

**INITIAL STATEMENT OF REASONS  
FOR  
PROPOSED BUILDING STANDARDS  
OF THE  
OF THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
REGARDING THE AMENDMENT OF THE 2016 CALIFORNIA BUILDING CODE, CALIFORNIA CODE OF  
REGULATIONS, TITLE 24, PART 2; AND THE 2016 CALIFORNIA EXISTING BUILDING CODE, CALIFORNIA  
CODE OF REGULATIONS, TITLE 24, PART 10**

**HCD EF 01/17**

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The Administrative Procedure Act (APA) 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:**

(Government Code Section 11346.2(b)(1)) requires a statement of specific purpose of each adoption, amendment, or repeal and the problem the agency intends to address and the rationale for the determination by the agency that each adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem the agency intends to address for which it is proposed. The statement shall enumerate the benefits anticipated from the regulatory action, including the benefits or goals provided in the authorizing statute.)

**1) The Public Problem, Administrative Requirement, or Other Circumstance Addressed**

**Administrative Requirement:** Health and Safety Code Sections 17921, 17922 and 19990 directs the Department of Housing and Community Development (HCD) to propose adoption, amendment or repeal of building standards for the protection of public health, safety and general welfare.

**2) Specific Purpose**

To amend the 2016 California Building Code (CBC), Title 24, Part 2 and the 2016 California Existing Building Code (CEBC), Title 24, Part 10, of the California Code of Regulations (CCR) for the following programs:

- a) **State Housing Law:** relative to residential occupancies, buildings or structures accessory thereto and as provided in Health and Safety Code Section 17921.
- b) **Employee Housing Act:** relative to any building or structure or outdoors on premises or property in accordance with Health and Safety Code Section 17040.
- c) **Mobilehome Parks and Special Occupancy Parks:** relative to the use of building systems in or on any permanent buildings, accessory buildings, and structures under the ownership and control of the park operator within the park in accordance with Health and Safety Code Sections 18300 and 18620 for mobilehome parks, and Sections 18865 and 18871.3 for special occupancy parks.
- d) **Factory-Built Housing Law:** relative to residential buildings, dwellings or portions thereof, or building components, or manufactured assemblies in accordance with Health and Safety Code Section 19990.

**3) Rationale for Necessity**

On September 15, 2016, the Governor approved Senate Bill 465 (Chapter 372, Statutes of 2016) to add Section 18924.5 of the Health and Safety Code (operative until January 1, 2018) to require the Working Group formed by the California Building Standards Commission (CBSC) to submit a report before January 1, 2018, containing any findings or recommendations for statutory changes or California Building Standards Code changes, to increase the level of safety for Exterior Elevated Elements (EEE). Further, it allowed the Working Group to make any recommended changes at any time to appropriate State agencies, as soon as possible, in order to protect the public. This working group met on May 25, 2017, to allow any new information to be provided to assist the certified rulemaking process.

HCD also found that code change proposals approved by the International Code Council (ICC) (model code writing body) to be amended into the 2018 International Building Code (IBC - model code for the CBC) and the 2018 International Existing Building Code (IEBC - model code for the CEBC) are critical for addressing construction documents, inspections and maintenance for EEE and that early adoption of these provisions utilizing the emergency rulemaking process was imperative. References for the IBC and IEBC Code Change Proposals are included in the discussion for each section changed. Rationale for most of these code changes have been accepted from the code change proposals submitted to ICC.

HCD, in coordination with the California Building Standards Commission (CBSC) and other state agencies, adopted emergency regulations for EEE. This emergency adoption was supported by a Finding of Emergency (HCD EF 01/17) that the adoption of these regulations was necessary for the immediate preservation of the public peace, health and safety, or general welfare.

As noted in the Finding of Emergency, these emergency regulations were adopted in response to a balcony failure at Library Gardens in Berkeley on June 16, 2015; and the availability of building standards developed by the ICC for enhancement of EEE for buildings and structures under the authority of HCD. HCD, in coordination with CBSC, the Division of the State Architect (DSA) and other stakeholders, developed and adopted the following emergency regulations that amend the 2016 editions of the CBC and CEBC, Title 24, California Code of Regulations.

