WASHINGTON STATE SECTION / INSTITUTE OF TRANSPORTATION ENGINEERS

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

ITE WASHINGTON

Letter from the President

Thank you to Michael Cummings of the Puget Sound Regional Council for an informative presentation about Transportation 2040 in the four county PSRC region. It was great to see so many folks at this first meeting of the ITE year, and just like being back at school after summer break, we took turns to give a personal update with each introduction.

Katherine Casseday
WA Section President

October brings two ITE activities: our luncheon meeting and a full day training workshop. At the ITE luncheon meeting on Tuesday, October 12th, Ted Trepanier of INRIX, Inc., will give us a summary of their nationwide review of strategies to maximize traffic flow within existing capacity. On October 26, we host the full-day

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This Month: Optimizing Use of Transportation Resources

If you have all the funds you could ever want and no environmental or cultural constraints to build your way out of congestion, then there is no need to attend our next presentation. If not, then come see how leading transportation agencies around the country are squeezing the most out of their existing roadways using the latest technology and operational strategies.

Ted Trepanier will present an overview of the findings from a recent best practices domestic scan conducted as a part of National Cooperative Highway Research Program (NCHRP). The purpose of the study was to identify best practices strategies used in the United States to maximize traffic flow without expanding capacity on existing facilities. The team visited Virginia, Maryland, New Jersey, Minneapolis, California, and Washington State and also held a webinar with the District of Columbia Department of Transportation.

Ted Trepanier is the Executive Director for the Public Sector with INRIX, Inc. Prior to joining INRIX, Ted was the Director of Traffic Operations for the Washington State Department of Transportation. In addition to his extensive background in traffic operations, he has experience in design, planning, project management and toll operations. Ted earned his Bachelor's Degree in Civil Engineering from Washington State University and his Masters in Civil Engineering from the University of Washington.

WHEN Tuesday, October 12th, 2010, 11:30 am ~ 2:00 PM

VENUE Lytle House (off of SR 522 east of SR 527, take 180th Street)
9929 NE 180th Street, Bothell, WA 98011

COST $15.00 (ITE Members), $20 (Non-Members), $5 (Students)

MENU Lunch boxes from Ella's Deli, Bothell. Please make your selection from the choices below. All lunches will include a beverage, a bag of chips, and a cookie.

1. Ham sandwich
2. Turkey sandwich
3. Roast Beef sandwich
4. Tuna sandwich
5. Veggie sandwich
6. Pastrami sandwich
7. Club sandwich -turkey, ham, roast beef
8. Chicken sandwich (with garlic)

RSVP By COB on Friday, October 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.

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training workshop on Accessible Pedestrian Signal planning, design and implementation, sponsored through a grant from NCHRP. See the details for each event in this newsletter, make your reservation and plan to attend.

As I look ahead to the 2010-2011 events and activities for Washington ITE, I'm impressed with the high level of dedication and effectiveness of the committee members making it all happen. I'm calling on all ITE members to step up and influence the programs, events and overall success of the section in fostering continued technical development and professionalism. The Executive Board and I welcome your input and contribution. **This is your chance to join this team of volunteers to deliver an outstanding program through this coming year!!**

We have plans underway for the ITE/IMSA/ITS meeting on February 14th where technical sessions are planned and a Vendor Fair will again provide planners, designers and operators the opportunity to get information directly from the manufacturers and vendors. Washington will host the Quad Section Meeting in 2011 which is a great opportunity to highlight our Section. July 10-13, 2011, the Alaska Section ITE is hosting the Western District Meeting in Anchorage and Nate Larson will coordinate volunteer efforts from Washington Section to assist our neighbors in delivering a successful Meeting in a compelling locale.

With such a bountiful program for the ITE year, there are many opportunities for your participation – from joining a committee to arrange an event to presenting a paper or project at a technical session. It is an effort that generates big returns – professionally, it gives the chance to practice project management and leadership skills in a friendly and supportive environment, with the great chance to work with colleagues from other agencies and firms. This is a great time to contribute your ideas for technical sessions, your organizational skills and for you to share your technical knowledge with your peers.

