

Biophilia in the Living Building Challenge (LBC)

<p>INTERNATIONAL LIVING BUILDINGS FUTURE INSTITUTE</p> <p>Biophilic Design Guidebook 2018</p> <p>Note: Same as Kellert, Heerwagen, and Mador</p> <ol style="list-style-type: none"> 1. Environmental Features 2. Natural Shapes and Forms 3. Natural Patterns and Processes 4. Light and Space 5. Place-Based Relationships 6. Evolved Human-Nature Relationships 	<p>Indoor Quality V3 (LBC)</p> <p>Prerequisite Twelve – A Civilized Environment Every occupiable space must have operable windows that provide access to fresh air and daylight</p> <p>Prerequisite Thirteen – Healthy Air: Source Control</p> <ul style="list-style-type: none"> • Entryways must have an external dirt track-in system and an internal one contained within a separate entry space.⁴⁸ • All kitchens, bathrooms, copy rooms, janitorial closets and chemical storage spaces must be separately ventilated. • All interior finishes, paints and adhesives must comply with SCAQMD 2007/2008 standards⁴⁹ • All other interior materials such as flooring and case works must comply with California Standard 01350 for IAQ emissions⁵⁰ • The building must be a non-smoking facility. <p>Prerequisite Fourteen – Healthy Air: Ventilation The building must be designed to deliver air change rates in compliance with California Title 24 requirements</p> <p>Prerequisite Fifteen – Beauty and Spirit The project must contain design features intended solely for human delight and the celebration of culture, spirit and place appropriate to the function of the building.</p> <p>Prerequisite Sixteen – Inspiration and 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. Non-sensitive areas of the building must be open to the public at least one day per year, to facilitate direct contact with a Living Building.</p>	<p>Wellbeing V3.1 (LCC)</p> <p>Civilized Environment</p> <ul style="list-style-type: none"> -Local food program -Car and bike sharing program -Transit information center -Community tool sharing -Community book library -Children, teen, adult & senior art and rec programs -Community “Hub” for information sharing <p>-For LBC, every regularly occupied space must have operable windows providing access to fresh air and daylight</p> <p>Healthy Neighborhood Design</p> <ul style="list-style-type: none"> -Access to walking trails, sidewalks or pedestrian paths from every building -Passive recreation in the form of parks, plazas, squares and bike trails no further than ½ mile from any point -Active recreation areas also no further than ½ mile from any point -Health and wellness education plan <p>Biophilic Environment</p> <ul style="list-style-type: none"> -Incorporating nature through environmental features, light and space, and natural shapes and forms -Incorporating nature’s patterns through processes and evolved human-nature relationships -Uniquely connected to the place, climate and culture through place-based relationships -Sufficient and frequent human-nature interactions (applied to both interior and exterior for LBC scale) <p>Resilient Community Connections</p> <ul style="list-style-type: none"> -Safe place for all residents to gather -Back up power for emergencies -Disaster response plan -Identify two captains to guide community in case of emergency -Emergency contact program -Neighborhood watch program -Ensure that all sensitive infrastructures are out of the flood plain 	<p>Beauty V4 (LBC)</p> <p>Each project team must engage in a minimum of one all-day exploration of the biophilic design potential for the project.</p> <p>The exploration must result in a biophilic framework and plan for the project that outlines strategy and implementation ideas for the following:</p> <ul style="list-style-type: none"> -How the project will incorporate nature through environmental features, light and space, and natural shapes and forms -How nature’s patterns will be incorporated through natural patterns and processes and evolved human-nature relationship -How the project will be connected to the place, climate, and culture through place-based relationships -Must meaningfully integrate public art and design features intended solely for human delight and the celebration of culture, spirit, and place 	<p>Health & Happiness V4 (LBC)</p> <p>Healthy Interior Environment</p> <ul style="list-style-type: none"> -Comply with current version of ASHRAE 62 -Prohibit smoking within building or within 25’ of building openings -Develop Healthy Indoor Environment plan that addresses cleaning protocols, prevention of particulates and toxins, and implementation of at least one strategy to improve air quality -Provide views outside and daylight for 75% of regularly occupied spaces -Provide direct exhaust for kitchens, bathrooms, and janitorial areas <p>Healthy Interior Performance</p> <ul style="list-style-type: none"> -Provide results from an IAQ test 1-6 months after occupancy -Comply with CDPH Standard Method for 90% if interior building products with potential to emit VOCs -Implement cleaning protocol that uses EPA Safer Choice labeled products -Provide access to views and daylight from 95% of regularly occupied spaces -Operable windows for 100% of residential project occupants -At least two of the following must be provided: <ul style="list-style-type: none"> -Sufficient operable windows to provide natural ventilation for at least 6 months of the year -Ability for occupants to influence their local airflow temperature -Flexible options for working and learning <p>Access to Nature</p> <ul style="list-style-type: none"> -Must connect people and nature through sufficient and frequent interactions in both interior and exterior -Must complete a post-occupancy evaluation that addresses the health benefits of daylight, fresh air, and access to nature at least once within 6-12 months of occupancy
<p>International Living Future Institute. Biophilic Design Guidebook. Seattle: ILFI, 2018, https://living-future.org/wp-content/uploads/2018/06/18-0605_Biophilic-Design-Guidebook.pdf.</p>	<p>https://living-future.org/wp-content/uploads/2016/12/Living-Building-Challenge-1.3-Standard.pdf</p>	<p>https://living-future.org/wp-content/uploads/2016/12/Living-Building-Challenge-1.3-Standard.pdf</p>	<p>https://living-future.org/wp-content/uploads/2019/04/Living-Building-Challenge-4.0.pdf</p>	<p>https://living-future.org/wp-content/uploads/2019/04/Living-Building-Challenge-4.0.pdf</p>