COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS

California State University Seismic Review Board Annual Report

Presentation By

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Summary

This information item presents the CSU Seismic Review Board Annual Report.

Seismic Policy and Review Board

The California State University has addressed the seismic hazard posed by its buildings and is in the process of completing their mitigation. In 1993 the CSU Board of Trustees adopted the following policy:

It is the policy of the Board of Trustees of the California State University, that to the maximum extent feasible by present earthquake engineering practice, to acquire, build, maintain, and rehabilitate buildings and other facilities that provide an acceptable level of earthquake safety for students, employees, and the public who occupy these buildings and other facilities at all locations where CSU operations and activities occur. The standard for new construction is that it meets the life-safety and seismic hazard objectives of the pertinent provisions of Title 24 of the California Code of Regulations; the standard for existing construction is that it provides reasonable life-safety protection, consistent with that for typical new buildings. The California State University shall cause to be performed independent technical peer reviews of the seismic aspects of all construction projects from their design initiation, including both new construction and remodeling, for conformance to good seismic resistant practices consistent with this policy. The feasibility of all construction projects shall include seismic safety implications and shall be determined by weighing the practicality and cost of protective measures against the severity and probability of injury resulting from seismic occurrences. [Approved by the Board of Trustees of the California State University at its May 19, 1993 meeting (RCPBG 05-93-13).]

CSU initiated the assessment of the seismic hazards posed by CSU buildings as directed by Governor Deukmejian’s executive order and legislative provisions. The CSU Seismic Review Board (SRB) was established to advise and assist in determining the condition of CSU buildings, and to technically oversee the program.
The SRB is comprised of:

- Charles Thiel Jr., Ph.D., President, Telesis Engineers and Consulting
- John A. Martin Jr., S.E., President, John A. Martin and Associates
- Greg Brandow, Ph.D., President, Brandow and Johnson, Adjunct Professor USC
- Ted Zsutty, Ph.D., S.E., Professor, San Jose State University, Retired
- James Hill, S.E., President, James Hill and Associates
- Sven Nielson, S.E., Principal, Johnson and Nielsen Associates
- John Egan, G.E., Geomatrix Consultants

Seismic Mitigation and Plan

As of September 2002, the majority of CSU buildings identified as posing a life-safety hazard to the students, staff and faculty have been mitigated. The CSU plan has four elements:

1. Mitigate significant life-safety threats posed by falling hazards as a priority. All such hazards at all 23 campuses and off-campus centers have been mitigated.

2. Identify those buildings that pose a significant life-safety threat and mitigate these hazards as soon as practical. Of the over 200 buildings identified as potentially highly hazardous since inception, most have been retrofitted, and only 8 priority buildings remain to have retrofit design initiated.

3. Systematically raise the level of seismic safety for deficient buildings whenever any structural modification, alteration or addition to the structure is undertaken. This is through application of Division VI-R requirements for all construction; particularly those circumstances identified as warranting action.

4. Assure that all CSU new construction and modification of existing structures have independent, technical peer review of the earthquake performance aspects of the plans. Review continues through construction.

2002-2003 SRB Activities

The following are notable activities by the SRB in the year since the last report to the Board of Trustees:

1. Revised and distributed widely the CSU Seismic Requirements, adopted December 8, 2000, and revised April 2003. This includes the specific seismic requirements for all construction work in CSU and establishes the minimum seismic coefficients to be used with the California Building Code provisions. Additions have been made that cover moment frame structures,
particularly when used in parking structures, reduced requirements for small projects, and requirements for approval and stamping of approved plans.

2. Maintained the CSU priority list for seismic retrofits. The list was revised to contain two parts: first, those projects that are priority actions that should be undertaken solely because of the seismic hazard posed by the building; and second, those buildings that have significant seismic issues that need to be recognized when the campus is contemplating alterations or modifications of the building. The latter is to assist in planning so that the planning stage for such modifications recognizes the seismic issues of the building. These problems are to be resolved notwithstanding the possibility that the California Building Code, Division VI-R may not administratively require.

3. Provided technical support in reaching a resolution to the hazards posed by the Residence Apartment Building at San Francisco State University and provided peer review of the modifications proposed by the contractor as part of the mediated settlement of the lawsuit. A seismic retrofit plan has been developed and approved by the SRB Peer Reviewer after considerable effort on the part of both the designers and the SRB, including development and evaluation of a number of different structural approaches. The modified building is expected to meet the seismic performance requirements of the university and Title 24, Division VI-R, consistent with the terms of the settlement.

4. Worked with the Pomona campus to implement actions to accommodate the San Jose fault trace that passes through the campus and has an identified trace. Of the 22 Pomona buildings within the fault trace, only a limited number pose a significant life-safety hazard during fault rupture. These were added to the seismic retrofit priority list as appropriate. Development of seismic retrofit plans for these specific buildings is underway under the review of the SRB.

5. The SRB is preparing additions to the CSU Seismic Requirements to address temporary structures (e.g. trailers), light metal frame construction, and selected issues in wood construction, all of which are not treated adequately in the California Building Code. Division VI-R will be revised to reflect the recently adopted NFPA Building code as the basis for the CBC. The SRB is taking the lead to develop a common lease policy to be used by state agencies (Department of General Services), and the University of California. The goal is to develop a common method of reporting seismic requirements to be used by all that provides a basis for decision making and can be customized to meet the individual circumstances.