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In This Issue	þage
PRESIDENT'S MESSAGE	1
STUDENT DAY	2
A COMPARISON OF TWO	4-5
LEGISLATIVE UPDATE	6-7
THOUGHTS FROM NEW DIRECTOR	8
REGION 9 HISTORY	9
2014 AWARD WINNERS	. 10-11
THANK YOU SPONSORS	12
ADS	13
PROFESSIONAL DIRECTORY	. 14-15





Los Angeles Section

Monthly: Est. 1913

ORANGE / SAN_BERNARDINO/RIVERSIDE / SAN_LUIS_OBISPO / SANTA_BARBARA/VENTURA / DESERT / SOUTHERN SAN_JOAQUIN / METROPOLITAN LOS ANGELES

PRESIDENT'S MESSAGE

Kenneth H. Rosenfield, P.E., F.ASCE Los Angeles Section President



Celebrate Civil Engineering!

The recent days have been filled with many Civil Engineering accomplishments and awards and there is not enough space here to share all of the excitement that I have experienced since preparing my last article, but, I will give you a summary and I encourage you to check out all of the following pages. First, congratulations to all of our 2014 ASCE Los Angeles Section Individual and Project award winners! Please view the list of award winners along with the photographs of this November 5th event on the

following pages. In addition, thank you to all of our sponsors for the event without which the event could not have been held. A listing of the sponsors is also included on the following pages. Please start thinking of your nominations for the 2015 awards season and work within your local Branch to complete your submissions.

Second, I was honored to represent the Los Angeles Section at the ASCE Global Engineering Conference in Panama City, Panama in the first week of October. This conference was all about "Giga Projects" focusing upon the Panama Canal expansion and the annual change of ASCE Officers that will serve us this year. Mr. Robert Stevens of Texas was sworn in as our new President with Mr. Mark Woodson of Arizona was sworn in as President-Elect. Our own Jay Higgins also joined the Board of Direction for the Society as the new District 9 Director. I am looking forward to a great ASCE year with their leadership!

While my career in Civil Engineering is at the local level and involves relatively small, albeit very important, projects, I must admit that the "Giga Project" is fascinating and exciting. At the Conference, I attended multiple lectures on all aspects of the Panama Canal expansion covering design-build, construction management, financing and funding, project attributes and the current status of the construction. This was followed by a



tour of the Canal. The tour included a stop at the Visitor Center to see the history of the Canal and the first two sets of original 100 year-old locks. We observed a freighter transported through the gates on its way from the Atlantic to the Pacific. The Panama Canal Authority is responsible for the maintenance and upkeep of the Canal and

they have kept this very old infrastructure in very good shape. We then boarded our bus, crossed the Centennial Bridge, a magnificent cable stayed bridge, and entered into the construction zone to view the third set of locks still under construction. The scope and breadth of this six billion dollar project is staggering and congratulations to all of the participants in this project. The Pacific lock set is immense and will accommodate post Panamax ships when it opens in about 18 months. This is mirrored by the Atlantic lock set. The quantities of concrete and steel, the realignment of the canal, the excavation, water conserving basins and new rolling gates of this entire project challenges the imagination. In the background of the following photograph, you can see the Pacific

Student Day - October 17-18, 2014





CONSTRUCTION INSTITUTE

SACRAMENTO, California – The ASCE–Construction Institute (CI) Sacramento Section hosted its Student Day event on October 17 and 18, 2014 at the Doubletree Hotel in Sacramento, California.

Over 55 junior and senior civil engineering and construction management students from the region's four local universities participated in the event which featured an evening dinner on Friday, panel/breakoutsessions by industry leaders, and a site visit on Saturday.

The event commenced on Friday with a keynote address by United States Army Corps of Engineers (USACE) Brigadier General Mark Toy. Brigadier General Toy delivered an inspirational and motivating presentation that focused on **passion** and the "AURA" concept that makes leaders and people successful. Having passion in what you do is the key to accomplishing whatever you want to do. **Accept** your employees and make them feel welcomed and part of the team. **Understand** your duties and responsibilities. **Recognize** your team for their achievements. Take time to **appreciate** your team and yourself for the hard work put in to completing a project or winning an award.

