

HAWAIIAN CONNECTIONS

THE HAWAII LOCAL TECHNICAL ASSISTANCE PROGRAM

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

HDOT Landscape Masterplan

By Chris Dacus, HDOT Highways Division

I had the unique opportunity to attend the 90th Transportation Research Board (TRB) annual meeting held January 23 – 27 in Washington, D.C. The TRB annual meeting is an incredible conference of cutting edge trends in transportation attracting over 11,000 transportation professionals, with 4,000 presentations and 650 sessions and workshops. The theme of TRB 2011 was "Transportation, Livability, and Economic Development in a Changing World."

I was invited to present at one of the workshops entitled, "Cultural Landscapes in Transportation" which fit this year's TRB theme. It was the first workshop ever at TRB on the topic of cultural landscapes. A cultural landscape is a term that really took shape in the 1980s. A cultural group shapes a natural landscape. Culture is the agent of change, nature is the medium, and the result is a cultural landscape. Cultural landscapes tell the stories of who we are.

The purpose of this workshop was to generate a discussion on the definition of cultural landscapes, current examples of transportation projects that have incorporated cultural landscape approaches and the management of these resources. The workshop was organized by two TRB committees: the TRB Committee on Historic and Archeological Preservation in Transportation and Committee on Landscape and Environmental Design.

My presentation was on the HDOT Statewide Sustainable Landscape

Masterplan, which will be the first DOT landscape masterplan in the nation. I showed up for the presentation on the coldest day in DC in over two years with everyone bundled up in a mountain of jackets, representing our agency and state with a short-sleeve Aloha shirt. The presentation focused on how HDOT is going to tell the interesting stories of Hawaii from the contextual development of our roads. Since the first Polynesians arrived in Hawai'i, many of the same routes that are now state roads were used to travel around the islands first by foot then horses and now cars. The masterplan will divide up each island into a series of contextual zones of similar landscape features and highlight iconic landmarks and stories that the community identifies as quintessential. Each contextual zone will have a palette of common road elements and associated standard drawings and specifications for project managers to easily incorporate. Contextual roadside elements will be designed for authenticity and the lifecycle of the road for the greatest sustainability.

The workshop was three hours with six presenters from all over the world sharing



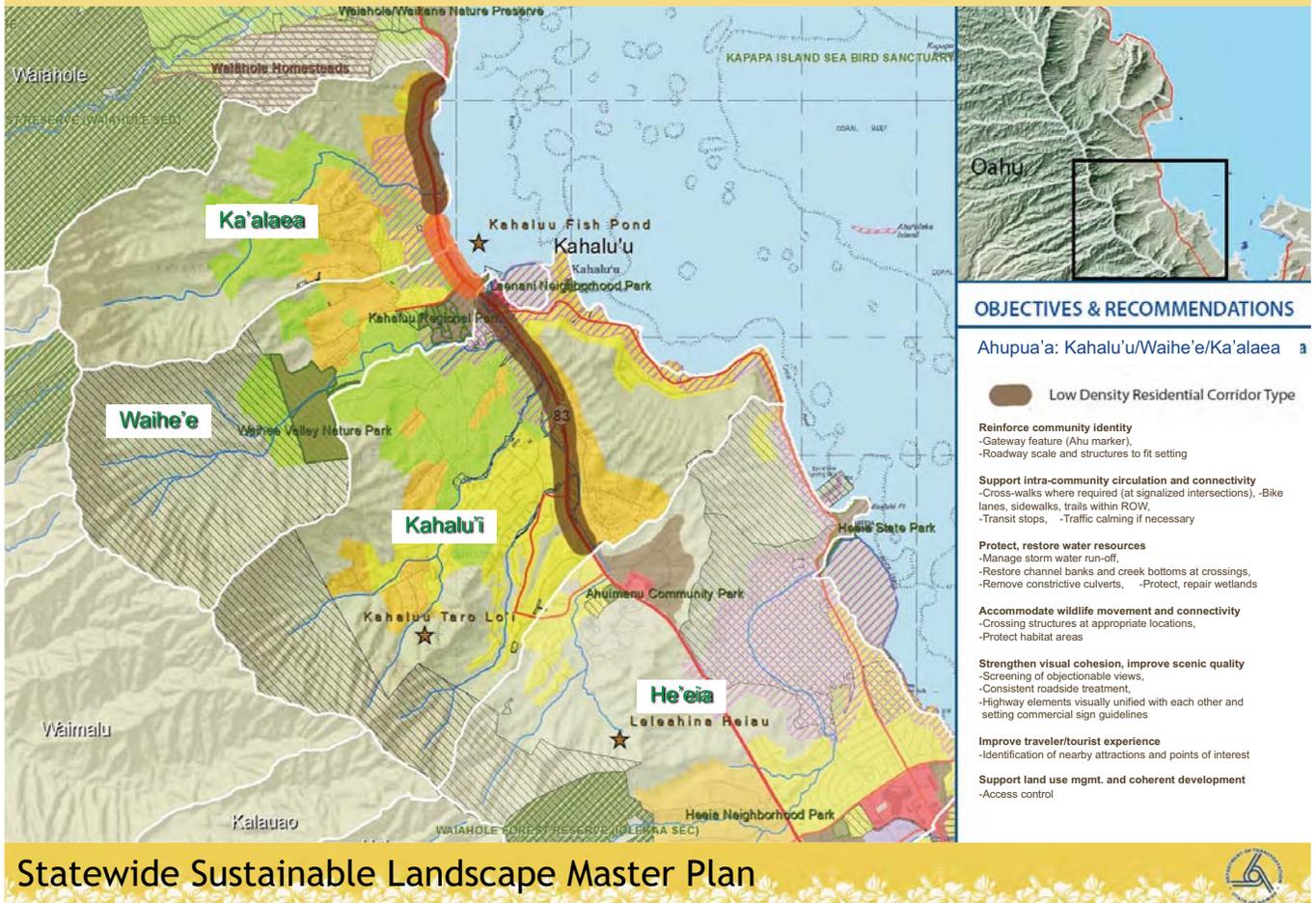
"Cultural Landscapes in Transportation" panel

