TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER DEPARTMENT: CITY MANAGER'S OFFICE

SUBJECT: UPDATE ON EARTH DAY 2006 COLLEAGUES’ MEMO ASSIGNMENT TO REVIEW AND UPDATE: CONSTRUCTION AND DEMOLITION DEBRIS AND RECYCLING PROGRAM; DOWNTOWN RECYCLING; BUSINESS/COMMERCIAL DISTRICT COMPOSTING; GREEN BUILDING STANDARDS FOR PRIVATE BUSINESSES; AND THE STREET TREE MANAGEMENT PLAN

RECOMMENDATION
Staff recommends that the City Council:

1) Direct staff to continue development of the Urban Forest Master Plan as outlined in this report.
2) Direct staff to move forward with the planned program adjustments for the Construction and Demolition Debris program as outlined in this report.
3) Direct staff to continue exploring programs for incentives and requirements related to Green Building policies for private businesses as outlined in this report.
4) Direct staff to proceed with the implementation of the enhancements to recycling programs in commercial districts as outlined in this report.
5) Direct staff to implement a pilot expansion composting program for florists and nurseries and to include an organics collection program for the commercial sector with the new collection services agreement.

BACKGROUND
On April 17, 2006, the Council adopted the recommendations outlined in a Colleagues’ Memorandum related to various environmental initiatives in preparation for Earth Day 2006. The recommendations included the following:

1) Update the Street Tree Management Plan – Council should consider updating the 1983 Street Tree Management Plan; direct staff to consult with CANOPY and other interested citizens and return to Council in the Spring of 2007 with a draft update to the Street Tree Management Plan.
2) Review and update the City Ordinance related to the Construction and Demolition Debris Reuse and Recycling Program – Direct staff to examine deconstruction and reuse as elements of the Zero Waste Operational Plan and/or the C&D ordinance and return to Council by Spring 2007 with recommendations for how reuse of C&D debris could be substantially enhanced, perhaps with doubling the present standard.
3) Review green building policies as they relate to private businesses – Direct staff to examine the U.S. Green Building Council (USGBC) memo and the policies described in it and return to Council by Spring 2007 with recommendations for incentives and policies.

4) Review recycling programs in commercial districts – Direct staff to explore the benefits and costs of: installing additional and more user-friendly recycling containers on the streets in business districts; a related public awareness campaign; and how the costs might be borne through public and/or private means.

5) Study the feasibility of developing a more comprehensive composting program for commercial and business districts – Direct staff to study the feasibility of developing a more extensive and inviting program, comparable to that in existence for residential areas, for the recycling and composting of plant materials generated in business and commercial districts.

On most of the initiatives, the Council asked staff to return in Spring 2007 with the completed updates or work programs. This report provides a status report on the various initiatives and, in some instances, recommends specific next steps for the Council to consider.

**DISCUSSION**

**Street Tree Management Plan:** On January 22, 2007, staff provided the City Council with an informational progress report on the Urban Forest Master Plan development (Attachment A). In September 2006, a group was formed to begin work on the update to the Street Tree Management Plan. This group includes staff from Public Works, Administrative Services, Utilities, Parks and Open Space, Planning, the City Manager’s Office and representatives from CANOPY. At the outset, the team identified the need to broaden the scope of the Street Tree Management Plan to encompass all elements of the City’s urban forest. Currently, the City has numerous documents that address different elements of the urban forest, including the Comprehensive Plan and the Tree Technical Manual. However, there is no single document that identifies the overall goals and management strategies for the urban forest. The goal of the working group has thus become the creation of a comprehensive document that addresses the management, protection and enhancement of the City’s urban forest resources. The document will identify the issues facing Palo Alto’s urban forest and will provide concrete actions for addressing these issues. It will also provide a framework for updating both the Street Tree Management Plan and the Tree Technical Manual. The update of the Street Tree Management Plan will likely occur simultaneously with the development of the Urban Forest Master Plan.

