

File No. 090584

Committee Item No. \_\_\_\_\_

Board Item No. 10

## COMMITTEE/BOARD OF SUPERVISORS

### AGENDA PACKET CONTENTS LIST

Committee \_\_\_\_\_

Date \_\_\_\_\_

Board of Supervisors Meeting

Date 5/11/10

#### Cmte Board

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FILE NO. 090584

ORDINANCE NO.

1 [Requiring Lighting Efficiency Measures in Commercial and City Buildings.]

2  
3 **Ordinance amending the San Francisco Building Code by adding a new Chapter 13D,**  
4 **Sections 1301D through 1311D, to require commercial buildings to increase efficiency**  
5 **of fluorescent lighting by the year 2011; amending the San Francisco Environment**  
6 **Code by dividing Section 705 into Sections 705 through 705.5 and amending them to**  
7 **require City-owned facilities to increase efficiency of fluorescent lighting; adopting**  
8 **findings required by California Health and Safety Code Section 17958.7 and**  
9 **environmental findings; and directing the Clerk of the Board of Supervisors to forward**  
10 **this ordinance to the California Building Standards Commission upon final passage.**

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

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

16 Section 1. To the extent the requirements of this Ordinance are deemed to constitute  
17 changes or modifications to the requirements of the California Building Standards Code and  
18 other regulations pursuant to California Health and Safety Code Section 17958.7, the Board of  
19 Supervisors expressly declares that the following amendments to the Building Code are  
20 reasonably necessary because of local climatic, topological, and geological conditions as  
21 listed below.

22 1. San Francisco is one of the oldest urban areas in California and has a large  
23 proportion of older commercial buildings that were constructed and remodeled under building  
24 and electrical codes that did not emphasize energy efficiency.

1           2. These older commercial buildings are typically small and do not have on-site  
2 professional maintenance staff to routinely retrofit inefficient lighting or to advise building  
3 owners of the value of improving buildings' energy efficiency.

4           3. Many San Francisco buildings have mixed commercial and residential uses. Since  
5 residential uses offer fewer lighting efficiency opportunities, owners of mixed use buildings are  
6 particularly unlikely to retrofit the building's lighting.

7           4. Commercial uses also consume more electricity for lighting than residential spaces  
8 of similar size because commercial uses typically illuminate workspaces, public areas and  
9 outside sales areas continuously for 10 to 24 hours per day.

10          5. Lighting in San Francisco's commercial buildings typically accounts for  
11 approximately 40 percent of the buildings' total electricity consumption.

12          6. Lighting is a disproportionate portion of San Francisco's electricity consumption  
13 because San Francisco's frequent foggy weather pattern means that many small San  
14 Francisco commercial buildings have no air conditioning load.

15          7. San Francisco has a high proportion of commercial, hospitality and entertainment  
16 enterprises that operate in the evening hours, contributing to a winter evening peak load that  
17 is often greater than the summer afternoon load.

18          8. San Francisco is located at the tip of a peninsula and has a constrained  
19 transmission area served by the electricity grid at a single point, the Martin Substation. It  
20 therefore is uniquely vulnerable to accident or malfunction, especially during winter evening  
21 peak periods, such as the December, 1999 blackout.

22          9. Reliable electricity is critical to local residents, organizations, and the San Francisco  
23 economy.  
24  
25

1           10. As a coastal city, San Francisco is vulnerable to sea level rise and is already  
2 experiencing the repercussions of excessive CO<sub>2</sub> emissions.

3           11. The Department of the Environment anticipates that it will be able to provide  
4 incentive funding to businesses and owners of commercial buildings to retrofit 4 foot and  
5 8 foot fluorescent lighting through utility rate payer funded programs authorized by the  
6 California Public Utilities Commission (CPUC).

7           12. Since 2001, at least 5,000 San Francisco businesses located in small commercial  
8 buildings have retrofitted their 4 foot and 8 foot fluorescent lighting with the assistance of  
9 publicly-funded incentive programs.

10           13. It is reasonably necessary to require commercial building owners to take steps to  
11 reduce the electricity consumed by inefficient building operations in order to reduce the City's  
12 demands on the power grid, and the resulting pollution and global warming effects of energy  
13 consumption.

14           14. The Department of Environment estimates that upgrades to inefficient fluorescent  
15 lighting required by this Ordinance will reduce citywide electricity use by at least 44 million  
16 kilowatt hours and CO<sub>2</sub> emissions by at least 0.7 percent.

