



STATE OF CALIFORNIA
 ALFRED E. ALQUIST
 SEISMIC SAFETY COMMISSION



Governor Edmund G. Brown Jr.

Alfred E. Alquist Seismic Safety Commission
 Minutes of Teleconference Meeting
 July 14, 2011

Members Participating

Mark Church, Chairman
 Kandiah “Arul” Arulmoli
 Christina Curry
 Jay Elbettar (joined at 10:06 a.m.)
 Michael Gardner
 Helen Knudson
 Sharron Leaon (joined at 10:06 a.m.)
 Emir Macari
 Elizabeth Mathieson (joined at 10:05 a.m.)
 Gary McGavin
 Mathew Ortiz
 Ali Sadre
 Howard Smith
 David Walls

Members Absent

William Chubb, Vice Chairman
 Ronald Garcia
 John Littrell
 John McPartland
 Kathy Smith
 Michael Stevens

Staff Present

Richard McCarthy, Executive Director
 Karen Cogan, Administrative Manager

I. CALL TO ORDER/ROLL CALL

Commission Chair Mark Church called the meeting of the Alfred E. Alquist Seismic Safety Commission to order at 10:02 a.m. Administrative Manager Karen Cogan called the roll and confirmed the presence of a quorum.

II. CHAIRMAN’S REMARKS

Chairman Church noted that after ten years as a San Mateo County Supervisor, he had been elected to the position of San Mateo County Assessor and had not applied for reappointment to the Seismic Safety Commission. He said it was an honor and privilege to serve on the Commission, and he thanked the staff and fellow commissioners for their support and assistance during his tenure as chair. He noted that the Commission is an invaluable resource for the governor and the Legislature, and he expressed his best wishes for continued success.

Report of Nominating Committee

Commissioner Gary McGavin reported that in response to the Nominating Committee's solicitation, four commissioners expressed interest in serving as the Commission's 2011/2012 officers. He said the Nominating Committee, consisting of himself as chair and Commissioners David Walls and Howard Smith as members, held a duly noticed teleconference meeting on July 13 to consider the candidates. He stated that the committee recommends electing Commissioner Michael Gardner as chair and Commissioner Jay Elbettar as vice chair.

Chairman Church asked if there were any other nominations, but there were none.

ACTION: Commissioner Emir Macari made a motion, seconded by Commissioner Ali Sadre, that:

The Commission elect Commissioner Gardner as chair and Commissioner Elbettar as vice chair as proposed.

* Vote: 14 - 0.

Chairman Church congratulated Commissioner Gardner and invited him to chair the rest of the meeting.

Chairman Gardner indicated that he spoke with the governor's appointment secretary on July 1 regarding the status of Commission reappointments and asked the governor's support for Senate confirmation of the members appointed last fall. He noted that eight Commission members are up for reappointment and seven need to be confirmed by October if they are to remain on the Commission. Chairman Gardner said the secretary seemed very receptive and believes a full Commission will be in place sometime in August. He reported that he was interviewed on July 13 and was told his confirmation would be recommended. He suggested that commissioners in a similar situation contact the appointment secretary to move the process along.

III. APPROVAL OF JUNE 9, 2011 MINUTES

Executive Director Richard McCarthy pointed out a typographical error in Chairman Church's first name in the Call to Order section on the first page.

Commissioner Helen Knudson noted that her name was spelled incorrectly in the middle of the ShakeOut section on Page 5.

ACTION: Commissioner McGavin made a motion, seconded by Commissioner Arul Arulmoli that:

The Commission approve the June 9 minutes as amended.

* Motion carried, 14 - 0.

IV. EXECUTIVE DIRECTOR'S REPORT

Budget Report

Mr. McCarthy advised that first-quarter budget projections would be available at the September meeting.

Meeting Schedule for 2011/2012

Mr. McCarthy stated that the staff was seeking clarification of the impacts of the statewide travel restrictions on the Commission's ability to meet in local jurisdictions throughout the state in alternate months. He noted that the next meeting will be held in Sacramento in September.

Letter of Support from California Hospital Association for Shake Table

Mr. McCarthy drew attention to the letter of support from the California Hospital Association for the Commission-funded research project involving shake table testing of a full-scale model hospital facility. He said Commission funding will be used to create video documentation of the testing process, and the building will be burned after the project is completed to provide additional information about fire following earthquake, another Commission-sponsored research topic.

