

GREEN+ 2026

SUSTAINABLE DEVELOPMENT
10 TRAINING SESSIONS

hosted and supported by

TEXAS ASSOCIATION OF COMMUNITY
DEVELOPMENT CORPORATIONS

Why Do We Need a Green CDC Training in Texas?

- Nearly one-third of Texans face high energy burdens, with low-income, minority, and rural communities disproportionately affected due to aging homes and inefficient infrastructure.
- Rising utility costs, grid upgrades, and new industrial demands like data centers threaten to worsen affordability and reliability across the state.
- While conservation and clean energy is a potential solution, public understanding is low and opinions are deeply divided along partisan lines, highlighting a need for broader education and policy focus on both supply and demand.
- Nearly 45% of households pay over \$200 a month on average for summer electricity. About one-third of Texans spend 7% or more of their income on energy — surpassing the high energy burden threshold of 6%.





Intro to Green Building and
Overview of Types of 3rd
Party Certifications

Session 1
Today - January 13




Designing For Resilience

Session 2
February 10th




"From Redlined to Green:
Equity through Sustainable
Design"

March
TACDC Conference



Passive Solar Design in
Texas

Session 4
April 14



Basic Energy Modeling &
Why We Do It

Session 5
May 12



Renovation & Reuse: The
Hidden Power of Existing
Buildings

Session 6
June 9



LEED & The Living Building
Challenge

Session 7
July 14




WELL, Fitwell, & Healthy
Materials

Session 8
August 11



Net Zero Energy (NZE)

Session 9
September 8



Carbon/Electrification & A
Year In Review

Session 10
October 13



Session 1 **Intro to Green Building and Overview of Types of 3rd Party Certifications**

This session introduces the foundations of sustainable design and green building, with an emphasis on why certifications matter for affordable housing and community development. Participants will learn about the most widely used third-party rating systems—including LEED, Living Building Challenge, WELL, Fitwel, and others—and how they can add measurable value to projects. We will highlight the benefits of certification for long-term operations, funding opportunities, and healthier communities.



GREEN+ 2026

Introduction to Green Buildings



Presenters



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LEED AP BD+C, LFA

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LEED FELLOW

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Agenda

1. Introduction
2. Sustainability / Wellbeing / Resilience
3. Design / Construction / Operations
4. Green Codes and Rating Systems
5. Case Study / Discussions



Introduction

Sustainability – lessening the impact to our natural environment

Wellbeing – addressing the environmental impact on our human health

Resilience – planning for natural disasters and long-term climate change

Green Codes – mandatory requirements that need to be met (typ. prescriptive based)

Green Rating Systems – volunteer programs that can be pursued (typ. performance based)



**TERMS &
DEFINITIONS**

Sustainability

Passive Design – Design using thermal and air-flow

Active Design – MEP systems

Renewables – Non-fossil fuel sources of energy

Net Zero – Energy, Water, and Waste

Biophilia – Human connection with nature

Biomimicry – Designs modeled after nature



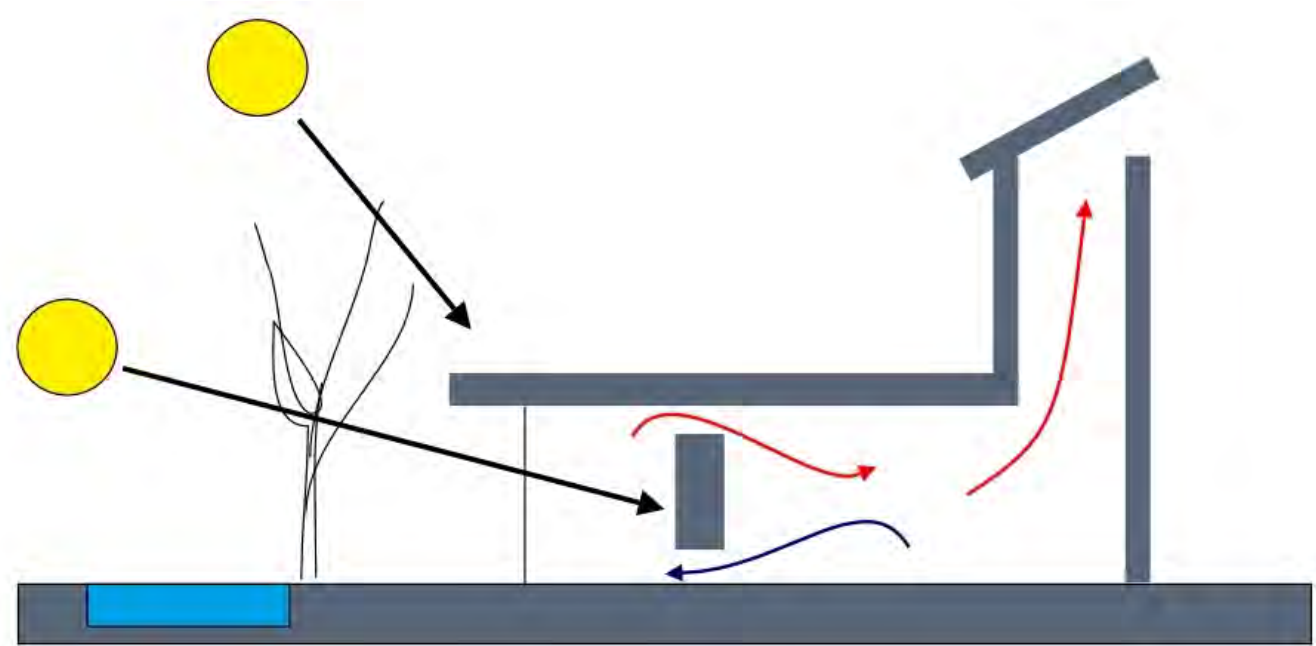
Sustainability

Passive Design

- Orientation – N/S vs E/W
- Shape and Size
- Envelope (Glass / Insulation)

Active Systems

- Mechanical (HVAC)
- Lighting Power
- Controls (both HVAC and Lighting)



Sustainability

Renewables

- Solar Power
- Wind Power

Net Zero

- Site Energy
- Source Energy



Sustainability

Biophilia (Biophilic Design)

- Direct connection
- Indirect / Visual Connection

Biomimicry

- Materials (Exterior and Interior)
- Structural systems



Wellbeing

Nourishment – better food choices

Fitness / Exercise – more opportunities

Comfort – quality of your environment

Materials and Products – proper selection



Wellbeing

Nourishment

- Healthier food options at cafeteria/ vending
- Labeling of food ingredients
- Access to free water

Fitness / Exercise

- Adjustable Workstations
- Encouraging stairs over elevators
- Access to fitness centers



Wellbeing

Comfort

- Thermal
- Ventilation / Filtration
- Acoustics

Materials / Products

- EPD / LCA
- HPD / Ingredients



Design for Resilience

Resilience

- Multiple Energy Sources
- Multiple Water Sources
- Disaster Fortitude Design
- Passive Survivability
- Support Natural Processes
- Evaluate Flood Plain
- Provide Access to Resources
- Civil Support Systems

