



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: John Stufflebean
Katy Allen
Peter Jensen

SUBJECT: SEE BELOW

DATE: 11-01-06

Approved

Date

11/02/06

COUNCIL DISTRICT: City-wide

SUBJECT **REPORT AND RECOMMENDATIONS ON IMPLEMENTATION
OF THE CITY'S GREEN BUILDING POLICIES AND
GUIDELINES**

RECOMMENDATION

1. Direct staff to draft and return to the City Council for adoption by February 2007, a recommended City Council Policy on Green Building that requires U.S. Green Building Council (USGBC) LEED™ (Leadership in Energy and Environmental Design) Certified-level certification be used as the standard for all City and Redevelopment Agency new construction or major retrofit projects greater than 10,000 square feet ("LEED eligible projects.")
2. Require that effective with the Proposed 2007-08 Capital Improvement Program (CIP) budget:
 - a. All new LEED eligible projects incorporate sufficient funding to achieve the LEED-certified level of certification.
 - b. All new and carryover LEED eligible projects identify the level of LEED certification being pursued, and that staff pursue additional capital funding where feasible to allow carryover projects to achieve the LEED Certified rating.
 - c. Staff identify new and carryover projects that could exceed the required rating, such as Silver and Gold ratings, and any recommended supplemental funding to meet those rating levels.
3. Direct staff to prepare a report to the Council in conjunction with the proposed 2007-08 budget, with recommendations on how the City could use the LEED for Existing Buildings'

(LEED-EB) rating system to assess existing city facilities, including a proposal for pilot projects that would apply the LEED-EB rating system.

4. Direct staff to establish a work plan for outreach to the private sector including exploring incentives and providing education on the use of additional LEED or other high-performance building guidelines such as those for Retail Stores, Schools, Homes, and Commercial Interiors, and specifically include all developments supported by the Redevelopment Agency and Housing funds.
5. Prepare associated budget requests as part of the City's FY 2007-08 budget process that would provide resources for the recommendations proposed above.
6. Direct staff to report to the City Council on an annual basis, the status of the City's Green Building Program.

OUTCOME

Approval of the recommendations contained in this memorandum will provide the necessary direction to City staff to proceed with program implementation and future policy and program development related to the City's Green Building Program.

EXECUTIVE SUMMARY

Since Council approval of the Green Building guidelines and policies in 2001, much progress has been made toward building sustainable, energy-efficient City buildings and providing outreach and education for the private sector. Within City facilities, nine libraries, one joint facility, and two community centers have been constructed – achieving the equivalent to the USGBC LEED Certified level of 26 points or higher (Information on the U.S. Green Building Council and the LEED standard is provided in the attachments). This memorandum provides Council with a comprehensive and independent analysis of the current status of the City's Green Building Program and outlines a process for moving the City toward a green building strategy for both public and private sector buildings. This report provides a review of the original policies and guidelines, success to date and ongoing steps being taken to implement the guidelines and policies. Executive staff, program staff and external stakeholders were interviewed for their input on the current policies as well as suggestions for the future direction of the Green Building program.

BACKGROUND

In 2001, with the assistance and contributions of more than 200 stakeholders within the San José community and City departments, a staff report was produced by the Environmental Services

Department (ESD) that proposed adoption of the *City of San José's Green Building Policies*. The Vision Statement that was developed by the community members was that:

“Our vision for Green Building in San Jose is a place where the people have the knowledge and opportunities to build and occupy dwellings that have a maximum impact on the well-being of the occupants and a minimal impact on the environment.”

On June 19, 2001, Council accepted the report and approved the following policies:

Policy #1: The City of San José shall adopt Green Building Policy goals and incorporate green building principles and practices into the planning, design, construction, management, renovation, operations, and demolition of all City facilities that are constructed, owned, managed or financed by the City.

Policy #2: The City of San José shall adopt the “*San José LEED Green Building Rating System*” as the green building design guideline for its ongoing and future program areas and incorporate this system into all City facility projects that are constructed, owned, managed or financed by the City. All new construction and major retrofit projects for all City facilities and buildings over 10,000 gross square feet of occupied space shall meet a “San José LEED” Certified rating effective with the FY 02-03 Budget Allocations.

Policy #3: The City of San José shall provide leadership and guidance to encourage the application of green building practices in private sector planning, design, construction, management, renovation, operations, and demolition of buildings by promoting the voluntary application of the San José Green Building Policy goals and the “*San José LEED Green Building Rating System*.”

Policy Integration and Support

The City has a strong commitment to the environment and has consistently strived to be a leader in environmental programs. This is best evidenced by the leadership shown by the City’s Environmental Services Department, whose mission is to “work with our community to conserve natural resources and safeguard the environment for future generations.” One aspect of meeting this mission is to promote the protection of our air, land and energy resources by identifying innovative and successful opportunities for protecting the environment.

Why Green Building?

Whether living, working, or playing, our time is increasingly spent inside buildings. In fact, the United States Environmental Protection Agency (EPA) estimates that Americans spend about 90 percent of their time indoors. The building industry accounts for the single largest manufacturing activity in the United States. Building construction, operations and demolition directly or indirectly consume over 40 percent of all U.S. energy and 66 percent of all U.S.

electricity. Buildings use 25-30 percent of all the world's wood and raw materials, 25 percent of water, and account for 35-40 percent of municipal solid waste (28 percent of this coming from construction and demolition debris alone). Green building practices provide the framework and tools to build in an efficient, healthy, and ecologically responsible manner.

Support of Existing City Policies

The City's Green Building Policies and Program is an integral component of the Environmental and Utility Services City Service Area (CSA). The mission of this CSA is to "provide environmental leadership through policy development, program design and reliable utility services." The City's Green Building Program aims to make new construction in San José as environmentally sound and resource-efficient as possible, which are key elements of implementation for this CSA's Outcome of "Clean and Sustainable" Air, Land and Energy.

