



My Summer Internship Experience

Nebraska Department of Roads
2014 MATC Summer Internship Report
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During this summer, I had the opportunity to be an intern at the Nebraska Department of Roads in the Traffic Engineering Department. I was really glad to work there because it was my first experience working in the Civil Engineering field, which is the field I want to be in.

On my first day of work I was introduced to the people who work in the Traffic Department and to all the tools that I would use during my internship. I learned how to use Pathweb, which is a program that contains pictures from all the highways that go through Nebraska and also has correspondent reference posts. Others softwares that I used were OnBase, Nectar, and Microstation.

The first projects I got involved with were pretty simple actually. I was asked to make two sign inventories, one of them was about the crossing pedestrian signs that are present in all of the state highways. The other was about the school crossing signs placed near zones that indicate the school has closed. For both projects, I used Pathweb, Google Maps, and Google Earth to help me find the signs and write on an Excel sheet its location, reference post, and the code of the sign, according to MUTCD. Making the second project made me work a little bit more since I had a big pdf file with the name of all the closed schools along the state of Nebraska, and I needed to find the address of each one so I could take a look around to check if there was any state highway passing nearby and if there were any remaining school crossing signs left there. According to legislation, if there is no school at a certain location, then the school crossing signs have to be removed.

Another part of my job, while working with the Traffic Analysis engineers, was to pull crashes at a certain location and make the crash diagrams for them. Usually, when we received a request for a study I had to do that to check the number of accidents that happened there and what caused the crash. By doing this, it is possible to look for a pattern in the crashes and try to

discover what is wrong with the location. For example, this research is beneficial if there is not enough sight distance available, or if it offers the driver a vision of their surrounding area.

Depending on the main cause of the crashes, the engineers can study what would be the best alternative to solve the problem.

Along with the crashes inventory, I was asked to prepare data collection to get speeds, volume, and land use inventory. To do that, at first I searched on the data basis if a previous study had already been performed in that location. If so, I got the file job and skimmed through it, just to get an idea of what was happening there. I then started to prepare the maps that the engineers would need to know where they should get data. NDOR keeps the maps for each city and county in Nebraska on a software called MadDog, so I needed to pull the correct location and edit it so it could fit on the paper. After I had everything ready, my supervisor would revise the folders and submit them for the data collectors so they could plan when they would perform the counting.

I didn't get the chance to be very frequently in the field, but I did participate in a few trips with my work colleagues. During the first field trip, we visited some intersections to inspect roadway repairs and check signs. While we were driving on the road, I noticed that the pavement markings were different from the ones I am used to. The spaced white lines are actually painted half white/half black, because when the surface is covered with snow it gets easier to identify the path of each lane. During another time, we visited Omaha's Operations Center of NDOR which is where they have control of the cameras along the highways that are part of that district to monitor the traffic. I also went to Lincoln's office called The Hill.

My supervisor was also a MATC intern while he was in college. During my internship he scheduled appointments with people from other departments and took me and the other intern so

we could learn more about what the NDOR really does. We visited the Bridge Department, Materials and Research Department, Roadway Design, and others. It was really interesting to see how the departments depend on each other to bring a project to life and the importance of working within a given time period.

Being in contact with many traffic engineers made me sure about what I want for my future. I can see that those people have a huge contribution on the lives of society, even if it may not seem like it. Their research and studies allow people to move safely around the city.

On my first day of work, I was afraid that maybe I could not have a satisfactory performance due to the language, but now I feel like I have grown up so much with this internship. I am completely grateful for having been given this opportunity. I have not only experienced what is like to work with traffic, but I have also improved my communication skills in English and I have met amazing people. I feel completely confident to apply for a position related to traffic/transportation in the future, as I am certain that I want to pursue a master's degree.