2030 COMMITMENT ACTION PLAN

FELDMAN ARCHITECTURE
SPRING 2018
We take seriously our obligations and opportunities as architects to respect and preserve the natural environment. Drawing upon past wisdoms and contemporary building science, we aspire to create structures that are in harmony with their natural surroundings, conserve resources and are efficient in use. Combined with the goal of exceeding industry baseline environmental standards on all of our projects, our philosophy serves as a catalyst in the movement towards a more ecologically and ethically responsible form of architecture.

In December 2016, Feldman Architecture pledged to the AIA 2030 Commitment and created an Action Plan as a road map to creating carbon-neutral buildings by the year 2030.

We are guided in this movement by the acronym PREACH which defines six focus areas on our path to attaining our goals and provides the impetus to do so.

1 PHILOSOPHY
2 RESEARCH & EDUCATION
3 EVALUATION & REPORTING
4 ACTION
5 COMMUNITY
6 HEALTH
Founded in San Francisco in 2003, Feldman Architecture is an award-winning residential and commercial design practice dedicated to creating buildings that sit gracefully and lightly on the earth: beautiful, healthy, and soulful spaces that enhance our client’s lives, our communities, and the environment.

Our work reflects an understanding of the clear connection between a building and its surrounding environment, using forward-thinking building science to create spaces with enduring significance. Passionate about design that solves complex problems, we challenge ourselves and our clients to imagine new possibilities that improve the way we live and interact with our planet.

Our commitments have attracted local, national, and international accolades, including five AIA Awards for their design excellence and achievements in sustainability and the Chicago Athenaeum’s 2015 American Architecture Award. The firm has designed numerous LEED certified projects, including the first LEED Platinum custom home in California’s Central Coast Region.

We are always striving to go beyond the baseline, and we fully embrace holding ourselves, our collaborators and our industry to a higher standard.
The American Institute of Architects (AIA) introduced the 2030 Commitment in support of Architecture 2030’s 2030 Challenge that was issued in 2006. The goal of the 2030 Challenge is that “all new buildings, developments, and major renovations shall be carbon-neutral by 2030,” which means not only achieving net-zero energy but also eliminating the use of fossil fuels. Architecture 2030 has set reduction targets based on a 2003 CBECS baseline to serve as a measuring stick for progress, with the target energy use reducing every five years, as indicated by the graph on the right.

As a means to track and document progress towards reduction goals, the AIA created an online database called the Design Data Exchange (DDX), and made it available to participant firms. Though 2017 was Feldman Architecture’s first reporting year, we have input data for projects from 2013-16 as a means to compile a more thorough catalog of the firm’s projects.

The reporting process revealed that only 27% of reported projects are meeting the goals of the 2030 Challenge. The majority of our projects, most aiming only to meet the requirements of California’s strict Energy Code, lie in the 40%-50% reduction range. So despite tougher regulations, simply meeting the baseline standards will not be enough to achieve carbon neutrality in our buildings by 2030. To do so we must greatly exceed these goals.

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In early 2017, we conducted an in-house survey of 17 staff members to gauge interest in sustainable design, how we perceive our firm’s efforts, and in what areas we should focus on educating and evolving our firm.

In general, the staff felt that the office ethos promoted sustainable design and integration into every project. However, many felt that sustainable design was not always integrated at project inception, with the focus primarily being only on those that had the “right” site, client or staff members associated with them. Other shortcomings revealed include a lack of office standards and resources, and educational opportunities made available by the firm.

An optimistic view of these results is that, since we have the ability to control the variables, it is only us who stand in the way of elevating the sustainable design practices of the firm. This survey has allowed our Sustainability Committee to focus its efforts on improving upon our areas of weakness while continuing to fine tune our strengths.

Feldman Architecture has completed a number of high-performing projects so it is not a question of our ability. Rather, it is a matter of holding ourselves accountable to our stated philosophy and values and taking a holistic approach to reducing our building’s impacts on the environment.
We believe integrating sustainability begins from a project’s inception and continues on even after its completion. Led by our diagram of guiding principles (shown left), developed to outline goals in three categories that we feel are inherent to sustainable design, we have begun to develop office standards and resources to clarify our position and encourage participation in the process by project team members. From templates for site analysis and goal setting, checklists for each design phase, and check-ins at project milestones, our aim is to implement a system that ingrains sustainable design into our office culture, not solely on a project-by-project basis.

In addition, we have begun evaluating our projects one year after completion to close the loop of the design process and develop a better understanding of how our buildings’ performance align with our expectations and goals. We conduct both an internal evaluation of each project for future knowledge sharing and an external evaluation where we ask the occupants of each completed project about various aspects and systems that directly affect comfort and performance. Combined, the results are both a resource for refining our process and revealing areas where we need to make improvements.

