File No. 250211 **Committee Item No.** 3
Board Item No. 26

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee: Land Use and Transportation **Date:** April 21, 2025
Board of Supervisors Meeting: **Date:** April 29, 2025

Cmte Board

Cmte	Board		
☐	☐	**Motion**	
☐	☐	**Resolution**	
☒	☒	**Ordinance**	**- VERSION 2**
☒	☒	**Legislative Digest**	**- VERSION 2**
☐	☐	**Budget and Legislative Analyst Report**	
☐	☐	**Youth Commission Report**	
☒	☒	**Introduction Form**	
☐	☐	**Department/Agency Cover Letter and/or Report**	
☐	☐	**MOU**	
☐	☐	**Grant Information Form**	
☐	☐	**Grant Budget**	
☐	☐	**Subcontract Budget**	
☐	☐	**Contract / DRAFT Mills Act Agreement**	
☐	☐	**Form 126 – Ethics Commission**	
☐	☐	**Award Letter**	
☐	☐	**Application**	
☐	☐	**Public Correspondence**	

OTHER

☐	☒	ADM Presentation – April 21, 2025
☒	☒	BIC Transmittal – April 17, 2025
☒	☒	CEQA Determination – April 1, 2025
☒	☒	Referrals CEQA and BIC – March 12, 2025
☐	☒	Referral BLA – April 23, 2025
☐	☐	
☐	☐	
☐	☐	
☐	☐	

Prepared by: John Carroll **Date:** April 17, 2025
Prepared by: John Carroll **Date:** April 25, 2025
Prepared by: **Date:**

[Existing Building Code - Concrete Building Inventory Assessment]

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this ordinance to the California Building Standards Commission upon final passage.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in ~~*strikethrough italics Times New Roman font*~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. General Findings.

(a) The Planning Department has determined that the actions contemplated in this ordinance comply with the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of Supervisors in File No. 250211 and is incorporated herein by reference. The Board affirms this determination.

(b) On April 16, 2025, the Building Inspection Commission considered this ordinance at a duly noticed public hearing pursuant to Charter Section 4.121 and Building Code Section 104A.2.11.1.1.

(c) San Francisco is located in an area of high seismic activity; earthquakes in the future. A damaging earthquake of magnitude 6.7 or greater has a 72% chance of occurring in the Bay Area before 2043, according to the United States Geological Survey (USGS).

(d) Older concrete and concrete tilt-up (rigid-wall-flexible-diaphragm) buildings can experience damage and collapse during large earthquakes, according to San Francisco's Community Action Plan for Seismic Safety (CAPSS). Older concrete buildings have suffered catastrophic collapses in recent earthquakes in Mexico City, Christchurch, New Zealand, and Turkey.

(e) Identifying concrete and rigid-wall-flexible-diaphragm buildings is a high priority recommendation in the Earthquake Safety Implementation Program, San Francisco's 30-year plan for improving seismic safety. CAPSS estimates that 50% of all structural casualties in a magnitude 7.2 San Andreas fault earthquake would occur in concrete buildings.

(f) The City has developed a preliminary inventory of potential concrete buildings, which builds on prior versions of an inventory developed by the Concrete Coalition and the Structural Engineers Association of Northern California. To definitively determine whether a building is concrete and contains vulnerabilities that put it at higher risk during an earthquake, a qualified structural engineer needs to assess the building.

(g) The City is developing the Concrete Building Safety Program (CBSP) to identify and address vulnerable concrete buildings in San Francisco, with the following goals: protect life and public safety, preserve housing and critical uses, protect the economy, preserve City vitality and character, and speed earthquake recovery.

(h) In an April 2024 report entitled "Stakeholder Engagement for the Concrete Building Safety Program," a working group of internal and external stakeholders advised the City in the development of the CBSP.

(i) On April 16, 2024, Mayor Breed issued Executive Directive 24-01, directing the Office of Resilience and Capital Planning and Department of Building Inspection to draft an ordinance mandating screening and publishing of retrofit standards in the San Francisco Existing Building Code.

Section 2. Findings Regarding Local Conditions.

(a) California Health and Safety Code Sections 17958.7 and 18941.5 provide that local jurisdictions may enact more restrictive building standards than those contained in the California Building Code, provided that the local jurisdictions make express findings that each change or modification is reasonably necessary because of local climate, geologic, or topographic conditions and that the local jurisdictions file the local amendments and required findings with the California Building Standards Commission before the local changes or modifications can go into effect.

(b) The Board of Supervisors hereby finds and declares that the following amendments to the San Francisco Building Code are reasonably necessary because of local climatic, topological, and geological conditions as discussed below.

(1) The topography of San Francisco creates increased risk of damage from seismic events due to high density of buildings on very small lots, steep slopes, and high population density. It is necessary and appropriate to adopt safety measures that assess and reduce cumulative seismic risk from existing buildings across the City.

(2) San Francisco's geologic conditions produce increased risk for earthquake-induced ground failure due to local hazardous seismic microzones, slide areas, and local liquefaction hazards. It is necessary and appropriate to reduce seismic risk and increase resiliency by assessing the inventory of vulnerable buildings and adopting voluntary retrofit standards to mitigate seismic risk in existing buildings.

Section 3. Chapters 3 and 5 and the Appendices to the Existing Building Code are hereby amended by revising Section 304.4 (including Section 304.4.1) and adding Chapter 5G (consisting of Sections 501G.1, 501G.2, 501G.3, 501G.4, 502G.1, 502G.2, and 502G.3) and Appendix A, Chapter A6, to read as follows:

SECTION 304 – STRUCTURAL DESIGN LOADS AND EVALUATION AND DESIGN PROCEDURE

* * * *

304.4 Minimum Lateral Force for Existing Buildings.

304.4.1 General. This section is applicable to existing buildings when invoked by SFEBC Section 503. This section may be used as a standard for voluntary upgrades.

An existing building or structure which has been brought into compliance with the lateral force resistance requirements of the San Francisco Building Code in effect on or after the dates shown in Table 304.4.1 shall be deemed to comply with this section except when a vertical extension or other alterations are to be made which would increase the mass or reduce the seismic resistance capacity of the building or structure. Where multiple building types apply, the later applicable date shall be used. Where none of the building types apply, compliance shall be at the discretion of the Director. Building type definitions are given in ASCE 41, Table 3-1.

TABLE 304.4.1 – DATES REQUIRED TO DEMONSTRATE BUILDING COMPLIANCE

Building Type	***Date of Compliance***	***Model Code (for reference)***
* * * *		

Reinforced concrete moment-resisting frame (Type C1)	~~12/28/1995~~ 7/1/1999	UBC ~~1994~~ 1997
Reinforced concrete shear walls (Types C2 & C2a)	~~12/28/1995~~ 7/1/1999	UBC ~~1994~~ 1997
* * * *		

* * * *

CHAPTER 5G: BUILDING INVENTORY ASSESSMENT OF RIGID-WALL-FLEXIBLE-DIAPHRAGM AND ~~OTHER~~CERTAIN CONCRETE BUILDINGS

501G.1 Intent. *This Chapter 5G is intended to advance public safety through a building inventory assessment and notification process regarding the seismic safety risks* ~~and retrofit options~~ *for Rigid-Wall-Flexible-Diaphragm* ~~("RWFD")~~ *and* certain *Concrete Buildings* ~~("CB")~~ *vulnerable to earthquake damage and collapse.* ~~The retrofit options for Concrete Buildings are intended to provide voluntary and practical pathways to reduce earthquake-related deaths and injuries and reduce the economic impacts of a damaging earthquake.~~ There is no mandatory requirement to seismically retrofit Rigid-Wall-Flexible-Diaphragm or Concrete Buildings, except when triggered by addition, alteration, repair, change of occupancy, relocation, or other work regulated by the Existing Building Code. It is the intent of the Board of Supervisors that, absent a compelling public safety necessity, buildings that are exempted as a result of the inventory assessment of Section 501G.4 and buildings that are voluntarily retrofitted pursuant to Appendix A, Chapter A2 for Rigid-Wall-Flexible-Diaphragm buildings or Chapter A6 for Concrete Buildings, will be exempt from any local mandatory seismic retrofit requirements for 20 years after the effective date of the ordinance in Board File No. 250211. Such a building shall not be exempt from requirements associated with any addition, alteration, repair, change

of occupancy, relocation, or other work regulated by this Code. All seismic retrofit work must be duly permitted, completed, and inspected to qualify for the exemption.

501G.2 Definitions. In addition to the definitions in San Francisco Building Code Chapter 2 and San Francisco Existing Building Code Chapter 2, the following shall apply for purposes of this Chapter 5G:

Rigid-Wall-Flexible-Diaphragm ("RWFD") Building. A one-story building or building portion, not counting mezzanines, with a seismic force-resisting system that would be classified by the latest edition of ASCE 41 as either PC1, RM1, or C2a with flexible roof diaphragm.

Concrete Building ("CB"). A building where (1) vertical elements of concrete construction, such as walls or columns, support gravity load from floors or roofs; and/or (2) vertical elements of concrete construction are part of the lateral-force-resisting system.

501G.*~~3~~2 *Subject Buildings. The building inventory assessment required by this Chapter 5G shall apply to the following, which are defined as Subject Buildings:~~This Chapter's provisions shall apply to:~~

(a) Rigid-Wall-Flexible-Diaphragm buildings where the total footprint area of all RWFD portions is larger than 3,000 square feet, and any RWFD portion was constructed or permitted for construction before July 1, 1999 or designed based on a code adopted or amended before that date and has not been retrofitted pursuant to Appendix A, Chapter A2; and

(b) Concrete Buildings not exempted below.~~where (1) vertical elements of concrete construction, such as walls or columns, support gravity load from floors or roofs; and/or (2) vertical elements of concrete construction are part of the lateral-force-resisting system.~~

(c) This Chapter refers to any such RWFD or CB as a subject building unless and until it is found to not meet the requirements of Section 501G.3(a), or it is found to *be exempt from the inventory assessment pursuant to Section 501G.*~~4~~3 ~~below~~. *Any building for which the Department has*

sent notification or screening instructions referring to this Chapter is also a subject building until it is found to be exempt.

501G.4~~3~~ Exemptions for Certain Concrete Buildings. *Concrete Buildings for which one or more of the following apply are not subject buildings,* ~~and will not be included in the building assessment inventory upon submittal and~~ as determined by *Department approval of a Screening Form as required by Section 502G.1:*

*(a) **Age.** The building complies with Section 304.4.1.*

*(b) **One-story.** The building has no more than one story above grade plane, as defined in San Francisco Building Code Chapter 2, excluding mezzanines.*

*(c) **Two-story.** The building conforms to all the following:*

- *The building has no more than two stories above grade plane, excluding mezzanines;*
- *The building does not include concrete columns or wall piers*~~, as defined in Section 501G.2~~*; and*
- *The building includes a structural reinforced concrete diaphragm at the second floor, the roof, or both.*

*(d) **Complete steel frame.** Steel columns support all the gravity floor load and roof load, and steel columns are connected to steel beams.*

*(e) **Concrete used only for floors, roofs, foundations, or basements.** All concrete elements that define the building as a* Concrete Building~~subject building~~ *extend less than four feet above adjacent grade.*

*(f) **Previous retrofit.** There is building permit documentation that the building has been seismically retrofitted to meet one of the following:*

- *Section 304.3 of the 2022 SFEBC*
- *Section 303.4 of the 2019 SFEBC*

• *Section 301.2 of the 2016 SFEBC*

• *Section 3401.10 of the 2013 SFBC*

• *Section 3401.8 of the 2010 SFBC*

• *Section 3403.5 of the 2007 SFBC*

(g) ***One- and two-family dwellings.*** *The building conforms to all the following:*

• *The building contains no more than two dwelling units.*

• *The building contains only Group R 3 occupancy and incidental Group U occupancy.*

(h) ***Light -frame over one-story concrete podium.*** *The building conforms to all the following:*

• *All concrete elements that define the building as a* Concrete Building~~subject building~~ *extend no more than one story above grade plane.*

• *All stories above the concrete story consist of light-frame (wood or cold-formed steel) construction.*

~~**502G – Screening Process**. The Department shall develop a screening process that notifies owners of potential subject buildings, provide them with a Screening Form to see if any exemptions apply, and educates them about the voluntary retrofit pathways available to reduce seismic vulnerability.~~

502G.1 Screening Process. The owner of each subject building shall comply with the reporting requirements of this Section 501G.1.

