

HAWAIIAN CONNECTIONS

THE HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

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In This Issue

- 1 2009 SHSP Peer Exchange
- 2 Driving in Magnetic Fields
A Moment in History
- 3 Nine Safety Countermeasures
- 4 News From Our Partners
- 5 News From Our Partners
(cont.)
- 6 Hawaii DOT Research Program
- 7 Hawaii DOT Research Program
(cont.)
Free Publications
- 8 2009 SHRP Peer Exchange (cont.)
- 9 Hawaii LTAP Activities
- 10 Director's Notes
Manager's Notes
- 11 Galena Creek Bridge

Please pass this on to other interested parties in your office.

2009 STRATEGIC HIGHWAY SAFETY PLAN (SHSP) PEER EXCHANGE

By: Sean Hiraoka & Brennon Morioka, HDOT & C.S. Papacostas, LTAP

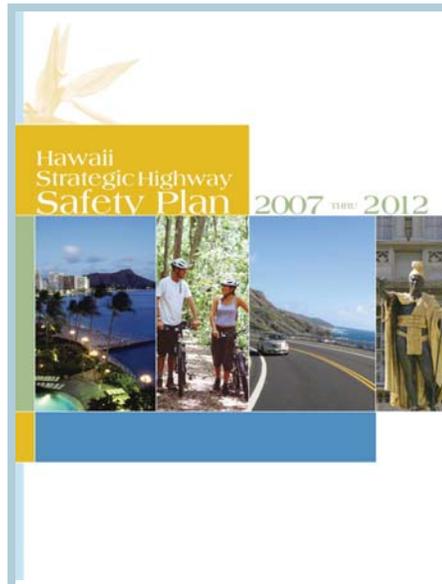
The 2009 SHSP Peer Exchange was held at the historic Drake Hotel in the windy city of Chicago. Although the weather was a bit chilly by Hawaii standards, the scenery was beautiful, with tulips and daffodils in full bloom up and down the Michigan Avenue Magnificent Mile. Over 250 safety partners from all 50 states, and even some of the territories attended the three-day (April 29 – May 1) event. Hawaii was well represented by a contingent consisting of **Mitch Roth** of the Hawaii County Prosecutors Office (current Hawaii SHSP Chair), **Kari Benes** of the Hawaii Department of Health, **Sean Hiraoka** of the Hawaii Department of Transportation, and **Dr. Papacostas**, who was sponsored by the National Academies to represent the National LTAP.

The Chicago event was a follow-up to the February 2007 peer exchange held in San Diego and was conducted to assist

states with the implementation of previously developed SHSPs and development of updated SHSPs. Hawaii's SHSP was completed and approved in 2007 and Hawaii's SHSP Core Committee is currently overseeing implementation of that plan. Although a few of the states have either recently updated their SHSP, or are currently working on an update, the vast majority of the states are still working on implementing their original SHSP as required by SAFETEA-LU. Hawaii's SHSP time frame is from 2007 to 2012, so planning for developing an update will probably start in 2011.

The mission of the Hawaii contingent was to discuss and obtain advice on the following:

- Benefits of developing detailed action plans;
- Benefits of and role of executive committees;
- Funding of SHSP Coordinators; and
- Specific implementation action strategies.



(Continued on Page 8)

DRIVING IN MAGNETIC FIELDS

By Darin Mar, City and County of Honolulu

The City and County of Honolulu, Department of Transportation Services (DTS) leads the way with innovative traffic counting equipment which utilizes magnetic imaging technology. DTS uses the Nu-Metric NC200 traffic analyzer which calculates traffic data from the magnetic distortion created as a vehicle passes over it. The device is a compact and portable module which collects vehicular counts, classifications, and speeds. After extensive testing, DTS has found the system to be reliable, maintainable, and accurate.

The traditional method collects traffic data by placing pneumatic tubes across the roadways. Although true and tested, it takes up to an hour to cover a typical intersection. There are other drawbacks. Complaints by nearby residents about the thumping noises are common

particularly at nights. Also, when tubes are installed in high traffic locations and loose pavement areas, they tend to disengage and malfunction.

Generally, DTS prefers to collect data when schools, colleges, and universities are in session. Any system that makes installation faster increases our productivity and coverage. The magnetic modules are simply taped to the roadway with industrial-grade duct tape. Typical intersections are setup in 15 minutes. Less time spent in the roadways means importantly less risk to our workers. Since the modules are placed in the middle of the roadway away from the tires, motorists tend to drive at true speeds. Confident with the technology, DTS plans to install permanent in-pavement wireless modules as data collection stations.

