



**DATE:** June 25, 2019

**TO:** Mayor and City Council

**FROM:** Development Services Director

**SUBJECT:** Introduction of an Ordinance to Establish a Soft Story Seismic Screening Program for Multifamily Residential Buildings and Voluntary Seismic Retrofit Standards for Soft Story Buildings

### **RECOMMENDATION**

That the City Council introduces the attached Ordinance (Attachment II) establishing a soft story seismic screening program for multifamily residential buildings and voluntary seismic retrofit standards for soft story buildings.

### **SUMMARY**

Multifamily wood frame buildings with soft, weak, or open-front (“soft story”) conditions are at risk of severe damage or collapse in the event of a major earthquake. Staff estimates that approximately 280, pre-1979, five or more unit buildings in Hayward are potential soft story buildings. In the past decade, several California cities (including San Francisco, Berkeley, and Oakland) have developed soft story retrofit programs to reduce the risk of collapse of soft story buildings in their jurisdictions. During a March 26<sup>th</sup> work session, Council directed staff to return with an ordinance establishing a mandatory screening program and voluntary retrofit standards for soft story buildings. The proposed ordinance fulfills this direction.

### **BACKGROUND**

The United States Geological Survey (USGS) predicts that there is a 72% probability of a major (M6.7 or greater) earthquake in the Bay Area by the year 2043. Of the 32 faults included in this analysis, the Hayward fault is the most likely to rupture and cause a damaging earthquake.

Some building types are more vulnerable to serious damage and potential collapse in a major earthquake. Engineers and other seismic safety professionals have identified so-called “soft story” buildings – multi-story wood-frame buildings with large open spaces on the first floor as one such building type. These building types are most commonly multifamily residential structures with retail, open garage space, or “tuck-under” parking on the ground floor. In recognition of the concerns specific to the seismic performance of wood-frame multifamily

housing, several California cities have passed ordinances mandating or supporting the screening and retrofit of soft story buildings.

The City Council has identified soft story retrofits as a seismic mitigation priority in multiple policy documents over the past five years:

- Soft story retrofit is encouraged by Goal HAZ-2.9 of the Hayward 2040 General Plan Policy Document
- Soft story retrofit is identified as a High priority by Hayward's 2016 Local Hazard Mitigation Plan
- A soft story mitigation ordinance is listed as task 2.d.3.a of Hayward's Complete Communities Strategy Two-Year Action Plan for FY 2018 and FY 2019.

On July 19, 2016, the City Council held a work session on seismic retrofits to soft story buildings. At the time, staff recommended a mandatory seismic retrofit program for wood frame, two-story buildings with five or more units, built prior to 1979. Following that work session, the ordinance was set aside to focus on addressing community concerns regarding increased rental housing costs.

During the March 26, 2019 City Council meeting, staff returned with a recommendation to establish a voluntary seismic retrofit program, seeking feedback from the City Council on the type of program, building ages and types to be included in the program, performance goals for seismic retrofit standards, and other policy considerations and potential incentives related to the program. Following the work session, staff engaged a structural engineer with expertise in developing soft story retrofit programs to draft the proposed ordinance.

## **DISCUSSION**

Working with an engineering consultant, staff has developed a soft story screening program designed to achieve the following goals:

- *Improve current building data in support of future response, recovery, and mitigation planning.* The City's current data comes primarily from the Alameda County Assessor's records. As such, it includes almost no information about construction materials, structural systems, or seismic vulnerabilities. Additionally, the Assessor's data is provided at a parcel level, so it is unclear about individual buildings within the City's many multi-building parcels.
- *Increase awareness of the existence and potential risk of soft story buildings among building owners and tenants.* Building owners may not be aware that their building could have a soft story condition, may not have confirmed it, and may not know how to address it. Tenants may not know the buildings they live in could have soft story conditions.

To achieve these goals efficiently and effectively, the proposed ordinance establishes a seismic screening program for multi-family buildings that consists of a screening form to be completed by a design professional. The program does not require an engineering evaluation, which can easily cost upwards of \$15,000 per building. Screening, by contrast to evaluation, is largely qualitative and is intended to reach a quick conclusion based on broad structural properties that are readily observed. Screening can be a challenge for concrete or steel structures where the critical elements are hidden, but it is very well suited to potential soft story wood frame buildings.