- Energy Independence
- Water Independence
- Renewable Resources
- Resource Storage
- Environmental Effects
- Community Supports

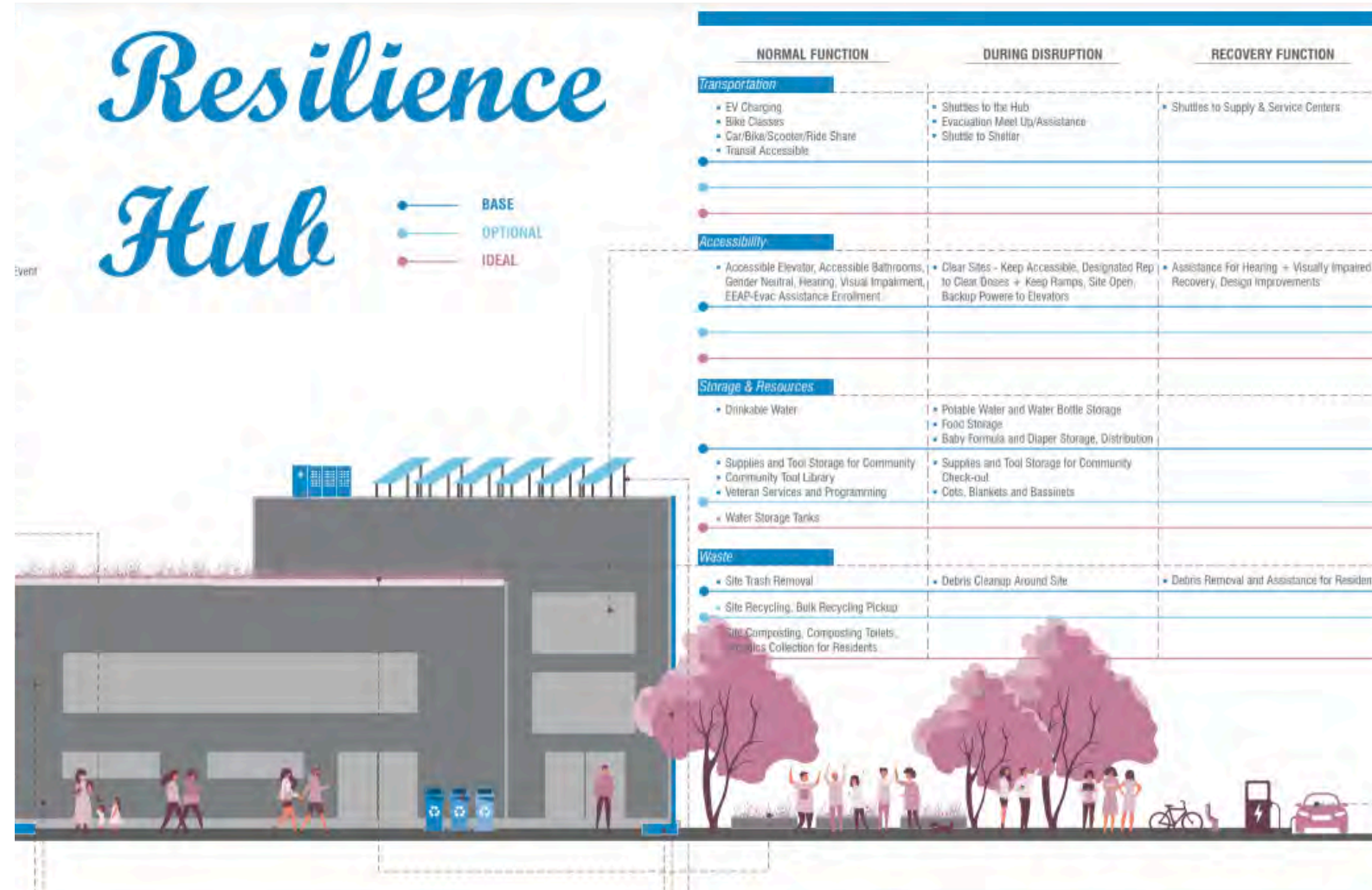
Sustainability

- Energy Reduction
- Renewable Energy Production
- Recycled / Reclaimed Water
- Locally Sourced Material
- Community Responsibility
- Access To Transportation
- Indoor Environmental Quality
- Brownfield Restoration

Design for Resilience

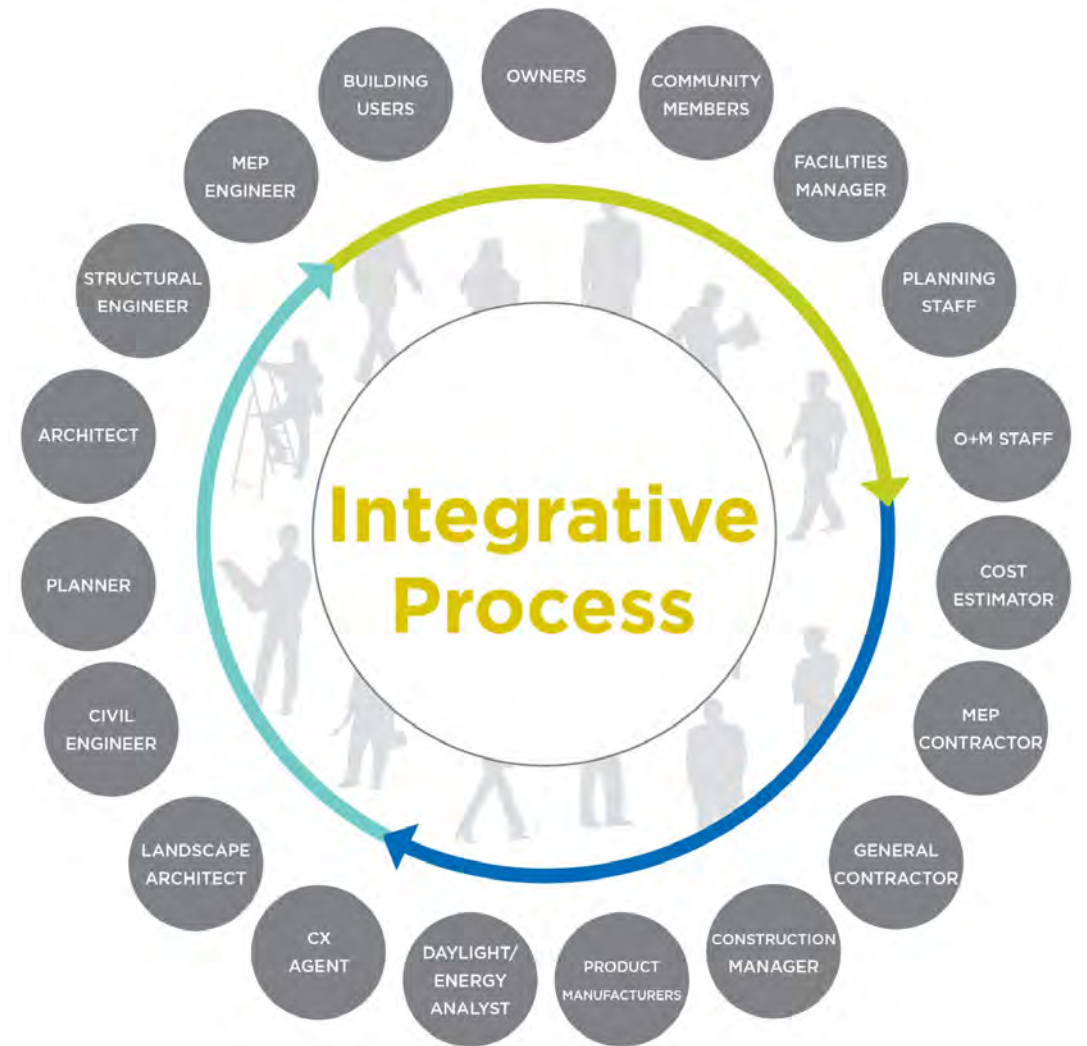
Potential Hazards to consider:

- Extreme Heat / Cold
- Black-Outs / Brown-Outs
- Flooding / Drought
- Lightning
- Wildfires
- Hurricane / Tornados
- Earthquakes
- Sea Level Rise



Integrated Design

- Kickoff meeting with all key stakeholders
- Create an Owner Project Requirements (OPR)
- Establish sustainability and wellbeing goals for the project
- Specifications with requirements of the construction team



Construction

Requirements

- Construction Waste Recycling
- Indoor Air Quality Management Plan / Indoor Air Testing
- Sustainable / Low Emitting Materials and Products
- Commissioning – both MEP systems and building envelope



Operations

Post Occupancy

- Green Operations – Recycling, Purchasing, Cleaning, and Pest Control
- POE / Survey to confirm meeting goals in design
- Operations Training, Education, and Maintenance
- Periodic checkups



Green / Energy Codes



THE AMERICAN
INSTITUTE
OF ARCHITECTS



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International Green Construction Code

“The IgCC is the first model code to include sustainability measures for the entire construction project and its site — from design through construction, certificate of occupancy and beyond.”

Adoptable, Useable and Enforceable code.

- Original version – 2012
- Latest version – 2024
- Dallas Green Code (based on 2021 version)
- Check for local “Green” requirements

Applicable for all buildings, both existing and new.

Commercial Compliance Process:
IgCC Alternative path - ASHRAE 189.1



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International Energy Construction Code

“The IECC regulates the design and construction of buildings for the use and conservation of energy over the life of each building.”

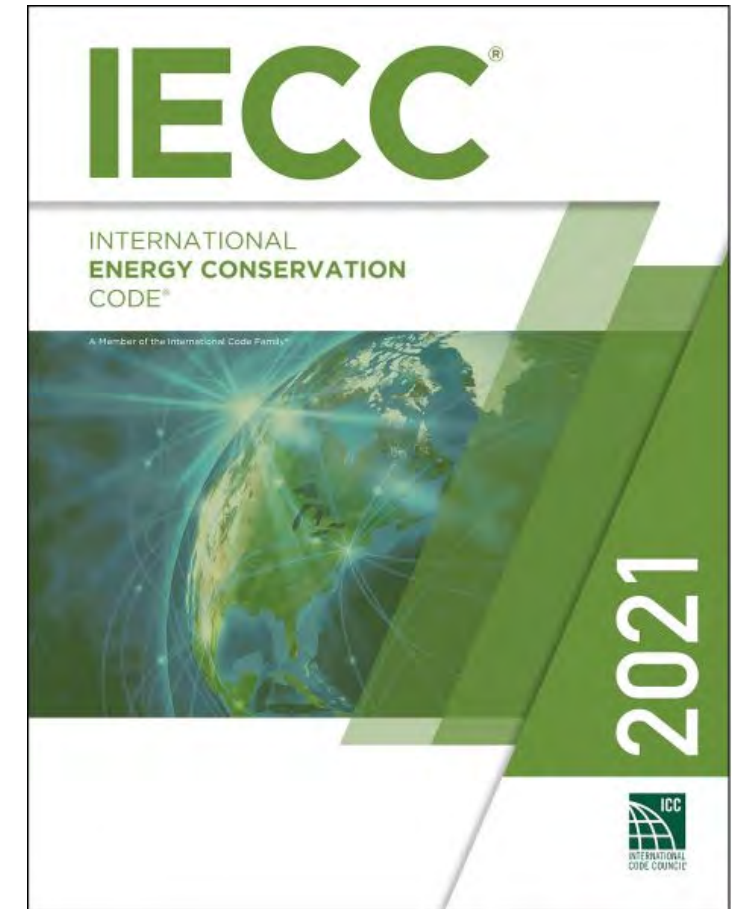
- Original version – 2012
- Latest version – 2024
- Minimum State version - 2015
- Most Cities in Texas have adopted the 2021 version

** Commissioning is now required by code, not just for LEED projects only (check local codes)

Commercial Compliance Process:

IECC - Prescriptive Path or Performance Path

Alternative - ANSI/ASHRAE/IES 90.1 - Prescriptive Path or Performance Path

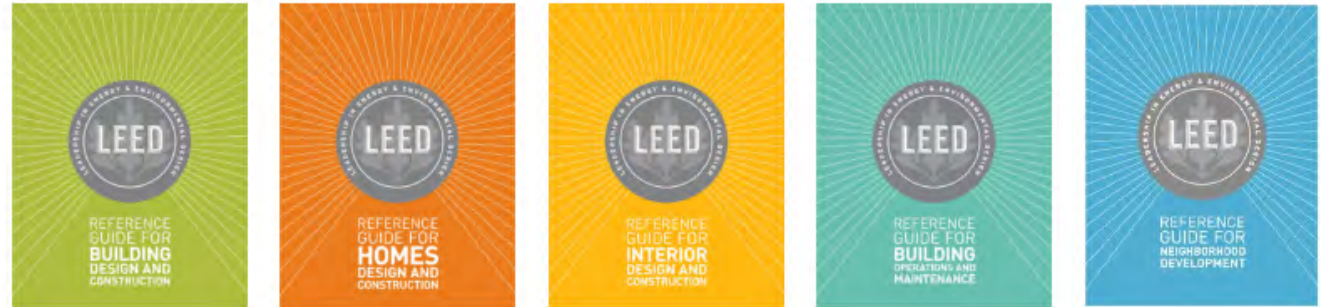


Green Rating Systems



LEED

- Same points possible and levels of certification
- New categories, credits, and prerequisites
- Additional building types
- New platform and forms for LEED Online
- New reference guides and credential exams