I look forward to seeing you at the October 12th meeting and the training workshop on October 26th.

Happy Trails!

Katherine Casseday
President, ITE Washington Section

Washington ITE Focus:

- Safer Roads
- Sustainable Projects
- Accommodation & Accessibility for All

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.

Safety Implications of Conversions to Flashing Yellow Arrow Indications

Richard A. Perez, P.E.
City Traffic Engineer
City of Federal Way

Introduction

This report analyzes the before-and-after collision history of Flashing Yellow Arrow (FYA) traffic signal indications in the City of Federal Way.

Flashing Yellow Arrows were allowed by FHWA by Interim Approval and have since been adopted in the 2009 MUTCD. Federal Way took advantage of WSDOT's statewide Interim Approval to implement a pilot project in 2006. An evaluation of the first six months of operation resulted in City Council approval of FYA's for all new protected/ permitted installations and established criteria for a retrofit program to be funded with project savings from the pilot project. This funding has been supplemented with developer mitigation and small works capital funding. FYA's have now been installed at eight of the City's seventy-six signalized intersections in Federal Way, with funding for one more retrofit in 2010, and proposed capital funding of four more retrofits in 2011, and four new installations in 2011 and five more in 2012.

Public education consisted of press releases and a web page. The initial press release resulted in a front page article in the *Tacoma News Tribune* on a Sunday. Press releases have been issued for each subsequent turn-on. Most public comments have been positive, frequently including requests to consider implementation at other intersections. Negative comments have dwindled since initial implementation.

One issue that arose with the implementation of FYA was a complaint that the FYA indication was confusing given the City's use of night flash operations and the lack of explicit language in state law and the Driver's Manual. To address the first issue, night flash operations were halted at all locations where FYA was implemented. The second was the installation of 24" x 42" instructional signing at FYA installations beginning on December 3, 2008, pictured below:

The Driver's Manual has since been revised to include discussion of FYA.

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Summary

Out of the seven intersections analyzed, we had a 9% reduction in collision rates, and an 8% reduction in severity rates. Although samples are limited, it appears that FYA increased fixed object, approach turn, and pedestrian collisions, but reduced rear-end and right angle, and backing collisions, and eliminated head on collisions.

Stratifying by the type of phasing before conversion results in more meaningful comparisons. Converting from protected phasing to FYA at three intersections resulted in a 15% increase in collision rates and 41% increase in severity rates. This was primarily in a 341% increase in approach turn collisions, an increase from 0 to almost 3 pedestrian collisions, and a 189% increase in fixed object collisions. On the positive side, there was a 37% reduction in rear ends, and a 24% reduction in right angle collisions, and elimination of backing and head-on collisions. Most of these changes would be expected with the elimination of protected phasing, although the increase in fixed object collisions isn't so intuitive. Review of the collision reports for the fixed object collisions did not reveal any pattern that could be attributed to this increase. However, it is noted that only the intersections that did not have auxiliary left-turn signal heads on the far left corners of the approaches with FYA experienced this increase in fixed-object collisions. Why this correlation would exist is unclear.

However, regarding the protected phasing conversions in general, these data are heavily influenced by the first year's experience. Comparing the three years before to after, but eliminating the first year after conversion, resulted in a net positive experience, with a 8% reduction in collisions and 22% reduction in severity rate. Although approach turns increased 161%, pedestrian collisions increased from 0 to almost 6 per year, and fixed object collisions increased 179%, this was more than offset by a 73% reduction in rear end collisions, 17% reduction in right angle collisions, and elimination of backing and head-on collisions.

