Memorandum

MIAMI-DADE COUNTY

Date: September 19, 2011

To: Honorable Chairman Joe A. Martinez and Members,
Board of County Commissioners

From: Carlos A. Gimenez
Mayor

Subject: Sustainable Capital Improvement Process (S-CIP) Guidelines & Recommendations

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I am pleased to advise you of the completion of the Sustainable Capital Improvement Process (S-CIP) Guidelines & Recommendations (attached), one of 12 projects part of Miami-Dade County's Energy Efficiency and Conservation Block Grant (EECBG) program, managed by the Office of Sustainability (OOS). The intent of this project is to develop and integrate energy and climate focused policies and procedures into the County's capital improvement process (CIP). This project underlines the County's commitment to ensure its investments use valuable resources efficiently, protect the natural environment and comply with County policies such as the Sustainable Buildings Program (IO 8-8) and the Americans with Disabilities Act (AO 10-10).

In 2010, Reynolds, Smith & Hills (RS&H) was selected through a competitive process as the project consultants. RS&H surveyed, interviewed and held workshops with representatives from 14 capital departments to conduct an evaluation of their approach to the CIP. RS&H also analyzed current Board of County Commissioners (Board) policies and requirements related to energy and climate performance of the County's capital improvement projects. And, CIP best management practices were compiled from peer organizations across the country (e.g., Chicago, San Francisco, etc.) and compared and contrasted with the County's existing CIP.

As a result, RS&H completed the S-CIP Guidelines which include policy and procedural recommendations for maximizing energy efficiency and greenhouse gas (GHG) emissions reduction through the CIP, translating into less energy consumption and operation and maintenance savings for the County's capital improvement projects. The guidelines address energy conservation criteria advanced by green building certifications (e.g., LEED, etc.), as well as tools for evaluating building performance (e.g., life cycle costing). Several policy recommendations, such as the use of a database for compliance and project tracking, are recommended. OOS will be integrating several recommendations into the updated Implementing Order (IO8-8) for the Sustainable Buildings Program, to be presented to the Board for consideration in the near future.

OOS is working closely with the Office of Capital Improvements (OCI) to implement process recommendations presented in the guidelines. S-CIP Training Modules, attended by the directors of capital departments, OCI staff and Sustainable Buildings Committee members, were conducted in July 2011. One training module acquainted capital improvement design and construction staff with the project assessment and S-CIP guidelines. The "train the trainer" module trained staff responsible for disseminating the recommendations within County departments.

The documents created through this project include procedures, guidelines and an accompanying training program for capital departments. The documents listed below are posted in the "Green Building" section of G-Net, which is accessible through E-Net at https://secure.miamidade.gov/enet/wps/myportal.

- S-CIP Guidelines & Recommendations (attached)
- S-CIP Policy Recommendations
- S-CIP Executive Summary on Findings, Guideline Recommendations & Trainings
- S-CIP Training Module
- S-CIP Train the Trainer Module

I would like to thank OOS and OCI for their hard work in coordinating this important project, and the major capital improvement departments for their essential support during the project's development. I am certain that the S-CIP guidelines and accompanying training modules will be utilized by all capital improvement departments to build in the most efficient and environmental friendly way possible, ensuring the sustainability of our community for years to come.

If you have any questions, please contact Maggie Fernandez, Sustainability Program Manager and EECBG Administrator, at 305-305-3008 or Patricia Gómez, PE, Sustainability Program Manager for Energy, Infrastructure and Policy, at 305-375-4775.

Attachments

c: Office of the Mayor Senior Staff
Department Directors
Office of Sustainability Staff
Sustainable Buildings Committee Members

MIAMI-DADE COUNTY

Sustainable Capital Improvement Process

Guidelines and Recommendations

August 2, 2011

Prepared by:

RS&H

IMPROVING YOUR WORLD

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Introduction

For most Americans, the built environment—buildings, parks, roads and other infrastructure—is the defining characteristic of life. It encompasses where we live, where we work, where we travel and where we play. Viewed this way, it is not surprising that buildings are the dominant source of demand for energy in the United States. They are also a major cause of greenhouse gas (GHG) emissions. Roadways, water and sewer infrastructure, air and seaports also leave a large carbon footprint.

Over the next several decades, it is estimated that as much as three quarters of the buildings in the US will be built or renovated. Much of the nation's infrastructure is aged or inadequate and in need of repair, replacement or expansion. If not built thoughtfully, these projects will waste valuable resources and impair the environment. If built with care, they can play a key role in developing a prosperous and sustainable future. As a result, those who plan, design, and construct capital improvement projects are tasked with a great responsibility. High-performance capital improvement projects save energy, increase the comfort, health and safety of users, and help steward valuable environmental resources. As a result, they are increasingly a priority of public agencies across the nation.

Those who plan, design, and construct capital improvement projects are tasked with a great responsibility.

Miami-Dade County (MDC) has demonstrated a commitment to high-performance capital improvement projects through a number of strategies aimed at improving the economic, social and environmental performance of its operations. The County's Sustainable Building Program is an exemplary initiative, which requires County buildings to meet environmental design and construction standards. Developing a systematic approach to this program as well as other

capital improvement projects will improve the quality and performance of the County's buildings and infrastructure and advance its long-term goals.

Miami-Dade County retained Reynolds, Smith and Hills, Inc. (RS&H) to evaluate the energy and climate performance of its capital improvement process (CIP). RS&H was also tasked with developing guidelines, policy recommendations and training to improve performance. The aim of these efforts has been to develop a roadmap that will enable the County to maximize the energy efficiency and minimize the greenhouse gas emissions of its capital projects over the long-term.

This guide was prepared in order to summarize guidelines and policy recommendations supporting improved energy and climate performance in the County's CIP. It is intended to support Miami-Dade County professionals involved in the planning, finance, design, construction, renovation and/or maintenance of the County's capital improvement projects.

- **Part 1 of this guide provides an overview of the County's high-performance capital improvement project requirements, including the Sustainable Buildings Program.**
- **Part 2 details step-by-step guidelines for understanding and implementing the County's requirements.**
- **Part 3 offers a series of policy and procedural recommendations for further improving the performance of the County's capital improvement projects.**

A series of Appendices collect additional information to aid County professionals. Appendix A provides resources for learning more about high-performance planning, design, construction and maintenance. Appendix B provides the full text of several important County requirements. Appendix C provides recommended data entry requirements for a proposed tracking and compliance database.

This guide is provided for assistance purposes only. It does not contain an exhaustive listing of all federal, state and local laws that may be pertinent to specific projects. It is not a substitute for ensuring that all applicable requirements have been identified and addressed.

Part 1: Current Requirements

Miami-Dade County has established several requirements related to the energy and climate performance of its capital improvement projects. This section details those requirements. The County's Sustainable Buildings Program aims to incorporate high-performance measures into the planning, design and construction of public buildings. The County has also advanced plans to reach electric consumption reduction goals. A life cycle cost analysis policy requires consideration of the energy consumption of facilities and major equipment. The principal elements of these requirements are highlighted in this section. The full text of the most relevant requirements are provided in **Appendix B**.

Sustainable Buildings Program

In 2005, the Miami Dade Board of County Commissioners approved **Resolution R-1200-05**. The resolution directed the County Manager to develop an implementation plan for a green building standard for County buildings, legislation to codify the standard and a coordinating office for the standard and other County sustainability initiatives. The Fiscal Year 2006-2007 budget established the County's Office of Sustainability (OOS) and Sustainability Manager. Also during this period, the Board approved **Ordinance O-07-65** creating the County's Sustainable Buildings Program (SBP). In 2007, the Board approved **Implementing Order 8-8** (IO 8-8), which instituted policies and procedures for the Sustainability Buildings Program.

The SBP advances a policy of incorporating green building practices into the planning, design, construction, management, renovation, maintenance and decommissioning of County buildings. It is implemented by the County's Sustainability Manager. The SBP requires all County capital improvement departments to appoint a staff member to act as a Sustainability Liaison with the Sustainability Manager. The SBP also established Sustainable Buildings Committee, chaired by the Sustainability Manager. The Committee is comprised of departmental Sustainability Liaisons and supports the Sustainability Manager with implementation of the SBP.

IO 8-8 establishes the most current version of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system as the standard for the planning, design and construction of all new buildings and renovations.

- All new construction projects must be formally certified as "Silver" or higher under the LEED for New Construction (LEED NC) rating system.

- All major-major renovations must formally attain a "Certified" or higher rating under the LEED NC. Major renovations include any design and construction project where the cost of construction is equal to or greater than 50% of the building's replacement cost.

- All non-major renovations must formally attain a "Certified" or higher rating under LEED NC, LEED for Commercial Interiors (LEED CI) or LEED for Existing Buildings (LEED EB) rating systems. Non-major renovations include any design and construction project where the cost of construction is less than 50% of the building's replacement cost, but greater than $1,000,000.

- Renovations or other building upgrades where the cost of construction is less than 50% of the building's replacement cost and less than $1,000,000 are not required to formally achieve any rating under the LEED rating systems. However, these projects are encouraged to incorporate the maximum feasible number of LEED-approved green building practices.

The Sustainable Buildings Program advances a policy of incorporating green building practices into the planning, design, construction, management, renovation, maintenance and decommissioning of County buildings.

Exemptions or modifications of the County's standards may be made due to "special circumstances." Exemptions and/or modifications permit use of alternative green building rating standards, but do not exempt use of green building practices to the maximum extent possible. The Sustainability Building Committee is tasked with addressing petitions for exemption and making recommendations to the Sustainability Manager regarding appropriate standards.

All capital improvement departments must submit quarterly status reports to OOS regarding the accomplishments of its projects. The Sustainability Manager is tasked with tracking building projects and preparing an annual report documenting the County's performance under the Program.

The County's Offices of Capital Improvements (OCI) and Procurement Management (DPM) must ensure that contracts contain language that requires compliance with the provisions of the Sustainable Buildings Program.

Cool Roofs

Resolution R-1103-10, passed in 2010, requires that energy-efficient reflective roofs or green roofs be specified in all solicitations for construction of new public and affordable housing in the County with a contract value greater than $1,000,000. Specifications must be based on LEED standards, or standards equivalent to LEED.

County Electrical Energy Consumption

In 2009, the Board adopted **Resolution R-228-09**. The resolution directed the Mayor to develop an Energy Master Plan to reduce electricity consumption in County operations by 20% by 2014 relative to a 2007 baseline. Among other elements, the proposed plan included mandatory use of ENERGY STAR Portfolio Manager for benchmarking facility energy consumption and re/retro-commissioning of buildings. Re/retro-commissioning (RCx) refers to the process of ensuring that an existing building's performance continues to meet or exceed its design intent over time.

A June 22, 2009 memo responsive to R-228-09 was submitted to the Board by the County Manager. The memo outlines four major initiatives, including: (1) improved analysis of baseline and future energy consumption; (2) use of federal grant funds for energy conservation projects; (3) expanded and enhanced use of energy savings performance contracts (ESPCs), and (4) integration of energy performance into county strategic planning, as well as departmental service delivery and performance measures.

The Energy Master Plan will be developed in 2011.

Life Cycle Cost Analysis

The County's Administrative Orders include a procedure for life cycle cost (LCC) analysis that dates to 1985. The **Administrative Order 11-3** (AO 11-3) defines "life cycling costing" as "that process whereby all the expenses associated with the acquisition and operation of an energy consuming facility or piece of equipment are identified and analyzed."

AO 11-3 requires LCC analysis for all new construction or renovation/refurbishment projects requiring compliance with the latest edition of the Florida Building Code. The requirements also cover the acquisition of the following equipment: air conditioning, driers, hot water heaters, light bulbs, vehicles, and refrigeration.

While AO 11-3 does not specify a methodology for conducting a LCC analysis, it requires all bid documents to "state the requirement that a life cycle costing be performed, explain the methodology to be followed and identify the data that must be submitted." Explicitly, energy costs must be considered in the LCC analysis.

Additional Requirements

While the above requirements are the most relevant to improving energy and climate performance in the County's Capital Improvement Process, other requirements are worth noting. These include the County's Standard Process for Capital Improvements (AO 3-39), which establishes standard procedures for the planning, design and construction of capital improvement projects, as well as its Value Engineering guidelines. Established via Administrative Order 3-26, the County's Value Engineering guidelines provide guidance for analytically evaluating alternative designs for optimal performance and impact.

The County has published a Water-Use Efficiency Standards Manual under Section 32-84 of the Code of Miami-Dade County. The Manual establishes minimum water efficiency standards for plumbing fixtures in residential, commercial, industrial and institutional new construction. Recommendations are provided for other applications and for rights of way.

Part 2: Sustainable CIP Guidelines

To meet the requirements of Miami-Dade County's Sustainable Buildings Program and other related energy and climate performance policies, specific steps must be taken during the planning, design and construction of capital improvement projects.

This section provides systematic direction for identifying which requirements apply to particular projects types. It also provides step-by-step guidelines for ensuring that projects comply with current applicable County's requirements. These guidelines are grouped chronologically, by project phase as well as by the department or team responsible for each task. A graphical representation of the County's requirements and their application to project types is provided. Procedural timelines illustrate mandatory steps for project compliance.

Energy and Climate Performance Criteria

Miami-Dade County capital improvement projects are subject to energy and climate performance requirements. These requirements are detailed in **Part 1** of this guide. They include the Sustainable Buildings Program, the County's electric consumption reduction plans and its life cycle cost analysis policy.

The County's requirements apply to capital improvement projects based on specific criteria. These criteria result in five major capital improvement project categories: (1) New building construction, (2) Major building renovation/remodel, (3) Non-major building renovation/remodel, (4) Minor building renovation remodel (or "exempt" building project), and (5) Non-building capital improvement. Different energy and climate performance requirements apply to each category. **Figure 1** graphically depicts these differences and provides assistance with determining which category is appropriate for a given project.

1. **New building construction** projects must be formally certified as LEED NC "Silver." This requirement does not apply to projects for which a design team was selected before December 14, 2007. All new construction projects are subject to the County's LCC analysis policy. New public and affordable housing projects with a contract value greater than $1,000,000 must comply with the County's Cool Roof requirements.

2. **Major renovation/remodel** projects must formally attain a LEED NC "Certified" rating. Major renovations have a project cost is equal to or greater than 50% of the building's replacement cost. All major renovation projects are subject to the County's LCC analysis policy.

3. **Non-major building renovation/remodel** projects must formally attain a "Certified" or higher rating under LEED NC, LEED for Commercial Interiors (LEED CI) or LEED for Existing Buildings (LEED EB) rating systems. Non-major renovations have a project cost less than 50% of the building's replacement cost, but greater than $1,000,000.

