



STAFF REPORT

Meeting Date: September 2, 2014

To: Honorable Mayor & City Council

From: Susan Healy Keene, AICP, Director of Community Development
Raj Patel, City Building Official, Assistant Director of Community Development

Subject: Request-by Councilmember Mirisch to discuss City Council approval of seismic report for projects in the City

Attachments: Policy No. DSP-003, dated January 1, 2014, titled The City Policy for Site-Specific Seismic Fault Investigations

INTRODUCTION

This report transmits a request by Councilmember Mirisch for the City Council to consider whether staff should further explore a potential revision to the current review and approval process for project development site specific seismic investigations to require City Council approval and acceptance. This item resulted from a recent seismic fault rupture investigation and report accepted by the City specific to the 9900 Wilshire Blvd. project.

DISCUSSION

Project developments subject to site specific seismic investigations are required by current City regulations and practices to provide geotechnical and geological/seismic investigations for review and acceptance by the City prior to issuance of building permits, pursuant to Policy No. DSP-003, dated January 1, 2014, titled The City Policy for Site-Specific Seismic Fault Investigations (attachment). The City of Beverly Hills is known to be in a seismically active area, but not specifically within a mapped zone established by the State Geologist Survey (CGS). However, to ensure for public health, safety and welfare, as a matter of policy, the City follows the recommendations and guidelines established by the CGS, resulting from the Alquist-Priolo (AP) Act, outlined as follows:

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1. The Alquist-Priolo (AP) Act was enacted in 1972 following the February 1971 Sylmar earthquake. The main intent of the AP is to prevent construction of habitable

structures across an "active fault," presently defined by the State as "*a fault that has had surface displacement within Holocene time (about the last 11,000 years), hence constituting a potential hazard to structures that might be located across it.*" [14 Cal. Code Regs. Section 3601(a)].

2. The State Geologist (CGS) is mandated to establish earthquake fault zones (EFZ) across known or reasonably inferred active faults. A project affected by the AP (PRC Section 2621.6) generally includes any structure for human occupancy with the *exception* of the following:

A) Single-family wood-frame or steel-frame dwellings to be built on parcels of land for which geologic reports have been approved [by the lead agency, in this case, the City of Beverly Hills];

B) A single-family wood-frame or steel-frame dwelling not exceeding two stories when that dwelling is not part of a development of four or more dwellings.

3. The local agency may impose investigation requirements more restrictive than those imposed by State regulations. The City may require that applicants for developments of four or more "units," whether in or out of an AP zone, conduct appropriate, site-specific fault investigations that employ current professional standards-of-practice; and that these reports be subject to peer review by a technically qualified geologist retained by the agency.

The developer is responsible to provide the required investigations, which are submitted to the City for review and approval pursuant to Policy No. DSP-003, dated January 1, 2014, titled The City Policy for Site-Specific Seismic Fault Investigations (attachment). Since the City does not have a certified geologist on staff, all seismic investigation reports are reviewed by a certified peer reviewer designated and contracted with the City. The peer reviewer's responsibility is to review all the technical documentation, including the Consultant-of-Record's (in the recent case, Geocon) opinions and conclusions, as to the possible presence and relative impact of active faults within and adjacent to the proposed development, and conclude that the investigation meets the current geologic standard-of-practice for evaluating the site-specific potential for seismic surface fault rupture. When all issues that may be identified by the City's peer reviewer have been addressed, the City's reviewer provides a brief summary of the investigation and certifies that the investigation was completed in conformance with the current building codes and with current geologic-standards-of practice that ensure public health, safety and welfare. Upon recommendation of acceptance by the City's peer reviewer, the City Building Official would formally accept the Fault Investigation Study.

Requiring Council review and approval for technical studies is not (to our knowledge) a typical standard in the building permit approval process. Staff at this point has not conducted any surveys or studies on this approach and how other agencies in the region have addressed this issue nor an analysis of any implications of a change in the current

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review protocol. Should the City Council wish to explore other review and approval procedures for site specific geological investigations, staff would review the practices of other agencies, consider the potential ramifications of adopting an alternate review and approval protocol in conjunction with the City Attorney's Office, and return to the City Council with options for its consideration.

FISCAL IMPACT

No fiscal impact anticipated at this time.

RECOMMENDATION

Staff recommends that City Council receive the information provided and direct staff as appropriate.

