My entire life, when I was asked what my parents did for work I responded by saying my “dad is a civil engineer.” Considering that my mom had enough on her plate at home with my two sisters and I, she did not need a day-to-day job. As I got older, I began to understand what that job title actually is and what his role for the company consisted of. Constantly hearing about my father’s endeavors got me thinking what I was going to do when I start my career in life. With this came a little bit of anxiety while taking a step back and looking at what life might look like in full. For the longest time, I wanted to be a neurosurgeon, a doctor, or some sort of scientist, being that I was always very proficient in the areas of academics that those professions required. I soon realized what kind and how much of schooling was actually necessary to be able to just begin to work your way to having the actual title of a neurosurgeon. I was then pretty thrown off with the idea of going to college and still being unsure as of what I wanted to do. For awhile this made me feel like I didn’t know what my purpose or my goal was in life, when everyone else seemed to have it all figured out. So I took a few years off of schooling after high school, and I was now in need of a job. I talked to my dad and he helped me apply as a laborer for his civil engineering construction company, RTA. Shortly after, I began working for the company and proving to everyone that I deserved to be there, and that I am capable of working hard and problem solving, which are the tools you need to have when working as a laborer. We worked on multiple different types of jobs including: wastewater treatment, removal and installation of sewer and water main lines, concrete, and the groundwork for a new courthouse to be built. As time went on, I began to fall in love with the perfection that came with building or repairing all different aspects of the civil engineering infrastructure world. It made me feel like what I was doing actually mattered and had an influence on the world, like I finally had a purpose.

In the summer of 2020, I was working on a sewer line that the plans had called out for an upsizing of the diameter on; the reason for this relates directly to fluid mechanics. Because the area that we were working on had such a flat grade from one manhole to the other, there was not enough room in the pipe for the sewage to flow with gravity to get where it needed to be, or not fast enough anyways. To counter this, we shortly realized that the 6 inch sewer pipe needed to be replaced with an 8 inch pipe to allow the flow of sewage to reach where it needed to be at an almost flat slope. In doing this, I was tasked with calculating the grade point on our survey rod that we needed to meet at the top of each length of pipe to be able to have fall, while also meeting the condition of connecting to the manhole at the correct elevation. In the field, this is an essential calculation of algebra that needs to be correct or someone is losing out on a whole lot of money from time and materials. To do this calculation you have two original elevations, the elevation of bottom of pipe where it meets manhole 1, and the elevation of bottom of pipe where it meets manhole 2. From there, you know the distance between manholes, and you can easily do rise over run to find the slope at which your pipe needs to have to meet perfectly at both ends, taking into account the upgrade in pipe diameter. I did this calculation, and our pipe had an extremely small slope and met the other side perfectly as expected. I was verbally rewarded after so much trust was put in my hands to be responsible computing these calculations and executing them in the trench. This gave me a sense of pride in my work, and it made me realize my math skills are needed to help everyone at the company get done what needs to get done so that we can get paid at the end of the week, and so that the community we are doing the work for is able to flush there toilets without it coming back up the wrong direction.

I then sat down with my dad after realizing I wanted to further pursue the idea of being a civil engineer and follow in his footsteps. He told me that going to school for civil engineering would be the first step in all of that. I then immediately started applying for schools and thinking about where I wanted to live while I was going to school. I had some friends that came to BSU right out of high school, so I came and visited Boise shortly after and fell in love with the scenery, and the people here. I then applied to BSU and am now a junior on my way to receiving my Civil Engineering Bachelor’s degree.