The Department shall notify owners of potential subject buildings that such buildings may be included in the CB and RWFD building assessment inventory. The Department shall provide owners with a Screening Form to confirm the existing structural systems and determine whether exemptions apply.

The owner of each building who has been notified that their building is within the scope of this Chapter 5G, as well as all other owners of buildings that may be subject to this

Chapter, shall submit to the Department within the time limits set forth in 502G.2 a properly completed Screening Form. Where required by the Screening Form, the owner shall engage an appropriately licensed design professional to complete the form.

If the owner believes exemptions apply, as specified in Section 501G.4, the owner and their design professional, where required, shall denote this on the completed Screening Form and shall return the form to the Department.

Additional information shall be provided to the owner informing the owner about the seismic retrofit requirements of Appendix A available to reduce seismic vulnerability.

502G.2~~1~~ Screening Form. *Within six months of the effective date of the ordinance in Board File No. 250211 enacting Chapter 5G, the Department shall* create a list of potential subject buildings and associated mailing list of owners,~~draft and~~ *issue Screening Forms to* the mailing list~~potential owners~~ *that outline the applicable exemptions, identify the information necessary to confirm whether an exemption applies, and set an 18-month deadline to submit the completed Screening Form.*

502G.3~~2~~ Concrete Building Website. *The Department shall maintain a webpage providing information about the screening process, the status of subject buildings, and links to* the seismic~~voluntary~~ *retrofit* ~~pathways~~ provisions of Appendix A, which owners may voluntary choose to implement to have the building removed from the CB and RWFD inventory.

APPENDIX A

SEISMIC RETROFIT PROVISIONS~~PROGRAM~~ FOR CONCRETE BUILDINGS

CHAPTER A6

A6.1 Intent. *This Chapter A6* ~~is intended to advance public safety and improve the ability of the City to recover from a major earthquake, by reducing the likelihood of collapse of~~

~~certain concrete buildings. In furtherance of this purpose, this Chapter~~ *establishes* ~~voluntary~~ *seismic retrofit* provisions~~requirements~~ *intended to reduce the collapse risk of the most vulnerable Concrete Buildings (CB*), as defined in Chapter 5G. ~~It is the present intent of the Board of Supervisors that, absent a compelling public safety necessity, buildings retrofitted pursuant to this Appendix A, Chapter A6 or Chapter 304.4 will not be subject to future mandatory seismic retrofitting legislation adopted by the Board.~~

A6.2 Definitions

In addition to the definitions in San Francisco Building Code Chapter 2 and San Francisco Existing Building Code Chapter 2, the following shall apply for purposes of this Chapter A6:

Wall pier. *A vertical wall segment within a structural wall, bounded horizontally by two openings or by an opening and an edge, with ratio of horizontal length to wall thickness less than or equal to 6.0, and ratio of clear height to horizontal length greater than 2.0.*

A6.3 Design Professionals. *All* evaluations and design~~work~~ *intended to comply with this Chapter shall be performed by* or under the supervision of *appropriately licensed individuals, and all documents submitted for compliance shall be sealed by a California licensed civil or structural engineer.*

A6.4 Structural engineering criteria

A6.4.1 Engineering criteria. For a Concrete Building to comply with this Chapter, the building ~~Each subject building that is required to comply by evaluation or retrofit~~ *shall satisfy one of the Engineering Criteria Options per Table* A6.4-1~~A6.4.1~~, by seismic evaluation or seismic retrofit.

Table* A6.4-1~~A6.4.1~~*: Engineering Criteria Options

Option (a)	*Comply with all of the following:* *1. ASCE 41 with a performance objective of Structural Collapse Prevention (S-5) with the BSE-1E earthquake hazard level.*

	2. For each seismic deficiency in Table A6.4-2~~A6.4.2~~*, demonstrate that the deficiency is not present, or address it by retrofitting. In a bulletin, the Department shall specify requirements for identifying, evaluating, and retrofitting the seismic deficiencies listed in Table* A6.4-2~~A6.4.2~~. *3. For all unreinforced masonry elements, ASCE 41 with a performance objective of Nonstructural Life Safety (N C) with the BSE-1E earthquake hazard level.*
Option (b)	*Comply with all of the following:* *1. ASCE 41 with a performance objective of Structural Collapse Prevention (S-5) with the BSE-2E earthquake hazard level. The BSE-1E earthquake hazard level need not be evaluated, regardless of the Tier of evaluation.* *2. For all unreinforced masonry elements, ASCE 41 with a performance objective of Nonstructural Life Safety (N C) with the BSE-1E earthquake hazard level.*

Table A6.4-2: Seismic deficiencies to be addressed by Engineering Criteria

Option (a)

Weak story: The structure includes one or more stories having lateral strength less than the story above. **Lateral-force-resisting-element irregularity:** The lateral force-resisting system includes one or more concrete walls or frames that are not continuous to the foundation. **Non-ductile moment frame:** The main lateral-force-resisting-system includes concrete moment frames that do not satisfy strong-column-weak-beam requirements or that have shear-governed columns or beams. **Shear-governed concrete column or wall pier:** The structure includes one or more concrete columns or wall piers that are shear-governed and susceptible to failure resulting in loss of gravity load support.

Punching shear in concrete slab: One or more concrete floor or roof slabs are supported by one or more columns without beams framing into the column and is susceptible to loss of gravity load support following punching shear failure.

Weak connection of concrete wall to flexible diaphragm: The structure includes one or more concrete walls connected to one or more flexible diaphragms, where the wall is not adequately anchored to the diaphragm.

Inadequate length of bearing connection: One or more concrete beams or slabs are supported by a bearing connection with short bearing length.

~~A6.4.2 Nonstructural components. For either Engineering Criteria Option, unreinforced masonry shall be removed or retrofitted to satisfy Non-structural Life Safety performance at the BSE-1E level.~~

A6.4.2~~3~~ Building separation. ~~Where buildings abut adjacent properties,~~ The *building separation limitations* of ~~(e.g.~~ *Section 7.2.13 of ASCE 41*~~)~~ *need not be considered*~~. For separation joints within the same property, the potential for pounding at the separation joints shall be considered in seismic evaluation and retrofit design.~~

A6.4.3~~4~~ Liquefaction or landslide risk. *If the building is located in a zone of high or very high risk of soil liquefaction or landslide, as indicated by the* current *State of California Seismic Hazard Zones Map for San Francisco, the Owner's Engineer shall so notify the Owner in writing* ~~and provide the owner with their professional opinion on voluntary measures or additional investigations that could be taken to address the risk~~. Aside from such notification,~~Otherwise,~~ *soil liquefaction, lateral spreading, and landslide* are~~need~~ *not* required to *be addressed in the seismic evaluation or retrofit design. This Chapter does not exempt the building from the requirements of the Slope and Seismic Hazard Zone Protection Act (San Francisco Building Code 106A.4.1.4) where applicable.*

A6.4.4~~5~~ Other retrofit triggers. *If the project involves a Substantial Structural Alteration as defined in Section 503.11 or Non-structural Alteration as defined in Section 503.11.1, the building shall meet the more restrictive of the provisions of this Chapter or those of Section 304.4 (Minimum lateral force for existing buildings).*

A6.4.5~~6~~ Masonry Infill. *For* ~~subject buildings~~Concrete Buildings *with masonry infill, the seismic evaluation and retrofitting shall account for the effect of the infill considering ASCE 41 requirements, and for Tier 2 and Tier 3 evaluations shall* take into account~~consider~~*:*

- *The peak strength that the infill can achieve.*
- *The potential for strength degradation of the infill.*
- *The potential for a weak story or story concentration of deformation, because of the locations of infill in the building, or because of potential concentrations of damage to infill.*
- *Plan torsion effects because of the location of infill in the building, or because of potential concentrations of damage to infill.*

~~**Table A6.4.2: Seismic deficiencies to be addressed by Engineering Criteria Option (a)**~~

~~**Weak story:** The structure includes one or more stories having lateral strength less than the story above.~~

~~**Lateral-force-resisting-element irregularity:** The lateral force-resisting system includes one or more concrete walls or frames that are not continuous to the foundation.~~

~~**Non-ductile moment frame:** The main lateral-force-resisting system includes concrete moment frames that do not satisfy strong-column-weak-beam requirements or that have shear-governed columns or beams.~~

~~**Shear-governed concrete column or wall pier:** The structure includes one or more concrete columns or wall piers that are shear-governed and susceptible to failure resulting in loss of gravity load support.~~

~~**Punching shear in concrete slab:** One or more concrete floor or roof slabs are supported by one or more columns without beams framing into the column and is susceptible to loss of gravity load support following punching shear failure.~~

~~**Weak connection of concrete wall to flexible diaphragm:** The structure includes one or more concrete walls connected to one or more flexible diaphragms, where the wall is not adequately anchored to the diaphragm.~~

~~**Inadequate length of bearing connection:** One or more concrete beams or slabs are supported by a bearing connection with short bearing length.~~

Section 4. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

Section 5. Scope of Ordinance. In enacting this ordinance, the Board of Supervisors intends to amend only those words, phrases, paragraphs, subsections, sections, articles, numbers, punctuation marks, charts, diagrams, or any other constituent parts of the Municipal Code that are explicitly shown in this ordinance as additions, deletions, Board amendment additions, and Board amendment deletions in accordance with the "Note" that appears under the official title of the ordinance.

Section 6. Directions to Clerk. Upon final passage of this ordinance, the Clerk of the Board of Supervisors is hereby directed to transmit this ordinance to the California Building Standards Commission pursuant to the applicable provisions of State law.

APPROVED AS TO FORM:
DAVID CHIU, City Attorney

By: /s/ Robb Kapla
ROBB KAPLA
Deputy City Attorney

n:\legana\as2024\2400333\01836089.docx

FILE NO. 250211

REVISED LEGISLATIVE DIGEST

(Amended in Committee – April 21, 2025)

[Existing Building Code - Concrete Building Inventory Assessment]

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this Ordinance to the California Building Standards Commission upon final passage.

Existing Law

The Existing Building Code does not define the terms Rigid-Wall-Flexible-Diaphragm ("RWFD") or Concrete Buildings, or require the Department of Building Inspection assess the seismic vulnerability of such buildings. The Existing Building Code includes Appendix A, Chapter A2 that establishes standards for voluntary seismic retrofits of flexible diaphragm buildings, that include RWFD.

Amendments to Current Law

The Proposed Legislation defines RFWD and Concrete Buildings and mandates the Department of Building Inspection create an inventory of seismically vulnerable RWFD and Concrete Buildings within the City. The Proposed Legislation would add Chapter A6 to Appendix A of the Existing Building Code creating standards for voluntary retrofit of seismically vulnerable Concrete Buildings.

Background Information

RWFD and Concrete Buildings constructed more than 25 years ago may be vulnerable to significant damage during seismic events. The inventory of RWFD and Concrete Buildings will assist the City in assessing and developing solutions to mitigate collective seismic risk to the City's building supply. The Proposed Ordinance would also educate property owners of their seismic vulnerability and direct them to voluntary retrofit options in Appendix A, Chapter A2 (for RWFD) and Chapter A6 (Concrete Buildings).

n:\legana\as2024\2400333\01800728.docx

Concrete Building Inventory Assessment and Voluntary Retrofit Standards Legislation

City and County of San Francisco
Land Use and Transportation Committee, Board of Supervisors
April 21, 2025

ONESF
Building Our Future

Summary

We are asking this committee to recommend approval of the legislation proposed under file number 250211.

This legislation would:

1. Give the City more information about our seismic risk.
2. Give building owners who want to voluntarily retrofit more clarity and a new option for doing so.

