Letter from the President

This year was my first entry into the world of interns. It was a strange set of circumstances that lead to me finally achieving a long held goal that I just never could seem to get to.

It all started when I was contacted by a researcher at the National Institute of Advanced Transportation Technology (NIATT) which is located at the University of Idaho. Professor Mike Dixon contacted me in August of last year because NIATT had received a grant to study arterial operations at freeway interchanges where there were known queuing problems. Lucky for me the arterial/interchange selected was 164th Street SE and I-5 in Snohomish County. Professor Dixon needed to collect video data of signal operations and have the detector inputs to the controller time and date stamped onto the video. So, he needed access to both the County’s and

(Continued on page 2)

Inside This Issue:

Letter from the President 1
Scribe Report 5
Campus Corner 6
“Dynamic Message Board” 6
Featured Technical Article: Intelligent Transportation Systems (ITS) – Built From a Solid Foundation 7-8

This Month: WSDOT Update

David Dye of the Washington State Department of Transportation (WSDOT) will be the speaker for October’s meeting and will give a state of the department address and answer questions.

In October 2007, David Dye was named Washington State Department of Transportation’s (WSDOT) Chief Operating Officer. This position focuses on the day-to-day operations of WSDOT across all lines of business, working closely with the Secretary of Transportation the Chief of Staff and all of WSDOT. Dave helps coordinate with the Regional Transportation Improvement District and maintains a presence on the Puget Sound Region project teams who are working on the region’s mega-projects.

His career with WSDOT began while he was attending the University of Washington as an undergraduate in Civil Engineering, working with a survey crew out of the Olympic Region in 1977. Upon graduating in 1980 with a Bachelor of Science degree in Civil Engineering, Dye worked as a transportation engineer and project designer in a WSDOT project office. Dye has served in numerous positions at WSDOT, including the Urban Corridors Office Administrator in charge of the development and implementation of multi-billion dollar transportation improvement projects in the Seattle-metropolitan area, including the Alaskan Way Viaduct and Seawall Replacement Project, the SR 520 Bridge Replacement Project and the I-405 Congestion Relief and Transit projects.

When Tuesday, October 13th, 2009, 11:30 am ~ 2:00 PM

Venue McCormick & Schmick’s Harborside on Lake Union
1200 Westlake Avenue North
Seattle, WA 98109
206.270.9052

Cost $35.00 for lunch (free for students)

Menu Buffet including: Classic Caesar Salad with Garlic Croutons, Fresh Baked Rustic Rolls, Pan Seared Breast of Chicken in Marsala Cream Sauce with Local Wild Mushrooms, Cheese Tortellini wit Pesto Cream Sauce, Seasonal Vegetables, Assorted Seasonal Cheesecakes

RSVP By COB on Friday, October 9th, 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.
WSDOT cabinets and the time of a technician to make the necessary connections to obtain the data. The information collected would be used to develop simulation tools to provide for improved signal operations. We at the county had a great time working with Professor Dixon and supplemented his data collection efforts with video of the interchange from our TMC.

In March of this year Professor Dixon Invited me to the NIATT annual Advisory Board meeting in Moscow to do strategic planning of what research would be of benefit to the industry and practitioners. This board is made up of educators/researchers from across the country, operators at the federal, state and local levels; and manufacturers and users. In this case we had a signal hardware manufacturer and the trucking industry represented. It was a great day of brainstorming. It was topped off by a banquet with some of the graduate students attending and describing their research projects.

The next day there was an Engineering Expo at the university. This was where engineering students across all disciplines presented their projects. It was incredible to see what these students were working on and the poise in which they conducted themselves.

A couple of weeks after my visit to the university I received an e-mail out of the blue from one of Professor Dixon’s undergraduate students asking if there were any internships available at the county. I was extremely interested in continuing to build on the relationship with the university and NIATT so I called the student and did a semi-interview over the phone. I was duly impressed and was excited about his passion for traffic engineering. So I set about finding out what I would need to do to hire him as an intern in a very tough economy and where my employer was laying off hundreds of employees. It turned out that my department would allow the hiring of interns as hiring freezes and furloughs did not apply to the Public Works Department because of how we are funded. However, I still needed to get the approval of three directors, the union, have a work plan developed and approved by the university, and get a background check done. I also needed to get this done in about a week as the semester was nearing its end. I sighed heavily and said to myself, “you have got to be kidding yourself to think you can do this.” But I didn’t pack it in. Even today I have a hard time believing this but I got it done. So, at the end of May, my intern arrived.

I hope, and I believe, I did not just luck out because this was an incredible young man. He was sharp, articulate, personable, witty, and….he could write! He also displayed a maturity at 22 years old that was way beyond where I was at that age.

My work plan for him was to expose him to as much of traffic engineering as I could for the 9-10 weeks he would be with us. The first few weeks I had him work with our data management and analysis group. He went out in the field and collected data. Turning movement counts, travel time studies, sight distance measurements. He then brought the information into the office for analysis and the preparation of safety reports we call “Inadequate Road Condition” analyses. Of course, his work was checked as are all such studies, but he was flawless.

