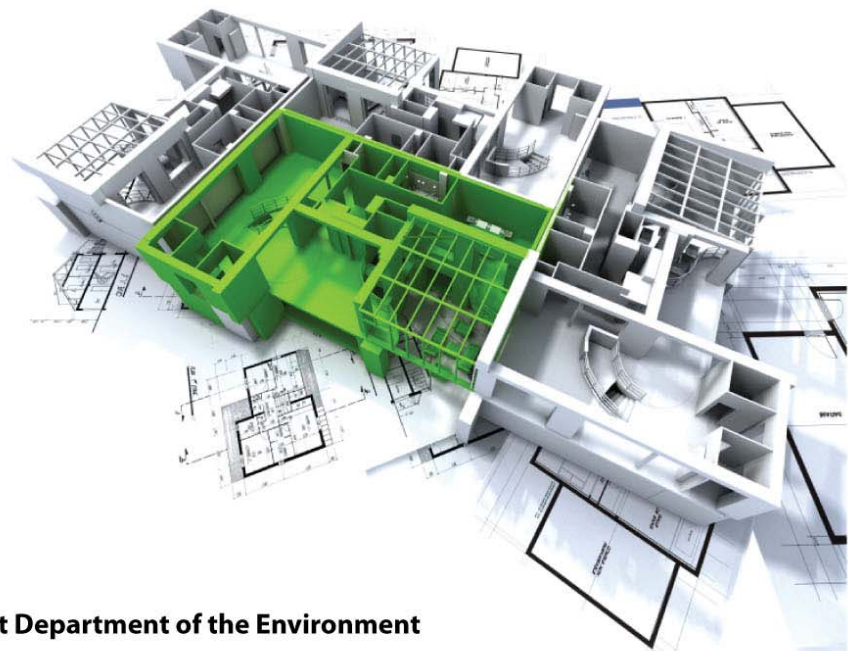




GREEN BUILDING REPORT

For the District of Columbia, 2007 through 2011.



Written by the District Department of the Environment
Approved by the Green Building Advisory Council



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I. EXECUTIVE SUMMARY

The green building report is an annual requirement of the Green Building Act of 2006 (“**GBA**”). It is intended to catalogue the implementation of the GBA and the progress made toward a more sustainable built environment in the District of Columbia. The report is divided into six chapters, and includes a glossary of terms and appendices. Throughout the report are recommendations that are intended to be discussed and decided upon by various entities including: District agencies, the Mayor, the Green Building Advisory Council (**GBAC**), or the City Council. The recommendations are also provided to inform the public of the status of certain issues and help the public understand what new ideas are under consideration.

Green Building Requirements

There are two primary pieces of legislation that provide green building guidance and requirements in the District. These are: (i) the Green Building Act of 2006 (and its amendments); and (ii) Title IV, Subtitle B, Section 455—the green building standards under the National Capitol Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2007 (“**AWDZ Act**”). For purposes of this report, only the requirements of the GBA are tracked and commented on. However, it is recommended that the requirements of the AWDZ Act be incorporated going forward. In gross summary, the green building requirements in the District of Columbia are as follows¹:

For District of Columbia public buildings (i.e. publicly-leased, -disposed, -financed, or property with other public interest) and District instrumentalities:

- Starting 2009, all buildings more than 10,000 square feet shall be annually benchmarked
- All buildings (excluding schools) greater than 10,000 square feet shall achieve USGBC’s Leadership in Energy and Environmental Design (“**LEED**”) certification at the Silver level, or meet Green Communities Criteria (“**GCC**”) for residential projects
- Non-residential buildings shall be designed to achieve at least 75 Energy Star points
- All schools shall achieve at least LEED-Certified, with best efforts to achieve LEED-Gold

For privately-owned, non-residential, buildings:

- Starting 2009, the owner shall submit a green building checklist at the time of building permit application
- Starting 2010, all buildings more than 200,000 square feet shall be energy benchmarked
- Starting 2011, all buildings more than 150,000 square feet shall be energy benchmarked
- Starting 2012, all buildings more than 100,000 square feet shall be energy benchmarked
- Starting 2012, all buildings more than 50,000 square feet shall achieve certification at the LEED-Certified level
- Starting 2013, all buildings more than 50,000 square feet shall be energy benchmarked

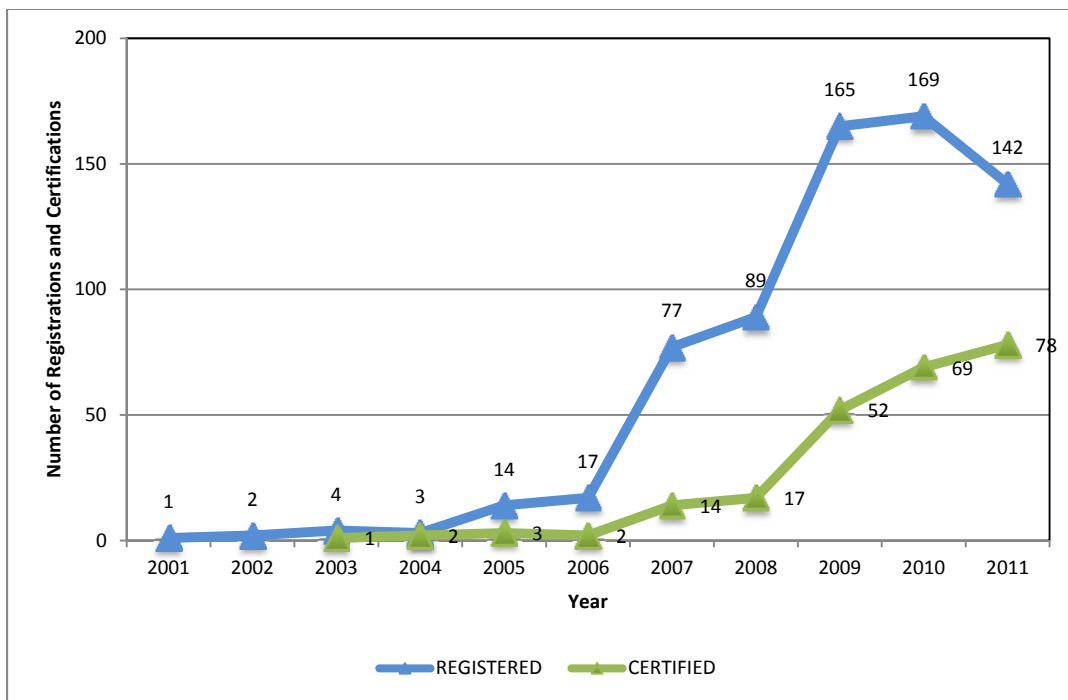
¹ The GBA specifies different start dates for properties of different use types and ownership status. Please reference the GBA for specific requirements of the Act.

The GBA requires that an incentive program be created to promote early adoption of green building practices. This program shall be funded by deposits made from a green building fee into the Green Building Fund. Also, DCRA shall establish a Green Building Expedited Construction Documents Review Program.

Finally, the GBA establishes a Green Building Advisory Council (“GBAC”) to coordinate with and provide technical assistance to District agencies, as the agencies implement the law. The GBAC is comprised of thirteen (13) members who are appointed for a two-year term.

Since the adoption of the Green Building Act, the District of Columbia has seen a significant increase in the rate of green building registration and certification (of which 61% are Gold and Platinum certified).

Chart 1: Number of LEED Registered and LEED Certified Buildings, 2001 - 2011



Green Building Report Card

The District of Columbia (and the greater Washington region) is a national leader in green building implementation. By the end of 2011, the city logged 230 total LEED-certified projects and 127 Energy Star certified buildings. Of the 230 LEED-certified projects, 57 are LEED-Existing Buildings and 100 are LEED-Commercial Interiors projects, indicating that the District’s real estate market strongly values renovations of existing buildings as well as new construction. This represents an economic advantage in promoting green building, as the cost of the LEED-EB application and certification is significantly less than that for New Construction.

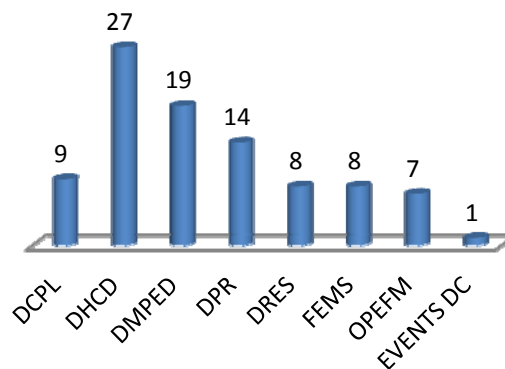
To date, LEED and Energy Star rated buildings are concentrated in the Central Business District (“CBD”), whereas the GCC projects are evenly distributed throughout the District. Property owners in the CBD have been aggressively including green building practices to compete for Class A and federal tenants, even in advance of the GBA’s mandates. The GCC projects, on the other hand, reflect publicly-owned, -financed, or -disposed properties, which tend to be more geographically dispersed. Starting in 2012, all private, non-residential buildings over 50,000 square feet will be required to achieve a minimum of LEED-Certified certification, which should create more green building projects outside of the CBD.

Public Buildings Compliance

102 District-owned, -leased, -financed, or -disposed green building projects are reported by District agencies. Some observations about the District’s implementation of the GBA include:

- About half of the District’s projects are new construction and half are major renovations.
- 63% of projects are seeking LEED certification, and 37% are seeking GCC approval.
- 56% of projects are in development and have registered for certification, but have not yet completed construction.
- Of the 102 projects, 51% are District-owned and 44% are District-financed. The remaining 5% of projects falling under GBA are triggered by land disposition.
- The distribution of public projects implemented by agency is as follows:

Chart 4: Number of Public Projects by Agency



- 6 exemptions were granted for District projects.
- Some District projects are exceeding the mandated LEED-Certified or Silver certification thresholds and many are achieving LEED-Gold, most notably led by the effort to modernize the District’s public schools.

Private Buildings Compliance

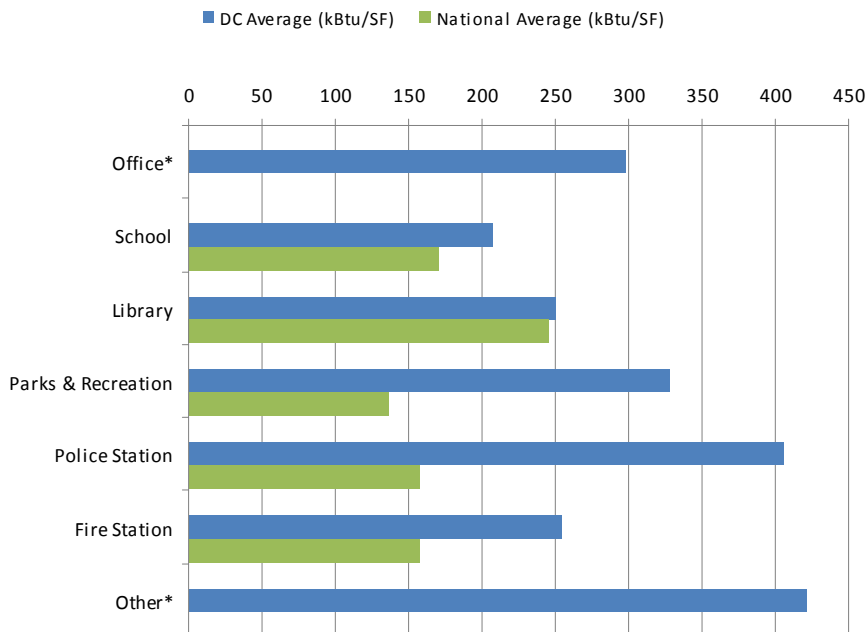
The Green Building Intake Form was created by DCRA for completion and submission by private building permit applicants. As stated above, the LEED-certification requirements commence in January 2012 for the private sector, and thus are not covered in this document.

Energy Star Benchmarking

The purpose of the building benchmarking requirement is to create performance profiles for the largest buildings in the city, which in turn will provide tenants, investors, and owners with valuable information to inform leasing, purchasing, and capital improvement decisions. Transparent building performance information is expected to drive the real estate market toward greater energy efficiency, without explicitly requiring that retrofit improvements be made.

Approximately 200 public buildings have been benchmarked. An estimated 1,800 private buildings are over 50,000 square feet in size and will be subject to the benchmarking requirement, to be implemented from 2010-2013. The results of the public building benchmarking indicated that the District performs below the national average for public buildings in almost every category. The benchmarking exercise generated many questions by District agencies, particularly around data input requirements. To address some of the inconsistencies in data availability, the Department of Real Estate Services (now DGS) initiated a system-wide buildings condition assessment and performance monitoring for many buildings. These changes should improve the quality of the benchmarking data going forward.

**Chart 5: Energy Star Benchmark Results
District Buildings Energy Use Intensity**



The private sector's benchmarking requirements were to begin in 2010, with the first report to be issued in 2011. But due to delays in completing necessary regulations around private sector benchmarking and the publication of information, the first private sector benchmarking reports will be due sometime in 2012.

Green Construction Codes

The GBA requires that the District’s construction codes “incorporate as many green building practices as practicable,” and specifically identifies the need to continually improve the energy codes. As a result, the District is establishing itself as a leader in the arena of green codes development. Not only did the District adopt the “30 Percent Solution”² for improved performance of residential buildings, but multiple improvements in the 2008 construction codes update have been adopted, which require commercial buildings to perform 7% more energy efficiently than those of surrounding Maryland and Virginia jurisdictions, and implement important water efficiency and stormwater management measures.

In FY10, the District began a second green codes update, which resulted in multiple recommendations being made to the Construction Codes Coordinating Board (“CCCB”). As of the date of this report, the CCCB was making final decisions about formal proposed amendments to the D.C. Construction Codes.

Regulations

The District is behind in promulgating the regulations required to implement the GBA. Two agencies (DDOE and DGS) have reported on the status of regulations for which they are responsible. Two (2) regulations have been completed and are in effect; two (2) are in draft; and an estimated eight (8) have not been drafted. This is clearly an area that requires more accountability by the responsible agencies, so that the GBA can be as effective as possible.

Green Building Fund

DCRA collects green building fees during the permit intake process, which in turn generates a budget for the Green Building Fund. The Green Building Fund is to be used for: (a) staffing and operating costs to provide technical assistance, plan review, and inspections and monitoring of green buildings; (b) education, training and outreach to the public and private sector on green building practices; and, (c) incentives for private buildings.

Table 4: Green Building Fund Revenue and Expenditures, FY08 – FY11

Fund Activity	FY08	FY09	FY10	FY11	TOTAL
Revenues	\$ 516,603	\$ 593,145	\$ 886,726	\$ 745,206	\$ 2,741,680
Expenditures	-	-	\$ 431,801	\$ 180,654	\$ 612,455
Reductions to fund	-	\$ 516,603	\$ 1,109,748	\$ 564,552	\$ 2,190,903

Funds have primarily been used for District staffing and staff training. However, future uses of the Green Building Fund need to include a plan for stakeholder training and incentives for private green building activity. The GBAC recognizes the fiscal crises of FY09 and FY10, and

²www.thirtypercentsolution.com, advanced by the Energy Efficient Codes Coalition.

the need for fiscal austerity during those years. However, the preservation of the Green Building Fund for training and incentives development is identified as one of the highest priorities.

Enforcement and Compliance

The District is currently weak in the areas of enforcement and compliance. As a result, two recommendations have been made:

- (1) Develop consistent accountability measures for government agencies with implementation responsibilities, such as: (a) bi-annual Director meetings to review progress; (b) GBA reporting at the Mayor's CapStat meetings; and (c) Council enforcement of benchmarking reporting, expenditures of the Green Building Fund and publication of the Green Building Report; and,
- (2) Examine DCRA's responsibilities under the GBA and determine how to organizationally adjust to accommodate such responsibilities.

An issue with the green building bond requirement in the original legislation was successfully resolved in December 2011, when a fine option was added to the existing financial securities of cash deposited in an escrow account, an irrevocable letter of credit, and a bond. Led by the Office of Councilmember Mary Cheh, multiple parties developed the fine option as a security mechanism to ensure that private building applicants would have a variety of options to meet the financial security requirements of the GBA.

Incentives

The District has not yet created any financial incentives for green building. This is a priority area of study for FY12 and is reflected in the work plan for FY12-13. DCRA has been offering expedited permit review for green building projects; however, due to the improvements DCRA has made to its overall permitting process, the expedited review has not been as much of an incentive as anticipated. As a result, expedited review is no longer being offered; however, Pre-Development Review Meetings ("PDRM") for green building projects were found to be of value and shall persist.

FY12-13 Work Plan

Going forward, it is proposed that the GBAC develop a work plan at the beginning of each new appointment term, which will include District agency performance milestones. The proposed work plan outlined in this report is an early draft, to be developed in full by the GBAC appointed for the FY12-13 term.

Report Recommendations

The following recommendations are incorporated into the pertinent sections of this report, but are compiled here for the purposes of the Executive Summary:

- ☀ **Explore integrating energy and water management systems and policies.** Currently, energy and water policies are developed, managed, and tracked separately, and water management (i.e., wastewater, drinking water, stormwater) is further decentralized. Given the cost (financial, environmental and societal) of water and energy infrastructure, neighborhood- or watershed-scale infrastructure systems, re-use initiatives, and other recovery solutions and policies should be coordinated.
- ☀ **Incorporate in future reports the green building activity required by the Anacostia Waterfront Development Zone Act.** The GBAC and DDOE should add to their oversight responsibilities the green building requirements contained within the AWDZ Act, so that District green building policy and implementation is coordinated and aligned.
- ☀ **Develop an integrated green building reporting system for all agencies.** Currently, the government does not maintain an integrated green building tracking system. A centralized or coordinated data collection program should be utilized to report District agency compliance. There are several integrated project management platforms currently being used by District agencies, which could be adapted to include green building tracking.
- ☀ **Directors of key agencies should resolve cross-agency implementation issues.** To ensure a coordinated approach, the Directors of DDOE and DCRA, and the Development Director of DMPED (at minimum), and others, should meet at least bi-annually to ensure inter-agency coordination and the resolution of outstanding implementation issues.
- ☀ **Confirm which agencies and quasi-governmental agencies are subject to the “District Government” provisions of the GBA.** Confirm the applicability of the GBA for those agencies currently considered excluded from GBA provisions. Propose clarifications to the scope of GBA applicability on quasi-government agencies and organizations.
- ☀ **Appoint or reappoint members of the GBAC.** The Mayor and Council are overdue to appoint or renew their designated appointees to the GBAC for the FY12-13 term. Appointments should be confirmed as soon as possible.
- ☀ **Determine if a public outreach role for the GBAC is needed.** The GBAC’s current public outreach commitment includes publication of this Green Building Report. The GBAC should discuss the merits of including greater public outreach in its scope of work and make a determination or recommendation on this issue.
- ☀ **Additional green building data needs to be collected.** The District should identify reliable and consistent source(s) for the following types of data, which will be used to determine the success of the District in achieving its green building goals.

 - Total building inventory, by square foot and/or building count, and by type;
 - Total green building inventory, by square foot and/or building count, and by type;
 - Number of construction starts for new development and renovations by year; and,
 - Registration and/or certification status by building type by year.

There are likely other metrics that should be captured, but for 2012, the goal should be to capture the minimum data points listed above.

- ✿ ***Develop a long-term green building vision or target.*** The District should identify a clear green building objective or vision to direct our efforts. The Mayor’s Sustainable DC Plan (expected to be complete in 2012) will likely address this need, but the GBAC should also be weighing in on the visions and targets for the city.
- ✿ ***Determine if additional energy modeling tools are needed.*** The District should determine whether additional energy modeling tools, along with Energy Star Target Finder, would be appropriate for measuring energy performance targets, and make a recommendation to include other equally acceptable tools or calculations.
- ✿ ***Integrate green building compliance into the permit process.*** DCRA is the “one-stop shop” for all building permits and Certificates of Occupancy. As part of the permit intake and approval process, green building compliance needs to be more thoroughly integrated and automated. DDOE and/or other agencies with GBA responsibilities should be granted access to the status of green building permits.
- ✿ ***Track business and workforce development opportunities related to green building.*** Given the opportunity for business and job development related to green building, this report could include a section on green building business and job growth. Determinations will need to be made about which metrics to track, how to track them, and which agency has responsibility for data collection. An anticipated challenge will be tracking business and job growth related to private development, as private parties are not required to track this information unless they are subject to the District’s CBE or First Source Agreements.
- ✿ ***Discuss the potential for building codes to replace the LEED or Green Communities requirements.*** Suggestions have been made, without needed analysis or discussions, to utilize the building code to set the “floor” (or minimum standard) for green building in lieu of requiring LEED or GCC certification. The role for LEED or GCC would then instead be used as part of an incentive structure to encourage deeper green building beyond what the code requires. The intention of this idea is to achieve a uniform green building standard across the entire District of Columbia (and not just have green building apply to buildings of a certain size).
- ✿ ***Discuss how to accelerate code adoption.*** Given the positive impact that greening the construction codes would have on advancing the green building agenda, the GBAC should propose to the Mayor and the CCCB a recommendation for accelerating and making more consistent the CCCB’s review and approval process.
- ✿ ***Rulemaking should be included as a key performance indicator (“KPI”) for responsible agencies.*** In the annual key performance indicators (“KPI”) required for each District agency with implementation responsibilities under the GBA, include the agencies’ GBA requirements to ensure accountability.
- ✿ ***Consistent accountability measures for government implementation should be put into place.*** Similar to the last recommendation, the need for agency accountability is noted. Specific suggestions include: (i) bi-annual Director meetings to review progress on hiring, training, enforcement, regulations, coordination between and among agencies and project compliance; (ii) GBA reporting to the City Administrator and Mayor’s office; and (iii) Council oversight of the

annual publication requirements for energy benchmarking results, the Green Building Fund expenditures, and the Green Building Report.

