



**A
Behind-the-Scenes
Look at**

Women- Owned Firm Leaders

Five pioneering women engineers describe their paths to leading their own firms and the career obstacles they have overcome

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As a college student in the early '90s, Elizabeth Stolfus was one of only four women in her engineering program. But the lack of women colleagues and role models did not stop her from blazing her own trail and eventually launching and leading her own firm.

Today, Stolfus—along with fellow engineering firm owners Tricia Ruby, Lauren Evans, Karen Friese, and Cathy Ritter—spearhead the ACEC Women in Leadership (WIL) Working Group to promote and develop diversity within the industry. WIL provides women with opportunities for professional growth, networking, and connection with other women in engineering as well as the first WIL educational sessions that were held at the 2019 Fall Conference.

Together, WIL promotes the idea that diversity broadens the outlook, input, advocacy, and value of all ACEC Member Firms.

WIL has attracted 87 members as of April, according to Friese, founder and president of K Friese + Associates. She expects that number to grow in the future.

“We look forward to coordinating with ACEC’s larger strategic plan goals for diversity and inclusion,” she says.

In conjunction with the initiative, *Engineering Inc.* is exploring the leadership and professional histories of those five women engineering firm owners.

“Understand what is important to you. If the firm you are in is not the firm you are meant to lead, find one that is a better fit, or create one of your own.”

Elizabeth Stolfus, President



Stolfus & Associates, Inc.

Greenwood Village, Colo.

At her first engineering job after college, Elizabeth Stolfus noticed a lack of women in top positions in the office.

“There were women, but certainly not in leadership roles. All of the leaders were men,” says Stolfus. “My first job was with a midsize, full-service engineering firm. The expectation for me or the other women in the group of new graduates was that we would not be there for very long. They were certainly open to giving us an opportunity, though. The training I received was on par with my male peers at the time. But culturally, I needed to learn how to golf and enjoy drinking beer to fit in.”

After two and a half years at her first job, Stolfus went to work for a smaller Colorado firm.

“I felt that I would fit in better. There still were not many women mentors, but the men that I was working with felt it was important to promote women, and the mentorship I got from those men was extraordinary,” she says. “At the time, my plan was to stay and run that firm. However, I ended up feeling like I was not becoming the person I wanted to be. I had to be so consumed by the chase of the next project that I was no longer connected to why I wanted to be an engineer in the first place.”

Stolfus began to question the vision of her future career in addition to her life path, and asking herself, “Would pursuing the corner office cost myself the chance to be a dedicated spouse and a parent?”

“Unfortunately, going to a different firm would not solve my problem,” Stolfus says.

In response, she started her transportation engineering firm in 2003 with \$30,000 and no clients.

“I had to push down my introvert self and get on the phone and talk to people from all the relationships I had built,” she says. “I got my first sizable project in a few months.”

A year later, she hired her first employee, who is still at the firm today.

Stolfus & Associates now boasts \$4.5 million in gross revenue with 18 engineers, 10 of whom are women. Her husband, also an engineer, joined the firm in 2011, and together they balance life at work and home while raising two children.

Her advice to other women engineers: “Understand what is important to you. If the firm you are in is not the firm you are meant to lead, find one that is a better fit, or create one of your own.”

“A professional network is so important. You cannot do it all by yourself, and you should not have to.”

Tricia Ruby, President and CEO

**Ruby + Associates, Inc.
Bingham Farms, Mich.**



Tricia Ruby never expected she would someday run the family firm when she started her engineering career in 1994. But a series of events led her to Ruby + Associates, which was launched in 1984 by her father, David.

While living in Atlanta in December 2001 and on leave from her engineering job after the birth of her son, Ruby got a call from her father. Ruby + Associates was in trouble because someone had embezzled money from the firm.

She packed up the family and headed to the firm's headquarters in Michigan for what she thought would be a couple of weeks to help out. The visit turned into a full-time position where she had to untangle and rebuild the business.

Ruby eventually righted the ship and took over as president in 2011. Her toughest challenge was getting comfortable leading a structural engineering firm with her industrial and manufacturing background.

"I remember feeling so self-conscious about being in charge but not being a structural engineer," says Ruby.

She attended an ACEC event and met firm leaders who assured her, "'None of us practice. We are all busy running our firms, so get over that.' It was lovely to have that reassurance that it is OK," she says.

Today, Ruby has transformed the firm and its culture, with 290 percent revenue growth and a 140 percent increase in staff. Today the firm employs 32 engineers, seven of whom are women. She credits part of her success to her mentor at her first engineering job.

"I got really lucky with an amazing, supportive boss who opened doors for me, supported me, challenged me, and saw potential in me that I did not see," she says. "I only worked for him for one year, but it was just one of those really lucky relationships to have starting out in your career."

Ruby's advice to women engineers: "Leadership takes courage. Nobody talks about the courage that is required to sit in this chair, but it has helped me take action when I was hesitant. Also, be an ally and find an ally—and it is not always a woman. A professional network is so important. You cannot do it all by yourself, and you should not have to."

"Prepare well. ... I made sure to learn all aspects of the business."

Lauren Evans, President and CEO

Pinyon Environmental, Inc.
Lakewood, Colo.



The environmental remediation sector had just emerged when Lauren Evans received her engineering degree in 1982 from the Colorado School of Mines.

“There was a pretty bad economic downturn at the time, but it was one of the industries you could get a good job in because they needed people,” says Evans. “Those first jobs were very male dominated. I was not married, and they paid the men more because they had families to support, even though I was supervising.”

