Profile of a Civil Engineer:
Keith Laube, P.E., Greeley, Colorado

Occupation
Civil and Geotechnical engineer, owner of a 1-person company

Education
B.S. Civil Engineering, Iowa State University, 1990
M.S. Geotechnical Engineering, Iowa State University, 1991
MBA Colorado State University, 2002

Studying Engineering
I initially picked engineering as a senior in high school because I was good in math and science, several of my friends were planning to study engineering, and I could transfer engineering math classes into another major if I decided to switch. As a senior in high school and a freshman in college I really had no idea what an engineer did.

The first few years of being a college engineering student was not very fun. I did not like calculus or physics, or maybe calculus and physics did not like me. I took my first civil engineering class my 2nd year, surveying. During my 3rd year of college I took some civil engineering courses and knew that civil engineering was the right major. I enjoyed creatively using math and science knowledge to solve problems. After several semesters of math, science, and engineering classes, this vague "math and science knowledge" was really common sense to me.

Downside of being an engineering student was that I had to give up some fun activities in college so I had enough time to study. I did not participate in marching band and I did not hang out in the dorm lounge playing cards all day. Being an engineering student took extra study time compared to many other majors.

The great thing about being an engineering student was the summer job opportunities and salary offers after graduation. Most other majors struggled getting good paying summer jobs and often took much lower starting salaries after graduation.

Although many people may consider engineers as nerds, I believe the image is up to each individual. I was part nerd, part athlete, part musician, and part social butterfly during college. My main mission during college (well at least the last several years) was to get the engineering degree, so studying was more important than the other things. It was fun to graduate, get a good job, and have money to do the fun things in life.

Career Life
A career as a civil engineer is very diversified. Helping others reach their goals is rewarding. Currently I help investors, owners, and developers develop land. The development may be a residential subdivision, a new school building, or an office building. I test the soil for the design of building foundations and pavements. I design the horizontal and vertical location of water, sanitary sewer and other utilities. I also use survey information to determine grading and drainage to prevent buildings or parking lots from flooding. Almost all of the site layout and design is done on a computer and plotted on 24" x 36" plans. I visit the projects during construction and answer any questions or clarifications the contractors may have. I enjoy being out of the office to visit sites during design and construction.

I spend time on the telephone and in meetings with clients learning about their projects and communicating how the engineering aspects will affect what they plan to do. I also spend time writing geotechnical engineering reports, drainage reports, and letters to clients and municipalities. As much as I did not enjoy English class, I followed the advice of older engineers and took extra English classes in college. My first job after graduation I spent a lot of time communicating to people and I was glad I forced myself to take those extra English classes.