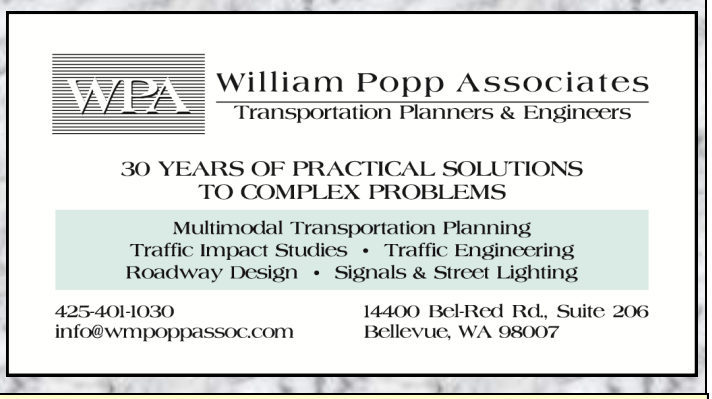
The conversion from traditional protected/permitted phasing at the two intersections is more encouraging, with a 39% reduction in collision rates and a 64% reduction in severity rates. Fixed object collisions, again, increased 233%, and rear-ends increased 56%. These were more than offset by a 77% reduction in approach turn collisions, a 68% reduction in right angle collisions, 61% reduction in pedestrian collisions, and elimination of head-on collisions.

Conclusions

Although limited in sample size, it appears that the conversion from protected/permitted to FYA has a significant safety benefit. The conversion from protected phasing to FYA should be reviewed closely, because, at least in the short term, collisions can be expected to increase. However, it appears that this may be a learning curve issue, and eventually results in better safety performance. Evidence is mixed as to whether the explanatory signing helps drivers on the learning curve with FYA, given that the large increase in collision rates occurred only at protected phasing conversions and occurred regardless of when the signing was installed in relation to the conversion. It also appears that installation of auxiliary left-turn signal heads on the far left corner of a subject approach tends to avoid an increase in fixed object collisions, although why this would be so is unclear.

These data suggest that prioritization of FYA installations should consider potential safety improvements in addition to reduction in queuing, delay, vehicle emissions, and improvement in signal coordination.

EDITOR's Note: This report, which includes more detailed information and analysis of each intersection where FYA was implemented, can be viewed in its entirety at http://www.westernite.org/Sections/washington/newsletters/Safety_Redux_2009_Rick_Perez.pdf.



Advertising (Business Cards & Larger)

To submit your ad, please send a jpg, png, or tif file of the desired ad to Jim Ellison at jim@jameswellison.com

Place your ad in the following sizes:

Business card ad for $100
Full page ad for $1000
1/2 page ad for $500
1/4 page ad for $250

Also send a check for the ad size you desire (ad will run from January 2011 through December 2011) to:

Jim Ellison
Consulting Traffic Engineer
1600-B SW Dash Point Rd, #33
Federal Way, WA 98023

Call 253.666.2377 for further questions.

22nd ITE Classic Recap

By Mark Poch

The 22nd ITE Golf Classic was played on Tuesday, June 8th at Battle Creek Golf Course in Marysville. The course was a little damp in spots after an unusually wet month of May, but the beautiful weather and nice greens more than made up for it. Eighteen groups of ITE members and friends, more than 72 people, participated in this traditional event started 22 years ago by our very own Terry Gibson.

After the round, folks settled in for a great BBQ lunch, which included recognition of our wonderful sponsors, a huge round of applause for Terry, and competition awards and raffle. Thanks to our sponsors, over 25 raffle prizes were handed out, including many $50 gift certificates to Puetz golf, Azteca, and Home Depot. The raffle also included four box seat tickets to a Friday night Mariner's game, and free rounds of golf.

The competition was exciting, and included a tie for first place between the longtime Seattle DOT team lead by Brian Kemper, and the third King Co team. A putt-off ensued, and after some remarkable shots, King Co (Jeff Lee, Nick Tran, David Mark, and Brad Wong) will have their name enshrined on the Classic Trophy. Congratulations also to the veteran DKS Ladies team, earning the coveted "highest score" prize. Also included in the competition were two closest to the pin holes (won by Don Cairns & Len Madsen), two long drive holes for the guys (John Samuelson & Steve Haugen), and ladies long drive (Sharon Lorenzo).