A MOMENT IN HISTORY

By C.S. Papacostas, Hawaii LTAP

On Saturday January 18, 1913, the Pacific Commercial Advertiser of Honolulu carried a story titled:

AUTO DRIVERS MUST MUZZLE MUFFLERS

The rest of the story went so:

Section 27 of Ordinance 11, known as the auto ordinance, will be invoked against all auto drivers who persist in opening up their muffler and otherwise making loud and disturbing noises with their gas wagons.

Attorney Ashford, who was appointed a committee of one of the Central Improvement Committee, to prepare a law for presentation to the legislature to prevent unnecessary noises as far as autos are concerned, has discovered, after a thorough examination of the auto ordinance, that Section 27 provides fully for preventing these unnecessary auto noises.

"The law will be carried out by the proper authorities," said Mr. Ashford yesterday.

What did YOU think?

Editor's Note: In this feature, we quote one of the presenters at our "Don't Duck Motor Fuel Taxes" workshop by the Federation of Tax Administrators (FTA).

"I also wanted to let you know that in all the years of teaching this class we have never had such a group of people that went above and beyond our expectations in making sure that all the equipment was working properly and that if we needed anything at all, all we had to do was ask and it was there. Again, special thanks to LTAP staff, who without their

help things would not have gone so smoothly."

Submitted by: **Robert F. Donnellan**, Senior Tax Manager Global Companies LLC.



NINE SAFETY COUNTERMEASURES

By: FHWA Office of Safety

The Office of Safety strongly encourages widespread use of the following countermeasures to accelerate achieving local, State, and national safety goals.

Road Safety Audits: A road safety audit (RSA) is a formal safety performance examination of an existing or future road or intersection by an independent and multi-disciplinary team to identify opportunities for improvements for all road users.

Rumble Strips and Rumble Stripes: Rumble strips are raised or grooved patterns on the roadway that provide both an audible rumbling sound and a physical vibration to alert drivers that they are leaving the driving lane. They may be installed on the roadway shoulder or on the centerline of undivided highways. If they coincide with centerline or edgeline striping they are referred to as rumble stripes.

Median Barriers: Longitudinal barriers used to separate opposing traffic on a divided highway. They are designed to redirect vehicles striking either side of the barrier. Median barriers can significantly reduce the occurrence of cross-median crashes and the overall severity of median-related crashes.

Safety Edge: An asphalt paving technique where the interface between the roadway and graded shoulder is paved at an optimal angle to minimize vertical drop-off and provide a safer roadway edge. A Safety Edge shape can be readily attained by fitting resurfacing equipment with a device that extrudes and compacts the shape of the pavement edge as the paver passes. This slight change in the paving equipment has a minimal impact on cost. In addition, the Safety Edge improves the compaction of the pavement near the edge. Shoulders should still be pulled up flush with the pavement.

Roundabouts: The modern roundabout is a type of circular intersection defined by the basic operational principle of entering traffic yielding to vehicles on the circulatory roadway and certain key design principles to achieve deflection of entering traffic by channelization at the entrance and deflection around a center island. Modern roundabouts have geometric features providing a reduced speed environment that offers substantial safety advantages and excellent operational performance.

Left and Right Turn Lanes at Stop-Controlled Intersections: Installation of left turn lanes reduces

crash potential and motorist inconvenience, and improves operational efficiency. Right-turn lanes provide a separation between rightturning traffic and adjacent through traffic at intersection approaches, reducing conflicts and improving intersection safety.

Yellow Change Intervals: Yellow change intervals that are not consistent with normal operating speeds create a dilemma zone in which drivers can neither stop safely nor reach the intersection before the signal turns red.

Medians and Pedestrian Refuge Areas in Urban and Suburban Areas: Medians can either be open (pavement markings only) or they can be channelized (raised medians or islands) to separate various road users. Pedestrian Refuge Areas (or crossing islands)—also known as center islands, refuge islands, pedestrian islands, or median slow points—are raised islands placed in the street at intersection or midblock locations to separate crossing pedestrians from motor vehicles.

