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FACT SHEET

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# Superior Courts of California Seismic Assessment Program

In November 2003 the Administrative Office of the Courts (AOC) completed a seismic assessment of court buildings in California. The assessment was mandated by the Trial Court Facilities Act of 2002 (Sen. Bill 1732 [Escutia]) ("the act"), the law that specifies the process for the transfer of ownership and management responsibility for about 451 of California's court buildings from the counties to the state.

The draft report was distributed to county administrators and court executives for their initial review. Many of their comments are reflected in the *Superior Courts of California Seismic Assessment Program: Summary Report of Preliminary Findings*, dated January 2004. **The findings are preliminary, since additional information on particular buildings may be forthcoming during the transfer negotiations.** Ratings for individual buildings will be added to the report periodically, once the building owners and the state have concluded the due diligence steps in the real estate transfer process.

Following are some frequently asked questions about the Seismic Assessment Program.

## Why was a study of the seismic safety of court buildings done?

Seismic inspections of many court buildings throughout California are required by the act, which was jointly sponsored by the Judicial Council and the California State Association of Counties (CSAC). The act specifies a process for the transfer of ownership and management responsibility for about 451 of California's court buildings from the counties to the state. A provision of the law (Gov. Code, § 70327) states that, before completing negotiations on the transfer of court facilities in a given building, the state must have a licensed structural engineer evaluate the building for seismic conditions that may need correction.

### Were all court buildings included in the seismic assessment?

Not all buildings were included in the Seismic Assessment Program because the act allows for certain exemptions from assessment. Of the 451 court facilities affected by the act, 225 were designated as subject to evaluation and assigned preliminary seismic risk levels based on a careful screening process. Among those, about 60 of the older buildings did not have architectural drawings for review. The evaluation of those buildings was performed by necessity at a cursory level, and their preliminary ratings for seismic risk level are pending.

Facilities not subject to evaluation under the act, and therefore not evaluated, include leased, abandoned, modular, or storage facilities; smaller buildings with minor occupancy by the court; and buildings constructed under the 1988 building code or a later code.

### Who conducted the assessments?

The AOC's Office of Court Construction and Management selected a supervising structural engineering firm, Rutherford & Chekene Consulting Engineers in Oakland, to administer the program and direct the efforts of the eight other consulting structural engineering firms that performed assessments. The eight firms were:

- Cole, Yee, Schubert & Associates, Sacramento
- Degenkolb Engineers, San Francisco
- Englekirk & Sabol Consulting, Los Angeles
- Forell/Elsesser Engineers, San Francisco
- Integrated Design Services, Tustin
- Middlebrook + Louie, San Francisco
- Nabih Youssef & Associates, Los Angeles
- Simpson, Gumpertz & Heger, San Francisco

### When were the assessments done?

The program began in January 2003 with the collection of structural and architectural documents. Initial screenings were completed in May, and detailed assessments were made from June through September of 2003. A preliminary draft report was then distributed to the building owners—the counties—in late November 2003 for their initial review and comment.

### What criteria were used in the assessment of court buildings?

The Seismic Assessment Program employed the services of eight leading structural engineering firms to assess seismic risk levels on the basis of risk acceptability methods and criteria developed by the California Department of General Services (DGS) for use in evaluating state-owned buildings. The state has used these risk level criteria, originally developed by the California Division of the State Architect in 1994, extensively for its own buildings, starting with the seismic evaluation and retrofit program mandated and financed by Proposition 122, following the Loma Prieta earthquake of 1989.

The risk levels range from I (sustaining potentially no structural damage, and repairable if any damage occurs, with negligible life safety risk) to VII (unstable under existing vertical loads or earthquake, with an imminent threat to occupants and adjacent property). Buildings constructed today under current codes are typically "designed to" Level III, with Levels I and II reserved for buildings housing critical services, such as fire stations, emergency operations centers, and hospitals. The vast majority of existing court buildings were designated as Level IV or V, pending further review.

### What were the results of the seismic assessments?

Using a multitier assessment process, the state assigned preliminary risk levels to 225 buildings—some comprising multiple segments, for a total of 300 structures. Of these 300 structures, 72 were assigned preliminary ratings of Level IV or better, 147 had ratings of Level V or worse, and 81 were placed in the "pending" category.

During the evaluation process it was determined that less detailed risk level assessments had been made for certain structures than for the balance of the inventory, due to a lack of information or the need for analysis beyond that prescribed in the act. Although all 81 of these structures were initially assigned a preliminary risk level in accordance with procedures consistent with the methods of DGS, the AOC decided to classify these structures as "pending" until more information is gathered or analysis carried out during the due diligence and transfer process with individual counties.

### Does a designation of Risk Level V or higher mean that a building is unsafe?

Court facilities are no more or less vulnerable to seismic events than other buildings of similar age and construction type. The Seismic Assessment Program—as well as programs conducted by the federal government, other state agencies, universities, and cities—has found that most older buildings pose a risk that may be unacceptable in a

"design earthquake"—the maximum credible seismic event in an area. This risk level is not surprising given the development of increasingly sophisticated evaluation techniques and the evolving understanding of building performance in seismic events.

Consultants involved in the assessments caution against drawing conclusions, on the basis of an assigned rating, about the performance of a building in a hypothetical seismic event. Buildings assigned a risk level of IV, for example, could suffer structural and nonstructural damage resulting in a need for repairs or loss of use of the building. On the other hand, buildings assigned a risk level of V should not be assumed to be unsafe in every earthquake.

### What does "shaking intensity" mean?

This term "shaking intensity," as used in the building codes for new buildings, is a measure of the effect of an earthquake at a particular site (not to be confused with the single *magnitude* of a given earthquake). In the United States we use an intensity scale with 12 stages representing a range from imperceptible shaking to total destruction. Nationally applicable building codes for the design of new buildings are based on the shaking intensity expected at a site once every 500 years on average—hence the term "500-year event" (similar to the terms used in reference to storms and floods).

### How will the risk level assessment be used in the court facilities transfer process?

Under the provisions of the act, court buildings ultimately found to have seismic risk levels of V or higher may not be eligible for transfer unless provisions to correct the deficiencies are made in the transfer agreements. Seismic risk levels for individual court buildings will be one of many due diligence issues in transfer discussions between the state and counties. The findings of the Seismic Assessment Program will be incorporated into a long-range Judicial Council Capital Improvement Program.

### What's next?

CSAC and individual counties anticipate that it will take them a long time to evaluate the technical findings contained in the preliminary report. The act provides that, in the event of a dispute between the state and individual counties over the seismic sufficiency of any court facility, the state has the burden of proving deficiency. Accordingly, at this time CSAC and the counties do not endorse any of the findings about deficient seismic safety contained in the preliminary report, and they reserve the right to contest such findings, based upon their own technical evaluations, at any

time. The act also provides a procedure for hearing and adjudicating any such disputes between the counties and the state over the seismic safety of buildings.

With the information provided by the assessment, specific procedures can be set in motion to address the identified conditions as well as to evaluate the costs and benefits of seismic upgrades. These and other issues will inform the discussions between the state and the counties about the transfer of court facilities through June 30, 2007.

The AOC and CSAC encourage all residents of seismically active areas to take reasonable precautions to review earthquake preparation procedures. An excellent resource for identifying and correcting potential hazards is available from the California Seismic Safety Commission at www.seismic.ca.gov and the Governor's Office of Emergency Services at www.oes.ca.gov.

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*Additional resources:* Reference section of the California Courts Web site, www.courtinfo.ca.gov