

# Living Building Pilot Documentation Requirements for LBC 4.0

**This document provides information on what pilot projects must show on the SDCI plan sets and design review presentation packages. This document is meant to complement and does not replace Land Use Code or any International Living Future Institute documents.**

## **Instructions:**

Living Building Pilot projects must include the following, at a minimum, on the Master Use Permit plan set, construction permit plan set(s), and the Full Design Review Early Design Guidance and Recommendation packets. The information is required to demonstrate compliance with the program's minimum standards (SMC 23.40.060.F.1). Information must be shown on one or more sheets titled, "Living Building Pilot," and be included in the title block and sheet index. Graphics, drawings, or other information your team feels is pertinent may be placed on the sheet in addition to the information described below.

- A. Living Building Pilot Program Minimum Environmental and Process Requirements: to be noted as is and does not require editing (see next page for more information).
- B. Living Building Challenge Petal Selection: demonstrate how the project intends to meet the pilot requirements and which Petals will be achieved. Highlight or depict which Petals and Core Imperatives will be achieved for the project.
- C. Living Building Pilot Checklist: provide a master checklist for all the program documents and at what phase of permitting they are required.

## A. Living Building Pilot Program Minimum Environmental and Process Requirements

Note the information below on the Living Building Pilot plan sheet.

Project must comply with all the below:

1. **Seattle Energy Requirements:** Comply with the requirements of the Target Performance Path in Section C401.3 of the Seattle Energy Code and decrease the building performance factor by at least 25 percent below that defined in the Target Performance Path Section C401.3.1.1 and use no fossil fuel for space and water heating.
2. **Seattle Water Requirements:** Reduce potable water demand by using only non-potable water for toilet and urinal flushing, irrigation, hose bib, cooling tower (make up water only), and water features, except to the extent other applicable local, state, or federal law requires the use of potable water.
3. **Living Building Challenge (LBC) 4.0 Living or Petal Certification, as administered by the International Living Future Institute (ILFI):**
4. If the LBC Energy Petal is achieved, the Seattle Energy Requirements are met (off-site exception/scale jumping may not be used to satisfy the 25% on-site energy reduction).
5. If the LBC Water Petal is achieved, then the Seattle Water Requirements are met. (SDCI will not recognize hand printing that ILFI allows for this Petal)
6. The applicant is responsible for all fees associated with obtaining LBC Living or Petal certification, auditing, and consulting fees including any coordination to comply with the Seattle Energy and Water requirements.
7. For Living or Petal Certification, projects are subject to ILFI rules, LBC version, handbooks, exceptions, and dialogue decisions that are effective at time of registration. The project owner, consultants or any other representative of the owner must notify SDCI of any exception or dialogue request made to ILFI prior to submitting such requests to ILFI. This is not meant to exclude minor process and procedural changes that may be necessary, nor to address any unanticipated situations.
8. In most cases, trade permits (mechanical, electrical, and plumbing) must be obtained prior to building permit issuance. This includes the Seattle-King County Health Water Reuse permit.
9. Living or Petal Certification and Seattle energy and water requirements apply to the entire building, including all floors and tenant spaces.
10. When meeting the Energy Petal, the 12-month performance period to measure energy use begins when the building reaches the occupancy level minimums allowed by ILFI.
11. When meeting the 25% energy reductions required to meet pilot requirements refer to Seattle Energy Code Target Performance Path in C401.3. Discrepancy between the energy Petal and TPP shall be identified and discussed in the approved TPP energy model. Energy process loads may be excluded pursuant to the TPP energy model but may not be allowed in meeting the Energy Petal.

12. When meeting the Materials Petal, the building is expected to be fully occupied as defined by ILFI.
13. The approved project plans and any other documents, together with any subsequent changes or amendments to those project plans and documents, shall demonstrate to the satisfaction of the Director that the completed building as designed will meet all the minimum standards in subsection SMC 23.40.060.B. (SMC 23.40.060.F.1).
14. The project shall be constructed and completed in accordance with the approved project plans and documents (SMC 23.40.060.F.2).
15. The Ready Audit required by ILFI must be complete before SDCI issues the final Certificate of Occupancy. Note that a temporary Certificate of Occupancy may be issued before the Ready Audit is completed.

