

So Many LEED:

A Case Study of the Existing
Building v5 O+M Beta
(Re)certification for **BranchPattern Omaha**

October 3, 2024





Please download and install the Slido app on all computers you use



How do you feel about LEED?









(i) Start presenting to display the poll results on this slide.





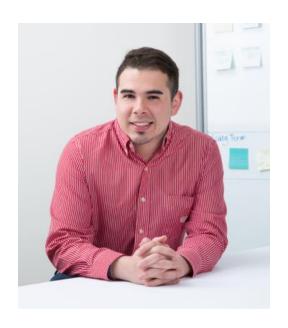
What LEED Rating Systems have you had a project Certified in?

(i) Start presenting to display the poll results on this slide.





Sam Blanchard
Associate



Andres
Rodriguez-Burns
LEED AP BD+C, WELL AP
Senior Associate



Sarah Gudeman
PE, BCxP, CPHC, WELL AP,
LEED Fellow, CEM
Principal

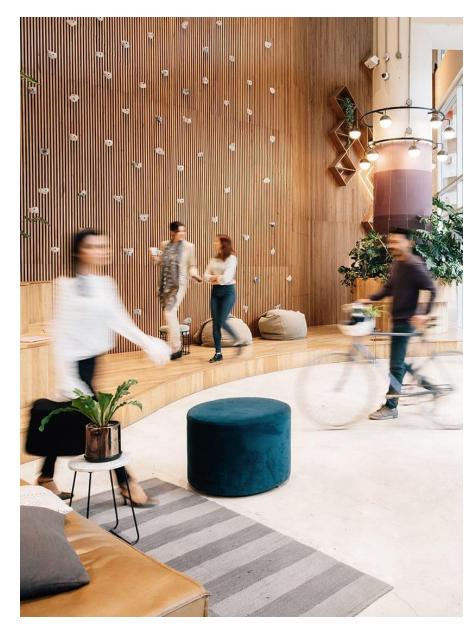


Photo: https://www.kaiterra.com/indoor-air-quality-monitoring-office

BETTER BUILT ENVIRONMENTS®





1. NAVIGATE

Navigate the twists and turns of LEEDv5 O+M Beta recertification, learning from our successes and our face-palm moments (reflecting on how much of our LEED v2009 certification remained relevant).



2. DISCOVER

Discover the strategies and improvements that have led to operational resiliency, including leaking windows in torrential downpour and the addition of EV charging infrastructure (in the same day!)



3. EXPLORE

Explore the journey towards net zero energy and carbon, including the installation of a new solar array and a partnership with the Arbor Day Foundation.



4. LEARN

Learn how to apply the lessons from this case study to your own organization's sustainability and operational resiliency goals.



Please download and install the Slido app on all computers you use





Who's in the Room?

i Start presenting to display the poll results on this slide.

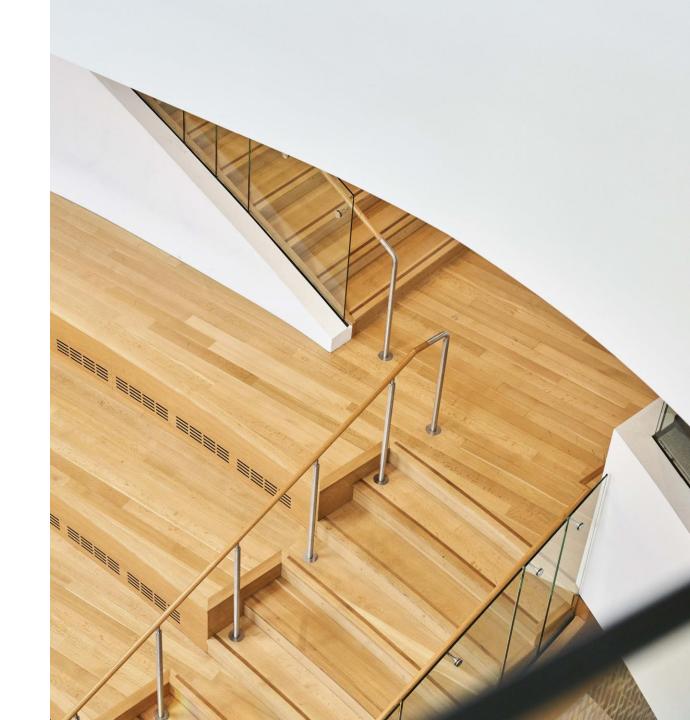
Our Story

Our name is inspired by the **natural environment** that surrounds us.