The January report provided the Council with the draft mission statement and framework for the plan. Since January, staff has learned that the City did not receive the State Proposition 40 grant that would have helped to fund development of the plan as well as the community engagement process envisioned for the plan. Despite this outcome, the working group intends to continue developing the plan, albeit with a reduced scope, with a targeted completion date of December 2007. Staff will also be evaluating the need for alternate funding strategies for the plan. Staff plans to reapply for the Proposition 40 grant next year and the application will likely include proposed funding for implementation of programs in the final plan. The hiring of a new Public
Works Arborist later this month will also aid in the development of this more strategic outlook on the urban forest.

Review and update the City Ordinance Related to Construction and Demolition (C & D) Debris Reuse and Recycling Program: In May 2004, the City Council adopted an ordinance (Ordinance No. 4830), Requirement to Divert Construction and Demolition Waste from Landfill, which added Chapter 5.24 to the Palo Alto Municipal Code. In November 2004, the program was fully implemented with the primary goal of diverting construction and demolition debris from local landfills. November 1, 2006 marked the completion of the second year of the program. The C&D program directly addresses debris generated from every demolition permit as well as all building permits with a valuation greater than $75,000.

Year in Review:
The second year of the program included review and approval of 483 participating projects. It was estimated that these projects would account for nearly 40,000 tons of construction and demolition debris. Each project that is approved in the program is categorized into one of nine different project types ranging from residential home demolitions to commercial remodels.

The second year of the program saw significant increases in the overall participation as compared to the first year. The total number of tons diverted from the landfill increased from 2,253 tons to 21,710 tons. The number of projects completing salvage increased from 5.5% to 11%. The number of finished jobs that complied with the requirements of the program increased from 6.6% to 33%. (See Attachment B for complete details.)

The most common material diverted from the landfill was concrete. Mixed C&D material (e.g., wood, metal, gypsum board, concrete, etc. all mixed together), metal and dirt were the other materials most often diverted from the landfill.

Additional program results include:
- Demolition projects generated 94% of all debris diverted from the landfill.
- 65% of all C&D related projects were residential projects.
- 70% of all C&D debris diverted from the landfill came from non-residential (commercial) projects.
- Zanker Materials Processing Facility accepted the largest amount of C&D debris of any approved recycling facility, accepting 39% of debris diverted from the landfill.
- 71% of all C&D debris diverted from the landfill occurred during the months of August and October.

Planned Program Adjustments:
Upon evaluation of the program’s second year, as contained in the attached report (Attachment B), the following adjustments to the program are planned to enhance the overall results:
- Placing more focus on salvage as a viable option for diversion. Options include:
  - Developing recommendations for a Resource Recovery Center for building materials that still have reusable value.
  - Establishing a partnership with local reuse facilities to generate more options for salvageable building materials.
• Working with various City of Palo Alto environmental committees, such as the Green Ribbon Task Force and the Environmental Sustainability Steering Committee, to help further the development of the program as a whole.
• Working more effectively with the Building Department to help increase compliance during the final inspection phase of project.

Considering that approximately 25% of Palo Alto’s waste being disposed in landfills is C&D debris, this program will continue to play an important role in the City’s sustainability efforts.

The Zero Waste Strategic Plan suggests the City consider requiring or encouraging building owners to remodel existing buildings through adaptive reuse rather than demolishing the building. In an adaptive reuse design, the major building elements of the existing building are kept intact and are incorporated into the new use (e.g. factory buildings converted to condominiums, warehouse building converted to live-work lofts). These additional program enhancements or goals will be considered by staff as work on the above program adjustments continues in the coming year. Any implementation proposals would be reported back to the Council, along with progress reports on the planned adjustments.

