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2021 AIA Fellowship

Candidate Keith Hempel
Organization LPA Design Studios
Location Irvine, California
Chapter AIA California Council; AIA Long Beach/South Bay

Category of Nomination

Object 2 > Practice (Management)

Summary Statement

Keith Hempel has devoted his career to developing and sharing an integrated model for sustainable design, systematically achieving high performance and design excellence, regardless of budget, program, or size constraints.

Education

California State Polytechnic University of Pomona
College of Environmental Design
1989-1994
Bachelor of Architecture
Magna Cum Laude

California State University International Program
Architecture, Florence, Italy
1992

Licensed in:

State of California, #C29190

Employment

LPA Design Studios, 1995-present (25 years)

C.J. Light Associates, 1994 (1 year)

September 24, 2020

Nancy Rogo Trainer, FAIA
CHAIR, JURY OF FELLOWS
The American Institute of Architects
1735 New York Avenue, NW
Washington, DC 20006

Re: Fellowship Nomination of Keith Hempel, AIA

Dear Ms. Rogo and the Jury,

I am honored to sponsor Mr. Keith Hempel, AIA LEED AP BD+C, for elevation to the College of Fellows of the American Institute of Architects. Within the body of this submission, you will find the accomplishments of a gifted design professional who has elevated an architectural firm, demonstrating on a large scale that high performance and design excellence can be attained within the scope and budget of 'non-boutique' projects. The support of his distinguished references is testimony to his impact on building performance, the respect of his nationwide peers, and the model he has shared with the profession on how we will attain a net-zero future.

A leader by example, his work with speculative office and industrial facilities demonstrates how an integrated process focused on building performance and energy efficiency can have a positive impact on our communities. These often-overlooked projects with lean, 'bottom line' budgets, through Keith's leadership have won 16 state and component AIA awards for design and achieved 26 LEED certifications, many of which exceeded the initial targets established by our clients.

Keith's passion and leadership are directly responsible for inspiring and educating the hearts and minds of the 400 people in our firm, enabling us to become the largest firm to meet the AIA's 2030 Commitment of 70% energy use reductions in both 2018 and 2019. The combined portfolios totaled over 11 million SF of education, workplace, and public environments. Typically, large firms have short institutional memory. Keith's strategy to overcome this at LPA was to establish a well-developed, sustainable annual curriculum, sharing case studies, concepts, and processes to inspire and cultivate knowledge. Offered in monthly firm-wide training, the sessions hone our informed process, enabling our integrated teams to identify and work toward a shared set of values and performance goals on each project. This investment in our people has established our firm as a leader in sustainability with 137 completed LEED certified projects.

Keith has taken those lessons learned and has tirelessly shared and promoted the importance of building performance to our sustainable future through National, State, and Local AIA committees; industry sustainability networks, including internationally through Architecture 2030; and real estate development and other client networks, beginning long before sustainability was at the forefront of discussions as it is today.

Keith Hempel's design contributions and commitment to sustainable leadership deserve recognition. I trust the jury will find the information presented here compelling. Keith will be a credit to the College as he has been to our firm, the Institute, and our entire profession.

Sincerely,

LPA Design Studios

Wendy S. Rogers, FAIA, LEED AP BD+C
CEO

1: SUMMARY OF ACHIEVEMENTS



1.0 Summary of Achievements

Keith Hempel has devoted his career to developing and sharing an integrated model for sustainable design, systematically achieving high performance and design excellence, regardless of budget, program, or size constraints.

A SUSTAINABLE MODEL

Keith Hempel looks beyond the performance of the individual project to create a design ecosystem that enlists not only the members of his team, but also clients and industry partners, on every project, regardless of budget. He seeks sustainability in all building types, with special attention to those that are often shortchanged: speculative office buildings, industrial facilities, building renovations, and public schools. He has crafted and leads an integrated design process that maximizes passive strategies, optimizes appropriate technologies, creates healthy environments that work better for the users, and moves us toward a net zero future.

AN INTEGRATED PROCESS

Keith has methodically developed a culture steeped in sustainability. As design director in a 400-person firm, he has played a key role in building a practice that brings together architects, landscape architects, interior designers, and structural and MEP engineers under one roof, with clear performance goals. To help focus teams, he led a comprehensive series of firm-wide LEED Training Seminars, through which 89% of the firm's staff became LEED Green Associates or LEED Accredited Professionals. He has instilled a multi-disciplined approach to building performance in the firm through the creation and direction of an AIA-credentialed continuing education program, LPA University, which has delivered 50 distinct AIA CES-approved courses since 2016.

RESULTS THAT MATTER

Keith's efforts have established his firm as a model for achieving design excellence and measurable performance goals. LPA was the largest firm to meet the AIA's 2030 Commitment in 2018, one of only 16 companies to meet the target. In 2019, the firm again surpassed the AIA target of a 70 percent predicted energy use intensity (pEUI) reduction across a portfolio of more than 5 million square feet of education, civic and commercial projects. Under Keith's leadership, LPA has saturated its region with exemplary high-performance

buildings: 137 LEED certified projects completed (26 under Keith's immediate direction). Since 2007, the firm has earned more than \$3.3 million in energy efficiency incentives for its clients through local utility "Savings by Design" programs. In 2020, LPA won the AIA National COTE Top Ten Plus award for exemplary energy performance and post-occupancy results.

EDUCATING CLIENTS

Keith is a passionate advocate for sustainable design, educating major clients of his region on how to achieve low-impact, high-performance building design and construction within constrained budgets. He is active in the NAIOP Commercial Real Estate Development Association as a Design Professional Mentor, and he speaks regularly to education and commercial real estate audiences, including NAIOP, the Urban Land Institute, and the Association for Corporate Growth. He has been a LEED AP Instructor for the U.S. Army Corps of Engineers' South Pacific Division, which oversees portions of ten states across the western U.S.

SHARING WITH THE PROFESSION

As founder and chair of AIA Long Beach/South Bay COTE, Keith introduced the first sustainability goals into the chapter's five-year strategic plan and serves as liaison to AIA California COTE. Nationally, he has been a member of BuildingGreen's Sustainable Design Leaders Network since 2008, serving multiple terms as Regional Leader for Southern California and the Southwestern U.S. He represents LPA in the Sustainability Working Group of AIA National's Large Firm Roundtable, where he works to assist firms with 2030 Commitment reporting. In addition, he is participating in AIA National's 2030 Working Group, sharing successes and lessons learned to help other firms improve their culture to better achieve their sustainability goals. Most recently, with an audience that spanned North and South America, he spoke to the steps the profession can take to move toward a carbon neutral future as a keynote panelist for Architecture 2030's CarbonPositive RESET! 1.5°C Global Teach-in, this past September.

2: ACCOMPLISHMENTS



2.1 Significant Work

Professional Positions

1995 - Present LPA Design Studios
2017 – Principal, Design Director
2014 – Associate Principal, Design Director
2004 – Associate, Lead Designer

1994 C. J. Light & Associates - Design Staff

Professional Accreditations and Licenses

2011 - Present LEED AP BD+C – Accredited Professional with Specialty

2004 - 2011 LEED Accredited Professional

2002 - Present Licensed Architect – State of California #C29190

Professional Organizations

2008 - Present Architecture + Design Sustainable Design Leaders Network

2004 - Present U.S. Green Building Council

2003 - Present American Institute of Architects

Professional Service

AIA National

2020 - Present Large Firm Roundtable - Sustainability Working Group
2030 Commitment Reporting Group

2019 - Present 2030 Commitment Working Group
Firm Culture Subgroup

AIA Long Beach / South Bay Board of Directors

2021 President

2020 Vice President / President Elect

Committee on the Environment (COTE) Chair
Chapter Liaison – AIA California Committee on the Environment (COTE)

2019 Director

Design Award Committee Co-Chair

2018 Secretary

2017 Secretary

Design Award Committee Co-Chair

2016 Director

2015 Director

Design Award Committee

Architecture + Design Sustainable Design Leader Network

2020 Building Electrification Working Group

2014 Regional Leader – Southwestern United States

2012 Regional Leader – Southern California

2011 Regional Leader – Southern California

2010 Regional Leader – Southern California

U.S. Green Building Council – Orange County Chapter

2010 Education Committee

2009 Education Committee

2.1 Significant Work

Community and Student Outreach

- 2019** Instructor, Kids Draw – AIA Long Beach/South Bay
- 2018** Instructor, Kids Draw – AIA Long Beach/South Bay
- 2017** Juror, California State University Long Beach, Industrial Design Program, AIA Long Beach / South Bay - Student Design Competition

Instructor, Kids Draw, AIA Long Beach/South Bay
- 2016** Design Professional Mentor, NAIOP Commercial Real Estate Development Association, San Diego Chapter, University Design Challenge
- 2015** Design Professional Mentor, NAIOP Commercial Real Estate Development Association, San Diego Chapter, University Design Challenge

Guest Critic, AIA Orange County, Student Design Competition
- 2014** Design Professional Mentor, NAIOP Commercial Real Estate Development Association, San Diego Chapter, University Design Challenge
- 2010** Design Team Leader, HomeAid Project Playhouse, Ocean Adventure Lab: A Net Zero Playhouse

Speaking Engagements and Teaching

- 2010 - Present** LPA University Director – For the last ten years oversaw firm-wide curriculum with a focus on sustainability and building performance. LPA is an approved continuing education unit provider for the AIA. This role has called for content development and the presentation of numerous 60-minute educational courses

2020



Keynote Panelist,
Architecture 2030 –
Carbon Positive RESET!
Architecture: Designing to
Meet 1.5C | Global Teach-In
North and South America

Moderator, AIA Long Beach / South Bay - Town Hall and
AIA California Advocacy Update

- 2019** Speaker, AIA Orange County – LPA Irvine: A Creative, Sustainable and Accessible Workplace
- 2017** Panelist, Urban Land Institute Orange County / Inland Empire Chapter – The Press: The Adaptive Reuse of the Los Angeles Times Building, Newport Beach, CA
- 2016** Panelist, NAIOP Southern California Chapter – The Press: OC’s Biggest Creative Office Conversion, Costa Mesa, CA
- 2015** Speaker, Association for Corporate Growth, CEO Signature Event – Conscious Capitalism, Irvine, CA
- 2014** Speaker, Green California Schools Summit – Net Zero for Zero? Pasadena, CA
- 2013** Panelist, 2013 Solar Decathlon, U.S. Green Building Council Orange County Chapter – Orange County Green Building Status Report, Irvine, CA

Speaker, Environmental Design + Construction Webinar – Integrating Innovative HVAC Solutions into Educational Environments

2.1 Significant Work

Speaking Engagements and Teaching Continued

- 2013** Speaker, California's Coalition for Adequate School Housing (CASH), 34th Conference on School Facilities - CHP'ing away at LEED: Getting the most out of LEED, CHPS & HPI, Sacramento, CA
- 2011** Instructor, LEED Green Associate / LEED AP BD+C Review - U.S. Army Corps of Engineers, 3-day seminar, Phoenix, AZ
- Instructor, LEED Construction Phase Review - U.S. Army Corps of Engineers, 2-day seminar, Albuquerque, NM
- Instructor, LEED Green Associate / LEED AP BD+C Review - U.S. Army Corps of Engineers, 3-day seminar, Sacramento, CA
- 2005 - 2010** Instructor, LEED Accredited Professional Seminar* - LPA Design Studios, Ongoing training program that resulted in LEED Professional Accreditation for 89% of the firm, multiple 3-week courses with 9 hours of training time per course, Irvine and Sacramento, CA
- 2008** Speaker, University of California, Los Angeles Extension - LPA: A Sustainable Design Firm
- 2007** Instructor, University of Southern California School of Architecture - ARC 599 - Seminar 6: "Sustainable Case Studies: A Primer for LEED Professional Accreditation" Six-week course, fall semester, Los Angeles, CA
- Instructor, LEED Accredited Professional Seminar* - The Irvine Company, Urban Planning and Development Team, 3-week course with 9 hours of training time, Irvine, CA
- Instructor, LEED Accredited Professional Seminar* - Shea Properties, Tustin Legacy Development Team, 3-week course with 9 hours of training time, Tustin, CA
- 2007** Instructor, LEED Accredited Professional Seminar* - Snyder Langston Construction Company, 3-week course with 9 hours of training time, Irvine, CA
- Panelist, University of California, Los Angeles Extension - The Renaissance of Urban Development: Redefining Community, Session Title: "Building Green: Where Do We Go from Here?"
- 2006** Instructor, Green Building Academy, Green California Summit and Exposition, 2-day seminar, Sacramento, CA
- 2005** Instructor, LEED Accredited Professional Seminar* - Toyota Motor Sales, USA, Real Estate and Facilities Team, 3-week course with 9 hours of training time, Torrance, CA
- Instructor, LEED Accredited Professional Seminar* - DPR Construction, 3-week course with 9 hours of training time Newport Beach, CA

* LEED Accredited Professional Seminars provided participants with a holistic view of the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) Green Building Rating System. Seminar topics included: Introduction to the USGBC and LEED, Project Registration, Sustainable Sites, Water Efficiency, Energy and Atmosphere, Material Resources, Indoor Air Quality, Design and Construction Documentation, Project Certification as well as preparation for accreditation exams.

