File No. 221223 **Committee Item No.** 9
Board Item No. _____

COMMITTEE/BOARD OF SUPERVISORS

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Completed by: Brent Jalipa **Date** February 22, 2023
Completed by: Brent Jalipa **Date** _____

[Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.

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

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

Section 1. CEQA Findings.

The Planning Department has determined that the actions contemplated in this ordinance comply with the California Environmental Quality Act (California Public Resources Code Sections 21000 et seq.). Said determination is on file with the Clerk of the Board of Supervisors in File No. 221223 and is incorporated herein by reference. The Board affirms this determination.

Section 2. General Findings: In 2021, San Francisco adopted an accelerated climate action goal to be net zero carbon citywide by 2040. To respond to the City's new strategies for resilience and sustainability, this update to Chapter 7 of the Environment Code is intended to support the 2021 Climate Action Plan commitments, simplify organization of the Chapter,

update definitions and legislative findings, and build upon advancements made in the 2022 San Francisco Building Code.

Section 3. Repeal of Environment Code Chapter 7: Green Building Requirements for City Buildings of the Environment Code. Chapter 7: Green Building Requirements for City Buildings is hereby repealed in its entirety. Chapter 7 was initially enacted in its current form on October 11, 2011, by Ordinance No. 204-11, and was amended by Ordinance Nos. 75-14, 71-16, 52-17, 250-18, and 8-20 (these ordinances are available on the Board of Supervisors' website). Chapter 7 is deleted in its entirety, as follows:

~~***SEC. 700. FINDINGS AND PURPOSE.***~~

~~*The Board of Supervisors finds that:*~~

~~*1. Buildings are one of the distinguishing elements of human civilization. Traditional building design and construction practices have significant negative environmental impacts. In the United States, buildings consume 48% of all energy, 76% of all electricity, and generate 38% of all carbon (CO2) emissions. In San Francisco, buildings consume 54% of all energy, 80% of all electricity, and generate 56% of all carbon emissions. Advanced green buildings can generate their own energy, minimize carbon emissions, produce and process their own water, emphasize reuse of buildings and materials, and provide healthy interior environments.*~~

~~*2. The selection of sustainable design features and building materials is consistent with the City's Precautionary Principle Policy. This policy requires that the City consider a full range of alternatives in order to select products and procedures that minimize harm and maximize the protection of public health and natural resources.*~~

~~*3. The United States Green Building Council (USGBC) is a non-profit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-*~~

~~*saving green buildings. LEED® is an internationally-recognized green building certification system, developed by the USGBC.*~~

~~*4. Green buildings provide financial benefits while protecting human and environmental health. Total construction costs for buildings seeking LEED certification fall into the existing range of costs for buildings not seeking LEED certification. Green buildings, on average, result in savings of 20% of total construction costs over the first 20 years of operation.*~~

~~*5. The California Energy Commission has established a goal that all new commercial construction in California will be Zero Net Energy by 2030, and 50% of existing commercial buildings will be retrofit to Zero Net Energy by 2030.*~~

~~***SEC. 701. DEFINITIONS.***~~

~~*The following terms shall have the meanings set forth below.*~~

~~*"All-Electric" means the described system, Building, or project uses a permanent supply of electricity as the source of energy for all space conditioning (including heating and cooling), water heating (including pools and spas), cooking appliances, and clothes drying appliances. An All-Electric system, Building or project may include solar thermal collectors, but installs no natural gas or propane plumbing or equipment in or in connection with a Building, or within property lines of the premises, extending from the point of delivery at the gas meter.*~~

~~*"Alternative Daily Cover" or ''ADC" means materials, other than soil, that have been approved by the California Department of Resources Recycling and Recovery ("CalRecycle") or a successor agency for use as a temporary overlay on an exposed landfill face. Material used as Alternative Daily Cover, including Green Material, does not qualify as material diverted from landfill.*~~

~~*"Beneficial reuse" means the reuse of material at a landfill that does not include ADC but shall include, but not be limited to, use of the material for or as the following: alternative intermediate cover; final cover foundation layer; liner operations layer; leachate and landfill gas collection system;*~~

~~*construction fill; road base; wet weather operations pads and access roads; and, soil amendments for erosion control and landscaping. "Beneficial reuse" does not include disposal of material at a landfill.*~~

~~*"BioMass Energy Generation" means the controlled combustion, when separated from other solid waste and used for producing electricity or heat, of wood, wood chips, wood waste, and tree and brush prunings. "BioMass Energy Generation" does not include the controlled combustion of recyclable pulp or recyclable paper materials, or medical or hazardous waste.*~~

~~*"Building" means:*~~

~~*(1) Any structure used for support or shelter of any use or occupancy. "Structure" means that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built or composed of parts joined together in some definite manner and permanently attached to the ground.*~~

~~*(2) "Building" includes office buildings, libraries, recreation centers, museums, airport buildings, public safety buildings, hospitals, clinics, education centers, transportation facilities, cruise ship terminals, marina buildings, convention facilities, and other structures.*~~

~~*(3) "Building" does not include any construction installation that is not part of a building, or any tunnel, roadway, or bridge, or any vehicle or mobile equipment. "Building" also does not include a structure, facility, or type of infrastructure that primarily provides for the collection, storage, treatment, delivery, distribution, and/or transmission of water, wastewater, and/or power utilities.*~~

~~*"CALGreen" means the California Green Building Standards Code (Cal. Code of Regs. Title 24, Part 11) as adopted by San Francisco Green Building Code.*~~

~~*"City department" means any department of the City and County of San Francisco. City department does not include any other local agency or any federal or State agency, including but not limited to, the San Francisco Unified School District, the San Francisco Community College District, the Office of Community Investment and Infrastructure or the San Francisco Housing Authority.*~~

~~*"City-owned Facility" means any Building owned by the City and County of San Francisco. "City-owned Facility" includes City-owned Buildings or portions thereof that the City leases to non-City entities.*~~

~~*"City Leasehold" means a Building or portion thereof owned by others where the City is a tenant.*~~

~~*"City Representative" means the employee of the City who oversees the construction and/or demolition process for a municipal construction and/or demolition project and is responsible for ensuring that the contractor complies with all aspects of the contract documents.*~~

~~*"Commission" means the Commission on the Environment.*~~

~~*"Commissioning Process" means an independent process to ensure the attainment of quality facilities pursuant to this Chapter. The commissioning process verifies and documents that the energy using systems in buildings are installed, tested, and operate as designed.*~~

~~*"Construction and Demolition Debris" or "C & D Debris" means building materials and solid waste generated from construction and demolition activities, including, but not limited to: fully-cured asphalt; concrete; brick; lumber; gypsum wallboard; cardboard and other associated packaging; roofing material; ceramic tile; carpeting; fixtures; plastic pipe; and metals. "Construction and Demolition Debris" does not include refuse regulated under the 1932 Refuse Collection and Disposal Ordinance or sections of the Municipal Code that implement the provisions of that ordinance, or materials excavated from the public right-of-way. "Construction and Demolition Debris" does not include "hazardous waste," as defined in California Health and Safety Code Sections 25100 et seq.*~~

~~*"Contractor" means the company or person to whom the City awards a contract for a municipal construction and/or demolition project. The contractor is responsible for complying with all aspects of Section 708 of this Chapter and for ensuring that all subcontractors, lower-tier subcontractors and suppliers also comply.*~~

~~*"Deconstruction" means the process of taking apart a structure with the primary goal of preserving the value of all useful building materials, so that they may be reused or recycled.*~~

~~*"Demolition Project" means the decimating, razing, ruining, tearing down or wrecking of any facility, structure, pavement, building, wall or fence, whether in whole or in part and whether interior or exterior.*~~

~~*"Department" means the Department of the Environment.*~~

~~*"Design Phases" means the generally-accepted stages of architectural design: conceptual design, schematic design, design development and construction documents.*~~

~~*"Design Development Phase" means the transitional phase of architectural design in which the design moves from the schematic phase to the construction document phase, in which the architect prepares drawings and other presentation documents to crystallize the design concept and describe it in terms of architectural, electrical, mechanical, and structural systems. In addition, the architect also prepares a statement of the probable project cost. This phase is often charted in percentages of completion leading up to the permit drawings. Such percentages refer to the level of details the plans have achieved and benchmarks established in the cost estimation process.*~~

~~*"Director" means the Director of the Department of the Environment or his or her designee.*~~

~~*"Disposal" means final deposition of material at a legally operating permitted landfill that does not include beneficial reuse or at a permitted transformation facility. A legally operating, permitted landfill includes Class III landfills and inert fills. Disposal of inert materials at inert fills or inert backfill sites does not constitute recycling.*~~

~~*"Diversion" means use of material for any purpose other than disposal in a landfill or transformation facility, such as source reduction, reuse, recycling, and composting activities that do not result in material being disposed at permitted landfills and transformation facilities.*~~

~~*"Diversion Rate" means the percentage of total material that is diverted from disposal at permitted landfills and transformation facilities through processes such as source reduction, reuse, recycling, and composting.*~~

~~*"Green Business Certification Inc." or "GBCI" is the body providing independent third-party LEED certification and professional credentials recognizing excellence in green building performance and practice.*~~

~~*"Green Material" means any plant material that is either separated at the point of generation or separated at a centralized facility that employs methods to minimize contamination of waste streams. Green Material includes, but is not limited to, yard trimmings, untreated wood wastes, paper products, and natural fiber products. Green Material does not include treated wood waste, mixed demolition or mixed construction debris, manure, or plant waste from food processing facilities, alone or blended with soil.*~~

~~*"Hazardous Material" means any material defined as hazardous in California Health and Safety Code Sections 25100 et seq., as amended and 25500 et seq., as amended.*~~

~~*"Indoor Air Quality" or "IAQ" means the quality of air inside buildings, especially as it relates to the health and comfort of building occupants. Factors such as gases (including carbon dioxide, carbon monoxide, radon, formaldehyde, volatile organic compounds), particulates, and microbial contaminants (mold, bacteria) that cause adverse health conditions can affect IAQ.*~~

~~*"Indoor Environmental Quality" means the overall state of conditions within a building that affect its occupants, including air quality, lighting, acoustics, thermal conditions, daylight, views, ergonomics, and controllability of lighting and thermal systems.*~~

~~*"Landfill" means a facility that (a) accepts for disposal in or on land non-hazardous waste such as household, commercial, and industrial waste, and waste generated during construction, remodeling, repair and demolition operations, and (b) has a valid current solid waste facilities permit from the California Department of Resources Recycling and Recover (CalRecycle).*~~

~~*"Land-disturbing activity" means any movement of earth or a change in the existing soil cover or existing topography that may result in soil erosion from wind, or water, and the movement of sediments into or upon waters, lands, or public rights-of-way within the City and County of San Francisco, including, but not limited to building demolition, clearing, grading, grubbing, filling, stockpiling, excavating and transporting of land.*~~

~~*"Leadership in Energy and Environmental Design" or "LEED®" is an internationally recognized green building certification system developed by the USGBC, providing third-party verification that a building or community was designed and built using strategies aimed at improving performance across all the following metrics: energy savings; water efficiency; CO2 emissions reduction; improved indoor environmental quality; and, stewardship of resources and sensitivity to their impacts. LEED provides building owners and operators with a concise framework for identifying an implementing practical and measurable green building design, construction, operations, and maintenance solutions. LEED certified buildings are rated on a scale from lowest to highest: LEED Certified, LEED Silver, LEED Gold and LEED Platinum. Wherever specific LEED prerequisites or credits are cited, such references are to LEED version 4 ("v4"). More recent LEED versions may be used, provided the credits and points achieved are at least as stringent as LEED v4.*~~

~~*"LEED Accredited Professional with specialty" or "LEED AP with specialty" means an employee of a City department or a consultant retained by the City through a design or construction contract or other agreement who has passed the LEED AP with specialty accredita-tion exam issued by GBCI and maintained this credential through continuing education.*~~

~~*"LEED Online" is a web-based platform provided by USGBC for LEED project registration, team collaboration, document management, project progress monitoring, and access to forms, reviewer comments and certification credit language.*~~

~~*"LEED Project Administrator" means the individual member of the design team who registers a project with GBCI, and subsequently administers the LEED documentation and certification*~~

~~*process for the project. For San Francisco municipal construction projects, the LEED Project Administrator shall be a LEED AP with specialty.*~~

~~*"LEED Scorecard" means a summary chart indicating all LEED prerequisites and credits being pursued and reasonably expected to be achieved for a municipal construction project.*~~

~~*"Major Renovation" means any unicipal1 Municipal Construction Project or renovation to an existing structure other than repair or addition. A Major Renovation may include, but is not limited to, a change in occupancy or use, or structural repair to an existing Building or facility; or remodeling, rehabilitation, reconstruction, historic restoration, or changes to the plan configuration of wall and full-height partitions, where the scope of work is sufficient to support LEED certification and extensive enough such that normal building operations cannot be performed while the work is in progress, and/or a new certificate of occupancy, or similar official indication that it is fit and ready for use, is required. Major Renovation does not encompass normal maintenance, reroofing, floor covering, painting, wallpapering, or changes to mechanical and electrical systems.*~~

~~*"Minimum Program Requirements" or "MPR" means the minimum requirements necessary for projects to become LEED certified, as determined by the USGBC.*~~

~~*"Mixed Construction & Demolition debris" or "Mixed C & D Debris" means "Construction and Demolition Debris" or "C&D Debris," but excluding materials source-separated for reuse or recycling.*~~

~~*"Municipal Construction Project" includes any planning, design, building, or construction activity, including demolition, New Construction, Major Renovation, or building additions performed either by a City department at a Building, City-owned Facility, or City Leasehold, or by tenants at a City-owned Building or Facility.*~~

~~*"Natural Gas" shall have the same meaning as "Fuel Gas" as defined in the California Plumbing Code and Mechanical Code, as amended from time to time.*~~

~~*"New Construction" means construction from the ground up, including a new building envelope, and new structural, mechanical, electrical and plumbing systems.*~~

~~*"Person" means a natural person, a firm, joint stock company, business concern, association, partnership or corporation or, to the extent permitted by law, governmental entity, including the City and County of San Francisco and its departments, boards and commissions for projects within the nine counties surrounding the San Francisco Bay, and its or their successors or assigns.*~~

~~*"Recover" or "Recovery" means any activity, including source reduction, deconstruction and salvaging, reuse, recycling and composting, which causes materials to be recovered for use as a resource and diverted from disposal.*~~

~~*"Recycle" or "Recycling" means the process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace. "Recycling" does not include "transformation," as defined in Section 40201 of California Public Resources Code.*~~