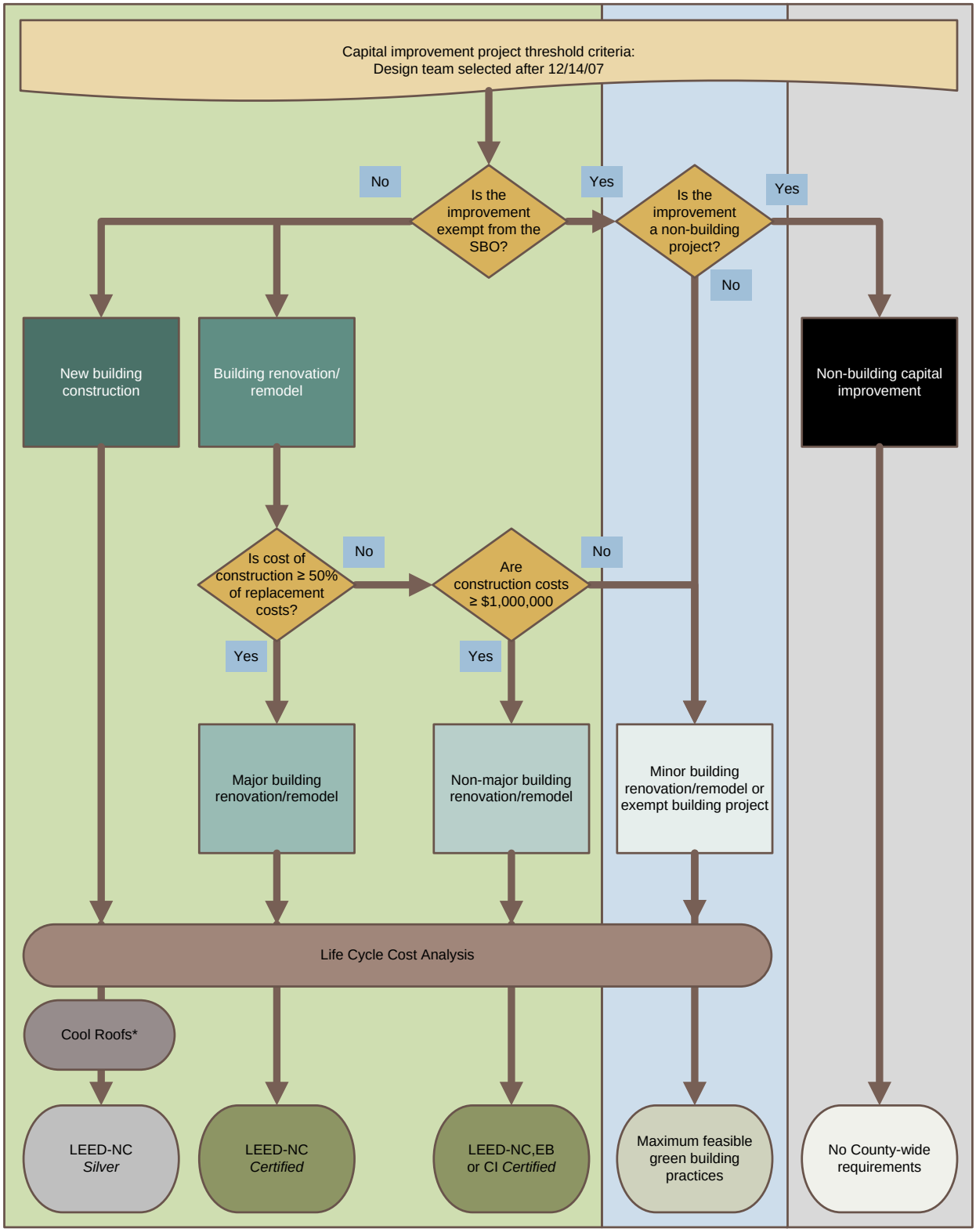
   Most non-major renovation / remodel projects will be subject to the County's LCC analysis policy. Only those projects not requiring compliance with the latest edition of the State of Florida Building Energy Code (FBEC) are exempt from the County's LCC requirement. Consult the FBEC for more information regarding this requirement.

4. **Minor building renovation/remodel** projects are encouraged to incorporate the maximum feasible number of LEED-approved green building practices. Feasible practices are those that are practical and fiscally responsible. LEED certification is not required for these projects. The same requirements apply to those building projects deemed exempt from the requirements of the Sustainable Buildings Program.

   Many minor renovation/remodel projects (as well as projects exempt from the SBP) will be exempt from the County's LCC analysis policy. However, minor renovations that include air conditioning, driers, hot water heaters, light bulbs, vehicles refrigerators, and freezers, among other building systems, are subject to the policy. Consult Administrative Order 11-3 and the FBEC for more information regarding this requirement.

5. **Non-building capital improvement** projects are not subject to any County-wide energy and client performance requirements. However, some departments may have mandated policies or procedures related to energy and/or climate performance. Consult with department management to ensure non-building capital improvement projects meet all relevant requirements.

Figure 1: Energy and Climate Performance Criteria and Requirements



**Applies only to new public and affordable housing in Miami-Dade County with a contract value of over $1,000,000.*

Energy and Climate Performance Procedures

The administrative procedures for ensuring compliance with the County's requirements differ by the project categories detailed in the previous section. These procedures flow along three paths, depicted in the illustration below. Path 1 applies to New Construction, Major Renovation and Non-Major Renovation capital improvement projects. Path 2 applies to Minor Renovation capital improvement projects and building projects exempt from the Sustainable Buildings Program. Path 3 applies to non-building capital improvements.

Path 1	Path 2	Path 3
• New Construction • Major Renovation • Non-Major Renovation	• Minor Renovation • Exemptions	• Non-building capital improvement projects

This section provides step-by-step guidelines for ensuring that projects comply with the current County requirements associated with each compliance path. These guidelines are grouped chronologically, by project phase as well as by the department or team responsible for each task. *Figures 2* and *3* illustrate the mandatory steps for project compliance. The guidelines include steps that must be completed in order to comply with the County's requirements. Best management practices that should be completed for full compliance are also included.

Path 1: New Construction / Major and Non-Major Renovations

The steps that must be taken to ensure compliance with the County's requirements for new construction, major and non-major renovations are provided below. Guidance is organized by three project phases: (1) planning, (2) design and (3) construction. *Figure 2* provides a graphical project flow diagram that summarizing the guidelines provided below.

1. PLANNING

The planning phase of a capital improvement involves establishing the requirements and expectations of the project. It is essential to begin integrating green design and construction concepts in to the project during this phase.

1.1. Prepare a draft LEED Checklist

As part of development of the project's Basis of Design, the **Project Management Team** must prepare a draft LEED Checklist. The LEED Checklist should reflect the project's green design and construction goals. New construction projects must propose a LEED NC Silver rating or higher, major renovations must propose a LEED NC Certified rating or higher and non-major renovations must propose a LEED NC, EB or CI Certified rating or higher. The **Project Management Team** should identify more than the minimum points required to ensure the required LEED rating is achieved. At this stage, the **Project Management Team** should also review FPL's energy efficiency programs and rebates and identify incentives that the project will attempt to receive from the utility. Any federal and state incentives should be reviewed as well.

The **Project Management Team** is composed of Miami-Dade County capital improvement professionals and any independent design and/or construction professionals involved in a project. Over the course of a project this team may be composed solely of MDC Project Managers (e.g. at the initial planning stages of the project), MDC Project Managers and design

professionals (e.g. during the design phase), or MDC Project Managers and construction professionals (e.g. during the construction phase). The composition of **Project Management Team** will also vary by Department (e.g. some Departments may undertake the majority of project planning and/or design) and by project delivery method (e.g. Design/Build, versus Design/Bid/Build, versus Construction Manager At-Risk, etc.).

1.2. Submit draft LEED Checklist / Petition for Exemption to the Office of Sustainability

The **Project Management Team** must submit the draft LEED Checklist to OOS.

A project may be exempted from the requirement to be certified under the appropriate LEED standard due to special circumstances. However, green building practices must still be applied to the maximum extent feasible. If an exemption is sought, the **Project Management Team** must submit a petition to the Office of Sustainability. The petition should include the draft LEED Checklist. If a project is exempted, the guidelines outlined under *Path 2* should be followed.

1.3. Record Project Data in Tracking Database

The **Project Management Team** must record project data, including information contained in the LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** will review and verify this information and may require additional information from the **Project Management Team** as it assembles quarterly and annual reports on the Sustainable Buildings Program.

1.4. Review draft LEED Checklist / Petition for Exemption

The **Sustainable Buildings Committee (SBC)**, chaired by the County's Sustainability Manager and comprised of technically knowledgeable representatives from key County agencies, must review LEED Checklists submitted to OOS during regularly convened meetings. The **SBC** must support implementation of the County's high-performance building requirements by providing feedback to the **Project Management Team** based on its experience and expertise with high-performance capital improvement projects. Examples include recommendations related to the Basis of Design, particular LEED credits, total LEED credits etc., intended to maximize project performance.

The **SBC** must review petitions for exemption from requirement to be certified under the appropriate LEED standard. Based on a review, the **SBC** must approve an alternative standard that ensures green building practices are applied to the maximum extent feasible.

1.5. Request to Advertise for Professional Services

The **Project Management Team** must follow the procedures outlined in Administrative Order 3-39 to acquire professional services, as necessary. If professional services must be acquired, the **Project Management Team** must indicate via the County's Request to Advertise (RTA) form that the project requires professional qualifications in green building practices. It is also highly recommended that the **Project Management Team** include an experienced LEED Accredited Professional (LEED AP). A LEED AP is a building industry practitioner who has demonstrated knowledge of high-performance design and construction, as well as the LEED rating systems and processes.

1.6. Include Compliance Language in Procurement Documents

The **Project Management Team** must ensure that all notices to professional consultants and all contracts for professional services for projects subject to the Sustainable Buildings Program (Implementing Order 8-8) and Administrative Order 11-3 (Life Cycle Costing Procedure), contain specific language requiring compliance.

1.7. Manage Selection of an Independent Commissioning Authority

The **Project Management Team** must coordinate with OCI to procure an Independent Commissioning Authority (ICA). Commissioning (Cx) is the process of ensuring that a project is designed, constructed and performing according to the County's project requirements. The LEED rating systems require "Fundamental Commissioning of Building Energy Systems." It also provides additional credits for "Enhanced Commissioning." The Office of Capital Improvements maintains a pool of ICAs in its Equitable Distribution Program, which streamlines procurement by distributing contracts to eligible firms on a rotational basis.

1.8. Prepare Owner's Project Requirements

Following the development of the project's Basis of Design and the draft LEED checklist by the **Project Management Team**, the **Independent Commissioning Authority** should review and document the County's project requirements. The **ICA** should gather information on the functional requirements of the project as well as how it will be used and operated.

2. DESIGN

The design phase of a project involves the work of architectural and engineering disciplines, which develop plans for construction. High-performance design elements must be incorporated at this stage to ensure the project meets the County's requirements.

2.1. Update LEED Checklist and submit to OOS.

The **Project Management Team**, which may include design-build or design consultants, must update the LEED Checklist throughout the development of design to reflect any changes in LEED credits sought by the project. Similarly, any changes in energy efficiency incentives sought from FPL or other entities should be noted. The Team must send quarterly status reports to OOS.

2.2. Update project in tracking database

The **Project Management Team** must record any updates to LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** must review and verify this information and gather any other information necessary for producing quarterly and annual reports on the Sustainable Buildings Program.

2.3. Register the project with GBCI

The **Project Management Team** must register the project with the Green Building Certification Institute (GBCI, www.gbci.org). Once registered, the team will receive access to resources that facilitate the LEED certification process. LEED Online access should also be granted to designated **Office of Sustainability** staff. The fee associated with registration should be incorporated into the project's budget.

2.4. Review the project

The **Sustainable Buildings Committee** should review updates to the LEED Checklists submitted to OOS during its regularly convened meetings and provide feedback to the **Project Management Team** as warranted to maximize project performance.

2.5. Prepare the Cx plan

As the design phase of the project begins, the **Independent Commissioning Authority** must prepare a commissioning plan. The plan defines all commissioning activities, identifying the systems to be commissioned, defining the roles and responsibilities of project participants,

creating a schedule, and establishing documentation and reporting requirements. As the design phase proceeds, the Cx plan must be updated to account for changes.

2.6. Perform Life Cycle Cost analysis

The **Project Management Team** must comply with Miami-Dade County Administrative Order 11-3, which requires Life Cycle Cost analysis of most capital improvement projects, to determine compliance. If LCC analysis is required, the **Project Management Team** should develop criteria and methodology for conducting the LCC analysis and evaluating results.

2.7. Begin LEED documentation

The **Project Management Team** must initiate a procedure for controlling the documentation and calculations necessary to satisfy GBCI's requirements when applying for LEED certification. This should be done as early in the design process as possible. LEED documentation begins during the design phase and may continue on through the conclusion of the construction phase. A LEED AP should ideally be charged with the responsibility for overseeing and coordinating the documentation and certification process.

2.8. Review design and construction documents

The **Independent Commissioning Authority** should review the project's Basis of Design (BOD) and construction documents during the design phase. The BOD includes the design narrative and criteria. Construction documents include drawings and specifications. The **ICA** must compare each element of the design to the Owner's Project Requirements at least once near the 100% Construction Documents level in order to ensure the functionality, operability, maintainability and compliance of the final design.

3. CONSTRUCTION

The construction phase of a project involves building to design specifications. Care must be taken to document green practices during this phase, while ensuring that installation and performance meets the County's requirements.

3.1. Manage selection of a construction consultant

If procurement of a construction consultant is necessary, the **Project Management Team** must consult with the Office of Capital Improvements to ensure that all green building requirements are included in contract documents and the selected professional is technically proficient and experienced with green building practices.

3.2. Review submittals and verify completeness

During the construction phase, the **Independent Commissioning Authority** must review submittals and shop drawings developed by the construction professional and its vendors and verify that they conform to the Owner's Project Requirements and contract documents.

3.3. Perform testing activities

The **Independent Commissioning Authority** should verify pre-functional tests of building systems based on the Commissioning Plan and report deficiencies to the **Project Management Team**. Once deficiencies are rectified, the ICA must verify via Functional Performance Tests that building systems will achieve the Owner's Project Requirements.

3.4. Complete LEED documentation and submit final LEED application to GBCI

The **Project Management Team** must complete LEED documentation and submit it to GBCI for review in order to achieve LEED certification. The documentation includes a project narrative,

drawings, photographs, plans and forms for and each credit sought. The fee associated with registration should be incorporated into the project's budget.

