

1 [Green Building Construction Requirements.]

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3 **Ordinance amending the San Francisco Building Code by adding Chapter 13C to**
 4 **require new or added construction over 20,000 square feet to comply with the**
 5 **Leadership in Energy and Environmental Design (LEED™) Gold rating or an equivalent**
 6 **green building standard except for City projects, which are covered by Chapter 7 of the**
 7 **San Francisco Environment Code, to authorize the Director of Building Inspection to**
 8 **grant an exemption from some of the requirements on the grounds of hardship or**
 9 **infeasibility, to require the Director to grant an exemption if compliance would**
 10 **compromise the historical integrity of an historic structure, and to encourage projects**
 11 **not within the scope of the ordinance to incorporate as many green building standards**
 12 **into their construction as is feasible; adopting findings, including environmental**
 13 **findings and findings required by California Health & Safety Code Section 17958.5.**

14 Note: Additions are *single-underline italics Times New Roman*;
 15 deletions are ~~*strikethrough italics Times New Roman*~~.
 16 Board amendment additions are double underlined.
 Board amendment deletions are ~~strikethrough normal~~.

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

18 Section 1. The Board of Supervisors of the City and County of San Francisco hereby
19 finds and declares as follows:

20 (a) CEQA Findings. The Planning Department has determined that the actions
 21 contemplated in this Ordinance are in compliance with the California Environmental Quality
 22 Act (California Public Resources Code sections 21000 et seq.). Said determination is on file
 23 with the Clerk of the Board of Supervisors in File No. _____ and is incorporated
 24 herein by reference.

25 (b) Findings Required by California Health & Safety Code Section 17958.5.

1 (i) San Francisco is located at the tip of a peninsula and is served by the electricity
2 grid at a single point, the Martin Substation. This single point of service makes San Francisco
3 uniquely vulnerable to supply disruptions. Making San Francisco's building stock more energy
4 efficient will reduce San Francisco's energy consumption and decrease its vulnerability to
5 supply disruptions.

6 (ii) The world's leading climate scientists have documented a clear global warming
7 trend and the unmistakable impact of human activities on that trend. As a coastal city
8 surrounded on three sides by water, San Francisco is extremely vulnerable to climate change
9 caused by global warming and the associated rise in sea levels. Construction of more energy
10 efficient buildings can help San Francisco reduce its share of the greenhouse gas emissions
11 that are a significant contributor to global warming.

12 (iii) In 2002, in response to the global warming threat, the Board of Supervisors
13 adopted unanimously Resolution No. 158-02, which, among other things, established for San
14 Francisco a greenhouse gas emissions reduction target of 20 percent below 1990 levels by
15 the year 2012 and called for continued actions toward achieving these goals.

16 In Resolution No. 158-02, the Board found that global warming and the associated rise
17 in sea levels would be particularly devastating to San Francisco and that a Green Building
18 Program, among other efforts, was a critical component in a local action plan for climate
19 protection. The Board further found that greenhouse gas reduction activities would contribute
20 substantially to the achievement of many of the City's highest priority goals, including but not
21 limited to: energy security and cost reduction, affordable housing, mobility and transportation
22 choices, solid waste reduction and recycling, reliable and affordable water supply, urban and
23 rural forest protection, sustainable economic development, and clean air.

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1 (iv) In response to Board Resolution No. 158-02, San Francisco's Department of
2 Environment and Public Utilities Commission published a Climate Action Plan for San
3 Francisco in September 2004. The Plan states that in San Francisco, the impacts of climate
4 change will be variable and widespread and identifies a number of specific serious impacts
5 that global warming and the associated rise in sea levels would have on San Francisco's
6 weather, water resources, physical landscape, ecosystem, human health, economy, and
7 infrastructure.

8 (v) The City's Climate Action Plan found that energy use in buildings and facilities is
9 responsible for approximately 50 percent of San Francisco's greenhouse gas emissions. In
10 1990, San Francisco's total energy consumption was about 5,000 gigawatt-hours of electricity
11 and 300 million therms of natural gas. San Francisco's energy use resulted in a total of
12 approximately 4.5 million tons of CO2 emissions released into the atmosphere in 1990: 1.7
13 million tons of CO2 was released by the City's 300,000 households, 1.5 million tons of CO2
14 was released by the City's 32,000 businesses, 894,000 tons of CO2 was released by the
15 City's industrial sector, and 402,000 tons of CO2 was released by the City's municipal
16 buildings and facilities.

