VOL. 40 NO. 6

**SERVING 2000 ENGINEERS & LAND SURVEYORS** 

NOVEMBER, 2004

#### ASCE HAWAII SECTION OUTSTANDING CIVIL ENGINEERING ACHEIVEMENT WINNER

There were two projects vying for this year's ASCE Hawaii Section Outstanding Civil Engineering Award. This year's winner was the Sewer Outfall Extension at Fort Kamehameha Project. The second project was the Emergency Repair for the Waipahu Wastewater Pump Station. Both projects are described in this issue.

# Sewer Outfall Extension at Fort Kamehameha Project

In order to meet National Pollutant Discharge Elimination System (NPDES) requirements, it was necessary to replace the aged and damaged outfall for the Wastewater Treatment Plant at Ft. Kamehameha that serviced the Pearl Harbor Naval Facilities and the Hickam Air Force Base. This outfall, about 2,000 feet long, discharged at a depth of 46 feet into an area of the Pearl Harbor Entrance Channel located within the Pearl Harbor estuary.

SSFM International, Inc. (SSFM), the prime consultant, assembled and led a team of sub-consultants who prepared the environmental documentation and design for the project:

- Project Management: SSFM International, Inc.
- Civil & Structural Design: SSFM International, Inc.
- · Cost Estimation: FPS Engineering, Inc.
- Environmental: Belt Collins Hawaii
- Geotechnical/Micro-tunneling: URS Corp.
- Ocean Engineering: Sea Engineering, Inc.
- Surveying: ControlPoint Surveying, Inc.

The Ft. Kamehameha Outfall Project was undertaken to install a new 48-inch (outside

diameter) High Density Polyethylene outfall. This project moved the primary outfall discharge point to a location where the dilution and dispersion of the effluent would improve overall water quality within the estuary as well as the neighboring areas.

After evaluating four alternative routes, the selected route provided the least amount of negative environmental impacts to coral, endangered species and existing sea life and had an estimated construction cost within the established \$21.7 million budget.

This recently completed outfall is approximately 2.4 miles long with four segments: (1) open trenching over the existing reef flats (5,080 feet); (2) jet-grouting/micro-tunneling down into the entrance channel (2,620 feet); (3) open trenching along the eastern edge of the channel (3,150 feet); and (4) pipe piling supported down a sandy slope ending at a diffuser depth of 150 feet (1,930 feet).

This project confirmed the practical use of the CEROS profiler, underwater coring, the Mamala Bay outfall plume modeling for planning and design, and the use of jet-grouting and micro-tunneling procedures in an offshore ocean area. The development of the "Charlie Horse" by the Contractor demonstrated the possibility of accurate and safe installation of deep-water pile driving with minimal dive time required by the contractor's personnel.

The services that were provided in this project demonstrate that, with careful planning and design, technical solutions for highly demanding challenges are not only possible, but can also be environmentally friendly during and after construction – even in a complex and

sensitive environment such as Hawaii's near shore area. The use of open trench, trenchless, and pile-supported methods for the outfall installation suggest that traditional and new technology can be combined for a successful project.

The project provides a very positive public image for the engineering profession. Turbidity plumes were kept to a minimum and Naval ship operations continued throughout the construction period. Further, due to the required partnering, all aspects of construction were coordinated with the personnel at the adjacent Hickam Air Force Base. As a result, there was little disruption to their activities.

The project was completed on December 10, 2003, which includes a little more than a month of Owner approved time extension from the original contract completion date of October 23, 2003.

The reef area at Ft. Kamehameha is extensively used for a variety of shoreline activities, including fishing, diving, gathering, and walking. By removing the effluent discharge from the reef area, the deep-ocean outfall enhances the water quality, recreational quality, and enjoyment of the reef area for such users.

# Emergency Repair for Waipahu Wastewater Pump Station

The primary goal of the original project was to expand the capacity of Waipahu Wastewater Pump Station to allow connection of additional development. However, towards the end of the pump station expansion, it was discovered that the inlet pipe had separated from the pump station wet well. This implied a potential for groundwater pollution. The City and County of Honolulu immediately set out to fix this problem. The innovative solution for fixing the broken pipe without creating a sewage spill was the most interesting part of the project.

The pump station and main junction manhole showed evidence of sinking, with the main junction manhole sinking more than the pump station. Soil borings indicated silty-clay depths exceeding 200 feet. Since it was impossible to totally arrest the settling of the structures, the emergency repair project set out to substantially slow down the rate of settling and to replace the broken pipe segment.

Arresting the settling of the main junction manhole consisted of underpinning the manhole with jet grouted "piles". Each jet grouted "pile" was three feet in diameter and 105 feet deep, with a minimum strength of 500 psi. To alleviate the fear of further groundwater pollution, jet grout was also used to saturate the (continued on page 9)





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## 2005 ENGINEER OF THE YEAR AND YOUNG ENGINEER OF THE YEAR AWARDS

In conjunction with the activities of Engineers' Week 2005, the Hawaii Society of Professional Engineers (HSPE) is soliciting nominations for the Hawaii Engineer of the Year and the Hawaii Young Engineer of the Year Awards. HSPE will evaluate candidates for both awards. The selected engineer(s) will be announced at the 2004 Engineers Week Banquet. Completed nomination forms and letters of support must be received no later than Friday, December 17, 2004 at the following address (electronic submittals only):

#### Hawaii Society of Professional Engineers

c/o Manny Lanuevo manny.lanuevo@hawaii.gov Phone: (808) 838-8804

Each candidate shall be nominated on the following basis:

#### Candidate for Engineer of the Year (Nomination Form not to Exceed 8 Pages)

- 1. Shall be current practicing Licensed Professional Engineer in the State of Hawaii;
- 2. Shall be current State of Hawaii resident;
- 3. Need not be a member of HSPE or any other society; and
- 4. Shall not be a State Officer or Director for HSPE.

#### Candidate for Young Engineer of the Year (Nomination Form not to Exceed 6 Pages)

- 1. Shall be 35 years of age or less as of Jan. 1, 2005;
- 2. Shall be a current practicing Licensed Professional Engineer in the State of Hawaii;
- 3. Shall be a current State of Hawaii resident;
- 4. Need not be a member of HSPE or other society; and
- 5. Shall not be a State Officer or Director of HSPE.

