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**CITY OF LINCOLN  
TRANSPORTATION  
AND UTILITIES**

# MATC INTERNSHIP REPORT

City of Lincoln - 2019

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Although it seems like many of the aspects of Traffic Engineering may be common sense to most people, I have learned in the past few months just how many intricacies that seemingly simple issues can have. My internship with the City of Lincoln has given me great insights into many of these traffic problems and solutions. Through daily work and meetings, I have also become acquainted with the vast number of tasks and projects that fall under the scope of a Municipal Traffic Engineering department.

My first week working with the City of Lincoln I was assigned with the project of extracting pedestrian counts on Holdrege Street near UNL East Campus from trailer camera footage. After an introduction into the software Avigilon, I was able to begin working on this project. Using the data that I collected, as well as my previous knowledge of Excel, I was able to create several different ways to display the patterns and trends in this data to be able to show to the consulting team on the overall project. Since then, I have been a part of multiple meetings between the City, the University, and consulting firms on how to proceed with the project. It has been exciting for me to see how the data I extracted and formatted has led to a decision and future planned construction on multiple crosswalk projects, all in only a few short months.

In addition to some other data extraction projects and other office tasks, I have had the opportunity to spend lots of time out in the field. One field task I have been working on all summer is taking vehicle and pedestrian clearance measurements at intersections. After collecting this data, I then enter it into spreadsheets to update signal timing information for traffic signals. Other field work I have done has included inspecting crosswalk markings and attending plan-in-hand meetings on construction

sites to ensure signals, wiring, and other traffic devices can be properly placed without obstruction.

One of my favorite days of working out in the field was doing a large bridge inspection with the asset management team. The private bridge over the Platte River near Ashland leads to an island where the City of Lincoln's Water Department has large wells and water pumps. The whole island sustained heavy flood damage in March, which I was able to see first-hand. The bridge had an emergency inspection in March, where the inspectors had to land on the island via Nebraska National Guard helicopter due to the surrounding roads being washed out. We were able to do a more thorough evaluation of the bridge and the effect the flooding had on it and determined it was in great condition.

Along with my field work, I have worked on a variety of other tasks and projects in the office. I have compiled crash data from police reports into Excel spreadsheets to be used for crash studies at different locations. I have analyzed pedestrian counts from multiple spots throughout the city and I have also updated maps and databases used by the Traffic team among other things. Each of these tasks is interesting and usually presents a new opportunity for me to learn something about what the Public sector of the engineering profession can consist of.

Perhaps the greatest learning experiences of my internship so far have come from attending a broad spectrum of meetings. From City planning meetings at the courthouse, to street closure traffic meetings, to Green Light Lincoln meetings and large project meetings such as 14<sup>th</sup> & Warlick, I have had the opportunity to learn not only about engineering specific information, but also professional meeting conduct. One

large project which I have attended multiple meetings about has been the 33<sup>rd</sup> & Cornhusker RTSD project. These meetings have given me great insight into the processes of Federal environmental studies, public opinion meetings, and overall project planning.

Attending meetings has also given me the opportunity to meet many other engineers from different firms and organizations. During a day long workshop, I was able to work in groups with engineers to brainstorm ideas and create preliminary drawings for new intersection options on N 48<sup>th</sup> Street at Cornhusker Highway. The main constraint for this project that required the most critical thinking was the BNSF railroad bridge over the road limiting the options available. Being able to see this process from the very beginning, as well as being asked for my own input and ideas, was a great experience for a prospective engineer like myself to have and was certainly one of the favorite days of my internship. I know that networking and creating connections with many different people at events like these will greatly help me in the future.

These past weeks, I have gotten to know much of the staff at my office and have the opportunity to work directly with and learn things from many of them as well. Being able to work at the City of Lincoln has been an awesome experience and has opened my eyes to many of the traffic related things people often take for granted. I know that I will be able to take with me all that I have learned through this MATC internship and use it as I continue forward in my professional career.