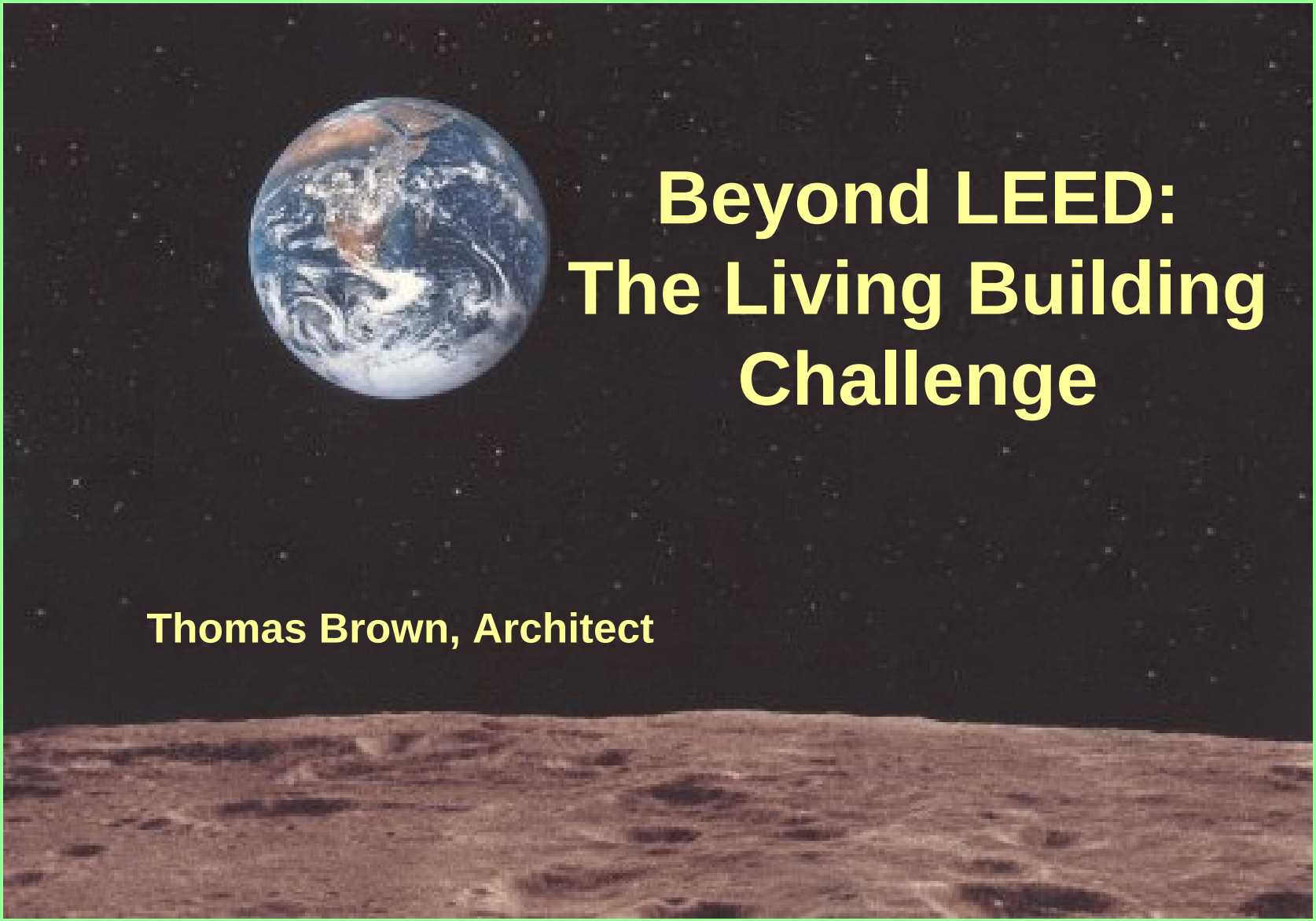

Beyond LEED:
The Living Building Challenge
Thomas Brown, Architect

Getting Started:

The design process should involve an analysis of how to prioritize choices leading to higher levels of sustainability, breaking down

“design” choices
vs.
“materials and systems” choices
vs.
"methods" choices.

Green Building Rating Systems

- LEED
- Green Globes
- Energy Star
- Green Built
- Net Zero Energy
- Passiv House
- Living Building Challenge

LEED

Leadership in Energy and Environmental Design

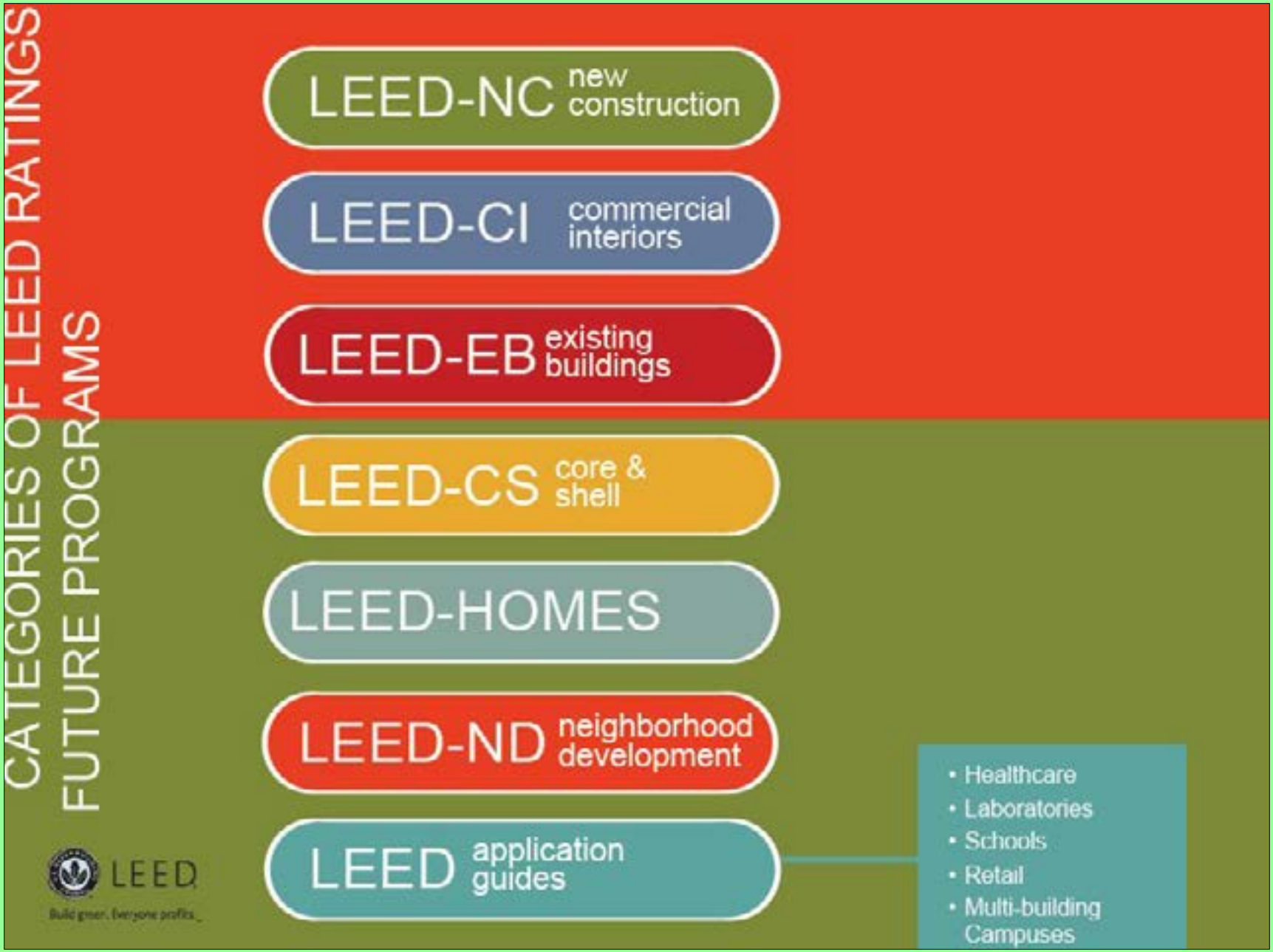
Reconfiguring the LEED criteria into Functional categories:

LEED Criteria Categories

- Sustainable Sites
- Water Efficiency
- Energy & Atmosphere
- Materials & Resources
- Indoor Environmental Quality
- Innovation & Design

Functional Categories

- Site issues
- Building Design issues
- Building Systems issues
- Building Materials issues
- Construction Method issues
- Wildcard Issues


CATEGORIES OF LEED RATINGS
FUTURE PROGRAMS
LEED-NC new construction
LEED-CI commercial interiors
LEED-EB existing buildings
LEED-CS core & shell
LEED-HOMES
LEED-ND neighborhood development
LEED application guides
• Healthcare
• Laboratories
• Schools
• Retail
• Multi-building Campuses
LEED

LEED for New Construction
LEED – NC -2009

- Four levels of certification
  - LEED Certified 40-49 points
  - Silver Level 50-59 points
  - Gold Level 60-79 points
  - Platinum Level 80-110 points (110 possible)

Green Globes Rating System

GREEN BUILDING INITIATIVE

BRINGING GREEN TO THE MAINSTREAM

HOME | ABOUT GREEN GLOBES | TRAINING | TECHNICAL COMMITTEE | USE GREEN GLOBES | CONTACT

Green Globes™ Ratings

Once an assessment is verified by a third party, properties achieving a score of 35% or more receive a Green Globes rating based on the percentage of total points (up to 1000) achieved.

85-100%		Reserved for select building designs which serve as national or world leaders in energy and environmental performance. The project introduces design practices that can be adopted and implemented by others.
70-84%		Demonstrates leadership in energy and environmental design practices and a commitment to continuous improvement and industry leadership.
55-69%		Demonstrates excellent progress in achieving eco-efficiency results through current best practices in energy and environmental design.
35-54%		Demonstrates movement beyond awareness and commitment to sound energy and environmental design practices by demonstrating good progress in reducing environmental impacts.

U.S. EPA Energy Star Homes Program

www.energystar.gov

Wisconsin Energy Star Homes Program

www.wifocusonenergy.com/Residential/New-Home

National Association Of Home Builders

www.nahbgreen.org

Wisconsin Green Built Homes Program

www.wi-ei.org/greenbuilt

U.S. Green Building Council
LEED for Homes

www.greenhomeguide.org

http://living-future.org/lbc

LIVING BUILDING CHALLENGE℠ 2.1

A Visionary Path to a Restorative Future

www.livingbuildingchallenge.org

INTERNATIONAL LIVING FUTURE INSTITUTE™

The Living Building Challenge

The LBC Flower

THE METAPHOR OF THE FLOWER

ROOTED IN PLACE AND YET:

Harvests all energy + water

Is adapted to climate and site

Operates pollution free

Is comprised of integrated systems

Is beautiful

WHY A CHALLENGE?