Walkways: Several types of pedestrian walkways include:

- **Pedestrian Walkway:** A continuous way designated for pedestrians and separated from motor vehicle traffic by a space or barrier.
- **Shared Use Path:** A bikeway or pedestrian walkway physically separated from motorized vehicular traffic by an open space or barrier—either within a highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers, and other nonmotorized users. Shared use paths also may be referred to as “trails” or “multiple-use trails.”
- **Sidewalks:** Walkways that are paved and separated from the street, generally by curb and gutter.
- **Roadway Shoulder:** In rural or suburban areas where sidewalks and pathways are not feasible, gravel or paved highway shoulders provide an area for pedestrians to walk next to the roadway. For more information on these countermeasures, visit <http://safety.fhwa.dot.gov>.

NEWS FROM O

American Public Works Association Hawaii Chapter

By: John Lamer, Vice President

A General Membership Meeting was held at Hawaiian Electric's (HECO) Ward location on Thursday, June 25, 7:30-10:30 am.

As part of the meeting APWA - Hawaii hosted a Click Listen and Learn (CLL) session. A CLL is part of APWA's series of interactive internet educational program and this session's topic was Subsurface Utility Engineering.

Subsurface Utility Engineering (SUE) continues to evolve as an important risk management field for public works projects. This two-hour session gave a brief overview of where SUE is today, where it is headed in the near future, and the applications for APWA members. After viewing this program, participants are better able to:

- Understand accuracy issues in documenting underground utilities
- Identify how Global Positioning Systems (GPS) and Radio-Frequency Identification (RFID) technologies are used in the field using real-world examples
- Explain how GPS and RFID increase the accuracy of documenting underground utilities

Altogether 50 sites spread throughout the country participated in the webinar. Our group consisted of about a dozen members from the City & County of Honolulu, HDOT, HECO, the Honolulu Board of Water Supply, Hawaii LTAP, and private engineering companies.



Following the webinar, the local participants engaged in lively discussion and sharing of ideas about this most timely topic. The general consensus was that improvements in accurately locating existing utilities horizontally and vertically can result in enormous cost savings, as well as public convenience and safety.

Of particular interest was the use of RFIDs, generally consisting of "marker balls" containing a computer chip on which attribute information can be programmed. The "markers" are placed underground in the vicinity of utility components. Typical data burnt into the chip include precise location and characteristics of the utility element (such as pipe, fiberoptic cable, sewer conduit, etc.) being referenced. Each utility company would be assigned its own transmission frequency so it can track its own markers without interference from those belonging to others.

The benefit of RFIDs would be to aid in the future location of the utility component when reconstruction in the area is undertaken by private or public entities. Each marker is powered by a battery with an estimated life of between 10 and 20 years.

Information on upcoming additional Chapter events may be found on <http://hawaii.apwa.net>.



American Society of Civil Engineers



By: Wayne Kawano and Ron E. Iwamoto

The American Society of Civil Engineers (ASCE) Hawaii Section will be hosting the Hawaii Section Scholarship Golf Tournament in Honor of **Steve Fong** on Friday, August 14, 2009 at the Pearl Country Club. For the past 6 years, the various construction industry/engineering organizations and the agencies have combined their efforts to raise scholarship funds for a deserving University of Hawaii Civil Engineering student. The ASCE Hawaii Section proudly looks forward to hosting this worthwhile fundraising tournament for our future engineers.

We and the scholarship recipients are very thankful for the support and camaraderie during the previous tournaments.

And again, we are looking for your help and support to make this year's tournament a successful one.

Please help by submitting a corporate sponsored team or registering individual. We also welcome any donations for the golf event or for team prizes.

We greatly appreciate your support. The discounted early registration and payment (for Sponsor entries) must be post-marked by June 30, 2009. All other entries, the deadline is July 31, 2009. Should you need any additional information, please do not hesitate to call **Lori Fong** at 955-4441 or **Ron Iwamoto** at 486-5202.

UR PARTNERS...

Hawaii Asphalt Paving Industry (HAPI)

By: *Bart Lungren, Director*



Preservation Partnership Promotes Preemptive Practice

Convincing transportation agencies, legislators and taxpayers that a “worst first” approach to maintaining the quality and safety of road structures throughout the State of Hawaii is one of the main themes of presentations, workshops and discussions held by the Hawaii Asphalt Paving Industry. HAPI’s mission is to provide pavement preservation practitioners (public agencies, contractors, suppliers, academia, local and federal government officials) an ongoing forum to publicize and share information that promotes the benefits of pavement preservation. With insufficient funding available to address all infrastructure needs, whether it’s new construction or maintaining the existing roadways, preservation plays a vital role in not only maintaining the quality and safety of good road structures, but also helps maximize available funding for maintenance, reconstruction and new construction.

