



Letter from the President

Happy New Year everyone and welcome to 2010! Finally we can get rid of those silly New Year's "00" glasses.



*Jim Bloodgood
WA Section President*

2009 was a tough one given the state of the economy and some tragedies that happened and some that almost happened. Sadly, six members of the law enforcement community (and nearly eight) were lost in the line of duty in about a 10 week time frame. Law enforcement is an integral part of our profession. It is one of the founding principles of traffic engineering and is one of the three "E's."

(Continued on page 2)

Inside This Issue:

Letter from the President	1-2
County Traffic Engineer Retires	3-4
Campus Corner	4
Scribe Report	6
Featured Technical Article: WSDOT Wireless Vehicle Detection System Evaluation at Olympia Area Field Test Sites	6-8
Bill Kloos Obituary	9
Dynamic Message Board	10

**This Month: Americans with Disabilities Act (ADA) -
Overview of Title II**

Our guest speaker this month is Jodi Peterson of the Federal Highway Administration (FHWA). Jodi is the FHWA Civil Right Program Manager and Training Coordinator. Jodi's training session will provide a brief overview of Title II of the Americans with Disabilities Act (requirements for State and local governments) with the primary focus on how to apply appropriate guidelines and policies in designing facilities within the public rights-of-way.

WHEN Tuesday, January 12, 2010, 7:30 am ~ 11:00 AM

VENUE Maggiano's Little Italy
10455 NE 8th Street
Bellevue, WA

COST \$30.00 for breakfast (free for students)

MENU Breakfast Buffet offering:

- Assortment of Muffins
- Sliced Seasonal Fresh Fruit
- Croissants, Assorted Jams & Butter
- Fresh Baked Zucchini Bread
- Cinnamon Streusel Coffee Cake
- Assorted Fruit Juices
- Regular & Decaffeinated Coffee
- Assortment of Hot Teas
- *Fran's Potatoes with Roasted Peppers & Onions*
- Scrambled Eggs
- Italian Sausage & Bacon Frittata
- Spinach & Tomato Frittata

RSVP By COB on Friday, January 8th, please e-mail:
ITEregistration@hotmail.com
Please include company name, address, phone number & names of attendees; note that you will receive an invoice from ITE if you RSVP but are unable to attend.

(Continued from page 1)

Engineering. Education. And, Enforcement. In your own way I hope you take a moment to thank law enforcement for the job they do for our profession and for the community and for the risks they take. Perhaps the next time you receive a ticket you can thank the officer just for being there.

On another sad note, the Oregon section and the country lost a valued member of ITE. William C. Kloos passed away in November of 2009. Bill was the Signal and Street Light Division Manager for the City of Portland. Bill was bright, witty, dedicated to his profession and a real gem. I cannot say that I knew Bill well, but to know Bill was to know him well. He was that sort of spirit. He had a totally inclusive nature to him and was always willing to discuss issues and share information. You can read more about Bill later in this newsletter. But let me just say, he will be missed.

On the bright side of things, Jim Ellison, Traffic Engineer for Pierce County, has retired after 26½ years with the county and 36 years of overall experience. Jim has been an active member of the National Committee of the Manual of Uniform Traffic Control Devices for many years and has made many significant contributions to traffic engineering. He also received our “Outstanding Service Award” at the 2009 Annual Meeting. The good news is, Jim is only retiring from the county and has started a traffic engineering consulting business and will stay active in the profession. Congratulations to Jim and best wishes to you. You deserve it!

Also on the positive side of things, the Executive Board approved a \$2,500 donation to the ITE District 6 Endowment Fund. This fund was established a few years ago to provide a self-sustaining funding source for the District’s Student Initiatives Program. It is projected that the fund needs to reach \$500,000 to be self-sustaining enough to generate adequate annual revenue to support the initiatives. To date, over \$200,000 has been raised. The Washington Section has contributed \$5,000 and is one of four organizations to reach the Platinum level of contributions.

So, we have a new decade in front of us. It is a decade that is full of promise and opportunity that will also present challenges and obstacles. But we can lead the way. I recall a colleague saying at the passing of Jim Kell, one of the absolute brilliant minds in ITE history, that we were the new leaders of the profession. I remember thinking to myself, wait a minute, I did not sign up for that job. I could barely take care of my cat, at the time! But I have come to recognize that we are all leaders of the profession and we must dedicate our education, our training and our experience to the profession. We have a lot to give and contribute. We are the leaders.