Infusing inspiration and poetry

Embracing the psychology of the 'end game'

Rewarding early adopters

Creating models for the future

Stirring the pot

Pulling the market forward

The Living Building Challenge

Types of Projects
(“Typology”)

FOUR TYPOLOGIES

The Living Building Challenge

Settings for Projects
(“Transects”)

SIX "LIVING TRANSECT" CATEGORIES

The Living Building Challenge

Shared Resources & Infrastructure
(“Scale Jumping”)

SCALE JUMPING

The Living Building Challenge

7 “Petals”

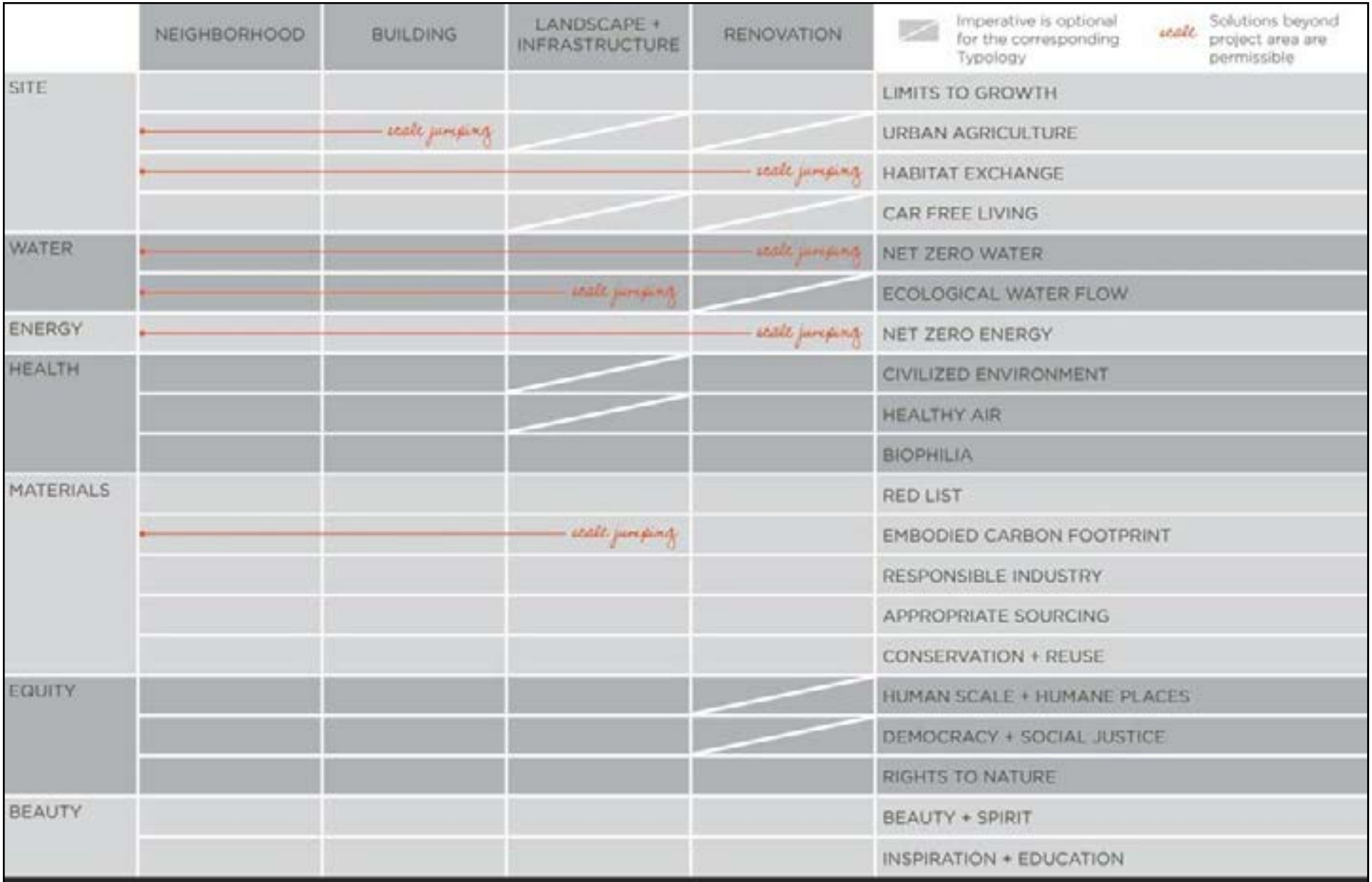
20 “Imperatives”

(Prerequisites)

The Living Building Challenge

The 7 Petals of the LBC Flower:

- **Site (4 imperatives)**
- **Water (2 imperatives)**
- **Energy (1 imperative)**
- **Health (3 imperatives)**
- **Materials (5 imperatives)**
- **Equity (4 imperatives)**
- **Beauty (4 imperatives)**



SUMMARY MATRIX

www.livingbuildingchallenge.org

TWO RULES

1. All Imperatives assigned to a Typology are mandatory to earn 'Living' status.

2. Living Building Challenge certification is based on actual, rather than modeled or anticipated, performance.

The Living Building Challenge

Petal 1 – Site

SITE

Restoring a healthy coexistence with nature

Petal 1 - Site

The Living Building Challenge

Imperative 1 – Limits to Growth

01

LIMITS TO GROWTH

The project may only be constructed on previously developed sites, greyfields and/or brownfields that are not classified as any of the following:

- sensitive ecological habitats (wetlands, primary dunes, old-growth forest, native prairie)
- prime farmland
- within the 100-year flood plain

The Project team must document conditions prior to the start of work.

On-site landscape may only include native and/or naturalized species, planted in such a way that emulates density and biodiversity of indigenous ecosystems and supports succession.

plant succession The gradual evolution vegetation over time. Also involved in plant community restoration. In *autogenic succession* the plants themselves are the genesis of change; succession is directed from within the ecosystem.

Petal 1 - Site

The Living Building Challenge

Imperative 2 – Urban Agriculture

02

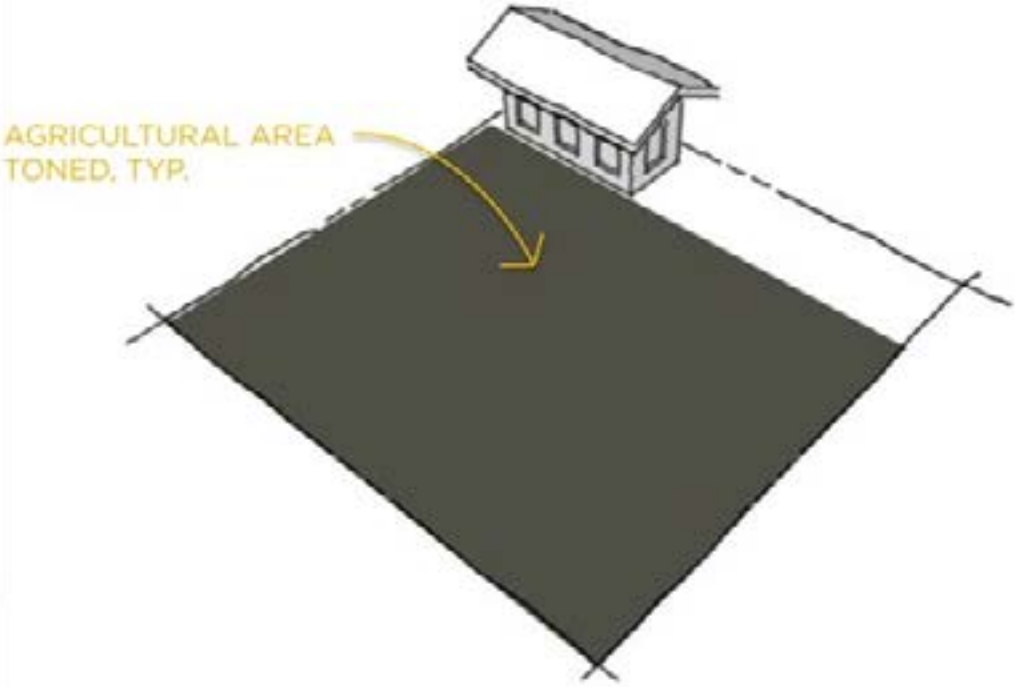
URBAN AGRICULTURE

The project must integrate opportunities for agriculture appropriate to its scale and density using the Floor Area Ratio (F.A.R.) as a basis for calculation.

FAR < .05

80%

of the project area must be used for food production.

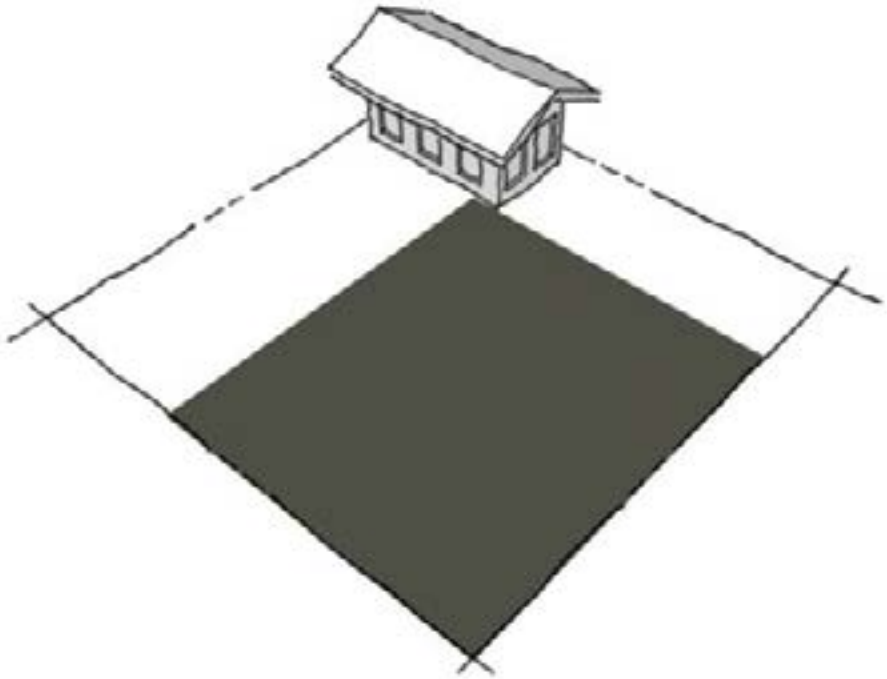


02 URBAN AGRICULTURE

FAR .05 - .09

50%

of the project area
must be used for
food production.

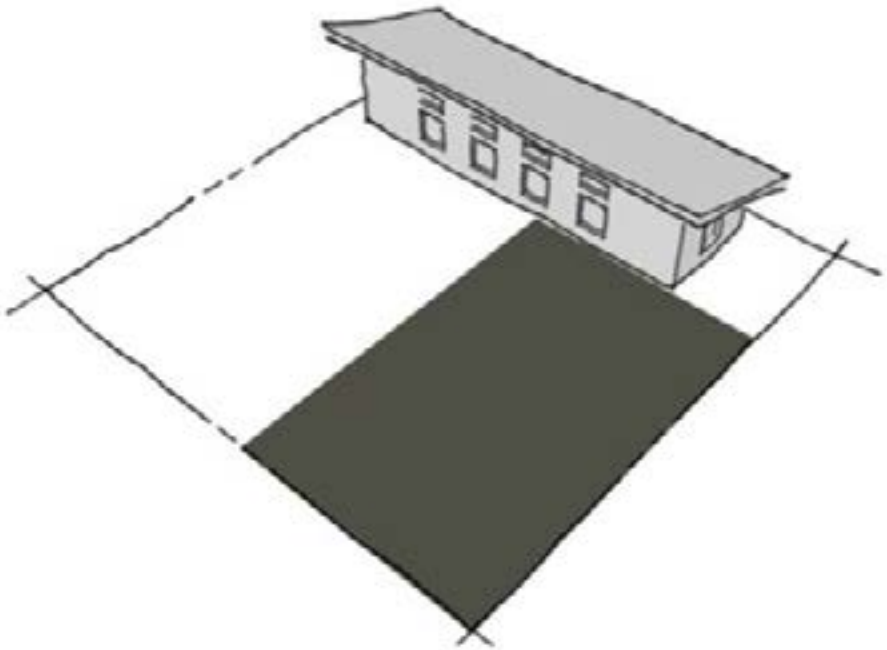


02 URBAN AGRICULTURE

FAR .10 - .24

35%

of the project area must be used for food production.

