

San Francisco's Earthquake Safety Program



San Francisco: Built World Snap Shot



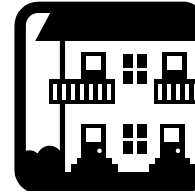
825,863

Total
Population



147,979

Buildings in
San Francisco



6,381

Noticed Buildings
Soft Story Program



Community Action Plan for Seismic Safety

ATC 52-2

**Here Today—Here Tomorrow:
The Road to Earthquake Resilience
in San Francisco**
A Community Action Plan for Seismic Safety



ATC Applied Technology Council

Prepared for
San Francisco Department of Building Inspection
under the Community Action Plan for Seismic Safety (CAPSS) Project



ATC  **CAPSS**



The Soft Story Ordinance

FILE NO. 130119 AMENDED IN COMMITTEE 3/25/2013 ORDINANCE NO. ~~66~~-13

1 [Building Code - Mandatory Seismic Retrofit Program: - Wood-Frame Buildings: Optional
2 Evaluation Form Fee]

3 Ordinance amending the Building Code to establish a Mandatory Seismic Retrofit
4 Program for wood-frame buildings of three or more stories or two stories over a
5 basement or underfloor area that has any portion extending above grade, and
6 containing five or more dwelling units where the permit to construct was applied for
7 prior to January 1, 1978, and the building has not been seismically strengthened;
8 establishing a fee for administering the program; adopting environmental findings and
9 findings of local conditions under California Health and Safety Code, Section 17958.7;
10 establishing an operative date; and directing the Clerk of the Board to forward the
11 legislation to specified State agencies.

12 NOTE: Additions are single-underline Italics Times New Roman;
13 deletions are ~~strike-through Italics Times New Roman~~;
14 Board amendment additions are double-underlined;
Board amendment deletions are ~~strikethrough normal~~.

15 Be it ordained by the People of the City and County of San Francisco:
16 Section 1. General Findings.

17 (a) At a duly noticed public hearing held on February 20, 2013, the Building Inspection
18 Commission considered this ordinance.

19 (b) The Planning Department has determined that the actions contemplated in this
20 ordinance comply with the California Environmental Quality Act (California Public Resources
21 Code Section 21000 et seq.). Said determination is on file with the Clerk of the Board of
22 Supervisors in File No. 130119 and is incorporated herein by reference.

23 (c) In Section 19160 of the California Health & Safety Code, the State Legislature
24 declared that because of the generally acknowledged fact that California will experience
25 moderate to severe earthquakes in the foreseeable future, increased efforts to reduce

Mayor Lee, Supervisor Chris Evers, Yee, Farrell, Board Member Tang, Cohan
BOARD OF SUPERVISORS

Page 1
3/25/2013



Compliance Tier	Submission of Screening Form and Optional Evaluation Form	Submittal of Permit Application with Plans for Seismic Retrofit Work	Completion of Work And Issuance of CFC
I	1	2	4
II	1	3	5
III	1	4	6
IV	1	5	7



Ordinance 66-13: a 23-yr history

- Loma Prieta, Northridge
 - LABC Div 93, GSREB, IEBC A4
- Berkeley (2005)
- CAPSS
- Newsom Exec. Directive (7/08)
- SPUR (2/09)
- ATC 52-3 (2009)
- 2010: AB-094, Prop A (63.2%)
- April 18, 2013



: It Takes a Village

- Mayor's Office –
Formation of ESIP
- Office of the City
Administrator
- Board of Supervisors
- Department of Building
Inspection



: It Takes a Village

- SF Planning Department
- SF Fire Department
- Department of Public Works
- Office of Small Business
- OEWD
- General Services Agency (311, Repro)



3402B: Scope

This Chapter shall apply to existing buildings, including mixed-occupancy buildings, that are Type V (wood-frame) construction of three or more stories or two stories over a basement or underfloor area that has any portion extending above grade, and containing five or more dwelling units and for which a permit for construction of a new building was applied for before January 1, 1978 or which is determined by the Department to have been originally constructed before January 1, 1978.