Prior San Francisco earthquake safety programs

- The Earthquake Safety Implementation Program (ESIP) outlines a long-term phased strategy for improving the seismic safety of buildings.
- The Office of Resilience and Capital Planning develops policy in collaboration with the Department of Building Inspection, who leads implementation.
- Programs to date:
  - Unreinforced Masonry Retrofit Program (1992-2004)
    - 1,800 high life safety risk buildings have been retrofitted to date.
  - Soft Story Retrofit Program (2013-2021)
    - 4,900 buildings have been retrofitted to date.
    - An estimated 114,000 residents are now in safer buildings.
  - Private Schools Evaluation Program (2014)
    - All private schools in the city were seismically evaluated to determine level of safety.
- **ESIP recommends addressing concrete and tilt-up buildings as the next high priority building types.**

Concrete and tilt-up buildings

Concrete buildings

- Some older concrete buildings lack sufficient steel reinforcement to withstand a large earthquake.
- Concrete buildings are most often office buildings or multifamily housing.
- Retrofit of concrete buildings can be complicated and expensive.

Rigid-wall-flexible-diaphragm (Tilt-up)

- In older tilt-ups a large earthquake may separate the roof from the walls.
- Tilt-ups are most often warehouses or retail businesses like grocery stores.
- Retrofit of tilt-ups is more straightforward.

Concrete Building Safety Program

Goal: Identify, evaluate, and retrofit the most vulnerable concrete and tilt-up buildings to protect against major structural failure.

Departments involved:

- Office of Resilience and Capital Planning
- Department of Building Inspection

Timeline:

- January 2022 - April 2024: Stakeholder engagement and policy development
- April 2024 - March 2025: Legislation drafted and introduced
- May 2025 - November 2025*: DBI finalizes forms, issues communications
- November 2025 - May 2027*: Building inventory assessment program

*If legislation passes in April

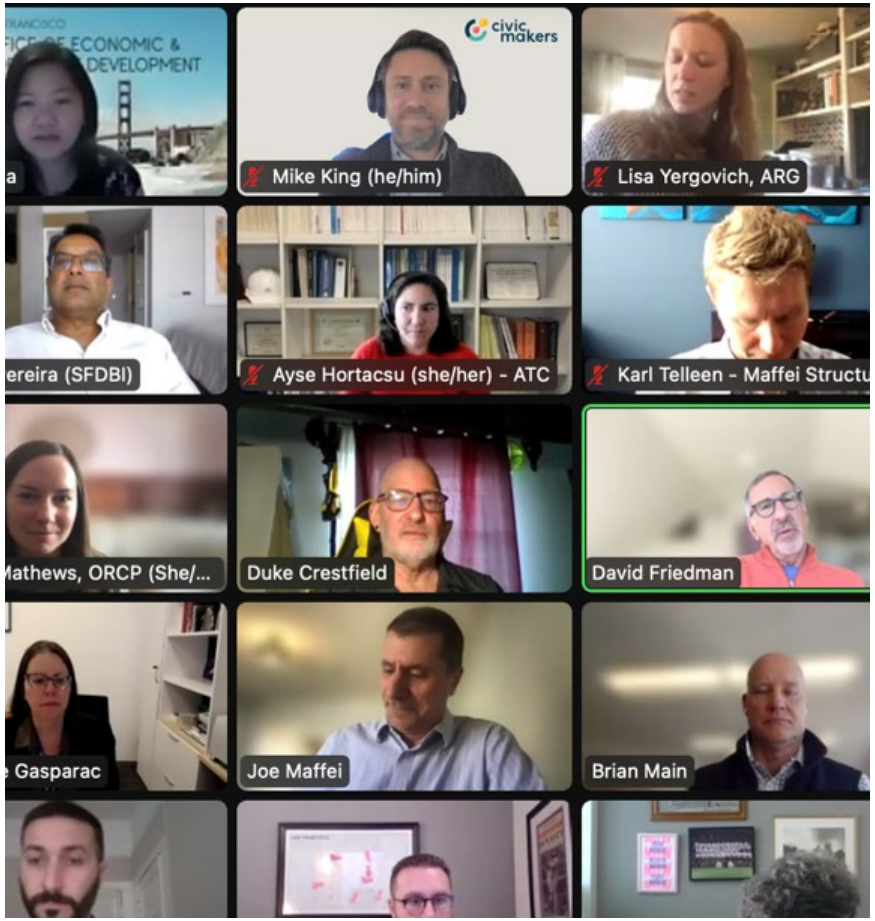
ONESF
Building Our Future

Stakeholder working group

- The City convened a working group to discuss social, economic, and policy considerations related to concrete building retrofits. This group included representatives of:
  - **Residential and commercial building owners**: SF Apartment Association, concrete building owner, BOMA SF, Hotel Council of SF, condominium owner representatives
  - **Non-profit housing**: Tenderloin Neighborhood Development Corporation, Chinatown Community Development Corporation
  - **Tenants**: Housing Rights Committee of SF, SF Tenants Union
  - **Businesses**: SF Chamber of Commerce
  - **Builders and developers**: Plant Construction, CBRE, TMG Partners
  - **Technical and policy experts**: SPUR, Structural Engineers Association of Northern California, Triangle Engineering, San Francisco State University professor
  - **City and County of San Francisco**: Code Advisory Committee, Building Inspection Commission, Departments of: Building Inspection, Public Works, Economic and Workforce Development, Housing and Community Development, Planning

ONESF
Building Our Future

Working group feedback summary



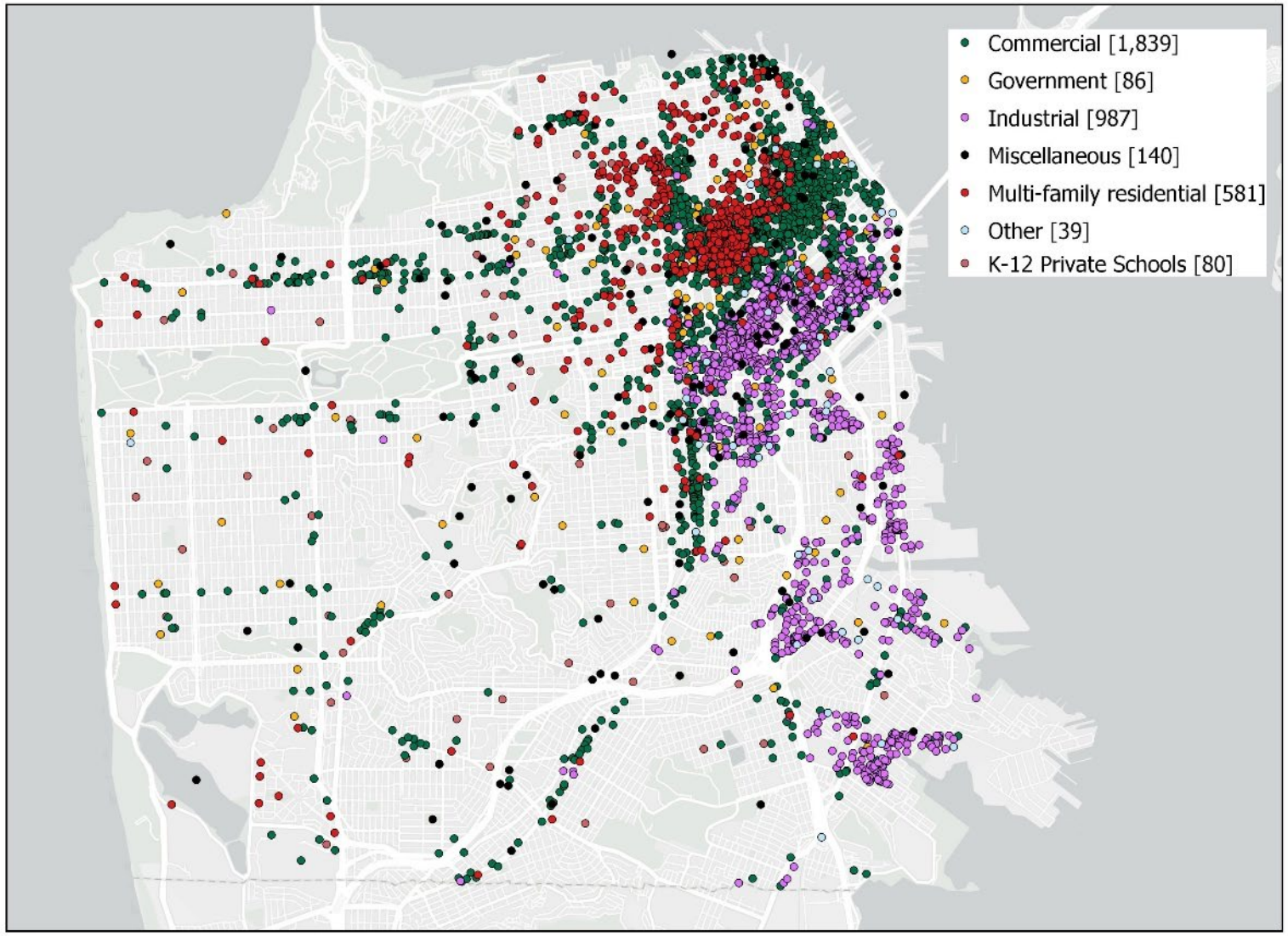
- High cost of retrofits and potential disruption to tenants
  - How we addressed:
    - Designed new retrofit option
    - Applied for funding for financing guide
- Need for clear communication of expectations from city before undertaking a major capital improvement
- Lack of information about number of concrete and tilt-up buildings in the City

Inventory

Map of possible concrete buildings

By Use Type:

- Commercial
- Government
- Industrial
- Miscellaneous
- Multi-family residential
- Other
- K-12 Private Schools



Concrete Buildings

Illustrated here are all concrete buildings in the city except: Post 1995 construction, public schools, colleges and universities, hospitals, SF Port Buildings, State and Federal Buildings and 1-4 unit residential buildings

3,752 Buildings Total

N

Legislation section one: building inventory assessment

Desired outcome: The City has a more accurate list of concrete and tilt-up buildings.

Building owner required action	DBI program implementation tasks
Owners of approximately 4,000 buildings would be required to hire an engineer to complete and submit a screening checklist to DBI. • The estimated cost to complete the checklist is $300-$3,200 per building in engineering fees. • After six months of program set-up by DBI, owners would have eighteen months to submit screening forms.	The ordinance directs DBI to: • Finalize a screening form and mailing list. • Maintain a webpage providing information and building status. Other DBI tasks: • Train and prepare staff to respond to questions. • Conduct public outreach and a mailing campaign. • Monitor program compliance.

Legislation section two: voluntary retrofit standards

Desired outcome: Building owners who are ready to retrofit have clear direction from the City.

Note: This legislation does not mandate retrofits.

What the ordinance would do	DBI program implementation tasks
The ordinance would establish voluntary retrofit standards for concrete buildings, including a new option which can produce more efficient retrofits.	• Develop an Administrative Bulletin to provide technical guidance (underway). • Train staff on performance-based retrofit method (underway).

Summary of changes recommended by Building Inspection Commission

- Made terminology more consistent.
- Added “definitions” section and defined the two building types.
- Defined “Subject buildings” outside of a heading.
- Clarified when talking about design work vs construction work.
- Replaced “requirements” with “provisions.”
- Specified that DBI should create a list of potential subject buildings and associated mailing list.
- Added instructions about the screening process.
- Specified 20-year exemption period.
- Clarified that retrofits per section 304.4 are exempt as prior retrofits in Chapter 5G.
- Moved exemption language out of Appendix A6 so that it applies to both building types.

Thank you

Questions?

ONESF
Building Our Future

BUILDING INSPECTION COMMISSION (BIC)

Department of Building Inspection **Voice (628) 652 -3510**
49 South Van Ness Avenue, 5th Floor San Francisco, California 94103

April 17, 2025

Ms. Angela Calvillo
Clerk of the Board
Board of Supervisors, City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102-4694

Dear Ms. Calvillo:

RE: File No. 250211

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this ordinance to the California Building Standards Commission upon final passage.

The Code Advisory Committee (CAC) met on April 9, 2025 and reviewed File No. 250211 Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concreate Buildings. After a close review of the ordinance and discussion of the possible effects on subject buildings, the CAC voted unanimously **to approve File No. 250211 with the Department's proposed amendments**.