The Green Building Policies also support and enhance the following City policies, strategies and goals:

- Sustainable City Policy within the General Plan
- Smart Growth Policies
- Water Policy
- Energy Policy
- San Jose Economic Strategy
- Stormwater Management and Pollution Prevention
- United Nations Environmental Accords
- Air Quality Goals
- Greenhouse Gas emission reductions goals

Green Building Guidelines for City Facilities

In accepting the 2001 staff report on Green Building, Council also approved a guideline and goal for achieving Green Building certification on City facilities that was tied to the Leadership in Energy and Environmental Design (LEED) rating system developed by the U.S. Green Building Council.

Why the LEED Rating System?

LEED was first established as a consensus-based, third-party certification system designed for rating new and existing commercial, institutional and high-rise residential buildings. Based on well-founded scientific standards, LEED emphasizes strategies for sustainable site development, water consumption, energy efficiency, materials selection and indoor environmental quality.

- LEED-NC (New Construction) establishes four levels of green building certification, each based upon cumulative points earned through design conformance to published LEED sustainability criteria. These points can be achieved across five building areas—sustainable sites; water and water efficiency; energy efficiency and renewable energy; conservation of materials and resources; and indoor environmental quality. LEED-NC ratings begin at a base “Certified” level (26-32 points) and progress through three levels: Silver (33-38 points), Gold (39-51 points), and the highest level of achievement, Platinum (52-69 points).
- LEED-EB (Existing Building) maximizes operational efficiency while minimizing environmental impacts. It provides a recognized, performance-based benchmark for building owners and operators to measure operations, improvements and maintenance on a consistent scale. LEED-EB is a road map for delivering economically profitable, environmentally responsible, healthy, productive places to live and work.

Formal LEED certification requires registration, application, documentation, and a verification process initiated at the start of design and continuing through completion. USGBC provides third-party verification much like the ISO-14000 certification used in the private sector. This third-party verification provides an objective review and evaluation of the design and completed construction of a project, providing proof that the City’s buildings have achieved our environmental goals and the buildings are performing as designed. Several of the LEED criteria supplement measures that are already addressed by existing City policies, such as urban runoff and water conservation programs and preference for local vendors.

ANALYSIS

ESD and its consultant (Hawley Peterson & Snyder Architects) undertook a five-year review of the City’s Green Building program in the summer and fall of 2005. Since then, Public Works and other participating departments have augmented this report with significant contributions, summarized below. Implementation of the Green Building Program involves collaboration among many City departments including: Environmental Services; Public Works; the Redevelopment Agency; Airport; Fire; General Services; Library; Parks, Recreation and Neighborhood Services; Planning, Building and Code Enforcement; and Police.

Green Building Program – Successes

Initial implementation of the Green Building Program in 2001-02 involved working with City staff from several departments, securing resources for training and technical assistance, identifying incentives, and providing workshops and other green building training for the private sector.

The Library, Parks, and Public Safety Bond Programs were budgeted prior to Council adoption of the Green Building Policies. As such, the projects within these programs are only required to include green elements in their design and construction to the extent possible. However, most if not all of these projects have been incorporating green building fundamentals equivalent to the USGBC Certified level of 26 points.

To date, 13 Libraries, one joint Library and Community Centers, and two Community Centers have been completed or are in construction and have been designed by incorporating USGBC green building fundamentals equivalent to the USGBC Certified level of 26 points. The remaining bond projects are in the design phases with goals to also achieve higher levels of green building fundamentals.

Five Police and Fire buildings – including two in construction and three in design – are also incorporating USGBC green building fundamentals equivalent to the USGBC Certified level of 26 points. The remaining projects in the program, because of their limited size, will be including green elements to the extent possible as required by the Council policies.

USGBC LEED Certification

Although not formally required by the current policies to achieve LEED certification, several projects have been selected for formal LEED certification. The following table presents those city facilities that are either LEED Certified or are planned to be in the near future. City facilities such as the Roosevelt Community Center, Police Substation and Fire Station 35 are in various stages of the design and construction process and City staff is currently intending to obtain certification.

City Facilities LEED Certified	Date Certified
West Valley Branch Library	January 2004
Projects Intended to be LEED Certified	Estimated Certification Date
Camden Community Center	Fall 2006
Starbird Teen Center	Summer 2007
Fire Station 35	Fall 2007
Roosevelt Community Center	Fall 2008
Central Service Yard Phase II	Spring 2008
Airport—North Concourse (LEED Silver, potentially)	Winter 2008
Police Substation	Fall 2009
Happy Hollow Zoo	Fall 2009

Further information on West Valley Library and the Camden Community Center is attached. The results of using LEED for these facilities will be efficiencies and cost reductions in energy and water, along with improved air quality and the use of environmentally friendly resources.

New City Hall—Green/Sustainable Aspects

Efforts were made by the design team and the City to follow sustainable design strategies and LEED criteria as a guideline in the design and construction of the new City Hall. The most notable of these efforts are the building's detailed commissioning plan, recycling program and use of reclaimed water for flushing of water closets and urinals.

The City has received recognition from Pacific Gas and Electric for installing energy efficiency measures that exceed the California Title 24 building standards by 27.4 percent and will reduce the annual energy costs of City Hall by \$190,000.

An independent review and analysis of City Hall indicated that, to meet the LEED-New Construction v2.2 would require a minimum of 26 points. Based on the review, City Hall meets all 7 mandatory prerequisites and would likely qualify for 19 points based on documentation confirming compliance. There are an additional 8 points which could be earned as City Hall would appear to meet LEED requirements with additional documentation and activation of specific building systems. While these points may be achieved, there is no guarantee that the project would be certified by the U.S. Green Building Council.

Because City Hall was constructed with a focus on sustainability, the facility may achieve success in achieving a LEED-EB (Existing Building) certification. Information on how this can be achieved will be provided to Council separately.