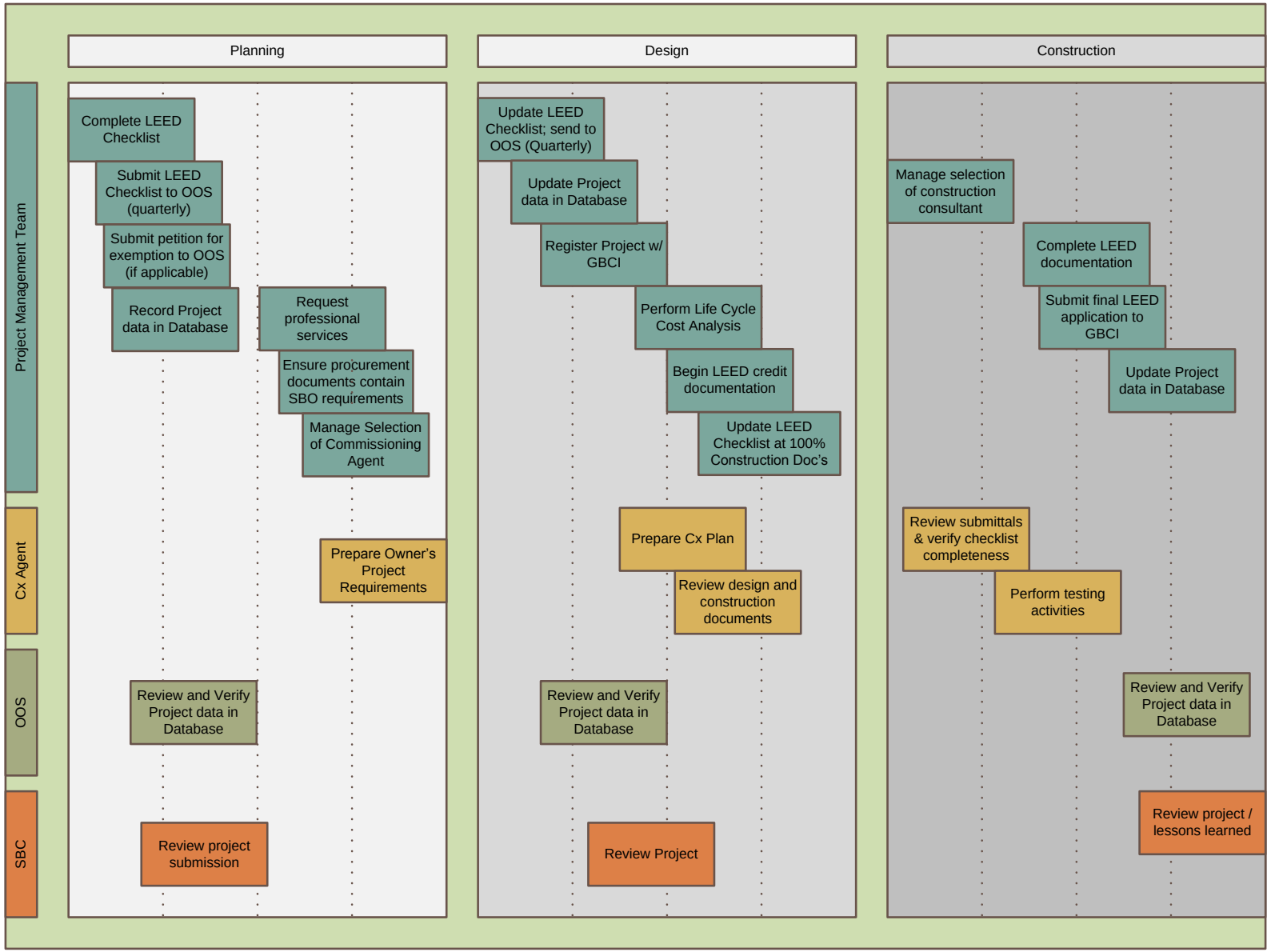
3.5. Update project in tracking database

The **Project Management Team** must record any updates to LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** must review and verify this information and gather any other information necessary for producing quarterly and annual reports on the Sustainable Buildings Program.

3.6. Review the project and lessons learned

The **Sustainable Buildings Committee** should review final project information during its regularly scheduled meetings, conducting a "lessons learned" exercise to identify best management practices and/or areas that require improvement in the County's capital improvement process and its related requirements.

Figure 2: New Construction / Major & Non-Major Renovation Project Flow



Path 2: Minor Renovation / Exemption

The steps that must be taken to ensure compliance with the County's requirements for minor renovations and projects that receive an exemption from the LEED certification requirements of County's Sustainable Buildings Program are provided below. Guidance is organized by three project phases: (1) planning, (2) design and (3) construction. *Figure 3* provides a graphical project flow diagram that summarizing the guidelines provided below.

The steps required under Path 2 are necessarily fewer than those required for projects that must obtain LEED certification. In particular, there is no requirement for commissioning projects. Nevertheless, commissioning is highly recommended for ensuring projects are designed and constructed to perform as intended.

1. PLANNING

1.1. Prepare a draft LEED Checklist

While LEED certification is not required for minor renovation or exempt projects, green building principles must be applied to the maximum extent feasible. It is highly recommended that the **Project Management Team** submit a draft LEED Checklist, or a comparable tool, to demonstrate the green design and construction techniques that will be applied. The **Project Management Team** should also review FPL's energy efficiency programs and rebates and identify incentives that the project will attempt to receive from the utility. Any federal and state incentives should be reviewed as well.

1.2. Submit draft LEED Checklist / Petition for Exemption to the Office of Sustainability

The **Project Management Team** should submit the draft LEED Checklist to OOS.

1.3. Record Project Data in Tracking Database

The **Project Management Team** must record project data, including information contained in the LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** will review and verify this information and may require additional information from the **Project Management Team** as it assembles quarterly and annual reports on the Sustainable Buildings Program.

1.4. Review draft LEED Checklist / Petition for Exemption

The **Sustainable Buildings Committee** must review LEED Checklists submitted to OOS during regularly convened meetings. The **SBC** must support implementation of the County's high-performance building requirements by providing feedback to the **Project Management Team**. In particular, they must ensure that the project will apply green building practices to the maximum extent possible.

1.5. Request to Advertise for Professional Services

The **Project Management Team** must follow the procedures outlined in Administrative Order 3-39 to acquire professional services, as necessary. If professional services must be acquired, the **Project Management Team** must indicate via the County's Request to Advertise (RTA) form that the project requires professional qualifications in green building practices.

1.6. Include Compliance Language in Procurement Documents

The **Project Management Team** must ensure that all notices to professional consultants and all contracts for professional services for projects subject to the Sustainable Buildings Program

(Implementing Order 8-8) and Administrative Order 11-3 (Life Cycle Costing Procedure), contain specific language requiring compliance.

2. DESIGN

2.1. Update LEED Checklist and submit to OOS.

The **Project Management Team**, which may include design-build or design consultants, should update the LEED Checklist throughout the development of design to reflect any changes in LEED credits sought by the project. Similarly, any changes in energy efficiency incentives sought from FPL or other entities should be noted. Quarterly status reports should be sent to OOS.

2.2. Update project in tracking database

The **Project Management Team** must record any updates to LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** must review and verify this information and gather any other information necessary for producing quarterly and annual reports on the Sustainable Buildings Program.

2.3. Review the project

The **Sustainable Buildings Committee** should review updates to the LEED Checklists submitted to OOS during its regularly convened meetings, providing feedback to the **Project Management Team** as warranted to ensure that the project is applying green building practices to the maximum extent possible.

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2.4. Perform Life Cycle Cost analysis

The **Project Management Team** must comply with Miami-Dade County Administrative Order 11-3, which requires Life Cycle Cost analysis of most capital improvement projects, to determine compliance. If LCC analysis is required, the **Project Management Team** should develop criteria and methodology for conducting the LCC analysis and evaluating results.

3. CONSTRUCTION

3.1. Manage selection of a construction consultant

If procurement of a construction consultant is necessary, the **Project Management Team** must consult with the Office of Capital Improvements to ensure that all green building requirements are included in contract documents and the selected professional is technically proficient and experienced with green building practices.

3.2. Submit final LEED application to OOS

The **Project Management Team** should submit a final report to OOS, based on the LEED Checklist, or a comparable tool, recording the green building practices applied to the project.

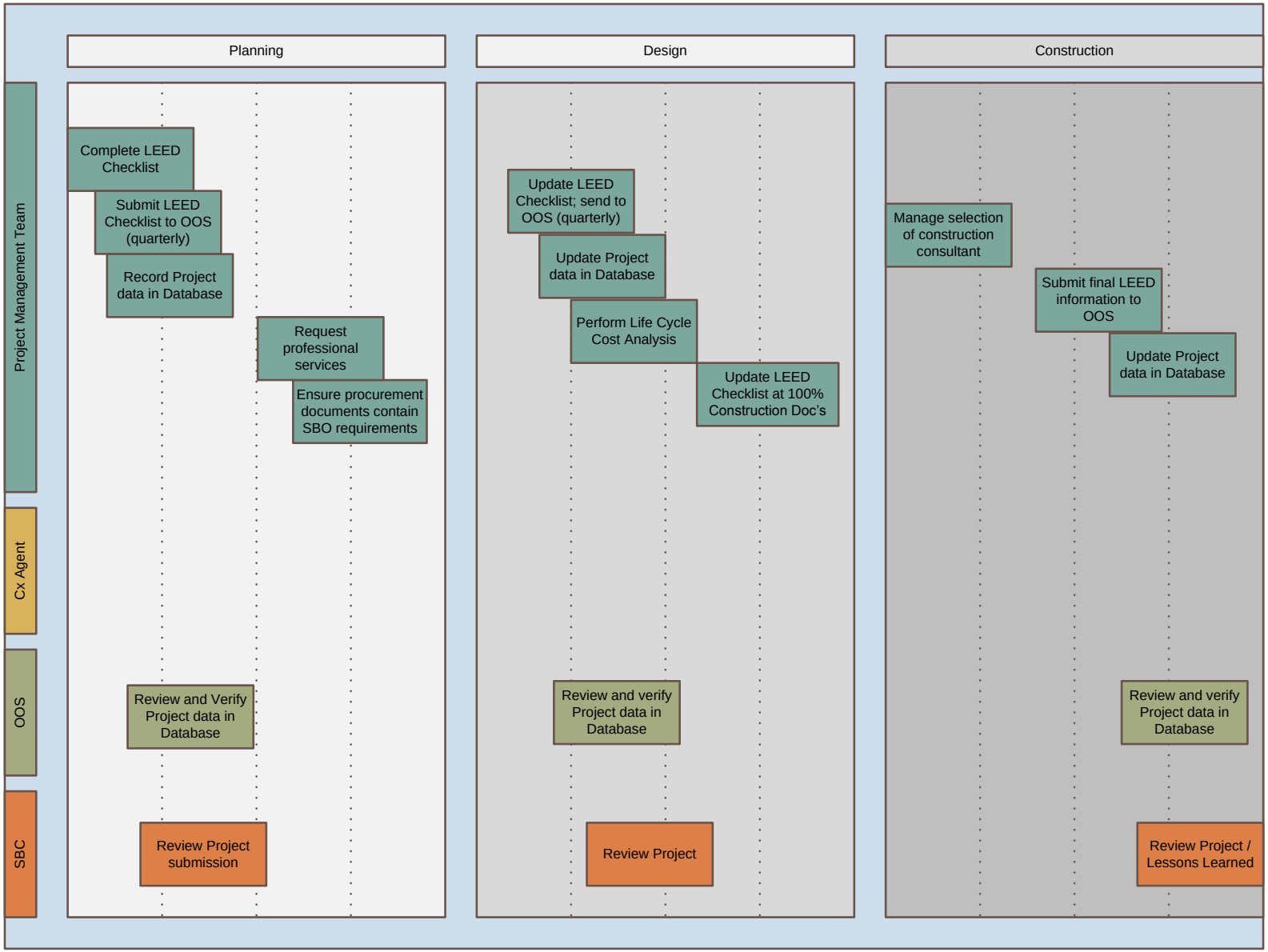
3.3. Update project in tracking database

The **Project Management Team** must record any updates to LEED Checklist in a database for the purposes of tracking progress on all projects subject to the Sustainable Buildings Program. The **Office of Sustainability** must review and verify this information and gather any other information necessary for producing quarterly and annual reports on the Sustainable Buildings Program.

3.4. Review the project and lessons learned

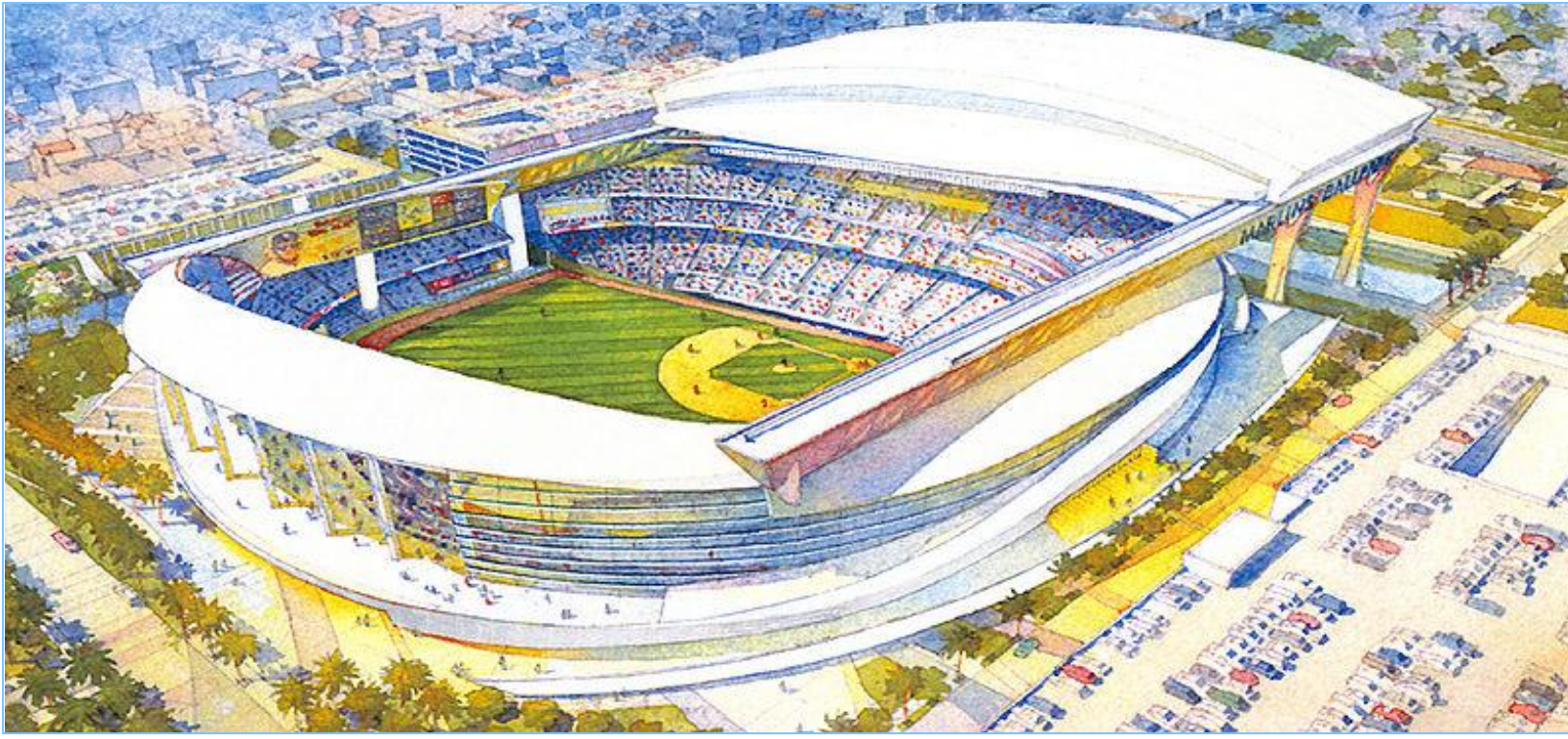
The **Sustainable Buildings Committee** should review final project information during its regularly scheduled meetings, conducting a "lessons learned" exercise to identify best management practices and/or areas that require improvement in the County's capital improvement process and its related requirements.