- Material: Type V (wood-frame) construction
- Stories: 3+ or 2 over basement
- Units: Five or more dwelling units
- Age: Pre-1978



3406B.2: Engineering criteria

1. FEMA P-807
2. ASCE 41-13
3. ASCE 41-06
4. ASCE 31-03 (evaluation only)
5. 2012 IEBC A4 (retrofit only)
6. Other rational methods

First story retrofit



NEES Testing – San Diego, CA



3404B.2: Screening Form

- Purpose
 - Quickly exempt buildings outside intended scope
 - Confirm buildings within intended scope
 - If in, assign Compliance Tier
- Need to account for odd cases of
 - Structural material
 - Number of stories
 - Number of units
 - Age



Screening Form

- Preamble
 - Instructions
 - Pre-populated data
- Section 1
 - Administrative
 - Condo units
 - Re-submittal?

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hui, S.E., C.B.O., Acting Director

Wood-Frame Seismic Retrofit Program SCREENING FORM – NO FEE

City records indicate that a building located on the block and lot shown below is subject to San Francisco Building Code Chapter 34B: Mandatory Earthquake Retrofit of Wood-Frame Buildings. The building owner or the owner's authorized agent shall complete and submit this Screening Form (Section 3404B.2), Sections 3 through 5.1 of this form, if needed, are to be completed by a California licensed architect or civil or structural engineer. Submittal of this Screening Form is required even if the building has completed voluntary seismic strengthening or if the building in its current condition is believed to satisfy the retrofit requirements of SFBC Section 3405B (see Section 2).

A separate document, **Screening Form Instructions**, provides explanation and instructions for this Screening Form.

Submit the completed Screening Form either:

- As a pdf attachment to sfdbi@sfdgov.org with "Screening Form submittal" in the subject line, or
- As a hardcopy by U.S. mail to Wood-Frame Seismic Retrofit Program, Department of Building Inspection, 1660 Mission Street, San Francisco, CA 94103

BLOCK / LOT NUMBER _____
OWNER NAME _____
OWNER ADDRESS _____

SECTION 1 – ADMINISTRATIVE INFORMATION

Owner telephone _____ Owner email _____

Owner mailing address (if different from above) _____

Authorized agent (optional) _____ Agent telephone _____ Agent email _____

Agent mailing address _____

CONDOMINIUM OWNERS: Please submit one Screening Form and one set of contact information for each building. Please list all lot numbers comprising the building here: _____


Does this Screening Form replace or supplement a previously submitted Screening Form for the same building? Yes No

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

Screening Form

- Section 2
 - Exemption for previous retrofits
- Section 3
 - Scope check
- Section 4
 - Compliance Tier

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hul, S.E., C.B.O., Acting Director

BLOCK / LOT NUMBER _____

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION
If the answer to question one (1) is yes, Screening Form Sections 3, 4, and Section 5.1 need not be completed. Section 5.2 must be completed in all cases.

	Yes	No
1. Has voluntary seismic strengthening been completed under Administrative Bulletin AB-094, Definition and Design Criteria for Voluntary Seismic Upgrade of Soft Story, Type-V (wood frame) Buildings? <i>If yes, AB-094 Permit Application Number: _____</i>	<input type="checkbox"/>	<input type="checkbox"/>
2. In addition to the exemption for AB-094 retrofits, this program (SFBC Section 3402B) also exempts certain retrofits completed within the last 15 years. To qualify for that exemption, complete and submit this Screening Form as well as the separate Optional Evaluation Form .		

SECTION 3 – SCOPE VERIFICATION

	Yes	No
1. Is the building of Type V (wood-frame) construction? (This question applies only to Target Stories. Use the Type V Worksheet in the Screening Form Instructions to answer this question.) <i>If No, indicate also which of these conditions is true:</i> <input type="checkbox"/> The building has no Target Stories. <input type="checkbox"/> The building has one or more Target Stories but they are not wood-frame.	<input type="checkbox"/>	<input type="checkbox"/>
2. Was the building originally constructed before January 1, 1978, or was a permit for construction applied for before January 1, 1978?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the building three or more stories, or two stories over a basement or underfloor area that extends above grade?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the building contain five or more dwelling units?	<input type="checkbox"/>	<input type="checkbox"/>

CONCLUSION: Is the response to ALL FOUR of the preceding questions Yes? Yes No

If Yes: The building is subject to SFBC Chapter 34B. Complete and submit this Screening Form.

If No: The building is exempt from SFBC Chapter 34B. Complete and submit this Screening Form, but skip Section 4. The Department will confirm the exemption in writing.