Susan Healy Keene, AICP

Approved By

A handwritten signature in black ink that reads "Susan Healy Keene". The signature is written in a cursive style and is positioned below the printed name and the "Approved By" text.

Attachment 1



Policy No: DSP-003
Release Date: January 1, 2014
Effective Date: January 1, 2014

TITLE: The City Policy for Site-Specific Seismic Fault Investigations

PURPOSE:

The purpose of this policy is to ensure that non-exempt developments initiate a site-specific fault-rupture investigation according to the 2013 California Building Code and following procedures of the California Geological Survey (CGS). The major purpose of the site-specific seismic fault investigation is to identify and to prohibit construction of structures intended for human occupancy across the traces of active faults, and thereby to mitigate the hazard of surface and near-surface fault rupture.

INTRODUCTION

This report responds to the request by Councilmember Mirisch for the City Council to consider whether staff should explore potential revision to the current review and approval process for project development; and particularly, whether or not each site-specific seismic investigation should also require City Council approval and acceptance. This discussion stems from current procedures where a seismic fault rupture investigation and report for the 9900 Wilshire Boulevard project was recently peer-reviewed and ultimately accepted by the City staff.

BACKGROUND

Prior to issuance of building permits, current City regulations and practice require that applicants for proposed developments conduct an appropriate site-specific fault-investigation, the ultimate intent of which is to ensure public health, safety and welfare. The City of Beverly Hills is known to be in a seismically active area, but not yet within a mapped zone established by the California Geological Survey (CGS). However, the CGS has now initiated the first phase of their regional assessments of possible active faults that may affect the City (mostly relating to the Santa Monica Fault system). Accordingly, as a matter of public safety and policy, the City, as the lead agency, follows the authority given to the City Building Official by the 2013 California Building Code, including recommendations and guidelines established by the CGS and spelled out in regulations implementing the Alquist-Priolo (AP) Act, the pertinent provisions are outlined as follows:

1. the 2013 California Building Code, Chapter 18 Soils and Foundations, Section 1803 Geotechnical Investigations, subsection 1803.5.11 Seismic Design Categories C through F, states “For structures assigned to Seismic Design Category C, D, E, or F, a geotechnical investigation shall be conducted, and shall include an evaluation of all of the following potential geologic and seismic hazards:
 - i. Slope instability.
 - ii. Liquefaction.
 - iii. Total and differential settlement.
 - iv. *Surface displacement due to faulting or seismically induced lateral spreading or lateral flow.*
2. The Alquist-Priolo (AP) Act was enacted in 1972 following the February 1971 Sylmar earthquake. The main intent of the AP is to prevent construction of habitable structures across an “active fault,” presently defined by the State as “*a fault that has had surface displacement within Holocene time (about the last 11,500 years), hence constituting a potential hazard to structures that might be located across it.*” [14 Cal. Code Regs. Section 3601(a)].
3. The State Geologist (CGS) is mandated to establish earthquake fault zones (EFZ) across known or reasonably inferred active faults. A project affected by the AP (PRC Section 2621.6) generally includes any structure for human occupancy with the *exception* of the following:
 - A) Single-family wood-frame or steel-frame dwellings to be built on parcels of land for which geologic reports have been approved [by the lead agency, in this case, the City of Beverly Hills];
 - B) A single-family wood-frame or steel-frame dwelling not exceeding two stories when that dwelling is not part of a development of four or more dwellings.
4. The City may impose investigation requirements more restrictive than those imposed by State regulations. Additionally, the City may require that applicants for developments of four or more “units,” whether in or out of an AP zone, conduct appropriate, site-specific fault investigations that employ current professional standards-of-practice; and that these reports be subject to peer review by a technically qualified geologist retained by the agency.

PROCESSES AND PROCEDURES:

The developer is responsible to conduct the required fault-activity investigations. The documentation (usually draft and final reports) is then submitted to the City for review and potential approval. Since the City does not have professional geologist on staff, all fault

investigation reports are critiqued by a State licensed, technically qualified peer reviewer who specializes in fault assessments. This reviewer is retained by the City to assess the scope and technical documentation provided by the applicant's Consultants-of-Record, including their professional opinions and conclusions, as to the possible presence and relative impact of active faults within and adjacent to the proposed development. The peer reviewer also determines whether or not the particular site-specific investigation meets the current geologic standard-of-practice for evaluating potential surface-fault rupture.