Figure 3: Minor Renovation / Exemption Project Flow



Path 3: Non-building capital improvement

No County-wide energy and climate performance requirements currently apply to non-building capital improvement projects. Accordingly, there are presently no common procedures for applying high-performance planning, design and construction principles to such projects. The **Recommendations** section provides several options for incorporating energy and climate performance best practices into non-building capital improvement projects in the future.



Part 3: Recommendations

Miami-Dade County is a leader in public sector sustainability efforts. Among its many accomplishments are several policies and procedures supportive of a high level of energy and climate performance in the County's capital improvement process. Further, it has successfully established a culture that is committed to economic, social and environmental responsibility in the built environment. Based on these successes, the County has several opportunities to further its commitment to high-performance buildings and infrastructure.

RS&H has developed a series of recommendations for maximizing the economic, social and environmental benefits of the County's capital improvement projects. Recommendations are based on a detailed evaluation of the County's present policies, procedures and operations. They are also drawn from research of the best management practices of peer local governments.

Recommendations are grouped in five categories: 1) planning, 2) design, 3) construction, 4) operations and maintenance, and 5) non-building capital improvement projects. They are presented in a standard format including a number, a brief title, a detailed description of the recommendation and reference to a comparable policy or procedure practiced by a peer local government.

These recommendations provide Miami-Dade County with the prospect of building on a strong foundation. Through targeted initiatives designed to maximize energy and climate performance, Miami-Dade County can operate as a global leader in the stewardship of public buildings and infrastructure.

1. PLANNING

1.1. **Alternative Compliance:** Establish standard alternative compliance paths for projects exempt from the LEED certification requirements of the Sustainable Buildings Program. A formal "Petition for Exemption" package should be submitted to OOS by the **Project Management Team** for all projects seeking exemption from the SBP. Paths should include alternative LEED rating systems (e.g. LEED Existing Buildings Operation and Maintenance, CI, etc.), alternative ratings systems (e.g. Florida Green Building Coalition, Green Globes, ENERGY STAR etc.), and a custom methodology for large capital improvement projects for which traditional rating systems are not appropriate. For instance, water/wastewater plants and drinking water systems are difficult to certify under green building rating systems, but can be certified under the ENERGY STAR program. Based on accumulated data (see Recommendation 1.4), typically exempt projects should be identified and criteria should be developed for determining which compliance path is appropriate for such projects. Recommendations 5.2 through 5.7 provide recommendations for criteria that may be applied to projects that would typically be exempt from the LEED certification requirements of the SBP.

1.2. **Professional Qualifications:** Require professional service providers selected to participate in projects involving green building practices meet minimum standards that demonstrate technical knowledge of high performance design and/or construction. The Pre-Qualification Certification (PQC) process managed by the Office of Capital Improvements may be amended for this purpose. Standards may include professional certifications (e.g. LEED AP, CEM, CxA, etc.), project experience (e.g. number of LEED certified projects), etc.

1.3. **LEED Administrator:** Require that a LEED Administrator be assigned to each project pursuing LEED certification. The LEED Administrator should be an experienced LEED Accredited Professional (LEED AP). The LEED Administrator can be a County capital improvement professional; Department staff with appropriate credentials, experience or training; or an independent contractor. (See Part 2, Step 1.5) *[Chicago, San Francisco].*

1.4. **Database and Tracking:** Adapt an existing capital improvement database (e.g. CIIS) for this purpose. Alternatively, establish a basic, user-friendly database (e.g. Microsoft Excel, Access, etc.) for tracking information related to the energy and climate planning, design, construction and performance of County capital improvement projects. Assign an appropriate staff person the responsibility for obtaining, updating and analyzing the data. Utilize the results of data analysis as the basis of initiatives to update and improve the County's requirements. See Appendix C for recommended minimum data entry fields. *[New York City, San Francisco]*

1.5. **Departmental Liaison:** OOS should establish a staff position with responsibilities for managing and tracking the energy and climate performance of capital improvement

> Through targeted initiatives designed to maximize energy and climate performance, Miami Dade County can operate as a global leader in the stewardship of public buildings and infrastructure.

projects (see Recommendation 1.4). This staff position should be knowledgeable and experienced in high-performance design and construction and serve as a technical resource to Miami Dade Departments and the Sustainable Buildings Committee. *[Seattle].*

1.6. **Compliance Thresholds:** Based on analysis of planning, design, construction and performance data (see Recommendations 1.4 and 1.5), as well as best practices and County goals, periodically revisit thresholds for compliance with LEED certification requirements to ensure that requirements are adequate and cost effective. For instance, currently ***all*** new construction projects must be certified LEED Silver, regardless of budget, square footage or occupancy / use. Several peer public institutions have established LEED certification requirements based on budget, square footage or occupancy / use. Other local governments have expanded or increased the stringency of certain compliance thresholds over time (e.g. from LEED Silver to Gold). *[Atlanta, Los Angeles, New York City, Philadelphia, Portland, San Francisco, Seattle].*

1.7. **Commissioning:** Establish requirements for utilizing fundamental commissioning and an independent commissioning agent for building projects that are not required to achieve LEED certification. The LEED Fundamental Commissioning prerequisite can be used as basis for developing the Cx requirements. Guidelines published by American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE), the National Environmental Balancing Bureau, the AABC Commissioning Group (AGC), and the Sheet Metal and Air Conditioning Contractors' Natonal Association (SMACNA), among others, are also potential resources. *[Portland, San Francisco].*

1.8. **Implementation Budget:** Require departments to include a line item (typically 1-2%) in the project budget devoted to complying with the County's energy and climate performance requirements. This line item may include the costs of formally certifying a building under a third-party rating system, energy modeling, life cycle cost analysis, green specifications, commissioning, etc. *[Atlanta, Los Angeles, Seattle].*

1.9. **Annual Reporting:** Expand County department's reporting responsibilities under Implementing Order 8-8. Establish annual department and/or project reporting requirements and criteria designed to support OOS's annual progress report summarizing the County's performance under the Sustainability Buildings program. For instance, beyond reporting quarterly on LEED Checklist accomplishments, departments could aggregate annual project data on energy and water use reductions, costs associated with LEED compliance, etc., attributable to the SBP. Annual reports could serve as a basis of comparison across departments.[*New York City*]

1.10. **Awards / Recognition:** Establish annual awards to recognize exemplary planning, design, construction, and/or operations and maintenance among County departments and/or contractors. The Sustainable Buildings Committee could serve as the awards / recognition committee. *[Seattle]*.

1.11. **Sea-Level Rise and Adaptation:** Miami-Dade County is an international leader with respect to research and planning for adaptation to sea level rise and other forecasted impacts of climate change. Most recently, OOS has been collaborating with NOAA Coastal Services Center and Local Governments for Sustainability (ICLEI) on several projects that are evaluating how sea level rise could affect water resources, land use, zoning, emergency response, and infrastructure, among other issues within the County. Along with these efforts, the County has engaged in efforts to map the potential impact of seal level rise on the county. As the County's approach to sea level rise and adaptation to climate change develops, efforts should be made to align the County's Capital Improvement Process with those policies. For instance, planning, of new capital projects could take into account the County's developing geospatial understanding of the impacts of rising seas though issues such as site selection, among others.

2. DESIGN

2.1. **LEED Plan:** Expand County department's reporting responsibilities under Implementing Order 8-8. Require that a LEED Plan be developed and updated throughout the planning, design and construction of a project. The **Project Management Team** should complete the LEED Plan as part of the Design Criteria Package and/or Request to Advertise form and memorandum and submit updates to OOS quarterly. The LEED Plan should include the project number(s), description, location, budget and schedule. It should identify the members of the **Project Management Team**, including the LEED Administrator (See Recommendation 1.5). It should also include the LEED Checklist, indicating the whether or not a particular credit is secure, likely, possible, less likely or not viable, as well as the design team members responsible for achieving particular credits. It should similarly include a listing of FPL, state, and or federal incentives sought. *[New York City].*

2.2. **Approval Authority:** Amend AO 3-39 to assign authority for approving / rejecting the LEED and/or Energy Plans (See Recommendation 2.1 and 2.9). The draft LEED and/or Energy Plans would be submitted as part of Design Criteria Package and/or Request to Advertise form and memorandum and would be copied to OOS and / or the Sustainable Building Committee. If the LEED and/or Energy Plan is not approved, the project cannot move forward. *[New York City, San Francisco].*

2.3. **Integrated Design Charrette:** Require each project to hold an integrated design charrette. An Integrated design charrette is an intensive workshop in which key stakeholders and representatives of the design disciplines identify and incorporate green strategies into a project. Collaborative, interdisciplinary project delivery is a hallmark of green design and should be formally incorporated into the capital improvement process.

2.4. **Mandatory Credits / Points:** Based on analysis of planning, design, construction and performance data (see Recommendations 1.6 and 1.7), as well as best practices and County goals (see Recommendation 2.4), require the **Project Management Team** to achieve certain LEED credits or a minimum number of LEED points. For instance, the LEED Enhanced Commissioning credit could be required, or a minimum number of LEED Energy and Atmosphere points could be mandated to establish a baseline of energy performance. (Also see Recommendations 2.10, 2.11, 2.12 and 3.1) *[Atlanta, Philadelphia, Portland, Seattle].*

2.5. **Energy Standards:** Miami-Dade County Resolution R-228-09 established an electric energy conservation goal of 20% by 2014 relative to a 2007 baseline. Based on an analysis of the County's goal relative to its stock of new and existing capital

improvement projects and the Florida Energy Code, consider establishing energy standards for capital improvement projects that contribute towards this goal. New York buildings must reduce energy costs between 5% and 30% depending on project type. The State of Florida has established minimum energy standards for public buildings based on the baseline requirement in LEED Energy and Atmosphere Credit 1. Portland requires energy savings 30% beyond the baseline requirement in LEED Energy and Atmosphere Credit 1. *[Federal Government, State of Florida, New York City, Portland, San Francisco]*

2.6. **Update AO 11-3:** Update Administrative Order 11-3 to redefine departmental responsibilities and authority for implementation of the Order. The Order presently references the now-defunct departments and department functions. Further, County departments are generally unaware of the requirements of the Order. Require LCC requirements are included in all applicable procurement documents.

2.7. **LCC Standards:** Update Administrative Order 11-3 to establish or reference standard requirements and methodologies for Life Cycle Cost analysis. For instance, Miami-Dade Public Schools has established LCC analysis standards for mechanical systems in its design criteria. The State of Florida has established Rule 60D-4.006 *Life-Cycle Cost Analysis Requirements* to govern the use of LCC analysis in state buildings. Federal standards for LCC analysis are set forth in 10 CFR Part 436: Federal Energy Management and Planning Programs.

2.8. **Computer Simulation:** Software programs can be used to simulate the total building energy usage of a given design. Such programs are widely used to comply with building energy codes, local government requirements, as well as achieve Energy and Atmosphere credits under the LEED rating system. Establish requirements, standards or guidelines for applying computer-based simulation to capital improvement project designs in conjunction with required LEED credits (see Recommendation 2.3), energy standards (See Recommendation 2.4) and/or Life Cycle Cost analysis requirements (See Recommendations 2.5 and 2.6). The State of Florida has promulgated rules for the use of computer-based simulation for public buildings. The modeling software is used in conjunction with Life Cycle Cost analysis to evaluate alternative designs (see Recommendation 2.8) for energy and cost savings. *[State of Florida, New York City]*

2.9. **Alternative Designs:** In conjunction with required LEED credits (see Recommendation 2.3), energy standards (See Recommendation 2.4) and/or Life Cycle Cost analysis requirements (See Recommendations 2.5 and 2.6), consider developing requirements, standards or guidance relating to the evaluation of alternative designs in order to maximize energy and climate performance. For instance, the State of Florida requires certain projects to evaluate three alternative designs. Each design must be modeled with a computer-based simulation program that estimates total energy usage for a building. Alternative designs must demonstrate a 10 percent reduction in energy consumption relative to the previous design in sequence. A preferred alternative is selected after performing an LCC analysis. *[State of Florida].*

2.10. **Energy Plan:** Expand County department's reporting responsibilities under Implementing Order 8-8. Require that an Energy Plan be developed and updated throughout the planning, design and construction of a project. The **Project Management Team** may complete the Energy Plan as part of the Design Criteria Package and/or Request to Advertise form and memorandum and submit updates to OOS quarterly. The Energy Plan may consist of a project overview, a list of project team members, a narrative describing the project's energy goals, as well as the assumptions, methodology and tasks to be performed during schematic design through 100% construction documents. This latter element should include the computer-based simulation tools that will be used, the modeling approach, including alternative designs, and the Life Cycle Analysis approach. *[New York City].*

2.11. **Energy Design Criteria for New Construction and Renovations:** Based on an analysis of County energy savings goals (see Recommendation 2.4); planning, design, construction and performance data (see Recommendations 1.6 and 1.7); and the Florida Energy Code, develop standard minimum energy and climate performance design criteria for new construction and major and non-major renovation projects. Several peer public institutions require certain LEED credits and or minimum standards for major building components (see Recommendation 2.3), such as roofing for HVAC systems. San Francisco has established design standards for lighting systems. The International Code Council has developed the International Green Construction Code for new and existing buildings. (Also see Recommendations 2.12 and 3.1) *[State of Florida, Atlanta, Philadelphia, Portland, San Francisco, Seattle]*

2.12. **Energy Design Criteria for Minor Projects:** Develop energy and climate performance design criteria for minor capital improvement projects, such as roof, window, elevator and mechanical systems replacement. The State of Florida has established minimum energy performance standards for minor equipment. The Green Design Table for Small Projects developed by the New York State Office of General Services provides a starting point for applying LEED credits to minor projects. ASHRAE has published a series of Advanced Energy Design Guides for small facilities. (Also see Recommendations 2.12 and 3.1) *[State of Florida, State of New York, Philadelphia, Portland, San Francisco].*

2.13. **Sustainability Design Criteria:** Several peer public institutions have established design criteria for non-energy, sustainability elements such as indoor air quality, site selection, chlorofluorocarbon reduction, and environmental tobacco smoke. Several require certain LEED credits related to these items. Based on an analysis of County sustainability goals (see Recommendation 2.4); and planning, design, construction and performance data (see Recommendations 1.6 and 1.7) consider including such elements in a standard energy design criteria (see Recommendations 2.10, 2.11 and 3.1) *[Atlanta, Los Angeles, Portland, San Francisco).*

3. CONSTRUCTION

3.1 **Construction Waste**: Several peer public institutions have established criteria for construction and demolition (C&D) waste management. Los Angeles and San Francisco require development of a C&D management plan for all new construction and major renovation projects. Portland and Los Angeles have established performance criteria for C&D plans. Based on an analysis of County sustainability goals (see Recommendation 2.4); and planning, design, construction and performance data (see Recommendations 1.6 and 1.7) consider developing C&D criteria in conjunction with energy or other sustainability criteria (See Recommendations 2.10, 2.11, and 2.12). *[Los Angeles, Portland, San Francisco]*

4. OPERATIONS AND MAINTENANCE

4.1. **Benchmarking:** Require tracking and benchmarking of energy and climate performance in existing buildings. Utilize results to prioritize energy and climate performance-oriented capital improvement projects. Free tools such ENERGY STAR Portfolio Manager are available for this purpose. Less labor-intensive, customized solutions are also available. *[Federal Government, New York City].*

4.2. **Re-/Retro-Commissioning:** Require departments to develop an enterprise-wide facility management plan that requires establishment of a schedule for retro-commissioning existing buildings that have never been commissioned and periodic re-commissioning of existing buildings that have been commissioned in the past.