Additional Successes

In addition to municipal construction activities, a number of other program-related activities have been undertaken:

- Coordination with the Department of Planning, Building and Code Enforcement on various efforts, including: planning activities, such as Coyote Valley, to ensure that green building principles are incorporated; providing education, assistance and referrals to the private sector on green building opportunities, and working to develop a pilot program with PBCE and Pacific Gas and Electric that would provide incentives to the Department for every referral they provide to PG&E's Savings by Design Program.
- Comprehensive educational programs offering numerous and varied courses related to energy efficiency and other green building strategies for city employees, architects, builders and developers.
- Technical assistance provided to City staff on green building strategies through a consultant contract with Hawley, Peterson, Snyder, Inc. This contract will end in June

2007. Additional technical assistance such as has been received in the past will be recommended as part of the 2007-08 budget request for the overall green building program.

- *The Sustainable and High Performance Buildings Summit*, a forum held in June 2005 targeted local business people, building developers, and real estate professionals.
- Participation in the regional Build It Green, a coalition of local governments and agencies identifying and developing regional green policies and programs.
- Partnerships with PG&E to provide design and financial incentives for projects pursuing energy efficiency—a key component for achieving LEED certification.

LEED Accredited Professionals within the City:

As part of the ongoing effort to train and educate City staff, several members have taken and passed the LEED Accreditation Exam. Passage of this exam indicates a detailed knowledge and understanding of the LEED system. The following City Staff are LEED Accredited:

Name	Department
Ruben Alvarez	Public Works
Deedee Flauding	Public Works
Domenic Onorato	Public Works
Lili Matthews	Public Works
Mary Follenweider	Public Works
Michael Foster	Environmental Services Department
Ashwini Kantak	City Manager’s Office
David Barry	San Jose Redevelopment Agency
Genny Bantle	San Jose Redevelopment Agency
Mary Jo McCully	San Jose Redevelopment Agency
Joyce Liu	Planning, Building and Code Enforcement

Green Building Program – Lessons Learned

Documentation

When LEED first entered the marketplace, documentation requirements for certification were considered onerous and seen as a major stumbling block to getting a project LEED Certified. Feedback to the USGBC about the need for streamlining the process was provided by the design and construction community. As a response to these concerns, USGBC developed a paperless, online submittal process. Project teams now have the option to submit 100 percent of their documentation online in an easy-to-use format. *LEED-Online* stores all LEED information, resources, and support in one centralized location. *LEED-Online* enables team members to

upload credit templates, track Credit Interpretation Requests, manage key project details, contact customer service, and communicate with reviewers throughout the design and construction reviews. Signatures are accepted electronically using an email address and a password.

In addition to submitting documentation online, project teams will have the option to submit documentation in two separate phases: first for the design phase, and then the construction phase. This will provide the benefit of knowing how many design credits are achieved prior to construction starting.

Cost Implications and Associated Benefits of Green Buildings

In an October 2003 report entitled “*The Costs and Financial Benefits of Green Buildings*” prepared for California’s Sustainable Building Task Force, “traditional” building costs were compared with costs associated with building “green.” This study looked at the life cycle costs of 33 green buildings and concluded that “a minimal up-front investment of about two percent of construction costs typically yields life cycle savings of over ten times the initial investment.”

A Seattle study that looked at the benefits and costs of achieving LEED Silver in two City-owned buildings found that the average LEED-related incremental cost was 1.2 percent and the benefit cost-ratio was approximately 1.5. The City of Vancouver, B.C. commissioned a LEED audit study that evaluated the cost to bring six existing multi-family buildings up to LEED Certified and Silver levels of certification. The results indicated that the average cost increment to achieve these levels was 1.14 percent and 1.2 percent respectively.

The U.S. General Services Administration (GSA) commissioned a study to estimate the costs to develop “green” federal facilities using LEED. The October 2004 study provided a detailed review of both the hard (construction) and soft cost (design and documentation) implications of achieving three different levels of LEED (Certified, Silver, and Gold). Based on the results of that study, the GSA intends to refine the amount of sustainability funding for future projects to an additional 2.5 percent to 4 percent allotment, with the implication that many of the buildings would achieve LEED Silver.

Experience in both the public and private sectors shows that the incremental costs associated with LEED certification range from cost neutral to 2 percent of construction costs and these costs almost always decrease with experience.

Under current City green building policies, the City is experiencing soft cost increases in design and commissioning (staff and consultants) of an additional 2.1 percent of construction. In addition to soft costs, projects have needed to account for increased costs related to green building construction materials such as recycled and sustainable products. These materials and products are typically higher priced than other marketed products but have been included in each project by the reduction of other materials or features of the building. Although difficult to quantify, the additional construction cost premium for green building materials and products

under the current policy is estimated to be approximately 3 percent of the construction cost. Current green building policy related expenditures on a large project, such as a \$12 to \$14 million library or community center total approximately \$715,000.

By certifying projects with USGBC, we estimate an additional soft cost increase of .8 percent for a total of approximately 2.9 percent. On a large project, such as a \$12 to \$14 million library or community center, the cost of USGBC LEED certification could exceed \$100,000. However, the true cost of formal LEED certification will not be known until additional buildings are taken through the process. With the improvements made to the LEED process as mentioned above and as City staff gain more experience with the LEED process, the formal certification costs should decline.

The following provides an overview of the savings and benefits of LEED facilities:

California Environmental Protection Agency Sacramento Headquarters LEED-EB Platinum	<ul style="list-style-type: none">• 25 percent reduction in overall water use• 25 percent more energy efficient than code• \$600,000+ annual savings from green features
City of Los Angeles Sun Valley Branch Library LEED Gold	<ul style="list-style-type: none">• 40 percent more energy efficient than code• Solar power provides 20 percent of building's electricity• Water savings reduced by 33 percent
Toyota Headquarters Torrence, California LEED Gold	<ul style="list-style-type: none">• 60 percent more energy efficient than code• 94 percent reduction in potable water demand• Energy savings estimated at \$400,000 annually

When looking at electricity usage, which is one aspect of the green features, a comparison was done between the new West Valley Library (USGBC LEED Certified) and several existing libraries – Santa Teresa, Carnegie and Seventrees. The kilowatt-hours used per day on a per square footage basis varied from 12 to 60 percent less in the West Valley Library. When compared to the previous West Valley Library facility, the new facility uses 34 percent less electricity.

