

*Presented to  
Public Safety Comm.*

CED COMMITTEE AGENDA: 9/27/10  
ITEM: (d) (8)  
PSFSS Committee 10-21-10, Item (d) 1  
City Council 11-02-10



## Memorandum

**TO: Community and Economic Development  
Public Safety, Finance and Strategic  
Support Committees**

**FROM: Joseph Horwedel  
William McDonald**

**SUBJECT: See Below**

**DATE: October 12, 2010**

Approved

*Diana Silva*

Date

*10/13/10*

**SUBJECT: ADOPTION OF THE 2010 CALIFORNIA BUILDING STANDARDS**

### RECOMMENDATION

- 1) Recommend that City Council Approve an Ordinance amending Title 24 of the San Jose Municipal Code to:
  - a) Adopt the 2010 editions of the California Building Code (CBC), California Residential Code (CRC), California Electrical Code (CEC), California Mechanical Code (CMC), California Plumbing Code (CPC), California Historical Building Code (CHBC), California Existing Building Code (CEBC), California Green Building Standards Code (CGBSC) and the 2009 edition of the International Existing Building Code Appendix Chapters A2, A3 and A4; and
  - b) Adopt local amendments regarding certain structural design requirements, compliance with FEMA regulations, fire sprinkler regulations, and other building and fire safety requirements.
- 2) Recommend that City Council Approve an Ordinance amending Chapter 17.12 of the San Jose Municipal Code to:
  - a) Adopt the 2010 edition of the California Fire Code (CFC), and the Standards referenced in 2010 CFC; and
  - b) Adopt local amendments regarding the design and installation requirements for fire sprinkler systems, fire standpipe and hose systems, centrifugal fire pumps, private fire service mains, fire alarm systems, clean agent extinguishing systems, fire protection systems in clean rooms, and other fire safety requirements.

## BACKGROUND

This memorandum addresses item 1) of the aforementioned Recommendation. A memo from the Fire Chief addresses the recommendation to amend Chapter 17.12 of the San Jose Municipal Code as outlined in item 2).

The Building Standards Commission (BSC) publishes triennial editions of the California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code. Last July 4, 2010, the BSC published the 2010 edition of the California Building Standards Code. The 2010 California Building Standard Codes will apply to any building or structure for which application for a building permit is made on or after January 1, 2011. The CBC, CRC and CEBC are based on the International Code Council's (ICC) published 2009 International model codes, while the CMC and CPC continue to be based on the International Association of Plumbing and Mechanical Officials' published 2009 Uniform model codes.

Due to the introduction of the CRC and CGBSC, and the differences between the current 2007 and the new 2010 California Building Standards Codes, staff has been conducting outreach for the adoption of the 2010 California Building Standards that includes roundtable meetings and a training session to assist the customers in understanding the new codes and the code changes leading up to the scheduled October 26, 2010 Council meeting.

The State of California allows local municipalities to modify the state adopted building standards to make them more restrictive (not less), provided certain express findings are made that the proposed modifications are necessary due to special local climatic, geological, or topographical conditions that can affect the health, welfare, and safety of local residents. Any local amendments must be made prior to the effective date of State Codes (January 1, 2011).

As part of the outreach, staff is presenting to the CED and PSFSS Committees a summary of proposed amendments to Titles 24 of the San Jose Municipal Code to Adopt the 2010 California Building Standards Code, California Code of Regulations (CCR) Title 24, Parts 2, 2.5, 3, 4, 5, 8, 10 and 11, and 2009 the International Existing Building Code Appendix Chapters A2, A3 and A4. Upon the Committee(s) recommendation(s), staff will present to the City Council proposed amendments to the 2010 California Building Standards Code for adoption.