~~*"Recycling Facility" means an operation or person that collects and processes materials for recycling.*~~

~~*"Registered Facility" means a facility that accepts mixed construction and demolition debris for processing and recycling and holds a valid registration issued by the City and County of San Francisco pursuant to Chapter 14 of the Environment Code.*~~

~~*"Registered Transporter" means a person who removes mixed construction and/or demolition (C&D) debris from a construction and/or demolition site, using a vehicle with more than two axles or two tires per axle (such as a large pickup truck with four tires on the rear axle or three-axle dump trucks), and hauling at least one (1) cubic yard of mixed construction and demolition debris. A "Registered Transporter" must hold a valid registration from the City and County of San Francisco and is obligated to take all mixed C&D material only to a Registered Facility.*~~

~~*"Reuse" means using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material.*~~

~~*"Source Reduction" means any action which causes a net reduction in the generation of solid waste. Source reduction includes, but is not limited to, reducing the use of non-recyclable materials, replacing disposable materials and products with reusable materials and products, reducing packaging, reducing the amount of yard wastes generated, establishing garbage rate structures with incentives to reduce waste tonnage generated, and increasing the efficiency of the use of paper, cardboard, glass, metal, plastic, and other materials.*~~

~~*"Source-Separated Materials" means materials that have been separated or kept separate from the solid waste stream, at the point of generation, for the purpose of reuse, recycling or composting in order to return them to the economic mainstream in the form of raw material for new, reused, or reconstituted products which meet the quality standards necessary to be used in the marketplace.*~~

~~*"Tenant Improvements" are municipal construction projects that involve changing the interiors of commercial, institutional, or industrial properties and are undertaken by the City and/or tenants to accommodate the needs of tenants. They include floor and wall coverings, ceilings, partitions, lighting, heating, ventilation, air conditioning, fire protection, and security, where the scope of work is sufficient to support LEED certification. Normal maintenance, reroofing, floor covering, painting or wallpapering, or changes to mechanical and electrical systems are not Tenant Improvements unless they are so extensive that normal building operations cannot continue while the work is in progress, and/or a new certificate of occupancy, or similar official indication that the building is fit and ready for use, is required.*~~

~~*The "United States Green Building Council" or "USGBC" is a non-profit organization committed to a prosperous and sustainable future for our nation through cost-efficient and energy-saving green buildings.*~~

~~*"Waiver Request" means a waiver request made by a City department in accordance with Section 713.*~~

~~*"Whole Building Major Renovation Project" means a major renovation that includes replacement of the building heating, ventilation and air conditioning (HVAC) system. A Whole Building Major Renovation Project may, in addition to the aforementioned replacement, involve replacing electrical distribution, lighting, fire protection, plumbing, and security systems, as well as changes to a building envelope such as window replacements or exterior wall insulation.*~~

~~*"Zero Net Energy (ZNE) Building" means a building where the amount of energy produced by on-site renewable energy resources is equal to the amount of the energy consumed annually by the building.*~~

~~***SEC. 702. MUNICIPAL GREEN BUILDING TASK FORCE.***~~

~~*(a) Establishment and Purpose. The Board of Supervisors establishes the Municipal Green Building Task Force (the "Task Force") to oversee and assist in enhancing the environmental performance of City construction projects pursuant to this Chapter. The Task Force shall review municipal construction projects subject to this Chapter during their design and construction to ensure that the responsible City departments are complying with the requirements of the Chapter, and may advise the Department of the Environment on matters of policy related to this Chapter. The Task Force shall facilitate interdepartmental communication and cooperation, and act as an educational forum to increase green building knowledge and share project-related successes and lessons learned. The Task Force shall hear Waiver Requests from City departments and make recommendations to the Director (or to the Executive Director of the Port of San Francisco for projects located on property owned or managed by the Port of San Francisco) with respect to such requests.*~~

~~*(b) The Task Force will consist of one member of the public appointed by the Mayor, and a representative with building design, construction and/or finance experience from each of the following City departments and divisions, or their successor agencies:*~~

~~*(1) Department of the Environment;*~~

~~*(2) Building Design and Construction Division within San Francisco Public Works;*~~

~~*(3) Design and Engineering Division within San Francisco Public Works;*~~

~~*(4) Landscape Architecture Division within San Francisco Public Works;*~~

~~*(5) San Francisco Public Works Buildings – Project Management;*~~

~~*(6) Power Enterprise within San Francisco Public Utilities Commission;*~~

~~*(7) Water Enterprise within San Francisco Public Utilities Commission;*~~

~~*(8) Wastewater Enterprise within San Francisco Public Utilities Commission;*~~

~~*(9) Infrastructure within San Francisco Public Utilities Commission;*~~

~~*(10) Project Management Division within Recreation and Parks Department;*~~

~~*(11) Capital Programs and Construction Division within San Francisco Municipal Transportation Agency;*~~

~~*(12) Capital Planning Program within Office of City Administrator;*~~

~~*(13) Department of Building Inspection;*~~

~~*(14) Citywide Planning Division within Planning Department;*~~

~~*(15) Port of San Francisco;*~~

~~*(16) San Francisco International Airport;*~~

~~*(17) Facilities Division within San Francisco Public Library;*~~

~~*(18) Fire Department;*~~

~~*(19) Department of Public Health; and,*~~

~~*(20) Real Estate Division within Department of Administrative Services.*~~

~~*(c) The Task Force shall adopt bylaws to govern its operations. At least half the Task Force members and the public member shall hold the credential of LEED Accredited Professional with specialty.*~~

~~*(d) The Municipal Green Building Coordinator from Department of the Environment shall be a permanent member and act as chair of the Task Force.*~~

~~*(e) Beginning on the effective date of the ordinance adding this subsection (e) to Section 702, the public member of the Task Force appointed by the Mayor shall serve for a three-year term. No person may serve as the public member of the Task Force for more than two consecutive terms.*~~

~~***SEC. 703. DUTIES OF THE DEPARTMENT OF THE ENVIRONMENT.***~~

~~*(a) General Duties Under this Chapter. The Department of the Environment shall:*~~

~~*(1) Develop goals, criteria, and strategies for optimizing municipal green building design, construction and operations and make policy recommendations regarding requirements for municipal construction projects to the Board of Supervisors;*~~

~~*(2) Develop and oversee a training program in green building practices, including design, construction, renovation, operation and reuse of buildings for City department heads and architects, engineers, construction managers, building managers, department managers and finance officers employed by the City in order to implement the policies adopted by the Board of Supervisors;*~~

~~*(3) Chair the Task Force and coordinate City departments having responsibility for compliance with the requirements of this Chapter. The Task Force shall assist the Director in providing green building advice, assistance, outreach, and education to City departments;*~~

~~*(4) Provide technical project oversight and assistance directly to City project teams or through green building technical assistance contracts; and*~~

~~*(5) Develop forms and materials necessary for compliance with this Chapter.*~~

~~*(b) Guidance, Rules and Regulations. After a public hearing, the Director may promulgate such guidance, forms, performance procedures, rules and regulations as may be necessary or appropriate from time to time to carry out the provisions of this Chapter, including the adoption of forms necessary to implement this Chapter. The Director is authorized to call upon the Task Force and other City departments as necessary and appropriate to assist in developing such guidance, forms,*~~

~~*performance procedures, rules and regulations. Such guidance, forms, performance procedures, rules and regulations may include adopting appropriate versions of LEED and adopting or modifying locally-required measures for municipal construction projects, as provided in Section 706.*~~

~~*(c) The Director shall determine the costs of implementing this Chapter and shall request that relevant City departments provide work orders to the Department to cover the costs of implementing and maintaining the programs required by this Chapter.*~~

~~***SEC. 704. DUTIES OF CITY DEPARTMENTS.***~~

~~*(a) Each City department, board and commission subject to this Chapter shall administer its municipal construction projects in accordance with the Chapter.*~~

~~*(b) Each City department, board and commission subject to this Chapter shall cooperate with, and provide in writing to the Department all information necessary for the Department to carry out its duties under this Chapter.*~~

~~*(c) Each City department with a municipal construction project registering for LEED certification shall provide LEED Online project access to the Department.*~~

~~*(d) Upon request, each City department subject to this Chapter shall provide project reports and presentations to the Task Force.*~~

~~*(e) Each City department as designated in Section 702 shall designate an employee to represent the interest of that City department on the Task Force for municipal construction projects and green building communications.*~~

~~*(f) Each City department shall assist the Director in providing advice, assistance, outreach and education to other City departments concerning municipal green building practices.*~~

~~*(g) Appropriate City department personnel shall attend green building related training offered by the Department.*~~

~~*(h) The San Francisco Public Utilities Commission may provide energy- or water-related technical project design review assistance directly to City project teams or through technical assistance contracts.*~~

~~***SEC. 705. LEED CERTIFICATION REQUIREMENTS FOR MUNICIPAL CONSTRUCTION PROJECTS.***~~

~~*Except as otherwise provided by the City's Charter,*~~

~~*(a) In addition to complying with this Chapter (except that municipal construction projects located on property owned or managed by the Port of San Francisco will not be subject to Sections 705 and 706 of this Chapter), municipal construction projects are subject to the applicable building codes in effect at the time of permit application. Municipal construction projects located within the City and County of San Francisco shall comply with the requirements of the San Francisco Green Building Code, except that municipal construction projects located on property owned or managed by the Port of San Francisco shall comply with the Port of San Francisco Green Building Standards Code, and municipal construction projects located at the San Francisco International Airport, which shall comply with this Chapter and the California Building Standards Code (CCR Title 24). All other municipal construction projects located outside the City and County of San Francisco shall comply with this Chapter and the local building code promulgated by the authority having jurisdiction.*~~

~~*(b) As described in this Chapter, the LEED rating system shall be used to certify the environmental design of the City's municipal construction projects. The minimum requirement for municipal construction projects of 10,000 gross square feet or more shall be LEED Gold certification by GBCI.*~~

~~*(c) Municipal construction projects shall demonstrate compliance with locally-required measures as provided in Section 706 of this Chapter.*~~

~~*(d) Operative Date. This section shall apply to any municipal construction project otherwise subject to the provisions of this Chapter 7 where LEED project registration takes place on or after November 1, 2016.*~~

~~*(e) Municipal construction projects Less Than 10,000 Gross Square Feet. For municipal construction projects less than 10,000 gross square feet and for municipal construction projects of any size not meeting the Minimum Program Requirements to be eligible for LEED certification, the sponsoring City department, in consultation with a LEED AP with specialty, shall prepare and submit a conceptual design phase LEED Scorecard to the Department for informational and reporting purposes. The conceptual design phase LEED Scorecard shall demonstrate the maximum LEED credits that are practicable for the project. The sponsoring City department shall pursue these LEED credits throughout the design and construction process. The sponsoring City department, in consultation with a LEED AP with specialty, shall prepare and submit a final as-built LEED Scorecard to the Department indicating all LEED credits that would be achieved if the project had been certified. Documentation of LEED credits is not required for these projects. Municipal construction projects less than 10,000 gross square feet are subject to all applicable local ordinances and requirements, including but not limited to, Construction and Demolition Debris Management, Recycling by Occupants, Construction Site Runoff Pollution Prevention, Stormwater Control, and Water Efficient Irrigation, as well as the requirements of the California Green Building Standards Code (CCR Title 24, Part 11).*~~

~~*(f) Municipal construction projects of 10,000 Gross Square Feet or More. For municipal construction projects with square footage of 10,000 gross square feet or more the following applies:*~~

~~*(1) Conceptual Design Phase. During the conceptual design phase, the sponsoring City department shall assemble a design team, which shall include a LEED AP with specialty assigned to be the LEED Project Administrator. The LEED Project Administrator shall prepare and submit a conceptual phase LEED Scorecard to the Department for review by the Task Force. The conceptual*~~

~~*phase LEED Scorecard shall demonstrate a LEED v4 Gold rating or higher, including all locally-required measures. The Task Force shall review and make recommendations on the conceptual LEED Scorecard within 35 days of submittal.*~~

~~*(2) Schematic Design, Design Development and Construction Document Phases. During the Schematic Design phase, the LEED Project Administrator shall register the municipal construction project with GBCI as a LEED registered project. At the conclusion of each design phase (Schematic Design, Design Development, and Construction Documents), the LEED Project Administrator shall submit an updated LEED Scorecard to the Department; the Scorecard shall demonstrate a LEED v4 Gold rating or higher for the municipal construction project, including locally- required measures. These interim LEED Scorecards shall be available for review by the Task Force.*~~

~~*(3) Project Closeout. At the completion of construction, the LEED Project Administrator shall submit the final LEED documentation to the GBCI for certification. Upon receiving the LEED certification from GBCI, the LEED Project Administrator shall submit a copy of the LEED certificate and the final LEED Scorecard to the Department for review by the Task Force.*~~

~~*(g) The USGBC regularly updates the LEED rating system. The Director shall adopt by regulation the current applicable versions of LEED pursuant to Section 703(b).*~~

~~***SEC. 705.1. RESERVED.***~~

~~***SEC. 705.2. RESERVED.***~~

~~***SEC. 705.3. RESERVED.***~~

~~***SEC. 705.4. RESERVED.***~~

~~***SEC. 705.5. RESERVED.***~~

~~***SEC. 706. LOCALLY-REQUIRED MEASURES FOR MUNICIPAL CONSTRUCTION PROJECTS.***~~

~~*All municipal construction projects shall comply with the following locally-required measures:*~~

~~*(a) Stormwater Management. Municipal construction projects that create and/or replace 5,000 or more square feet of impervious surface in separate and combined sewer areas, and projects that create and/or replace from 2,500 up to but not including 5,000 square feet of impervious surface in separate sewer areas only, shall implement post-construction stormwater controls that comply with the Stormwater Management Ordinance (Public Works Code Sections 147-147.6).*~~

~~*(b) Construction Site Runoff. Municipal construction projects that involve land-disturbing activities on 5,000 or more square feet of ground surface shall implement construction site run-off best management practices in compliance with the Construction Site Runoff Ordinance (Public Works Code Sections 146-146.11). Persons commencing Construction Projects after January 1, 2014, must obtain a Construction Site Runoff Control Permit prior to the commencement of land-disturbing activities.*~~

~~*(c) Indoor Water Use Reduction. Municipal construction projects subject to a LEED certification requirement shall demonstrate a minimum 30% reduction in the use of indoor potable water, as calculated to meet and achieve LEED credit Indoor Water Use Reduction.*~~

