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This past summer I have extremely enjoyed my time as an intern at the City of Lincoln in the Engineering Services department. This internship has allowed me to gain more knowledge beyond classroom learning. The hands-on experience that I have gained from this experience is very rewarding and has allowed me to gain more knowledge in the construction field. I have also gotten to know what to expect from the construction field in general and how to conduct business with and properly communicate with other professionals within my field.

This experience for my internship at the City of Lincoln was probably the most rewarding summer job experience I have ever had. Over the past summers I having been working hard at jobs that were important, but they were never in the career field that I was studying in. This past summer at the City of Lincoln I have learned a lot and have met a ton of new people that have helped me learn and expand my horizons in the Construction Management field. The knowledge that I have gained are in the areas of soil, concrete, and some in asphalt. I have also learned how to tell a good quality soil, concrete, or asphalt from a bad one. These experiences have broadened my horizons to give me a better understanding on what to expect after graduating with my degree in construction management.

One of the most important construction materials that I have learned about was soils. This is a component that is mostly, but not all of the time, over looked on a construction site. You can pour the best quality concrete or lay down the best quality asphalt, but if you don't have a compacted soil underneath then the pavement is useless. Soil is probably the most important component to a good quality pavement that will last for years to come. The soil must be compacted to within 95% of complete compaction, with a moisture between (-2%) to (+4%) of the optimum moisture, to be able to be compacted to the minimum of 95%.

The next material that I dealt with a lot was concrete. Most people think of cement and concrete being the same thing, but I learned very fast they are not. Concrete is made up of cement, aggregate, and water. Concrete is a construction material that is very strong when compressed but very weak under tensile strength. I have broken a concrete cylinder made to represent a concrete pour out in the field. The strength of concrete increases rapidly over the first 28 days after being cured. After that, the concrete still gains strength, but at a much lower rate than during the first 28 days. Concrete can have many different mixes to gain strength early or to gain it more gradually by the addition of admixtures to mixes. This amazing material also can be used in many applications including pavement, a base for asphalt, and even bridges.

The last material that I learned about this summer was asphalt. This is a very tricky material to work with seeing as how there are many different ingredients that can go into it. Most asphalt includes aggregates, asphalt cement, and RAP (Recycled Asphalt). To get a mix just right you need to have minimum oil or asphalt cement and the right amount of air voids. Some might think that asphalt is compacted so there are no voids within a mix, at least that was my first impression. However, air voids are necessary in asphalt to give a cushion of air so that heavy trucks can go over the pavement and the pavement will rebound back to its original form. Over time, the mat will become compacted and eventually fail. The voids will give a longer life to the pavement and allow for a smoother driving surface.

This is just some of the materials that I have come across during my internship. The knowledge that I have gained has allowed me to grow as a person and as a future professional in the field of construction. I would like to thank the Mid-America Transportation Center and the City of Lincoln for the opportunity to intern here this summer. I would also like thank

everyone at the City of Lincoln and the Nebraska Department of Roads that I have met; I have learned so much from everyone this summer.