

## Women in Engineering

By Barbara Horwitz-Bennett, Contributing Editor -- Consulting-Specifying Engineer, 6/1/2006 1:00:00 AM

Just a few decades ago, it was practically unheard of for women to enter the field of M/E engineering. While a few brave female pioneers began testing the waters in the late '70s and early '80s, it wasn't until the '90s that greater numbers began to follow. Over time, women have become much more accepted and respected in this traditionally male-dominated profession, and today, it's not uncommon to find at least a couple of female engineers in just about any office. But how did women first break into the profession? What were their initial experiences as professional engineers? And what challenges have they encountered balancing career and family life? Consulting-Specifying Engineer takes a candid look at women in engineering, relaying their experiences both today and in the not-so-distant past.

Despite the fact that very few women could be found in the building and construction industry back in the 1980s, engineering happened to be an up-and-coming profession at the time, so Leigh Ann Vogel's father decided to encourage his daughter to move in that direction.

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"It wasn't easy [for a woman to pursue an engineering degree then], but once I had started, I decided I was going to finish," recalls Vogel, now a registered P.E. and electrical project engineer with TLC Engineering for Architecture, Orlando.

As one of only two or three women in her college engineering classes, Vogel soon became aware that she was about to enter a male-dominated profession. And upon accepting her first job in construction administration, she quickly learned that a woman on a job site was very much an anomaly.

"I used to get cat calls and whistles," she relates. Consequently, Vogel realized that the only way to make it was to "develop a thick skin and learn how to be firm when you need to be."

In addition, Vogel has learned to always be prepared to back up her facts in case she is challenged by doubting male colleagues.

Similarly, Vogel's colleague Victoria Robertson, LEED AP, a mechanical engineer with TLC's Nashville office, felt that she had to work harder to be taken seriously. In Robertson's case, she originally decided to go down the M/E engineering road because she was strong in math and science, and had no interest in becoming a teacher or scientist.

However, Robertson found those early days in the engineering office quite lonely, as she didn't always share the same interests with her male colleagues.

The social scene, in fact, was one of the most difficult challenges these women faced, especially when it involved customers or vendors. Beth Collins, LEED AP, a mechanical engineer based in TLC's Miami office, explains that social events planned by vendors and manufacturer reps often catered exclusively to men.

"Sometimes some of their entertainment could be a little inappropriate for women. Even things like golf tournaments and fishing outings generally aren't of interest to women," says Collins.

Fortunately, she says, women are much more involved in the profession now, and the event planners—who are often women themselves—are generally receptive to new ideas.

## Getting a start

Collins got her start in engineering after joining a mentorship program while she was still in high school. After shadowing a female engineer at Honeywell for a few days, she was sold.

Similarly, Vogel was fortunate to connect with a fellow female engineer in the early days of her career.



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"When I first started with TLC, it was a much smaller firm, but there was a female engineer who was definitely my mentor. She's always been there to guide me along, and being that we're both mothers, she's helped me with balancing home and work." (See "Engineering Moms," below.)

While Robertson wasn't fortunate enough to have a female mentor, she was able to make those valuable connections through professional associations. "This way I've been able to meet other women in the industry and it's been very encouraging to share experiences."

## The upper echelons

Even though women in senior-level positions are still rather uncommon, this too is slowly beginning to change.

For example, after working as a communications professional for a number of years, Ann Banning-Wright was recruited to bring her market research and communications skills to the Syska Hennessy Group's Los Angeles office as a chief strategy officer.

Although Banning-Wright has been very happy with the firm and her position, she admits that it is hard getting used to not having women counterparts, particularly their interpersonal interaction styles and natural tendency to act as mentors.

But while Banning-Wright hasn't been in a position to benefit from female mentorship, she's found ample opportunity to serve as an advisor to others.

"About 80% of the people who approach me for mentoring are women," she relates.

According to Banning-Wright, the main message she tries to impart is to encourage women to go against their nature of playing "mop up and clean up," and instead to assume more of a leadership role.

"Women are so willing to be No. 2 that we often forget that the No. 1 spot is open," she says.

Another area where Banning-Wright has felt the winds of change is in the realm of social networking. Going back about 18 years, she comments that it was very much an old boys network, which made it challenging for women to break in. But nowadays, she observes, the gender differences are beginning to fall away.

As a matter of fact, Banning-Wright's colleague Susan Kessler, P.E., an electrical engineer at Syska's New York office, comments that it's actually been easier for her, as a woman, to break the ice at networking events because she's more of a novelty. On the other hand, taking things to the next level and really creating a professional relationship remains a challenge.

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Another lesson Kessler had to learn along the way was how to best advance in her career.

Because it's more of a woman's nature to help others, Kessler says she ended up working for several different groups within the firm early on, effectively spreading herself too thin. And while she picked up valuable experiences and exposure along the way, she failed to make herself important to any one group.

"Men really understand the linear structure of an organization better, whereas I wanted to help everyone," she explains. "But in order to advance, I've had to learn to keep my focus on one group."

## Engineering Moms

In addition to the challenge of being a female in a male-dominated field, some women have had the additional challenge of raising children. And while things have drastically changed, with corporate America offering significantly more support in this area, this wasn't always the case.

"After having my twins, I went back to work three weeks later as we had no maternity leave then," recalls Dorothy Thrasher, P.E., now a plumbing engineer with the SmithGroup's Phoenix office. "It was very hard with sleepless nights and very exhausting. I had to be a very organized, fast multi-tasker. We had a baby sitter for the first two years and a day-care center later. I was also lucky that my husband had a flexible schedule and could work out of the house when so he could take care of our twins when I was gone."

With very little time for maternity leave and a general lack of empathy for parental responsibility, Cassandra Daller, P.E., now a department head and mechanical engineer with URS Corp., Grand Rapids, Mich., actually started her own consulting business while her children were young, in order to sidestep that whole issue. She could then communicate directly with her clients to work out schedules, meetings and deadlines without compromising her family's needs.

"The hardest part was men accepting that you could be a mom and an engineer at the same time," she relates. "But now it's become very accepted—for example, taking time off if your child is sick or coming in late if your child misses a bus."

In addition, women engineers, as well as men, she says, are now able

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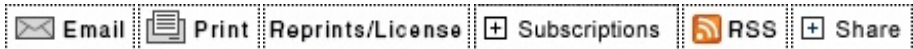
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to work out part-time arrangements during various stages of child rearing and still be able to advance in their careers.

Similarly, Susan Kessler, P.E., electrical engineer, Syska Hennessy Group, New York, credits her firm with enabling her to successfully balance work and family via a flexible schedule.

Namely because Kessler put in so many hours in the office, before her kids came, she feels she was really able to learn the ins and outs of her job. "Now I can work efficiently, within a reasonable time frame, be responsive to my clients and co-workers, and be responsive at home."

Jennifer Dickey, P.E., a mechanical engineer with Albert Kahn, Detroit, is also grateful for the flexibility her firm allows in letting her work four 10-hour days. But that said, being a mom and an engineer is still a tough challenge.



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