V. RESEARCH FUND PROJECTS

Projects Under Development:

Update on Office of Public School Construction Project

Mr. David Zian, Chief of Program Services, Office of Public School Construction (OPSC), provided an update on the status of evaluating vulnerable school buildings for seismic retrofit bond funding. He said the State Allocation Board authorized OPSC to develop emergency regulations that define eligibility criteria, with some important changes: 1) the 1.68 spectral acceleration threshold was eliminated; 2) the program was opened to all Category 2 buildings; 3) and other geologic hazards, such as liquefaction, landslides, and faulting, can be considered in addition to ground shaking. He noted the Division of the State Architect (DSA) is revising its Procedure 08-03 to incorporate these new features, and the existing template will need to be revised to delete the spectral acceleration threshold. Mr. Zian advised that OPSC still needs the \$50,000 augmentation approved by the Commission at the last meeting to conduct seismic evaluations of more school buildings.

Mr. Zian reported that draft regulations were being reviewed by the Department of General Services, after which they would be sent to the Department of Finance and then to the Office of Administrative Law. He said OPSC hopes the new regulations will proceed through this process and be ready for approval sometime in early August.

Commissioner McGavin asked how the recognition of other geologic hazards would impact use of the template. Mr. Zian responded that OPSC is not sure exactly how the template will be affected. He noted that OPSC will still use the template to evaluate buildings, but DSA will need to approve reports by structural engineers identifying other deficiencies that could make buildings vulnerable to collapse; because DSA lacks expertise in assessing other geologic hazards, the California Geologic Survey (CGS) will need to confirm the findings of the engineering reports. He added that the costs of this additional review process may deter many school districts from applying based on other geologic hazards.

Mr. Zian said that opening eligibility to all Category 2 buildings occupied by students or staff only expands eligibility to 6 more buildings on the AB 300 inventory list, and elimination of the spectral acceleration threshold allows a couple more buildings to apply. Commissioner McGavin observed that the State Board of Equalization's decision did not open the floodgates to a huge number of buildings, as originally feared. Mr. Zian agreed, and said he did not think many school districts would apply once they realize the steps in the additional analysis and the resulting costs.

Commissioner Smith clarified that DSA was working with CGS to revise the template and the procedure. He stated that the template, based on ASCE 31, will still be a useful guideline for engineers to determine collapse hazard based on ground shaking, but ASCE 31 does not address hazards other than ground shaking. If other hazards are to be considered, an engineer would need to determine estimated building displacement and then verify the collapse hazard resulting from those hazards. Commissioner Smith added that geologists understand that the shaking hazard is the most important threat to buildings in California, and there is little scientific data on other hazards.

Commissioner Sadre asked about the cost of structural engineering reports to determine collapse potential based on other hazards. Mr. Zian estimated \$5,000 to \$20,000, depending on the size and scope of the project. Commissioner Smith said he had heard figures ranging from \$2,500 to \$10,000. He noted the average costs of using the template to evaluate buildings was \$2,500. Commissioner Sadre asked about the criteria for evaluating other hazards. Mr. Zian cautioned that there was a lack of scientific knowledge with respect to other geologic hazards, but engineers could conduct site borings and provide geohazards reports. He said there are still many steps and unknowns, and both DSA and CGS will need to concur with the report findings.

Mr. Zian advised that OPSC will partner with DSA to publicize availability of seismic retrofit bond funds. He said that once DSA revises Procedure 03-03 and the template, and once regulations are in place, there will be an outreach program using letters, phone calls, and Web blasts to school districts with buildings on the original AB 300 list.

Commissioner McGavin recommended that the Commission allow OPSC to keep the \$50,000 augmentation, and other commissioners agreed. Mr. McCarthy noted that the Commission had already approved the additional amount, so no further action was necessary. Mr. Zian thanked the Commission for its support. He promised to keep the Commission informed of how the money is spent.

Fire Following Earthquake Report

Mr. McCarthy said the Commission's research on fire following earthquake is of great interest to the insurance industry and has the potential to benefit the public as well. He invited Dr. Charles Scawthorn, Pacific Earthquake Engineering Research Center, to brief the Commission on the results of his work. He said Dr. Scawthorn will provide a full briefing at the September meeting with photos and information on the shake table tests in San Diego. He noted that Dr. Scawthorn has contacts in Japan who provided relevant information that was incorporated in the report.

Dr. Scawthorn expressed his appreciation to the Commission and the staff for their help and support. He said the purpose of his 117-page report is to review the status of California's emergency water supply for firefighting. He stated that water supply has been a significant problem in California after major earthquakes and other disasters.

Dr. Scawthorn noted that the report contains an executive summary, four main chapters, a glossary, appendices, and detailed tables. He said Chapter 2 discusses past earthquakes and fires, including the 1906 San Francisco earthquake, the 1995 Northridge earthquake, the 1995 earthquake in Kobe, Japan, and the Japanese earthquake and tsunamis earlier this year. He advised the non-earthquake fires are also addressed, such as the 1988 First Interstate Bank fire that required one third of the Los Angeles Fire Department's resources and was eventually extinguished by the building's sprinkler system. He stated that four floors of the building were totally destroyed, and the entire building was damaged by smoke and water.