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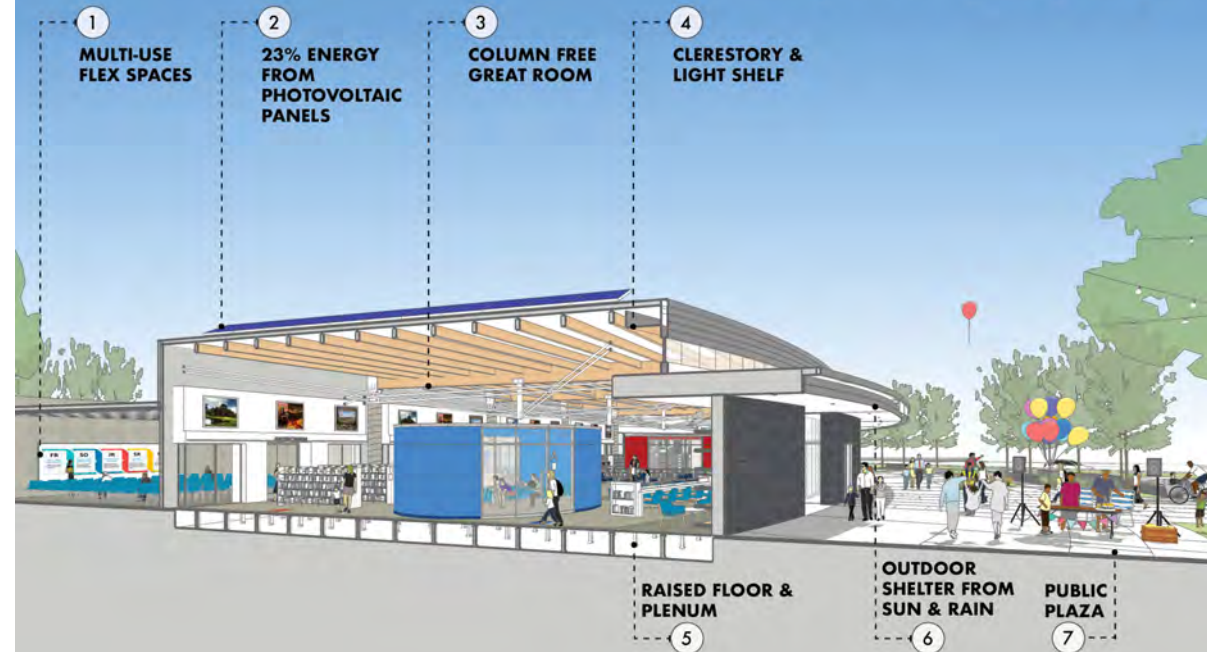
LEED Case Study



Vickery Park Branch Library achieves all 20 Energy Points



using Passive design strategies and efficient HVAC systems
the Library achieves 18 points for 54.3% energy reduction
+1 point for exemplary performance
+1 bonus point for regional priority



LEED Case Study

Vickery Park Branch Library healthy materials.

Declare.

Standard or Custom Hollow Metal Frame
ASSA ABLOY

Final Assembly: Dallas, Texas, USA; Mason City, Iowa, USA; Cambridge, New Jersey, USA; Newton, North Carolina, USA; Ceres, California, USA; Woodbridge, Ontario, Canada; Florida, Bay County, Florida, USA

Life Expectancy: 30 Years
End of Life Options: Salvageable/Reusable in its Entirety. See Back Program (ASSA ABLOY End of Life Recycling Program, Perforated 2020).

Ingredients:
Steel, Carbon Steel, Water, Calcium Carbonate, etc. 2-Butoxyethanol, Titanium dioxide

Living Building Challenge Criteria: Compliant

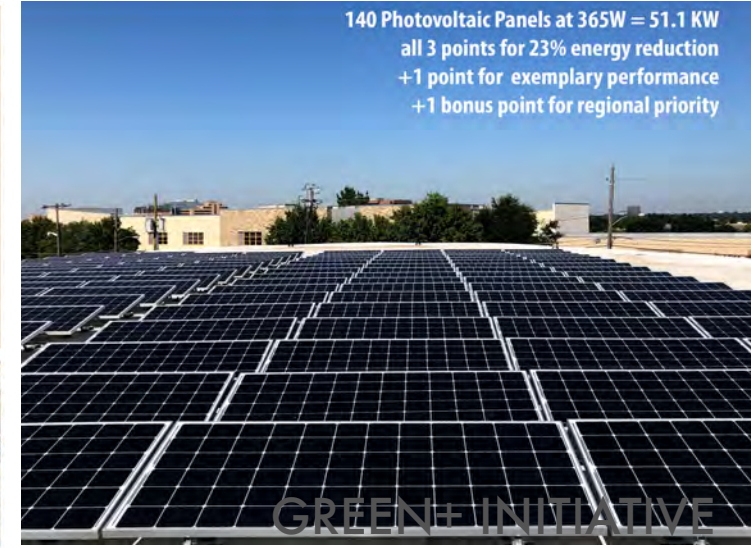
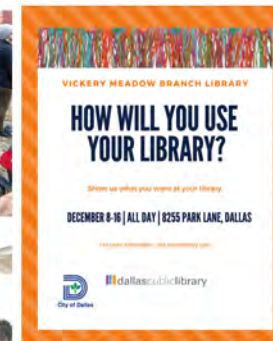
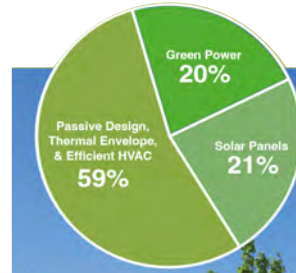
LEED Red List:
■ LBC Red List Free
■ LBC Red List Approved
■ LBC Red List Not Applicable
■ LBC Red List Not Applicable

ASSA-008
EXP 01 NOV 2023
Original Issue Date: 2022

INTERNATIONAL LIVING FUTURE RESOURCES



carefully selected, here is a summary of products installed:
43 EPDs - Environmental Product Declarations
16 HPDs - Healthy Product Declarations
including 7 with Declare labels



140 Photovoltaic Panels at 365W = 51.1 KW
all 3 points for 23% energy reduction
+1 point for exemplary performance
+1 bonus point for regional priority

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Living Building Challenge

- Rating system to go beyond Platinum
- One year post occupancy of operational data
- Requires net zero energy and water use
- Red list of chemicals to avoid
- Can achieve the following options:
 - Living Building Certification
 - Core Certification
 - Petal Certification
 - Zero Energy Certification
 - Zero Carbon Certification



LBC Case Study



The Betty and Clint Josey Pavilion is the first Living Building Challenge project in Texas.

The 5,000-square-foot pavilion is a site for meetings and educational events in Decatur, TX.

It is self-sufficient with net zero energy and water.