Branch patterns are the building blocks of natural systems. Humanity is innately drawn to these elegant and efficient fractals.

This deep connection is represented throughout mankind's history of science, art, engineering and architecture.

Looking closely, we see that the buildings and infrastructure we help create are full of fractals and branching patterns.



LEED V5

A market ready rating system that will drive the built environment toward a near zero carbon future that is equitable, resilient, and promotes the wise, safe utilization of all resources.

LEED v5 DEVELOPMENT TIMELINE

September 2023

LEED for Operations and Maintenance (O+M) draft released at Greenbuild April 2024

First public comment period opens

Public comment period(s)

Rating system refinement

Ballot and member ratification

Current Phase

Early 2025 Rating system

opens for registration

Entirety of 2024

LEED O+M beta LEED for Building Design and Construction (BD+C) and Interior Design and Construction (ID+C) will proceed without a beta



Continuity across the building lifecycle

Initial development

Existing buildings for ongoing assessment of performance and guidance towards improvement where needed

Annual impact reporting

Ongoing certification

Operations and Maintenance

Position every building on a path to improved performance while maintaining the pursuit of market transformation and leadership.

How we get there:

- Provide education and leadership in a critical time.
- Establish a roadmap of actionable and transformational criteria, and a plan for improvement over time.
- Achieve certification through measurable building performance.
- Reward existing buildings that start down the path toward decarbonization by creating strategic longterm plans and taking immediate steps.



LEED v5 Operations + Maintenance: Existing Buildings

rightarrow	Integrati	ive Process, Planning & Assessments	,
	integrat		4
	Prereq	Operations Assessment: Climate Action, Quality of Life and Ecological Conservation and Restoration	Required
	Credit	Operational Planning and Response for Resilience	2
	Credit	Equity within Operations and Maintenance Staff	2
000	Location	and Transportation	10
<i>~</i>	Credit	Sustainable Transportation Performance	10
	Sustaina	able Sites	4
W	Credit	Rainwater Management	2
	Credit	Heat Island Reduction	1
	Credit	Light Pollution and Bird Collision Reduction	1
6	Water E	fficiency	14
dil	Prereq	Water Metering & Reporting	Required
	Credit	Water Performance	14
(33)	Energy a	and Atmosphere	37
(T)	Prereq	Energy, Carbon & Operations Foundations	Required
	Credit	Decarbonization and Efficiency Plans	5
	Credit	GHG Emissions Reduction	12
	Credit	Refrigerant Impact Reduction	2
	Credit	Grid Interactive	4
	Credit	Energy Performance and Commissioning	14

$\overline{}$			
(\pm)	Material	s and Resources	11
	Credit	Waste Performance	9
	Credit	Embodied Carbon of Interior Materials During Renovations	2
	Indoor E	nvironmental Quality	20
0	Prereq	Verification of Ventilation and Filtration	Required
	Prereq	No Smoking	Required
	Credit	Indoor Air Quality Performance	12
	Credit	Occupant Satisfaction Survey	3
	Credit	Green Cleaning	3
	Credit	Integrated Pest Management	2
	Project P	riorities & Innovation	10
0	Credit	Project Priorities	10
	Total	Possible Points:	110