Preservation proponents promote cost-effective solutions, both long and short range programs, by providing “the right fix at the right time in the right place.”

King W. Gee, associate administrator for the Federal Highway Administration’s Office of Infrastructure, has said that managing the nation’s 3.9 million miles of roads will require a continued preservation approach. In fact, Gee issued a Preservation Maintenance Eligibility memorandum (Oct. 8, 2004) to all FHWA directors of field services, division administrators and Federal Lands Highway Division engineers stating: “The FHWA supports increased flexibility for using federal-aid funding for cost-effective preventive maintenance.” The FHWA recognizes that “timely preventive maintenance and preservation activities are necessary to ensure proper performance of the transportation infrastructure.”

The memorandum states: “By using lower-cost system preservation methods, states can improve system conditions, minimize road construction impacts on the traveling public, and better manage their resources needed for long-term improvements, such as recon-

struction or expansion. Preventive maintenance offers state DOTs a way of increasing the return on their infrastructure investment.”

The American Association of State Highway and Transportation Officials (AASHTO) defines preventive maintenance “as the planned strategy of cost-effective treatments to an existing roadway system and its appurtenances that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system without increasing the structural capacity.”

Accordingly, the pavement preservation approach is a necessary part of the infrastructure solution because it extends the service life of roadways, maximizing the investment, while buying some time for long-term solutions. With the availability of mill and fill, thin lift overlays, ultra thin bonded wearing course, slurry seals, and crack filling: the agencies in the State of Hawaii do have the tools that have been proven to provide solutions to our needs and budgets. For more information on Pavement Preservation you may contact HAPI with any questions that you might have. We will provide informational packets, workshops, and presentations to assist in improving our roadways. Please contact HAPI at blungren@hawaiiasphalt.com or call (808)-469-6748



HAWAII DOT RES

Self-Consolidating Concrete in Hawaii

By I.N. Robertson, G.P. Johnson & R. Ishisaka, University of Hawaii at Manoa

INTRODUCTION

Self Consolidating Concrete (SCC) is a high flow concrete that provides various advantages over traditional concrete. It can flow between dense reinforcing steel under its own weight, reducing or even eliminating the need for mechanical consolidation. It can also reduce finishing time and produce a higher quality end result. Past SCC research has often recommended using rounded aggregate, such as river gravel, to improve flow. The aggregate readily available in Hawai'i is made from crushed basalt and is very angular. This may cause problems in getting the mix to flow properly without segregation.

The coarse aggregates used in this project were 3/4" and 3/8" crushed basalt rock from both the Halawa and Kapa'a quarries (the two major quarries on Oahu). The fine aggregates were a mixture of basalt sand obtained by crushing rock from both quarries, as well as Maui Dune Sand and Nanakuli Limestone. Sieve analyses, absorption and moisture content tests were performed on all aggregates for use in the mix design process.

The cement was Hawaiian Cement Type I/II. The high range water reducer (HRWR) was Master Builders Glenium 3030 NS and the viscosity modifying admixture was Master Builders VMA 358. Retarding admixtures were used in some mixtures.

TEST PROCEDURES

The fresh mix properties of all mixtures were evaluated using inverted cone slump flow and VSI tests. Once ac-



Typical slump flow test

ceptable mix performance was achieved, T50, J-Ring, L-Box and Segregation Column tests were also performed.

Hardened Concrete compressive strength tests were performed on standard 6" ϕ x 12" long cylinder specimens for all mixtures. Visual inspection for voids and aggregate segregation were done on the split cylinders.

MIX DESIGN

A total of 30 mix trials were conducted in this study. Because of the highly angular aggregate with high absorption, published SCC mix design procedures were not expected to yield successful performance. Instead, the SCC mix design was performed using a visual stability approach.

All dry ingredients and mixing water were batched in a drum mixer. High range water reducer (HRWR) was added incrementally with 90 seconds mixing for each addition until a self leveling mix was obtained. Viscosity modifying admixture (VMA) was then added incrementally with 30 seconds mixing until coarse aggregate was visible at the surface of the mixture.

The above process was used successfully to develop SCC mixtures with water cement ratios of 0.39, 0.45 and 0.50 using aggregates from the two Oahu quarries.