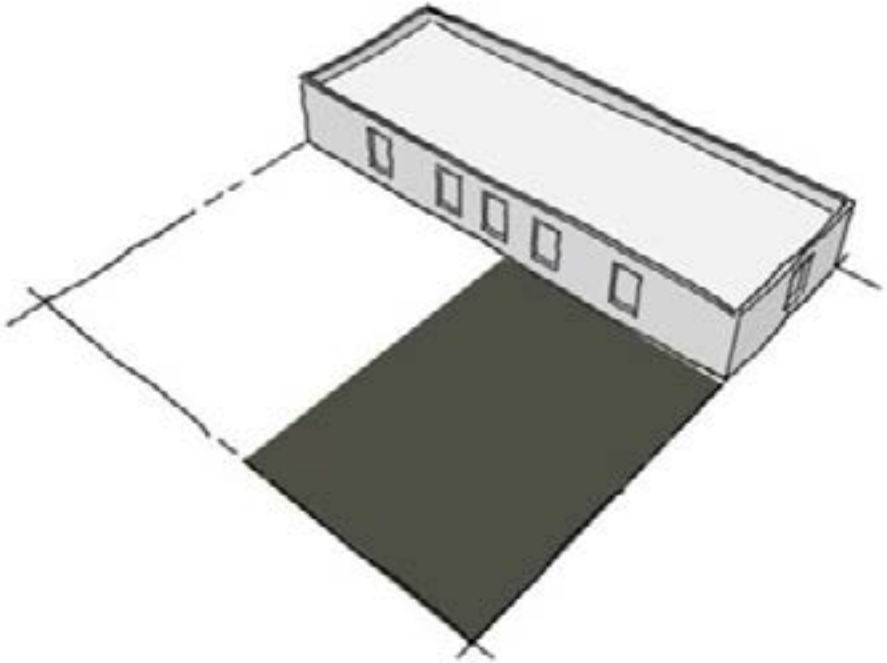


02 URBAN AGRICULTURE

FAR .25 - .49

30%

of the project area
must be used for
food production.

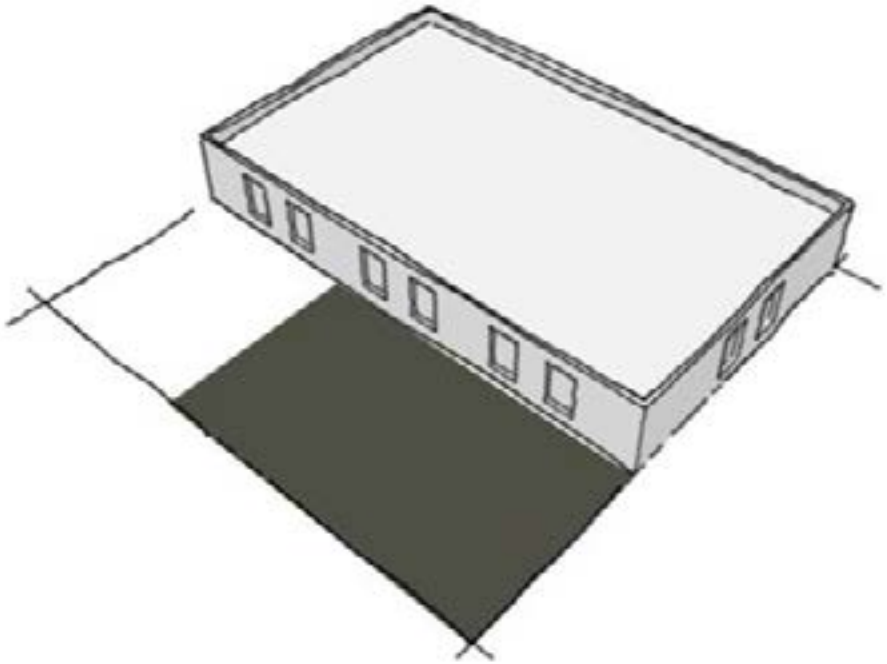


02 URBAN AGRICULTURE

FAR .50 ≥ .74

25%

of the project area must be used for food production.

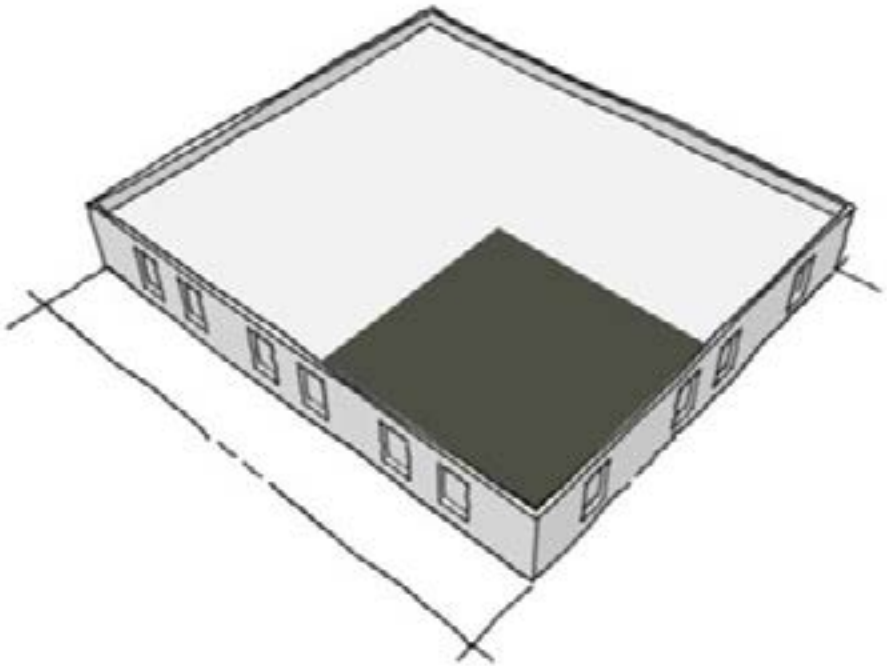


02 URBAN AGRICULTURE

FAR .75 ≥ .99

20%

of the project area must be used for food production.

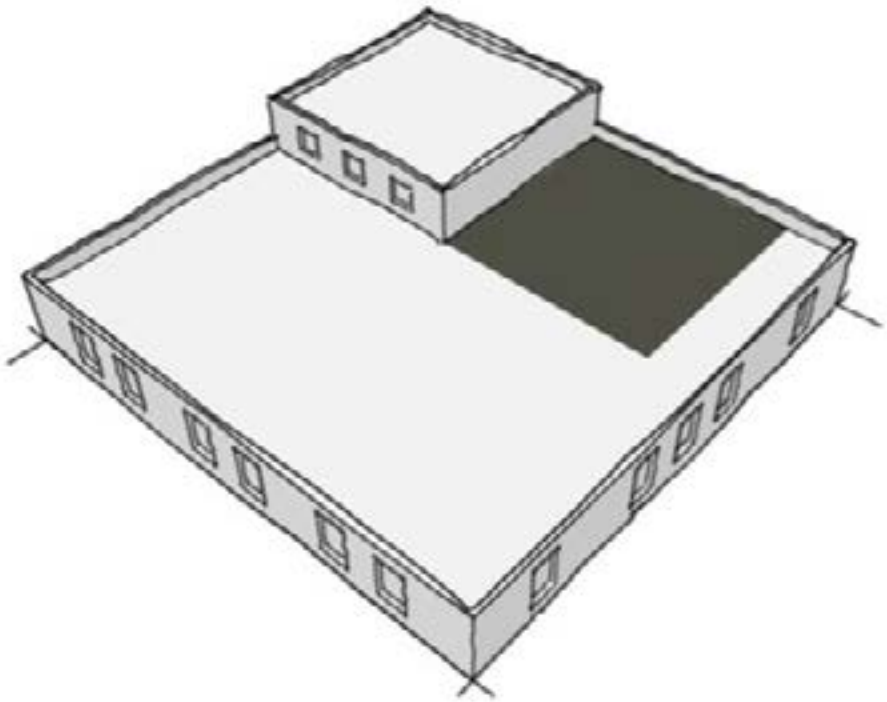


02 URBAN AGRICULTURE

FAR 1.0 ≥ 1.49

15%

of the project area must be used for food production.

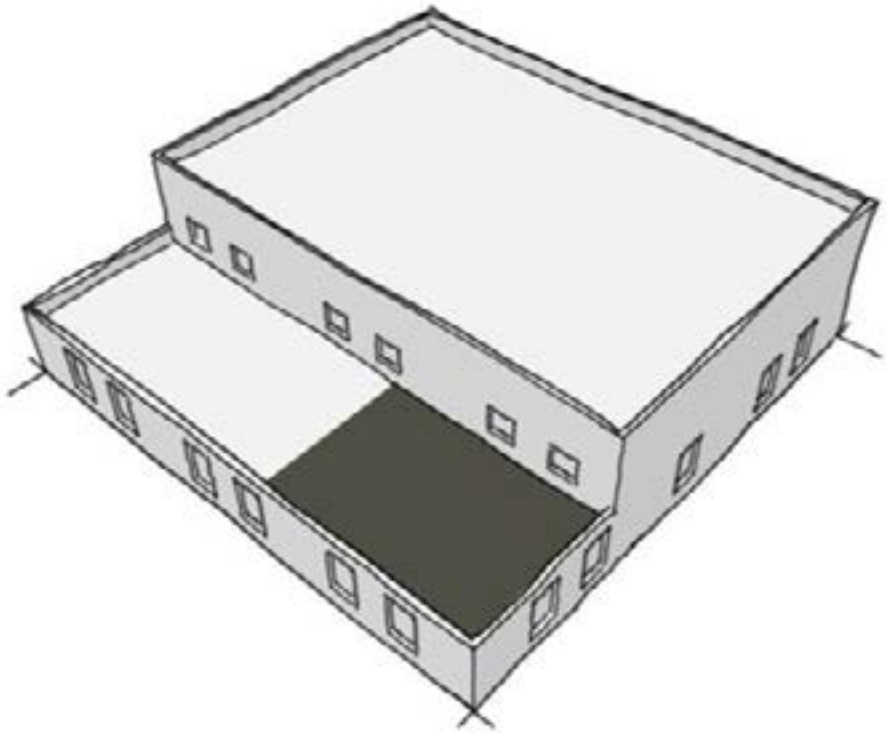


02 URBAN AGRICULTURE

FAR 1.5 ≥ 1.99

10%

of the project area
must be used for
food production.

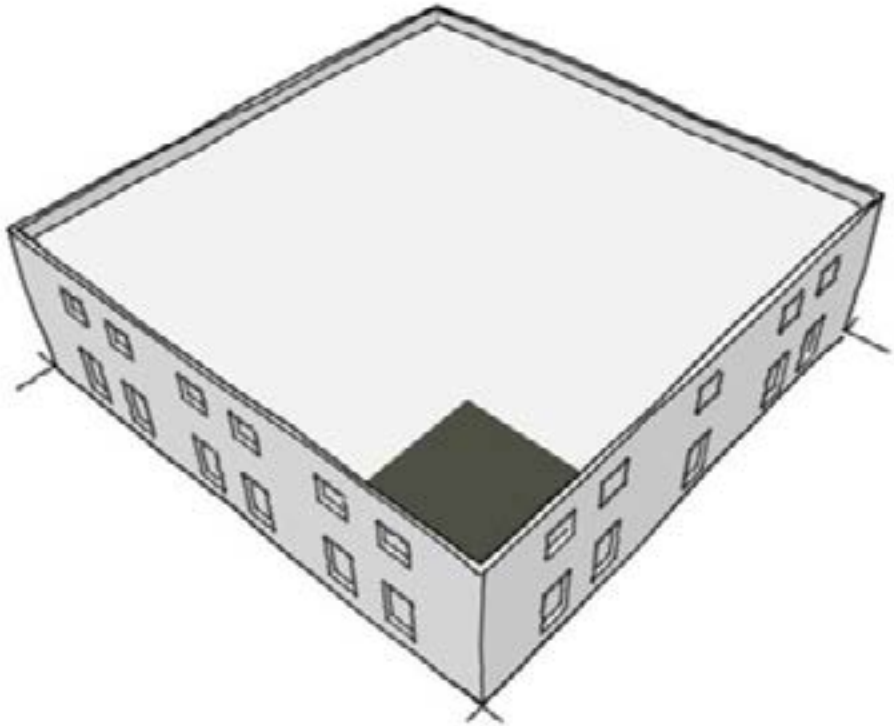


02 URBAN AGRICULTURE

FAR 2.0 ≥ 2.99

5%

of the project area must be used for food production.