Huge thanks goes out to our great sponsors! Our main sponsors this year included Mark Skaggs - All Traffic Data (BBQ), Robert Nims - Western Systems (Prizes), and Mike Singson - Advance Traffic Products (Competition holes). A big thanks also to INCA (Dave Alm), DKS Associates (Mark Yand), Quality Counts (Andrew Bellamy), Spot Devices (Sandi Taylor), Zumar (Tom Brandes), Fehr & Peers, and Perteet. Our sponsors not only participated in the event, but also enabled the Classic to offer a great 19th hole party after the round…thanks again sponsors!!

22nd ITE Classic Results

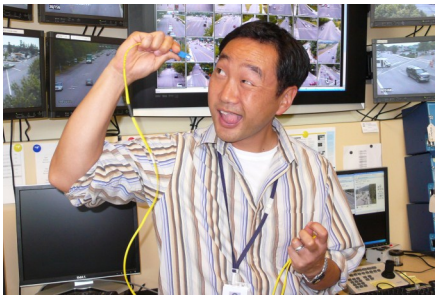
1st Place – King County 2nd Place – Seattle DOT 3rd Place – INCA Highest Score – DKS Ladies

We look forward to seeing everyone at next year's Classic…. Mark Poch, Tournament Chair

Scribe Report

By Paul Cho, City of Redmond

September weather typically provides crisp mornings with warm afternoons and a last good look at the summer sun. Walking into the Alki Room of Salty's On Alki's, the allure of the patio area extending beyond the formal meeting room was not enough to attract the sun to join the 55 members registered for this year's kick-off meeting. However, that didn't stop members from catching up on the latest activities and warming up to the buffet and meeting ahead.



Once the buffet table was prepared, members reclaimed their seats to enjoy wild Copper River salmon, top sirloin steak, lemon and tomato tapenade, seafood chowder along with fresh salads and fruit before this year's section president, Katherine Casseday commenced the meeting promptly at 12:30 p.m. Ms. Casseday asked members to provide self introductions along with sharing a memorable summer experience.

Following, Ms. Casseday continued with a recap of the Annual Meeting including recognition for Meagan Powers, Outstanding Young Engineer and Dan Dawson, Outstanding Service. She then introduced Michael Cummings of Puget Sound Regional Council (PSRC) to begin his presentation on Transportation 2040 just as the sun began to peer through the clouds.

As we move forward with transportation improvements, Mr. Cummings stressed the importance of considering various facets of improving mobility. Traditional funding sources will be enhanced by user fees to manage congestion. Environmental impacts such as air quality will be especially emphasized in moving new projects forward. Still, with 60% of the strategy focused on preservation, operation and maintenance of existing facilities, the plan will need to be recalibrated after the initial five year as the program continues to move forward. Discussions on what form various parts of the plan would take was better illustrated during the question and answer session that followed the formal presentation.

Before closing, a reminder for the Accessible Pedestrian Signals (APS) training on October 26th was provided. In addition, Jim Bloodgood announced improvements in Terry Gibson's health. The good news and the sun now burning through the remaining clouds warmed the return trip to the rest of

"The Campus Corner"

By Scott Lee and Meagan Powers

The ITE Annual Meeting took place in the city of Vancouver, BC between August 8th to 11th, 2010. Hundreds of professionals and students came from different corners of the United States and Canada, and made this meeting a very enriching experience.

The ITE student chapter at the University of Washington was present this year with five of its members. Each of them had different motivations and experienced this meeting in different ways.

In general, the two main motivations were to learn from specific topics related to their research and interest areas, and to look for job opportunities. The variety of sessions offered during the meeting and the networking opportunities (at the exhibit area, and during coffee breaks and mixers) fulfilled the members' objectives.