17 The Climate Action Plan states that the potential for CO2 reductions through electricity
18 and gas savings in San Francisco's buildings is tremendous and that key actions required to
19 reach this potential include incorporating policies in both the private and public sectors such
20 as designing new buildings beyond code and implementing energy efficient retrofit projects in
21 existing buildings. Reducing electricity demand means in-city power plants run less, creating
22 fewer emissions.

23 (vi) As a participant in the Cities of Climate Protection campaign sponsored by the
24 International Council on Local Environmental Initiatives, San Francisco has joined with more
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1 than 500 cities around the world to inventory its emissions of greenhouses gases, set
2 reduction targets, and take action to meet those targets.

3 (vii) In recent years, green building design, construction and operational techniques
4 have become increasingly widespread. Many homeowners, businesses and building
5 professionals have voluntarily sought to incorporate green building techniques into their
6 projects. A number of local and national systems have been developed to serve as guides to
7 green building practices. At the national level, the U.S. Green Building Council, developer of
8 the Leadership in Energy and Environmental Design (LEED™) Green Rating System and
9 LEED™ Reference Guide, has become a leader in promoting and guiding green building.

10 (viii) In 2004, the City adopted Chapter 7 of the San Francisco Environment Code,
11 which, among other things, mandates green building standards for City construction projects.
12 This ordinance will continue San Francisco's efforts to mitigate the effects of global warming
13 by reducing the emissions of greenhouse gases by San Francisco's residential, commercial
14 and industrial sectors.

15 (ix) In 2006, the State enacted the California Global Warming Solutions Act of 2006
16 (AB 32) which added Section 38501 et seq. to the California Health and Safety Code. This
17 legislation requires, among other things, that by January 1, 2008, the State Air Resources
18 Board approve a statewide greenhouse gas emissions limit that is equivalent to the emissions
19 level in 1990. This ordinance will further the State's efforts to reduce greenhouse gas
20 emissions statewide by reducing San Francisco's emissions.

21 Section 2. The San Francisco Building Code is hereby amended by adding Chapter
22 13C, to read as follows:

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1 Chapter 13C

2 GREEN BUILDING DESIGN REQUIREMENTS

3 SECTION 1301C - TITLE

4 This chapter shall be known as the "Green Building Design Ordinance."

5 SECTION 1302C - INTENT

6 The purpose of this chapter is to promote the health, safety and welfare of San
7 Francisco residents, workers, and visitors by minimizing the use and waste of energy, water
8 and other natural resources in the construction and operation of the City's building stock and
9 by providing a healthy indoor environment. The green building practices required by this
10 Chapter will also further the goal of reducing the City's greenhouse gas emissions to 20
11 percent below 1990 levels by the year 2012, as stated in Board of Supervisors Resolution No.
12 158-02 and the City's 2004 Climate Action Plan.

13 SECTION 1303C - DEFINITIONS

14 For the purposes of this chapter, certain terms are defined as follows:

15 APPLICANT means any individual, firm, limited liability company, association,
16 partnership, political subdivision, government agency, industry, public or private corporation,
17 or any other entity that applies to the City for permits to construct a covered project within the
18 scope of this ordinance.

19 BUILDING means any structure used for support or shelter of any use or occupancy,
20 as defined in Chapter 3 of this Code.

21 CITY means the City and County of San Francisco.

22 CONDITIONED SPACE means an enclosed space in a building that is provided with a
23 mechanical heating system that has a capacity exceeding 10 Btu(hr. x ft.²) or is provided with
24 a mechanical heating system that has a capacity exceeding 5 Btu(hr. x ft. ²), unless the
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1 space-conditioning system is designed and thermostatically controlled to maintain a process
2 environment temperature less than 55°F or to maintain a process environment temperature
3 greater than 90°F for the entire space the system serves.

4 CONSTRUCT OR CONSTRUCTION means the construction of any building or
5 structure or portion thereof.

6 COVERED PROJECT means a project that is within the scope of this chapter.

7 GREEN BUILDING means a whole systems approach to the design, construction, and
8 operation of buildings that helps to mitigate the environmental, economic, and social impacts
9 of buildings. Green building practices recognize the relationship between natural and built
10 environments and seek to minimize the use of energy, water, and other natural resources and
11 to provide a healthy indoor environment.

12 GREEN BUILDING PROJECT CHECKLIST means a checklist or scorecard developed
13 and amended from time to time by the U.S. Green Building Council or an equivalent entity for
14 the purpose of calculating a score on a Green Building Rating System.