The next few weeks I had him out in the field again. There is a program called “Target Zero” whose goal is to eliminate single car, run off the road fatalities on rural roads through improved signing and marking for positive guidance. He really enjoyed being in the rural parts of the county and working with his lead, and he got some diversity from an urban traffic engineering experience.
The last few weeks I had him work in our TMC developing and bench testing different controller timing, performing Synchro analyses, comparing alternative operational tactics and strategies, and monitoring actual operations. I think he really enjoyed the latter the most. I recall he came into my office one day with this big grin on his face and said “you want to see something cool?” I went into the TMC and he replayed a video he had recorded of a collision he observed in real time. It was one of those classic situations where a vehicle was in the two-way-left-turn-lane wanting to turn into a driveway. The two inside opposing lanes were queued up but were leaving space for this motorist to turn. The vehicle turned left but the outside opposing lane was not queued and an approaching motorcyclist hit the turning vehicle in the right rear quarter panel. Amazingly, the motorcyclist rider did not hit the car at all but flew over the trunk onto the pavement on the other side of the vehicle. He immediately popped back up and I think I could see him mouth words I cannot print. Fortunately, the motorcyclist was dressed appropriately with a helmet, leathers, gloves and boots. There were no injuries except to property.

My intern’s time came and went way too fast. He became part of our team and we all miss him. But it was a joy to have him. So my message concludes with do what you can whether you are in the public or private sectors to promote internships. Let’s give what we can to provide opportunities to train

Traffic Engineers

The Next Generation

Sincerely,

Jim Bloodgood
President, ITE Washington Section

(Continued from page 2)
September weather has always been a good month for the Pacific Northwest. The morning air turns a bit crisp, but the afternoons warm up to the temperature every air conditioned space is set to. Walking into the Alki Room of Salty’s on Alki, our little carpooled band of traffic professionals made a bee line for the outdoor patio. As much sun as we’ve enjoyed throughout this summer, we still could not get enough.

If the overhead projectors would have functioned outdoors, the lone seagull keeping close tabs on the gathering of ITE Washington members would have been able to participate in this month’s kick-off meeting with speaker Mark Yand (DKS Associates) presenting on the short and long term mobility needs for the City of Bellingham, Whatcom County and other users along this northern part of I-5 in Washington state.

Upon completion of the buffet table of food, the members’ attraction toward the sun was soon eclipsed by the attraction back inside and took turns serving themselves Wild Copper River Salmon, Top Sirloin Steak, lemon and tomato tapenade, and seafood chowder along with fresh salads and fruit. They continued on to their seats to begin the luncheon portion of the meeting.

Jim Bloodgood, section President, started the meeting by introducing this year’s Executive Board; Katherine Casseday as Vice President/Treasurer, Kevin Chang as Secretary and Nick Ching as Past President and thanked many of this year’s Committee Chairs and Co-Chairs. In addition, Mr. Bloodgood was proud to recognize Ming-Yi Wang (INCA Engineers) and George E. Fies (Parametrix) on achieving Life Member status with ITE International. Mr. Bloodgood continued to recap the Annual Meeting held earlier in June at the Tulalip Casino.

After a brief introduction, Mr. Yand began his presentation of the I-5 Master Plan in Bellingham by providing some background and overview of the project. With closely spaced on and off ramps that have very short deceleration and acceleration areas, this particular section of I-5 leads the region in high accident rates. A master plan was needed by FHWA for short and long term improvements that would serve the needs of the local and through traffic along this significant transportation facility. With safety obviously topping the priority list, other improvements would address local mobility, access management, transit, non-motorized improvements and allow for future options.

The 2010 Winter Olympic schedule is fast approaching. The tourist traffic is expected to fluctuate past the typical seasonal peaks. The short term solution for the corridor was to complete an overlay of I-5 along with improvements to the Ohio Street off-ramp, the highest accident rate location. However, with the overlay complete, there is not sufficient time for the completion of the off-ramp improvements. Work on the ramp will have to commence after the Olympics.
It’s the start of another great year for students involved in ITE. We are happy to be serving as your student activities chairs for another year and look forward to working with students from different universities within Washington.

Last year was a successful year in which students from both University of Washington and Seattle University were active in Washington ITE activities including: attendance at the QUAD conference in Vancouver, scholarship applications, the student night competition, and presentations at the annual meeting.

The next year promises to be exciting for students with multiple activities/opportunities to get involved in, including:

- 18th Annual Traffic Bowl
- District 6 Data Collection Project
- Graduate and Undergraduate Scholarships
- Student Night Competition
- ITE International Meeting in Vancouver, BC

In addition, we will be looking to get more students from the east side of the state (Washington State University and Gonzaga University) involved in Washington ITE activities.

We are looking forward to using another demonstration project for this year’s Students Night and are looking for ideas from cities and counties within the region. If you have a project going on in your jurisdiction that you think would be interesting for the Student Night, please contact either Scott Lee or Meagan Powers.

