



CHANGE.
CHICAGO HOUSING AUTHORITY



CHA GREEN ASSESSMENT

Portfolio-Wide Approach to
LEED for Existing Buildings

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LEED 2009 R

EXISTING

BUILDINGS

LEED OVERVIEW

- Introduction
- Rating System Overview
- Certification Paths
- Limitations

OPERATIONS AND

MAINTENANCE

LEED EBOM INTRODUCTION

LEED for Existing Buildings helps building owners & operators:

- measure operations, improvements and maintenance on a consistent scale
- maximize operational efficiency while minimizing environmental impacts
- promote high performance, healthful, durable, affordable, and environmentally sound practices in existing buildings

LEED EBOM is a policy-centric system that encompasses:

- whole-building cleaning and maintenance
- chemical use,
- recycling programs,
- exterior maintenance programs, and
- systems upgrades.

Performance Period organization is key:

- Unique aspect of the Existing Building Rating System
- Continuous, unbroken time (3-12 months) during which performance is measured for some credits
- Requires up-front planning and organization of the LEED effort



LEED EBOM RATING SYSTEM OVERVIEW

Sustainable Sites (26 points)

- Implement Effective Grounds Management
- Practice Low-Impact Hardscape Solutions
- Plant Sustainable Landscapes
- Reduce Transportation Emissions
- Protect Surrounding Habitats
- Manage Stormwater Runoff
- Reduce Heat Island Effects
- Eliminate Light Pollution

Water Efficiency (14 points)

- Monitor Water Consumption Performance
- Reduce Indoor Potable Water Consumption
- Reduce Water Consumption to Save Energy & Improve Environmental Well-Being
- Practice Water-Efficient Landscaping

Energy & Atmosphere (35 points)

- Monitor & Improve Building Energy Performance
- Eliminate CFCs
- Utilize Renewable Energy

LEED EBOM Certification Point Scale

Certified	40-49
Silver	50-59
Gold	60-79
Platinum	80-110

Materials & Resources (10 points)

- Sustainable Materials
- Practice Waste Reduction Strategies
- Reduce Source Waste
- Reuse & Recycle
- Reduce Mercury Pollution

Indoor Environmental Quality (15 points)

- Improve Ventilation
- Manage Air Contaminants
- Implement Green Cleaning
- Allow Occupants to Control Desired Settings
- Provide Daylighting & Views

Innovation in Operations (6 points)

- Implementing New Technologies & Methods
- Involving LEED AP Expertise
- Documenting Cost Impacts

Regional Priority (4 points)

LEED EBOM CERTIFICATION PATHS

Option 1:

Single Building/Property

- Developments with a single building on site



Patrick Sullivan Apartments

Option 2:

LEED Volume Program

- Developments with multiple, similar buildings
- Advantages:
 - Streamlined certification process
 - Prototype based
 - Achieves economies of scale & reduces costs



Dearborn Homes

Option 3:

Application Guide for Multiple Building & On-Campus Building

- Developments with multiple, dissimilar buildings
- Advantages:
 - Streamlined certification process
 - Achieves economies of scale & reduces costs



Trubull Park Homes

LEED EBOM LIMITATIONS

Applicable only to residential buildings of 4 stories or more

- Most CHA senior buildings qualify
- CHA multifamily (13) properties are typically low-rise & not eligible
 - LEED for Homes Multifamily Midrise is a future possibility

LEED EB favors Commercial Office Buildings

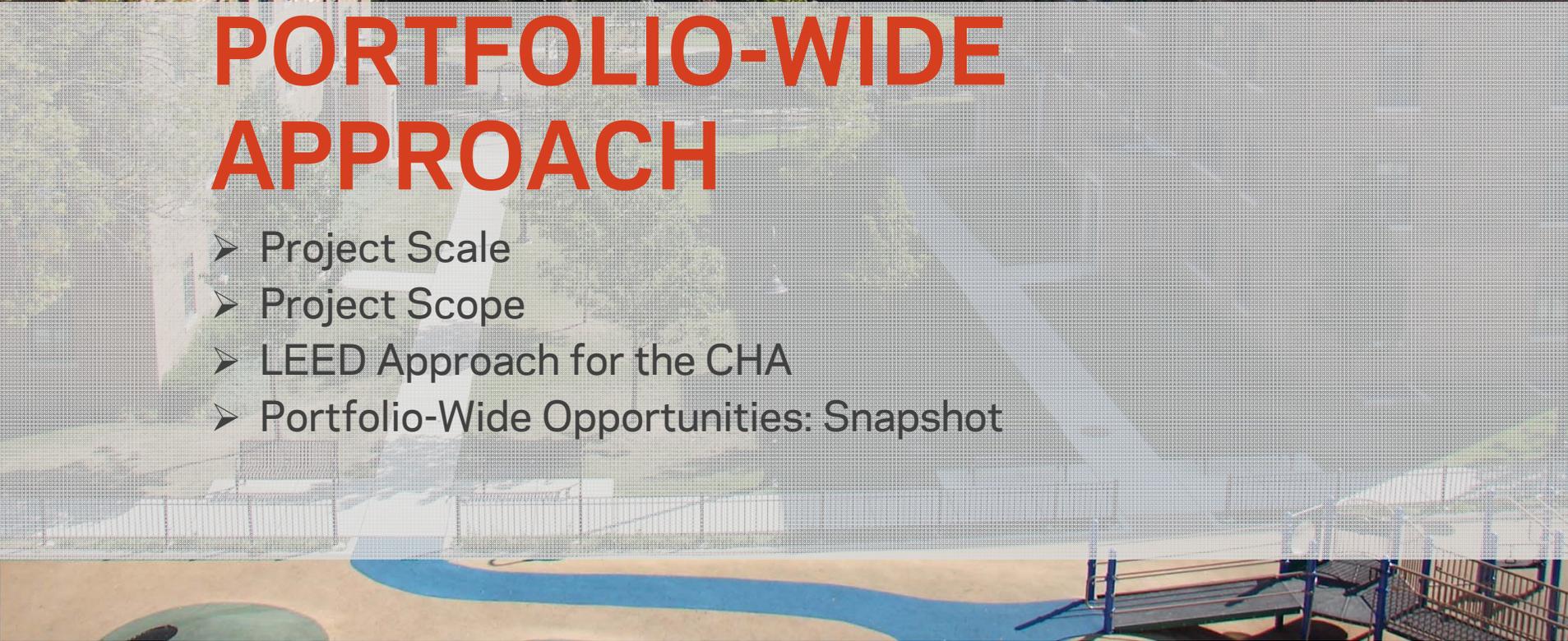
- Residents are treated similar to “tenants” in a commercial building
 - Requires documentation of individual purchasing actions
- Property Management only has control over whole building operations
 - PHA’s cannot “require” residents to participate in green operations
 - Policies must be structured to avoid requiring resident actions

Building must be at least 50% occupied to pursue LEED EBOM

- Opportunity to pursue LEED NC if the property is less than 50% occupied & over 50% of the building will be renovated.



PORTFOLIO-WIDE APPROACH

- Project Scale
 - Project Scope
 - LEED Approach for the CHA
 - Portfolio-Wide Opportunities: Snapshot
- 

PROJECT SCALE

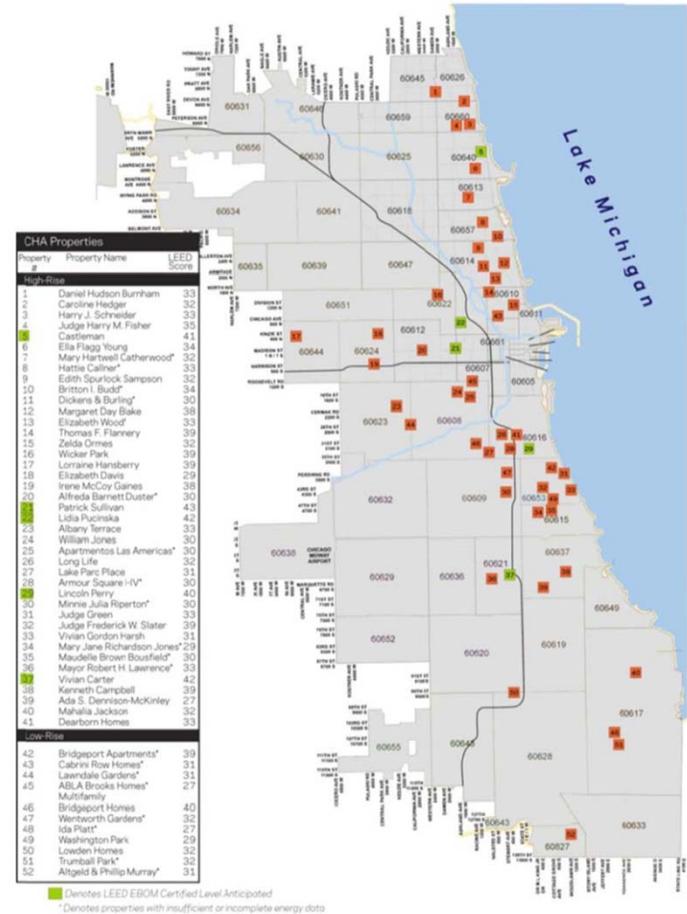
62 Properties

- 12 Multi-family
- 50 Senior

580 Buildings ranging from **27-75** years old

15,186 out of **17,800** Units (**85%**)

399.2 Acres



PROJECT SCOPE

1. Evaluate all CHA Senior and Family Developments against HUD, EGCC and LEED standards
2. Determine current LEED score for each property
3. Determine upgrades for each property to reach a minimum LEED Certification Rating
4. Create or improve operations and maintenance practices based on current EGCC and LEED standards
5. Train Section 3 Green Ambassadors to implement selected sustainable strategies in the field



LEED APPROACH FOR THE CHA

1. Reduce cost and increase efficiency through portfolio-wide applications

- Create **LEED compliant policies** for all properties
- Non-policy credit recommendations based on **portfolio-wide property similarities** identified during site visits
 - Pursue credits with **easily replicable processes**
 - Utilize **data tracking system** (YARDI) to maximize efficiency with documentation and provide assistance to the decision making process
 - Target **improved performance thresholds** for more points, taking advantage of economies of scale
 - Prioritize high-point credits