### HOLISTIC VISION

#### 1-year Goals
- Develop an early phase project template for sustainable design
- Develop a project kick-off sustainability checklist
- Develop a project energy/water use database to create project benchmarks

#### 3-5 year Goals
- Develop and employ project close-out process to collect lessons learned from all projects
- Develop a sustainability checklist for each phase of design and construction
- Check in with project teams at project phase completion to set sustainability goals

### PHILOSOPHY

#### Diagram of Guiding Principles

**economic**
- innovative technologies
- long term savings
- market competitive solutions
- cost-value engineering

**eco-efficiency**
- waste management
- life cycle & maintenance
- sourcing & distribution
- incentives & certification

**environmental**
- responsive/contextual site design
- energy use
- conservation, renewability, & reuse
- clean air & water
- material selection

**socio-economic**
- job creation
- vertical mobility
- labor rights, chain of custody

**socio-enviro**
- global stewardship
- public/private space
- shared use spaces
- occupant comfort

**social**
- pro-bono & community outreach
- empowerment of residents, engagement in design process
- transparency & education
2 RESEARCH & EDUCATION

KNOWLEDGE SHARING

Ongoing research and education are vital to us staying relevant in an industry that stands at the forefront of the environmental stewardship movement and is constantly evolving its understanding of how the built environment affects our quality of lives and the health of our planet. It is to this end that encouraging and providing opportunities for continued education and training of staff and the commitment to supplement that internally through support of our Sustainability Committee is paramount to our success.

In addition to supporting sustainable design focused professional accreditation efforts and participation in seminars, workshops and lectures, we also aim to consistently bring in outside speakers and product representatives to strengthen our knowledge as a firm. In-house, our Sustainability Committee conducts its own research into sustainable materials, products and systems, with the ultimate goal of building a database that catalogs our findings while also highlighting the successes and failures of previous projects so that we may better understand the success of our past efforts and map a path towards future progress.

1-year Goals
• Encourage employees to use dedicated continuing education time to go to local conferences or take classes at the PG&E Energy Center
• Hold quarterly building science lunch and lemons & Third Thursday talks
• Create templates for sustainability conversations at client meetings with bullet pointed goal guides
• Host a yearly off-site tour of a local building that demonstrates exceptional sustainability
• Research environmental impact of FA standard materials and processes
• Encourage employees to publish and speak publicly about their experiences

3-5 year Goals
• 90% of staff LEED Accredited
• Staff feeling they have the tools and knowledge to design every project to meet the 2030 Challenge
• Host bi-yearly knowledge sharing events with the Bay Area architecture community
A 2015 study* of architects across the country revealed that less than 25% of architects measure building performance of any kind after occupancy on more than half of their projects. Furthermore, it noted that one third of architects have never conducted post-occupancy analyses on their buildings. Post-occupancy surveys and performance analyses are vital to understanding the successes and failures of our buildings so we have committed to a standard practice of revisiting each project after completion so that we can evaluate actual building performance vs. set goals and expectations.

In early 2017 we launched our client survey to collect both occupant feedback and utility usage (energy, gas, and water). Collecting this data will allow us to create our own project benchmarks and develop methods to reduce our projects’ impacts on the environment.

**“How Gender and Age Impact the Path to Carbon Neutrality” by H. Nelson, S. Duluk Beavis, and J. Duluk**

### 1-year Goals
- Report all current projects to the AIA 2030 Commitment via the DDX
- Create energy models for 10% of projects to evaluate their predicted EUI
- Conduct exit interviews on 75% of completed projects
- Conduct post-occupancy survey for all past projects, collecting energy, water, and occupancy comfort data

### 3-5 year Goals
- Collect whole building data (temp, RH, CO2, etc) for at least 3 projects
- Create office standard for post-occupancy evaluation of every project
- 100% of completed projects put through both project exit interviews and post-occupancy evaluations
- Publish annual sustainability report beginning in 2019
- Conduct life cycle analysis on 2 projects to look at total carbon use in design, construction, and maintenance
Historically, our office standard has been to meet the energy requirements of the California Energy Code for all of our projects. The energy code baseline is only about a 50% reduction in energy use from the 2030 baseline. However, we are in the process of pushing projects to exceed the energy code by 10%. Depending on project location, this would result in most projects performing approximately 70% better than the 2030 Baseline. We currently do not create separate compliance and energy models for each project so it is difficult to accurately predict the EUI.

1-year Goals
• All projects comply with Title 24 by at least 10%

3-5 year Goals
• Build all new residential projects as Net Zero Energy
• Create energy models to predict EUI for half our projects
• Install renewables on 75% of our projects
• Have 1 Living Building Challenge Project underway

Fresh water scarcity is an issue we are acutely aware of in California due to recent and past drought events that have reduced the state’s water supply to dangerously low levels. Though the state continues to impose more stringent water use restrictions, we feel it is a more proactive approach as a firm to aim to exceed these standards through the research and implementation of systems and strategies such as rainwater collection and on-site filtration, gray and black water reuse and the use of drought tolerant landscaping, among others.

1-year Goals
• Design/Install gray water reuse and/or rainwater collection systems on 20% of new construction projects
• Investigate opportunities and methods for black water reuse/recycling

3-5 year Goals
• Design/Install gray water reuse and/or rainwater collection systems on 50% of projects
• Install 1 black water reuse system
• Have 1 project in progress pursuing Net-Zero Water/Living Building Challenge
According to a 2001 study funded by the Environmental Protection Agency (EPA), Americans spend about 87% of their time inside buildings. That’s 87% of our lives where we run the risk of constant exposure to dangerous chemicals and toxins emitted from building materials that can negatively impact our health. As much as we should be focused on saving the environment on the outside we acknowledge that improving the health of the indoor environments that we create is equally significant.