Part of the UW-ITE crew: Runze Yu, Felipe Sandoval, Wenjuan Zhao, and Yao-Jan (from left to right). Brent Butler also attended the meeting but had job-related responsibilities at this minute.

The presentations had a great level of detail and covered many topics, not only from an American point of view but also from Asian and European countries. Our members suggest including more sessions related to emission analysis during the transportation planning process and sessions related to freight.

Professionals during breaks and mixers were really open to talk with our members, have a thoughtful conversation and provide information about job opportunities. Some members would have preferred to see more consulting firms and

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agencies in the exhibit area. There were mainly companies offering devices.

All our members also appreciate the chance to meet students from all over the States and Canada.

In summary, our members think it was worth attending the meeting and are greatly surprised by the ITE culture of experience sharing as well as the willingness to provide professional advices.

An image of what was happening in the exhibit area.

Personal Statements

Experience: Brent Butler

My expectation in attending this session was to better understand how to improve non-motorized mobility for the general public, and school children in particular. Given new studies by the Centers for Disease Control are documenting an explosion of obesity so severe that the US Military has recently changed the basic training regime. One of the sessions on the safe routes to schools program was especially relevant since it demonstrated that just building infrastructure to support non-motorized mobility is not enough.

While I was thoroughly pleased by the quality of some of the presenters, I would have enjoyed seeing more information related to the emissions side of the transportation equation. Nonetheless, I did find some avenues for better understanding how to incorporate environmental review in transportation planning and engineering, as well as learned from some surprising results.

All in all, this was a great event, and one that I shall attend again.

Experience: Felipe Sandoval

My main motivation was to see all UW members meet their expectations at the end of the conference. Fortunately, this was easy to accomplish because everything was very well organized, there were very informative sessions, and it was possible to meet professionals and students in the different mixers and coffee breaks. I am happy to see that everyone came back to Seattle with the intention to attend next year's meeting.

Secondly, I was interested in meeting people working in transportation planning. I had the chance to have very deep discussions with several professionals and learn from the projects they have been part of. So I totally met this objective. Nonetheless, I would have liked to see more consulting firms and public agencies in the exhibit area.

In third place, I was interested in looking for job opportunities. I found several interesting companies with challenging projects and cultures matching my personality. I met most of the people during after-session conversations and ITE committee meetings.

Finally, I thank the convenient opportunity ITE provides to its members by including all ITE Council meetings in the program. I personally attended the Pedestrian & Bicycle and Transportation Planning Council meetings because of my areas of interest and curiosity to see the job ITE is doing in these areas. I was greatly surprised to see a strong commitment to progressive ideas and to receive proposals from all ITE members.

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I had a great time during the conference and it was totally worth attending it. I really appreciate the opportunity the Washington State ITE provided to all of us.

Experience: Runze Yu

I enjoyed the technical exhibition a lot because it is not only a showcase for the companies in the industry, but also a good opportunity to talk to your potential employers. I also liked the coffee breaks when people mixed and talk. It was pretty refreshing from school life and I learned something in practice.

Two sessions impressed me the most. The first one was about variable speed limit practices in Europe, America (Seattle), and Canada. From this session I realized there is a priority issue behind the engineering design. There is a trade-off between safety and efficiency. The second session that caught my attention focused on how ITE can strengthen your social network and improve your resume. This is another reason I like ITE a lot. People are really willing to share their experiences.

I also went to the mixer and talked to some heads of Western ITE. I built some connections with them and figured out how I can find more scholarship information for our student chapter.

Runze and Yao enjoying the mixer!

Experience: Yao –Jan Wu

My motivation to attend this conference was to meet traffic professionals and learn up-to-date practical experiences in traffic engineering. This conference was an exciting event for me to explore more opportunities and activities for our students, such as the technical programs, trade shows, and professional development seminars. Undoubtedly, by attending this conference I gained knowledge of practical traffic engineering and a better understanding of inter-relationships among different areas of the practical transportation world.