Achievability

- Depending on cost and timeline for implementation, portfolio-wide opportunities are identified as either achievable or short term

LEED APPROACH FOR THE CHA (CONT'D)

- 2. Track residents' satisfaction** with the building and site
 - Inform areas to improve & help to obtain LEED points associated with occupant comfort

- 3. Revise vendor contracts** to ensure inclusion of sustainability components
 - Allows owner to set requirements & require vendor to comply & document accordingly

- 4. Focus on credits that have **Regional Priority (RP) & Innovation in Operations (IO)****
 - RP credits earn a “bonus point” in addition to standard credit points
 - IO credits that support resident engagement benefit all stakeholders

- 5. Implement, track & maximize performance of the new **Green Operations Policies****
 - Identify synergies between policy and performance measurement credits
 - Effective policy training bridges the gap between theory and practice

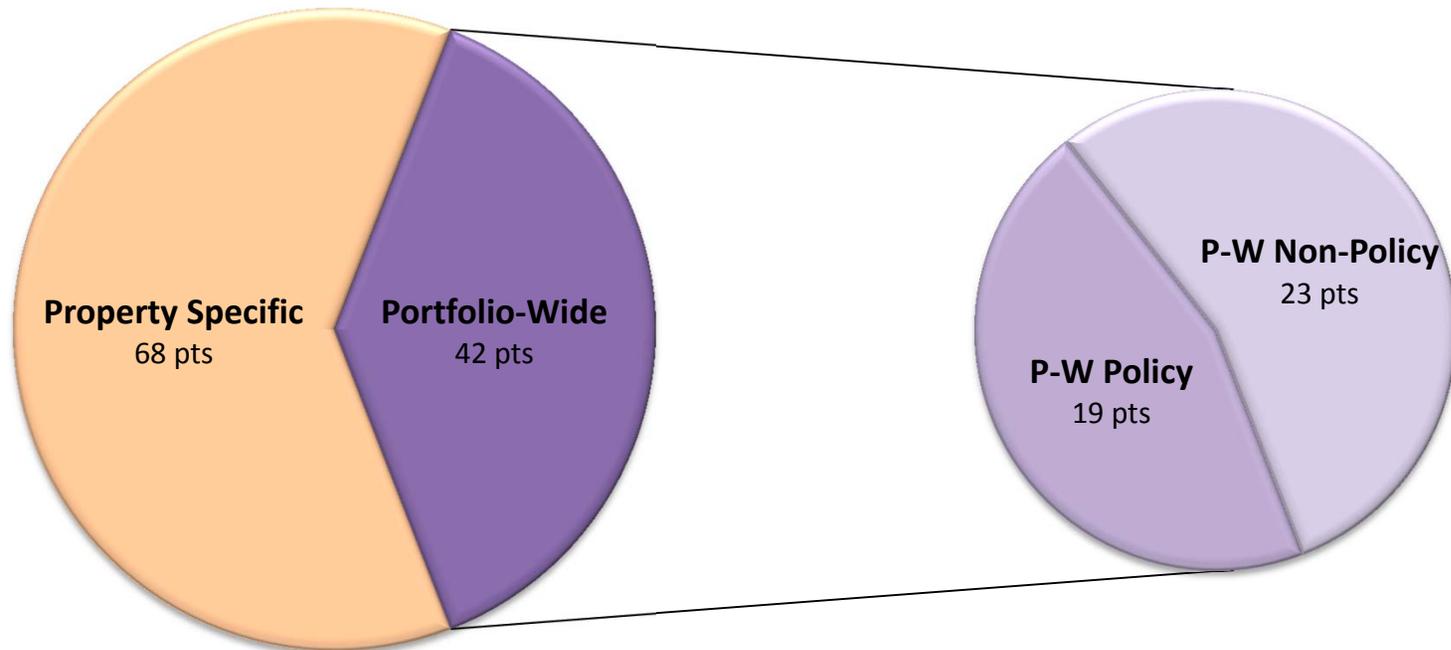
LEED EBOM CREDIT ACHIEVABILITY

Realizing that green operations can be implemented over time, the following categorization of LEED EBOM Credit Achievability was used throughout the project

- C** **Currently Compliant (C)** • Current facility and practices meet the prerequisite/credit intent with no adjustment or cost implication
- A** **Achievable (A)** • Revised facility and practices meet the prerequisite/credit intent with little adjustment or cost implication. Mainly Policy-driven credits.
- S** **Short Term (S)** • Implementation and data tracking of revised policy, procedure, and/or building system during the performance period is required. Time frame of 1-5 years.
- L** **Long Term (L)** • Credit achievability requires significant costs, policy changes, or facility/grounds alterations. Consists of high capital improvement costs over \$100,000.
- N** **Not Achievable (N)** • Credit eligibility may be deemed infeasible due to high cost and/or payback period or building attributes preclude credit achievement.

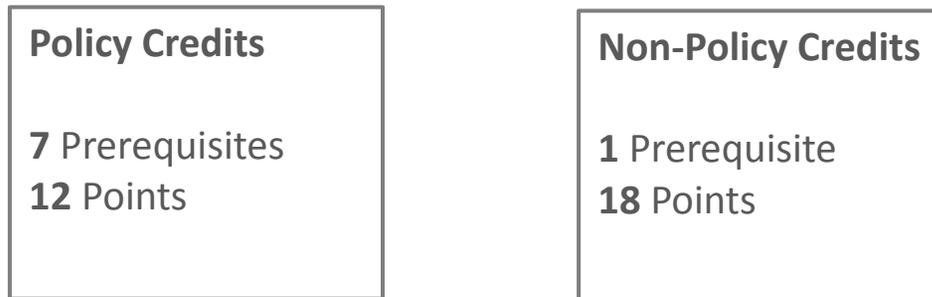
PORTFOLIO-WIDE OPPORTUNITIES: CREDITS

Property Specific and Portfolio-Wide Policy & Non-Policy Points



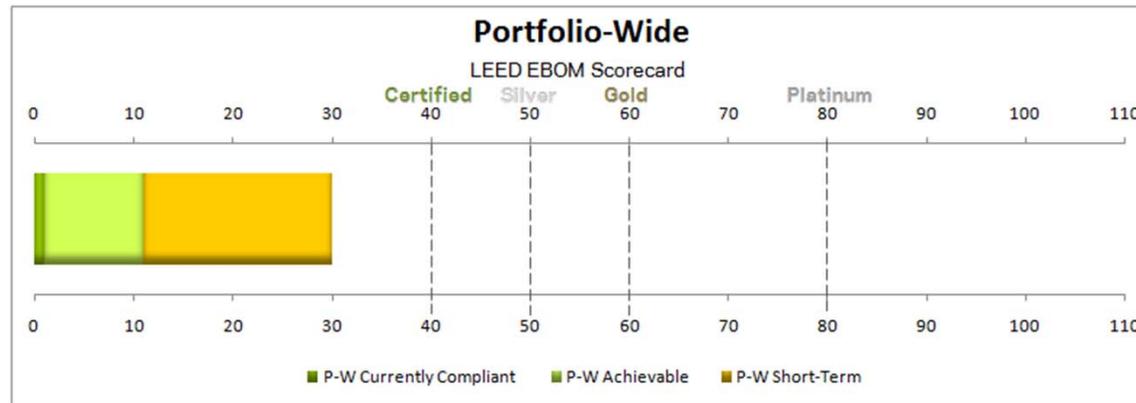
PORTFOLIO-WIDE OPPORTUNITIES: SNAPSHOT

Prioritize synergies between credits to maximize the value of sustainable strategies



All CHA properties could potentially achieve 11 points and score an additional 19 points in the short-term

- **10** points shy of LEED Certified Level for all properties





POLICY CREDITS

- Achievable
- Short Term

4 Prerequisites

3 Potential Points

Sustainable Sites

- SSc2 - Building Exterior & Hardscape Management Plan
- SSc3 - Integrated Pest Management, Erosion Control, and Landscape Management Plan

Energy & Atmosphere

- EAp3 - Fundamental Refrigerant Management

Materials & Resources

- MRp1 - Sustainable Purchasing Policy
- MRp2 - Solid Waste Management Policy

Indoor Environmental Quality

- IEQp3 - Green Cleaning Policy
- IEQc3.6 - Green Cleaning: Indoor Integrated Pest Management

SSc2 - BUILDING EXTERIOR & HARDSCAPE MANAGEMENT PLAN

Goals:

- To minimize the impact of site management practices on the local ecosystem
- To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological, and particle contaminants.

Operations Affected:

- Maintenance equipment
- Snow and ice removal
- Hardscape maintenance
- Cleaning of building exterior
- Paints and sealants used on the building exterior

CHA Changes:

- Operations done in-house:
 - Material & Equipment Purchases
- Integrating plan into contract language for contractors removes responsibility from CHA

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier Occupants

SSc3 - INTEGRATED PEST MANAGEMENT PLAN

Goals:

- Minimize the impact of site management practices on the local ecosystem
- Reduce exposure of occupants, staff and maintenance personnel to potentially hazardous chemical, biological and particle contaminants.

