

STRUCTURAL / SEISMIC PEER REVIEW PROTOCOL

The City of Los Angeles Building Code requires a structural design to be reviewed by an independent Structural/Seismic Peer Review Panel for structures using the performance-based design approach, nonlinear response history procedure, seismic isolators, damping systems, alternative lateral force procedures or other complex structures as deemed appropriate by the Department. The Los Angeles Department of Building and Safety (LADBS) has developed the following protocol to facilitate the independent structural peer review process.

The Structural/Seismic Peer Review Panel provides an independent objective, technical review of those aspects of the structural design of buildings or structures that relates to seismic performance according to the requirements and guidelines described in this Bulletin, and advises LADBS whether the design generally conforms to the intent of this Bulletin and other requirements set forth by LADBS.

I. Composition of the Structural Peer Review Panel

A focused Structural/Seismic Peer Review Panel (SPRP) shall consist of experts, approved by LADBS, with the following qualifications:

- a. A California State licensed Structural Engineer with experience in peer review, design, and analysis of buildings similar to the buildings or structures proposed.
- b. A California State licensed Geotechnical Engineer with experience in peer review, ground motion preparation, and analysis similar to the buildings or structures proposed.
- c. For buildings with more than 40 stories, buildings or structures with unusual structural systems, or buildings or structures with unconventional or atypical materials as determined by LADBS, a university professor responsible for testing and research will be added to the SPRP.

Selection Process for the SPRP

When the project design requires a Structural Peer Review (SPR), the design team shall request that LADBS start the SPRP selection process as follows:

1. The project team shall submit a Basis of Design describing the structural system and the analysis method to LADBS.
2. LADBS recommends a list of peer reviewers from an LADBS approved roster based on experience and expertise in the related field for the type of project.
3. The potential peer reviewers and the project team are required to submit a written statement that none of the LADBS recommended SPRP members will pose a conflict of interest for the subject project including:
 - a. Any member of the project team shall not have previously or currently participated in litigation with or against any members of the SPRP.
 - b. Any member of the SPRP shall not have submitted an unsuccessful bid for this project.
 - c. The project team shall not currently employ any member of the SPRP.

- d. Any member of the SPRP shall not be currently working on a project with any of the project team members.
4. After it is determined that there are no conflict of interest, the project team shall finalize the SPRP selection based on LADBS's recommendations. When the agreements are made, project team shall notify LADBS who the final SPRP team members are.
5. The contract between the SPRP members and the project owners shall adhere to and include the following information:
 - a. All requirements of this Information Bulletin
 - b. Scheduled meetings for the approval of the Design Criteria, Ground Motions and final building structural design by the SPRP.
 - c. Tasks of the SPRP during the project.
 - d. Services of the SPRP to be provided on behalf of the Los Angeles Department of Building and Safety.
6. The cost of the Peer Review Panel shall be borne by the owner/applicant and be independent of the plan review and permitting fees required by LADBS.

II. Tasks of the SPRP

The primary tasks of the SPRP include the following, and require a direct and personal participation by the peer reviewer for the project. Minor tasks may be delegated under supervision of the peer reviewer; however, the selected peer reviewer shall personally participate in all meetings and discussions, and shall be well versed in the details and specifics of the project:

- a. Review of the structural design.
- b. Meet with the design team.
- c. Provide recommendations, as needed, to verify the integrity of the structural system.

The scope of review of the structural design should include the following:

- a. Earthquake hazard determination,
- b. Ground motion characterizations,
- c. Seismic design methodology,
- d. Seismic design performance goals,
- e. Acceptance criteria,
- f. Mathematical modeling and simulation,
- g. Seismic design and results,
- h. Drawings and specifications, and
- i. Location of seismographs and building structural monitoring systems.

Once the structural design is deemed adequate, the SPRP will provide the following approved letters:

- a. A letter to LADBS indicating that the design criteria is accepted by the SPRP
- b. A letter to LADBS indicating that the ground motions are accepted by the SPRP
- c. A letter to LADBS indicating that the final building structural design is deemed adequate and meets the agreed upon design criteria and ground motion.

In an effort to facilitate the construction schedule, developers may request approvals from the SPRP to allow the commencement of the following construction phases:

- a. Early start shoring, excavation and foundation and basement retaining walls.
- b. Basement and structural system from footings to street level grade.

III. SPRP Communication Process Requirements

The developer and the SPRP shall adhere to the following requirements during the SPR process:

1. Correspondence:
 - a. All communication, including phone calls, between the project design team/owner and the peer reviewers shall be directed through LADBS staff.
 - b. The project design team shall submit initial plans to LADBS staff. LADBS staff will forward the initial plans to the peer reviewers.
 - c. Emails containing responses and comments sent between the project design team/owner and SPRP shall include LADBS staff as recipients.
 - d. A comment log shall be maintained with the SPRP's comments and Engineer of Record's written responses.
2. Meetings:
 - a. Meeting schedules throughout the SPR process shall be included as part of the agreement between LADBS, developer and SPRP.
 - b. All meetings between the SPRP and design team or developer for the project shall be held in the LADBS Metro office as much as feasibly possible or be held through online telephonic conference calls.
 - c. An explicit schedule for regular meetings shall be included in the contract between the developer and peer reviewers. The meetings shall be held until the ground motions and design criteria are approved by the SPRP. After these approvals, the frequency of the meetings may be changed or individual SPRP members may miss meetings based on the needs of the project, if both the SPRP and the design teams decide and confirm the agreement in writing.

The SPRP shall take into consideration the project schedule and be readily available for full participation to ensure timely review during the peer review process.

IV. How to Qualify an LADBS Structural/Seismic Peer Reviewer

Engineers interested in participating as an SPRP member shall send the following to LADBS for review and evaluation:

1. Resume indicating the peer reviewer's experience:
 - a. For the structural engineer, significant design experience and expertise related to the type of structure requiring peer review.
 - b. For the geotechnical engineering peer reviewer, significant experience in preparation of site-specific spectra and ground motion time histories in the local vicinity of the proposed project.
 - c. When a university professor is needed as a peer reviewer, significant experience in research and testing related to significant elements of the proposed structural system design.
2. List of projects that the candidate has been in responsible charge for the design, analysis, or peer review. The list of projects must indicate any atypical design criteria used specifically for the project.

Submit resumes and project lists Charles Chang charles.chang@lacity.org and Daniel Chan daniel.chan@lacity.org.