- ✿ ***The Green Building Fund should perform according to a budget plan to be approved on an annual basis.*** More stringent protections of the Green Building Fund are highly recommended, so that the District may reap the downstream economic benefits related to creating and having greener buildings. DCRA should propose an annual budget for the Green Building Fund and receive GBAC acknowledgment or approval of such budget.
- ✿ ***Analyze the areas of need for incentives, and develop the appropriate incentive tools.*** Conduct analyses needed to understand where incentives are required and develop incentive tools to address the greatest priorities of need.

II. INTRODUCTION

A. Report Intent and Organization

This report documents the progress in the District of Columbia towards a “greener” and more sustainable building stock, as required by the Green Building Act of 2006. The baseline year of performance and data collection is 2007; the latest data available depends on the data source and is noted accordingly.

This is the first green building report published by the District of Columbia. As such, some chapters do not have complete data; however, the format presented provides the template for future reports and identifies sections that should be populated in the future.

- *Section I* provides an explanation of green building generally, the legislative framework and requirements for green building in the District of Columbia, and the roles and responsibility of various District agencies and of the Green Building Advisory Council.
- *Section II* provides an account of green building compliance by sector: public, private with public-financing, and fully private. Subsections under these sector categories include: (i) green building compliance, and (ii) exemptions requested. Future reports may want to include estimated green building jobs retained and/or created and resulting greenhouse gas, energy, stormwater/water, or other impact calculations if the data is available.
- *Section III* provides an account of energy benchmarking by sector.
- *Section IV* reports on the advancement of green building codes, regulations/rulemaking, and legislation.
- *Section V* discusses the District of Columbia’s progress in addressing enforcement of green building requirements, internal capacity building, use of green building funds, and development of incentive programs.
- *Section VI* identifies the need for a two-year work plan, by which to prioritize policy decisions.

Throughout the report are recommendations that are intended to be discussed and decided upon by any, or any combination, of the following: District agencies, the Mayor, the Green Building Advisory Council, or the Council. The recommendations are also provided to inform the public of the status of certain issues and understand what new issues are under consideration.

B. Sustainability in the District of Columbia

“Sustainable development” and “green building” are closely related concepts that describe the relative impact of buildings and development on the environment. The first concept tends to apply to development choices applicable to a site (and the buildings on it), whereas green building generally applies to construction and operating methods contained within a building.

- For example, “sustainable development” may mean the set of planning, design, and consumption decisions around resource usage that aims to meet human needs while preserving environmental resources so these needs can continue to be met by future generations. Sustainable development takes into account the carrying capacity of natural systems, as well as economic and social equity issues.

Elements considered to be “sustainable” may include: providing a mix of uses for a diversity of income levels; preserving/restoring land features and natural resources; improving soil quality; managing water use and stormwater runoff; minimizing greenhouse gas emissions; using recycled, low-toxicity materials; designing energy efficient and high performance buildings; reducing heat island effects; increasing accessibility, density and transit options; providing green space; and others.

- “Green building” is an approach to building design, construction and operations that is environmentally-responsible and resource-efficient throughout a building's life-cycle. The common green building objective is to reduce the impact of the built environment on human health and the natural environment by: (a) designing and locating buildings to promote resource-efficient development and increase community vitality; (b) efficiently using energy, water, and other resources; (c) protecting occupant health, safety and improving employee productivity; and (d) reducing waste, pollution and environmental degradation.

Unique Built Environment Characteristics

The District of Columbia has some unique land and building characteristics that provide various challenges, as well as opportunities, for achieving a highly sustainable built environment. These features not only impact which green building solutions may be most feasible, but also provide some context about issues property owners face when deciding to develop or redevelop.

Challenges

- *Building height limit:* The District has a regulated building height limit, which may limit the District's ability to provide incentives for green building in the form of bonus density.
- *Lot-line to lot-line development:* In many parts of the District, and particularly in the Central Business District (“**CBD**”), lot-line to lot-line development is standard, which may limit green building solutions that could otherwise be accommodated within the setbacks.

- *Stormwater infrastructure:* Two stormwater management infrastructure systems (managed by DDOE and DC Water) with different maintenance and fee requirements.
- *Water table:* The portions of the District that have a shallow water table have related dewatering and related cost-considerations.
- *Moderate climate:* The District's temperate and seasonal climate, while providing moderate potential for solar and other alternative energy, does not generate enough of any one renewable energy source to depend on it as a single primary power source.
- *Historically-protected public space:* The street network (roads and sidewalks) covers more than 26% of the District's land surface area.³ This represents significant non-pervious surface area in the city, and while not a direct "green building" concern, the public right-of-way is part of the built environment and green infrastructure solutions should be seriously considered for long-term sustainability. (For the relative scale of impervious surface impacts, buildings account for approximately 20% of the city's impervious area).

Opportunities

- *Permanently protected green space:* 19.4% of the District is park or open space, which contributes to a current 35% urban tree canopy and preserves a degree of surface permeability.
- *Uniform roofline:* Similar building heights and the predominance of flat roofs provide a good platform for green roofs and solar energy installations, so stormwater and solar access concerns may more easily be solved in the District than in other cities.
- *Federal occupancy:* Federal government ownership of 23% of land in the District, though possibly limiting off-site green building solutions, creates opportunities for rapid market transformation due to Federal adoption of green building priorities.
- *Development of large sites:* Development areas, such as the AWDZ, Walter Reed Army Medical Center, MacMillan Reservoir, and a few others, could become significant opportunities to move toward aspirational zero waste, net-zero water, net-zero energy, and/or micro-grid/off-the-grid utility solutions.

Finally, the District has forty-six historic districts and numerous buildings with historic designation, which may equally represent challenges as well as provide opportunities.


³ District Department of Transportation estimates, 2009

Environmental Policies & Framework

In addition to zoning, land use, and historic preservation considerations, the District is also subject to and maintains a variety of environmental regulations and policies that influence the built environment, such as:

- (1) The Municipal Separate Storm Sewer System (“**MS4**”) Permit⁴ issued by the EPA to the District of Columbia, which requires a 1.2” stormwater retention standard; and,
- (2) A proposed citywide Climate Action Plan,⁵ which aims to achieve 30% greenhouse gas emissions reductions by 2020 and 80% greenhouse gas emissions reductions by 2050. Given that 74% of the District’s greenhouse gas emissions are directly attributable to energizing buildings, these climate change targets reveal the need for building owners to reduce their use of greenhouse gas-emitting fuels by adopting significant energy efficiency measures in combination with purchases or generation of clean energy.

An on-going environmental priority for the District is the preservation of the Rock Creek and Potomac watersheds and the restoration of the Anacostia River. The conditions of the District’s waterways are attributable in large part to historically poor industrial practices and the effects of stormwater runoff, which left a legacy of land and water contamination. The residual impacts on developers, the city, and neighboring residents is noted and highlights the role that sustainable development and green building practices may have in restoring these natural resources.

 **RECOMMENDATION: Explore integrating energy and water management systems and policies.** Currently, energy and water policies are developed, managed, and tracked separately, and water management (i.e. wastewater, drinking water, stormwater) is further decentralized. Given the cost (financial, environmental and societal) of water and energy infrastructure, neighborhood- or watershed-scale infrastructure systems, re-use initiatives, and other recovery solutions and policies should be coordinated.

Green Building Certification

As mentioned in the Executive Summary, the three green building certification programs mandated for some sectors in the District are: (1) the U.S. Green Building Council’s (“**USGBC**”) Leadership in Energy and Environment Design (“**LEED**”), (2) Environmental Protection Agency’s (“**EPA**”) Energy Star, and (3) Enterprise’s Green Communities Criteria (“**GCC**”).

⁴“District of Columbia Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System Final Permit,” dated October 7, 2011, <http://www.epa.gov/reg3wapd/npdes/dcpermits.htm>.

⁵“Climate of Opportunity: A Climate Action Plan for the District of Columbia, Draft September 2010,” <http://www.green.dc.gov/green/cwp/view,A,1231,Q,460764.asp>

Leadership in Energy and Environmental Design

LEED is a green building certification program created by the USGBC, but administered by the Green Building Certification Institute (“**GBCI**”), a not-for-profit organization that provides independent oversight of professional credentialing and project certification programs related to green building.⁶ To receive certification, a project applies to a specific (or multiple) program(s), such as LEED-New Construction, LEED-Existing Buildings, LEED-Core and Shell, LEED-Homes, LEED-Schools, LEED-Commercial Interiors and others.

There are criticisms of the LEED certification system, and issues for governments that mandate LEED green building certification requirements. These concerns and questions include:

- The dependence on a third-party organization, over which the government has no oversight, to set the District’s green building standards
- The perception that application costs associated with LEED are significant

Despite these critiques, LEED is the recognized national standard for green building certification and the District will utilize this standard until an alternative solution is proposed and approved.

Energy Star

EPA’s Energy Star Target Finder tool is an energy-modeling tool for new construction that enables a design team to model and plan future energy performance. Portfolio Manager, the EPA’s online energy benchmarking system, is a widely accepted tool that enables building owners to track energy and water use in their buildings and compare a building’s performance against similar buildings nationwide. Portfolio Manager is used by building owners throughout the country as a tool to track and evaluate energy and water consumption, develop energy management goals over time, and identify strategic opportunities for cost savings. Additionally, LEED references Portfolio Manager as the measurement tool to verify energy performance under the LEED-Existing Buildings Operations and Maintenance standard.

Enterprise Green Communities Criteria

Enterprise GCC is a green building rating system that was developed by Enterprise Community Partners, with the mission to “fundamentally transform the way we think about, design and build affordable homes.”⁷ It is a certification program for affordable housing development (new construction and renovation); however, the District has identified the GCC as the standard for residential green building and mandates compliance with this standard for publicly-funded residential projects, with the intent of insuring a reasonable level of environmental, health and economic performance without the burden of the fees associated with LEED certification.

⁶ For more information about GBCI, go to www.gbci.org.

⁷ For more information on Enterprise Green Communities Criteria, go to www.greencommunitiesonline.org.

C. Green Building Legislation

As mentioned in the Executive Summary, there are two primary pieces of legislation that provide green building guidance and requirements in the District. These are: (i) the Green Building Act of 2006 (the “**GBA**”) and its amendments; and (ii) Title IV, Subtitle B, Section 455, the green building standards, under the National Capitol Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2007 (the “**AWDZ Act**”). For clarity, when this report refers to the District’s “green building requirements” and provides detailed reports, it refers only to the requirements of the GBA and its amendments and does not include the requirements of the AWDZ Act.

(i) Green Building Act of 2006

On March 8, 2007, the GBA⁸ became law, and created new requirements for green building performance of public and publicly-financed new construction projects and major renovations, as well as private commercial buildings. The GBA grew out of a public collaborative process that included green building advocates, environmentalists, designers, contractors, developers, District agencies, and the Office of Council Member Jim Graham. The members of Council unanimously supported its passage.

The GBA created a phased approach to implementing green building requirements, starting with public projects in October 2007 and publicly-financed projects in October 2008. Public and publicly-financed non-residential projects are required to achieve LEED certification at the Silver level, whereas residential projects are required to meet the Enterprise GCC. To ensure that projects seeking LEED certification do not avoid the points for energy efficiency, the GBA also requires Energy Star modeling and benchmarking, and benchmarking results must be made available to the public.

The initial responsibilities for the private-sector began January 1, 2009, by first requiring non-residential projects greater than 50,000 square feet to submit a green building checklist with their building permit application, and starting in January 2012, all private commercial projects greater than 50,000 square feet will be required to achieve LEED-Certified certification.

The GBA has been amended three times: first, by the Clean and Affordable Energy Act of 2008 (“**CAEA**”)⁹, which created an energy and water benchmarking and disclosure requirement for buildings greater than 50,000 square feet; second, by the Green Building Technical Corrections, Clarification and Revision Amendment Act of 2010¹⁰; and, third, by the Green Building Compliance, Technical Corrections, and Clarification Emergency Amendment Act of 2011¹¹.

⁸ The Green Building Act of 2006 (D.C. Official Code § 6-1451.01 *et seq*)

⁹ The Clean and Affordable Energy Act of 2008 (D.C. Official Code §§ 8-1773.01, *et seq.*)

¹⁰ Green Building Technical Corrections, Clarification and Revision Amendment Act of 2010 (D.C. Law 18-349, effective March 31, 2011)

¹¹ Green Building Compliance, Technical Corrections, and Clarification Emergency Amendment Act of 2011 (D.C. Act 19-257, effective December 21, 2011)

(ii) National Capital Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2007

The AWDZ Act¹² included ambitious green building standards for projects in the AWDZ. The standards for non-residential projects include LEED-Gold certification for certain projects, achievement of 85 points on the EPA’s Energy Star rating system, and a requirement that projects be designed to be 30% more energy efficient than required by ASHRAE 90.1 2004. Residential projects are required to receive LEED-Silver and be 30% more energy efficient than required by ASHRAE 90.1 2004. If an affordable housing project receives District-financing or funding, the GCC is permitted as an alternative to LEED. This report does not currently analyze the implementation of the green building requirements of the AWDZ Act; however, it is recommended that future iterations should.

RECOMMENDATION: *Incorporate in future reports the green building activity required by the AWDZ Act.* The GBAC and DDOE should add to their oversight responsibilities the green building requirements contained within the AWDZ Act, so that District green building policy and implementation is coordinated and aligned.

Federal Green Building Requirements

While the Federal government’s green buildings policies do not have direct regulatory or legal impact on the District, their policies and practices have significant impact on the private real estate market. The General Services Administration (“GSA”), the federal government’s primary property management and leasing agency, has been adopting progressively more rigorous green building requirements for buildings built and leased by the Federal government. These requirements include, but may not be limited to:

- In 2003, all GSA projects were required to earn LEED-Certified certification, with a target for LEED-Silver;
- In 2008, all GSA-leased space was required to earn LEED-Silver certification and adhere to the GSA’s green leasing guidelines; and,
- The Federal Energy Independence and Security Act of 2007, Section 435, incorporates an Energy Star label requirement, prohibiting federal agencies from leasing buildings that have not earned an Energy Star label.¹³

As one of the most significant tenants in the Washington region, the GSA’s requirements have accelerated private market adoption of green building practices, and will likely continue to be a primary driver of green development in the District.

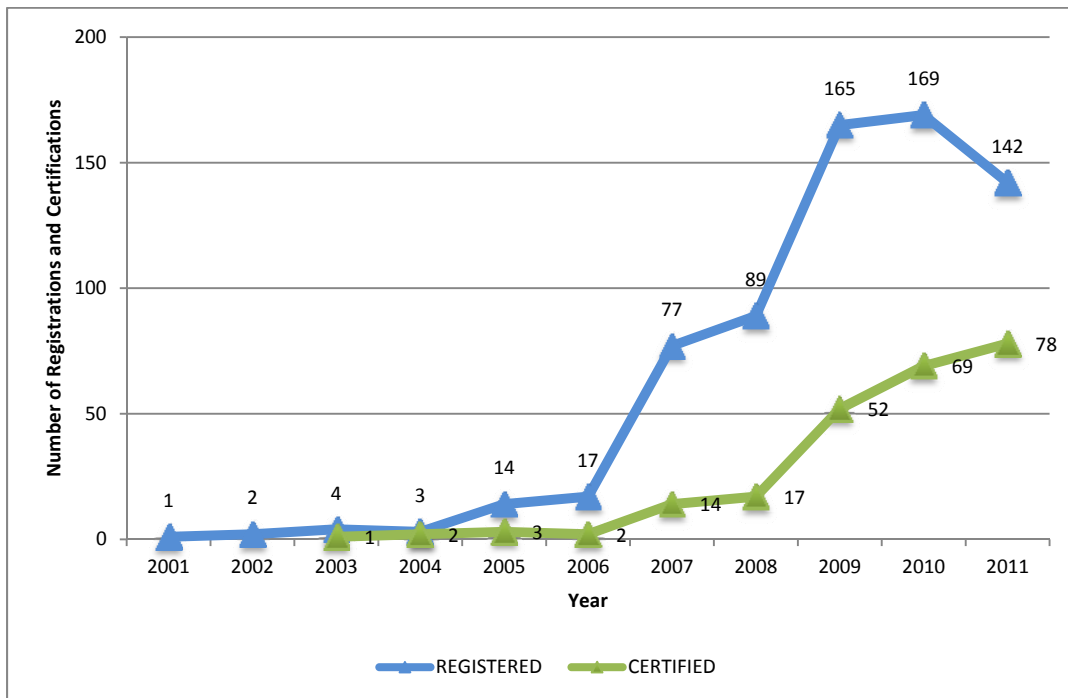
¹² National Capital Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2007 (D.C. Official Code §§ 2-1225.01, *et seq.*)

¹³ The Energy Independence and Security Act of 2007 can be found at: http://energy.senate.gov/public/_files/RL342941.pdf

Market Response to Green Building Legislation

As shown below, starting in 2007, the same year that the GBA was made effective and the Federal green building directives were issued, a significant increase in LEED registrations has occurred. The number of certifications shows an additional rate of increase in about 2009, since it takes a year or two to convert registrations to certifications. It is fair to say that public policies and leasing guidelines have impacted the green building market in the District of Columbia.

Chart 1: Number of LEED Registered and LEED Certified Buildings, 2001 - 2011



D. Roles & Responsibilities

There are several parties and agencies that have responsibilities for coordination, oversight, and regulatory and project implementation. This section provides a summary of the key agencies' responsibilities, as well as achievements during the past five years. It also provides a summary of the responsibilities and achievements of the GBAC.

District agencies are tasked with the authority and responsibility to execute the Mayor's obligations under law typically through Mayor's Orders. For the implementation of the GBA, two Mayor's Orders provide guidance; these are:

- (1) Mayor's Order 2007-206: Delegation of Authority, issued Sept. 21, 2007; and,
- (2) Mayor's Order 2010-1: Delegation of Authority, issued January 5, 2010.

For the implementation of the AWDZ Act, Mayor's Order 2008-137: Delegation of Authority issued October 20, 2008, delegates responsibility for oversight of the AWDZ to the Deputy Mayor for Planning and Economic Development.

District Departments & Agencies

District departments and agencies have a variety of roles and responsibilities related to the implementation of the GBA. This section outlines these roles and responsibilities, as well as provides a summary as to what the agencies have accomplished, and what still needs to be addressed or accomplished.

(i) District Department of the Environment (“DDOE”)

Responsibilities

- Review and promulgate rules necessary to implement the GBA and its amendments
- Training and technical assistance
- Provide energy benchmarking reports to the public
- Review and promulgate rules for the LEED for Schools standard
- Implement and promulgate rules for granting GBA project exemptions

Achievements

- Convened the GBAC
- Promulgated rules to advance and amend the GBA
- Coordinated with sister agencies to report on the results of energy benchmarking of public buildings
- Coordinated with sister agencies to report their adherence of the GBA requirements for public buildings

Work pending

- ⊗ Future green building reports should include work that is underway and not final, as well as work that is not completed.

