San Francisco Municipal Green Building
Capital Planning Committee
November 14, 2016

Guillermo Rodriguez and Mark Palmer
Overview

I. Proposed Changes to Environment Code Chapter 7

II. What is the value-add of LEED?

III. Findings of LEED v4 Cost Study

IV. Modifications to the Ordinance

V. Waiver Process

VI. Next Steps & Legislative Timeline
Updating Env Code Chapter 7

- LEED v3 expired this year. Need to update Env Code to be compliant with new LEED v4 requirements.
- Additional updates:
  - Title 24 2016 (~15% stricter than 2013)
  - CalGreen 2016 (only minor changes)
  - Feasibility
    
    Zero Net Energy (CA State goal by 2030)
    Solar Plus Energy Storage (Emergency Response and Community Resilience)
GHG Emissions from San Francisco

- **Transport**: 43%
- **Buildings**: 53%
- **Waste**: 4%

- **Residential**: 21%
- **Commercial**: 26%
- **Municipal**: 6%

Sources: (2010) PG&E, Hetch Hetchy Water and Power, CA. Dept of Transportation, MTC, Muni, BART
Value-Add of LEED

LEED is a leading-edge system for designing, constructing, operating and certifying the world’s greenest buildings. It facilitates an integrated design process.

**Independent Verification**
LEED provides independent verification of a building’s green features. Current City building inspectors do not have the training and experience to verify that green building requirements are met.

**Resource Efficiencies**
LEED buildings use less water and energy and reduce greenhouse gas emissions than code-compliant buildings. As an added bonus, they save money.

**Superior Human Experience & Health**
LEED buildings are demonstrating increased recruitment and retention rates and increased productivity benefits for employers. Harvard study shows cognitive function is markedly affected by indoor air quality.
Presentations on LEED v4

CPC Meeting, August 29th
CPC Follow-up Meeting, October 11th
CPC Pre-Meeting, November 9th
CPC Meeting, November 14th
Outreach, Analysis and Education

Follow-up Meetings

Aug 30: Initiate Task Order for Arup v4 study
Sept 1: Edgar Lopez SFPW: v4 study
Sept 1: Masoud Vafaei RED: v4 study
Sept 8: Kathy How SFPUC: Infrastructure Group SSIP
Sept 9: Edgar Lopez SFPW: v4 study
Sept 14: Municipal Green Building Task Force: v4 study
Sept 26: Edgar Lopez and Arup: v4 study work plan
Sept 26: Roberto Lombardi SFPL: v4 study
Sept 1 – Oct 1: Meetings between Debbie and CPC Department heads

LEED v4 CalGreen 2016 Presentations

Sept 6: SFRPD Dawn Kamalanathan and project managers
Sept 15: SFPW Green Building Committee
Sept 20: SFPW Architects
Sept 27: SFPW Section Managers
Sept 30: SFPW Project Managers
Oct 12: SFO Project Managers
What We Heard

Cost

Building Performance

Certification
Cost Study of LEED v4

ORIGINAL ASSESSMENT
Massachusetts Case Study: v3 Gold to v4 Gold = 0.533% of total project cost

COST STUDY
Analyze the projected cost differences of two San Francisco municipal projects going from v3 Gold to v4 Gold

Use 2 recently certified LEED v3 Gold city projects as examples:
- North Beach Branch Library (new construction)
- Sunset Recreation Center (major renovation)
North Beach Branch Library
North Beach Library Results

$ LEED v4 Estimate
- 5 Credits* worth 7 points
  $71,000 soft and hard costs
- +0.8% of the original
  $9,198,650 total project cost

*Credits selected were applicable to project needs
Sunset Recreation Center
Sunset Recreation Center
$ LEED v4 Estimate
- 9 Credits* worth 17 points
- $255,000 soft and hard costs assuming PV is on PPA ($484,500 total if PV is purchased)
- + 2.6% of the $9,717,916 total project cost (5% total if PV is p)

*Credits selected were applicable to project needs
Cost Study Findings

- LEED v4 update added 0.8 – 2.6% to the project budget (0 – 5% might be a reasonable broader range to assume)

- Cost is estimated using “likely” credits rather than the cheapest ones. So teams have some agency in staying at the lower end of the premium range if desired.

- Whether PV is directly purchased or acquired for free via PPA or other means makes a large budget impact.

- Energy performance was improved for LEED v4, which would result in reduced operating costs and contribute to City Climate Action goals.
Modifications to LEED v4 Ordinance

1. Municipal LEED v4 requirements only apply to municipal construction projects greater than 10,000 square feet (and less than 25,000 square feet)

2. Altered feasibility study for Solar plus Energy Storage
   - Reduced the number and type of projects
   - Added a sunset date
Waiver Process

1. Waivers can be submitted to the Director of the Department of Environment if:
   
   • Requirements are cost prohibitive as weighed against the benefits
   
   • Compliance would create an unreasonable burden on the construction project or City department

2. The Municipal Green Building Task Force shall provide the Director with a recommendation with respect to the waiver request.

3. The Director may grant a waiver if the requesting Department has:

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

   (B) Developed a reasonable plan to maximize the number of LEED points attainable.
## Waiver Request Log

13 granted – 0 denied

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Legislative Timeline & Next Steps

- Continue discussion with CPC members on building performance and operations; explore CPC Sustainability Sub-Committee

- Municipal Green Building Task Force will look into alternatives to LEED certification and report back to CPC in 6 months

Legislative Schedule

Nov 27: BOS Introduction
January: BOS Committee Hearing
January: BOS Action
February: Mayor Action
Effective: March 1, 2017
Thank you

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