~~*(d) Renewable Energy Efficiency, Better Roofs, and Energy Resilience.*~~

~~*(1) As provided in Administrative Code Section 99.3, the municipal construction project shall receive electric service from the San Francisco Public Utilities Commission ("SFPUC") unless SFPUC determines that such service is not feasible or that the City's lease or contract, if any, does not permit such service. The municipal construction project design team shall work with SFPUC to arrange for electric service and shall confer with SFPUC on renewable energy opportunities and interconnection requirements for municipal construction projects, including photovoltaics and solar hot water.*~~

~~*(2) For municipal construction projects subject to a LEED certification requirement, the design team shall demonstrate that the project meets LEED prerequisite Minimum Energy Performance EA 1 Energy Performance requirement and demonstrates compliance with Title 24, Part 6 California Energy Standards in effect at the time of the permit application.*~~

~~*(3) For each municipal new construction or whole building major renovation project the project design team shall set a target for annual net energy consumption, and report this target to the Task Force. The Department in collaboration with the Task Force shall provide guidance as to the tools and methods to be used for setting annual net energy consumption targets. This provision shall apply to projects for which the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after March 1, 2017.*~~

~~*(4) For each municipal new construction or whole building major renovation project with an estimated height of no more than three stories above grade, project design teams shall determine the feasibility of designing and constructing such project to have zero net annual site energy consumption, including all building end uses. The Department in collaboration with the Task Force shall provide guidance as to the tools and methods to be used for determining feasibility. The design team shall submit determinations of feasibility to the Task Force. This provision shall apply to projects for which the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after March 1, 2017.*~~

~~*(5) Each municipal new construction project shall include a combination of photovoltaic, solar thermal, and/or living roof area, meeting the requirements of Planning Code Section 149 and San Francisco Green Building Code Chapter 5, Division 5.2, or demonstrate the applicability of any exceptions to those requirements. Compliance with the Living Roofs Alternative approved by the Planning Department in accordance with Planning Code Section 149 shall be acceptable in lieu of compliance with San Francisco Green Building Code Sections*~~

~~*.2 and*~~

~~*.1.3. In such cases, the applicable requirements of CCR Title 24, Part 6, Section 110.10 for the solar zone shall continue to apply.*~~

~~*(6) For each municipal new construction or whole building major renovation project, the project design team shall analyze the costs and benefits of incorporating onsite batteries that store*~~

~~*electricity from onsite solar photovoltaic systems and can be temporarily separated from the electricity grid to supply the community with electricity in the event of disaster. The Task Force, in consultation with Department of Emergency Management, shall define the building types subject to this requirement and parameters for sizing batteries and analyzing costs and benefits. Cost-benefit analyses shall be submitted to the Task Force and Department of Emergency Management. This provision shall apply to projects for which the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after March 1, 2017, and shall remain in effect through December 31, 2025.*~~

~~*(7) Each Municipal New Construction or Major Renovation Project for which the first building permit application is submitted on or after January 1, 2020 shall be All-Electric, except as follows:*~~

~~*(A) Natural Gas or propane service and plumbing may be installed if necessary for processes or features separate from the operation of systems integral to Building functions, such as vehicle fueling and mechanic shop equipment.*~~

~~*(B) Existing equipment that uses Natural Gas and serves the project area, but is outside the scope of the project, may be retained. Projects which both (i) are served by existing equipment that use Natural Gas and are outside the scope of work, and (ii) include upgrade to electric service in the project scope of work, are encouraged to include sufficient electrical service capacity to, in the future, replace existing systems that use Natural Gas with All-Electric systems.*~~

~~*(C) Emergency backup electricity generation systems may use any combination of technologies permitted under applicable law, including combustion of fossil fuels. Zero-emissions emergency backup electricity systems are encouraged, such as onsite batteries that store electricity from onsite solar photovoltaics.*~~

~~*(D) Pursuant to approval of a Waiver under Section 713 of this Chapter 7.*~~

~~*(e) Commissioning. For each municipal construction project subject to a LEED certification requirement, the design team shall demonstrate that the project achieves Option 1 of LEED credit*~~

~~*Enhanced and Monitoring-Based Commissioning, in addition to LEED prerequisite Fundamental Commissioning and Verification.*~~

~~*(f) Construction Debris Management. All municipal construction projects shall demonstrate a minimum 75% diversion from landfill. For all municipal construction projects subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED credit Construction and Demolition Waste Management (75%; 2 points). The project must also satisfy the requirements of Section 708.*~~

~~*(g) Indoor Air Quality. For each municipal construction project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED credit Enhanced Indoor Air Quality Strategies (1 point), LEED credit Construction Indoor Air Quality Management Plan (1 point), and LEED credit Indoor Air Quality Assessment Option 2: Air Testing (2 points).*~~

~~*(h) Low Emitting Materials. For each municipal construction project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves LEED Low Emitting Materials (3 points).*~~

~~*(i) Toxics Reduction and Pollution Prevention.*~~

~~*(1) For all municipal new construction, major renovation and tenant improvement projects that include furniture within the project scope, or for purchases made by or on behalf of City departments for these projects, the purchased furniture shall comply with regulations promulgated under this Chapter pertaining to the following environmental attributes, subject to verification by the Department of the Environment:*~~

~~*(A) Added flame retardant chemicals;*~~

~~*(B) Emissions of volatile organic compounds (VOCs);*~~

~~*(C) Use of certified wood;*~~

~~*(D) Polyvinyl chloride (PVC) content;*~~

~~*(E) Antimicrobial chemicals;*~~

~~*(F) Fluorinated chemicals;*~~

~~*(G) Required ecolabels; and*~~

~~*(H) Other environmental attributes, consistent with this Chapter.*~~

~~*(2) For all municipal new construction, major renovation and tenant improvement projects, and for purchases made by or on behalf of City departments for such projects, interior surfaces, including but not limited to countertops, doorknobs, handles, wall paints, and carpet, where these features are included within the project scope, shall comply with regulations promulgated under this Chapter pertaining to the following attributes, subject to verification by the Department of the Environment:*~~

~~*(A) Emissions of volatile organic compounds (VOCs);*~~

~~*(B) Fluorinated chemicals;*~~

~~*(C) Recycled content and recyclability;*~~

~~*(D) Antimicrobial chemicals;*~~

~~*(E) Required ecolabels; and*~~

~~*(F) Other environmental attributes, consistent with this Chapter.*~~

~~*(3) These requirements shall apply to projects for which the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after March 1, 2017.*~~

~~***SEC. 707. COLLECTION, STORAGE AND LOADING OF RECYCLABLE AND COMPOSTABLE MATERIALS.***~~

~~*(a) City departments shall ensure that adequate, accessible, and convenient recycling, composting and trash areas are provided within City-owned facilities and leaseholds, and that all contract documents for construction activities contain this requirement. In accordance with the City and County of San Francisco's solid-waste diversion goals, and the Mandatory Recycling and Composting Ordinance (Chapter 19 of the Environment Code), the departments shall provide sufficient*~~

~~*space to allow the collection, storage and loading of 100% of the facility's recyclable, compostable and trash materials. That space must be sufficient to accommodate containers consistent with both current methods and goals of refuse collection, storage and loading, and with projected needs when full zero waste goals are met.*~~

~~*(1) All areas designated for the collection, storage and loading of recyclable, compostable and trash materials shall be integrated into the design and construction of the project. The departments shall ensure that areas for collection, storage and loading of recyclable and compostable materials are at least as convenient and usable as spaces provided for non-recyclable waste disposal, and located in the same areas whenever possible. When separate locations must be provided due to space constraints, the locations for collection, storage and loading of recyclable and compostable materials shall be at least as convenient as non-recyclable trash disposal locations.*~~

~~*(2) All areas designated for the collection, storage and loading of recyclable, compostable and trash materials shall allow for easy access to the containers by collection vehicles.*~~

~~*(3) Each interior space shall include adequate area designed and designated for collection and storage of recyclable, compostable and trash materials.*~~

~~*(4) Any chute system for solid-waste disposal shall be designed for equal convenience to all users to separate the three refuse streams of trash, recycling and compostable materials.*~~

~~*(b) Surplus Furniture, Equipment, Computers and Supplies. The Virtual Warehouse Program facilitates the reuse, recycling, and disposal of surplus City materials. To the extent permitted by law, all surplus furniture, equipment, computers and supplies purchased with San Francisco City and County funds shall be turned in to the Virtual Warehouse. Before buying any new furniture, equipment or supplies, City employees shall check the Virtual Warehouse for available products that meet their needs.*~~

~~*(c) City departments are required to recycle used fluorescent and other mercury containing lamps, batteries, and universal waste as defined by California Code of Regulations Section 66261.9.*~~

~~***SEC. 708. CONSTRUCTION AND DEMOLITION DEBRIS MANAGEMENT.***~~

~~*(a) This requirement applies to all Construction and/or Demolition Projects at City-owned Facilities and City leaseholds, regardless of size of the project, located within the nine counties surrounding the San Francisco Bay. All City departments shall ensure that each Construction and/or Demolition Project subject to this Section shall meet the following requirements:*~~

~~*(1) The Contractor shall employ the following hierarchy of highest and best use for handling Construction & Demolition ("C&D") debris as follows:*~~

~~*(A) Implement reduced material usage or reuse of materials before any recycling;*~~

~~*(B) Implement recycling of source-separated material before any recycling of mixed C&D debris material;*~~

~~*(C) Implement recycling of mixed C&D debris before all other forms of disposal.*~~

~~*(2) The contractor shall manage all project C&D debris materials to meet a minimum diversion rate of 75 percent. The Director may increase the minimum diversion rate by regulation under Section 703(b) based on the Director's assessment of infrastructure, markets and materials available to support the new rate.*~~

~~*(3) The contractor is prohibited from sending any C&D debris material directly to a landfill without submitting a request to and receiving approval from the Department. The request must demonstrate that all reuse and recycling options for the material have been evaluated and determined to be not possible. A request to send C&D material directly to landfill must demonstrate that beneficial reuse of the material is employed, if possible, before any material is used as alternative daily cover (ADC), and that material is used as landfill disposal only as a last resort if necessary, and shall include documentation such as a written statement by the landfill operator that the material will be used as designated.*~~

~~*The contractor should submit any initial request for approval to send C&D debris material directly to a landfill to the Department at the same time the contractor submits the*~~

~~*Construction and Demolition and Debris Management Plan (CDDMP) to the City Representative, as provided in subsection (b)(2)(A)(ii), below. But if unforeseen circumstances affect the material during the project, the contractor may at that time submit an additional or amended request to the Department for its review and possible approval.*~~

~~*(4) The contractor is prohibited from sending any C&D debris materials directly to any facility that would incinerate such debris or otherwise process such debris using high temperature conversion technology, unless the debris is used as boiler fuel in BioMass Energy Generation, which will only be allowed after the contractor has submitted a request to and received approval from the Department. The contractor shall demonstrate in the request that all reuse and recycling options for the material have been evaluated and determined to be not possible.*~~

~~*(5) No solid waste or C&D debris material shall be buried or otherwise disposed of on the project site, unless engineered and processed on site for on-site reuse such as engineered backfill or landscaping; any such use shall be documented on all C&D debris material management plans and reports.*~~

~~*(6) In order for C&D debris to be considered hazardous, such as containing asbestos or lead, it shall be tested and determined to be hazardous by an independent professional, such as a Cal/OSHA Certified Asbestos Consultant. The waste determination and other verification shall be included with the C&D Debris Management Plan, together with a list of hazardous materials found at the project site and plans for proper disposal.*~~

~~*(b) Construction and Demolition Debris Management Plan. The contract between the City department and the contractor shall require the contractor responsible for construction and/or demolition debris material management to:*~~

~~*(1) Conduct a site assessment to estimate the types of materials that will be generated during the construction and/or demolition project, including packaging or shipping materials.*~~

~~*(2) Complete a plan as set forth below describing procedures for reuse, recycling and material management.*~~

~~*(A) Plan Requirements. The contract between the City department and the contractor shall require that:*~~

~~*(i) After award of the contract and prior to commencement of the demolition or construction project, the City Representative shall ensure that the contractor develops a plan for managing C&D debris material from the project to meet the requirements of this Section.*~~

~~*(ii) The contractor shall prepare, sign and submit a Construction and Demolition Debris Management Plan ("CDDMP") to the City Representative. The City Representative shall review the plan to ensure the contractor and the City are maximizing highest and best use of all C&D debris material and are meeting the requirements of this Section. The City Representative shall, if appropriate, approve and sign the CDDMP to ensure that the contractor abides by all requirements of this Section.*~~

~~*(B) The Director shall specify the form of the CDDMP by regulation pursuant to Section 703(b). The form shall include, but not be limited to:*~~

~~*(i) Contractor and project identification information;*~~

~~*(ii) Procedures to be used for C&D debris management;*~~

~~*(iii) A list of the materials generated from the project, their estimated weight by tons, and how they will be reused, recycled, or otherwise handled; and,*~~

~~*(iv) The names and locations of reuse and recycling facilities or sites, and companies that will transport the material.*~~

~~*(3) If the project involves a Full Demolition Permit from the code official having jurisdiction, or if the projected cost of the project exceeds $100,000, or as may be required by the Department, the City Representative shall send the approved CDDMP to the Department for optional review and approval.*~~

~~*(c) Summary of Diversion; Disposal. The contract between the City department and the contractor shall require that:*~~

~~*(1) With each application for progress payment, the contractor shall submit a signed Summary of Diversion to the City Representative showing C&D debris material diversion and disposal coinciding with the time period of the progress payment. This summary shall quantify all materials generated by the municipal construction and/or demolition project, and how they were diverted from disposal through reuse or recycling, plus supporting documentation in the form of weight slips or other similar proof. The means used to reuse or recycle debris material must be consistent with the Construction and Demolition Debris Management Plan ("CDDMP") for the project. No material may be taken to any landfill without prior approval pursuant to Section 708(a)(3), and landfill documentation provided with the Summary of Diversion must show that material was used as specified in the CDDMP. Failure to submit the Summary of Diversion and supporting documentation to the City Representative shall render the application for progress payment incomplete and delay progress payment. The Summary of Diversion must be submitted on a form specified by regulation of the Director under Section 703(b).*~~

~~*(2) The City Representative shall review and, if appropriate, sign as approved, the Summary of Diversion and supporting documentation to ensure that the contractor is adhering to the approved CDDMP, and that the reported diversion rate is correct. The City Representative shall send the Department a copy of the approved Summary of Diversion for any projects subject to subsection (b)(3).*~~

~~*(d) Final Diversion Report. The contract between the City department and the contractor shall require that:*~~

~~*(1) A Final Diversion Report signed by the contractor showing the weight of C&D debris material diverted for the entire construction and/or demolition project and the overall diversion rate achieved shall be prepared and submitted to the City Representative for approval prior to final*~~