*Note: Even if the building is subject to SFBC Chapter 34B, it might not require retrofit. An owner may show that retrofit is not required by submitting a separate Optional Evaluation Form with supporting documents. The **Optional Evaluation Form** is available at www.sfdoss.org/labatory.*

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER
Indicate the compliance tier. Use the Compliance Tier Worksheet in the Screening Form Instructions to find the compliance tier.

Tier I Tier II Tier III Tier IV

Screening Form

- Section 5
- Stamp and signature
- Owner statement
- DBI use

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hui, S.E., C.B.O., Acting Director

BLOCK / LOT NUMBER _____

SECTION 5 – DESIGN PROFESSIONAL & OWNER AFFIDAVIT

Please see instructions.

5.1 DESIGN PROFESSIONAL

Under penalty of perjury, I certify that the information provided in Sections 3 and 4 of this Screening Form is based on my personal review of the building and its records, or review by others acting under my direct supervision, and is correct to the best of my knowledge.

Date stamped and signed _____

Firm name _____

Design Professional telephone _____

Design Professional email _____



5.2 OWNER/ AGENT

Under penalty of perjury, I certify that the information provided in Sections 1 and 2 of this Screening Form is correct to the best of my knowledge.

Owner
 Agent

Signature _____

Date _____

FOR DBI USE ONLY

Form appears incomplete / more information needed regarding:

SECTION 2: AB-694 Retrofit

SECTION 3: Scope Verification

Wood-Frame

Pre- 1978

Stones

Units

SECTION 4: Compliance Tier

SECTION 5: Professional and Owner / Agent

Statement s

Building is subject to the ordinance.

The form appears complete and is assumed correct based on design professional and owner / agent statements.

DBI Reviewer: _____


Date: _____

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

Screening Form Section 2

- Exemption for previous retrofits
- AB-094?
 - If yes, skip to Section 5.2
- Other
 - Per 3402B
 - Requires Optional Evaluation Form

City and County of San Francisco
Department of Building Inspection



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Tom C. Hul, S.E., C.B.O., Acting Director

BLOCK / LOT NUMBER _____

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION
If the answer to question one (1) is yes, Screening Form Sections 3, 4, and Section 5.1 need not be completed. Section 5.2 must be completed in all cases.

	Yes	No		
1. Has voluntary seismic strengthening been completed under Administrative Bulletin AB-094, Definition and Design Criteria for Voluntary Seismic Upgrade of Soft Story, Type-V (wood frame) Buildings?	<input type="checkbox"/>	<input type="checkbox"/>		
If yes, AB-094 Permit Application Number: _____				
2. In addition to the exemption for AB-094 retrofits, this program (SFBC Section 3402B) also exempts certain retrofits completed within the last 15 years. To qualify for that exemption, complete and submit this Screening Form as well as the separate Optional Evaluation Form .				

SECTION 3 – SCOPE VERIFICATION

	Yes	No
1. Is the building of Type V (wood-frame) construction? (This question applies only to Target Stories. Use the Type V Worksheet in the Screening Form instructions to answer this question.) If No, indicate also which of these conditions is true: <input type="checkbox"/> The building has no Target Stories. <input type="checkbox"/> The building has one or more Target Stories but they are not wood-frame.	<input type="checkbox"/>	<input type="checkbox"/>
2. Was the building originally constructed before January 1, 1978, or was a permit for construction applied for before January 1, 1978?	<input type="checkbox"/>	<input type="checkbox"/>
3. Is the building three or more stories, or two stories over a basement or underfloor area that extends above grade?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the building contain five or more dwelling units?	<input type="checkbox"/>	<input type="checkbox"/>

CONCLUSION: Is the response to ALL FOUR of the preceding questions Yes? Yes No

If Yes: The building is subject to SFBC Chapter 34B. Complete and submit this Screening Form.

If No: The building is exempt from SFBC Chapter 34B. Complete and submit this Screening Form, but skip Section 4. The Department will confirm the exemption in writing.

Note: Even if the building is subject to SFBC Chapter 34B, it might not require retrofit. An owner may show that retrofit is not required by submitting a separate Optional Evaluation Form with supporting documents. The **Optional Evaluation Form** is available at www.sfdgss.org/az03tory.

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER
Indicate the compliance tier. Use the Compliance Tier Worksheet in the Screening Form instructions to find the compliance tier.