The use of angular crushed aggregate with high absorption resulted in SCC mixtures which are acutely sensitive to the aggregate properties, particularly moisture content.

Some trial mixes revealed that there is a limit to HRWR's effectiveness for SCC made from angular crushed aggregate. Mixes with low water cement ratios required HRWR doses exceeding manufacturer recommendations for SCC applications by as much as 17%. T50 times for these mixes, ranged from 1 to 2 seconds—at the lower end of the workability window established by others. In theory, adding VMA should increase the T50 times, however, at these high HRWR dosages there are two issues: (1) severe air entrapment occurs with the addition of the HRWR alone; and (2) it appears that VMA's efficacy is diminished as a result of the high HRWR dosages.

Consistency of aggregate source is also critical to ensur-

RESEARCH PROGRAM



J-ring flow test on SCC mixture

ing consistency of mix performance. After successfully developing an SCC mixture using aggregates from the Kapaa Quarry, a trial batch of SCC was ordered from the Halawa Quarry. The slump flow and VSI for this mix did not meet expectations, and use of this concrete in trial reinforced concrete beams resulted in inadequate flow through the reinforcing cage, and lack of consolidation around congested reinforcing steel. It was therefore necessary to develop individual mixtures for each aggregate sources.

The future availability of Maui dune sand came into question. If this is true, new mixtures will have to be developed in the laboratory before they can be used in the field.

CONCLUSIONS

- Self-consolidating concrete mixtures can be developed successfully, in the lab, with aggregates derived from crushed basalt rock.
- Variations in moisture content of the aggregates can lead to instability of the mixture. It is critical to monitor moisture content and adjust mix proportions accordingly.
- An increase in high range water reducer demand can pose additional problems for SCC made with angular crushed aggregate.
- Consistent performance of the mixture can also be affected by changes in the aggregate source.
- Changes in aggregate availability will necessitate redesign of SCC mixtures. In order to ensure a stable aggregate supply for the duration of a project it may be necessary to stockpile aggregates.

FREE PUBLICATIONS

*We are cleaning and reorganizing the Transportation Library! Please take the time to review this list. Any remaining copies will be discarded by **SEPTEMBER 30, 2009**. Please call 956-2696 to request any copies.*

1. **TCRP - 55 (1999)** *Guidelines for Enhancing Suburban Mobility Using Public Transportation*
2. **TCRP Synthesis - 29 (1998)** *Passenger Counting Technologies and Procedures*
3. **TCRP Synthesis - 30 (1998)** *ADA Paratransit Eligibility Certification Practices*
4. **TCRP Synthesis - 31 (1998)** *Paratransit Contracting and Service Delivery Methods*
5. **TCRP Synthesis - 32 (1998)** *Transit Advertising Revenue: Traditional and New Sources and Structures*
6. **TCRP Synthesis - 35 (2000)** *Information Technology Update for Transit*
7. **NCHRP - 437 (2000)** *Collection and Presentation of Roadway Inventory Data*
8. **NCHRP - 439 (2000)** *Superelevation Distribution Methods and Transition Design*
9. **NCHRP - 441 (2000)** *Segregation in Hot-Mix Asphalt Pavements*
10. **NCHRP - 443 (2000)** *Primer Environmental Impact of Construction and Repair Materials on Surface and Ground Waters*
11. **NCHRP - 444 (2000)** *Compatibility of a Test for Moisture-Induced Damage with Superpave Volumetric Mix Design*
12. **NCHRP - 468 (2002)** *Contributions of Pavement Structural Layers to Rutting of Hot Mix Asphalt Pavements*
13. **TRR - 1505 (1995)** *Pavement Monitoring and Evaluation Issues*
14. **TRR - 1507 (1995)** *Seal Coats and Asphalt Recycling*
15. **TRR - 1515 (1995)** *Recycled Tire Rubber and Other Waste Materials in Asphalt Mixtures*
16. **TRR - 1559 (1996)** *Environmental, Economic, and Social Effects of Transportation*
17. **TRR - 1568 (1997)** *Pavement Rehabilitation and Design*
18. **TRR - 1570 (1997)** *Pavement Research Issues*
19. **TRR - 1571 (1997)** *Public Transit 1997: Bus, Paratransit, Intermodal, and Rail*
20. **TRR - 1572 (1997)** *Highway Capacity and Issues and Analysis*
21. **TRR - 1574 (1997)** *Advances in Concrete and Concrete Construction*

2009 STRATEGIC HIGHWAY SAFETY PLAN (SHSP) PEER EXCHANGE (Continued from Page 1)

Several plenary sessions, and most of the special meetings and breakout sessions, focused on implementing SHSPs, so this peer exchange was especially valuable to the Hawaii contingent. It was very interesting to hear about the many ways that States chose to implement their SHSPs. The included detailed action plans, executive committees, and oversight committees that meet often, some of the states hired SHSP coordinators with staff. One theme was clear among all the states, however: Implementing the SHSP takes a lot of time, commitment, hard work, and passion.