~~*payment. The Final Diversion Report will be submitted on a form established by regulation, pursuant to Section 703(b).*~~

~~*(2) The City Representative will send an approved copy of the Final Diversion Report to the Department. The City Representative shall retain all supporting documentation and make it available to the Department upon request.*~~

~~*(e) Retention of Records. The City Representative shall retain all C&D Debris Management Plans, Summaries of Diversion, Final Diversion Reports and all supporting documentation after completion of the project for a period of time determined by the Department by regulation.*~~

~~*(f) Revenue. Revenues or other savings obtained from recycled or reused materials shall accrue to the City department or the contractor as negotiated between them and embodied in the contract.*~~

~~*(g) All factual representations required by this Section shall be signed under penalty of perjury.*~~

~~*(h) All forms and documentation required by this Section will be submitted electronically, if possible.*~~

~~*(i) Enforcement. The Director and his or her designee may administer all provisions of this section and enforce those provisions by any lawful means available for such purpose except as otherwise provided in this Chapter.*~~

~~***SEC. 709. WATER CONSERVATION RETROFIT REQUIREMENTS.***~~

~~*(a) On or before January 1, 2017, the City department responsible for any City-owned facility's operation and maintenance shall take all steps necessary to bring the facility into compliance with this Section.*~~

~~*(b) The City department shall use San Francisco Public Utilities Commission ("SFPUC") guidelines to determine which of the following provisions applies.*~~

~~*(c) Water Conservation Requirements for Water Closets (Toilets) and Urinals.*~~

~~*(1) This subsection applies to all City-owned facilities.*~~

~~*(2) City leaseholds are subject to the all the requirements of the Commercial Water Conservation Ordinance of Chapter 13A of the San Francisco Building Code, including provisions requiring the replacement of non-compliant water closets and urinals on or before January 1, 2017.*~~

~~*(3) The responsible City department shall ensure that all water closets in City-owned facilities with a rated flush volume exceeding 1.6 gallons per flush are replaced with high-efficiency water closets that use no more than 1.28 gallons per flush. All wall-mounted urinals with a rated flush volume exceeding 1.0 gallon per flush shall be replaced with high-efficiency urinals that use no more than 0.125 gallons per flush. All non-wall mounted urinals with a rated flush volume exceeding 1.0 gallon per flush shall be replaced with high-efficiency urinals that use no more than 0.5 gallons per flush.*~~

~~*(4) The responsible City department shall replace the bowl and flushometer valve together in all City-owned facilities to meet high-efficiency standards for flushometer type water closets and urinals. The responsible City department shall replace the bowl and tank together to meet high-efficiency standards for tank type water closets.*~~

~~*(5) The responsible City department shall be responsible for the costs of compliance and for ensuring that all applicable contract documents for the replacement of water closets and urinals contain the above requirement.*~~

~~*(6) Installation of water closets and urinals:*~~

~~*(A) City departments purchasing water closets and urinals may only purchase high-efficiency water closets and urinals listed by the General Manager of the SFPUC.*~~

~~*(B) City departments shall confer with the General Manger of the SFPUC and incorporate technical assistance and water conservation audit findings in project plans.*~~

~~*(7) City departments shall comply with inspection findings determined to be necessary by the General Manager of the SFPUC to ensure that all fixtures have been properly installed for*~~

~~*buildings subject to the requirements in subsection (c)(3) where four or more high-efficiency water closets or urinals are replaced.*~~

~~*(8) Should the General Manager of the SFPUC determine that water closets and urinals that are more water-efficient than those specified in the foregoing sections exist City departments shall install fixtures identified on a SFPUC list of other water-efficient water closets and urinals that City departments may use pursuant to Section 703(b).*~~

~~*(d) Water Conservation Requirements for Shower Heads.*~~

~~*(1) This subsection applies to all City-owned facilities.*~~

~~*(2) City leaseholds are subject to the Commercial Water Conservation Ordinance of Chapter 13A of the San Francisco Building Code, including provisions requiring the replacement of non-compliant showerheads on or before January 1, 2017.*~~

~~*(3) The City department responsible for any City-owned facility's operation and maintenance shall take all necessary steps to ensure that all showerheads in the facility having a maximum flow rate exceeding 2.5 gallons per minute are replaced with shower heads having a maximum flow rate, not to exceed 1.5 gallons per minute.*~~

~~*(4) The City department shall be responsible for the costs of compliance and for ensuring that all applicable contract documents for the replacement of showerheads contain the above requirement.*~~

~~*(5) Should the General Manager of the SFPUC determine that shower heads that are more water efficient than those specified in the foregoing section exist, City departments shall install fixtures identified on a San Francisco Public Utilities Commission list of other water-efficient shower heads that City departments may use pursuant to Section 703(b).*~~

~~*(e) Water Conservation Requirements for Faucets and Faucet Aerators.*~~

~~*(1) This subsection applies to all City-owned facilities.*~~

~~*(2) City leaseholds are subject to requirements of the Commercial Water Conservation Ordinance of Chapter 13A of the San Francisco Building Code, including provisions requiring the replacement of non-compliant faucets and faucet aerators on or before January 1, 2017.*~~

~~*(3) The City department responsible for any City-owned facility's operation and maintenance shall take all necessary steps to ensure that all faucets and faucet aerators in the facility with a maximum flow rate exceeding 2.2 gallons per minute are replaced with fixtures having a maximum flow rate not to exceed 0.5 gallons per minute per appropriate site conditions.*~~

~~*(4) The City department shall be responsible for the costs of compliance and for ensuring that all applicable contract documents for the replacement of faucet or faucet aerators containing the above requirement.*~~

~~*(5) Should the General Manager of the SFPUC determine that faucet aerators that are more water efficient than those specified in the foregoing section exist, City departments shall install fixtures identified on a SFPUC list of other water-efficient faucets or faucet aerators that City departments may use pursuant to Section 703(b).*~~

~~***SEC. 710. RESERVED.***~~

~~***SEC. 711. INDOOR ENVIRONMENTAL QUALITY.***~~

~~*(a) The requirements of this Section apply to all City-Owned Facilities and City leaseholds.*~~

~~*(b) The San Francisco Department of Public Health ("DPH"), in consultation with the Department, shall track Indoor Environmental Quality (IEQ) problems, including indoor air pollution, fumes, odors, humidity problems, and thermal and acoustical comfort issues, in City-owned buildings and City leaseholds through the Department of Public Works and the Real Estate Division's Computerized Maintenance Management System (CMMS).*~~

~~*(c) City Departments not using the CMMS may complete a voluntary annual survey of IEQ information.*~~

~~*(d) DPH shall compile tracking information from the CMMS and survey results into an annual analysis including commonalities among complaints and preventative techniques. The annual survey results and analysis will provide information with which to provide better solutions to IEQ problems and improve IEQ policy-making.*~~

~~*(e) DPH will coordinate research and interventions relating to the causes, effects, extent, prevention, and control of indoor pollution, and will disseminate outcomes to City departments.*~~

~~*(f) Pursuant to Section 703(a)(2), the Department, in consultation with DPH, will provide outreach and education programs for City Departments and design professionals on the importance of IAQ management in the design, construction, operation and maintenance of municipal buildings.*~~

~~*(g) Construction specifications and facility maintenance protocols for City-owned Facilities and City Leaseholds shall include the following:*~~

~~*(1) Implementation of moisture and mold management practices during the design, construction and maintenance of a building. City-owned Facilities and City Leaseholds shall have a system in place that provides prompt response and remediation for moisture infiltration, water damage and/or mold.*~~

~~*(2) For new construction, elimination of building materials manufactured with lead. Eliminated materials are established by regulation, pursuant to Section 703(b).*~~

~~*(h) Additional IEQ construction specifications and facility maintenance protocols for City-owned Facilities and City Leaseholds may be adopted by regulation pursuant to Section 703(b).*~~

~~***SEC. 712. REPORT TO THE BOARD OF SUPERVISORS.***~~

~~*No later than July 1, 2018, the Director, in consultation with the Task Force and affected City departments and with input from members of the public who have asked to be informed by the Task Force or the Department, shall submit to the Board of Supervisors a report on the effects of this Chapter, including but not limited to the following:*~~

~~*(1) A report of the compliance of municipal construction projects under the LEED rating system, including a report on waivers;*~~

~~*(2) A report of City departments' compliance with this Chapter;*~~

~~*(3) An assessment of whether this Chapter has achieved its stated goals; and*~~

~~*(4) Recommended changes, if any, to this Chapter.*~~

~~***SEC. 713. WAIVERS.***~~

~~*(a) Waivers from the requirements of this Chapter are available under the following circumstances:*~~

~~*(1) Emergency. A City department may grant itself a waiver from any requirement of this Chapter, except the requirements of Section 706(a), when it is necessary to respond to an emergency which endangers public health or safety. In such case, the City department shall report to the Director on a form provided by the Director regarding the emergency that prevented compliance with this Chapter within five business days. City departments desiring an emergency waiver from the requirements of Section 706(a) shall confer with the General Manager of the San Francisco Public Utilities Commission.*~~

~~*(2) Cost Prohibitive. If the sponsoring City department determines that compliance with this Chapter is cost prohibitive, a City department may request a waiver from any provision of this Chapter that is not otherwise required by the San Francisco Building Inspection Commission Codes, the Port of San Francisco Building Standards Code, or other state or local requirement. Waivers may be requested on a form provided by the Director and submitted to the Task Force. The Task Force shall provide the Director with a recommendation with respect to the waiver request. Where a project is located on property owned or managed by the Port of San Francisco, the Task Force shall provide the Executive Director of the Port of San Francisco with a recommendation with respect to the waiver request. The Director (or, where a project is located on property owned or controlled by the Port of*~~

~~*San Francisco, the Executive Director of the Port of San Francisco) may grant a waiver upon a finding that the requesting City department project team has:*~~

~~*(A) Demonstrated which specific requirements are cost prohibitive as weighed against the potential economic, environmental and health benefits posed by a particular requirement; and*~~

~~*(B) If applicable for Section 705, or equivalent provisions in the Port of San Francisco Green Building Standards Code, developed a reasonable plan to maximize the number of LEED points attainable.*~~

~~*(3) Alternate Compliance. A City department may request a waiver from LEED Gold certification if utilizing an independently verified green building rating system or standard that is determined by the Task Force to be at least as stringent as LEED, or to be a more appropriate standard for a specific project. Such waiver requests shall provide justification and details for alternate compliance. Waivers for alternate compliance may be requested on a form provided by the Director and submitted to the Task Force. The Task Force shall provide the Director with a recommendation with respect to the waiver request. Where a project is located on property owned or managed by the Port of San Francisco, the Task Force shall provide the Executive Director of the Port of San Francisco with a recommendation with respect to the waiver request. The Director (or, where a project is located on property owned or managed by the Port of San Francisco, the Executive Director of the Port of San Francisco) may grant a waiver upon finding that the requester has provided adequate justification.*~~

~~*(4) Other. If, due to specific circumstances, compliance would defeat the intent of this Chapter or create an unreasonable burden on the municipal construction project or City department, the City department may request a waiver from that requirement on a form provided by the Director. The Task Force shall provide the Director with a recommendation with respect to the waiver request. Where a project is located on property owned or managed by the Port of San Francisco, the Task Force shall provide the Executive Director of the Port of San Francisco with a recommendation with*~~

~~*respect to the waiver request. The Director (or, in the case of projects located on property owned or managed by the Port of San Francisco, the Executive Director of the Port of San Francisco) may grant a waiver upon a finding that the requesting City department has:*~~

~~*(A) Documented the circumstances and burdens at issue; and*~~

~~*(B) If applicable for Section 705, or equivalent provision in the Port of San Francisco Green Building Standards Code, developed a reasonable plan to maximize the number of LEED points attainable.*~~

~~*(b) After the end of the 50% Design Development Phase, the Director or the Executive Director of the Port of San Francisco will only accept waiver requests for consideration if the project design team can demonstrate extenuating circumstances, including but not limited to the following:*~~

~~*(1) Unforeseen site conditions; or*~~

~~*(2) Unavailability of specified system or products.*~~

~~*(c) The Director shall respond to a request for a waiver within 35 days.*~~

~~*(d) The Director (or, where a project is located on property owned or managed by the Port of San Francisco, the Executive Director of the Port of San Francisco) may not waive the requirements of Sections 706(a), 707, and 708, except in the case of emergencies as provided in subsection (a)(1) of this Section 713. Granting of a waiver for any requirement of this Chapter, or the Port of San Francisco Green Building Standards Code does not waive any requirement of the San Francisco Building Inspection Commission Codes, the Port of San Francisco Building Standards Code, or the California Building Standards Code (CCR Title 24, Part 6 and Part 11) as applicable.*~~

~~*(e) The Director (or, when a project is located on property owned or managed by the Port of San Francisco, the Port of San Francisco representative to the Task Force) shall regularly report to the Task Force on waivers requested, granted and denied. The Director in consultation with the Task Force shall report to the Commission on the Environment regularly on waivers requested, granted and denied.*~~

~~***SEC. 714. PREEMPTION.***~~

~~*The City recognizes that in some circumstances state or federal law governs some of the matters addressed in this Chapter. Nothing in this Chapter shall be interpreted or applied by a court or an agency of City government so as to create any requirement, power, or duty in conflict with federal or state law or with a requirement of any government agency, including any agency of City government, implementing federal or state law.*~~

Section 4. Enactment of New Chapter 7 of the Environment Code. Chapter 7: Municipal Green Building Requirements, consisting of Sections 700-705, is hereby enacted, to read as follows:

CHAPTER 7: MUNICIPAL GREEN BUILDING REQUREMENTS

SEC. 700. FINDINGS.

The Board of Supervisors finds and declares that:

(a) Conventional building industry practices contribute to ecosystem degradation and our climate crisis. Construction activities are responsible for more than 30% of global resource use, and it is anticipated that embodied carbon will be responsible for 72% of the carbon emissions associated with global new construction between 2020 and 2030.

(b) In the United States, buildings consume 40% of all energy and 74% of all electricity. Buildings in San Francisco currently generate 41% of the City's greenhouse gas emissions. More than 99% of the greenhouse gas emissions associated with the municipal portfolio can be attributed to the use of natural gas for building operations.

(c) San Francisco has established targets to supply 100% renewable energy by 2025, reduce greenhouse gas emissions 61% below 1990 levels by 2030, and achieve net-zero emissions by 2040.

(d) San Francisco is susceptible to natural and climate disasters, and the incorporation of strategies for resilience can reduce morbidity and mortality rates, lower utility costs, and contribute to incident stabilization.