17           15. Under the Energy Policy Act of 1992 (42 U.S.C. 6201 *et seq.*), it will be unlawful to  
18 manufacture, sell or incorporate certain inefficient ballasts in fluorescent lighting beginning in  
19 2012.

20           16. The low mercury fluorescent lamps required under this Ordinance are  
21 commercially available at competitive prices.

22  
23 / / /

24 / / /

1 Section 2. The San Francisco Building Code is hereby amended by adding  
2 Chapter 13D, Sections 1301D through 1311D, to read as follows:

3  
4 SEC. 1301D. TITLE.

5 This Chapter shall be known as the "Commercial Lighting Efficiency Ordinance."

6  
7 SEC. 1302D. PURPOSE.

8 The purpose of this Chapter is to reduce public demand for electricity and the associated  
9 detriment to the environment of energy production and delivery by requiring commercial buildings to  
10 install or adopt more energy efficient lighting measures.

11  
12 SEC. 1303D. SCOPE.

13 The provisions of this Chapter shall apply to all privately owned non-residential buildings,  
14 including school facilities, the non-residential portions of mixed-use commercial and residential  
15 buildings, tourist hotels, and the common areas of residential hotels and multiple -unit residential  
16 buildings, all as herein defined.

17 EXCEPTIONS:

18 The provisions of this Chapter do not apply to:

- 19 1. Residential buildings and residential hotels, except that it shall apply to their common areas.  
20 2. The residential portions of mixed-use commercial and residential buildings, except that it  
21 shall apply to their common areas.

22  
23 SEC. 1304D. DEFINITIONS.

24 For the purpose of this Chapter, certain terms are defined as follows:

1           Commercial Building is any privately owned building that is occupancy group A, B, E, F, H, I,  
2 L, M or S as defined in this Code and any tourist hotels, as herein defined. When a building is  
3 designated for more than one type of occupancy, "Commercial Building" shall mean those spaces  
4 within the mixed use building designated as A, B, E, F, H, I, L, M or S or tourist hotel, as herein  
5 defined. Except for tourist hotels as herein defined, "Commercial Building" shall include only the  
6 common areas of any R ("residential") occupancy buildings or the common areas of any R  
7 ("residential") occupancy portions of mixed use buildings.

8           Common Area is any area, space or room of a building that is made available to the general  
9 public as either a client or guest.

10           Director is the Director of the Department of Building Inspection, or his or her designee.

11           Exit Signs are signs located and illuminated as required by the Building Code.

12           Linear Fluorescent Lamp is a "tube" or "bulb" formed in a straight shape, as distinguished  
13 from a circular or u-shape, but not including linear specialty lamps such as black lights.

14           Luminaire is an interior or exterior complete lighting unit, including internally or externally  
15 illuminated signs, consisting of the lamp and the parts designed to distribute the light, to protect the  
16 lamp, and to connect the lamp to the power supply, but not including illuminated utilization equipment  
17 or exit signs as defined herein.

18           Occupancy Sensor Control Device is a device that automatically turns off a luminaire or series  
19 of luminaires no more than 30 minutes after it senses that the area is vacated.

20           Tourist Hotel is any residential building, or portion thereof, which is occupied as a hotel, motel  
21 or inn and which has a certificate of use for tourist occupancy, or any portion of a residential building  
22 which is converted to tourist hotel use pursuant to the Residential Hotel Conversion Ordinance (S.F.  
23 Administrative Code, Article 41) or other City law.

1            Utilization Equipment is commercial, retail or industrial equipment, including but not limited  
2 to refrigeration equipment, fully enclosed retail display cases, vending machines, printing equipment or  
3 conveyors, which uses 4-foot or 8-foot linear fluorescent lamps as an integrated part of such  
4 equipment. "Utilization Equipment" shall not include furniture or workstations.

5  
6            **SEC. 1305D. COMPLIANCE REQUIREMENTS.**

7            1305D.1. Compliance Deadline. No later than December 31, 2011 ("Compliance Deadline"),  
8 the owner of each building subject to this Chapter shall self-certify that the entire building meets the  
9 standards specified in this Chapter 13D, and if the building is not certified, the building owner shall  
10 make such repairs as may be required to conform to this Chapter.