The most valuable portion of the peer exchange was the breakout sessions. States were provided the opportunity to request information from other states that are more advanced in implementing their SHSPs. We were able to discover best practices and lessons learned on how to implement the plan. It was also reassuring to learn that many of the other states are struggling with common problems, and that, we have met people that can continue to assist our efforts.

Another valuable benefit of attending the exchange was the opportunity to meet and establish connections with many safety specialists from around the nation. The Hawaii contingent renewed existing relationships and made new contacts with State, County, and Federal partners. It was also rewarding to finally put a face to those contacted throughout the year by e-mail, teleconference, telephone, etc. The Hawaii contingent definitely benefitted from that opportunity.

Our mission was definitely accomplished and we recommended that the Hawaii SHSP incorporate the following into the existing implementation process:

- Develop detailed action plans that identify lead contacts and performance measures;
- Establish a Leadership Implementation Committee based on functions of other states;
- Secure a contract for SHSP Coordinator position; and
- Encourage OMPO to include SHSP strategies as part of their Long Range Transportation Plan (LRTP) performance measures.

Since the peer exchange, the Hawaii's SHSP Core Committee has started working on a process to de-

velop detailed action plans. The process will be led by each of the Emphasis Area Team Chairs and Vice Chairs who will coordinate the statewide pool of safety partners to develop detailed action plans for each of the seven (7) emphasis areas. The Core Committee will also develop a tool, based on examples found at the peer exchange, to monitor progress of each action item. The Core Committee has also completed a draft of roles and responsibilities of a Leadership Implementation Committee that is comprised of top management from key safety agencies around the state. The draft roles and responsibilities incorporated ideas from the peer exchange meeting.

Although Hawaii's SHSP has still to meet its goal of reducing fatalities to 100 or fewer per year by 2012, it is becoming clearer around the nation that the collaborative efforts of SHSPs are contributing to the recent decline in motor vehicle related fatalities. Exchanges like this keep Hawaii abreast of the latest developments regarding SHSP implementation, updates, and overall highway safety issues, and will certainly put Hawaii on the right path to saving more lives on our roads in the future. If you would like more information on the Hawaii SHSP, please visit the following website <http://hawaii.gov/dot/highways/shsp-1>.



HAWAII LTAP ACTIVITIES

Compiled by Gail Ikeda, Hawaii LTAP

In March, together with our partner, the Cement and Concrete Products Industry of Hawaii (CCPI), we were fortunate to have instructor **Michael Ayers**, of the American Concrete Pavement Association, share his extensive knowledge in the “Concrete Pavement Construction” seminar. This seminar covered critical construction elements such as basic terminology, equipment types and application, concrete mixes and batching, quality control requirements, pre-paving operations, construction operations, troubleshooting and corrective actions and other important considerations for a successful project.

The summer quarter started off with two “Right of Way (ROW)” workshops. In a collaborative effort, we along with the Hawaii Department of Transportation (HDOT) and the Federal Highway Administration (FHWA) invited instructor **David Leighow** to conduct a two-day workshop entitled “Right of Way Specialist Training”. This intensive two-day seminar covered the major facets of rights of way which included acquisition, property management, relocation, appraisal and abstracting. Following the seminar was a 1-day “Right of Way 101 for the non-specialist” led by **Dean Yogi**, of the HDOT Highways Division, Right of Way Branch. Together with the instructor and his staff, they gave other HDOT personnel a general synopsis of ROW functions and its relationship with the rest of the HDOT Highways Division.

In April we hosted a “Arborist Technical Rigging” course for the City & County of Honolulu, Department of Parks & Recreation out in Bellows Air Force Station. For three days, participants learned safety and risk management, how to make rigging knots and hitches, and winching lowering/lifting device benefits.



