



DATE: April 9, 2018

AGENDA ITEM # 3

**TO:** Environmental Commission

**FROM:** J. Logan, Staff Liaison

**SUBJECT:** Receive Update from Commissioner Bray and Chair Teksler (via email) on LEED Charrette for new Community Center

**RECOMMENDATION:**

Accept update and provide comments

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**BACKGROUND**

The new Community Center is currently at the beginning phase of the Design Development Process the second of three design phases. On March 13, 2018, staff and the Noll & Tam design team presented the Schematic Design to City Council.

The Recreation & Community Services Department, Technology (IT), Engineering, and Public Works continue to provide programming input. Staff will continue to provide updates and solicit input from representatives of neighboring facilities near the construction site that include the Main Library, Bus Barn Theater and History Museum.

Meetings to provide project updates with neighborhood groups, community center users groups, and the community at large are being planned and recent meetings were held on February 23 and February 28, 2018 at the Hillview and Grant Senior programs, and March 1 with neighbors near the community center. The purpose of these outreach events is to inform the public on the progress of the project and solicit input on potential impacts at key points during the design. Staff will continue to regularly engage, solicit feedback, and provide information at intervals throughout the design process.

During the Design Development Phase, the design team will further develop the details of the schematic layout with the many engineering disciplines including mechanical, electrical, plumbing, civil, audio visual, and security access. The start of construction is anticipated in summer 2019.

**DISCUSSION**

The new Community Center Design consultant, Noll & Tam Architects (N&T), invited two Environmental Commission members to participate in a Leadership in Energy and Environmental Design (LEED) Charrette on March 22, 2018. The purpose of the LEED charrette was to review project goals and to go through the LEED Score Card selection process. Meeting attendees included architects, various subconsultants (mechanical, electrical, plumbing, civil, structural and others), City staff, and two Environmental Commissioners. The Environmental Commission at its meeting on March 12, 2018 discussed the invitation for input at the LEED Charrette event, selected the two

Commissioners to attend as representatives and provided the Commissioner representative with direction related to the LEED Charrette decisions. The Environmental Commission selected Commissioner Bray to attend the LEED Charrette. The Commission also selected Chair Teksler to serve as an alternate. Due to a vacancy in the meeting group, both Environmental Commissioners attended and participated in the event.

The LEED Charrette group evaluated and discussed categories on the scorecard to achieve a LEED Gold equivalency. A LEED Gold equivalency requires between 60 and 79 points. The scorecard includes categories for water efficiency, sustainable sites, innovation and design process, indoor environmental quality, energy and atmosphere, and materials and resources. Within each category, points may be given if targets are met for such items as heat island reduction, rainwater management, construction waste diversion from landfills, low-emitting interior components, acoustical performance, interior lighting levels, energy performance, and water and energy consumption.

The LEED Charrette meeting attendees reviewed the list of available LEED credit strategies and requirements, determined which strategies are best suited for the project, which components will not be pursued, and which components need to be investigated further. Some of the credits were influenced by the cost to obtain the sustainability level required for points, as an increased cost would mean forgoing some other aspect of the building

Afterwards the consultant prepared a report to document action items/next steps for all team members. As this first LEED Charrette is the initial meeting to get the team of consultants thinking about how best to achieve LEED Gold equivalency, there will be ongoing discussions and research into the different sustainability elements on how best the team will achieve the goals.

At the April 9, 2018 Environmental Commission meeting, an update to Commissioners will be presented by Commissioner Bray and Chair Teksler (via email) and City staff pursuant to the LEED Charrette. The attending Environment Commissioners supported the direction the project is heading in relation to sustainable issues and the draft LEED scorecard.

Attachments: to be presented under separate cover at the meeting and to be posted on the Environmental Commission website agenda materials

A. LACC LEED Design Charrette Notes.

# ATTACHMENT A

## 3/22 LACC LEED Design Charrette Notes

Many of the choices are a question of committing additional construction costs to obtain one feature over another. E.g. designing buildings to be “solar-ready” to realize any initial cost savings from not installing PV panels could be applied to installing automated windows to control building temperature, energy management system, or other design feature that couldn’t be added later.

### Site-related Strategies:

- Significantly increased bike racks above LEED/Calgreen requirements
- Will install EV charging infrastructure for more than required spaces and will install chargers in at least 4 spaces
- No LEED credit for designing in for ride sharing/shuttle services (only access to public transit).

### Water Conservation:

- Plumbing for greywater use is impractical since there isn’t a significant single source for graywater that could be used for landscaping
- Permeable pavement in the parking lot would be expensive and, due to the slope of the lot, the runoff can be channeled into bioswale
- Waterless urinals an option but City does not want for some reason?
- Will have separate indoor and outdoor water meters and possibly hot water meter

### Energy

- Pursuing all-electric (currently only gas for cooking). The mechanical engineer has designed to handle all-electric load
- Building will at minimum be PV-ready. Integral Group thinks could be ZNE building
- Automatic windows that open/close to maximize natural heating and cooling are expensive but reduce energy costs as well as use of HVAC (therefore prolonging life of system). Not currently planned.
- It is possible to get a comparison of estimated operating costs with one design vs. another from Integral Group if the City requested such an analysis. If there was a decision to spend more in construction costs but that would bring the annual operating cost down that might

be useful information. Taking for example the decisions to install automatically controlled windows, Integral Group said they decrease HVAC use which prolongs the life of that equipment as well as reducing energy costs.