Dr. Scawthorn said 75 percent of California's population lives in large urban areas, so the risk of fire is especially critical in urban areas like San Francisco, Los Angeles, San Diego, and San Jose. He pointed out that although California has well trained and professional fire services, advanced communications systems, protective legislative requirements, and considerable resources, the Achilles heel for the state is having a reliable water supply.

Dr. Scawthorn noted that Chapter 3 of his report discussed California's problems and challenges in detail. He said he collected his data using Web-based surveys of water and fire departments throughout the state, followed up with in-person and telephone interviews. Based on what he learned, he concluded that the state's water and fire departments are not well informed about earthquake risks. Fire departments especially tend to rely on very general information, and there is a lack of specific information pertinent to their areas of service. Water districts are a bit better informed, but their efforts tend to focus on getting water to their service area, not distributing water to customers within their areas. For example, Dr. Scawthorn noted, the East Bay Municipal Utilities District has done considerable work in strengthening its pipes and connections, but internal distribution of water within cities has been neglected. He added that this is a huge problem because thousands of miles of piping have not been upgraded or retrofitted, and the loss of pressure to internal distribution systems means there will not be water available for firefighting.

Dr. Scawthorn observed that the responsibility for firefighting water supply rests with fire departments. Most fire departments have identified alternate water supplies, but their plans lack specifics and details about how to move water from these sources to fires, and few departments

have addressed this issue in drills and response exercises. Water departments in general are not well prepared to furnish firefighting water, and most do not have alternative water delivery systems. Dr. Scawthorn said the bottom line is that California's post-earthquake water supply has fallen through a gap, and fire departments are not drilling and are not equipped to move water from alternate sources.

Dr. Scawthorn mentioned some cities that have taken proactive measures to improve their firefighting capabilities. He said San Francisco and Vancouver established portable auxiliary systems that allow firefighting water to be deployed to sites where it is needed, and Oakland, Berkeley, and Vallejo now have similar systems.

Dr. Scawthorn noted that his report contains general policy recommendations as well as recommendations specifically for the Los Angeles metropolitan area and the San Francisco Bay Area. In terms of general policy, he recommended improving the situation by starting with senior fire service officials in the metro chiefs organization. He said the Seismic Safety Commission can assist by working with the California Emergency Management Agency (CalEMA) to get the metro chiefs together to review his report and discuss possible solutions. Then he recommended outreach to their counterparts at key water agencies, and having water department managers meet with the metro fire chiefs. He proposed establishing a joint task force to address the problem on a statewide basis.

Dr. Scawthorn recommended that fire departments in the San Francisco Bay Area drill together and develop portable systems using water from the ocean and the Bay. He recommended adopting standardized designs and distributing hose tenders throughout the area. He pointed out that the population in Los Angeles is farther away from the ocean, so a portable system would not work as well in the high-density urban areas there. He observed that a high-pressure system would be a substantial benefit, but it would also be very expensive to build. As an alternative, he suggested using storm channels to pipe water from the ocean, building dedicated pumping stations tied to fire boats at the ports, and linking with a portable system. Dr. Scawthorn added that this alternative would be technically feasible and much less expensive. Finally, he recommended a standardized statewide system.

Commissioner Mathieson asked about the possibility of coordinating with the U.S. military and using military aircraft to transport portable water systems to locations where they are needed. Dr. Scawthorn stated that emergency response issues were part of a larger problem that went beyond the water supply issues he examined in his report. He advised that use of military resources is part of the federal government's response plans, and CalEMA coordinates with the military. He observed that loading cargo and unloading fuel is a complicated process that takes time, so overland transport within the state is just as effective. Dr. Scawthorn said fire services generally move their resources to a staging area, from where they are deployed.

Commissioner Mathieson expressed her opinion that Dr. Scawthorn's research and report was one of the best investments of \$50,000 the Commission has made.

ACTION: Commissioner Knudson made a motion, seconded by Commissioner Elbettar, that:

The Commission approve the report as proposed.

* Motion carried, 14 - 0.

VII. PUBLIC COMMENT

There were no members of the public who wished to address the Commission.

VIII. GOOD OF THE MEETING

Mr. McCarthy thanked Commissioner Church for his service and leadership as chair of the Commission. He said Commissioner Church's political advice and local government experience perspective helped the Commission better deal with the challenges of working with members of the public and state government.

Chairman Gardner expressed his appreciation to Commissioner Church for his outstanding performance as chair.

XII. ADJOURNMENT

There being no further business, Chairman Church adjourned the meeting at 11:34 a.m.

Sue Celli
Office Manager

Approved by:

Richard McCarthy
Executive Director