The Building Inspection Commission met and held a public hearing on April 16, 2025 regarding the proposed amendment to the Building Code contained in Board File No. 250211.

The Commissioners voted unanimously to **recommend approval of the Ordinance with the Code Advisory Committee's proposed amendments.**

President Alexander-Tut	Excused
Commissioner Chavez	Yes
Commissioner Meng	Yes
Commissioner Neumann	Yes
Commissioner Williams	Yes

Should you have any questions, please do not hesitate to call me at (628) 652-3510.

Sincerely,

Sonya Harris
Commission Secretary

cc: Patrick O'Riordan, Director
Mayor Daniel Lurie
Supervisor Myrna Melgar
Board of Supervisors

[Existing Building Code - Concrete Building Inventory Assessment]

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this ordinance to the California Building Standards Commission upon final passage.

NOTE: **Unchanged Code text and uncodified text** are in plain Arial font.
Additions to Codes are in *single-underline italics Times New Roman font*.
Deletions to Codes are in ~~*strikethrough italics Times New Roman font*~~.
Board amendment additions are in double-underlined Arial font.
Board amendment deletions are in ~~strikethrough Arial font~~.
Asterisks (* * * *) indicate the omission of unchanged Code subsections or parts of tables.

Be it ordained by the People of the City and County of San Francisco:

Section 1. General Findings.

(a) The Planning Department has determined that the actions contemplated in this ordinance comply with the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of Supervisors in File No. ___ and is incorporated herein by reference. The Board affirms this determination.

(b) On _____, the Building Inspection Commission considered this ordinance at a duly noticed public hearing pursuant to Charter Section 4.121 and Building Code Section 104A.2.11.1.1.

(c) San Francisco is located in an area of high seismic activity; earthquakes in the future. A damaging earthquake of magnitude 6.7 or greater has a 72% chance of occurring in the Bay Area before 2043, according to the United States Geological Survey (USGS).

(d) Older concrete and concrete tilt-up (rigid-wall-flexible-diaphragm) buildings can experience damage and collapse during large earthquakes, according to San Francisco's Community Action Plan for Seismic Safety (CAPSS). Older concrete buildings have suffered catastrophic collapses in recent earthquakes in Mexico City, Christchurch, New Zealand, and Turkey.

(e) Identifying concrete and rigid-wall-flexible-diaphragm buildings is a high priority recommendation in the Earthquake Safety Implementation Program, San Francisco's 30-year plan for improving seismic safety. CAPSS estimates that 50% of all structural casualties in a magnitude 7.2 San Andreas fault earthquake would occur in concrete buildings.

(f) The City has developed a preliminary inventory of potential concrete buildings, which builds on prior versions of an inventory developed by the Concrete Coalition and the Structural Engineers Association of Northern California. To definitively determine whether a building is concrete and contains vulnerabilities that put it at higher risk during an earthquake, a qualified structural engineer needs to assess the building.

(g) The City is developing the Concrete Building Safety Program (CBSP) to identify and address vulnerable concrete buildings in San Francisco, with the following goals: protect life and public safety, preserve housing and critical uses, protect the economy, preserve City vitality and character, and speed earthquake recovery.

(h) In an April 2024 report entitled "Stakeholder Engagement for the Concrete Building Safety Program," a working group of internal and external stakeholders advised the City in the development of the CBSP.

(i) On April 16, 2024, Mayor Breed issued Executive Directive 24-01, directing the Office of Resilience and Capital Planning and Department of Building Inspection to draft an ordinance mandating screening and publishing of retrofit standards in the San Francisco Existing Building Code.

Section 2. Findings Regarding Local Conditions.

(a) California Health and Safety Code Sections 17958.7 and 18941.5 provide that local jurisdictions may enact more restrictive building standards than those contained in the California Building Code, provided that the local jurisdictions make express findings that each change or modification is reasonably necessary because of local climate, geologic, or topographic conditions and that the local jurisdictions file the local amendments and required findings with the California Building Standards Commission before the local changes or modifications can go into effect.

(b) The Board of Supervisors hereby finds and declares that the following amendments to the San Francisco Building Code are reasonably necessary because of local climatic, topological, and geological conditions as discussed below.

(1) The topography of San Francisco creates increased risk of damage from seismic events due to high density of buildings on very small lots, steep slopes, and high population density. It is necessary and appropriate to adopt safety measures that assess and reduce cumulative seismic risk from existing buildings across the City.

(2) San Francisco's geologic conditions produce increased risk for earthquake-induced ground failure due to local hazardous seismic microzones, slide areas, and local liquefaction hazards. It is necessary and appropriate to reduce seismic risk and increase resiliency by assessing the inventory of vulnerable buildings and adopting voluntary retrofit standards to mitigate seismic risk in existing buildings.

Section 3. Chapters 3 and 5 and the Appendices to the Existing Building Code are hereby amended by revising Section 304.4 (including Section 304.4.1) and adding Chapter 5G ~~(consisting of Sections 501G.1~~ and Appendix A, Chapter A6, to read as ~~follows~~shown below.~~:~~

There is ~~currently~~ no mandatory requirement to seismically retrofit Rigid-Wall-Flexible-Diaphragm ~~and~~or Concrete Buildings, except when triggered by addition, alteration, repair, change of occupancy, relocation, or other work regulated by the Existing Building Code. It is the ~~present~~ intent of the Board of Supervisors that, absent a compelling public safety necessity, buildings that are exempted as a result of the inventory assessment of Section 501G.4 and buildings that are voluntarily retrofitted pursuant to Appendix A, Chapter A2 for Rigid-Wall-Flexible-Diaphragm buildings or Chapter A6 for Concrete Buildings, will be exempt from any local mandatory seismic retrofit requirements ~~until~~ for 20 years after the effective date of the ordinance in Board File No. _____ enacting Chapter 5G and Chapter A6. Such a building shall not be exempt from requirements associated with any addition, alteration, repair, change of occupancy, relocation, or other work regulated by this Code. All seismic retrofit work must be duly permitted, completed, and inspected to qualify for the exemption.

SECTION 304 – STRUCTURAL DESIGN LOADS AND EVALUATION AND DESIGN PROCEDURE

* * * *

304.4 Minimum Lateral Force for Existing Buildings.

304.4.1 General. This section is applicable to existing buildings when invoked by SFEBC Section 503. This section may be used as a standard for voluntary upgrades.

An existing building or structure which has been brought into compliance with the lateral force resistance requirements of the San Francisco Building Code in effect on or after the dates shown in Table 304.4.1 shall be deemed to comply with this section except when a vertical extension or other alterations are to be made which would increase the mass or reduce the seismic resistance capacity of the building or structure. Where multiple building types apply, the later applicable date shall be used. Where none of the building types apply, compliance shall be at the discretion of the Director. Building type definitions are given in ASCE 41, Table 3-1.

TABLE 304.4.1 – DATES REQUIRED TO DEMONSTRATE BUILDING COMPLIANCE

Building Type	***Date of Compliance***	***Model Code (for reference)***
* * * *		
Reinforced concrete moment-resisting frame (Type C1)	~~*12/28/1995*~~ *7/1/1999*	UBC ~~*1994*~~ *1997*
Reinforced concrete shear walls (Types C2 & C2a)	~~*12/28/1995*~~ *7/1/1999*	UBC ~~*1994*~~ *1997*
* * * *		

* * * *

CHAPTER 5G: BUILDING INVENTORY ASSESSMENT OF RIGID-WALL-FLEXIBLE-DIAPHRAGM AND ~~OTHER~~ CERTAIN CONCRETE BUILDINGS

501G.1 Intent. *This Chapter 5G is intended to advance public safety through a building inventory assessment and notification process regarding the seismic safety risks ~~and retrofit options~~ for Rigid-Wall-Flexible-Diaphragm ~~("RWFD")~~ and certain Concrete Buildings ~~("CB")~~ vulnerable to*

earthquake damage and collapse. ~~*The retrofit options for Concrete Buildings are intended to provide voluntary and practical pathways to reduce earthquake-related deaths and injuries and reduce the economic impacts of a damaging earthquake.*~~

501G.2 Definitions. *In addition to the definitions in San Francisco Building Code Chapter 2 and San Francisco Existing Building Code Chapter 2, the following shall apply for purposes of this Chapter 5G:*

Rigid-Wall-Flexible-Diaphragm ("RWFD") Building. *A one-story building or building portion, not counting mezzanines, with a seismic force-resisting system that would be classified by the latest edition of ASCE 41 as either PC1, RM1, or C2a with flexible roof diaphragm.*

Concrete Building ("CB"). *A building where (1) vertical elements of concrete construction, such as walls or columns, support gravity load from floors or roofs; and/or (2) vertical elements of concrete construction are part of the lateral-force-resisting system.*

501G.3~~2~~ Subject Buildings. *The building inventory assessment required by this Chapter~~'s provisions~~ shall apply to the following, which are defined as Subject Buildings:*

(a) Rigid-Wall-Flexible-Diaphragm buildings where the total footprint area of all RWFD portions is larger than 3,000 square feet, and any RWFD portion was constructed or permitted for construction before July 1, 1999 or designed based on a code adopted or amended before that date and has not been retrofitted pursuant to Appendix A, Chapter A2; and

(b) Concrete Buildings not exempted below ~~*where (1) vertical elements of concrete construction, such as walls or columns, support gravity load from floors or roofs; and/or (2) vertical elements of concrete construction are part of the lateral-force-resisting system*~~.

(c) This Chapter refers to any such RWFD or CB as a subject building unless and until it is found to be exempt from the inventory assessment pursuant to Section 301G.3(a) above or 501G.~~43~~

below. Any building for which the Department has sent notification or screening instructions referring to this Chapter is also a subject building until it is found to be exempt.

501G.~~43~~ Exemptions for Certain Concrete Buildings. *Concrete Buildings for which one or more of the following apply are not subject buildings ~~and will not be included in the building assessment inventory upon submittal and~~ , as determined by Department approval of a Screening Form as required by Section 502G.~~1~~:*

*(a) **Age.** The building complies with Section 304.4.1.*

*(b) **One-story.** The building has no more than one story above grade plane, as defined in San Francisco Building Code Chapter 2, excluding mezzanines.*

*(c) **Two-story.** The building conforms to all the following:*

- *The building has no more than two stories above grade plane, excluding mezzanines;*
- *The building does not include concrete columns or wall piers~~, as defined in Section 501G.2~~; and*
- *The building includes a structural reinforced concrete diaphragm at the second floor, the roof, or both.*

*(d) **Complete steel frame.** Steel columns support all the gravity floor load and roof load, and steel columns are connected to steel beams.*

*(e) **Concrete used only for floors, roofs, foundations, or basements.** All concrete elements that define the building as a ~~subject~~ Concrete ~~b~~Building extend less than four feet above adjacent grade.*

*(f) **Previous retrofit.** There is building permit documentation that the building has been seismically retrofitted to meet one of the following:*

- *Section 304.3 of the 2022 SFEBC*
- *Section 303.4 of the 2019 SFEBC*

- *Section 301.2 of the 2016 SFEBC*
- *Section 3401.10 of the 2013 SFBC*
- *Section 3401.8 of the 2010 SFBC*
- *Section 3403.5 of the 2007 SFBC*

*(g) **One- and two-family dwellings.** The building conforms to all the following:*

- *The building contains no more than two dwelling units.*
- *The building contains only Group R 3 occupancy and incidental Group U occupancy.*

*(h) **Light -frame over one-story concrete podium.** The building conforms to all the following:*

- *All concrete elements that define the building as a ~~subject~~ Concrete ~~b~~Building extend no more than one story above grade plane.*
- *All stories above the concrete story consist of light-frame (wood or cold-formed steel) construction.*

502G – Screening ~~Process~~. *The owner of each subject building ~~subject to this Chapter~~ shall comply with the reporting requirements of this section.~~The Department shall develop a screening process that notifies owners of potential subject buildings, provide them with a Screening Form to see if any exemptions apply, and educates them about the voluntary retrofit pathways available to reduce seismic vulnerability.~~*

502G.1 Screening Process. *The Department shall notify owners of potential subject buildings that such buildings may be included in the CB and RWFD building assessment inventory. The Department shall provide owners with a Screening Form to confirm the existing structural systems and determine whether exemptions apply.*

The owner of each building who has been notified that their building is within the scope of this Chapter, as well as all other owners of buildings that may be subject to this Chapter, shall submit to the Department within the time limits set forth in 502G.2 a properly completed Screening Form. Where

required by the Screening Form, the owner shall engage an appropriately licensed design professional to complete the form.

