



# DESIGN PERFORMANCE ACTION PLAN

LAKE | FLATO



Holdsworth Center | Austin, Texas

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# INTRODUCTION

Lake|Flato strives to create restorative environments that reduce carbon emissions and enhance our understanding and relationship to the natural world. Our work reflects the belief that sustainability and design are two sides of the same coin — balanced, integrated, and inseparable.

We design for beautiful, healthy, highly efficient design solutions and system strategies that are tailored to each project and location.

Design performance provides us with a clear path to achieving sustainability by integrating design with building performance, technology, research, innovation, and equity.

This Design-Performance Action Plan outlines our goals, objectives, and strategies in three critical areas: **PRACTICE. PEOPLE. PLANET.** Each focus area has specific strategies on how and when we will achieve these goals. Many of these goals take inspiration from existing frameworks and standards such as the AIA Framework for Design Excellence, WELL Building Standard, The International Living Future Institute and associated programs, the Sustainable Sites Initiative, and more.

The strategies in this action plan are organized into two parts:

**L|F BASE:** Goals we expect all projects to meet today.

**L|F REACH:** Our project and client-specific “above-and-beyond” goals and strategies that further enhance performance and work toward regenerative design.



Integrated Design Workshop

## Goal 1 | Practice

### **INTEGRATE DESIGN PERFORMANCE IN ALL ASPECTS OF OUR PRACTICE.**

At Lake|Flato, we recognize the built environment has direct impacts on human health and the natural environment. We strive to create environments that enhance our understanding of and relationship with the natural world. To create high-performing buildings, we must integrate design performance in all aspects of our practice including our projects, culture, operations, and marketing.



## OBJECTIVE 1.A

### INTEGRATE AND TRACK DESIGN PERFORMANCE IN ALL PROJECTS

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#### L|F BASE:

- **Set and track** aspirational design performance goals throughout the project from concept to post-occupancy.
- **Conduct** an [Integrated Design Workshop \(IDW\)](#) or internal goal-setting that discusses both environmental and social topics. <sup>[14]</sup>
- **Collaborate** with lead consultants early and often to create high-performance buildings.
- **Perform** [post-occupancy evaluation](#) on energy, water, and/or indoor environmental quality (IEQ) to determine if the project is performing as designed.
- **Assign** a sustainability champion to every project team whose role is to advocate for design performance baseline practices on their project.

## OBJECTIVE 1.B

### INTEGRATE DESIGN PERFORMANCE INTO LAKE|FLATO'S FIRM CULTURE

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#### L|F BASE:

- **Assign** a champion for every project type that will serve as the design performance advocate and expert for that specific building typology.
- **Leverage** the Lake|Flato equity, diversity, and inclusion (EDI) action plan to promote design performance decisions and implementation.
- **Encourage** research within the firm through Lake|Flato's Internal Research & Development Program called [Investigations](#).
- **Promote** continuing education through 'Lunch & Learns', external guest speakers, conferences, and internal workshops.
- **Require** all product representatives who would like to give a CE course to provide a Material Disclosure Letter.
- **Select and celebrate** one sustainability champion in the firm each month.
- **Support** sustainable design learning by providing study materials and reimbursing passed exam fees for all employees for one green building accreditation (LEED AP, WELL AP, Living Future Accreditation) within 6 months of hire.



## OBJECTIVE 1.C

### INTEGRATE DESIGN PERFORMANCE INTO LAKE|FLATO'S OFFICE OPERATIONS

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#### L|F BASE:

- **Attain, maintain, & promote** a healthy and restorative office environment at Lake|Flato's San Antonio office through WELL certification. [7]
- **Attain, maintain, & promote** zero-carbon operations at Lake|Flato's San Antonio office through the International Living Future Institutes Zero Carbon Certification. [6]
- **Maintain & promote** organizational transparency by upholding the commitment to our JUST certification. [5]
- **Track** post-occupancy energy, water, and/or indoor environmental quality at all Lake|Flato offices.
- **Complete and maintain** a 'Red to Green' Materials Library for all Lake|Flato offices.
- **Promote** zero-waste operations for both San Antonio and Austin offices including trash, recycling, and food waste. [15]

#### L|F REACH:

- **Create and maintain** a digital 'Red to Green' Materials Library in the future with dedicated staff to manage and update
- **Eliminate** Red-List Materials from our Materials Library, Specifications, and Continuing Education from our Lake|Flato offices in San Antonio and Austin.
- **Achieve** carbon-neutral operations at all Lake|Flato's offices. [6]
- **Achieve** a WELL Building Standard Certification at all Lake|Flato's offices. [7]



## OBJECTIVE 1.D

### BE AN INTERNATIONAL LEADER IN TRANSPARENCY.

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#### LIF BASE:

- **Publish and communicate** our firm’s progress toward our design performance goals and post-occupancy data internally and externally on our website and [Lake|Flato’s Blog ‘The Dogrun’](#).
- **Publish** several projects’ Post-Occupancy Evaluation “Lessons Learned” internally and externally with the clients’ consent for future projects to build upon.
- Publish at least two “[Investigations](#)” a year on our website.
- **Support** and participate in AIA COTE (Committee on the Environment) leadership nationally and locally.
- **Externalize** our Design Performance Action Plan as an industry example.
- **Submit** for sustainability awards like AIA COTE TOP 10 and other awards that acknowledge our long-term commitment to sustainability and resiliency.