LEED v5 Operations + Maintenance: Existing Buildings

GHG Emissions Reduction

Grid Interactive

Refrigerant Impact Reduction

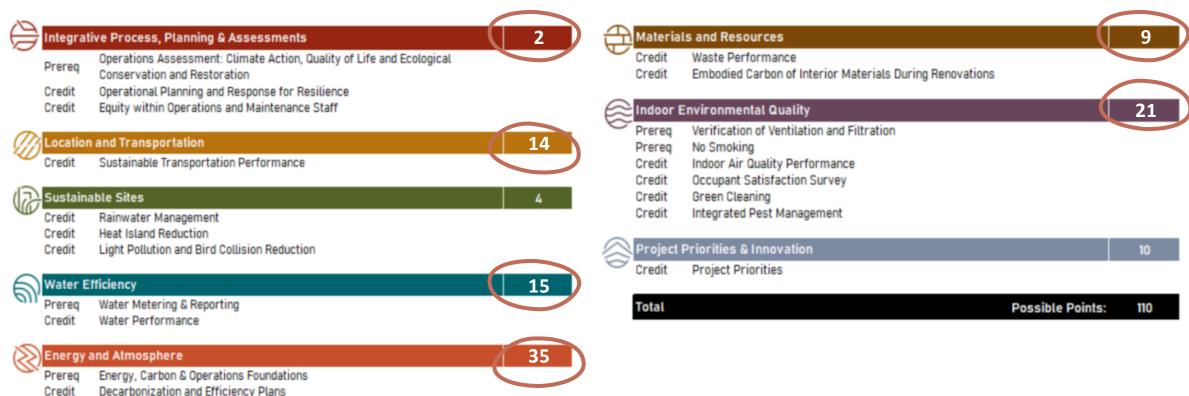
Energy Performance and Commissioning

Credit Credit

Credit

Credit





LEED v5 Operations + Maintenance: Existing Buildings



Integral	tive Process, Planning & Assessments	2
Prereq	Operations Assessment: Climate Action, Quality of Life and Ecological Conservation and Restoration	Required
Credit	Operational Planning and Response for Resilience	2
Credit	Equity within Operations and Maintenance Staff	2
Location	n and Transportation	14
Credit	Sustainable Transportation Performance	10
Sustain	able Sites	4
Credit	Rainwater Management	2
Credit	Heat Island Reduction	1
Credit	Light Pollution and Bird Collision Reduction	1
Water E	ifficiency	15
Prereq	Water Metering & Reporting	Required
Credit	Water Performance	14
Energy	and Almosphere	35
Prereq	Energy, Carbon & Operations Foundations	Required
Credit	Decarbonization and Efficiency Plans	5
Credit	GHG Emissions Reduction	12
Credit	Refrigerant Impact Reduction	2
Credit	Grid Interactive	4
Credit	Energy Performance and Commissioning	14

_			
\oplus	Material	s and Resources	9
\cup	Credit	Waste Performance	9
	Credit	Embodied Carbon of Interior Materials During Renovations	2
	Indoor E	invironmental Quality	21
0	Prereq	Verification of Ventilation and Filtration	Required
	Prereq	No Smoking	Required
	Credit	Indoor Air Quality Performance	12
	Credit	Occupant Satisfaction Survey	3
	Credit	Green Cleaning	3
	Credit	Integrated Pest Management	2
	Project I	Priorities & Innovation	10
0	Credit	Project Priorities	10
	Total	Possible Points:	110

Welcome to BranchPattern's Omaha Office!





Photo: BranchPattern Inc.

History

- Designed by founder and CEO Ravi Maniktala
- Located in urban west Omaha neighborhood
- Built in Fall 2008



Photo: BranchPattern Inc.

Ethos

- Sustainability in everything we do
- Community connectivity
- Occupant-centric
- Resilience



Photos: BranchPattern Inc.





First LEED Platinum Certification



Systems Design

High Performance HVAC

Enclosure Strategies

Renewable Energy



Ecology

Site Impact Reductions

Internal and External Impacts



Occupant Amenities

Transportation Options

Space Types

Biophilic Principals



Outcomes

Long Term Impact

Gaps for O&M recertification

ENERGY STAR

- Continuous ENERGY STAR Certifications since 2010
- Score of 90+ consistently





Photos: Branch Pattern Inc.



Photo: BranchPattern Inc.

First Fitwel Project in Nebraska

Policy Development

- Materials, emphasis on circular economy
- Catering, emphasis on local and sustainable food
- IAQ Policy
- Cleaning Protocol

Other Crosswalks

- Daylight
- Indoor Air Quality
- Views of Nature
- Indoor bicycle storage
- Showers with lockers

BETTER BUILT ENVIRONMENTS®

Social Justice Label for BranchPattern since 2018



Just. Organization Name: BranchPattern, Inc. Organization Type: Engineering Headquarters: Overland Park, Kansas Number of Employees: 83 Social Justice Indicators: **Employee Benefits** Diversity & Inclusion ■□□□ Gender Diversity Health Care Ethnic Diversity Retirement Provision III II Inclusion ■□□□ Family/Medical Leave Engagement Engagement Training/Education Equity Stewardship Full-Time Employment Local Communities Pay-Scale Equity Volunteering Freedom of Association Animal Welfare ■□□□ Charitable Giving Living Wage Positive Products Gender Pay Equity **Employee Health** Purchasing & Supply Chain Physical Health Equitable Purchasing Well-Being Supply Chain THE SOCIAL JUSTICE LABEL 2.0 BPI-002 EXP. 03/01/2023 INTERNATIONAL LIVING FUTURE INSTITUTE"