2.1 Significant Work



Innovation Park

Irvine, CA

2021 | Design Principal

Keith led the design to re-imagine a sustainable response to a 1,100,000sf speculative office campus. He and the team..

- Developed a customizable window system that tenants can enhance with operable windows and glass sectional doors.
- Gave special care to integrate the roof design to incorporate equipment enclosures, future solar panels, and daylighting devices.

The project received Designed to Earn the Energy Star status

The design results in a 75% predicted energy use intensity reduction and exceeded the 2030 Commitment threshold.

Targeting LEED Core and Shell Gold

Keith Hempel AIA, LEED AP BD+C



Spectrum 3

San Diego, CA

2020 | Design Principal

For a 129,000sf life science building with three levels of lab and office over two levels of subterranean parking, Keith worked with the team to...

- Develop a building envelope that passively protects from the sun but maintains dramatic canyon views.
- Design articulated façades that use sunshades, deep recesses, overhangs, and perforated scrims to control heat and glare.
- Strongly connect the building to the outdoors with a roof deck and exterior vertical circulation and amenities.

The design results in a 53% predicted energy use intensity reduction.

Targeting LEED Core and Shell Gold



Edwards Lifesciences Campus Expansion

Irvine, CA

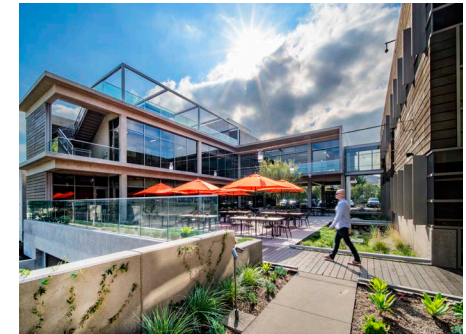
2021 | Design Principal

Keith led a design team that embraced the site's mild climate to design a sustainable 10-acre campus expansion for a medical device manufacturer, with 479,000sf of office, lab, and campus amenities, built in three phases. He...

- Developed an exterior circulation system, accentuated by courtyards and arcades, to reduce conditioned space and its associated loads
- Integrated solar panels into shade canopies to partially offset campus energy usage and put sustainability on display.

The design results in a 79% predicted energy use intensity reduction and exceeded the 2030 Commitment threshold.

Phases target LEED Core and Shell Platinum and Gold



TGS Bridge Building

Irvine, CA

2019 | Design Principal

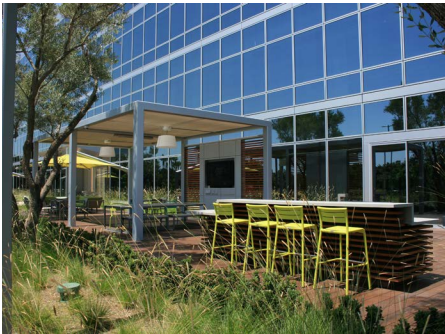
Keith organized 30,000sf of parking, office, and exterior gathering space on a 7,000sf site set between existing buildings with a 40'-0" height limit. He...

- Developed a building massing that passively shades itself and defines a central courtyard.
- Integrated a roof-top solar array that will partially offset the building's energy usage and support other buildings on the campus.

Base building design resulted in a 79% predicted energy use intensity reduction and exceeded the 2030 Commitment threshold.

Roof top solar array will increase predicted energy use reduction to 83%.

2.1 Significant Work



Discovery Business Center Phase 2 & 4 | Irvine, CA

2019 | Design Principal

For a 278,000sf high-performance office space in the park-like setting of what will be a 1,000,000sf campus, Keith...

- Further refined the NextGen prototype he helped develop for Sand Canyon Business Center (2017).
- Optimized building envelopes and conventional systems to meet budgetary and sustainability goals
- Carefully selected HVAC systems, LED lighting and high efficiency glazing for cost and performance.

Phases 2 & 4 received Designed to Earn the Energy Star status.

The design results in a 60% predicted energy use intensity reduction.

LEED Core and Shell Gold (Phase 4) & Silver (Phase 2)

Keith Hempel AIA, LEED AP BD+C



Spectrum 4
San Diego, CA

2018 | Design Principal

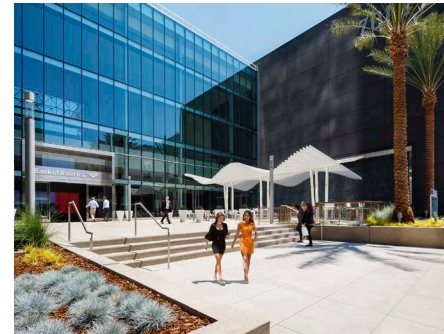
Keith led the design team to carefully site this 171,000sf, three-story, state-of-the-art lifescience building with two levels of sub-grade parking on a bluff top with expansive views to the surrounding canyons. He and the team...

- Developed a “Boomerang” form of the building, which captures a 1.4-acre “meadow” and maximizes daylight and views.
- Designed deep overhangs and sunshades to passively protect interior spaces and exterior decks from the sun.

The design results in a 45% predicted energy use intensity reduction.

AIA San Diego Award of Merit

LEED New Construction Gold



701B Street
San Diego, CA

2018 | Design Principal

Keith directed the project team to design and detail a high-performance renovation for the existing lobby of a 571,000sf downtown office tower. He worked with the team to...

- Replace an outdated space frame façade with a high-efficiency curtain wall and integrated shading for performance, transparency, and visual impact.
- Design a large-format panelized glass door to promote natural ventilation and open a ground floor café to a new entry plaza to enhance the urban setting.

The design results in a 29% lighting power density reduction and exceeded the 2030 Commitment threshold for interior projects.



Edwards Lifesciences Starr Atrium
Irvine, CA

2017 | Design Principal

Keith captured the space between two existing buildings to create a dynamic enclosure for a new, 25,000sf event space with lofty sustainability goals. He...

- Worked with engineers to create a structural “truss-net” for a sculptural clear span.
- Employed displacement ventilation to quietly and efficiently condition the space and eliminate visible ductwork.

Incorporated solar panels to offset 100% of the atrium’s energy usage.

Met 2030 Commitment

AIA California Council Award of Merit – Interior Architecture

AIA Orange County Award of Honor

LEED New Construction Platinum

2.1 Significant Work



3250 Olcott
Santa Clara, CA

2017 | Design Principal

Keith redesigned an aging, 39,000sf, three-story, 1970s-era office building for performance and visual impact. He...

- Added a north facing, two-story lobby to create an identifiable entry, introduce daylight, and support a roof deck.
- Incorporated new high-performance glazing for views to heritage redwood trees
- Used lightweight cladding to maintain the existing structure, saving dollars and resources.

The design exceeded state energy codes by 16%.

AIA Orange County COTE Award

LEED Core and Shell Gold
(exceeded Silver target)

Keith Hempel AIA, LEED AP BD+C



Sand Canyon Business Center
Irvine, CA

2017 | Design Principal

Keith led design of two four-story buildings totaling 210,000sf, to create a next generation (NextGen) prototype for high performance office space. He...

- Worked with the team to optimize building systems to meet stringent state energy codes but satisfy the client's strong desire for uninterrupted views and daylight.
- Used large-format sliding glass doors to open to private exterior spaces and shared pavilions.

The project received Designed to Earn the Energy Star status.

The design results in a 56% predicted energy use intensity reduction.

LEED Core and Shell Gold
(exceeded Silver target)



Eastgate Terrace
San Diego, CA

2016 | Design Principal

Keith led design efforts for a three-story, 93,000sf office building built on the NextGen platform. He...

- Sited the building to maximize a north exposure, opening the building to diffuse natural daylight and expansive canyon views.
- Designed high-performance envelope, HVAC, lighting and plumbing to conserve energy and water.
- Designed large-format sliding glass doors that open to shared, canyon-edge gathering spaces.

The project received Designed to Earn the Energy Star status.

The design results in a 47% predicted energy use intensity reduction.

LEED Core and Shell Silver



Towers @ 2nd
San Jose, CA

2016 | Design Principal

Keith led a landscape and interiors team to revitalize an unleaseable basement level shared by two office towers, converting it into common amenities, including a fitness center, lounge, and conference space. He...

- Worked with the client and team to program an underutilized sunken courtyard with outdoor work and social gathering spaces.
- Worked with the landscape team to transform a terraced planted retaining wall into a stadium stair with flexibility for small informal gatherings and corporate events.

The design results in a 61% lighting power density reduction and exceeded the 2030 Commitment threshold for interior projects.

2.1 Significant Work



Fremont High School Modernization
Los Angeles, CA

2016 | Lead Designer

Keith led team efforts to create a sustainable modernization model for LA Unified, the nation's 2nd largest school district. He...

- Designed a perforated façade for passive shading, glare control and a new community face.
- Used life-cycle cost analysis to validate the use of high-performance materials to exceed district standards.

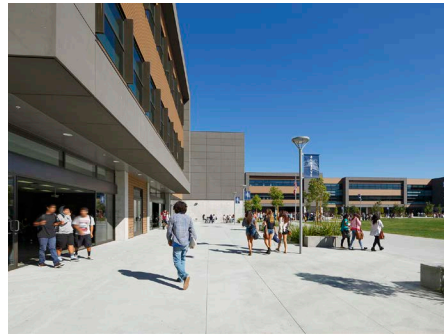
Coalition for High Performance Schools (CHPS) Verified.

The design results in a 57% predicted energy use intensity reduction.

Coalition for Adequate School Housing (CASH) / AIA California Council Award of Honor – Modernization

LEED for Schools Gold (exceeded Silver target)

Keith Hempel AIA, LEED AP BD+C



San Marcos High School
San Marcos, CA

2014 | Lead Designer

Keith led a fully integrated design team on a \$125 million, phased reconstruction totaling over 400,000sf. He...

- Worked with the team to organize classrooms, gymnasium and performing arts around a main quad.
- Oriented major entries to face north to maximize transparency and daylight.
- Integrated passive solar control and high-efficiency systems to ensure lifetime performance.

Meets CHPS standards.

The design results in a 56% predicted energy use intensity reduction.

Coalition for Adequate School Housing (CASH) / AIA California Council Award of Honor



1 Columbia Place
San Diego, CA

2014 | Lead Designer

Keith led the design efforts to completely renovate and rebrand this 27-story, high-rise. He...

- Reoriented and redesigned the entry to strengthen the street level experience.
- Redesigned underutilized exterior terraces to provide tenant amenities with amazing views of the skyline.
- Upgraded lighting and finishes for a consistent branded experience.
- Used high performance materials and systems throughout the project.

Improvements resulted in at 12% increase in occupancy.