(ii) Department of Consumer and Regulatory Affairs (“DCRA”)*Responsibilities*

- Promulgate rules necessary to implement the GBA and its amendments
- Training and technical assistance
- Develop and implement compliance review for public and private building applications
- Collect and administer the performance bond or other financial surety mechanisms, and promulgate rules associated with bond management
- Establish an incentive program to promote early adoption of green building practices and propose associated rules for administration and compliance
- Administer the Green Building Fund
- Implement construction code amendments that incorporate as many green building practices as practicable and report on progress

Achievements

- Creation of the Green Permitting Checklist
- Creation of the Green Intake Form for permit applications
- Preliminary Design Review Meeting process for green project review
- Tracking of green projects in Accela, DCRA’s permit management system
- Accepted, reviewed and issued 70+ permits for green projects in FY11 alone

Work pending

- ⊗ Future green building reports should include work that is underway and not final, as well as work that is not completed.

(iii) Department of General Services (“DGS”—formerly DRES)*Responsibilities*

- Promulgate rules to prioritize green buildings in space leased by the District
- Management of the District’s property portfolio, to include leasing, planning and construction activities
- Provide utility consumption data for Energy Star Portfolio Manager to DDOE

Achievements

- Developed the LEED Certification Guidebook¹⁴ and policy guidebook to train and inform project managers across all agencies
- Developed the Existing Buildings & Small Projects Sustainable Design Guide¹⁵ to provide standards for green building in projects smaller than the legislated threshold
- Conducted condition assessments on District buildings
- Conducted energy audits on all District buildings

¹⁴<http://dresdgs.dc.gov/DC/DRES/Programs/LEED%20Certification%20Guidebook%20March%202011.pdf>

¹⁵<http://dgs.dc.gov/DC/DGS/Programs/Existing%20Buildings%20&%20Small%20Projects%20Sustainable%20Design%20Guide%202011.pdf>

- ☑ Included green leasing and green building management strategies language into agency solicitations for leased space
- ☑ Included requests for descriptions of existing building processes and potential green retrofits to be included in private industry proposal responses
- ☑ Incorporated LEED requirements into the agency's school construction guidelines documents

Work pending

- ⊗ Future green building reports should include work that is underway and not final, as well as work that is not completed.

(iv) Other Agencies^{16/17}

Other agencies and quasi-governmental entities also have responsibilities for facilities planning and construction, such as: DCPL, FEMS, DPR, DMPED, DHCD, DOH and Events DC.

Summary achievements

- ☑ General incorporation of GBA requirements into project RFPs and RFQs, with a required demonstration of past performance on similar projects
- ☑ General incorporation of GBA requirements into contract documents
- ☑ General incorporation of green building measures into construction drawings and specifications
- ☑ DPR, whose projects are currently being developed and built by sister agencies, incorporated green building into their scopes of work
- ☑ DCPL staff was proactive in incorporating GBA standards into project requirements despite the fact that early financing placed them outside the scope of the GBA
- ☑ DHCD revised its standard Development Finance Division's template Request for Proposal ("**RFP**") to include green building compliance as an eligibility threshold, and moved from paper to a more environmentally-friendly RFP issuance
- ☑ DHCD's Property Acquisition and Disposition Division incorporated green building standards into its requirements for infill redevelopment of vacant properties and lots
- ☑ DHCD requires residential projects seeking public funding to submit a GCC checklist and sustainable development plan with their application, including evidence of an integrated design charrette as required by GCC
- ☑ As of FY11, DHCD projects under design are required to register with Enterprise Community Partners for certification, which will help with compliance going forward
- ☑ DHCD partnered with Enterprise Community Partners to offer integrated design charrette grants to assist nonprofit developers' transition to green building
- ☑ DMPED incorporated the GBA requirements into its template RFPs and land disposition agreements

¹⁶ DDOE has attempted to get a full report from all agencies on their green building activities, but cannot guarantee that this list mentioned above is exhaustive. The information provided here summarizes the information that has been made available to DDOE.

¹⁷ All acronyms for District agencies are provided in the Glossary for easy reference.

There are also a number of independent authorities and quasi-governmental agencies that do not have clear status under the GBA. For example, the University of the District of Columbia (“UDC”) is generally considered to fall under GBA requirements, whereas DC Courts, DC Water, DCHA and the HFA are not considered to fall under GBA requirements. It is also unclear whether or not charter schools are considered public facilities for GBA purposes; and as a result, the District government does not track charter school construction projects. These assumed exclusions should be further investigated for inclusion under the GBA, particularly since DC Courts and DC Water are two of the largest energy users in the District and DCHA and HFA have significant residential projects that they maintain and/or fund.

Work pending

- ⊗ Future green building reports should include work that is underway and not final, as well as work that is not completed.

✿ **RECOMMENDATION: *Develop an integrated green building reporting system for all agencies.*** Currently, the government does not maintain an integrated green building tracking system. A centralized or coordinated data collection program should be utilized to report District agency compliance. There are several integrated project management platforms currently being used by District agencies, which could be adapted to include green building tracking.

✿ **RECOMMENDATION: *Directors of key agencies should resolve cross-agency implementation issues.*** To ensure a coordinated approach, the Directors of DDOE and DCRA, and the Development Director of DMPED (at minimum), and others, should meet at least bi-annually to ensure inter-agency coordination and the resolution of outstanding implementation issues.

✿ **RECOMMENDATION: *Confirm which agencies and quasi-governmental agencies are subject to the “District Government” provisions of the GBA.*** Confirm the applicability of the GBA for those agencies currently considered excluded from GBA provisions. Propose clarifications to the scope of GBA applicability on quasi-government agencies and organizations.

Green Building Advisory Council

The GBA established the GBAC to monitor District implementation progress for the GBA and to advise the Mayor, Council and staff on ongoing GBA implementation and policy including:

- Development, adoption and revisions of the GBA, including suggestions for additional incentives to promote green building practices
- Evaluation of the effectiveness of the District’s green building policies and their impact on the District’s environmental health, including the relation between green building policies and specific environmental challenges
- Green building practices to include in the triennial revision of construction codes
- Promotion of green building education, including educating relevant District employees, the building community, and the public regarding the benefits and techniques of high-performance building standards

Appointments to the GBAC were made in 2007, and individuals were selected for their expertise in building construction, development, water and energy conservation, affordable housing, environmental advocacy or other related green building expertise (see Appendix A: Green Building Advisory Council). The formal term requirement is two years; however, the original GBAC appointees (save one) have served since 2007.

The GBAC has met periodically, but generally not six times per year as the GBA requires. The GBAC was especially active during the 2008 construction codes update cycle and in 2009, when legal and policy questions were most debated, and the first group of GBA exemption requests were submitted. Specific GBAC recommendations and decisions during the period of the report include, but are not limited to:

- Reviewed and provided feedback on proposed GBA rules and amendments
- Contributed to policies for publically financed projects
- Reviewed and confirmed exemption requests
- Evaluated and proposed the approach to greening construction codes
- Reviewed and provided feedback on public energy benchmarking results
- Provided feedback on metrics and performance standards for green building progress
- Provided recommendations for improving District agency capacity building
- Provided recommendations for incentives
- Provided recommendations for building management and operations issues
- Provided recommendations for the nexus between stormwater and green building
- Provided recommendations for shifting consumer behavior

☼ **RECOMMENDATION: *Appoint or reappoint members of the GBAC.*** The Mayor and Council are overdue to appoint or renew their designated appointees to the GBAC for the FY12-13 term. Appointments should be confirmed as soon as possible.

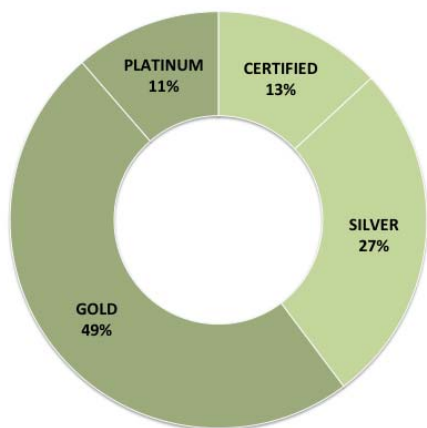
☼ **RECOMMENDATION: *Determine if a public outreach role for the GBAC is needed.*** The GBAC's current public outreach commitment includes publication of this Green Building Report. The GBAC should discuss the merits of including greater public outreach in its scope of work and make a determination or recommendation on this issue.

III. Green Building Report

A. Green Building Market Overview

The greater Washington metropolitan area is one of the nation's most active regions for green building, measured by the number of LEED certified buildings, levels of LEED certification attained, number of Energy Star certifications, and number of GCC buildings. In the District of Columbia, from 2006 through 2011, the USGBC reports 230 projects having been certified under the LEED rating system, and 715 registered.¹⁸ (See Appendix B: LEED Certifications, 2006-2011). For 2011, the EPA reports 127 Energy Star rated buildings.¹⁹ (See Appendix C: Energy Star Rated Buildings, 2011). Finally, District agencies self-report 9 projects GCC certified and 28 projects GCC registered.

Chart 2: Percentage of LEED certifications by type, 2006-2011



Not only has there been a significant increase of certifications in the last three years, the proportion of LEED-Gold and Platinum certifications has increased relative to the number of Certified and Silver certifications, resulting in 60% of the District's LEED buildings being certified at the Gold or Platinum levels. By comparison, the national average for Gold and Platinum certifications represent 45% relative to all LEED certifications.

The District has the nation's second largest number of Energy Star-rated buildings. The 127 Energy Star buildings in the District averaged 83 points out of the maximum of 100. Of the total, 123 office buildings were registered, two banks, one hotel and one house of worship.

While current green building statistics demonstrate that the District of Columbia is ahead of national trends, this leadership position does not indicate how close the District is to achieving its own green building goals. To get a better sense of the District's progress, it is important to analyze the District's overall building profile, the rates of renovation and development, and the rates of green building implementation. Currently, there is limited data available to evaluate these metrics; however, some data has been analyzed and is presented below. It is important to note that some of the data presented has not been verified (and is indicated with an *), but is provided nonetheless to establish a reference point for the types and quality of information the District should be collecting. By use type, the District currently has the following space breakdown:²⁰

¹⁸ <http://www.usgbc.org/LEED/Project/CertifiedProjectList.aspx>

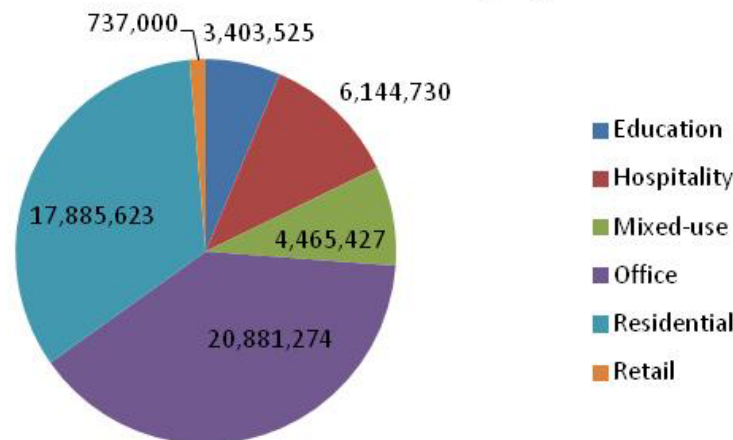
¹⁹ http://www.energystar.gov/index.cfm?fuseaction=labeled_buildings.locator

²⁰ Delta Associates, 2011 Trendlines Report: Accelerating from Recovery to Expansion

- Office Space: 399 million square feet
- Flex/Industrial Space: 372 million square feet
- Grocery-Anchored Shopping: 58 million square feet
- Apartments: 524,000 units
- Condos: 222,000 units

*Between 2006 and 2011, 53 million square feet was constructed or underwent major renovation in the District of Columbia, and 25% of these new construction starts have resulted in LEED certification.²¹ Office and residential construction expectedly represent the majority of new construction or major renovation during this period, and the office sector significantly leads in sustainable development compared to the other building types.

Chart 3: Construction square footage by asset type, 2006-2010



Confirming the total number of certified green building projects is relatively easy; however, more challenging, yet very helpful, are estimates of the total square feet of green buildings. Having the green building total square footage helps the District identify whether or not it is achieving our overall sustainable development or green building goals. For example, the approximate estimate of total office square footage in the District is 400 million square feet²². Using the Metropolitan Washington Council of Government’s “Washington Region 2011 Green Building Trends Report”²³ estimates, the District has 12.5 million square feet of green building. This represents 3% of the District’s office total. By comparison, the list of LEED certified

²¹ Washington DC Economic Partnership, 2006-2011 construction start data. *The WDCEP makes no claim as to the accuracy of the data; this data needs to be verified against DCRA construction permit databases.*

²² Delta Associates, 2011 Trendlines Report: Accelerating from Recovery to Expansion. The calculation example in this paragraph uses office as the sample asset type for totals, since a significant majority of LEED and Energy Star buildings are office. In the future, this percentage calculation should include all building use types.

²³ http://www.mwcog.org/store/item.asp?PUBLICATION_ID=407

projects (including all LEED certification types) total 45 million square feet, and 2011 Energy Star rated buildings total 46 million square feet. Adding LEED-certified and Energy Star labeled square footage totals together (and deducting by 20%²⁴ to account for duplication between the two), it could be estimated that 18% of the District's office buildings are green. In short, developing a more reliable estimate for total square footage of green buildings would be very helpful in measuring the District's overall achievement toward a city-wide green building goal.

Based on USGBC data, several other observations are made:

- LEED-certified buildings are mostly clustered in the high-activity construction and business zones of the city, namely the CBD (see Map 1A²⁵). This could indicate that:
 - (i) Many CBD buildings are being repositioned to higher classes of space, such as Class A, which likely includes green certification as a standard;
 - (ii) Office is the leading building type to adopt green building certification. Since green building certification mandates for private non-residential projects take effect January 2012, there exists private market demand for green building; and,
 - (iii) There are likely project cost thresholds that influence whether or not a developer applies for green building certification, and the thresholds may relate to project size. It is speculated that larger buildings are more cost effective to construct and/or that better capitalized developers can more easily afford to build green. More analysis of the correlation between project size and LEED certification is needed, so that incentives, technical assistance, and design or permit support can be targeted to the project type(s) that require assistance.
- By comparison, GCC projects completed and in development are more evenly distributed throughout the District (see Map 1B). The equal dispersion of GCC projects may indicate that:
 - (i) The District's financial support of housing projects is both well-distributed throughout the city and is causing the greening of housing projects; and,
 - (ii) Residential projects may not be adopting green building certification as quickly as the office sector²⁶ and additional study needs to be done to better understand the opportunity to apply green building standards to the residential sector.

²⁴ The deduction factor of 20% is arbitrary and only provided to demonstrate a point about the need to look at the total square footage.

²⁵ Of the 230 certified LEED projects, 55 were identified as "confidential" projects and cannot be mapped.

²⁶ Despite the lack of green building mandates for residential, 115 LEED-Homes projects have been certified in the District, which indicates some natural market movement for residential green building. LEED-Homes certification is tracked separately by USGBC and is not counted in the District's 230 LEED projects total.

- Of the 230 LEED-certified projects in the District, 57 are LEED-Existing Buildings and 100 are LEED-Commercial Interiors projects. The District real estate market opportunity equally includes retrofits and renovations of existing buildings as it does new construction. This represents the market uptake and the opportunity for retrofitting existing building stock.
- Finally, the DCRA Accela permit tracking system identifies 165 green projects within the permitting system.²⁷ This count includes all projects that have a green element, and does not differentiate between modest renovations and major projects, or between mandated green projects and voluntary participants. Research is currently underway to determine how many of these projects are permitted under GBA requirements, and how many are being voluntarily built to green standards.

RECOMMENDATION: *Additional green building data needs to be collected.* The District should identify reliable and consistent source(s) for the following types of data, which will be used to determine the success of the District in achieving its green building goals.

- Total building inventory, by square foot and/or building count, and by type;
- Total green building inventory, by square foot and/or building count, and by type;
- Number of construction starts for new development and renovations by year; and,
- Registration and/or certification status by building type by year.

There are likely other metrics that should be captured, but for 2012, the goal should be to capture the minimum data points listed above.

RECOMMENDATION: *Develop a long-term green building vision or target.* The District should identify a clear green building objective or vision to direct our efforts. The Mayor's Sustainable DC Plan (expected to be complete in 2012) will likely address this need, but the GBAC should also be weighing in on the visions and targets for the city.

B. Public Sector Report

Section 3 of the GBA contains the green building provisions for public- and publicly-financed projects and tenant improvements. Green building certification applied to public projects starting October 2007, and applied to publicly-financed projects the following year in October 2008. There are 102 self-reported District projects that have been completed or are being developed since the applicability of the GBA began (see Appendix D: Public and Publicly-Financed Projects).²⁸

²⁷ As of September 30, 2010.

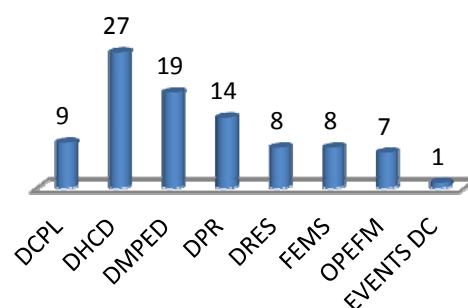
²⁸ DCRA's Accela data management system recorded 165 District-owned projects within its permitting system. Further investigation of DCRA's data is needed to determine if the project totals are overly inclusive of projects and include projects that are undergoing modest renovation and do not fall under the GBA.

Table 1: Summary of Public and Publicly-Financed Projects

Summary of Public and Publicly-Financed Projects	
Total Number of certified LEED and GCC projects	19
• Number of LEED-certified projects	18
• Number of GCC projects	1
Total Number of completed projects, with certification under review	19
• Number of completed projects, under LEED review	11
• Number of completed projects, under GCC	8
Total Number of projects in design or under construction	57
• Number of projects seeking LEED certification	29
• Number of projects seeking GCC certification	28
Number of projects requiring more information on certification status	7
Total number of projects completed or in development under the GBA	102

Some observations and conclusions reached about the District's implementation of the GBA requirements include:

- About half of the District's projects are new construction and half are major renovations
- 63% of projects are seeking LEED certification, and 37% are seeking GCC approval
- 56% of projects are in development and have registered for certification, but have not yet completed construction
- Of the 102 projects, 51% are District-owned and 44% are District-financed. The remaining 5% of projects falling under GBA are triggered by land disposition. No projects were identified that fell under the category of private tenant improvements in District-owned property.
- As agencies were ramping up to meet GBA requirements in 2007 and 2008, some early projects falling under GBA requirements may not have been captured. Agencies generally began to track green building projects under GBA when dedicated staff were brought on board. For example, DHCD and DCPL started tracking green building projects in 2007, whereas DMPED began tracking projects for GBA compliance in 2010.
- The distribution of public projects implemented by agency is as follows:

Chart 4: Number of Public Projects by Agency

- *Energy Star Target Finder Requirement for New Construction.* The GBA requires new non-residential projects, both public- and publicly-funded, to achieve a score of 75 points using the Energy Star Target Finder²⁹ energy modeling tool. Data on the District’s compliance with this requirement is not available, primarily because the public agencies responsible for design and construction opt to use more sophisticated modeling tools than the one prescribed by the GBA, so that they can qualify for additional LEED points. Energy Star Target Finder compliance data for publicly-funded projects is also not currently available.
- *Tenant Improvement of District-Owned Properties.* The GBA requires that substantial tenant improvements to District-owned buildings that are 30,000 square feet or greater shall achieve LEED-CI certification. No projects of this type have been identified.
- *Leased Buildings.* The District is required to favor LEED-CI Silver certified space when selecting facilities for District leases greater than 30,000 square feet. Below is a list of District leases in property that are either LEED-certified or that incorporate green elements. Complete information accounting for all leases executed since 2007 and their compliance with the GBA needs to be assembled.

Table 2: Information available to date for District-leased space

Property Name	Year Leased	Certification Status
Waterfront East Tower 1100 4 th St. SW	2010 (10 years)	LEED-NC Gold
Waterfront West Tower 1101 4 th St. SW	2010 (10 years)	LEED-NC Gold
Capital Plaza 1200 First St. NE	2009 (10 years)	Owner is currently pursuing LEED-EB Gold

- *Publicly-financed projects.* Many large-scale redevelopment projects in the District, and most affordable housing projects, benefit from some form of public financial assistance, in the form of loans, public bonds, tax increment financing, grants and public land disposition. As currently defined under the GBA, the term “publicly-financed” was not adequately detailed, and the ambiguity has caused inconsistent application of the GBA and reporting for these types of projects. This problem has been addressed and there is a new definition that is being proposed in the form of an amendment to the GBA, which is currently under Council consideration. Confirmed publicly-financed projects include:

²⁹ http://www.energystar.gov/index.cfm?c=new_bldg_design.bus_target_finder

- 9 non-residential projects
- 37 residential projects³⁰
- Notable projects benefitting from public funds include City Center, 2 M Street NE, the I-395 project, and Southwest Waterfront. These developments aim to exceed the GBA's mandates and achieve LEED-Gold and Platinum certifications.