The Saturday morning session featured an open panel session by four industry leaders including the current ASCE CI National Director Paul Sgambati, PE, Darren Mack, GE (SAGE Engineering), Rick Reinhardt, PE (MBK Engineers) and Steven Hiatt, PE, SE (HDR, Inc.) Paul kicked off the session with his presentation titled "The Road Ahead" which began with a capital "L" which represented the future Leaders of the industry. Darren presented a light hearted discussion in his talk titled, "Things I Wish I Knew As A Student". He emphasized not to be afraid of doing field work and getting hands on experience, traits all engineers should have. Rick talked about his role as a flood plain manager and the ever-present challenges in his presentation, "Flood Management in the Lower Sacramento / Delta North Regional Flood Management Planning Area". Steven provided some tips for success that he has seen over his career which include getting your PE as soon as possible, remaining active in professional organizations (such as ASCE), and make conscious decisions to advance your career. He also talked about getting into the business aspects of engineering, something that is outside of the box of what we typically do on the technical side of our daily work.

Following the morning session, the students attended mid-morning breakout sessions which featured industry engineering and construction leaders. The informal breakout sessions were divided into the various engineering disciplines as follows:



- Construction Management discussion was provided by Thor Larsen, PE (HDR, Inc.) and Andy Gust, PE (Psomas)
- Transportation Engineering discussion was provided by Kevin Thompson, PE (URS Corporation)
- Interview skills and resume workshop provided by Jennifer Powers
- Geotechnical Engineering discussion was provided by Darren Mack, GE (SAGE Engineering)
- Construction and related discussion was provided by Mike Tatusko (Granite Construction)
- Water Resources Engineering discussion was provided by Rick Reinhardt, PE (MBK Engineers)

The morning sessions were followed by a field trip to the Folsom Dam Spillway and Control Structure jobsite hosted by Granite Construction, one of the prime general contractors on the two massive federally funded projects. Participants met with Rob Cheeseman (the project CM) who provided an overview of the project's scope of work and background. The students then met with Lew McIllroy (the project Safety Manager) who discussed the project safety hazards and protocols. The field trip then concluded with a visit to the dam structure and a tour of the jobsite. The chartered buses then transported the students to the Doubletree hotel where the conference was concluded.

This event was sponsored and hosted by CI Sacramento Section. Construction engineering firms such as Magnus Pacific Corporation, Construction Testing Services, The Dutra Group, Granite Construction, and Teichert Construction provided attendees with personal protective equipment. In closing, the CI Sacramento Section would





Locks under construction, note all the cranes, and in the far left distance is the onsite concrete plant producing a reported 500 cubic meters of concrete every hour! Some of our members were also able to take advantage of other tours and I invite you to share your photographs to be placed in future edition of this Newsletter.





In addition to all of the Civil Engineering aspects of the Conference, we had some fun! Thanks to Gidti Ludesirishoti, YMF Committee Chair, for organizing an LA Section dinner at the Restaurante Tinajas where we were treated to local cuisine followed by a Folkloric show by Panamanian dances. In total, 58 LA Section members and their guests joined the dinner, a record number, including quite a few students that were able to make the trip.

Third, the November 5th election was historic as it included overwhelming public support for Proposition 1 to provide over \$7 Billion for Water Quality, Supply, Treatment, and Storage Projects throughout the State. Water projects, without a statewide funding source, are primarily dependent upon ratepayers for local improvements to their system. However, water supply and protection is a statewide obligation and the voters agreed. Region 9 took a support position on this Proposition and many of us performing legislative advocacy recommended to our elected officials that this Water Bond be put forth to a vote of the people. This bond measure will do much to help our water supply in the long term but it will not be enough funding

for all needs and we still have to be vigilant in recommending more funding for infrastructure maintenance, renewal and expansion.

Fourth, and finally, I acknowledge the hard work of the LA Section Sustainability Committee in hosting the Society's Sustainability Conference, November 6-8, in Long Beach. This was quite an accomplishment and over 300 ASCE members from around the world participated in the event. A preliminary session offering was Envision training and a large group of Civil Engineers, including myself, completed the training and are on our way to becoming "Env SP" certified, an Envision Sustainability Professional. This certification will allow us to rate and evaluate the sustainability aspects of infrastructure projects. Sustainability is one of the ASCE Initiatives and we are all responsible for caring for the environment. The Envision system allows infrastructure projects to evaluate their sustainability rating and provoke more thought and discussion on the choices we make in our designs and projects. For more information: www.sustainableinfrastructure.org.

I wish you, and all of your families, a happy and safe holiday season and a great new year!





