Green Building and Development Committee Report
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Strategy for Howard County in the area of Green Building and Development:

By executive order 2007-1, the county executive has adopted the target of reducing global warming pollution levels to 7 percent below 1990 levels by 2012. EPA has stated that existing buildings accounted for 39.4 percent of total U.S. energy consumption in 2002. Residential buildings accounted for 54.6 percent of that total, while commercial buildings accounted for the other 45.4 percent. It will be necessary to reduce resource consumption in future buildings by introducing sustainable environmental requirements such as LEED standards. Other measures must be taken to reduce energy and resource consumption in existing buildings such as encouraging businesses and individuals to upgrade to more efficient Energy Star rated lighting and appliances.

The charge of this committee has been to explore ideas and strategies for implementing sustainable green practices as they relate to public and private buildings in Howard County. These building types include commercial buildings, mixed-use buildings, and multi-family residential and potentially single-family residences. The focus of the committee is to have more resource conservative practices for existing structures and to require green practices for future new buildings, redevelopment of existing buildings and infill buildings. In addition the committee is also exploring opportunities for implementing sustainable (Green) practices for large-scale future development projects that may include projects similar to Maple lawn and Emerson.

The goal of the committee is to make recommendations that first and foremost create a level playing field for ALL participants and impose minimal hardship in terms of economic, legal or other impediments towards implementation of Green practices.

1. Strengths and weaknesses of current Howard County government in this area:

In reviewing the current measures for sustainable practices in place by Howard County Government it is evident that HCG is making a good faith effort to implement green building strategies in the County. This is evidenced by the construction of the Glenwood Community Center and the proposed Robinson Nature Center project. The current practice with HCG DPW is that all capital projects are to be designed with LEED Silver certification rating.

The current challenges faced by the HCG as determined by the input received from HCG personnel is the absence of a “standard” that can be enforced and used across the building projects in the County, both in the public and private sector development and redevelopment projects. The current practice with HCG for public development, i.e. Capital Projects is the encouragement to use LEED standards. Other areas of weakness/concern are education and knowledge of HCG personnel in sustainable measures. There may potentially also be shortage of manpower in monitoring and implementing green building standards and codes once they are in place.
With the emphasis made by the county executive on reduction of current green house gas levels by 2012, it will be necessary to more aggressively pursue upgrades to existing buildings to reduce resource consumption.

The strengths are most definitely the enthusiasm and willingness to learn and participate by the HCG personnel. This enthusiasm seemed to run through each department instead of being compartmentalized.

2. **Actions recommended by the committee to implement sustainable resource conservation strategies for Green Buildings in Howard County include the following:**

   a. Adopt USGBC LEED as the standard for all public and private commercial buildings including retail, mixed-use developments, industrial buildings, multifamily housing and single-family homes, etc. These standards include LEED NC, EB, CI, CS. (LEED for homes, & LEED for Neighborhood Developments are being ratified by USGBC), or equivalent approved code based standard such as the NAHB/ICC National Green Building ANSI Standard (currently in process of development) or other equivalent code standard, if approved by Howard County.

      i. Mandate that the minimum required level of certification for all private commercial projects to be at “certified” level. All public buildings to be certified at “Silver” level.

      ii. Committee recommends that County Council approve the proposed “draft” of the Green Building legislation at the earliest.

      iii. The committee recommends that incentives such as tax credits, expedited permits, permit fee rebates be provided for achieving ratings of Silver (33-38 points) or greater (Gold or Platinum). The committee also recommends that the above incentives can be a combination.

      iv. Mandated re-commissioning of projects after 5 years of occupancy to verify the project’s operation within the original design standards.

      v. Provide for implementation of ‘new green technologies” that may be implemented within a project through a “waiver” process so that the technology can be “proved” for future use.

      vi. Implement policies that promote good environmental stewardship but that are both practical and economically feasible.

      vii. Implement policies whose impacts and incentives have been quantified to an extent where the committee feels the policies are feasible.

      viii. Implement policies that create a road map towards increased environmental consciousness in the public and private sectors, the
general public, the building community, the development community and society at large.

ix. As part of the future Howard County General Plan 2010 process, create a public outreach and communication program that promulgates the benefits of density and the fiscal, environmental, transportation and social costs of sprawl. As a stated public policy decision, guide the General Plan 2010 process to locate new development and redevelopment/ infill within existing infrastructure corridors as per state of Maryland Smart Growth policy.

b. Provide opportunities for “Green” education and outreach for both public and private sector within Howard County with examples of “actual” cost/benefits for implementing resource conservation and other Green policies.
   i. Specific steps here for resource conservation in existing buildings and properties may include but not limited to the following:
      1. Energy efficient light fixtures.
      2. Motion sensors for lighting controls
      3. Installation of building energy management systems
      4. Installation of waterless urinals and low flow toilets
      5. Create Waste Management and Recycling programs for all HCG buildings and provide technical assistance to private commercial properties.
      6. Implement a tree planting program at all HCG facilities.
      7. Investigate opportunities on all HCG properties (road R.O.W.s., fields, parks, parking lots, and buildings) to plant native flora that replaces grass to minimize the need for mowing and provides native bio-habitat. Encourage similar measures on private property

c. Recommend development of procedures for implementation and enforcement of sustainable practices by executive action in the County within 60 days of approval of the above measures through legislation by the County Council.

d. Recommend that HCG address the need for appropriate additional staff and budget to manage the process of implementation sustainable practices as approved by the County Council during the next fiscal budget session.
3. Assessment of how much impact these actions will have in attaining the desired results (including major barriers that may traditionally be out of the domain of county government) as well as recommended methods for measuring progress toward attaining these results.

The objective of implementing sustainable (Green) policies are to implement “design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants that address: Sustainable site planning, Safeguarding water and water efficiency, energy efficiency, conservation of materials and resources and indoor environmental quality”. Source – USGBC Technical Review Workshop Manual.

There are many studies and reports that are available in the public domain that specifically address the measurable reduction in the carbon footprint, reduction in energy consumption, gains in worker productivity and human health. Some of these source studies include reports by EPA, American College of Allergy, Asthma & Immunology and others.

The most significant & readily measure of success would be the reduction in energy consumption of a building as compared to the baseline systems for a given building per ASHRAE 90.1-2004. The energy modeling required per this standard and the requirement of re-commissioning of the buildings after two to three years of the building occupancy will provide measurable and verifiable results needed.

The committee recommends that all buildings achieving LEED certification and receiving tax credits be required to provide annual energy consumption data that shows continued energy savings as projected.

The above measure of energy reduction in tandem with building applying for and receiving the LEED certification will provide assurances that the objective of implementing sustainable green practice for a particular project and or development is being met.