Since the ordinance is designed to improve data and increase awareness and does not mandate retrofits of buildings with soft story conditions, requiring costly engineering evaluations is unnecessary. However, the ordinance encourages voluntary retrofit by requiring additional evaluation to rule out suspected vulnerability or voluntary retrofit to eliminate a real vulnerability in order for buildings who are not eliminated via the screening program to be removed from the list of potentially at-risk buildings.

**Scope**

As previously presented, the screening program will apply to residential buildings with two or more stories built prior to 1979, when seismic zone 4 was incorporated into the California Building Code.

In the March 26<sup>th</sup> work session, several Councilmembers expressed a preference for including multifamily buildings with fewer than 5 units in the screening program. Staff has incorporated this preference for screening buildings with 3 or more units into the attached ordinance. Including 3- and 4-unit residential buildings effectively furthers the screening program goals of data collection and education and without the financial burden of an engineering evaluation shouldn't unduly burden owners of 3- and 4-unit buildings.

**Table 1:** Hayward parcels with pre-1979 multifamily residential buildings with 2 or more stories

	Parcels with 5-unit or larger buildings	Parcels with 3-unit or larger buildings
<b>Number of parcels:</b>	230	417
<b>Number of buildings:</b>	590	930
<b>Number of residential units:</b>	6,800	8,100
<b>Portion of total housing stock:</b>	14%	17%
<b>Portion of multi-family stock:</b>	44%	53%

*Source: Alameda County Assessor*

By including the 3- and 4-unit buildings, the size of the program increases by 60 to 80 percent relative to a program for just 5-unit buildings (See Table 1). For the additional effort, staff will learn or confirm data for an additional 3% of the City's housing stock. Even so, since the main purpose of the screening program is to inform citywide mitigation planning, it will be valuable to have data from all of the multi-unit buildings. Indeed, if the smaller buildings are to be

exempted from a future retrofit mandate, or eligible for separate incentives, that decision will need to be based on data that will only be available if it's collected as part of the screening program.

## **Timeline**

As written in the ordinance, the building official will notify owners that their buildings may be subject to the screening program within 90 days of the ordinance effective date. Once the notices and screening forms have been distributed, owners will have 12 to 18 months to return the screening form, depending on the number of units in their building. The deadlines outlined in the ordinance are as follows:

- For 5+ unit buildings: 12 months
- For 3+ unit buildings: 18 months

Previous conversations with stakeholders and Council work sessions suggested tentative screening deadlines of 18 months for 5-unit and larger buildings, and 24 months for 3- or 4-unit buildings. At the time, the recommendation assumed that each building would be required to complete a full engineering evaluation. Now, with the simpler screening process that typically takes only a few hours for each building, shorter deadlines seem reasonable. A shorter overall program makes more efficient use of resources, minimizes dead time between early and late compliers, minimizes complications related to change of ownership or staff, and allows the City to move more quickly to analysis and use of the submitted data.

## **Implementation and Incentives**

Based on Council direction during the March 26<sup>th</sup> work session and the expertise of the consultant, below is a summary of the policy considerations that informed the proposed ordinance:

*Exemption from future designations.* Owners might be wary of undertaking a voluntary retrofit if they think a later mandate will require them to redo or supplement the work. California Health and Safety Code Section 19166 anticipates this concern by providing a 15-year waiver period for soft story retrofit. The proposed ordinance clarifies this HSC provision with regard to when the conformance period begins, which code provisions still apply during the period, and what is required when the period ends.

*Parking requirements.* Per Council direction, staff has not included parking requirement exemptions specifically for soft story retrofits. In cases where the number of available parking spaces may be impacted by seismic retrofitting, owners will be able to request exemption from parking requirements through pre-established City policies for granting exemptions, which will be granted or denied at staff discretion.