LEED Gold Recertification for Existing Buildings Operations and Maintenance



7835 Ivanhoe
San Diego, CA

2013 | Lead Designer

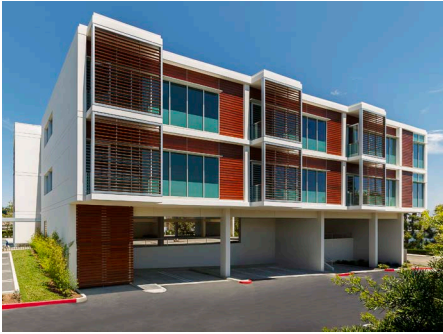
Keith transformed a small, run-down 3,400sf building into a high-performing office space that fully leverages its coastal setting. He...

- Stripped away façade decoration to reveal a simple, modern geometry.
- Introduced operable windows on opposing façades to capture coastal breezes and used tubular daylighting devices to light the 2nd floor.
- Used high-performance building systems throughout.

The design exceeded state energy codes by 16%.

LEED New Construction Certification (within strict budgetary constraints)

2.1 Significant Work



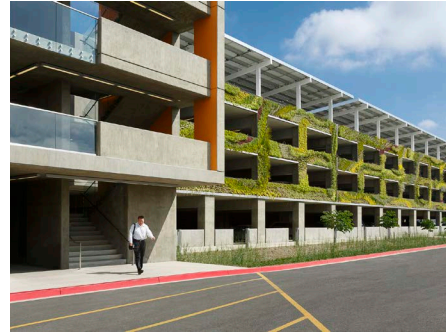
2 Journey Medical Office Building
Aliso Viejo, CA

2013 | Lead Designer

Keith resolved the challenges of a small, sloping site for a 20,000sf medical office building. He...

- Lifted the office suites off the ground to provide required parking underneath.
- Developed exterior lobby, elevated walkways, and stairs to reduce conditioned space and maximize leasable space.
- Optimized solar orientation to maximize north exposure.
- Inserted solid shear walls on east and west elevations to protect from heat gain and increase interior flexibility.

The design exceeded state energy codes by 15%.



Edwards Lifesciences Parking Structure | Irvine, CA

2013 | Lead Designer

Keith integrated sustainability into the design of a 1,200-car parking structure, the first step in a ten-year master plan, “creating land” for outdoor space. He...

- Introduced a living wall to provide a natural backdrop for a future campus green that will support recreational activities.
- Incorporated vegetated swales to capture and treat stormwater runoff.
- Integrated expandable infrastructure for electric vehicle charging.

This design includes a “solar umbrella” above the roof deck to provide shade and to offset 100% of the building’s energy use.



TGS Campus Expansion
Irvine, CA

2012 | Lead Designer

Keith led design for a two-phase expansion of a campus LPA had designed in 2000. Phase one called for the adaptation of an existing recreation building into a high-density data center. Phase two called for a new two-story, 10,000sf office addition. Keith...

- Greatly reduced data center energy demand by applying air-side economization, allowed by the site’s temperate climate.
- Took cues from the existing campus, using a simple diagram of relatively solid east and west walls and glazed north and south façades.
- Passively shaded openings with fin walls and vertical and horizontal sunshades.



Watson Land Company HQ
Carson, CA

2010 | Lead Designer

Keith led an integrated team to design a new 29,000sf high-performance headquarters for a sustainably minded development company. He...

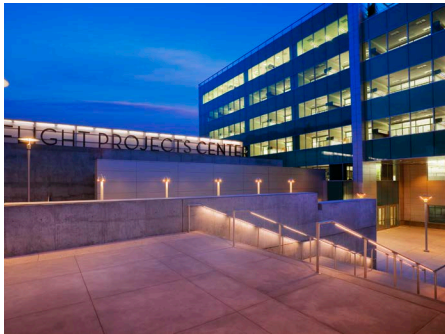
- Modeled and designed each façade to optimize its passive solar response, increasing the envelope’s overall performance.
- Introduced skylights, interior clerestories, double-height volumes, and open stairs to filter daylight throughout the building.
- Partially offset the building’s energy use with solar panels.

The project received Designed to Earn the Energy Star status.

The design exceeded state energy codes by 42%

LEED New Construction Platinum

2.1 Significant Work



JPL Flight Project Center
La Canada Flintridge, CA

2009 | Lead Designer

Under tight budget constraints, Keith used cost effective materials and systems to exceed federal targets for this 190,000sf, seven-story office tower and 400-seat auditorium. He...

- Specified insulated metal panels, high performance glazing and “off-the-shelf” sunshades to passively control heat gain.
- Designed the auditorium with displacement ventilation and an insulating green roof for efficiency and comfort.

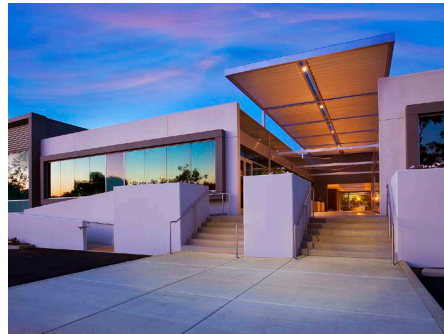
The project received Designed to Earn the Energy Star status.

The design exceeded state energy codes by 25%.

NASA’s first LEED Gold facility

LEED New Construction Gold (exceeded federal Silver mandate)

Keith Hempel AIA, LEED AP BD+C



Koll Airport Professional Building
Irvine, CA

2009 | Lead Designer

Keith strategically adapted an old industrial building into a high-performance multi-tenant professional office complex. He...

- Called for surgical cuts into the 62,000sf floor plate to create entry courts that provide individual suite access, introduce daylight, and accommodate increased parking requirements.
- Designed louvered canopies to provide solar protection, integrate LED lighting, and identify suite entries.
- Fully upgraded the building with high performance glazing, lighting, and HVAC systems.

The design exceeded state energy codes by 20%.

LEED Core and Shell Silver (exceeded Certification target)



Toyota Los Angeles Region Expansion
Irvine, CA

2008 | Lead Designer

Keith utilized natural daylight to drive the design of a 16,000sf expansion for new technical training service bays. He...

- Negotiated with the client facilities team to exceed and amend corporate standards to increase the number of skylights, introduce service bay doors with glass and broader use of light-colored interior finishes to maximize the penetration of daylight.
- Worked with design team to specify high efficiency plumbing and irrigation systems and a native drought tolerant plant palette to minimize water consumption across the campus.

Designed to meet LEED for Existing Buildings, Operations & Maintenance Certification (EBOM)



Dreamworks Knitting
Irvine, CA

2007 | Lead Designer

With strict budgetary constraints, Keith led design of this two-story, 25,000sf headquarters for a women’s apparel company. He...

- Designed the south-facing front façade with full-height curtainwall and horizontal sunshades for transparency and reduced heat gain and glare.
- Achieved this openness with concrete tilt-up construction by dragging loads into an offset core and avoiding the cost of additional steel bracing.
- Used the tilt-up system for cost effectiveness, thermal mass, and response to the surrounding business park’s rigorous design guidelines.

2.1 Significant Work



Koll Center 3

Irvine, CA

2007 | Lead Designer

Keith introduced sustainable strategies in the design of a 181,000sf for-sale industrial complex. He...

- Strategically located glazing to provide daylight and views.
- Employed vertical fins, horizontal sunshades and canopies for passive shading.
- Introduced custom sliding doors to promote indoor-outdoor connections and capture prevailing breezes.
- Used cool roofs, vented skylights, and high-efficiency lighting, plumbing, and HVAC systems throughout.



Orange Public Library Expansion

Orange, CA

2007 | Lead Designer

Located in the historic heart of Old Town Orange, Keith led design efforts to expand the existing 17,000sf library with a two story 28,000sf addition. He...

- Prepared analysis to demonstrate the value of renovating the existing library and expanding as opposed to demolition and building new.
- Used deep set windows, overhangs, arcades and trellises to maintain the vernacular of the historic district and to passively protect glazing from solar heat gain.
- Worked with the engineering disciplines to integrate high efficiency HVAC and lighting systems throughout both the renovation and the addition.



C. I. Design

Irvine, CA

2006 | Lead Designer

Keith led design efforts for a 30,000sf office and warehouse building for a computer solution manufacturing company. He...

- Located the administrative program to the north, to take advantage of daylight and views to the local mountains with minimal heat gain.
- Designed south-facing roll-up doors and vented skylights to capture prevailing breezes.
- Used skylights throughout all warehouse and manufacturing spaces.

On a limited budget, the project exceeded strict state energy codes by over 33%.



Toyota South Campus Expansion

Torrance, CA

2003 | Project Designer

In his first LEED project, Keith collaborated on the site design and building envelope for this 625,000sf office campus expansion. He worked with the team to...

- Set as a defining goal an aggressive budget, equal to or less than nearby speculative office development.
- Demonstrated that sustainability could be achieved at scale at no added cost through good design.

The design exceeded state energy codes by 42%.









First privately developed office campus in the nation to earn LEED Gold Certification.

LEED New Construction Gold

AIA Long Beach / South Bay Award of Honor

2.2 Significant Awards, Honors & Recognition

AWARDS

- 2019** **San Diego Business Journal Project of the Year**
701 B Street
San Diego, CA
- 2018**  **AIA California Council Award of Merit – Interior**
Edwards Lifesciences Starr Atrium
Irvine, CA
-  **Coalition for Adequate School Housing / AIA California Council Award of Honor – Modernization**
Fremont High School
Los Angeles, CA
-  **AIA Orange County Committee on the Environment Award**
3250 Olcott
Santa Clara, CA
-  **AIA San Diego Award of Merit**
Spectrum IV
San Diego, CA
- American Society of Landscape Architects Sierra Chapter Award of Honor**
Towers at 2nd
San Jose, CA
- CREW – Orange County SPIRE Awards Best Renovation**
Edwards Lifesciences Starr Atrium
Irvine, CA
-  **AIA California Council Award of Merit – Interior**
Edwards Lifesciences Starr Atrium
Irvine, CA
-  **AIA Orange County Committee on the Environment Award**
Edwards Lifesciences Starr Atrium
Irvine, CA
- 2016**  **AIA San Diego Award of Merit – Unbuilt**
The Press
Costa Mesa, CA
- 2015**  **Coalition for Adequate School Housing / AIA California Council Award of Honor**
San Marcos High School
San Marcos, CA
- Pacific Coast Builders Conference Gold Nuggets Awards Award of Merit – Education Project**
San Marcos High School
San Marcos, CA
- 2014**  **Coalition for Adequate School Housing / AIA California Council Award of Honor – Project in Design**
Fremont High School
Los Angeles, CA
- Pacific Coast Builders Conference Gold Nugget Awards Award of Merit – Best Commercial Project**
7835 Ivanhoe
San Diego, CA
- 2012**  **Coalition for Adequate School Housing / AIA California Council Award of Honor - Project in Design**
San Marcos High School
San Marcos, CA
- Precast Concrete Institute Best Commercial Office Building**
Watson Land Company Headquarters
Carson, CA
- 2010** **Green Technology Magazine Green California Leadership Awards - Green Building Category**
Jet Propulsion Laboratory Flight Projects Center
La Canada Flintridge, CA

2.2 Significant Awards, Honors & Recognition


AWARDS (CONTINUED)


- 2010** **Associated General Contractors Marvin M. Black Partnering Award**
Jet Propulsion Laboratory Flight Projects Center
La Canada Flintridge, CA
- 2009** **Construction Communications Green Building of America Awards – New Construction & Renovation Community Service Award**
Koll Airport Professional Center
Irvine, CA
- 2007** **Pacific Coast Builders Conference Gold Nugget Awards Grand Award – Best Commercial Project**
C.I. Design
Irvine, CA
- 2006**  **AIA California Council / Savings by Design Award for Exceptional Performance in a Suburban Office Park**
Toyota Motor Sales South Campus Expansion
Torrance, CA
- 2004** **City of Fairfield Design Awards Award of Merit**
Green Valley Corporate Park
Fairfield, CA
- 2003**  **AIA Long Beach / South Bay Award of Honor – Green Architecture**
Toyota Motor Sales South Campus Expansion
Torrance, CA

