Green Building Collaborative
Santa Clara County Cities Association
Overview—Phase II

Overview
The Green Building Collaborative, (GBC), originated in June 2007 per the direction of the Santa Clara County Cities Association. In partnership with the Silicon Valley Leadership Group, its goal was to help meet our climate change goals by developing green building policy that would:

- Be easy to navigate and consistent across jurisdictions
- Appropriately nudge the public and private sector to more quickly adopt green building practices

Since that time, the Green Building Collaborative has met regularly, determining early on to work towards the following:

1) Phase I: Near term, easy steps in green building policy. (Done!)
2) Phase II: Moderate level compliance standards. (June 11th Cities Association meeting expected action to adopt Phase II.)
3) Phase III: More stringent standards based on an evaluation of Phase II

Cities who have regularly contributed to the Green Building Collaborative through staff, council or planning commissioner participation include Cupertino, Campbell, Mountain View, Sunnyvale, Santa Clara, San Jose, Palo Alto, Saratoga and Morgan Hill.

Progress
Last year, the Cities Association adopted Phase I: Near Term Green Building Policy Recommendations. Those recommendations, or something tougher in some cases, were subsequently adopted by all cities/towns and the County, making Santa Clara County the only County to have all jurisdictions moving in the same direction on green building policy.

The past seven months have been spent developing Phase II, the phase meant to transition cities from entry-level green building policy to something slightly ratcheted up, yet not out of step with the evolution and capacity of the green building industry. In March, the Green Building Collaborative gave a progress report to the Cities Association Board. At that meeting, the Cities Association conceptually agreed with the Phase II recommendations and asked for more information on two specific items related to cost and verification. The following document is intended to help Cities Association Board Members understand the key issues that the Green Building Collaborative has grappled with. It focuses on the following:

- Green Building Standards and Rating Systems: A quick overview of green building standards/rating systems.
- Phase II Chart Explanation: A brief explanation of the chart outlining Phase II recommendations
- Verification: Various methods cities decide if an applicant has met the green building requirements.
- Costs: An overview of costs associated with green building
- General Principles: The reasoning and rationale behind some of the major Phase II conclusions

Green Rating Systems

There are two major green building rating systems in use in California - Build It Green's (BIG) GreenPoint Rated and the U.S. Green Building Council's (USGBC) LEED® [1]. Both BIG and USGBC are not-for-profit 501c organizations. The USGBC is a national ratings system that focuses on all building types, while BIG has a California focus and specializes in homes. Both rating systems are based on a series of prerequisites, green building features or strategies required for every project, and a minimum amount of optional points that can be claimed for additional green building features or strategies. With the adoption of Phase I: Near Term Green Building Policy Recommendations, every city accepted the two major sets of standards. For GPR, 50 points is the minimum number needed in order to be green. For LEED, different point amounts correlate to specific LEED levels of green: Certified, Silver, Gold or Platinum. Both systems have different sets of rating systems tailored to construction types, listed below.

Table 1. Rating Systems

Build It Green	USGBC
GPR New Home Construction	LEED For Homes
GPR Home Remodeling	LEED Core & Shell
GPR Multifamily	LEED New Construction
	LEED Commercial Interiors
	LEED Schools, Retail & Health Care
	LEED for Existing Buildings

Phase II Chart Explanation

The Phase II Policy Recommendations Chart is intended to be a quick reference guide that clearly lays out what green threshold applies to what building type. It is broken down into two main sections, residential and nonresidential. Within those categories, it is further broken down into subsets based on building size and valuation.

Verification

Many cities and counties have been working to adopt green building policies and ordinances. However, it is a new area of policy and as a result, cities and counties are working through some tricky questions. This section focuses on one of those tricky elements—the process for determining if an applicant has met the jurisdiction's green building requirements.

The Collaborative has deliberated in great length on this subject, discussed the pros and cons of different approaches and concluded that it is best to put forward two methods of addressing verification and encourage cities and counties to choose the path that works best for them.

As mentioned above, there are two major rating systems, GPR and LEED, both of which have different methods for administering their programs. An assessment of verification methods performed by the County of Santa Clara found that there are several methods that cities use:

[1] The U.S. Green Building Council's green building rating system is called Leadership in Energy and Environmental Design (LEED). There are versions tailored for commercial new construction, tenant improvement, existing buildings, homes (focused mainly on larger development projects) and neighborhoods, as well as others in development.