(e) Green building is a form of climate action that minimizes greenhouse gas emissions, relies on energy efficiency and renewable resources, conserves water, optimizes material use, provides healthy and biodiverse environments, and bolsters an equitable society.

(f) Third party rating systems characterize the lifecycle considerations for green buildings. These programs can offer credibility, transparency, and consistency to project teams in pursuit of an elevated and well-defined performance standard for Municipal Construction Projects.

SEC. 701. DEFINITIONS.

For purposes of this Chapter 7, the following terms shall have the meanings set forth below.

"All-Electric" shall have the same meaning as "All-Electric Building or Project" as defined in the San Francisco Green Building Code, as amended from time to time.

"Biodiversity Guidelines" means specific actions for project teams to create local wildlife habitat in the built environment toward fulfilling the City's Biodiverse City Vision, in accordance with the SF BOS 2018 Biodiversity Resolution. (sfenvironment.org/biodiversityguidelines)

"Building" means any structure with a roof and walls that supports or shelters a use or occupancy, other than that which primarily provides for the collection, storage, treatment, delivery, distribution, and/or transmission of water, wastewater, and/or power utilities.

"City Department" means any agency of the City and County of San Francisco. Any other local, state, or federal agency doing business in San Francisco is not a City Department, such as the San Francisco Unified School District, the San Francisco Community College District, the Office of Community Investment and Infrastructure, and the San Francisco Housing Authority.

"City Leasehold" means a Building or portion thereof owned by a party other than the City where a City Department is a tenant.

"City-Owned Property" means any land or real estate belonging to the City and County of San Francisco, including any portion thereof that is leased to a non-City entity.

"City Representative" means the employee of the City and County of San Francisco who oversees the process for a Municipal Construction Project and is responsible for ensuring that the Contractor complies with all aspects of the contract documents.

"Commission" means the Commission on the Environment.

"Community Center" means a Building and its grounds, where regular public programming provides an essential health and wellness function, important to maintain during an emergency. For the Recreation and Park Department, Community Center specifically means a recreation center.

"Construction and Demolition Debris" or "C & D Debris" shall have the same meaning as "Construction and Demolition Debris" as defined in the Environment Code, Chapter 14, as amended from time to time.

"Contractor" means the company or Person to whom the City awards a binding agreement to deliver a Municipal Construction Project.

"Critical Community Institution" means a Building necessary for providing vital societal and individual functions, including public safety facilities, health clinics, Community Centers, libraries, and emergency management facilities.

"Department" means the Department of the Environment.

"Design Phases" means the generally accepted stages of architectural design: conceptual design, schematic design, design development, and construction documents.

"Director" means the Director of the Department of the Environment or their designee.

"Embodied Carbon" means the sum impact of all the greenhouse gas emissions attributed to a material throughout its lifecycle.

"Green Building Rating System" means an assessment tool, created and managed by a reputable organization in good standing and recognized by the building industry as meeting the standard of care, that includes the following general characteristics, at a minimum:

- *Holistic approach to program requirements, with established and comprehensive sustainability metrics for measuring performance in a range of impact areas, such as energy; environmental justice; human and environmental health; integrative process; materials; site and surrounds; and water;*
- *Independent third-party verification;*
- *Mechanism for consistent evaluation and communication of achievement or levels of achievement;*
- *Standardized processes for project data tracking and project team support; and*
- *Commitment to continuous improvement with clearly delineated and transparent methods for program updates.*

"Green Business Certification Inc." or "GBCI" is the global certification body for the LEED green building program and other sustainability rating systems, as well as the administrator of related professional credentials. (www.gcbi.org)

"Indoor Air Quality" or "IAQ" means the characteristics of air within and around a Building, especially as it relates to the health and comfort of Building occupants, and as it is affected by gases (including but not limited to carbon dioxide, carbon monoxide, radon, formaldehyde, ozone, nitrogen oxides, semi-volatile organic compounds, sulfur oxides, volatile organic compounds), particulates, and microbial contaminants (e.g., mold, bacteria).

"Indoor Environmental Quality" means the overall state of conditions within a Building that affects its occupants, including but not limited to Indoor Air Quality, lighting, acoustics, thermal conditions, daylight, views, and ergonomics.

"Leadership in Energy and Environmental Design" or "LEED®" is an internationally recognized and third-party verified green building rating system developed by the U.S. Green Building Council. (www.usgbc.org/leed)

"LEED Accredited Professional With Specialty" or "LEED AP With Specialty" means an employee of a City Department or a consultant retained by the City through a design or construction contract or other agreement, who has passed the LEED AP With Specialty accreditation exam issued by GBCI and has maintained this credential by earning continuing education hours.

"LEED Online" means the web-based platform provided by the U.S. Green Building Council for LEED project registration, team collaboration, document management, project progress monitoring, and access to forms, reviewer comments, and certification credit language.

"LEED Project Administrator" means the individual member of the design team who registers a Municipal Construction Project with GBCI, and subsequently administers the LEED documentation and certification process for the project. The LEED Project Administrator shall be a LEED AP With Specialty in good standing.

"LEED Scorecard" means a summary chart indicating all LEED prerequisites and credits being pursued and reasonably expected to be achieved for a Municipal Construction Project.

"Maintenance" means repair, replacement, or modernization of items as part of single-trade scope of work (e.g., roofing, boiler, chiller, fire sprinkler, fire alarm, elevator), accessibility barrier removal, or non-permitted work (e.g., finish materials, furniture systems, hardware).

"Major Renovation" means a Municipal Construction Project where Building interior finishes are removed and significant upgrades to structural and/or mechanical, electrical, and/or plumbing systems are proposed; and where the scope of work is extensive enough such that normal Building operations cannot continue while the work is in progress and/or a new certificate of occupancy, or similar official indication that it is fit and ready for use, is required.

"Material Reduction and Recovery Plan" or "MRRP" shall have the same meaning as "Material Reduction and Recovery Plan" as defined in Environment Code, Chapter 14, as amended from time to time.

"Municipal Construction Project" means any planning, design, construction, deconstruction, or demolition activity performed by a City Department or on a city-owned property.

"Natural Gas" shall have the same meaning as "Fuel Gas" as defined in the California Plumbing Code and Mechanical Code, as amended from time to time.

"New Construction" means a Municipal Construction Project that includes land disturbing activity from the ground up, with a new Building envelope and new structural, mechanical, electrical, and plumbing systems.

"Non-Building Project" means a Municipal Construction Project that does not include a Building.

"Person" means a natural person, a firm, joint stock company, business concern, association, partnership or corporation or, to the extent permitted by law, governmental entity, including the City and County of San Francisco and its departments, boards, and commissions for projects within the nine counties surrounding the San Francisco Bay (Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma), and its or their successors or assigns.

"Small Project" means New Construction, Major Renovation, or Tenant Improvement that either is less than 10,000 gross square feet or is of any size with insufficient scope to meet all LEED prerequisites.

"Tenant Improvement" means a Municipal Construction Project that involves the customized alterations to the interior of an occupiable Building to accommodate the needs of specific occupants, where interior finishes are removed and/or mechanical, electrical, and/or plumbing systems are proposed, such that normal building operations cannot continue while the work is in progress and/or a new certificate of occupancy, or similar official indication that it is fit and ready for use, is required.

"Tier 1 Emergency Loads" means mission-critical, life-sustaining electrical end uses which shall not comprise less than 10% of total Building electrical capacity and shall include loads essential to the continued function of the use(s) that are the basis for the designation of Critical Community Institution at the site.

"Tier 2 Priority Loads" means electrical end uses that should maintain operation in the event of disruption to electricity supply only when doing so does not threaten the resilient operation of Tier 1 Emergency Loads. Tier 2 Priority Loads usually comprise about 15% of total Building electrical capacity.

"Tier 3 Discretionary Loads" means electrical end uses that should maintain operation in the event of disruption to electricity supply only when doing so does not threaten the resilient operation of Tier 1 Emergency Loads and Tier 2 Priority Loads. Tier 3 Discretionary Loads usually comprise about 75% of total Building electrical capacity.

"Virtual Warehouse" means the City's online reuse system for all unwanted City-owned items. The Virtual Warehouse facilitates the reuse, recycling, and proper disposal of city-owned material pursuant to the Surplus Disposal Ordinance and Resource Conservation Ordinance. (https://sfenvironment.org/virtualwarehouse).

SEC. 702. ROLES AND RESPONSIBILITIES.

(a) ***Municipal Green Building Task Force.***

(1) ***Establishment and purpose.*** *The Municipal Green Building Task Force (the "Task Force") is hereby established to oversee and assist in enhancing the environmental performance of Municipal Construction Projects pursuant to this Chapter 7. The Task Force shall assist the Director in providing green building advice, assistance, outreach, and education to City Departments. The Task Force shall advise the Department of the Environment on matters of policy related to this Chapter and may review Municipal Construction Projects subject to this Chapter during their design and*

construction to ensure that the responsible City Departments are complying with the Chapter's requirements. The Task Force shall hear waiver requests from City Departments and propose recommended actions to the Director (or to the Executive Director of the Port of San Francisco for projects located on property owned or managed by the Port of San Francisco). The Task Force shall facilitate interdepartmental communication and cooperation, and act as an educational forum to increase green building knowledge and share project-related successes and lessons learned.

*(2) **Membership.** The Task Force shall consist of one member of the public appointed by the Mayor, and a representative with building design, construction, and/or finance experience from each of the following City Departments and divisions, or their successor agencies:*

(A) Department of the Environment;

(B) Building Design and Construction Division within San Francisco Public Works;

(C) Design and Engineering Division within San Francisco Public Works;

(D) Landscape Architecture Division within San Francisco Public Works;

(E) San Francisco Public Works Buildings - Project Management;

(F) Bureau of Building Repair within San Francisco Public Works;

(G) Power Enterprise within San Francisco Public Utilities Commission;

(H) Water Enterprise within San Francisco Public Utilities Commission;

(I) Wastewater Enterprise within San Francisco Public Utilities Commission;

(J) Infrastructure within San Francisco Public Utilities Commission;

(K) Capital and Planning Division within Recreation and Park Department;

(L) Capital Programs and Construction Division within San Francisco Municipal Transportation Agency;

(M) Office of Resilience and Capital Planning within Office of City Administrator;

(N) Department of Building Inspection;

(O) Citywide Planning Division within Planning Department;

(P) Port of San Francisco;

(Q) San Francisco International Airport;

(R) Facilities Division within San Francisco Public Library;

(S) Fire Department;

(T) Department of Public Health; and,

(U) Real Estate Division within Office of the City Administrator.

Membership on the Task Force is intended, to the extent applicable, to be a continuation of membership on the similar task force established in an earlier iteration of this Section 702, repealed by the ordinance in Board File No. 221223, except to the extent an appointing authority decides to make a change in membership.

*(3) **Governance.** The Task Force shall adopt bylaws to govern its operations.*

*(b) **Department of the Environment.***

*(1) **General duties under this Chapter 7**. The Department of the Environment shall:*

(A) Develop goals, strategies, and criteria for optimizing the design, construction, renovation, operation, reuse, and dismantling of Municipal Construction Projects and Buildings, and make related policy recommendations to the Board of Supervisors;

(B) Develop and oversee trainings in green building practices for City staff to aid the implementation of policies adopted by the Board of Supervisors;

(C) Chair the Task Force, and coordinate City Departments having responsibility for compliance with the requirements of this Chapter;

(D) Provide technical oversight and assistance directly to Municipal Construction Project teams or through green building technical assistance contracts; and

(E) Develop forms and materials necessary for compliance with this Chapter.

(2) ***Guidance, rules and regulations.*** *After a public hearing, the Director may promulgate such guidance, forms, performance procedures, rules, and regulations as may be necessary or appropriate from time to time to implement the provisions of this Chapter 7. The Director is authorized to call upon the Task Force and other City Departments as necessary and appropriate to assist in developing such guidance, forms, performance procedures, rules, and regulations. Such guidance, forms, performance procedures, rules, and regulations may include adopting or modifying locally required measures for Municipal Construction Projects, as documented in Section 704.*

(3) ***Implementation costs.*** *The Director shall determine the costs to implement the provisions of this Chapter 7 and shall request that relevant City Departments provide work orders to the Department to cover the costs of implementing and maintaining the programs required by this Chapter.*

(c) ***City Departments.***

(1) ***General Duties Under This Chapter 7.*** *Each City Department, board, and commission subject to this Chapter shall:*

(A) Administer its Municipal Construction Projects in accordance with this Chapter;

(B) Cooperate with the Department, and supply in writing all information necessary for the Department to carry out its duties under this Chapter;

(C) Assist the Director in providing advice, assistance, outreach, and education to other City Departments concerning municipal green building practices;

(D) Provide project reports and presentations to the Task Force upon request;

(E) Attend green building related trainings offered by the Department, as appropriate;

(F) Give the Department access to LEED Online and other Green Building Rating System web-based platforms for each Municipal Construction Project registered for certification; and

(G) Designate an employee to represent the interest of, and provide the expertise of, that City Department or division on the Task Force, if listed in Section 702(a)(2).

SEC. 703. APPLICABILITY.

*(a) **Preemption**. The City recognizes that in some circumstances state or federal law governs some of the matters addressed in this Chapter 7. Nothing in this Chapter shall be interpreted or applied by a court or an agency of City government so as to create any requirement, power, or duty in conflict with federal or state law or with a requirement of any government agency, including any agency of City government, implementing federal or state law.*

*(b) **Compliance with building codes.** In addition to complying with this Chapter 7, a Municipal Construction Project is subject to the applicable building codes in effect at the time of permit application. A Municipal Construction Project located within the City and County of San Francisco shall comply with the requirements of the San Francisco Green Building Code, except that a Municipal Construction Project located on property owned or managed by the Port of San Francisco shall comply with the Port of San Francisco Green Building Standards Code, and a Municipal Construction Project located at the San Francisco International Airport shall comply with this Chapter and the California Building Standards Code (CCR Title 24). A Municipal Construction Project otherwise located outside the City and County of San Francisco shall comply with this Chapter and the local building code promulgated by the authority having jurisdiction.*

*(c) **Exemptions.***

(1) A Municipal Construction Project located on property owned or managed by the Port of San Francisco is not subject to Section 704 of this Chapter 7, except that it is subject to Sections 704(b)(1), 704(b)(2), 704(c)(1)(A), 704(c)(1)(B), 704(c)(2), 704(c)(3), 704(c)(4)(A), 704(d), and 704(e).

(2) A Municipal Construction Project located on property owned or managed by the San Francisco International Airport is not subject to Section 704(e).