- Adds additional requirements for submittal documents and inspections to Chapter 1 of the CBC.
- Amends Table 1607.1 of the CBC pertaining to live loads.
- Amends Section 2304.12.2.5 of the CBC pertaining to drainage of water that infiltrates the moisture-permeable floor topping.
- Adds Section 2304.12.2.6 to the CBC pertaining to ventilation required beneath balcony or elevated walking surfaces.
- Adds (reestablishes from 2013 CBC, Chapter 34) Section 101.8 in the CEBC pertaining to maintenance and reinspections.
- Adds Sections 106.2.6 and 109.3.7.1 to the CEBC pertaining to construction documents and inspections, respectively.

#### **Specific Proposed Regulatory Actions:**

HCD proposes to permanently adopt the above emergency regulations in the 2016 CBC and CEBC. The proposed amendments are intended to provide clarity, specificity and direction to the code user, to implement and make specific existing state laws, and for purposes of public safety. These amendments to the 2016 CBC and CEBC will, mostly likely, not be carried forward in the 2019 CBC and CEBC Section 101.8 since this section will not be included in the 2018 CEBC. The rationale for each amendment is listed below.

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## **1. CBC CHAPTER 1 SCOPE AND ADMINISTRATION**

HCD proposes to permanently amend Chapter 1 of the 2016 CBC as follows:

### **SECTION 107 SUBMITTAL DOCUMENTS**

#### **107.2.7 Exterior balcony.**

**Rationale:** HCD proposes to permanently adopt this new California amendment. This code change proposal to the IBC (ADM77-16) was proposed by the American Wood Council because existing language in IBC Section 107.2.4 specifies requirements for the construction documents associated with the wall envelope, but does not address how that extends to the balcony and elevated walking surfaces where an impervious moisture barrier system protects structural elements. A new section was proposed to add detailing requirements for exterior balcony and elevated walking surfaces. This amendment was approved by ICC and will be published in the 2018 IBC.

Permanent adoption of these provisions will not increase the cost of construction since the inclusion of construction details for weather protection is a common requirement already enforced by most building departments. This clarifies existing code language to be consistent with common practice.

## SECTION 110 INSPECTIONS

### 110.3.8.1 Weather exposed balcony and walking surface waterproofing.

**Rationale:** HCD proposes to permanently adopt this new California amendment. The code change proposal for the 2018 IBC (ADM87-16) was proposed by the American Wood Council because detailed inspections are needed to ensure the performance of the impervious moisture barrier used with exposed balconies and walking surfaces. As an exception, Section 1705.1.1, Item 3, of the 2015 IBC allows the building official to require special inspections of “Materials and systems required to be installed in accordance with additional manufacturer’s instructions that prescribe requirements not contained in this code or in standards referenced by this code.” This would be acceptable in lieu of inspections performed by the building department staff when utilized by the building official.

Permanent adoption of this provisions will not increase the cost of construction since Section 110.3.8 currently requires “other inspections” to ascertain compliance with the code. The proposal also gives the existing option of special inspections in Section 1705.1.1, Item 3, as an exception to this provision.

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## 2. CBC CHAPTER 16 STRUCTURAL DESIGN

HCD proposes to permanently amend Chapter 16 of the 2016 CBC as follows:

### SECTION 1607 Live Loads

#### TABLE 1607.1 Minimum Uniformly Distributed Live Loads, $L_o$ , And Minimum Concentrated Live Loads<sup>9</sup>

**Rationale:** HCD proposes to permanently amend Table 1607.1. This amendment to the IBC was proposed by the National Council of Structural Engineers’ Association; American Wood Council; and Codes and Standards Committee of the Structural Engineer’s Association of New York.

According to the code change proposal for the 2018 IBC (S85-16), historically, the 2006 IBC and 2005 ASCE 7-05 contained similar language in that balconies and decks were treated as different uses and had different uniform loading criteria. Then the IBC diverged from matching ASCE 7 in 2006 under code change proposal S9-06/07 when the IBC combined the separate occupancy categories (balconies and decks) into one item, with the uniform loading set as the “Same as occupancy served” force level. ASCE 7-10 followed suit in combining balconies and decks as a single item, however, the uniform loading was set at 1.5 times the live load for the area served, with an upper bound not required to be greater than 100 pounds per square foot. To harmonize the ASCE and IBC and International Residential Code (IRC) live loading requirements, this proposal is using the ASCE 7 load requirements for the baseline minimum live loads on balconies and decks.