4.3. **Existing Buildings:** Based on the results of benchmarking and re-/retro-commissioning activities, explore establishment of County requirements for existing buildings. For instance, ENERGY STAR or LEED Existing Buildings Operation and Maintenance standards or certification could be required for certain existing County buildings, based on threshold criteria (i.e. square footage, replacement cost, occupancy/use, etc.). *[Portland].*

5. NON-BUILDING CAPITAL IMPROVEMENT PROJECTS

5.1. **Non-building Projects:** Expand the SBP to include non-building projects. Where LEED or a comparable rating system does not exist, direct affected departments to develop or adopt high-performance guidelines or standards for the planning, design and construction of non-building projects. (See Recommendations 5.2 – 5.7).

5.2. **Aviation:** The Sustainable Aviation Guidance Alliance (SAGA), a project of the Airports Council International, Airport Consultants Council and the American Association of Airport Executives, provides planning, implementation and maintenance support for aviation-oriented sustainability efforts. It has developed a database of sustainable practices. Los Angeles World Airports has published a *Sustainable Airport Planning, Design and Construction Guidelines* document. These resources could be used as design and construction criteria for aviation capital improvements that are not eligible for green building rating systems like LEED.

5.3. **Parks and Recreation:** The Sustainable Sites Initiative (SITES) has created voluntary national guidelines and performance benchmarks for sustainable land design, construction and maintenance practices. Developed by American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin and the United States Botanic Garden, SITES has released *Guidelines and Performance Benchmarks 2009*. It can be used to certify design, construction and maintenance of park and recreational projects on a 250 point scale. In addition, the New York City Parks Department and the Design Trust for Public Space have produced *Park Design for the 21st Century: High Performance Landscape Guidelines*. Both resources

could be used as design and construction criteria for parks and recreation capital improvements that are not eligible for green building rating systems like LEED.

5.4. **Public Works:** The New York City Department of Design and Construction and the Design Trust for Public Space has published *High Performance Infrastructure Guidelines*. The Guidelines provide best management practices for high-performance streets, sidewalks, utilities and landscaping that could utilized as design and construction criteria for public works capital improvements that are not eligible for green building rating systems like LEED.

5.5. **Seaport:** While a number of seaports have undertaken or are undertaking sustainability initiatives, there are no standard sustainability criteria for seaport-oriented capital improvement projects at present. The Port of Los Angeles reports that sustainable engineering design and construction guidelines are presently being developed. In addition, the American Association of Port Authorities (AAPA) maintains a list of resources related to sustainability initiatives. Further coordination between the Port of Miami-Dade County, its peers and professional associations such as AAPA is necessary in order to lay the groundwork for design and construction criteria for those port-oriented capital improvement projects that are not suited to green building rating systems such as LEED.

5.6. **Transit:** Miami-Dade Transit (MDT) is a signatory of the American Public Transit Association *Sustainability Commitment*. The Commitment establishes core sustainability principles as well as several exemplary action items. MDT is an entry level signatory and should seek to achieve higher recognition levels over time. Further, APTA, in association with North American transit authorities and the Environmental Protection Agency (EPA) have developed *Draft Transit Sustainability Guidelines*. These guidelines may be used in the future as design and construction criteria for transit capital improvement projects.

5.7. **Water and Sewer:** Research sponsored in part by the American Water Works Association (AWWA) on benchmarking water and wastewater utilities has been incorporated into the ENERGY STAR® Portfolio Manager tool. Portfolio Manager is a web-based energy management tool that permits users to track facility energy consumption, water usage and greenhouse gas emissions. Over time, the tools allows users to evaluate facility performance on a 100 point scale. Facilities that score 75 or higher, representing a level of performance among the 25% most energy efficient in the nation, may receive the ENERGY STAR® label. Miami Dade County's Water and Sewer Department should consider utilizing Portfolio Manager to administer energy consumption in its existing facilities and strive to achieve the ENERGY STAR® label, where feasible. Additionally, AWWA is promoting sustainability through its Sustainability Initiatives Coordinating Committee, which maintains a web-based clearinghouse of information and resources related to sustainability. While AWWA has not yet developed guidelines or standards for the industry, it has published several resources on the topic which may be used as a basis for development of design and construction criteria.

Appendix A: Resources

There are a wealth of resources that support energy and climate performance in the planning, design and construction of capital improvement projects. This section provides a selection of some of the most useful resources available to Miami-Dade County project managers and decision-makers.

Miami-Dade County Office of Sustainability (OOS)

OOS collaborates with County agencies, business groups, non-profit organizations and other partners to protect and enhance the County's distinct environmental quality and livability. OOS administers the County's Sustainable Buildings Program, as well as several other initiatives aimed at improving the energy and climate performance of the County's capital improvements.

Miami-Dade County Office of Capital Improvements (OCI)

OCI facilitates procurement of architecture and engineering contracts, assists with evaluation of proposals, contract negotiation, contract management and training of the County's capital improvement project managers. OCI is charged with ensuring that all qualifying County professional services and construction contracts contain specific language requiring compliance with the Sustainable Buildings Program.

Miami-Dade County General Services Administration (GSA)

GSA supports the County's department operations, including providing architectural, engineering and construction management services. GSA's Design and Construction division is committed to designing and building facilities in accordance with the Sustainable Buildings Program. GSA is involved in the design and construction of several LEED Silver facilities.

U.S. Green Building Council (USGBC)

USGBC is a non-profit organization focused on promoting green building. USGBC manages the LEED green building certification program, engages education and advocacy efforts, and maintains a nation-wide network of volunteer-based chapters. USGBC maintains extensive resources tailored for government, including case studies, research, and peer-to-peer forums.

The South Florida Chapter of the USGBC represents a diverse group of staff and volunteers committed to a prosperous and sustainable future for South Florida. It was founded with help from Miami-Dade County staff and the County continues to maintain an active presence in the organization.

Whole Building Design Guide (WBDG)

A project of the National Institute of Building Sciences, WBDG is a clearing house for information, applied research, tools and references related to high-performance buildings. It provides design guidance, project management, Life Cycle Cost analysis, as well as operation and maintenance resources for government and industry.

ENERGY STAR

A program of the U.S. Environmental Protection Agency and the Department of Energy, ENERGY STAR provides standards, strategies, and tools related to energy efficient products

and practices. ENERGY STAR provides an energy management tool called Portfolio Manager that permits tracking and assessment of energy and water use in buildings.

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

ASHRAE is an international, membership-based organization dedicated research, education and development of standards related to heating, ventilation, air conditioning and refrigeration. ASHRAE has developed several standards and guidelines related to high-performance building design, construction and commissioning, including Standard 189.1 and a series of Advanced Energy Design Guides.

Florida Power & Light (FPL)

FPL provides electric service to the County's facilities. FPL also provides a suite of rebates and incentives associated with high-performance building design and construction. Miami-Dade County capital improvement projects may be eligible for FPL rebates and incentives.

Florida Department of Community Affairs (DCA)

DCA maintains the Building Code Information System (BCIS). BCIS provides comprehensive information on the State's building code, including online access to the most recent version Florida Energy Code. In partnership with the Florida Solar Energy Center, DCA also maintains MyFlorida Green Building, a resource that promotes energy efficiency and high-performance building design in Florida.

Florida Department of Management Services (DMS)

DMS's implements the state's high-performance building standards for state facilities. In addition, the department's Division of Real Estate Development and Management maintains energy conservation guidelines, the state energy management plan as well as a design and construction guide. It has established a guide supporting the Florida Life-Cycle Cost Analysis Program.

Florida Green Building Coalition (FGBC)

FGBC is a non-profit organization dedicated to improving the built environment in Florida. It members are dedicated to finding new and innovative ways to educate builders, developers, local governments and consumers about sustainable development. It has developed Green Certification Programs for homes, commercial buildings, high-rise residential projects, land development and local governments.

Florida Solar Energy Center (FSEC)

A research institute of the University of Central Florida, FSEC conducts research, development and educational activities related to energy technologies. FSEC's Building Research Department is involved in projects related to green standards, energy efficient products , and zero energy buildings among others.

Database of State Incentives for Renewables & Efficiency (DSIRE)

A project of the North Carolina Solar Center and the Interstate Renewable Energy Council, DSIRE is a web-based database of federal, state, local and utility incentives and policies that promote energy efficiency. DSIRE includes a comprehensive listing of incentives and policies in the State of Florida that may apply to capital improvement projects in Miami-Dade County.

Appendix B: County Requirements

Miami-Dade County has established several requirements related to the energy and climate performance of its capital improvement projects. The full text of Resolution R-1200-05, Ordinance O-07-65, Implementing Order 8-8, Resolution R-228-09, Resolution R-1103-10 and Administrative Order 11-3 are provided on the following pages.

Resolution R-1200-05

MEMORANDUM

Agenda Item No. 11(A)(40)

TO: Honorable Chairman Joe A. Martinez
and Members, Board of County Commissioners

DATE: October 18, 2005

FROM: Murray A. Greenberg
County Attorney

SUBJECT: Resolution declaring sustainable development building measures for county buildings as a policy of Miami-Dade County

The accompanying resolution was prepared and placed on the agenda at the request of Commissioner Katy Sorenson.

Murray A. Greenberg
County Attorney

MAG/bw

MEMORANDUM

(Revised)

TO: Honorable Chairman Joe A. Martinez and Members, Board of County Commissioners

DATE: October 18, 2005

FROM: Murray A. Greenberg County Attorney

SUBJECT: Agenda Item No. 11(A)(40)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

2

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(40)
10-18-05

RESOLUTION NO. _____

RESOLUTION DECLARING SUSTAINABLE DEVELOPMENT BUILDING MEASURES FOR COUNTY BUILDINGS AS A POLICY OF MIAMI-DADE COUNTY AND DIRECTING THE COUNTY MANAGER TO PREPARE A PLAN TO IMPLEMENT THIS POLICY

WHEREAS, this Board seeks to enhance the public welfare and assure that further civic development is consistent with this Board's desire to create a more sustainable community by incorporating sustainable development building measures into the design, construction, renovation and maintenance of County-owned, County-financed and County-operated buildings; and

WHEREAS, this Board recognizes that such sustainable development building measures are designed to encourage resource conservation, reduce waste generated by construction projects, increase energy efficiency, and promote the health and productivity of residents, employees and visitors to Miami-Dade County; and

WHEREAS, this Board recognizes that the design, construction, renovation and maintenance of buildings within Miami-Dade County has a significant impact on Miami-Dade County's environmental sustainability, resource usage and efficiency, waste management, and the health and productivity of residents, employees, and visitors to Miami-Dade County; and

WHEREAS, this Board recognizes that utilizing such sustainable development building measures may result in significant cost savings to Miami-Dade County over the life of the buildings; and

WHEREAS, this Board finds that in recent years sustainable development building measures for design, construction, renovation, and maintenance of buildings have become increasingly widespread; and

WHEREAS, Atlanta, Austin, Boston, Chicago, Dallas, Houston, Kansas City (MO), Los Angeles, Portland, San Diego, San Francisco, Seattle and other major metropolitan areas in the United States have adopted significant sustainable development building measures for the design, construction, renovation, and maintenance of public buildings,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that:

Section 1. This Board hereby declares that the incorporation of sustainable development building measures into the design, construction, renovation and maintenance of County-owned, County-financed, and County-operated buildings shall be the policy of Miami-Dade County.

Section 2. The County Manager is hereby directed to prepare a plan for the implementation of this policy and to provide this plan to this Board not later than 120 days from the date hereof. The plan shall include, but not be limited to, a timetable for implementation, adoption of a well-recognized Green Building standard such as the US Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system, a description of appropriate legislation for consideration by this Board, and consideration of the creation of a County-wide office in the Office of the County Manager to implement the approved plan and coordinate other sustainability initiatives currently being conducted by various County departments and agencies.

The foregoing resolution was sponsored by Commissioner Katy Sorenson and offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Joe A. Martinez, Chairman
Dennis C. Moss, Vice-Chairman

Bruno A. Barreiro	Dr. Barbara Carey-Shuler
Jose "Pepe" Diaz	Carlos A. Gimenez
Sally A. Heyman	Barbara J. Jordan
Dorrin D. Rolle	Natacha Seijas
Katy Sorenson	Rebeca Sosa
Sen. Javier D. Souto	

The Chairperson thereupon declared the resolution duly passed and adopted this 18th day of October, 2005. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency. PST

Peter S. Tell

5

Memorandum

MIAMI-DADE COUNTY

(Second Reading 05-08-07)

Date: March 6, 2007

Agenda Item No. 7(D)

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Proposed Amendments to Chapter 9 of the Code of Miami-Dade County, creating the Sustainable Buildings Program for County-owned, -financed, and/or -operated buildings

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RECOMMENDATION

It is recommended that the Board approve the attached ordinance, which amends Chapter 9 by adding a new article to that chapter encompassing Sections 9-71 through 9-75 of the Code of Miami-Dade County, Florida ("Ordinance"). The Ordinance establishes the Sustainable Buildings Program (the "Program") for buildings owned, financed, and/or operated by the County. The Ordinance also addresses measurement standards and thresholds for compliance, and requires that the County Manager appoint a Sustainability Manager to implement the requirements of the new article.

BACKGROUND

On October 18, 2005, the Board approved Resolution R-1200-05, sponsored by Commissioner Katy Sorenson, which declared sustainable building as a policy of Miami-Dade County. The resolution directed the County Manager to prepare an implementation plan that would address, among other things, the adoption of a well-recognized green building standard for design and construction of County buildings, the development of appropriate legislation, and the creation of a centralized office to coordinate sustainability initiatives for the County. Toward that end, staff reviewed a number of programs currently in place or under implementation by other jurisdictions, consulted with the leadership of the local chapter of the U.S. Green Building Council, and secured input from key County development agencies through the Sustainable Buildings Committee. In addition, the funding necessary to establish the recommended Office of Sustainability was incorporated into the General Services Administration budget in the FY2006-07 Resource Allocation and Multi-Year Capital Plan, as adopted by the Board in September 2006.

