



TRANSPORTATION SPOTLIGHT

PROFESSIONAL: DOREEN NG-SUI-HING, E.I.T.

NAME: Doreen Ng-Sui-Hing, E.I.T.

COMPANY: Virginia Department
of Transportation

TITLE: District Project Controls Engineer

COLLEGE: Virginia Polytechnic Institute
and State University

DEGREE: B.S. in Civil Engineering

Q: How did you select your certification program or college major?

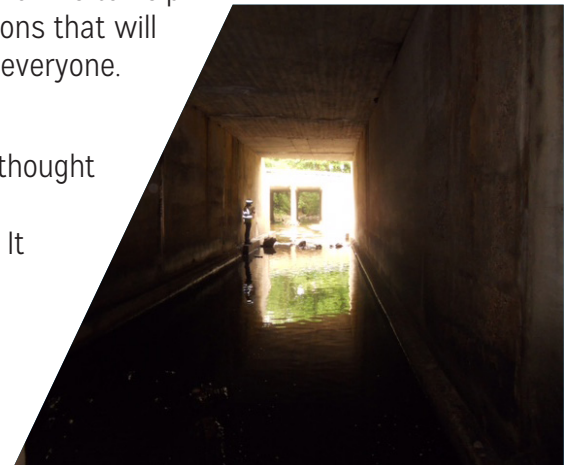
A: During my last two years of high school, the school offered AutoCAD classes and Fundamental Engineering classes, and so I enrolled in these electives to see if engineering was something I wanted to do. I ended up really enjoying these classes because I was able to design projects using latest software like Inventor, and then being able to create what I designed by physically building the project. When it came down to narrowing what type of engineering to choose, I ended up picking civil engineering because I was fascinated with large building structures like skyscrapers and bridges. I also noticed that civil engineering deals with various structures and roadways that are unique in nature, which means it cannot be reproduced - when you look at the other engineering fields, they tend to have a reproduction factor to it like mechanical, electrical engineering. So I liked the idea of having to design for a specific issue/project.

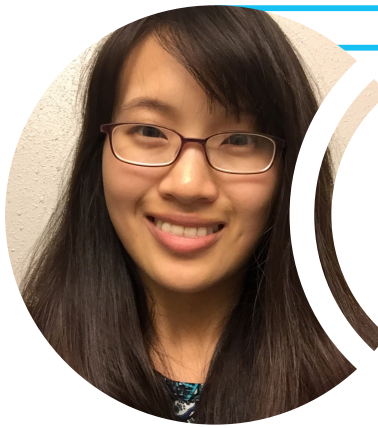
Q: What was the biggest influence in your selection of major/career pathway?

A: My family - my parents, who led the way for my siblings and me to have the opportunity to go to college. My parents taught us to work hard, to live with what we need, and to understand that as we grow, the world grows around us, too. So, given the life lessons and encouragement that my parents gave me and seeing my brothers go to college, college was always one of my goals; the challenge for me was determining what my career would be. My brothers were interested in political science, business, biology, chemistry... I wanted to choose a unique career that showcased my personal and professional interest. I have a desire for me to help people, and ironically, civil engineering allows me to make ethical decisions that will improve the quality of transportation in Virginia. Transportation affects everyone.

Q: What attracted you to the transportation industry?

A: I like to travel which sparked my interest in transportation. I always thought it was neat that there were different ways of getting to a destination, whether that's walking, taking the Metro, driving, flying on an airplane... It always brought me to these questions of "how was this vehicle built?" and "how did I get here?" What I like most about this industry is that it engages numerous fields and so there is a wide range of avenues that can be pursued in this industry alone. It also offers stability, which is a plus; and one of the greatest things about transportation is that it will continue to evolve as we become wiser.





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Q: What is your favorite aspect of your job?

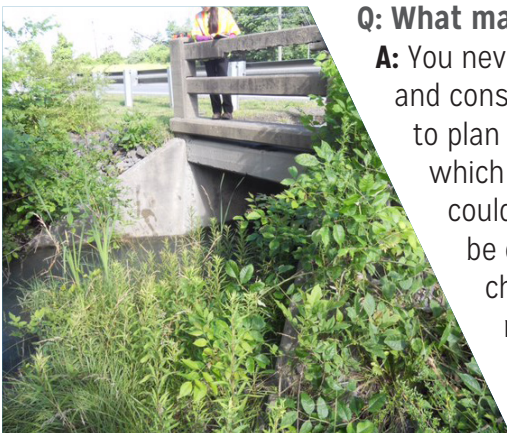
A: My favorite aspect of my job is being able to work with various types of people from engineers to maintenance crews to inspectors. Everyone has their own insights and experiences – so I always find myself learning something new from someone else whether it is work related or it is just personal advice.

Q: How do you/your company make a positive impact on society/your community?

A: VDOT's responsibility is to serve the public. I stand by and truly believe that the organization does its best to make a positive impact on society every day. I think one of the ways that we stand out is through our emergency services. As VDOT employees, we are on stand by for any emergency event like hurricanes, winter weather, etc. When I first started as a salaried employee, I worked on several 12 hour shifts being a monitor and helping make sure that our hired equipment and VDOT equipment were clearing roads and shoulders. I followed fellow coworkers who drove dump trucks to plow the roads and essentially risk their lives to keep roads open. Ultimately, VDOT is responsible for maintaining the (state) roads and making sure that the public has access to them. Being part of VDOT, there is this responsibility of knowing that we can influence day by day routines because of how we maintain and construct our roads and that we are willing to do our very best to help keep Virginians moving.