11            1305D.2. Stay of Compliance Deadline. The Compliance Deadline stated in Section 1305D.1  
12 shall be stayed for up to two years from the date of an application for a demolition permit for any  
13 building subject to this Chapter. If the building is demolished and a Certificate of Completion issued  
14 by the Department before the end of the two-year postponement, the requirements of this Chapter shall  
15 not apply. If the building is not demolished after the expiration of two years, the provisions of this  
16 Chapter shall apply even though the demolition permit is still in effect or a new demolition permit has  
17 been issued.

18  
19            **SEC. 1306D. LIGHTING EFFICIENCY MEASURES.**

20            1306D.1. Mercury Content. The mercury content of each 4-foot linear fluorescent lamp  
21 installed after the Compliance Deadline in a luminaire in a building subject to this Chapter shall not  
22 exceed 5 mg. The mercury content of each 8-foot linear fluorescent lamp installed after the  
23 Compliance Deadline in a luminaire in a building subject to this Chapter shall not exceed 10 mg.

1           1306D.2. Energy Efficiency. The lamp and ballast system in each luminaire that utilizes one or  
2 more 4-foot or 8-foot linear fluorescent lamps to provide illumination in a building subject to this  
3 Chapter must meet at least one of the following requirements:

4           1. The lamp and ballast system emits 81 or more lumens per watt of electricity consumed.

5           2. The luminaire is controlled by an occupancy sensor control device that does not control an  
6 area in the building of more than 250 square feet.

7           3. The luminaire is fitted with a lighting efficiency measure approved by the Director as  
8 equivalent to the measures in subsection (1) or (2).

9           4. The Director finds, based on the facts of the particular building and luminaire, that the  
10 energy savings from installing lighting efficiency measures meeting the requirements of this Section  
11 will be so insignificant over the life of the luminaire that the measure is not cost efficient.

12           5. If the owner of a Commercial Building elects to meet the requirements of this Section  
13 1306D.2 with measures that require permits, such permits shall comply with all other applicable  
14 requirements of this Code and all other applicable state and local laws.

15  
16           **SEC. 1307D. ENFORCEMENT.**

17           Any building maintained in violation of this Chapter shall constitute a public nuisance under  
18 the terms of Section 102A of this Code and such nuisance may be abated pursuant to the procedures set  
19 forth in Section 102A of this Code for unsafe buildings.

20  
21           **SEC. 1308D. RULES.**

22           The Director, after consulting with the Department of the Environment, and in accordance with  
23 Section 104A.2.1 of this Code, shall adopt, and may amend, reasonable rules, guidelines and forms for  
24 implementing the provisions and intent of this Chapter.



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**SEC. 1309D. UNDERTAKING FOR THE GENERAL WELFARE.**

In undertaking the enforcement of this Chapter, the City and County of San Francisco is assuming an undertaking only to promote the general welfare. It is not assuming, nor is it imposing on its officers and employees, an obligation for breach of which it is liable in money damages to any person who claims that such breach proximately caused injury.

**SEC. 1310D. PREEMPTION.**

Nothing in this Chapter shall be interpreted or applied so as to create any power or duty in conflict with any federal or state law or regulation.

**SEC. 1311D. SEVERABILITY.**

If any provision or clause of this Chapter or the application thereof to any person or circumstance is held to be unconstitutional or to be otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect other provisions, and clauses of this Chapter are declared to be severable.

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1 Section 3. The San Francisco Environment Code is hereby amended by dividing  
2 Section 705 into Sections 705 through 705.5, and amending those Sections to read as  
3 follows:  
4

5 **SEC. 705. RESOURCE EFFICIENCY REQUIREMENTS FOR CITY BUILDINGS;**  
6 **GUIDELINES.**

7 ~~(a) Within 90 days of the effective date of this Chapter, the The Commission on the~~  
8 ~~Environment~~ shall issue guidelines to all City departments to assist them in determining which  
9 of the ~~following~~ provisions ~~of Section 705.1 et seq. in this Chapter~~ apply to them. Pursuant to  
10 Section 703(b), the Director may revise these guidelines from time to time.  
11