<b>B. Living Building Challenge Petal Selection</b>	
<b>LBC Categories</b>	<b>LBC Subcategories &amp; Seattle Pilot Requirements</b>
<b>Petals (7)</b>	<b>Imperatives (20)</b>
Water (required if energy or materials is not chosen)	<b>Responsible Water Use (Core imperative)</b>
	Net Positive Water
	<b>Seattle Pilot Requirements (required)</b>
Energy (required if water or materials is not chosen)	<b>Energy + Carbon Reduction (Core imperative)</b>
	Net Positive Energy
	<b>Seattle Pilot Requirements (required)</b>
Materials (required if water or energy is not chosen)	<b>Responsible Materials (Core imperative)</b>
	Red List
	Responsible Sourcing
	Living Economy Sourcing
	Net Positive Waste
Place	<b>Ecology of Place (Core imperative)</b>
	Urban Agriculture
	Habitat Exchange
	<b>Human Scaled Living (Core imperative)</b>
Health & Happiness	<b>Healthy Interior Environment (Core imperative)</b>
	Healthy Interior Performance
	Access to Nature
Equity	<b>Universal Access (Core imperative)</b>
	<b>Inclusion (Core imperative)</b>
Beauty	<b>Beauty + Biophilia (Core imperative)</b>
	<b>Education + Inspiration (Core imperative)</b>

## C. Living Building Pilot checklist

Each item must be noted on the applicable plan for permit record type as noted below—Early Design Guidance=EG, Master Use Permit=LU, Construction=CN or PH. Some items will not apply depending upon your project or type of permit. Concept level information is typically required during schematic and design development (EG, LU records) and must evolve to add more specific information during design development and construction documents (CN, PH records). The Full Design Review Board presentation packages are not expected to be embedded on the plans although some graphics and information from the packets should be included on the plan sets.

### All Projects

- EDG Design Review presentation package with pilot strategies
- Meet with International Living Future Institute (ILFI) to determine project scope, feasibility, and any other anticipated project challenges (EG)
- ILFI feasibility report, optional (EG, LU, CN, PH)
- ILFI registration. Provide name or title the project is registered under and provide access to the Living Futures online portal for green building staff by using our general mailbox [SCIprioritygreen@seattle.gov](mailto:SCIprioritygreen@seattle.gov) (LU)
- Living Building Challenge Petal selection (LU, CN, PH)
- Provide approved Target Performance Path, C401 energy model (CN, PH)
- Water narrative that describes the reduction of potable water use by at least 50% for new buildings as compared to a baseline regional building. (LU)
- Annual water balance diagram (LU, CN, PH)
- Concept approval from Seattle King County Health for non-potable water system (LU)
- Design Review Recommendation presentation package with pilot strategies described and integrated with design (LU)
- Energy narrative/preliminary Target Performance Path energy model (LU)
- Preliminary contract for power purchase agreement, optional, only required if using LBC off-site renewables exception (CN, PH)
- Water system plans included in permit plan set (CN, PH)
- Issued plumbing permit (CN, PH)
- Issued plumbing water re-use permit for non-potable water system (CN, PH)
- Code and Target Energy Use Intensities embedded on permit plan set (CN, PH)

## All Projects - Core Imperatives

### Energy + Carbon Reduction (if not pursuing Energy Petal)

- Demonstrate a total net annual reduction in energy consumption of 70% for new buildings, compared to an equivalent building baseline. (LU, CN, PH)
- Call out no combustion energy sources to be used on the plans. (LU, CN, PH)
- Demonstrate the project is metering energy use. (LU, CN, PH)
- Demonstrate the project is zero-ready. Designate area and pre-install wiring and connections for future installation of renewable systems. (LU, CN, PH)

### Responsible Materials (if not pursuing Materials Petal)

- The project must contain one Declare label product per 200 square meters of gross building area, or project area, whichever is smaller, up to twenty distinct products from five manufacturers. All other product manufacturers not currently in Declare must, at a minimum, receive a letter requesting they disclose their ingredients and identify any Red List content. (Include note on LU, CN, PH plans that this will be met)
- All projects (except residential) must incorporate one product certified under the Living Product Challenge. (Include note on LU, CN, PH plans that this will be met)
- 50% of wood products must be FSC, salvaged, or harvested on site either for the purpose of clearing the area for construction or to restore or maintain the continued ecological function of the site. The remainder must be from low-risk sources. (Include note on LU, CN, PH plans that this will be met)
- 20% or more of the materials construction budget must come from within 500 kilometers of construction site. (Include note on LU, CN, PH plans that this will be met)
- The project must divert 80% of the construction waste material from the landfill. (Include note on LU, CN, PH plans that this will be met)

### Ecology of Place

- Provide an assessment of the cultural and social equity factors and needs in the community to consider those identified needs to inform design and process decisions. (EG)
- Note on the landscape plans that no petrochemical fertilizers or pesticides can be used for the operation and maintenance of on-site landscaping, including urban agriculture. (LU, CN, PH)

### Human Scaled Living

- Call out on the plans spaces for occupants to gather and connect with the community (LU, CN, PH).