Electronic files of the respective nomination forms are available for your use – contact Manny Lanuevo at manny.lanuevo@hawaii.gov

#### Criteria for Selection of Young Engineer & Engineer of the Year Awards

1.30% Technical Accomplishment

(Technical Awards, Papers & Presentations, Major Projects, etc.)

2.35% Professional History & Contributions

(Positions Held, Professional Affiliations, Special Contributions to Profession & Special Recognition, etc.)

3. 20% Civic & Community Contributions (Affiliations, Position Held, Special Recognition, etc.)

4. 15% Recommendation(s)

(Why the individual is nominated)

No more than 3 letters of support per candidate with maximum 2 page limit per letter.

#### **Nominations for HCES Lifetime Achievement Award**

Nominations are now open for the HCES Lifetime Achievement Award which recognizes the lifetime achievements of retired engineers. This annual recognition is given to an individual who has contributed significantly to the development of engineering in the State of Hawaii and who has made a noteworthy impact on the local engineering community.

The following criteria shall be applied when nominating a candidate who:

- Must be affiliated with an HCES member society as an active member;
- Must have lived and worked in Hawaii as an engineer/manager for at least 15 years;
- Should be 55 years or older at time of nomination;
- Must have taken retirement from public or private sector of employment; however, could be continuing employment or consultancy or other work after effective retirement;
- For entrepreneur who started his/her own company, the nominee should have actively handed over control of the company to a successor but could be in a position of involvement with the company;
- Has been retired for not more than four years;
- Posthumous awards may be made provided the nominee was an active of an HCES member society at the time of his/her passing away and and fullfilled all the required criteria above

The following criteria shall apply to the method of nomination:

- Any person belonging to any HCES member organization may nominate a candidate;
- Nomination must be accompanied by a citation that effectively highlights the engineers contributions with special emphasis on contributions to Hawaii;
- · Include resume of candidate:
- Nominations must be received no later than December 17, 2004.
- Nomination package should be limited to 10 pages (letter size) and addressed to : HCES Chairperson, Tony Lau

c/o HCES Lifetime Achievement Award

P.O. Box 2873

Honolulu, HI 96802

Just to be nominated is already a worthy recognition. Please take the time and effort to nominate that much appreciated individual. For any questions, please contact Wayne Kawano at 848-7100 or email wkawano@ccpihawaii.org. Thank you & Mahalo!



www.eng.hawaii.edu/~hspe

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#### NSPE Objects to Architects' Attempt to Limit Rights of Professional Engineers

ALEXANDRIA, Va. (September 29, 2004) - The National Society of Professional Engineers (NSPE) has alerted its state societies about changes to a guidance document published by the National Council of Architectural Registration Boards (NCARB) that attempts to cut engineers out of the building design process.

NSPE objects to NCARB's revised version of "Architecture as it Differs from Engineering." Over the years NCARB, the national organization for state architectural boards, and its member boards have promoted this document in an effort to prohibit duly licensed and qualified professional engineers from performing building and other facility design services or from serving as the coordinating design professional on facilities design and construction projects.

"We've been watching this issue for the past several years and architects need to realize that engineers are also competent to oversee the design of buildings and structures," said Bobby Price, Ph.D., P.E., F.NSPE, current president of NSPE. "By working with our state societies and our members, NSPE will continue to safeguard an engineer's right to design facilities and structures that keep the public's health, safety, and welfare in mind."

Among the offensive statements in the NCARB document include the assertion that "a registered architect should be involved in all buildings intended for human occupancy and habitation and that a registered architect is the only design professional prepared to coordinate all of the other disciplines required for the project." (emphasis added). Over the years, scope or practice issues have been addressed on a case-by-case basis at the state level. However, during the mid-1980s and again in the mid-1990s, NCARB and other groups aggressively sought to limit the scope of engineering practice through the distribution of the NCARB publication, state legislation, and other efforts. From all indications, it appears that NCARB, and possibly other groups, are gearing up for another concerted effort to undermine the professional practice rights of licensed engineers.

NCARB's assertions are contradicted by the uncontestable fact that the vast majority of state engineering licensure statutes and the Model Law of the National Council of Examiners for Engineering and Surveying specifically incorporate the "design of build-

(continued on page 9)

#### HSPE/NSPE Project Nets \$33,400 for Honolulu Habitat for Humanity



HSPE State Vice President Ken Rappolt, P.E., (right) presents checks for \$33,400 to Honolulu Habitat for Humanity Executive Director Anne Marie Beck. Also present were Riley Smith, P.E., HSPE State President, and Queenie Komori, P.E., Honolulu Chapter President.

The NSPE National Convention was held in Honolulu in July. Since 2001, NSPE has given back to its convention host cities through a Legacy Project that makes financial contributions to a charity in the host community. Society members from across the country as well as from the host city contribute to each year's selected Legacy recipient.

As a result, NSPE in association with the local chapters had donated more than \$45,000 to charities in Detroit, Orlando, and San Antonio. This year's recipient was Honolulu, site of the NSPE 2004 Convention.

Hawaii's beneficiary of the Legacy Project was Honolulu Habitat for Humanity. The goal was to raise at least \$20,000 to finance a house for a needy family in Hawaii—a goal that was surpassed by more than \$10,000. The donation will help pay for the construction of a home for the Ka'aihue family, longtime residents of Nanakuli, Hawaii. May, a groundbreaking ceremony was held for the Ka'aihue house, which should be completed by December.

Funds were raised through activities at the convention, including a 3K/5K walk/run and a golf tournament, as well as from contributions from NSPE, the Hawaii Society of Professional Engineers, and Hawaii engineering firms and affiliated corporate donors. In addition, a series of online Internet auctions helped raise money for the project. The Hawaiian Electric

Company supported the Legacy Project with a \$15,000 contribution. Other local businesses and consultants participated through cash donations. During the Convention, about 20 convention attendees volunteered their time to help build a Habitat house in Kapolei.