Just. Organization Name: BranchPattern, Inc. Organization Type: Consulting Headquarters: Kansas City, Missouri Number of Employees: 110 Social Justice Indicators: Diversity & Inclusion **Employee Benefits** ■■□□ Gender Diversity Health Care ■■■ Ethnic Diversity Retirement Provision I Inclusion Family/Medical Leave Engagement Engagement Training/Education Equity Stewardship Full-Time Employment ■■□□ Local Communities Volunteering Pay-Scale Equity ■■■ Freedom of Association ■□□□ Animal Welfare Living Wage Charitable Giving ■■■■ Gender Pay Equity ■■■ Positive Products **Purchasing & Supply Chain Employee Health** Physical Health Equitable Purchasing ■■■□ Well-Being ■□□□ Supply Chain THE SOCIAL JUSTICE LABEL 2.0 BPI-003 EXP. 04/01/2025 INTERNATIONAL LIVING FUTURE INSTITUTE"

Submitted 2018 Data

Submitted 2020 Data

Submitted 2022 Data

Crosswalk Overview

	LEEDv5 O+M	Just	Fitwel	EnergyStar	LEED v2009 NC
ID	Equity Within Operations and Maintenance Staff, Option 2	Employee Engagement Policy			
IP	Operational Planning and Response for Resilience	CDC Workplace Health Model Step 2	12.1. Emergency Equipment Database, 12.3 Certified First Responders, 12.4 Emergency Address Notification		
LT	Sustainable Transportation Performance, Option 3		1.1 Walkability, 1.4 Proximity to Transit, 2.3 Bicycle Parking, 2.4 Active commuter showers, 2.6 Efficiency Parking		SSc4 Alternative Transportation
	Transportation Policy		2.2 Commuter Survey		
	Site Management Policy		3.1 Outdoor Space Amenities		
SS	Heat Island Reduction				SSc7 Heat Island Effect
	Light Pollution Reduction		3.8 Outdoor Lighting		SSc8 Light Pollution Reduction
WE	Water Performance				WE ALL CREDITS
	Energy and Carbon Policy Management				
	Refrigerant Policy and Maintenance Practices				EA Enhanced Refrigerant Management
EA	Minimum Energy Performance			Energy Use	EAp2 Minimum Energy Performance
	GHG Emissions Reduction			GHG Reporting	EA On-site Renewable Energy, Green Power
	Energy Performance and Commissioning			Energy Use	EA Optimize Energy Performance
MD	Materials Management Policy	Supply Chain Social & Environmental Responsibility	6.4 Green Purchasing Policy		
MR	Waste Performance, Option 2,3				MRc1: Storage & Collection of Recyclables
	Occupant Needs Assessment	Physical Health, Workplace Safety & Health Assessment	4.3 Main Entrance Pedestrian Route, 4.5 Publicly Accessible Use, 4.6 Advertise nearby amenities, 8.5 Quiet Room. 8.7 Multipurpose room		
	Green Cleaning Policy				
	Verification of Ventilation and Filtration			Ventilation for acceptable AQ	EQp1 Minimum IAQ Performance
50	Environmental Tobacco Smoke Control		3.9 Smoke Free Outdoor Spaces, 4.1 Smoke-Free Signage		EQp2 Environmental Tobacco Smoke (ETS) Control
EQ	IAQ Policy		6.3 IAQ Policy		
	Indoor Air Quality Performance		4.7 Entryway Systems	Ventilation for acceptable AQ	EQc1 Outdoor Air Delivery Monitoring, EQc2: Increased Ventilation, EQc5: Indoor Chemical & Pollutant Source Control
	Occupant Satisfaction Survey		7.1 Natural Daylight, 7.3 Operable Shading	Thermal Environmental conditions, Adequate Illumination	EQc6 Controllability of Systems. EQc7: Thermal Comfort, EQc8: Daylight and view
	Integrated Pest Management		3.7 Integrated Pest Management		EQc Integrated Pest Management

BETTER BUILT ENVIRONMENTS®





Does your organization compile an ESG report?

i Start presenting to display the poll results on this slide.