HDOT continued on page 2

the latest developments in cultural landscapes. It was a well-attended workshop with a diverse attendance ranging from engineers, landscape architects to historic preservationists. Of course, the beautiful images of Hawaii's cultural landscapes were well received and the

workshop encouraged a lively discussion that resulted in a second cultural workshop being planned for next year's TRB. Thanks to the HDOT administration for their support and making my attendance possible.

Objectives and design palette for each distinct framework zone



Got a 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.

Local and Rural Safety Resources

FHWA Office of Safety Programs (HSSP)

Noteworthy Practices: Addressing Safety on Locally-Owned and Maintained Roads - A Domestic Scan

Seven States were identified to participate in the Local Road Safety Domestic Scan. The Domestic Scan report identifies and documents practices in the planning, programming, and implementation of efforts to improve local road safety. Practices are presented in data collection and analysis; local project identification; local project administration; funding; training and technical assistance; outreach and partnerships between State Departments of Transportation (DOTs) and local agencies. FHWA-SA-09-19

Implementing the High Risk Rural Roads Program

This document contains findings from research and subsequent follow-up to States' implementation of the High Risk Rural Roads Program (HRRRP) within the context of States' programs and policies. FHWA-SA-10-012

Local Roads Safety Resource CD

The CD provides quick and easy access to the latest information on local roads safety. Organized by topic area in one place, the CD provides guidance, tools, and other resources from government agencies and national associations on local roadway safety. FHWA-SA-10-003



Local and Rural Safety Peer-to-Peer Program

FHWA established the Peer-to-Peer (P2P) Program as a form of technical assistance for local and rural highway agencies to adequately address safety problems on the roads they maintain. Experts with knowledge in various local and rural road safety issues volunteer their time to provide assistance to their peers requesting help. Whatever the safety issue your local agency is facing, there is a Peer ready and willing to help. Local and Rural Roads Safety Peer to Peer website http://safety.fhwa.dot.gov/local_rural/training/p2p/

Safety Circuit Rider Best Practices Guide

The guide focuses on examples of two groups of programs: 1) existing SCR programs, and 2) existing programs that provide services similar to an SCR but which are not technically known as a SCR program. FHWA-SA-09-019

Road Safety Tools for Local Agencies

NCHRP Synthesis 321 focuses on identifying safety tools that can be used by these agencies in formulating safety programs. It recognizes the wide variation in the parameters of operation and responsibilities of local agencies. Also, it acknowledges that expertise in transportation safety analysis varies widely among local agencies.

Rural Highway Safety Clearinghouse

The Rural Highway Safety Clearinghouse is intended to be an easy-to-use starting point for information about safety on our nation's rural roads.

Local Guides

The Rural Highway Safety Clearinghouse is intended to be an easy-to-use starting point for information about safety on our nation's rural roads.

This guide is intended to help local road agency maintenance workers understand the importance of maintaining and upgrading drainage features on their road system to avoid an unsafe condition. FHWA-SA-09-024

Maintenance of Signs and Sign Supports - A Guide for Local Highway and Street Maintenance Personnel

This guide, which is an update to the same titled guide published in 1990, is intended to help local agency maintenance workers ensure their agency's signs are maintained to meet the needs of the road user. The guide succinctly covers: sign types, sign materials and sign supports; sign installation and the elements of a sign management system. FHWA-SA-09-025

W-Beam Guardrail Repair – A Guide for Highway and Street Maintenance Personnel

The purpose of this guide is to provide highway and

Resources continued on page 9

The 4-Step Employee Development Plan

Article from the Missouri-LTAP Quarterly Newsletter Fall 2010 Edition

Developing an employee involves improving his or her skills in their current job as well as developing them for future responsibilities and new positions. As manager, it is your job to develop your people. Many companies are now holding managers responsible for the development of their employees and make employee development a part of the manager's performance appraisal. (To a large degree, the skills required for employee development are the skills developed in leadership, management, and supervisory training.)