A Comparison of Two, Similar Civil Engineering Projects 100 – Years Apart

By Joe Buley, P.E., F. ASCE, Life Member



Rare does a civil engineer have the opportunity to see similar projects built 100 - years apart. The opportunity came at the recent ASCE Global Conference in Panama City, Panama. The Global Conference celebrated the 100th anniversary of completion of the original Panama Canal in conjunction with the near completion of the parallel Third Lane and Locks (approximately 78 percent complete).

Originating with the French in 1879, the unfinished canal was sold to the US for \$50 million in 1902, after investing approximately \$250 million. The US completed the canal in 1914 for an additional cost of \$350 million. The US operated the canal until 1999 when the Panama Canal Authority (ACP) assumed control. In 2006, the ACP began construction on the Third Lane and Locks with estimated completion next year at a cost, excluding claims of \$1.6 billion, of \$5.2 billion. Over 1,000 ASCE attendees from 21 countries celebrated this event. Included were approximately 60 members from the LA Section.

The overall length of the canal between the Atlantic and Pacific Ocean is 50 miles. The approach from the Atlantic to Gatun Locks is 6 miles. It is 27 miles across Gatun Lake, 9 miles thru Gaillard Cut and Pedro Miguel Lock, 2 miles across Miraflores Lake and Locks and 6 miles out to the Pacific Ocean. Comparative statics between old and new locks is shown in the below table.

Current and Projected Trade

The below pictorial identifies the strategic location of the Panama Canal in relation to world markets. Clearly, we are a global economy with the US centered in the middle.

Post Panamanian ships carry 5,000 to 8,000 containers. Super Post Panamanian ships can carry 13,200 containers. For reference the Port of Long Beach currently accommodates ships with 8,500 to 10,000 containers. Current Panama Canal tonnage is 188 million tons compared to Port of Long Beach of 63 million tons. Panama Canal with third lane tonnage in 2025 is projected at 508 million tons. In 2005 cargo was 35 percent container, 19 percent dry bulk, 11 percent vehicles and the balance of 35 percent made up of liquid bulk, reefer, cruise ship, general cargo and miscellaneous. Already a fourth lane is under consideration if 2025 traffic projections are met.



Atlantic approach to Gatun Locks via 166 square mile Gatun Lake

Original Canal and Third Lane comparative size and features

Description	Original	Third Lane and Locks
Width	110 feet	180 feet
Length	1050 feet	1400 feet
Depth	41.2 feet	60 feet
Construction	Mass concrete	Reinforced concrete
Gates	Miter – 745 ton (electric drive wheel to hydraulic)	Rolling (3100 ton) – will alleviate maintenance shutdowns
Controls	Electro mechanical	Fiber optic
Ship guidance	Locomotives	Tugboats
Water usage	100 % lost (52 million gallons per ship passage)	Water saving basins (3/5 reuse)
Supporting new construction		
Atlantic approach channel		2 miles
Pacific North access channel		3.9 miles
Borinquen Dam		Separates Third Lane from Miraflores Lake
South access Channel		1.1 miles
Raise Gatun Lake		1.5 feet
Safety	25,000 deaths	Not available???

ARTICLE continued from page 4



In support of the original locks, significant facilities of the original construction are Gatun Dam, Gatun Lake and the Hydro Power Plant.



A conceptual rendering for the Third Lane Lock with water saving basins



Ship transitting Miraflores Lock on the Pacific side



Original General Electric Hydro Power Generators



Actual construction progress of the Pacific side Third Lane Lock



Gatun Dam Original spillway with 14 gates within the 1.4 mile long x 0.4 mile wide (at base) x 85 foot high



A typical massive, lock interior, culvert that controls inflow/outflow of water by gravity to raise and lower the ships. Currently 53 million gallons are used per ship passage. New locks will reuse two fifths less water.



Massive 3,100 ton rolling gates shipped from Italy. Half of gates will be transported from the Atlantic side to the Pacific side thru the existing canal



View of a typical lateral slot in side wall ready to receive two rolling gates



Rock excavation for Third Lane Lock on Atlantic side. Soft excavation is available on the Pacific side.