CORENET Global Sustainable Design Leadership Award
Toyota Motor Sales South Campus Expansion
Torrance, CA


California Environmental Protection Agency Governor’s Environmental & Economic Leadership Award
Toyota Motor Sales South Campus Expansion
Torrance, CA

- 2003** **Pacific Coast Builders Conference Gold Nugget Awards Best Sustainable – Green Project**
Toyota Motor Sales South Campus Expansion
Torrance, CA

- 1999**  **AIA Orange County Award of Honor**
Mission Imports
Laguna Niguel, CA

-  **AIA Orange County Award of Honor**
Mossimo Corporate Headquarters
Irvine, CA

- 1998** **Pacific Coast Builders Conference Gold Nugget Awards Award of Merit**
Mossimo Corporate Headquarters
Irvine, CA

- 1997**  **AIA Orange County Award of Merit - On the Boards**
Mission Imports
Laguna Niguel, CA

-  **AIA Orange County Award of Merit**
Westwood Medical
Westwood, CA

U.S. GREEN BUILDING COUNCIL - LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED)

LEED PLATINUM CERTIFICATIONS

- 2021** **Vans HQ2**
LEED for New Construction (NC), In Progress

- 2020** **Edwards Lifesciences Campus Expansion, Building A**
LEED for New Construction (NC), In Progress

2.2 Significant Awards, Honors & Recognition

LEED PLATINUM CERTIFICATIONS (CONTINUED)

2017 **Edwards Lifesciences Starr Atrium**
LEED for New Construction (NC)

2011 **Watson Land Company Headquarters**
LEED for New Construction (NC)

LEED GOLD CERTIFICATIONS

2021 **Spectrum III**
LEED for Core and Shell (CS), In Progress

Edwards Lifesciences Campus Expansion, Building D
LEED for Core and Shell (CS), In Progress

Innovation Park, Phase 1
LEED for Core and Shell (CS), In Progress

Innovation Park, Phase 2
LEED for Core and Shell (CS), In Progress

2020 **Edwards Lifesciences Campus Expansion, Building C**
LEED for Core and Shell (CS), In Progress

Edwards Lifesciences Campus Expansion, Building B
LEED for Core and Shell (CS), In Progress

2019 **Discovery Business Park, Phase 4**
LEED for Core and Shell (CS)

2018 **3250 Olcott**
LEED for Core and Shell (CS)

Spectrum IV
LEED for New Construction (NC)

2017 **Fremont High School Modernization**
LEED for Schools

Sand Canyon Business Center
LEED for Core and Shell (CS)

2010 **Toyota Training Facility, Inland Empire**
LEED for Commercial Interiors (CI)

2009 **Jet Propulsion Laboratory Flight Project Center**
LEED for New Construction (NC)

2003 **Toyota Motor Sales South Campus Expansion**
LEED for New Construction (NC)

LEED SILVER CERTIFICATIONS

2021 **6 Polaris**
LEED for Core and Shell (CS), In Progress

Western Digital, Building F4
LEED for New Construction (NC), In Progress

University California Irvine Research Park, Phase IX
LEED for Core and Shell (CS), In Progress

2019 **Discovery Business Park, Phase 2 Building A**
LEED for Core and Shell (CS)

Discovery Business Park, Phase 2 Building B
LEED for Core and Shell (CS)

2017 **Eastgate Terrace**
LEED for Core and Shell (CS)

2009 **Koll Airport Professional Center**
LEED for Core and Shell (CS)

2.2 Significant Awards, Honors & Recognition

LEED CERTIFIED

2014 7835 Ivanhoe
LEED for New Construction (NC)

COALITION FOR HIGH PERFORMANCE SCHOOLS (CHPS)

2019 Fremont High School Modernization
CHPS Verified

U.S. ENVIRONMENTAL PROTECTION AGENCY – DESIGNED TO EARN THE ENERGY STAR

2020 Innovation Park Phase 1
Irvine, CA
100, 101, 105, 110, 120, 130, 140, 150 Progress

2019 Discovery Business Park Phase 4
Irvine, CA
15555 Laguna Canyon Road

Discovery Business Park Phase 2
Irvine, CA
505, 525 Technology Drive

2016 Sand Canyon Business Center
Irvine, CA
15485, 15495 Sand Canyon

Eastgate Terrace
San Diego, CA
9779 Towne Centre Drive

2009 Watson Land Company Headquarters
Carson, CA

2008 Technology Park @ Legacy Park
Tustin, CA

2007 Jet Propulsion Laboratory Flight Projects Center
La Canada Flintridge, CA

2.3 Significant Publications & Media

PUBLICATIONS AND MEDIA

2020

Five tips for meeting the 2030
Commitment

By Keith Hempel, AIA, Principal Director of Workbooks at LPA Design Studios, January 07, 2020



AIA National Website
Article - Keith Hempel, “Five
Tips for Meeting the 2030
Commitment”



ARCHITECT Magazine
Interview - Wanda Lau,
Technology Podcast, Episode
48, “LPA on How to Achieve the
2030 Challenge Targets Toward
Carbon Neutrality”

Climate Change Business Journal

Interview - “LPA Design Studios Expands Sustainable
Building Projects Practice Based on Performance and
Value” Volume XIII, No. 4-5-6, Second Quarter 2020

2019

CityAge

Interview - Jennifer Peralta, “America’s Architects
Struggling to Build Carbon Neutral Buildings”

2018

ArchDaily

Article - Fernanda Castro, “Starr Atrium / LPA”
Featured Project: Edwards Lifesciences Starr Atrium

2017

Orange County Register

Article - Tomoya Shimura, “Edwards Lifesciences
completes \$100 Million renovations of Irvine Campus”
Featured Project: Edwards Lifesciences Starr Atrium

2016

Globe Street


Interview - Carrie Rossenfeld, “How Office Amenities and
Food Trends Relate”

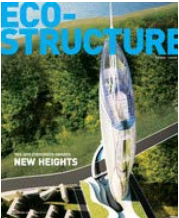
2.3 Significant Publications & Media


PUBLICATIONS AND MEDIA (CONTINUED)

2016 **Globe Street**
Article - David Phillips, "Redev Plans Take Shape for Former LA Times Site"
Featured Project: The Press

2014 **San Diego Union Tribune**
Article - Gary Warth, "Reborn San Marcos High School Opens to Students"
Featured Project: San Marcos High School

2012  **Integrated Design for Corporate Facilities**
Book - ORO Editions
Featured Projects: Jet Propulsion Laboratory Flight Projects Center; Watson Land Company Headquarters

2010  **Eco-Structure**
Article - November/December
Murrye Bernard, "Playing House"
Featured Project: Project Playhouse: Ocean Adventure Lab

 **Eco-Structure**
Article - January/February
Lydia Lee, "Industrial Revolution"
Featured Project: Koll Airport Professional Center

ARCHITECT Magazine
Website Article - Murrye Bernard, "Not a Doll House"
Featured Project: Project Playhouse: Ocean Adventure Lab

2010 **ARCHITECT Magazine**
Website Article - Lydia Lee, "Industrial Revolution"
Featured Project: Koll Airport Professional Center

Cox Community Forum
Televised Interview - Featured Project: Project Playhouse: Ocean Adventure Lab

2009 **Jetson Green**
Article - "Old Industrial Building Gets an Extreme Makeover" Featured Project: Koll Airport Professional Center

Jetson Green
Article - "NASA's Gorgeous LEED Gold Building"
Featured Project: Jet Propulsion Laboratory Flight Projects Center

2007 **Los Angeles Business Journal**
Article - "JPL Projects Center Going Green"
Featured Project: Jet Propulsion Laboratory Flight Projects Center

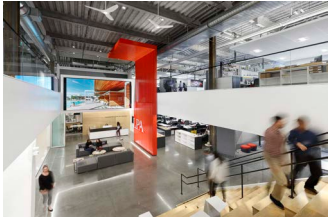
Orange County Register
Article - Courtney Bacalso, "Orange Flavor Lingers"
Featured Project: Orange Public Library Expansion

2005  **Mainstream Green: Sustainable Design by LPA**
Book - Images Publishing Group
Featured Project: Toyota Motor Sales South Campus Expansion

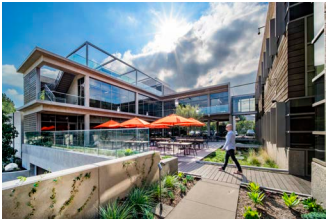
3: EXHIBITS



3.0 Exhibits List



- 1. A Model for Sustainable Practice**
LPA Design Studios
2004 - Present
Infographics: LPA



- 2. Witherspoon Campus TGS**
Irvine, California
2019
Photographers: Cris Costea, LPA



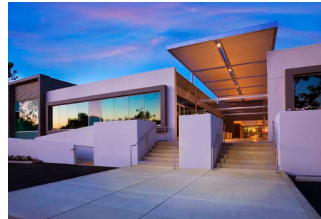
- 3. Starr Atrium Edwards Lifesciences**
Irvine, California
2017
Photographer: Cris Costea



- 4. 3250 Olcott**
Santa Clara, California
2017
Photographer: Cris Costea



- 5. Campus Modernization Fremont High School**
Los Angeles, California
2016
Photographer: Cris Costea



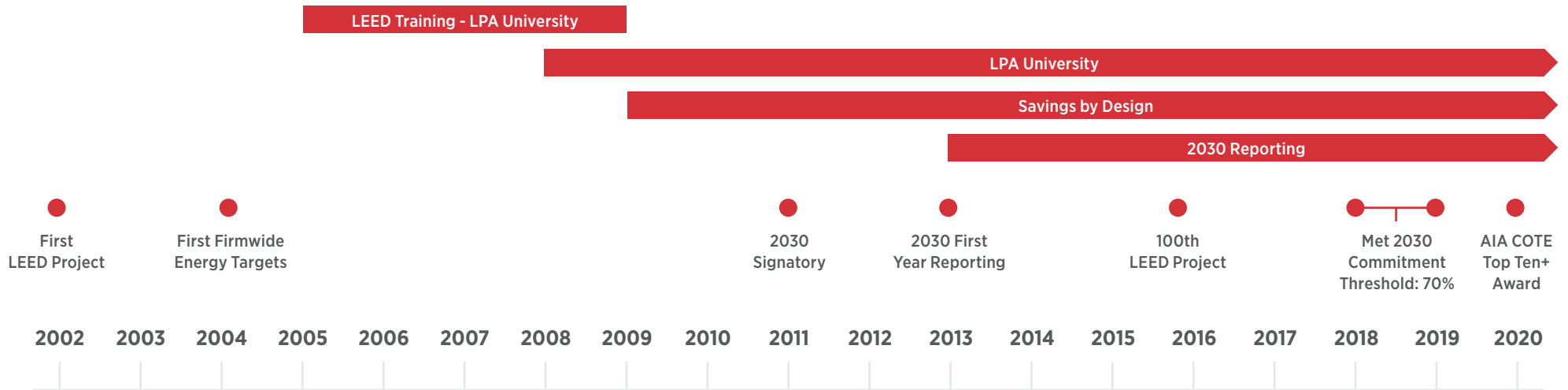
- 6. Koll Airport Professional Center**
Irvine, California
2009
Photographer: Cris Costea



- 7. Campus Expansion Edwards Lifesciences**
Irvine, California
Phase 1 + 2 - Fall 2020 / Phase 3 - End of 2021
Images: LPA

3.0 Exhibits

Sustainable Practice Timeline



1: A Model for Sustainable Practice

Declaration of Responsibility:

I have personal knowledge of the nominee’s responsibility for the exhibit listed above. That responsibility included:

Project under direction of the nominee

Dan Heinfeld, FAIA, LEED AP BD+C

Principal
LPA Design Studios
Company President

A SUSTAINABLE MODEL:

In 2004, LPA established a firm-wide performance target that all projects would exceed California’s stringent Title 24 Energy Code by 25%. Since then, Keith has dedicated his passion for building performance and design to helping his firm become a national leader in the sustainable design movement and a model for other firms.