WELL Building Standard

- Newer rating system to focus more on building occupants instead of the building
- Combines design and construction with evidence based medical and scientific research
- Letters of Assurance instead of full documentation
- Also requires onsite post-occupancy performance testing
- Requires re-certification every 3 years

TEN CONCEPTS



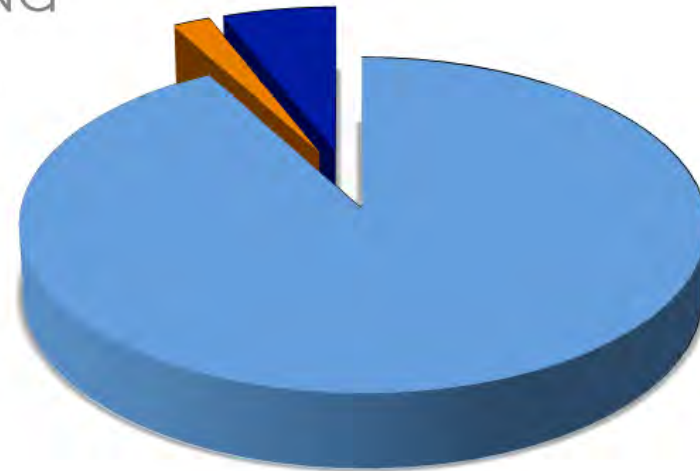
WELL Building Standard

INVEST IN PEOPLE FOR RETURN ON INVESTMENT

When viewed over an extended period of time, the majority of corporate expenses incurred within commercial buildings can be attributed to personnel costs. Addressing human health in the built environment can reduce expenses associated with personnel throughout the lifetime of the building.

30 YEAR COST OF BUILDING

- Personnel Costs
- Design and Construction
- Maintenance



WELL – Case Study

Dallas County Records Building

300,000 sf renovations of three buildings into a single building

Scope includes:

- New building core
- Infill space for community rooms
- Additional 7th floor

Pursuing dual certifications:

WELL Silver v1.0

LEED Silver v3.0



Project with previous firm

LEED + WELL

Crosswalk for projects pursuing both ratings

- Technical alignments
- Coordinated review cycles
- Streamlined approach

<https://www.wellcertified.com/certification/leed-well>

- WELL > LEED BD+C
- WELL > LEED ID+C
- LEED BD+C > WELL
- LEED ID+C > WELL



LEED + WELL

Streamlined Certification Process Guide

2023



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Fitwel

Fitwel includes 63 evidence-based design and operational strategies. Each strategy is linked to one of seven health impact categories. They are weighted on the strength of evidence and impact on occupant health.

Developed by:

Center for Disease Control and Prevention (CDC)

General Services Administration (GSA)

Third Party Certification:

Center for Active Design (CfAD)



Fitwel Certification is awarded at the following levels:



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Fitwel

Fitwel Strategies are categorized into 12 sections:



Location



Building Access



Outdoor Spaces



Entrances and Ground Floor



Stairwells



Indoor Environment



Workspaces



Shared Spaces



Water Supply



Cafeteria / Prepared Food



Vending Machines / Snack Bars



Emergency Procedures



Impacts Community Health



Reduces Morbidity + Absenteeism



Supports Social Equity for Vulnerable Populations



Instills Feelings Of Wellbeing



Provides Healthy Food Options



Promotes Occupant Safety



Increases Physical Activity

Fitwel – Case Study

Hall Park Monarch

The Monarch HALL Park recently achieved Fitwel Certification, recognizing the 19-story luxury residential tower in Frisco, Texas for its commitment to supporting occupant health and well-being design and operations.

Building Information:

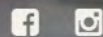
- Features amenity deck on the sixth floor with club room, resort-style pool, fitness studio, yoga and meditation space, and outdoor social areas
- Improved indoor air quality
- Direct connectivity to greenspaces, walking trails, and Kaleidoscope Park (5.7-acre programmed park)
- Community connection and wellness-oriented living



Other Rating Systems

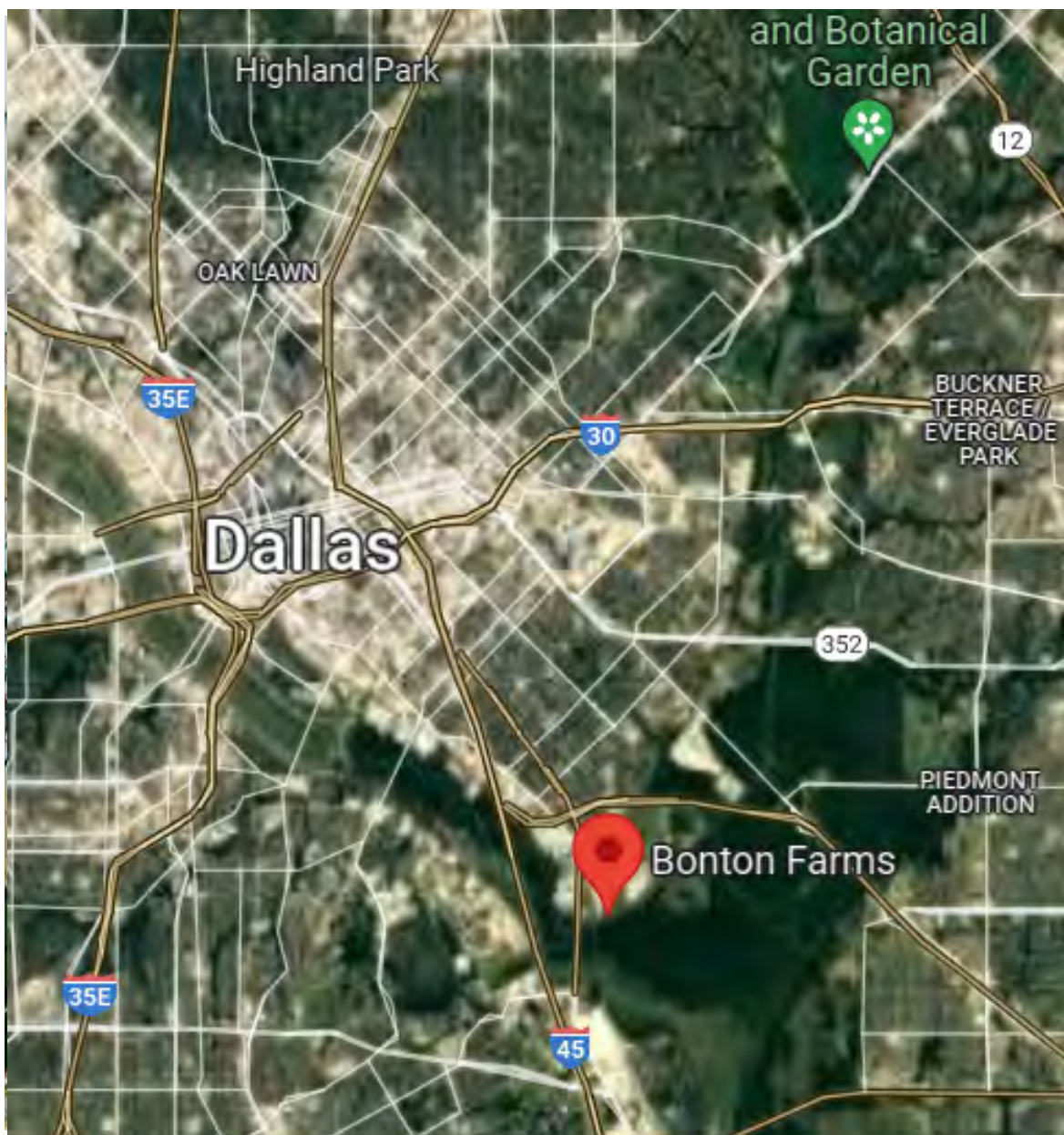
- AASHE Stars (Higher Ed)
- CHPS (Schools)
- Energy Star (Buildings)
- Green Globes
- Sustainable Sites Initiative



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WE'RE PROVING
THAT A FARM
CAN REDEFINE
A COMMUNITY.