12 **SEC. 705.1. CITY BUILDINGS; WATER CONSERVATION REQUIREMENTS—TOILETS.**

13 ~~(b) Water Conservation Requirements for Toilets.~~

14 ~~(a) (1) The requirements of this Section apply~~ ~~This requirement applies~~ to the following City  
15 departments: City departments undertaking or authorizing others to undertake Construction  
16 Projects with a total projected cost of \$90,000 or more at City-owned Facilities; City  
17 departments undertaking or authorizing others to undertake Construction Projects with a total  
18 projected cost of \$90,000 or more in Existing City Leaseholds (but only if restrooms are  
19 included in the leasehold space and the City department has a separate metering account  
20 with the San Francisco Public Utilities Commission); City departments undertaking or  
21 authorizing others to undertake Construction Projects with a total projected cost of \$90,000 or  
22 more in New City Leaseholds (but only if restrooms are included in the leasehold space and  
23 the City department has a separate metering account with the San Francisco Public Utilities  
24 Commission Water Department); City departments executing agreements for New City  
25

1 Leaseholds or occupying New City Leaseholds (but only if restrooms are included in the  
2 leasehold space and the City department has a separate metering account with the San  
3 Francisco Public Utilities Commission); City departments occupying City-owned Facilities (but  
4 only if the City department has separate metering account with the San Francisco Public  
5 Utilities Commission); and all City departments purchasing toilets beginning 90 days after the  
6 effective date of this ordinance.

7 ~~(b) (2)~~ All City departments listed above shall ensure that all toilets are replaced with  
8 toilets that use no more than 1.6 gallons of water per flush. Replacement shall occur at the  
9 earlier of:

10 ~~(1) (A)~~ The time of major remodeling, defined as when a water drainage system  
11 is substantially altered, modified or renovated (as those terms are defined in *San Francisco*  
12 *2001 California* Plumbing Code Section ~~101(4)~~ 101.4.4 or when two or more toilets and/or  
13 urinals are replaced in a single bathroom; or

14 ~~(2) (B)~~ By June 30, 2005.

15 ~~(c) (3)~~ Each City department subject to subsection (b)(1) of this Section shall be  
16 responsible for the costs of compliance and for ensuring that all applicable contract  
17 documents for the replacement of toilets contain the above requirement.

18 ~~(d) (4)~~ To facilitate the installation of these toilets, the San Francisco Public Utilities  
19 Commission shall:

20 ~~(1) (A)~~ Negotiate and secure, within 90 days of the effective date of this  
21 Chapter, contracts with one or more vendors that all City departments may use for the  
22 purchase and installation of 1.6-gallon-per-flush valves and tank toilets. The contract will  
23 include a list of toilets approved by the International Association of Plumbing and Mechanical  
24 Officials. The toilets on this list shall be the only toilets purchased. This list shall be updated  
25

1 annually by the San Francisco Public Utilities Commission and shall be provided to all heads  
2 of City departments responsible for purchases and/or installations at City-owned Facilities or  
3 leaseholds and to the Purchasing Department.

4 ~~(2) (B)~~ Establish a procedure (including a fixed price) by which City departments  
5 may contract with the Department of Public Works' Bureau of Building Repair for the  
6 installation of such toilets. This procedure shall be distributed to all City departments  
7 responsible for purchases and/or installations at City-owned Facilities or leaseholds within 90  
8 days of the effective date of this Chapter. It shall be updated by the San Francisco Public  
9 Utilities Commission annually and sent to all heads of City departments responsible for  
10 purchases and/or installations at City-owned Facilities or leaseholds and to the Purchasing  
11 Department.

12 ~~(e) (5)~~ Between July 1, 2005, and June 23, 2007, the San Francisco Public Utilities  
13 Commission shall inspect all buildings subject to this requirement to ensure that all toilets  
14 have been installed as required by this subsection.

15 ~~(f) (6)~~ Should the Director determine that toilets that are more water-efficient than  
16 those specified in the foregoing sections exist, the Director may, in consultation with the San  
17 Francisco Public Utilities Commission, establish a list of other water-efficient toilets that City  
18 departments may use pursuant to Section 703(b).

