

## Career Reflections

By Carol Post, P.E., S.E., LEED AP

Upon hearing I was retiring, my Cal Berkeley friend and colleague, John Dal Pino, Chair of the STRUCTURE magazine Editorial Board, asked if I would share some thoughts about my nearly 40 years (WHAT? – how did that happen?) practicing as a Structural Engineer. He suggested many topics, and these were the ones that resonated most with me.

*What makes engineering an interesting and rewarding profession?*

At our core, we are problem solvers, not just  $M = wL^2/8$  but our predisposition to improve the world around us. Be it a project workflow, the technical challenges for projects without precedent, or even the culture in our office, we want tomorrow to be a better day. In all my years, I do not recall a boring day. The years have been a mixture of knowns and unknowns, peppered with physical triumphs in the built environment based on the intangibles of codes and software modeling. Most importantly, it has been interacting with some of the most intelligent people in the working world – both colleagues and clients.

Many professions draw young minds into a particular field of work with the lure of high-paying jobs. All too often, those career paths hit rough patches in your mid-40s when the next generation of 20-year-olds easily replaces acquired skills. In structural engineering, we are constantly learning something new and challenged daily with computerized solutions and the physical considerations of construction. While I have had my share of sleepless nights worrying about a design that may be pushing typical limits, I have never been bored or felt that creativity was being hampered. The knowledge one accrues is not easily supplanted by the next new graduate.

Structural Engineering is the right career for individuals who enjoy people, solving problems, and with a knack for driving efficiency. The most successful SE leaders are intellectually curious about mathematics, physics, and materials and want to explore how their focus integrates with architecture and constructability. They are capable of being the smartest ones in the room, delighted to share their knowledge, as well as being the person most willing to learn something new from someone else.

Adage: If you love what you do, you will never work a day in your life.



*What was your approach to developing and mentoring staff?*

As the mother of three sons, I would say that domestic experiences of raising children and hiring their caregivers involved some of the same skillsets for hiring and developing staff. As it applies to Thornton Tomasetti, I came to understand that I could learn as much from the younger staff as they were going to learn from me. I think most could see that I saw their unique value and that I was

trying to encourage them to advance with their natural talents rather than assume one size fits all.

I tried to follow some fundamentals when mentoring staff. Early in an SE career, it is important first to become proficient with your technical skills and dabble in understanding good project management by observing more senior staff at internal and external meetings. This proficiency is often followed by assuming project management responsibilities. Many of us at Thornton Tomasetti helped develop bespoke training modules for our Project Management (PM) staff, which was critical as the firm size grew. I also encourage PMs to use self-guided training by reading books or attending presentations authored by subject matter experts. By honing in on PM skills, including communication and “reading the audience,” staff are better prepared to take on the next growth in their career, which is often developing client relationships and trusted partners and winning work.



The listening skills and pursuit strategies learned at this stage of one's career may lay the foundation for becoming part of your firm's senior leadership. At all stages, it is different phases of problem-solving. It begins with physics and ends with sustaining and growing your firm's value in the AEC community.

Takeaway: Empathy is the key to success with staff and clients.

*Are there tips for developing and maintaining a clientele?*

Developing trusted partners is akin to playing the long game. More than 20 years ago, I began my outreach to a new client for our firm. It started with a letter to the President (yes, the kind with an envelope and stamp). When he did not respond, I sent another letter. Long story short, he eventually must have asked the Facilities Group to give me some small project – which was the design of a “rusty lintel.” That start and my professional persistence (a term coined by the new client) have developed into many exciting and rewarding projects. But, equally important has been my deliberate transition of this client to the project managers who did the heavy lifting for the last two projects. I have made it evident that they are the next generation to deliver the quality of service that began two decades ago.

Words of Advice: The best business development strategy is professional persistence and showing your value by discovering your client's needs.

*How does one work successfully within and leading large organizations?*

Four years ago, I became the first Chief Quality Assurance Officer at Thornton Tomasetti. Unlike executing project work with clients, I needed to learn how to listen, engage, and empathize with my colleagues as I pursued the cultural changes for our quality and risk management goals. More importantly, there should be an underlying desire for continuous improvement when leading large organizations, coupled with a passion for delivering it. I have been fortunate enough to have spent the last 25 years at a firm that allowed me to explore and develop solutions on various initiatives. My key to success has been to have a road map and a willingness to pivot when others offer betterments to my original plan.

Secret revealed: If you believe in something, do not give up on the idea. Instead, find ways to help others see your vision by challenging yourself to understand their perspective.

*What does the profession do right, and what does it do wrong?*

Structural engineers are some of the most intelligent and diligent people in our society. Our dedication to the public's life, safety,



and well-being are not easily executed, especially for the most sophisticated projects. We also fall short on attracting the best and keeping them in our profession. Our pipeline seems to be decreasing, and it is particularly low as it applies to people of color. This needs to be solved by design professionals and stakeholders working together to attract and sustain minorities who enroll in Bachelors and Masters degree programs.

We are generally modest and humble professionals, which is a good trait. However, it is commonly bemoaned by many in the SE world that our compensation does not match “our value.” While I agree, I also do not feel enough of us are taking the time to explain what we mean by this to the ultimate clients – owners. The only way to fix a problem is to address it head-on and authentically work with an owner to demonstrate that we are there to listen to and solve their problem. We must believe in our value and sell it to our clients by educating them about our worth.

There will always be professionals whose greatest asset is a low fee. Rather than getting drawn into that business model, those in our profession who have more to offer need collectively to enlighten the world. “The bitterness of poor quality remains long after the joy of a good price.”

Forward Thinking: ADEPT – Advancing Diversity in Engineering Pipeline Talent is an idea I have advocated for over the last year. If interested, I am looking for resources and partners.

*Thank you for allowing me to reflect on a career that unfolded in ways I could never have imagined when I graduated from an all-girls Catholic high school in New Jersey. I am grateful, pleased, proud, and energized to begin a new era in my life using the skills and experiences from a rewarding career as a Structural Engineer.*



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