This four step employee development plan will put you, your employees and the whole department on track to achieve maximum potential.

1. Prepare the Employee

To get the employee thinking about their own development and the areas where development can occur, here is a series of questions you will want to ask the employee.

- What are the skills needed to do your job? How well do you perform them?
- What aspects of your job do you like least/best?
- What major accomplishments have you achieved since your last performance appraisal?
- In what ways, can your supervisor and/or the organization help you to do a better job?
- What changes would you like to see in your current job?
- What are your job goals for this next year?
- Where do you see yourself in five years?
- What have you been doing to prepare yourself to move ahead in your career?
- What activities would help you develop yourself?

An excellent time to begin the developmental process is during the performance appraisal. Get the questions to the employee well in advance of the appraisal interview to give them time to prepare. Their answers will help guide the discussions.

2. Provide Development Opportunities

There is a vast array of things you can do to help the employee develop and every employee is different. Here is a list of some developmental approaches you can consider:

- *Training*
Training is obviously first on the list. Often training needs are simply defined by looking at the employee's performance or by understanding their experience or lack of experience with the specific job tasks.
- *Peer Coaching*
Employees coach other individuals on their jobs. The benefits are two-fold. First, the employees develop skills in other areas and can fill in for their counterpart if that person is on vacation or out sick. Also, by in the process of teaching another person, the teacher themselves becomes more proficient.
- *Job Design Changes*
Here, the employee defines all aspects of their job and makes suggestions as to how the job might be redesigned to enhance proficiency. You may be surprised by their creativity and superior ideas. Even though you may not be able to totally revamp a job, the employee understands the job is better and you begin to recognize some of their concerns.
- *Representing the Department*
Have the employee represent you the team, or the department at an important meeting. Have them report back the proceedings to you and/or the team. In the process, the employee has a better understanding of how the team, the department, and their job fit into the big picture of the organization.
- *Delegate Special Projects*
Make certain the project challenges the employee. The project must be seen as meaningful. Also, make sure the employee views the project as a reward for good work in other areas of their job. In doing so, the assignment becomes a motivating experience and not just more work.
- *Assist the Boss*
Assign an employee to assist your boss or another executive on a special assignment where the employee will be exposed to new business perspectives of the organization's business.

Employee Plan continued on page 5

A Moment In History

by C. S. Papacostas, Hawai'i LTAP

The January 24, 1901 issue of the Evening Bulletin in Honolulu carried a story titled "STREETS THAT ARE DRY BOG HOLES."

In it, were remarks made by a notable doctor about the condition of the city's streets: "I have lived in this country thirty five years," remarked Dr. J. S. McGrew to a Bulletin representative, "and during all that time I have never seen the streets of Honolulu in such condition as they are today."

The story continued so:

To give further proof that the principal city streets are anything but modern city thoroughfares and really don't come up to the standard of well kept alleyways, the first American of the Territory volunteered his rig for a trip along the highways that now serve as an important factor in frequently broken carriage springs.

The course was first laid along Hotel street toward Palama. The first evidence of the "good roads" standard of Honolulu street service was found on the town side of Nuuanu street. Opposite the hack stand at that point the street surface has been worn away from the car track and assures a good jolt to the carriage or a wrenched wheel unless particular care is taken by the driver. On Hotel street through

the burned district the roadway boasts of only a few lateral gullies.

The story went on with examples of deficiencies to roads and bridges throughout the town.

As it is the case today, this kind of complaint was a typical theme in the daily newspapers of yore. My suspicion is that, as is the case today, the complainants may be a bit guilty of exaggeration!

By the way, the ironic reference to "good roads" was about a noteworthy national movement led by bicyclists who demanded good roads to accommodate their excursions into the countryside. The reference to the "burned district" was about the result of the January, 1900 "Great Chinatown Fire" in Honolulu. The Board of Health had ordered the controlled burning of several houses where instances of the bubonic plague were reported, but the winds picked up and the entire crowded district was engulfed in flames.

Clearly, this momentous event must have affected the public works lists of priorities of the Territory of Hawaii.

Employee Plan continued

3. Monitor Progress

Observe how the employee is doing. Schedule to meet at least once per quarter to discuss how things are going. Ask questions; review any quantity and quality measure that are relevant. Give ongoing feedback on what the individual is doing well and what they need to be doing differently. Feedback is critical to the success of the developmental process. If you do not follow up with them, you are essentially telling the employee the developmental process is not all that important to you. If it is not important to you, how can you expect the employee to take it seriously?