When all fault issues have been adequately addressed, the City's reviewer briefly summarizes the investigation scope and conclusions, and whether or not these conform to current building codes and geologic standards-of-practice. Ultimately, if warranted, the Reviewer then provides the City with a formal "Recommendation for Acceptance." Under current practice, and as common in other lead agencies, the local Building Official relies on the peer review to make an informed decision about acceptance. In the interest of public health and safety and as provided in the 2013 California Building Code (see above), other geologic and geotechnical concerns may also have to be addressed; e.g., potential ground deformation owing to seismically induced liquefaction. The appropriate investigations for these seismic and other pertinent geotechnical issues are then reviewed by the City's in-house staff or by a contracted specialist as needed. When all code-mandated investigations have been completed and accepted, the City Building Official may then issue a building permit.

ATTACHMENTS / REFERENCES:

- 1.) Guidelines for Evaluating Potential Surface-Fault Rupture Within the City of Beverly Hills, California



GUIDELINES FOR EVALUATING POTENTIAL SURFACE-FAULT RUPTURE WITHIN THE CITY OF BEVERLY HILLS, CALIFORNIA

As Lead Agency, the City of Beverly Hills has the regulatory authority to protect the health, safety, and welfare of the public by minimizing the potential adverse effects of surface-fault rupture. Accordingly, the City requires that all proposed development of habitable structures for four or more occupants complete an appropriate “standard-of-practice” geological investigation to ensure that active faults do not underlie the site or, if present, are appropriately mitigated by avoidance (structural setbacks). All sites are different, and hence a wide variety of geological investigation techniques may be appropriate for a specific location. The following Guidelines and general information recognize this reality, and enumerate general procedures to assist the permit applicant and the consultants-of-record to conduct adequate and yet reasonable investigations consistent with maintenance of public health and safety.

1. An “active fault” is currently defined by the California Geological Survey (CGS) as one having surface or near-surface ground rupture within the last ~11,500 years, regardless of recurrence interval or amount of displacement per event. The City follows this definition but recognizes that in certain situations, on a site-specific basis, well documented engineering mitigation may be appropriate.
2. Fault-rupture investigations must meet current geologic standards-of-practice. Such practice changes over time. It is therefore the duty of the consultants-of-record to keep abreast and to employ the latest investigation techniques. Many such techniques are provided in CGS Note 49 “Guidelines for Evaluating the Hazard of Surface Fault Rupture;” a document that is periodically revised and readily available via the CGS website.
3. Currently, well documented trenches of sufficient length and depth are regarded as the “best” indicator of potential fault presence and relative activity. Such subsurface exploration, as needed for a specific site, may also require emplacement, collection and interpretation of continuous cores, advancement and interpretation of cone penetrometer tests (CPT), and – if appropriate – geophysical surveys. Trench depth and number of cores or applicability of other exploratory techniques will vary from site to site, and thus no specific procedures are specified other than the requirement to carry out standard-of-practice investigations. The consultants-of-record should be aware of and employ appropriate investigation techniques, many of which are spelled out in CGS Notes 42 and 44, respectively, both readily available on the CGS website.

4. The geological investigation should be under the supervision of a *technically qualified*, Professional Geologist (PG) licensed in the State of California.
5. Trench exposures, continuous cores and other site-specific geologic data should be observed by the City "Peer Reviewer" in order to identify possible technical issues early in the investigation.
6. It is recommended that, prior to commencement of geologic investigations, the Consultants-of-Record meet, or otherwise communicates, with the Peer Reviewer to assure that the proposed investigations are reasonable and will likely meet the City guidelines.
7. The Applicant, through the Consultants-of-Record, will submit a draft report to the City (for transmittal to the Peer Reviewer) that describes the investigation procedures, and the provisional conclusions. As needed, the Peer Reviewer will comment on, or otherwise assist the Consultants in formal meetings or written communication about the adequacy of the report. Ostensibly, after, surface fault rupture critique of any revised documentation, the Peer Reviewer will recommend "acceptance" when the report complies with the City's requirements.
8. As needed, the Peer Reviewer can respond to technical questions of the Consultants during the entire review process.
9. These Guidelines apply only to investigation of potential surface-fault rupture. Requirements to investigate, identify and mitigate other possible geological or geotechnical hazards, such as high seismic accelerations, liquefaction and related ground deformation, or landslides and mudflows, are currently subsumed within the latest California Building Codes and thus subject to review by City officials or by a designated external peer reviewer.