If the owner believes exemptions apply, as specified in Section 501G, the owner and their design professional, where required, shall denote this on the completed Screening Form and shall return the form to the Department.

Additional information shall be provided to the owner informing the owner about the seismic retrofit requirements of Appendix A available to reduce seismic vulnerability.

502G.~~2~~1 Screening Form. *Within six months of the effective date of the ordinance in Board File No. _____ enacting Chapter 5G, the Department shall create a list of potential subject buildings and associated mailing list of owners, ~~draft and~~ issue Screening Forms to ~~potential owners~~ the mailing list that outline the applicable exemptions, identify the information necessary to confirm whether an exemption applies, and set an 18-month deadline to submit the completed Screening Form.*

502G.~~3~~2 Concrete Building Website. *The Department shall maintain a webpage providing information about the screening process, the status of subject buildings, and links to the ~~voluntary~~ seismic retrofit ~~pathways~~ requirements of Appendix A, which owners may voluntarily choose to implement to have the building removed from the CB and RWFD inventory.*

APPENDIX A

SEISMIC RETROFIT ~~REQUIREMENTS~~ PROVISIONS~~PROGRAM~~ FOR CONCRETE BUILDINGS

CHAPTER A6

A6.1 Intent. *~~This Chapter A6 is intended to advance public safety and improve the ability of the City to recover from a major earthquake, by reducing the likelihood of collapse of certain concrete buildings. In furtherance of this purpose, t~~This Chapter establishes ~~voluntary~~ seismic retrofit*

~~requirements~~ provisions intended to reduce the collapse risk of the most vulnerable Concrete Buildings (CB), as defined in Chapter 5G, when invoked by the San Francisco Existing Building Code. ~~It is the present intent of the Board of Supervisors that, absent a compelling public safety necessity, buildings retrofitted pursuant to this Appendix A, Chapter A6 or Chapter 304.4 will not be subject to future mandatory seismic retrofitting legislation adopted by the Board.~~

A6.2 Definitions

In addition to the definitions in San Francisco Building Code Chapter 2 and San Francisco Existing Building Code Chapter 2, the following shall apply for purposes of this Chapter A6:

Wall pier. A vertical wall segment within a structural wall, bounded horizontally by two openings or by an opening and an edge, with ratio of horizontal length to wall thickness less than or equal to 6.0, and ratio of clear height to horizontal length greater than 2.0.

A6.3 Design Professionals. All ~~work~~ evaluations and design intended to comply with this Chapter shall be performed by or under the supervision of appropriately licensed individuals, and all documents submitted for compliance shall be sealed by a California licensed civil or structural engineer.

A6.4 Structural engineering criteria

A6.4.1 Engineering criteria. ~~Each subject building that is required to comply by evaluation or retrofit~~ For a Concrete Building to comply with ~~the requirements of~~ this Chapter, the building shall satisfy one of the Engineering Criteria Options per Table A6.4-1, by seismic evaluation or seismic retrofit.

Table A6.4-1: Engineering Criteria Options

Option (a)	Comply with all of the following: 1. ASCE 41 with a performance objective of Structural Collapse Prevention (S-5) with the BSE-1E earthquake hazard level.

	2. For each seismic deficiency in Table A6.4--2, demonstrate that the deficiency is not present, or address it by retrofitting. In a bulletin, the Department shall specify requirements for identifying, evaluating, and retrofitting the seismic deficiencies listed in Table A6.4--2. *3. For all unreinforced masonry elements, ASCE 41 with a performance objective of Nonstructural Life Safety (N C) with the BSE-1E earthquake hazard level.*
Option (b)	*Comply with all of the following:* *1. ASCE 41 with a performance objective of Structural Collapse Prevention (S-5) with the BSE-2E earthquake hazard level. The BSE-1E earthquake hazard level need not be evaluated, regardless of the Tier of evaluation.* *2. For all unreinforced masonry elements, ASCE 41 with a performance objective of Nonstructural Life Safety (N C) with the BSE-1E earthquake hazard level.*

Table A6.4-2: Seismic deficiencies to be addressed by Engineering Criteria Option (a)

Weak story: *The structure includes one or more stories having lateral strength less than the story above.* ***Lateral-force-resisting-element irregularity:*** *The lateral force-resisting system includes one or more concrete walls or frames that are not continuous to the foundation.* ***Non-ductile moment frame:*** *The main lateral-force-resisting-system includes concrete moment frames that do not satisfy strong-column-weak-beam requirements or that have shear-governed columns or beams.*

Shear-governed concrete column or wall pier: *The structure includes one or more concrete columns or wall piers that are shear-governed and susceptible to failure resulting in loss of gravity load support.*

Punching shear in concrete slab: *One or more concrete floor or roof slabs are supported by one or more columns without beams framing into the column and is susceptible to loss of gravity load support following punching shear failure.*

Weak connection of concrete wall to flexible diaphragm*: The structure includes one or more concrete walls connected to one or more flexible diaphragms, where the wall is not adequately anchored to the diaphragm.*

Inadequate length of bearing connection*: One or more concrete beams or slabs are supported by a bearing connection with short bearing length.*

~~***A6.4.2 Nonstructural components.*** *For either Engineering Criteria Option, unreinforced masonry shall be removed or retrofitted to satisfy Non-structural Life Safety performance at the BSE-1E level.*~~

A6.4.2~~3~~ Building separation. ~~*Where buildings abut adjacent properties,*~~ *The building separation limitations of ~~(e.g.~~ Section 7.2.13 of ASCE 41~~)~~ need not be considered.* ~~*For separation joints within the same property, the potential for pounding at the separation joints shall be considered in seismic evaluation and retrofit design.*~~

A6.4.3~~4~~ Liquefaction or landslide risk. *If the building is located in a zone of high or very high risk of soil liquefaction or landslide, as indicated by the current State of California Seismic Hazard Zones Map for San Francisco, the Owner's Engineer shall so notify the Owner in writing ~~and provide the owner with their professional opinion on voluntary measures or additional investigations that could be taken to address the risk~~. ~~Otherwise~~ Aside from such notification, soil liquefaction, lateral spreading, and landslide ~~need~~ are not required to be addressed in the seismic evaluation or retrofit*

design. This Chapter does not exempt the building from the requirements of the Slope and Seismic Hazard Zone Protection Act (San Francisco Building Code 106A.4.1.4) where applicable.

A6.4.~~45~~ Other retrofit triggers. *If the project involves a Substantial Structural Alteration as defined in Section 503.11 or Non-structural Alteration as defined in Section 503.11.1, the building shall meet the more restrictive of the provisions of this Chapter or those of Section 304.4 (Minimum lateral force for existing buildings).*

A6.4.~~56~~ Masonry Infill. *For ~~subject b~~ Concrete Buildings with masonry infill, the seismic evaluation and retrofitting shall account for the effect of the infill considering ASCE 41 requirements, and for Tier 2 and Tier 3 evaluations shall take into account ~~consider~~:*

- *The peak strength that the infill can achieve.*
- *The potential for strength degradation of the infill.*
- *The potential for a weak story or story concentration of deformation, because of the locations of infill in the building, or because of potential concentrations of damage to infill.*
- *Plan torsion effects because of the location of infill in the building, or because of potential concentrations of damage to infill.*

~~Table A6.4-.2: Seismic deficiencies to be addressed by Engineering Criteria Option (a)~~

~~Weak story:~~ *~~The structure includes one or more stories having lateral strength less than the story above.~~*

~~Lateral-force-resisting-element irregularity:~~ *~~The lateral force-resisting system includes one or more concrete walls or frames that are not continuous to the foundation.~~*

~~Non-ductile moment frame:~~ *~~The main lateral-force-resisting system includes concrete moment frames that do not satisfy strong-column-weak-beam requirements or that have shear-governed columns or beams.~~*

~~***Shear-governed concrete column or wall pier:*** *The structure includes one or more concrete columns or wall piers that are shear-governed and susceptible to failure resulting in loss of gravity load support.*~~

~~***Punching shear in concrete slab:*** *One or more concrete floor or roof slabs are supported by one or more columns without beams framing into the column and is susceptible to loss of gravity load support following punching shear failure.*~~

~~***Weak connection of concrete wall to flexible diaphragm****: The structure includes one or more concrete walls connected to one or more flexible diaphragms, where the wall is not adequately anchored to the diaphragm.*~~

~~***Inadequate length of bearing connection****: One or more concrete beams or slabs are supported by a bearing connection with short bearing length.*~~

Section 4. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

Section 5. Scope of Ordinance. In enacting this ordinance, the Board of Supervisors intends to amend only those words, phrases, paragraphs, subsections, sections, articles, numbers, punctuation marks, charts, diagrams, or any other constituent parts of the Municipal Code that are explicitly shown in this ordinance as additions, deletions, Board amendment additions, and Board amendment deletions in accordance with the "Note" that appears under the official title of the ordinance.

Section 6. Directions to Clerk. Upon final passage of this ordinance, the Clerk of the Board of Supervisors is hereby directed to transmit this ordinance to the California Building Standards Commission pursuant to the applicable provisions of State law.

APPROVED AS TO FORM:
DAVID CHIU, City Attorney

By: /s/ Robb Kapla
ROBB KAPLA
Deputy City Attorney

n:\legana\as2024\2400333\01796627.docx

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

MEMORANDUM

Date: March 12, 2025

To: Planning Department/Planning Commission

From: John Carroll, Assistant Clerk, Land Use and Transportation Committee

Subject: Board of Supervisors Legislation Referral - File No. 250211
Existing Building Code - Concrete Building Inventory Assessment

☒ California Environmental Quality Act (CEQA) Determination
(California Public Resources Code, Sections 21000 et seq.)
☒ Ordinance / Resolution
☐ Ballot Measure

Not defined as a project under CEQA Guidelines sections 15378 and 15060(c)(2) because it would not result in a direct or indirect physical change in the environment.

4/1/2025 Joy Navarrete

☒ Amendment to the Planning Code, including the following Findings:
(Planning Code, Section 302(b): 90 days for Planning Commission review)
☒ General Plan ☒ Planning Code, Section 101.1 ☒ Planning Code, Section 302

☐ Amendment to the Administrative Code, involving Land Use/Planning
(Board Rule 3.23: 30 days for possible Planning Department review)

☐ General Plan Referral for Non-Planning Code Amendments
(Charter, Section 4.105, and Administrative Code, Section 2A.53)
(Required for legislation concerning the acquisition, vacation, sale, or change in use of City property; subdivision of land; construction, improvement, extension, widening, narrowing, removal, or relocation of public ways, transportation routes, ground, open space, buildings, or structures; plans for public housing and publicly-assisted private housing; redevelopment plans; development agreements; the annual capital expenditure plan and six-year capital improvement program; and any capital improvement project or long-term financing proposal such as general obligation or revenue bonds.)

☐ Historic Preservation Commission
☐ Landmark *(Planning Code, Section 1004.3)*
☐ Cultural Districts *(Charter, Section 4.135 & Board Rule 3.23)*
☐ Mills Act Contract *(Government Code, Section 50280)*
☐ Designation for Significant/Contributory Buildings *(Planning Code, Article 11)*

Please send the Planning Department/Commission recommendation/determination to John Carroll at john.carroll@sfgov.org.

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

M E M O R A N D U M

TO: Patrick O'Riordan, Director, Department of Building Inspection
Sonya Harris, Secretary, Building Inspection Commission

FROM: John Carroll, Assistant Clerk
Land Use and Transportation Committee

DATE: March 12, 2025

SUBJECT: LEGISLATION INTRODUCED

The Board of Supervisors' Land Use and Transportation Committee has received the following legislation, introduced by Supervisor Melgar on March 4, 2025:

File No. 250211

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this Ordinance to the California Building Standards Commission upon final passage.