SEC. 704. REQUIREMENTS.

(a) ***Green Building Rating Systems.***

(1) ***LEED®.*** *New Construction, Major Renovation, and Tenant Improvement project teams shall use LEED to certify and/or document environmental attributes. Wherever specific LEED prerequisites or credits are cited in this Chapter 7, such references are to LEED version 4.1 ("v4.1"). The U.S. Green Building Council updates LEED from time to time; more recent versions may be used, provided the credits and points achieved are at least as stringent as LEED v4.1. The Director shall adopt by regulation the current applicable versions of LEED pursuant to Section 702(b)(2).*

(A) ***Projects of 10,000 gross square feet or more.*** *The minimum requirement for a project of 10,000 gross square feet or more shall be certified as LEED Gold®. In addition, the following applies:*

(i) ***Conceptual design phase****. During the conceptual design phase, the sponsoring City Department shall assemble a project team, which shall include a LEED Project Administrator.*

(ii) ***Schematic design phase****. During the schematic design phase, the LEED Project Administrator shall register the Municipal Construction Project with GBCI as a LEED registered project.*

*(iii) **All Design Phases**. At the conclusion of each Design Phase, the LEED Project Administrator shall submit to the Department an updated LEED Scorecard for optional review by the Task Force. The Task Force may provide comment on the LEED Scorecard within 35 days of submittal. The LEED Scorecard shall indicate a LEED Gold rating or higher, incorporating all LEED credits referenced in Section 704 and other compatible locally required measures.*

*(iv) **Project Closeout.** At the completion of construction, the LEED Project Administrator shall submit LEED documentation to GBCI for certification. Upon achieving certification, the LEED Project Administrator shall submit to the Department a copy of the LEED Gold or LEED Platinum certificate and the final LEED Scorecard for review by the Task Force.*

*(B) **Small Projects**. LEED certification is not required and LEED credit documentation is not necessary for a Small Project. Instead, the sponsoring City Department, in consultation with a LEED AP With Specialty, shall prepare and submit to the Department a LEED Scorecard for informational and reporting purposes as follows:*

(i) At the conclusion of the conceptual design phase, indicating the maximum LEED credits that are practicable for the project, the sponsoring City Department shall integrate the environmental attributes of these LEED credits throughout the design and construction process.

(ii) Upon receiving a temporary certificate of occupancy or similar indication that the project is substantively complete, indicating all LEED credits that have been or would likely be achieved.

*(C) **Maintenance.** LEED certification, LEED credit documentation, and LEED Scorecard preparation is not required for Maintenance.*

*(2) **Other Green Building Rating Systems.** The Department, in consultation with affected City Departments, shall explore the applicability of Green Building Rating Systems for Non-Building Projects and report to the Task Force no later than two years after the effective date of the*

ordinance in Board File No. 221223, enacting this Chapter 7 and repealing an earlier version of Chapter 7.

(b) ***Energy Optimization.***

(1) Each Municipal Construction Project is subject to compliance with the following locally required measures:

(A) ***Electric Service To City Departments And Facilities*** *(Administrative Code Section 99.3).*

(B) ***Better Roofs*** *(San Francisco Green Building Code Chapter 5, Section 5.201.1.2).*

(2) ***Commissioning.*** *For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation to the Department of Environment verifying that the project achieves the LEED credit Enhanced Commissioning Option 1, Path 2: Enhanced and monitoring-based commissioning.*

(3) ***All-Electric Building.*** *Each New Construction or Major Renovation that includes HVAC system replacement shall be All-Electric, except as follows:*

(A) Natural Gas or propane service and plumbing may be installed if necessary for processes or features separate from the operation of systems integral to Building functions, such as vehicle fueling and mechanic shop equipment.

(B) Existing equipment that uses Natural Gas and serves the project area, but is outside the scope of the project, may be retained. Projects which both (i) are served by existing equipment that use Natural Gas and are outside the scope of work, and (ii) include upgrade to electric service in the project scope of work, are encouraged to include sufficient electrical service capacity to, in the future, replace existing systems that use Natural Gas with All-Electric systems.

(C) Emergency backup electricity generation systems may use any combination of technologies permitted under applicable law, including combustion of fossil fuels. Zero-emissions

emergency backup electricity systems are encouraged, such as onsite batteries that store electricity from onsite solar photovoltaics.

*(4) **Electrification of Existing Building Systems.***

(A) Each City Department shall conduct an inventory of gas-using equipment in their managed Buildings using a template provided by the Director, and upload the inventory results to the City and County of San Francisco's online data catalog no later than December 31, 2023.

(B) Where a gas-using equipment or system integral to building functions is removed from a Building other than a hospital and/or new equipment is required for a Municipal Construction Project, electric equipment or system must be installed, and:

(i) If new equipment can be supported by existing electric service capacity, no upgrade to electric service infrastructure is required by this subsection 704(b).

(ii) If new equipment requires an increase from existing electric service capacity, the upgraded electric service infrastructure must be sufficient to accommodate the new equipment, future replacement, and electrification of the Building's remaining gas-using equipment.

*(5) **Energy Resilience.** This provision shall apply to any Municipal Construction Project for which the initial appropriation request, either whole or partial, is submitted to the Board of Supervisors after the effective date of the ordinance in Board File No. 221223, enacting this Chapter 7 and repealing an earlier version of Chapter 7.*

(A) Critical Community Institution: For New Construction and Major Renovation that includes HVAC system replacement and electrical system upgrade:

(i) Calculate the battery storage capacity and photovoltaic array size sufficient to ensure ongoing operation of the Building's Tier 1 Emergency Loads to be met by battery storage and solar resources in the event of disaster or other disruption to electrical power, using a typical operational 3-day cycle in March as a basis of design; and

(ii) install battery storage and photovoltaics consistent with daily ongoing delivery of Tier 1 Emergency Loads and functions specified in Section 704(b)(5)(A)(i).

(B) All other Buildings: For New Construction and Major Renovation, other than at Critical Community Institutions, that includes HVAC system replacement and electrical system upgrade, comply with at least one of the following:

(i) Battery storage and photovoltaics sufficient to sustain ongoing Tier 1 Emergency Loads as specified in Section 704(b)(5)(A)(i); OR

(ii) Annual site zero net energy; OR

(iii) Design energy use intensity (EUI) 50% better than the national median site EUI; OR

(iv) For a Building with process loads that are at least 50% of the Building's total energy use, exceed requirements of ASHRAE 90.1-2019 by 10%.

(c) ***Responsible Production and Consumption.***

(1) ***Building Material Management.***

(A) Each Municipal Construction Project located within the nine counties surrounding the San Francisco Bay must comply with the Construction and Demolition Debris Recovery Ordinance (No. 27-06) and Environment Code Chapter 14.

(B) For each Municipal Construction Project, the contract between the City Department and the Contractor shall require the Contractor responsible for construction and/or demolition (C&D) debris management to:

(i) Conduct a site assessment to estimate the types of material discards that will be generated during the project, including packaging and/or shipping materials.

(ii) Write and implement a Material Reduction and Recovery Plan (MRRP) in accordance with regulations promulgated under this Chapter 7 to guide onsite material management procedures for waste prevention and material reuse and recycling.

(iii) At a minimum, source-separate for reuse or recycling concrete, metal, clean solid wood, clean and unpainted drywall, and carpet and carpet padding. Other C&D debris must either be source-separated or placed in a C&D debris box for transport to a registered facility to maximize material recovery. The Director may adjust the materials to be source-separated by regulation under Section 702(b)(2) based on the Director's assessment of infrastructure and markets available.

(iv) If needed, maintain dedicated separate bins for recyclable, compostable, and trash materials as required by Environment Code Chapter 19 Mandatory Recycling and Composting.

(C) For each Tenant Improvement subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the Interior Design + Construction – Commercial Interiors LEED credit Construction and Demolition Waste Management Option 2: Waste Prevention (1 point).

*(2) **Material Reuse.** City Departments are encouraged to prioritize source reduction and onsite reuse through whatever means practicable. To the extent permitted by law, City Departments shall list in the Virtual Warehouse all unwanted furniture, fixtures, equipment, computers, and supplies purchased with City and County of San Francisco funds. Before buying any new furniture, fixtures, equipment, computers, or supplies, City Departments shall check the Virtual Warehouse for available items that meet their needs.*

*(3) **Material Recovery.***

(A) City Departments shall ensure that all City-Owned Properties and City Leaseholds have adequate, accessible, and convenient areas for the collection, storage, and loading of 100% of recyclable, compostable, and refuse materials. Design and/or construction contract documents shall incorporate requirements of Environment Code Chapter 19 Mandatory Recycling and Composting, and ensure that the designed and designated areas are sufficient to accommodate

containers consistent with both current methods and projected needs when zero waste goals are met, as well as allow for easy access by a collector's vehicle.

(B) City Departments are required to recycle used fluorescent and other mercury-containing lamps, batteries, and universal waste as defined by California Code of Regulations Section 66261.9.

*(4) **Embodied Carbon.***

(A) Each Municipal Construction Project of 10,000 gross square feet or more shall submit to the Department an embodied carbon reduction strategies checklist on a form provided by the Director for informational and reporting purposes as follows:

(i) At the conclusion of the schematic design phase, as an assessment of the maximum embodied carbon reduction strategies that are practicable for the project. The sponsoring City Department shall prioritize the integration of these strategies throughout the design and construction process.

(ii) Upon receiving a temporary certificate of occupancy or similar indication that the project is substantively complete, explaining the embodied carbon reduction strategies that have been successfully integrated into the design and/or construction process.

(B) For each New Construction or Major Renovation subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Building Life-Cycle Impact Reduction Option 2: Whole-Building Life-Cycle Assessment, Path 3 by addressing at least three product categories or building assembly types. For each Tenant Improvement subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Interiors Life-Cycle Impact Reduction Option 1: Interior Furniture and Nonstructural Elements Reuse (1 point) or Option 3: Building Interiors Life Cycle Assessment (2 points).

(C) For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Environmental Product Declarations (1 point).

(d) ***Human and Environmental Health.***

(1) ***Indoor Air Quality.*** *For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the following LEED credits:*

(A) Enhanced Indoor Air Quality Strategies (1 point);

(B) Low-Emitting Materials (5 product categories);

(C) Construction Indoor Air Quality Management Plan (1 point); and

(D) Indoor Air Quality Assessment Option 2: Air Testing (2 points).

(2) ***Toxics Reduction and Pollution Prevention.***

(A) For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Building Product Disclosure and Optimization - Material Ingredients (1 point) using reporting methodologies that inventory content of a product's homogeneous materials to at least 1,000 ppm.

(B) For all Municipal Construction Projects and for purchases made by or on behalf of City Departments for these projects, product categories including but not limited to furniture, countertops, door hardware, paints, ceilings, and flooring shall comply with regulations promulgated under this Chapter 7 pertaining to the following attributes, subject to verification by the Department of the Environment:

(i) Added flame retardant chemicals;

(ii) Antimicrobial chemicals;

(iii) Fluorinated chemicals;

(iv) Volatile organic compounds (VOCs) content or emissions.

(v) Polyvinyl chloride (PVC) content;

(vi) Recycled content and recyclability;

(vii) Sustainably grown and harvested wood; and

(viii) Other environmental attributes, consistent with this Chapter.

*(3) **Biodiversity and Wildlife Habitat.***

Each Municipal Construction Project shall follow the City and County of San Francisco's Biodiversity Guidelines.

*(e) **Water Conservation.***

A Municipal Construction Project located outside of the City and County of San Francisco may be subject to the following locally required measures if the project is not mandated by the local agency having jurisdiction to meet equivalent requirements:

*(1) **Construction Site Runoff Ordinance** (Public Works Code Sections 146-146.11).*

*(2) **Stormwater Management Ordinance** (Public Works Code Sections 147-147.6).*

*(3) **Indoor Water Use Reduction.** (Green Building Code, Section 5.103.1.2). For each Municipal Construction Project subject to a LEED certification requirement, the LEED Project Administrator shall submit documentation verifying that the project achieves the LEED credit Indoor Water Use Reduction (30% reduction minimum).*

*(4) **Water Efficient Irrigation Ordinance** (Administrative Code Chapter 63).*

SEC. 705. WAIVERS.

(a) Waivers for any requirement of this Chapter 7, except any requirement that is mandated by other local or state policy, are available under the following circumstances:

*(1) **Emergency.** When it is necessary to respond to an emergency that endangers public health or safety, the Director of a City Department may grant itself a waiver from any requirement of this Chapter. The City Department shall report within five business days to the Director, on a form*

provided by the Director, and explain the emergency that prevented compliance with the requirement(s) of this Chapter.

(2) ***Cost Prohibitive.*** *If the sponsoring City Department of a Municipal Construction Project determines that compliance with any requirement of this Chapter is cost prohibitive, that City Department may request a waiver on a form provided by the Director and submitted to the Task Force. The Task Force shall propose a recommended action to the Director (or the Executive Director of the Port of San Francisco for a project that is located on property owned or controlled by the Port of San Francisco), who may grant a waiver upon a finding that the Municipal Construction Project's team has:*

(A) Ascertained the specific requirement(s) is cost prohibitive, as measured against the potential economic, environmental, societal, and health benefits posed by that requirement; and

(B) Developed a reasonable plan to maximize the sustainability strategies for the Municipal Construction Project, and counterbalance the requirement that cannot be met to the extent that it is practicable.

(3) ***Alternate Compliance.*** *The sponsoring City Department of a Municipal Construction Project may request a waiver from LEED Gold if using a Green Building Rating System or standard that is determined by the Task Force to be at least as stringent as LEED or to be more appropriate for a specific project. Such waiver request shall document justification and details for alternate compliance on a form provided by the Director and submitted to the Task Force. The Task Force shall propose a recommended action to the Director (or the Executive Director of the Port of San Francisco for a project that is located on property owned or controlled by the Port of San Francisco), who may grant a waiver upon finding that the Municipal Construction Project's team has provided adequate justification.*

*(4) **Other.** If, due to specific circumstances, compliance with a requirement would defeat the intent of this Chapter 7 or create an unreasonable burden on the Municipal Construction Project or sponsoring City Department, that City Department may request a waiver on a form provided by the Director. The Task Force shall propose a recommended action to the Director (or the Executive Director of the Port of San Francisco for a project that is located on property owned or controlled by the Port of San Francisco), who may grant a waiver upon a finding that the requesting City Department has:*

(A) Documented the circumstances and burdens at issue; and

(B) Developed a reasonable plan to maximize the sustainability strategies for the Municipal Construction Project, and counterbalance the requirement that cannot be met to the extent that it is practicable.

