

**2008**

**MATC INTERNSHIP REPORT**



**Greg Seib**

**Olsson Associates**

My second year as a MATC intern provided me with a much different experience in transportation engineering. Working at the Mid-America Transportation Center (MATC) the previous year gave me a look into the role education and research play in the broad field of transportation engineering. This summer I have been able to transfer much of the knowledge and skills gained at MATC into my work at Olsson Associates.

Learning the software program *MicroStation* while at MATC proved to be extremely useful in working at a private sector consulting firm. The first week of this summer I began using *MicroStation* to update volumes and lane configurations for the West Haymarket project. As a part of the traffic team at Olsson Associates, my work on this project involved the study of the impact of events at a proposed arena and convention center on the traffic volumes of the surrounding area. In addition to updating volumes and lane configurations in *MicroStation*, I also changed traffic control devices and capacity analyses at intersections in the area and learned to use *Synchro* while working on the West Haymarket project.

After I put in a few weeks of work on the West Haymarket project, I began working on what would be my main project for the summer. This project is an Intelligent Transportation Systems (ITS) project that depicts the installation of ITS equipment such as cameras, sensors, poles, and fiber cable in Western Iowa. I have worked primarily in *MicroStation* on this project making revisions to the sheets that depict the location of the ITS equipment. These sheets include aerial views of sections of the Council Bluffs and Sioux City areas as well as existing and proposed ITS equipment shown relative to the roadways and geographical features of the area. I have also spent time preparing the cover sheets and note sheets for this project. Learning to synchronize spreadsheets

with text in *MicroStation* made the job of updating tables in the cover sheets much easier and also taught me a time-saving tip that I can use in my future as a student and an engineer.

The Western Iowa project offered the experience of working with deadlines and the pressure to finish submittals for multiple stages of a project. Getting an idea of what the consulting side of transportation and traffic engineering is like in this aspect is something that is difficult to learn in the classroom or in an internship at a public sector agency. The best way to learn about the workings of the engineering world is to actually work in it and be immersed in it as I have this summer while working on the Western Iowa project.

In addition to the West Haymarket and Western Iowa project, I also did some work on a number of other projects. Data collection in Nebraska City, Norfolk, and downtown Lincoln got me out of the office while I learned how traffic counts and data collection fit into the big picture of traffic studies and traffic engineering. I was also able to do more work in *MicroStation* for other projects including pavement marking revisions for a project in Arizona, an intersection improvement in Colorado, and a Wal-Mart design in Wisconsin. While I did not spend as much time on these projects and my work on them mostly included revising sign and pavement marking quantities and updating tables, they still gave me an idea of the variety of projects that traffic engineers deal with.

Overall, my experience this summer as a MATC intern has been very positive. I was previously unsure about some of the differences between what traffic engineers and transportation engineers focusing on roadway design do, but working at Olsson

Associates gave me a better idea of the role each play in the design and improvement of roads and transportation systems. The knowledge of these differences will help me in making future career decisions on a specialization within transportation engineering. I'm sure this internship will also be beneficial to my future in this field by offering experience at a consulting firm that is well known in the Lincoln area and many places across the country. In addition, the new knowledge I gained of software programs such as *Synchro* and the increased depth of knowledge of *MicroStation* is certain to put me ahead of the game as I start my career.