

Special Seismic Certification Requirements for Mechanical and Electrical Systems for OSHPD Projects

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2007 CBC

(based on the 2006 IBC)

- **Published:** *June 2007*
- **Adopted:** *January 1, 2008*

CBC Chapter 1613A: “Earthquake Loads” specifies
ASCE 7-05 as the basis for design



ASCE 7-05 Chapter 13: Seismic Design Requirements for Non-Structural Components

- **13.2.2a Special Seismic Requirements for Designated Systems:** *Active mechanical and electrical equipment that must remain operable following the design earthquake shall be certified by the supplier as operable based on approved **shake table testing** in accordance with Section 13.2.5 or experience data in accordance with Section 13.2.6. Evidence demonstrating compliance of this requirement shall be submitted to the authority having jurisdiction after review and approval by the registered design professional.*
- **13.2.5 Testing Alternative for Seismic Capacity Determination:** *As an alternative to the analytical requirements of Sections 13.2 through 13.6, testing shall be deemed as an acceptable method to determine the seismic capacity of components and their supports and attachments. Seismic qualification by testing based upon a nationally recognized testing standard procedure, such as ICC-ES AC 156, acceptable to the authority having jurisdiction shall be deemed to satisfy the design and evaluation requirements provided that the substantiated seismic capacities equal or exceed the seismic demands determined in accordance with Sections 13.3.1 and 13.3.2.*



OSHDP CAN 2-1708A.5

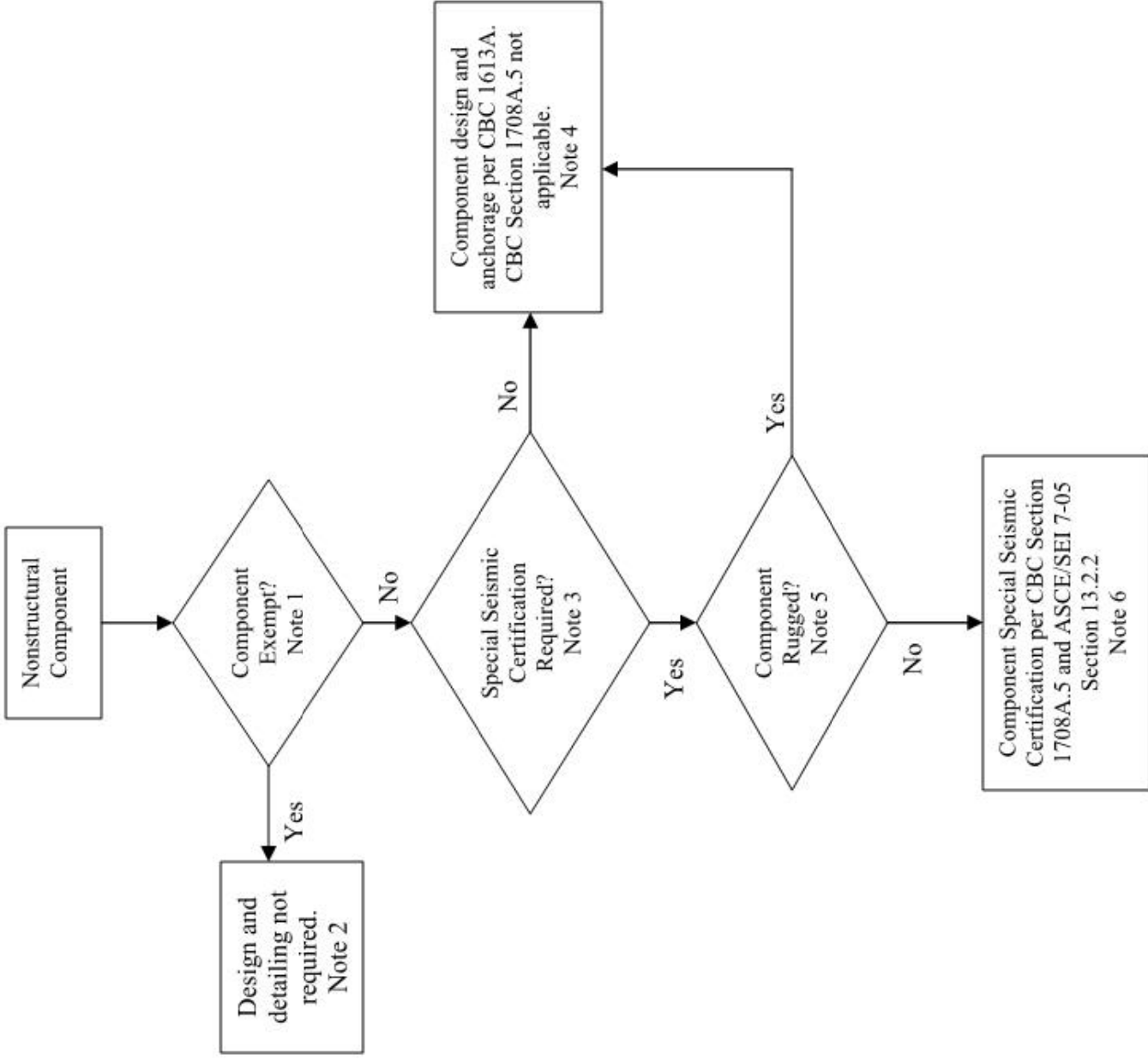
- Effective *10/31/08*

- Latest Revision: *6/26/09*

- **PURPOSE:** The purpose of this Code Application Notice (CAN) is to clarify the requirements for seismic qualification/certification of mechanical and electrical equipment/components. This CAN also provides an interpretation for code sections of the 2007 CBC and ASCE/SEI 7-05 that appear to be in conflict. Note: This CAN will be updated regularly as additional data on seismic qualification and certification of critical components becomes available.

