



TRANSPORTATION SPOTLIGHT

PROFESSIONAL: KEITH D. WILLIAMS

NAME: Keith D. Williams P.E., PTOE
COMPANY: Pennsylvania Department of
Transportation (PennDOT)

TITLE: District Traffic Engineer
COLLEGE: Penn State
DEGREE: BS in Civil Engineering

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

A: I have always liked problem solving, the outdoors, math and science. Even as a kid I always liked to build things from airplane models to tree houses. I also like to draw, and I really enjoyed my first drafting and mechanical drawing classes. When selecting civil engineering as a major, I looked at my college education as an investment. I decided that if I was going to spend at least 4 years of my life and thousands of dollars getting a diploma, I wanted it to be in a field that I enjoyed, and paid well. It turned out my career in Civil Engineering and Transportation has allowed me to achieve both.

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

A: Not knowing what I wanted to do after high school, I travelled around and worked in various trades including home construction and machine design. I also joined a local kayaking club where I met people that had attended college and were working in professional careers. Some of these friends asked me what I planned on doing with my life while sitting around the campfire on a weekend kayaking trip. They said that I seemed like a smart guy and that I should give college a try. They were right and I enrolled at Penn State. I have come to realize that those gap years after high school helped me mature, gave me a strong work ethic and helped me be a more engaged student.

Q: What attracted you to the transportation industry?

A: During college I was hired in a summer internship program with PennDOT. I worked a total of three summers in PennDOT's internship program. I worked on projects such as building bridges, paving roads, and



designing traffic signals. I really enjoyed it and learned a lot. I believe it was those PennDOT internships that generated my interest in transportation.

Q: What is your favorite aspect of your job?

A: It is hard to name a single aspect. Some of my favorite aspects are the problem solving that is part of a design and the feeling of satisfaction watching an idea go from a drawing on a piece of paper to construction, and end up as a bridge, new road, or a traffic signal. Some other favorite aspects are knowing I am involved in providing safer roads and that I am "a part of the future" as I watch the transportation industry evolve.

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

A: Making roads safer and reducing fatal crashes is a big part of my job. Knowing that we are keeping traffic moving and reducing congestion, thus improving air quality and safety are very positive impacts. Repairing and replacing old and structurally deficient bridges and repaving roads is good for everyone. What we do improves the quality of life for anyone who drives, walks or rides a bike.

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

A: One of my favorite projects was the design and construction of a Traffic Management Center (TMC) at PennDOT's engineering district office building. This TMC is like a 911 center where we manage changeable message signs, signals, cameras, etc. as part of a transportation system and operations program. We also use the center during crashes, winter blizzards and during flood events to coordinate PennDOT's emergency response.





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

A: Seeing a project through to the end is a big motivator to come to work. PennDOT highway projects are often very complex and require input from the many different engineering areas such as bridge, environmental, roadway and traffic units. I know that to complete the project the traffic unit part must get done and that the other units are counting on me, and I don't want to let them down. Also, knowing that what I do has saved lives by preventing serious vehicle crashes is a great feeling and an excellent motivator.

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

A: I guess courses in risk management, communication skills, consensus building and running a good meeting would be high on the list. Engineers tend to focus on math and science in school and then hit the "real world" and must interact with a lot of

different people. When you are participating in a public meeting in front of a big crowd of non-engineers, and you are trying to explain the benefits of a project, you realize quickly your extensive math background isn't much help.

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

A: Some of my thoughts are: your education will get you an interview, but your internship will get you a job. If you think you have earned it, ask your teachers, intern providers, and employers if they would write you a letter of recommendation before you leave. Keep a portfolio of projects that you worked on in school and/or during internships and employment. Keep a school/work journal. Find a person and/or fellow student you like and respect, and ask them to be your mentor. Remember that part of what you get paid for is to be patient. Keep your options open, there are a lot of opportunities in the Transportation field, not just engineers. We need people in almost every field and at every technical and vocational level to help create and support the future transportation network. Ask questions. Learn to listen. Respond to people as quickly as possible, but above all, respond. Be real and keep a sense of humor. Own your job.