19  
20 **SEC. 705.2. CITY BUILDINGS; WATER CONSERVATION REQUIREMENTS—SHOWER**  
21 **HEADS.**

22 ~~(e) Water Conservation Requirements for Shower Heads.~~

23 ~~(a) (1) The requirements of this Section apply. This requirement applies~~ to the following City  
24 departments: City departments undertaking or authorizing others to undertake Construction  
25

1 Projects with a total projected cost of \$90,000 or more in City-owned Facilities; City  
2 departments undertaking or authorizing others to undertake Construction Projects with a total  
3 projected cost of \$90,000 or more in Existing City Leaseholds (but only if restrooms are  
4 included in the leasehold space and the City department has a separate metering account  
5 with the San Francisco Public Utilities Commission); City departments undertaking or  
6 authorizing others to undertake Construction Projects with a total projected cost of \$90,000 or  
7 more in New City Leaseholds (but only if restrooms are included in the leasehold space and  
8 the City department has a separate metering account with the San Francisco Public Utilities  
9 Commission); City departments executing agreements for New City Leaseholds or occupying  
10 New City Leaseholds (but only if restrooms are included in the leasehold space and the City  
11 department has a separate metering account with the San Francisco Public Utilities  
12 Commission); City departments occupying City-owned Facilities (but only if the City  
13 department has a separate metering account with the San Francisco Public Utilities  
14 Commission); and all City departments purchasing shower heads beginning 90 days after the  
15 effective date of this Ordinance.

16 (b) ~~(2)~~ All City departments listed above shall ensure that all shower heads are  
17 replaced with shower heads using no more than 1.5 gallons per minute by June 30, 2005.

18 (c) ~~(3)~~ Each City department subject to subsection (a) ~~(e)~~(4) shall be responsible for  
19 the costs of compliance and for ensuring that all applicable contract documents for the  
20 replacement of shower heads contain the above requirement.

21 (d) ~~(4)~~ To facilitate the installation of these shower heads, the San Francisco Public  
22 Utilities Commission shall:

1            (1) ~~(A)~~ Provide a list of the approved shower head brands and models to all  
2 heads of City departments responsible for purchases and/or installations at City-owned  
3 Facilities or City Leaseholds and to the Purchasing Department;

4            (2) ~~(B)~~ Negotiate and secure, within 90 days of the effective date of this  
5 Chapter, a contract with one or more vendors for the purchase and installation by City  
6 departments of 1.5 gallon per minute shower heads; and

7            (3) ~~(C)~~ Negotiate a set price for the installation of the shower heads with the  
8 Department of Public Works'

9            (4) ~~(D)~~ Distribute information on the price for installation, and lists of approved  
10 shower heads and contract vendors to all heads of City departments responsible for  
11 purchases and/or installations at City-owned Facilities or City Leaseholds and to the  
12 Purchasing Department.

13            (e) ~~(5)~~ Should the Director determine that shower heads that are more water efficient  
14 than those specified in the foregoing section exist, the Director may, in consultation with the  
15 San Francisco Public Utilities Commission, establish a list of other water-efficient shower  
16 heads that City departments may use pursuant to Section 703(b).

17  
18            **SEC. 705.3. CITY BUILDINGS; ENERGY CONSERVATION REQUIREMENTS—LIGHT**  
19            **FIXTURES AND EXIT SIGNS.**

20            ~~(a) Energy Conservation.~~

21            (a) ~~(1)~~ The requirements of this Section ~~These requirements~~ (or of California Code of  
22 Regulations Title 24, Part 6, or subsequent State standards, whichever are more stringent)  
23 shall apply in all cases except those in which a City department is not responsible for  
24 maintenance of light fixtures or exit exist signs.

1           **(b) (2)** City departments shall be responsible for the cost of compliance and for  
2 ensuring that all applicable contract documents for the replacement and installation of light  
3 fixtures and exit signs contain the following requirements:

4           **(1) (A) Exit Signs.** At the time of installation or replacement of broken or non-  
5 functional exit signs, all exit signs shall be replaced with light-emitting diode (L.E.D.)-type  
6 signs. Edge-lit compact fluorescent signs may be used as replacements for existing edge-lit  
7 incandescent exit signs.