4. Create Confidence

Let them know you are always available. Give the employee the encouragement and support needed to

feel confident in his or her ability to succeed. When things do not go as well as planned, focus on what went right. You are asking the person to go beyond their current level, take it one step at a time. Sometimes we must take smaller steps to ensure a successful outcome.

The ultimate success in developing the employee depends on the employee themselves. However, the success of the developmental process depends on the manager. Follow these guidelines to ensure success in developing your people.

Resources: http://www.alliancetac.com/index.html?PAGE_ID=151

Reuse of Highway Materials

By P.S.K. Ooi, University of Hawaii at Manoa

Reuse of crushed Recycled Concrete Aggregate (RCA), derived from demolition of existing Portland cement concrete structures and pavements, as base and sub-base course and as backfill has significant environmental and economical benefits. They include reduction in waste disposal in landfills and preservation of natural resources by reduced mining of virgin aggregate, thereby leading to more sustainable construction practices. Despite these advantages, RCA performance-related issues that need to be addressed include asbestos and lead paint contamination, high pH, sulfate attack, alkali-silica reaction, alkali-carbonate reaction and formation of tufa. Additionally, an oversight in quality control can lead to the use of contaminated RCA in the unbound layer, leading to premature deterioration that is costly to repair. Following are the findings of two studies conducted as part of a HDOT project on the reuse of construction materials in Hawaii. The first addresses the potential formation of tufa and the second presents a case study of contamination.

Tufa or Not Tufa: That is the Question

Tufa exists in nature from the precipitation of calcium ions and dissolved CO₂ in natural waters. Typically found in the air, CO₂ dissolves in rain or natural water to form carbonic acid, H₂CO₃, which disassociates to form mostly bicarbonate ions. Bicarbonate ions increase the solubility of the calcium ions. Tufa is a calcite or calcium carbonate precipitate that has the ability to clog drainage systems and filter fabrics. Clogged systems can lead to water retention and generation of large excess pore pressures especially when used below a roadway, which in turn can lead to premature failure of roads. Tufa precipitation of RCA has been studied in various states but no studies have been made on RCA containing a coarse basaltic and a fine coralline sand aggregate commonly used in Hawaii. This formed the impetus for this study.

To examine the tufa precipitation potential of a Hawaiian RCA, two sets of aggregate were soaked in rain water for approximately 3 months. CO₂ was continuously bubbled through one set of samples (Figure 1) to simulate an accelerated exposure of RCA to the elements of nature while no bubbling was performed on the other set. Tests conducted on the rainwater over time and on the aggregate before and after CO₂ bubbling included pH and chemical composition of rain water over time, the make-up of the RCA aggregate before and after testing using x-ray diffraction (XRD) and energy dispersive spectroscopy (EDS) through scanning electron microscopy (SEM) on thin sections and by visual observation of the aggregate themselves.

Inductive Coupled Plasma-Atomic Emission Spec-

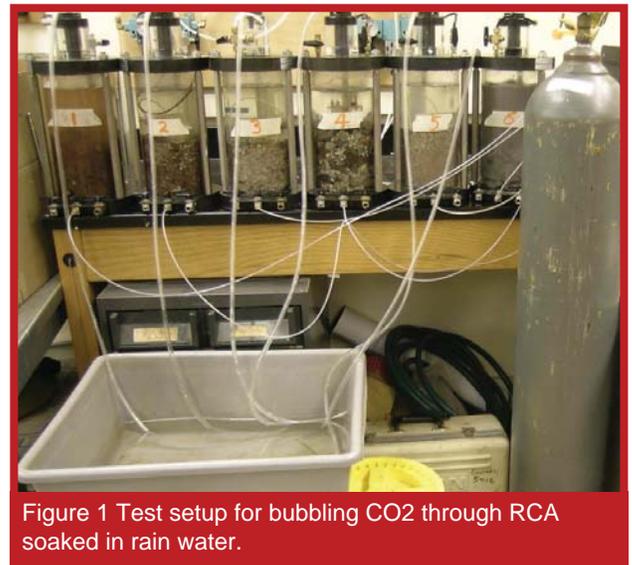


Figure 1 Test setup for bubbling CO₂ through RCA soaked in rain water.