The proposed ordinance is being transmitted pursuant to Charter, Section D3.750-5, for public hearing and recommendation. It is pending before the Land Use and Transportation Committee and will be scheduled for hearing upon receipt of your response.

Please forward me the Commission's recommendation and reports at the Board of Supervisors, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102 or by email at: john.carroll@sfgov.org.

c:
Offices of Chair Melgar
Tate Hanna, Department of Building Inspection
Patty Lee, Department of Building Inspection

BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco 94102-4689
Tel. No. (415) 554-5184
Fax No. (415) 554-5163
TDD/TTY No. (415) 554-5227

M E M O R A N D U M

TO: Budget and Legislative Analyst

FROM: John Carroll, Assistant Clerk, Land Use and Transportation Committee

DATE: April 23, 2025

SUBJECT: LEGISLATION AMENDED - FISCAL IMPACT DETERMINATION

The Board of Supervisors' Land Use and Transportation Committee (a nonfiscal committee) amended the following legislation on April 21, 2025. Pursuant to Administrative Code, Section 2.6-3, the new version is being forwarded to you as it was initially determined not to have fiscal impact.

File No. 250211-2

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this Ordinance to the California Building Standards Commission upon final passage.

If the new version is determined to have fiscal impact, the legislation will need to be referred to a fiscal committee before it can be referred to the full Board for approval.

Please send your determination or contact with me any questions at (415) 554-4445 or email: john.carroll@sfgov.org.

RESPONSE FROM THE BUDGET AND LEGISLATIVE ANALYST - Date: _____

____ **This matter has fiscal impact.**

____ **This matter does not have fiscal impact.**

____ **Additional information attached.**

_____
Budget and Legislative Analyst

From:	Menard, Nicolas (BUD)
To:	Carroll, John (BOS)
Cc:	Somera, Alisa (BOS); Goncher, Dan (BUD); BOS Legislation, (BOS)
Subject:	RE: REFERRAL BLA - FISCAL IMPACT DETERMINATION REQUEST - AMENDED IN LUT - BOS File No. 250211 - Existing Building Code - Concrete Building Inventory Assessment
Date:	Wednesday, April 23, 2025 3:33:38 PM
Attachments:	image001.png

Hi John

This ordinance, as amended, does not have fiscal impact.

Nicolas Menard
Budget & Legislative Analyst's Office
415-484-5485

From: Carroll, John (BOS) <john.carroll@sfgov.org>
Sent: Wednesday, April 23, 2025 3:13 PM
To: Menard, Nicolas (BUD) <nicolas.menard@sfgov.org>
Cc: Somera, Alisa (BOS) <alisa.somera@sfgov.org>; Goncher, Dan (BUD) <dan.goncher@sfgov.org>; BOS Legislation, (BOS) <bos.legislation@sfgov.org>
Subject: REFERRAL BLA - FISCAL IMPACT DETERMINATION REQUEST - AMENDED IN LUT - BOS File No. 250211 - Existing Building Code - Concrete Building Inventory Assessment

Good afternoon,

The subject ordinance was amended in LUT on April 21, 2025. It was then recommended as amended to the BOS for consideration on April 29, 2025.

At the time of introduction this ordinance was determined to not have fiscal impact.

Referral to BLA – April 23, 2025

Pursuant to Admin Code, Section 2.6-3, please review the amended ordinance to determine whether the amendments result in the legislation having a fiscal impact.

You are invited to review the entire matter on our Legislative Research Center by following the link below.

Board of Supervisors File No. 250211

Best to you,

From:	Board of Supervisors (BOS)
To:	BOS-Supervisors; BOS-Legislative Aides
Cc:	Calvillo, Angela (BOS); Mchugh, Eileen (BOS); Ng, Wilson (BOS); Somera, Alisa (BOS); De Asis, Edward (BOS); BOS-Operations; Board of Supervisors (BOS); Carroll, John (BOS)
Subject:	FW: SFAA Support Letter File No. 250211
Date:	Monday, April 21, 2025 1:51:44 PM
Attachments:	SFAA Support Letter File No. 250211.pdf

Dear Supervisors,

Please see below and attached from the San Francisco Apartment Association regarding:

> File No. 250211 - Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this Ordinance to the California Building Standards Commission upon final passage.

Regards,

Richard Lagunte
Office of the Clerk of the Board
San Francisco Board of Supervisors
1 Dr. Carlton B. Goodlett Place, Room 244
San Francisco, CA 94102
Voice (415) 554-5184 | Fax (415) 554-5163
bos@sfgov.org | www.sfbos.org

Pronouns: he, him, his

From: Charley Goss <charley@sfaa.org>
Sent: Monday, April 21, 2025 11:55 AM

To: Melgar, Myrna (BOS) <myrna.melgar@sfgov.org>; Mahmood, Bilal (BOS) <bilal.mahmood@sfgov.org>; Chen, Chyanne (BOS) <Chyanne.Chen@sfgov.org>
Cc: Board of Supervisors (BOS) <board.of.supervisors@sfgov.org>; Janan New <janan@sfaa.org>
Subject: SFAA Support Letter File No. 250211

Hi Members of the Land Use Committee,

Attached please find the San Francisco Apartment Association's letter in support of Supervisor Melgar's proposed ordinance to assess the City's inventory of seismically vulnerable concrete non-ductile buildings, and to adopt voluntary seismic retrofit standards for these buildings (File No. 250211). This ordinance will be heard by the Land Use Committee today, 4/21/25.

Please let us know if you have any questions or concerns.

Best,

Charley Goss
Government and Community Affairs Manager
San Francisco Apartment Association
415.255.2288 ext. 114

San Francisco
Apartment Association

San Francisco Board of Supervisors
Land Use Committee
San Francisco City Hall, Room 244
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

April 21, 2025

Re: Support of File No. 250211: Concrete Building Inventory Assessment

Dear Members of the Land Use Committee,

The San Francisco Apartment Association writes to you in support of Supervisor Melgar's legislation to assess the City's inventory of seismically vulnerable concrete non-ductile buildings and to adopt voluntary seismic retrofit standards for these buildings (File Number 250211: Concrete Building Inventory Assessment).

The San Francisco Apartment Association was an active participant in the City's Concrete Building Safety Program (CBSP) working group in late 2022 and throughout 2023. The CBSP convened stakeholders and community advocates to develop and issue recommendations about a potential mandatory seismic retrofit program for concrete non-ductile buildings.

While we commend the work of the Concrete Building Safety Program, SFAA remained concerned about mandating the seismic retrofit of concrete non-ductile buildings: these types of retrofits can be cost-prohibitive, would require relocation of tenants across hundreds or thousands of buildings at the same time, and the City had not identified potential funding sources to assist property owners with mandatory retrofits.

SFAA believes it is an appropriate and more measured approach to instead pass a voluntary seismic retrofit program as envisioned by Supervisor Melgar's proposal, which assesses potentially vulnerable buildings, and, importantly, develops seismic retrofit standards for buildings who wish to retrofit voluntarily.

We understand there are property owners who are currently considering voluntary seismic retrofits, especially while doing major renovations or office-to-residential building conversions. It is critical for owners of these buildings to have a clear understanding of the City's retrofit

standards, and for the City to ensure that buildings who choose to undergo a voluntary seismic retrofit will not be subject to potential future mandatory seismic retrofit legislation.

These are important components of Supervisor Melgar's Concrete Building Inventory Assessment legislation, and thus, we ask you to vote in support of File No. 250211.

Sincerely,

Janan New
Director
San Francisco Apartment Association

Charley Goss
Government and Community Affairs Manager
San Francisco Apartment Association

Cc:

Board of Supervisors President Rafael Mandelman

Supervisor Connie Chan

Supervisor Stephen Sherrill

Supervisor Danny Sauter

Supervisor Joel Engardio

Supervisor Matt Dorsey

Supervisor Jackie Fielder

Supervisor Shamann Walton

HOW SKYSCRAPERS ARE BUILT IN JAPAN

There is a difference in the building philosophy between Tokyo and San Francisco. Some of it has to do with Japan's philosophical outlook, ie. "The green reed which bends in the wind is stronger than the mighty **oak** which breaks in a storm." This wisdom is attributed to Confucius. In the West, the phrase, "Be like the Willow and not the Oak" is more common. This outlook emphasizes the importance of resilience and adaptability over rigidity and resistance when facing challenges. Like a green reed that bends with wind without breaking, those who are adaptable can navigate difficult situations with greater ease. Oaks, while strong, can be brittle and break under intense pressure, representing the negative consequence of inflexibility.

SEISMIC ISOLATION IN JAPAN

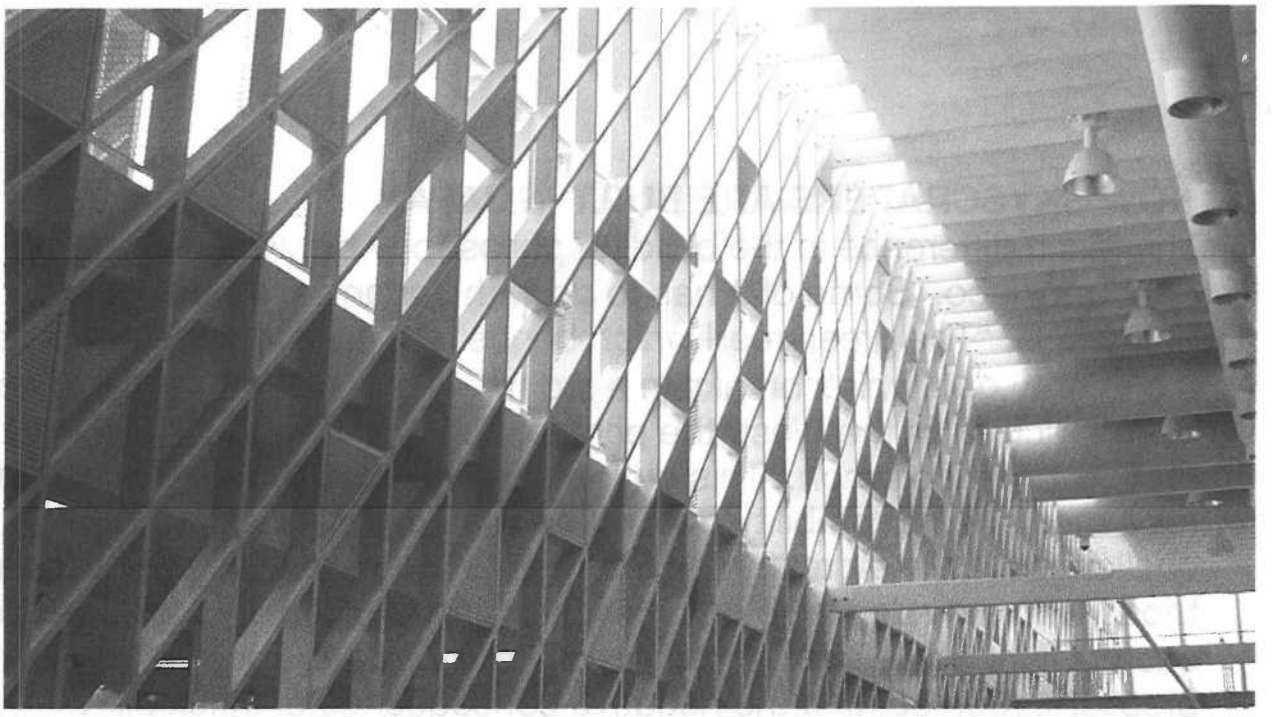
Therefore, in Tokyo, buildings are constructed to sway and bend. The engineers in Tokyo believe if a structure is able to absorb the energy, it will not fail. There are many ways Japan uses to control earthquake destruction. One way is through "seismic isolation". "The buildings or structures are put on a form of bearing or shock absorber – sometimes as simple as blocks of rubber about 30-50cm (12 to 20 inches) thick – to resist the motions of the earthquake. Wherever the building columns come down to the foundation, they sit on these rubber pads." 1

DAMPENING IN JAPAN

However, this is not the only method of making buildings resilient in Tokyo. Another strategy is to use dampening throughout the height of the building. For example, a tall building can move as much as **five** feet but if dampers are located, on every 2nd floor, all the way up to the top, this allows the building to be able to absorb more shock without failing. 1

MESH STRUCTURES IN JAPAN

Another way to make buildings resilient is to use "mesh" structures which can prevent a buildings support from buckling and distributes the energy absorption in an earthquake more universally. Fortunately, using this style of design can create very attractive buildings also. 1



Hakodate Future University, designed by Riken Yamamoto.