Table 2. Description of Verification Categories

USGBC	Certificate from USGBC required
BIG	Certificate from BIG required
AP	Sign-off by certified GreenPoint Rater LEED Accredited Professional required
Internal	Verified by city
Third-Party	Qualified 3rd party other than LEED AP
Self-verify	Applicant provides assurance

Examples: Rohnert Park, & San Jose
Rohnert Park: Rohnert Park is one of the very first cities to enact a green building ordinance that covers the private sector – both residential and non-residential. As such, they have been on the cutting edge of working through issues around verification and enforcement. Rohnert Park contracts with a third party for their plan check function and has added green building verification to the responsibilities of that contracted party. Rohnert Park uses the LEED rating system for non-residential projects and GreenPoint Rated for residential projects. For most commercial projects, an applicant seeking to meet the city's green building requirements is not required to achieve accreditation from USGBC but submits the required paperwork to the City. The City, through its plan check consultant then verifies that, for all intent and purposes, the building meets the LEED requirements. However, that does not make the building a LEED certified building. Only USGBC is authorized to award that designation.

San Jose: San Jose recently passed a private sector green building policy for new construction that requires applicants building commercial developments over a certain size to obtain certification through the USGBC at the Silver level and residential projects of a certain size to be GreenPoint Rated or LEED certified. The city does not intend to play a role in "certifying" but instead will rely upon the verification processes established by USGBC or BIG. The way they intend to enforce this is by requiring an upfront deposit that will be returned once proof of certification from USGBC or BIG is provided.

There reasons these two types of approaches evolved are listed below:

"Internal" Verification such as Rohnert Park:

1. Some cities *want* to do the verification and have the resources to do so.
2. The green building industry is rapidly evolving. A mandatory approach with a select rating system should be approached with caution until any potential kinks are worked out, especially regarding capacity and communication with the certification entity.
3. Because private, third party rating systems are not accountable to local governments, there are concerns about granting so much "power" to such organizations.
4. There is a concern that verification can be costly and bureaucratic.

USGBC Verification such as San Jose

1. Local governments do not have the capacity, expertise or resources to do a good job at verifying whether a building is green or not.
2. Third party verification assures there is no conflict of interest and that rigorous green standards are being met.

Verification Recommendation
After debating the good and bad elements of these different approaches, the Green Building Collaborative decided that both approaches are acceptable. It is important, as stated above, for local jurisdictions to understand their capacities and tailor their verification system accordingly.

1. Private, third party certification via BIG/USGBC
2. In-house verification that does not require certification by USGBC or BIG

Regional Verification
As stated above, the Cities Association during the March meeting requested information on the viability of pursuing a regional approach to verification. Because of the difficulty of putting something like this together, the Green Building Collaborative, early on, did not consider it as a viable option for Phase II. The GBC has been focused on policy and implementation options that are viable in the short term and a regional approach, although it has merit, is beyond the capacity of the staff support currently provided by the Leadership Group and the Cities Association.

With that said, staff has asked the firm Davis Langdon, an expert in green building policy and administration and the authors of one of the most comprehensive surveys on green building costs, to outline a ballpark figure on what it might cost to put together a regional approach to verification. Those figures are pending.

Green Building Costs
At the last Cities Association meeting, the group also requested information on the cost of building green, specifically, the costs associated with certification. Below is an outline of cost issues.

On average, the up front building cost is around 4-11% with an overall decrease in operational costs of 8-9%[2]. Over half the up front costs are related to the actual "greening" of the building while the rest are attributed to "soft costs"—costs to hire consultants, assemble the documentation and go through the commissioning process. A comprehensive study performed by Davis Langdon looked at the costs of building conventionally and green. Their conclusion was that there is an equal amount of fluctuation in cost between the two. You can have a really expensive conventionally built building or a really expensive green building—it depends upon the choices made, the green building products used and how experienced your green team is.[3]

For the LEED process, which again, mainly addresses nonresidential buildings, cost categories associated with greening are broken out in Table 3.

Table 3. Soft Costs as a Percent of Total Project Costs[4]

Design	0.4% to 0.6%
Commissioning	0.5% to 1.5%
Documentation/Fees	0.5% to 1%
Energy Modeling	0.1%

For the BIG process, which is used only for residential construction, a local builder provided specific cost data, detailed below.