There are additional benefits of formal LEED Certification that, although perhaps harder to quantify, can be significant in their overall impact:

- Third-party documentation and verification that the LEED elements were included in the project.
- LEED facilitates integrated design from start to finish – it encourages design teams to use a holistic approach and to measure progress.
- Using LEED standards improves the likelihood that the building will have a low impact on its occupants and the environment, and a positive economic impact over the building's life.

- LEED establishes baselines and benchmarks for future policy recommendations so that Council is well informed of San Jose's progress.
- LEED provides for benchmarking to other City projects and to efforts in other cities, states and around the world.
- LEED provides credibility and a standard for recognition of quality buildings and environmental stewardship that earns local, national and international recognition.
- LEED measures and supports the expectations of stakeholder groups and of related Council policies such as the 2020 General Plan, Sustainable City Master Plan, and U.N. Environmental Accords.

Key Findings -- 2005 Green Building Report

ESD commissioned a report, conducted by Hawley, Peterson and Snyder, that provided the City with an independent and departmental five-year review and analysis of the City's Green Building Policies and Program. A key component of this report was collecting data from the various stakeholders that are responsible for implementation along with those stakeholders that are impacted by the City's Green Building program.

The key findings were that San José has taken some excellent first steps. A common theme among stakeholders was that there is a need for consistent direction and leadership from Council and management, as well as substantive support for the green building goals in the form of staffing, funding and other resources to avoid an uneven application of the green building policies to projects in the City.

Barriers to implementing the City's Green Building Program for City facilities that were identified include:

- Clarification of the process for implementation – roles and responsibilities;
- Clear identification of the buildings that fall within the Program;
- Requirements of the Program, including documentation and certification;
- Inability to track achieved savings because of the need for improved tracking and energy management systems;
- Lack of funding and staff resources; and
- The need for clarity between the terms "San José LEED" and USGBC LEED. When San Jose LEED was first adopted, it was envisioned that it would be based on USGBC and incorporate many of the environmental aspects of San Jose ordinances, such as those related to stormwater. Due to a lack of staff resources to work on finalizing the standards for San Jose LEED, the extensive improvements in the current version of the USGBC

LEED standard, and the increased use of LEED across the country, staff is now recommending that the USGBC LEED be the standard for city facilities.

Short-term and long-term goals were recommended for the City to build on its reputation as a leading innovator in green building policy adoption and implementation. Long-term goals include:

- Raising the bar on current green building policy requirements
- Optimizing the City's existing facilities through the use of LEED-EB (Existing Buildings)

LEED for Existing Buildings (LEED-EB) is another of the products developed by the U.S. Green Building Council as part of their mission to *"transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life."* LEED-EB is a rating system that gives building owners and operators the tools needed to maximize operational efficiency while minimizing environmental impacts.

Developing a work plan to optimize the City's existing facilities through the use of LEED-EB will help to improve the environmental impact of existing city facilities, with a special focus on energy and water savings and indoor environmental quality.

- Creating incentives and policies that address private sector commercial and residential construction
- Pursuing innovative project funding models

More immediate goals that were recommended include:

- Ensuring that needed funding and staffing are available;
- Ensuring integration of green building design and construction within the current city processes;
- Improving the tracking of green building projects, including documentation costs, up-front costs and benefits, through to operation and maintenance efforts, and
- Continuing and expanding educational programs, including programs and workshops for building occupants and maintenance staff.

Proposed Recommendations: Green Building Program 2007 Action Plan

Based on extensive discussions with the City departments involved in City facilities (new and existing), research on other City programs, and on the findings, opportunities and recommendations in the Green Building Report and research on other city programs, the following action plan for 2007 is proposed. This action plan addresses the barriers that were

identified above within the consultant's report.

Recommendation 1. Direct staff to draft and return to the City Council for adoption by February 2007, a recommended City Council Policy on Green Building that requires U.S. Green Building Council (USGBC) LEEDTM (Leadership in Energy and Environmental Design) Certified-level Certification be used as the standard for all City and Redevelopment Agency new construction or major retrofit projects greater than 10,000 square feet ("LEED eligible projects."

Actions

- Replace "San José LEED" with "USGBC LEEDTM";
- Develop a City Council Policy for City facilities that would clearly identify those facilities that would be affected, include detail on appropriate exemptions and refine the process for implementation. The Policy would also cover green building activities within established CIP processes, including: budget appropriations, responsible parties within the City for signing LEED Documentation and the establishment of a database to record costs, benefits and successes;
- Explore the potential to establish incentives for city departments that meet and/or exceed the City Green Building requirements, through the use of innovative technologies or processes, such as the potential to direct rebates and/or facility energy savings to the implementing department or a city-wide revolving loan fund that would provide investment capital for additional energy efficiency investments.
- Create an Executive Staff Green Building Steering Committee to assist in continued program success

Recommendation 2: Require that effective with the Proposed 2007-08 Capital Improvement Program (CIP) budget:

- a. All new LEED eligible projects incorporate sufficient funding to achieve the LEED-certified level of certification.
- b. All new and carryover LEED eligible projects identify the level of LEED certification being pursued, and that staff pursue additional capital funding where feasible to allow carryover projects to achieve LEED certified ratings.
- c. Staff identify new and carryover projects that could exceed the required rating, such as Silver and Gold ratings, and any recommended supplemental funding to meet those rating levels.

Actions

- Work with all affected departments and the City Service Area processes to develop budget proposals that will provide the resources necessary to implement the actions associated with the recommendations.

Recommendation 3: Direct staff to prepare a report to the Council in conjunction with the proposed 2007-08 budget, with recommendations on how the City could use the LEED for Existing Buildings' (LEED-EB) rating system to assess existing city facilities, including a proposal for pilot projects that would apply the LEED-EB rating system.

Actions

- Establish a multi-departmental team to begin development of a work plan that would develop criteria for evaluating building participation, volume of buildings to participate each year, CIP and consultant needs and costs, etc.
- Work closely with the General Services Department on the proposed LEED for Existing Buildings Process on the New City Hall.