- Call out on the plans the weather protected bike storage and parking and facilities such as showers and lockers. (LU, CN, PH).
- If providing parking, show at least two electric vehicle charging stations or one per 30 spaces, whichever is greater. (LU, CN, PH).
- If surface parking is proposed, minimize impervious surface parking to no more than 20% (Transects 1-3), 15% (Transect 4), 5% for (Transect 5) and 0% (Transect 6) of the Project Area and ensure that any surface parking area larger than 20m x 30m is separated with planted areas. Demonstrate on plans (LU, CN, PH).
- A Transportation review will be a part of the Master Use Permit based on the project's scope. If there is no Transportation review required for the project, we may require the following information-
  - Provide documentation demonstrating how the project will reduce single-occupancy vehicle (SOV) trips and trips by fossil-fuel based vehicles by 30% over an established baseline relevant to the region and occupancy type OR demonstrate how the project will implement four of the below best practices...
    - Consideration and enhancement of pedestrian routes, including weather protection on street frontages.
    - Advocacy in the community to facilitate the uptake of human-powered and public transportation.
    - A transit subsidy for all occupants of the project.
    - Carpool coordination assistance.
    - Access either to subsidized car sharing and/or to hybrid or EV fleet vehicles.
    - Regular survey of occupants to determine current fossil fuel-based SOV trips.

#### Healthy Interior Environment

- Demonstrate that at least 75% of regularly occupied spaces provide daylight and views outside. (LU, CN, PH)

## **Petal Specific**

See requirements below for the specific Petals the project is pursuing.

## **Place**

Urban Agriculture:

- Identify the project's Living Transect and which pathway the project will pursue, Pathway 1 (Agriculture only) or Pathway 2 (Agriculture and food access). Call out location and size of dedicated space on plans. (LU, CN, PH)

## **Water**

Net Positive Water:

- Demonstrate supply of 100% of the project's water needs through captured precipitation or other natural closed-loop water systems. All water must be purified as needed without the use of chemicals.
- Demonstrate treatment of grey and black water through on-site treatment.

## **Energy**

Net Positive Carbon:

- Demonstrate supply of 105% of the project's energy through on site renewable energy on a net annual basis. (LU, CN, PH)
- Call out no combustion energy sources to be used on the plans. (LU, CN, PH)
- Provide a resilience strategy to allow the building to be habitable for one week or demonstrate participation in support for the community in a disaster by batteries, storage, etc. Show space on plans reserved for resilience strategy. (LU, CN, PH)

## **Health + Happiness**

Healthy Interior Performance:

- All projects must provide access to views and daylight from 95% of regularly occupied spaces and opportunities for those occupants in the remaining five percent of regularly occupied spaces to move to compliant spaces for a portion of their day. (LU, CN, PH)
- In addition, all projects must provide at least two of the following: (LU, CN, PH)
  - Sufficient operable windows to provide natural ventilation for at least six months of the year.
  - Ability for the occupants to influence their local airflow and temperature through direct input or controls.
  - Flexible options for working and learning such as sit/stand options and/or varied sensory experiences for living, working, or learning.
- Residential projects must provide operable windows for 100% of the project occupants. (LU, CN, PH)



**Materials**

Include note on the LU, CN, PH plans stating, “Project is to comply with the requirements of the LBC Red List, Responsible Sourcing, Living Economy Sourcing, and Net Positive Waste Imperatives.”

**Equity**

Include note on the LU, CN, PH plans stating, “Project is to comply with the requirements of the LBC Universal Access and Inclusion Imperatives.”

**Beauty**

Include a note in the EDG packet stating the date the all-day exploration of biophilic design for the project was held. State what was learned that day and how the project was influenced by the findings.

Include note on the LU, CN, PH plans stating, “Project is to comply with the requirements of the LBC Beauty + Biophilia and Education + Inspiration Imperatives.”