Tier I Tier II Tier III Tier IV

Screening Form Section 3

- Scope check
- 4 questions
- If any No, exempt. Skip to Section 5
- See instructions:
 - Story count
 - Type V “Target Stories”

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hul, S.E., C.B.O., Acting Director

BLOCK / LOT NUMBER _____

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION

If the answer to question one (1) is yes, Screening Form Sections 3, 4, and Section 5.1 need not be completed. Section 5.2 must be completed in all cases.

1. Has voluntary seismic strengthening been completed under Administrative Bulletin AB-094, Definition and Design Criteria for Voluntary Seismic Upgrade of Soft Story, Type-V (wood frame) Buildings? Yes No

If yes, AB-094 Permit Application Number: _____

2. In addition to the exemption for AB-094 retrofits, this program (SFBC Section 3402B) also exempts certain retrofits completed within the last 15 years. To qualify for that exemption, complete and submit this Screening Form as well as the separate **Optional Evaluation Form**.

SECTION 3 – SCOPE VERIFICATION

1. Is the building of Type V (wood-frame) construction? (This question applies only to Target Stories. Use the Type V Worksheet in the Screening Form Instructions to answer this question.) Yes No

If No, indicate also which of these conditions is true:

- The building has no Target Stories.
 The building has one or more Target Stories but they are not wood-frame.

2. Was the building originally constructed before January 1, 1978, or was a permit for construction applied for before January 1, 1978? Yes No

3. Is the building three or more stories, or two stories over a basement or underfloor area that extends above grade? Yes No

4. Does the building contain five or more dwelling units? Yes No

CONCLUSION: Is the response to ALL FOUR of the preceding questions Yes? Yes No

If Yes: The building is subject to SFBC Chapter 34B. Complete and submit this Screening Form.

If No: The building is exempt from SFBC Chapter 34B. Complete and submit this Screening Form, but skip Section 4. The Department will confirm the exemption in writing.

Note: Even if the building is subject to SFBC Chapter 34B, it might not require retrofit. An owner may show that retrofit is not required by submitting a separate Optional Evaluation Form with supporting documents. The **Optional Evaluation Form** is available at www.sfdpass.org/az03at0ry.

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER

Indicate the compliance tier. Use the Compliance Tier Worksheet in the Screening Form Instructions to find the compliance tier.

Tier I Tier II Tier III Tier IV

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

Screening Form Section 4

- Compliance Tier
- Purpose
 - Prioritize highest life safety risk
 - Give more time for complex cases
 - Control DBI workflow
- Definitions: 3404B.3

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hul, S.E., C.B.O., Acting Director

BLOCK / LOT NUMBER _____

SECTION 2 – VOLUNTARY STRUCTURAL WORK EXEMPTION

If the answer to question one (1) is yes, Screening Form Sections 3, 4, and Section 5.1 need not be completed. Section 5.2 must be completed in all cases.

1. Has voluntary seismic strengthening been completed under Administrative Bulletin AB-094, Definition and Design Criteria for Voluntary Seismic Upgrade of Soft Story, Type-V (wood frame) Buildings? Yes No

If yes, AB-094 Permit Application Number: _____

2. In addition to the exemption for AB-094 retrofits, this program (SFBC Section 3402B) also exempts certain retrofits completed within the last 15 years. To qualify for that exemption, complete and submit this Screening Form as well as the separate **Optional Evaluation Form**.

SECTION 3 – SCOPE VERIFICATION

1. Is the building of Type V (wood-frame) construction? (This question applies only to Target Stories. Use the Type V Worksheet in the Screening Form instructions to answer this question.) Yes No

If No, indicate also which of these conditions is true:

- The building has no Target Stories.
 The building has one or more Target Stories but they are not wood-frame.

2. Was the building originally constructed before January 1, 1978, or was a permit for construction applied for before January 1, 1978?

3. Is the building three or more stories, or two stories over a basement or underfloor area that extends above grade?

4. Does the building contain five or more dwelling units?

CONCLUSION: Is the response to ALL FOUR of the preceding questions Yes?

If Yes: The building is subject to SFBC Chapter 34B. Complete and submit this Screening Form.

If No: The building is exempt from SFBC Chapter 34B. Complete and submit this Screening Form, but skip Section 4. The Department will confirm the exemption in writing.

Note: Even if the building is subject to SFBC Chapter 34B, it might not require retrofit. An owner may show that retrofit is not required by submitting a separate **Optional Evaluation Form** with supporting documents. The **Optional Evaluation Form** is available at www.sfdass.org/sfdatory.