Recommendation 4: Direct staff to establish a work plan for outreach to the private sector including exploring incentives and providing education on the use of additional LEED or other high-performance building guidelines such as those for Retail Stores, Schools, Homes, and Commercial Interiors, and specifically include all developments supported by the Redevelopment Agency and Housing funds

Actions

- Identify opportunities to partner with organizations such as PG&E, the Northern California Chapter of the U.S. Green Building Council, American Institute of Architects, Building Operators and Managers Association and others in order to provide education and outreach on green building practices and tools.
- Research and evaluate incentives that could be developed that would encourage more green buildings in the private sector.

Recommendation 5: Prepare associated budget requests as part of the City's FY 2007-08 budget process that would provide resources for the recommendations proposed above.

Recommendation 6: Direct staff to report to the City Council on an annual basis, the status of the City's Green Building Program.

POLICY ALTERNATIVES

Alternative # 1: Eliminate the Green Building Policies

- Pros: Eliminates a program, generating cost savings through reduced staffing.
- Cons: Reduction of the perception of San José as a green building leader within the national and global community. Loss of operational savings over the life of the facilities estimated at 10 times the initial two to three percent additional

investment in construction costs. Conflicts with the Council-adopted U.N. Urban Environmental Accord action that requires a local government to have an adopted Green Building Policy.

Reason for not recommending: Conflicts with other City adopted policies and programs, and loss of associated benefits.

Alternative # 2: Recommend adoption of LEED Platinum, Gold or Silver

Pros: For Platinum, San José would be the first city in the world to adopt a policy. For Gold, San Jose would join with three other cities in the world, and for Silver, San Jose would join more than 12 cities or states that have adopted LEED Silver.

Cons: LEED Platinum would require the allocation of significant additional resources and require the City to completely change its approach for budgeting, designing and operating a building. LEED Gold may be achievable with additional resources and would require significant changes in the approach for budgeting, designing and operating a building. LEED Silver would require some change in the approach for budgeting, designing and operating a building.

Reason for not recommending: Higher levels of LEED may not be cost-feasible on all projects.

Alternative # 3: Adopt a hybrid Green Building Program for City-constructed projects

With this alternative, local review would be completed by City staff in lieu of the USGBC organization, thus the final project would be “LEED Certifiable” instead of official USGBC LEED/Green Building Certification. Using USGBC Accredited City staff to evaluate the green building compliance is similar to project reviews provided by licensed City staff for Building Code and regulatory project review.

Pro: City staff internal reviews assure compliance responsibility while also maintaining staff flexibility to respond directly to Council needs such as project delivery timeframes and scheduled community commitments.

Cons: Eliminates an independent and objective 3rd party review. Would also require additional and substantial staff resources to implement the review in-house, and for compliance monitoring and process improvements.

Reason for not recommending: Staffing and resources have not been allocated to the Green Building Program.

PUBLIC OUTREACH

- Criteria 1:** Requires Council action on the use of public funds equal to \$1 million or greater. **(Required: Website Posting)**
- Criteria 2:** Adoption of new or revised policies that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ✓ **Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. (Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)

Public outreach and input on the City's Green Building Program was obtained by:

- Stakeholder input as part of the *Sustainable and High Performance Buildings Summit*, held June 8, 2005, and
- One on one and group interviews conducted by the City's green building consultants, Hawley Peterson & Snyder Architects in collaboration with Bennington/Conover Associates of the City's Executive Staff, program staff and outside stakeholders.

COORDINATION

Preparation of this report and memorandum was coordinated with the assistance of the following Departments: City Attorney's Office, City Manager's Office, Office of Economic Development, Airport; Park, Recreation and Neighborhood Services, Planning, Building and Code Enforcement, Housing, Redevelopment Agency; Library; Police, and Fire.

FISCAL/POLICY ALIGNMENT

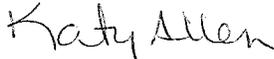
Work on implementation of the Green Building Policies meets the Budget Strategy that emphasizes prevention and expenditures that reduce costs to the City and our community.

COST IMPLICATIONS

Full cost implications of the proposed policies and program direction will be determined and presented as part of the FY07-08 budget process. Additional staff, capital and programmatic costs, along with proposed funding sources, will be determined and presented.

CEQA

Not a project.



KATY ALLEN
Director
Public Works Department



PETER JENSEN
Director,
General Services Department



JOHN STUFFLEBEAN
Director
Environmental Services Department

For questions, contact Mary Tucker, Supervising Environmental Services Specialist, at (408) 975-2581

Attachments: U.S. Green Building Council LEED Overview
Cities and the adopted of LEED standards
West Valley Library—Green Building Overview
Camden Library—Green Building Overview

U.S. Green Building Council and LEED

The U.S. Green Building Council (USGBC) was formed in San Francisco in 1994 as a coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, healthy and profitable places to live and work.

The U.S. Green Building Council is a community of more than 6,400 organizations from every sector of the building industry united by a common purpose: to transform the building marketplace to sustainability.

The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® is a voluntary, consensus-based national standard for developing high performance, sustainable buildings. LEED provides a roadmap for measuring and documenting success for every building type and phase of a building lifecycle. Members of the U.S. Green Building Council representing all segments of the building industry developed LEED and continue to contribute to its evolution. LEED standards are currently available or under development for a number of building and project types, including:

- LEED-NC: New Commercial Construction and Major Renovation Projects
- LEED-EB: Existing Building Operations
- LEED-CI: Commercial Interiors
- LEED-CS: Core and Shell Projects Core and shell projects (LEED-CS)
- LEED-H: Homes
- LEED-ND: Neighborhood Development

Using the LEED scorecard, points can be achieved across five building areas—sustainable sites; water and water efficiency; energy efficiency and renewable energy; conservation of materials and resources; and indoor environmental quality. LEED-NC ratings begin at a base “Certified” level (26 points) and progress through three levels: Silver (33 points), Gold (39 points), and the highest level of achievement, Platinum (52 points).