troscopy or ICP-AES tests on rain water with CO₂ bubbling through the Hawaiian RCA indicate that the calcium ions have a tendency to remain in solution rather than combining with the carbonate ions to precipitate as tufa. The XRD tests were performed on pulverized RCA before and after 3 months of CO₂ bubbling and showed the “before” and “after” samples to be almost identical, suggesting that any changes in the RCA as a result of CO₂ bubbling are minimal. The SEM with EDS tests were also performed before and after 3 months of CO₂ bubbling. Magnified images of the perimeter of voids in the “before” sample is consistently smooth and regular while that of the “after” sample appears more rough and jagged (Figure 2). This suggests that some precipitation has occurred. However, the quantity of precipitation observed is insignificant. Based on the test results, it was concluded that tufa may potentially form with Hawaiian RCA. However, based on the quantities observed in the experiments of RCA subjected to extreme CO₂ exposure, the evidence suggests that tufa quantities would be insignificant to cause any drainage problems. For more information see:

Song, Y., Ooi, P.S.K., Hellebrand, E. and Muenow, D.W. (2011). Potential for Tufa Precipitation with Crushed Concrete Containing Coarse Basaltic and Fine Coralline Sand Aggregates. *Environmental and Engineering Geoscience Journal, Association of Engineering Geologists*, 17(1):53-66.

Contaminated RCA

A case study of an asphalt concrete (AC) pavement experiencing a significant number of eruptions approximately 1 inch high and 12-inches in diameter was forensically investigated. The distressed 2-inch-thick pavement was

Research Program

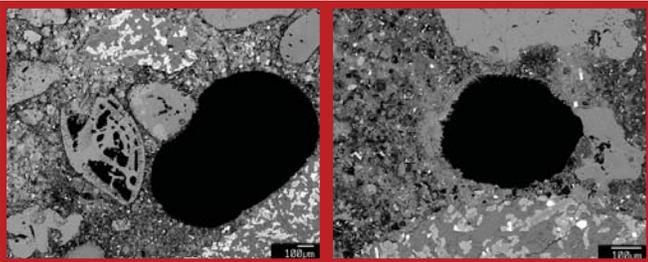


Figure 2 SEM image of an interior void in RCA sample (a) before and (b) after CO₂ bubbling

supported on a 6-inch-thick base course containing 50% basalt, 25% reclaimed asphalt pavement (RAP) and 25% RCA. According to the geotechnical report, a parcel to the north of the site is approximately 6 ft higher in elevation. Therefore, drainage generally flows in a southerly direction through the site. The pavement experienced over 30 eruptions within one year after completion of construction and over 100 eruptions after two years.

Directly below an eruption, significant amounts of a white substance were found within the base course (Figure 3). The objectives of this study were to: (1) chemically identify the reaction product; (2) determine the cause of this distress based on the chemistry of the reaction product; (3) perform experiments in the laboratory to replicate the reaction; (4) estimate the swell pressure that can arise as a result of this reaction; and (5) numerically simulate the heave to see if it corroborates the field observations. The chemistry of the white substance was investigated using: (1) Scanning Electron Microscopy (SEM) equipped with an X-ray Energy Dispersive Spectroscopy (EDS) detector; (2) X-ray Diffraction (XRD); and (3) Raman Spectroscopy. The primary constituent of the product was bayerite, an unstable form of gibbsite. This product can form when aluminum metal corrodes in an alkaline environment. These test results preclude the possibility of other more common distresses associated with RCA such as sulfur attack, alkali-silica reaction, tufa formation and alkali-carbonate reaction.

The adjacent ground topography greatly favored drainage through this site thereby rendering the base course moisture susceptible and making it conducive to be highly alkaline since RCA in an aqueous solution has a high pH. When aluminum metal was exposed to an alkaline environment in the laboratory to duplicate the field reaction, the formation of bayerite was confirmed.

In addition, when exposing aluminum powder to an alkaline environment in a Geonor h-200 apparatus, it was found that a maximum swell pressure of 430 kPa was attained in just 15 minutes.

By numerically subjecting the pavement to this swell pressure using a range of Young's moduli for the AC pavement valid over the ambient temperature extremes on Oahu, Hawaii, it was found that the calculated deflections are consistent with the observed pavement deflections thus corroborating the hypothesized cause of distress.

Considering the extensive costs and effort required to reconstruct this pavement, it is vital that sufficient quality control practices are adopted to ensure that this case history is not repeated. When using RCA as a base course, it may be prudent to follow one or more of the following:

- Allow only uncrushed concrete that can be visually inspected for use as RCA;
- Allow RCA from a supplier who can guarantee the quality. RCA from unknown sources should not be accepted unless certified by a qualified engineer/scientist that it is free of deleterious materials (such as aluminum).
- Avoid using building demolition RCA.
- Require a paper trail to document the RCA source although challenging.
- Use a non-ferrous metal detector to determine if aluminum is present and also visually inspect the RCA prior to use.