SECTION 4 – ASSIGNMENT OF COMPLIANCE TIER

Indicate the compliance tier. Use the Compliance Tier Worksheet in the Screening Form instructions to find the compliance tier.

Tier I Tier II Tier III Tier IV

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

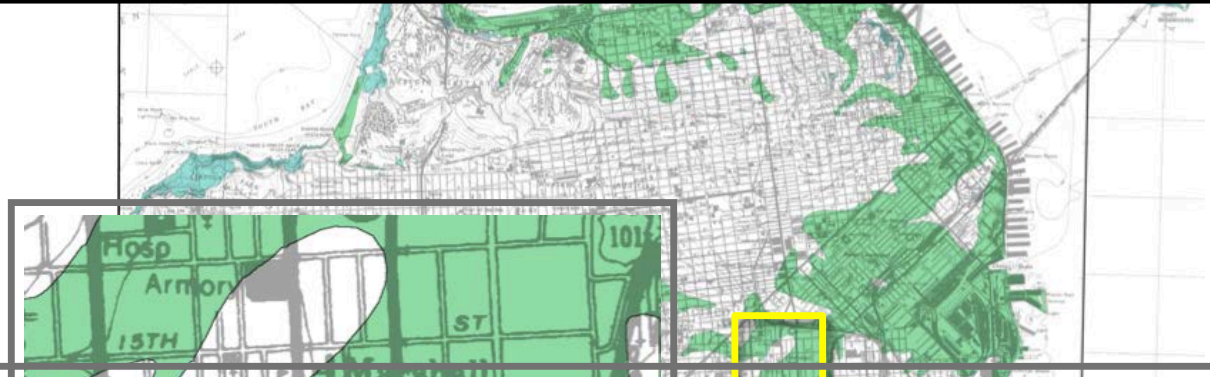
3404B.3: Compliance Tiers

1. Tier I: Buildings that contain a Group A, E, R-2.1, R-3.1 or R-4 occupancy on any story.
 2. Tier II: Buildings containing 15 or more dwelling units, except for buildings assigned to Tier I or Tier IV.
 3. Tier III: Buildings not falling within the definition of another tier.
 4. Tier IV: Buildings that contain a Group B or M occupancy on the first story or in a basement or underfloor area that has any portion extending above grade, and buildings that are in mapped liquefaction zones, except for buildings assigned to Tier I.
- Highest risk: Assembly, School, Assisted living
 - Complex cases: Businesses, liquefaction areas



Liquefaction Areas

- ZORI map
- Block/lot lookup



Your block **1177** and lot **010** has not been found in the database.



Optional Evaluation Form

- Not required for
 - AB-094 retrofit per 3402B.2
- Required for
 - Retrofit per 3402B.1
 - Other retrofit
 - Claim of compliant building

City and County of San Francisco
Department of Building Inspection



Edwin M. Lee, Mayor
Tom C. Hui, S.E., C.B.O., Acting Director

Wood-Frame Seismic Retrofit Program OPTIONAL EVALUATION FORM - \$374.00 FEE

This form has been developed in compliance with San Francisco Building Code Section 3404B.2.2 for use by owners of buildings within the scope of SFBC Chapter 34B. The purpose of the form is to summarize an owner's optional evaluation demonstrating that the building either 1) has been strengthened to meet or exceed the standards of SFBC Section 1604.11 or its predecessor provisions since June 17, 1988, or 2) already meets the criteria of SFBC Section 3402B.2 without additional retrofit. Where used, Sections 3 through 5.1 of this form are to be completed by a California licensed architect, civil or structural engineer.

Submit the completed Optional Evaluation Form together with a completed Screening Form and with the supporting documents identified in Sections 3 and/or 4 to Department of Building Inspection, 1660 Mission Street, San Francisco, CA 94103.

