



Structural engineers work in the shadows. When asked about my occupation, I often respond with, “I am a structural engineer” and then with emphasis, “No, I am not an architect”. The common public does not know what structural engineering is and what it entails. Their perception of us is that we are synonymous with the architect and one of the same.

Part of the problem lies with us: we are often soft-spoken and mild mannered who prefer calm environments. While our architect counterparts are at the forefront of speaking loudly and proudly of their visions and renderings for the project to their client, with a focus on self-promotion and branding, we sit back in obscurity. As structural engineers, we are concentrated on load paths and examining material behavior. We are not taught and trained to advertise our brand to play the same role as architects. As such, architects are frequently accredited for a project’s completion while our contributions are mostly diminished, if at all recognized. We need to be courageous and step up to be a bigger player and not settle as simply a sub-consultant to the architect. By bringing ourselves to the table with developers and managers, they will know who we are, and we would have the opportunity to explain how our insight is helping them to bring their project to fruition and demonstrate the value we bring. This is a powerful first step but if we don’t speak up for ourselves, who will?

To change the public’s perception of structural engineers, we need to enrich the public about what we perform. Our role in society is paramount to the safety of the public and the public needs to be aware of this. I recall a lecture by a professor in the Civil Engineering Department during a freshman General Engineering Forum course that still resonates with me today. Speaking before an audience of all engineering majors, the professor stated the following:

“When your computer is having issues, you can reboot the computer. Often, this reset can solve the problem. When a structure collapses, there is no restart button.”

It is unfortunate that structural engineers only get called into the public eye when a structural failure occurs. In these scenarios we become potential scapegoats and are not recognized for the many more successful and safe structures that we design. Every time the wind blows, the ground shakes, a floor sustains building occupancy, or a bridge endures traffic, the public should not take the structure’s safety for granted. Every structural component, from its beams and columns to its nuts and bolts was designed with the qualified training of a professional engineer to ensure the structure is safe and progressive collapse is prevented. The public needs to be educated on our crucial role in their safety for us to be recognized.

To educate the public, we need to leverage technology and to advertise ourselves. I am encouraged about NCSEA’s launch of the WE SEE ABOVE & BEYOND Campaign and am

excited to feel its impact. I think there are several approaches for this campaign to broaden its reach. The Structural Engineering Excellence Awards (SEE) is a tremendous summary of some of the most inventive projects structural engineers have worked on, but the celebration of the awards is only viewed by a narrow spectrum of structural engineers. We need to share this with the common public on other social medial platforms to extend its reach.

We should also aim to spotlight projects in progress so the public can see the “bones and skeleton” of the structure. Video series, akin to documentaries should be made to follow projects throughout the design and construction phase, detailing how structural engineers resolve complex problems that arise from the project. Moreover, we should also highlight the people behind these projects. What was their upbringing? Their educational background? What made them pursue a career in structural engineering? What do they enjoy about their profession and find most rewarding? These videos tell us stories that can connect with aspiring structural engineers. In fact, I attribute partially the reason for why I choose to become a structural engineer by watching a time-lapse video of the One World Trade Center Building. I was in awe of what started out as an empty lot became an icon towering above New York City’s skyline.

Moreover, to engage and reach the public, there is no better place to collaborate than with schools and early education. We should work in partnership with local schools to provide hands-on structural engineering activities such as building popsicle bridges and load testing the bridges. We can extend invitations for structural engineers to come into classrooms for science lessons to narrow the gap between industry and school curriculums. By teaching young children basic structural engineering fundamentals, we are carving a path for them to become future structural engineers. We need to engage parents in these sessions to enable parents to see that their children are interested in structural engineering, and to explain to them why it is a gratifying field and to help answer any questions such a career possesses.

Structural engineers have been in the dark for far too long. We need to speak up for ourselves and take the lead in defining who we are. We need to teach the public as to why are vital to the safety of the public. We need to celebrate the success of our projects and our engineers and expand these stories to the public. They need to see our work and the complex problems we solve to recognize what we do. Lastly, we need to widen our reach to the younger generation and to inspire them to help improve the world around us. Structural engineering is a humble yet heroic profession: the public deserves to know that.