Next Deadline for **Wiliki** is November 15th



- Male and Female special agents
- Bachelor's or graduate college degree from an accredited institution
- Nationwide employment
- Computer Science/Information Technology, Engineering, Sciences (Architecture, Bio-chemistry, Biology, Chemistry, Forensics, Mathematics, Nursing, Physics, medical specialties), Accounting/Finance, Law, Languages, Intelligence, Foreign Counterintelligence, Counterterrorism
- 2-3 years strong professional/investigative/managerial work experience desired
- + 23-36 years of age
- Drug policy/drug testing mandatory
- Entry-level salary (GS-10) is \$45,735 Academy training;
   \$56,240 \$61,045 upon graduation, including locality/availability pay





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#### **November Program**

November 5th – Alan Pallmer, Executive Director and CEO Pacific Aviation Museum; "Creating an Aviation Museum on Ford Island" November 12th – No Meeting Veterans Day November 19th - Howard Wiig, State Energy Division; "A New Lighting Code for Honolulu?" November 26th – No meeting Thanksgiving

Meetings held every Friday at YWCA room 205 on Richards Street downtown. Parking at Alii Place off Alakea Street for \$1.00 per hour. Meetings start at NOON and end promptly at 1:00 pm

Members-\$7.50 Guests-\$8.50

Program schedule may be adjusted. Call Secretary to confirm speaker. Anyone wanting a weekly email meeting notice please send your email address to Sam Gillie at sgillie@hei.com.

#### Meeting Report for September 17th

SPEAKER: George Mason - Founder, Pacific Business News: SUBJECT: "Business in Hawaii." George Mason came to Hawaii in the early 50's for a \$250 per month job as a radio announcer. In 1955 the State created the Economic Planning and Coordination Authority and he was hired as the director. In 1959, the State created the Department of Economic Development and George served as the director until Governor George Quinn lost to John A. Burns in 1962. But he had an idea. He had all this economic information and had an idea to publish. No one was interested so he founded the Pacific Business News.

George requested that if he could be declared "Hawaii's Benevolent Dictator" for a day, he would make the following changes. First he would pass a rule in each House of the Legislature to limit the number of bills each member could introduce to 10 bills per session. This would limit bills to be considered to 760. This type of rule has been very successful in Nebraska. The legislature is currently burdened with between 4,000 to 5,000 bills per session. Only 200 to 400 bills are presented to the Governor for signature each session. How many trees must be cut down to just copy these bills for the representatives and staff?

Second, he would return to bi-annual legislature sessions. As a former department head, he knows that department heads and staff are involved with preparing for the legislature sessions many months before it begins. Previously, with bi-annual sessions departments had time to digest what the legislature had passed, develop programs and prepare budgets, instead of immediately turning around and starting to prepare for the next leg-

islature session.

Third, appoint an ombudsman to eliminate at least 20% of all state rules and regulations and do it within two years. Remaining rules and regulations would be revised and simplified. George saw a brief three sentence law turned into 200 pages of regulations and this is not uncommon.

Fourth, call for a detailed review of all the audit reports prepared by the Legislature Auditor since 1965 when the Auditor's office was established. This office was created to determine if the Executive Branch was carrying out the intent of the Legislature's bills. People would be shocked at how few of the Auditor recommendations have been accomplished or implemented over the last 40 years.

Fifth, transfer all land use functions to the counties. There is no other Convention Center Authority in the Nation that is operated by State Government. The State has been running the Kakaako Redevelopment since 1972. It is just now starting to be redeveloped, but it will take another 20 to 30 year to finish. Also, if the Counties will be doing more, then they should get a bigger slice of the tax pie. But this will take muscle away from the State and would take a big change for it to happen. Hawaii is the only State that has only two levels of government.

Sixth, hire an accounting firm to determine the true cost of every government active and service. This is not the number in the State When George was a department head he could not find out how much his department was costing taxpayers. They paid no rent, no electric and had free use of attornevs and vehicles. The cost for our schools is much much more thAn shown in the DOE budget, because the cost for buildings and infrastructures are tucked away in general obligation bond issues and not the DOE budgets. There are some 300 special and revolving funds that hide from our view, at the very least, three billion dollars. This true cost accounting would open the public's eyes to how much the taxpayers are being milked for very little in return.

Seventh, revamp our Tax structure, starting with dumping the evils of the general excise tax. The majority of people believe it is a sales tax. It is Not!! With the pyramiding structure it is really 11 to 12 percent on everything, not just food and cloth, but every business activity. A subscription to the Pacific Business News has about 16% taxes. If it were a sale tax on everything but food the rate would have to be 15% or more. Other states do not tax hospital cost and rents as well as other items that are hit by the Hawaii GET.

Eighth, change the legal driving age to 17 year of age. This would be done for safety reasons not traffic reduction.

Ninth, many elections are won with votes from less than 30% of the citizens of voting age. Only about 65% of citizens actually register to vote and only about 50% of registered voters actually vote. Hawaii should emulate Australia. If you are 18 and don't register and don't vote you are fined a substantial amount. Turn out at the polLs down-under tops 99%. We have to find a way to get the youth of our Nation involved.

When George was a Government official he was humiliated that vendors he had hired were not paid after 120 or more days. After he left government, lobbied and had passed a law that the State pay 1% interest per month after 60 days. Guess what? Venders wouldn't use it because they had to bill the government for the

interest. The University of Hawaii ran some ads in the PBM and when they weren't paid after 60 days, he sent a bill to the UH for the interest, 94 cents! A note came back a few days later and he wondered why couldn't they send checks that fast? The note said, The State does not pay interest. It was a prefect opportunity. He filed a lawsuit for 94 cents. Within a week the University sent a check for \$25.94. The 25 dollars was to cover the court filing fee. PBN front paged the story. The State has since made paying interest mandatory and the amount of interest paid now per year is \$100,000 or less

Nothing happens overnight. George fears that we are all waiting for someone else to change Government. It will not happen. There is no someone else; there is only you and me. If we can not develop the backbone to force change, start a revolution of spirit in the youth, to talk economic common sense with our fellow citizens then we must be willing to give-in and give-up and forget that we are here to do good and not simply to do well. I am not sorry I sound like a scold. I refuse to bow and scrape before the entrenched rulers of a place I love, a people I care about, a business community suffering in silence and feeling abandoned. If you want change, only you can make it happen. Don't wait for someone else, because someone else is waiting for you.



#### HAWAII CHAPTER

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#### **General Membership Update**

Several members of the Hawaii chapter traveled to MetalCon 2004 on October 20-22 at the Las Vegas Convention Center. In addition to the 10th anniversary luncheon on October 20th, committee meetings were held on the same day. The LGSEA national committees are: Fastener/Connector Committee, Structural Assemblies Committee, Research and Development Committee, Truss Task Group, and the Board of Directors meeting. We will have committee updates in the next issue.