15 GREEN BUILDING RATING SYSTEM means the most recent version of the
16 Leadership in Energy and Environmental Design (LEED™) Green Building Rating System
17 approved by the U.S. Green Building Council or an alternative rating system approved as an
18 equivalent by the Director in consultation with the Director of the Department of the
19 Environment. As new rating systems are developed, the Director, in consultation with the
20 Director of the Department of the Environment, is authorized to specify the applicable Green
21 Building Rating System required by this chapter.

22 GREEN BUILDING REFERENCE GUIDE means a supporting document published by
23 the U.S. Green Building Council or equivalent entity that provides detailed information,
24 resources, and standards for the environmental categories covered by the LEED™ Rating
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1 System or the equivalent rating system, including information requiring the documentation
2 required for certification.

3 GREEN BUILDING WORKSHEET means a worksheet or other form, developed by the
4 Director in consultation with other relevant City departments, which specifies information to be
5 submitted prior to any hearing on building design authorized by any provision of the San
6 Francisco Municipal Code. The Green Building Worksheet shall specify the form and content
7 of the required documentation.

8 HISTORIC STRUCTURE means any building or structure listed on or eligible for listing
9 on a national or state register or listing of historic resources or designated under Article 10 or
10 Article 11 of the San Francisco Planning Code.

11 RENOVATION means any change, addition, or modification to an existing building or
12 structure.

13 SECTION 1304C - SCOPE

14 All construction projects within the City that include 20,000 gross square feet or more of
15 conditioned space are covered projects that shall comply with the requirements of this chapter
16 excluding City projects, which are covered by Chapter 7 of the San Francisco Environment
17 Code. For the purposes of this chapter, a covered project shall include renovation projects
18 that incorporate 20,000 gross square feet or more of additional space. A renovation project
19 that consists solely of interior improvements to an existing building is not a within the scope of
20 this chapter. Applicants for projects that are not mandated to meet green building standards
21 under this chapter are encouraged to use their best efforts to incorporate as many green
22 building measures as feasible without compromising the historical integrity of an historic
23 structure.

24 SECTION 1305C - RULES AND REGULATIONS

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1 The Director shall adopt reasonable rules and regulations implementing the provisions
2 and intent of this chapter and may amend them from time to time. The Director shall develop
3 the rules and regulations and any amendment thereto in consultation with the Director of the
4 Department of the Environment and such other advisors as the Director may deem
5 appropriate and after considering public input.

6 **SECTION 1306C – DESIGN REQUIREMENTS**

7 1306C.1 Applicable Green Building Standard. A covered project shall meet a
8 minimum LEED™ Gold rating or an alternative equivalent green building standard approved
9 by the Director pursuant to Section 1306C.2. Compliance with the provisions of this chapter is
10 a condition of approval of the covered project and no building permit shall be issued unless
11 and until the Director or his designee has determined that the project meets this standard or
12 an exemption has been granted under Section 1308C.

13 For the first six months after the release of any new version of the Green Building
14 Rating System, the applicant shall be given the choice at the time an application for a building
15 permit is filed of using the most current version or the version to be superseded. City staff
16 shall maintain the most recent version of the applicable Green Building Rating System and
17 associated Green Building Reference Guide that are being used by the Department.

18 1306C.2. Alternative Rating System. The applicant may request approval from the
19 Director to use an alternative rating system that is equivalent to the LEED™ Gold rating. An
20 application to use an alternative rating system shall be made and approved by the Director
21 prior to submission of the permit application and documentation required by Section 1306C.3
22 and shall include any documentation that the Director, in consultation with the Director of the
23 Department of the Environment, determines is required to determine whether the alternative
24 rating system is equivalent to the LEED™ Gold rating.

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1 1306C.3. Documentation to be Submitted with the Permit Application. In conjunction
2 with an application for a building permit, the applicant shall submit documentation indicating
3 the measures to be used to achieve the applicable green building standard. The
4 documentation shall also indicate how many credits the covered project will achieve in each
5 category. This documentation shall include:

- 6 (1) the Green Building Project Checklist;
- 7 (2) the Green Building Worksheet with an analysis of each credit claimed; and
- 8 (3) any other documentation that the Director may require to show compliance with
9 this chapter.

10 Covered projects shall use the Green Building Project Checklist that corresponds with
11 the Green Building Rating System approved for use. All building plans shall indicate in the
12 general notes or individual detail drawings, where feasible, the green building measures to be
13 used to attain the applicable green building rating.

14 1306C.4. Project Registration and Building Commissioning. Although not required by
15 this chapter, applicants are encouraged to register projects using the LEED™ rating system
16 with the U.S. Green Building Council. Building commissioning, specified as a prerequisite for
17 all LEED™ ratings, is not required under this chapter. However, applicants are encouraged to
18 verify that fundamental building systems are designed, installed, and calibrated to operate as
19 intended.