The Building related codes (Building Standards Codes) that will be adopted in the proposed ordinance are:

- 2010 California Building Code - CCR Title 24 Part 2
- 2010 California Residential Code - CCR Title 24 Part 2.5
- 2010 California Electrical Code - CCR Title 24 Part 3
- 2010 California Mechanical Code - CCR Title 24 Part 4
- 2010 California Plumbing Code - CCR Title 24 Part 5
- 2010 California Historical Building Code - CCR Title 24 Part 8
- 2010 California Existing Building Code - CCR Title 24 Part 10
- 2010 California Green Building Standards Code - CCR Title 24 Part 11
- 2009 International Existing Building Code, Appendix Chapters A2, A3 and A4

## ANALYSIS

### Participation in the Code Adoption Process and Uniformity in Local Code Amendments

The City of San Jose (CSJ) continues to participate in the Building Standards Codes adoption process at both the national and state levels to ensure that amendments to codes address acute safety issues, eliminate redundant requirements and do not create impediments to appropriate building forms desired by the City. The City has been seen as unique by most other agencies involved in the code development through our partnership between the Building Official and the Fire Marshal staff to ensure that both technical areas are advocating for code changes that are mutually supportive rather than conflicting.



Homer Maiel, a Senior Engineer from the Building Division, was appointed to serve on the International Building Code Development Committee. This Committee reviewed and screened proposed changes to the model building code. Additionally, Fire Department and Building Division staff provided significant contributions in the International Code Council's code development committees and the State's working groups.

To establish uniformity in adopting code amendments in the Bay Area, City staff worked with other local jurisdictions by participating in the Tri-Chapter Uniform Code Program continuing our long standing leadership role in creating a uniform code implementation between cities. The cities and counties that participate in this program stretch from Contra Costa County in the north to San Benito County in the south. As a result of this program, three technical amendments are being proposed based on local geographic, topographic and climatic conditions. These amendments will be adopted uniformly in the neighboring cities and counties with minimal local variations. At both regional and state levels, Staff will continue to maintain a leadership role in order to reduce individual differences between cities in Silicon Valley. One of the largest sources of frustration of our customers is the lack of code uniformity between cities. This was very evident with the recent survey of permitting processes for solar panels in the Bay Area. With such a visible leadership role, the City should continue to insist that any local amendment is based on documented rationale demonstrating essential need versus staff practices, preferences and/or convenience.

The 2010 California Building Standards Code includes two new standards. These are the California Residential Code and the California Green Building Standards Code.

#### California Residential Code

For the past three years, the CBC (developed for multi-family, commercial and industrial occupancies) was the code applied to one- and two-family dwellings which added unnecessary complexity. The 2010 CRC, which is the code developed specifically for detached one- and two-family dwellings, has been adopted by the state and will be the code used for detached one- and two-family dwellings.

One new significant feature of the 2010 CRC is the requirement that all new detached one- and two-family dwellings be provided with a residential fire sprinkler system. Because of the magnitude of this new national requirement, staff has been conducting the extensive outreach to

build awareness and to try to elicit concerns that should be considered in creating the new protocols to implement the requirement.

### The Green Building Standards Code

The CGBSC was developed to promote the enhancement of the design and construction of buildings through the use of building concepts that result in a positive environmental impact and that encourage sustainable construction practices. This code requires mandatory prescriptive measures in the areas of energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. Staff proposes to adopt the mandatory measures of the CGBSC. Additionally, staff proposes to continue the implementation of the City's Private Sector Green Building program together with the CGBSC. Staff is working through the overlap between the new CGBSG requirements for Construction, Demolition, Debris (CDD) diversion and the City's own CDD program. The CGBSC creates a potential situation of a \$100 million project not receiving their occupancy permit because a \$500 debris bin went to the wrong facility. Staff will be presenting to the Transportation and Environment Committee (T&E) additional analysis on this issue.

### SUMMARY OF AMENDMENTS

? Where is FARs/ELEVATOR?

