

President's Message

Calendar

Sierra Chapter Excellence Awards Ceremony

What's Happening in Elk Grove - October Meeting

Assemblyman Bill Dodd, September Recap

1st Annual Sierra Chapter Excellence Awards

Tim Fleming Memorial Scholarship

ACEC State News

Drake Haglan & Associates, Company Profile

2014-15 Board of Directors



## President's Message

In my opinion, the first Sierra Chapter Engineering Excellence Awards event was a success, and I'm looking forward to helping to make the second one even better next year! The key to the success of our chapter events is participation. Thank you to everyone who nominated projects to be recognized, everyone who worked on event planning (Steve Greenfield, Landon Blake, Kathy Wickam, Debbie LoCicero, and Jane Rozga who initiated the event and who will hopefully be able to participate again next year), and KSN and Psomas for sponsoring the event. It's not too early to start thinking about which of the projects you are working on now would be good candidates for awards next year.

Switching topics: What do you think about the education standards for licensure?

The National Council of Examiners for Engineering and Surveying (NCEES) supports requiring a master's degree or equivalent before initial licensure and the American Society of Civil Engineers (ASCE) developed the Raise the Bar initiative to try to generate support for increasing educational requirements. The primary reason given in support of increasing the educational

*(Continued on page 6)*

## Calendar of Events

Meetings are at the Sacramento Hilton unless otherwise noted.  
Member Cost: \$35 - Non-Member \$50

### Wednesday, October 21, 2015

**Note Different time**

**\*\* General Lunch Meeting \*\***

Speakers: City of Elk Grove, Darrel Doan, Economic Development Director, and Christopher Jordan, Assistant to the City Manager

11:30 am - 1:30pm

<http://acec-ca-sierrachapter10-21-2015.eventbrite.com/>

### Thursday, October 22, 2015

Engineers Without Borders Fundraiser and Silent Auction

6 - 8 pm, Blue Prynt Restaurant  
815 11th St, Sacramento, CA 95814

See attached flyer

### Wednesday, November 18, 2015

**Note Different time and venue**

**\*\* General Lunch Meeting \*\***

**\*\* Red Lion Woodlake \*\***

Speaker TBD

11:30 am - 1:30pm

**No December Meeting**



**Harvey Oslick**

President

## What's Happening in Elk Grove - October Meeting and Speaker Topic

By: Kevin Gustorf, Director



Please join us for our October monthly meeting to hear about the ambitious growth and development plans in Elk Grove. Darrel Doan, the City's Economic Development Director, and Christopher Jordan, the Assistant to the City Manager, will provide a tag-team presentation on the City's current planning and development activities. A few of the City's exciting current projects include the Southeast Policy Area, General Plan Update, and major capital projects, such as the Civic Center and Competition Sports Complex.



Mr. Doan has more than 14 years of experience in public planning, economic development and redevelopment. He joined the City of Elk Grove earlier this year from the City of Alameda, where he served as the City's first Economic Development Division Manager. Prior to his work in Alameda, Mr. Doan served as the Director of Economic Development and Managing Director of Real Estate Development for the Baltimore Development Corporation. Mr. Doan joined the City of Elk Grove at an exciting time, as the City embarks on its most ambitious project to date, development of the Southeast Policy Area (SEPA). The 1,200 acre master plan area is the first

City initiated master plan since incorporation in July 2000, and the largest scale development within the City. Mr. Doan holds a Bachelor's Degree in Political Science from UC Davis, and a Master's Degree in City and Regional Planning from Rutgers University.

Mr. Jordan has spent his 11 year professional career working with numerous California cities and municipalities in various capacities, including having served as the Planning Director for the City of Lone. He has also served as a project manager on a variety of advance planning projects, including zoning codes and development codes, general plans, and design guidelines. He has processed dozens of projects, including variances, subdivisions, rezones, design reviews, and general plan amendments. Mr. Jordan has spent parts of the past 11 years working with and for the City of Elk Grove, formerly as a contract Planning Manager, and most recently in the full-time position he currently holds. In his current position at the City, his focus is on planning and implementing the bigger picture and forward looking projects. Mr. Jordan graduated with a Bachelor's Degree in City and Regional Planning from California Polytechnic State University, San Luis Obispo.