The session that drew most of my attention was the development of high-speed rail infrastructure in China. This session was very meaningful because I could understand how a large infrastructure is constructed in a different cultural environment. Different from the U.S., China tends to build things in a more rapid and efficient way without considering long-term impacts. The Chinese scholars brought their thoughts and concerns into discussion. Many professionals also provided their feedback. After the session, I talked with these professionals and scholars about the pros and cons of the rapid infrastructure development in China.

I really appreciate the funding support from ITE. My career goal is to teach in a university. I'll definitely share this experience with my students in the future and encourage them to attend ITE events to broaden their horizons.

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Experience: Wenjuan Zhao

I went to the ITE conference with the primary intention to meet professionals and network. I did get the chance to talk with several transportation professionals and exchange business cards. At the big exhibition area, I had the opportunity to chat with company representatives, learn about their services, and find whether there had any job opportunities. Some professionals also gave me very good advice on how to effectively meet more people in conferences, broaden my professional network, and find job opportunities.

I also went to some interesting technical sessions. My research area is freight transportation but there was only one session about this topic. It will have a positive impact on future meeting agendas to include more sessions in this area. One session I found really interesting was the conversation circle about "IntelliDrive". The conversation happened in a very friendly atmosphere between speakers and audience. This session discussed the strategic plan of the IntelliDrive program and the audience brought up a lot of in-depth questions about its implementation barriers, priorities, application in other counties, and so on.

All in all, I enjoyed this year's ITE meeting and would love to go next time.

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

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Accessible Pedestrian Signals Workshop

Tuesday, October 26, 2010, 8:00AM – 4:00PM

This workshop provides information and guidance pertaining to the features, design, and installation of accessible pedestrian signals (APS). This full-day workshop is the product of a national research project that developed guidance on APS to optimize safe and independent crossing at signalized intersections by pedestrians who are visually impaired.

Workshop overview

Module A: Accessible Pedestrian Signals (APS) and Accessible Public Rights-of-Way

Module B: Travel Needs of Blind or Low Vision Pedestrians / Traffic Signals and Intersection Design

Module C: APS Features

Module D: When to Install APS

Module E: Designing Installations

Module F: Installation, Operation, and Maintenance

Module G: Public Education on APS

Intended audiences

Traffic engineers
Transportation administrators
Signal technicians
Orientation and Mobility professionals
Blind consumers

Instructors

Janet Barlow, COMS – Accessible Design for the Blind

Daniel Carter, P.E. – University of North Carolina Highway Safety Research Center

Date and Time

October 26, 2010 (8:00 AM to 4:00 PM)

Location

Everett Station

3201 Smith Avenue

Everett, WA 98201

Weyerhaeuser Room, 4th Floor

Cost

$50

What do participants receive?

6 hours of instruction that can be counted toward Professional Development Hours (PDH)
350-page reference book entitled "Accessible Pedestrian Signals: A Guide to Best Practices"
Refreshments and Lunch will be provided

Space is limited, registration is required.

Contact Carla Nasr at (425) 334-3348 or iteregistration@hotmail.com

WA Section Board

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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

DYNAMIC MESSAGE BOARD

SAVE THE DATE! Upcoming Washington State Section ITE Activities:

- October 26, 2010 Accessible Pedestrian Signals - Training
- November 9, 2010 Transportation Sustainability Program at the University of Washington
- December 14, 2010 Highway Safety Manual - Training
- January 11, 2011 luncheon program
- February 14, 2011 ITE/IMSA/ITS Conference
- March 8, 2011 luncheon program
- April 2011 Quad Meeting
- May 10, 2011 Student Night
- June 13, 2011 Annual Meeting & Conference
- June 14, 2011 23rd Annual ITE Golf Classic