State Investments and Legislative Update



by Richard Markuson, CA Region 9 Legislative Advocate



The 2015 legislative session is right around the corner, the election is over, winners are congratulating themselves (and their campaign staff) and losers are plotting their next move. The water bond passed but won't help the current drought and worse, if the Scripps Institution of Oceanography study released in November is accurate, California is entering a period of substantially lower snow fall. This study suggests that California may consider "forecast-based"

operations" which allows reservoirs to hold more water in storage when storms are not expected. As part of the Folsom Lake spillway project, the Corps of Engineers is updating its reservoir operations manual that is expected to be finished in 2017. According to the Sacramento Bee, "Corps officials say they aren't yet sure if forecast-based operations will become part of the new rulebook. They are studying the accuracy of historical weather forecasts to determine whether meteorology can safely play a role in operating a major flood-control dam."

Coincidentally, California released the latest update of its comprehensive Water Plan 2013, which looks at California's water needs through 2050. Governments currently spend \$20 billion a year on water – state water officials project spending \$500 billion in investments in the coming decades.

Recent Reports

State Treasurer Bill Lockyer, releases <u>"2014 Debt Affordability Report,"</u> "the last of his eight-year tenure," estimates "bond debt service in FY 2014-15 will consume 7.19 percent of State General Fund revenues, up slightly from 7.13 percent in FY 2013-14. The State in FY 2014-15 will sell \$5.7 billion of bonds backed by the General Fund."

The State Water Resources Control Board has released its report, "Emergency Conservation Regulation Update," findings include large urban water suppliers decreased their August demand by 27 billion gallons compared to August 2013.

California High-Speed Rail Authority releases <u>"Small Business Participation and Jobs Report: Reporting Period: June 1-30, 2014,"</u> analyzes 21 prime contractors "that logged 139,838 man hours worked, resulting in 832 full-time equivalent jobs."

The Legislative Analyst's Office has released <u>"California's State Budget,"</u> an infographic that "presents information about the current state budget (2014-15) and compares the level of spending and revenues assumed in the current budget to historical levels since 1950-51;" says: "As a share of personal income - one broad measure of the size of the California economy - state spending has been

relatively flat since the late 1970s. Spending on health and human services and corrections programs has generally increased over the period, while spending on higher education and transportation programs has generally decreased. Since 1950-51, the personal income tax has replaced the sales and use tax as the predominant source of General Fund revenue."

California State Association of Counties and League of California Cities has released their biennial <u>Local Streets and Roads Needs Assessment</u>, survey confirms "pavement conditions are declining and existing funding levels are insufficient to properly fix and/or maintain streets, roads, bridges, sidewalks, storm drains and traffic signs."

The Little Hoover Commission has released a letter report, "Revisiting California's Energy Future," sent Friday to Gov. Brown and the Legislature, says the state "still lacks a comprehensive and prioritized action plan to attain its energy and environmental goals and minimize costs to electricity customers;" recommends that the Governor, through executive order, direct the state's energy organizations "assess, how much, in the aggregate, recent major policies related to energy will affect electricity rates and reliability and whether these policies are achieving California's goals."

Tripnet released <u>California Transportation</u> by the <u>Numbers: Meeting</u> the <u>State's Need for Safe and Efficient Mobility.</u> "Roads and bridges that are deficient, congested or lack desirable safety features cost California motorists a total of \$44 billion statewide annually—as high as nearly \$2,500 per driver—due to higher vehicle operating costs, traffic crashes and congestion-related delays ... throughout California, 34% of major urban roads and highways are in poor condition. More than a quarter of California's bridges are structurally deficient or functionally obsolete.... Driving on deficient roads costs each California driver as much as \$2,458 per year in the form of extra vehicle operating costs as a result of driving on roads in need of repair, lost time and fuel due to congestion-related delays, and the cost of traffic crashes in which roadway features likely were a contributing factor."

The American Meteorological Society released Explaining Extreme Events of 2013 From a Climate Perspective. "Attribution of extreme events is a challenging science and one that is currently undergoing considerable evolution. In this paper, 20 different research groups explored the causes of 16 different events that occurred in 2013." Three of the groups looked specifically at the 2013-2014 California Drought, and the likely contribution of human-induced climate change. Although the three groups did not agree on whether human-induced climate change could be blamed for the current drought, all three groups' models predicted increasing climate variability for the state, and increasing risk of drought.