Review Green Building Policies as they relate to private businesses: For the past four years, the City’s Architectural Review Board (ARB) has been encouraging green building in its reviews, requesting a Leadership in Energy and Environmental Design (LEED) or similar checklist and reviewing the projects’ sustainability features under the existing ARB Findings. The ARB held a retreat in November 2006, at which the Council’s 2006 Earth Day memo was discussed. The attached ARB staff reports (Attachments C and D) provide background on existing and proposed green building policies for ARB-reviewed projects, consistent with the Green Ribbon Task Force Building Committee’s recommendations. The February 15, 2007 ARB staff report notes possible benchmark cities with various incentive programs and indicates that requiring certified LEED buildings for every ARB application would be too onerous and likely could not be enforced without additional LEED-trained City staff. Finally, it cites possible incentives, and encourages the City to ask developers for their perspectives on good incentives. On February 15, 2007, the ARB recommended (Attachments E and F):

A. Updating the existing sustainability finding (#15) found in Zoning Ordinance Chapter 18.76, Section 18.76.020, Architectural Review, subsection (d) Findings, incorporating categories contained in the LEED checklist, and
B. Adding to Chapter 18.77, Section 18.77.020, Applications, the criteria ‘Council Adopted Sustainability Policies’ for reviewing applications and thereby allowing the Director to require a sustainability checklist(s) with ARB applications rather than just requesting the checklist.

The April 19, 2007 ARB staff report (Attachment D) proposes a different approach to amending finding #15 (Attachment C to the April report) and asks for ARB discussion of the program Chair Solnick submitted at the joint Council and ARB meeting on April 3, 2007 (Attachment G). The cities matrix and 2030 Challenge document provided to the Council in the packet for the April 3, 2007 meeting are also attached to this report (Attachments H and I).
In Palo Alto, most development projects are not subject to review by the ARB because most are single family homes subject only to the Individual Review process or simply a building permit (one-story homes and additions). The Development Center staff has been providing homeowners and architects with copies of the Build It Green guidelines and checklist. A kiosk provides green building information for all customers doing business at the Development Center.

The benefit of adding the Council Adopted Sustainability Policies to Chapter 18.77 is that this chapter is applicable to most discretionary applications, including ARB, Variances, Conditional Use Permits, Neighborhood Preservation Exceptions, Individual Reviews, and Home Improvement Exceptions. The Council may therefore adopt a Sustainability Policy that staff can then require an applicant to address in their application materials.

*Planned Policy Implementation:*

During the first phase of proposed implementation, staff plans to begin requiring planning entitlement (discretionary) applications to include a Build It Green (BIG) checklist for residential projects and a LEED or similar checklist for non-residential projects. Staff would also require these checklists upon submittal of building permit plans after planning entitlements are obtained for those projects. By requiring the applicant to provide such checklists at both entitlement and building permit submittals, staff believes many more projects will incorporate sustainable design components into the buildings and the site. This would be implemented following action on the recommended code changes. The second phase of implementation would include staff training and possible mandatory levels of green design within two to three years. Leading up to the second phase, staff would work with the City Attorney’s Office to identify and resolve any legal issues that might be implicated by this implementation.

Staff has recommended an implementation schedule to ARB that includes a requirement that green building checklists (LEED, BIG or equivalent) be submitted for all new nonresidential, multi-family, and single-family development, at either the discretionary review stage or building permit review, or both, beginning in July of 2007. A minimum number of LEED or BIG points would be suggested, though compliance would be voluntary. Mandatory compliance with LEED certification levels is proposed to be required by July of 2008, after further staff training and other implementation tools are in place. Compliance for new single-family residences with BIG certified levels is proposed to become mandatory in July of 2009. The ARB is scheduled to discuss this program on April 19, 2007, and staff will report on the Board’s recommendation at the April 23 Council meeting.

Anticipating Council direction to implement the ARB-recommended code changes, staff has tentatively scheduled a Planning and Transportation Commission (P&TC) hearing of these changes on May 9, after the P&TC’s sustainability study session on the same evening.