✿ **RECOMMENDATION: *Determine if additional energy modeling tools are needed.*** The District should determine whether additional energy modeling tools, along with Energy Star Target Finder, would be appropriate for measuring energy performance targets, and make a recommendation to include other equally acceptable tools or calculations.

Exemptions

The GBA allows exemptions to be made, provided that a project demonstrates “substantial evidence of practical infeasibility or hardship” as a result of the mandates. For those exemption requests that were formerly processed, communication between DDOE (the reviewing agency) and the GBAC was highly efficient and determinations were made in a timely fashion. Unfortunately, several projects were missed during the early years of the GBA's applicability, and several did not receive formal GBA exemption. Explanations for the difficulty in immediately achieving compliance during the early years of the GBA include:

- Publicly-financed projects may have been negotiated and agreed to prior to the applicability of the GBA, but funds were actually received after applicability of the GBA. For example, DHCD identified a number of projects that were supposed to receive public funding in FY07, but were not actually funded until FY09. These projects had been designed by the private partner prior to the enactment of the GBA and are likely to be exempted from the GBA.
- Projects with multi-year negotiations or phased financing have been difficult to track, particularly when those negotiations began prior to the applicability of GBA. For example, DMPED projects can be funded and developed in phases, which made it difficult to accurately account for projects subject to the GBA in the early years. Going forward, multi-year negotiations and financing will become less of an issue for proper documentation, since the requirements of the GBA are now well-understood.
- DGS identified two schools that were recently completed and did not meet GBA green building standards: (1) Deal Middle School and (2) Addison Elementary. Both of these projects were funded prior to October 1, 2007, and so did not trigger the GBA requirements.
- The design schedule has been a factor in the ability of District agencies to green early projects. FEMS was not able to redesign its 2002-financed Engine 10 project in time for a 2008 renovation to meet LEED certification, but the agency has installed energy

³⁰ Some of these projects are mixed-use projects with a majority residential or non-residential use.

efficient windows and apparatus doors, and efficient T5 and T8 lighting. FEMS is currently seeking full funding for at least eight fire station renovations. Some of these projects received initial funding in 2003 and 2004, but are being designed to meet GBA standards.

To date, exemption requests have primarily been made for publicly-financed projects, specifically:

- *Pentacle Apartments Rehabilitation Project.* Horning Brothers requested an exemption for their Pentacle Apartments rehabilitation of 167 affordable housing units on the basis that the project was fully designed, but did not receive financing before the GBA requirements started. The project was fully designed in February 2008, building permits received September 2008, and tax credit financing delayed past October 2008 due to market conditions. An exemption was granted based on the project's circumstances, including lack of notice, financial hardship resulting from substantial design changes, and a threat to financing resulting from delays to permitting. The project does include green features, such as Energy Star windows, water conservation measures, recycling and use of low VOC paints and adhesives. The exemption was approved on November 7, 2008.
- *Upper Cardozo Health Center.* Unity Health Care, Inc. requested an exemption for the renovation of Upper Cardozo Health Center on the basis that the project had been designed in full before 2007, but did not receive public bond financing until 2009. The addition of public financing triggered GBA requirements. The exemption request was denied in December 31, 2009, based on the fact that the public financing could compensate the developer for the financial hardships caused by redesigning of the project to meet GBA requirements.
- *Village at Chesapeake Southern Court Apartments.* Vesta Corporation requested an exemption for the Village at Chesapeake Southern Court Apartments for the renovation of 118 affordable housing units, based on the fact that the project was permitted in 2006, prior to the effective dates of the GBA. A letter outlining the circumstances under which an exemption can be granted was sent to Vesta Corporation on May 28, 2009, and they did not pursue their exemption request following receipt of the letter.
- *Arts and Technology Academy.* The Arts and Technology Academy, a publicly-funded charter school, requested GBA exemption for two trailer structures (totaling 1,500 square feet), on the grounds that the requisite LEED for Schools standard could not be applied to temporary structures. An exemption was granted on January 14, 2011, after it was verified that the LEED standard could not be applied to temporary structures.
- *Skyland Tower Center.* DMPED requested an exemption for a 2,773 square foot cable utility building, to be constructed at the Skyland Tower Center, on the basis that the building does not meet core eligibility criteria established by the USGBC, because the building is to be unoccupied. Skyland Tower Center is a redevelopment project on District land. The exemption request was granted on May 5, 2011, on the basis that projects without at least one full-time occupant cannot seek certification under LEED.

- *1431 Okie Street NE.* DPW requested an exemption for a series of 19 conjoined temporary trailers that will house DPW’s street and alley cleaning operations for the next five years, after which DPW intends to build a permanent structure. DPW requested an exemption based on the temporary status of the project. The exemption request was granted on November 28, 2011, on the basis of the temporary nature of the structures. However, the exemption approval letter notes that temporary trailers are becoming increasingly used by District agencies, and the District may want to address this issue with specific green building requirements for such structures in the future.

Summary of Public Sector Implementation

Overall, the progress made by District’s agencies is impressive. The District has completed more green building projects than the federal government during the same approximate time frame, despite the significant difference in their respective portfolio scope and size. Also, District projects are exceeding the mandated LEED-Certified or Silver certification thresholds and many are achieving LEED-Gold, most notably led by the effort to modernize the District’s public schools. Finally, many public projects are incorporating and testing new technologies, for example:

- Phelps High School has an on-site wind turbine;
- Woodson High School is incorporating ground-source heat pump system and green roofs;
- Benning Road Library has a green roof and incorporates pervious paving; and,
- FEMS and DGS are incorporating energy conservation measures, green roofs, and low-impact development (“**LID**”) techniques into smaller projects that fall below the GBA project thresholds.

C. Private Sector Report

The GBA requirements for private projects are phased in over time. The first mandate took effect January 2009, which applied to non-residential projects larger than 50,000 square feet. As required by Section 4 of the GBA, these projects shall submit a non-binding green building checklist (the “**Green Building Intake Form**” or “**Checklist**”) with their building permit application. The purpose of the Checklist is to increase developer awareness of green building elements. There is no information available on the number of Green Building Intake Forms completed, or total number of projects larger than 50,000 square feet that applied for building permits; also, an evaluation of the content of the Checklist is merited to determine whether or not there are any findings to be derived from the forms themselves.

The second mandate is effective January 1, 2012, and all private projects larger than 50,000 square feet and permitted after that date are required to attain LEED certification. There has been significant discussion about how the District, specifically DCRA, will manage private sector compliance with the GBA, as well as the bond requirement. Rules and regulations need to be completed by DCRA, and additional staff hired, to respond to private project permit applications being processed in 2012.

- ✿ **RECOMMENDATION: *Integrate green building compliance into the permit process.*** DCRA is the “one-stop shop” for all building permits and Certificates of Occupancy. As part of the permit intake and approval process, green building compliance needs to be more thoroughly integrated and automated. DDOE and/or other agencies with GBA responsibilities should be granted access to the status of green building permits.

- ✿ **RECOMMENDATION: *Track business and workforce development opportunities related to green building.*** Given the opportunity for business and job development related to green building, this report could include a section on green building business and job growth. Determinations will need to be made about which metrics to track, how to track them, and which agency has responsibility for data collection. An anticipated challenge will be tracking business and job growth related to private development, as private parties are not required to track this information unless they are subject to the District’s CBE or First Source Hiring Agreements.

IV. Benchmarking Report

The GBA (as amended by the CAEA) mandates on-going annual building benchmarking³¹ for: (a) District buildings greater than 10,000 square feet, starting in 2009, and (b) private sector buildings larger than 200,000 square feet starting in 2011 (now 2012 because of delays in the issuing of regulations). The requirements incrementally apply so that all buildings greater than 50,000 square feet will be benchmarked by the end of 2014. The GBA identifies EPA's Energy Star Portfolio Manager³² as the approved benchmarking tool for all properties.

The purpose of the benchmarking (which typically measures water and energy usage, although not exclusively) requirement is to create performance profiles for the largest buildings in the city, which in turn will provide tenants, investors, and owners with valuable information to inform leasing, purchasing, and capital improvement decisions. Transparent building performance information is expected to drive the real estate market toward greater water and energy efficiency, without explicitly requiring that retrofit improvements be made.

Approximately 200 public buildings have been benchmarked, the results of which are provided in this chapter; and an estimated 1,800 private buildings are greater than 50,000 square feet in size and will be subject to the benchmarking requirement. In addition to benchmarking, the District is mandated to publicly disclose the public and private benchmarking results, which is a meaningful component of the mandate, as it promotes building performance awareness and, hopefully, valuation.

Implementing the benchmarking requirement has included the following activities:

- (1) Collecting and reconciling utility bills and building information for the District's 300+ building portfolio;
- (2) Evaluating and publishing the information once it was uploaded;
- (3) Training public and private sector asset and property managers on how to use Energy Star Portfolio Manager; and,
- (4) Promulgating regulations related to this requirement and determining the best course for public disclosure of data.

This section provides the results of the first three activities. Activity 4 is discussed in Chapter V, Subsection B: Rulemaking.

³¹ Benchmarking is the process of comparing one's building operations practices and performance metrics to industry best practices, averages or norms.

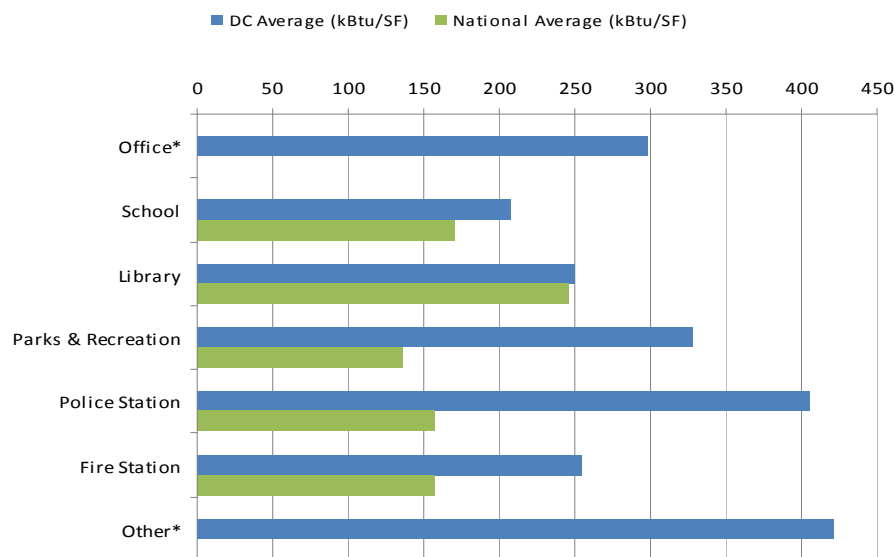
³² www.energystar.gov/benchmark

A. Public Sector Benchmarking Results

The District initiated building benchmarking in 2008 with a pilot portfolio of ten public buildings, then benchmarked a majority of its portfolio in 2009. Benchmark results for 2009 show that overall, public buildings in the District perform below average compared to similar buildings nationwide.³³ Specifically:

- Libraries and office buildings perform at just below the national average
- District police stations use 2.5 times more energy than their counterparts nationwide
- District recreation facilities and community centers use approximately 2.5 times more energy than similar facilities nationwide
- District fire stations use about 60% more energy than the national average
- Data from the District's schools remains incomplete (due to school closures and other building-specific operations that need to be further examined). However, based on the data available, the public schools averaged 29 points on the Energy Star rating system, compared to the national average of 50 points.
- District office buildings averaged 42 points on the Energy Star rating score, compared to the national average of 50 points.³⁴

Chart 5: EnergyStar Benchmark Results, District Buildings Energy Use Intensity



³³ A full report of the District's benchmarking results is available at www.ddoe.dc.gov

³⁴ There is no national EUI average for government office buildings and "other" buildings. To compare government office building performance, the District compared performance to national market rate office, as measured by the Energy Star rating system.

The benchmarking exercise generated many questions by District agencies. It is generally agreed that building characteristics, building information, and building performance needs to be more consistently tracked for District buildings. To address some of the inconsistencies in data availability and other, DGS initiated a system-wide buildings condition assessment and performance monitoring for many buildings. These changes should improve the quality of the benchmarking data going forward.

Despite the inconsistencies in data, the 2009 benchmarking results started to highlight opportunities for improvement, such as: (a) the need for more accurate data and performance tracking; (b) the need to conduct energy audits and condition assessments for the entire public portfolio given the consistently poor performance across almost all building types; and (c) the opportunity to significantly invest in energy and water efficiency improvements. For example, energy efficiency retrofits are being implemented at One Judiciary Square, the District's largest office complex, and the building's energy data is being tracked to demonstrate how cost reductions can be achieved without sacrificing tenant comfort and building operator safety.

B. Private Sector Benchmarking Results

Section 4 of the GBA requires private buildings of 50,000 square feet of gross floor area or more to be benchmarked using Energy Star Portfolio Manager. The requirement is phased in over a four-year period:

- Buildings more than 200,000 square feet of gross floor area beginning in 2010 and thereafter;
- Buildings more than 150,000 square feet of gross floor area beginning in 2011 and thereafter;
- Buildings more than 100,000 square feet of gross floor area beginning in 2012 and thereafter; and
- Buildings more than 50,000 square feet of gross floor area beginning in 2013 and thereafter.

To support the adoption of the new requirement, DDOE held a series of work groups in 2009 and 2010 in preparation for release of the regulations guiding benchmark reporting. Also, by request, the first public reporting date was pushed to July 2011 to give the District and private industry adequate time to develop and comment on the benchmarking regulations. The proposed regulations were posted for public comment on October 21, 2011, via the *D.C. Register* and, as of the date of this report, are still being finalized. The reporting cycle for private building benchmarking will begin in the summer of 2012 for the previous year's operations.

The benchmarking requirement may be one of the most impactful elements of the GBA. Based on building data collected by the Office of Tax and Revenue (“OTR”), approximately 1,800 buildings, representing 400 million square feet, will be benchmarked and results publicly made available. More than half of the total square footage will be reported in 2012.

V. Codes, Regulations & Legislation

A. Green Construction Codes

Sections 10 and 13 of the GBA lay out a course for continual improvement of building practices through regular code updates. The GBA specifically mandates that “The Mayor shall, in consultation with the GBAC, submit construction code revisions to Council that incorporate as many green building practices as practicable,” and specifically identifies the need to continually improve the energy codes. Code evaluation and recommendations are given to DDOE and the GBAC, with implementation and code reporting responsibilities to DCRA. If conflicts arise between existing codes and the green amendments, the District is instructed to give priority to the more stringent green building practices.

As a result of the requirements of the GBA, the District is establishing itself as a leader in the arena of green codes development. Not only did the District adopt the “30 Percent Solution”³⁵ for improved performance of residential buildings, but the GBAC also successfully included multiple recommendations for greening the District’s construction codes in the 2008 construction codes update, now being enforced.

- In 2008, the District updated the city’s building codes, the most comprehensive update effort since 2003, involving stakeholders such as the GBAC, DDOE, DCRA, the District of Columbia Building Industry Association (“**DCBIA**”), the Apartment and Office Building Association (“**AOBA**”), and others. The following code improvements were adopted:
 - ASHRAE Standard 90.1 update to 2007 version for commercial buildings
 - “30 Percent Solution” energy efficiency strategies for low-rise residential buildings
 - Stormwater management measures, including rainwater retention on site and easier methods for disconnecting downspouts
 - More stringent efficiency requirements for water fixtures and plumbing, and removal of impediments for use of waterless urinals and green piping
 - Heat island management requirements for flat roofs, with cool, green, or limestone ballast options
- In 2010, the District, through a newly formed CCCB, undertook a second significant green codes update. The CCCB created thirteen TAGs, including the Green Building TAG and the Energy TAG, to provide recommendations to the CCCB. GBAC member Ethan Landis volunteered to Chair the Green Building TAG. As of the date of this report, the CCCB is making final decisions about formal proposed amendments to the D.C. Construction Code.

³⁵www.thirtypercentsolution.com, advanced by the Energy Efficient Codes Coalition.

New Roles for Codes in Green Building

International and national building code bodies have identified construction codes as an essential tool for improving building performance. Guidance from the ICC and the IECC has significant influence on local code changes, as most jurisdictions in the U.S., including the District of Columbia, base their energy codes on the IECC's construction standards and base their construction codes on ICC standards. The ICC will publish its International Green Construction Code ("IGCC") in 2012, which, together with the 2012 IECC construction standards, target energy efficiencies of 30% or greater compared to the 2006 IECC for commercial and residential buildings. These two publications will be available in time for the District to deliberate on them during the 2013 codes approval cycle.

Building codes enforcement is one of the most effective tools available for improving environmental and energy performance of buildings. In the District, as in other parts of the country, compliance and enforcement needs to be significantly improved. The codes have limited impact if plan reviewers do not check for green construction specifications, or if building inspectors are not trained in new techniques or requirements when confirming permit plan compliance. In 2009, DCBIA and non-governmental members of the GBAC recommended that the District spend \$2.5 million to improve compliance with energy codes, which indicates the scale of investment that may be required to ensure proper code compliance training and enforcement. If high performance codes are to be considered as a viable alternative to a LEED-based green building requirement for many of the city's buildings, code enforcement will be paramount to this strategy's success.

- ✿ **RECOMMENDATION: *Discuss the potential for building codes to replace the LEED or GCC requirements.*** Suggestions have been made, without needed analysis or discussions, to utilize the building code to set the "floor" (or minimum standard) for green building in lieu of requiring LEED or GCC certification. The role for LEED or GCC would then instead be used as part of an incentive structure to encourage deeper green building beyond what the code requires. The intention of this idea is to achieve a uniform green building standard across the entire District of Columbia (and not just have green building apply to buildings of a certain size).
- ✿ **RECOMMENDATION: *Discuss how to accelerate code adoption.*** Given the positive impact that greening the construction codes would have on advancing the green building agenda, the GBAC should propose to the Mayor and the CCCB a recommendation for accelerating and making more consistent the CCCB's review and approval process.

B. Rulemaking

Rulemaking is a critical component to successful implementation. Various agencies have responsibilities for rulemaking under the GBA. A list of the completed, drafted but not finalized, and rules yet to be drafted are provided in this section.

Rulemaking Completed and in Effect

Two regulations have been written by DDOE. They are:

- (i) 55 D.C. Register 11318, Issue Volume 55, Number 44, issued October 31, 2008

DCMR Title 20 Chapter 35 had the following sections added:

- Section 3501: Standards for New School Buildings
- Section 3511: Exemptions from Green Building Act
- Section 3512: Expedited Permit Review
- Section 3599: Definitions

These rules include three provisions necessary to satisfy certain DDOE responsibilities under the GBA: (1) to adopt the LEED rating system for schools as the standard for new and substantially renovated public schools green building standards; (2) to establish the basis and process for granting exemptions from the GBA's requirements; and (3) to establish an internal DDOE expedited permit review provision for all projects that DDOE determines offer exemplary environmental benefits. DDOE also notes that the specific language in section 3(b) of the GBA only requires school buildings to meet the LEED Certified level, unlike other District government buildings which must meet the LEED Silver certification level.

- (ii) 58 D.C. Register 6422, Issue Volume 58, Number 30, issued July 29, 2011

DCMR Title 20 Chapter 35 is amended, with replacements and amendments to:

- Subsection 3501.1: the current edition of LEED is 2009
- Subsection 3501.2: the current edition of GCC is 2008

This regulation establishes the USGBC's LEED standard and Enterprise Community Partners' GCC standard to be LEED 2009 and Green Communities 2008, respectively. The updates of LEED 2009 and Green Communities 2008 further advance the goals of the GBA to establish high-performance building standards. These standards require the planning, design, construction, operation, and maintenance of building projects that help to mitigate negative environmental, economic, and social impacts associated with built structures in the District.

Regulations completed by agencies other than DDOE have not been reported, but should be included in future reports.

Rulemakings Under Development

- (iii) DDOE has drafted and proposed changes to DCMR Title 20 Chapter 35:
- New Section 3513: Energy Performance Benchmarking of Privately-Owned Buildings
 - Amended Section 3599: Definitions

The proposed regulations implement the provisions of the GBA which mandate, according to building size and a defined schedule, owners of privately-owned buildings to annually

benchmark their buildings using the Energy Star Portfolio Manager benchmarking tool; that the benchmark and Energy Star statements of energy performance for each building be submitted to DDOE; and that beginning with the second annual filing for a given building, DDOE make the results available to the public. In addition, the proposed regulations set forth DDOE's implementation and enforcement of the benchmarking requirements.