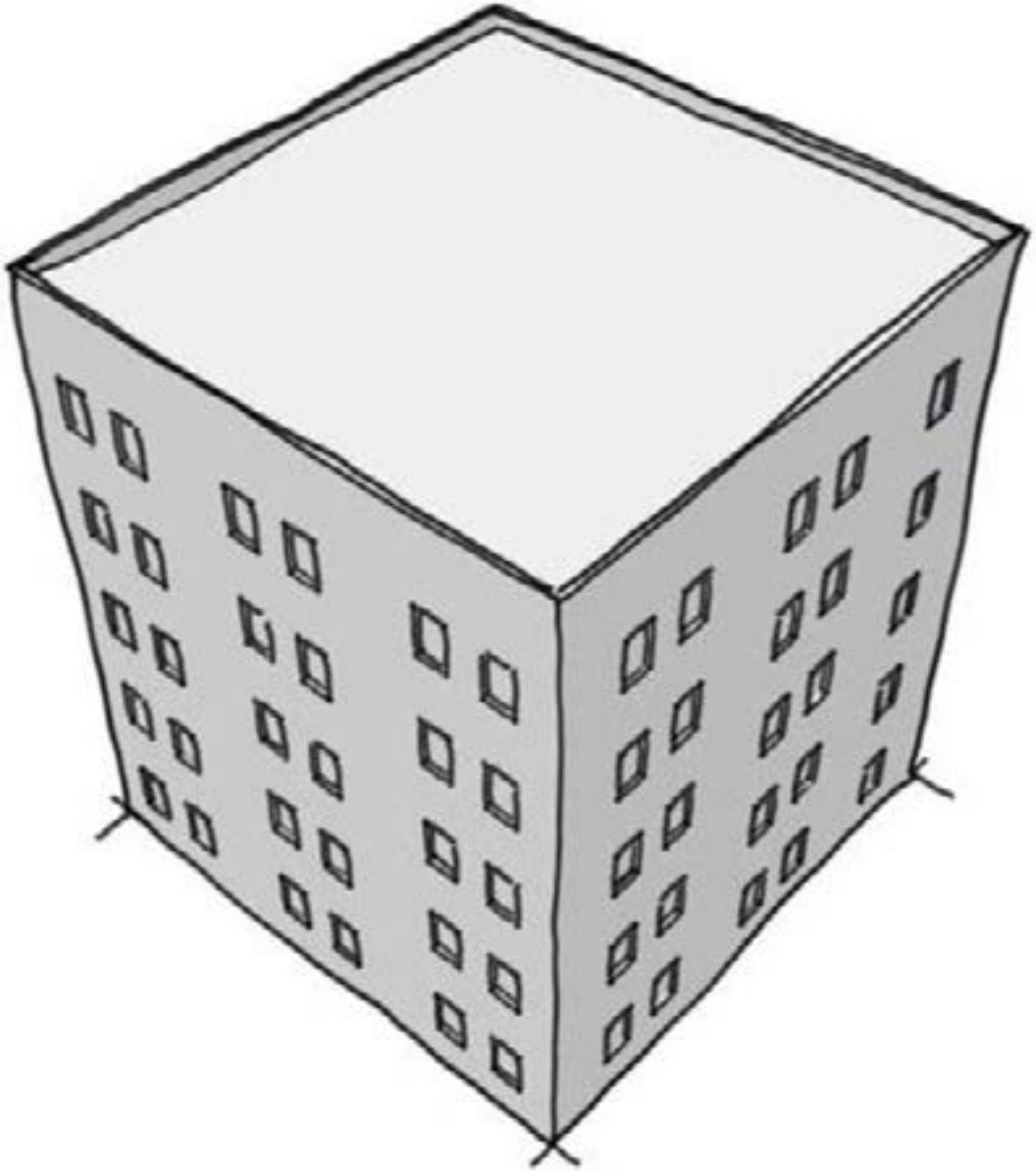


02 URBAN AGRICULTURE

FAR ≥ 3.0

0%

of the project area must be used for food production.



02 URBAN AGRICULTURE

Petal 1 - Site

The Living Building Challenge

Imperative 3 – Habitat Exchange

03

HABITAT EXCHANGE

For each hectare of development, an equal amount of land away from the project site must be set aside in perpetuity as part of a habitat exchange.

The permanent easement or transfer of ownership must be to an official Land Trust organization to ensure proper safeguarding and long-term care.

land trust a nonprofit organization that, as all or part of its mission, actively works to conserve land by undertaking or assisting in land or conservation easement acquisition, or by its stewardship of such land or easements.

www.livingbuildingchallenge.org

Petal 1 - Site

The Living Building Challenge

Imperative 4 – Car-free Living

04

CAR FREE LIVING

The project should contribute to the creation of pedestrian-oriented communities.

Evaluate the potential for the project to enhance the ability of a community to support a car free lifestyle based on the ratio of the following occupancy types:

a. Residential

b. Commercial (Business or Mercantile), Assembly, Educational, Institutional

c. Light Industrial (Factory, Storage)

Building or Neighborhood project: the proposed development may not lower the density of the existing site or the catchment area of the Transect.

Neighborhood projects: the proposed development also may not cause the predominant occupancy type within the catchment area to exceed the maximum percentage:

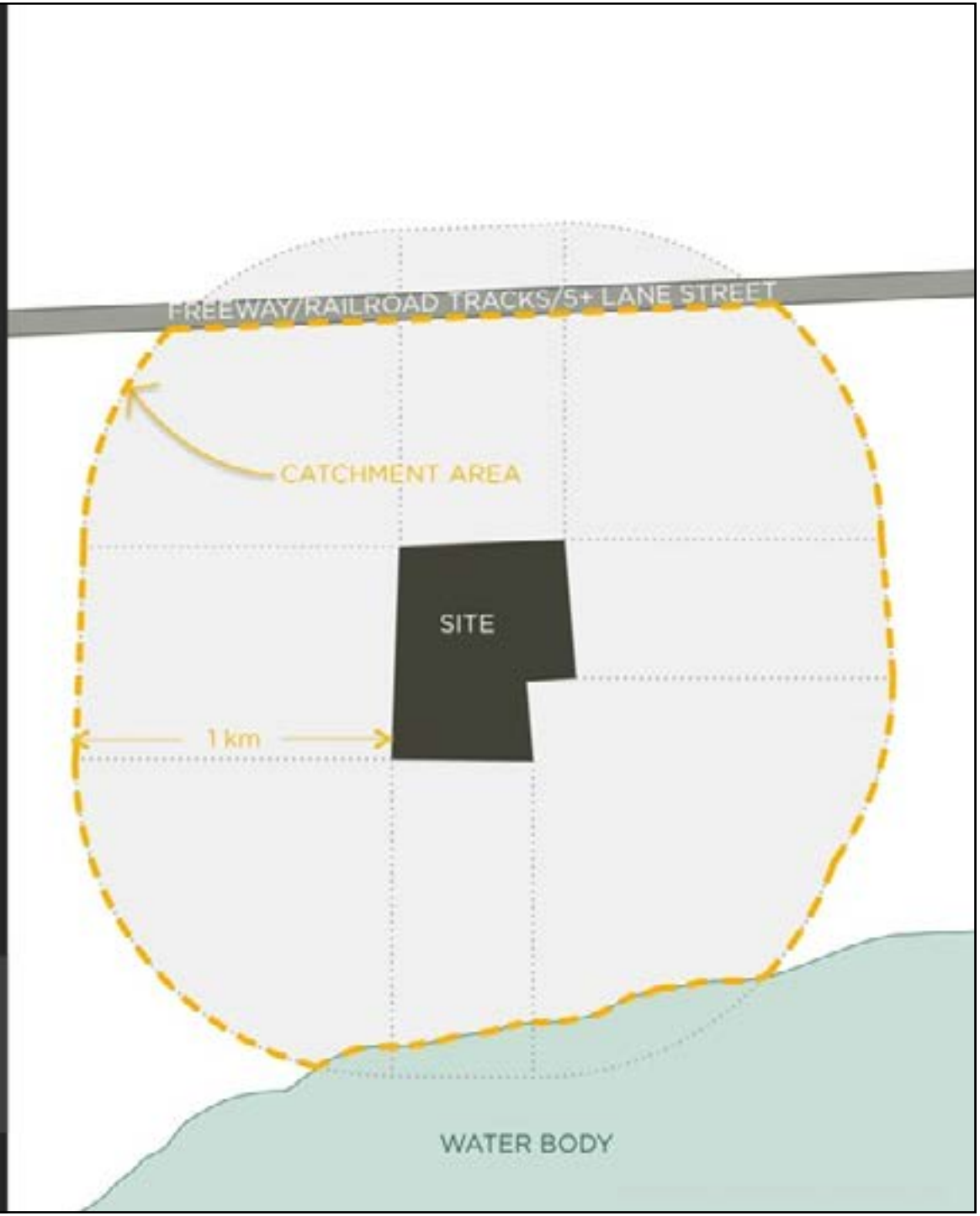
Transect	Maximum percentage of any single occupancy type within catchment area
L1	--
L2	--
L3	70%
L4	60%
L5	50%
L6	40%

Catchment Area

1 Survey the territory outside the project boundary that is an outline of its perimeter offset one kilometer.

2 Remove areas obstructed by:
- bodies of water
- a series of 2+ train tracks
- freeways
- streets that are 5+ lanes across

Catchment Area for a Neighborhood project also includes the proposed project itself.



The Living Building Challenge

Petal 2 – Water

WATER

Creating water independent sites, buildings + communities

www.livingbuildingchallenge.org

Petal 2 - Water

The Living Building Challenge

Imperative 5 – Net Zero Water

05

NET ZERO WATER

100% of the project's water needs must be supplied by captured precipitation or other natural closed loop water systems that account for downstream ecosystem impacts, or by re-cycling used project water. Water must be appropriately purified without the use of chemicals.

Petal 2 - Water

The Living Building Challenge

Imperative 6 – Ecological Water Flow

06

ECOLOGICAL WATER FLOW

100% of storm water and used, project water discharge must be managed onsite to feed the project's internal water demands or released onto adjacent sites for management through acceptable natural time-scale surface flow, groundwater recharge, agricultural use or adjacent property needs.

The Living Building Challenge

Petal 3 – Energy

ENERGY

Relying only on current solar income

Petal 3 - Energy

The Living Building Challenge

Imperative 7 – Net Zero Energy

07

NET ZERO ENERGY

100% of the project's energy needs must be supplied by on-site renewable energy on a net annual basis.

The Living Building Challenge

Petal 4 – Health

HEALTH

Maximizing physical and psychological health + well being

www.livingbuildingchallenge.org

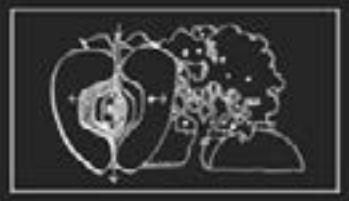
Petal 4 - Health

The Living Building Challenge

Imperative 8 – Civilized Environment

08

CIVILIZED ENVIRONMENT



Every occupiable interior space of the project must have operable windows that provide access to fresh air and daylight.

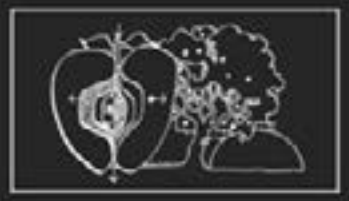
Petal 4 - Health

The Living Building Challenge

Imperative 9 – Healthy Air

09

HEALTHY AIR



To promote good indoor air quality, a Renovation, Building, and building(s) completed as part of a Neighborhood project must comply with best practices.