Operations Affected:

- Outdoor integrated pest management
- Indoor integrated pest management

CHA Changes:

- Existing IPM contractor complies with plan
 - Documentation chain must be established for LEED Compliance
 - Treatment notification procedures
- Integrating plan into contract language for contractors removes responsibility from CHA

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants

SSc3 - EROSION CONTROL & LANDSCAPE MANAGEMENT PLAN

Goals:

- protect and enhance the natural diversity
- develop synergies between the building and its environmental context
- minimize the impact of site management practices on the local ecosystem
- reduce exposure of residents, staff, and maintenance personnel to potentially hazardous chemical, biological, and particle contaminants

Operations Affected:

- Erosion and sedimentation control
- Landscape waste
- Fertilizer use
- Community gardens
- Playgrounds

CHA Changes:

- In-house material purchasing & application
- Integrating plan into contract language for contractors removes responsibility from CHA

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants
- Lower costs through water-efficient landscaping operations

EAp3 - REFRIGERANT MANAGEMENT PLAN

Goals:

- to reduce refrigerant and energy costs
- to reduce greenhouse gas emissions

Operations Affected:

- Maintenance & Purchasing of HVAC&R units

CHA Changes:

- Purchasing guidelines for new HVAC&R units

CHA Benefits:

- Lower costs

MRp1 - SUSTAINABLE PURCHASING POLICY

Goals:

- Protect the environment and public health
- Conserve natural resources
- Minimize waste, including land-filling and incineration, and reduce toxicity

Operations Affected:

- Ongoing consumables such as office supplies
- Durable goods such as appliances and furniture
- Building materials used in facility alterations and additions
- Mercury-containing lamps

CHA Changes:

- In-house material purchasing & vendor contracts
- Measurement & Documentation
- Integrating plan into contract language for contractors removes responsibility from CHA

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants
- Lower costs by minimizing waste hauling expenses

MRp2 - WASTE MANAGEMENT & RECYCLING POLICY

Goals:

- protect the environment and public health
- conserve natural resources
- minimizing landfill/incineration therefore reducing toxicity

Operations Affected:

- Sorting, diversion, and disposal of ongoing consumables, durable goods, and building materials

CHA Changes:

- Existing Resident Recycling program
 - accounts for disposal of ongoing consumables
- Measurement & Documentation
- Integrating plan into contract language for contractors removes responsibility from CHA

CHA Benefits:

- Lower waste diversion costs
- Increase participation & therefore revenue from the Resident Recycling Program

IEQp3 - GREEN CLEANING POLICY

Goals:

- to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particle contaminants

Operations Affected:

- Efficient and healthy cleaning procedures
- Purchasing cleaning products
- Purchasing cleaning equipment
- Maintenance of hard floors and carpets
- Maintenance of entryway systems
- Promoting and improving hand hygiene
- Handling and storage of cleaning chemicals and dilution systems
- Establishing procedures for the use of chemical concentrates
- Staff training requirements
- Resident satisfaction with green cleaning procedures

CHA Changes:

- Cleaning material purchasing
- Cleaning procedures

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants

2 Prerequisites

9 Potential Points

Energy & Atmosphere

- EAp1 - Energy Efficiency Best Practices: Planning, Documentation & Opportunity Assessment

Materials & Resources

- MRc6 - Solid Waste Management: Waste Stream Audit
- MRc7 - Solid Waste Management: Ongoing Consumables
- MRc8 - Solid Waste Management: Durable Goods
- MRc9 - Solid Waste Management: Facility Alterations & Additions

Indoor Environmental Quality

- IEQp2 - Environmental Tobacco Smoke (ETS) Control
- IEQc1.1- Best Management Practices: IAQ Management Program
- IEQc3.1 - Green Cleaning: High Performance Cleaning Program
- IEQc3.2 - Green Cleaning: Custodial Effectiveness Assessment
- IEQc3.3 - Green Cleaning: Purchase of Sustainable Cleaning Products & Materials
- IEQc3.4 - Green Cleaning: Sustainable Cleaning Equipment

EAp1 - ENERGY EFFICIENCY BEST PRACTICES: PLANNING, DOCUMENTATION & OPPORTUNITY ASSESSMENT

Goals:

- To promote continuity of information to ensure that energy-efficient operating strategies are maintained and provide a foundation for training and system analysis

Operations Affected:

- Building operating plan
- Systems narrative
- Preventative maintenance plan

CHA Changes:

- Formally document building operations plans
- Perform ASHRAE Level 1 walk-through
 - Identifies no/low cost efficiency upgrades

CHA Benefits:

- Increased efficiency of building systems
- Formal plan documents eases frequent property management transitions

MRc6-9 - SOLID WASTE MANAGEMENT

Credits Included:

- MRc6 - Waste Stream Audit
- MRc7 - Ongoing Consumables
- MRc8 - Durable Goods
- MRc9 - Facility Alterations & Additions

Goals:

- To facilitate the reduction of ongoing waste and toxins generated by building occupants and building operations

Operations Affected:

- Sorting, diversion, and disposal of ongoing consumables, durable goods, and building materials

CHA Changes:

- Formally documenting existing waste management practices
- Provide more encouragement for resident recycling program

CHA Benefits:

- Reduce waste hauling expenses
- Increase recycling revenue for residents

IEQp2 - ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL PLAN

Goals:

- To prevent or minimize exposure of building occupants, indoor surfaces and systems to Environmental Tobacco Smoke (ETS)

Operations Affected:

- Continue prohibiting smoking in common areas of the building
- Reduce air leakage between smoking & non-smoking areas

CHA Changes:

- Weather strip all unit doors leading to common areas
- Extend non-smoking distance from building from 15' (Chicago mandate) to 25' (LEED mandate)

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants

IEQc1.1 - INDOOR AIR QUALITY MANAGEMENT PLAN

Goals:

- To provide a living environment with good indoor air quality to protect the health, welfare and comfort of residents, visitors and staff
- To prevent negative health effects of poor indoor air quality
- Utilize the EPA's Indoor Air Quality Building Education and Assessment Model (I-BEAM).

Operations Affected:

- Ventilation rates
- Contaminant control
- Moisture control
- Mold Control
- Asbestos

CHA Changes:

- Annual building IAQ audit & adjustments
- Resident Satisfaction survey

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants

IEQc3.1-3.4 - GREEN CLEANING

Credits:

- IEQc3.1 - High Performance Cleaning Program
- IEQc3.2 - Custodial Effectiveness Assessment
- IEQc3.3 - Purchase of Sustainable Cleaning Products & Materials
- IEQc3.4 - Sustainable Cleaning Equipment

Goals:

- To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological, and particulate contaminants

Operations Affected:

- Efficient and healthy cleaning procedures
- Purchasing cleaning products & equipment
- Maintenance of building
- Handling and storage of cleaning chemicals and dilution systems
- Staff training & evaluation requirements

CHA Changes:

- Cleaning material purchasing
- Cleaning procedures

CHA Benefits:

- Reduced exposure of personnel & residents to hazardous chemicals
 - Lower risk
 - Healthier occupants



NON-POLICY CREDITS

- Achievable
 - Short Term
- 

1 Prerequisite

7 Potential Points

Energy & Atmosphere

– EAc4 - On-site & Off-Site Renewable Energy

Indoor Environmental Quality

– IEQp1 - Minimum IAQ Performance

Innovation in Operations

– IOc2 - LEED Accredited Professional (Only requirement is having a LEED AP on the Team)

EAc4 - ON-SITE & OFF-SITE RENEWABLE ENERGY

Goals:

- To encourage and recognize increasing levels of on-site and off-site renewable energy to reduce environmental impacts associated with fossil fuel energy use

Operations Affected:

- None

CHA Changes:

- The off-site compliance path does not provide any environmental, social or financial return on investment and thus, is not recommended unless the property is in need of “buffer points”

CHA Benefits:

- None

IEQp1 - MINIMUM IAQ PERFORMANCE

Goals:

- To establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in buildings
- To maintain the well-being of the occupants

Operations Affected:

- Ventilation systems (if any)

CHA Changes:

- **No change.** Natural ventilation via operable windows allows for credit compliance.
 - CHA ventilation design standards are above minimum ASHRAE requirements

CHA Benefits:

- Healthier indoor air quality

0 Prerequisites

10 Potential Points

Energy & Atmosphere

- EAc2.1 - Existing Building Commissioning: Investigation & Analysis
- EAc6 - Emissions Reduction Reporting

Indoor Environmental Quality

- IEQc2.1 - Occupancy Comfort: Occupant Survey

Innovation in Operations

- IOc1 - Innovation in Operations
- IOc3 - Documenting Sustainable Building Cost Impacts (Tracking required for credit compliance)

Regional Priority

- RPc1-4 - Regional priority

EAc2.1 - EXISTING BUILDING COMMISSIONING: INVESTIGATION & ANALYSIS

Goals:

- To develop an understanding of the operation of the building's major energy-using systems, options for optimizing energy performance and a plan to achieve energy savings.

Operations Affected:

- Major energy-using systems

CHA Changes:

- Develop a retrocommissioning plan

CHA Benefits:

- Identification of low/no cost opportunities to increase building energy performance

EAc6 - EMISSIONS REDUCTION REPORTING

Goals:

- To document the emissions reduction benefits of building efficiency measures

Operations Affected:

- Documentation & information aggregation

CHA Changes:

- Technology integration (YARDI) should streamline the data collection process required for this credit.

CHA Benefits:

- Tracking & reporting CO₂ emissions enables CHA to accurately track progress toward Chicago Climate Action Plan goals

IEQ_c2.3 - OCCUPANCY COMFORT: OCCUPANT SURVEY

Goals:

- To provide for the assessment of building occupants' comfort

Operations Affected:

- HVAC systems (thermal comfort)
- Acoustics
- Indoor air quality
- Lighting levels
- Building cleanliness

CHA Changes:

- Address any issues identified by over 20% of those surveyed

CHA Benefits:

- Support's CHA's resident-centric mission statement
 - Help to reduce tenant turnover by addressing needs identified by residents

INNOVATION IN OPERATIONS

Goal & Benefit:

- To recognize projects for innovative & exemplary building features or practices

Strategies

- Pursue Exemplary Performance for appropriate credits
- Resident Engagement Program
 - Educate and engage residents and the public on green building practices through a series of outreach tactics
 - Deliver environmental benefits at the building:
 - Reduced electricity use
 - increased recycling and e-waste/battery capture rates
 - Increased use of alternative transportation
- Thermal Integrity Scanning
 - Increase energy efficiency by identifying and fixing areas of thermal bridging, inadequate insulation and building envelope sealing

Strategies (cont'd)

- Chicago Transit Authority (CTA) *Bus Tracker*
 - The CTA has proposed a collaboration with the CHA to increase alternative transportation use at CHA properties
 - CTA will provide real-time *Bus Tracker* displays in the lobby of CHA developments to inform residents of the next available public transit option
- Load Response Program (Pilot Credit)
 - enhance the optimization of electric generation, transmission and distribution resources
 - reduce the building's demand for electricity during periods of critical system conditions or periods of high market power costs