At the local chapter, the program committee is exploring the possibility of a membership meeting before the busy holiday season begins. Potential topics include the corrosion

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Director	Dean Doi	955-4441	942-2027
Past Pres	Tom Tanimura	536-7692	537-9022

#### **BOD MEETING HIGHLIGHTS**

06 October 2004

#### **Previous Business:**

Reference Library: Efforts to establish a Structural Steel Reference Library is ongoing. After suggestions of reference material for the reference library has been collected and compiled, Randy Chu and Ibbotson Kellett will meet with Rupert Chun to discuss which items to purchase and include in the reference library. SEAOH welcomes suggestions for book titles to purchase for the Structural Steel Reference Library.

#### **New Business:**

City and County of Honolulu / County of Hawaii - Third Party Plan Certification: SEAOH has undertaken a review of "City and County of Honolulu Chapter 2 - Permit Processing" and the "County of Hawaii Sections 106 and 108 Amendments" proposal to allow third party code review (ordinarily done by the building division). The gist of this provision is to allow pre-qualified independent reviewer's to conduct the code compliance check of a project in lieu of a check by the County Building Division. The reviewer will report to the County Building Division, who will have final say on all matters. It should be noted that this procedure is being proposed only for code compliance review for architectural, structural, mechanical, electrical and other UBC / LUO criteria. Clearance from DLU and Board of Health, etc is not included in this review. The County will still maintain control of permit issuance and will decide all issues in gray areas.

Gary Chock attended the BOD meeting to briefly discuss the current status of these provisions. SEAOH Codes Committee (Gary Chock) has been directly involved with helping the Counties draft the third party review provisions and has gone through several revision cycles with the Counties. If SEAOH proposed revisions to the draft documents are implemented by the Counties, the BOD consensus is to support the proposed third party review procedures.

The proposed third party review provisions of both Counties establish qualifications and requirements for certification of third party reviewers and sets forth the procedures required to proceed with a third party review for code compliance. The "self certification" process that was originally proposed by the County of Hawaii has been dropped as it apparently had no industry/ professional sup-

port. In its place a third party review procedure similar to that proposed by the County of Honolulu is being considered. Very soon we will be posting on our website the official language to be adopted by the Counties to implement third party reviews and background information giving some insight into the development of these provisions. By the time you read this article the City and County of Honolulu will already have a procedure for third party review in place.

**2004** NCSEA Conference: Randy Chu attended the 2004 NCSEA Conference in New Orleans, Louisiana on 23 -25 September 2004. Randy Chu reported the following discussions at this year's conference (see website for complete summary):

- The Code Advisory Committee (CAC) is working toward convincing the IBC and NFPA codes to reference the ASCE-7 for the structural loading provisions.
- The CAC is working toward convincing the IBC to eliminate the load calculation equations for wind, earthquake, and snow from the body of the code and refer to ASCE-7.
- 3. The CAC is working toward convincing the IBC to extend revision cycle to 5 years.
- 4. Note that ASCE-7 is currently on a 6 year revision cycle.

The Board voted to accept Marcello Sgambelluri and Kainoa Aki as new Allied Members.

#### Adoption of IBC 2003:

The adoption of the 2003 IBC by the City and County of Honolulu tentatively scheduled for

the latter part of this year is temporarily delayed. Currently, no deadline for the adoption of the IBC'03 has been established

#### Website Items:

New postings on the website: ISSUES / NCSEA / Summary of NCSEA issues and positions as discussed in the 12th Annual Conference.

SEAOH will be creating a "BULLETIN BOARD" on the website. On the bulletin board we will post resumes of engineers, drafters, etc that are looking for jobs, position openings for companies and miscellaneous items that the Board deems appropriate for our membership. Send requests for postings to any Board member.

#### New Member Applications:

The following membership application has been received at the 06 October 2004 Board meeting and is open for comments from the membership:

Zi Hang Ou, Englekirk Partners, Inc., applied as an Allied member. This application will be voted on at the December Board Meeting. Please notify any SEAOH Officer prior to the December Board meeting if you wish to comment on this prospective member.

#### 2004 Calendar of Events:

Next BOD meeting: 03 November 2004, 4:30 p.m., at Shigemura, Lau, Sakanashi, Higuchi office.

January 29, 2005: SEAOH Installation of 2005 Officers and Directors at the Honolulu Country Club.

#### LGSEA, (continued from page 4)

study of fasteners that Dr. Ian Robertson at UH-Manoa has recently concluded, bringing another mainland speaker such as Dr. Roger Laboube of University of Missouri at Rolla, or a job site tour. The Board is also preparing a slate of candidates for the 2005 directors to replace the outgoing 2004 directors. Members who are interested in becoming more involved with LGSEA, please contact any of the directors to see how you can participate.

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## NOVEMBER JOINT LUNCHEON MEETING WITH HWEA AND AWWA

Program: ASSET MANAGEMENT: WHY, WHAT, AND WHERE?

Ray Matasci, Vice President and Hawaii Operations Manager for Brown and Caldwell will present the perspective of asset management in the wastewater and water utility management fields. His presentation will describe the why, what and where of actively managing assets to meet the multitude of objectives and needs in these complex fields.

Date: Wednesday, November 10, 2004 (NOTE: DATE & TIME CHANGE)

Location: Treetops at Paradise Park,

Manoa Valley

Time: 11:30 a.m. – Lunch and Program

1:00 p.m. - Adjourn Menu: Multi-entree buffet

Cost: \$12.00

Please make your check payable to American Water Works Association and mail it, postmarked by Friday, November 5, 2004, to AWWA, c/o Fukunaga & Associates, Inc., 1388 Kapiolani Blvd., 2nd Floor, Honolulu, Hawaii, 96814, Attention: Jon Muraoka. Reservations for the luncheon can be made by contacting Jon Muraoka by Monday, November 8, 2004 by phone at 944-1821, fax at 946-9339, or e-mail at office@fainc.org.

#### **EXECUTIVE COMMITTEE MEETING**

October 11, 2004

2004-2005 CALENDAR OF EVENTS (subject to change)

November 2004 - Joint luncheon meeting with HWEA and AWWA.

## 2004 ASCE HAWAII SECTION OCEA AWARD

There were two projects vying for this year's ASCE Hawaii Section Outstanding Civil Engineering Award. This year's winner was the Sewer Outfall Extension at Fort Kamehameha Project. Congratulations to all nominees and participants in this event.