Please download and install the Slido app on all computers you use





Which of the following emissions does your organization disclose as part of its ESG reporting? (Select all that apply)

(i) Start presenting to display the poll results on this slide.

Please download and install the Slido app on all computers you use





What disclosure frameworks does your organization use for ESG reporting? (Select all that apply)

i Start presenting to display the poll results on this slide.

Please download and install the Slido app on all computers you use





What's helped most as you've tried to tackle internal data tracking / certifications / ESG initiatives?

i Start presenting to display the poll results on this slide.

Certification Systems as Reporting Frameworks

	_
N T	J

	JUST	Fitwel	LEED
ENVIRON- MENTAL			LEED O+M's core focus on energy, water, and material efficiency directly aligns with the environmental metrics in ESG, particularly for climate risk and resource management.
SOCIAL	JUST's focus on equity, diversity, and fair labor practices aligns with the social component in ESG reporting.	Fitwel's focus on health and well-being aligns strongly with the social aspects of ESG, especially in enhancing workplace productivity, reducing absenteeism, and promoting a healthy lifestyle.	The credits on indoor environmental quality, occupant well-being, and community engagement align with social ESG goals, particularly in health and safety.
GOVERNANCE	Transparency and accountability in reporting workforce diversity and pay structures also fall under governance .		LEED's transparent certification process and ongoing building performance evaluations feed into governance aspects, emphasizing accountability and sustainability reporting.

BETTER BUILT ENVIRONMENTS®

	JUST	Fitwel	LEED
ENVIRON- MENTAL		 Green Purchasing Policy IAQ Policy Integrated Pest Management Plan Supply Chain Social & Environmental Responsibility 	 Energy and Climate Policy Materials Management Policy Refrigerant Policy & Maintenance Practices Site Management Plan Sustainable Transportation Policy Water Management Policy
SOCIAL	 Employee Engagement Policy Ethnic & Racial Diversity Policy Family-Friendly Policy Gender Diversity Policy Gender Pay Scale Equity Policy Inclusion Policy Medical Leave Policy Physical Health Policy Well-Being Program Workplace Safety & Health Assessment 	 Cleaning Protocols Meetings & Events Catering Policy Office Commuter Survey Results Tobacco-Free Policy 	 Emergency Preparedness Plan Green Cleaning Policy Occupant Needs Assessment Policy Smoke & Tobacco-Free Workplace Policy Social Equity Checklist
GOVERNANCE	 Animal Welfare Policy Charitable Giving Policy Community Engagement Narrative Fair & Equitable Procurement Activities Freedom of Association Narrative Full-Time Employment Policy Living Wage Policy Local Control Pay Scale Equity Polity Positive Products & Services Policy Retirement Provision Policy Supply Chain Social & Environmental Responsibility Supply Chain Social & Environmental Responsibility Training & Education Policy Volunteer Time Off Policy 	 Fair & Equitable Procurement Activities Positive Products Policy Supply Chain Social & Environmental Responsibility 	 Site Management Policy Sustainable Purchasing Policy Repair/Reuse Policy





Internal Goals

- Strengthen knowledge of O&M
- Develop understanding of v5 criteria
- Become experts in the new LEEDOnline Platform
- Put ourselves in the shoes of our clients

The overarching goal of LEED v5 is to guide new and existing buildings towards achieving near-zero carbon emissions operationally by 2050, supported by a decarbonized grid.

Operational Resiliency

Addressing Resiliency

- Emphasis on climate resilience
- Impact of building resources
- Greenhouse gas emission focus
- Policy adaptation











TACKLING E	MISSIONS
IN CRE	
1. RESPONSIBLE	2. OPERATIONAL EFFICIENCY
DESIGN	Energy + refrigerant monitoring
Embodied carbon	Grid integration
Passive strategies	Continuous commissioning
Electrification	Auditing
Efficient systems	Supply chain
Renewable energy	Health + wellness
	Offsets