[▶ PLAY VIDEO](#)



What is Bonton?

For the last 200 years, racial injustice and systemic oppression prevented opportunities in Bonton that were a given elsewhere. The people here experienced higher rates of diabetes, stroke and cancer, and 48% of residents lived in poverty. Residents have been denied access to the seven human essentials that are necessary to survive and thrive - health and wellness, economic stability, safe and affordable housing, transportation, a sense of belonging, education and access to fair credit. Today, the community is transforming, and healing is coming from within.

Who We Are

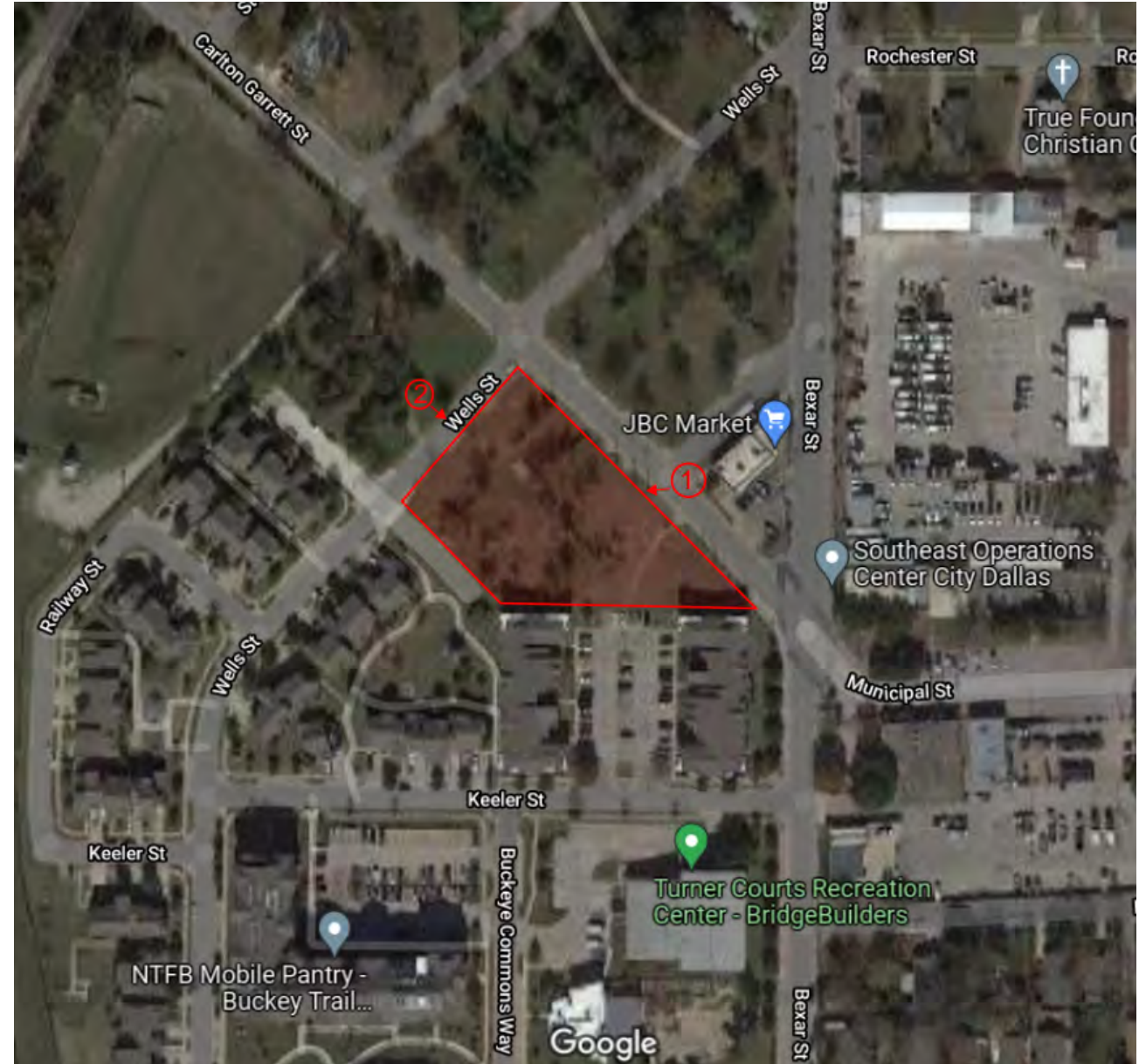
What started out as a garden in a small lot has grown to two fully functioning farms, a Farmer's Market, a Café and Coffee House. We continue to grow organic food and hope for a better tomorrow right in the Bonton community, but we are addressing more of the barriers residents are up against so they can access all seven human essentials. Working alongside residents to transform the community, we support our neighbors in redefining the norm in their community so they may have a fighting chance at life.



1 - FROM CARLTON GARRETT LOOKING WEST



2 - FROM WELLS STREET LOOKING SOUTH



JOIN US FOR A

TOWN HALL MEETING

SAT JAN 29 2022 • 2-3:30PM

COME LEARN WHAT'S HAPPENING IN BONTON. WE'LL DISCUSS THE BONTON FARMS INITIATIVES, INCLUDING A FUTURE HEALTH & WELLNESS CENTER, COMMUNITY FINANCIAL RESOURCE CENTER, APARTMENTS, AND MORE.