The code change proposal for the 2018 IBC acknowledges that this provision will increase the cost of construction. For an ASCE 7-compliant design there is no increase in loading and thus no change in construction cost. For an IBC/IRC-compliant design the loading of balconies and decks will increase and possibly increase the cost of structural framing for the support of these structures.

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## 3. CBC CHAPTER 23 WOOD

HCD proposes to permanently amend Chapter 23 of the 2016 CBC as follows:

### 2304.12.2.5 Supporting members for permeable floors and roofs.

**Rationale:** HCD proposes to permanently amend the above referenced section. The code change proposal for the 2018 IBC (S279-16) was proposed by the American Wood Council. According to the code change proposal a key functional requirement of impervious moisture barrier systems installed under a permeable floor system exposed to water are elements that provide for drainage of any water making its way through the permeable floor system. Without a properly functioning method to transport this water out, the floor assembly can stay saturated for very long periods of time which may contribute to premature failure. The code change proposal created a requirement for impervious moisture barrier systems protecting the structure, supporting a floor, to provide a mechanism for the water to drain out. As referenced in the code change proposal, the “impervious moisture barrier” is not defined, but describes the performance of the barrier. The “positive drainage” would ensure a need for slope and method for water to escape. Without the drainage the impervious moisture barrier may be subject to constant attack by water infiltrating the moisture-permeable topping slab in a wet environment. Additional information on these concepts may be found in a recently completed article by Joseph Lstiburek in the ASHRAE Journal. The article is available at the following website: <https://buildingscience.com/documents/building-science-insights-newsletters/bsi-093-all-decked-out>

The code change proposal for the 2018 IBC acknowledges that this provision will increase the cost of construction. Drainage barriers between the permeable floor slab and impervious barrier are commonly called for and installed by many practitioners and will not change the cost of construction in those cases. However, in cases where no method to provide positive drainage is currently provided, this proposal will increase the cost of construction.

#### **2304.12.2.6 Ventilation Required Beneath Balcony or Elevated Walking Surfaces.**

**Rationale:** HCD proposes to permanently adopt the above referenced section. The code change proposal for the 2018 IBC (S7-16) was proposed by the American Wood Council. This change clarifies the intent of the code when a balcony or elevated walking surface serves as a weather-resistant barrier and the joist spaces below are enclosed it is more difficult for water in the assembly to dry out regardless of the source of the water. Although the current IBC is generally applied to require ventilation when wood supports a balcony and is enclosed, there is no specific reference to this application. It is critical to provide ventilation to these areas when enclosed and the wood supports an elevated balcony exposed to the weather.

The code change proposal for the 2018 IBC acknowledges that this provision will increase the cost of construction. For initially compliant designs there is no increase in construction cost. However, if openings were not initially designed for the enclosed areas, this may possibly increase the cost of construction for designing framing and openings and making accommodations for required fire resistance.

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## **4. CEBC CHAPTER 1 SCOPE AND ADMINISTRATION**

HCD proposes to permanently amend Chapter 1 of the 2016 CEBC as follows:

### **SECTION 101 GENERAL**

#### **101.8 Maintenance.**

**Rationale:** HCD proposes to permanently adopt this California amendment. This rulemaking includes provisions in new construction to help reduce or avoid structural failures related to EEE. Therefore, the provisions also need to address existing buildings which may currently have conditions that could lead to failure. Proposed reestablishment of requirements that buildings be maintained in a safe and sanitary condition and providing authority for building officials to require reinspections are important. This provision was found in the 2013 CBC, Chapter 34. The model code 2012 IBC (adopted as 2013 CBC) Chapter 34 provisions were repealed and not brought forward into the 2015 IBC. Instead, Chapter 34 provisions were merged into the 2015 IEBC. Chapter 34, Section 3401.2, Maintenance, was not merged into 2015 IEBC and was instead placed into the 2015 International Property Maintenance Code (IPMC) which is not recognized in California. Without adopting this provision in the CEBC there would be no guidance or authority for local enforcing agencies to address existing buildings.