Conduct air quality testing at pre-occupancy and after 9 months of occupancy to measure levels of Respirable Suspended Particulates (RSP) and Total Volatile Organic Compounds (TVOC).

- Entryways must have an external dirt track-in system and an internal dirt track-in system contained within a separate entry space.
- All kitchens, bathrooms, copy rooms, janitorial closets and chemical storage spaces must be separately ventilated and exhaust directly to outside air.
- Ventilation rates must be designed to comply with ASHRAE 62 and equipment must be installed to monitor levels of carbon dioxide (CO_2), temperature and humidity.
- Smoking must be prohibited within the project boundary.

Guideline for maximums in testing:

CO_2	1000 ppm or 500+ outdoor level (L3-L6)
CO	9 ppm or 2+ outdoor level (L3-L6)
RSP	30 ug/m^3 by mass measurement or 900,000 f^3 by laser particle counter
TVOC	500 ug/m^3 micrograms per cubic meter

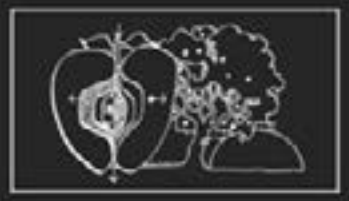
Petal 4 - Health

The Living Building Challenge

Imperative 10 – Biophilia

10

BIOPHILIA



The project must be designed to include elements that nurture the innate human attraction to natural systems and processes.

Environmental features • Natural shapes and forms • Natural patterns and processes
Light and space • Place-based relationships • Evolved human-nature relationships

Environmental features
Color
Water
Air
Sunlight
Plants
Animals
Natural materials
Views and vistas
Façade greening
Geology and landscape
Habitats and ecosystems
Fire

Natural shapes and forms
Botanical motifs
Tree and columnar supports
Animal (mainly vertebrate) motifs
Shells and spirals
Egg, oval, and tubular forms
Arches, vaults, domes
Shapes resisting straight lines and right angles
Simulation of natural features
Biomorphy
Geomorphology
Biomimicry

Natural patterns and processes
Sensory variability
Information richness
Age, change, and the patina of time
Growth and efflorescence
Central focal point
Patterned wholes
Bounded spaces
Transitional spaces
Linked series and chains
Integration of parts to wholes
Complementary contrasts
Dynamic balance and tension
Fractals
Hierarchically organized ratios and scales

Light and space
Natural light
Filtered and diffused light
Light and shadow
Reflected light
Light pools
Warm light
Light as shape and form
Spaciousness
Spatial variability
Space as shape and form
Spatial harmony
Inside-outside spaces

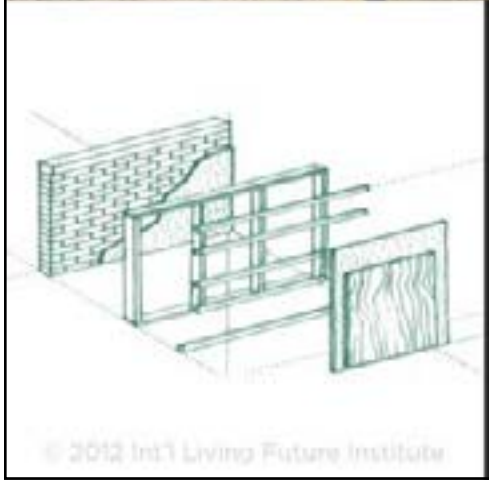
Place-based relationships
Geographic connection to place
Historic connection to place
Ecological connection to place
Cultural connection to place
Indigenous materials
Landscape orientation
Landscape features that define building form
Landscape ecology
Integration of culture and ecology
Spirit of place
Avoiding placelessness

Evolved human-nature relationships
Prospect and refuge
Order and complexity
Curiosity and enticement
Change and metamorphosis
Security and protection
Mastery and control
Affection and attachment
Attraction and beauty
Exploration and discovery
Information and cognition
Fear and awe
Reverence and spirituality

The Six Biophilic Design Elements

The Living Building Challenge

Petal 5 – Materials



MATERIALS

Endorsing products + processes that are safe for all species through time

www.livingbuildingchallenge.org

Petal 5 - Materials

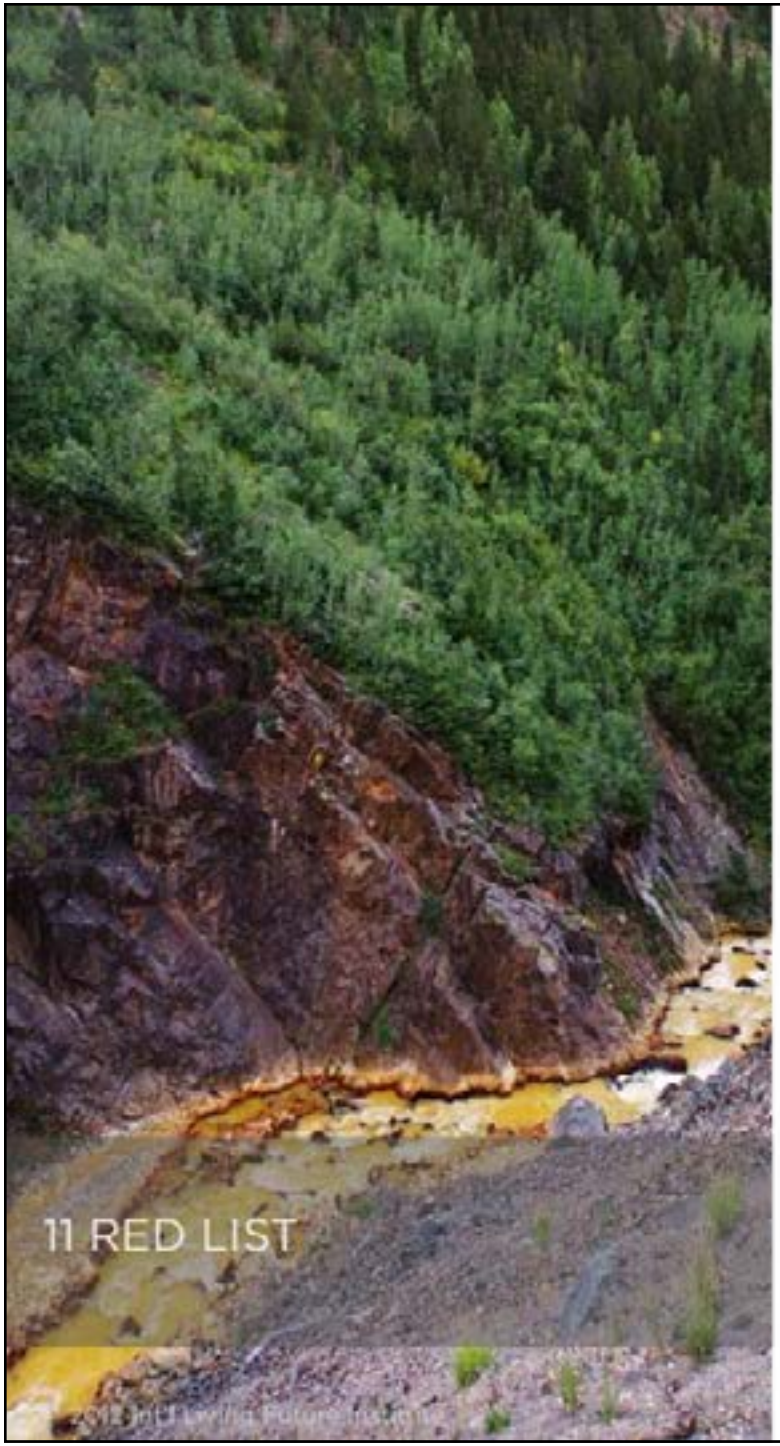
The Living Building Challenge

Imperative 11 – Red List

11

RED LIST

The project cannot contain the identified worst-in-class materials or chemicals, which include carcinogens, persistent organic pollutants, bioaccumulative toxins, and endocrine disruptors.



Asbestos

Cadmium

Chlorinated Polyethylene and Chlorosulfonated Polyethlene

Chlorofluorocarbons (CFCs)

Chloroprene (Neoprene)

Formaldehyde (added)

Halogenated Flame Retardants

Hydrochlorofluorocarbons (HCFCs)

Lead (added)

Mercury

Petrochemical Fertilizers and Pesticides

Phthalates

Polyvinyl Chloride (PVC)

Wood treatments containing Creosote, Arsenic or Pentachlorophenol

Petal 5 - Materials

The Living Building Challenge

Imperative 12 – Embodied Carbon Footprint

12

EMBODIED CARBON FOOTPRINT

The project must account for the total footprint of embodied carbon (tCO2e) from its construction through a one-time carbon offset tied to the project boundary.

12 EMBODIED CARBON FOOTPRINT

Offsets may only be from renewable energy projects that ensure real, verifiable, permanent carbon reductions.

Also consider:

- Meet/exceed criteria of: Gold Standard, VCS, Climate Action Reserve, Green-e Climate Protocol
- Green-e certified (3rd party verification)
- Additionality
- Forecasted performance
- Unique Recipients
- Transparency / Education to buyers
- Social co-benefits
- Minimal environmental impacts

Petal 5 - Materials

The Living Building Challenge

Imperative 13 – Responsible Industry

13

RESPONSIBLE INDUSTRY

The project must advocate for the creation and adoption of third-party certified standards for sustainable resource extraction and fair labor practices. Applicable raw materials include stone and rock, metal, minerals and timber.

For timber, all wood must be certified to Forest Stewardship Council (FSC) 100% labeling standards, from salvaged sources, or from the intentional harvest of timber onsite for the purpose of clearing the area for construction or restoring/maintaining the continued ecological function of the onsite bionetwork.

WHY FSC?

- Triple bottom line: social, economic, environmental interests
- Supports health and long-term integrity of forests (biodiversity, habitat) and communities
- Provides strict management and monitoring procedures
- Chain of Custody + independent verification

Petal 5 - Materials

The Living Building Challenge

Imperative 14 – Appropriate Sourcing

14

APPROPRIATE SOURCING

The project must incorporate place-based solutions and contribute to the expansion of a regional economy rooted in sustainable practices, products and services.

14 APPROPRIATE SOURCING

Source locations for materials and services must adhere to the following restrictions:

ZONE	MAX DISTANCE	MATERIALS/SERVICES	MASTERFORMAT CLASSIFICATION
7	20,004 km	Ideas	-
6	15,000 km	Renewable Technologies	Divisions: 42, 48
5	5,000 km	Assemblies that actively contribute to project performance + adaptable reuse once installed	Divisions: 08 (exterior), 11, 14, 22, 23, 26, 33, 44 Sections: 07 50 00, 10 21 23, 10 22 00, 10 70 00, 44 40 00
4	2,500 km	Consultant Travel	-
3	2,000 km	Light or low-density materials	Sections: 07 31 00, 07 33 00, 07 40 00, 09 50 00, 09 60 00
2	1,000 km	Medium weight or density materials	Divisions: 06, 08 (interior) Sections: 07 32 00, 09 20 00, 09 30 00, 12 30 00
1	500 km	Heavy or high-density materials	Divisions: 03, 04, 05, 31, 32

Petal 5 - Materials

The Living Building Challenge

Imperative 15 – Conservation + Reuse

15

CONSERVATION + REUSE

The project team must strive to reduce or eliminate the production of waste during design, construction, operation, and end of life in order to conserve natural resources.