(b) After the end of the 50% design development phase, the Director (or the Executive Director of the Port of San Francisco for a project that is located on property owned or controlled by the Port of San Francisco) will only accept a waiver request for consideration if the project design team can demonstrate extenuating circumstances, including but not limited to unforeseen site conditions or unavailability of a specified system or product.

(c) The Director shall respond to a waiver request within 35 days.

(d) The Director (or the Executive Director of the Port of San Francisco for a project that is located on property owned or managed by the Port of San Francisco) may not grant a waiver for the requirements of Sections 704(c)(1)(B) or 704(c)(2)(A). Granting a waiver for any requirement of this Chapter 7 does not eliminate any requirement of other local or state codes.

(e) The Director, in consultation with the Task Force, shall report to the Commission on the Environment regularly on waivers requested, granted, and denied.

Section 5. Effective Date. This ordinance shall become effective 30 days after enactment. Enactment occurs when the Mayor signs the ordinance, the Mayor returns the ordinance unsigned or does not sign the ordinance within ten days of receiving it, or the Board of Supervisors overrides the Mayor's veto of the ordinance.

APPROVED AS TO FORM:
DAVID CHIU, City Attorney

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

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FILE NO. 221223

LEGISLATIVE DIGEST

[Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.

Existing Law

Chapter 7 of the Environment Code outlines heightened green building requirements for City buildings. When originally enacted, Chapter 7's requirements were significantly stricter than the San Francisco Building and Green Building Codes that govern all other buildings in the City. These requirements include the establishment of a Municipal Green Building Task Force to oversee and guide enhancements in environmentally superior design for City projects, mandating Leadership in Energy Efficiency and Design (LEED) certification, renewable energy onsite or purchase, all-electric design, strict recycling and construction debris management, improved indoor air quality, and stricter water conservation and stormwater runoff protections for new City buildings.

Amendments to Current Law

The Proposed Legislation would repeal Chapter 7 and adopt a reorganized and retitled Chapter 7: Municipal Green Building Requirements. The new Chapter 7 would update legislative findings regarding environmental conditions, and advance building standards for City projects such that Chapter 7 will remain a "reach" code that exceeds the standards of the 2022 San Francisco Building and Green Building Codes and aligns with the 2021 Climate Action Plan.

Among the more significant updates, the Proposed Legislation would compel electrification of systems utilizing gas in existing mixed-fuel City buildings where feasible, include energy resiliency and storage requirements for critical infrastructure, mandate enhanced construction debris and material reuse requirements, and introduce embodied carbon reduction provisions for City projects. The Proposed Legislation also updates LEED certification requirements for different types of City projects; clarifies water conservation, renewable energy, and stormwater managements provisions; and better defines the composition and responsibilities of the Municipal Green Building Task Force and the Department of Environment in promulgating regulations pursuant to Chapter 7 and evaluating requests for waivers from various requirements.

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Item 9 File 22-1223	Department: Environment (ENV)

EXECUTIVE SUMMARY

Legislative Objectives

- The proposed ordinance would repeal and replace Chapter 7 of the Environment Code regarding Municipal Green Building Requirements.

Key Points

- Chapter 7 of the City's Environment Code sets green building requirements for City-owned buildings. According to the proposed ordinance, approximately 41 percent of greenhouse gas emissions in San Francisco are generated from buildings. The City's municipal buildings generally obtain their electricity from the San Francisco Public Utilities Commission's (SFPUC) Hetch Hetchy Power Enterprise, which is free from fossil fuel combustion and greenhouse gas emissions. Therefore, over 99 percent of greenhouse gas emissions from municipal buildings are due to the use of natural gas.
- The key changes to Chapter 7 under the proposed ordinance are: (1) requirement to replace existing municipal building natural gas systems, such as furnaces and water heaters, with all-electric systems at the end of useful life; (2) energy resilience requirements (photovoltaic and battery storage systems) for new construction and major renovations of municipal buildings; and (3) embodied carbon life cycle assessment requirement for new construction and major renovations of municipal buildings. There are also minor changes regarding building material management, human and environmental health, water conservation, and the Municipal Green Building Task Force.

Fiscal Impact

- The largest fiscal impact of the proposed ordinance likely comes from the requirement to replace existing natural gas building systems in municipal buildings with all-electric systems at the end of useful life. Based on a range of interconnection, retrofit, and soft costs from available project data and interviews with subject matter experts, we estimate the City would face approximately an additional $247 million to $1.58 billion in electrification costs for 332 municipal buildings. There is a wide range of building types, sizes, and existing conditions that creates significant uncertainty in this estimate.
- The estimated cost for each battery system for a medium office building is approximately $160,000-$270,000. Actual costs may vary significantly depending on the size and energy needs of each building. The estimated cost for an embodied carbon life cycle assessment on a project is approximately $15,000-20,000.

Recommendation

- Approval of the proposed ordinance is a policy matter for the Board of Supervisors.

MANDATE STATEMENT

City Charter Section 2.105 states that all legislative acts shall be by ordinance, approved by a majority of the members of the Board of Supervisors.

BACKGROUND

Chapter 7 of the City's Environment Code sets green building requirements for City-owned buildings. Chapter 7 was enacted in its current form by the Board of Supervisors in October 2011 (File 11-0854) and was amended in 2014, 2016, 2017, 2018, and 2020 (Files 14-0226, 16-1054, 16-1287, 18-0002, and 19-0972). Chapter 7 standards include construction and operating requirements for energy efficiency, water conservation, toxics reduction, indoor environmental quality, and recycling and composting of waste.

According to the proposed ordinance, approximately 41 percent of greenhouse gas emissions in San Francisco are generated from buildings. The City's municipal buildings generally obtain their electricity from the San Francisco Public Utilities Commission's (SFPUC) Hetch Hetchy Power Enterprise, which is free from fossil fuel combustion and greenhouse gas emissions. Therefore, over 99 percent of greenhouse gas emissions from municipal buildings are due to the use of natural gas. The City has adopted a goal of net-zero emissions by 2040 through an update to Chapter 9 of the City's Environment Code in 2021 (File 21-0563).

The 2020 amendments to Chapter 7 required new construction and whole building major renovations of municipal buildings to exclude natural gas and include exclusively all-electric energy sources. The ordinance exempted buildings primarily used for water, wastewater, and/or power utilities, as well as natural gas equipment that service other buildings or is part of an emergency backup electricity system. The ordinance did not require existing buildings to replace gas appliances with all-electric appliances if not part of a whole building major renovation.

DETAILS OF PROPOSED LEGISLATION

The proposed ordinance would repeal and replace Chapter 7 of the City's Environment Code regarding Municipal Green Building Requirements. The key changes are summarized below.

Electrification of Existing Building Systems

The proposed Chapter 7 amendments require existing municipal building natural gas systems, such as furnaces and water heaters, to be replaced with all-electric systems at the end of useful life, with the exception of hospitals.[1] At the time of equipment replacement, electric service infrastructure to the building must be sufficient to accommodate new equipment, future replacement, and the electrification of any remaining natural gas equipment in the building. Additionally, each City department would be required to conduct an inventory of gas-using equipment in their managed buildings and upload the inventory to a City database by December 31, 2023.

[1] Throughout Environment Code Chapter 7, the term "building" excludes structures primarily used for water, wastewater, and/or power utilities.

The Bay Area Air Quality Management District (BAAQMD) is considering a rule change to prohibit the sale and installation of water heaters and furnaces that emit nitrogen oxides in the nine-county Bay Area. This would effectively prohibit natural gas appliances, as currently only electric appliances do not emit nitrogen oxides. The proposed rule would take effect in 2027 for small water heaters, 2029 for furnaces, and 2031 for large commercial water heaters. The State has a carbon neutrality target of 2045, which may require building code electrification mandates as well.

Energy Resilience

The proposed Chapter 7 amendments include energy resilience requirements for new construction and major renovations. For "critical community institutions," such as public safety facilities, health clinics, community centers, libraries, and emergency management facilities, construction must include photovoltaic panels and battery storage capacity to meet Tier 1 emergency loads, which is generally equivalent to 10 percent of total building electrical capacity for emergency uses. For other buildings, photovoltaics and battery storage must either meet Tier 1 emergency loads or the building must comply with other energy efficiency standards.[2] Photovoltaic installation is already required under State Building Energy Efficiency Standards Section 140.10 and City Green Building Code Section 5.201 and is not an additional requirement.

Embodied Carbon

The proposed Chapter 7 amendments would require each municipal construction project of at least 10,000 square feet to submit an embodied carbon checklist assessing the embodied carbon reduction strategies considered for the project and those that were incorporated into the design and/or construction process. Each new construction project or major renovation would be required to conduct a life cycle assessment demonstrating at least 10 percent global warming potential reduction by addressing at least three product categories or building assembly types. Each tenant improvement of at least 10,000 square feet would be required to either conduct a life-cycle assessment demonstrating at least 10 percent global warming potential reduction or demonstrate furniture and interior nonstructural elements reuse equivalent to at least 10 percent by cost. These requirements are consistent with certain LEED[3] certification requirements.

Minor Changes

The proposed ordinance also makes several minor changes to Chapter 7, including:

- Building Material Management: Each tenant improvement subject to a LEED certification requirement would be required to submit documentation verifying that the project generates less than 10 pounds of waste per square foot;

[2] Other energy efficiency standards include annual site zero net energy, designing energy use intensity (EUI) 50 percent better than the national median site EUI, or for a building with process loads that are at least 50 percent of the building's total energy use, exceed American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) equipment efficiency requirements by 10 percent.

[3] Leadership in Energy and Environmental Design (LEED) is a widely used green building certification program developed by the U.S. Green Building Council

- Human and Environmental Health: Each municipal construction project subject to a LEED certification requirement would be required to meet LEED requirements for material ingredient reporting, and each municipal construction project would be required to follow the City's biodiversity guidelines;
- Water Conservation: Applies the Water Efficient Irrigation Ordinance (Administrative Code Chapter 63) to municipal construction projects outside of San Francisco city limits; and
- Green Building Task Force: Adds a representative from the Department of Public Works Bureau of Building Repair to the Green Building Task Force.

Waivers

Chapter 7 allows for code waivers due to emergencies, cost-prohibitiveness, alternative compliance measures, or other circumstances. According to the Department of Environment, 26 Chapter 7 waivers have been granted over approximately 20 years, and none have been denied. Waivers are typically granted due to technical inabilities for projects to achieve LEED requirements and have never been sought due to cost-prohibitive reasons.

Role of Municipal Green Building Task Force and Department of the Environment

Under Chapter 7, the role of the Municipal Green Building Task Force includes assisting the Department of the Director of the Environment in providing green building advice, assistance, outreach and education to City Departments, advising the Department of the Environment on policy matters, reviewing municipal construction projects for compliance during design and construction, hearing waiver requests from City departments and proposing recommended actions, facilitating interdepartmental communication and cooperation, and acting as an educational forum to increase green building knowledge and sharing project-related successes and lessons learned. The role of the Department of the Environment includes developing goals, strategies, and criteria for optimizing the design, construction, renovation, operation, reuse, and dismantling of municipal construction projects and buildings, making policy recommendations to the Board of Supervisors, developing and overseeing trainings in green building practices for City staff to aid policy implementation, chairing the Municipal Green Building Task Force, coordinating City departments having responsibility for compliance with requirements, providing technical oversight and assistance on green building projects, and developing forms and materials necessary for Chapter 7 compliance.

FISCAL IMPACT

Electrification of Existing Building Systems

The largest fiscal impact of the proposed ordinance likely comes from the requirement to replace existing natural gas building systems in municipal buildings with all-electric systems at the end of useful life. There are varying estimates of this cost, which should consider capital costs, energy costs, and electrical connection costs.

ARUP Study

In October 2022, ARUP issued a study commissioned by the Department of Environment to estimate costs associated with proposed Chapter 7 amendments. The study focused specifically on the incremental costs of equipment, installation, and energy for the replacement of existing natural gas systems with all-electric systems, as opposed to replacement with new natural gas systems. The study analyzed costs for five building types (libraries, office buildings, fire stations, recreational pools, and health centers) that comprise approximately 75 percent of the City's municipal building stock and estimated the incremental costs of replacement of natural gas systems with all-electric systems in 250 buildings over a 15-20 year period. ARUP estimated that all-electric system replacements would have an added cost of approximately $37.6 million for equipment and installation but a savings of approximately $16.4 million in energy costs, for a total net cost of approximately $21.2 million. If extrapolated to the approximately 332 applicable municipal buildings, the total net cost would be approximately $28.2 million.

ARUP notes that at present, electricity is typically more expensive than gas energy. However, electric appliances are more efficient than gas appliances, and natural gas costs are projected to escalate much faster than electric costs in future years. Furthermore, City facilities use SFPUC's Hetch Hetchy Power, which provides favorable pricing compared to PG&E electricity rates. Therefore, ARUP estimates that over a 15-20 year timeframe, energy costs would be lower for all-electric replacement of gas systems.

The ARUP study did not estimate other costs associated with the proposed Chapter 7 amendments, including engineering and design costs, electric connection costs, battery storage, embodied carbon analysis, and other considerations of all-electric systems, such as structural upgrades, space constraints, and cascading impacts on mechanical distribution systems.

Electrical Upgrade Costs

The ARUP report notes that as building systems are converted from natural gas to all-electric, infrastructure upgrades may be needed to provide sufficient power to operate the systems. This includes PG&E interconnection costs, upgrades to primary service, new main switchgear, panelboard, and/or transformer, trenching, and design. According to SFPUC, the cost of new PG&E interconnections has ranged from $30,000 to $2.5 million per project but will likely increase to a minimum cost of approximately $300,000 per project. SFPUC estimates that at least $800,000 per project should be budgeted for a primary switchgear (power system control equipment), if needed, and that additional costs may be incurred to rearrange floorplans to make space for new switchgear. SFPUC also notes that PG&E's process for service upgrades can take between 10 months and four years, which may contribute to additional cost escalation. PG&E also requires "cost of ownership" payments for maintenance and future replacement costs of new distribution infrastructure, and perhaps substation upgrades.

SFPUC Pilot Projects

SFPUC has four building electrification pilot projects in process. Two projects are located at health clinics (Sunset Health Center and City Clinic) and two projects are at the San Francisco Zoo (Lurie Education Building and Lion House). For these projects, SFPUC identified relatively small buildings that did not require additional electrical loads and upgrades of electrical systems. Construction

contracts are under negotiation, and SFPUC estimates that the capital cost to purchase and install electric appliances range from approximately $505,000 to $963,000 per project. SFPUC notes that space requirements vary by building and the estimates include additional work, such as structural or roofing upgrades, to accommodate the new equipment. Estimated design and project management costs range from approximately $82,000 to $132,000 per project. SFPUC did not estimate the cost of replacing gas equipment with new gas equipment, so this is not a marginal cost estimate. SFPUC did not analyze ongoing energy costs. SFPUC also notes that these sites are atypical in that they did not require power upgrades, and SFPUC had ruled out several other locations due to the electric connection costs.