Q: What's the most interesting thing you have been able to do in your professional career?

A: In general, if you're an engineer, you're considered like the math and science guru of your field so your primary focus is on design and making sure that the design works. With that said, I never knew that as an engineer that I would find myself working a lot with legal teams. Specifically, part of my job is to review claims that Contractors submit if they are not satisfied with some aspect of the on-going project work; and so I help evaluate the Contractor's position and the organization's position and determine what's realistic, what was in the Contract, and take in information that may warrant the need to bring in the organization's legal team. At first, it's daunting because you think to yourself that now I'm bringing lawyers into the work; but at the same time, it's kind of invigorating because I have to think like a lawyer, too.



Q: What makes you get up each morning excited about your profession?

A: You never know what to expect, especially working in the transportation and construction industry. As part of my position, I am scheduler; so I do try to plan out what I intend to work on, but "the plan" can always change, which can lead you down the road of "what is going to happen today?" I could be in my office reviewing plans or constructing a schedule, I could be out on a project working with the inspectors in determining field changes that requires quick decision making, or I am suddenly finding myself in a meeting with leadership staff to review infrastructure repairs. So every day is kind of its own adventure and you never know what might happen that day even with "the plan".



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Q: If you could go back to high school and select any elective course to take that would have better prepared you for the future, what would it be?

A: Personal finance – I think growing up I listened to the concept of needing to spend money (and time) wisely but I probably didn't appreciate it as much until I was in a position calculating how much I was willing to spend every week. I remember being at college and I was able to pay for tuition, books, and a meal plan. This meal plan was not based on the number of meals but a dollar amount. So by the end of semester, I always found myself scrambling to figure out how many “meals” I had remaining. As simple as a meal plan could be, I think overall just having self-awareness and knowing how to create a budget, what does insurance entail, what is a credit score, and etc., can help someone prepare for the future. Money is something that will be here for quite some time, if not eternity, so knowing how to use it wisely is a good thing.

Q: What advice would you share with students or anyone considering your profession?

A: Be willing to take on tasks that are not necessarily your “standard work position requirements”. Always strive for more – never let the job control you but rather take your role and make it your own.

Q: When did you come to VDOT?

A: I came to VDOT in May 2013 as part of the Civil Engineering Scholarship Program as a summer intern.

Q: What has been your career path at VDOT?

A: In the summers of 2013 and 2014, I worked in the Northern Virginia District Office in Structure and Bridge and then with the Location and Design/Project Management teams respectively. In the fall of 2015, I started the Core Development Program (CDP) and was assigned to the Northern Neck Residency. As part of the CDP, I rotated through various sections of VDOT, primarily in the Fredericksburg District. Beginning of January 2016, I was asked to be the acting District Project Controls Engineer; and I have officially been in this role since June 2016. So my career path has been a mix of maintenance, design, and construction. And the journey continues.

Q: Where do you want to be?

A: Growing up, I have always had some sort of plan as to where I wanted to be, like going to college, getting a job, becoming a mentor/manager/supervisor, etc. But I feel like some of the best opportunities that I have ever had were ones that were spur of the moment. I know that I (at least) want to sit for my PE license and be in a managerial role some day; in terms of what that specific role is, I am purposefully leaving it open so that I can continue to learn all aspects of civil engineering and learn about roles that are unfamiliar to me, because I know that's what will challenge me.

Q: What helped you to get where you've wanted to go? (mentors, opportunities, initiative, leaders, etc)

A: Balance of being a hard worker and putting myself out there – Being a hard worker because being able to do tasks effectively and efficiently is important; I like for my work to speak for itself. Networking because it actually landed me the job I am in now; I remember having the one conversation with the District Construction Engineer (DCE) prior to him asking me to being in the acting role and (so I'm very grateful) he had confidence in



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me to perform the job... so you never know how one conversation can land you your next job or assignment. I truly believe that one needs both hard work and networking to be able to move up in his or her career.

Q: What have been your challenges along the way and how have you mitigate them?

A: In my time with VDOT, I have had to learn how to work with my VDOT team, consultants, Contractors and the public. Everyone has their own insights. So listening is the key, because you have to understand each section or entity's perspective to make a decision or a resolution that is best for everyone. In a lot of cases, that decision comes to one question, "what is best for the project?"

Q: What do you do to develop others (for those identified as people developers)?

A: Even though I am not designated as a supervisor, I have had the opportunity to mentor interns and CDPs and also give advice to fellow co-workers. I have found that listening to what they have to say and being able to ask them questions encourages participation; being able to appreciate that person's work is also very important. And lastly, leading by example so if I'm motivated, then my co-workers around will be motivated, too.

Q: What is the best career advice you have ever been given?

A: To be thankful for the opportunities you are given - sometimes people will offer you chances to attend conferences for instance or give you specific assignments because of your expertise/talents; take these opportunities whenever you can, don't take it for granted. To be humble - whether someone comes in with a ton of experience or comes in with minimal experience or if that person is highly educated, etc. Remember that there is always something you can learn from someone else whether it be work related or just personal advice.

Q: What advice would you give someone new to VDOT?

A: Be willing to take on tasks that are not necessarily your "standard work position requirements". Always strive for more - never let the job control you but rather take your role and make it your own.

Don't count the days, make the days count. - Muhammad Ali

Life is simple but we insist on making it complicated. - Confucius