As a footnote, numerous pieces of temporary road stripings with an aluminum backing were found in the RAP pile, which offers a possible explanation for the source of the aluminum. In this case, since it was not the RCA that was contaminated, none of the bullets above would have helped mitigate this problem. Nevertheless, they form part of a good quality assurance/quality control program in the practice of RCA utilization. For more information, see:

Ooi, P.S.K., Rajabipour, F., Shafaatian, A. and Joo, S. (2011). Forensic investigation of a distress in a pavement supported on a base course containing recycled concrete aggregate. Paper presented at the Proc., Transportation Research Record 90th Annual Meeting, Paper 11-1668.



FIGURE 3 White reaction product found in base course

News From Our Partners



By Wayne Kawano

Cement and Concrete Products Industry of Hawaii,
“COOL CONCRETE...in HAWAII'S HEAT”

We are blessed with typical sunny, trade wind days in delightful Hawaii, as commented by Kenneth Hover, CCPI's featured guest author in our special January edition of the Building Industry magazine.



Dr. Kenneth Hover, Ph.D, P.E, is a Professor of Civil Engineering at Cornell University. He has written many technical research publications and is one of the most influential people in the concrete industry today. Through the years, he has visited Hawaii for both business and pleasure, and has conducted several seminars. He is the current President of ACI, the American Concrete Institute – International.

“To understand concrete placement and finishing... contractors and concrete finishers must understand Hawaii's climatic conditions, as referenced in ACI 305R, “A Guide to Hot Weather Concreting” or, as we say, a Guide to Hawaii's Concreting. The bottom line, we're all trying to prevent surface deficiencies which are more aesthetic rather than a structural concern but that's

what the owners and the general public perceive to be defects. We need to make it look good!” Often times, concrete placement and finishing are done during the early mornings or at night, when our Hawaiian weather is milder.



To read Ken Hover's full article, check our website at www.ccpihawaii.org or contact CCPI at 808-848-7100 or email: wkawano@ccpihawaii.org.

CCPI is a non-profit industry trade organization, incorporated in 1965, to promote the use of cement, concrete, and masonry products in Hawaii. Actively servicing Hawaii for over 47 years, we are your local technical resource center for concrete information and educational training.



LTAP Continue moving forward with HMA-QC Tech Presentations

By Rich Gribbin

In the third quarter of 2010 the Hawaii Asphalt Paving Industry, working through its University of Hawaii Local Technical Assistance Program partners and The Asphalt Institute offered a certification in Asphalt Mix Design Technology to Hot Mix Asphalt industry and agency technical staffs. This 4-day Asphalt Institute course was followed by a one-day Introduction to the Bailey Method of Achieving Volumetrics and HMA Compactability.

Based on the level of interest developed from that one-day Introduction to the Bailey Method, HAPI contracted with William Pine, PE of the Heritage Research Group, located in Indianapolis, Indiana for a February 23 – 25, 2011 presentation here in Honolulu. Bill, who has a lengthy practical career in materials, having worked for an Agency as well

as private industry, presented the full 3-day Bailey Method course to our hot mix asphalt material designers.

Prior to the full-course offering, Pine provided an Executive Summary to a cross-section of interested Agency, and Industry personnel on February 22. Our partners at UH – LTAP assisted with the Executive Summary portion of these presentations.

The Hawaii Asphalt Paving Industry continues working with Aloha in joining with our partners at our Local Technical Assistance Program of the University of Hawaii – Manoa in making available to our Agency, Academic, Consultant and Industry partners, knowledgeable presenters to help better our Hot Mix Asphalt technical expertise here in the islands.

maintenance personnel with up-to-date information on how to repair damaged W-Beam guardrails, the most frequently used barrier system. FHWA-SA-08-002

Vegetation Control for Safety – A Guide for Local Highway and Street Maintenance Personnel

The purpose of this guide is to help local road agency maintenance workers identify locations where vegetation control is needed to improve traffic and pedestrian safety, to provide guidance for maintenance crews, and to make them aware of safe ways to mow, cut brush and otherwise control roadside vegetation. FHWA-SA-07-018

Roadway Safety Guide

This popular resource was developed in conjunction with the Federal Highway Administration and the Roadway Safety Foundation for decision makers to learn about various roadway hazards and ways to improve road design to reduce traffic accidents and fatalities. Read the full document online.

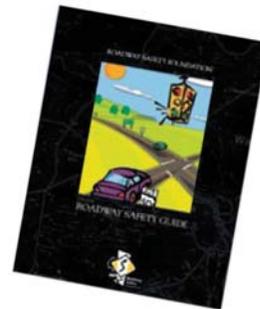
Order copies from the FHWA Report Center,

(814) 239-1160, Fax (814) 239-2156,

Report.Center@dot.gov

These documents can be found online at:

http://safety.fhwa.dot.gov/local_rural/training/



APPLICATIONS SOUGHT FOR 2011 NATIONAL ROADWAY SAFETY AWARDS

(Washington, DC) -- The Roadway Safety Foundation and the Federal Highway Administration are currently accepting applications for the 2011 National Roadway Safety Awards. RSF and FHWA recognize best practices in roadway safety improvements and publish the practices to help solve reoccurring roadway safety issues throughout the nation.