*Exploring Programs for Incentives and Requirements:*

Staff has begun researching nexus requirements for establishing green building requirements and fees. In the coming fiscal year, staff proposes to benchmark other cities’ programs, work with Utilities staff on developing and implementing meaningful incentives, and begin outreach to determine possible paths for making green buildings mandatory in Palo Alto. The Utilities staff has reviewed its 10-Year Energy Efficiency Plan with the Utilities Advisory Commission and
will be presenting it to City Council in April of this year. This plan includes incentives for new construction and remodeling to support the City’s green building efforts.

Before the City requires any buildings to be certified green buildings, staff believes the following actions, at a minimum, are needed:

1. benchmarking other cities’ successful green building policies;
2. identifying and resolving any potential legal issues;
3. conducting outreach to developers and architects;
4. preparing a nexus study to establish unique building standards; and
5. training existing staff or contracting for expertise in LEED and Build It Green (BIG).

Legal Parameters of Green Building Regulation:  
The City Attorney’s Office has determined that if the City wishes to impose mandatory green building regulations on non-public buildings, it may work within three general frameworks: adoption of local amendments to the California Building Code, adoption of local amendments to the California Energy Code, or enactment of local zoning regulations. While any proposed regulation will require independent analysis, each method presents unique legal considerations.

The first method involves adopting local amendments to the California Building Code, part of the California Building Standards Code (CBSC). Cities may amend the California Building Code to require green building measures (perhaps requiring certain types of building materials in new construction) that are more restrictive than state law. The California Building Standards Commission permits amendment only if the city can show how amendments are reasonably necessary because of unique local climatic, geologic or topographic conditions. It may be difficult to demonstrate specific local conditions to support such amendments relating to building materials.

The second method is to adopt local amendments to the California Energy Code, also part of the CBSC. The City may require more stringent energy efficiency standards on new construction after presenting a study demonstrating the expected energy savings and cost effectiveness of the proposed standards, in addition to presenting findings that amendments are reasonably necessary based on unique local climatic, geologic or topographic conditions. Although local energy efficiency standards must be approved by both the California Building Standards Commission and the California Energy Commission (CEC), it is easier to amend the Energy Code than the Building Code because the requirements are easier to satisfy and the CEC actively encourages cities to adopt more stringent energy efficiency requirements.

The third method emphasizes the aesthetic, architectural, site design and zoning elements within green building. Although the City has some authority pursuant to its police powers to impose green building standards on non-public buildings via zoning regulations, local standards must be carefully crafted to avoid conflict with state law, particularly state building codes. To reduce conflict, an incentive based approach would be preferable to a regulatory scheme.

Additional Sustainability and Green Building Implementation:  
Staff would like to highlight the sustainability/green building features that have already been incorporated into the Zoning Ordinance over the past year:
• Adoption of commercial/mixed use criteria to better facilitate a mix of uses that reduce trips and encourage neighborhood walkability.
• Allowance for small markets or other retail in large multi-family residential projects, to minimize external retail and service trips.
• Adoption of a Pedestrian Transit Oriented Development (PTOD) district near the California Ave. Caltrain station, facilitating transit use and walkability of the neighborhood.
• Enhanced landscape requirements, including a requirement for 50% tree canopy cover over parking lots within 15 years.
• Stream corridor protection (introduced greater setback requirements).
• Storm water requirements, and integration of storm water and landscape planning.
• Context-based design (form code) sections of the commercial/mixed use, PTOD, and multi-family chapters of the code, including a section on sustainability, as well as other sections related to landscape, permeable materials, storm water, pedestrian and bike connections, etc.
• New transportation demand management (TDM) criteria, outlining possible TDM measures, performance standards, and monitoring.

Review Recycling Programs in Commercial Districts: A report (Attachment J) was prepared in response to the 2006 Council Colleagues’ memo. The report considered the business districts of University Avenue, California Avenue and Midtown and included: the benefits and challenges of providing recycling for pedestrian traffic on City sidewalks of the three business districts; the current inventory of trash and recycling receptacles in business districts; results of a waste and recycling audit; recycling receptacle options; and recommendations for the three business districts.