REGIONAL PRIORITY

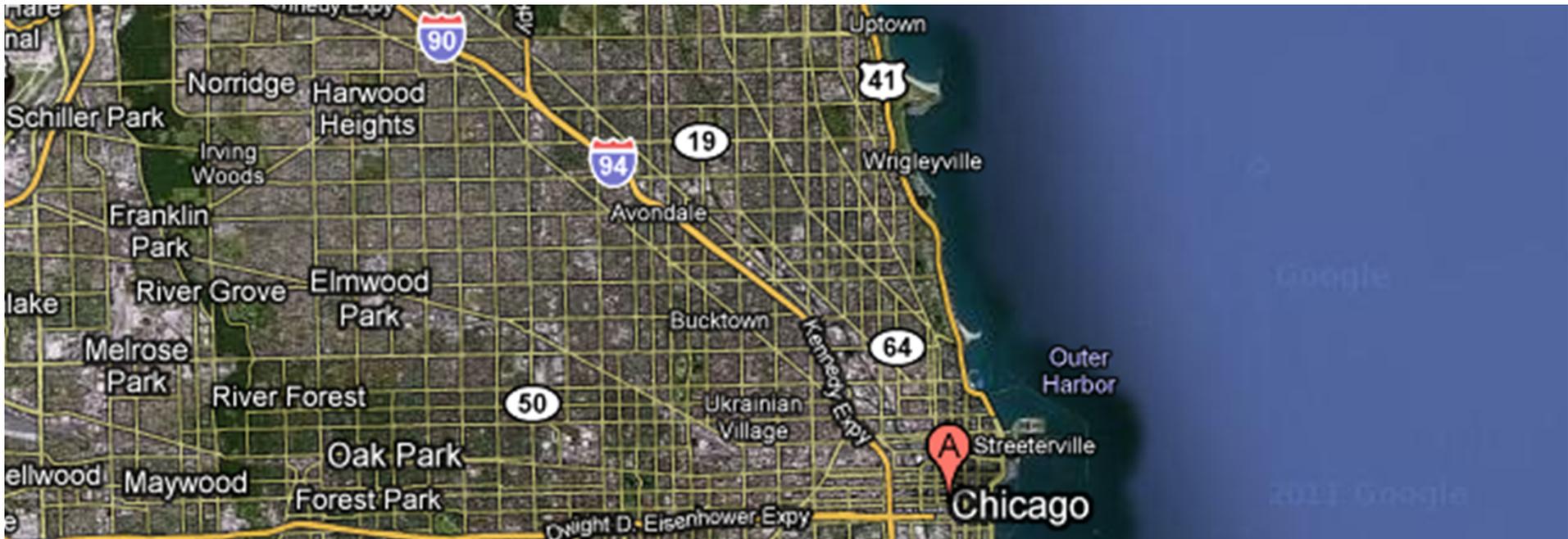
Goal & Benefit:

- To provide an incentive for the achievement of credits that address geographically specific environmental priorities

Strategy

- Eliminate IEQc1.4 - Reduce Particulates in Air Distribution because of natural ventilation
- Focus on remaining credits, many of which are achievable or short term, depending on specific property details

CHA Property Zip Codes	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6
60608	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60609	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60610	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60612	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60613	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60614	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60615	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60616	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60617	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60621	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60622	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60623	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60624	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60626	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60628	SSc4 (25%)	SSc6	WEc3 (100%)	MRc6	IEQc1.3	IEQc1.4
60637	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60640	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60642	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60644	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60653	SSc4 (50%)	SSc6	SSc7.2	WEc2 (30%)	IEQc1.3	IEQc1.4
60657	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60660	SSc4 (75%)	SSc5	SSc6	SSc7.2	WEc2 (30%)	IEQc1.4
60827	SSc4 (25%)	SSc6	WEc3 (100%)	MRc6	IEQc1.3	IEQc1.4



PORTFOLIO-WIDE ANALYSIS

- CHA Portfolio Map
- LEED Scorecards
- Category Breakdown
- High-Point Credit Breakdown

CHA PORTFOLIO MAP

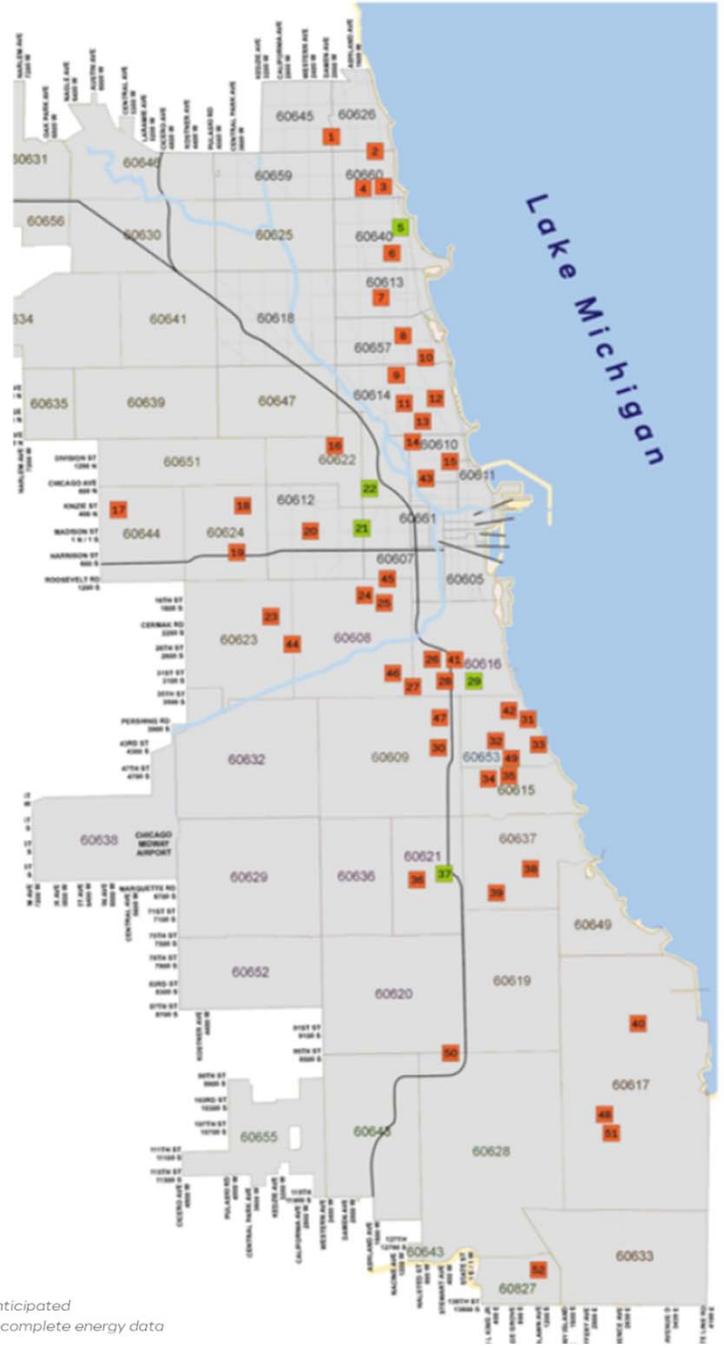
Compares all properties based on:

- Total LEED Points,
- LEED Eligibility
- LEED EBOM Category Breakdown
- High-Point Variable Credit Breakdown

CHA properties performed similarly portfolio-wide with no dramatic variation from property to property

5 of 52 property sites are projected to attain LEED certification with little additional investment:

CHA Properties		
Property #	Property Name	LEED Score
High-Rise		
1	Daniel Hudson Burnham	33
2	Caroline Hedger	32
3	Harry J. Schneider	33
4	Judge Harry M. Fisher	35
5	Castleman	41
6	Ella Flagg Young	34
7	Mary Hartwell Catherwood*	32
8	Hattie Callner*	33
9	Edith Spurlock Sampson	32
10	Britton I. Budd*	34
11	Dickens & Burling*	30
12	Margaret Day Blake	38
13	Elizabeth Wood*	33
14	Thomas F. Flannery	39
15	Zelda Ormes	32
16	Wickler Park	39
17	Lorraine Hansberry	39
18	Elizabeth Davis	29
19	Irene McCoy Gaines	38
20	Alfreda Barnett Duster*	30
21	Patrick Sullivan	43
22	Lidia Pucinska	42
23	Albany Terrace	33
24	William Jones	30
25	Apartmentos Las Americas*	30
26	Long Life	32
27	Lake Parc Place	31
28	Armour Square I-IV*	30
29	Lincoln Perry	40
30	Minnie Julia Riperton*	30
31	Judge Green	33
32	Judge Frederick W. Slater	39
33	Vivian Gordon Harsh	31
34	Mary Jane Richardson Jones*	29
35	Maudelle Brown Bousfield*	30
36	Mayor Robert H. Lawrence*	33
37	Vivian Carter	42
38	Kenneth Campbell	39
39	Ada S. Dennison-McKinley	27
40	Mahalia Jackson	32
41	Dearborn Homes	33
Low-Rise		
42	Bridgeport Apartments*	39
43	Cabrini Row Homes*	31
44	Lawndale Gardens*	31
45	ABLA Brooks Homes*	27
46	Multifamily	40
47	Bridgeport Homes	32
48	Wentworth Gardens*	27
49	Ida Platt*	29
50	Lowden Homes	32
51	Trumbull Park*	32
52	Altgeld & Phillip Murray*	31