EMPOWER PROJECT TEAMS:

To achieve sustainability at scale across a large firm, expertise needs to live within the firm’s project teams. It cannot be limited to a few experts or a “green team.” Starting in 2005, Keith led a comprehensive series of firm-wide LEED Training Seminars, through which 89% of the firm became LEED Green Associates or LEED Accredited Professionals. A goal of the program was to describe the key concepts of LEED as a framework that could be applied to all projects, not just those pursuing certification.

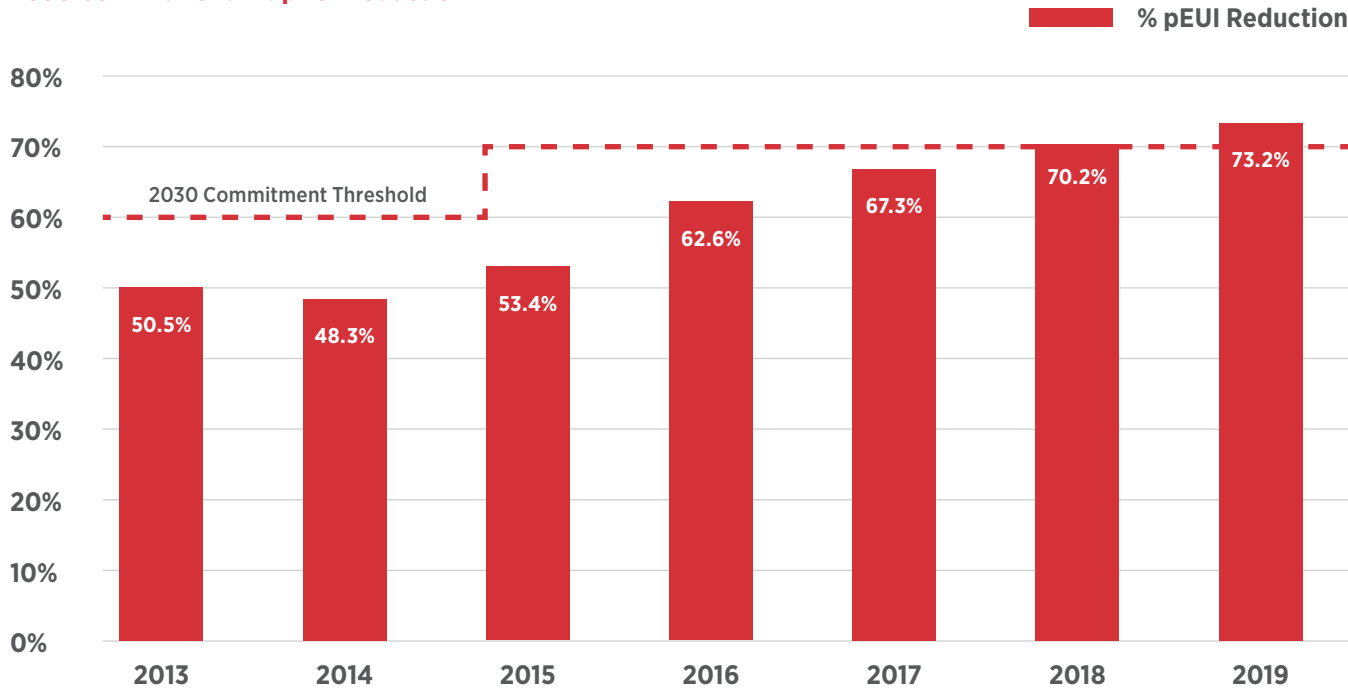
INVEST IN PEOPLE:

In 2007, the firm began LPA University to promote professional development and build expertise. In 2010, Keith was asked to develop a curriculum focused on building performance and integrated design, to deepen the level of sustainability across the firm’s projects. Building on the LEED seminars, he organized monthly sessions around case studies, project research, and takeaways from national conferences. He has been a key presenter for the program, which has delivered 50 hours of AIA CES-approved courses since 2016.

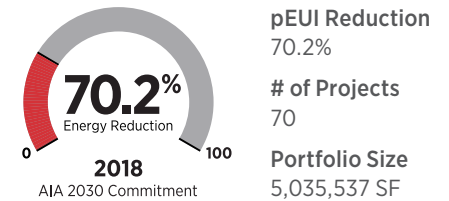
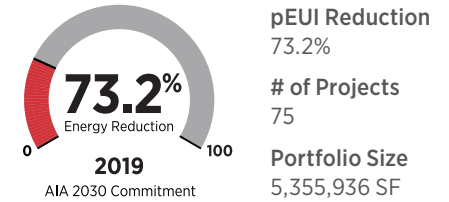
Keith led development of a grant program for employees, to support specialized research and education in sustainability and building performance, using more than \$1.1 million in funds generated from energy efficiency incentive programs offered by local utilities.

3.0 Exhibits

2030 Commitment - % pEUI Reduction



LPA has averaged better than the 2030 Commitment 70% threshold over the last three years.



SUPPORT AN INTEGRATED PROCESS:

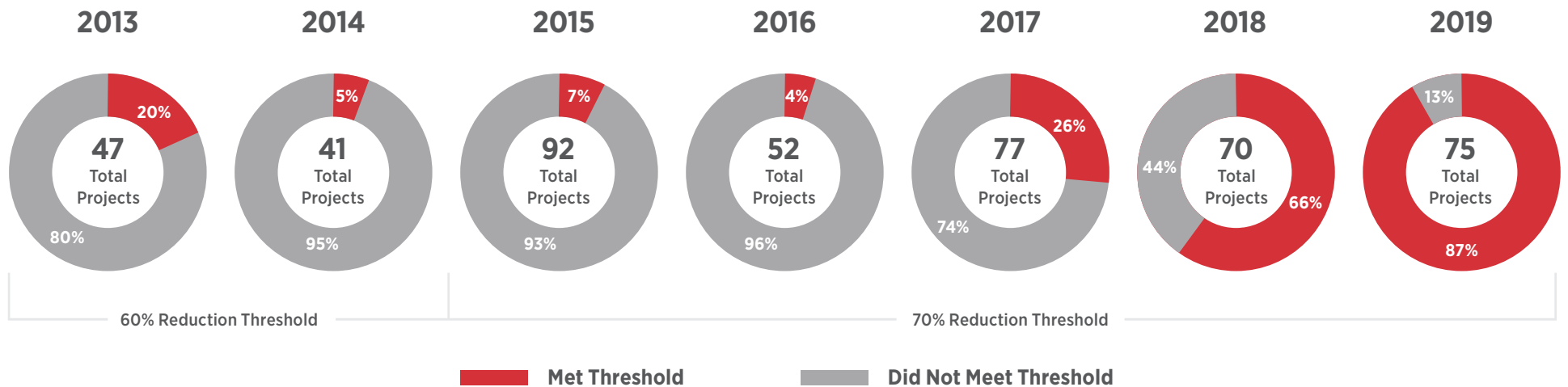
As design director, Keith models an integrated process in all projects, regardless of budget, scale, or project type. He invites clients, in-house disciplines, and out-of-house consultants to the table in the early design phases to co-author goals for the project. Progress toward goals is validated at key milestones. At project completion, results are collected and reviewed to identify goals that have been achieved and areas for future growth.

PROMOTE TRANSPARENCY:

LPA began reporting portfolio data for the AIA 2030 Commitment in 2013. Keith shares yearly progress with the firm, presenting the firm’s metrics, successes and lessons learned, promoting an open dialogue on how to improve building performance. The practice of sharing results has taken hold across the firm. Energy targets and results on all projects are presented and shared within the firm and in communications with colleagues and clients. Energy use reductions are published in all project profiles, as well as in the firm’s quarterly magazine, Catalyst.

3.0 Exhibits

Percentage of Projects Meeting the 2030 Commitment



CONNECTING PERFORMANCE TO DESIGN EXCELLENCE:

Keith has taken a leadership role in developing a firm culture in which building performance is a key criterion of design excellence. He guides project teams across all disciplines in setting targets, tracking progress, and analyzing results. Younger designers throughout the firm regularly use the framework he established, which is consistently reinforced through education programs and collaborative review of projects.

RESULTS THAT MATTER:

This model for firm practice has yielded some incredible results. LPA has completed 137 LEED-certified projects, with an additional 129 projects currently pursuing certification. In 2018, it became the largest firm to meet the AIA's 2030 Commitment, when it achieved a 70.2% predicted energy use intensity (pEUI) reduction, exceeding the Commitment's 70% threshold. The reported portfolio totaled more than 5 million square feet and included a diverse mix of project types including civic, commercial, K12 education, higher education, and healthcare. In 2019, LPA backed up these results by reporting a 73.2% pEUI reduction over a similar portfolio that totaled over 5.3 million square feet.

SHARING WITH THE PROFESSION:

Keith shares the lessons learned from the past 15 years broadly with the profession. He represents LPA in the Sustainability Working Group of AIA National's Large Firm Roundtable, where he assists firms with 2030 Commitment reporting. Simultaneously, as a member of AIA National's 2030 Commitment Working Group, he works with a subgroup on firm culture to assist firms of all sizes craft sustainability action plans and work toward achieving their sustainability goals. In 2019, he authored "Five tips for meeting the 2030 Commitment" for the AIA National website and was interviewed by ARCHITECT Magazine for an episode of their technology podcast titled "LPA on How to Achieve the 2030 Challenge Targets Toward Carbon Neutrality." In September 2020, Keith was a keynote panelist for Architecture 2030's CarbonPositive RESET! 1.5°C Global Teach-In. There, with an audience that spanned North and South America, he shared actionable steps design professionals can take today to move toward a carbon neutral future.

"You all did a masterful job of setting the bar for the profession, it will make a huge difference moving forward..."

Ed Mazria, FAIA, in an e-mail thanking Carbon Positive keynote panelists Keith Hempel, AIA, Marsha Maytum, FAIA, and Rives Taylor, FAIA.

3.0 Exhibits

2: TGS Witherspoon Campus Irvine, CA

INTRODUCTION:

The Witherspoon Campus for financial management company TGS has been 20 years in the making. The development is a series of thoughtful additions to a compact site, each building upon the one that came before. The design of the campus began with a 15,000sf, single-story office building and a 7,000sf recreational facility (2001). Company expansion led to the adaptive reuse of the recreation facility as a data center (2011) and a 10,000sf, two-story office addition (2012). The campus maximized its available entitlement with the construction of a four-level structure that added sub-grade parking, additional office space, a central courtyard and roof deck (2019).