Benefits of providing recycling in business districts includes reinforcement of the recycling message and leading by example, illustrating the City’s commitment to help reduce waste sent to landfills. Challenges are the cost of replacing or retrofitting existing trash receptacles with a combination trash/recycling receptacle versus the effectiveness of recovering recyclables from the trash at the SMaRT Station. A waste study performed on the contents of Downtown trash and recycling receptacles indicates there is little recycling to be recovered from receptacles on City sidewalks in business districts.

Based on the cost of recycling receptacles, collection service costs and the quantity of recycling expected to be recovered from the business districts, staff recommends implementation of the following:

Downtown: As grant monies become available, replacement of the existing trash receptacles with combination trash/recycling receptacles will be phased in. Future City-purchased receptacles will be of the combination trash/recycling receptacle type. Public Works will apply for grants to fund receptacle purchases. The contents of existing trash receptacles will be sorted off-site at the SMaRT Station to recover recyclables. Businesses will be contacted by a Recycling Coordinator and asked to improve their efforts to provide access to recycling for their customers (e.g., coffee shops, casual dining).
California Avenue: As part of the California Avenue Street Improvement Project and upon approval of the CIP budget, the existing trash receptacles will be replaced with combination trash/recycling receptacles. Businesses will be contacted by a Recycling Coordinator and asked to improve their efforts to provide access to recycling for their customers (e.g., coffee shops, casual dining).

Midtown: Future City-purchased receptacles will be of the combination trash/recycling receptacle type. Businesses and property management of shopping centers will be contacted by a Recycling Coordinator and asked to improve their efforts to provide access to recycling for their customers (e.g., coffee shops, casual dining). Public Works will apply for grants to fund receptacle purchases. As grant monies become available, replacement of trash receptacles with combination trash/recycling receptacles will be phased in.

In addition to recycling in business districts, there is a greater need to incorporate access to recycling in both public and private projects (e.g., shopping centers, parks, corporate campuses, transit stations). Consistent with the proposed Zero Waste Operational Plan, staff will, in the future, explore the adoption of an ordinance, resolution or other law that would require the availability of recycling wherever access to trash is provided to ensure consistency of access throughout the community. This will help make recycling the standard and not the exception. This requirement could also become part of the land use entitlement process for new projects as well as phased in to existing projects.

Study the feasibility of developing a more comprehensive composting program for commercial and business districts: A report (Attachment K) was prepared to study the feasibility of developing a more extensive and inviting yard trimmings collection program for businesses and commercial districts, comparable to that in existence for residential areas. The report includes: a review of the current yard trimmings collection program for the commercial sector; the waste characterization data derived from the May 2006 Waste Characterization Final Report; three options for program expansion; and staff recommendations.

Yard trimmings collection is currently available to the commercial sector through either curbside wheeled carts or debris boxes. Cart service is offered on a case-by-case basis while debris boxes are offered to any business that would like to have one. There are currently 42 businesses with cart service and 6 with debris box service.

The May 2006 Palo Alto Waste Composition Study found that 38% percent of the commercial sector’s waste stream is compostable. However, only 2.6% of it is from material that is accepted by the current yard trimmings collection program.

Three options were explored to determine the feasibility of creating a more extensive and inviting yard trimmings collection program: creating a new yard trimmings collection route; expanding the current routes to all florists and nurseries; or implementing an organics collection program with the new collection services agreement.

As a result of this study, staff recommends a twofold approach. First, implement a pilot expansion program to florists and nurseries. Although this has a limited scope and will have only
a minimal impact on City diversion levels, it does immediately expand the current program to more businesses that generate material accepted by the current yard trimmings collection program. A pilot program would allow the City to gain accurate data to better evaluate the viability of this as a permanent program. Second, include an organics collection program for the commercial sector with the new collection services agreement (in 2009). An organics program would target the majority of the compostable waste stream, include all of the businesses within the City and be more efficient and cost effective than a yard trimmings only program.