The competition includes three award categories: Infrastructure Improvements; Operational Improvements and Program Planning; and Development and Evaluation. Applicants can submit projects, programs, or activities that include effective and innovative safety agendas, and resourcefully employ various sources of aid including federal, state, local, and/or private sector funds.

Winners of the competition will receive an invitation to attend a national-level recognition event in Washington, DC; local and national media cover-

age opportunities; appearance in trade press and other RSF and FHWA publications and websites, and meeting opportunities with key roadway safety officials and legislators in Washington, DC.

The deadline for submissions is May 1, 2011. To learn more or to download an application, please visit www.roadwaysafety.org.

The Roadway Safety Foundation (RSF) is a 501(c)(3) nonprofit, educational, and charitable organization whose mission is to reduce the frequency and severity of motor vehicle crashes, injuries, and fatalities through improvements to roadway systems and their environment.

Please visit RSF on the web at www.roadwaysafety.org or on Facebook at <http://www.facebook.com/pages/Roadway-Safety-Foundation/106920996048661>.

Director's Note

by C.S. Papacostas



With the recent change in the State's Administration came changes in the Hawaii Department of Transportation (HDOT). Governor Neil Abercrombie appointed and the State Senate confirmed Glenn Okimoto as the new director. Glenn's immediately prior position was budget director for the

University of Hawaii and he has also had a long association with the HDOT, including the positions of Harbors and Airports Administrator, as well as Deputy for Administration.

To fill a newly-created department-wide position, that of Deputy Director for Capital Improvement Projects, the governor called upon Jadine Urasaki, an excellent civil engineer with extensive experience in both the public and private sectors, including an earlier stint as Deputy Director for Highways, a position that has not currently been filled.

We congratulate both Glenn and Jadine, thank them for accepting their respective public service roles, and look forward to strengthening the relationship between HDOT and Hawaii LTAP.

For the past several years, the relationship between the National Highway Institute (NHI) and the national LTAP program has been growing ever closer. Resources offered by NHI are more readily available to LTAP. NHI is also actively collaborating with the Transportation Curriculum Coordination Council (TCCC) in partnership with State DOTs to develop instructor-led and web-based training activities. One example of the latter is course 131131 "TCCC Superpave Mix Design Process and Analysis," targeted to those who are responsible for the laboratory testing and evaluation of Superpave mix designs. To view the various offerings under this program and to register, please Visit the NHI Web site at www.nhi.fhwa.dot.gov.

I would also like to bring to the attention of local transportation agencies a series of free safety-related resources that the Federal Highway Administration (FHWA) has made available (see pages 3 & 9).

We at Hawaii LTAP are looking forward to bringing to all our associates quality training that meets your expressed needs. Please use our short training request form (<http://hltap.eng.hawaii.edu/forms/requestForm.pdf>) to let us know how we can be of help.

Program Manager's Note

by Juli Kobayashi



In January I had the opportunity to attend the Transportation Research Board Meeting in Washington, D.C. While I was there, I had a chance to meet up with Chris Dacus (HDOT) and found out that he had made a presentation on the HDOT Statewide Sustainable Landscape Masterplan. It was extremely impressive since it is the very first landscape masterplan in the nation. This significant accomplishment is featured in our newsletter and we would like to congratulate Chris for a job well done!

While I was at TRB, I also attended the NLTAPA Business Meeting. This annual meeting is a great way to reconnect with the other LTAP and TTAP Centers as well as get updated by FHWA and our national partners, AASHTO, APWA and NACE. Also at the meeting each of the different NLTAPA work groups made presentations on what they are doing and some of the exciting things that they are working on.

For example, members of the NLTAPA Safety Group are on AASHTO's Safety Management Subcommittee and the Standing Committee on Highway Safety. They are also working on the Every Day Counts and Towards Zero Deaths initiatives. The committee members are always looking for new ways that the centers can share innovative ideas on how to improve the safety on our local roads and highways.

This year we are looking forward to having more workshops with our local partners. Some of the training workshops that we are planning for this year are:

- 7 Habits of Highly Effective People
- Beyond Compliance: Historic Preservation in Project Development
- Safety Inspection of In-Service Bridges
- 2011 Superintendent/Overseers Conference
- Construction Career Days (Oahu)
- OSHA 10 Hour Certification Training
- Bridge Inspection Refresher Training
- Heavy Equipment Training
- County Traffic Group Meeting
- Sign Retroreflectivity

Please continue to check our website at <http://hltap.eng.hawaii.edu/> for updated information on all these workshops.