Declaration of Responsibility:

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:
Project under direction of the nominee

Fred Taylor

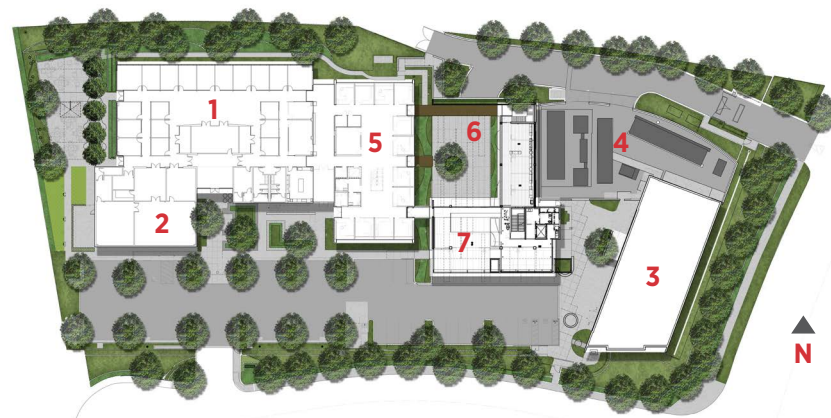
Co-founder, President
TGS Management Company
Client

Design Firm: LPA

Firm of Record: LPA

Completed: 2019

Role of Nominee: Lead Designer / Design Principal



1. 1-Story Office (2001)
2. Data Center (2001)
3. Recreation Center / Expanded Data Center (2011)
4. Utility Yard (2011)
5. 2-Story Office Expansion (2012)
6. Central Courtyard (2019)
7. Bridge Building (2019)

3.0 Exhibits

A SUSTAINABLE MODEL:

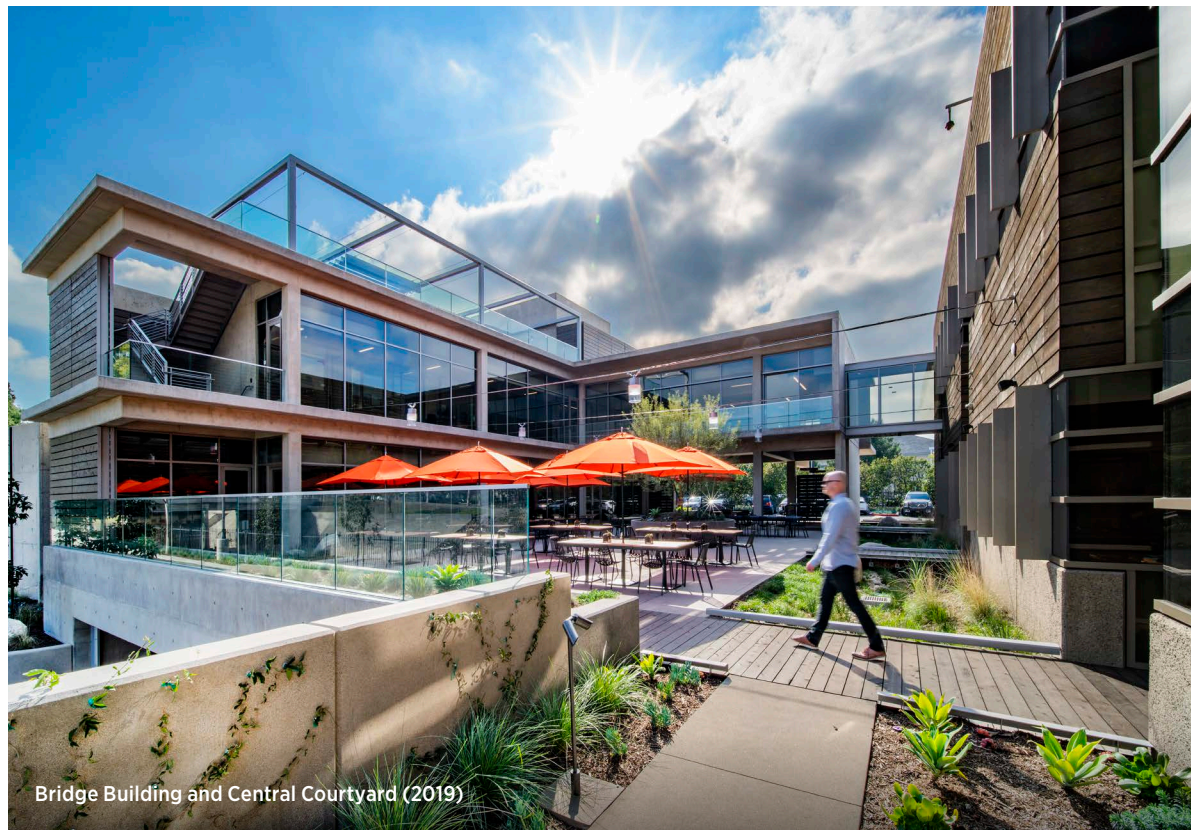
Keith led design teams in a simple, passive design approach that unifies the campus and protects it from the sun. Organized along an east-west axis with a strong north exposure, the buildings understand where the sun is. East and west facades are protected by adjacent buildings and have limited openings. South exposures have horizontal sunshades and overhangs. North elevations open to views of the mountains and daylight. Skylights and roof monitors ensure access to daylight throughout the campus. High efficiency systems are integrated into all the buildings. The adaptive reuse of the recreation building into the expanded data center allowed the team to take advantage of the mild climate and introduce an outside air economizer to greatly improve efficiency. Renewable energy was introduced to the campus in 2019 with roof-mounted solar arrays.

AN INTEGRATED PROCESS:

The integrated process employed throughout the campus can best be seen in the recently completed Bridge Building. With limited site remaining, a 40-foot height restriction and an aggressive program of parking, offices, and exterior gathering space, Keith stacked programmatic elements vertically. He worked with landscape and civil engineering teams to provide subgrade parking. A cast in place concrete structural system minimizes floor-to-floor heights and creates two office levels around a central courtyard. An optimized building section allows the project to meet the height restriction. On the upper level, a rooftop deck with mountain views completes the project.



Main entry at original office building (2001) with two-story addition (2012)

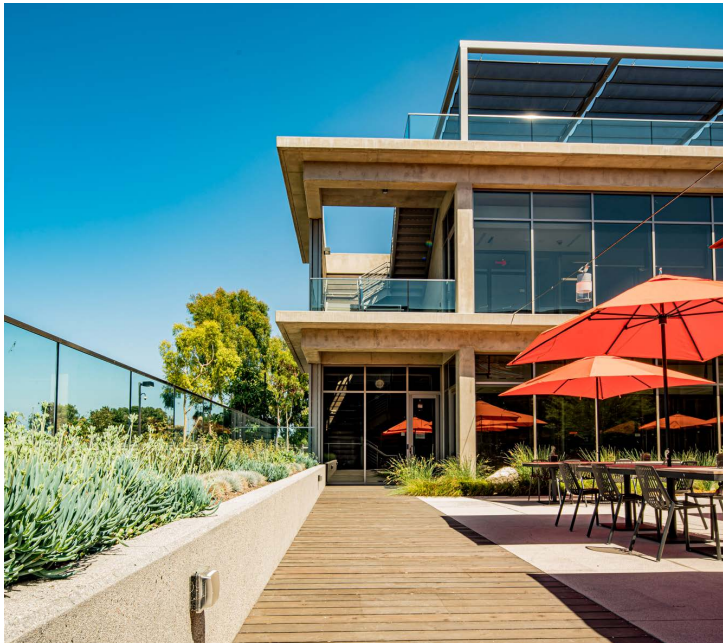


Bridge Building and Central Courtyard (2019)

3.0 Exhibits

RESULTS THAT MATTER:

In 2019, the final phase of the campus expansion reported a predicted energy use intensity (pEUI) reduction of 78% when compared to a similar baseline facility, exceeding the 2030 Commitment threshold, which at that time was set at a 70% reduction. With the completion of the installation of the rooftop solar panel array, currently in progress, the pEUI of the project will improve to an 83% reduction.



3.0 Exhibits

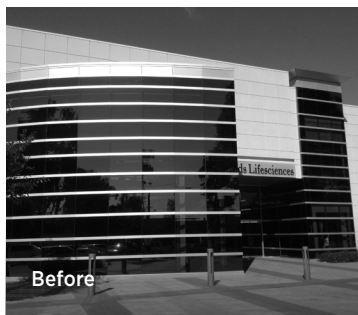
3: Edwards Lifesciences Starr Atrium Irvine, CA

INTRODUCTION:

Replacing an underwhelming lobby and cafeteria, the 25,286 sq.-ft. Starr Atrium is the focal point for the growing campus. It includes a café, meeting rooms, collaborative digital meeting spaces, museum elements and media displays, large-scale projection capabilities and reception. Situated between two existing office structures, the atrium connects visitor reception to the heart of the corporate campus.

“The jury felt this project demonstrated a deft balance of spatial clarity and energy performance issues to great effect.”

Design Award Jury, AIA Orange County



Declaration of Responsibility:

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

Project under direction of the nominee

Luba Karson

Director, Global Real Estate and Construction
Edwards Lifesciences
Client

Design Firm: LPA

Firm of Record: LPA

Completed: 2017

Role of Nominee: Design Principal

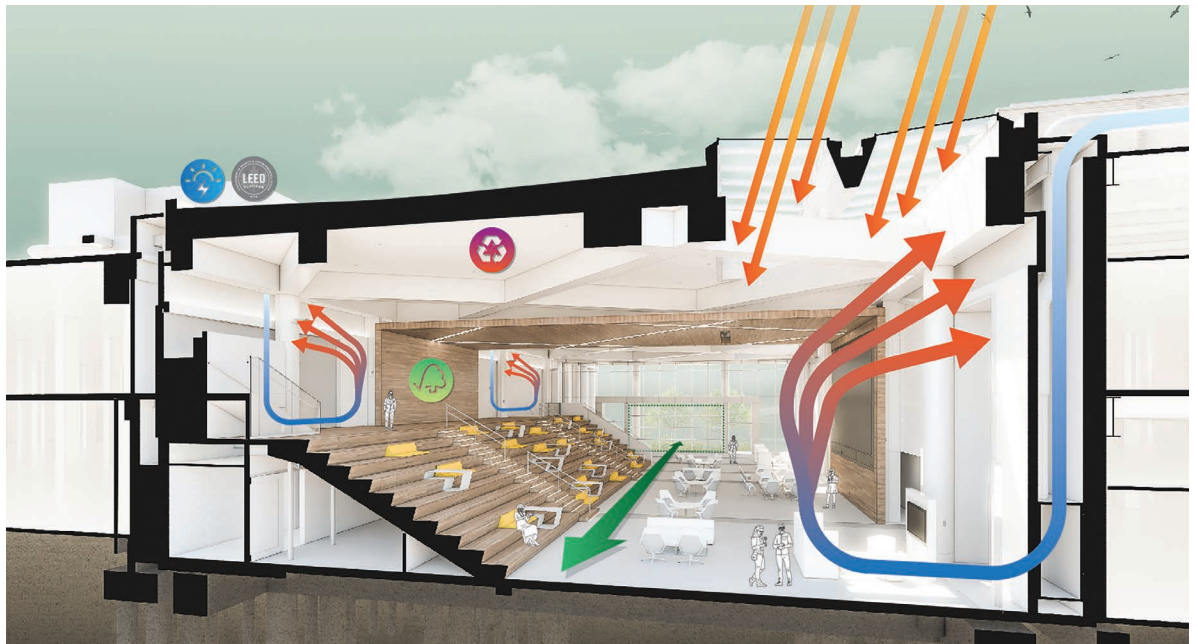
3.0 Exhibits

A SUSTAINABLE MODEL:

Keith led design of the atrium's dominant feature, a linear skylight that runs the length of the building, filling the collaborative social gathering space with daylight. Quarterly, the Starr atrium is transformed into an all-hands meeting space using an integral shade system that optimizes the space for audio visual presentations. Keith also oversaw the design of another dual-purpose passive feature. A large, vertical-lift, bi-fold door facilitates the loading and unloading of the atrium for large events. This same door introduces natural ventilation and opens the café to the campus. High-efficiency HVAC and lighting systems further improve performance; loads are fully offset by a solar array.

AN INTEGRATED PROCESS:

An early goal of the project was to clear span the width of the building for flexibility. Initial options included bulky trusses that lowered the perceived height of the space. In concert with the structural engineering team, Keith developed a system of thinner, diagonally intersecting steel beams that support one another. This “truss net” provides an efficient and sculptural solution. To enhance this structural expression, Keith worked with the mechanical engineering team to introduce a displacement ventilation system to eliminate overhead ductwork. In addition to simplifying the ceiling design, this approach supplies conditioned air at lower velocity and at a higher temperature, which provides improved acoustics and energy performance.



3.0 Exhibits

RESULTS THAT MATTER:

With a combination of passive strategies and high efficiency systems minimizing the energy use of the project, a solar panel array fully offsets the loads of the Starr Atrium making it a net zero energy consumer. Through an integrated team approach the atrium was also able to achieve its goal of LEED Platinum Certification for New Construction.