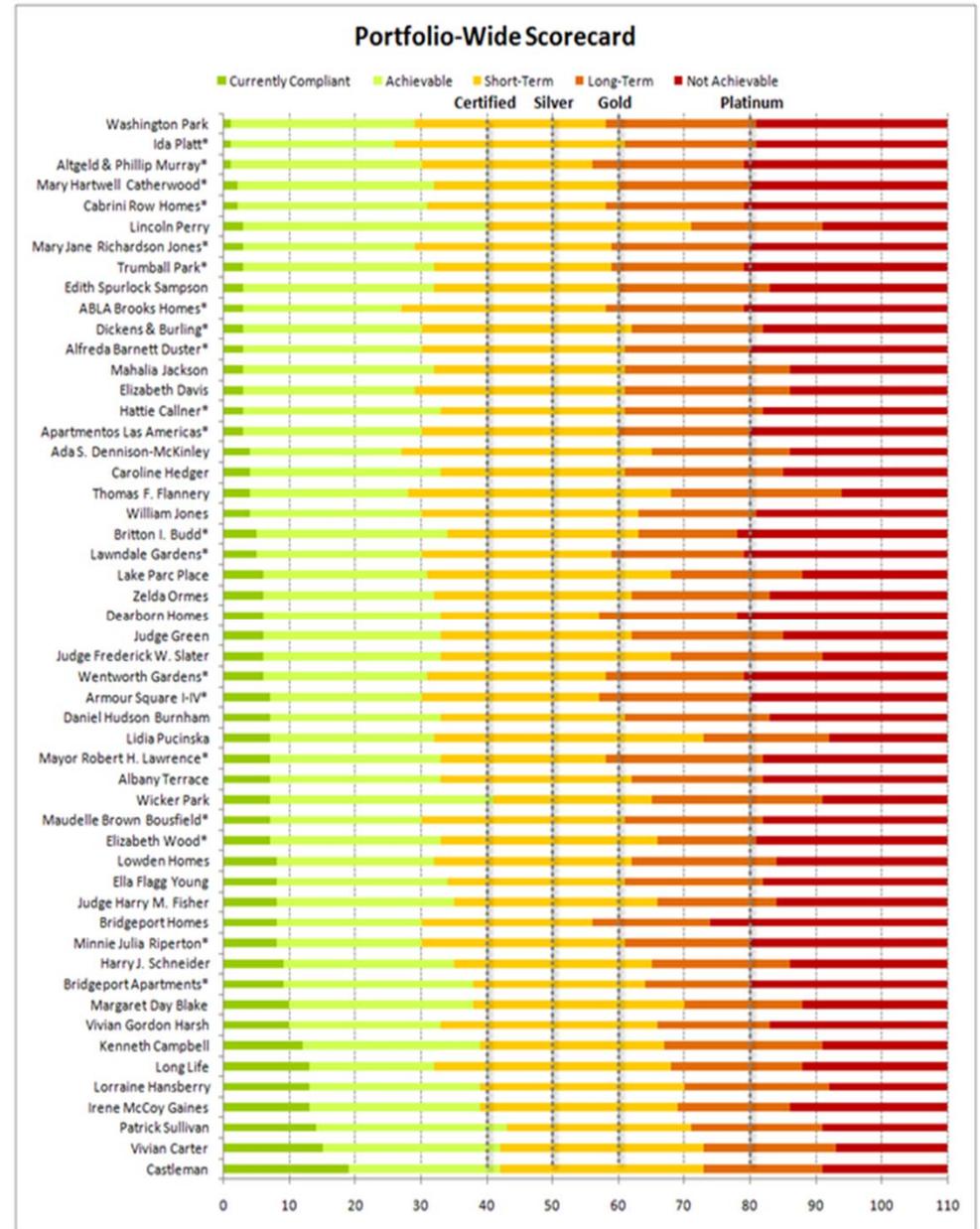


 Denotes LEED EBOM Certified Level Anticipated
 Denotes properties with insufficient or incomplete energy data

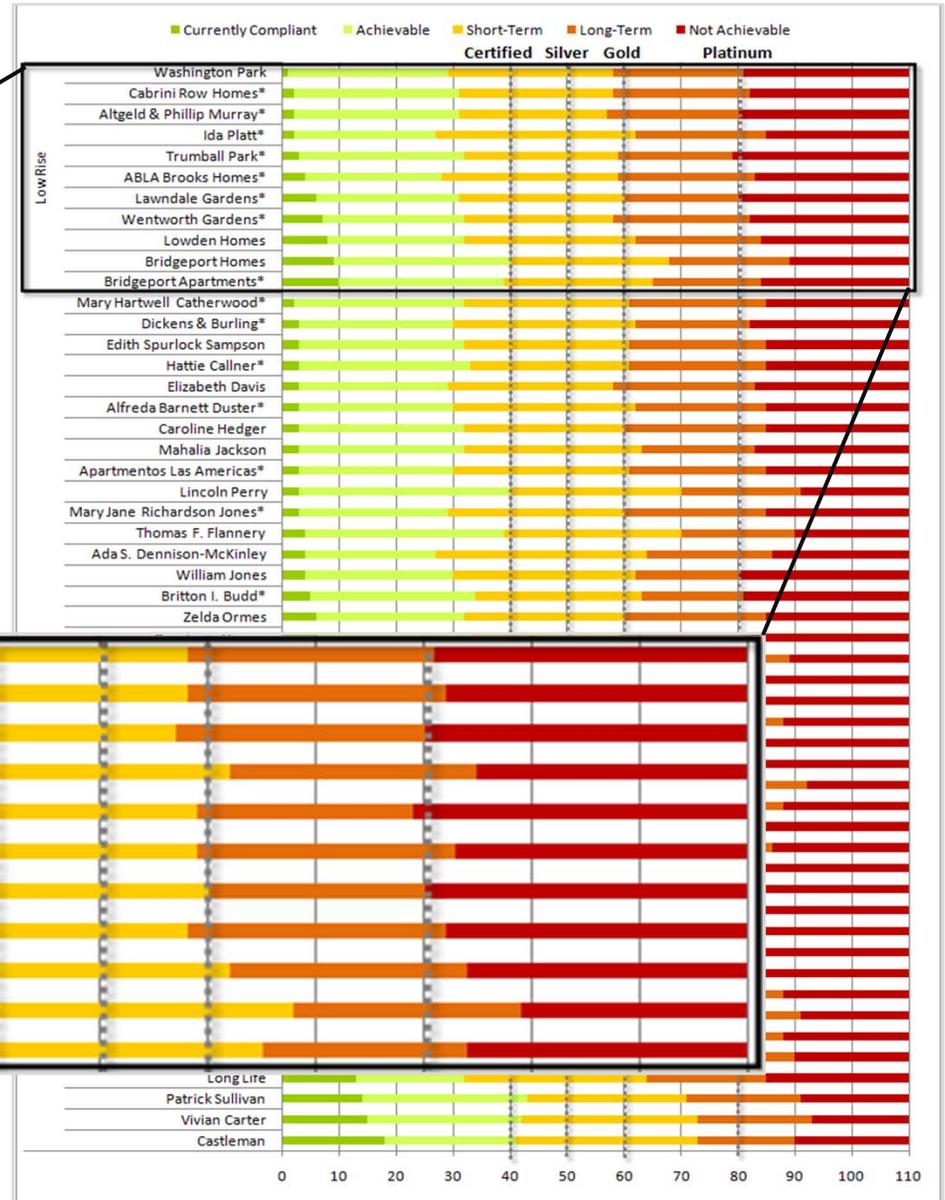
PORTFOLIO-WIDE SCORECARD

5 of 52 property sites are projected to attain LEED certification with little additional investment:

Property Name	LEED Score (Compliant + Achievable)
Patrick Sullivan	43
Vivian Carter	42
Lidia Pucinska	42
Castleman	41
Lincoln Perry	40



LEED EBOM INELIGIBILITY



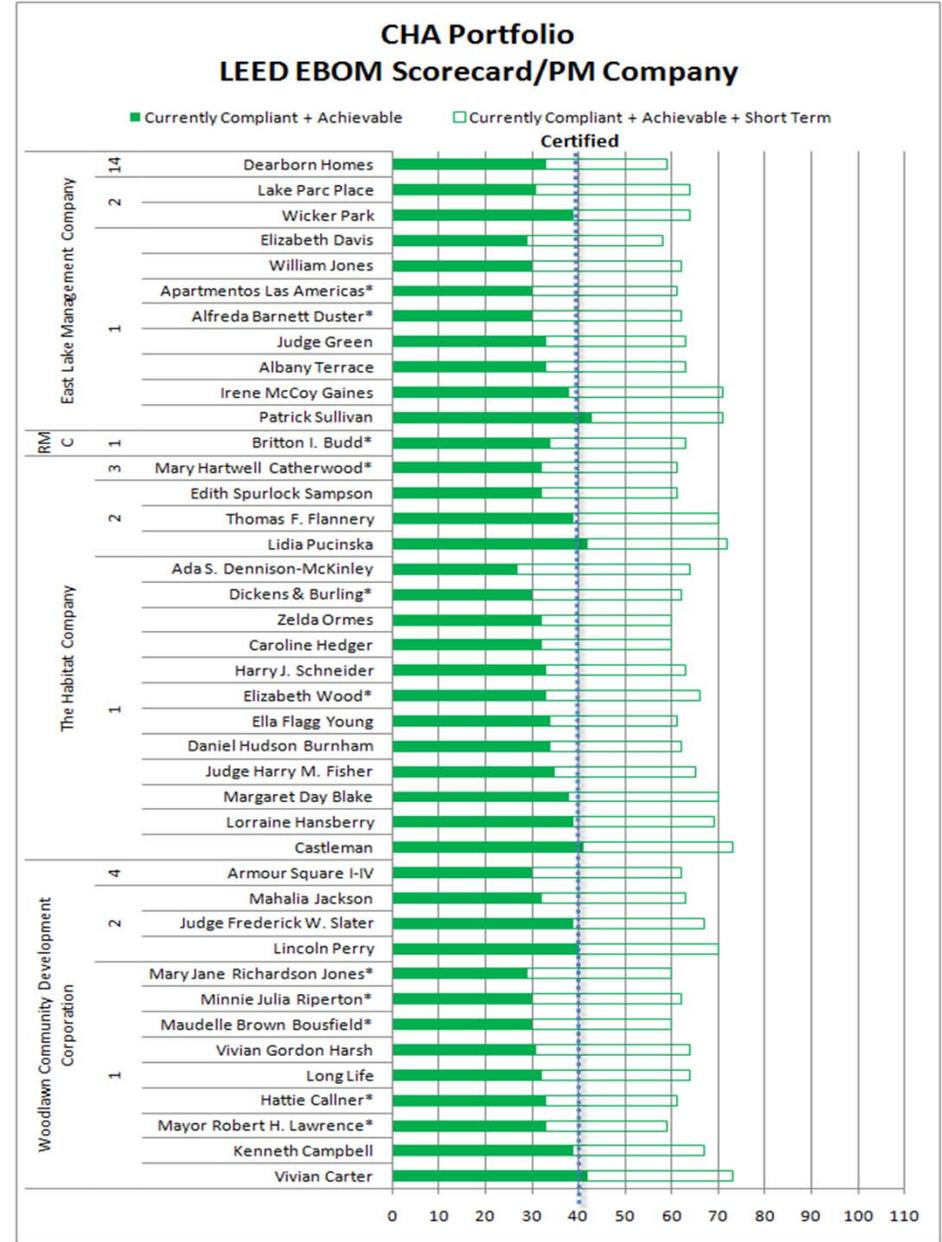
PORTFOLIO-WIDE SCORECARD

- This table shows the totals for credits per property
 - Currently Compliant;
 - Currently Compliant and Achievable;
 - Currently Complaint, Achievable and Short-Term;
 - Currently Complaint, Achievable, Short-Term and Long-Term