BLOCK / LOT NUMBER _____
OWNER NAME _____
OWNER ADDRESS _____

SECTION 1 – ADMINISTRATIVE INFORMATION

Owner telephone _____ Owner email _____
Owner mailing address (if different from above) _____
Authorized agent (optional) _____ Agent telephone _____ Agent email _____
Agent mailing address _____

CONDOMINIUM OWNERS: Please submit one Screening Form and one set of contact information for each building. Please list all lot numbers comprising the building here: _____

Does this Optional Evaluation Form replace or supplement a previously submitted Optional Evaluation Form for the same building? Yes No

Department of Building Inspection
1660 Mission Street – San Francisco CA 94103
Office (415) 558-6699 – www.sfdbi.org

Outreach

Target Audience:

- Design Professionals
- Contractors
- Financial Partners
- Property Owners
 - Financing/Compliance
- Tenants
 - Hardship Reform



Outreach Events



Chinatown Community
Development Center

華協中心



Outreach Events

Earthquake Retrofit Fair

January 28, 2014

3pm-7pm

Bill Graham Civic Auditorium

99 Grove Street

Design Professionals | Contractors | Banks | Building Owners

To participate in this event please contact
Jeno Wilkinson at (415) 554-4925 or
Jeno.Wilkinson@sfgov.org



Building Private Industry Relationships



Summer Interns and Fellowships



The EPICENTER



The **EPICENTER** is a pop-up collaborative space for earthquake policy research and development. The center, a project of the [San Francisco City Administrator's Earthquake Safety Implementation Program \(ESIP\)](#), is aimed at engaging the public, working directly with design professionals, and the hands-on development of effective and innovative public policy aimed at reducing the impacts of earthquakes on San Francisco.

At our [South of Market location](#), The **EPICENTER** strives to *promote an effective, well-managed public sector and nurture a climate of civic engagement* ([SPUR, Good Government](#)) by connecting professionals, policy makers, and the community in one space to ask the question: How can we make San Francisco safer from earthquakes tomorrow than it is today? Our mission, then, is simple: to collaborate, to innovate, and to educate.



The EPICENTER Opening Event



Earthquake Safety Implementation Program

Some Current Tasks



Private Schools



**Voluntary Cripple Wall
Retrofits**



Façade Maintenance



Private Schools



1933 Long Beach Earthquake killed 115 people and damaged several schools leading to the passage of the Field Act.

- **Private schools are currently not required to meet the same standards as public schools**
- **Approximately 1/3 of SF children attend private schools**
- **Public expectation does not reflect reality**
- **Collapse or extensive damage to even a few schools can result in many deaths or injuries to children**
- **Schools are an essential part of the City's post-disaster recovery efforts.**



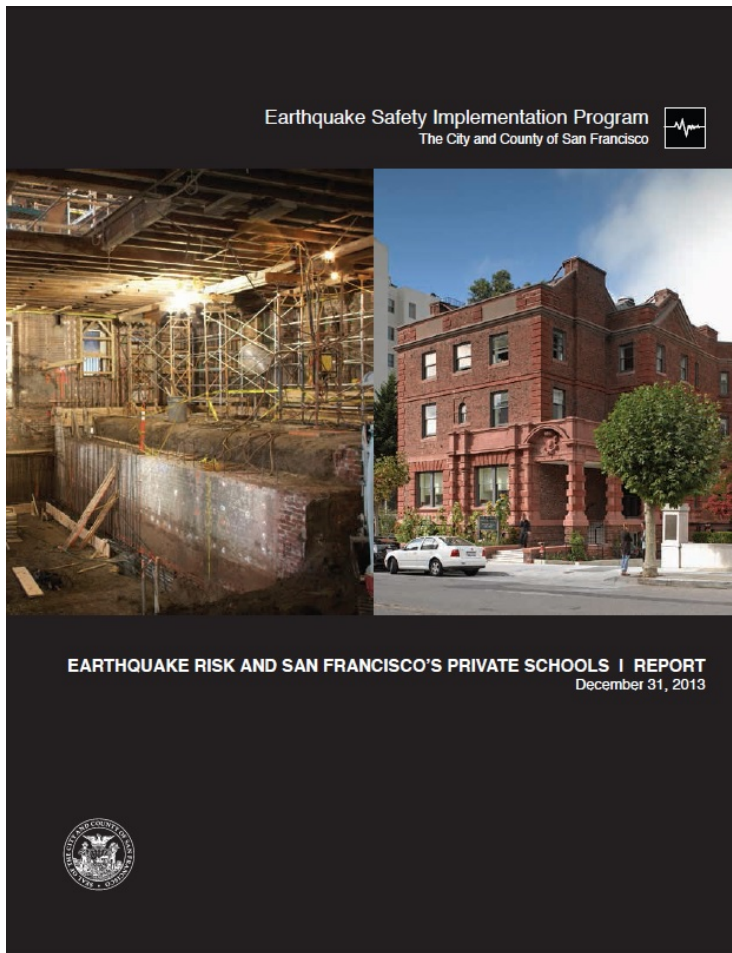
Private Schools



- **Policy working group established in early 2012**
- **Outreach to every private school administrator for participation**
- **Examined and discussed all policy options at length**