#### **ASCE JOB LISTINGS**

The following employers have openings they would like to fill:

Austin Tsutsumi & Associates, Inc. (Civil, Traffic/Transportation, Environmental and Surveying - Honolulu and Wailuku)

Board of Water Supply (Chief Capital Projects Officer - Honolulu)

CH2MHILL (Water Engineer - Honolulu)

Fewell Geotechnical Engineering (Geotechnical Engineer - Honolulu)

Fukunaga & Associates (Civil and Civil/Environmental Engineers - Honolulu)

GeoEngineers, Inc. (Senior Engineer in Geotechnical Engineering)

Hawaii Pacific Engineers (Environmental Engineers - Honolulu)

Hida, Okamoto & Associates, Inc. (Civil Engineer – Honolulu)

Maui Land & Pineapple Co. (Director, Land & Water Asset Management – Kahului)

Warren S. Unemori Engineering (Project and Civil Engineers - Wailuku)

For more information on these job listings, please visit the ASCE Hawaii Section website at www.ascehawaii.org.

#### **ASCE HAWAII SECTION AWARDS**

Please help us increase our scholarship endowment so that we can recognize those deserving students. We continue to accept tax-deductible donations with the goal of establishing a second annual scholarship. Make your check payable to ASCE Hawaii Section and mail to ASCE Scholarship Committee, P.O. Box 917, Honolulu, HI 96808. If you have any questions, please contact Westley Chun at 488-0477, or at wkcchun@engrsol.com.

## RENEW YOUR ASCE MEMBERSHIP EARLY AND WIN A PRIZE

If you renew your membership by December 1, 2004, you could win an Apple iPod 30GB Digital Audio Player, or one of many attractive gifts, and be eligible to win additional prizes. If you renew by December 13, 2004, you could win a Gateway 42" Plasma Television, with guaranteed delivery by the holidays, or other attractive gifts. Please contact our membership chair, Lori Nishida, at 533-3646 or *Inishida@ata-bawaii.com* for further information.

#### MEMBERSHIP DRIVE

ASCE counts on our members to help us grow every year by actively participating in the Member-Get-A-Member Drive. The drive is now year-round and offers great new prizes, such as cash rewards, gift certificates, digital cameras, personal digital assistants, LCD TVs and more. For most prizes, all you have to do to be eligible to win is refer a colleague. This is a great time to help out your colleagues while also helping ASCE find new members. Take a minute to think about the people in your professional life who could benefit from membership. Visit www.ASCEDrive.org to refer them and you could be a winner in the next drawing! Please contact our membership chair, Lori Nishida, at 533-3646 or Inishida@atahawaii.com for further information.

## CONVERTING TO ELECTRONIC VERSION OF WILIKI

If you would like to help the ASCE Hawaii Section reduce operating costs by receiving your monthly issue of the Wiliki via e-mail, please contact Joanna Seto at 522-7426 or e-mail her at <code>jseto@ascehawaii.org</code>.

#### **KNOW YOUR ASCE HISTORY**

by C.S. Papacostas

The year was 1974, the month was August, and the Department of Planning and Economic Development (DPED) of the State of Hawai`i, now known as the Department of Business, Economic Development and Tourism (DBEDT), launched a probe into the soaring prices that the two newly renamed portland cement plants on O`ahu were charging their new customers.

In public hearings, the State leveled accusations of collusion and price-fixing against Cyprus Hawaiian Cement and Kaiser Cement & Gypsum. The two companies defended themselves by attributing the high prices to shortages driven by the increasing demands of a construction boom, reduced supplies due to a temporary break-down of a kiln at Cyprus, and a steep rise in fuel oil costs.

If not then, then now, it is understood that the 1973 Energy Crisis, precipitated by the oil export embargo of the Organization of Petroleum Exporting Countries (OPEC), has had a profound effect on global (and local) economic conditions. Kaiser also claimed that other production costs, such as those of imported silica, were on the rise as well, and it was said that long-term contracts limited the prices that old customers could be charged, but dictated higher prices for new accounts.

This situation must have persisted into the next year for, in April 1975, the Honolulu Advertiser (HA) reported that both companies turned to importing clinker from Japan in order to meet the demand.

Some relief came in August when Cyprus inaugurated a significant expansion to its facilities. In what appears to me to be a conciliatory move, the keynote speaker at the dedication ceremony was Hideto Kono, director of DBED. Parenthetically, Kono's recent passing on October 2, 2004 at age 82 was widely reported locally. As the HA put it, "one of Kono's chief legacies... was his leadership in the drive to wean Hawai'i from its dependency on fossil oil"

Energy concerns became more alarming as the 1970s progressed, prompting Fred B. Smales, President of Cyprus Hawaiian Cement, to strike a cautionary note, in a July 1978 speech to the Engineering Association of Hawaii, about the competitive advantage that the U.S. Mainland competitors enjoyed. But, according to the Honolulu Star-Bulletin (S-B), for three years in a row, in an apparent reversal of the normal state of affairs, the local cement plants were actually exporting cement to the U.S. West Coast.

Interestingly, Cyprus' shipments were "limited only by the local plant's capacity and the four-ply Kraft paper bags in which cement is shipped." This shortage of paper, by the way, resulted from labor strikes against paper mills in the Northwest sector of the United States.

As for prices, the S-B continued, "a bag of cement that sells for \$3.59 here will sell for \$5.18 in California due to packing, shipping and handling costs."

Ultimately, however, Smales' fear proved to be real, especially when the second energy crisis, which U. S. President Jimmy Carter characterized as "the moral equivalent of war," hit the globe in 1979 after the Shah of Iran was deposed. Again, as if in lockstep with each other, the two competitors reacted in the same way: First Kaiser Cement, in July, and then Cyprus Hawaiian, in December 1979, announced their intention to switch their opera-

(continued on page 7)



Hawaii Section — Younger Member Forum Web site: http://www.ascehawaii.org/ymf.html

#### **2004-2005 YMF OFFICERS**

		Phone
President	Paulette Chang	781-1187
	Hawaiiymf@yahoo.com	
Vice-Pres	Scott Jennings	845-8440
	sjennings@rci-group.com	
Secretary	Florence Ching	472-1342
	fching@ascehawaii.org	
Treasurer	Laura Smolinski	382-7174
	Smolinskil001@hawaii.rr.co	om
Student Chapter	Jesse Elliot	956-5808
President	Elliotj@hawaii.edu	

#### **Next YMF General Meeting**

The next two YMF general meetings are scheduled for Tuesday, November 2, 6:00 p.m., at Tiki's Grill & Bar at the Aston Waikiki Beach Hotel, Second Level, 2570 Kalakaua Ave., 923-TIKI; and Tuesday, December 7, 6:00 p.m., at Gordon Biersch Brewery Restaurant at Aloha Tower, 599-4877. If you are interested in attending to find out what the YMF is all about and how much fun we have, please call Paulette Chang at 781-1187.