The project team must create a Material Conservation Management Plan that explains how the project optimizes materials in each of the following phases:

- Design Phase
- Construction Phase
- Operation Phase
- End of Life Phase

During construction, teams must divert wasted materials from landfills:

Material	Minimum Diverted/Weight
Metals	95 %
Paper and Cardboard	95 %
Soil, and biomass	100 %
Rigid Foam, carpet & insulation	90 %
All others - combined weighted average	80 %

Hazardous materials in demolition waste are exempt from percentage calculations.

The Living Building Challenge

Petal 6 – Equity

EQUITY

Supporting a just, equitable world

www.livingbuildingchallenge.org

Petal 6 - Equity

The Living Building Challenge

Imperative 16 – Human Scale + Humane Places

16

HUMAN SCALE + HUMANE PLACES

The project must be designed to create human-scaled rather than automobile-scaled places, so that the experience brings out the best in humanity and promotes culture and interaction.

16 HUMAN SCALE + HUMANE PLACES

In context of the character of each Transect, there are specific design requirements that contribute to livable places.

Petal 6 - Equity

The Living Building Challenge

Imperative 17 – Democracy + Social Justice

17

DEMOCRACY + SOCIAL JUSTICE

All primary transportation, roads and non-building infrastructure that are considered externally focused must be equally accessible to all members of the public regardless of background, age and socioeconomic class – including the homeless – with reasonable steps taken to ensure that all people can benefit from the project's creation.

Access for those with physical disabilities must be safeguarded through designs meeting the Americans with Disabilities Act (ADA).

17 DEMOCRACY + SOCIAL JUSTICE

Petal 6 - Equity

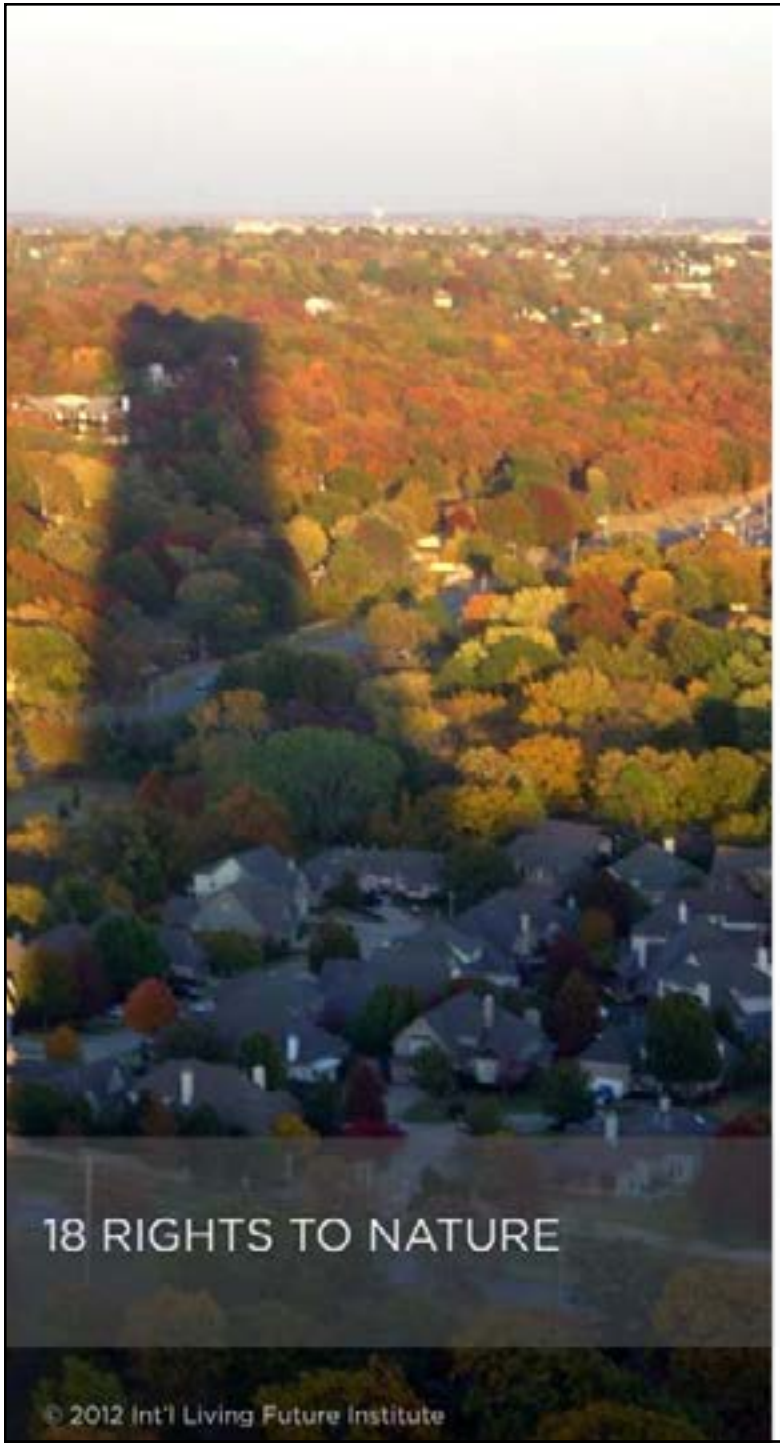
The Living Building Challenge

Imperative 18 – Rights to Nature

18

RIGHTS TO NATURE

The project may not block access to, nor diminish the quality of, fresh air, sunlight and natural waterways for any member of society or adjacent developments.



Fresh Air

The project must be designed to protect adjacent properties from any noxious emissions that would compromise its ability to use natural ventilation.

Sunlight

The project may not block sunlight to adjacent building façades and rooftops such that they are shaded in such a way to preclude access to daylight or use of renewable energy technologies.

Natural Waterways

The project may not restrict access to the edge of any natural waterway, assume ownership of water contained in these bodies or compromise the quality or quantity that flows downstream.

The Living Building Challenge

Petal 7 – Beauty

BEAUTY

Celebrating design that creates transformative change

www.livingbuildingchallenge.org

Petal 7 - Beauty

The Living Building Challenge

Imperative 19 – Beauty + Spirit

19

BEAUTY + SPIRIT

The project must contain design features intended solely for human delight and the celebration of culture, spirit and place appropriate to its function.

Petal 7 - Beauty

The Living Building Challenge

Imperative 20 – Inspiration + Education

20

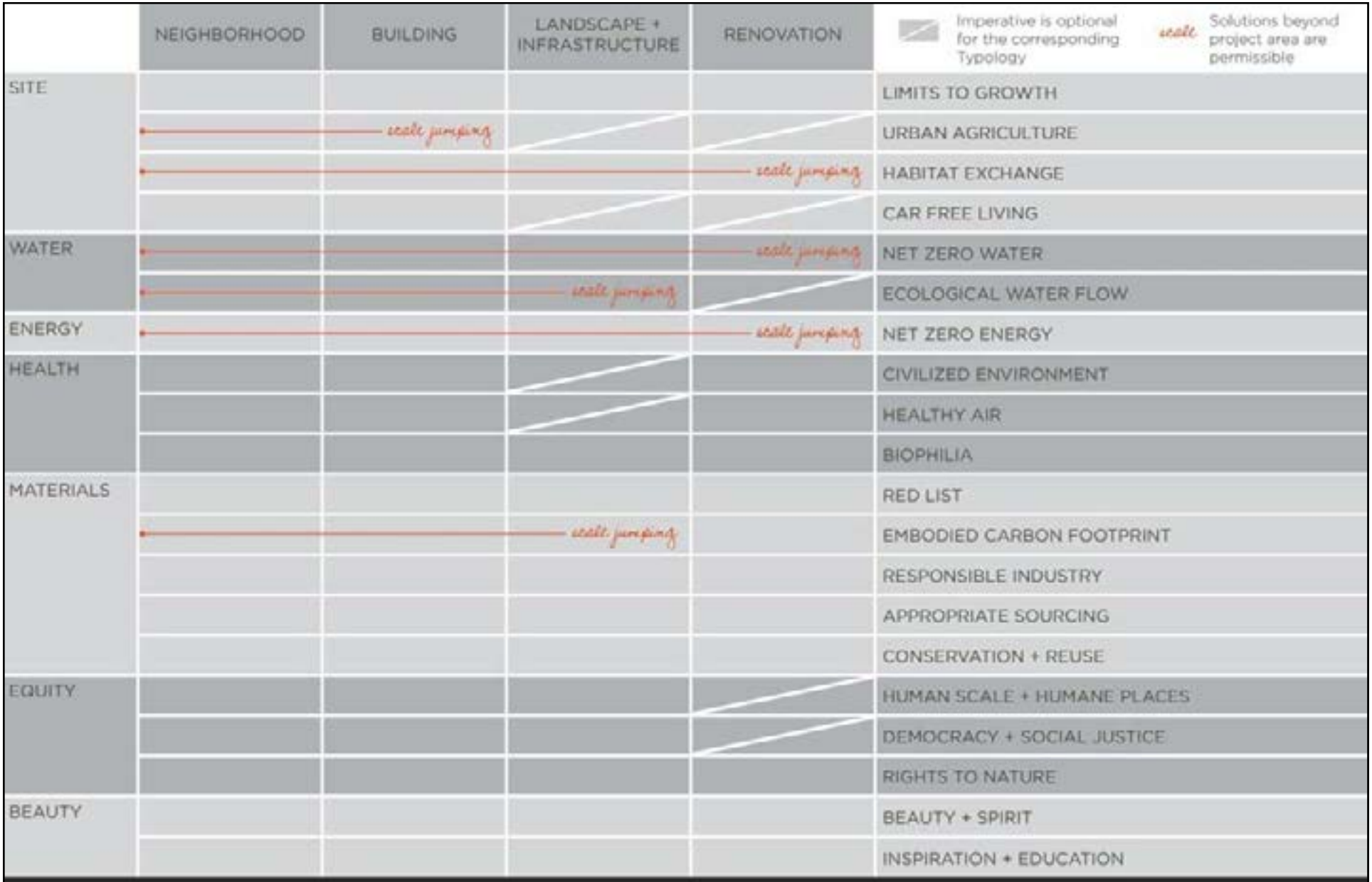
INSPIRATION + EDUCATION

Educational materials about the performance and operation of the project must be provided to the public to share successful solutions and to motivate others to make change.

The Living Building Challenge

The 7 Petals of the LBC Flower:

- **Site (4 imperatives)**
- **Water (2 imperatives)**
- **Energy (1 imperative)**
- **Health (3 imperatives)**
- **Materials (5 imperatives)**
- **Equity (4 imperatives)**
- **Beauty (4 imperatives)**



SUMMARY MATRIX

www.livingbuildingchallenge.org

The Living Building Challenge

Program Certifications

- “Living” (7 petals)
- “Petal” (3 petals)
- “Net Zero Energy”

PROGRAM CERTIFICATIONS - "LIVING" STATUS

IF YOU'VE GOT IT, FLAUNT IT!

PETAL RECOGNITION: 3 MINIMUM (INCL. WATER, ENERGY OR MATERIALS)

PROVEN PERFORMANCE • INDEPENDENT AUDITS • TRANSPARENT RESULTS

WWW.LIVING-FUTURE.ORG/NETZERO

The Living Building Challenge

Technical Assistance & Resources

The Living Building Challenge

Living Building Standard version 2.1

http://living-future.org/lbc/about

The Living Building Challenge

01

LIMITS TO GROWTH

The project may only be constructed on previously developed[9] sites, greyfields and/or brownfields that are not classified as any of the following:

- sensitive ecological habitats[10] such as:
  - wetlands[11]: maintain at least 15 meters, and up to 70 meters[12] of separation
  - primary dunes[13]: maintain at least 40 meters of separation
  - old-growth forest[14]: maintain at least 60 meters of separation
  - native prairie[15]: maintain at least 30 meters of separation
- prime farmland[16]
- within the 100-year flood plain[17]

The project team must document conditions prior to the start of work.

On-site landscape[18] may only include native and/or naturalized species planted in such a way that emulates density and biodiversity of indigenous ecosystems and supports succession[19].

