Learning from Loss

Civil engineering major assists with World Trade Center site reconstruction

by Patrick Miner, civil engineering senior

Last fall, I was praying for nothing more than landing a cooperative education position with a structural engineering firm for the remainder of the school year. When I arrived home in Pittsburgh for Thanksgiving and still had not secured a position, I was frustrated. Then, a call came from human resources at Simpson Gumpertz & Heger Inc. (SGH), a New York City structural and building enclosure engineering company to whom I had sent my résumé almost two months before. I ended up getting the job—just a month before the start date.

I joined SGH in January 2008, working at the Midtown Manhattan office across 34th Street from the Empire State Building, as well as at dozens of other project sites in and around the New York City metro area—including the World Trade Center site.

All of my work in the office such as checking shop drawings, performing design calculations, putting together field reports, and interacting with the many talented SGH employees was invaluable—but the time I spent on site visits added amazing depth to my experience. Because SGH specializes in new design, investigation, and rehabilitation projects, I was able to get involved with a variety of fieldwork.

One of those projects is the resupport of a critical slurry wall at the World Trade Center site. The wall is supported by caissons, or steel that is bolted and welded together, then encased in concrete and drilled into bedrock. At one point, the welds on a caisson failed when a crane lifted the steel assemblies, and I was asked to go to the site and investigate. I had to inspect the assemblies, take photos, and interview experts. Since September 11, I have been fascinated with the engineering and societal aspects of the World Trade Center site, but I never dreamed I would have a chance to work there.

Another exciting project was working with SGH's building enclosure division to investigate a defective curtain wall facade on an 18-story building in Jersey City, N.J.—which meant I rode a swing-stage scaffolding up and down the side of the building on a daily basis. For another task, a rehabilitation job, I helped measure and document structural elements and connections in a lower-Manhattan building that was constructed in 1889, for which there were no existing structural drawings.

My co-op assignment taught me a great deal of things that are not covered in the classroom, as far as engineering goes. But this is also true of ethics, budgeting, writing, interpersonal skills, and life in general. Just moving to and living in different areas of in the nation's largest city—whether commuting on the PATH train beneath the Hudson River or through Central Park on my bicycle—was quite an experience. Still, I looked forward to my return to the beautiful Appalachian hills of Athens, Ohio. So, it was the best of both worlds for me.

Top photo: Patrick Miner (left, white hat), checks work on the slurry wall at the Freedom Tower site in Manhattan.

Bottom photo: Standing on a swing-stage scaffolding hanging down the side of an 18-story building in Jersey City, NJ, Miner helps inspect the structure's curtain-wall façade.