#### YMF August Field Trip – Hokua at 1288 Ala Moana

By Florence Ching, Hawaii Section YMF Secretary

On Saturday, August 28, 2004, nine attendees were up early to meet at 7:30 AM for the chance to tour Hokua at 1288 Ala Moana - a 40-story high-rise luxury condominium situated upon almost four acres being constructed by Albert C. Kobayashi, Inc. Hokua means the "majestic crest of powerful waves rising above the surrounding sea," and is scheduled for completion in December 2005. With workers already busy at work and more scheduled to begin their shift, several members of Kobayashi's staff led attendees throughout the site describing construction methods such as the utilization of post-tensioned reinforcing system and a flying form system to place the decking for each floor. Attendees were also able to see the sweeping views of Ala Moana Beach Park and the Pacific Ocean that future homeowners will be able to directly look at right outside their windows

YMF would like to thank the staff of Albert C. Kobayashi for the opportunity to tour the project site.

## YMF September Community Service Project - ASCE Helps Raise Over \$3,400 for MDA

By Jeff Kalani, Hawaii Section YMF Past President

ASCE Hawaii Section volunteers from the Younger Member Forum (YMF) gave up part of their three-day Labor Day weekend to help raise money for the Muscular Dystrophy Association (MDA). This is the 4th straight year that ASCE has participated in the MDA Hawaii Chapter's "Catch-a-Cure" drive at the intersection of Piikoi Street and Ala Moana Boulevard, and held in conjunction with the annual Jerry Lewis MDA Labor Day Telethon. The YMF volunteers were teamed up with other groups, who together raised over \$3,400 in just four hours by waving signs and encouraging motorists to deposit donations into their fishnets. Money raised during the Catch-a-Cure drives helps provide services for Hawaii patients who suffer from muscular dystrophy and other neuromuscular diseases. The YMF



Hokua field trip attendees.

would like to thank all volunteers who participated for helping to demonstrate yet another way in which civil engineers make a difference!

## YMF September Social – Pearl Country Golf Outing

By Jeff Kalani, Hawaii Section YMF Past President

On Friday, September 17, 2004, 18 YMF'ers and friends spent a fun-filled afternoon at the Pearl Country Club golf course at the Hawaii Section YMF's first golf outing. Participants "hacked" away at the challenging 18-hole golf course, enjoying great company, the sweeping views of Pearl Harbor and the great weather while making new friends and contacts. Adding to the golfers motivation was competed was \$170 in prize money for the "closest to the pin" on four par 3 holes. Jeff Kalani was closest to the pin at one of the holes and Fred Erskine won closest to the pin for the other 3 holes. Following the round of golf, everyone enjoyed an evening of food, drink, and door prize drawings at Pearl Country Club's 19th

#### **ASCE Job Classified**

Looking for work? Visit the ASCE's job listing page at http://www.ascehawaii.org/jobs/jobsin-fo.html.

#### ASCE History, (continued from page 6)

tions from oil to coal. Both were to receive the material at Honolulu Harbor, a little more than twenty miles away. It is my recollection that, naturally, both were in favor of the then proposed and highly controversial nearby Barbers Point Harbor at Kalaeloa.

Kaiser completed the conversion in June and Cyprus in October 1980. And then, on October 6, 1981, the HA ran the following headline: "Cyprus Hawaiian Cement up for sale."

Stay tuned!

Do you know of a civil engineering accomplishment or event that your fellow ASCE members might find interesting? Please send a brief description to C.S. Papacostas (fax 956-5014, email csp@wiliki.eng.hawaii.edu). Previous articles in the series may be found at the Section's web site. Just point your browser to http://www.ascehawaii.org.



#### 2003-2004 OFFICERS

Office	Name	Phone	Fax
President	Cathy Leong	946-2277	946-2253
Vice Pres	Susan Uejo	521-5361	538-7819
Secretary	Pierson Koike	527-6989	521-2501
Treasurer	Fred Smoot	841-7617	833-6125
Past Pres	Richelle Suzuki	541-2530	541-2700

#### **September Meeting Highlights**

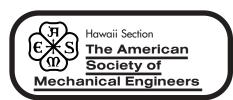
The Hawaii Section Meeting was held on September 21, 2004 at Parsons Brinckerhoff Quade and Douglas, Inc. President Wayne Yoshioka identified all Executive Board members and committee chairpersons. Wayne noted that a chairperson is needed for the Engineering Week display committee.

The Local Arrangement Committee (LAC) is working on District 6 Annual Conference. Hawaii will be hosting this conference in June 2006. Information about the conference can be found on the ITE Hawaii website.

Wayne then introduced the featured speaker, Ms. Pat Noyes. Ms. Noyes is an International Director for ITE District 6. Her company, Pat Noyes and Associates, specializes in incident management, traffic calming, and public participation. Ms. Noyes installed the 2004-2005 officers. Then she spoke about emphasis areas for ITE in 2004. Ms. Noyes identified intersection safety, continuing education, public awareness and traffic signal design for system users as focus areas for the year. Ms. Noyes shared information about the workforce development program, and four professional development modules available on compact discs. She explained initiatives for intersection safety and the new mentoring program. She asked section members to send in their 2004 constitutional amendments, update their personal ITE info, and participate in the traffic signal self-assessment. Ms. Noves closed by identifying the upcoming District 6 annual meeting locations. They are as follows: 2005 Kalispell, 2006 Hawaii, 2007 Portland, 2008 Anaheim, 2009 Denver.

#### **November Meeting Announcement**

The November Section meeting date, location and speaker will be announced at a later date. A meeting notice will be issued.