As an example, the City of Berkeley, in response to a tragic balcony failure in June 2015, established an Exterior Elements Program (E3) and adopted Ordinance No. 7.431-N.S requiring inspection and certification of weather-exposed EEE. This was a requirement applying to R-1 (hotel/motel) and R-2 (apartment) occupancies. The ordinance also required subsequent periodic reinspection (5 years) of these structures. Based on the immediate need to respond to the potential for similar failures and the number of aging housing stock, Berkeley's response resulted in increased costs to the local enforcing agency and to the public. As summarized in a June 27, 2017, Joint Task Force Committee on Housing and a memo by Councilmember Harrison to the City Council, proactive inspections increased significantly between 2014 (252) to 2015 (1,320). Costs related to this program included notifications to property owners, developing resources for property owners for compliance, processing proof of inspections from property owners, enforcing non-compliance, developing a database to identify three or more units and development of a listing for licensed professions. Staffing was also increased for purposes of administering the program. Therefore, the costs of developing a comprehensive proactive prevention program could be significant.

As far as benefits, according to a February 10, 2016, article in the Berkeley side local news site, 402 out of 2,200 Berkeley buildings with weather-exposed EEE were determined to need remedial work.

According to an October 25, 2016, City Council work session memo by the Berkeley Planning and Development, Housing Code Enforcement noticed 6,127 properties with 3 or more units in August 2015 meeting the new requirement to inspect EEE. Of the more than 3,000 inspected properties, 622 properties were indicated to require corrective work. Additional work by the city includes tracking properties to ensure the corrective work is completed. 122 properties failed to submit inspection certification forms and were issued administrative citations. These examples demonstrate the public safety benefit of providing clear authority for local enforcing agencies to require reinspections of existing buildings.

## SECTION 106 CONSTRUCTION DOCUMENTS

### 106.2.6 Exterior Balconies and Elevated Walking Surfaces.

**Rationale:** HCD proposes to permanently adopt this California amendment. The code change proposal to the 2018 IEBC (ADM77-16) was proposed by the American Wood Council because existing language in IEBC Section 106.2.4 specifies requirements for the construction documents associated with the wall envelope, but does not address how that extends to the balcony and elevated walking surfaces where an impervious moisture barrier system protects structural elements. A new section was proposed to add detailing requirements for exterior balcony and elevated walking surfaces. This amendment was also further amended by the National Council of Structural Engineers Association, approved by ICC and will be published in the 2018 IEBC.

Permanent adoption of this provision will not increase the cost of construction since the inclusion of construction details for weather protection is a common requirement already enforced by most building departments. This clarifies existing code language to be consistent with common practice.

## SECTION 109 INSPECTIONS

### 109.3.7.1 Weather exposed balcony and walking surface waterproofing.

**Rationale:** HCD proposes to permanently adopt this California amendment. This code change proposal to the IEBC (ADM87-16) was proposed by the American Wood Council because detailed inspections are needed to ensure the performance of the impervious moisture barrier used with exposed balconies and walking surfaces. As an exception, Section 1705.1.1, Item 3, of the current IBC allowed the building official to require special inspections of "Materials and systems required to be installed in accordance with additional manufacturer's instructions that prescribe requirements not contained in this code or in standards referenced by this code." This would be acceptable in lieu of inspections performed by the building department staff when utilized by the building official. This amendment was further amended by the National Council of Structural Engineers Association, Washington Association of Building Officials Technical Development Committee, and Washington Association of Building Officials Code Committee; approved by ICC; and will be published in the 2018 IEBC.

Permanent adoption of this provisions will not increase the cost of construction since Section 110.3.8 currently requires "other inspections" to ascertain compliance with the code. The proposal also gives the existing option of special inspections in Section 1705.1.1, Item 3, as an exception to this provision.

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

(Government Code Section 11346.2(b)(3)) requires an identification of each technical, theoretical, and empirical study, report, or similar document, if any, upon which the agency relies in proposing the regulation(s).

None.

### STATEMENT OF JUSTIFICATION FOR PRESCRIPTIVE STANDARDS:

(Government Code Section 11346.2(b)(1)) requires a statement of the reasons why an agency believes any mandates for specific technologies or equipment or prescriptive standards are required.)

HCD is statutorily required to adopt by reference model building codes, which contain prescriptive standards. Prescriptive standards provide the following: explicit guidance for certain mandated requirement; consistent application and enforcement of building standards while also establishing clear design parameters; and ensure compliance with minimum health, safety and welfare standards for owners, occupants and guests. The 2018 model codes should include the provisions adopted by HCD.

Performance standards are permitted by state law; however, they must be demonstrated to the satisfaction of the proper enforcing agency.

