



Senior Transportation Engineer

Job Description

Senior Transportation Engineers plan, organize, and supervise professional and technical operations in the transportation district. Operations can be related to short term or long term transportation matters affecting the city. Senior Transportation Engineers also represent the city on regional transportation issues.

Salary

Entry — \$59,017
Middle — \$83,500
Top — \$138,500

Core Tasks

- Plan and direct the staff of a Transportation District
- Act as Deputy to the District Director of Transportation
- Direct a portion of Transportation District activities
- Charge and direct the work of a Headquarters' division or office
- Make recommendations and negotiate transportation policies

Workplace / Environment

- **Work hours**
Approx. 40 hours/week
(Sometimes weekend and evening meetings are required)
- **Environment**
Usually in an **office** with field work including occasional **site visits**
- **Travel**
Occasional travel may be required to attend local, regional, state, and federal **meetings**

Education / Prerequisites

Education Level

Generally a civil, electrical, or mechanical bachelors degree from an accredited college or university

Licensing

Depending on state, often certified by a State Board of Registration for Professional Engineer

Pre-Job Preparation

STEM classes in high school and transportation engineering coursework in college

Experience

Soft Skills

- Communication
- Problem-Solving
- Ability to adapt, prioritize, and deliver

Technical Skills

- Microsoft Suite (Word, PowerPoint, Excel and other Office software)
- GIS Software
- Understanding of transportation engineering practices



Career Path: Don Samdahl

About Me

Senior Project Manager & Senior Market Leader at Fehr and Peers

Bachelor's Degree in Civil Engineering
- Purdue University

Masters in Transportation Civil Engineering
- Northwestern University

High School Life

"In high school, I was very much on the side of **STEM**. I really liked math and science. I also liked languages and writing."



College Choices



"I ended up going to **Purdue University** and got a Bachelor's in **Civil Engineering**, with an emphasis on transportation. I picked transportation because out of all the different civil engineering disciplines, it was one that was likely to have a lot of **interaction with people**. I took a fair number of **non-STEM courses** at the University, which I think was very valuable — it's important to not just focus on the technical subjects. After two years, I went back and got a Master's Degree in **Transportation Civil Engineering** at **Northwestern University**."

Into the Real World

"Once I graduated, I got a job with a **small consulting firm in Washington D.C.** I had a **wide variety** of transportation planning and engineering experiences. That was influential on me, but a big change was about eight years later. My wife and I moved to **Australia** and I got a job with a company over there. That was a very **eye-opening experience** — being in a different part of the world made me want to further broaden my background. After we spent a couple years in Australia, we moved to Seattle and I got a job with the **City of Bellevue** for six years."

"At that time, I was fortunate that it was at the start of the Growth Management Act. So, I got very involved in that when I was in the city and also when I went back into **consulting**. It really became a focus area of mine. I find that nice because it's kind of a mixture of **Technical and Policy Studies**."

"After a few more years, **I started my own consulting firm, Mirai Associates** with three other people. We ran a successful company for **10 years**, when we decided to merge with **Fehr and Peers**. I still work there part time."

About My Job

"I'm basically a mixture of a planner and an engineer — it's good to have both experiences."

Pros

- "I've always enjoyed interacting with the **clients** during a project."
- "It's been very exciting to work with a wide range of **planners, engineers, architects** and others."

Fieldwork

- "My years as a consultant was mostly indoors, but I did quite a bit of **traveling for different projects** and **marketing opportunities**."
- "We'll often take a **half a day**, at the start of a project, go out there, take a look, and **observe** what's going on. We'll also hopefully **meet with the client** at the same time."

Skills

- "**Computer programs** and **programming skills**."
- "**GIS Capabilities** are pretty standard."
- "Ability to **write and speak coherently** — that's the biggest challenge for us when we hire new entry engineers or planners."

Cons

- "Some deadlines might require **weekend** or **night work**."
- "**Licensing** is often required, so it takes a commitment to keep up-to-date with the profession."

Office Work

- "I normally work in our office for most of my time. In recent years I also had an **office at Sound Transit** working there on a large transit project."

Education/Experience

- "It's always good to have an **internship when you're in college**. I had one — after my junior year I was working for an engineering firm."
- "Historically, transportation engineers have come through **civil engineering programs**."
- "If you look at our company in our office, probably half of the people come through **urban planning** or even **environmental planning**. We also have a couple of **data scientists**."

The Future of **Transportation Engineering**

"Every 20 years we see some pretty big changes in transportation"

"Despite changes, transportation engineering itself is still going to have a lot of the **same characteristics**. The challenges are new as we get into looking at things like **autonomous vehicles** and **shared mobility** — such as Uber and Lift. There are always new ideas that come up, like the automated vehicles. I think there's going to be **so many more choices** for people out there 10 or 20 years from now."

"Being able to do things **virtually** makes it easier in some respects. Some of the **modeling work** is probably going to be more automated. It's the **personal interaction** that I think is going to stay."

"I've been very active in **professional societies** over the years, such as the Institute of Transportation Engineers and the Transportation Research Board. I always encourage young professionals to get involved in some way in a professional society both to help **broaden your knowledge and reputation** and for **networking**. You never know what needs or interests are going to be out there 20 years from now. Start developing those **contacts** and then, in our case, it **leads to business opportunities**. I've always felt strongly about this — taking the time and effort to really help with the profession through professional societies."