While our current office standards favor the use of environmentally friendly materials, we continue to seek exposure to new products that push forward the idea of minimizing our carbon footprint through the use of local materials and sustainable sources. In doing so we aspire to reach farther than the boilerplate “FSC wood” and “low-VOC” specifications by ultimately removing all materials and products that contain Red List* ingredients from our projects.

*As identified by the International Living Future Institute (ILFI)

1-year Goals

- Use more green rated products (Cradle to Cradle, Greenguard, Declare)
- Detoxify our projects by using no PVC (unless required by code)
- Remove materials from library with Red List elements. Notify the manufacturers we will not be using them due to chemical content.
- Research material manufacturing and impact on health of surrounding communities

3-5 year Goals

- Reduce use of materials from manufacturers that heavily impact the health of their surrounding communities
- Source materials with Health Product Declarations
- Remove Red List materials from our project specifications
- Develop office library of non Red List materials and products
In 2017 Feldman Architecture moved our office into a historic former firehouse in San Francisco’s Russian Hill neighborhood, occupying the 2nd and 3rd floors. With this move comes the opportunity to set new operational protocols and measure our energy and water use with the goal of reducing our office’s impact on the environment through data collection. An immediate impact on the reduction of electric lighting loads should be apparent due to the preservation of a skylight that runs nearly the length of the main office space.

In addition to operational sustainability we intend to more closely examine our firm culture to ensure social equity in the workplace. Inspired by the JUST program’s transparency platform and associated JUST Label, we strive for a socially just and equitable work environment that enhances the employee experience.

1-year Goals:
- Reduce paper consumption by 20% (double sided standard, digital agendas, scrap paper for notepads)
- Use recycled paper for 50% of our prints
- Use cleaning supplies with no Red List chemicals
- Energy Star appliances for the new office
- Track our office energy, water, paper, and waste
- Conduct a waste audit
- Rigorous education on recycling and composting

3-5 year Goals:
- Reduce paper consumption by 50% from 2016 baseline
- Digital agendas and notes
- Reduce office energy use by 20%
- Purchase office lunches from places with 100% compostable containers
- Add rooftop solar panels
- Conduct a waste audit, with the goal of a 25% reduction from year 1
- Internal audit for the JUST label
Feldman Architecture established a Pro-Bono committee in 2014 as a means to explore ways in which we could give back to our community, through both volunteer work and pro-bono design services. Since then FA has had the pleasure of participating in fundraising efforts for the SF Bay Area’s LEAP Arts in Education program, which aims to bring art programs to local schools, as well as providing pro-bono architectural services to non-profit organizations such as Playworks and the Center for Urban Education about Sustainable Agriculture (CUESA), who themselves both dedicate their efforts to giving back to the community.

In addition to our pro-bono work, FA would like to become a resource for sustainable knowledge within our community and industry. We are actively exploring opportunities to engage with our neighborhood and colleagues as a means to share information and highlight critical issues that we’re facing at the local and global levels.

1-year Goals
• Host an FA “open house” to engage our neighborhood
• Host small-firm sustainability round table to share ideas and best practices
• Host benefit fundraiser for victims of the 2017 Sonoma fires

3-5 year Goals
• Establish FA as a leader and resource for residential sustainability
• Host annual Earth Day party to celebrate sustainability
• Continue to seek out local pro-bono opportunities
Personal wellness is a consideration that manifests itself not only in the buildings we design but also in our ethos as a firm and in our workplace. FA recognizes the importance of healthy living and, by extension, healthy building design, as a cornerstone of the holistic vision of sustainability.

Currently, 80% of our employees walk, bike, or use public transit to get to work and we have a bi-weekly sketch club that encourages employees to get out and be active over the lunch hour through neighborhood exploration. In addition, our office provides healthy snack options and sit/stand workstations to encourage movement throughout the day.

Within the design spectrum, building certification programs exclusively promoting healthier indoor environments have recently appeared on our radar with the emergence of such organizations as the International WELL Building Institute (IWBI) and the Center for Active Design (CfAD). As with other areas of our practice we are constantly seeking opportunities to challenge ourselves in our design thinking and we see in these and other similar organizations the impetus to do so in regards to healthy building design.

### 1-year Goals
- Host Quarterly office yoga
- Explore enrollment in building certification programs such as IWBI’s WELL Building Standard and CfAD’s Fitwel.
- Encourage employees to walk/bike to work instead of drive/bus to reduce our carbon footprint
- Weekly office snacks to be 75% fruit and vegetables to promote healthy eating

### 3-5 year Goals
- Study indoor air quality of three FA homes to look at longevity of VOCs
- Enroll one or more projects in a certification program focusing solely on the health of indoor environments
**Philosophy**

**Research & Education**

**Evaluation & Reporting**

**Advocacy**

**Health**

**Community**

**P.R.E.A.C.H.**