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12th Grade

Constructing My First Bridge

I watch the large project underway as the crane rises up into the air about fifty feet. I hear metal clinking all around me, hammers banging, and the sound of drills.

Jackhammers and the hissing of welding equipment echo through my ears. I see those yellow hardhats all around me. Bridges hold a special place in my heart. At this point in my life, I feel one with the bridge. A bridge represents stability and connects two things together, as I act as the bridge between my in-laws and my own parents.

A bridge also functions as a historical landmark, something that people hold dear in their hearts. It has significance to them because perhaps a battle took place there. For others, a bridge becomes easily taken advantage of because people drive by everyday, not realizing the beauty or the time and work put into such a magnificent piece of architecture. My life presents a historical landmark to others because of my past and current projects, while simultaneously I feel taken for granted at work and home. While overseeing the construction of my design, I also supervise the bridge construction site and check for safety precautions. Previously, I spent days at the computer designing the structure, and now I watch my work come to life before my very eyes. As a civil engineer, specifically a structural engineer, for 12 years now, I still feel passion for my job. The work reveals the exciting, rewarding, and important contributions to society. This has been my dream job for years because of the problem solving aspect. I return back to the office and log onto the computer. While the computer loads, I look up at my calendar and it reads November 22, 2030. The computer finishes loading as I sip my coffee, and so I recheck the mathematical calculations of the lenticular truss structure, similar to that of the Smithfield

Street Bridge. They appear correct. At roughly six-thirty, I decide to head back home to my family. A bridge represents stability, and I am the stable part of my relationship with my family.



While in the early stages of the building process, workers assemble the bridge. Like the workers, my parents and teachers contributed to the development of my education, making sure to provide me with all the right equipment to advance later on in life. During my earlier years, directly after high school, I attended the Swanson School of Engineering in the University of Pittsburgh for four years, where I took several math and science courses, majoring in civil engineering with a minor in education. I received my bachelor's degree and also participated in a work study program that offered me a job with a company after I graduated. I switched companies several times until I found one compatible with me. I now work for PennDOT in the Pittsburgh district, where as before I worked for O'Donnell Consulting Engineers, Inc. and HDR Engineering, Inc. I also earned my license from the State to offer services directly to the public. I completed four years of work experience, passed an exam, and worked under an experienced engineer. In my case, I interned under Tom Rudak, whose profession consisted of a civil engineering background and helped me on the path to where I stand today. I reached my highpoint in life, the top arch of the bridge. Not really moving up any more in life, I stand still as a bridge stands still. Some structures include self-suspension type bridges, which relates to my life as a strong, independent person. I chose to focus on my career for a while, waiting until later in life to start a family. Now, at age 37, I live with three healthy and energetic kids. My husband and parents continually offer me support, as anchorage cables and piers offer support to the bridge itself. We all work together to function as a strong family.



Bridges often get recognized for their unique structures and become renowned. I, myself, receive recognition as a renowned engineer for my designs. “Lisa, what is going through your mind right now as you speak on live television?” the CNN reporter asked me. I remained speechless, absolutely speechless. Several thoughts raced through my mind as I smiled and said,

“Well, I am very grateful and ecstatic to be nominated for such an award. It means a lot to me to be considered for Civil Engineer of the Year. I know I have worked hard to earn the title, and even if I don’t win it, it was such an honor to be recognized alone for my work.”

“What do you plan on doing for the next ten years to come?”

“Hmm. I plan on repairing old bridges that are in dire need of fixing. There is no reason to knock them down. We just have to get enough funding and we’ll work hard on keeping the bridges in tip top shape. The Birmingham Bridge is currently being shut down again because of another problem with the girders.” I paused for a second and then added, “We want Pittsburgh to maintain its title, *City of Bridges*.” The video camera’s bright light left my eyes with what seemed to be everlasting glare spots on everything else I looked at. I returned back to the table where my husband sat in his black tuxedo. He pulled out my chair for me. For my future ten years, I plan on becoming the best engineer possible, while striving to become the world’s greatest mother and wife, continually watching my kids grow up and instilling in them the same knowledge I received from my parents. Furthermore, I want to go back to school to earn my master’s degree in engineering. I want to expand my knowledge and education. As bridges grow older, sometimes they need more support to help them stand.

The announcer of the Engineer Hall of Fame spoke into the microphone. “And the winner is...”