Journey Towards Net Zero

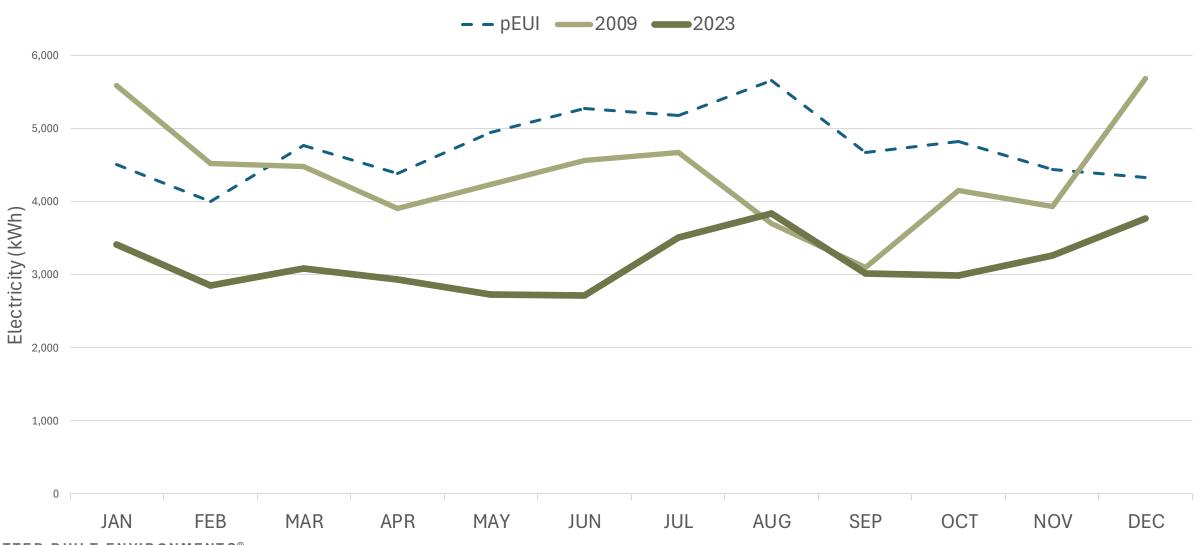






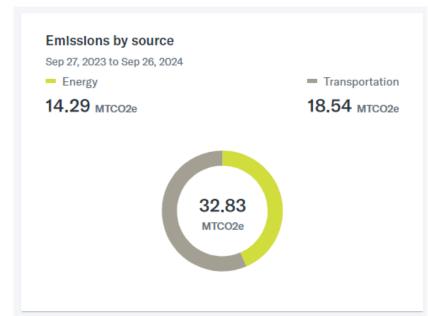


Journey Towards Net Zero





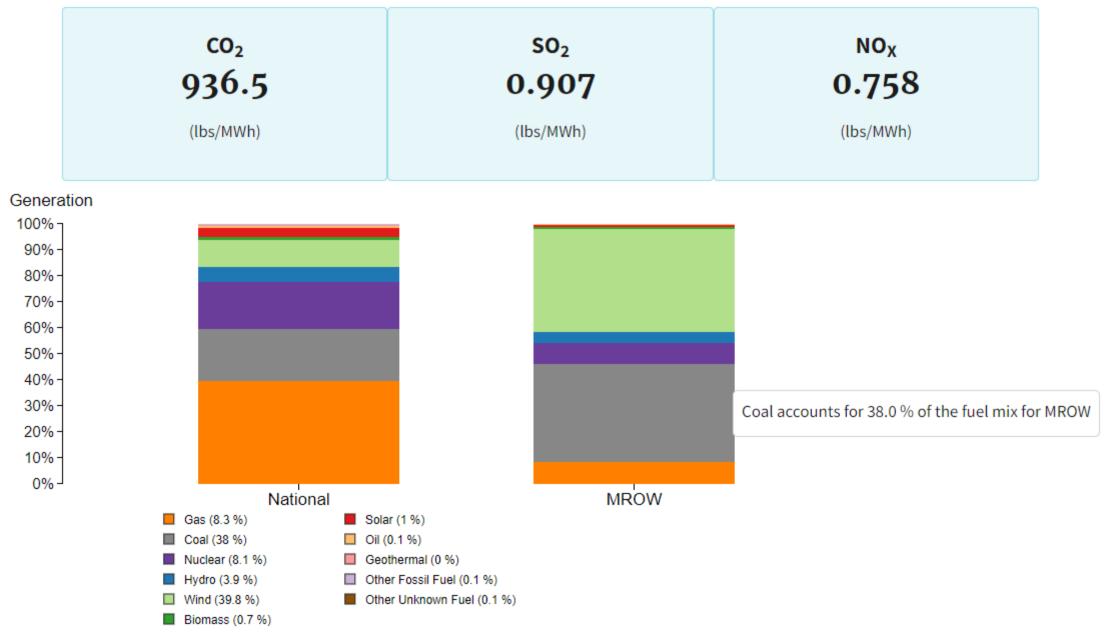
Journey Towards Net Zero







MROW Emission Rates







LEED O+M: Existing Buildings (v5 - BETA)	LEED O+M: Existing Buildings (v5 – PC1)	LEED O+M: Existing Buildings (v5 – PC2)
 PRE: Energy & Carbon Policy Management PRE: Refrigerant Policy and Maintenance Practices PRE: Minimum Energy Performance 	PRE: Energy, Carbon and Operations Foundations	 PRE: Carbon Projection from Energy Use PRE: Energy Monitoring and Reporting PRE: Fundamental Refrigerant Management PRE: Minimum Energy Performance
Decarbonization and Efficiency Plans	same	same
Energy Performance and Commissioning	same	Enhanced Commissioning
GHG Emissions Reduction	same	Greenhouse Gas Emissions Reduction Performance
Grid Harmonization	Grid Interactive	Peak Load ManagementPeak Load Reduction Performance
Refrigerant Impact Reduction	same	Enhanced Refrigerant Management Performance
		Optimized Energy Performance



1,463 METRIC TONS OF CARBON DIOXIDE HAVE BEEN OFFSET AND RETIRED ON BEHALF OF

BRANCHPATTERN

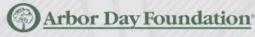
BY PROTECTING AND RESTORING TREES IN THE MISSISSIPPI ALLUVIAL VALLEY

