**Seek Out Challenges and Opportunities to Learn**

Lisa Karwoski, P.E., LEED AP, is a transportation engineer at Mott MacDonald based in Los Angeles. After graduating with a degree in civil engineering from the University of Delaware, she spent about two years working on stormwater and environmental projects in Pennsylvania before moving to Southern California in 2009 to work on the California High Speed Rail project. She joined Mott MacDonald in 2011, and since 2014 she has led the civil design for Los Angeles’ Metro Regional Connector light-rail tunnel project.

What are the chief skills and abilities that you developed in your previous position(s) that enabled you to move on to this new position?

Honest communication has been the chief skill that has allowed me to move into this new position. I am currently finishing a role as the design unit manager for the civil work for a complex, fast-paced urban underground infrastructure project, and with that comes coordination with subconsultants, the client, and all the other groups involved. Having that communication skill threaded through all that we’re doing to meet the deliverables and the schedule has been key. My communication skills have evolved and improved while working on this project and were key in helping me move into this new position.

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

There are three: determination, drive, and passion. I am very passionate about transportation and what it does for people in their day-to-day lives, and so I am determined and driven to deliver the best project or idea to make a better transportation network for all users. I also put my hand up for a lot of things that are initiated within the company or by outside organizations that I’m involved with. I want to get involved as much as I can to make as broad an impact as I can.

What “hard” skills helped you achieve this position?

My technical skills. Having a foundation of technical knowledge is key to being able to move up and take on more management and leadership roles. There are so many pieces to projects that you need to consider, and a big part of using those technical skills is understanding the whole picture.

What “soft” skills helped you achieve this position?

Patience and listening to what’s going on, to be able to make a decision as needed, and to let other people know what’s happening. And that goes back to the importance of communication.

How did your education—formal or informal—help you prepare for a position like this?

The University of Delaware was amazing; a wonderful experience. My technical training set me up for that mind-set of constant learning and adapting as the environment around us changes.

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

I am involved with the Los Angeles chapter of the Women’s Transportation Seminar (WTS), and having that network has been helpful in terms of gaining some soft skills, such as public speaking. It has given me the opportunities to develop skills that are important but you just don’t necessarily get in a college setting. And as you take that step into manager or leader, you must have those sorts of skills. I’ve also had many mentors who have impacted me along the way, from whom I’ve learned a number of different skills, such as being able to set up a budget and understanding what needs to happen to make sure the budget captures everything. And on the technical, design side of things, I have learned to think holistically, from planning through to construction—to determine what needs to happen and make sure that everything is coordinated correctly. Mentors were always there to help make sure that I was successful in whatever I was trying to do and played a huge part in getting me where I am today.

What advice would you give to other young engineers who would seek a position similar to yours?

My first piece of advice to engineers is that you should make sure that you are being challenged with the work...
If you are not being challenged, then you probably are not learning, and you are not growing as much as you could be.

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—Catherine A. Cardno, Ph.D.

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What do you hope to accomplish in this new position?

I would like to help develop other people’s technical and soft skills—whatever it is they want to develop. This will continue to challenge me, and I think it will also help challenge the folks that are on my team.

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

This is a really interesting question because I feel like we are at the beginning of a big revolution in the transportation industry with things like Uber and driverless cars and all of the other technology that is shifting how we’re thinking and engaging. I feel like I can’t really identify that “I want to be in this position in five years,” because I think that the position that I will want to be in is a position that just doesn’t necessarily exist right now.

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