Living Building Challenge™ 2.1

14

Living Building Standard version 2.1

The Living Building Challenge

The project must implement the following design guidelines:

Transect			L1	L2	L3	L4	L5	L6
Surface Cover	Maximum dimension of surface parking lot before a separation is required on all four sides (e.g. building wall or 3 m wide minimum paved median or sidewalk)		7 m x 10 m					
	Total area of surface parking lot allowed. All other parking requirements must be handled in structured or underground parking.		43 m²	270 m²	196 m²	120 m²	66 m²	0 m²
Streets + Intersections	Maximum street width, measured either shoulder-to-shoulder or curb-to-curb		9 m		15 m	10 m	15 m	22.5 m
	Maximum street width before driving lanes must be separated by a pedestrian strip and planting median (additional lanes may be included on the other side of median to a maximum of 22.5 m total width of driving area)	Not Applicable. Development of this kind is not permitted in a Natural Habitat Preserve or Rural Agricultural Zone.			15 m			
	Maximum street width before tree plantings and sidewalks are required on both sides				22.5 m			
	Minimum overall width of sidewalks and planted median				1/3 street width			
	Maximum distance between trees or furnishing zone and planted median				8 m			
	Maximum distance between crosswalk marked (Note: any must be 3 m wide minimum to qualify)				45 m		60 m	
	Maximum street block size (Note: Providing multiple pedestrian/bicycle circulation routes within a block increases the appropriateness of block area.)				90 m x 120 m		120 m x 120 m	
Signage	Number of free-standing signs per development		1					
	Maximum dimensions of free-standing sign(s)		2 m x 2.5 m		2 m x 3 m		2.5 m x 6 m	
	Maximum elevation of sign's bottom edge above ground		2 m	3 m	6 m	9 m	12 m	12 m or over-crossing
Proportion	Maximum distance between facade openings (e.g. doors and windows)		N/A		30 m			
	Maximum footprint for any building with a single use, single owner or single tenant (Incubator to provide additional floor area for tenants on upper level floors.)		5700 m² (excludes floor area of atriums, courtyards and daylight shafts)					

Living Building Standard version 2.1

The Living Building Challenge

“Declare” website

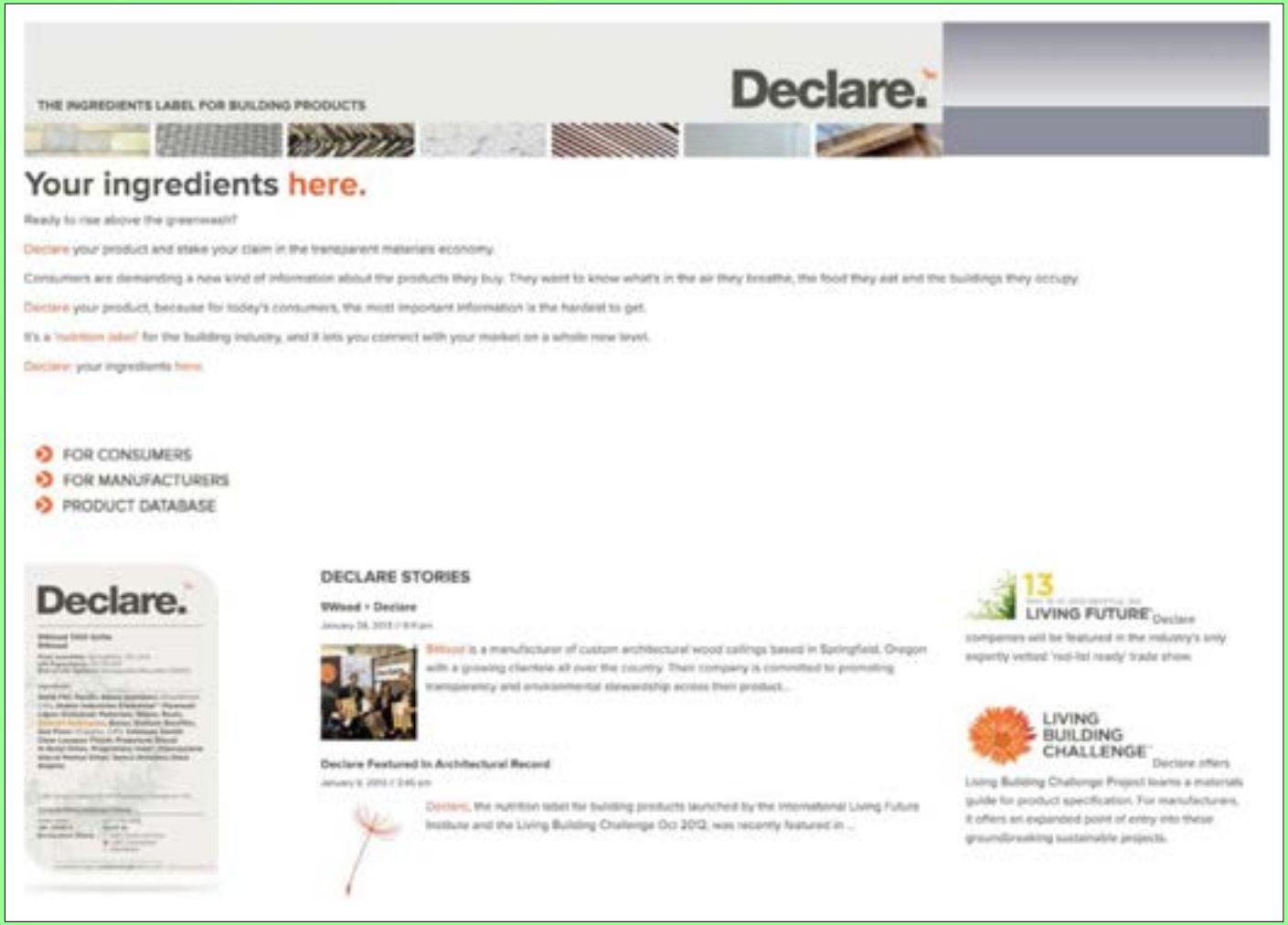
http://www.declareproducts.com

Your ingredients here.

Introducing Declare, the ingredients label for building products. Declare your product and stake your claim in the transparent materials economy.

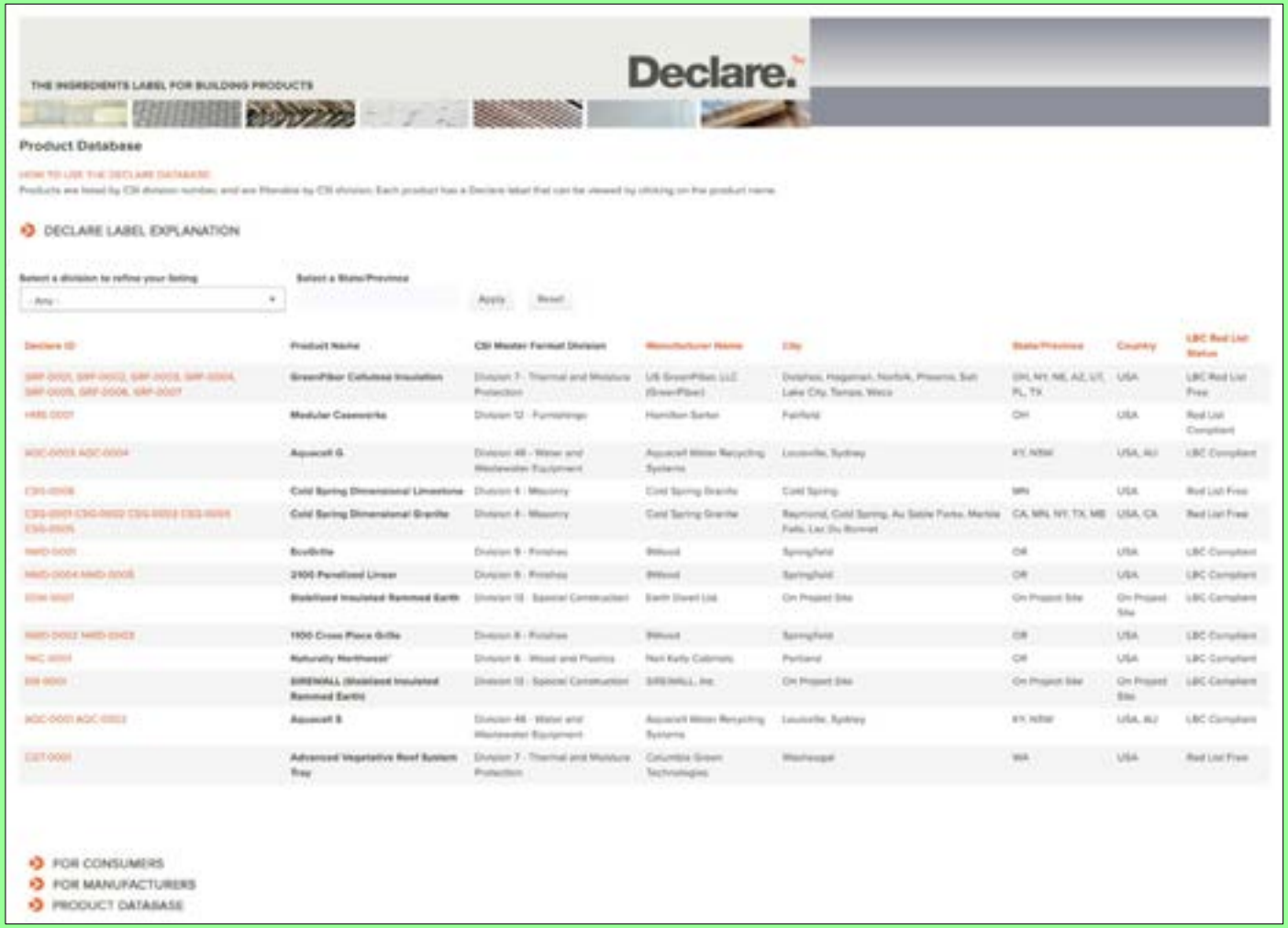
WWW.DECLAREPRODUCTS.COM

The Living Building Challenge



“Declare” website

The Living Building Challenge



“Declare” website

TECHNICAL ASSISTANCE FOR PROJECT TEAMS

The Living Building Challenge

Policy

REGULATORY INCENTIVES + ORDINANCES

The Living Building Challenge

Case Studies

THERE ARE DOZENS OF PROJECTS IN PURSUIT OF THE CHALLENGE...

TAH MAH LAH - PORTOLA VALLEY, CA
© Mike Martuscello, MGM Construction

HAWAII PREPARATORY ACADEMY ENERGY LAB - WAIMEA, HI
© Matthew Millman Photography, courtesy of Flansburgh Architects

SUSTAINABLE BUILDING RESEARCH CENTRE - WOLLONGONG, AUS
© Cox Richardson

CENTER FOR SUSTAINABLE LANDSCAPES - PITTSBURGH, PA
© Andropogon and The Design Alliance Architects

PAINTER'S HALL - SALEM, OR
© Pringle Creek Community

EXAMPLES OF COMPLETED + IN-PROGRESS PROJECTS PURSUING 'LIVING' STATUS, PETAL RECOGNITION + NET ZERO ENERGY BUILDING CERTIFICATION

UNIVERCITY CHILDCARE FACILITY - BURNABY, BC
© Hughes Condon Marler Architects


BULLITT CENTER - SEATTLE, WA
© Miller Hull


PRIVATE RESIDENCE - PORTOLA VALLEY, CA
© Kevin Burke

IDeAs Z SQUARED DESIGN - SAN JOSE, CA
© Integrated Design Associates, Inc.