### CONSIDERATION OF REASONABLE ALTERNATIVES

(Government Code Section 11346.2(b)(4)(A)) requires a description of reasonable alternatives to the regulation and the agency's reasons for rejecting those alternatives. In the case of a regulation that would mandate the use of specific technologies or equipment or prescribe specific action or procedures, the imposition of performance standards shall be considered as an alternate. It is not the intent of this paragraph to require the agency to artificially construct alternatives or describe unreasonable alternatives.)

There were no alternatives available to HCD. As noted in the Finding of Emergency, in view of the urgency to provide enhanced measures, intended to reduce risk factors and increase public safety, as implied by the statute's urgent language, HCD proposed the adoption of these building standards through the emergency adoption process, authorized in HSC Section 18937. These regulations have undergone two re-adoption processes and further re-adoption without formal rulemaking is not allowed by the Administrative Procedure Act.

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

(Government Code Section 11346.2(b)(4)(B)) requires a description of any reasonable alternatives that have been identified or that have otherwise been identified and brought to the attention of the agency that would lessen any adverse impact on small business.)

HCD is statutorily required to adopt by reference model building codes, which contain prescriptive standards. Therefore, HCD determined that early adoption of provisions related to EEE in the soon-to-be published model codes was the best and most feasible alternative.

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

(Government Code Section 11346.2(b)(5)(A)) requires the facts, evidence, documents, testimony, or other evidence on which the agency relies to support an initial determination that the action will not have a significant adverse economic impact on business)

HCD has determined that this regulatory action, focused on public safety and to avoid structural failure of EEE, would have no significant adverse economic impact on California business enterprises and individuals, including the ability of California businesses to compete with businesses in other states.

#### **ASSESSMENT OF EFFECT OF REGULATIONS UPON JOBS AND BUSINESS EXPANSION, ELIMINATION OR CREATION**

(Government Code Sections 11346.3(b)(1) and 11346.5(a)(10))

The Department of Housing and Community Development has assessed whether or not and to what extent this proposal will affect the following:

- The creation or elimination of jobs within the State of California.

**These regulations will not cause the elimination of jobs within the State of California. These regulations may create additional jobs within the State of California especially as related to inspection, repair and maintenance of EEE.**

- The creation of new businesses or the elimination of existing businesses within the State of California.

**These regulations will not cause the elimination of existing businesses within the State of California. These regulations may create additional businesses within the State of California especially as related to inspection, repair and maintenance of EEE.**

- The expansion of businesses currently doing business with the State of California.

**These regulations may affect the expansion of businesses currently doing business within the State of California.**

- The benefits of the regulation to the health and welfare of California residents, worker safety, and the state's environment.

**These regulations were initially proposed as emergency regulations for the purposes of providing enhanced measures, intended to reduce risk factors and increase public safety, as related to EEE. Permanent early adoption of these regulations will keep these regulations in force until adoption of the 2018 model codes.**

#### **ESTIMATED COST OF COMPLIANCE, ESTIMATED POTENTIAL BENEFITS, AND RELATED ASSUMPTIONS USED FOR BUILDING STANDARDS**

(Government Code Section 11346.2(b)(5)(B)(i)) states if a proposed regulation is a building standard, the initial statement of reasons shall include the estimated cost of compliance, the estimated potential benefits, and the related assumptions used to determine the estimates.)

The impact of these regulation may be minimal or none as the cost of compliance on a project-by-project basis will vary since some projects may already include detailed construction requirements and details or be designed to avoid water or moisture damage or for cross ventilation, and for greater loads. Costs may be greater for projects not designed in excess the minimum requirements of the existing code. Costs would also vary depending on the amount, location and extent of EEE in a project. Costs for existing construction would vary due to the unknown number of EEE on existing residential structures and inspection schedules, if any, adopted by local enforcing agencies. The potential benefits include reducing and/or avoiding harm, injury or death to residential occupants due to failure of EEE.

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

(Government Code Section 11346.2(b)(6)) requires a department, board, or commission within the Environmental Protection Agency, the Resources Agency, or the Office of the State Fire Marshal to describe its efforts, in connection with a proposed rulemaking action, to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues. These agencies may adopt regulations different from these federal regulations upon a finding of one or more of the following justifications: (A) The differing state regulations are authorized by law and/or (B) The cost of differing state regulations is justified by the benefit to human health, public safety, public welfare, or the environment.)

These regulations do not duplicate nor conflict with federal regulations.