- (iv) DGS is developing regulations that give weighted funding consideration for District government facilities exceeding the LEED-Silver standard.

Regulations under development by agencies other than DDOE and DGS have not been reported, but should be included in future reports.

Rulemakings Not Drafted

- (v) DCRA is required to:
 - Establish an internal mechanism to verify compliance with the requirements of Sections 3 and 4 of the GBA (in lieu of LEED certification)
 - Promulgate regulations governing third-party entities that apply to Sections 3 and 4 of the GBA (in lieu of LEED certification)
 - Establish a mechanism to review the qualifications of each approved third-party entity at least every two years to determine if the entity will remain eligible to conduct the verifications required in Sections 3 and 4 of the GBA
 - Promulgate regulations governing the bond requirement
 - Establish a mechanism to extend the period for green building verifications for three (3) successive 4-month periods
 - Promulgate construction codes revisions for building practices that incorporate as many green elements as practicable for the District
 - It is recommended that DCRA also draft the rules for the CAEA's requirement that buildings which submit their first permit for new construction or substantial improvement after January 1, 2012, estimate the energy performance of the building using the Energy Star Target Finder Tool, prior to construction

Regulations not completed by agencies other than DCRA have not been reported, but should be included in future reports.

 **RECOMMENDATION: Rulemaking should be included as a key performance indicator ("KPI") for responsible agencies.** In the annual key performance indicators ("KPI") required for each District agency with implementation responsibilities under the GBA, include the agencies' GBA requirements to ensure accountability.

C. Legislative Amendments

Three legislative amendments have been made to the GBA since its original enrollment in 2006. These amendments are summarized below:

- (i) **Clean and Affordable Energy Act of 2008.** The CAEA added benchmarking and the public disclosure requirement provisions to the GBA. The CAEA was passed unanimously by the Council.
- (ii) **Green Building Technical Corrections, Clarification, and Revision Amendment Act of 2010.** This amendment corrected errors found in the GBA, clarified the bond definition, and allowed the District to adopt the most recent versions of LEED and Green Communities Criteria certification as they were updated by USGBC and Enterprise, respectively. This amendment was passed unanimously by the Council.
- (iii) **Green Building Compliance, Technical Corrections and Clarification Amendment Act of 2012.** This act corrected and further refined various definitions and requirements of the GBA. The act clarifies application for mixed-use and publicly-financed projects, adds a new penalty for failure of publicly funded projects to fulfill GBA, introduces a penalty for failure to comply with benchmarking requirements, further addresses the GBA's financial security requirements, and revises the uses of the Green Building Fund, including more oversight by the Council and GBAC. The amendment was unanimously approved by the Council in early March and signed by the Mayor on March 28, 2012.

The process for proposing and negotiating the terms of the GBA has been extraordinarily cooperative among the Council, the Executive branch, the private building industry, and green building advocates. Leadership and representation from all sectors has been excellent, with proposals, revisions, and analysis being provided by each, and working toward the goal of adopting practical, yet aggressive, green building policies. The good faith efforts of all parties are reflected in the public recognition of the importance of green building and the consistently unanimous approvals by Council for each amendment. This shared vision for a greener Washington is a significant competitive advantage for the city and should be leveraged in its branding, identity and economic opportunity.

VI. Implementation

A. Capacity Building, Training & Education

The District continues to build agency capacity to support green building implementation, although it has taken several years to identify the skills required and to get staff hired. GBA requirements and implementation has lagged as a result, which is expected; however, significant capacity development and education efforts have been made to date.

Capacity Building

Table 3: Hires Made by Agency and by Function

Agency	Year Hired	Current FTEs	Projected Needs
DDOE	FY08	Green building specialist	0.5 FTE for benchmarking 0.5 FTE for PUD review
	FY11	1 LEED AP on staff	
DCRA	FY10	Existing FTE designated as the green building coordinator	1 FTE to serve as full time green building coordinator
	FY10	Existing FTE designated as the green building plan reviewer	1 FTE to serve as full time green building plan reviewer
	FY10	Existing FTE designated as the green building inspector	1 FTE to serve as full time green building inspector
DGS	FY09	Energy Manager	
	FY10	Sustainability Specialist	
	FY10	8 LEED APs on staff	
DGS, schools	FY09	3 project managers designated with green building responsibilities	
	FY10	Green projects coordinator	
DHCD	FY07	Senior Policy Specialist (.5 FTE)	
		2 LEED APs on staff	
DMPED	FY10	Sustainability Coordinator (.25 FTE)	

Training & Education

The District has not initiated an aggressive training program across all agencies; however, agency staff is proactively seeking training and educational opportunities for themselves and for their organization. Training that has been conducted includes:

- In FY09, DGS hired a LEED consultant to train project managers in LEED project management. DGS also created a reference guidebook for project management staff about LEED requirements.

- In FY09 and in FY11, DHCD conducted GCC training for 15 to 25 project managers. DHCD staff conducts on-going education and peer-to-peer learning.
- In FY09, DDOE conducted training for key permitting and inspections staff at DCRA.
- In FY10, DCRA staff attended GCC training, hosted by Enterprise Community Partners and GreenHOME.
- In FY11, DCRA permitting and inspections staff attended energy codes training.

Agencies staff continue to ask for green building training. With the District's membership in the USGBC, agency staff can participate in limited free webinars. Some local training opportunities also exist, but capacity building would be significantly advanced through comprehensive targeted training. To this end, DDOE and DCRA are working to develop or identify a set of training programs should that be funded in FY12 with the Green Building Fund. Specific training requests from District agencies include:

- Energy codes training for DCRA permitting and inspections staff
- Sustainable development training for DMPED staff
- Field-based inspection training for DHCD architects and field inspectors
- Training on new certification standards as LEED and GCC are updated
- Attendance at leading industry conferences, such as USGBC's Greenbuild
- Access to updated manuals and training provided by USGBC, GCC, and Energy Star

Training for private contractors and industry professionals is also a permitted use of the Green Building Fund. However, very limited, if any, training of this type has been provided by the District. This is a deficit in the training conducted to date, and the GBAC recommends that a portion of the proceeds of the Green Building Fund include stakeholder training and education. Some specific education areas have been identified:

- Green codes training for contractors
- Training in rehabilitation specifications for green affordable projects
- New energy codes training for residential builders
- GCC training for contractors serving single-family and small projects
- GBA requirements and updates
- Training in energy benchmarking and stormwater regulations for DHCD and other housing agencies

B. Enforcement & Compliance

Enforcement of, and compliance with, the GBA can occur at multiple levels, through oversight by the Council, agency Director accountability to the Mayor, public disclosure of benchmarking results, publication of an annual green building report, building permitting and inspection of individual projects, and more. There is a significant discussion in this section about the District's permitting and inspections capacity; however, other consistent accountability measures could be put into practice, which would both align stakeholders around green building policies, and ensure that the District provides adequate staff, resources, and regulatory direction to support GBA implementation.

❁ **RECOMMENDATION: *Consistent accountability measures for government implementation should be put into place.*** Similar to the last recommendation, the need for agency accountability is noted. Specific suggestions include: (i) bi-annual Director meetings to review progress on hiring, training, enforcement, regulations, coordination between and among agencies and project compliance; (ii) GBA reporting to the City Administrator and Mayor’s office; and (iii) Council oversight of the annual publication requirements for energy benchmarking results, the Green Building Fund expenditures, and the Green Building Report.

Project Permitting and Inspections

Green building compliance and enforcement continues to be weak. Permitting intake processes (i.e. the Green Building Intake Form), standard operating procedures (“SOPs”) and tracking systems (i.e. the Accela tracking system) have been put in place by DCRA. However, lack of adequate plan review staff and inspectors remains an ongoing concern. Staffing needs have been neglected for several reasons: (a) austerity measures imposed on the government as a result of fiscal hardships during FY10 and FY11; and (b) legal issues around DCRA’s right to enforce the GBA were unresolved. The legal issues include:

- DCRA’s legal authority to enforce legislative requirements outside of the agency’s narrow mission to enforce District codes
- DCRA’s legal authority to reject permit applications for causes other than noncompliance with construction codes
- DCRA’s legal authority to reject a certificate of occupancy on anything other than noncompliance with construction codes

Since the above were resolved, DCRA has developed the following mechanisms to manage GBA projects compliance at the permitting stage:

- Green Building Intake Form for projects 50,000 square feet or larger
- Tracking of green features in the new Accela project tracking system
- SOPs include review for applicable GBA documentation, including LEED and Green Communities Criteria checklists and the general green building intake form, registration with a third party certifying organization if appropriate, demonstration of Energy Star Target Finder compliance, and third party standards for permitting, inspections, and certification for green building
- Preliminary Design Review Meetings (“PDRM”) for large projects subject to the GBA
- Inclusion of GBA requirements in full project permit applications; i.e. a permit application is not deemed completed unless it incorporates documentation demonstrating compliance with the GBA

Benchmarking Compliance

The GBA was amended in 2011 to include a fine of \$100/day for projects that are not in compliance with the benchmarking requirements for private buildings. The efficacy of the fine has not been determined, since the mandates for private building benchmarking were not in effect prior to the publication of this report.

Project Bonding Requirement

The GBA requires some form of financial surety for mandated green building projects. Until the passage of the Green Building Compliance, Technical Corrections, and Clarification Amendment Act of 2012 (“**TCCAA of 2012**”) was passed, obstacles to implementing a “green building bond” were cited, which included arguments about the lack of availability of a “green building bond” in the private marketplace, the pricing associated with a novel and niche product, identification of which party (developer, architect, contractor, or sustainability consultant) is the appropriately responsible party; and others.

As a result of the TCCAA of 2012, the interests of the government to have financial security are better aligned with the range of tools available to private practitioners. Specifically, the types of financial security that are now permitted include: (i) cash deposited into an escrow account; (ii) letters of credit; (iii) bonds; and (iv) binding pledges to fulfill green building certification. If the building owner fails to receive the required green building certification, the District has the ability to draw down on funds or levy fines against the applicant. The efficacy and preferences of the financial security mechanisms have not yet been determined, since the financial security mandates were not in effect prior to the publication of this report.

C. Green Building Fund

DCRA collects green building fees during the permit intake process, which in turn generates a budget for the Green Building Fund, which is to be used for the following purposes:

- Staffing and operating costs to provide technical assistance, plan review, and inspections and monitoring of green buildings
- Education, training and outreach to the public and private sector on green building practices
- Incentives for increasing green building practices

In FY08, DCRA started collecting the authorized green building fees. Funds were first spent in FY10. The table shows incoming revenues and expenditures through August 11, 2011, as well as reductions to the Fund, as authorized by the respective years’ Budget Support Acts (“**BSA**”).

Table 4: Green Building Fund Revenue and Expenditures, FY08 – FY11

Fund Activity	FY08	FY09	FY10	FY11	TOTAL
Revenues	\$ 516,603	\$ 593,145	\$ 886,726	\$ 745,206	\$ 2,741,680
Expenditures	-	-	\$ 431,801	\$ 180,654	\$ 612,455
Reductions to fund	-	\$ 516,603	\$ 1,109,748	\$ 564,552	\$ 2,190,903

FY10 expenditures: \$431,801 for nine full-time employees at DCRA

- 2 engineering technicians
- 3 program specialists
- 1 plan review coordinator
- 1 structural engineer
- 2 code compliance specialists

The Green Building Fund was used in FY10 to retain positions that would otherwise have been cut as part of District-wide austerity measures. In FY10, use of the fund saved nine existing positions at DCRA. Three staff members at the agency took on additional duties in support of GBA implementation as part of the reallocation. The fourth position (the chairman of the newly formed CCCB) was a new hire. The CCCB chairman oversaw the work of the Green Building TAG and other TAGs.

FY11 expenditures: \$180,654 for four full-time employees at DCRA

- 1 code development specialist
- 1 mechanical engineer
- 1 inspection program manager
- 1 program specialist

In response to FY11 budget constraints, the District initiated another government-wide set of austerity measures, asking agencies to reduce their budgets by prescribed amounts. DCRA's FY11 operating budget was reduced by \$772,000, which included \$98,636 from the Green Building Fund. Additionally, \$600,066 in the Fund balance was directed to the general fund to close the FY11 budget gap. As of the initial draft of this report, DCRA had \$155,750 in the Green Building Fund, which funds will be used for training and education in FY12.


While there is widespread recognition of the necessity to balance the District's budget during times of austerity, the loss of fund monies has severely limited opportunities for District staff training and education, as well as training and education for stakeholders, and the creation of incentives. As a result, the TCCA of 2012 now requires that the uses of the Green Building Fund be reported annually to the Council.

RECOMMENDATION: *The Green Building Fund should perform according to a budget plan to be approved on an annual basis.* More stringent protections of the Green Building Fund are highly recommended, so that the District may reap the downstream economic benefits related

to creating and having greener buildings. DCRA should propose an annual budget for the Green Building Fund and receive GBAC acknowledgment or approval of such budget.

D. Incentives

Under the GBA, DCRA is responsible for developing incentives to support green building innovation, with the Green Building Fund as one of the sources of funding. To date, no financial incentives have been created, in part because the private sector requirements have not yet taken effect and because specific subsectors of need have not been identified or analyzed. For example, the District assumes that smaller buildings will require additional incentives to build green, however, the research to confirm this point has not been done. Given limited public resources, incentives should be as targeted and cost-effective as possible. The creation of financial incentives is among the priorities for FY12 and FY13.

 **RECOMMENDATION: *Analyze the areas of need for incentives, and develop the appropriate incentive tools.*** Conduct analyses needed to understand where incentives are required and develop incentive tools to address the greatest priorities of need.

Expedited Permit Review

DCRA developed an expedited permit process for projects that exceed the GBA requirements. The program offered a 30-day review and PDRM for the applicant. Five projects went through this expedited process in 2008 and 2009, and while the results were promising, DCRA's improvements to the overall permit approval process have eliminated expedited review as a significant advantage or incentive. As a result, this incentive is has been ineffective in promoting greener building standards. The PDRM benefit, however, remains appreciated and DCRA is preserving this element.

VII. FY12-13 Work Plan

This chapter needs to be developed further in future Green Building Reports, but is included in this report to establish the framework for near- and medium-term plans to align with the green building vision for the District. The work plan below is organized into six-month increments, and is provided for informational purposes. The work plan should be: informed by a green building vision for the city (which is under development as part of the Sustainable DC effort), developed by the GBAC and District agencies, and approved by the GBAC. The items included in the work plan should be measurable action items, and could include District agency Key Performance Indicators or other accountability mechanisms. At the beginning of 2012, the GBAC should develop the work plan for FY12-13. This work plan does not necessarily include all of the District’s operational requirements to implement the GBA.

Table 5: Proposed Work Plan Format for FY12-13

		GBAC	District of Columbia
FY12	Apr to Sep -12	<ul style="list-style-type: none"> Attend 3 GBAC meetings Participate in Sustainable DC green building vision development Approve 2007-2011 Green Building Report Adopt FY12-13 work plan, based on green building vision for the District Comment on proposed FY12 Green Building Fund uses Track and report on CCCB approval of green construction code adoption Identify areas for incentives development Identify priority areas for education and training 	<ul style="list-style-type: none"> Mayor and Council to reappoint GBAC Coordinate and host 3 GBAC meetings Agencies to confirm list of outstanding regulations and develop a plan for completion with feedback from GBAC Develop a common green building tracking protocol Propose FY12 uses for the Green Building Fund Finalize the list of agencies and instrumentalities subject to the GBA requirements for District-owned buildings Determine green building data needed for analysis and collect/analyze such data Propose FY13 uses for the Green Building Fund
	Oct -12 to Mar -13	<ul style="list-style-type: none"> Attend 3 GBAC meetings 	<ul style="list-style-type: none"> Coordinate and host 3 GBAC meetings Publish 2012 Green Building Report Report mid-year green building activity Implement regulations development plan
FY13	Mar to Oct -13	<ul style="list-style-type: none"> Attend 3 GBAC meetings Develop and approve priorities and work plan for FY14-15 	<ul style="list-style-type: none"> Coordinate and host 3 GBAC meetings Report District’s annual green building activity Implement regulations development plan

Glossary

AOBA	Apartment and Office Building Association
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
AWDZ	Anacostia Waterfront Development Zone
AWDZ Act	National Capitol Revitalization Corporation and Anacostia Waterfront Corporation Reorganization Act of 2007
BSA	Budget Support Act
CAEA	Clean and Affordable Energy Act of 2008
CBD	Central Business District
CCCB	Construction Codes Coordinating Board
DCBIA	District of Columbia Building Industry Association
DCPL	District of Columbia Public Libraries
DCRA	Department of Consumer and Regulatory Affairs
DDOE	District Department of the Environment
DHCD	Department of Housing and Community Development
DMPED	Office of the Deputy Mayor for Planning and Economic Development
DGS	Department of General Services, which, as of 2012, includes the agency formerly known as the Department of Real Estate Services (“ DRES ”) (or the Office of Property Management (“ OPM ”), and the Office of Public Education Facilities Modernization (“ OPEFM ”)
DOC	Department of Corrections
DOH	Department of Health
DPR	Department of Parks and Recreation
DPW	Department of Public Works
DYRS	Department of Youth Rehabilitation Services
FEMS	Fire and Emergency Medical Services

GBA	Green Building Act of 2006
GBAC	Green Building Advisory Council
GBCI	Green Building Certification Institute
GCC	Green Communities Criteria
GSA	U.S. General Services Administration
HFA	Housing Finance Agency
ICC	International Code Council
IECC	International Energy Conservation Code
IGCC	International Green Construction Code
LEED	Leadership in Energy and Environmental Design
LEED-AP	LEED-Accredited Professional
LID	Low-Impact Development
MPD	Metropolitan Police Department
MS4	Municipal Separate Storm Sewer System
OP	Office of Planning
OTR	Office of Tax and Revenue
PDRM	Preliminary Design Review Meetings
RFP	Request for Proposal
SOP	Standard Operating Procedures
TAG	Technical Advisory Group
TCCRAA	Green Building Technical Corrections, Clarification and Revision Amendment Act
UDC	University of the District of Columbia
USGBC	U.S. Green Building Council

List of Maps & Appendices

Map 1A: LEED-Certified Buildings

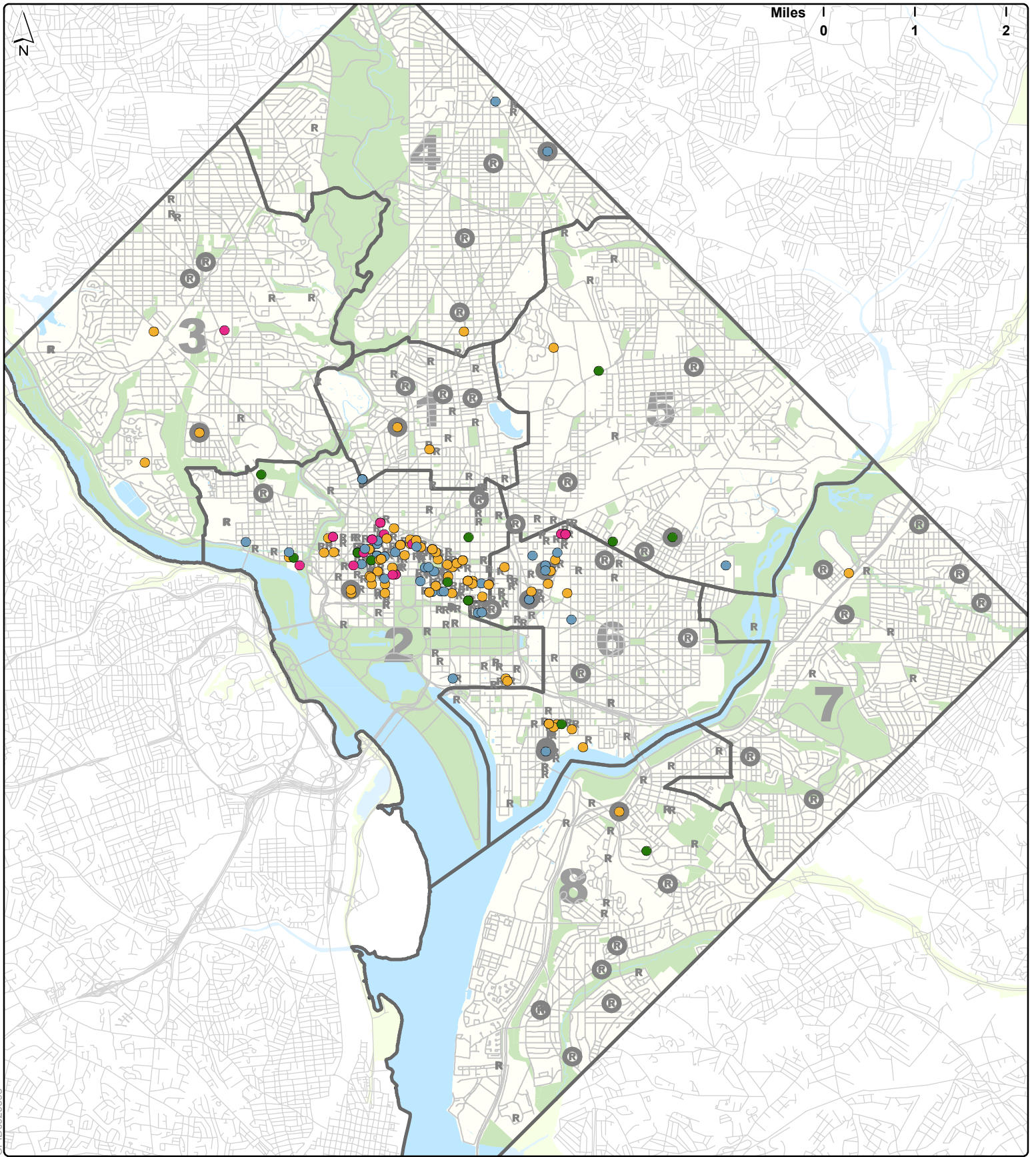
Map 1B: Green Communities Buildings

Appendix A: Green Building Advisory Council

Appendix B: LEED Certifications in the District, 2006-2011

Appendix C: Energy Star Rated Buildings, 2011

Appendix D: Public and Publicly-Financed Projects



LEED Buildings in the District of Columbia

- LEED Certified Platinum
- LEED Certified Gold
- LEED Certified Silver
- LEED Certified
- R LEED Registered
- Local Government Project

