Research Potential Employers and Approach Them with Confidence

IT'S RARE THAT ANYONE'S FIRST JOB after college is a perfect fit, but for Madeley Arriola Guerrero, A.M.ASCE, research, patience, and persistence paid off. As an associate engineer in the West Palm Beach, Florida, office of Chen Moore and Associates, she is using the technical education and software expertise she obtained at the University of Florida to model and design potable water and force main systems for a variety of clients. By taking her time to research different companies and evaluate their corporate cultures, she was able to find an employer that supports her desire to increase her skills and learn at a fast pace.

Madeley Arriola Guerrero, A.M.ASCE

COMPANY
Chen Moore and Associates, West Palm Beach, Florida, office

NEW TITLE
Associate Engineer

PREVIOUS TITLE
Undergraduate Research Assistant, Solid Waste Management, University of Florida

What are the responsibilities that come with this job?

My responsibilities include potable water modeling for new or existing water mains, designing potable water systems and force mains, and doing construction design with my project manager. I have also had the opportunity to learn the construction side of projects, going out to oversee construction on location and making sure things are going well and that the measurements by the contractor are correct.

The most recent thing I've gotten into is learning ICPR 4.1 [software produced by Streamline Technologies, of Winter Springs, Florida]. That's modeling software for stormwater, and I will need to know it because we will be working on a water modeling project for the University of Florida. That's where I went to college, so it will be cool to go back and do this for them.

What are the chief skills and abilities that you developed in your education and volunteer activities that helped you get this job?

I worked with my research professors at the University of Florida on water projects, and that got me interested in water resources, which is my main role now at Chen Moore.

My multiple internships also helped me learn about the consulting world versus the public realm. I interned at MWH Global [now part of Stantec], and there I got a very good, cross-cutting learning experience about the consulting world. The next year I had an internship at the Florida Department of Transportation [FDOT] in Gainesville, and that was a completely different setting and way of working. The big differences were in how fast-paced things are in the consulting world, how much more pressure there is, and how you have the chance to learn more and learn faster there. FDOT was a great place to work, but it was more research focused, and research tends to go slower. I like learning fast and moving to new things constantly.

Also, the fact that I am not an American played a role; I'm from Nicaragua, so getting approval to work for the state would have been difficult.

What personal traits or characteristics do you believe helped you win this position?

As a student I didn't know my strengths as much, but as a consultant I can now see some key things. One is, I am a very fast learner and I am able to adapt quickly. I'm very enthusiastic to discover new things. One example is when I was on a construction site for the first time. I am a small girl, I am not from this country, and I was dealing with a lot of men. There was an age gap, too; I'm 25, and they were maybe 45 to 50. It was challenging and a bit intimidating, but I ended up liking it a lot. I had the support of more experienced engineers who came with me to make sure I understood what was happening on the site and to introduce me to the team. By the end of that experience, one of the construction workers introduced me to someone as 'the person who tells me what to do.' It was nice.

Working on the site also required mental preparation. I had to read and learn the technical specifications so I could be aware of what was going on. I also made myself a list of contacts so I knew who to call in case there was an emergency; I wanted to be prepared. There is always something that happens that you don't yet know how to handle, and you have to be good at communicating that and asking for help.

What technical skills helped you achieve this position?

At the University of Florida, as you get close to graduating, you can take technical electives in subjects like transportation, water resources, stormwater, or structural engineering. Lots of my electives were in stormwater design and water resourc-

es management. Plus, I did my honors thesis in water resources, so I came to this job with a good background in those areas. During the interview for this job I met my current supervisor, who is a water resources director, and he saw that I could bring those technical skills to the office.

I also had experience with two of the software packages used a lot by this company, and now I spend most of my time working in those programs.

What nontechnical skills helped you achieve this position?

One of the biggest is communication skills, which I developed as the design and education team lead for Engineers without Borders' University of Florida chapter. I was in charge of 20 students. I had to learn how to make myself understood and communicate why the things that I wanted the team to do were important.

I am also very persistent and patient, and that came through in multiple situations. When I was living in Norway, I applied to many universities in the United States to pursue my undergraduate degree, and then later I applied for many jobs. Both required lots of persistence and patience. To prove that you are good enough to study here and get a job here takes a lot.

What role did mentors, advisers, or your network play in your achievement?

They played a huge role. I was lucky to be able to engage with my professors a lot, and some of them have been very good mentors. My water resources professor for my honors thesis was Dr. [Mark] Newman; another mentor was Dr. [Robert] Thieke [A.M.ASCE, the associate chair of the Engineering School of Sustainable Infrastructure and Environment at UF]. I transferred from University of Oklahoma, and their guidance in what courses to take, what direction to take, and even in financial matters was very valuable.

Now that I am working at Chen Moore, my mentors are Brent Whitfield [P.E., M.ASCE], the director of water resources; Suzanne Dombrowski [P.E., M.ASCE], a senior engineer and office manager; and Paula Fonseca [P.E., M.ASCE], a senior engineer. They listen to what I want to do and what I want to become.

Be confident. If you were able to do what you needed to do to get a degree, you can do the job and do it well.

And my parents have been the long-lasting mentors of my life. They were very strict in terms of my education and goals that I had to set for myself. The discipline they taught me is really working out for me.

What do you hope to accomplish in your current position?

I want to become very skilled and sharp when it comes to engineering design. I look forward to obtaining my professional engineering license so I can eventually become a project manager, but I want to lean more toward the technical side of engineering. My future goal is to eventually get my master's degree in water resources to broaden my knowledge and skills.

What types of positions do you see yourself moving toward over the next few years?

I may want to move into being an engineering director so I can have more impact on a specific community. One thing that excites me is learning useful things that, many years in the future, I may be able to take back to my country and implement. That is something I really want to do, maybe 20 years from now.

What advice can you give graduates seeking their first engineering jobs?

Prepare yourself properly. At UF we had career events at which companies came and talked with us. I went three times—as a sophomore, a junior, and a senior. The first two times were not so good because I didn't research the companies well and I was shy. I was not confident enough to show them my work and my skills.

So my advice is to research the companies you will be meeting ahead of time and learn what they want from you. Know your own skills and be able to portray them properly so employers get to know you better. And try to be confident. If you were able to do what you needed to do to get a degree, you can do the job and do it well. Confidence changes things a lot.

Also, when I was looking for a job, a strong goal of mine was to find a company with a great work culture. When we are in our senior year, we are all desperate to find jobs. But if you have the luck and opportunity to have different offers or interviews, finding a company with a good office culture is key to helping you become a good engineer. I was very lucky to find a company like that in Chen Moore.

I was interviewed by a different company before I took this job, and it seemed good, but when I talked with others who had internships there, I decided I might not like it as well. With Chen Moore, my interview was very casual and fun—it did not feel pressured. Also, before making my decision, they invited me to come to the office and meet the other engineers and ask questions. That told me a lot about them.

Something my boss says, that I think is true, is that getting a job is like a relationship. There is a courtship period—but you also have to pay attention to the details.

—LAURIE A. SHUSTER

Are you a younger member who has recently taken the next step in your career? We'd like to hear from you. Email cemag@asce.org using the subject line "Next Step."