*Noticing requirements.* There are two main reasons to require owners to either post signs or otherwise disclose to tenants that a building has a soft story deficiency. The first is to help

current and prospective tenants make informed choices about their own earthquake risk. The second is to nudge owners to retrofit, assuming they will want to avoid the possible stigma associated with a public disclosure. Based on academic studies of voluntary soft story retrofit programs in other jurisdictions, neither of these goals are achieved by including noticing requirements. Noticing requirements are difficult to enforce without visual inspection (in the case of posted signs) or complaints from unnotified tenants (in the case of letters). Since staff will be administering the list of buildings subject to the screening program, and Council has indicated that they would like this information included in the forthcoming citywide rental housing database, staff can administer and promote a list and map with information on buildings subject to the screening program and whether they have been determined to not have a soft story condition. This will provide the Hayward community with accurate information without the additional and unreliable administrative burden of enforcing posting or noticing requirements.

*Financial incentives and assistance.* Staff has continued to research financial assistance options for building owners seeking to complete soft story seismic retrofits. The few possible programs that exist are cumbersome, time-consuming, and have intensive administrative requirements. Since this ordinance only requires a relatively inexpensive screening and does not mandate seismic retrofits, staff will not be pursuing or establishing funding programs at this time.

## **Retrofit Standards**

As owners become aware of the status of their buildings, some might decide to undertake voluntary evaluation to rule out a suspected vulnerability or voluntary retrofit to eliminate a real one. The ordinance provides criteria for this voluntary work.

The ordinance includes the adoption of retrofit standards for voluntary soft story seismic retrofits intended to reduce the risk of building collapse in a major earthquake. These retrofit standards provide a means by which owners whose buildings are potentially at risk in an earthquake due to a soft story condition as determined during the screening program may be no longer identified as such. The retrofit standards provide flexibility for building owners to work with a design professional to determine what configuration of seismic retrofit best suits their buildings and their budgets by allowing owners to choose from multiple guidance documents.

## **ECONOMIC IMPACT**

To the extent that these retrofits prevent collapse in an earthquake, they can potentially limit economic losses and speed recovery. The immediate economic impact of a major earthquake on the Hayward Fault would include the probable loss of several thousand housing units, creating a tremendous need for short-term housing and support among a portion of our population likely to have limited resources. The anticipated longer-term economic impact would include permanent loss of multi-family housing stock, causing long-term displacement of residents from the City of Hayward, blight, and a prolonged recovery from the disaster.

## **FISCAL IMPACT**

Staff does not anticipate additional fiscal impacts from the adoption of this ordinance. The screening program can be administered at current staffing levels and technical assistance for the implementation of the program will be provided by the consultant within the scope of the current contract.

## **STRATEGIC INITIATIVES**

This agenda item supports the Complete Communities Strategic Initiative. The purpose of the Complete Communities Initiative is to create and support structures, services, and amenities to provide inclusive and equitable access with the goal of becoming a thriving and promising place to live, work, and play for all. This item supports the following goal and objective:

Goal 2: Provide a mix of housing stock for all Hayward residents and community members, including the expansion of affordable housing opportunities and resources.

Objective 4: Increase supply of affordable, safe, and resilient housing in Hayward.

## **PUBLIC CONTACT**

In preparation for the March 26<sup>th</sup> Council work session, staff met with multifamily housing property owners and managers who operate in Hayward, as well as representatives from the Rental Housing Association. Some of the concerns that arose from these conversations included:

- Consistency – owners and managers were concerned with consistent and predictable interpretation and application of retrofit standards between City staff and contracted service providers. Staff will develop guidance documents for internal and external plan checkers and building inspectors to ensure consistency in the application of the requirements for soft story retrofits.
- Incentives – owners and managers supported an exemption from future increased or mandatory retrofit standards for 15-20 years following the completion of a voluntary retrofit.
- Timeline – owners and managers indicated that two years was an appropriate timeline for compliance with a screening program that included an engineering evaluation.

The latter two concerns have been incorporated into the ordinance as presented today and concerns about consistency will inform the implementation of the ordinance.

## **NEXT STEPS**

If Council introduces the attached ordinance, it will be adopted at the July 2, 2019 regular Council meeting via a consent item and will become effective on August 1, 2019. Staff will

work to implement the ordinance, including developing guidance documents for building owners and design professionals and a public information strategy for all stakeholders.

*Prepared by:* David Bonowitz, Consulting Engineer  
Laurel James, Management Analyst

*Recommended by:* Laura Simpson, Director of Development Services

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', written in a cursive style.

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Kelly McAdoo, City Manager