- **BACKGROUND:** The 2007 California Building Code (CBC) and ASCE/SEI 7-05 introduces new concepts for seismic design of nonstructural components. These concepts are intended to improve the performance of essential nonstructural systems subject to strong ground shaking. The full texts of the related code sections are included in Appendix A of this document.

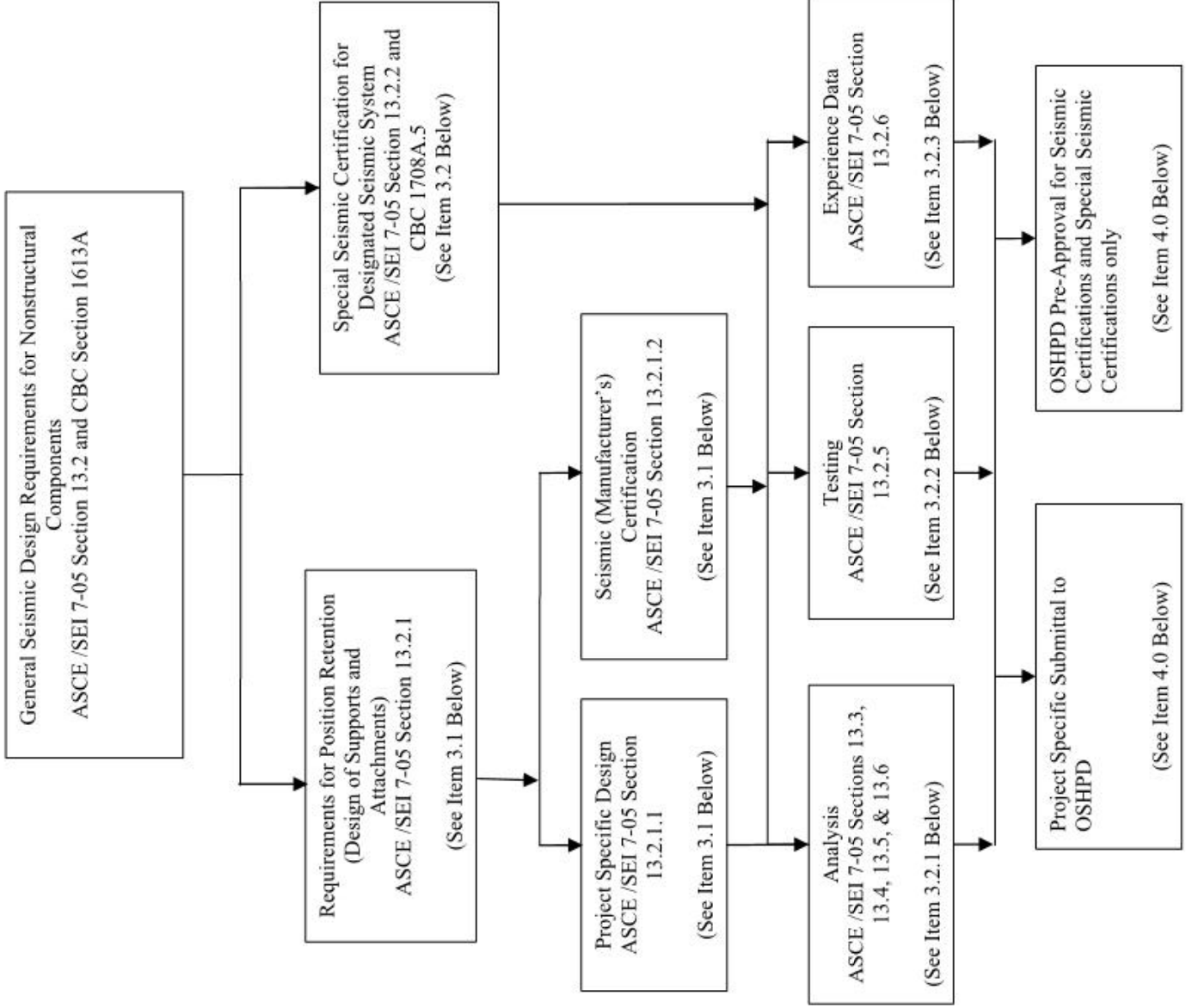




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- **4.2 Approval by Testing:** *All tests shall be performed by an independent laboratory having accreditation to the International Standards Organization (ISO) accreditation standard 17025 by an organization such as the International Accreditation Service (IAS) of the International Code Council (ICC) or shall be under the responsible charge of a California Licensed structural, civil or mechanical engineer. Test reports shall be prepared by a **California Licensed structural, civil or mechanical engineer**. If test reports are prepared by a California Licensed civil or mechanical engineer, they shall be reviewed and accepted by a **California licensed structural engineer**.*





OSHDPD Approval (CAN 2-1708A.5 Section 4.0)

- *Seismic Certification and Special Seismic Certification approval by OSHDPD can be either a project-specific approval or a pre-approval. When repetitive review of the same equipment or component is anticipated, a pre-approval is encouraged.*
- **OSP**
 - 1st awarded on June 28, 2009
 - As of March 3, 2010, 44 submitted, 37 pre-approved

www.oshpd.cahwnet.gov/FDD/pre-approval/special_seismic_cert_pre-approval.html