8           **(2) (B) Fluorescent Fixtures.**

9           **(A) Definitions.** *For the purposes of this Section 705.3(b), the following*  
10 *definitions shall apply:*

11                           **(i) "Luminaire" is an interior or exterior complete lighting unit,**  
12 **including internally or externally illuminated signs, consisting of the lamp and the parts designed to**  
13 **distribute the light, to protect the lamp, and to connect the lamp to the power supply, but not including**  
14 **illuminated utilization equipment or exit signs.**

15                           **(ii) "Occupancy Sensor Control Device" is a device that automatically**  
16 **turns off a luminaire or series of luminaires no more than 30 minutes after it senses that the area is**  
17 **vacated.**

18                           **(iii) "Utilization Equipment" is commercial, retail or industrial**  
19 **equipment, including but not limited to refrigeration equipment, fully enclosed retail display cases,**  
20 **vending machines, printing equipment or conveyors, which uses 4-foot or 8-foot fluorescent lamps**  
21 **("tubes" or "bulbs") as an integrated part of such equipment. "Utilization Equipment" shall not**  
22 **include furniture or workstations.**

23                           **(iv) "Compliance Deadline" is the final date by which all fixtures using 4-**  
24 **foot or 8-foot linear fluorescent lamps to provide illumination are to be in compliance.**

1 (B) Compliance Deadline. The Compliance Deadline is December 31, 2011.

2 (C) Mercury Content. The mercury content of each 4-foot or 8-foot fluorescent  
3 lamp ("tube" or "bulb" ) installed in a luminaire after the Compliance Deadline shall not exceed 5 mg  
4 for each 4-foot fluorescent lamp, or 10 mg for each 8-foot fluorescent lamp.

5 (D) Energy Efficiency. The lamp and ballast system in each luminaire that  
6 utilizes one or more 4-foot or 8-foot linear fluorescent lamps to provide illumination in a building  
7 subject to this Chapter must meet at least one of the following requirements:

8 (i) The lamp and ballast system emits 81 or more lumens per watt of  
9 electricity consumed;

10 (ii) The luminaire is controlled by an occupancy sensor control device  
11 that does not control an area in the building of more than 250 square feet;

12 (iii) The luminaire is fitted with a lighting efficiency measure approved  
13 by the Director as equivalent to the measures in subsections (i) or (ii) above;

14 (iv) The Director finds, based on the facts of the particular building and  
15 luminaire, that the energy savings from installing lighting efficiency measures meeting the  
16 requirements of this Section will be so insignificant over the life of the luminaire that the measure is  
17 not cost-effective; or,

18 (v) If the City department elects to meet the requirements of this  
19 Section 705.3(b)(2) with measures that require permits, such permits shall comply with all other  
20 applicable requirements of this Code and all other applicable state and local laws.

21 (E) Low Light Levels. The requirements of this Section 705.3(b)(2) shall not  
22 apply where the resulting luminaire will provide lighting levels at the work surface that are below the  
23 standards established by the Illuminating Engineering Society.



1 (F) Waivers. By September 30, 2011, the Director shall act on all pending  
2 requests for City Departments for a temporary waiver of the requirements of this Section 705.3(b). (2)  
3 under Section 708. The criteria for waivers of this Section 705.3(b) shall be described in rules  
4 issued by the Director. The Director shall submit to the Board of Supervisors a list of all  
5 departments receiving waivers, and shall identify budgetary or other barriers to compliance cited in  
6 those departments' waiver requests. Thereafter, the Director shall report on the effects of this  
7 Ordinance as part of the tri-annual report required by Section 710.

8 ~~All four foot and eight foot fluorescent fixtures shall be equipped with electronic ballasts and T8~~  
9 ~~or more efficient lamps unless this replacement will create lighting levels at the work surface that are~~  
10 ~~below the standards established by the Illuminating Engineering Society.~~

11 (3) (C) Exterior Light Fixtures. At the time of installation or replacement of  
12 broken or non-functional exterior light fixtures, a photocell or automatic timer shall be installed  
13 to prevent lights from operating during daylight hours. The existing switching capability shall  
14 be maintained. Upon written request by a City department the Director may grant an  
15 exemption from the requirement of this subsection where lighting is necessary during daylight  
16 hours.

17 ~~(D) Fluorescent Fixture Ballasts. At the time of installation or replacement of~~  
18 ~~the ballasts in fluorescent fixtures equipped with T10 or T12 lamps, all replacement ballasts shall be~~  
19 ~~electronic and compatible with only No later than December 31, 2010, all four foot and eight foot~~  
20 ~~fluorescent fixtures shall be equipped with electronic ballasts and T8 or more efficient lamps unless~~  
21 ~~such replacement will create light levels at the work surface that are below the standards established~~  
22 ~~by the Illuminating Engineering Society.~~

23 (c) (E) Other Technologies. Should the Director determine that light fixtures or exit  
24 signs that are more energy-efficient than those specified in the foregoing sections exist, the

1 Director may, in consultation with the San Francisco Public Utilities Commission, establish a  
2 list of other energy-efficient light fixtures and exit signs that City departments may use  
3 pursuant to Section 703(b).