Lead the way!

Jim Bloodgood
President, ITE Washington Section

County Traffic Engineer Retires

Pierce County Traffic Engineer Jim Ellison retired December 31 after 26 years of service in Public Works & Utilities.

A retirement party is being planned for January 15 at the Environmental Services Building from 5:30-9:00 p.m. Details will be announced.

Ellison joined Pierce County in 1983 as the county's first associate Traffic Engineer and was instrumental in developing a dedicated traffic engineering team. He succeeded Traffic Engineer Tom Ballard in 1990 and assumed management of the department's Traffic division.

Under his leadership the division enriched the lives of people who use Pierce County roads through new traffic signals, turn lanes, lighting, signing, road striping and other improvements.

Among Ellison's accomplishments are numerous division awards from state and national organizations, including the Stop and Yield Sign Maintenance Response Program (1989), Traffic Informational Brochures (1990), Stop and Think Program (1995), involvement in national "Danger Signs" video (2000), and Traffic Sign Retroreflectivity Maintenance Program (2009). He received the Institute of Transportation Engineers' Outstanding Service Award for 2009, which is presented each year to an individual who demonstrates long term commitment to the success of the profession.

He also lent his support and encouragement to the Traffic division's employee recognition program, which won a county Standing Ovation Award for Innovation in 2008. Ellison's staff honored him with their division's Employee Appreciation Award and Traffic Engineer's coin in 2009 for his inspiration, support and vision as a manager.

Ellison's supervisor, Pierce County Engineer Brian Stacy, recalls the challenges and demands Ellison faced while managing the Traffic Division. "At one point, Jim had to fill 16 vacancies in 16 months. He was committed to filling those positions with individuals who shared his vision for the organization, and he brought some outstanding people to the county and provided promotional opportunities to several other deserving people."

"Having the opportunity to work here at the county and be part of Public Works and Utilities' growth has been the most rewarding part of my entire career," Ellison said. I am grateful for all the support I have received over the years from three directors and two County Engineers, and the talent, expertise, creativity and professionalism of the fine people in the Traffic division."

Ellison's most memorable moments include seeing Pierce County and the U.S. Department of Transportation successfully defend in U.S. Supreme Court the county's right to protect crash records from discovery and admissibility in lawsuits against the county. He also recalls working on the production and direction of the division's "Stop and Think" video, a campaign against traffic vandalism which later became nationally recognized and was the foundation of a national video entitled "Danger Signs."

Prior to his career with Pierce County Ellison worked 5 years as an assistant Traffic Engineer for the City of Kent and later with the private firm Transportation Planning & Engineering, Inc. of Bellevue as their project engineer.

(Continued on page 4)

(Continued from page 3)

In retirement, Ellison plans to continue his professional involvement with the National Committee on Uniform Traffic Control Devices and to remain active in state activities such as the annual Road and Street Supervisors Traffic Solutions Workshop and state committee for the Manual on Uniform Traffic Control Devices. Personally, he looks forward to traveling and exploring new places, and running the 12K Sound to Narrows race on Saturday, June 11, 2011, one week after his 60th birthday.

For information on attending the retirement celebration on the evening of January 15th, please contact Rory Grindley at 253-798-2275 or rgrindl@co.pierce.wa.us

“The Campus Corner”

By Meagan Powers and Scott Lee

Congratulations to the University of Washington ITE student chapter for being awarded a District 6 Data Collection Grant for \$1000! District 6 received 12 proposals and only awarded 5 grants to student chapters. This year, the UW student chapter will be collecting parking and trip generation data at the Roosevelt High School in Seattle.

The UW student chapter also competed in the Oregon ITE Traffic Bowl and sent eight students to the Region X Conference in Eugene, Oregon. UW also won the prize for best presentation at the conference for Felipe Sandoval's presentation titled "Emission Reductions in Urban Pickup and Delivery Systems."

The student activity committee still is looking for a new project for students to research and present this year for the ITE student night. If you have a safety study, preliminary corridor study, or concept plan from a larger project that you think would be interesting, please contact the student activity committee.