Building Height	Property Name	Currently Compliant	Currently Compliant + Achievable	Currently Compliant + Achievable + Short Term	Currently Compliant + Achievable + Short Term + Long Term
High Rise	Ada S. Dennison-McKinley	4	27	64	86
	Albany Terrace	7	33	63	85
	Alfreda Barnett Duster*	3	30	62	85
	Apartentos Las Americas*	3	30	61	85
	Armour Square I-IV	7	30	62	88
	Britton I. Budd*	5	34	63	81
	Caroline Hedger	3	32	60	85
	Castleman	18	41	73	90
	Daniel Hudson Burnham	7	34	62	85
	Dearborn Homes	6	33	59	82
	Dickens & Burling*	3	30	62	82
	Edith Spurlock Sampson	3	32	61	85
	Elizabeth Davis	3	29	58	83
	Elizabeth Wood*	7	33	66	81
	Ella Flagg Young	8	34	61	85
	Harry J. Schneider	7	33	63	86
	Hattie Callner*	3	33	61	85
	Irene McCoy Gaines	12	38	71	88
	Judge Frederick W. Slater	6	39	67	89
	Judge Green	6	33	63	85
	Judge Harry M. Fisher	8	35	65	84
	Kenneth Campbell	12	39	67	91
	Lake Parc Place	6	31	64	85
	Lidia Pucinska	7	42	72	92
	Lincoln Perry	3	40	70	91
	Long Life	13	32	64	85
	Lorraine Hansberry	13	39	69	90
	Mahalia Jackson	3	32	63	83
	Margaret Day Blake	10	38	70	88
	Mary Hartwell Catherwood*	2	32	61	85
	Mary Jane Richardson Jones*	3	29	60	85
	Maudelle Brown Bousfield*	7	30	60	85
	Mayor Robert H. Lawrence*	7	33	59	85
	Minnie Julia Riperton*	8	30	62	83
	Patrick Sullivan	14	43	71	91
	Thomas F. Flannery	4	39	70	90
	Vivian Carter	15	42	73	93
	Vivian Gordon Harsh	8	31	64	82
	Wicker Park	7	39	64	88
	William Jones	4	30	62	80
	Zelda Ormes	6	32	60	85
Low Rise	ABLA Brooks Homes*	4	28	59	83
	Altgeld & Phillip Murray*	2	31	57	80
	Bridgeport Apartments*	10	39	65	84
	Bridgeport Homes	9	40	68	89
	Cabrini Row Homes*	2	31	58	82
	Ida Platt*	2	27	62	85
	Lawndale Gardens*	6	31	60	80
	Lowden Homes	8	32	62	84
	Trumbull Park*	3	32	59	79
	Washington Park	1	29	58	81
	Wentworth Gardens*	7	32	58	82

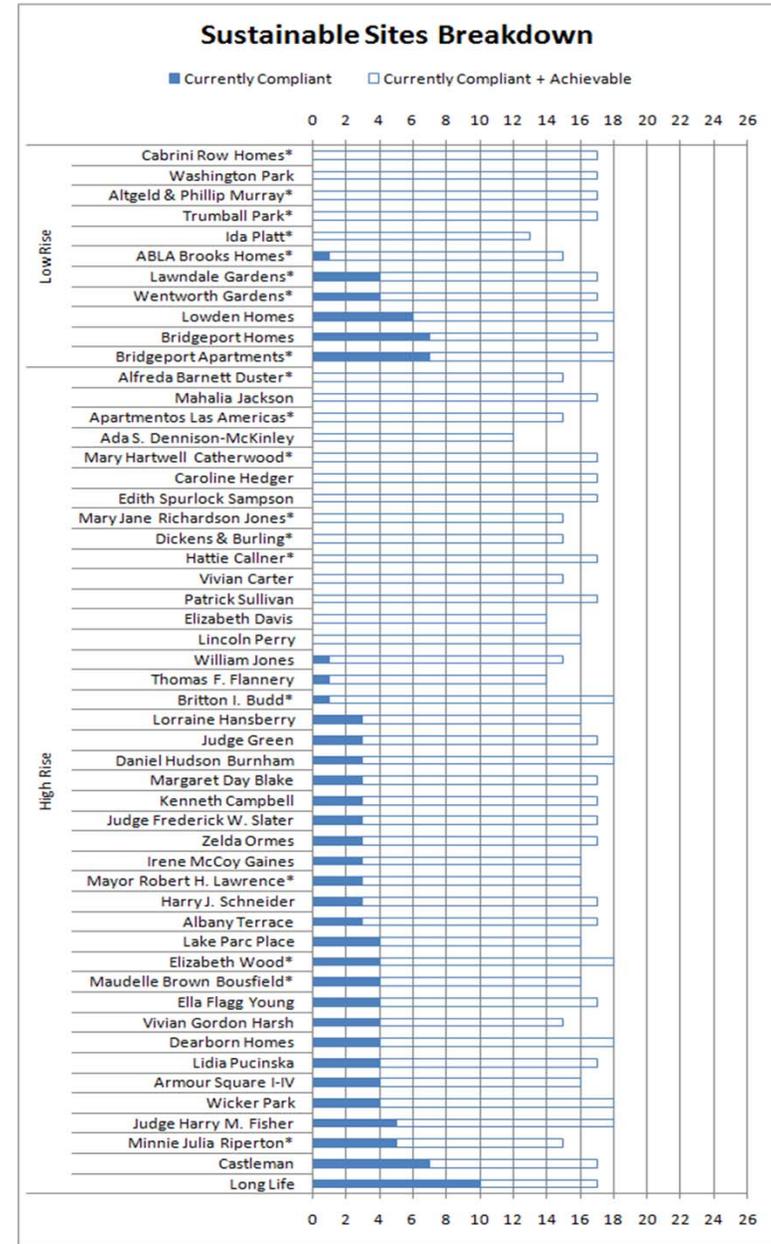
PER PM COMPANY LISTING

- Most properties can achieve minimum certification level of 40 points
- Overall, there is not much of an operations gap between buildings