Participants lifting branches with a winch

In late April we invited back instructor, **Charles Nemmers**, to conduct the “Federal-Aid Highways 101” course on Kauai. This two-day training provided participants with an overview of key elements of the entire Federal-Aid Highway Program. Specifically, the course focused on the general requirements and laws that govern the Federal-Aid Highway Program (updated for SAFETEA-LU), the entire project development process, and the flexibility inherent in the Federal-Aid program. Video conferencing allowed simultaneous participation on Maui and Oahu.

“The right treatment, on the right road, at the right time” was the central theme that emerged from a two-day conference on the pavement preservation (PP) we coordinated in May. Planning

for the event were our partners Hawaii Asphalt Paving Industries (HAPI) via its president **Bart Lungren** and the Cement and Concrete Products Industries (CCPI) via their executive director **Wayne Kawano**. Brought into the picture were the Washington and Hawaii Offices of FHWA, represented by **Jim Sorensen**, **Wayne Kaneshiro** and **Pat Phung**. Both offices contributed special funding to the event as did our industry partners. **John Williams** represented the HDOT on the planning committee. The first day of the conference targeted industry and agency middle and upper management for a comprehensive overview of the state of practice. HDOT Director **Brennon Morioka**, FHWA Division Administrator **Abraham Wong**, and LTAP Advisory Board member and UH professor **Ricardo Archilla** provided the local context and research directions, whereas a long list of national experts from major entities discussed flexible and rigid pavement fixes, current research, project selection strategies, and the need for training and certification. The second day presented PP strategies in depth for the benefit of project managers and designers. **Matthew Ross** of the American Concrete Pavement Association and **Larry Galehouse** of the National Center for PP at Michigan State University led the presentation of Concrete Pavement Restoration and Slurry Seals & Micro-surfacing techniques.

Sadly, Jim Sorensen passed away this past June. His expertise and dedication towards pavement preservation was unparalleled and will be sorely missed.



Speakers at a recent “Pavement Preservation Training”

Ending the quarter was the 2009 Audit and Compliance Program workshop “Don’t Duck Motor Fuel Taxes”. This year, HDOT invited instructors from the Federation of Tax Administrators to give their structured week long course that focused on detailed description of motor fuel industry practices and the source documents required. Case studies were also presented to demonstrate reporting formats and tools, audit compliance procedures, evaluation of return procession and reconciliation, surveillance and inspection techniques. The last day was a special session for government agencies which concentrated on tracking fuel transactions through the motor fuel distribution chain, civil audit and criminal investigations and testifying.

For more information on any of these workshops or a list of upcoming workshops, visit our website at <http://hltap.eng.hawaii.edu/>

Director's Note

by C.S. Papacostas



At the end of April, I was fortunate to be invited by the National Academies to represent the National LTAP Association (NLTAPA) in Chicago at the annual peer exchange meeting of those involved in the Strategic Highway Safety Plans (SHSP) of the various States, as required by the current federal transportation bill.

I view my presence there as serving a dual purpose: to take advantage of the opportunity and strengthen our participation in the Hawai'i SHSP process, and to also help NLTAPA through its members to extend the reach of strategic highway safety activities to the local level.

The accomplishments of the Hawai'i contingent are described in a separate article in this issue of the newsletter. The impact at the NLTAPA level was something I described to the Region 9 (Western) meeting of LTAP in Reno, Nevada, during the first week of June, and will also present, along with the NLTAPA contingent, at the National LTAP conference to be held in July.

My presentation in Reno informed that the national SHSP initiative is seriously examining ways to get locals (e.g., cities and counties) to increase their involvement. After all, a slight majority of highway fatalities occur on rural roads, and the fatality rate per 100 million vehicle miles is about 2.5 times higher in rural as compared to urban areas. Whereas the States are contemplating ways to get the locals involved, NLTAPA and its member centers have a long-standing strong network with them. The national partnership between SHSP and NLTAPA that started in Chicago is a natural fit that, as recognized by the participants, would obviate the "reinvention of the wheel!"

As usual, this year's regional meeting was a source of renewed energy and the sharing of information and knowledge. A field trip to the construction site of the impressive Galena Creek Bridge was the crown jewel (see p. 11). As I had mentioned back in 2005, four webcams are offering the construction team and the general public a daily progress report at <http://factory.oxblue.com/client/galena/>.

We are thankful to the Nevada LTAP, and particularly **Lisa Cody**, for organizing an excellent meeting.