The Pew Charitable Trusts released <u>Intergovernmental Challenges</u> in Surface Transportation Funding. "Today, all levels of government

ARTICLE continued from page 6

provide substantial funding for highway and transit infrastructure (referred to here as 'surface transportation' or 'transportation'). Total federal, state, and local spending on surface transportation—which includes roads, bridges, tunnels, and other motor vehicle infrastructure; and buses, subways, commuter trains, and other public mass transit—averaged \$207 billion between 2007 and 2011 (the most recent year for which data are available), equal to 1.4% of the nation's gross domestic product. Of that amount, the federal government provided 25% (\$51 billion); states contributed 40% (\$82 billion); and localities (i.e., municipalities, counties, and local transportation authorities) accounted for the remaining 36% (\$74 billion)." For California, the average spending on surface transportation by level of government is as follows: Federal: \$5.16B (21%, \$140 per capita); State and Local: \$19.24B (79%; \$523 per capita).

The U.S. PIRG Education Fund released Millennials in Motion: Changing Travel Habits of Young Americans and the Implications for Public Policy. This report "is intended to help policy-makers and the public make better informed and more responsive transportation decisions. The changing preferences and habits of the Millennial generation provide a golden opportunity to address many long-standing transportation problems, from traffic congestion to oil dependence and from car crashes to air pollution. The time has come for the United States to take advantage of that opportunity by shifting our transportation priorities in ways that provide a broader range of choices to Millennials and all Americans."

The Transit Center released Who's on Board: 2014 Mobility Attitudes Survey. "The survey, the largest of its kind, sampled nearly 12,000 people from a selection of 46 metro areas across the country, including a mix of 'transit progressive' cities (such as Miami, Denver, Seattle, and Minneapolis) and 'transit deficient' cities (such as Tampa, Dallas, Fresno, and Detroit) revealing several surprising trends about today's public transit commuters: Riders of all ages and in all regions place the greatest value on factors like travel time, proximity, cost, and reliability above safety, frequency, and perks like Wi-Fi when choosing whether or not to take public transportation. There is a high demand for quality public transportation nationwide, but such infrastructure is often missing in the places where people currently live."

Appointments

The Governor made the following appointment:

As chief deputy director at the California Department of Transportation: **Kome Ajise**, 53, Sacramento, no party preference, has served as deputy director of planning and modal programs at Caltrans since 2012.

BPELSG

The Board for Professional Engineers, Land Surveyors, and Geologists Official Notice and Agenda is now available on the Board's website.

Reminder:

Copy deadline for the December 2014 issue is November 1, 2014; copy deadline for the January 2015 issue is December 1, 2014

MATERIALS SUBMISSION INFORMATION

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All graphic materials submitted for use in the ASCE newsletter should have all fonts outlined, and links included; EPS or PDF files preferred. Other formats are Adobe InDesign or Adobe Illustrator (any version); additional acceptable file formats are JPEG or TIFF files (minimum 300 dpi). Images embedded in Microsoft Word documents should be sent separately, at a minimum resolution of 300 dpi at the display size desired. Collected files, including links and fonts, should be compressed and e-mailed, or sent on CD or Zip disk (provide return address). Business cards can be submitted electronically as well, or send clean, crisp, B&W laser print, unfolded. This publication's size is $8\frac{1}{2}$ " × 11".

A Great Idea from the Life Members

The ASCE Life Members' Public Image Committee request that members take their (to be discarded) Civil Engineering magazines to their doctor's office or barber shop and merge them with the stack of magazines. We feel that this will be an effective way to make the general public more aware of what civil engineers do.

National ASCE (800) 548-2723 (ASCE)

Access National ASCE at: www.asce.org

L.A. Section web site at: www.ascelasection.org



www.ascelasection.org

Thoughts From Your New Region 9 Governor



by John Hogan, P.E., M. ASCE



I am very pleased and proud to have been elected to the position of Region 9 Governor. My 3 year term began on October 1, 2014. I am now the Governor representing the Los Angeles Section, joining the three governors representing California's other three Sections, two atlarge governors, and Director Jay Higgins, P.E. Together we comprise the ASCE Region 9 Board of Governors.

A bit about me: I am a native Californian and have been involved in ASCE for over 40 years, dating back to my college days at USC where I served as a chapter officer. Upon graduation, I became involved in the younger member group (called the Associate Member Forum in those days) and served as the 1980-81 Los Angeles Section AMF President. Later, I became active in the Orange County Branch, went through the officer ladder, becoming Branch President in 2005. More recently, in 2011-12, I served as the Los Angeles Section President. In my professional life, I am CEO of Hall & Foreman, a division of David Evans and Associates. I work in Tustin and live in Laguna Hills. My wife and I have seven children and six grandchildren.