**RESOURCE IMPACT**

**Street Tree Management Plan:** As mentioned above, the City did not receive the State Proposition 40 grant that would have helped fund development of the plan as well as the community engagement process envisioned for the plan. Despite this outcome, the working group intends to continue developing the plan, albeit with a reduced scope, with a targeted completion date of December 2007. Staff will also be evaluating the need for alternate funding strategies for the plan. Staff plans to reapply for the Proposition 40 grant next year and the application will likely include proposed funding for implementation of programs in the final plan. Additionally, the final Urban Forest Master Plan document will identify the resource needs associated with each of the action items included in the plan.

**Construction and Demolition (C & D) Debris Reuse and Recycling Program:** Staff will evaluate the possibility of using grant money to fund facilities for reuse. Staff will also analyze the cost impacts of conducting site audits to help applicants identify salvageable items prior to the demolition phase of a project.

**Review Green Building Policies as They Relate to Private Businesses:** Staff will continue to evaluate the resource impacts associated with expanding Green Building policies to address private businesses. As staff moves forward with the actions identified in this report, there will need to be a discussion of the resource impacts of any proposed incentives or regulatory measures. In addition to financial resources, these types of programs will require staff time dedicated to implementation and administration.

**Review Recycling Programs in Commercial Districts:** Attachment J to this report identifies the specific resource impacts associated with expansion of recycling programs in commercial districts. As mentioned above, staff will pursue grant opportunities to fund the replacement of existing commercial district receptacles.

**Composting Program for Commercial and Business Districts:** Attachment K to this report identifies the specific resource impacts associated with expansion of the composting program for commercial and business districts. The proposed expansion of service to florists and nurseries has a specifically identified cost that would be absorbed in the existing program, depending on the success of the pilot program. Additionally, costs for the inclusion of organics collection in the new collection services agreement will be evaluated as part of that RFP and negotiations process.
**General Impact:** Although many of the initiatives cited above are not adequately developed to assess their resource impact, they will result in additional costs. Applications for grant funding are important. Financial impacts to the General and Refuse Fund should be considered carefully. The former is under considerable pressure given the need to fund old and new infrastructure needs and the latter’s rates will rise as new recycling and other green efforts emerge. As a whole, residential and commercial utility rates will be strained as commodity and infrastructure costs (e.g., water) continue to increase. The potential for General Fund financial support for any of the programs will be evaluated against other General Fund budget priorities and the availability of funding.

**POLICY IMPLICATIONS**
This report is consistent with existing City policies and with the Council’s designation of global climate change as a top priority for 2007.

**ENVIRONMENTAL REVIEW**
This is not a project requiring environmental review under the California Environmental Quality Act (CEQA).

Attachment A: January 22, 2007 staff report – Progress Report on Urban Forest Master Plan Development
Attachment B: City of Palo Alto Construction and Demolition Year Two Review
Attachment C: Architectural Review Board staff report dated February 15, 2007
Attachment D: Architectural Review Board staff report dated April 19, 2007
Attachment E: Minutes of February 15, 2007 ARB meeting
Attachment F: Chapter 18.77 text amendments recommended by staff and ARB
Attachment G: Thresholds for requiring and encouraging sustainable development proposed by ARB Chair Solnick
Attachment H: City Green Building Program Comparison
Attachment I: 2030 Green Building Challenge information
Attachment K: Composting Plant Materials in Commercial and Business Districts

**PREPARED BY:**
______________________________
Kelly Morariu
Assistant to the City Manager

**DEPARTMENT HEAD:**
______________________________
GLENN ROBERTS
Director of Public Works

______________________________
VAL FONG
Director of Utilities
CITY MANAGER APPROVAL:

______________________________
EMILY HARRISON
Assistant City Manager