LEED-NC Version 2.2 Registered Project Checklist



LEED-NC

Yes ? No

			Sustainable Sites	14 Points
			Prereq 1 Construction Activity Pollution Prevention	Required
			Credit 1 Site Selection	1
			Credit 2 Development Density & Community Connectivity	1
			Credit 3 Brownfield Redevelopment	1
			Credit 4.1 Alternative Transportation, Public Transportation Access	1
			Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms	1
			Credit 4.3 Alternative Transportation, Low-Emitting and Fuel-Efficient Vehicles	1
			Credit 4.4 Alternative Transportation, Parking Capacity	1
			Credit 5.1 Site Development, Protect or Restore Habitat	1
			Credit 5.2 Site Development, Maximize Open Space	1
			Credit 6.1 Stormwater Design, Quantity Control	
			Credit 6.2 Stormwater Design, Quality Control	1
			Credit 7.1 Heat Island Effect, Non-Roof	1
			Credit 7.2 Heat Island Effect, Roof	1
			Credit 8 Light Pollution Reduction	1
			Water Efficiency	5 Points
			Credit 1.1 Water Efficient Landscaping, Reduce by 50 percent	1
			Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation	1
			Credit 2 Innovative Wastewater Technologies	1
			Credit 3.1 Water Use Reduction, 20 percent Reduction	1
			Credit 3.2 Water Use Reduction, 30 percent Reduction	1
			Energy & Atmosphere	17 Points
Y			Prereq 1 Fundamental Commissioning of the Building Energy Systems	Required
Y			Prereq 2 Minimum Energy Performance	Required
Y			Prereq 3 Fundamental Refrigerant Management	Required
			Credit 1 Optimize Energy Performance	1 to 10
			Credit 2 On-Site Renewable Energy	1 to 3
			Credit 3 Enhanced Commissioning	1
			Credit 4 Enhanced Refrigerant Management	1
			Credit 5 Measurement & Verification	1
			Credit 6 Green Power	1
			Materials & Resources	13 Points
Y			Prereq 1 Storage & Collection of Recyclables	Required
			Credit 1.1 Building Reuse, Maintain 75 percent of Existing Walls, Floors & Roof	1
			Credit 1.2 Building Reuse, Maintain 100 percent of Existing Walls, Floors & Roof	1

			Credit 1.3	Building Reuse, Maintain 50 percent of Interior Non-Structural Elements	1	
			Credit 2.1	Construction Waste Management, Divert 50 percent from Disposal	1	
			Credit 2.2	Construction Waste Management, Divert 75 percent from Disposal	1	
			Credit 3.1	Materials Reuse, 5 percent	1	
			Credit 3.2	Materials Reuse, 10 percent	1	
			Credit 4.1	Recycled Content, 10 percent (post-consumer + ½ pre-consumer)	1	
			Credit 4.2	Recycled Content, 20 percent (post-consumer + ½ pre-consumer)	1	
			Credit 5.1	Regional Materials, 10 percent Extracted, Processed & Manufactured Regionally	1	
			Credit 5.2	Regional Materials, 20 percent Extracted, Processed & Manufactured Regionally	1	
			Credit 6	Rapidly Renewable Materials	1	
			Credit 7	Certified Wood	1	
			Indoor Environmental Quality			15 Points
			Prereq 1	Minimum IAQ Performance	Required	
			Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required	
			Credit 1	Outdoor Air Delivery Monitoring	1	
			Credit 2	Increased Ventilation	1	
			Credit 3.1	Construction IAQ Management Plan, During Construction	1	
			Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1	
			Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1	
			Credit 4.2	Low-Emitting Materials, Paints & Coatings	1	
			Credit 4.3	Low-Emitting Materials, Carpet Systems	1	
			Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products	1	
			Credit 5	Indoor Chemical & Pollutant Source Control	1	
			Credit 6.1	Controllability of Systems, Lighting	1	
			Credit 6.2	Controllability of Systems, Thermal Comfort	1	
			Credit 7.1	Thermal Comfort, Design	1	
			Credit 7.2	Thermal Comfort, Verification	1	
			Credit 8.1	Daylight & Views, Daylight 75 percent of Spaces	1	
			Credit 8.2	Daylight & Views, Views for 90 percent of Spaces	1	
			Innovation & Design Process			6 Points
			Credit 1.1	Innovation in Design: Provide Specific Title	1	
			Credit 1.2	Innovation in Design: Provide Specific Title	1	
			Credit 1.3	Innovation in Design: Provide Specific Title	1	
			Credit 1.4	Innovation in Design: Provide Specific Title	1	
			Credit 2	LEED® Accredited Professional	1	
			Yes ? No			
			Project Totals (pre-certification estimates)			69 Points

Certified 26-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points

Cities that have adopted USGBC LEED Standards

Twenty largest Cities in the United States

New York	Requires LEED Silver Certification on all projects costing more than \$2M
Los Angeles	Requires LEED Certification of all publicly funded projects.
Chicago	LEED Certification (or higher) on all City projects
Houston	LEED Certification (or higher) on all City projects
Philadelphia	No official policy, but work towards LEED Certification
Phoenix	Encourages LEED Certification on municipal projects
San Antonio	No Policy
San Diego	City Buildings must meet LEED Silver rating as of April 2002
Dallas	LEED Silver required on all city funded projects
San Jose	Projects over 10,000 must meet SJ LEED
Detroit	No Policy
Indianapolis	No Policy
Jacksonville	No Policy
San Francisco	Requires LEED Silver Certification on all projects over 10,000gsf-Ordinance
Columbus	"Get Green"-Encourages LEED Certification
Austin	Requires LEED certification of all public works projects over 5,000 SF
Memphis	No Policy
Baltimore	LEED Certification (or higher) on all City projects
Fort Worth	LEED Silver required on all city funded projects
Charlotte	Environmental Leadership Principals-Guiding Principles for Environmental Practices in County Government