Student Activities Committee Co-Chairs:

Meagan Powers, DKS Associates – (206)382-9800 or mcp@dksassociates.com

Scott Lee, Transpo Group – (425)821-3665 or scott.lee@transpogroup.com



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Place your ad in the following sizes:

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Also send a check for the ad size you desire (ad will run from January 2010 through December 2010) to:

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Scribe Report

By Paul Cho, City of Redmond

November 2009 Meeting

Change happens. It appears to be a reliable constant in our lives. And if you blink, you could miss it. As we entered the Shoreline Library, part of King County Library System, for this month's ITE Washington section meeting, I noticed quite a bit of change as we parked the car and heading into the meeting room. As I blinked, the building had been reconstructed. The old library where I had borrowed books from and studied within had been demolished.



Fortunately, the change brought about quite a number of improvements including the meeting room that welcomed the 57 registered attendants. As we finished our Ingallina's prepared boxed lunches, Jim Bloodgood commenced the meeting at noon and immediately introduced our guest speaker, Tim Bevan of CH2M HILL.

Mr. Bevan began by providing a goal of improving quality of life while limiting impacts on the environment as the goals of sustainable transportation. Just as the social, economical, and environmental aspects overlap each other in our lives, these same areas must be addressed as we move forward with any improvements. There exists a scale of sustainability that starts with just adding new streets and highways to maximizing efficiency of existing infrastructure to meeting the needs of mobility without growth in mobility demands.

Mr. Bevan provided additionally information regarding the Green Roads rating standard which awards credit for approved sustainable choices and can be used to certify projects based on total point value. Utilizing these methods, we can quantify sustainability in roadway design and construction. In addition, these methods can be applied at all levels of our industry such as organizational, programming, planning, projects and operations/maintenance.

Before closing the meeting, Randy McCourt (Western District ITE International Director) provided information on a recent meeting on sustainability. Over time, ITE will up the level of sustainability awareness with additional training such as webinars. While sustainability practices are becoming well known in the urban areas, efforts are needed to effectively balance the needs of rural areas that do not experience congestion.

Mr. Bloodgood continued the announcements regarding the December training meeting. All attempts are being made to host Representative Rick Larsen in lieu of the technical training. The current probability of Rep. Larsen's attendance is at 80%. Due to health care debate schedule, however, this may be reduced to lower than 40%. Please watch the future meeting announcements for the final details. The meeting was adjourned at 1 PM.

December 2009 Meeting

Driving to South Bellevue Community Center tucked away off of a tree canopied, winding road, the ice that had formed at the driveway entrance from a drainage run-off or more probably a broken irrigation line was a sign of the record cold weather in the teens we'd been facing. However, once inside the conference room which could easily accommodate a jazzercise class, the 32 registered attendants could refocus their attention away from the local driving conditions and towards opportunities for regional mobility.

As mentioned in previous meetings regarding the pulse of the region's transportation systems, revenues falling behind

(Continued on page 9)

Featured Technical Article

Do you have an interesting technical topic, idea, or project to share? If you do, the Technical Report Committee wants to hear from you! Please contact Dongho Chang at <DChang@ci.everett.wa.us> for more information.

WSDOT Wireless Vehicle Detection System Evaluation at Olympia Area Field Test Sites

By Matthew Neeley, Washington State Department of Transportation

The Washington State Department of Transportation (WSDOT) has implemented two field test sites in Olympia, along I-5 (see Figure 1) and SR 101, for the sole purpose of testing various kinds of ITS equipment. The field test sites are equipped with video surveillance, controller cabinets, a backup 20kVA generator, 50-foot poles for mounting test devices, and a direct fiber optic communication cable connection back to the WSDOT Emergency Operations Center (EOC) for remote operation and data collection. In addition, WSDOT has partnered with the University of Washington to evaluate other technologies such as video-based vehicle detection and classifications systems and Bluetooth MAC address tracking for travel times. WSDOT is open to partnering with local agencies to coordinate research activities in order to reduce duplicate effort.