Website: www.sections.asme.org/hawaii

#### ASME-HI 2004-2005 Officers

Chairperson	Raymond Liu	521-3777
Vice-Chair	LCDR John Markowicz	484-9164
Secretary	Sam Gillie	543-4737
Treasurer	Rodney Krienke	373-2916
Dir 1 yr	Ron Flegal	455-0254
Dir 2 yr	Chester Kaitoku	527-6063
HCES Rep	James Grogan	254-2947

#### HAWAII SECTION GENERAL MEETING

Date: Tuesday, November 9, 2004 Time: 5:30 p.m. to 6:30 p.m.

Place: Hawaiian Electric Company, Inc.

Ward Avenue Cafeteria

Program: The Hawaii Section ASME 125th

Anniversary Planning.

All Hawaii Section members are invited to attend this planning meeting with their ideas and suggestions on how to celebrate this grand event in ASME history. So far we plan to participate in the Engineers Week Poster Exhibit. We will procure ASME Anniversary Ballpoint Pens, Earth Saver Slide Guides, Anniversary Buttons, and Anniversary Shopping Bags to give to the people visiting our exhibit. Your suggestions will be appreciated. An Anniversary Picnic with the Student Section is another possible event. The Officers and Directors of ASME-HI look forward to seeing new and familiar faces Lots of free pizza and pop are always provided. Please contact Ray Liu or Sam Gillie for directions and for more information.

#### **ASME-HI STUDENT SECTION PRESENTATIONS**

David Katsuda and Blake Sato, Student Section Chair and Vice-Chair, respectively, ioined the senior section on October 12, 2004 and made presentations on their ME 481/482 Senior Design Course projects. Blake Sato gave a PowerPoint presentation on his Human Powered Vehicle (HPV) project while David Katsuda presented his Mini-Baja Vehicle project. Fundraising for both projects are at full speed with travel costs to compete being the largest expense. Charitable donation can be made through the University of Hawaii Foundation. For more information, please contact Ron Flegal. Both projects will be entered in the Francis Rhodes Montgomery Design Competition in early May of next year.

#### KIUC KAPAIA POWER STATION TOUR

Ray Liu, Chester Kaitoku and Ed Chang flew to Kauai for the September 25 tour of the Kauai Island Utility Cooperative (KIUC) Kapaia Power Station tour and ASME-HI Section meeting with the Kauai members. This tour was a Hawaii Section Power Technical Chapter event. The hosts for this tour were Kauai members Brad Rockwell and Earl Smith. Brad Rockwell is the Kapaia Power Station Manager, and he personally gave the informative and detailed tour of his plant.

The Kapaia Power Station went into commercial operation on September 14, 2002 and is the newest power plant in Hawaii. The facility is a 27.5 MW Steam-Injected Gas Turbine power plant. It produces clean, efficient power for KIUC, and operates 24 hours a day, 7 days

a week. The heart of the plant is a General Electric LM2500 STIG Gas Turbine Generator Package. Steam is produced using a hot exhaust gas via a Once-Through Steam Generator (OTSG) manufactured by Innovative Steam Technologies. Low emissions are achieved by a combination of steam injected into the gas turbine fuel nozzles and ammonia injected into the exhaust via a catalyst similar to the one found in modern cars. Higher efficiencies are achieved by injecting the remaining steam into the combustor of the gas turbine, providing a 25% increase in MW output without any additional fuel burned.

That evening after the tour a Hawaii Section meeting was held at the Kintaro Restaurant in Kapaa again hosted by Brad Rockwell and Earl Smith. After the section meeting the rest of the evening was enjoyable socializing with Kauai members and their spouses. This meeting and social event was capped off with photos with Fox's North Shore star Jason Momoa who graciously posed with Ray Liu and Mrs. Quyen Rockwell.

We thank Brad Rockwell and Earl Smith for being great hosts for the tour and evening event. We look forward to future tours and meetings on Kauai.

#### **ASME-HI SECTION CHRISTMAS PARTY**

The holidays are fast approaching and planning for the ASME Hawaii Section Christmas party is in the works for sometime in early December. This will be an opportunity for all the section members and their families to come together to share in the holiday spirit and to recognize all the hard work of the section officers and members during the past year.

The program planning for the event will include the recognition ceremony for those ASME members who, during the 2003-2004 membership year, have achieved 25 years, 50 vears of membership, or who have achieved the Life Membership status. Award certificates and lapel rocker pins will be presented at that time. Also, our new Section Officers for 2004-2005 will be officially installed and recognized.

If you would like to help with the planning of the Christmas party and recognition ceremony, please contact Raymond Liu at ph. 521-3773 ext. 124, or email at rliu192228@aol.com. For updates on the event, please our section website at www.sections.asme.org/hawaii.

#### **ASME-HI SECTION WHALE WATCHING TOUR**

The ASME Hawaii section officers would like to thank Mr. P. Michael Watson, President of Dream Cruises Hawaii and member of the ASME Hawaii section, for offering to host a whale watching tour for the general membership. The whale watching season is from mid-January to mid-March with tours lasting for about 11/2 hours.

In addition, members who are boat enthusiast will have an opportunity to tour the main propulsion system and other systems related to mechanical engineering.

The cost for the tour will be a nominal fee, depending on the amount of people attending. So spread the word to your fellow section members about this a fun filled family and educational event!

If you would like to help with this event, please call Raymond Liu at ph. 521-3773 xt. 124, or email at rliu192228@aol.com. For more information about American Dream Cruises, please visit www.dream-cruises.com.

#### **ASME'S 125th ANNIVERSARY ACTIVITIES UPDATE**

ASME Founders Day on February 16, 2005 will coincide with the 2005 Engineers Week. The activities of ASME Founders Day/EWeek 2005 are going to be the highlight of ASME's anniversary celebration. To help the Sections with their celebrations, ASME will make available items such as bronze commemorative coins as an anniversary memento and anniversary pins at nominal costs. At no charge, ASME is planning to issue each Section a customized anniversary resource kit that will include a 10-minute 125th anniversary video and a podium banner with ASME's anniversary

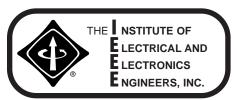
To announce their 125th anniversary activities to the world ASME has a website called "2005 Activities: Around the World" that each Section can access to share where and when they will celebrate. Section entries can be updated as their plans progress.