Other Cities/States

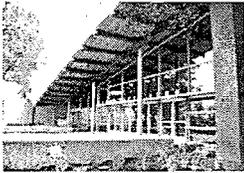
Portland	Requires LEED Gold Certification for all city buildings
Scottsdale	Requires LEED Gold Certification for all city buildings
Vancouver, BC	Requires LEED Gold Certification for all city buildings
Atlanta	Requires LEED Silver Certification for all municipal projects
Honolulu	Requires LEED Silver Certification for all municipal projects over 5,000gsf
Kansas City	Requires LEED Silver Certification for all municipal projects
Santa Monica	Requires LEED Silver Certification for all municipal projects
Seattle	Requires LEED Silver Certification for all municipal projects
Sacramento	Requires LEED Silver Certification for all municipal projects
State of California	Requires LEED Silver Certification for all state facilities, including adoption of LEED for Existing Buildings for existing facilities
Salt Lake City	Requires LEED Certification for all municipal projects over 10,000 gsf
Sarasota	Requires LEED Certification for all municipal projects
Pasadena	Requires LEED Certification for all municipal projects over 5,000 gsf
Grand Rapids	Requires LEED Certification for all municipal projects
Long Beach	Requires LEED Certification for all municipal projects over 7,500 gsf with goal of Silver Certification
Normal, IL	Requires LEED Certification for all municipal projects
Oakland	Working to adopt LEED Silver for all new municipal projects



San José Public
Library
Check it out.

WEST VALLEY BRANCH LIBRARY

The building was designed to LEED (TM) Standard integrating the principles of sustainable design as part of the City of San Jose's Sustainable City Project Program. The building has a raised floor system through which heating and cooling is delivered through the space, as well as allowing for maximum flexibility in relocating electrical and communication connections for future space reconfigurations. In addition, the building was designed and situated on the site to preserve the beautiful existing mature trees.



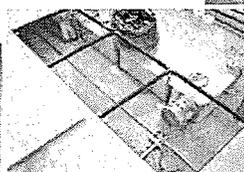
Building Location



Energy Star Roof



Water Efficient Landscaping



Optimize Energy Performance



Sustainable Materials



Environmental Public Art Installations



Environmental Public Art Installations



LEED Project 163

Final Rating CERTIFIED, 29 Points Achieved

December 2003

Major design consideration areas include:

Sustainable Sites

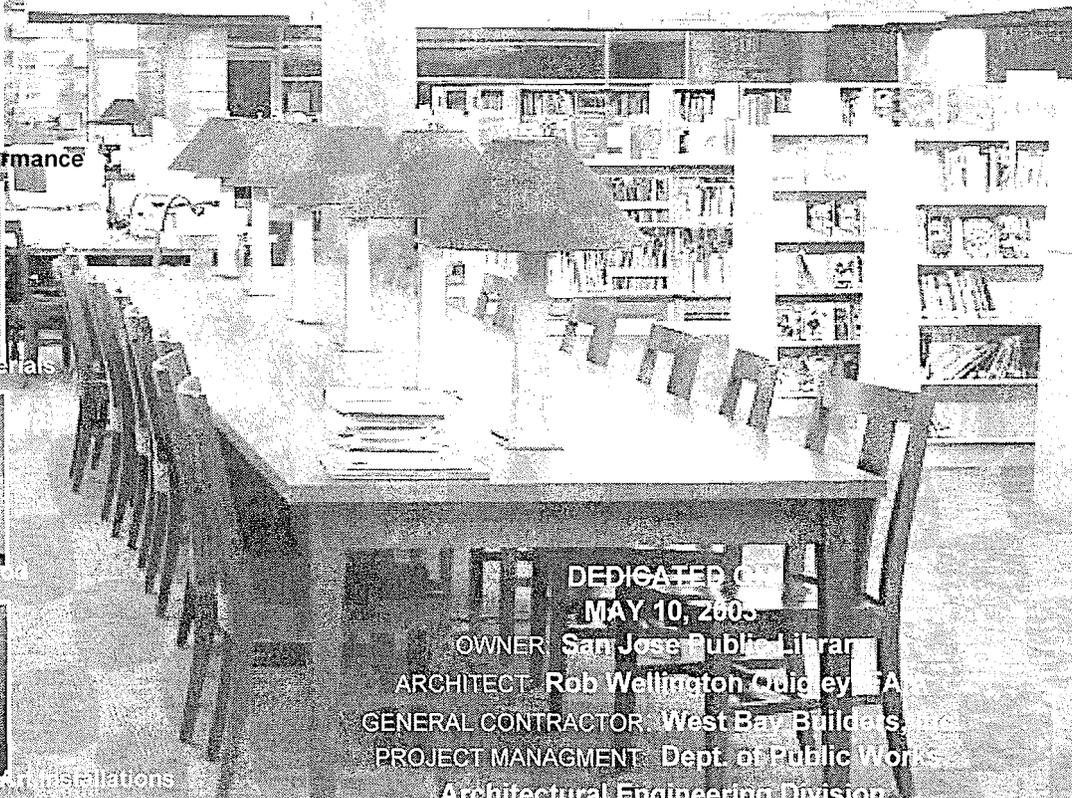
Water Efficiency

Energy and Atmosphere

Materials and Resources

Indoor Environmental Quality and

Innovation in Design



DEDICATED ON
MAY 10, 2003

OWNER San Jose Public Library

ARCHITECT Rob Wellington Quigley, FAIA

GENERAL CONTRACTOR West Bay Builders, Inc.