#### LIF REACH:

- **Publish** every project’s Post-Occupancy Evaluation “Lessons Learned” internally and externally for future projects to build upon.



Universities at Shady Grove Biomedical Science & Engineering Education Building | Rockville, MD

## Goal 2 | People

### **PRIORITIZE OCCUPANT HEALTH AND EQUITY IN DESIGN, CONSTRUCTION, AND OPERATION IN ALL PROJECTS.**

The built environment impacts human health in profound ways. Our approach to human-centered environments and biophilic design seeks to enhance connections to nature and improve indoor environmental quality. We respond sensitively to the unique ecology and social/cultural aspects of the place by prioritizing the health, safety, and welfare our clients and community. Our designs should be inclusive to all and should reflect the communities within which they are located.



## OBJECTIVE 2.A

### INTEGRATE INDOOR ENVIRONMENTAL QUALITY (IEQ) STANDARDS

#### LIF BASE:

- Integrate WELL Building Standard Preconditions by prioritizing the following actions: [7]
  - **Address** indoor air quality by improving air filtration strategies, maximizing fresh air and natural ventilation, minimizing indoor air pollutants, and mitigating construction pollution.
  - **Address** water quality through performance testing, drinking water quality analysis, and implementing a Legionella plan.
  - **Address** lighting quality by providing access to quality daylight and electrical lighting.
  - **Address** thermal comfort through performance verified conditions and/or conducting thermal comfort surveys.
  - **Address** acoustics through sound mapping and implementing acoustical solutions.
  - **Address** mindfulness by providing a connection to nature and place.
  - **Conduct** post-occupancy surveys to confirm occupancy satisfaction.

#### LIF REACH:

- **Conduct** post-occupancy performance testing on water, air, and /or thermal comfort using the WELL Building Standard to ensure they meet the acceptable thresholds. [7]
- **Integrate** WELL Building Standard Preconditions & Optimizations. [7]

## OBJECTIVE 2.B

### INTEGRATE HEALTHY MATERIALS

#### LIF BASE:

- **Create, integrate and utilize** a specification standard that restricts unhealthy materials.
- **Address** hazardous materials by integrating WELL Building Standard Preconditions such as restricting lead, asbestos, and mercury in new construction, and managing asbestos, lead exterior, CCA (Chromated copper arsenate), and PCB (Polychlorinated Biphenyl) hazards in existing buildings. [7]
- **Specify** transparent and healthy materials when possible, such as HPDs (Health Product Declaration), Declare, and/or Red-list free. [15]
- **Send** material disclosure and advocacy letters to select product manufacturers to advocate for healthier materials and transparency labels.

#### LIF REACH:

- Integrate WELL Building Standard Materials Preconditions and Optimizations. [7]
- Eliminate all Red-List Materials from all projects. [4]



## OBJECTIVE 2.C

### ADDRESS SOCIAL, ENVIRONMENTAL, AND CLIMATE JUSTICE

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#### L|F BASE:

- **Establish** equity, diversity, and inclusion (EDI) goals early in the project process and track them through completion.
- **Address** equity, diversity, and inclusion (EDI) goals within our Integrated Design Workshops and include diverse representative community members. <sup>[13]</sup>
- **Complete and integrate** findings from a [Community Health Needs Assessment](#) in project pursuits and community analysis, goals, and renderings.
- **Address** client and community climate risks associated with climate change.

#### L|F REACH:

- Work with contractors and consultants who have a Just Label or are willing to complete a JUST self-assessment, and/or are registered Minority, Woman, or Disadvantaged Business Enterprises (MWDDBE) organizations. <sup>[4] [5]</sup>

## OBJECTIVE 2.D

### PROVIDE ACCESS TO DESIGN PERFORMANCE THAT IS ECONOMICAL AND EQUITABLE FOR ALL

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#### L|F BASE:

- **Be intentional** about balancing the cost of services with the need to be profitable.
- **Review** cost-benefit and return on investment of systems and material choices with clients.
- **Maintain** our long-standing pledge to the [1+ Initiative](#) in which we contribute at least 1% of our total direct hours towards pro-bono work focusing on non-profit clients working for the public good.

#### L|F REACH:

- **Source** local materials and support local businesses. <sup>[10]</sup>
- **Identify** federal, state, and local incentives and grants for sustainable goals available for clients.



