

UNDERSTANDING THE CITY OF OAKLAND'S SOFT STORY SEISMIC RETROFIT ORDINANCE

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In 2009, the City of Oakland passed a mandatory ordinance (No. 12966) requiring owners of certain buildings to undergo structural screening to determine if the building contains a potential “soft story” at its lowest level, typically comprised of large open areas compared to the stories above.

In 2019, the City of Oakland passed a second ordinance (No. 13516, “Mandatory Seismic Evaluation and Retrofit of Certain Multi-unit Residential Buildings”), which requires the evaluation and retrofit of multi-unit, wood-framed structures that meet the following criteria:

- | Building contains five or more residential units
- | Has a vulnerable lower story or crawl space
- | Was permitted for construction before 1 January 1991, or designed based on the 1985 or earlier edition of the Uniform Building Code



COMPLIANCE TIERS AND DEADLINES

All buildings located in Oakland that fit these criteria are subject to this ordinance. Buildings that are included in the program fall under three compliance tiers, depending on the building occupancy group:

- | **Tier 1-LB:** Buildings with twenty or more dwelling units not eligible for Tier 3.
- | **Tier 1-NR:** Buildings whose owners failed to comply with the 2009 Soft Story Screening Program (OMC Section 15.26.230).
- | **Tier 2:** Buildings with five to nineteen dwelling units not eligible for Tier 3.
- | **Tier 3:** Buildings where the soft story (or “target story”) contains residential or commercial space. Owners of buildings with commercial space at the target story must demonstrate that at least one commercial unit is non-vacant.

Building owners who receive notice from the City of Oakland can follow the following compliance steps:

1. File a petition for exemption (optional).
2. File a petition to change the building’s compliance tier (optional).
3. Hire a structural engineer to perform the mandatory evaluation and prepare a Schematic Design Report, which identifies non-structural hazards. The owner must submit an Initial Affidavit of Compliance to the City of Oakland acknowledging that he or she has received the Schematic Design Report.
4. Hire a structural engineer to design any needed retrofits and prepare drawings, and then submit the retrofit plans. If the building complies without strengthening, in lieu of retrofit drawings, a structural engineer can prepare an evaluation report for submission.
5. Perform any necessary retrofit construction and obtain approval on final inspection.

Deadlines vary for each step based on compliance tier:

Assigned Compliance Tier	STEP 1. Document that building is not a subject building	STEP 2. Document that building is eligible for a later compliance tier	STEP 3. Perform mandatory evaluation and submit initial affidavit of compliance	STEP 4. Obtain retrofit permit or submit Target Story evaluation report	STEP 5. Perform retrofit work and obtain approval on final inspection; submit final affidavit of compliance
Non-subject building	2/21/2020	NA	NA	NA	NA
Tier 1-LB or Tier 1-NR	2/21/2020	2/21/2020	2/21/2021	2/21/2022	2/21/2023
Tier 2	2/21/2020	2/21/2020	2/21/2022	2/21/2023	2/21/2024
Tier 3	2/21/2020	NA	2/21/2023	2/21/2024	2/21/2025

Table from OMC13516, Section 15.27.070.

UNDERSTANDING SEISMIC RETROFITS

Structural engineers can help building owners and property managers assess their buildings and prepare plans for seismic retrofits. SGH has intimate knowledge of the requirements and allowable engineering procedures in the City of Oakland's soft story ordinance. In our Oakland and San Francisco offices, we have a large staff of licensed structural engineers who are knowledgeable regarding the performance of these types of buildings through studying their performance in the 1989 Loma Prieta and 1994 Northridge earthquakes. The engineers have participated in numerous studies and have published many technical papers on soft story buildings.

Building owners and property managers turn to SGH when they need thoughtful, expert engineering guidance. We have evaluated and retrofitted hundreds of buildings with seismic deficiencies, including those with soft, weak, and open fronts. Our clients value the high standards we set for design efficiency, constructability, and long-term durability. If a soft story building requires seismic upgrades, SGH can help.



SHARING LESSONS LEARNED

San Francisco's soft story ordinance work is wrapping up as most deadlines have passed. We worked on projects in a variety of roles, including verifying previously completed San Francisco soft story ordinance screening forms, determining whether previous retrofits satisfy the requirements of the ordinance, or acting as the engineer-of-record for the retrofit. In completing these projects for this mandatory ordinance, we learned several important lessons, including the need for better communication between owners and all members of the design and construction team, especially for building owners who have not previously participated in construction projects. Even if an owner views the project as something that is being forced upon them, it is in their interest to make sure that the work being done is of high quality and will perform well when an earthquake happens.

The chances of having a quality project are enhanced when an owner understands the required steps and roles of the individuals involved. In addition to the structural engineer, who will analyze the building and develop a retrofit design, each retrofit project will have a contractor (possibly with subcontractors) to perform the construction, a special inspector and testing lab to verify work is performed as required, and a city inspector who will occasionally check on project progress and quality. Some projects will also require other consultants, such as an architect, a mechanical engineer, or a geotechnical engineer. When multiple consultants have significant scope, it may be appropriate to assign a principal consultant who coordinates the work of all consultants. Historically, an architect serves the role of principal consultant in construction projects, but when most of the work is structural, the structural engineer may be an appropriate choice.

ADDITIONAL RESOURCES

For more information about the soft story ordinance, visit the City of Oakland's [Mandatory Soft Story Retrofit Program site](#).

For more information on soft story projects, read a [step-by-step guide to these projects](#).



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