#### A. Technical Amendments

1. Structural Design (CBC Section 1613.6.7, Equation 16-44)  
Modify CBC Section 1613.6.7, Equation 16-44 to delete the importance factor from the equation that determines the minimum seismic separation distance between buildings. The inclusion of the importance factor in the equation's denominator has the unintended consequence of reducing the minimum distance for important facilities such as hospitals, schools, police and fire stations from adjacent structures where the importance factor (I) is greater than 1. San Jose is located in an active seismic area. A higher level of performance is expected from buildings and structures in this region due to this specific geological condition. This amendment is jointly developed with the TUCC for adoption.
2. Gypsum Board and Stucco (CRC Section R602.10, Table 602.10.1.2(2))  
Consistent with the CBC, modify the CRC to not allow the use of gypsum wallboard or diagonal let-in-bracing in braced wall panels of conventional light-frame wood construction. In addition, limit the use of Portland cement (stucco), diagonal wall sheathing, particleboard sheathing, structural fiberboard sheathing and hardboard panel siding in braced walls. Braced walls comprised of these materials have historically performed poorly during major seismic events. The proposed limits will improve the lateral load resistance capacity and performance of conventional light-framed wood structures. This amendment is jointly developed with the TUCC for adoption.
3. Existing Structures (CBC Chapter 34)  
Modify the chapter to (a) maintain compliance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act to allow building owners to avail of possible Federal Funds in a disaster or emergency; and (b) to delete the City requirements for a building seismic evaluation when changing a building use to that of a higher occupancy hazard

classification. The proposed amendment maintains the requirement for structural evaluation using ASCE 31 and structural rehabilitation using ASCE 41 in accordance with the aforementioned disaster relief act. The 2010 CBC includes seismic analysis and design provisions for existing buildings when changing the use to a higher occupancy category. These are consistent with the practices implemented by surrounding jurisdictions and jointly developed with TUCC for adoption.

B. Fire Sprinkler Regulations (CBC Chapter 4 & 9 and CRC Section R313)

The CBC sections pertaining to fire sprinklers are modified to maintain current standards and (a) require fire sprinkler systems in buildings when changing a building use to that of a higher hazard occupancy classification; (b) require fire sprinkler coverage in areas exempted by the CBC and CRC; (c) require fire sprinkler systems in existing one- and two-family dwellings when increasing the building floor-area by 500 square-feet resulting to a total floor area of 3,600 square-feet; and (d) disallow the use of a multi-purpose residential fire sprinkler system in one- and two-family dwellings.

C. CBC Appendices

Modify the CBC by deleting Appendix I, the code provisions for Patio Covers. The construction of patio covers will be regulated by Appendix H of the CRC. This amendment is jointly developed with the TUCC for adoption.

D. CRC Appendices

Modify the CRC by adopting Appendices E, G, H, and K to address Manufactured Housing; Swimming Pools, Spas and Hot Tubs; Patio Covers; and Sound Transmission, respectively. This amendment is jointly developed with the TUCC for adoption.

E. Administrative Provisions

The proposed ordinance will continue to have a single set of administrative provisions for all eight codes.

**PUBLIC OUTREACH/INTEREST**

In the Bay Area, the City of San Jose is in the forefront in identifying amendments to the 2010 California Building Standards and informing the public of these proposed amendments. Staff is in the process of presenting the proposed amendments to design professionals, developers and contractors in roundtable meetings to be held on August 19, September 1, 2, 9 and 14, 2010. Information about the new codes is available at the Permit Center counter and has been published on the City's web site ([www.sanjoseca.gov/building](http://www.sanjoseca.gov/building)).

In November 2010, a free training session will be conducted to introduce design professionals, developers and contractors to the significant changes between the 2007 and 2010 California

Community and Economic Development and Public Safety, Finance and Strategic Support Committees  
October 12, 2010  
**Subject: Adoption of the 2010 California Building Standards**  
Page 6

Building Codes, as well as the proposed local amendments to the California Building Standards. Additionally, Building staff will conduct brown bag training sessions for the public from November 8 through December 17, 2010.

/s/  
JOSEPH HORWEDEL, DIRECTOR  
Planning, Building and Code Enforcement

/s/  
WILLIAM McDONALD  
Fire Chief