Serial Numbers

ACR-US-114-2019-1071-280294 to 281756



Presented by



January 5, 2024

Date

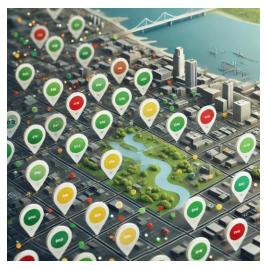
Nerds for Continuous Air Quality Monitoring

Emphasis on IAQ

- O+M incentives good IAQ in significant and challenging ways
- There is not just ONE air!
- Continuous monitoring supplemented with on-site labbased testing











Humidity (current)

100%

Reduction (current)

BETTER BUILT ENVIRONMENTS®

Last update: 20 Sep 24, 08:33

Purchasing & Material Management Procedures

Adjustments to internal processes

Old and new strategies

Looking at ways to improve follow-through

How much is up to us?







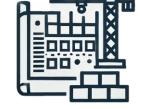
Significant differences in interactions between O+M and BD+C.

v5 encourages neighbor and jurisdictional interactions.



Stakeholders





LEED v5 O+M

- 1. Owner
- 2. All building occupants
- 3. Cleaning service provider
- 4. Refrigerant maintenance provider
- 5. Controls contractor
- 6. Landscaping crew
- 7. Solar Installers
- 8. Window retrofit crew
- 9. Drone operator
- 10. Building maintenance staff

LEED BD+C

- 1. Owner
- 2. Architect
- 3. Design team
- 4. Contractors

GBCI Online / The HUB

Hi Samantha

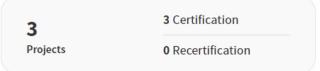
What do you want to do today?