As part of WSDOT's field research, evaluations have been completed for a number of ITS devices. This report will focus on Wavetrax, Speedinfo, and Sensys Wireless Vehicle Detection systems. Vehicle speeds and count data were collected side-by-side with data gathered from traditional loops that have been calibrated with manual counts. WSDOT has deployed all three technologies in multiple locations throughout the state.



Figure 1
I-5 Custer Way Test Site

Sensys Networks VDS240 Vehicle Detection System (www.sensysnetworks.com)

Sensys Networks is a wireless magnetometer based vehicle detection system composed of two “hockey puck” sized sensors core-drilled and epoxyed in the pavement, and spaced a fixed distance apart longitudinally in the center of each lane. A small access point (AP) junction box placed above the pavement on the side of the road captures the data and transmits it through a cellular modem to a remote server for data analysis and storage (see Figure 2).

WSDOT installed the Sensys Networks vehicle detection system at the SR 101 Olympia field test site in October 2007. WSDOT installed this device for traffic data collection on freeway, stop bar and advanced detection at traffic signals, and most recently as a vehicle identifying system that utilizes individual vehicle magnetic signatures to determine travel times. The

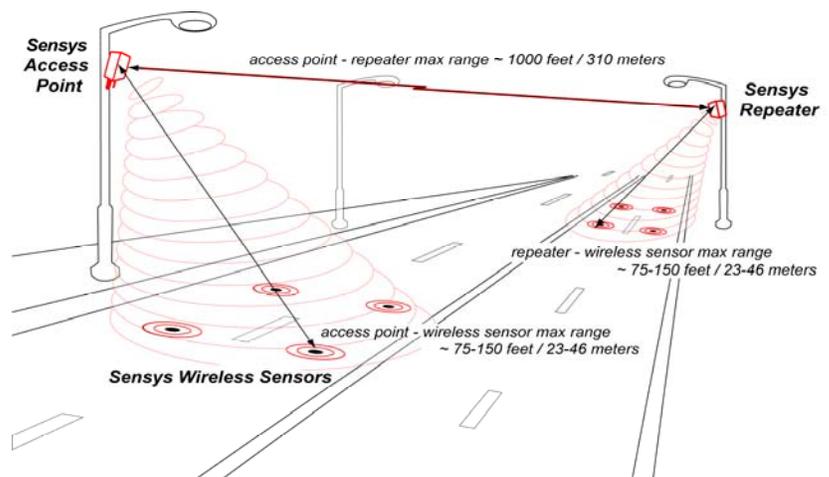


Figure 2
Typical Sensys Network Data Station Layout

(Continued on page 8)

(Continued from page 7)

performance of Sensys equipment has been very similar to that of a well tuned induction loop. We are evaluating the performance of Sensys equipment for travel time.

SpeedInfo-DVSS-100 Sensor (www.speedinfo.com)

SpeedInfo was evaluated as a low cost solution for expanding coverage of WSDOT traffic congestion map. SpeedInfo is a side-fire 24.125 GHz Doppler radar detection system with self contained solar power and cellular communication that can be deployed in less than 45 minutes (see Figure 3). SpeedInfo is capable of capturing two directions of traffic with a +/- 5mph accuracy from one sensor and operate without solar recharging for an estimated 21 days. Procurement options include a monthly lease per sensor location with complete data processing service and equipment coverage or a lump sum purchase per sensor location with initial data processing service.

WSDOT evaluated the sensor for 6 months at the I-5 Olympia test site. The sensor was installed along I-5 on an 8-lane cross section.

During the peak hour of the day the sensor is capturing the speed every thirty seconds and transmitting the data back to SpeedInfo servers every minute. In the off peak hours, the sampling rate is increased from thirty seconds to two minutes to reduce power and data consumption. WSDOT pulls the data from the SpeedInfo server in an XML format that is used to supply congestion information on WSDOT's traffic flowmap. WSDOT has found the accuracy to be sufficient for the congestion map used by the traveling public for traveler information, especially in areas where existing power and WSDOT owned communication is unavailable. WSDOT is also exploring the use of SpeedInfo data for freeway travel times.

Wavetronix HD 105 and HD125 sensor

WSDOT evaluated the Wavetronix SS105 and HD125 sensors as a non-evasive vehicle detection system that could be used for capturing vehicle speed and volume.