She also grew frustrated as the companies she worked for kept getting acquired by bigger firms.

“Back then, they paid no attention to the firm’s culture. They were just buying companies and then would tell us how we were doing everything wrong,” Evans says.

Her father, also an engineer, had always encouraged Evans to start her own firm.

“After another conversation with him, I went in and quit the next day,” Evans says.

In July 1993, she founded Pinyon Environmental, named after the hearty piñon evergreen grown in the West, with an Anglicized spelling.

A few months later, working out of her garage office, Evans won a contract with the City of Denver for underground storage tanks, and she hired her first employee. The business eventually grew steadily.

“In 1999, we were doing a lot of M&A work. We had over 20 employees in an office. Then the dot-com bubble burst, and we backed down to 10,” Evans says.

To manage the downturn, she started making use of the woman-owned business designation, part of the federal Disadvantaged Business Enterprise Program.

“We set a goal of getting into public sector transportation work, and that spurred on some growth,” Evans says.

In 2010, Evans created middle management positions to bring in additional work from new markets.

“The company really exploded as we went from 15 employees to over 50 in a couple years,” she adds.

Since then, Pinyon Environmental has grown from \$2 million to \$9 million in annual revenue, with 70 employees, more than half of whom are women scientists, chemists, and engineers.

Her advice for starting your own firm: “Prepare well. You cannot always afford to pay someone to help you out in the early days. I made sure to learn all aspects of the business.”

“Find the people who will be honest with you; surround yourself with them.”

Karen Friese, Founder and President

**K Friese + Associates
Austin, Texas**



Karen Friese spent the first 20 years of her career as “an engineer who happened to be a woman.” After she founded her firm in 2003, some people saw her as “a woman who was also an engineer.” She prefers to let her firm’s work speak for itself.

“We never wanted to be the best woman-owned firm that people put on teams. We wanted to win work as the prime or sub on our own merit and make sure the work could compete with any other large firm out there,” says Friese.

Leading her own firm was never something Friese planned to do, but when her longtime employer in Austin, Texas, was acquired by a national firm, she started thinking about it.

“Suddenly the ‘home office’ was in Florida. I was designing large water and wastewater infrastructure-type projects, and I wanted to keep doing that, but doing it locally,” Friese says.

In 2003, K Friese + Associates was formed. “I used to say my first office was worldwide because I could meet clients in any Starbucks. A year later, we had our first real office that sat 10 people,” she says.

“I was fortunate to have great male mentors who gave me opportunities. They were

really instrumental in helping me identify my strengths and weaknesses, and making sure I understood what it was going to take to succeed," Friese says. "It does not matter if a mentor is male or female as long as they are giving you opportunity and helping show you the way."

Today, K Friese + Associates has grown to 75 employees in three offices, with a fourth Texas office planned to open this summer. About half of the firm's engineers are women.

Friese's advice for starting your own firm: "Focus on the quality of your product and service. Be passionate about what you want to build and why. Find the people who will be honest with you; surround yourself with them. As a friend warned me, your first year will be easy because everyone wants to help you. It is your second year that you need to be thinking about. You will get some work to get off the ground, and then you have to fly on your own."

"Find somebody who has your back—not just for the firm, but for you as an individual—somebody out there that you can call."

Cathy Ritter, President

**Constellation Design Group, Inc.
Timonium, Md.**



Not many women have blazed more trails in engineering than Cathy Ritter. She was the first woman to graduate from the civil engineering program at Kansas State University in 1975, the first and only woman engineer at her first engineering job in Baltimore, the first and only woman ACEC/MD president, and the first woman ACEC national vice chair.

It is no surprise Ritter never felt like she was missing a female mentor as she traversed her career. In fact, she was the mentor.

"I have always been more of a leader than a follower, so it was obvious that if I wanted to be part of decision-making, then maybe I should try it on my own," says Ritter.

The tipping point came in 1981 when her employer had been acquired by another firm.

"It was an uncertain time for us," she says. "It was also a time when the state of Maryland started a Disadvantaged Business Enterprise Program."

Several colleagues suggested she start her own firm.

“The timing was right. I was not married and did not have any kids, so I thought, ‘If you are going to do something, do it now,’” she says. “I went into it thinking I would give it a year or two, and if it does not work, there are other engineering firms.”

This year, her civil engineering firm, Constellation Design Group, celebrated its 38th anniversary.

“In 1982, my first office was a room in my apartment. I worked by myself for about a year and got help from engineering friends,” she says. Her first contracts came through the Disadvantaged Business Enterprise Program. “After the first one or two contracts, the rest of it fell into place with repeat customers.”

Her biggest challenge with leading the company is being a sole owner.

“When you do not have a business partner who is going to help you make decisions about health insurance or employees—to divvy up those issues and concerns—it can be lonely at the top,” Ritter says. “Also, I have never really been on a vacation where I did not I check my email every day or stay up late in a hotel room someplace trying to get a proposal finished. I have never ‘checked out.’”

Today Constellation Design employs 45 people in design and construction inspection, a number of whom are women.

Her advice for leading a firm: “Find somebody who has your back—not just for the firm, but for you as an individual—somebody out there that you can call. Also, give yourself permission to enjoy the professional journey and life.”

Stacy Collett is a business and technology writer based in Chicago.



For more information on the Women in Leadership Working Group or to join, contact Katharine Mottley at kmottley@acec.org. To review ACEC's resource page dedicated to inclusion, diversity, and equity, go to programs.acec.org/inclusion-and-diversity