Now I am in a new ASCE role – Regional Governor. What do Regional Governors do? In his newsletter column a couple of months ago, Jay Higgins outlined the purposes and objectives of the Board of Governors. In simple terms, we help to carry out ASCE's strategic initiatives within our Region. The 3 strategic initiatives tie to Sustainability, Infrastructure, and Raising the Bar. Added to this are the regional goals and objectives designed to bring direct benefit to ASCE members in Region 9. These include advocating for infrastructure, fostering collaboration among various ASCE groups in the Region, and providing a conduit for communications between the Society and local groups. Each of the Governors is responsible for certain aspects of these goals.

As a Region 9 Governor, I plan to work in alignment with the ASCE Vision to further the Mission and Goals of the organization. I am particularly passionate about the areas of Membership Growth, Infrastructure Advocacy, and Leadership Development.

Membership Growth: Our success as an organization begins and ends with the quality and quantity of members. ASCE is no small organization. Our numbers carry clout and enhance the effectiveness of the organization in advancing its goals, especially with regard to influencing public policy. So, too, does the credibility that we have as Civil Engineers. We are influential now, but imagine if we doubled our membership. With a force of that size, it would be hard to find a public policy maker or legislator, at any level, who would not listen to what we have to say. This might just be enough to convince our leaders to adjust priorities and step up the investment in

infrastructure. As a group, our Region 9 Board can be a champion of statewide membership growth initiatives and work with our Sections to set and attain ambitious membership growth goals.

Infrastructure Advocacy: I strongly believe that one of the most important roles of the Region 9 organization is to advocate sound infrastructure policies at our state and local levels. Having a legislative advocate in Sacramento (Richard Markuson) is important to our effectiveness. So too, are the visits, calls, and messages from our members to our legislators and other elected officials. Several years ago, financial constraints brought on by the effects of the recession, forced the Region to consider whether it could afford a professional advocate. Fortunately, the Sections stepped up and pledged the necessary funding. Today the Region 9 finances are greatly improved. Funding for our advocate is secure and the Region 9 Board of Governors will continue to lead the way and work with the Sections and their subsidiary groups to coordinate and enhance our advocacy efforts.

Leadership Development: I am concerned that, like many volunteer organizations, some of our Sections and Branches are running low on leadership depth. Some of our groups are experiencing difficulty finding members who are willing to step into leadership roles. Also, today's branch and section leaders tend to be younger than was the case a generation ago. While this is encouraging, it appears that leadership in ASCE has lost some appeal to mid-career and late-career members. We need more members willing to step up to leadership roles. As I see it, we want to continue to be attractive to the younger leaders because they bring high energy and ambition. But I would like to see more leadership involvement from our more mature members, particularly those who are in management or executive positions. They bring influence, experience, and financial support that is very valuable. I think it's important for Region 9 to assist the Sections and Branches with programs and strategies that can be implemented to reverse recent trends and grow the numbers and diversity of the organization's leaders.

Over the next three years, working with Section, Branch, Institute, and Chapter leaders and the other Governors, I will strive to make tangible progress in all three of these goal categories. If you have ideas, suggestions, or would like to take part, please contact me at jhogan@hfinc.com.

Thank you for demonstrating your commitment to our profession through your membership in ASCE. The New Year is upon us - don't forget to renew, and consider increasing the value of your membership by taking on an active role in the organization.



Region 9 History and Heritage Committee



By Chuck Spinks, P.E., M. ASCE, Chair, Region 9 History & Heritage Committee



In November, 2013, the Region 9 Board of Governors created the Region 9 History and Heritage Committee to help increase the awareness of Civil Engineering history in California and recognize historic Civil Engineering projects in the State. To cover the geographic area of California we have a representative from each of the Region 9 Sections on the committee:

- Andy Machen, Vice Chair
- Greg Farrand, San Diego Section
- Charlie Kavanagh, San Francisco Section
- Craig Copelan, Sacramento Section
- Bill Lawson, Los Angeles Section

Even though the built environment in California is relatively new, it has an abundance of historically significant civil engineering projects, many of them are "firsts" in the industry. We currently have 14 ASCE National Historic Landmarks:

Alvord Lake Bridge Bidwell Bar Suspension Bridge **Bridgeport Covered Bridge** Colorado River Aqueduct Folsom Hydroelectric System Pelton Water Wheel Sweetwater Dam

Arroyo Seco Parkway **Tustin Blimp Hangers** Central Pacific Railroad Owens River-Los Angeles Aqueduct Golden Gate Bridge San Francisco-Oakland Bay Bridge Tehachapi Pass Railroad Line

Most of these are probably familiar to civil engineers that have been in California awhile, but how many of you have heard of the Alvord Lake Bridge? It was the FIRST reinforced concrete bridge constructed in the U.S. It was constructed in 1889 in Golden Gate Park in San Francisco by Ernest Ransome, who is also credited with inventing the twisted square steel bar reinforcing used for many years in concrete construction. The Committee is looking for more projects like this that we can recognize, and would like the help of our members in identifying historically significant Civil Engineering projects.

