

MATC PROGRAM 2018 SUMMER INTERNSHIP

MY SUMMER JOURNEY AT DEPARTMENT OF TRANSPORTATION

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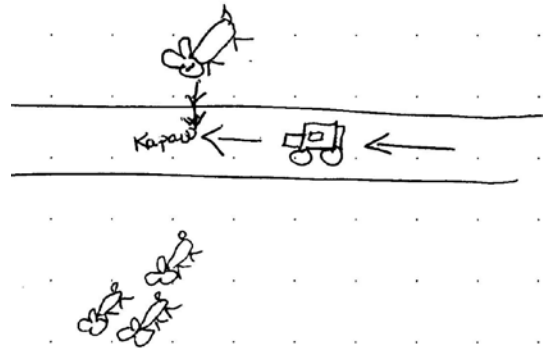
Introduction

Looking for gaining experience and figuring out which field you want to work in the future? You need to consider applying for the MATC program internship. In this report, I am pleased to share my journey as an MATC intern at the Nebraska Department of Transportation working the Traffic Division. The purpose of this report is to include a summary of the activities and tasks that I had experienced in my internship this summer, and advice for interns in the future.

The following indicates several tasks I touched on this summer through working with Traffic Division at DOT:

Reviewing and Summarizing Crash reports

One of the tasks I experienced this summer is reviewing crashes in a segment of highways to evaluate the accidents and write a crash history as part of the memos with recommendations that meet the standards at MUTCD. I got to analyze about a thousand crash reports during my internship. I learned what things I should pay



attention to when I am writing the summary or the memo of the crash's history, also, to be aware of what are the well-known failures drivers do that cause crashes.

Reviewing consultant Studies

During my work with the Traffic Division at DOT, I had the opportunity to review two consultant study reports. One of them taking place in W Center Road and 204th St in Omaha; while the other was in the city Cozad. My job was to go over the impact study reports, check the data in the appendix with those given in the paper, and the given Level of Service in long term development. Afterward, I would have a meeting with the team to go over what each member thinks about the report and things the partners recommend to the consultant to update the study.

Working on researches for my supervisor

This task helped me gain information I was not familiar with, for example, I helped my supervisor gather information about road diets for his presentation in the city St. Paul. I

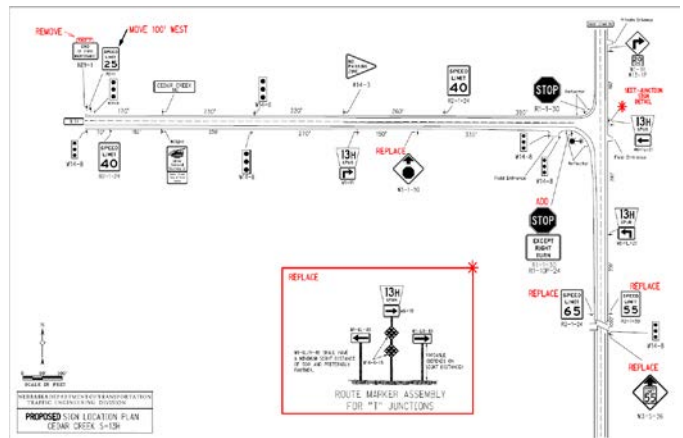
worked on gathering information on safety edges on the shoulders of roadways and how one lane closure on work zone area could increase the crashes.

Assisting with organizing paper files, scanning documents into electronic system (OnBase)

As the company is moving forward with technology, I helped the team scan old consultant studies into an electronic system called OnBase the department uses to keep the records more accessible to search for whenever you need to pull information about a specific project, highway, or county.

Drafting maps or display using MicroStation

One of the benefits I gained from the internship is learning the basic of MicroStation to draft two roadways inventory maps including the exciting signing; I worked on editing the actual signing of one of the segments to propose the recommendation the engineers in my division recommended.



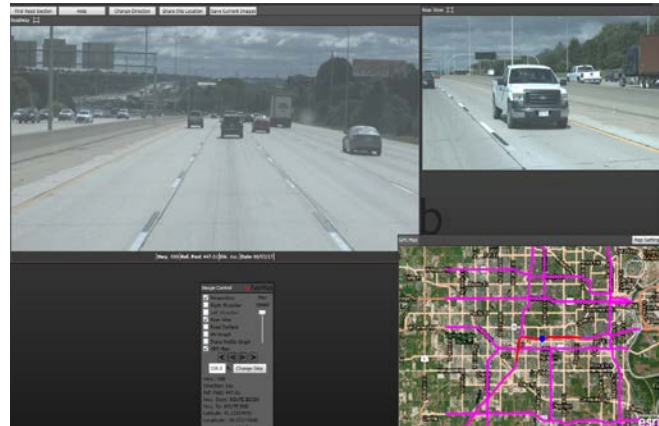
Inventorying signs and other information using NDOT's Videolog System

The Department of Transportation has this helpful software that displays recorded videos of driving on the highways around the state. One of the benefits of the system is saving time. For example, when you want to check out a highway that you want to do an inventory sign for a segment of road, use the video log system to check all the signs, pavement markings, distances between the signs and turns, etc. I used the video log

(PathWeb) to draw the maps through MicroStation to include all the signs in that state highway.

Meeting with other divisions at the NDOT to learn about what other engineers do

My supervisor arranged meetings with the other divisions at the department in Lincoln and Omaha to give me an idea of what the others do and which parts of the



project they cover. I got to meet the Planning Division, Roadway Design Division, Omaha Operation Center, Environmental Division, and Communication Division. That is quite useful for the students to help us decide which field we want to touch more on and what classes could be taken to give you more knowledge.

Basic Highway Capacity Analysis (HCS+)

I worked on writing a memorandum for few engineers in my division, one part in the memo required running a Level of Service test to figure out the current LOS and based on the result, the engineer may recommend a solution to make the LOS better.

On-site trips

This summer, I got chances to tag along with different engineers in my division For example, I joined the Signal Engineers on a trip to Norfolk for a coordination check along five intersections and visited the district office to see the new signal cabinet that they are operating. Another time I joined the Signing Engineers in safety checking around the work zones in Omaha and writing a report on each state project we drove by

indicating safety errors and things that need to be fixed/replaced. Also, we had a trip to the Omaha Operation center and learned things they do to keep the roads moving and finding new detours in case of an emergency. Also, I will be joining the Data Collector during the last week of my internship with DOT to visit Wahoo and Fremont to set up Miovision Cameras for collecting volume data.



Conclusion

Ask questions! You got the internship to learn; there are no goofy questions. If something makes your thought curious about it, ask, google it, and use the unlimited sources you are exposed to in work as an



intern to grow and be aware of what is happening out there; how other countries are implementing an idea and take advantage of their research to learn and improve the design to be meeting the provided standards.