The information below summarizes the various proposed amendments to the Code that are required to establish the Program.

- Sec. 9-71. Title

  The Program is reflected in a proposed new article to Chapter 9 of the Code of Miami-Dade County, Florida. To accommodate the change to Chapter 9, the title of that Chapter would be amended to read "Standards for Construction of County Buildings, Roads, Bridges and Causeways." The title of Chapter 9 currently reads "Construction: Roads, Bridges and Causeways, Etc."

- Sec. 9-72. Policy

  The policy section of the Ordinance serves to declare the County's formal commitment to green building practices in its construction projects.

- Sec. 9-73. Definitions

  Definitions of relevant terms ensure consistency in the scope and application of the Program.

- Sec. 9-74. Staffing

  To implement the contemplated policy and process changes, the proposed Ordinance creates a staff position to be filled by someone with particular knowledge of the subject matter, and who will be dedicated solely to County sustainability issues. In addition, departments involved in design and construction will be required to designate qualified technical liaisons to work with the Sustainability Manager.

- Sec. 9-75. Measurement Standards and Compliance

  The proposed Ordinance directs broad authority to the Sustainability Manager for purposes of developing a rating system that sets standards to use in evaluating the technical concerns associated with implementing green building practices in the design and construction of County buildings. The particular rating system selected shall be addressed by administrative order, so as to allow flexibility to address future concerns, such as regional differences from the national standard, unique project characteristics, unforeseen administrative difficulties, or otherwise.

FISCAL IMPACT

Operating Expense. The Sustainable Buildings Program, as implemented and administered under the authority of the amended Chapter 9 of the Miami-Dade County Code, will initially require the addition of one full-time position to the overall staffing of the Executive Policy Support Section of the County Manager's Office . Added staffing is anticipated as the program evolves; however, the specific number is, as yet, unknown. The initial fiscal impact of the additional staff support is approximately $90,000 and is funded in the FY06-07 Budget.

Capital Expense. According to a comprehensive report prepared in October 2003 for the State of California's Sustainable Building Task Force, a group of more than 40 California state government agencies, the average cost premium for the 33 green buildings analyzed for the report fell just under two percent ($3 to $5 per square foot). Another study, *Costing Green: A Comprehensive Cost Database and Budgeting Methodology*, July 2004, by Lisa Fay Matthiessen and Peter Morris of Davis Langdon, Santa Monica, CA, concluded that basic LEED certification (not the higher Bronze, Silver, Gold, or Platinum levels) can be achieved for little or no cost premium. Moreover, for the 61 LEED projects of varying certification levels studied by Davis Langdon, researchers found that more than half of the projects had original budgets set without considering sustainable design, yet received no supplemental funding to achieve certification targets. And, where extra funding was provided, it was typically for specific enhancements or requirements, such as photovoltaic systems. Such supplemental funding ranged between 0 and 3 percent of the initial budget.

Life Cycle Savings. Studies such as those cited above indicate that sustainable building design and construction will result in reduced operating and maintenance costs over the life of the building equal to about 20% of the initial construction cost, which represents a tenfold return on investment.

Assistant County Manager

MEMORANDUM
(Revised)

TO: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

DATE: May 8, 2007

FROM: Murray A. Greenberg
County Attorney

SUBJECT: Agenda Item No. 7(D)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Manager's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 7(D)

05-08-07

ORDINANCE NO. _____

ORDINANCE CONCERNING THE SUSTAINABLE BUILDINGS PROGRAM; ESTABLISHING AS THE POLICY OF MIAMI-DADE COUNTY THE INSTITUTION OF SUSTAINABLE DEVELOPMENT PRACTICES AND MEASURES INTO BUILDINGS OWNED, FINANCED, AND/OR OPERATED BY MIAMI-DADE COUNTY; ESTABLISHING MEASUREMENT STANDARDS AND THRESHOLDS FOR COMPLIANCE; AMENDING CHAPTER 9 OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA; CREATING SECTIONS 9-71 THROUGH 9-75 OF THE CODE; PROVIDING SEVERABILITY, INCLUSION IN THE CODE, AND AN EFFECTIVE DATE

WHEREAS, the County is committed to conserving the region's natural resources, saving taxpayer dollars through reduced operating expenses, and creating a healthier built environment for its employees and visitors; and

WHEREAS, the County intends to incorporate environmentally responsible ("green") practices into the design, construction, and operation of its buildings; and

WHEREAS, the County can set a healthy standard of sustainability for the entire community; and

WHEREAS, properly-implemented, sustainable buildings and communities can be designed, built, and operated in a way that will achieve environmental goals without sacrificing either social responsibility or economic success,

THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:

Section 1. The foregoing recitations are hereby incorporated herein as a portion of this ordinance.

Section 2. Chapter 9 of the Code of Miami-Dade County, Florida is hereby amended as follows:[1]

Chapter 9 [[~~CONSTRUCTION: ROADS, BRIDGES AND CAUSEWAYS, ETC.~~]] >>STANDARDS FOR CONSTRUCTION OF COUNTY BUILDINGS, ROADS, BRIDGES AND CAUSEWAYS<<

Section 3. Article III of Chapter 9 of the Code of Miami-Dade County, Florida, is hereby created to read as follows:

>>**Sec. 9-71. Title**

This Article shall be entitled, "The Sustainable Buildings Program."

Sec. 9-72. Policy

It shall be the policy of Miami-Dade County to incorporate, wherever practical, green building practices into the planning, design, construction, management, renovation, maintenance and decommissioning of buildings owned, financed, and/or operated by the County.

Sec. 9-73. Definitions

Unless specifically defined elsewhere in this Chapter, the definitions provided in this Section shall apply.

(a) *Green building* is a structure that is designed, built, renovated, operated and reused in an ecological and resource-efficient manner.

(b) *Green building practices* are environmentally and socially-conscious practices that emphasize processes and methods of design and construction that (i) reduce exposure to noxious materials, (ii) conserve non-renewable energy and scarce materials, (iii) minimize life-cycle ecological impact of energy and materials, (iv) employ renewable energy or materials that are sustainably harvested, (v) protect and restore local air, water, soils, flora and fauna, and (vi) support pedestrians, bicycles, mass transit and other alternatives to fossil-fueled vehicles.

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[1] Words stricken through and/or [[double bracketed]] shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

(c) *New construction* is the design and construction of any new building, or an addition to an existing building.

(d) *Major renovation/remodel* is any design and construction project that alters the structure of an existing building where the cost of construction is equal to or exceeds 50% of the building's replacement cost.

(e) *Non-major renovation/remodel* is any design and construction project that alters the structure of an existing building where the cost of construction is less than 50% of the building's replacement cost.

(f) *Renovate* is to improve or repair the condition of a building.

(g) *Sustainable building* means building processes that integrate materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction and operation of the built environment.

Sec. 9-74. Staffing

(a) *Sustainability Manager.* The County Manager, or his designee, shall appoint a qualified staff person to serve as the Sustainability Manager, who will be charged with implementing the requirements of this Article, as well as coordinating the sustainability initiatives of other County departments and agencies. The Sustainability Manager shall be authorized to interpret and enforce all of the provisions of this Article.

(b) *Sustainability Liaison.* All County departments engaged in designing and constructing County-owned buildings shall designate a staff member with authority or expertise in project management, architecture, landscape architecture, design, engineering, resource conservation, budget analysis and other skills to act as a liaison with the Sustainability Manager.

Sec. 9-75. Measurement Standards and Compliance

(a) *Rating System.* The Sustainability Manager shall select a nationally-recognized rating system that sets standards for implementing green building practices in design and construction, which may include, but not be limited to, the Leadership in Energy and Environmental Design Rating System administered by the U.S. Green Building Counsel. This rating system will be used to measure compliance with the terms of this Article. The rating system selected for each category of construction by

the Sustainability Manager shall be set forth in an Implementing Regulation to be approved by the Board of County Commissioners.

(b) *Standard for County-owned buildings.* All new construction, major renovations/remodels, and non-major renovations/remodels of County-owned buildings shall adhere to the nationally-recognized rating system standards designated by the Sustainability Manager for that particular category of construction, as described in subsection (a) above.

(c) *Standard for County-financed, County-leased, and County-operated buildings.* The Sustainability Manager shall evaluate and propose criteria for the use of green building practices in connection with County-financed, County-leased, and County-operated buildings. The criteria shall be set forth in an Implementing Regulation to be approved by the Board of County Commissioners.

(d) *Interpretations, exemptions and waivers.* The Sustainability Manager shall establish such processes, policies, and procedures as may be necessary to guide the consideration of requests for interpretations of this Article, or for exemption or waiver from the requirements of this Article. <<

Section 4. If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

Section 5. It is the intention of the Board of County Commissioners, and it is hereby ordained that the provisions of this ordinance, including any sunset provision, shall become and be made a part of the Code of Miami-Dade County, Florida. The sections of this ordinance may be renumbered or relettered to accomplish such intention, and the word "ordinance" may be changed to "section," "article," or other appropriate word.

Section 6. This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED:

Approved by County Attorney as
to form and legal sufficiency:

Prepared by:

Erica S. Zaron

OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: December 4, 2007

Amended
Agenda Item No. 8(F)(1)(I)

To: Honorable Chairman Bruno A. Barreiro
and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Subject: Implementing Order 8-8 Instituting Departmental Policies and Procedures in Furtherance of the County's Sustainable Buildings Program. R#1309-07

This item has been revised to reflect the modification made during the December 4, 2007 Board meeting deleting the following language under Order Overview #3, "Making final determinations on requests for exemption or substitution of rating standards", from the Implementing Order.

RECOMMENDATION

It is recommended that the Board of County Commissioners approve the attached Implementing Order (IO), which shall institute those administrative policies and procedures to be followed by all County departments engaged in activities related to the design, construction, renovation and/or maintenance of County-owned, -financed and -operated buildings, in order to incorporate sustainable development practices in the day-to-day operations of the County.

PURPOSE

This Implementing Order is in furtherance of the County's "Sustainable Buildings Program," as mandated by Sections 9-71 through 9-75 of the Code of Miami-Dade County. The Implementing Order is intended to provide consistent direction to County agencies and departments so as to ensure adherence to principles and processes that comply with the County's Sustainable Building Program. The program, which falls under the oversight of the County's Sustainability Manager, calls for the integration of materials and methods promoting environmental quality, economic vitality, and social benefit through the design, construction and operation of the County's built environment.

SCOPE

This Implementing Order will have a Countywide effect.

BACKGROUND

On October 18, 2005 the Board of County Commissioners approved Resolution R-1200-05, which established Sustainable Building as a policy of Miami-Dade County, and directed the County Manager to prepare a plan to implement the policy. In accordance with that directive, staff from GSA and the County Attorney's Office reviewed a broad variety of similar programs in other jurisdictions across the country, and sought input from the Department of Procurement Management, the Office of Capital Improvements, and all other County agencies with large capital development programs or with regulatory roles in the development process, in order to draft Ordinance 07-65, which was approved by the Board on May 8, 2007. The ordinance amended the Code of Miami-Dade County to establish a Sustainable Buildings Program (The Program) for Miami-Dade County facilities, requires the creation

of a Sustainability Manager (SM) position to oversee the program, and mandates the use of external sustainability rating system(s) to measure the County's efforts.

Order Overview

1- Sustainable ("Green") Design:

The mission of sustainable or "green" design is to promote the design and construction of buildings that are environmentally responsible, economical to operate, and healthy places to live and work. As defined by the U.S. Green Building Council (USGBC), it is "design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas including: sustainable site planning, safeguarding water and water efficiency, energy efficiency and renewable energy, conservation of materials and resources, and indoor environmental quality".

2- Rating System:

Except as provided for elsewhere in the Implementing Order, the primary mechanism for determining compliance with the Ordinance shall be the USGBC's Leadership in Energy and Environmental Design (LEED) Green Building Rating System™. The LEED Green Building Rating System helps design teams and facility managers realize and attain green project goals. It is a nationally recognized and utilized voluntary certification process that provides a definitive standard for what constitutes "green" building practices. LEED Certification is obtainable at four levels including Certified, Silver, Gold and Platinum. The LEED Certification process promotes a whole-project integrated design process, provides standards for recognition of sustainable design leaders and buildings, and raises awareness of the importance of "green" design.

3- Sustainability Manager (SM):

The Implementing Order delegates broad discretionary authority to the SM for coordinating the County's sustainability efforts. The SM shall be tasked with directing and coordinating the County's sustainability policy, and with the collection and dissemination of information related to the County's sustainability initiatives. He/She will be instrumental for ensuring specific functions that should be performed within County government, either as a direct task or indirectly by working with designated departments. The SM will also be responsible for the following functions:

- Maintaining a comprehensive list of all current building projects and tracking the progress of each such project as it relates to LEED compliance.
- Preparing annual progress report summarizing County performance under Sustainable Buildings Program.
- Serving as the County liaison with the South Florida Chapter of the U.S. Green Building Council, and other appropriate entities.

4- Scope of Construction:

The extent to which sustainability requirements are sought will depend on the extent of the project. The degree of compliance will be enforced, as predetermined by the selected Rating System, varying in accordance to the type and size of the job to be performed:

- New construction, which includes the construction of any new building or any addition to a building, shall be required to attain "Silver" or higher designation under the LEED for New Construction (LEED-NC) Rating System.

- Renovate to improve or repair the condition of an existing building/structure.

  - Major renovation/remodel includes those projects in existing buildings where the cost of construction is equal to, or exceeds 50% of the building's replacement cost. Such projects shall be required to attain "Certified" or higher designation under the LEED-NC Rating System

  - Non-major renovation/remodel includes those projects in existing buildings where the cost of construction is less than 50% of the building's replacement cost, but greater than $1 Million. Such projects shall attain "Certified" or higher designation under the appropriate LEED Rating System such as LEED for Existing Building, Commercial Interiors, Core and Shell, et al.

Departmental Responsibilities

Detailed direction regarding implementation of the Sustainable Building Program throughout County departments will be formulated and monitored through the Sustainability Manager. At a minimum, however, departments with roles and/or responsibilities in the design, construction, renovation, management and/or maintenance of County-owned, -financed and -operated buildings shall have responsibilities as follows:

OFFICE OF CAPITAL IMPROVEMENTS (OCI):

Ensure that all County construction contracts governed by the Ordinance contain specific language requiring compliance.

DEPARTMENT OF PROCUREMENT MANAGEMENT (DPM):

As directed by the Sustainability Manager or OCI, include appropriate language in procurement contracts for goods and/or services that ensures compliance with the Ordinance.