Private Schools



- **Final policy recommendations to Mayor Lee in early 2014**
- **Policy recommendations will be for mandatory structural evaluations of all San Francisco private schools within 3 years.**
- **Ordinance development underway and introduction is expected next month**

Façade Maintenance Program



Façade programs exist in the following cities:

**New York
Boston
Chicago
Columbus
Detroit
Milwaukee
Philadelphia
Pittsburg
St. Louis**

**San Francisco will be the first west coast city
to adopt a façade ordinance**



Façade Maintenance Program



Program Requirements

- **Working group policy analysis underway**
- **Periodic inspection of façade by engineer of the owners choosing**
- **Reports submitted to the Department of Building Inspection**
- **Requires mitigation of unsafe conditions**



Voluntary Cripple Wall Retrofits

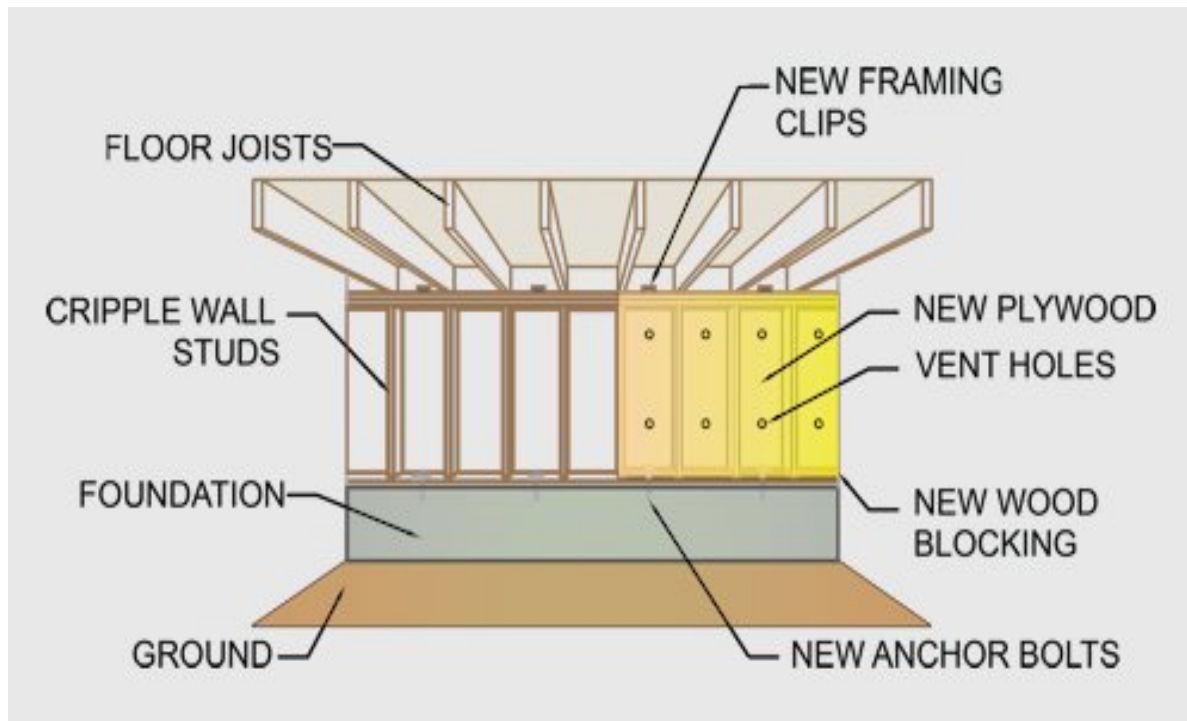


California Residential Mitigation Program

- Provides a \$3,000 rebate for retrofits done in accordance with CEBC Appendix A3
- In process of local SFBC Administrative Bulletin for implementation



Voluntary Cripple Wall Retrofits



- **CEBC Appendix A3 is a prescriptive method of retrofit for cripple walls 4' or less**
- **Exception allows for larger cripple walls when recommended by an engineer**



Get Involved!



Working Groups | Facebook | Website | Visit EPICENTER



[facebook/sfcapss](https://www.facebook.com/sfcapss)



www.sfcapss.org



245 Third St.
SF, CA 94103