4 ~~(d)~~ **(e) Fluorescent Lamp Recycling.** Commencing 90 days after the effective date of  
5 this Chapter, all fluorescent lamps discarded by City departments shall be recycled. The  
6 Director shall establish a program for collecting and recycling discarded fluorescent lamps.

7  
8 **SEC. 705.4. CITY BUILDINGS; INDOOR AIR QUALITY.**

9 ~~(f) Indoor Air Quality.~~

10 ~~(a)~~ ~~(1)~~ The requirements of this Section apply ~~This requirement applies~~ to the following City  
11 departments: City departments undertaking or authorizing others to undertake Construction  
12 Projects with a total projected cost of \$90,000 or more in City-owned Facilities; City  
13 departments undertaking or authorizing others to undertake Construction Projects with a total  
14 projected cost of \$90,000 or more in Existing City Leaseholds; City departments undertaking  
15 or authorizing others to undertake Construction Projects with a total projected cost of \$90,000  
16 or more in New City Leaseholds; City departments occupying an Existing City Leasehold (if  
17 the City is responsible for managing the Existing City Leasehold); City departments executing  
18 agreements for New City Leaseholds or occupying New City Leaseholds (if the City is  
19 responsible for managing the New City Leasehold); and City departments occupying City-  
20 owned Facilities (if the City department is responsible for managing the City-owned Facility.)

21 ~~(b)~~ ~~(2)~~ **Maintenance.** Within 90 days of the effective date of this Chapter, the  
22 Department shall provide informational guidelines for the development of indoor air quality  
23 maintenance plans to all City departments identified above. The guidelines shall include, at a  
24 minimum, guidance and recommendations on the following:

1           (1) ~~(A)~~ A schedule and procedures for thorough cleaning of finishes, furniture  
2 and fixtures in order to remove and reduce the growth of organisms hazardous to human  
3 health at the time of delivery and regularly after installation.

4           (2) ~~(B)~~ A schedule and procedures for inspecting and maintaining mechanical  
5 systems, including heating, ventilation and air conditioning systems (hereinafter "HVAC"  
6 systems).

7           (3) ~~(C)~~ A schedule and procedures for inspecting for mold and/or mildew  
8 contamination in porous building materials, fixtures and furnishing, including provisions for the  
9 complete removal and replacement of such materials where it is determined by inspection that  
10 the materials have become contaminated by mold and/or mildew.

11           (4) ~~(D)~~ A commitment to using cleaners and polishes with minimal effects on  
12 indoor air quality.

13           (c) ~~(3)~~ Within 90 days of the development of guidelines pursuant to Subsection (f)(2),  
14 all City departments identified in Subsection (f)(1) shall develop and implement indoor air  
15 quality maintenance plans.

16           (d) ~~(4)~~ **Pollutant Source Control.**

17           (1) ~~(A)~~ **Reduction of Health Hazards from Microbial Contaminants.**

18 Commencing 90 days after the effective date of this Chapter, all City departments undertaking  
19 or authorizing others to undertake Construction Projects with a total projected cost of \$90,000  
20 or more in City-owned Facilities, New City Leaseholds, and Existing City Leaseholds shall  
21 include in their contracts for Construction Projects provisions requiring:

22           (A) ~~(i)~~ **Prevention of Moisture Contamination.** Building materials that  
23 are intended to be kept dry before, during and following installation (e.g., fabrics, carpeting,  
24  
25

1 drywall, ceiling tiles, and insulation) shall be protected from moisture prior to, during, and after  
2 installation.

3 (B) ~~(ii)~~ **Removal of Building Materials Contaminated by Moisture.** If,  
4 in the judgment of the City project engineer, project architect or project manager, any building  
5 material that is intended to be kept dry before, during and after installation has become wet,  
6 such material shall be removed immediately from the job site, disposed of in accordance with  
7 this Chapter, and replaced. It shall be the responsibility of the relevant contractor or  
8 subcontractor to monitor the storage of such materials to ensure that they remain dry and to  
9 remove and dispose of such materials if they become wet.