Hawaiian Connections features scenic pictures from various locations around Hawai'i. This issue's cover features the Royal Sala Thai outside of the East-West Center on the UH at Manoa campus. The traditional sala (pavilion) was a gift from King Bhumibol Adulyadei of Thailand. The back cover features the Korean studies building on the UH campus.



“Climate Change Transportation Vulnerability Workshop”

Hawai‘i LTAP Activities

Compiled by Gail Yamamoto, Hawai‘i LTAP

The beginning of 2011 we partnered with the Hawaii Asphalt Paving Industry (HAPI) to host a one-day course entitled “The Basics of the Bailey Method”. This course was a follow up to last year’s “An Introduction to the Bailey Method”. Teaching the class was none other than the key researcher of the “Bailey Method”, William J. Pine. He provided an overview of the concepts and principles of the Bailey Method, which focused on aggregate packing in hot mix asphalt (HMA). Bill also discussed in detail of what “Quality Control” really is in regards to mix production and placement.



“The Basics of the Bailey Method”

We welcomed back Bruce Drewes from Idaho LTAP to conduct seven sessions of “ATSSA Flagger Certification” courses. This half-day training prepared attendees for directing traffic in a work zone. After discussing proper flagging procedures, the participants were given an exam. Those that passed received an ATSSA flagger certification card which is good until 2015.

While on Oahu, Bruce also conducted a one-day course, “Road Safety 365”. This workshop, aimed primarily at local and rural road public works supervisors, state DOT personnel and contractors, provided practical guidance on improving road safety. Participants discussed how construction, maintenance, and other activities could impact the safety of roadways. This course enabled road agency owners and practitioners to identify and access appropriate infrastructure safety information, and use it effectively.

The end of our first quarter, together with Oahu Metropolitan Planning Organization (OahuMPO) and the Federal Highway Administration (FHWA), we invited numerous climate scientists and transportation engineers and planners to participate in the “Climate Change Transportation Vulnerability Workshop”. The purpose of the workshop was to learn how climate variability plays an increasingly important role in planning for and engineering transportation infrastructure. Attendees provided invaluable input to the transportation adaption conceptual model that OahuMPO is evaluating. The conceptual climate change risk assessment model was developed for FHWA to support long-range transportation planning and asset management.

For more information on any of these workshops please contact Hawaii LTAP at (808) 956-9006 or check out our website: <http://hltap.eng.hawaii.edu/>.

Hawai'i Local Technical Assistance Program
 Department of Civil and Environmental Engineering
 University of Hawai'i at Manoa
 2540 Dole Street - Holmes Hall 383
 Honolulu, Hawai'i 96822

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Hawai'i Local Technical Assistance Program

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A. Ricardo Archilla
 Associate Professor
 Department of Civil and Environmental
 Engineering
 University of Hawai'i at Manoa

Steven Ege
 Engineer
 Hawaii Department of Transportation
 Highways Division, Materials Testing
 Lab

Brian Gibson
 Executive Director
 Oahu Metropolitan Planning
 Organization
 Ocean View Center

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Ray McCormick
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Costas Papacostas
 Director
 Hawaii Local Technical Assistance
 Program
 Department of Civil Engineering
 University of Hawai'i at Manoa

Paul Santo
 Engineer
 Hawaii Department of Transportation
 Highways Division, Design Branch

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 City & County of Honolulu
 Department of Facility Maintenance

Nolly Yagin
 Traffic Engineer
 Engineering Division
 County of Maui
 Department of Public Works

Steven Yoshida
 Engineer
 Hawaii Department of Transportation
 Highways Division, Traffic Branch

Hawai'i LTAP Staff

Director:
 C.S. Papacostas

Program Manager:
 Juli Kobayashi

Program Assistant:
 Gail Yamamoto

IT Specialist:
 Thong Lien

Training Associate:
 Les Imada

Student Assistants:
 Ryan Saruwatari
 Jonathan Straley
 Tyler Tanabe

The Hawai'i Local Technical Assistance (LTAP) is a cooperative program of the University of Hawai'i Department of Civil and Environmental Engineering, the Hawai'i Department of Transportation, Highway Division, State of Hawai'i and the U.S. Department of Transportation Federal Highway Administration, Hawai'i. 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:

*Hawai'i LTAP
 Department of Civil and
 Environmental Engineering
 University of Hawai'i at Manoa
 2540 Dole Street - Holmes Hall 383
 Honolulu, Hawai'i 96822*

*Please contact:
 C.S. Papacostas, Director
 Tel: (808) 956-6538
 Fax: (808) 956-5014
 E-mail: csp@hawaii.edu
 or
 Juli Kobayashi, Program Manager
 Tel: (808) 956-9006
 Fax: (808) 956-8851
 E-mail: juli@hawaii.edu*

*Website:
<http://hltap.eng.hawaii.edu/>*

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