ALL OTHER DEPARTMENTS:

- Utilize the most current USGBC LEED criteria available to incorporate green building practices in the planning, design, and construction of new buildings, and in the remodeling, renovation, management and maintenance of existing buildings.

- As required by the Ordinance and/or the Sustainability Manager, ensure that all designated projects are registered as "green building" projects through the USGBC.

- Designate a staff member to act as a liaison with the Office of Sustainability for purposes of coordination and education on existing and future County initiatives as part of an overall sustainability strategy.

- Submit quarterly status reports to the Office of Sustainability providing information relative to LEED checklist accomplishments for registered projects.

- Undertake proactive measures to ensure that all relevant staff becomes knowledgeable about green building practices and the benefits of green building through the:
  - training and accreditation of staff, as appropriate;
  - communication of the substance and benefits of sustainable building practices, in general, and the LEED Green Building Rating System, in particular;
  - commitment of effort and financial support to pursue certification of every project;
  - setting and pursuit of annual sustainability achievement targets;
  - inclusion of sustainability achievement goals in departmental business plan.

Track Record/Monitor:

Oversight will be provided by the County's Sustainability Manager (SM).

Fiscal Impact/Funding Source:

The FY2006-07 Resource Allocation and Multi-Year Capital Plan includes $590,000 for the creation of the Office of Sustainability. Recruitment is underway for the Sustainability Manager who, once hired, will develop a detailed spending plan for the Office.

The degree to which sustainability requirements add cost to construction, renovation, and maintenance projects is contingent on the type and size of the project, and the "degree" of sustainability being sought. Industry research clearly shows that, in recent years, the gap between sustainable ("green") and conventional development has narrowed dramatically, to the point that some level of sustainability can be achieved at virtually the same cost as conventional projects. Higher levels of sustainable development can be achieved at very modest cost premiums – recent studies consistently show the increase in capital development cost at less than 2%. And, in all cases, even where there is a cost premium in the initial development cost, the savings in operating costs over the life of the building will offset that initial "green" investment by a 10 to 1 ratio.

Director
General Services Administration

MEMORANDUM

(Revised)

TO: Honorable Chairman Bruno A. Barreiro and Members, Board of County Commissioners

DATE: December 4, 2007

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Amended Agenda Item No. 8(F)(1)(I)

Please note any items checked.

_____ "4-Day Rule" ("3-Day Rule" for committees) applicable if raised

_____ 6 weeks required between first reading and public hearing

_____ 4 weeks notification to municipal officials required prior to public hearing

_____ Decreases revenues or increases expenditures without balancing budget

_____ Budget required

_____ Statement of fiscal impact required

_____ Bid waiver requiring County Manager's written recommendation

_____ Ordinance creating a new board requires detailed County Manager's report for public hearing

_____ Housekeeping item (no policy decision required)

_____ No committee review

5

Approved _____ Mayor
Veto _____
Override _____

Amended
Agenda Item No. 8(F)(1)(I)
12-4-07

RESOLUTION NO. R-1309-07

RESOLUTION AUTHORIZING APPROVAL OF IMPLEMENTING ORDER 8-8: ESTABLISHING GUIDELINES TO FURTHER OUR SUSTAINABLE BUILDINGS PROGRAM INITIATIVE; AND AUTHORIZING THE COUNTY MAYOR OR HIS DESIGNEE TO EXERCISE ANY AND ALL OTHER RIGHTS CONFERRED THEREIN

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board hereby approves Implementing Order 8-8 which establishes guidelines to further the Sustainable Buildings Program Initiative; in substantially the form attached hereto and made a part hereof; and authorizes the County Mayor or his designee to exercise any and all other rights conferred therein.

The foregoing resolution was offered by Commissioner Katy Sorenson, who moved its adoption. The motion was seconded by Commissioner Rebeca Sosa and upon being put to a vote, the vote was as follows:

Bruno A. Barreiro, Chairman aye
Barbara J. Jordan, Vice-Chairwoman aye

Jose "Pepe" Diaz	aye	Audrey M. Edmonson	aye
Carlos A. Gimenez	aye	Sally A. Heyman	absent
Joe A. Martinez	aye	Dennis C. Moss	aye
Dorrin D. Rolle	aye	Natacha Seijas	aye
Katy Sorenson	aye	Rebeca Sosa	aye
Sen. Javier D. Souto	aye		

The Chairperson thereupon declared the resolution duly passed and adopted this 4th day of December, 2007. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF COUNTY
COMMISSIONERS

HARVEY RUVIN, CLERK

By: KAY SULLIVAN
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Erica Zaron

AMD 8F I
12-4-07
R-1309-07

I.O. No.: 8-8
Ordered:
Effective:

MIAMI-DADE COUNTY
IMPLEMENTING ORDER

SUSTAINABLE BUILDINGS PROGRAM

AUTHORITY:
Section 4.02 of the Miami-Dade County Home Rule Amendment and Charter, and Chapter 9, Article III, Sections 9-71 thru 9-75 of the County Code.

POLICY:
Resolution No. R-1200-05 established it to be the policy of Miami-Dade County to incorporate sustainable development building measures into the design, construction, renovation and maintenance of County-owned, County-financed, and County-operated buildings.

GENERAL TERMS, AS USED IN THIS ORDER SHALL MEAN:

- **Florida Green Building Coalition (FGBC):** a nonprofit Florida Corporation dedicated to improving the built environment, with a specific mission "to provide a statewide Green Building Program with environmental and economic benefits." FGBC has developed and administers individual standards and certification programs to recognize and designate specific projects as achieving the organization's "green standard" for homes, commercial buildings, and land developments. FGBC also has a Green Local Government Standard that recognizes individual cities and counties for outstanding environmental stewardship.

- **Green building:** is a structure that is designed, built, renovated, operated and reused in an ecological and resource-efficient manner.

- **Green building practices:** environmentally- and socially-conscious practices that emphasize processes and methods of design and construction that (i) reduce exposure to noxious materials, (ii) conserve non-renewable energy and scarce materials, (iii) minimize life-cycle ecological impact of energy and materials, (iv) employ renewable energy or materials that are sustainably harvested, (v) protect and restore local air, water, soils, flora and fauna, and (vi) support pedestrians, bicycles, mass transit and other alternatives to fossil-fueled vehicles.

- **LEED**: the Leadership in Energy and Environmental Design Green Building Rating System™ is a nationally accepted benchmark for the design, construction, and operation of high-performance green buildings. Developed and administered by the U.S. Green Building Council, LEED provides a defined process for measuring and documenting the implementation of environmentally responsible practices for multiple building types and phases of a building's lifecycle. It is accessible on-line and supported by a robust program of workshops and professional accreditation.

- **LEED-NC:** LEED for New Construction - the LEED Green Building Rating System that focuses on the design and construction process for new construction and major

reconstruction of buildings. It is most frequently applied to high-performance commercial and institutional projects, with a focus on office buildings, K-12 schools, multi-unit residential buildings, manufacturing plants, laboratories and many other building types.

- **LEED-EB:** LEED for Existing Buildings – the LEED Green Building Rating System that provides a recognized, performance-based benchmark for building owners and operators to measure operations, improvements and maintenance on a consistent scale.

- **LEED-CI:** LEED for Commercial Interiors – the LEED Green Building Rating System that establishes the green benchmark for tenant improvements.

- **New construction:** is the design and construction of any new building, or an addition to an existing building.

- **Major renovation/remodel:** is any design and construction project that alters an existing building where the cost of construction is equal to or exceeds 50% of the building's replacement cost.

- **Non-major renovation/remodel:** is any design and construction project that alters an existing building where the cost of construction is less than 50% of the building's replacement cost, but in excess of $1 million.

- **Ordinance:** is the Sustainable Buildings Program Ordinance that amended Chapter 9 of the Code of Miami-Dade County, Florida.

- **Renovate:** is to improve or repair the condition of a building.

- **Sustainable building:** means building processes that integrate materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction and operation of the built environment.

- **Sustainable Buildings Program:** The procedures necessary to implement the policy set forth in the Ordinance shall be referred to in the aggregate as the Sustainable Buildings Program.

- **USGBC:** A 501(c)(3) nonprofit organization, the U. S. Green Building Council is a nationally recognized coalition of professionals from across the building industry, whose mandate is to promote the development and operation of buildings that are environmentally responsible, profitable, and healthy places to live and work. USGBC has regional chapters throughout the country (75 chapters in 2007), including the South Florida Chapter, of which Miami-Dade County is a member organization. USGBC developed and administers the LEED Green Building Rating System™.

STANDARDS:

Except as provided for elsewhere in this Implementing Order, the primary mechanism for determining compliance with the Ordinance shall be the U.S. Green Building Council's LEED Rating System. All construction projects for which a design team was selected subsequent to the effective date of this Implementing Order shall be required to meet the standards delineated

herein. Compliance shall be determined by completing a formal certification process with the U.S. Green Building Council, or as otherwise directed by the Sustainability Manager.

- New Construction: All new construction projects shall be required to attain "Silver" or higher level rating under the LEED -NC Rating System.

- Major Renovations & Remodels: All major renovations/remodels shall attain "Certified" or higher level rating under the LEED-NC Rating System.

- Non-major Renovations/remodels: All non-major renovations/ remodels begun shall attain "Certified" or higher level rating under the appropriate LEED Rating System such as LEED-NC, LEED-EB or LEED-CI.

- Renovation, remodels, and other building upgrades not meeting the above criteria are encouraged to incorporate the maximum number of LEED-approved green building practices as are feasible from a practical and fiscal perspective; however, LEED certification will not be required.

- Substitution of Standard: the requirement for applying the appropriate LEED standard under any of the above-referenced categories may be exempted or modified due to special circumstances of the project. Such exemption or modification shall be for the express purpose of ensuring the use of the most appropriate or relevant rating standard, and shall not, in any way, exempt the requirement to apply green building practices to the maximum extent possible. This substitution process shall be administered by and through the Sustainability Manager.

DEPARTMENT RESPONSIBILITY:

All County Departments:

To implement the above policy, all County departments that are responsible for the financing, designing, developing, constructing, and managing County-owned buildings shall implement the following requirements or instructions:

- Utilize the most current USGBC LEED criteria available to incorporate green building practices in the planning, design, and construction of all new buildings, setting at a minimum, the level of "Silver" in the LEED-NC Rating System. Language specific to this requirement shall be incorporated into all related contracts. Additionally, all projects shall be registered as "green building" projects through the USGBC.

- Utilize the most current USGBC LEED criteria available to incorporate green building practices in the planning, design, and construction of major remodel/renovations, setting as a minimum a "Certified" rating in the LEED-NC Rating System. Language specific to this requirement shall be incorporated into all related contracts. All such projects shall be registered as "green building" projects through the USGBC.

- Utilize the most current USGBC LEED criteria available to incorporate green building practices in the planning, design, and construction of non-major renovation/remodels, setting as a minimum a "Certified" rating under the appropriate LEED Rating System such as LEED-NC, LEED-EB or LEED-CI. Language specific to this requirement shall be

incorporated into all related contracts. All such projects shall be registered as "green building" projects through the USGBC.

- Submit quarterly status reports to the Office of Sustainability providing information relative to LEED checklist accomplishments for registered projects.

- County departments that develop, construct, and/or manage County-owned buildings, or those that have a role in the development regulatory process, shall be expected to designate, as liaison with the Office of Sustainability, a staff member who has knowledge or expertise in project management, architecture, landscape architecture, design, engineering, resource conservation, budget analysis and/or other skills as needed.

- All other County departments shall designate a staff member to act as a liaison with the Office of Sustainability for purposes of coordination and education on existing and future County initiatives as part of an overall sustainability strategy.

Office of Capital Improvements

The Office of Capital Improvements (OCI) will be responsible for:

- Ensuring that all qualifying County construction contracts contain specific language requiring compliance with the Sustainable Building Ordinance.

Department of Procurement Management

The Department of Procurement Management (DPM) will be responsible for:

- Including, as directed by the Sustainability Manager or OCI, appropriate language into procurement contracts to ensure compliance with the Sustainable Building Ordinance.

Sustainability Manager

The Sustainability Manager shall be tasked with directing and coordinating the County's sustainability ("green") policy, and with the collection and dissemination of information related to the County's sustainability initiatives. Specifically, the Sustainability Manager will be responsible for ensuring that the following functions are performed within County government, either as a direct task or indirectly by working with designated departments within Miami-Dade County:

- Maintaining a comprehensive list of all current building projects, including new construction, major and non-major renovations/remodels, and tracking the progress of each such project as it relates to LEED compliance. This file will contain, but not be limited to, data relating to the specific LEED criteria targeted during the design phase, and the progress of each desired criteria throughout the building process.

- Chair the Sustainable Buildings Committee, which will be comprised of departmental Sustainability Liaisons and/or other technically knowledgeable representatives from key County agencies. This committee shall support the Sustainability Manager in the implementation of the policies set forth in this Implementing Order. Every effort should be made to ensure that the Committee includes members or support staff with professional accreditations, certifications, licenses or special proficiencies that can provide technical

support to the Sustainable Building Program on such matters as training on LEED or other compliance standards, green building technologies, specific project reviews, and sustainability policy and research. The Committee shall be comprised of, at a minimum, representatives from the following departments: Miami-Dade Aviation, Building, Building Code Compliance, Consumer Services, DERM, Miami-Dade Fire Rescue, GSA, Office of Capital Improvements, Planning and Zoning, Park and Recreation, Procurement, Public Works, Solid Waste Management, and Miami-Dade Water and Sewer.

- Establishing guidelines for evaluating requests for exemption from the LEED certification standards. The Sustainable Building Committee (or designated staff thereof) shall be tasked with addressing petitions for specific exemptions from the ordinance and making recommendations to the Sustainability Manager or designee. The unique characteristics of a particular project shall not exempt it from applying green building practices to the maximum extent possible, and it is expected that all projects will incorporate as many LEED-approved green building practices as are feasible from a practical and fiscal perspective. The Sustainable Building Committee may, where it deems appropriate, recommend that the Sustainability Manager or designee substitute an alternative rating system (e.g. FGBC "Green Home" or "Green Development" Standard); substitute an alternative rating standard (e.g. LEED- CI, rather than LEED-EB); or craft a specific rating methodology for evaluating a project that is deemed to be exempt from, or infeasible to comply with, LEED certification standards.

- Preparing annual progress report summarizing County performance under Sustainable Buildings Program.

- Maintaining a database of all existing County sustainability initiatives.

- Serving as the County liaison with the South Florida Chapter of the U.S. Green Building Council, and other appropriate entities to ensure that the County is current with "best practices" in sustainability.

- Coordinating with other departments to develop and implement green building practices in Miami Dade County and provide support for their participation.

This Implementing Order is hereby submitted to the Board of County Commissioners of Miami-Dade County, Florida.