Engineering/Design

In the SFPUC pilot projects noted above, soft costs are estimated to be approximately 11 to 20 percent of construction costs. Public Works staff note that soft costs are typically budgeted at approximately 35 percent of total project costs.

Total Electrification Capital Costs

Based on a range of interconnection, retrofit, and soft costs from available project data and interviews with subject matter experts, we estimate the City would face approximately an additional $247 million to $1.58 billion in electrification costs for 332 municipal buildings. We note that there is a wide range of building types, sizes, and existing conditions that creates significant uncertainty in this estimate. By comparison, the FY 2022-FY 2031 Capital Plan includes $617 million for General Fund facility renewal projects over ten years (and notes $2.3 billion of deferred facility renewal projects). These costs may be partially offset by reduced energy costs if natural gas rates escalate faster than electricity rates in future years, as projected by ARUP. A breakdown of cost estimates is shown in Exhibit 1 below.

Exhibit 1: Electrification Capital Cost Estimates

Costs	Low Estimate	High Estimate
PG&E Upgrades	$300,000	$2,500,000
Building Retrofits[4]	403,382	1,210,145
Soft Costs (10-20% of Retrofit Cost)	40,338	242,029
Switchgear	0	800,000
Total Cost per Building	$743,720	$4,752,174
Total Cost (332 Buildings)	**$246,915,034**	**$1,577,721,931**

Complying with the proposed ordinance's electrification requirements will likely require a reorganization of the Capital Plan that includes a combination of deferring planned projects, additional debt, and/or new revenue sources. If capital funds are strained, City departments may seek to utilize the Chapter 7 waiver process under cost-prohibitive grounds. As noted above,

[4] The building retrofit cost range of $403,382-$1,210,145 per building is an estimate of the marginal cost of replacing gas equipment with electric equipment, rather than with new gas equipment. This assumes retrofit capital costs of approximately $500,000-$1,500,000 per building, and that electric equipment and installation costs are approximately 5.2 times the cost of gas replacements (which is consistent with ARUP's findings).

proposed action by BAAQMD or future State building code amendments may necessitate electrification of municipal or privately-owned buildings, regardless of the proposed ordinance.

Benefits of Electrification

The ARUP study notes that building electrification has the benefits of reduced air pollution and greenhouse gas emission. Natural gas combustion releases carbon dioxide, nitrous oxides, particulate matter, sulfur dioxide, and volatile organic compounds, which are all either air pollutants or greenhouse gases and contribute to adverse public health impacts and global warming. ARUP estimates total benefits of approximately $14.3 million from the electrification of 250 municipal buildings. This includes $4.2 million in reduced healthcare costs, as air pollution contributes to strokes, heart disease, lung cancer, asthma, and other respiratory diseases, as well as $10.1 million in avoided economic damages from climate change, including the cost of sea level rise, extreme heat, and other weather-related events. If extrapolated to the approximately 332 applicable municipal buildings, the total benefits would be approximately $19 million.

Battery Storage

The proposed Chapter 7 amendments include energy resiliency requirements for new construction and major renovations. For "critical community institutions," construction must include photovoltaic panels and battery storage capacity to meet Tier 1 emergency loads, which is generally equivalent to 10 percent of total building electrical capacity for emergency uses. For other buildings, photovoltaics and battery storage must either meet Tier 1 emergency loads or other requirements. According to estimates from the California Energy Commission, a medium office building (approximately 53,628 square feet) would require approximately 217-360 kWh of battery storage. At an estimated cost of $767 per kWh, the estimated cost for each battery system is approximately $160,000-$270,000. SFPUC notes recent battery pricing of $1,100 per kWh for a 253 kWh system, or approximately $278,300. Actual costs may vary significantly depending on the size and energy needs of each building. As noted above, photovoltaic installation is already required under state and local building codes and does not present an added cost.

Embodied Carbon

According to the Department of Environment, which conducted several interviews with green building consultants and architects, the cost for a life cycle assessment on a project is approximately $15,000-20,000. The Department does not expect the requirement to complete an embodied carbon checklist for each project to have a significant added cost.

Department of Environment Staffing

According to the Department of Environment, the Department assigns 0.25 FTE Senior Environmental Specialist and 0.10 Environmental Specialist to administer existing Environment Code Chapter 7 requirements (such as evaluating planned capital project's compliance with that Code's requirements). In addition, the Department is planning to assign 0.50 FTE Public Service Aide this fiscal year to assist with evaluating municipal and residential projects. The Department reports it will not seek additional positions to implement the new requirements of the proposed ordinance.

RECOMMENDATION

Approval of the proposed ordinance is a policy matter for the Board of Supervisors.

BOARD of SUPERVISORS

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

MEMORANDUM

Date: December 9, 2022

To: Planning Department/Commission

From: Erica Major, Assistant Clerk, Land Use and Transportation Committee

Subject: Board of Supervisors Legislation Referral - File No. 221223
Environment Code - Repeal and Replace Chapter 7 Green Building Requirements

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

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

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

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

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

Please send the Planning Department/Commission recommendation/determination to Erica Major at Erica.Major@sfgov.org.

Not defined as a project under CEQA Guidelines Sections 15378 and 15060(c)(2)
because it would not result in a direct or indirect physical change in tthe envrionment.
Physical projects will require separate environmental review.

12/16/22

BOARD of SUPERVISORS

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San Francisco, CA 94102-4689
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M E M O R A N D U M

TO: Tyrone Jue, Interim Director, Department of the Environment
Elaine Forbes, Executive Director, Port Department
Carla Short, Interim Director, Public Works
Dennis Herrera, General Manager, Public Utilities Commission
Phil Ginsburg, General Manager, Recreation and Parks Department
Jeffrey Tumlin, Executive Director, Municipal Transportation Agency
Brian Strong, Program Director, Office of Resilience and Capital Planning
Carmen Chu, City Administrator, Office of the City Administrator
Rich Hillis, Director, Planning Department
Ivar C. Satero, Airport Director, Airport Department
Michael Lambert, City Librarian, Library Department
Jeanine Nicholson, Chief, Fire Department
Dr. Grant Colfax, Director, Department of Public Health
Andrico Penick, Director, Real Estate Division

FROM: Erica Major, Assistant Clerk, Land Use and Transportation Committee

DATE: December 9, 2022

SUBJECT: LEGISLATION INTRODUCED

The Board of Supervisors' Land Use and Transportation Committee has received the following proposed legislation, introduced by Mayor Breed on December 6, 2022.

File No. 221223

Ordinance amending the Environment Code to require new construction and major renovations of municipal buildings to exclude natural gas and include exclusively all-electric energy sources; and affirming the Planning Department's determination under the California Environmental Quality Act.

If you have comments or reports to be included with the file, please forward them to me at the Board of Supervisors, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102 or by email at: Erica.Major@sfgov.org.

cc: Peter Brastow, Department of the Environment
Charles Sheehan, Department of the Environment
Boris Delepine, Port Department
David Steinberg, Public Works
Ian Schneider, Public Works
John Thomas, Public Works
Lena Liu, Public Works
Masood Ordikhani, Public Utilities Commission
Jeremy Spitz, Public Utilities Commission
Kate Breen, Municipal Transportation Agency
Janet Martinsen, Municipal Transportation Agency
Joel Ramos, Municipal Transportation Agency
Sophie Hayward, Office of the City Administrator
Vivian Po, Office of the City Administrator
Angela Yip, Office of the City Administrator
Dan Sider, Planning Department
Corey Teague, Planning Department
Tina Tam, Planning Department
Lisa Gibson, Planning Department
Devyani Jain, Planning Department
AnMarie Rodgers, Planning Department
Aaron Starr, Planning Department
Joy Navarrete, Planning Department
Elizabeth Watty, Planning Department
Cathy Widener, Airport Department
Theresa Ludwig, Fire Department
Greg Wagner, Department of Public Health
Dr. Naveena Bobba, Department of Public Health
Sneha Patil, Department of Public Health
Ana Validzic, Department of Public Health

President, District 3
BOARD of SUPERVISORS

City Hall
1 Dr. Carlton B. Goodlett Place, Room 244
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Tel. No. 554-7450
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TDD/TTY No. 544-6546

Aaron Peskin

PRESIDENTIAL ACTION

Date: 01/26/2023

To: Angela Calvillo, Clerk of the Board of Supervisors

Madam Clerk,
Pursuant to Board Rules, I am hereby:

☐ Waiving 30-Day Rule (Board Rule No. 3.23)

File No. _____ _____ (Primary Sponsor)

Title. _____

☒ Transferring (Board Rule No 3.3)

File No. 221223 Mayor (Primary Sponsor)

Title. [Environment Code - Repeal and Replace Chapter 7 Green Building Requirements]

From: Land Use & Transportation Committee

To: Budget & Finance Committee

☐ Assigning Temporary Committee Appointment (Board Rule No. 3.1)

Supervisor: _____ Replacing Supervisor: _____

For: _____ (Date) _____ (Committee) Meeting

Start Time: _____ End Time: _____

Temporary Assignment: ○ Partial ◉ Full Meeting

Aaron Peskin

Aaron Peskin, President
Board of Supervisors

[RESOLUTION ENCOURAGING THE ADOPTION OF ORDINANCE 221223 UPDATED CHANGES TO CHAPTER 7 OF THE ENVIROMENT CODE]

WHEREAS, San Francisco has established targets to achieve net-zero emissions by 2040 and reduce greenhouse gas emissions by 61% from 1990 levels by 2030; and

WHEREAS, Conventional building industry practices contribute to ecosystem degradation and our climate crisis; and

WHEREAS, Construction activities are responsible for more than 30% of global resource use, and embodied carbon is anticipated to be responsible for 72% of the carbon emissions associated with global new construction between 2020 and 2030; and

WHEREAS, Mayor London Breed committed San Francisco to reduce solid waste generation by 15% by 2030 and reduce disposal to landfill by 50% compared to 2015 levels, and prioritize the better use, repurposing, and retrofitting of existing building stock and infrastructure to reduce the impact of materials, design, and construction on our City's resilience to climate impacts; and

WHEREAS, Green building is a form of climate action that minimizes greenhouse gas emissions, relies on energy efficiency and renewable resources, conserves water, optimizes material use, provides healthy and biodiverse environments, and fosters an equitable society; and

WHEREAS, Third-party rating systems characterize the lifecycle considerations for green buildings. These programs can offer credibility, transparency, and consistency to project teams in pursuit of an elevated and well-defined performance standard for Municipal Construction Projects; and

WHEREAS, San Francisco municipal buildings receive 100% greenhouse gas-free electricity from the San Francisco Public Utilities Commission, and, as a result, all greenhouse gas emissions from the operation of City buildings come from the onsite combustion of natural gas or the production of district steam; and

WHEREAS, The 2021 San Francisco Climate Action Plan includes commitments to transition buildings from natural gas to clean electricity and achieve total carbon balance across the building and infrastructure sectors; and

WHEREAS, To achieve the City's goal of net zero emissions, it is necessary to require City agencies to discontinue the installation of equipment dependent on fossil fuels, and instead install high-efficiency equipment that uses electricity and does not emit greenhouse gas; and

WHEREAS, Zero-emission buildings, and resilient buildings that generate and store energy onsite, benefit the health, safety, and welfare of San Francisco and its residents by improving indoor air quality, enhancing emergency preparedness, and reducing harmful greenhouse gas emissions from energy consumption; and

WHEREAS, Green buildings with high indoor environmental quality protect the health and comfort of building occupants, enhance productivity, decrease absenteeism, and improve a building's value; and

WHEREAS, Healthy ecosystems provide nature-based solutions to climate change by sequestering carbon from the atmosphere and storing it in plants, trees, and soil. Stewardship of the City’s natural resources helps restore biodiversity and provides a healthy environment
that benefits all San Franciscans; and

WHEREAS, San Francisco continues to lead by example through its own municipal building stock, which must meet rigorous green building standards and

includes 86 LEED certified projects that together comprise more than 11 million square feet; and

WHEREAS, The Municipal Green Building Task force has developed recommendations to update Chapter 7 of the Environment Code through a public and inclusive process; now, therefore, be it

RESOLVED, That the Commission on the Environment requests that the Board of Supervisors adopt ordinance 221223 and update Chapter 7 of the Environment Code to uphold San Francisco as a leader in decarbonization and green building practices; and, be it

FURTHER RESOLVED, That the Commission on the Environment urges that the Board of Supervisors continue to adopt ordinances that implement Climate Action Plan strategies, lead San Francisco down the path to be an emissions-free city, and enhance the health and general welfare of all who live here.

I hereby certify that this Resolution was adopted by the Commission on the Environment at its special meeting on February 7, 2023.

Kyle Wehner, Commission Affairs Officer

Vote: Approved 6-0

Ayes: Commissioners Ahn, Stephenson, Hunter, Sullivan, Wald, and Wan

Noes: None

Absent: Commissioner Bermejo

From:	Conine-Nakano, Susanna (MYR)
To:	BOS Legislation, (BOS); KAPLA, ROBB (CAT)
Cc:	Paulino, Tom (MYR); Thornhill, Jackie (BOS); Piasecki, Joseph (ENV); Sheehan, Charles (ENV); Comerford, Cyndy (ENV); Brukman, Eden (ENV)
Subject:	Mayor -- Ordinance -- Repeal and Replace Chapter 7 Green Building Requirements
Date:	Tuesday, December 6, 2022 4:12:57 PM
Attachments:	20221206 ORD new findings Env Ch 7 inc LEG edits.DOCX 20221206 LEG Digest for GB update.DOCX

Hello Clerks,

Attached for introduction to the Board of Supervisors is an Ordinance amending the Environment Code to repeal Chapter 7: Green Building Requirements for City Buildings and replace with new Chapter 7: Municipal Green Building Requirements; and affirming the Planning Department's determination under the California Environmental Quality Act.

@KAPLA, ROBB (CAT), can you please reply-all to confirm your approval? Thanks!

Please note that Supervisor Mandelman is a co-sponsor of this legislation.

Best,
Susanna

Susanna Conine-Nakano
Office of Mayor London N. Breed
City & County of San Francisco
1 Dr. Carlton B. Goodlett Place, Room 200
San Francisco, CA 94102
415-554-6147