EARTHQUAKE OCCURRENCE

Earthquakes in Japan are also getting stronger. In California, it is estimated that there is a 95% chance of a serious earthquake occurring in the next 100 years.

HOW SKYSCRAPER ARE BUILT IN SAN FRANCISCO

As you would expect, skyscrapers in San Francisco are built like the oak tree. Instead of numerous appliances to absorb or dampen buildings, construction in San Francisco primarily depends on rebar and concrete to build modern skyscrapers strong. Skyscrapers built in this fashion are robust, however, the earthquake resiliency strategy is very different from that in Japan. 2

WHERE SAN FRANCISCO FAILS IN ITS EARTHQUAKE STRATEGY

Before 1990, as many as 4,000 buildings in San Francisco were built with no rebar to resist side-to-side shaking. Buildings like this were usually built as office spaces or multi-family houses. In other countries, i.e. New Zealand and Mexico, these buildings have collapsed in a severe earthquake. 2

TILT-UP

Another type of building vulnerable to damage during an earthquake is tilt-ups. These buildings includes warehouses, grocery stores and manufacturing facilities. The problem with these buildings, is that the walls and the roof are not always secured adequately together. When the wall and roof separate, the failure can be catastrophic. 2

INSPECTION AND MONITORING IN TOKYO

To start, Japan has a strict earthquake code and inspection system. In addition, after an earthquake buildings are required to have safety inspections. This provides confidence for the public and owners of the building both. Buyers when purchasing buildings in Japan are provided legal documentation from independent inspectors stating the earthquake resiliency of their purchase. 3

1981 IN JAPAN

For buildings constructed before 1981, the disclosure by the Developer or Seller is needed of any seismic upgrading on the property. If not, the Buyer must provide the necessary seismic upgrading. Providing the cost for improvement to the Buyer provides the Buyer leverage in purchasing the property unimproved for less capital. 3

1981 to 2000 IN JAPAN

After the Miyag Earthquake of 1978, seismic standards were upgraded, therefore, after this date developers must confirm compliance with improved earthquake standards. Also, the Buyer has the responsibility to be sure the property meets post 1981 retrofitting standards. 3

POST 2000 BUILDINGS IN JAPAN

At this point in time, all seismic standards are cutting edge and meet the latest standards of code enforcement. Now, Developers/Sellers must provide certificates stating the state of the art practices are in place for the building being purchased. The Buyer has the mandate to check to see if post 1981standards and if retrofitting of the building was provided. 3

IN JAPAN BUYER CONFIRMATION AT PURCHASE IS REQUIRED
Buyers are entitled to receive by a certified engineer proof the property is in compliance with seismic safety standards. Most importantly, there are two Certificates of compliance provided to the Buyer. One is the Certificate of Inspection and the other is the Certificate of Completion. Furthermore, Sellers of the real estate are compelled to report any shortfall in the building due to earthquakes. 3

INSPECTION AND MONITOR IN SAN FRANCISCO
The City is far behind Tokyo in inspection and monitoring of buildings for earthquake resiliency. As mentioned before, the City has 4,000 buildings that are likely to fail in an earthquake but the City believes this list is incomplete. Therefore, legislation is being considered by the Board of Supervisor in the month of May 2025, to research and exam all buildings that are questionable. To do these exams of the buildings in question, can cost between $300 to $3,200. Should this legislation pass, the City would have a better idea of how buildings would fair in an earthquake. At this time, there seems to be a controversy as to whether this information would be made available to the public that live and work in these buildings. The City hopes when this information is available, they can prod owners to upgrade their earthquake resilience. Supervisor Melgar, who sponsored this legislation, believes those that visit, work or live in the City, should be comforted with the fact their buildings are safe. 3

Today, the ordinance does not demand retrofitting but does provide a standard of retrofitting improvement. For now, the program is voluntary for earthquake readiness, however, Supervisor Melgar says, should the City find there is a problem, that people are not solving quickly enough, then at some point, legislation will become mandatory. The expense of retrofitting old concrete buildings would be between $50-$200 per square foot. **3** When this does occur, maybe San Francisco will have an inspection and monitoring system closer to that of Japan. We can only hope so!

FOOTNOTE:

1. https://www.bbc.com/future/article/20190114-how-japans-skyscrapers-are-built-to-survive-earthquakes
2. https://housingjapan.com/blog/why-japans-earthquake-resistant-buildings-are-the-future-of-real-estate/
3. https://www.sfchronicle.com/sf/article/earthquake-risk-concrete-buildings-retrofit-20267310.php

* EXAM AFTER EACH EARTHQUAKE

From:	Carroll, John (BOS)
To:	"Sarah Atkinson"
Cc:	Richard McCarthy; Bruce Maison; Tal Feinstein; Tracy Becker; Donald Wells; Melgar, Myrna (BOS); Low, Jen (BOS); Chen, Chyanne (BOS); Sciammas, Charlie (BOS); Mahmood, Bilal (BOS); Cooper, Raynell (BOS)
Subject:	RE: Public Comment letter from EERI-NC : Concrete Building Inventory Assessment - BOS File No. 250211
Date:	Monday, April 21, 2025 10:43:00 AM
Attachments:	LUTC_Letter of support for SF Concrete Inventory Assessment_EERI-NC.pdf image001.png

Thank you for your comment letter.

I am forwarding your comments to the members of the Land Use and Transportation committee, and I will include your comments in the file for this ordinance matter.

I invite you to review the entire matter on our Legislative Research Center by following the link below:

-

Board of Supervisors File No. 250211

John Carroll
Assistant Clerk
Board of Supervisors
San Francisco City Hall, Room 244
San Francisco, CA 94102
(415)554-4445

Click here to complete a Board of Supervisors Customer Service Satisfaction form.

The Legislative Research Center provides 24-hour access to Board of Supervisors legislation and archived matters since August 1998.

From: Sarah Atkinson <satkinson@spur.org>
Sent: Monday, April 21, 2025 10:36 AM
To: Carroll, John (BOS) <john.carroll@sfgov.org>
Cc: Richard McCarthy <mccarthy2041@gmail.com>; Bruce Maison <maison@netscape.com>; Tal Feinstein <talish@berkeley.edu>; Tracy Becker <tcbecker@berkeley.edu>; Donald Wells <d.wells@fugro.com>
Subject: Public Comment letter from EERI-NC : Concrete Building Inventory Assessment

Dear John,

On behalf of the Earthquake Engineering Research Institute (EERI) Northern California Chapter Board and our Board President, Richard McCarthy, I am submitting a support letter for today's Land Use & Transportation Committee for Agenda Item #3: Existing Building Code - Concrete Building Inventory Assessment.

Please pass along this support letter to the committee chairs.

Thank you,
Sarah Atkinson
EERI-NC Board Member

Northern California Chapter

April 21, 2025

To: San Francisco's Land Use & Transportation Committee

Subject: Advance San Francisco's Concrete Building Safety Program; Adopt Concrete Building Inventory Assessment (Agenda Item #3)

Dear Supervisors Melgar, Chen, Mahmood,

On behalf of our diverse members, we, the **Northern California Chapter of the Earthquake Engineering Research Institute (EERI-NC)**, strongly support the proposed citywide ordinance requiring the seismic evaluation of Rigid-Wall-Flexible-Diaphragm (RWFD) and Concrete Buildings, along with the adoption of voluntary seismic retrofit standards in the city. This is an essential step in raising awareness of seismic risks and encouraging property owners to act. However, we believe voluntary retrofits alone are not enough. San Francisco has already fallen behind other Southern California cities in requiring retrofits for concrete buildings.

EERI-NC has long advocated for seismic resilience policy and smart design. Our organization has contributed to research and policy recommendations for addressing non-ductile concrete buildings and other vulnerable structures. About ten years ago, the EERI Concrete Coalition gathered a set of case studies of concrete building collapses around the world; you can find that list here. The absence of a comprehensive mitigation program for these buildings, despite years of knowing the significant risks these buildings pose, leaves San Francisco vulnerable.

Los Angeles, Santa Monica, and West Hollywood have already surpassed San Francisco by mandating retrofits for non-ductile concrete buildings. The trend of mitigating **hazardous buildings is gaining momentum, and now is the time for San Francisco to again lead the way.** We urge the Committee to 1.) support this ordinance and 2.) contribute to the advancement of a mandatory retrofit program that retrofits at-risk RWFD and concrete buildings *before* the next major earthquake. Taking decisive action now will save lives, protect neighborhoods, and ensure the long-term resilience of San Francisco's built environment.

After the recent 7.7-magnitude earthquake in Myanmar that killed over 3,000 people, it is irresponsible to overlook the City's seismic mitigation risks. We urge your support of this legislation to advance seismic safety in San Francisco. We look forward to working together to protect the residents and businesses of San Francisco. Please reach out with any questions.

Sincerely,

Richard McCarthy
Board President
Northern California Chapter of the Earthquake Engineering Research Institute (EERI-NC)

From:	Carroll, John (BOS)
To:	Sarah Atkinson
Cc:	David Friedman; Melgar, Myrna (BOS); Low, Jen (BOS); Chen, Chyanne (BOS); Sciammas, Charlie (BOS); Mahmood, Bilal (BOS); Cooper, Raynell (BOS)
Subject:	RE: SPUR Support for Concrete Building Inventory Assessment - BOS File No. 250211
Date:	Monday, April 21, 2025 10:03:00 AM
Attachments:	Concrete Building Inventory Assessment_SPUR Support.pdf image001.png

Thank you for your comment letter.

I am forwarding your comments to the members of the Land Use and Transportation committee, and I will include your comments in the file for this ordinance matter.

I invite you to review the entire matter on our Legislative Research Center by following the link below:

-

Board of Supervisors File No. 250211

John Carroll
Assistant Clerk
Board of Supervisors
San Francisco City Hall, Room 244
San Francisco, CA 94102
(415)554-4445

Click here to complete a Board of Supervisors Customer Service Satisfaction form.

The Legislative Research Center provides 24-hour access to Board of Supervisors legislation and archived matters since August 1998.

From: Sarah Atkinson <satkinson@spur.org>
Sent: Monday, April 21, 2025 9:59 AM
To: Carroll, John (BOS) <john.carroll@sfgov.org>
Cc: David Friedman <dfriedman@spur.org>
Subject: SPUR Support for Concrete Building Inventory Assessment

Dear John,

On behalf of SPUR, I am submitting a support letter for Agenda Item #3: *Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings for* the Land Use & Transportation Committee meeting today.

Please pass along this support letter to the committee chairs.

Thank you,
Sarah Atkinson

--
Sarah Atkinson (she/her)
Hazard Resilience Sr. Policy Manager | SPUR
satkinson@spur.org
510.589.1626

SPUR
San Francisco | San José | Oakland

April 21, 2025

To: Land Use & Transportation Committee

Subject: Support for Proposed Concrete Building Inventory Assessment (Agenda Item 3)

Dear Supervisors Melgar, Chen, Mahmood,

SPUR writes to express our strong support for the proposed citywide ordinance requiring the evaluation of *Rigid-Wall-Flexible-Diaphragm (RWFD) and Concrete Buildings* and the adoption of voluntary seismic retrofit standards to address these buildings. This is a necessary first step to increase awareness of seismic risks and empower property owners to act. However, voluntary retrofits alone are insufficient—San Francisco must plan to adopt a mandatory retrofit program soon.

SPUR has long championed seismic safety. Our 2009 *Resilient City* policy reports, including *The Dilemma of Existing Buildings*, called for a mitigation program for critical non-ductile concrete buildings—yet, 17 years later, such a program remains absent. SPUR has actively engaged in stakeholder discussions on the Concrete Building Safety Program and has advocated for expediting soft-story retrofits across the Bay Area. The need for action on seismic risk mitigation in San Francisco is urgent.