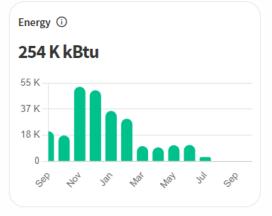
















Properties vs Projects

LEED calculators

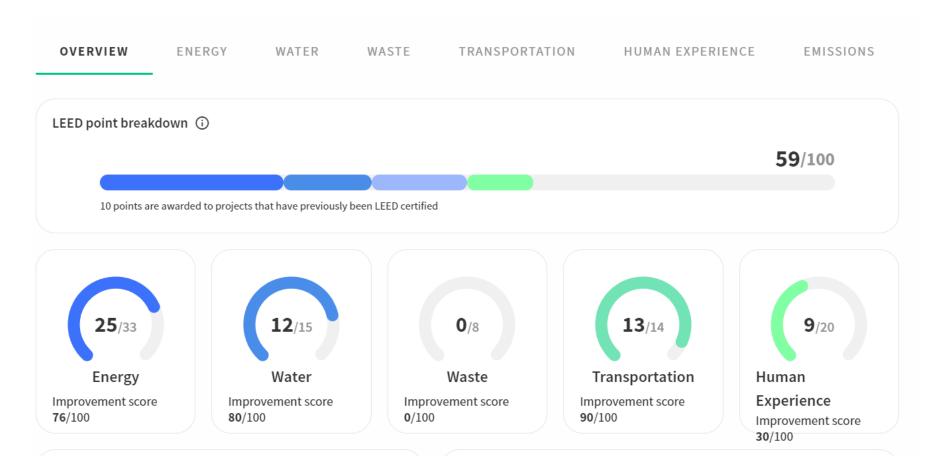
Data input strategies and challenges

https://www.gbcionline. com

BETTER BUILT ENVIRONMENTS®

Properties



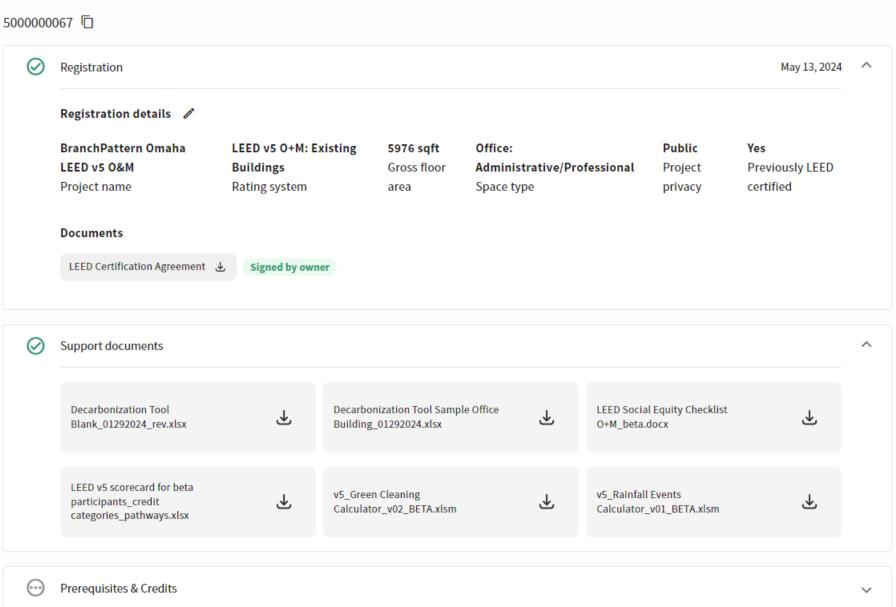


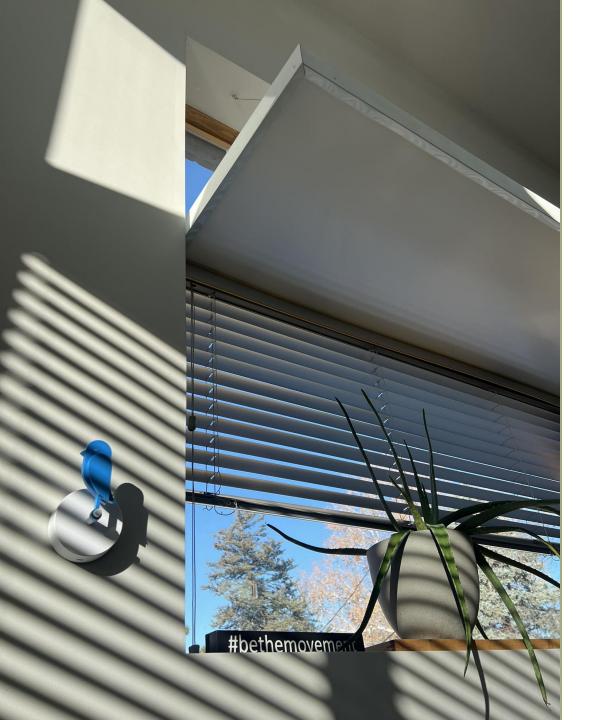
What do these graphics mean in the context of certification?

Project



Initiate payment









Certification Comparison

Very few large scale design changes

Need for O&M certification for originally certified BD+C buildings



Policy Development

Discuss new policies for LEED and company

Discuss internal goal discussions that align with international climate goals and target dates



Ongoing Operations

Large emphasis on ongoing maintenance and logging needs

Occupant involvement in sustainable practices

Delegating roles as a challenge



Takeaways

Unlike any other certification our firm has received

Important for organizational changes in operations

Please download and install the Slido app on all computers you use





i Start presenting to display the audience questions on this slide.