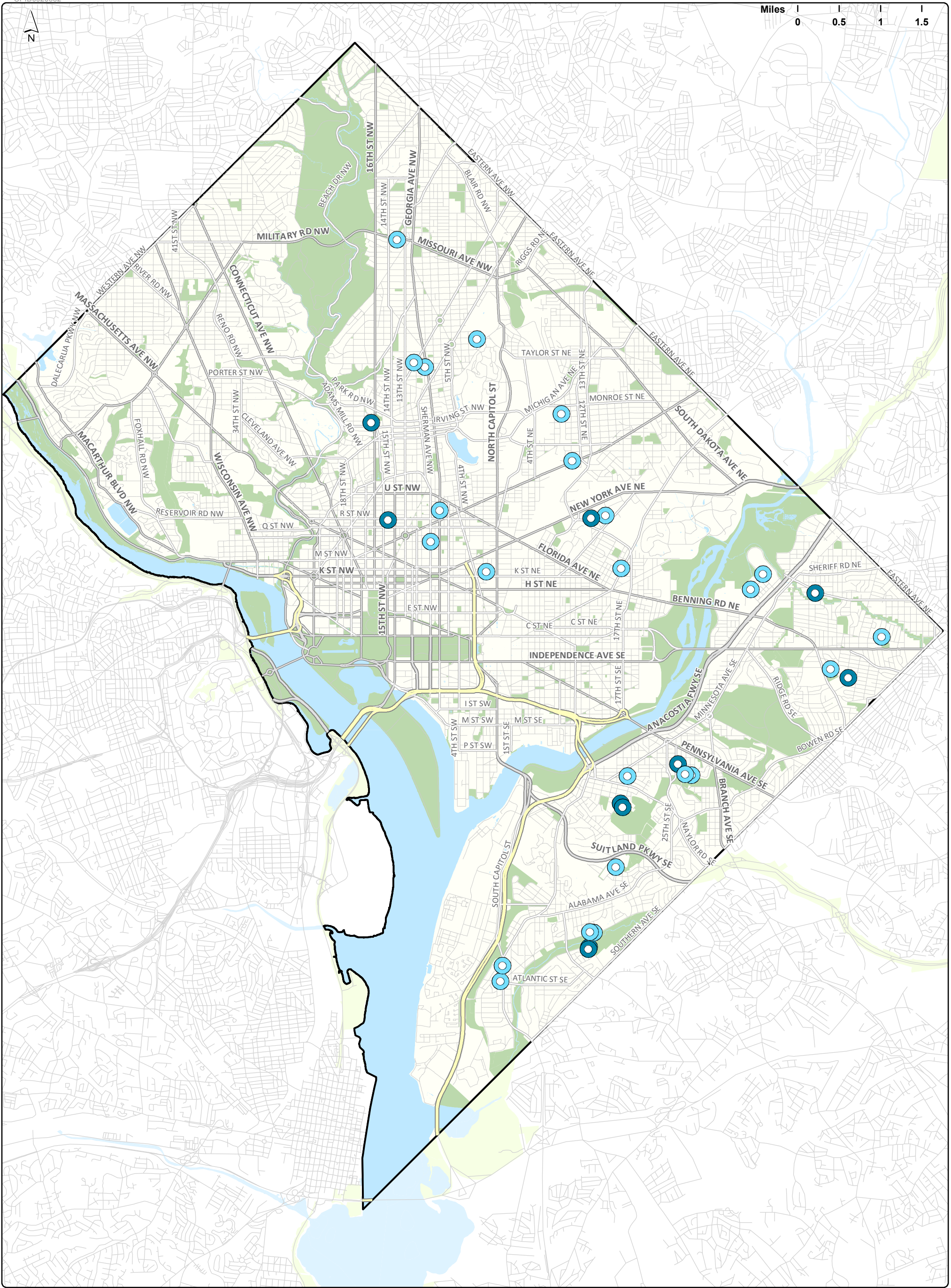
Office of Planning ~ August 9, 2011

Government of the District of Columbia

This map was created for planning purposes from a variety of sources. It is neither a survey nor a legal document. Information provided by other agencies should be verified with them where appropriate.



OPLD0020598



Green Communities Projects as of August 2011




Office of Planning ~ August 16, 2011

Government of the District of Columbia

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 Completed Projects

 Under Construction/In Development

APPENDIX A: GREEN BUILDING ADVISORY COUNCIL

#	Position	Current Appointees
1	DDOE Director or designee (GBAC Chairman)	Christophe Tulou, DDOE Director
2	OP Director or designee	Laine Cidlowksi, OP Urban Sustainability Planner
3	DRES Director or designee	Michael Yambrach, DRES Energy Manager
4	DCRA Director or designee	Rabbiah Sabbakhan, DCRA Chief Building Official and Deputy Director of Permits
5	DHCD Director or designee	Beatrix Fields, DHCD Senior Legislative Specialist, Maribeth DeLorenzo, Senior Policy Specialist
6	Private sector representative	Sean Cahill, Vice President Development, Property Group Partners
7	Private sector representative	Ethan Landis, Principal, Landis Construction
8	Private sector representative	Vacant
9	Non-profit sector representative	Patty Rose, Executive Director, Greenspace
10	Non-profit sector representative	Irv Sheffey, Environmental Justice Organizer, Sierra Club
11	Non-profit sector representative	Paul Schwartz, National Policy Coordinator, Clean Water Action
12	Appointee by Chairman of the Council Committee on Public Services and Consumer Affairs (oversees DCRA)	Chris Van Arsdale, Executive Director, Canal Park Development Association
13	Appointee by Chairman of the Council Committee on the Environment, Public Works, and Transportation (oversees DDOE)	Cliff Majersik, Executive Director, Institute for Market Transformation

APPENDIX B: LEED Certifications, 2006 - 2011

Project Name	Street	Zip Code	LEED System/Version	Certification Level	Registration Date	Certification Date	Owner Type
Society for Neuroscience Headquarters	1121 14th Street NW	20005	LEED CI 2.0	Gold	2/2/05	10/16/06	Non-Profit Org.
TOYOTA GOVERNMENTAL AFFAIRS	601 13TH STREET NW	20005	LEED CI 2.0	Silver	3/14/05	12/22/06	Profit Org.
Confidential	Confidential	Confidential	LEED NC 2.1	Gold	8/18/04	1/18/07	Other
USGBC National Headquarters	1800 Massachusetts Avenue, NW Suite 300	20036	LEED CI 2.0	Platinum	5/25/06	2/6/07	Non-Profit Org.
Lamond Recreation Center	20 Tuckerman St NE	20011	LEED NC 2.1	Silver	12/5/03	3/6/07	Local Government
Sidwell Friends Middle School	3825 Wisconsin Avenue	20016	LEED NC 2.1	Platinum	7/15/04	3/21/07	Non-Profit Org.
Potomac Center North @ 500 12th street	500 12th Street, SW	20024-6121	LEED CS 1.0 Pilots Only	Silver	11/15/04	3/23/07	Profit Org.
Confidential	Confidential	Confidential	LEED NC 2.1	Certified	8/8/05	4/12/07	Profit Org.
United Nations Foundation	1800 Massachusetts Avenue NW - Suite 400	20036	LEED CI 2.0	Gold	7/25/06	5/12/07	Non-Profit Org.
World Resources Institute Expansion	10 G Street, NE	20006	LEED CI 2.0	Gold	12/7/06	7/20/07	Non-Profit Org.
METROPOLITAN WATER DIST. OF S.	500 NEW JERSEY AVE. NW	20001	LEED CI 2.0	Gold	1/24/06	7/24/07	Local Government
Aveda Retail & Institute, Washington, DC	713 7th Street NW	20001	LEED CI 2.0	Silver	1/24/05	8/7/07	Profit Org.
PORTLAND CEMENT ASSOCIATION	500 NEW JERSEY AVENUE, NW	20001	LEED CI 2.0	Silver	4/5/06	8/9/07	Non-Profit Org.
Friends Committee on National Legislatio	245 Second Street, NE	20002	LEED NC 2.1	Silver	9/16/04	8/20/07	Non-Profit Org.
Urban Land Institute	1025 Thomas Jefferson, NW	20007-5201	LEED CI 2.0	Certified	12/10/04	11/8/07	Non-Profit Org.
ENVISION DESIGN - OFFICE	1211 CONNECTICUT AVENUE NW	20036	LEED CI 2.0	Gold	10/20/05	11/12/07	Profit Org.
20 M Street	20 M Street, SE	20003	LEED CS 2.0	Gold	6/15/05	2/12/08	Profit Org.
Alliance to Save Energy	1850 M STREET NW	20036	LEED CI 2.0	Silver	1/24/06	2/27/08	Non-Profit Org.
LEED Retail (NC) (USGBC Test Project) 2	1800 Mass Ave	20036	LEED Retail (NC) 1.0 Pilots Only	Certified	2/27/08	2/28/08	Profit Org.
1101 New York Avenue	1101 New York Avenue, NW	20002	LEED CS 1.0 Pilots Only	Gold	9/14/04	4/23/08	Profit Org.
Natural Body Spa & Shoppe - West End	1104 24th Street NW	20037	LEED CI 2.0	Gold	6/12/07	6/3/08	Profit Org.
CB Richard Ellis - DC	750 9th Street NW	20004	LEED CI 2.0	Gold	4/26/07	6/19/08	Profit Org.
Haworth DC Showroom	575 SEVENTH ST.	20004	LEED CI 2.0	Gold	1/25/06	6/30/08	Profit Org.
Confidential	Confidential	Confidential	LEED Retail (CI) 1.0 Pilots Only	Silver	4/2/08	7/7/08	Profit Org.
Confidential	Confidential	Confidential	LEED Retail (CI) 1.0 Pilots Only	Silver	4/2/08	7/7/08	Profit Org.
Confidential	Confidential	Confidential	LEED Retail (CI) 1.0 Pilots Only	Silver	4/2/08	7/7/08	Profit Org.
SEC Child Care Center	100 F Street, NE	20549	LEED CI 2.0	Gold	9/19/06	8/25/08	Federal Government
Union of Concerned Scientists	1825 K Street, NW	20006	LEED CI 2.0	Gold	10/29/07	9/16/08	Non-Profit Org.
Gensler DC Office Expansion	2020 K Street NW	20006	LEED CI 2.0	Silver	1/30/07	10/6/08	Other
APPA	1875 Connecticut Avenue NW	20009	LEED CI 2.0	Certified	5/4/07	11/10/08	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	8/2/07	11/19/08	Non-Profit Org.
Dorsky Hodgson Parrish Yue, DC Office	1825 M Street NW	20036	LEED CI 2.0	Silver	11/29/07	12/10/08	Profit Org.
Brookfield Properties	750 9th Street NW	20001	LEED CI 2.0	Gold	11/30/07	1/7/09	Profit Org.
Delucchi +	1828 L Street, NW, Suite 240	20036	LEED CI 2.0	Silver	10/30/07	1/21/09	Profit Org.
American Legacy Foundation	1724 Massachusetts Avenue	20036	LEED NC 2.2	Gold	3/13/07	1/23/09	Non-Profit Org.
1331 L Street	1331 L Street	20006	LEED CS 2.0	Gold	1/4/07	1/28/09	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Platinum	1/25/07	2/2/09	Profit Org.
Founding Farmers	1924 Pennsylvania Ave, NW	20006	LEED CI 2.0	Gold	6/22/07	3/11/09	Profit Org.
1050 K ST. NW	1050 K ST. NW	20001	LEED CS 1.0 Pilots Only	Gold	1/31/06	3/31/09	Profit Org.
The Millennium Building	1909 K Street, N.W.	20036	LEED EB 2.0	Certified	5/22/07	4/1/09	Profit Org.
LINCOLN COTTAGE - VISITOR EDUC	3700 N. CAPITOL ST., NW	20011	LEED NC 2.2	Gold	1/18/06	4/3/09	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Certified	6/25/07	4/6/09	Other
Council For Responsible Nutrition	1828 L St. NW	20006	LEED CI 2.0	Certified	12/7/07	4/14/09	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	11/26/07	4/22/09	Profit Org.
Bechtel Government Affairs Office	750 9th Street, NW	20001	LEED CI 2.0	Platinum	4/22/08	5/14/09	Profit Org.
Lafayette Tower	801 17th Street, NW	20036	LEED CS 2.0	Platinum	6/19/07	5/14/09	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	1/14/08	5/26/09	Profit Org.

APPENDIX B: LEED Certifications, 2006 - 2011

Project Name	Street	Zip Code	LEED System/Version	Certification Level	Registration Date	Certification Date	Owner Type
AAAS' LEED-EB Project	1200 New York Ave., NW	20005	LEED EB 2.0	Gold	6/13/07	6/1/09	Non-Profit Org.
Gables at Takoma	7035 Blair Road NW	20012	LEED NC 2.2	Silver	8/1/06	6/4/09	Profit Org.
Hickok Cole Architect 4th Floor Renovati	1023 31st St. NW	20007	LEED CI 2.0	Gold	9/25/07	6/8/09	Profit Org.
Knoll DC	1050 K Street, NW, 2nd floor	20005	LEED CI 2.0	Gold	12/6/07	6/8/09	Profit Org.
FOX Architects - DC Build-out	1121 14th St. NW, 3rd floor	20005	LEED CI 2.0	Gold	5/2/07	6/12/09	Individual
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	6/22/07	6/19/09	Profit Org.
Edison Place	701 9th Street, NW	20001	LEED EB O&M	Gold	9/6/07	6/19/09	Profit Org.
Cassidy & Pinkard Colliers - DC Offices	2101 L Street, NW	20037-1526	LEED CI 2.0	Silver	3/5/08	7/1/09	Profit Org.
VOA Office	722 12th Street NW	20002	LEED CI 2.0	Certified	8/23/07	7/7/09	Profit Org.
USGBC Headquarters	2101 L Street NW	20037	LEED-CI v2009	Platinum	4/30/09	7/10/09	Non-Profit Org.
55 M Street, SE	55 M Street, SE	20001	LEED CS 2.0	Gold	6/26/07	7/14/09	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	2/22/08	7/24/09	Profit Org.
GALLAUDET UNIVERSITY SORENSON	GALLAUDET UNIVERSITY	20002	LEED NC 2.1	Certified	12/9/05	7/29/09	Other
UNEP Relocation Project	900 17th Street NW	20006-2501	LEED CI 2.0	Gold	1/28/08	7/31/09	Other
Confidential	Confidential	Confidential	LEED CS 2.0	Gold	6/4/07	8/13/09	Profit Org.
DC Parks - Trinidad Community Center	1310 Childress Street, NE	20002	LEED NC 2.1	Certified	11/12/03	8/13/09	Local Government
Wachovia South East DC Branch	20 M St., SE	20003	LEED CI 2.0	Silver	1/24/08	8/28/09	Profit Org.
1225 Connecticut Avenue	1225 Connecticut Avenue, N.W.	20036	LEED CS 2.0	Platinum	1/31/08	9/25/09	Profit Org.
American Chemical Society - Main Bldg	1155 16th St. NW	20036	LEED EB O&M	Gold	3/31/07	9/27/09	Profit Org.
Independent Sector	1602 L Street NW	20036	LEED CI 2.0	Gold	5/21/08	10/2/09	Non-Profit Org.
Council on Foreign Relations	1777 F Street NW	20006	LEED NC 2.2	Gold	9/5/07	10/2/09	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	2/11/09	10/15/09	Profit Org.
National Geographic Society HQ Recert	1145 17th st	20036	LEED EB 2.0	Gold	5/4/07	10/21/09	Non-Profit Org.
Market Square	701 Pennsylvania Avenue, NW	20004	LEED EB O&M	Silver	5/12/08	10/28/09	Profit Org.
Headquarters II - Existing Building	1900 Pennsylvania Ave, NW	20431	LEED EB O&M	Gold	7/9/09	10/31/09	Other
Confidential	Confidential	Confidential	LEED CI 2.0	Certified	3/19/09	11/3/09	Profit Org.
Parsons	100 M Street SE	20003	LEED CI 2.0	Certified	2/19/08	11/3/09	Profit Org.
1501 M Street	1501 M Street	20005	LEED CS 2.0	Certified	2/4/08	11/3/09	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Platinum	8/15/08	11/6/09	Profit Org.
Confidential	Confidential	Confidential	LEED CS 2.0	Silver	6/26/07	11/6/09	Profit Org.
1228 9th Street NW	1228 9th Street, NW	20001	LEED NC 2.2	Certified	6/24/07	11/19/09	Profit Org.
Confidential	Confidential	Confidential	LEED NC 2.1	Gold	1/10/05	11/20/09	Local Government
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	9/4/08	11/23/09	Profit Org.
Headquarters I - Existing Building	700 19th St. NW	20431	LEED EB O&M	Gold	7/9/09	11/23/09	Other
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	12/1/08	12/2/09	Profit Org.
700 Sixth Street	700 Sixth Street, NW	20001	LEED CS 2.0	Platinum	4/8/03	12/8/09	Profit Org.
Confidential	Confidential	Confidential	LEED CS 2.0	Gold	12/22/06	12/15/09	Profit Org.
GGA	2900 K Street NW	20007	LEED CI 2.0	Platinum	8/15/08	1/8/10	Profit Org.
Confidential	Confidential	Confidential	LEED NC 2.1	Silver	1/26/04	1/12/10	Local Government
Confidential	Confidential	Confidential	LEED-EB:OM v2009	Gold	5/11/09	1/15/10	Federal Government
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	9/11/08	1/27/10	Profit Org.
901 E Street - Core & Shell	901 E Street, NW	20004	LEED CS 2.0	Silver	6/13/08	2/2/10	Non-Profit Org.
1775 Pennsylvania Ave. NW	1775 Pennsylvania Ave. NW	20006	LEED CS 2.0	Silver	12/3/07	2/8/10	Profit Org.
McDonough School of Business	O and 37th Streets	20057	LEED NC 2.2	Silver	3/13/07	2/23/10	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CS 2.0	Gold	3/28/07	3/5/10	Non-Profit Org.
H.D. Cooke Elementary School	2525 17th St. NW	20001	LEED for Schools 2.0	Gold	1/9/08	3/8/10	Local Government
Hamilton Square	600 14th Street, N.W.	20005	LEED EB O&M	Silver	6/10/09	3/15/10	Profit Org.