20 SECTION 1307C - COMPLIANCE REVIEW

21 1307C.1. Compliance Inspections. Department staff shall verify that the green building
22 measures indicated in the approved documentation are being implemented at foundation
23 inspection, framing inspection, and prior to issuance of a final certificate of occupancy. The
24 Director may require such additional inspections as he or she determines are needed to
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1 ensure compliance with this chapter. If, as a result of any such inspection, the Department
2 determines that the covered project does not comply with the approved documentation, the
3 Department shall issue a stop-work order, which may apply to the portion of the project
4 impacted by the noncompliance or to the entire project. The stop-work order shall remain in
5 effect until the Director determines that the project will be brought into compliance with the
6 approved documentation and this chapter.

7 1307C.2. Substitution of Credits. During compliance review for covered projects, the
8 Director or his or her designee may authorize the substitution of approved credits with other
9 credits in the approved Green Building Rating System. Substitution shall occur only at the
10 request of the applicant and after the Director or his or her designee has determined that the
11 originally approved credits are no longer feasible.

12 1307C.3. Post Construction Compliance Documentation. After completion of
13 construction, the applicant shall submit to the Department the following documentation
14 demonstrating compliance of a covered project with this chapter (1) prior to the Department's
15 final approval of construction or issuance of a certificate of final completion and occupancy for
16 the project, (2) after one year of occupancy, and (3) after five years of occupancy if the
17 Director deems it necessary. The Department shall keep a copy of this documentation with its
18 official records of the building.

19 (1) Prior to the Department's final approval of construction or issuance of a
20 certificate of final completion and occupancy for a covered project, the applicant shall submit
21 to the Department: (a) documentation that verifies incorporation of the approved design and
22 construction related credits; and (b) a letter from the project architect or project contractor
23 certifying that the building has been constructed in accordance with the approved Green
24 Building Project Checklist. The applicant shall also provide any additional documentation that
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1 would be required by the LEED™ Reference Guide for LEED™ certification or the reference
2 guide for the alternative rating system approved by the Department. The applicant may
3 submit any additional information that he or she believes is relevant to determining its good
4 faith efforts to comply with this chapter.

5 (2) After one year of occupancy of a covered project, the applicant, property owner,
6 or building tenant as applicable shall submit to the Department documentation detailing
7 conformance with the operation, efficiency and conservation related credits from the approved
8 documentation for the project. The applicant shall also provide any additional documentation
9 that would be required by the LEED™ Reference Guide for LEED™ certification or the
10 reference guide for the Department's approved alternative. The applicant may submit any
11 additional information that the applicant believes is relevant to determining its good faith
12 efforts to comply with this chapter.

13 (3) If required by the Director, after five years of occupancy of a covered project, the
14 applicant, property owner, or building tenant as applicable shall submit to the Department
15 documentation that details conformance with the operation, efficiency, and conservation
16 related credits from the approved documentation for the project. The applicant may submit
17 any additional information that the applicant believes is relevant to determining its good faith
18 efforts to comply with this chapter.

19 1307C.4. Compliance Determination. Prior to the Department's final approval of
20 construction or issuance of a certificate of final completion and occupancy, the Director or his
21 designee shall review the information submitted by the applicant pursuant to Section
22 1307C.3(1) and determine whether the applicant has achieved the LEED™ Gold rating or
23 approved alternative required by this chapter. If it is determined that the applicant has not
24 achieved the required rating, the Director or his designee shall make the following findings:
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1 (1) Good faith effort to comply. If the Director or his designee determines that the
2 covered project has not met the requirements for the LEED™ Gold rating or approved
3 alternative, he or she shall determine on a case-by-case basis whether the applicant has
4 made a good faith effort to comply with this chapter. In making this determination, the
5 Director or his designee shall consider the availability of markets for materials to be recycled,
6 the availability of green building materials and technologies, and the documented efforts of the
7 applicant to comply with this chapter. The Director may require additional reasonable green
8 building measures, as authorized in subsection (3) below, to be taken in the operation of the
9 covered project to mitigate the failure to comply fully with this chapter.

10 (2) Noncompliance. If the applicant fails to submit the documentation required by
11 Section 1307C.3(1) within the required time period, or if the Director or his designee
12 determines that the applicant has not made a good faith effort to comply with this chapter, the
13 final building approval or occupancy certificate may be withheld. The Director may require
14 additional reasonable building measures, as authorized in subsection (3) below, to be taken in
15 the operation of the covered project to mitigate the failure to comply fully with this chapter.
16 Once the applicant has performed such additional reasonable green building measures, the
17 Director or his designee shall approve the covered project for final building approval and/or
18 issuance of a certificate of final completion and occupancy.