Beyond public safety, addressing seismic risks is essential for San Francisco's economic resilience. Downtown's high concentration of concrete buildings poses a significant risk of widespread business disruption and long-term habitability challenges following a major earthquake. If these buildings collapse, lives will be lost, and entire neighborhoods could become uninhabitable for months, weakening San Francisco's economy. We cannot afford to delay. The impacts of past earthquakes on brittle concrete buildings offer sobering lessons:

- In 1971, the M6.6 San Fernando earthquake in Los Angeles killed 64 people, 49 of whom died after the collapse of the San Fernando Veterans Administration Hospital.
- In 2011, the CTV building in Christchurch, New Zealand, collapsed, killing 115 people after a M6.3.
- In 2017, the M7.1 earthquake hit Mexico City, killing over 300 people, including 21 children and four adults, in the collapse of an under-reinforced concrete private school.

In 2013, San Francisco led the state by requiring retrofits for soft-story buildings. In 2015, the City of Los Angeles adopted a retrofit mandate for soft-story buildings and concrete buildings, and other Southern California cities have followed suit. **Today, we urge the Land Use & Transportation Committee to support this voluntary assessment** while encouraging the city

SPUR
San Francisco | San José | Oakland

to pursue a mandatory retrofit ordinance in the near future. We look forward to celebrating your leadership in protecting San Francisco's residents and businesses.

Sincerely,

David A. Friedman, PE, SE, NAE
Interim CEO, SPUR
E: david@meyer-friedman.com | C: 415-305-4224

Sarah Atkinson
Hazard Resilience Sr. Policy Manager, SPUR
E: satkinson@spur.org | C: 510-589-1626

From:	Carroll, John (BOS)
To:	"Joyce Feng"
Cc:	Ojala, David; Wayne Low; Jenna Wong; Melgar, Myrna (BOS); Low, Jen (BOS); Chen, Chyanne (BOS); Sciammas, Charlie (BOS); Mahmood, Bilal (BOS); Cooper, Raynell (BOS)
Subject:	RE: Land Use and Transportation Committee Meeting - SEAONC Support Letter for Agenda Item #3 - BOS File No. 250211
Date:	Monday, April 21, 2025 10:00:00 AM
Attachments:	2025-04-18 SEAONC Support Letter for Agenda Item 3.pdf image001.png

Thank you for your comment letter.

I am forwarding your comments to the members of the Land Use and Transportation committee, and I will include your comments in the file for this ordinance matter.

I invite you to review the entire matter on our Legislative Research Center by following the link below:

-

Board of Supervisors File No. 250211

John Carroll
Assistant Clerk
Board of Supervisors
San Francisco City Hall, Room 244
San Francisco, CA 94102
(415)554-4445

 Click here to complete a Board of Supervisors Customer Service Satisfaction form.

The Legislative Research Center provides 24-hour access to Board of Supervisors legislation and archived matters since August 1998.

From: Joyce Feng <joyce@strandbergeng.com>
Sent: Saturday, April 19, 2025 11:15 AM
To: Carroll, John (BOS) <john.carroll@sfgov.org>
Cc: Ojala, David <DOjala@thorntontomasetti.com>; Wayne Low <wlow@degenkolb.com>; Jenna Wong <jewong@sfsu.edu>
Subject: Land Use and Transportation Committee Meeting - SEAONC Support Letter for Agenda Item #3

Hi John,

Attached is SEAONC's support letter for Agenda Item #3 on the upcoming Committee Meeting. SEAONC is committed to offering technical expertise and engaging with stakeholders. Please feel free to reach out if we can be of assistance in supporting efforts to safeguard San Francisco's residents and businesses.

Thank you,
Joyce
2024-2025 SEAONC President

STRANDBERG ENGINEERING
JOYCE FENG - *PRINCIPAL*
415.906.2438
STRANDBERGENG.COM

SEAONC STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

April 18, 2025

To: San Francisco Land Use & Transportation Committee

RE: Support for File No. 250211 – Concrete Building Safety Program and Inventory Assessment

Dear Supervisors Melgar, Chen, and Mahmood,

On behalf of the Structural Engineers Association of Northern California (SEAONC), we are writing to express our support for the proposed ordinance requiring a seismic inventory and evaluation of Rigid-Wall-Flexible-Diaphragm (RWFD) and Concrete Buildings in San Francisco, as well as the adoption of voluntary retrofit standards.

SEAONC represents practicing structural engineers who are deeply engaged in the design, evaluation, and retrofit of buildings across the Bay Area. Our members understand the life safety and economic risks of older, non-ductile concrete structures and RWFD buildings, many first-hand through their emergency response and reconnaissance efforts. The engineering community has widely recognized these structures as some of the most vulnerable to earthquakes. The City has already mitigated the risk posed by two other types of earthquake-vulnerable buildings, unreinforced masonry and wood-framed soft story buildings through similar inventory and retrofit programs. We commend the City's steps toward acknowledging and addressing these hazards.

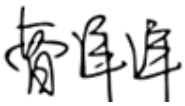
We support the passage of this legislation as a vital first step towards improving public safety by raising awareness of the risk posed by these building types. However, as engineers charged with protecting public safety, we also emphasize that inventories and voluntary retrofit programs alone are insufficient to meaningfully reduce seismic risk. San Francisco already lags behind several Southern California jurisdictions that have already implemented mandatory retrofit requirements for these same building types, and the City will remain behind as long as this program remains voluntary. SEAONC urges the Committee to not only adopt this ordinance but also commit to a clear timeline and pathway toward a mandatory retrofit requirement for these building types.

We look forward to working together to protect the residents and businesses of San Francisco.

SEAONC stands ready to assist with technical expertise or stakeholder engagement as this program advances. Please do not hesitate to reach out if we can support your efforts to protect the residents and businesses of San Francisco.

Sincerely,

Arthur Cao,



SEAONC Existing Buildings Committee Chair

Joyce Feng,

SEAONC President

From:	Carroll, John (BOS)
To:	David Harrison
Cc:	MelgarStaff (BOS); ChenStaff; MahmoodStaff; Jackson Nutt-Beers; Mathews, Laurel (ADM); Melgar, Myrna (BOS); Low, Jen (BOS); Chen, Chyanne (BOS); Sciammas, Charlie (BOS); Mahmood, Bilal (BOS); Cooper, Raynell (BOS)
Subject:	RE: SF Chamber Letter of Support re: File No. 250211 Concrete Building Inventory Assessment
Date:	Monday, April 21, 2025 10:00:00 AM
Attachments:	250211 Concrete Building SF Chamber Support.pdf image001.png image002.png

Thank you for your comment letter.

I am forwarding your comments to the members of the Land Use and Transportation committee, and I will include your comments in the file for this ordinance matter.

I invite you to review the entire matter on our Legislative Research Center by following the link below:

- Board of Supervisors File No. 250211

John Carroll
Assistant Clerk
Board of Supervisors
San Francisco City Hall, Room 244
San Francisco, CA 94102
(415)554-4445

Click here to complete a Board of Supervisors Customer Service Satisfaction form.

The Legislative Research Center provides 24-hour access to Board of Supervisors legislation and archived matters since August 1998.

From: David Harrison <dharrison@sfchamber.com>
Sent: Friday, April 18, 2025 3:38 PM
To: Carroll, John (BOS) <john.carroll@sfgov.org>
Cc: MelgarStaff (BOS) <melgarstaff@sfgov.org>; ChenStaff <ChenStaff@sfgov.org>; MahmoodStaff <MahmoodStaff@sfgov.org>; Jackson Nutt-Beers <jnuttbeers@sfchamber.com>; Mathews, Laurel (ADM) <laurel.mathews@sfgov.org>

Subject: SF Chamber Letter of Support re: File No. 250211 Concrete Building Inventory Assessment

Hello,

Please find the attached letter on behalf of the San Francisco Chamber of Commerce in support of File No. 250211. Thank you.

All the best,

David Harrison *(He/Him)*

Director of Public Policy

(O) 415-352-8803 (C) 202-262-5860

San Francisco Chamber of Commerce

235 Montgomery Street, Suite 760

San Francisco, CA 94104

SAN FRANCISCO
CHAMBER OF COMMERCE

April 18, 2025

San Francisco Board of Supervisors
Land Use and Transportation Committee
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102

Re: Support for File No. 250211 – Concrete Building Inventory Assessment and Voluntary Retrofit Standards

Dear Chair Melgar, Vice Chair Chen, and Supervisor Mahmood,

On behalf of the San Francisco Chamber of Commerce, I write to express our support for the proposed ordinance (File No. 250211) to create an accurate inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm (RWFD) and Concrete Buildings and to establish new voluntary retrofit standards.

We appreciate the thoughtful and balanced approach that this legislation takes. It provides meaningful progress toward understanding San Francisco's seismic risk while respecting the economic and logistical realities facing property owners. The Chamber commends the City's effort to engage stakeholders in a transparent and collaborative process, and we are especially grateful for the opportunity the business community had to participate in the working group that helped shape this proposal.

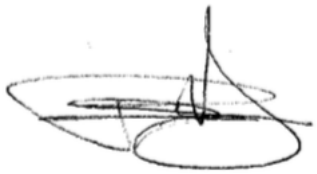
By improving the accuracy of the City's building inventory, the ordinance will give both policymakers and property owners clearer information about which buildings are truly at risk. Importantly, it also provides a pathway for building owners who were mistakenly included in preliminary drafts to correct the record. Giving owners two years to work with licensed engineers to complete and submit checklists is a reasonable and practical timeline.

The introduction of voluntary retrofit standards is also a commendable approach. These standards give owners flexibility and clarity while also offering an incentive to upgrade buildings proactively, with the goal of avoiding future mandatory retrofit requirements. At the same time, the legislation wisely stops short of imposing a retrofit mandate. The Chamber agrees that additional data collection and assessment is necessary, and we

recognize the unresolved challenges around financial feasibility, tenant relocation, and displacement. Maintaining this careful balance between safety and practicality makes the ordinance a model of responsible policymaking.

We urge the committee to advance this ordinance. The San Francisco Chamber of Commerce looks forward to continuing to work with City leaders to promote both public safety and economic vitality.

Sincerely,



Rodney Fong
President & CEO
San Francisco Chamber of Commerce

Introduction Form

(by a Member of the Board of Supervisors or the Mayor)

I hereby submit the following item for introduction (select only one):

- [x] 1. For reference to Committee (Ordinance, Resolution, Motion or Charter Amendment)
- [ ] 2. Request for next printed agenda (For Adoption Without Committee Reference)
  (Routine, non-controversial and/or commendatory matters only)
- [ ] 3. Request for Hearing on a subject matter at Committee
- [ ] 4. Request for Letter beginning with "Supervisor _____ inquires…"
- [ ] 5. City Attorney Request
- [ ] 6. Call File No. _____ from Committee.
- [ ] 7. Budget and Legislative Analyst Request (attached written Motion)
- [ ] 8. Substitute Legislation File No. _____
- [ ] 9. Reactivate File No. _____
- [ ] 10. Topic submitted for Mayoral Appearance before the Board on _____

The proposed legislation should be forwarded to the following (please check all appropriate boxes):

☐ Small Business Commission ☐ Youth Commission ☐ Ethics Commission

☐ Planning Commission ☒ Building Inspection Commission ☐ Human Resources Department

General Plan Referral sent to the Planning Department (proposed legislation subject to Charter 4.105 & Admin 2A.53):

☐ Yes ☐ No

(Note: For Imperative Agenda items (a Resolution not on the printed agenda), use the Imperative Agenda Form.)

Sponsor(s):

Supervisor Melgar

Subject:

Existing Building Code - Concrete Building Inventory Assessment

Long Title or text listed:

Ordinance amending the Existing Building Code to assess the City's inventory of seismically vulnerable Rigid-Wall-Flexible-Diaphragm and Concrete Buildings, and adopt voluntary seismic retrofit standards for such buildings; adopting findings of local conditions under the California Health and Safety Code; affirming the Planning Department's determination under the California Environmental Quality Act; and directing the Clerk of the Board of Supervisors to forward this ordinance to the California Building Standards Commission upon final passage.

Signature of Sponsoring Supervisor: /s/Melgar