ArchDaily - Article
Fernanda Castro, "Starr Atrium / LPA"

AIA California Council
Award of Merit - Interior Architecture

AIA Orange County
Award of Honor - Interior Architecture

AIA Orange County
Committee on the Environment Award



3.0 Exhibits

4: 3250 Olcott Santa Clara, CA

INTRODUCTION:

A three-story, 35-year-old office building in Santa Clara, California, was languishing in the ultra-competitive Silicon Valley market. The ownership and leasing teams viewed the building as outdated and uninviting. The challenge was to recreate the vacant 48,000-square-foot building, 3250 Olcott, to appeal to modern companies, emphasizing warmth and spaces for creativity and connectivity.

“The jury applauded the architect’s reuse of the existing building and the thoughtful interventions that helped transform the project from a dated and unremarkable office building to a modern example of the potential of renovation over demolition...”

Design Award Jury, AIA Orange County



Declaration of Responsibility:

I have personal knowledge of the nominee’s responsibility for the exhibit listed above. That responsibility included:
Project under direction of the nominee

Brett McLarney

President
McLarney Construction, Inc.
General Contractor

Design Firm: LPA

Firm of Record: LPA

Completed: 2017

Role of Nominee: Design Principal



3.0 Exhibits

A SUSTAINABLE MODEL:

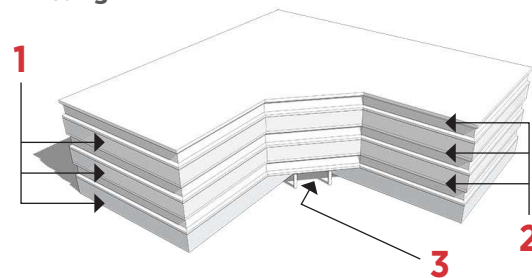
Keith partnered with arborists and contractors to save the site's most important sustainable feature, a line of mature redwood trees that wrap the north, east and south facades, providing passive shading and a living back drop. He convinced the leasing team that the trees did not adversely hide the building from the street. A new two-story lobby with a third-floor roof deck along the north façade gives the building an identifiable front door, floods the center of the building with daylight and opens the building to the trees. To further increase the quality of natural daylight, Keith specified new high-efficiency glazing to replace existing dark-tinted glass, improving visible light transmission and color rendition as well as boosting building performance. Additional gains were realized through high-efficiency HVAC and lighting systems.

AN INTEGRATED PROCESS:

A key goal was to transform the image of the building. Outdated, overly articulated concrete panels were identified as the main obstacle. Initial estimates revealed that removal and replacement of the panels was cost prohibitive. Before defaulting to painting the building, which would have been a long-term maintenance issue, Keith led an analysis by the structural and architectural teams, determining that the existing connections could take an additional load. An overlay of lightweight, high-pressure laminate "planks" and an integral color plaster with rigid insulation met the criteria. The solution saved dollars and natural resources when compared to a full-building re-skin, while achieving the goal of a full-building transformation.

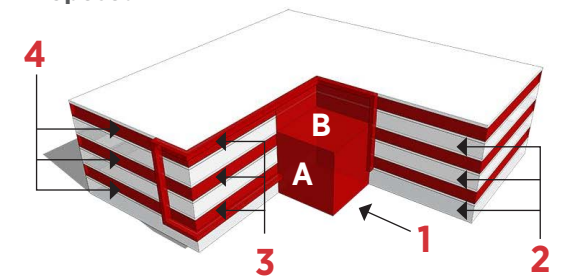


Existing



1. Existing dark tinted and reflective glazing
2. Existing precast panels
3. Main entry

Proposed



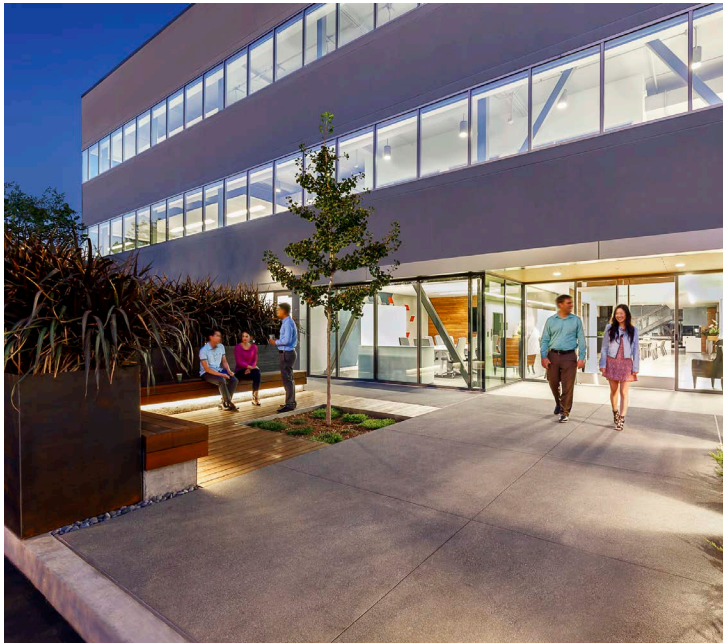
- A. New two-story lobby
- B. New roof deck
1. Main entry
2. New high-performance glazing
3. New high-pressure laminate panels
4. New integral color plaster

3.0 Exhibits

RESULTS THAT MATTER:

The solution reused 97% of the existing perimeter walls, building structure and floor and roof decks, saving 1,387 metric tons of embodied carbon when compared to the construction of a new, similar building. This is equivalent to the emissions from powering 160 single family homes for a year. Based on the strength of the design, the project was 100% leased before the start of construction. It exceeded its LEED Core and Shell Silver Certification target, earning LEED Gold Certification.

AIA Orange County
Committee on the Environment Award



3.0 Exhibits

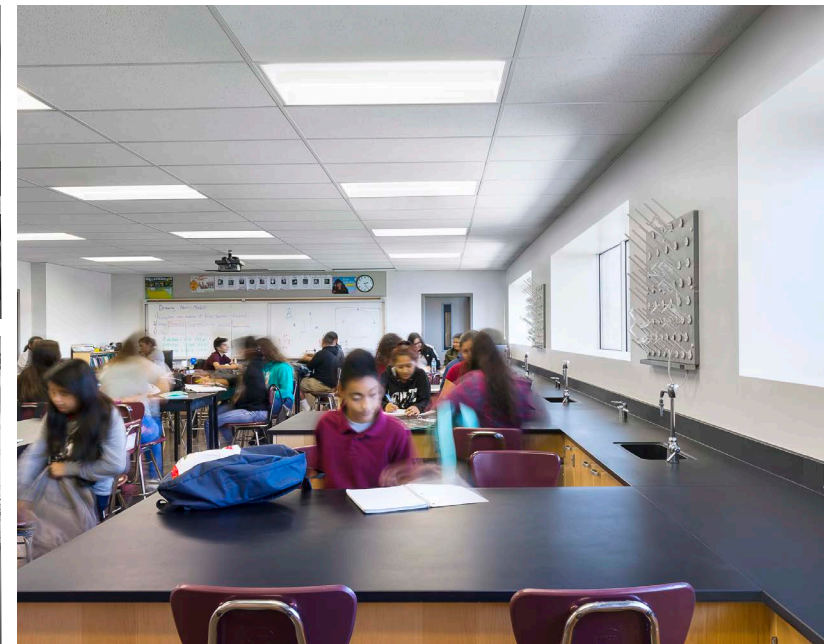
5: Fremont High School Modernization Los Angeles, CA

INTRODUCTION:

John C. Fremont High School was established in 1924 and has a rich history within the Los Angeles Unified School District (LAUSD). As an invaluable resource to the surrounding community, the district established a vision of transforming the campus into a 21st century educational environment that embraces sustainability. The project completed a full renovation of the 140,000-square-foot main academic building, a minor renovation of the gymnasium, and the construction of a new 25,000 sq.-ft. two-story student union with library, kitchen, and dining hall.

“This project’s inclusion of many resource saving and green features is impressive, particularly in a modernization project.”

Design Award Jury, Coalition for Adequate School Housing / AIA California Council



Declaration of Responsibility:

I have personal knowledge of the nominee’s responsibility for the exhibit listed above. That responsibility included:
Project under direction of the nominee

Don Pender, AIA, LEED AP

Principal
LPA Design Studios
Principal-in-Charge

Design Firm: LPA

Firm of Record: LPA

Completed: 2016

Role of Nominee: Lead Designer

3.0 Exhibits

A SUSTAINABLE MODEL:

Keith incorporated passive strategies into the modernization. In the main academic building, operable windows were introduced into the renovated classrooms. Along the dominant west façade, he conducted daylight simulations to optimize the design of a new perforated metal scrim to protect from heat gain and glare, while allowing greatly improved levels of daylight. In the student union, large glass sectional roll-up doors provide natural ventilation and a connection to the quad. Above, in the library, a large overhang protects a south-facing curtainwall, which provides 180-degree views of the campus. High-performance systems, including a new central plant and high-efficiency lighting, enhance energy performance. Infrastructure was routed to a new parking lot to prepare for the future addition of solar power generating shade canopies.

AN INTEGRATED PROCESS:

Keith offset the massing of the library to shade a dining patio and allow for roof-mounted HVAC equipment above the ground floor kitchen. From this position, ducted air could directly enter the library at floor level. This use of displacement ventilation is quieter, more efficient and promotes healthier air quality than a conventional forced air system. Radiant ceiling panels optimize seasonal heating. At the main academic building, life cycle cost assessments enabled the team to exceed district standards and introduce 1" insulated glazing units. Results proved that energy cost savings greatly outweighed the higher replacement costs.



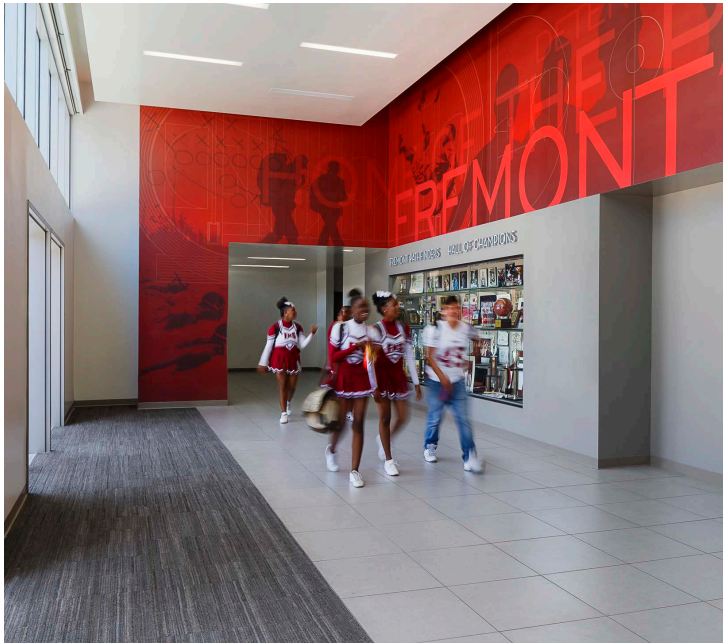
3.0 Exhibits

RESULTS THAT MATTER:

Fremont High School exceeded rigorous state energy codes by more than 32%, with a projected annual savings for the district of \$84,600. The project exceeded its LEED for Schools Silver Certification target and achieved LEED Gold Certification. As part of a pilot program, the project also received CHPS Verified Certification from the Coalition for High Performance Schools. Keith provided a comparison of the two certification programs to help the district determine a path for future projects.

Coalition for Adequate School Housing (CASH) / AIA California Council Award of Honor – Project in Design

Coalition for Adequate School Housing (CASH) / AIA California Council Award of Honor – Modernization



3.0 Exhibits

6: Koll Airport Professional Center Irvine, CA

INTRODUCTION:

Located in the Irvine Business Complex, the Koll Airport Professional Center called for the adaptive reuse of an existing 2-story, 62,000sf industrial building into a 40,000sf multi-tenant office building. Given the challenging economic times, the developer decided early on to pursue a LEED Core and Shell certification for the project, which was considered an important differentiator in the marketplace. The project had to be efficient and cost effective in all phases of design and construction with special attention paid to the cost of sustainable strategies.