## Goal 3 | Planet

### ACHIEVE NET-ZERO DESIGN BY 2030 & REGENERATIVE DESIGN BY 2050 IN ALL PROJECTS

Lake|Flato is committed to the efficient and thoughtful use of the Earth's resources. We design high-performing buildings that use less energy to operate, reduce the embodied carbon impacts of building materials, and conserve water. Our goal is for all projects to be regenerative and have a positive environmental impact.



## OBJECTIVE 3.A

### LEAVE PROJECT SITES BETTER THAN WE FOUND THEM

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#### L|F BASE:

- **Avoid** building on land that has not been previously impacted by humans and work to maintain the flourishing native habitat. If building on a greenfield site is unavoidable, reduce the extent of disturbances and restore and enhance all areas to the maximum extent possible. [2] [4] [11]
- **Conserve and integrate** native vegetation. [2]
- **Perform** an analysis of the current climate and ecoregion to better understand how to passively design within the local environment.
- **Perform** an analysis of future climate and natural disaster trends to better design for climate resiliency. [8]
- **Implement** strategies that reduce the heat island effect such as reducing impervious parking. [11]
- **Implement** ecosystem-conscious strategies such as maintaining dark natural environments by reducing light pollution and implementing bird collision design strategies. [11]
- **Implement** sustainable construction standards for site preservation such as implementing a site protection plan. [2] [11]
- **Manage** all stormwater runoff on-site. [2] [16]

#### L|F REACH:

- **Analyze and document** pre-development habitats, carbon and water balance, and other ecosystem services to preserve, restore, and create a regenerative impact on the local ecosystem. [4]
- **Manage and treat** all stormwater runoff on-site. [2] [16]



### OBJECTIVE 3.B

## ACHIEVE NET-ZERO ENERGY BY 2030 AND REGENERATIVE ENERGY BY 2050

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#### L|F BASE:

- **Establish** an energy use intensity baseline (EUI) from a benchmarked regional building of the same type. <sup>[1]</sup>
- **Achieve** AIA 2030 Challenge targets as they progress over time. As of 2022, meet an 80-90% annual energy reduction from a baseline after accounting for on-site renewable power. Achieve 100% annual energy reduction by 2030. <sup>[1]</sup>
- **Maximize** climate-specific passive strategies to minimize energy consumption and peak loads.
- **Collaborate** with consultants to optimize the building envelope and HVAC design.
- **Conduct** early and iterative energy modeling throughout the design process. <sup>[12]</sup>
- **Conduct** a renewable energy potential analysis, such as photovoltaics, and share results with the client.
- **Design** to be solar-ready and all-electric. <sup>[4] [12]</sup>

#### L|F REACH:

- **Achieve** annual net-positive energy use. <sup>[4]</sup>
- **Conduct** post-occupancy energy metering to confirm and further reduce energy after construction.
- **Conduct** building commissioning to ensure quality assurance. <sup>[12]</sup>
- **Offset** remaining operational carbon impact using third-party verified certifications. <sup>[12]</sup>
- **Generate** energy without combustion. <sup>[4]</sup>



### OBJECTIVE 3.C

## ACHIEVE NET-ZERO WATER BY 2030 AND REGENERATIVE WATER PRODUCTION BY 2050

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#### L|F BASE:

- **Establish** a water use baseline from a benchmarked regional building of the same type. [4] [16]
- **Set** an interior potable water use baseline reduction of 30% for all existing buildings and 50% for all new buildings. [4]
- **Implement** water-saving strategies such as indoor water efficiency, outdoor water use reduction, rainwater greywater capture, water reuse, and native or low-water landscapes. [2] [16]
- **Reduce** the use of potable water for irrigation by 50% or reduce total irrigation volume by 50%. [2]
- **Establish** a stakeholder map of the project's watershed and determine who may be impacted. [2] [16]

#### L|F REACH:

- **Set** water use reduction goal of 100% potable water reduction. [4]
- **Conduct** a water balance analysis to determine how to fully offset the demand through supply.
- **Implement** strategies that restore the pre-development water balance. [4]
- **Conduct** post-occupancy water use analysis. [16]
- **Irrigate** the landscape without using potable water. [2] [4]



### OBJECTIVE 3.D

## ACHIEVE NET-ZERO EMBODIED CARBON EMISSIONS BY 2030 AND REGENERATIVE CARBON EMISSIONS BY 2050

#### L|F BASE:

- Discuss the project's embodied carbon impact with the client.
- Establish an embodied carbon baseline and reduce the project's global warming potential by 20% with low carbon strategies. [6]
- Perform material design option studies to analyze and compare the global warming potential impact.
- Select low carbon material alternatives. [6]
- Prioritize adaptive reuse and material salvage when working with existing buildings. [15]
- Design for deconstruction and reuse. [15]
- Reduce material waste by reducing manufacturing, construction, and demolition waste. [15]
- Specify FSC (forest stewardship council) certifications when using wood products. [15]

#### L|F REACH:

- Perform a whole building life cycle assessment to measure total embodied carbon impacts. [6]
- Offset calculated embodied carbon impacts with carbon offsets. [6]



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