Student Activities Committee Co-Chairs:
Scott Lee, Transpo Group – (425)821-3665 or scott.lee@transpogroup.com
Meagan Powers, DKS Associates – (206)382-9800 or mcp@dksassociates.com

Mark Your Calendars!
Plan ahead and mark your calendars now for upcoming Washington Section meetings and events:

- November 10, 2009
- December 8, 2009 (breakfast meeting & training)
- January 12, 2010
- February 22, 2010 (tentative) - 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
- August 8-11, 2010 - International Meeting, Vancouver, British Columbia
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.

Intelligent Transportation Systems (ITS) – Built From a Solid Foundation

A recent experience volunteering with Habitat for Humanity ended up being insightful and relevant towards delivering projects. I volunteered with other Transpo Group employees to help build Habitat for Humanity homes – my assignment was to assist on building a deck for one of the homes. Through this project, I recognized a simple principle that is universal in all work – if the foundation is built wrong everything following will be a patchwork of corrections.

Projects in our industry, whether ITS or civil improvements, follow the same principle as building the deck. When projects begin with a solid foundation e.g., a strategic ITS plan, the groundwork is set to deliver projects with speed, quality, and flexibility. Flexibility is a key element to all of our projects because modifications to the scope of work are inevitable as needs, finances, and technologies change.

The replacement of the Alaskan Way Viaduct (AWV) carries approximately 110,000 vehicles per day. The need to replace the viaduct became important following the 2001 Nisqually earthquake, which caused column damage weakening the beam and footing connections.

As part of the planning and mitigation for AWV replacement, multiple ITS projects were designed in the last year. Our team assisted with the delivery for three of the ITS projects to improve communication and management of traffic during the multi-year construction of AWV replacement. These ITS projects are on track for finishing construction before the fall of 2010.

As illustrated on the map to the right, a variety of ITS improvements are included as part of the AWV replacement. Projects shown in blue were deployed by Seattle Department of Transportation (SDOT) and those in yellow were part of the State Route 99/East Marginal Way corridor delivered by Washington State Department of Transportation (WSDOT). These projects include:

- Over 70 new cabinet/foundations
- Cabinet upgrades to accommodate future traffic signal priority (TSP) and increased detection
- Over 50 CCTV cameras
- 18 Digital Message Signs (DMS)
- Over 25 License Plate Reader Cameras (PIPS)
- Sensys wireless detection
- Over 20 miles of new fiber installed by SDOT

(Continued on page 8)
The 20+ miles of new fiber is the backbone of the entire ITS system. The fiber optic network allows for improved communication of the system components back to the Seattle traffic management center (TMC). Each ITS device plays an important role towards managing traffic during construction:

- Video monitoring of traffic flow (CCTV),
- Collecting corridor travel times (LPR),
- Collect live data from the intersections (Sensys wireless system and advanced detection)

Sharing travel time information in real time with the public and viable detour routes during viaduct closures/construction (DMS) which may divert up to 110,000 vehicle trips per day.

These ITS projects also help to fill in missing arterial travel time information that adds to the well populated WSDOT freeway flow map. A key regional deployment is the connection of all ITS information from agencies and sharing it with each other. Traffic Busters, a program WSDOT is leading will be a first step in this process, by sharing CCTV camera views between agencies.

Summarizing the fast track delivery of these projects, I have outlined some key lessons learned:

- Prioritize – place the big rocks first. If you are installing any new foundations, it is important that these elements get the highest priority as they may involve right-of-way (ROW), utility conflicts, poor soils, or public involvement/outreach.
- Strategize – the clearer the objective, the quicker the implementation. Review your strategic ITS plan. Spend additional time, early in the process, clarifying the scope of work so that both the design team and agency can foresee some pitfalls before they occur and develop a strategy for combating these pitfalls.
- Make Timely Decisions – resolve issues and make determination early and as quickly as possible. Timely decisions and reviews from agencies are essential to delivering fast tracked projects. Provide clear designs standards upfront to allow for greater flexibility when technology or site conditions change.

The best way to deliver any project is to lay a good foundation at the very beginning. As with the Habitat for Humanity deck project, our team fixed the uneven struts first - providing stable ground for constructing the project, just as we did for the City of Seattle and WSDOT.

Eric H. Shimizu, PE, PTOE
Transpo Group
Eric.Shimizu@transpogroup.com
President
James Bloodgood
Snohomish County
3000 Rockefeller Avenue
M/S 607
Everett, WA 98201
425.388.6419
jim.bloodgood@co.snohomish.wa.us

Vice President/
Treasurer
Katherine Casseday
Casseday Consulting
9726 NE 138th Place
Kirkland, WA 98034-1808
206.450.8758
kcasseday@yahoo.com

Secretary
Kevin Chang
King County
201 S Jackson St
Mailstop KSC-TR-0222
Seattle, WA 98104
206.263.6131
206.296.0176 Fax
kevin.chang@kingcounty.gov

Past President
Nick W. Ching
HNTB
600 - 108th Ave NE, Suite 405
Bellevue, WA 98004
425.456.8551
425.453.9179 Fax
nching@hntb.com

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Newsletter Contact Info
If you have any changes in your contact information, please let us know so you continue to receive monthly ITE e-mail announcements and newsletters. To update your information, click on the "Membership" link on the Washington State Section ITE website:

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