PROJECT MANAGEMENT Dept. of Public Works

Architectural Engineering Division

**Dedicated Team Members that have
contributed to the successful
completion of the Project**

SAN JOSE PUBLIC LIBRARY

Richard Desmond, Ned Himmel
Joy Macari, Carmencita Valerio
Dave Genesy, Lisa Valerio
Wayne Disher, Lynn Harris

**DEPARTMENT OF PUBLIC WORKS
Architectural Engineering Division**

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Inspectors: Tim Donohoe, Tom Lakia, Les Page
Engineers/Plan reviews: Gabrielle Wilder
Ed Lao, Farid Shahrivar, Michael Salehi
Suzie Mihara, Tony Andary

ARCHITECTS

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Robert Flock, Maryanne Welton

Sub Consultants

C&B Engineers
Ivy Landscape Architects
Sandis Humber Jones
Burkett & Wong
Int-Elect
Environments Interiors
Patrick Quigley Lighting
Kate Keating Associates
Simon & Associates

Public Artist

Elizabeth O'Conner

GENERAL CONTRACTOR

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Yan Wan, Rob Baumgarten

Sub Contractors

WKW Mechanical
Glass and Sash
Calhoun Brothers
Spec 5 Steel
Calvello Electric
HL Hegstad
Romano Painting
West Coast Rebar
JL Shumaker
Ross McDonald
BT Mancini
Bratton Masonry
Amberwood Casework
Yamada Controls
TYCO

**West Valley Branch Library
Sustainability Strategies**

The West Valley Branch Library is a 20,000 SF building that replaces an out-dated library that was located on the same property. The new library features a large children's area and group study rooms for teens and adults. It was completed in the Spring of 2003.

The library is designed to serve as a practical example of environmentally responsible architecture. It is the City of San Jose's first project to apply for LEED certification.

The project incorporated a variety of green strategies, addressing site, water, energy, materials and resources, and indoor environmental quality issues. The following are just a few examples:

The site's mature, existing trees were preserved. And the landscaping is drought tolerant and features high-efficiency irrigation controls to reduce use of water.

Air conditioning is kept to a minimum through carefully shaded windows, insulation, and an under-floor mechanical system. In addition, thick concrete block walls add thermal mass to the structure.

The building is carefully designed to minimize the use of artificial light sources, for energy savings as well as indoor environmental quality. Clerestory windows and skylights help bring in daylight. Photo cells turn off lights when daylighting is adequate.

Green materials are also featured in the project. Half of the wood used for the project was FSC-certified wood. Many other materials have recycled content, including the ceramic tile, carpeting, and flooring. Low-emitting materials were also used, including low-VOC paints and adhesives. In addition, more than 90% of the construction and demolition waste was recycled.

Among the most unique and innovative features of the library are the fanciful public art installations situated inside the building and outside near the building's entry. The artworks' plant themes reflect the area's agricultural past, and the artworks are made of green materials, including found/re-used objects, sustainably harvested wood, and low-VOC paint. The cabbage sculpture near the entryway acts as a passive water feature, fed by stormwater and dew that flows from the roof.



Camden Community Center is one of the City of San Jose's green building projects with approximately 30,000 square feet of sustainable features. These sustainable features include recycled blue jeans for insulation, natural day light, recycled content materials and installation of water conservation features that include waterless urinals and landscape irrigation.

Owner: City of San José—Parks Recreation & Neighborhood Services
Architect: Steinberg Architects
General Contractor: Arntz Builders
Project Management: Dept. Public Works

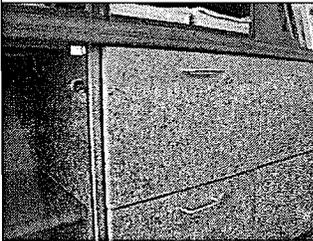


Camden Community Center Selected Sustainability Strategies

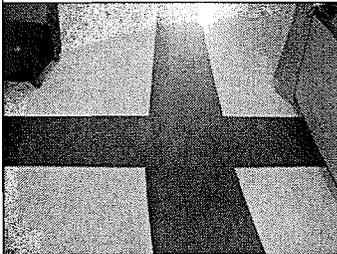
The maintenance staff at Camden are committed to maintaining the facility in an environmentally friendly way. All of the cleaning products are non-toxic and biodegradable so as to not harm the environment or the people that use them.



Energy efficiency was a key feature in the new facility. Through the use of natural daylight and efficient lighting and heating/cooling equipment, Camden beats the State's Energy Code by more than 20%. Additionally, the heating and cooling system does not use ozone depleting CFC refrigerants. The administration building at Camden Community Center is designed with an abundance of natural day light, which helps to minimize the need for artificial lighting. It also utilizes recycled blue jean insulation which helps the facility to beat State energy code by 20%.

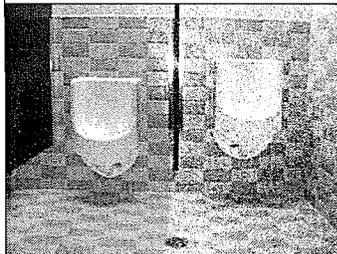
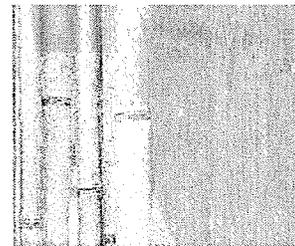


Reception Desk and Display cases are made from Pressed Wheat Board. This material is made from compressed wheat straw and a formaldehyde free binding agent which helps to improve indoor air quality in indoor work environments.



Linoleum flooring is produced from renewable materials: linseed oil, rosins, wood flour, jute and ecologically responsible pigments. Linoleum is a durable, biodegradable material that is comfortable, warm and quiet. Constructed from all natural ingredients, this flooring is a truly low-toxic flooring option.

The use of bamboo for flooring in the multi-purpose room also adds to the sustainable green features. Bamboo is actually in the "grass" family and is one of the fast growing species on the planet. It matures in three years, regenerates without need for replanting, and requires minimal fertilization or pesticides. Bamboo is attractive as a building material because it is very hard, strong, and dimensionally stable.



The no flush urinal resembles a conventional men's room fixture that requires a gallon or more of water to flush urine into a U-shaped pipe trap and then on down the drain after each use. Instead of water, it relies on gravity to force urine through a filter containing a floating layer of oily liquid that then acts as a sealant to prevent odors from escaping from the sewer pipe.

The average no-flush urinal can save as much as 24,000 gallons of water a year. Camden has installed 2 in the multi-purpose room bathrooms.