

STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY
CALIFORNIA BUILDING STANDARDS COMMISSION
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Office Use Item No. _____

PARTICIPATION COMMENTS FOR THE NOTICE DATED AUGUST 31, 2012
Written comments are to be sent to the above address.

WRITTEN COMMENT DEADLINE: OCTOBER 15, 2012

Date: 10/15/2012

From:

Clay Westling
Name (Print or type)


(Signature)

County of San Diego, Planning & Development Services

Agency, jurisdiction, chapter, company, association, individual, etc.

5510 Overland Avenue, San Diego, CA 92123
Street City State Zip

We do not agree with:

The Agency proposed modifications As Submitted on Section No. 1612

We recognize that this request is not specifically related to an amendment currently proposed by a state agency but respectfully request that the Building Standards Commission consider the amendment as described in the attached letter.

and request that this section or reference provision be recommended:

Approved Disapproved Held for Further Study Approved as Amended

Suggested Revisions to the Text of the Regulations:

The County of San Diego respectfully requests that the Commission exclude Section 3.2 of ASCE 24-05 from the California Building Code.

We recognize that this request is not specifically related to an amendment currently proposed by a state agency but respectfully request that the Building Standards Commission consider the amendment as described in the attached letter.

Reason: California Building Code (CBC) Section 1612 incorporates the requirements of the American Society of Civil Engineers technical document, ASCE 24-05 which conflicts with federal standards and imposes unreasonable and prohibitively costly prescriptive requirements without considering possible alternatives. It is our belief that requiring a fan-wide solution as the only option to allow buildings in alluvial flood plains was not the intent of the Building Standards Commission when ASCE 24-05 was included by reference in the CBC.

HEALTH & SAFETY CODE SECTION 18930

SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

- (a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:
- (1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
 - (2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
 - (3) The public interest requires the adoption of the building standards.
 - (4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
 - (5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
 - (6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
 - (7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
 - (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
 - (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
 - (8) The format of the proposed building standards is consistent with that adopted by the commission.
 - (9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.



MARK WARDLAW
Director

BETH A. MURRAY
Assistant Director

County of San Diego
PLANNING & DEVELOPMENT SERVICES

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October 11, 2012

Building Standards Commission
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Sacramento, CA 95833

PUBLIC COMMENTS ON CALIFORNIA BUILDING CODE SECTION 1612

California Building Code (CBC) Title 24, Part 2, Section 1612 incorporates the requirements of the American Society of Civil Engineers technical document, ASCE 24-05 which conflicts with federal standards and imposes unreasonable and prohibitively costly prescriptive requirements without considering possible alternatives. ASCE 24-05 appears to prohibit any structure in alluvial fan areas without a major protective works project that addresses flooding for the entire fan (fan-wide solution); however, the language is unclear and the intent of the document is unclear. It is our belief that requiring a fan-wide solution as the only option was not the intent of the Building Standards Commission when ASCE 24-05 was included by reference in the CBC.

The County respectfully requests that the Commission exclude Section 3.2 of ASCE 24-05 from the CBC until the discrepancy can be addressed in the next update of the ASCE document.

Background

In 2010, the State of California adopted a Residential Code (Title 24, Part 2.5) that went into effect January 1, 2011. The California Residential Code (CRC) does not reference ASCE 24-05, and therefore the fan-wide structural project is not required for 1 and 2-family dwelling units and townhouses that meet the structural requirements of the CRC. However, because the CBC references ASCE 24-05 commercial structures – even infill developments in previously developed downtown areas – must follow the CBC; these structures are effectively prohibited in alluvial fan areas without a prohibitively expensive, structural fan-wide solution. This is the case even when a jurisdiction has an effective flood control program meeting federal standards.

The federal requirements for development on an alluvial fan are in the Code of Federal Regulations, Chapter 1, Section 60.3 (44 CFR 60.3). These requirements do not make it necessary for structures placed in these areas that would not impact the flood hazard areas as currently mapped (i.e. structures on piers) to include a fan-wide solution. The

combined effect of 44 CFR 60.2.h, 44 CFR 65.3, and 44 CFR 65.13 is that any structures placed, or development related changes that **would** impact the flood hazard areas as currently mapped would require a fan-wide solution.

The source of the structural fan-wide solution requirement as referenced by the California Building Code is ASCE 24-05, Section 3.2 Alluvial Fans. The Section reads:

Section 3.2 ALLUVIAL FAN AREAS

Construction of structures shall be prohibited at the apex of an alluvial fan, and in the fan's meandering flow paths. Construction in other areas of the alluvial fan shall meet the following requirements:

- The elevation of the lowest floor shall be a minimum of 1 ft. above the highest adjacent grade, or higher, if required on a community's flood hazard map.
- Foundations shall be designed and constructed to resist scour caused by actual flow velocity but not less than 5 ft/s. Determination of actual flow velocities shall be based on a review of a community's flood hazard map and flood hazard study, or on hydraulic calculations.
- Design and construction shall resist all load combinations specified in Section 1.4.

3.2.1 Protective Works in Alluvial Fan Areas

Structures shall be prohibited in alluvial fan areas unless:

- 1) a whole alluvial fan flood damage reduction project has been designed and constructed to safely pass the design flood at the apex, within the capacity of the constructed channel(s);
- 2) design and construction do not divert flood flows and debris toward other structures, nor increase flood velocities and depths elsewhere on the alluvial fan; and
- 3) such construction satisfies the requirements of Section 1.5.2 and a maintenance and operations plan for the protective works is provided."

While Section 3.2 does not prohibit construction on alluvial fan areas outside of the apex and meandering flow paths, it appears that Section 3.2.1 requires a fan-wide structural solution for any development. A fan-wide structural solution is a multi-million dollar flood control facility that requires a long-term maintenance budget in perpetuity. Because the CRC doesn't reference ASCE 24-05, it does not prohibit 1 and 2-family dwelling units and townhouses (that meet CRC Section 1.1.7.3.1¹) built with structural

¹ "Detached one-and two-family dwellings and townhouses not more than three stories above grade plane with a separate means of egress and their accessory structures shall not be required to comply with the more restrictive requirements contained in Title 24, Part 2, the California Building Code, unless the proposed structure(s) exceed the design limitations established in the California Residential Code and the code user is specifically directed to use the California Building Code."

flood protection measures. The CRC requires the use of ASCE 24 only for proposed structures located in a floodway (R322.1 Exceptions²). All other one-and two-family dwellings and townhouses may follow the flood provisions of the CRC.

However, because commercial developments must follow the CBC, even in-fill developments in already developed areas that are not located in a floodway, and are raised in piers to comply with the federal requirements require a fan-wide structural solution.

FEMA's terminology of "active" and "inactive" areas is different than ASCE 24-05's terminology and this inconsistency makes it impossible to determine the intent of ASCE 24-05's Section 3.2. Given the confusing language of ASCE 24-05, it is not clear if this was the intent of the authors.

ASCE is currently in the process of updating this technical document and they expect to release a draft for public review sometime next year (personal communication with John Ingargiola, FEMA); however, there is no time associated with the completion and publishing of a final document.

The County respectfully requests that the Commission exclude Section 3.2 of ASCE 24-05 from the CBC until the next update of the document.

Sincerely,



CLAY WESTLING, Building Official
County of San Diego
Planning & Development Services

² "Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24."