The two Wavetronix sensors are similar in appearance, but operationally are very different (see figure 4). The SS105 operates on single band radar at frequency range of 10.5 to 10.55 GHz (X band). The SS105 sensor is capable of providing a detection range of up to 200 feet, which can amount to detecting 8 traffic lanes. The High Definition Sensor HD125 is a more advanced sensor operating at frequency range of 24 to 24.25 GHz (K band). It has a detection range of 250 feet, which can amount to detecting 10 traffic lanes. The HD125 sensor also makes use of a dual radar design that increases the accuracy of this detector.



Figure 3
SpeedInfo-DVSS-100 Sensor



Figure 4
Wavetronix HD125 Radar Detector

(Continued on page 9)

(Continued from page 8)

The SS105 and HD125 sensors were installed at the I-5 Olympia test site approximately 20 feet above the roadway on the test pole. The SS105 sensor evaluation identified a number of challenges, such as splash back from a concrete retaining wall on the opposite side of the roadway. This resulted in high vehicle counts due to multiple detection of the same vehicle at this location. As an aside, the SS105 was evaluated at another location without the concrete retaining wall, which resulted in successful performance.

Wavetronix released HD125 sensor that was evaluated under the same initial scenario as the SS105. It was determined that the HD125 sensor, which incorporated dual rather than single radar technology, was able to perform much better at the concrete retaining wall site. The HD125 performed within 5% of induction loops for vehicle speeds and volume. Going forward WSDOT intends to use both the SS105 and HD125 for flow map traveler information and data station applications.

IN MEMORY OF WILLIAM C. KLOOS

The traffic community is mourning the loss of a great man. William C. Kloos died peacefully on November 4th. Bill was, hands down, the most knowledgeable, innovative, creative, witty and respected traffic engineers there ever was. Bill served as an inspiration to everyone he met – on a technical level as well as a personal level. His legacy will live on in many aspects of the traffic engineering world – too many to list here. He will be deeply missed.

As one colleague put it, we are “saddened to see such a bright signal go dark”.

Rest in Peace Bill



[William C. Kloos](#)

Now Available: [William C. Kloos Scholarship Fund Donation Form](#)

(Scribe Report Continued from page 6)

travel demand alternatives require creative funding to support mobility growth. Tolling would have to become a more viable source of revenue. Currently being implemented and analyzed locally, this month's speaker, Samantha Soules (PBS&J), would share her knowledge on tolling experience and expand on expectations for the local region.

Ms. Soules began with an overview of the Open Road Tolling (ORT) and All-Electronic Tolling (AET). These two basic types of tolling have their pros and cons that each managing agency must consider to meet the needs of the local users and stakeholders. The benefits of AET are clear with enhanced mobility, less maintenance cost and improved safety for drivers and toll collectors. However, increased capital costs, challenges of post transaction collections, clear information/communications, unbanked or under banked population along with fine and enforcement structure must be considered in order to have a successful system.

With 14 Cities that have or are converting to AET, Washington joins the ranks with the Tacoma Narrows Bridge and SR 167 HOT lanes. The upcoming SR 520 project, Alaska Way Viaduct and various HOT lanes projects must each consider their individual goals and prioritize issues to make good decisions that will address stakeholder expectations.

Ms. Soules concluded her presentation and fielded questions from the members for 15 minutes. Jim Bloodgood concluded the meeting by sharing recent activities in the San Francisco Bay Bridge toll booth conversion and reminded the attending members of next month's training program.



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<http://www.westernite.org/Sections/washington/index.htm>

DYNAMIC MESSAGE BOARD

Mark Your Calendars!

Plan ahead and mark your calendars now for upcoming Washington Section meetings and events:

- January 12, 2010 (breakfast meeting & training)
- February 22, 2010 - ITE/IMSA Meeting
- March 9, 2010
- March 14-17, 2010 Technical Conference, Savannah, Georgia
- April 13, 2010 (tentative)
- May 10, 2010 - Student Night
- June 7, 2010 (tentative) - Washington Section Annual Meeting
- June 27-30, 2010 - District 6 Meeting, San Francisco, California (**Abstracts Due January 11, 2010**)
- August 8-11, 2010 - International Meeting, Vancouver, British Columbia