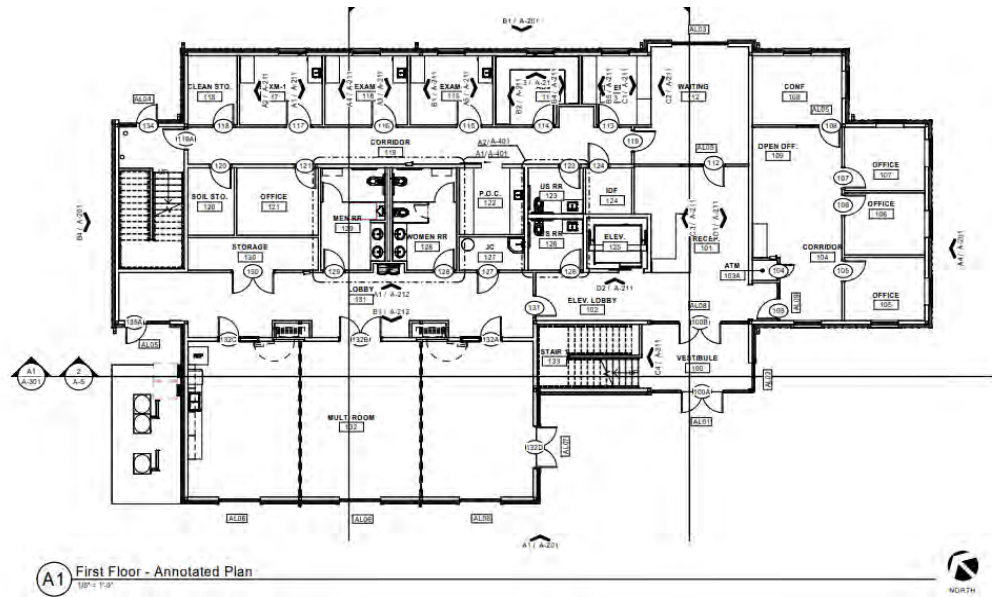
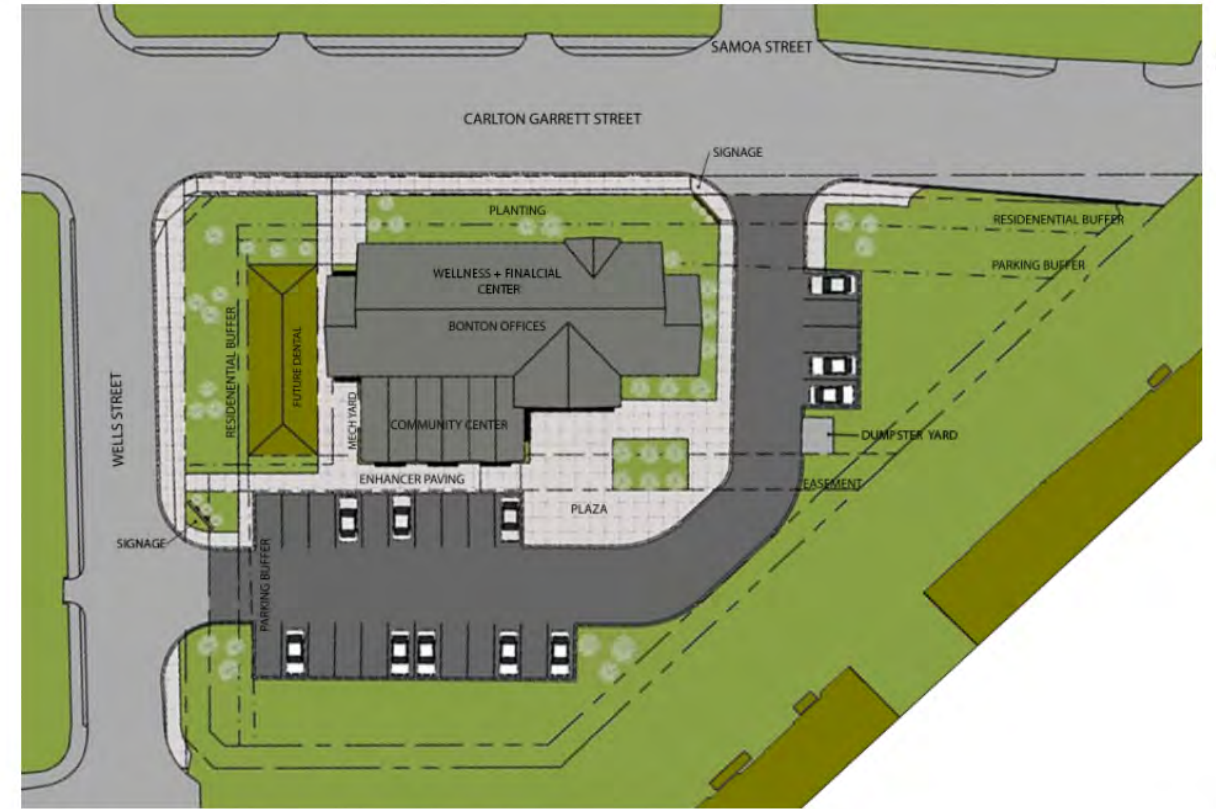
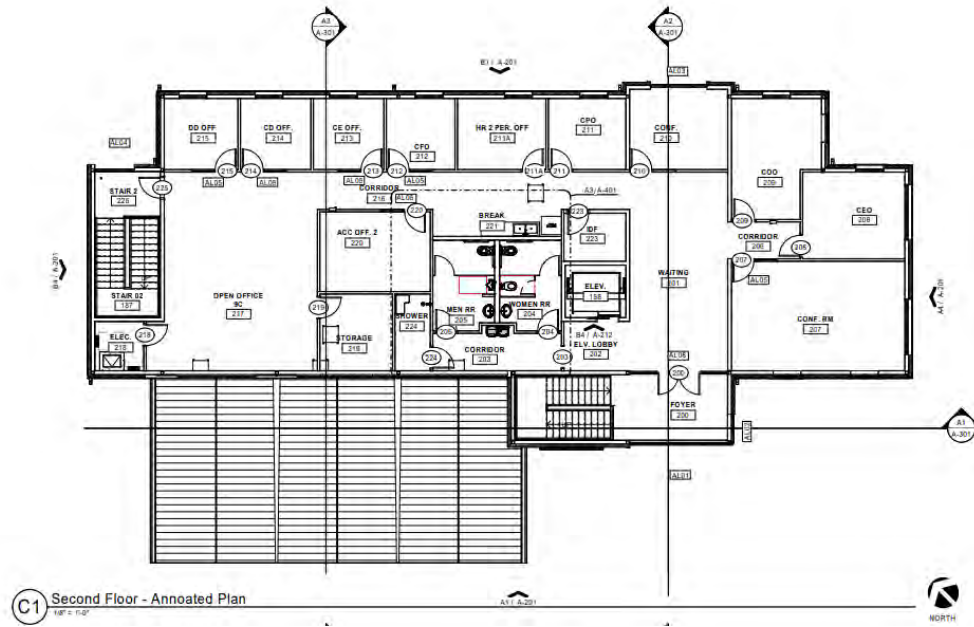
WE NEED YOUR FEEDBACK AND INPUT TO DESIGN THE FUTURE OF OUR COMMUNITY!

REFRESHMENTS AND RAFFLE PRIZES AVAILABLE FOR THOSE WHO ATTEND AND PARTICIPATE.

6601 BEXAR ST
DALLAS, TX 75215








Required to meet the City of Dallas Green Building and Energy codes.

Looked at the LEED program, but did not submit for certification.


Project team is filling out the Common App for Design Excellence.