APPENDIX B: LEED Certifications, 2006 - 2011

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National Geographic Society II	1145 17th st NW	20036	LEED EB 2.0	Gold	8/25/08	3/22/10	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	8/18/08	3/24/10	Profit Org.
Deere & Co	801 17th St NW, Suite 200	20006	LEED CI 2.0	Certified	2/9/09	4/1/10	Profit Org.
CUA Residence Hall - Phase 1	620 Michigan Ave. N.E.	20064	LEED NC 2.2	Certified	10/16/06	4/5/10	Non-Profit Org.
Residence Hall at Square 80	Residence Hall at Square 80, The George	20052	LEED NC 2.2	Gold	8/8/08	4/5/10	Non-Profit Org.
Patriot's Plaza II	375 E STREET, SW	20024	LEED CS 1.0 Pilots Only	Gold	3/15/05	4/9/10	Other
Patriot's Plaza III	355 E STREET SW	20024	LEED CS 1.0 Pilots Only	Gold	3/15/05	4/9/10	Other
Pew Charitable Trusts at 901 E Street	901 E Street, NW	20004	LEED CI 2.0	Gold	6/13/08	4/22/10	Non-Profit Org.
US Trust Relocation	730 15th Street	20005	LEED CI 2.0	Silver	1/16/09	4/22/10	Profit Org.
IFC Headquarters Building	2121 Pennsylvania Avenue, NW	20433	LEED-EB:OM v2009	Platinum	6/9/09	4/30/10	Profit Org.
1129 20th Street	1129 20th Street, NW	20036	LEED CS 2.0	Gold	2/29/08	5/3/10	Profit Org.
Phelps ACE High School	704 26th Street NE	20002	LEED for Schools 2.0	Silver	8/7/07	5/4/10	Federal Government
Confidential	Confidential	Confidential	LEED-EB:OM v2009	Silver	7/14/09	5/7/10	Other
901 K Street, NW	901 K Street, NW	20001	LEED CS 2.0	Gold	2/9/07	6/3/10	Profit Org.
Confidential	Confidential	Confidential	LEED Retail (CI) 1.0 Pilots Only	Certified	8/24/07	6/4/10	Other
Confidential	Confidential	Confidential	LEED CI 2.0	Platinum	8/18/08	6/8/10	Profit Org.
National Education Association	1201 16th St NW	20036	LEED EB O&M	Gold	2/13/07	6/14/10	Non-Profit Org.
1200 Nineteenth Street, NW	1200 19TH Street, NW	20036	LEED CS 2.0	Platinum	12/19/07	6/15/10	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	12/16/08	6/16/10	Profit Org.
School without Walls	2130 G St. NW	20037	LEED for Schools 2.0	Gold	12/1/08	6/17/10	Local Government
The Westory	607 14th Street, NW	20005	LEED EB O&M	Silver	4/6/09	6/29/10	Profit Org.
899 North Capitol Street	899 North Capitol Street, NE	20002	LEED-EB:OM v2009	Silver	8/10/09	7/1/10	Profit Org.
999 North Capitol Street	999 North Capitol Street, NE	20002	LEED-EB:OM v2009	Silver	8/10/09	7/1/10	Local Government
Bryan Cave	1155 F Street, NW	20004	LEED CI 2.0	Gold	5/19/08	7/21/10	Profit Org.
Unite Here! Local 25	901 K St NW, Suite 200	20001	LEED CI 2.0	Gold	3/17/09	7/22/10	Other
1229-1231 25th Street	1229-1231 25th Street NW	20037	LEED NC 2.2	Gold	1/15/08	7/23/10	Profit Org.
PNC -2501 Penn (West End)	2501 Pennsylvania Ave. NW	20037	LEED CI 2.0	Gold	6/6/08	8/4/10	Profit Org.
799 9th Street, NW	799 9th Street, NW	20001	LEED EB O&M	Gold	5/14/09	8/4/10	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Certified	2/23/09	8/13/10	Other
American Wind Energy Association	1501 M Street, NW	20005	LEED CI 2.0	Gold	5/5/08	8/16/10	Non-Profit Org.
American Society of Hematology	2021 L Street, NW	20009	LEED NC 2.2	Platinum	10/30/08	8/19/10	Non-Profit Org.
Two Constitution Square	145 N Street NE	20002	LEED CS 2.0	Platinum	6/25/07	9/9/10	Profit Org.
Savoy Elementary School	2400 Shannon Place, SE	20020	LEED NC 2.2	Gold	11/8/06	9/13/10	Local Government
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	6/18/09	9/16/10	Profit Org.
Confidential	Confidential	Confidential	LEED CS 2.0	Platinum	6/21/07	9/21/10	Profit Org.
1121 14th Street	1121 14th Street	20005	LEED-EB:OM v2009	Gold	8/10/09	9/22/10	Profit Org.
Susan G. Komen for the Cure	901 E Street, NW	20001	LEED CI 2.0	Certified	12/11/08	9/27/10	Non-Profit Org.
1350 I Street, NW	1350 I Street, NW	20005	LEED EB O&M	Silver	6/19/09	9/29/10	Other
Confidential	Confidential	Confidential	LEED NC 2.2	Gold	5/25/07	10/5/10	Profit Org.
FERC	1100 First St, N.E.	20426	LEED-CI v2009	Silver	9/11/09	10/8/10	Federal Government
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	10/20/08	10/11/10	Profit Org.
Davis Polk & Wardwell, DC Office	901 15th Street	20005	LEED CI 2.0	Silver	5/20/09	10/14/10	Profit Org.
2001 K St	2001 K St NW	20006	LEED-EB:OM v2009	Gold	7/13/09	11/2/10	Profit Org.
1828 Fitness Center and Offices	1828 L Street NW	20036	LEED-CI v2009	Gold	8/11/09	11/10/10	Profit Org.
Columbia Center	1152 15th Street, NW	20005	LEED-EB:OM v2009	Silver	11/3/09	11/10/10	Other
Becton Dickinson	700 6th Street NW	20001	LEED-CI v2009	Gold	11/18/09	11/22/10	Profit Org.
One Constitution Square	1275 First Street, NE	20002	LEED CS 2.0	Platinum	6/26/07	11/24/10	Profit Org.

APPENDIX B: LEED Certifications, 2006 - 2011

Project Name	Street	Zip Code	LEED System/Version	Certification Level	Registration Date	Certification Date	Owner Type
1325 G Street	1325 G Street	20005	LEED-EB:OM v2009	Gold	1/3/10	12/1/10	Investor
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	2/21/08	12/2/10	Profit Org.
WWF 1st Floor Office Renovation	1250 24th St NW	20037	LEED-CI v2009	Platinum	10/13/09	12/2/10	Non-Profit Org.
90 K Street, NE	90 K Street, NE	20002	LEED CS 2.0	Gold	6/26/07	12/8/10	Profit Org.
Pelham Hall	2100 Foxhall Road	20007	LEED NC 2.2	Gold	8/7/08	12/8/10	Profit Org.
77 K Street Tower	77 K Street NW	20001	LEED CS 2.0	Silver	10/17/08	12/13/10	Other
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	12/5/07	12/16/10	Profit Org.
Franklin Tower	1401 I Street, NW	20005	LEED EB O&M	Silver	7/2/09	12/17/10	Other
ACS - Othmer	1550 M Street	20036	LEED-EB:OM v2009	Platinum	3/3/10	12/18/10	Non-Profit Org.
One Franklin Square	1301 K St. NW	20007	LEED-EB:OM v2009	Gold	8/26/09	12/27/10	Individual
2101 L Street	2101 L Street, NW	20037	LEED EB O&M	Certified	11/24/08	12/29/10	Profit Org.
1133 15th Street NW	1133 15th Street NW	20005	LEED EB O&M	Gold	6/3/09	1/7/11	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	9/12/08	1/17/11	Profit Org.
Confidential	Confidential	Confidential	LEED-EB:OM v2009	Gold	5/26/10	1/24/11	Individual
KIPP DC Douglass School	2600 Douglass Road, SE	20020	LEED for Schools 2.0	Certified	11/14/08	2/2/11	Non-Profit Org.
AED Idea Exchange	1875 Connecticut Avenue NW	20009	LEED CI 2.0	Silver	6/26/09	2/4/11	Non-Profit Org.
Chevy Chase Center	5425 Wisconsin Avenue	20815	LEED EB O&M	Certified	6/24/09	2/17/11	Profit Org.
CBNA Chinatown, 9th and H Washington DC	750 9th St NW	20001	LEED Retail (CI) 1.0 Pilots Only		2/21/11	2/21/11	Profit Org.
Victor Building	750 9th Street, NW	20001	LEED EB O&M	Gold	6/11/09	2/22/11	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Silver	10/17/08	3/4/11	Profit Org.
Stoddert Elementary School	4001 Calvert Street, NW	20007	LEED for Schools 2.0	Gold	4/10/09	3/7/11	Local Government
The Homer Building	601 13th Street, NW	20005	LEED-EB:OM v2009	Gold	3/2/10	3/8/11	Other
1707 L St NW	1707 L St NW	20036	LEED-EB:OM v2009	Silver	8/24/10	3/11/11	Individual
1828 L St NW	1828 L St NW	20036	LEED-EB:OM v2009	Gold	8/24/10	3/11/11	Individual
80 M Street	80 M Street	20003	LEED-EB:OM v2009	Gold	3/11/10	3/15/11	Profit Org.
Confidential	Confidential	Confidential	LEED-CI v2009	Certified	4/2/10	3/16/11	Profit Org.
A.U. School of International Service	4400 Massachusetts Avenue, NW	20016	LEED NC 2.2	Gold	6/30/06	3/17/11	Non-Profit Org.
Confidential	Confidential	Confidential	LEED EB 2.0	Platinum	10/16/07	3/23/11	Non-Profit Org.
425 Eye Street NW	425 Eye Street NW	20001	LEED CS 2.0	Gold	9/15/08	3/29/11	Profit Org.
Confidential	Confidential	Confidential	LEED-CI v2009	Certified	2/2/10	4/9/11	Profit Org.
Silman Associates Office Renovation	1053 31st street NW	20007	LEED-CI v2009	Silver	10/30/09	4/12/11	Profit Org.
Lafayette Centre	1120 20th St NW	20036	LEED EB O&M	Silver	6/18/09	4/14/11	Profit Org.
Safeway Georgetown 2912	1855 Wisconsin Avenue NW	20007	LEED-NC v2009	Certified	6/24/09	4/20/11	Profit Org.
1200 K Street NW	1200 K Street NW	20005	LEED EB O&M	Gold	6/2/09	4/22/11	Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Gold	4/29/08	5/24/11	Federal Government
Blenheim DC I LLC	1801 K St, NW	20006	LEED-EB:OM v2009	Gold	4/20/10	5/24/11	Profit Org.
Liberty Place	325 7th St NW	20004	LEED EB O&M	Silver	6/24/09	5/27/11	Profit Org.
JBG Federal Center	1200 New Jersey Ave, SE	20590	LEED-EB:OM v2009	Gold	6/3/09	6/3/11	Profit Org.
601 New Jersey Avenue	601 New Jersey Ave NW	20001	LEED-EB:OM v2009	Gold	12/14/09	6/10/11	Other
IBM Hamilton Square	600 14th Street, NW	20005	LEED-CI v2009	Gold	2/11/10	6/13/11	Profit Org.
Perkins and Will Washington DC Fit Out	1250 24th St. NW	20037	LEED-CI v2009	Platinum	2/4/10	6/14/11	Profit Org.
600 Thirteenth Street	600 Thirteenth Street	20005	LEED-EB:OM v2009	Silver	7/30/10	6/15/11	Investor
PNC Place - PNC Interiors	800 17th Street	20006	LEED CI 2.0	Platinum	3/10/09	6/16/11	Profit Org.
830 First Street	830 First Street NE	20002	LEED-EB:OM v2009	Gold	7/28/10	6/16/11	Federal Government
Confidential	Confidential	Confidential	LEED EB 2.0	Certified	6/26/07	6/21/11	Non-Profit Org.
I-Building	1850 I Street, NW	20006	LEED-EB:OM v2009	Gold	12/22/10	6/24/11	Non-Profit Org.
J-Building	701 18th Street, NW	20006	LEED-EB:OM v2009	Gold	12/22/10	6/24/11	Non-Profit Org.

APPENDIX B: LEED Certifications, 2006 - 2011

Project Name	Street	Zip Code	LEED System/Version	Certification Level	Registration Date	Certification Date	Owner Type
1909 K Street Office Suites 300/320	1909 K Street, NW	20006	LEED-CI v2009	Gold	4/1/10	6/29/11	Profit Org.
Confidential	Confidential	Confidential	LEED NC 2.2	Gold	6/4/09	6/30/11	Local Government
Kipp DC Will Academy	421 P Street, NW	20001	LEED for Schools 2.0	Silver	3/20/08	6/30/11	Non-Profit Org.
Clifford Chance	2001 K Street NW	20006	LEED-CI v2009	Silver	3/31/10	7/5/11	Profit Org.
The Columbia Group	20 M Street, SE	20003	LEED-CI v2009	Silver	11/8/10	7/12/11	Profit Org.
1015 Half Street	1015 Half Street, SE	20003	LEED CS 2.0	Gold	8/20/07	7/14/11	Profit Org.
AED Fifth Floor	1825 Connecticut Avenue NW	20009	LEED CI 2.0	Silver	6/25/09	7/19/11	Non-Profit Org.
Wheeler Terrace Apts Redevelopment	1217 Valley Ave., SE	20032	LEED NC 2.2	Gold	7/16/07	7/20/11	Non-Profit Org.
Franklin Square	1300 Eye Street	20005	LEED-EB:OM v2009	Silver	12/6/10	7/29/11	Profit Org.
Chevy Chase Pavilion	5335 Wisconsin Avenue	20015	LEED EB O&M	Silver	9/22/10	8/2/11	Profit Org.
64 New York Avenue	64 New York Ave NE	20002	LEED-EB:OM v2009	Gold	11/1/10	8/4/11	Investor
HQ US INSTITUTE OF PEACE	23RD STREET & CONSTITUTION AVE	20037	LEED NC 2.1	Gold	12/14/05	8/10/11	Non-Profit Org.
Confidential	Confidential	Confidential	LEED CI 2.0	Platinum	10/30/08	8/15/11	Federal Government
WRL DC Office	1634 Eye St NW	20006	LEED-CI v2009	Gold	1/8/10	8/19/11	Profit Org.
NATIONAL ASSOCIATION OF REALTORS	500 New Jersey Avenue, NW	20001	LEED-EB:OM v2009	Gold	12/3/10	8/19/11	Non-Profit Org.
WWF 1st Floor South Office Renovation	1250 24th Street	20037	LEED-CI v2009	Platinum	12/17/10	8/24/11	Non-Profit Org.
1530 14th Street	1530 14th St. NW	20005	LEED-EB:OM v2009	Gold	7/14/09	9/6/11	Individual
Confidential	Confidential	Confidential	LEED-CI v2009	Silver	7/29/10	9/8/11	Profit Org.
Confidential	Confidential	Confidential	LEED-CI v2009	Silver	12/11/09	9/15/11	Profit Org.
Benning Branch Library	3935 Benning Road NE	20019	LEED NC 2.2	Gold	7/10/08	9/19/11	Local Government
Confidential	Confidential	Confidential	LEED NC 2.2	Gold	6/5/08	9/19/11	Local Government
Confidential	Confidential	Confidential	LEED-CI v2009	Platinum	1/14/10	9/20/11	Federal Government
2200 Pennsylvania Avenue NW	2200 Pennsylvania Avenue NW	20037	LEED CS 2.0	Gold	10/31/07	9/22/11	Profit Org.
Systems Planning and Analysis	20 M Street, 8th Floor, SE	20003	LEED-CI v2009	Certified	11/4/10	9/26/11	Profit Org.
National Museum of the American Indian	Fourth St and Independence Ave SW	20560	LEED EB 2.0	Silver	7/3/07	9/28/11	Federal Government
Confidential	Confidential	Confidential	LEED-CI v2009	Gold	1/12/10	9/30/11	Profit Org.
Potomac Center South	550 12th Street SW	20024	LEED-EB:OM v2009	Gold	5/12/10	10/14/11	Investor
CQ Roll Call Group	77 K Street NE	20002	LEED-CI v2009	Gold	10/12/10	10/17/11	Profit Org.
Confidential	Confidential	Confidential	LEED CS 2.0	Gold	10/30/06	10/19/11	Profit Org.
IRS at 77K ST	77 K Street NE	20002	LEED-CI v2009	Certified	10/18/10	11/3/11	Investor
Confidential	Confidential	Confidential	LEED-CI v2009	Silver	1/11/10	11/9/11	Profit Org.
Dept. of Treasury - Main Building	1500 Pennsylvania Avenue NW	20220	LEED EB 2.0	Gold	6/19/07	11/14/11	Federal Government
Building W200 Modernization	1014 N Street, SE	20374	LEED NC 2.2	Silver	5/19/09	11/17/11	Federal Government
National Parks Conservation Association	777 6th Street, NW	20001	LEED-CI v2009	Gold	4/2/10	11/17/11	Non-Profit Org.
700 6th St. - 4th Floor	700 Sixth St.	20001	LEED CI 2.0	Certified	4/9/09	11/30/11	Profit Org.
Royal Netherlands Embassy - DC	4200 Linnean Ave, NW	20008	LEED-EB:OM v2009	Silver	7/19/10	11/30/11	Federal Government
USDA Headquarters Modernization: Phase 4	14th Street & Independence Avenue SW	20250	LEED CI 2.0	Gold	6/9/09	12/1/11	Federal Government
Confidential	Confidential	Confidential	LEED NC 2.2	Gold	5/25/07	12/2/11	Profit Org.
10 G Street	10 G Street, NE	20002	LEED-EB:OM v2009	Gold	4/20/11	12/12/11	Investor
TD Bank Constitution Square	1275-A 1st Street NE	20002	LEED-CI v2009	Platinum	3/8/10	12/13/11	Investor
District Department of Transportation	55 M Street SE	20003	LEED-CI v2009	Silver	11/18/10	12/22/11	Local Government
The Warner	1299 Pennsylvania Avenue, NW	20004	LEED-EB:OM v2009	Certified	5/25/11	12/30/11	Investor

Appendix C: EnergyStar Rated Buildings, 2011

Building Name	Building Type	Building Owner	Property Manager	Address	Zip	2011 Rating	Floor SF
1001 Pennsylvania Ave	Office	TIAA-CREF	Hines	1001 Pennsylvania Ave, NW	20004	77	808,836
101 Constitution	Office	101 Constitution Trust	101 Constitution Trust	101 Constitution Avenue, NW	20001	85	527,366
11 DuPont	Office	SC DuPont Leasehold, Inc.	Cassidy Turley	11 Dupont Circle, NW	20036	86	148,843
1100 New York Avenue	Office	Manulife Financial	Manulife Financial	1100 New York Avenue, NW	20005	89	560,953
1101 14th street	Office	Lincoln Property Company	Lincoln Property Company	1101 14th St NW	20005	79	123,552
1101 Connecticut Avenue	Office	Penzance 1101 Connecticut, LLC	Penzance 1101 Connecticut, LLC	1101 Connecticut Avenue	20036	78	196,094
1101 K Street	Office	Rockefeller Group Dev. Corp.	Rockefeller Group Dev. Corp.	1101 K Street, NW, Suite B110	20005	87	307,330
1101 New York Ave	Office	Louis Dreyfus Property Group	Louis Dreyfus Property Group	1101 New York Ave NW	20005	77	377,690
1111 19th St NW	Office	Columbia DC	Cassidy Turley	1111 19th St NW	20036	81	253,664
1125 15th St.	Office	1125 15th Street Associates, LLC	S.C. Herman & Associates, Inc.	1125 15th St., NW	20005	83	285,264
1200 K Street	Office	Brookfield Properties	Brookfield Properties	1200 K Street NW	20005	88	425,681
1201 Eye Street	Office	Piedmont Office Realty Trust	Piedmont Office Realty Trust	1201 Eye Street NW	20005	76	282,879
1201 Maryland Avenue	Office	Republic Properties Corporation	Republic Properties Corporation	1201 Maryland Avenue, SW	20024	93	505,447
1220 19th Street	Office	Washington REIT		1220 19th Street, N.W.	20036	83	93,657
1225 Eye Street	Office	Piedmont Office Realty Trust	Piedmont Office Realty Trust	1225 Eye Street NW	20005	76	247,426
12845 The Farragut Building	Office	GNAREI 1 Farragut, LLC	Cassidy Turley	900 17th Street NW	20006	86	158,384
1299 Penn Ave	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1299 Penn Ave	20004	78	756,720
1301 New York Ave	Office	Boston Properties	Boston Properties	1301 New York Ave., NW	20001	85	207,599
1301 Pennsylvania Avenue	Office	Quadrangle Mangement Company	Quadrangle Mangement Company	1301 Pennsylvania Ave. NW	20004	83	215,292
1310 G Street	Office	Gaedeke Group LLC (Corporate Office)	Gaedeke Group LLC (Washington DC)	1310 G Street, NW, Suite 790	20005	78	195,711
1325 G Street	Office	Behringer Harvard Property Trust	Behringer Harvard Property Trust	1325 G St. NW, Suite PH	20005	88	333,484
1330 Connecticut Ave., NW	Office	Boston Properties	Boston Properties	1330 Connecticut Ave., NW	22204	78	335,990
1331 L Street, NW	Office	GLL L-Street 1331, LLC	Lincoln Property Company	1331 L Street, NW	20005	90	181,724
1400 K Street	Office	Brookfield Properties	Brookfield Properties	1400 K Street, NW	20005	83	210,763
1425 New York Avenue NW	Office	Liberty Property Trust	Liberty Property Trust	1425 New York Ave NW	20005	77	284,845
1445 New York	Office	Ponte Gadea Washington, LLC	Cassidy Turley	1445 New York Avenue, NW	20005	84	205,656
1501 K St,NW	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1501 K St,NW	20002	75	397,871
1601 K Street, NW	Office	PPF/OFF 1601 K Street, LLC	JBG Commercial Management, LLC	1601 K Street NW, Suite 160	20006	85	230,189
1625 Eye St.	Office	Brookfield Properties	Brookfield Properties	1625 Eye Street NW	20006	81	378,945
1625 K Commonwealth Building	Office	Shorenstein Realty Services, LP	Shorenstein Realty Services, LP	1625 K St. NW	20006	78	106,079
1629 K St, NW	Office	Davis Building, LLC	Vornado/Charles E. Smith	1629 K St. NW	20002	83	106,527
1666 K St	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1666 K St.	20006	79	294,046
1700 K	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1700 K St.	20052	82	392,121
1725 DeSales St Nw	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1725 DeSales St. NW	20002	93	88,413
1726 M St	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1726 M St	20002	84	92,023
1730 M ST	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1730 M St	20002	84	219,213
1750 K Street	Office	1750 K Street, LLC	Vornado/Charles E. Smith	1750 K Street	20006	93	165,620
1776 G Street	Office	Washington Real Estate Investment Trust	Trust	1776 G Street, N.W.	20006	80	283,078
1776 K Street	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1776 K Street	22202	85	198,009