The San Francisco and Los Angeles Sections have already celebrated their 100 year anniversaries, and in 2015 it is the San Diego Section's turn. The San Diego Region has many historically significant Civil Engineering projects, from wood plank highways, to dams, to "impossible" railroads. The Committee will work with the San Diego Section and help them to recognize some of these projects on their 100th anniversary.

A longer term project for the committee is preparing for the celebrations that ASCE Region 9 will host in 2019 for the 150th anniversary of the completion of the Transcontinental Railroad. As part of this celebration, a task we are starting now is the relocation of the Theodore Judah Monument from its current obscure location in Old Sacramento, to a more visible location near the railroad, Judah was an ASCE member and his monument was dedicated at an ASCE meeting in Sacramento on April 26, 1930.

The Committee will need help from our members in identifying potential Historic Civil Engineering projects and in preparing for the activities we have coming up in the future. One of our primary goals is to increase the appreciation among our members and of the public with the significant role Civil Engineering had in our history, and we could use your help. Please contact me or one of our Committee members if you have some ideas on projects that should be recognized, or would like to help with one of our other planned activities.

Bi-Monthly Board Meetings



Dav:

1st Friday of February, April, June, August, October, and December

Time:

7:30 am - 10:00 am

Los Angeles Section Monthly: DECEMBER 2014

Location:

ASCE LA Section Office 1405 Warner Ave., Ste B. Tustin, CA 92780

Everyone is welcome



2014 ASCE Los Angeles

























































Los Angeles Section *Monthly:* DECEMBER 2014

Section Award Winners













INDIVIDUALS

President's Award: Mr. Mark Norton, P.E., F.ASCE

Carl Blum Award: Ms. Amber Falk, P.E.

Outstanding Civil Engineer in the Public Sector: George A. Johnson, P.E. Outstanding Civil Engineer in the Private Sector: Cody Briggs, P.E. State Legislator of the Year: Anthony Rendon, Assemblyman 63rd District

Outstanding Civil Engineer in Community Service: Michael J. Howie, P.E. Outstanding Civil Engineer in Legislative Activities: Steven L. King, P.E. Outstanding Civil Engineer in Legislative Activities: Serge M. Haddad, P.E.

Outstanding ASCE Section Officer: Kathereen Shinkai, P.E. Outstanding ASCE Branch Officer: James Winslow, P.E. Outstanding ASCE YMF Officer: Kyle Anderson, P.E. Outstanding ASCE Life Member: Steven R. Marvin, P.E.

Outstanding Practitioner Advisor for Student Groups: Jazz Gilbert Outstanding Faculty Advisor for Student Groups: Dr. Eric Kasper, P.E.

Outstanding Civil Engineering Student: Jose G. Jimenez, Jr.

Outstanding Younger Civil Engineer: Ravi Shah, P.E.

Excellence in Journalism: Joel Kotkin

Lifetime Achievement in Civil Engineering: Michael Kantor, P.E.

PROJECTS

Airports & Ports Project of the Year: Port of Los Angeles, Berths 144-145 Backland Redevelopment

Architectural Engineering Project of the Year:

East Valley Water District Administration Building and Corporate Yard

Bikeways & Trails Project of the Year: San Juan Creek Bike Trail at Pacific Coast Highway

Bridge Project of the Year: North Milliken Grade Separation

Community Improvement Project of the Year: La Brea Avenue Streetscape

Construction Project of the Year: I-215 Segments 1 & 2 – Reconstruction and Widening

Energy Project of the Year: Broadrock Renewable Energy Program – Olinda Landfill

Environmental Engineering Project of the Year: Mill Creek Wetlands

Flood Management Project of the Year: Michael Drive Stormwater Enhancements

Geotechnical Project of the Year: East Garden Grove-Wintersburg Channel

Historical Renovation Project of the Year: The Packing District Land Development Project of the Year: Laguna Altura (PA 18) Parks & Recreation Project of the Year: Spring Street Park