- Energy Management System/Building Management System not currently included (will track energy use but not easy to access/manage)

#### Waste

- Deconstruction had not yet been considered. We discussed identifying salvageable materials from existing buildings and investigating cement reuse (but this is not noted in follow-up notes). Will pursue points for 75% C&D waste diversion. New building will be outfitted with multi-stream waste receptacles.

# Los Altos Hillview Community Center

LEED-NC v4 Equivalency Scorecard - Preliminary points as of 3/27/2018



**40 24 17 31 Total Project Score** Certified 40-49 points Silver 50-59 points Gold 60-79 points Platinum 80 or more points

Yes	No	Yes	No	Yes	No	Yes	No
1							

Location and Transportation 16 Points Possible							
6	1	1	8				
1							
1		1					
2			3				
			5				
1							
	1						
1							

Sustainable Sites 10 Points Possible							
5	4	1					
Y							
1							
	2						
1							
2		1					
	2						
1							

Water Efficiency 11 Points Possible							
5	1	1	4				
Y							
Y							
Y							
1			1				
3	1	1	1				
			2				
1							

Energy & Atmosphere 33 Points Possible							
9	5	10	9				
Y							
Y							
Y							
Y							
3		1	2				
4	4	5	5				
	1						
			2				
		3					
		1					
2							

Materials & Resources 13 Points Possible							
1	4		8				
Y							
Y							
			5				
	1		1				
	1		1				
	1		1				
1	1						


Indoor Environmental Quality 16 Points Possible							
7	7	2					
Y							
Y							
1	1						
1	2						
1							
1	1						
1							
1							
1	1						
1							
2	1						
1							
1							

Innovation & Design Process 6 Points Possible							
6							
1							
1							
1							
1							
1							
1							
1							

Regional Credits 4 Points Possible							
	2	2	2				
	94022						

Points allocated to PV system

# SOLAR ENERGY

## Purchasing Options

### Hillview Community Center

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This document is a discussion springboard for options available to obtain solar energy for the new Hillview Community Center project.

#### Timing:

While solar can be obtained at any point in the lifecycle of a building, it would be prudent for this system to be designed in with the building so that roof penetrations are addressed, and the roof warranty is not voided. The Design Development phase should be completed Fall 2018, with Construction Documents phase completed Spring/Summer 2019. Construction is estimated to begin Summer 2019.

#### **Option #1**

#### **Power Purchase Agreement (PPA)**

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##### **What is it?**

A third party pays for installation, owns, operates, and maintains the system. The City would make an agreement to purchase energy monthly from the third party that operates this system. A PPA locks in lower energy costs for the long term. At the end of the contract, you can purchase the system, negotiate another PPA, or have the system removed. PPA is a form of a Public Private Partnership and type of lease.

##### **Benefits?**

1. No capital outlay
2. The solar panel system is owned by a third party and therefore no maintenance costs
3. Most PPAs guarantee that their rates will always be less than Clean Energy and PG&E
4. The cost of energy (the rate) is locked in for 20-30 years

##### **Disadvantages?**

1. There will always be two electric bills, one from the energy provider (SVCE -Silicon Valley Clean Energy), and one from the third party solar provider.
2. On days where the electric load exceeds solar generation, energy would have to be purchased from the local energy provider (SVCE).
3. The PG&E bill will always have a monthly minimum charge for delivery infrastructure.
4. Over the life cycle of the system, a PPA most likely pencils out to a cost much higher than ownership.

## **Option #2**

### **Cash Purchase (self-financed)**

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#### **What is it?**

You purchase a solar panel system outright. Cash purchases typically offers the maximum return on a solar investment.

#### **Benefits?**

1. The solar panel system is owned by City
2. Cost-free energy for life of system

#### **Disadvantages?**

1. Capital outlay up front
2. Maintenance and repair costs borne by the City
3. Roof leaks and damage are responsibility of the City

## **Option #3**

### **Public Financing**

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#### **What is it?**

Public entities have access to a variety of financial benefits not available to other solar users, often enabling the greatest financial returns of all. From tax breaks to government-subsidized bonds.

Financing that may be available to local agencies:

CREB – Clean Renewable Energy Bonds

QECB – Qualified Energy Conservation Bonds<sup>2</sup>

#### **Benefits?**

1. This option facilitates system ownership
2. Special incentives
3. Tax-exempt leases
4. Government subsidized loans

#### **Disadvantages?**

1. Participation is limited by the volume of bonds allocated
2. QECB was discontinued by the current federal administration on December 22, 2017 and may or may not start up again.