

An Engineer Guided By a Grand Design

Erin McConahey's dedication to her profession as an engineer is only matched by her determination to advance inclusion and sustainability efforts **BY GREG ARAGON**



As an engineer with Arup, Erin McConahey has worked on some of the most complex and innovative projects in the world. As a colleague, thought leader and mentor, she is also leaving a profound imprint on the industry.

"Erin represents the human face of engineering," says Jo da Silva, global director of sustainable development with Arup. "She is a brilliant engineer and an authentic human being committed to using her knowledge, expertise and intellect to make a positive difference for her clients and the world."

Currently a principal and fellow at Arup, McCo-

nahey has used her experience in project leadership, mechanical engineering and sustainability consulting to lead project teams on high-profile museums, performing arts facilities, stadiums, corporate offices, university campuses, laboratories and government buildings such as embassies, office buildings, courthouses and border stations.

"I love approaching the complexity of building design in a collaborative manner across all disciplines," says McConahey, who has been at Arup for nearly 30 years. "I feel design is an act of social imagination, and I think that at its best, the AEC industry is peo-

LOOKING FORWARD Erin McConahey, who began her path to engineering at a young age, says she has welcomed the challenges ever since.

PHOTO COURTESY ARUP

WORK OF ART

McConahey was part of the Arup team that worked on the upgrade and expansion of the Los Angeles County Museum of Art.



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ple coming together in goodwill and [with] a generous spirit to build something beautiful and useful."

In recognition of her impact on the industry, ENR West has chosen McConahey as the Southern California Legacy Award winner for 2025.

A Chosen Path

McConahey, who holds degrees in mechanical and structural engineering, says she became interested in engineering around age 5, when an aunt gave her a set of Tinkertoys. This set off her creative spirit, and she began building structures and was soon helping to build things around the house. Her love for building continued until one day, while she was volunteering at church, a technician on the space shuttle suggested to her parents that she pursue a career in engineering.

Then, when she was about 14, McConahey's father, a high school biology and chemistry teacher, was contacted by the Society of Women Engineers. The group was looking for high school girls to attend an engineering summer camp at Cal Poly Pomona in Southern California. When her dad couldn't find any of his students to sign up, he suggested his daughter, and she was accepted. From there, McConahey went on to study engineering at UC Berkeley.

Looking back on her career, McConahey says it has never been boring. "Being a design consultant has taken me to a lot of different cultures, exposing me to a

lot of different ways of thinking. The great thing about our industry is, in the end, we all have the same goal of getting to a real building that real people can walk through and be happy with the results."

Steve Matt, chairman and CEO of MATT Construction, says McConahey is an exceptional collaborator, always open to input during all project phases.

"Working with Erin on the [Los Angeles County Museum of Art] and The Broad [Contemporary Art Museum] projects, we all considered her as the go-to person for resolving complex mechanical issues with rational and effective solutions," says Matt, who has worked with McConahey for over 15 years. "Erin's passion for sustainability and energy efficiency stands out. She has consistently been an early adopter of new design technologies, and her active involvement in organizations like the Green Building Council underscores her commitment to green building practices."

And this year, McConahey's team was part of the Google Gradient Canopy project in Mountain View, Calif., which won the 2025 Golden State Honor Awards from the American Council of Engineering Companies (ACEC). On this LEED Platinum project, she led a team of structural, MEP, fire life safety, facade, acoustics and other specialists.

The sustainable project features performance-based seismic design and innovative water conservation, with a lightweight, wave-like canopy equipped with an array

of photovoltaic panels, arranged to channel rainwater for collection, treatment and reuse on site.

"Erin has contributed significantly to the mechanical, electrical, plumbing and structural engineering design for the project," says Kerri May, senior project manager, Project Management Advisors Inc. "She has a remarkable ability to break down complex situations and ensure that everyone involved understands the facts. Her calm demeanor, even in the most challenging situations, makes her a steady-going force on any project."

Helping Others

Helping women in construction is important to McConahey. She led the creation of the equity, diversity and inclusion (EDI) program within Arup between 2012 and 2018 and produced a learning resource on unconscious bias in STEM that was later distributed by the Society of Women Engineers.

"It's about encouraging women and people from other underrepresented minority populations in engineering to know their own value and seek an environment where they can thrive," says McConahey. "A lot of times people with just a little wind at their back will take a step and build confidence and get the opportunities that they deserve."

May says McConahey is an inspiration to other women in the industry.

"Erin has shown me what it means to navigate a male-dominated industry with confidence and grace," May says. "She is often the only woman in the room, yet she never seeks the spotlight and naturally commands attention with her vast knowledge."

Karine Leblanc, sales manager with air-conditioning company Daikin Applied, says McConahey has inspired her to be "authentic and to confidently" take her place in a male-dominated industry.

"Seeing someone like her rise as a lead engineer on high-profile projects, climb the ranks in her organization and pave the way for other women in the industry proves that success is possible," says Leblanc, who has worked with McConahey on projects since 2001. "Beyond her technical excellence, she gives back in so many ways—whether through her DEI initiatives, her leadership and mentorship within her firm or her commitment to decarbonization. She is always one step ahead, continuously driving positive change."

McConahey also initiated and designed an introduction course for new graduates joining Arup. The program, which still happens yearly, brings junior staff together with the objective of putting them on track for a successful career. During the 10 years that she has led the course, every graduate that started at Arup in the Americas region personally knew McConahey.



TEAM LEADER
Erin McConahey with Fiona Cousins, also an Arup fellow and principal, during Arup's Long Service award ceremony in Los Angeles.



HEALTH BY DESIGN
McConahey led Arup's MEP effort on the Kaiser Permanente School of Medicine in San Diego.

Sustainability Focus

Another important topic for McConahey is carbon emissions in buildings. Using her two decades of experience in multidisciplinary design leadership and strategic corporate transformation, she led hundreds of colleagues to help push Arup's global Whole Life Carbon initiative over the last three years.

Jo da Silva, structural engineer with Arup, says it's reasonably straightforward to measure the carbon emission of a design once it's almost complete because it is possible to measure how much material such as steel, concrete and glass, for instance, is in a building and how much carbon is associated with the extraction, transportation and manufacture of those materials and components.

"The tricky bit is estimating how much carbon is associated with different design ideas and solutions in the early stages of design, and secondly, measuring carbon in the same way across all our projects," she says.

Da Silva says Arup's Whole Lifecycle Carbon Assessments program needed someone to work this out, in a way that was inclusive.

"Erin was asked to lead this because she is super smart, can navigate complexity and really cares about creating a better future," she says. "But also because she is able to inspire and motivate people from around the world and collaborate with them to reach a consensus on the way forward." ■

ON THE WEB

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