Roadway and Highway Project of the Year: Interstate 5/Crown Valley Parkway Corridor Improvements

Small Project of the Year: Mill House at Mill Creek Linear Park

Small Project of the Year: Pismo Heights Water System Reconstruction

Structural Engineering Project of the Year: Colton Crossing Flyover Rail to Rail Grade Separation

Sustainable Engineering Project of the Year: Santa Ana River Watershed "One Water One Watershed" Integrated Regional Water Management Plan

Transportation Project of the Year: SR91 Widening from SR-55/91 to SR-241/91 Separation

Wastewater Treatment Project of the Year: OC Sanitation District-Plant No. 2 Headworks Replacement

Water Project of the Year:

Los Angeles Aqueduct Filtration Plant Dr. Pankaj Parekh Ultraviolet Disinfection Facility















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Los Angeles Section Monthly ASCE Advertisement





US Army Corps of Engineers®

The U.S. Army Corps of Engineers, Los Angeles District, seeks a Materials Engineer to join the Geotechnical group of our Engineering Division. The work covers projects in Arizona, portions of Nevada, Utah and Southern California.

This opportunity offers qualified candidates the chance to apply their expertise and leadership skills for determining and assessing material requirements for design and construction of large and complex structures such as large multipurpose dams, flood control structures, and military support. Current and planned projects in the District include modification to the Prado Dam spillway utilizing roller compacted concrete; grouted stone, soil cement and sheet pile embankment protection along the Santa Ana river; roadways, bridges, and other infrastructure associated with border security; and concrete flood control structures.

The Materials Engineer duties encompass a variety of work including investigations to determine the suitability of concrete mineral aggregates, base course material, stonework, and general material sources for new and existing Civil Works and Military projects; oversight of the engineering associated with a variety of concrete products such as roller compacted concrete, asphalt petroleum, coal tar products, cements, mortars, grout, soils, sealant, adhesives, metal, epoxies, and paint; inspect commercial laboratories performing contractor quality control testing to determine proper testing of materials is being made.

Qualified candidates will have experience in field investigations, analysis, design, and preparation of plans and specifications for materials products. Additional requirements include:

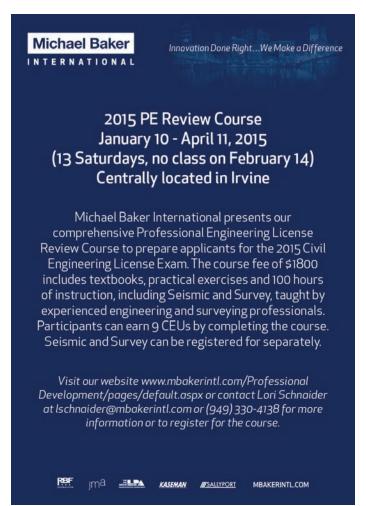
- A professional engineer degree from an accredited four year university.
- Experience in materials engineer analysis and decision making
- P.E. license considered a plus
- Experience in conducting field investigations and laboratory studies as well as performing laboratory inspections
- Technical expertise regarding construction techniques and experience resolving controversial materials problems
- Effective written and verbal communicate skills. Position requires extensive report preparation and other types of written documentation
- Ability to effectively research and document the availability and cost of materials proposed for design

This is a permanent full-time position. Position will be filled at GS-12, annual salary range: \$77,411.00 to \$100,162.00. Excellent benefit programs which may include: comprehensive health and life

insurance, generous retirement programs, paid holidays, sick leave, annual leave, flexible work environment and alternate work schedules, paid employment related training and education, possible payment of licenses, and academic degrees as applicable.

The open period for application is Monday, December 8, 2014 to Sunday, December 21, 2014. To apply, go to www.usajobs. gov and search Keyword "civil engineer" and Location "Los Angeles, California" and view Vacancy Announcement Number WTKC143682811244089D or WTKC143682811244239. It is imperative that the instructions be followed precisely as eligibility determination is electronically determined based on information provided and responses provided during the on-line application process.

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ASCE LA Section Gayle Stewart

1405 Warner Ave., Suite B

Tustin, CA 92780 Phone (714) 258-8306 (714) 258-8391

E-mail: GStewart@associationplanet.com

#### Editor

Dr. Cris B. Liban, P.E.

**LACMTA** 

One Gateway Plaza Mail Stop 99-17-2 Los Angeles, CA 90012

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