County Manager

Resolution R-1103-10

MEMORANDUM

Agenda Item No. 11(A)(4)

TO:	Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners	**DATE:**	November 4, 2010
FROM:	R. A. Cuevas, Jr. County Attorney	**SUBJECT:**	Resolution directing County Mayor to include a requirement for energy-efficient reflective roofs or green roofs in all solicitations for new construction for public and affordable housing

The accompanying resolution was prepared and placed on the agenda at the request of Co-Prime Sponsors Commissioner Joe A. Martinez and Commissioner Katy Sorenson, and Co-Sponsors Commissioner Audrey M. Edmonson and Commissioner Dorrin D. Rolle.

R. A. Cuevas, Jr.
County Attorney

RAC/up

MEMORANDUM

(Revised)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: November 4, 2010

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 11(A)(4)

Please note any items checked.

_____ **"3-Day Rule" for committees applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **No committee review**

_____ **Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**

_____ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(4)
11-4-10

RESOLUTION NO. _____

RESOLUTION DIRECTING COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO INCLUDE A REQUIREMENT FOR ENERGY-EFFICIENT REFLECTIVE ROOFS OR GREEN ROOFS IN ALL SOLICITATIONS FOR NEW CONSTRUCTION FOR PUBLIC AND AFFORDABLE HOUSING

WHEREAS, pursuant to Resolution No. R-1431-08, the County has committed to participate in the U.S. Cool Counties Program and has agreed to pursue the region-wide goal of reducing greenhouse GHG emissions to 80% of 2010 level emissions by 2050; and

WHEREAS, Miami-Dade County currently solicits proposals to construct new public and affordable housing within Miami-Dade County; and

WHEREAS, traditional roofing surfaces such as black asphalt-based roofing contributes to a heat-island effect trapping heat close to the surface; and

WHEREAS, energy-efficient reflective roofs or green roofs reflect the sun's rays back into the atmosphere and release absorbed heat there by keeping buildings cooler and lessening the demand for air conditioning by ten (10) to thirty (30) percent; and

WHEREAS, public building projects may achieve significant cost savings through the use of energy efficient or reflective roofs; and

WHEREAS, the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) provides standards for roofing practices that will decrease the heat-island effect and provides sustainable site credits for meeting such standards,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that the County Mayor or County Mayor's designee is directed to include a requirement to use energy-efficient reflective roofs or green roofs in all solicitations for the construction of new public and affordable housing in Miami-Dade County with a contract value of over one million dollars ($1,000,000). Such requirements shall be based on the LEED certification standards or other such similar standards for such roofs and shall be made a part of any contract resulting from such solicitation.

The Co-Prime Sponsors of the foregoing resolution are Commissioner Joe A. Martinez and Commissioner Katy Sorenson, and the Co-Sponsors are Commissioner Audrey M. Edmonson and Commissioner Dorrin D. Rolle. It was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Dennis C. Moss, Chairman
Jose "Pepe" Diaz, Vice-Chairman

Bruno A. Barreiro	Audrey M. Edmonson
Carlos A. Gimenez	Sally A. Heyman
Barbara J. Jordan	Joe A. Martinez
Dorrin D. Rolle	Natacha Seijas
Katy Sorenson	Rebeca Sosa
Sen. Javier D. Souto	

The Chairperson thereupon declared the resolution duly passed and adopted this 4th day of November, 2010. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Oren Rosenthal

support to the Sustainable Building Program on such matters as training on LEED or other compliance standards, green building technologies, specific project reviews, and sustainability policy and research. The Committee shall be comprised of, at a minimum, representatives from the following departments: Miami-Dade Aviation, Building, Building Code Compliance, Consumer Services, DERM, Miami-Dade Fire Rescue, GSA, Office of Capital Improvements, Planning and Zoning, Park and Recreation, Procurement, Public Works, Solid Waste Management, and Miami-Dade Water and Sewer.

- Establishing guidelines for evaluating requests for exemption from the LEED certification standards. The Sustainable Building Committee (or designated staff thereof) shall be tasked with addressing petitions for specific exemptions from the ordinance and making recommendations to the Sustainability Manager or designee. The unique characteristics of a particular project shall not exempt it from applying green building practices to the maximum extent possible, and it is expected that all projects will incorporate as many LEED-approved green building practices as are feasible from a practical and fiscal perspective. The Sustainable Building Committee may, where it deems appropriate, recommend that the Sustainability Manager or designee substitute an alternative rating system (e.g. FGBC "Green Home" or "Green Development" Standard); substitute an alternative rating standard (e.g. LEED- CI, rather than LEED-EB); or craft a specific rating methodology for evaluating a project that is deemed to be exempt from, or infeasible to comply with, LEED certification standards.

- Preparing annual progress report summarizing County performance under Sustainable Buildings Program.

- Maintaining a database of all existing County sustainability initiatives.

- Serving as the County liaison with the South Florida Chapter of the U.S. Green Building Council, and other appropriate entities to ensure that the County is current with "best practices" in sustainability.

- Coordinating with other departments to develop and implement green building practices in Miami Dade County and provide support for their participation.

This Implementing Order is hereby submitted to the Board of County Commissioners of Miami-Dade County, Florida.

County Manager

MEMORANDUM Agenda Item No. 11(A)(7)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: March 3, 2009

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Resolution to reduce Miami-Dade County Government's Electrical Energy Consumption

The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Commissioner Katy Sorenson, and Co-Sponsors Commissioner Sally A. Heyman, and Commissioner Rebeca Sosa.

R. A. Cuevas, Jr.
County Attorney

RAC/cp

MEMORANDUM

(Revised)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: March 3, 2009

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 11(A)(7)

Please note any items checked.

_____ **"4-Day Rule" ("3-Day Rule" for committees) applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Bid waiver requiring County Mayor's written recommendation**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **Housekeeping item (no policy decision required)**

_____ **No committee review**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 11(A)(7)
3-3-09

RESOLUTION NO. _____

RESOLUTION TO REDUCE MIAMI-DADE COUNTY GOVERNMENT'S ELECTRICAL ENERGY CONSUMPTION

WHEREAS, the cost of fuel for electricity generation has increased dramatically within the past year and the US Energy Information Administration has forecast that the price of oil and natural gas, the source of most of the fuel for electricity generation for Miami-Dade County government, will remain high for the foreseeable future; and

WHEREAS, Florida Power & Light Company, the primary electric utility in Miami-Dade County, has received approval from the Florida Public Service Commission (PSC) to increase fuel charges by 8% starting in August 2008, and in 2009 will request an increase in base rate charges to compensate for rising costs; and

WHEREAS, Florida Power & Light Company has also received approval from the PSC to begin collecting additional funds from customers for the initial cost of planning additional nuclear power facilities at the Turkey Point complex; and

WHEREAS, this rise in energy costs will directly affect the operating budget of Miami-Dade County government, which used 1.17 million megawatt-hours of electricity in 2007 alone; and

WHEREAS, it is imperative that the County aggressively pursue energy conservation options wherever and whenever possible to contain electricity costs and to protect the environment through reduced emissions of pollution,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that:

Section 1. The Mayor is hereby directed to develop a plan to reduce electricity consumption in County governmental operations by 20% from 2007 County usage consumption levels not later than 2014 (234,000 mwh).

Section 2. The Mayor is hereby directed to investigate all opportunities to reduce electric energy consumption in County operations and conduct electric energy audits for all County departments to identify both short and long-term opportunities for electric energy savings including, but not limited to:

a. Mandating that building energy use and carbon emissions be measured, tracked, managed and benchmarked, annually at a minimum, through the use of EPA's Energy Star Portfolio Manager along with other applicable building energy use tracking and management tools that the Mayor or his designee deem necessary for effective facilities-based energy management;

b. Commissioning (a process designed to achieve, verify, and document improved energy efficiency, environmental health, indoor air quality) for existing energy-consuming County buildings and facilities to maximize energy performance;

c. Establishing a mandate for the County to procure products qualified by the Energy Star program on date of purchase for all purchases for which the Energy Star program has established standards;

d. Deploying renewable energy generation where feasible and accelerating landfill gas energy projects;

e. Establishing policies for reducing electric energy demand in County computers by requiring that electric energy-saving features be activated on all desktop computer systems (excluding systems required for emergency safety systems) and in a fashion that does not allow employees to disable such features, and that the County utilize software upgrade tools recommended by the Energy Star program;

f. Evaluating the electric energy consumption of the County server farms and setting a goal for reducing electric power consumption by the County's technology infrastructure;

g. Training qualified County building and plant maintenance staff to perform small-scale energy efficiency retrofits;

h. Developing an energy efficiency educational campaign for County employees to complement investments in electric energy efficient equipment and other energy conservation investments.

Section 3. The Mayor shall prepare and submit the electricity consumption reduction plan described in Section 1 hereinabove to the Board of County Commissioners within ninety (90) days of the date of passage and adoption of this Resolution.

The Prime Sponsor of the foregoing resolution is Commissioner Katy Sorenson and the Co-Sponsors are Commissioner Sally A. Heyman, and Commissioner Rebeca Sosa. It was offered by Commissioner , who moved its adoption. The motion was seconded by Commissioner and upon being put to a vote, the vote was as follows:

Dennis C. Moss, Chairman
Jose "Pepe" Diaz, Vice-Chairman

Bruno A. Barreiro	Audrey M. Edmonson
Carlos A. Gimenez	Sally A. Heyman
Barbara J. Jordan	Joe A. Martinez
Dorrin D. Rolle	Natacha Seijas
Katy Sorenson	Rebeca Sosa
Sen. Javier D. Souto	

The Chairperson thereupon declared the resolution duly passed and adopted this 3rd day of March, 2009. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency. PST

Peter S. Tell

Administrative Order

Administrative Order No.: 11-3

Title: Life Cycle Costing Procedure

Ordered: 10-01-85 **Effective:** 10-01-85

AUTHORITY:
Section 4.01 of the Metro-Dade County Charter. Resolution R-1379-77, December 6, 1977.

POLICY:
Acquisition costs normally represent only a fraction of the total expense of buying and operating a facility or piece of equipment. Maintenance, repair, energy costs and other expenditures associated with day-to-day operations must also be considered in order to gain an accurate estimate of overall cost. For this reason, it is essential when evaluating a purchase that a total life cycle cost analysis be performed.

Board of County Commission, Resolution No. R-1379-77, which outlines the County's Comprehensive Energy Management Program, establishes the requirement for life cycle costing. Specifically, the resolution states that when refurbishing and retrofitting existing facilities and equipment, planning new construction and purchasing new energy consuming equipment, performance criteria derived from a life cycle cost analysis shall be considered.

DEFINITION:
The terms "energy consuming facility" and "equipment" refer to those items generically identified in Attachment I.

The term "life cycle costing" refers to that process whereby all the expenses associated with the acquisition and operation of an energy consuming facility or piece of equipment are identified and analyzed.

PROCEDURE:
The Director of the Procurement Management Division, GSA, shall be responsible for assuring that equipment purchased is reviewed to determine those purchases for which life cycle costing is the appropriate method of evaluation. The responsible county department director shall be responsible for determining those projects for which life cycle costing is the appropriate method of evaluation with respect to the acquisition of new facilities or the refurbishing or retrofitting of existing facilities. All bid documents relating to these identified purchases and acquisitions shall state the requirement that life cycle costing be performed, explain the methodology to be followed and identify the data that must be submitted. The bid evaluations relating to such purchases and

acquisitions shall not only consider first cost (purchase price), but also operating cost, energy cost and all other life cycle costs.

In many cases standardized specifications and bidding documents are used periodically throughout the fiscal year. Therefore, those specifications and bidding documents that are used repeatedly may seek the approval of the Director of Procurement Management Division, GSA, and the Director of the Office of Energy Management (OEM) on an annual basis.

All bid documents relative to individual or blanket purchases and acquisitions costing more than $10,000 shall be reviewed by the requesting department and by the Director of the Office of Energy Management (OEM) to determine the applicability of life cycle costing requirements.

All County personnel involved in the specification, ordering and acceptance, testing of equipment and facilities, regardless of cost, shall, in so far as possible, request and evaluate life cycle costing information. Said information shall be considered when making purchasing and acquisition decisions, and shall be used as a criteria for acceptance testing. Specifications which offer price offsets for features reducing total life cycle cost, such as demonstrated fuel economy, parts commonality, or reduced need for user training, shall be used whenever appropriate.

OEM shall be responsible for the bi-annual review and update of Attachment I. OEM shall also be responsible for conducting a Countywide life cycle cost analysis training program. The purpose of this program shall be to train all appropriate personnel on the proper evaluation of life cycle costing information and on life cycle costing acceptance testing.

This administrative order is hereby submitted to the Board of County Commissioners of Dade County, Florida.

M.R. Stierheim
County Manager

Attachment I

ACQUISITIONS REQUIRING THE CONDUCT OF A LIFE CYCLE COST ANALYSIS

I. All new construction projects requiring compliance with the State of Florida's Model Energy Code for Building Construction, latest edition.

II. All renovation/refurbishment of existing facilities requiring compliance with the State of Florida's Model Energy Code for Building Construction, latest edition.

III. Air Conditioning
- Electric air conditioners
- Gas air conditioners

IV. Driers
- Commercial electric driers
- Commercial gas driers
- Commercial steam driers
- Standard domestic electric driers
- Compact domestic electric driers
- Standard domestic gas driers
- Compact domestic gas driers

V. Hot water heaters
- Electric hot water heaters
- Gas hot water heaters

VI. Light bulbs
- Fluorescent lamps
- Fluorescent ballasts
- Incandescent lamps
- All H.I.D. lamp types
- All H.I.D. ballast types

VII. Vehicles
- Passenger vehicles all types
- Multi passenger vehicles (excluding buses)
- Specialized vehicles

VIII. Refrigerators, Freezers and Refrigerator/Freezers
- All sizes

Appendix C: Data Entry Fields

The following are recommended data entry fields for a database that tracks compliance with Miami-Dade County's energy and climate performance requirements.

Project Information

- Project Identification Number(s)
- Project Title
- Project Description
- Project Address
- Project City
- Project Zip Code
- District
- Sponsoring Department
- Project Type (e.g. New Construction, Major Renovation, Non-Major Renovation, Minor Renovation, Non-Building Capital Improvement Project, etc.)
- Exemption Status (e.g. Yes, No)
- Project Phase (e.g. Planning, Design, Construction, etc.)
- Facility Contact Name
- Facility Contact Phone Number
- Date of Last Update

Project Metrics

- Projected Cost
- Final Cost
- Additional Cost for LEED / Green Design
- Projected Square Footage
- Final Square Footage
- Projected Energy Consumption
- Projected Water Consumption

Project Team:

- LEED Administrator Name
- Architect(s)
- Engineer(s)
- General Contractor
- Commissioning Agent

Green Design & Construction:

- LEED Project Type (e.g. NC, EB, CI, etc.)
- USGBC Status (e.g. Registered, Not Registered, Certified, etc.)
- Estimated LEED Points
- Estimated Certification Level (e.g. Platinum, Gold, Silver, Certified)
- LEED Credits Sought / Not Sought
- LEED Points by Category Final LEED Points
- Final Certification Level