[2] US Green Building Council, http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1720
[3] The Cost of Green Revisited, Davis Langdon, July 2007
[4] Analyzing the Cost of Obtaining LEED Certification, Northbridge Environmental Management Consultants, April 2003

GREEN FEATURES - Per Plan	
Minimum 25% Fly ash or Slag in Concrete Mix	No additional cost
Comfortwise - 15% plus over T-24	$1,650.00
Construction Debris recycle	No additional cost
High Efficiency Irrigation Systems	$700.00
Wood I-Joists & Web Trusses	No additional cost
Oriented Strand Board for Subfloor, Wall and Roof Sheathing	No additional cost
Durable and Non Combustible Siding and Roofing Materials	No additional cost
Low Emitting Insulation at Walls and Ceilings	No additional cost
Insulate all Hot Water Pipes	$500.00
Energy Star Appliances	$250.00
Low VOC Paint, Caulking and Construction Adhesives	$150.00
Energy Star Bath Fans	$285.00
HVAC Filter MERV 6 or 8	$15.00
Duct Mastic on all Duct Joints and Seams	Included in Comfortwise
HVAC System Designed to ACCA Manual J, D and S recommendations	Included in Comfortwise
High Efficiency Air Conditioner with Environmentally Responsible Refrigerants (SEER 14 slimline)	$1,250.00
Radiant Barrier Roof Sheathing	$200.00
HERS Rater/Energy Star	$550.00
Green Rater & BIG fees	$450.00
Total Additional Cost	$6,000.00
Optional: Solar panel system. Cost varies greatly depending on size of house and availability of tax credits. For a 2,200 square foot home	*$16,000*

Other Issues

Below are some key issues that were discussed at length at the GBC and should help explain the rationale behind the conclusions that were made.

The GBC understands that the cities in Santa Clara County are different and that development activity varies. In some cities, such as Saratoga, residential remodels and additions are the bulk of building permit activity. San Jose on the other hand has more multifamily building permits in addition to large and medium sized commercial buildings. Each city is different and therefore, a one-size shoe fits all policy approach might not be appropriate. However, the goal of the GBC is to try to ensure that Santa Clara County jurisdictions are not radically different, but are, in fact, fairly similar in their approach to green building policy.

With regard to determining the difference between large, medium and small projects, each city may have a typical set of break points already incorporated into its planning processes. We encourage each city to align green building policy to existing planning and code requirements in order to minimize complexity. However, we do offer suggestions as a guide and if they work for your city, great.

Basic Principles Behind Trigger Points

With that said, the basic premise behind the choice of thresholds is based on a few fundamentals:

- Larger projects have a greater environmental impact and should therefore be subject to greener rules.

- Larger projects are more likely to mean that the applicant has more resources to dedicate to learning /implementing green building. For example, a large company has more capacity than a small commercial owner to invest in green building.
- It is easier to build a building green than it is to retrofit/remodel an existing building to become green.

To capture the principles above, permit valuation, square feet and floor area ratio are all suggested as potential trigger points in the Phase II Policy Recommendations.

Multifamily Remodels
At this point, the multifamily remodel guidelines are still being perfected. Build It Green does not recommend implementing mandatory policy based on these guidelines yet. We recommend requiring submittal of the checklist in the interim and as soon as BIG gives the green light, to require 50 points for multifamily remodels.

Nonresidential Remodels/Tenant Improvements
After much deliberation on this issue, the group discovered that there is no easy answer for determining large and small projects. With that said, the group settled upon using square footage, permit valuation and project scope. Project scope is defined by the number of building systems touched by the remodel. The group believes this is a good, modest starting point that will need to be checked and revisited for appropriateness over time.

Cutting Edge…
It is important to note that the efforts of the Green Building Collaborative are cutting edge. The green building industry is still relatively new and maturing/evolving quickly as is the world of green building policy. The GBC recognizes that perfection is unlikely right out of the gate and as a result, the proposed approach is a moderate one that encourages cities to be flexible in working with applicants. After all, at the end of the day, we want to achieve our climate change goals and a large part of being able to achieve those goals is making sure the path to get there is one on which people are happy to walk along.