“We are extremely proud of the transformation of Koll Airport Professional Center. The sustainability strategies it demonstrates are key to the project’s success.”

Scott Meserve - The Koll Company



Declaration of Responsibility:

I have personal knowledge of the nominee’s responsibility for the exhibit listed above. That responsibility included:
Project under direction of the nominee

Scott Meserve

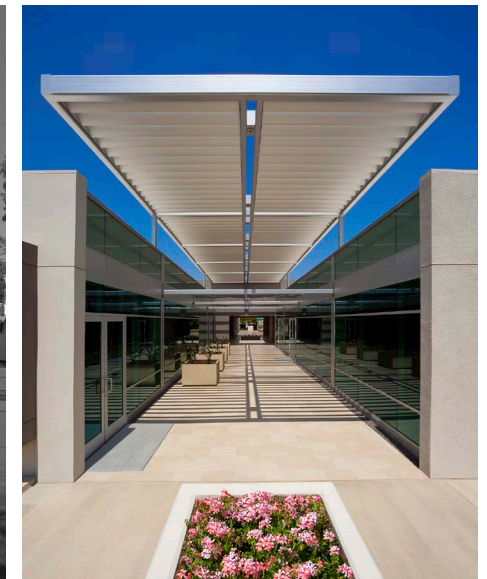
Principal, Vice President
The Koll Company
Client

Design Firm: LPA

Firm of Record: LPA

Completed: 2009

Role of Nominee: Lead Designer



3.0 Exhibits

A SUSTAINABLE MODEL:

Keith understood that the original square plan of the building was too deep for effective daylighting, so it was “cut” to create two rectangular wings separated by a series of connected exterior courts. He then lined the resulting breezeway with full-height glazing and shaded it with louvered canopies, which also announced the new tenant entries to visitor parking areas. The subtraction of building area allowed the project to balance increased parking requirements brought on by the change in use from industrial to office. Careful expansion of existing openings in perimeter concrete tilt up panels further distributed daylight throughout the tenant spaces.

AN INTEGRATED PROCESS:

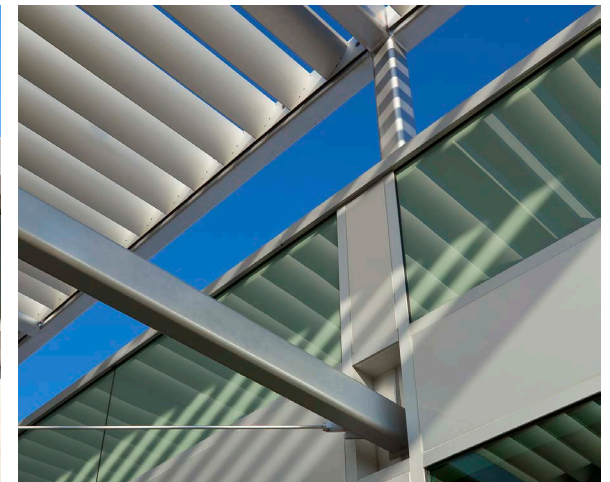
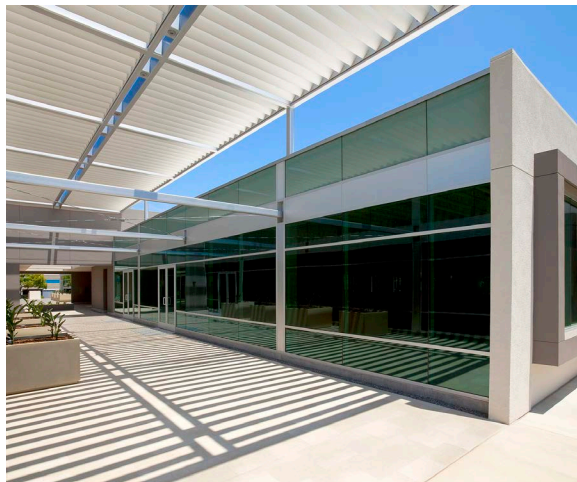
Keith worked closely with the structural team to devise a solution that would allow the two wings to act as a single building to minimize the cost required to stabilize two independent structures. First the project was carefully planned to maintain the existing concrete masonry core. The entry canopies were then designed with horizontal steel struts and cable cross bracing to tie the two wings together. When combined, these elements allowed forces to be transferred across a single roof diaphragm into the preserved central core.

RESULTS THAT MATTER:

A thoughtful approach to the adaptive reuse of the building met tight budget targets and limited core and shell renovation costs to less than \$73.00/sf. The project exceeded its LEED Core and Shell Certification target and was awarded LEED Silver Certification.

Eco-Structure - Article
January/February 2010 - Lydia Lee, “Industrial Revolution”

ARCHITECT Magazine - Website Article
Lydia Lee, “Industrial Revolution”



3.0 Exhibits

7: Edwards Lifesciences Campus Expansion Irvine, CA

INTRODUCTION:

Edwards Lifesciences (ELS) is a leading medical device manufacturer. Their existing 32 AC campus is in Irvine, CA and set within the Irvine Business Complex, which consists of low-rise office, warehouse and industrial properties that were mostly constructed in the 1970's. Recently, ELS has acquired an adjacent 10 AC parcel to consolidate local facilities and to accommodate their rapid growth. The program for the campus expansion includes 479,000 SF. In phase 1 a new entry pavilion (A) and office/lab building (B) were completed. Phase 2 includes a new full-service dining facility and conference center (C). Phase 3 calls for the construction of a second office/lab building (D). At completion, the existing and expanded campus will have a combined population of over 4,000 employees.



Declaration of Responsibility:

I have personal knowledge of the nominee's responsibility for the exhibit listed above. That responsibility included:

Project under direction of the nominee

Luba Karson

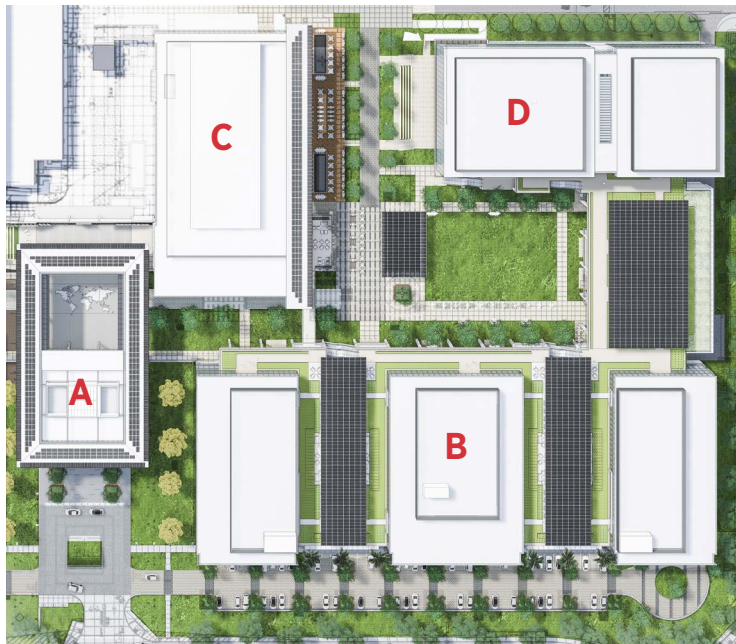
Director, Global Real Estate and Construction
Edwards Lifesciences
Client

Design Firm: LPA

Firm of Record: LPA

Completed: Phase 1 + 2 - Fall 2020
Phase 3 - End of 2021

Role of Nominee: Design Principal



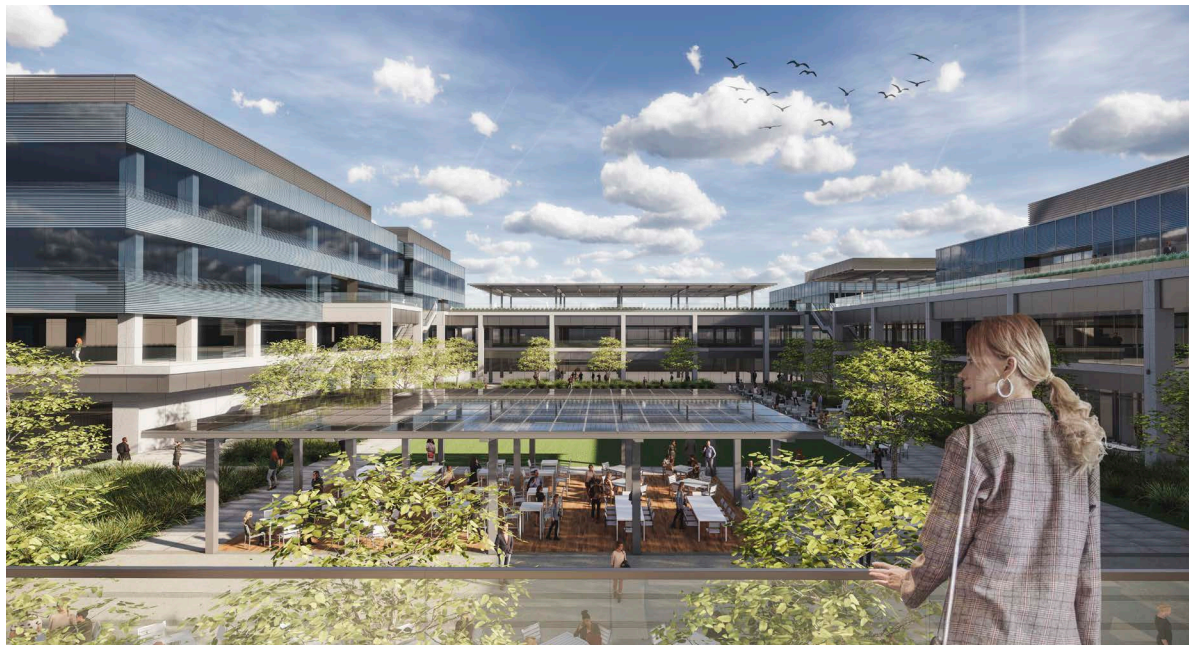
3.0 Exhibits

A SUSTAINABLE MODEL:

Keith's solution takes advantage of the mild climate and pulls circulation throughout the campus to the exterior, reducing its conditioned footprint. Covered walkways, arcades, and bridges blur the lines between indoors and out and provide passive shading for adjacent interior spaces. Deep overhangs, canopies and sunshades further protect the buildings from solar heat gain. Additional performance gains were realized through the integration of high-efficiency systems, including building envelopes, mechanical equipment, and lighting. Renewable energy is a key design element. For buildings A and C, solar panels are conventionally mounted on rooftops. In the main courtyard and roof decks of buildings B and D, panels are integrated into shade canopies, putting sustainability on display.

AN INTEGRATED PROCESS:

An integrated approach was central to the design of buildings B and D, which combine office, lab, and conference spaces to promote collaboration. Keith directed the structural engineering team to develop a column grid and structural system that would work with both office work stations and lab benching, providing flexibility and allowing the client to scale the program up or down depending on future workflows. Within this structural framework, Keith guided the mechanical team to strategically offset building cores to keep large expanses of roof area open for decks that provide space for outdoor work and social gathering.



3.0 Exhibits

RESULTS THAT MATTER:

In 2018, phases 1 and 2 of the campus expansion reported a predicted energy use intensity (pEUI) reduction of 76% when compared to a similar baseline facility. In 2019 Phase 3 reported a pEUI reduction of 79% allowing the entire project to exceed the 2030 Commitment threshold, which at that time was set at a 70% reduction.

Currently the entry pavilion is designed to be a net zero energy consumer and is targeting LEED New Construction Platinum Certification. The dining and conference center as well as both office/lab buildings are targeting LEED New Construction Gold Certification.