City of Dallas Commercial Project

Chapter 61 Project Summary and Checklist

New Construction



Summary					
Date of Application					
Project Identification					
Project Address					
Owner Identification					
Architect Identification					
Contractor Identification	Permit No.				
Third Party Provider	Registration No.				
Building Code	IBC	IBC Residential Occupancy	Mixed Use	Multifamily: IBC Group R Occupancy: (circle one) R-1, R-2, R-3, R-4	
Occupancy/Use					
Number of:	Stories				
Parking	Attached Garage	Open Lot	None		
Building Sq. Footage	Lot Size:	Building Total Sq. Ft.	Area Under Roof:	Total Nonroof Area:	
IECC Climate Zone	3A				
Zoning:					
Chapter 61 is based on the IgCC 2015 with Dallas amendments. Note: Buildings shall be designed and constructed in accordance with the Energy provisions of Dallas Energy code. Compliance with IECC must be demonstrated separately by City of Dallas registered Third Party Energy Inspector					



LEED v4.1 BD+C

Project Checklist

Project Name: Bonton Farms Wellness Center

Date: 1-Mar-22

1 1 1 Integration Process		1	
7 2 7 Location and Transportation	16	4 2 7 Materials and Resources	13
LEED for Neighborhood Development Location	16	Storage and Collection of Recyclables	Required
Sensitive Land Protection	1	Building Life-cycle Impact Reduction	0
High Priority Site and Sustainable Development	2	Environmental Product Declarations	2
Surrounding Density and Oversee Urban	3	Sourcing of Raw Materials	2
Access to Quality Transit	3	Material Ingredients	0
Bicycle Facilities	1	Construction and Demolition Waste Management	0
Reduced Parking Footprint	1		
Electric Vehicles	1		
3 0 7 Sustainable Sites	10	6 7 3 Indoor Environmental Quality	16
Construction Activity Pollution Prevention	Required	Minimum Indoor Air Quality Performance	Required
Site Assessment	1	Environmental Tobacco Smoke Control	Required
Protect or Restore Habitat	2	Enhanced Indoor Air Quality Strategies	2
Open Space	1	Low-Emitting Materials	3
Stormwater Management	4	Construction Indoor Air Quality Management Plan	1
Heat Island Reduction	4	Indoor Air Quality Assessment	2
Light Pollution Reduction	1	Thermal Comfort	1
		Acoustic Performance	1
2 2 7 Water Efficiency	11	2 1 3 Innovation	6
Outdoor Water Use Reduction	Required	LEED Accredited Professional	1
Indoor Water Use Reduction	Required		
Building-Level Water Metering	Required		
Outdoor Water Use Reduction	2	2 0 2 Regional Priority	4
Indoor Water Use Reduction	6	Regional Priority: Reduce Parking Footprint	1
Optimize Process Water Use	2	Regional Priority: Outdoor Water Reduction	1
Water Metering	1	Regional Priority: Specific Credits	2
3 1 29 Energy and Atmosphere	33		
Fundamental Commissioning and Verification	Required		
Minimum Energy Performance	Required		
Building-Level Energy Metering	Required		
Fundamental Refrigerant Management	Required		
Behavioral Commissioning	4		
Optimize Energy Performance	18		
Advanced Energy Metering	1		
Grid Harmonization	2		
Renewable Energy	6		
Enhanced Refrigerant Management	1		

80 15 65 TOTALS

Possible Points: 110

Credits: 42+48 points, Silver: 50+53 points, Gold: 60+73 points, Platinum: 80+110





Session 1
Intro to Green Building and
Overview of Types of 3rd
Party Certifications

Questions and Discussion



The Three Pillars of Sustainability

Environmental Pillar

This pillar focuses on the responsible use and protection of natural resources, including air, water, land, and ecosystems. It aims to minimize environmental degradation, conserve biodiversity, and promote renewable energy and sustainable practices.

Economic Pillar

This pillar emphasizes the economic viability and profitability of sustainable practices. It involves creating economic opportunities, fostering innovation, and ensuring long-term financial stability through the adoption of sustainable business models and technologies.

Social Pillar

This pillar addresses the well-being and equity of individuals and communities. It focuses on issues such as social justice, equal access to resources, education, health, and the preservation of cultural heritage. This pillar aims to create a just and inclusive society.

Interconnectedness

These three pillars are interconnected and interdependent. Sustainable development requires a balanced and integrated approach that considers the environmental, economic, and social aspects of any decision or action.

Sustainable Development Goals (SDGs)

- **End poverty**
End poverty in all its forms everywhere.
- **Zero Hunger**
End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
- **Good Health and Well-Being**
Ensure healthy lives and promote well-being for all at all ages.
- **Quality Education**
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
- **Gender Equality**
Achieve gender equality and empower all women and girls.
- **Clean Water and Sanitation**
Ensure availability and sustainable management of water and sanitation for all.
- **Affordable and Clean Energy**
Ensure access to affordable, reliable, sustainable, and modern energy for all.
- **Decent Work and Economic Growth**
Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.
- **Industry, Innovation, and Infrastructure**
Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
- **Reduced Inequalities**
Reduce inequality within and among countries.
- **Sustainable Cities and Communities**
Make cities and human settlements inclusive, safe, resilient, and sustainable.
- **Responsible Consumption and Production**
Ensure sustainable consumption and production patterns.
- **Climate Action**
Take urgent action to combat climate change and its impacts.
- **Life Below Water**
Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
- **Life on Land**
Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss.
- **Peace, Justice, and Strong Institutions**
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.
- **Partnerships for the Goals**
Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Sustainability in Action



Renewable Energy

Harnessing the power of wind, solar, and hydroelectric energy



Sustainable Agriculture

Organic farming practices that prioritize soil health and natural ecosystems



Circular Economy

Closing the loop by reusing, recycling, and repurposing materials



Green Buildings

Designing energy-efficient and environmentally-friendly structures



Sustainable design and green building certifications offer a comprehensive framework to create healthier, more eco-friendly, and socially-conscious communities. By embracing these principles, organizations can enhance the quality of affordable housing projects, unlock funding opportunities, and foster greater community well-being. The journey towards a more sustainable future starts with taking the first steps to incorporate these practices and certifications into your development plans.



THE GREEN+ INITIATIVE

Community Development In The Context of Sustainability

Co-Founders: Karen Brooks-Crosby & Regina Nippert

THE GREEN+ INITIATIVE

Mission: Advance the built and social environment of marginalized communities at the intersection of climate risks, energy poverty, housing affordability and sustainability.

Vision: Every community has access to and shares in the benefits of wisdom, knowledge, cutting edge technology and supportive infrastructure to enhance and sustain the lives of its residents.



Regina Nippert
Masters in HCD, SMU

Co-Founder of
GREEN+

Human Systems & Strategies Design
Sustainable Development Advocate



Karen Brooks Crosby

Co-Founder of
GREEN+

MAE B. Real Estate Development
Managing Partner



Beth Brant, AIA,
LEED AP BD+C, LFA

Board Member of
GREEN+

DSGN - Architect / Director of
Sustainability/ Principal

THE GREEN+ INITIATIVE

What is Sustainability?

Sustainability is a holistic approach that aims to meet our present needs while safeguarding the ability of future generations to thrive. By striking a balance between economic, environmental, and social considerations, we can create a more resilient and equitable world for all.



Meeting Present Needs

Fulfilling the current requirements of individuals, communities, and societies without depleting resources or causing environmental harm.



Preserving for Future Generations

Ensuring that future generations have the ability to meet their own needs and maintain a healthy, livable planet.



Balancing Priorities

Striking a balance between economic, environmental, and social factors to create a sustainable and equitable future.

Sustainability Interconnection & Complexity