19 If the documentation submitted by the applicant as required by Section 1307C.3(2) and
20 (3) reveals that the applicant has not made a good faith effort to maintain the originally
21 approved conservation and energy related credits in the operation of the building, the Director
22 or his designee may require additional reasonable green building measures as authorized in
23 subsection (3) below.

1 (3) Mitigation. If the Director or his designee determines that the applicant has not
2 complied with this chapter, the Director may require further reasonable green building
3 measures to be employed in the operation and maintenance of the covered project to mitigate
4 the applicant's failure to comply fully with this chapter. A list of potential mitigation measures
5 to be employed shall be developed by the Director in consultation with the Director of the
6 Department of the Environment and may be amended from time to time. Such measures may
7 include, but are not limited to, landscaping the covered project to decrease water and energy
8 consumption, use of energy efficient fixtures, including the use of energy efficient light bulbs,
9 and education of the building's occupants and owners regarding on-going energy and
10 resource savings techniques.

11 SECTION 1308C – HARDSHIP OR INFEASIBILITY EXEMPTION

12 1308C.1. Exemption. If an applicant for a covered project believes that circumstances
13 exist that make it a hardship or infeasible to meet fully the requirements of this chapter, he or
14 she may apply to the Director for an exemption as set forth below. In applying for an
15 exemption, the burden is on the applicant to demonstrate hardship or infeasibility.

16 1308C.2. Application. An applicant shall apply for the exemption at the time that he or
17 she submits an application for a building permit and shall submit the following information in
18 support of the application:

19 (1) the maximum number of credits the applicant believes is practical or feasible for
20 the covered project;

21 (2) the circumstances that the applicant believes make it a hardship or infeasible to
22 comply fully with this chapter. Such circumstances may include, but are not limited to,
23 availability of markets for materials to be recycled, availability of green building materials and
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1 technologies, and compatibility of green building requirements with existing building
2 standards.

3 1308C.3. Granting of Exemption. If the Director determines that it is a hardship or
4 infeasible for the applicant to meet fully the requirements of this chapter based on the
5 information submitted with the application for an exemption, the Director shall determine the
6 maximum feasible number of credits reasonably achievable for the covered project and shall
7 indicate this number on the documentation submitted by the applicant. If an exemption is
8 granted, the applicant must achieve the number of credits the Director determines to be
9 achievable and shall comply with this chapter in all other respects.

10 1308C.4. Exemption for Historic Structure. The Director shall grant an exemption for
11 an historic structure if the Director determines that compliance with certain requirements
12 would impair the structure's historical integrity. The historic structure shall comply with this
13 chapter in all other respects.

14 1308C.5. Denial of Exemption. If the Director determines that it is possible for the
15 applicant to meet fully the requirements of this chapter, he or she shall so notify the applicant
16 in writing. The applicant may then submit the documentation required by Section 1306C.1. If
17 the applicant does not submit the documentation within the time period ordered by the
18 Director or the documentation does not comply with the requirements of Section 1306C.1, the
19 Department shall deny the building permit.

20 1308C.6. Appeal. The determination of the Director under this Section 1308C is
21 appealable to the Building Inspection Commission pursuant to the procedure set forth in
22 Chapter 77 of the San Francisco Administrative Code. Appeal from the denial of a building
23 permit is appealable to the Board of Appeals pursuant to the procedure set forth in Section 8
24 et seq. of the San Francisco Business and Tax Regulations Code.

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1 SECTION 1309C – ENFORCEMENT

2 The applicant's failure to build the covered project in accordance with the project's
3 approved documentation and plans shall be subject to the procedures governing abatement of
4 unsafe structures set forth in Section 102 of this Code. In addition, the Director may require
5 additional reasonable green building measures as authorized in Section 1307C.4(3) to
6 mitigate the failure to comply fully with this chapter.

7 SECTION 1310C - CONFLICT WITH OTHER PROVISIONS OF THIS OR OTHER
8 CODES

9 In the event that the requirements of this chapter conflict with other provisions of this
10 Code or the other codes enforced by the Department of Building Inspection, the process
11 requirements of this chapter shall apply and the more restrictive building design standards of
12 this or the other codes shall prevail.

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14 APPROVED AS TO FORM:
15 DENNIS J. HERRERA, City Attorney

16 By: _____
17 JUDITH A. BOYAJIAN
18 Deputy City Attorney

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