CENTRE OF EXCELLENCE - PENTICTON, BC
© CEI Architecture Planning Interiors

EXAMPLES OF COMPLETED + IN-PROGRESS PROJECTS PURSUING 'LIVING' STATUS, PETAL RECOGNITION + NET ZERO ENERGY BUILDING CERTIFICATION

EXAMPLES OF COMPLETED + IN-PROGRESS PROJECTS PURSUING 'LIVING' STATUS, PETAL RECOGNITION + NET ZERO ENERGY BUILDING CERTIFICATION

TYSON LIVING LEARNING CENTER - EUREKA, MO
© Hellmuth + Bicknese Architects, LLC


BERTSCHI SCHOOL SCIENCE WING - SEATTLE, WA
© Chris Hellstern, KMD Architects


JUNE KEY DELTA COMMUNITY CENTER - PORTLAND, OR
© Cornelius Swart


CIRS - VANCOUVER, BC
© Perkins + Will


SMITH COLLEGE BECHTEL ENVIRONMENTAL CLASSROOM - WHATELY, MA
© Coldham + Hartman Architects

EXAMPLES OF COMPLETED + IN-PROGRESS PROJECTS PURSUING 'LIVING' STATUS, PETAL RECOGNITION + NET ZERO ENERGY BUILDING CERTIFICATION

The Living Building Challenge

Certification Process

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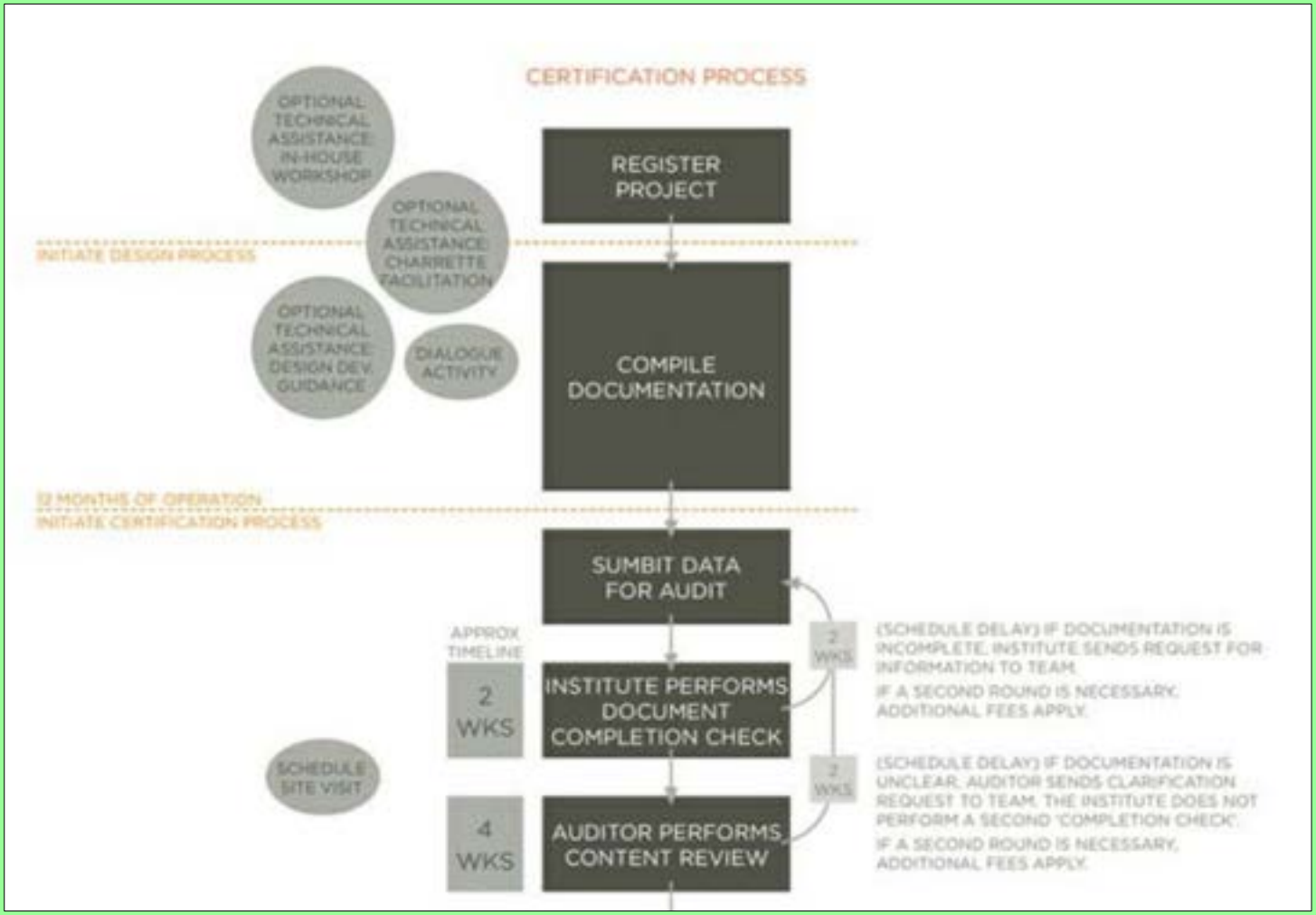
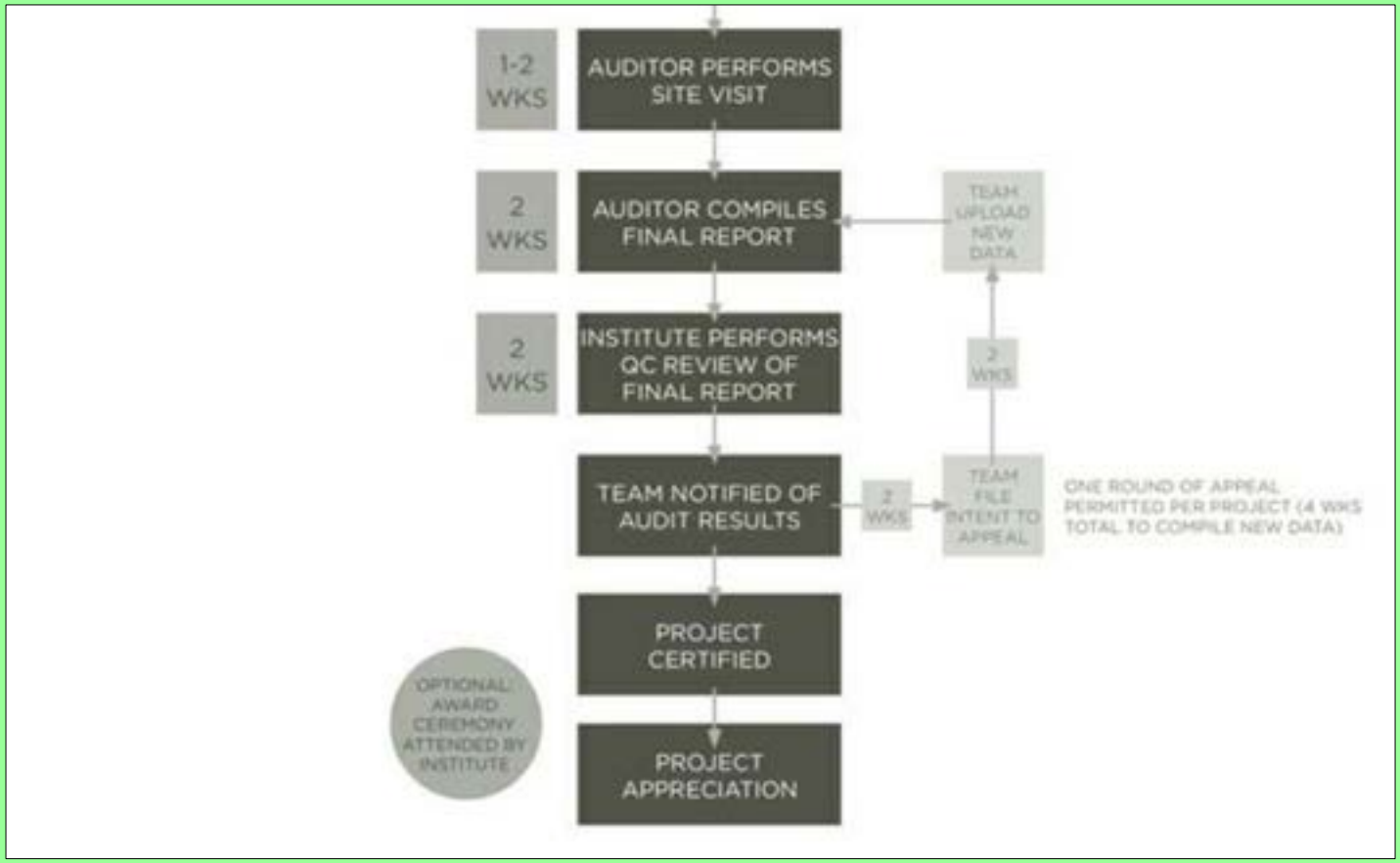


Certification Process

The Living Building Challenge



Certification Process

The Living Building Challenge

Certification Fees

The Living Building Challenge

Registration is the first step toward earning Living Building Challenge certification or Petal* recognition for your project and is based on its Typology:

- $500 : Renovation
- $900 : Landscape + Infrastructure and Building
- $1200 : Neighborhood

Review the **Process Diagram** for details on the full certification process for registered projects.

Registration Fees

The Living Building Challenge

SINGLE FAMILY RESIDENTIAL

Project Size (sq m)	(sq ft) - approx.	Petal Recognition* (US $)	Each Add'l Petal (US $)	Full Certification (US $)
< 230	<2,475	1,250	250	1,750
230 - 425	2,475 - 4,575	1,500	500	2,500

ALL OTHER PROJECTS

Project Size (sq m)	(sq ft) - approx.	Petal Recognition* (US $)	Each Add'l Petal (US $)	Full Certification (US $)
<500	< 5,380	1,500	500	2,500
500 - 999	5,380 - 10,764	2,000	1,000	5,000
1,000 - 2,999	10,765 - 32,289	3,000	1,500	7,500
3,000 - 4,999	32,290 - 53,819	6,000	2,000	10,000
5,000 - 9,999	53,820 - 107,639	9,000	3,000	15,000
10,000 - 49,999	107,640 - 538,194	12,000	4,000	20,000
50,000 +	538,195 +	15,000	5,000	25,000

Certification Fees

The Living Building Challenge

Annual Conference

LIVING FUTURE® 2013

MAY 15-17, 2013 | SEATTLE, WA
SEATTLE WESTIN

We are a resilient species. It's time we start building like it.

INTERNATIONAL
LIVING FUTURE
INSTITUTE™

At Living Future 2013, we'll create best practices for achieving resilience and regeneration in a changing climate.

LIVING FUTURE® 2013

MAY 15-17, 2013 | SEATTLE, WA
SEATTLE WESTIN

KEYNOTES INCLUDE:

David Suzuki, Award-winning Scientist, Environmentalist and Broadcaster

Jason F. McLennan, Buckminster Fuller Prize Winner, Creator of the Living Building Challenge

living-future.org/unconference2013

INTERNATIONAL LIVING FUTURE INSTITUTE™

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JOIN.
Access the tools, research and technical resources that guide the construction of Living Buildings, Sites and Communities.

CONNECT.
We all have a role in creating a restorative future. Learn ways to initiate necessary change in your neighborhood.

STRIVE.
Competitions draw forth the brilliant solutions we so urgently need. Share your ideas and see what others have in mind.

REPRESENT.
Let the world know that you are an Ambassador of the Living Building Challenge. Help spread the word and

Use our World Map to mark your location and find fellow Ambassadors of the Living Building Challenge all over the globe.

www.flickr.com

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JOIN OR START A COLLABORATIVE IN YOUR COMMUNITY

livingbuildingchallenge.org/facilitate

BECOME A VOLUNTEER PRESENTER IN THE AMBASSADOR NETWORK

livingbuildingchallenge.org/presenter


A CALL TO ACTION:
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Thank You

Thomas Brown
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