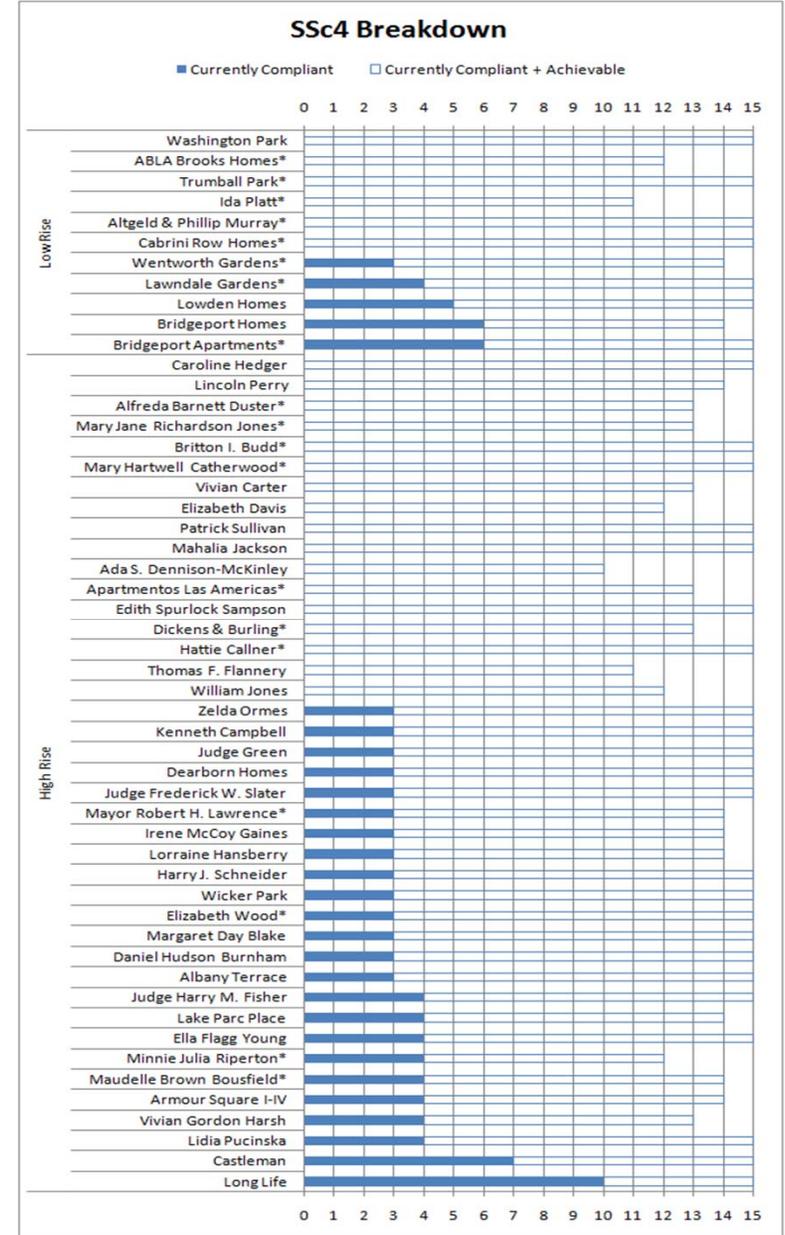
LEED CATEGORY: SUSTAINABLE SITES

- 26 Total Possible Points



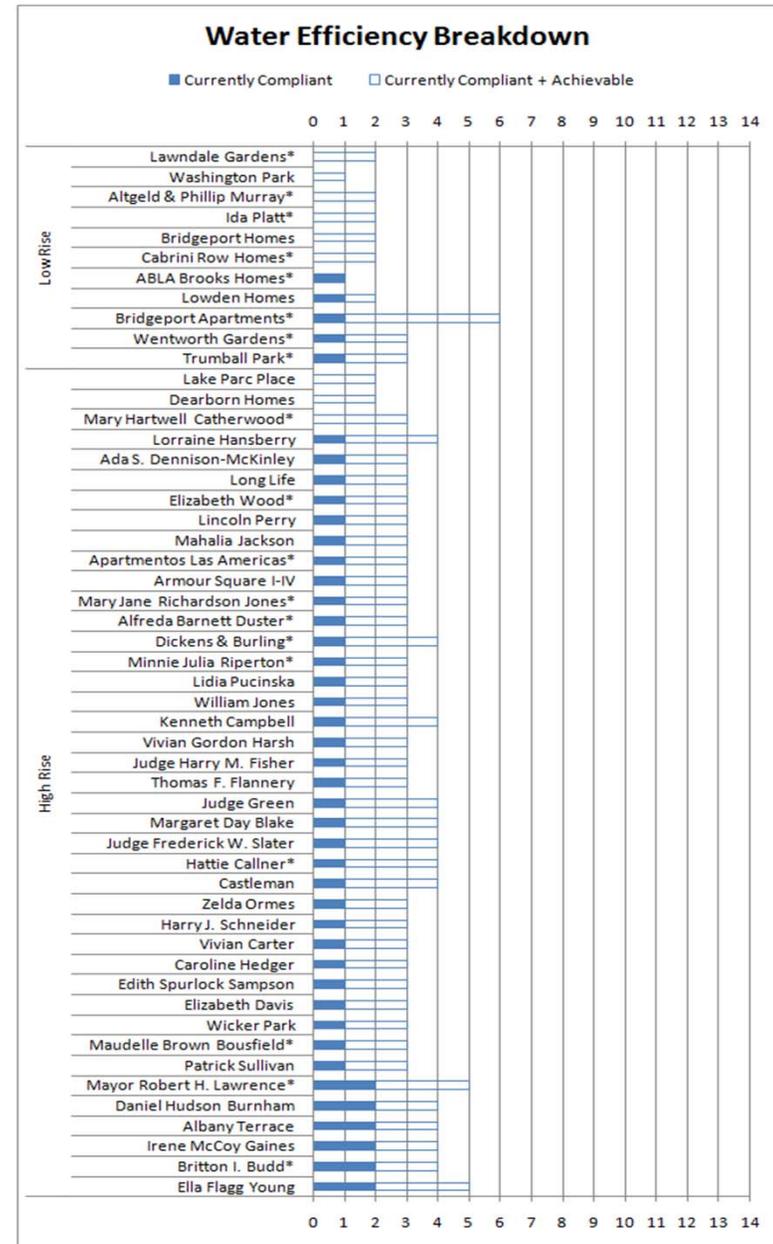
HIGH-POINT CREDIT: SSc4 - ALT. COMMUTING TRANSPORTATION