Program Manager's Note

by Juli Kobayashi



Summer is here and we are so blessed to live in such a BEAUTIFUL state! Sun, surf and amazing weather!

This past quarter we held the Federal Aid 101 workshop on Kaua'i and used the technology of videoconferencing to include participants on O'ahu and Maui. This alternative training opportunity will allow us to use more innovative ways to bring training to each of the islands.

In July, Costas and I will be traveling to Pittsburgh, PA for our annual National LTAP-TTAP Conference. At the conference some of the other states will be discussing their challenges and successes of using alternative training methods. We hope to learn from them and bring these new techniques to you in the future.

One of the exciting events that we help coordinate annually is our Hawai'i Construction Career Days (CCD) event. This year it will be held at Honolulu Community College on October 22 – 23, 2009. Recently, we were extremely fortunate to receive a donation from Walmart to help support this vital workforce development event in Hawai'i. We would like to thank **John Mendez**, Senior Manager, Public Affairs and **Brian Halsey**, Market Manager, from Walmart for their kindness and generosity on behalf of their company.

We are looking forward to bringing this event to the neighbor islands in 2010 and **Melanie Martin** and I will be going to the Big Island to help promote CCD! Please check our website for more information on the event and how you can get involved. <http://hltap.eng.hawaii.edu/ccd/>



Walmart Check Presentation

*Hawaiian Connections features scenic pictures from various locations in Hawaii. (Photos courtesy of the Hawaii Visitors and Convention Bureau).

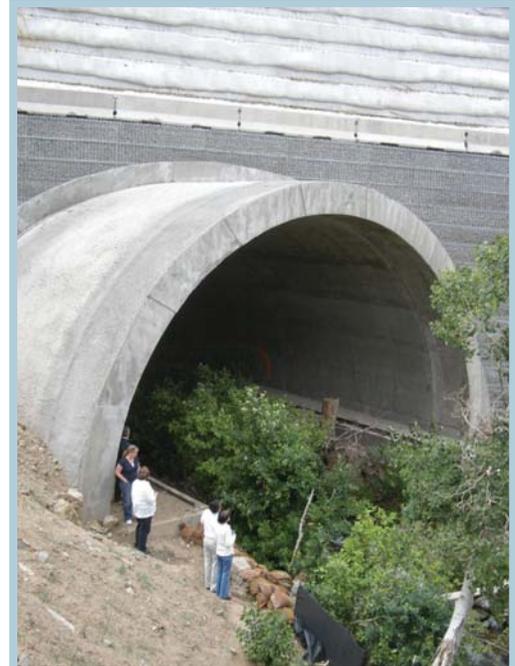
In this issue, we are featuring the popular sport of surfing. The Hawaiian name for surfing is He`enalu. Perfected by kings and queens of the Hawaiian Islands, this sport has become famous worldwide. An icon of surfing and gold medalist, Duke Kahanamoku's statue stands proudly on the beach at Waikiki.

GALENA CREEK BRIDGE

The Galena Creek “cathedral arch” bridge under construction on the I-580 Freeway Extension Project near Reno, NV. At 1700 feet in length and a dual bridge decks (3 traffic lanes each) it will be the longest bridge of its kind in the U.S. The 140-foot tall black-and-white, free standing, geotextile-reinforced, earth embankment provides temporary support. A temporary reinforced-concrete tunnel provides unobstructed passage to creek flow during construction.



Cathedral Arch Bridge (Reno, Nevada)



Outside the temporary tunnel



Look Closely: Deep inside the temporary tunnel is our past Advisory Board member **Larry Leopardi**, who now resides in Reno

GOT A BETTER MOUSETRAP?

Better Mousetrap?

Have you or one of your co-workers built a better mousetrap recently? A modified gadget? An improved way to do a job? Please let us know about it. The best entries will be featured in a future issue of Hawaiian Connections.



Your name and phone number:

Inventor's name and phone:

Invention:

Please fax this form to (808) 956-8851.

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The Hawaii Local Technical Assistance (LTAP) is a cooperative program of the University of Hawaii Department of Civil and Environmental Engineering, the Hawaii Department of Transportation, Highway Division, State of Hawaii and the U.S. Department of Transportation Federal Highway Administration, Hawaii. The LTAP program provides technical assistance and training programs to local transportation related agencies and companies in order to assist these organizations in providing cost-effective improvements for the nation's highways, roads and bridges. Our office is located at:

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