

September 19 ITE SF Bay Area Lunch Meeting

The SF Bay Area Section of the Institute of Transportation Engineers (ITE) kicked off its September lunch meeting on 9/19/2013, with focuses on data and expert witnesses within the transportation industry. Three presentations were made during the meeting; they are:

- Big Data for Transportation, by Rob Hranac, Iteris.
- ITE Western District's Student Data Collection Program, by Karen Aspelin, Wilson & Company.
- So You Want to Be an Expert? – An ITE Program, by Dalene Whitlock, W-Trans.

Leveraging Big Data for Transportation

By: Rob Hranac, Iteris

Mr. Hranac first introduced the transportation industry technology shift, from computing, sensors, to mobile; on the method side, the shift was from models, control, to data. Data is traditionally used to measure infrastructure; however, it is now more toward measuring travel instead. He used an example to illustrate this concept. Travel times for trips from Oakland to Silicon Valley starting at 8:00 a.m. on September 1 through December 30, 2012 were animated to show in a column diagram. The line connects the columns represents probability density function (pdf). The combination of the probability density function for 24 hours in a day forms a volcano-like shape. Mr. Hranac used the animated rotary volcano to illustrate the visualization of big data on travel times. The flat pdf function for a given starting time indicates less travel time reliability, and vice versa. Mr. Hranac also briefly discussed using loop detector data to measure what happens on the road real-time. Research on re-identifying vehicles between detectors would be helpful for vehicle-by-vehicle simulation.

ITE Western District's Student Data Collection Program

By: Karen Aspelin, Wilson & Company

Ms. Aspelin started her presentation first by asking where the data come from for the ITE Trip Generation Manual and Parking Generation Manual. Actually, the data come from volunteers who collected the data. The ITE Western District's student data collection program was initiated by Mr. Randy McCourt in 2004. It is win-win program: students get the experience and the cash, while professionals get the data. This program is administered by the District Technical Chair.

The purposes of the ITE West District's student data collection program are:

- To generate relevant technical data in the West for transportation engineers and planners
- To facilitate ITE Student Chapter activity and student mentoring by transportation professionals
- To focus on practical, day-to-day, minor research in transportation engineering and planning
- To focus on the collection of basic data
- To provide funds to student chapters that may be used to offset travel costs for students to attend ITE meetings, which help them to better understand the transportation profession by meeting a wide range of working members

The requirement for the student chapter who receives the fund is to collect and reduce 80 person-hours of data, which includes three observations of the 7 AM to 6 PM period for trip counts, and three observations of 12 consecutive hours of parking occupancy. The deliverables include the trip generation and parking generation forms as well as the abstract of the project in no more than 500 words.

Every year about 18 proposals are received, but only five can receive funding of \$1,000 each. This program has become so successful that ITE International started similar program.

ITE Trip Generation Manual, 9th Edition, has used data collected by student funded by this program, for many land uses, such as snow ski area (466), soccer complex (488), elementary school (520), and research and development center (760). Similarly, ITE Parking Generation Manual, 4th Edition, has used student data for multiplex movie theater (445) and coffee shop with driver-through (937).

The next RFP for this program will go out in October, and all student chapters are encouraged to submit a proposal. Ms. Aspelin provided a list of land uses that ITE community is especially interested in, such as small technical college, schools for students with special needs, swim club, downtown hotels, and aquarium.

So You Want to Be an Expert? – An ITE Program

By: Dalene Whitlock, W-Trans

A transportation expert may help sort out the facts after a crash and determine what they mean, assist the attorney with technical aspects related to a crash, and assess if the deficiency is related to the driver, vehicle, or transportation infrastructure. An expert witness is a person who assists the attorney and client in the litigation process because he/she has special knowledge in a particular field. This entitles them to testify about their opinion on the meaning of facts.

To become an expert, Ms. Whitlock suggested to establishing an area of interest, understanding tort liability, gaining technical competence, and building credentials. In addition, the ITE Transportation Expert Witness Council provides well-established resources. The council has the mission to foster ethical conduct, promote professional development, and advance knowledge and skills that improve transportation safety. The council was chartered by ITE in 1986 with 24 founding members, and it now has over 500 members. The ITE Expert Witness Directory can be accessed through the ITE website and it is free to council members.