- 15 Total Possible Points



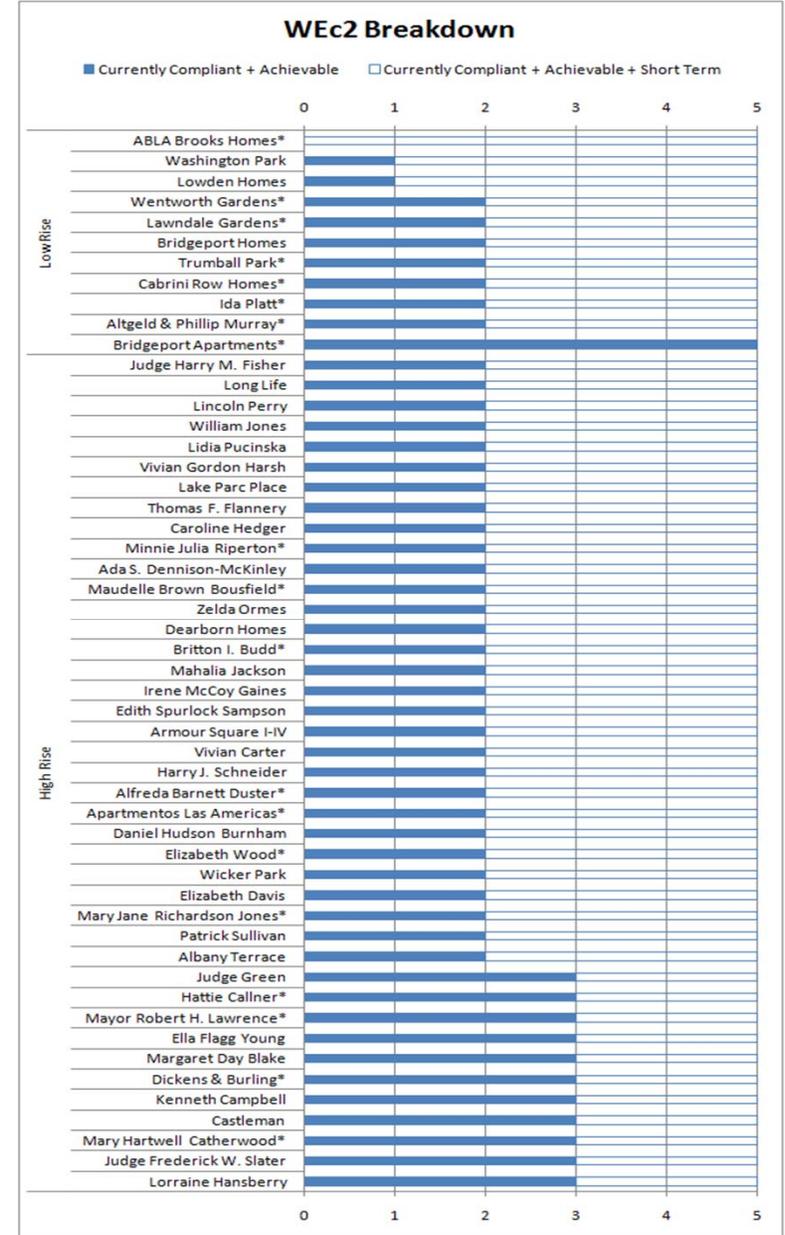
LEED CATEGORY: WATER EFFICIENCY

- 14 Total Possible Points



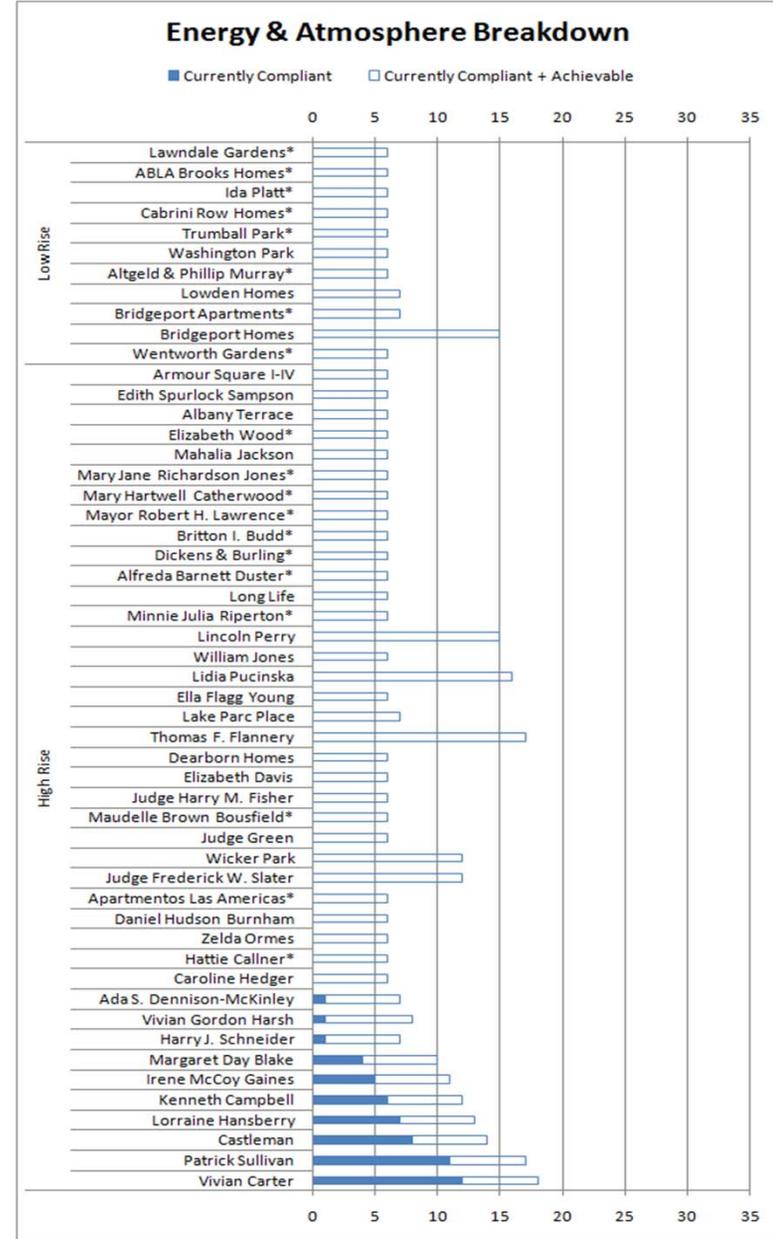
HIGH-POINT CREDIT: WE_c2 - INDOOR PLUMBING FIXTURE & FITTING EFFICIENCY

- 5 Total Possible Points



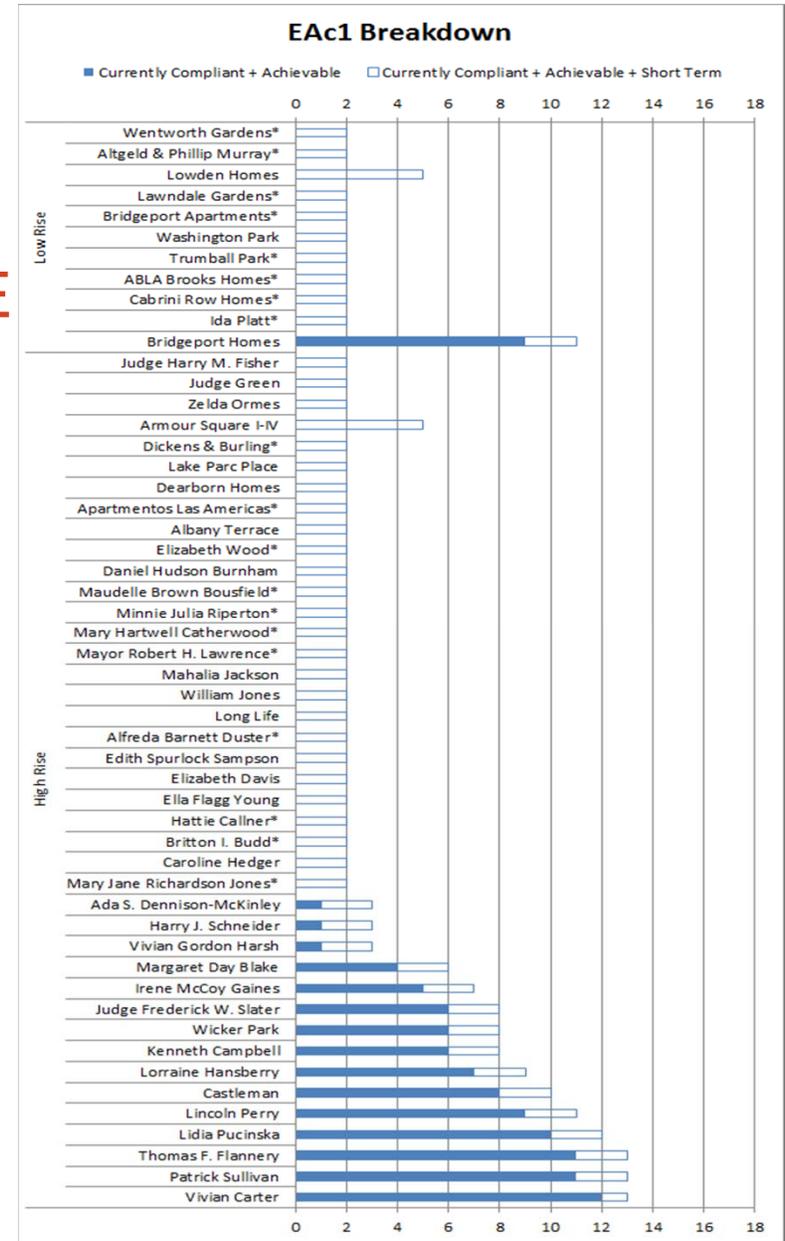
LEED CATEGORY: ENERGY & ATMOSPHERE

- 35 Total Possible Points



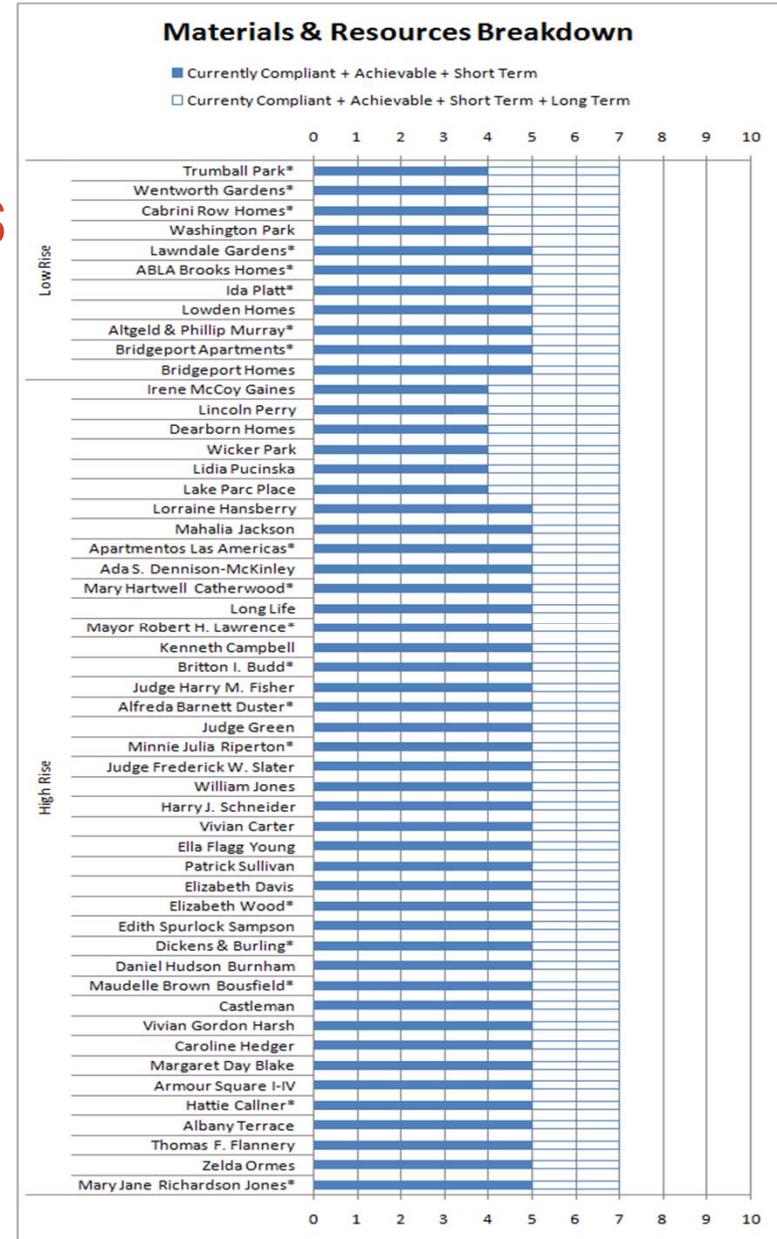
HIGH-POINT CREDIT: EAc1 - OPTIMIZE ENERGY EFFICIENCY PERFORMANCE

- 18 Total Possible Points



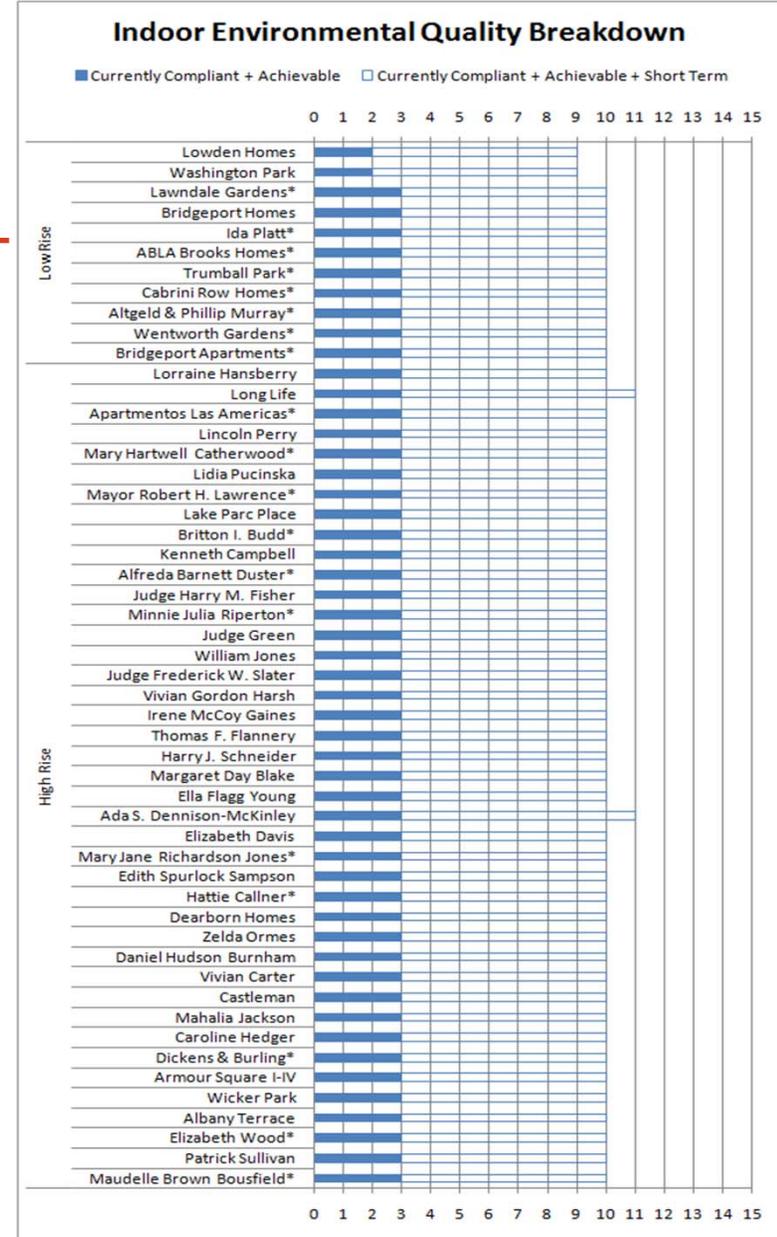
LEED CATEGORY: MATERIALS & RESOURCES

- 10 Total Possible Points
- None of the properties attain any currently compliant or achievable points for this category



LEED CATEGORY: INDOOR ENVIRONMENTAL QUALITY

- 15 Total Possible Points



THANK YOU

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