voluntary measures. As proposed in Section 306.1.2, the DSA-SS will encourage public schools and community colleges to use the nonresidential voluntary measures as a guideline.

### DIVISION A5.6 – VOLUNTARY TIERS

DSA-SS is not proposing adoption of Division A5.6.

### APPENDIX A6 – REFERENCED STANDARDS

DSA-SS is not proposing adoption of Appendix A6.

### **TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS**

No technical, theoretical, or empirical studies or reports were used, as Section 18928 of the Health & Safety Code mandates this proposed action.

### **STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:**

No new prescriptive standards are proposed.

### **CONSIDERATION OF RESONABLE ALTERNATIVES**

The Division of the State Architect has not considered any reasonable alternatives to the proposed action, as this action is required by law.

### **REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS**

The Division of the State Architect has not identified any reasonable alternatives to the proposed action, and no adverse impact to small business due to these proposed changes is expected.

### **FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS**

The Division of the State Architect has no evidence indicating any potential significant adverse impact on business with regard to the proposed action.

### **DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS**

The proposed regulations do not duplicate or conflict with federal regulations.