10 (C) ~~(iii)~~ **Determination by Independent Industrial Hygienist.** On  
11 Construction Projects with a total construction cost exceeding \$1,000,000, if any building  
12 material that is intended to be kept dry becomes, in the judgment of the subcontractor or the  
13 City project engineer, contaminated by moisture, the City's project manager shall obtain an  
14 assessment by an independent industrial hygienist to assess the extent of contamination and  
15 supervise the containment and removal of moisture-contaminated materials. Where the  
16 hygienist determines that moisture contamination has occurred, the contractor responsible for  
17 causing or allowing the contamination to occur shall be responsible for the costs of the  
18 hygienist's services and the costs for removal and replacement of the contaminated materials.  
19 Should no moisture contamination be found, the City shall be responsible for the costs of the  
20 hygienist's services.

21 (2) ~~(B)~~ **Elimination or Encapsulation of Fibrous Insulation Materials.** The  
22 use of exposed fibrous duct insulation material in Construction Projects shall be prohibited. If  
23 the design of a Construction Projection requires the use of fibrous insulation material, such  
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1 material shall be encapsulated to minimize mold and/or mildew growth and emissions of  
2 volatile organic compounds into the habitable space.

3  
4 **SEC. 705.5. CITY BUILDINGS; STORAGE OF RECYCLABLES.**

5 ~~(g) Storage of Recyclables.~~

6 ~~(a) (1) The requirements of this Section apply~~ *This requirement applies* to the following City  
7 departments: City departments undertaking or authorizing others to undertake Construction  
8 Projects at City-owned Facilities; City departments undertaking or authorizing others to  
9 undertake Construction Projects in Existing City Leaseholds; City departments undertaking or  
10 authorizing others to undertake Construction Projects in New City Leaseholds; City  
11 departments executing agreements for New City Leaseholds or occupying New City  
12 Leaseholds; and City departments occupying City-owned Facilities (but only if the City-owned  
13 Facility was acquired at least 90 days after the effective date of the Ordinance.)

14 ~~(b) (2)~~ All City departments identified above shall ensure that adequate, accessible,  
15 and convenient recycling areas are provided within the City-owned Facility or leasehold, and  
16 that all applicable contract documents contain this requirement. The minimum allowable  
17 recycling area shall be not less than the space allocated for the storage of refuse.

18 ~~(c) (3)~~ The requirement set forth in Subsection (g)(2) of this Section to provide  
19 adequate recycling areas shall apply to Construction Project(s) for which funds have been  
20 appropriated on or after the effective date of this Chapter for:

21 ~~(1) (i)~~ A single alteration which is subsequently performed that adds to or  
22 modifies 20 percent or more of the existing floor area of the project; or

23 ~~(2) (ii)~~ Multiple alterations which are conducted within a twelve-month period  
24 which collectively add to or modify 20 percent or more of the existing floor area of the project.

1           (d) (4) Any cost associated with recycling areas pursuant to this subsection shall be  
2 the responsibility of the party or parties who are responsible for the cost of any alterations to  
3 accommodate their occupancy.  
4

5           Section 4. The Planning Department has determined that the actions contemplated in  
6 this Ordinance are in compliance with the California Environmental Quality Act (California  
7 Public Resources Code sections 21000 et seq.). Said determination is on file with the Clerk of  
8 the Board of Supervisors in File No. 090584 and is incorporated herein by reference.  
9

10           Section 5. Upon final passage of this Ordinance, the Clerk of the Board of Supervisors  
11 is hereby directed to transmit this Ordinance to the California Building Standards Commission  
12 pursuant to applicable provisions of California law.  
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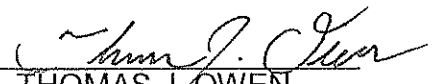
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1           Section 6. The lighting retrofits required by this ordinance may expose the people  
2 replacing the lamp and/or ballast to dangerous levels of electricity. The Board of Supervisors  
3 strongly urges building owners and managers to take appropriate precautions to protect both  
4 the people doing the electrical work and the people in the buildings from the associated risks  
5 of fire, serious injury, and/or death, by having the work performed only by qualified persons.  
6 Such persons should be trained in both the technical requirements of the work involved, and  
7 the decision-making process necessary to determine the nature and extent of the hazard and  
8 the personal protective equipment and job planning necessary to perform the task safely.

11 APPROVED AS TO FORM:  
12 DENNIS J. HERRERA, City Attorney

13 By:   
14 THOMAS J. OWEN  
15 Deputy City Attorney

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