#### ASME ACTIVITIES REMINDER

In previous Wiliki issues we have reported on the following ASME activities: "Continuity & Change" (August 2004 issue), "Communities of Practice" (September 2004 issue), "New Faces of Engineering" (October 2004 issue), and "FasTrack E-zine" (October 2004 issue). If these activities are of interest to you, please remember to visit the ASME website (www.asme.org) to get additional information, if you have not done so already.

#### **FUTURE ACTIVITIES**

Several tours and meeting speakers are being planned. Ed Chang is planning a tour in Kona for next year. Also visit the ASME-HI website for more information.



#### IEEE Hawaii Section

P. O. Box 37607 Honolulu, Hawaii 96837 Email: sec.hawaii@ieee.org Web Page: http://community.hei.com/ieee/

#### 2003 HAWAII SECTION OFFICERS:

Chairperson:	Grant Torigoe	833-8889
	(torigoe@ieee.org)	
Vice Chair:	Mark Rognstad,	956-8712
	(mark_rognstad@ieee.	org)
Sec/Treasr:	Alison Lee	224-9723
	(al.lee@care2.com)	
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	(oscar.libed@ieee.org)	
Past Chair:	Norm Kawachika	531-1308
	(normk@ieee.org)	
Past Chair:	Fred Kobashikawa	543-7753

	(fkobashi@ieee.org)	
Section Commi	ttee Chairpersons:	
HCES Rep:	Fred Kobashikawa (fkobashi@ieee.org)	543-7753
Membership:	Steven Sano (ssano@ieee.org)	543-7981
Webmaster:	Steven Sano (ssano@ieee.org)	543-7981
Newsletter Editor:	Alison Lee (al.lee@care2.com)	224-9723
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Student Act:	Tep Dobry (tep@ieee.org)	956-9740
Oceanic Society:	Mark Rognstad (mark rognstad@ieee.org	956-8712 a)



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1. Upcoming Hawaii SFPE Seminars - dates to be determined probably 1st and 2nd quarter 2005

email: kam@thermaleng.com

**FIRE DYNAMICS** SIMULATOR Computational Fluid Dynamics fire model HUMAN BEHAVIOR IN FIRE

Society of Fire Protection Engineers (SFPE) Supports the Fire Sprinkler Incentive Act of

Society of Fire Protection Engineers (SFPE) has announced their support for the Fire Sprinkler Incentive Act of 2003. The bill is assigned to the House of Representatives' Ways and Means Committee (H.R. 1824). Currently, there are over 110 Democratic and Republican co-sponsors for this legislation. Passage of this legislation would modify the current federal tax code to classify fire sprinkler systems as five year property for purposes of depreciation.

This would allow building owners to depreciate the cost of a sprinkler system over an accelerated schedule that would allow cost recovery in a much shorter time frame than offered by the current tax codes.

"The installation of a fire sprinkler system in a building significantly improves the chances of survival in a fire. Unfortunately, because there is a cost to install these systems, building owners may be reluctant to retrofit their facility with an automatic fire sprinkler system" said, Kathleen Almand, P.E., FSFPE, at the SFPE. "The incentives that are provided in the Fire Sprinkler Incentive Act will motivate building owners to install these life saving systems." By providing tax incentives, this legislation will promote the installation of fire sprinkler sysin new and existing buildings.

Consequently, passage of this bill should lead to a reduction in the economic and human losses from fire in the United States. For more information on the Society please visit www.sfpe.org.

#### **HSPE/Architects**, (continued from page 3)

ings and structures" into the definition of the "practice of engineering." Further, the NCEES Model Law and an increasing number of state engineering licensure statutes specifically define the practice of engineering to include "design coordination," which is specifically described as "review and coordination of those technical submissions prepared by others including as appropriate and without limitation, consulting engineers, architects, landscape architects, surveyors, and others working under the direction of the engineer. NSPE endorses the NCEES Model Law (see NSPE Professional Policy 152- Licensure and Qualifications for Practice).

To explain the role of the professional engineer in the building design process, NSPE has "Managing Engineer-Architect published Relations: An NSPE Strategy and Resource Guide." which includes case studies, strategies and other valuable resources that refute the exclusionary position taken by NCARB and others. In addition, NSPE has published a white paper entitled "Engineering Licensing Laws & The Design of Buildings: An NSPE Discussion Paper" as well as "Building Design: The Engineer's Role.'

It is NSPE's longstanding policy that, when there is overlap between activities that may be performed by licensed professionals, project owners should select the licensed professional they deem appropriate as the lead professional. Any licensed professionals so selected should practice only within their area of competency and should add other licensed professionals to the team to provide a full scope of services required for the assignment (see NSPE Professional Policy 50 - Interprofessional Relations). This position was again reinforced by a recent Pennsylvania court decision that affirmed the authority of licensed professional engineers to perform building design services as the "practice of engineering."

The National Society of Professional Engineers (NSPE) is the national society of engineering professionals from all disciplines that promotes the ethical and competent practice of engineering, advocates licensure, and enhances the image and well-being of its members. Founded in 1934, NSPE serves more than 50,000 members and the public through 53 state and territorial societies and more than 500 chapters. For more information, please visit www.nspe.org.

#### **Emergency Repair,** (continued from page 1)

ground around the displaced pipe to create a "water-tight" barrier through which a channel was cut to access the pipe section and create a waterway for potential extreme peak wastewater flows. Holes were cut/formed in the junction manhole and wet well to allow these extreme peak flows to pass should the bypass pumps fail to handle the incoming wastewater Operation of the bypass pumps required setting up temporary variable frequency drives that the City had in storage, and a temporary connection to the City's SCADA

The new pipe section of HOBAS pipe material, was "borrowed" from the Kalaheo Avenue Relief Sewer project. A concrete cradle was created for the pipe segment, supported by the valve vault constructed above the pipe. In the end, the junction manhole was supported on three-foot diameter jet grouted "piles", the valve vault was supported on 16-1/2-inch octagonal driven piles, and the existing wet well/pump station was supported on 12-inch square driven piles. It is hoped that all of the structures will now settle at a very similar rate.

The Project Owner is the City and County of Honolulu and the Client was the Department of Design and Construction. The Project was completed and has been operational since March 2003, and Department of Health certification given within the following one-year time span.



## **HONOLULU POST**

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Will Boudra (MWH Corp) William.Boudra@mwhqlobal.com 3rd VP (Membership):

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James.L.Bersson@poh01.usace.army.mil SECRETARY:

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