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Building Name	Building Type	Building Owner	Property Manager	Address	Zip	2011 Rating	Floor SF
1800 Massachusetts Ave	Office	Service Employees International Union	Akridge	1800 Massachusetts Avenue, NW	20036	89	222,660
1825 Connecticut Avenue	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1825 Connecticut Av	20009	97	351,341
1828 L Street Associates	Office	The Tower Companies	The Tower Companies	1828 L Street Street, NW	20036	86	332,928
1850 M St.	Office	Manulife Financial	Manulife Financial	1850 M St., NW	20036	86	259,948
1875 K	Office	Shorenstein Realty Services, LP	Shorenstein Realty Services, LP	1875 K Street, NW	20006	79	199,435
1899 L STREET	Office	1899 L Street Tower LLC	1899L Street Tower, LLC	1899 L St, NW	20036	80	152,500
1899 Penn Owner, LP	Office	1899 Penn Owner, LP	1899 Penn Owner, LP	1899 Pennsylvania ave. N.W.	20006	76	206,164
1900 K Street	Office	TIAA-CREF	Hines	1900 K Street	20006	77	379,324
1901 L Street, LLC	Office	1901 L Street, LLC	Cassidy Turley	1901 L Street, NW	20036	84	141,514
1901 Pennsylvania Ave	Office	Washington Real Estate Investment Trust		1901 Pennsylvania Ave	20006	82	89,756
1919 M Street	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1919 M Street, NW	20036	90	271,532
1919 Pennsylvania Associates, L.P.	Office	Tishman Speyer	Tishman Speyer	1919 Pennsylvania Ave. NW	20006	79	262,403
1999 K Street NW	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	1999 K Street NW	20006	84	252,630
20 Massachusetts Avenue	Office	Government Properties Income Trust	REIT Management & Research	20 Massachusetts Avenue	20001	88	343,324
2000 L Street, N.W.	Office	Brookfield Properties	Brookfield Properties	2000L St N.W	20036	84	420,391
2001 M Street	Office	Brookfield Properties	Brookfield Properties	2001M St. N.W.	20036	87	231,443
2033 K Street	Office	ARA GREEN	Quadrangle Mangement Company	2033 K Street N.W.	20006	79	127,216
2100 2nd Street SW	Office	Monday Properties Services, LLC	Monday Properties Services, LLC	2100 2nd Street SW	20593	81	587,776
2100 M Street	Office	Hines	Hines	2100 M Street, NW, Suite 620	20037	85	325,856
2101 L Street	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	2101 L Street, NW	20037	81	385,413
400 Virginia Avenue	Office	Piedmont Office Realty Trust	Piedmont Office Realty Trust	400 Virginia Avenue SW	20024	91	252,289
455 Mass Ave	Office	Square 516S Office Venture, LLC	Cassidy Turley	455 Massachusetts Ave NW	20001	91	247,330
500 E Street, SW	Office	Boston Properties	Boston Properties	500 E Street, SW	20024	80	280,118
500 New Jersey Avenue	Office	National Association of Realtors	Cassidy Turley	500 New Jersey Avenue	20001	75	102,985
505 9th Street	Office	Boston Properties	Boston Properties	505 9th St. NW	20004	80	368,831
555-12TH STREET	Office	Manulife Financial	Manulife Financial	555 12th St. NW	20004	88	887,642
600 Thirteenth St	Office	Hines Interest Limited Partnership	Hines	600 13th St Nw	20005	81	256,702
750 17th St.	Office	Manulife Financial	Manulife Financial	750 17th St., NW	20006	80	139,841
80 M Street - Navy Yard Metro	Office	Wells REIT II - 80 M Street, LLC	Wells REIT II - 80 M Street, LLC	80 M Street , SE	20003	98	319,955
800 N CAPITOL	Office	Capitol Owners LLC	Akridge	800 N CAPITOL STREET, NW	20004	75	322,538
901 New York Avenue	Office	Boston Properties	Boston Properties	901 New York Ave., NW	20001	85	604,549
AAAS	Office	Science	Akridge	1200 New York Avenue	20005	82	206,010
ARIEL RIOS FEDERAL BUILDING	Office	General Services Administration	General Services Administration	12TH & PENN AVE NW	20004	88	912,684
Capital Gallery	Office	Boston Properties	Boston Properties	Suite 150W	20024	86	571,431
Capitol Plaza I	Office	Polinger Shannon & Luchs	Polinger Shannon & Luchs	1200 1st Street NE	20002	85	303,703
Center for Education and Medicine	Office	Association of American Medical Colleges	Cassidy Turley	2501 M Street, NW	20037	76	102,441
Chevy Chase Pavilion Office Tower	Office	Clarion Partners	Company	5335 Wisconsin Avenue	20015	89	211,471
Columbia Square	Office	13th & F Associates Limited Partnership	Partnership	555 13th Street N.W Suite 100 West	20004	75	629,670
Embassy of Finland	Office	Embassy of Finland	Embassy of Finland	3301 Massachusetts Ave. NW	20008	86	50,278

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Building Name	Building Type	Building Owner	Property Manager	Address	Zip	2011 Rating	Floor SF
Evening Star Building	Office	T-C 1101 Pennsylvania Avenue Owner LLC	Jones Lang LaSalle	1101 Pennsylvania Ave. NW.	20004	79	202,638
Federal Gateway 1	Office	William C Smith + Company/Square 742 LLC	742 LLC	1100 New Jersey Ave., SE	20003	93	303,458
FERC	Office	Rosche/888 First Street, NE, LLC	Corp.	888 First Street, NE	20002	82	558,620
Franklin Square	Office	TIAA -CREF	Jones Lang LaSalle	1300 Eye Street	20005	83	475,785
Franklin Tower	Office	Shorenstein Realty Services, LP	Shorenstein Realty Services, LP	1401 Eye Street, NW	20005	78	225,573
Hamilton Square	Office	Shorenstein Realty Services, LP	Shorenstein Realty Services, LP	600 14th Street, NW	20005	75	224,741
1300 Building	Institution	Inter-American Development Bank		1300 New York Ave, NW	20577	97	1,018,508
1350 Building	Institution	Inter-American Development Bank		1350 New York Ave, NW	20577	82	144,637
Internal Revenue Service 1111	Office	U.S. General Services Administration	U.S. Internal Revenue Service	1111 Constitution Ave., NW	20224	90	1,428,147
Electrical Workers	Office	Workers	Akridge	900 Seventh Street	20005	78	318,853
International Finance Corporation	Office	International Finance Corporation	International Finance Corporation	2121 Pennsylvania Ave., NW	20433	93	882,174
International Square	Office	Tishman Speyer	Tishman Speyer	1875 Eye Street, NW Suite 325	20006	88	1,177,174
Jefferson Court	Office	NSP Ventures Corporation - 1025	J Street Company	1025 Thomas Jefferson Street NW	20007	82	316,056
Lincoln Square	Office	Lincoln Square Associates Manager, Inc.	Dweck Properties	555 11th St. NW	20004	90	447,537
Market Square I & II	Office	Wells Real Estate Funds	Cassidy Turley	701 & 801 Pennsylvania Avenue, NW	20004	83	736,052
Market Square North	Office	Boston Properties	Boston Properties	Suite 150	20004	85	475,190
Metropolitan Square	Office	Boston Properties	Boston Properties	655 15th Street, NW	20005	79	702,037
N.A.H.R.O	Office	N.A.H.R.O	Akridge	630 I Street NW	20004	77	17,404
Builders	Office	National Association of Home Builders	Transwestern	1201 15th Street, NW	20005	93	239,784
National Education Association	Office	National Education Association	National Education Association	1201 16th St., NW	22036	84	394,087
Ave. N.W.	Office	Quadrangle Mangement Company	Quadrangle Mangement Company	1331 Pennsylvania Ave. NW	20001	87	454,557
National Press Building	Office	AEW	Quadrangle Mangement Company	529 14th Street NW	20006	75	489,395
Synagogue	Worship	Ohev Sholom, The National Synagogue	Ohev Sholom, The National Synagogue	1600 Jonquil Street, NW	20012	75	30,633
One Constitution Square	Office	CS Office One, LLC	StonebridgeCarras	1275 First Street, NE	20002	89	338,645
One Franklin Square	Office	Hines	Hines	1301 K Street Nw	20005	87	603,519
Portals I - 1250 Maryland Ave	Office	Republic Properties Corporation	Republic Properties Corporation	Suite 280	20024	75	583,876
Potomac Center North	Office	Potomac Center North/Jones Lang LaSalle	Jones Lang LaSalle Americas Inc	500 12th Street SW	20024	88	504,155
Presidential Plaza, L.P.	Office	Tishman Speyer	Tishman Speyer	900 19th Street NW	20006	75	104,215
Republic Place	Office	Washington Republic LLC	Dweck Properties	1776 I St. NW	20006	82	227,484
Station Place I - 100 F Street, NE	Office	Second Street Holdings LLC	Louis Dreyfus Property Group	100 F Street, NE	20002	77	802,199
Station Place II - 600 2nd Street, NE	Office	600 Second Street Holdings LLC	Louis Dreyfus Property Group	600 2nd Street, NE	20002	75	381,401
Sumner Square	Office	Boston Properties	Boston Properties	NW	20036	82	223,628
Terrell Place	Office	Terrell Place, a Condominium	Cassidy Turley	575 7th Street, NW	20004	79	521,568
The Army and Navy Club Building	Office	1627 Eye Street Property, LLC	Cassidy Turley	1627 I Street, NW	20006	92	114,595
The Homer Building	Office	Akridge	Akridge	601 13th Street, NW	20005	79	463,862
The Millennium Building	Office	The Tower Companies	The Tower Companies	1909 K Street	20006	83	242,937
The Westory	Office	Cassidy Turley	Cassidy Turley	607 14th St NW	20005	86	273,111
Two Constitution Square	Office	Two Con, LLC	StonebridgeCarras Management	145 N Street, NE	20002	83	623,532
Two Independence Square-NASA	Office	Wells REIT-Independence Square, LLC	Piedmont Office Realty Trust	300 E St SW	20024	76	639,780

Appendix C: EnergyStar Rated Buildings, 2011

Building Name	Building Type	Building Owner	Property Manager	Address	Zip	2011 Rating	Floor SF
Building	Office	Wereldhave USA-DC, LLC	Wereldhave USA-DC, LLC	801 9th Street NW	20001	88	250,433
USDOT Building	Office	JBG/Federal Center, LLC	JBG Commercial Management, LLC	1200 New Jersey Ave, SE	20590	94	1,578,431
Victor Building	Office	Brookfield Properties	Brookfield Properties	750 9th Street NW	20001	87	338,158
Washington Center	Office	Quadrangle Mangement Company	Quadrangle Mangement Company	1001 G Street NW	20006	76	366,055
Washington Marriott Metro Center	Hotel	Resorts	Center	775 12th St Nw	20005	76	450,000
Washington Office Center	Office	Vornado/Charles E. Smith	Vornado/Charles E. Smith	409 3rd Street SW	20024	75	461,032
Westbridge Office Building	Office	Tishman Speyer	Tishman Speyer	2550 M Street NW	20037	81	208,325
World Bank, I Building	Office	The World Bank	The World Bank	1850 I Street, N.W.	20433	84	477,446
World Bank, J-Building	Office	The World Bank	The World Bank	701 18th. Street, N.W.	20433	86	487,894
World Wildlife Fund	Office	World Wildlife Fund, Inc	Cassidy Turley	1250 24th Street, NW	20037	82	251,707

APPENDIX D: Public and Publicly-Financed Projects

Project Name	Agency/Developer	Types of Project	GBA Trigger	Certification Sought	Project Status	Ward
DRES						
New Beginnings Youth Center	DYRS	Youth corrections facility (NC)	District-owned	LEED-NC: Gold	Completed and certified	
Waterfront	OP, DCRA	Office (NC)	District-funded	LEED-CS and LEED-CI: Gold	Completed and certified	6
DOES Headquarters	DOES	Office (NC)	District-owned	LEED-NC: Gold	Completed and certified	7
Evidence Warehouse	MPD	Warehouse (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	8
4 DRES Projects	Various	1 office 2 homeless shelters 1 community center	District-owned	LEED NC, CS, and CI, Silver and Gold	2 in development 2 under construction	1, 2, 6, and 7
OPEFM						
H.D. Cooke Elementary School *	OPEFM	School (MR)	District-owned	LEED-NC: Gold	Completed and certified	1
School Without Walls High School*	OPEFM	School (MR)	District-owned	LEED-Schools: Gold	Completed and certified	2
Phelps High School*	OPEFM	School (MR)	District-owned	LEED-Schools: Silver	Completed and certified	6
Savoy Elementary School	OPEFM	School (MR)	District-owned	LEED-Schools: Gold	Completed and certified	8
Stoddert Elementary School	OPEFM	School (MR)	District-owned	LEED-Schools: Gold	Completed and certified	3
Eastern High School	OPEFM	School (MR)	District-owned	LEED-Schools: Silver	Completed; certification pending	6
1 OPEFM projects	OPEFM	MR	District-owned	LEED-Schools	Under construction	8
DMPED						
C Street, SE	Blue Sky Development	New Communities: Mixed use/Mixed Income (MR)	District-funded	Green Communities	Completed; certification pending	7
4427 Hayes Street	Blue Sky Development	New Communities: Mixed use/Mixed Income (MR)	District-funded	Green Communities	Completed; certification pending	7
17 District-funded and District-owned projects	Various	Mixed Use (NC) and (MR)	1 District-owned 13 District-funded 3 land dispositions	9 LEED 8 Green Communities	14 in planning and development 3 under construction	
DPR						
Kennedy Recreation Center*	DPR	Parks & recreation facility (NC)	District-owned	LEED-NC: Certified	Completed and certified	2
Lamond Recreation Center*	DPR	Parks & recreation facility (NC)	District-owned	LEED-NC: Gold	Completed and certified	4
Riggs LaSalle Recreation Center*	DPR	Parks & recreation facility (NC)	District-owned	LEED-NC: Gold	Completed and certified	4
Wilson Aquatic Center*	OPEFM	Parks & recreation facility (NC)	District-owned	LEED-NC: Silver	Completed and certified	3
Deanwood Recreation Center*	DMPED	Parks & recreation facility (NC)	District-owned	LEED-NC: Silver	Completed and certified	7
Joe Cole Recreation Center*	DPR, OPEFM	Parks & recreation facility (NC)	District-owned	LEED-NC: Silver	Completed and certified	5
Trinidad Community Center*	DPR	Community Center (NC)	District-owned	LEED-NC: Certified	Completed and certified	5

APPENDIX D: Public and Publicly-Financed Projects

Project Name	Agency/Developer	Types of Project	GBA Trigger	Certification Sought	Project Status	Ward
Stoddert Recreation Center*	DPR, OPEFM	Parks & recreation facility (NC)	District-owned	LEED-NC: Gold	Completed and certified	3
Columbia Heights Community Center*	DPR	Community Center (NC)	District-owned	LEED-NC: Silver	Completed and certified	1
Walker Jones	DMPED/DPR	Parks & recreation facility (NC)	District-owned	LEED-Schools	Completed; certification pending	6
3 DPR projects	DPR and DPR/OPEFM	Parks & recreation facility (NC)	District-owned	LEED-NC	Under construction	4, 6, 8
DCPL						
Benning Library*	DCPL	Library (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	7
Anacostia Library*	DCPL	Library (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	7
Shaw Library*	DCPL	Library (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	2
Georgetown Library*	DCPL	Library (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	2
Tenley-Friendship Library*	DCPL	Library (NC)	District-owned	LEED-NC: Silver	Completed; certification pending	3
Petworth Library*	DCPL	Library (MR)	District-owned	LEED-NC: Silver	Completed; certification pending	4
3 Library Projects*	DCPL	2 major renovations 1 new construction	District-owned	LEED-NC: Silver	Under construction	1, 7, 8
FEMS						
8 Fire Stations	FEMS	Fire station (MR)	District-owned	LEED-NC: Silver	In design and development	Various
Events DC						
Nationals Ballpark Stadium*		MLB baseball stadium (NC)	District-funded	LEED-NC: Silver	Completed and certified	6
DHCD						
Wheeler Terrace*	CPDC	Residential (MR)	District-funded	Green Communities LEED-NC: Gold	Completed. LEED certified.	8
Galen Terrace*	Galen Terrace Tenants Association/Somerset Developers/NHT	Residential (MR)	District-funded	Green Communities	Completed.	8
Ivy City Demonstration Project, Mi Casa, Phase I and II	Mi Casa, Inc.	Residential (MR)	Land disposition	Green Communities	Completed	5
Ivy City Demonstration Project, Habitat for Humanity	Habitat for Humanity	Residential	Land disposition	Green Communities	Completed	5
District Alliance for Safe Housing	DASH	Residential (MR)	District-funded	Green Communities	Completed	
R Street Apartments	NHT/Enterprise Preservation Corporation	Residential (MR)	District-funded	Green Communities	Completed	2
The Community Builders Scattered Sites AKA Dudley Scattered Site Preservation	The Community Builders	Residential (MR)	District-funded	Green Communities	Completed	7
The Atlonatl	Manna, Inc.	Residential (MR)	District-funded	Green Communities	Completed	1
Brookland Artspace Lofts	Artspace/Dance Place	Residential	District-funded	Green Communities	Completed	5

APPENDIX D: Public and Publicly-Financed Projects

Project Name	Agency/Developer	Types of Project	GBA Trigger	Certification Sought	Project Status	Ward
1320 Mississippi Avenue, SE	1320 Miss Ave, LLC	Residential	District-funded	Green Communities	Completed	8
Jasper 29T	Jasper 29 T Limited Partnership	Residential	District-funded	Green Communities	Completed	7, 8
Park Vista Apartments	Park Vista LP	Residential	District-funded	Green Communities	Completed	8
Daffodil House	Building Futures	Residential	District-funded	Green Communities	Completed	1
VIDA Senior Residences at Brightwood	VIDA	Residential	District-funded	Green Communities	Completed	4
Webster Gardens	THC	Residential	District-funded	Green Communities	Completed	4
Three Tree Flats	3910 Georgia Commons Associates LP	Residential	District-funded	LEED-ND Pilot	Completed	4
Hyacinth's Place	Institute for Urban Living	Residential	District-funded	Green Communities	Completed	5
Chabraja House	SOME	Residential	District-funded	Green Communities	Completed	8
23 DHCD-funded Projects	Various	Residential and Residential with mixed use	District-funded 1 land disposition	Green Communities	41 indevelopment; 15 under construction	Various

NC: New Construction
MR: Major Renovation