## GET NOTICED IN THE SIERRA CHAPTER NEWSLETTER!

**Would you like to see YOUR FIRM listed in this Newsletter?**

ACEC-CA/Sierra Chapter firms in good standing are invited to submit a company profile for inclusion in this newsletter. **Firms that have not been featured in the last two years are invited to participate again.** Contact Dana Remington, Vice President, for submission details.

### Point of Contact:

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## Assemblymember Bill Dodd, Chapter Engineering Excellence Awards Dinner Recap

By: Steve Greenfield, State Director



The Sierra Chapter kicked off the 2015-16 year with our 1st Annual Engineering Excellence Awards presentation at our September dinner meeting. We had a great group of projects to select from and were pleased to recognize the three projects described on the next page.

The evening's keynote speaker was District 4, Assemblymember Bill Dodd. District 4 is a vast district including all or portions of Lake, Yolo, Napa, Sonoma, Solano, and Colusa Counties. Assemblymember Dodd is currently serving on the Business & Professions, Agriculture, Transportation, Rules, Water, Parks & Wildlife Committees, and he is the Chair of the Assembly Select Committee on Wine. Hopefully our bottle of wine speaker gift met his standards!

Before getting into the main points of his presentation, Asm. Dodd made note that his former experience as a business owner and a Napa County Supervisor has provided him helpful insight regarding the impact of state policies on local governments, state agencies and commerce. His presentation then focused on the history of California's transportation funding and challenges before us, as well as a summary of critical water infrastructure issues facing the state.

His points regarding transportation funding focused on the dwindling gas tax due to a combination of it being a fixed per gallon tax and our goals to reduce our dependency on fossil fuels leading to more efficient vehicles; hence less gasoline being sold. The Governor called a special session to address the transportation funding challenge to find ways to accomplish three key concerns:

- 1) Establish permanent, pay-as-you-go funding.
- 2) Establish performance management incentives.
- 3) Incorporate project development efficiencies to expedite project delivery or reduce project costs.

Asm. Dodd shared that the Governor's proposed annual funding package for transportation is \$3.6 billion, with an emphasis on repairing and maintaining existing transportation infrastructure. However, the current funding shortfall is estimated to be \$100 billion. The Transportation Committee is slated to address the issue in the next session.

In regards to water infrastructure, the Assemblymember noted the success of Proposition 1 authorizing expenditures of \$7.45 billion in general obligation bonds for state water needs. This year's state budget appropriates around \$700 million of the Prop. 1 money. Asm. Dodd recently penned a letter urging the Governor to call a special session on water to provide faster funding for specific water projects; however, this special session was not granted. The dinner group was encouraged to urge the Governor's Office to expedite the distribution of these funds to local communities and projects.

Asm. Dodd acknowledged the great projects that were recognized earlier in the evening, sharing that it was very helpful for him to see the great work being done in the region to improve our infrastructure.

## 1st Annual Sierra Chapter Excellence Awards

**First Place: Nelson Lane at Markham Ravine Bridge Replacement, Lincoln**

### HDR Construction Control Corporation

The project consisted of a 4,000 lineal foot two lane rural road widening, extending from SR 65 north to Nicolas Road in Lincoln. The widening included the challenge of replacing a seismically deficient two lane bridge with a two new single span bridges across Markham Ravine. Ray Leftwich with the City of Lincoln accepted the award and provided a short presentation on the project challenges. Sierra Chapter judges were most impressed by these critical project elements:



- There was a critical need to widen the roadway and bridge due to a tremendous increase in traffic volumes once SR 65 was opened in 2013. Traffic on Nelson Lane increased from 1,200 to 15,000 ADT.
- The existing bridge was subject to flooding from the ravine, seismically unsafe, and clearly overcapacity from a safety viewpoint with the increase in traffic.
- Due to the high volume of traffic, the construction schedule was reduced from two seasons to just 6 months, requiring a highly coordinated design and City team to deliver the project two weeks ahead of schedule.
- Tremendous economic benefit to the City of Lincoln by providing improved accessibility for future development.

**Second Place: Next Move Sacramento Family Shelter Campus, Sacramento**

### Morton & Pitalo, Inc.

The Sierra Chapter awarded the second place to Morton & Pitalo, Inc. for their Next Move Sacramento Family Shelter Campus. The project is an excellent example of the consultant and construction community serving our local community and clients to build a better community. Renovations to the existing family shelter located in Sacramento increased the facility capacity which was in dire need of upgrades and space. Morton & Pitalo, Inc. provided the civil engineering improvement plans, construction assistance and record drawings pro-bono. Wood Rodgers also provided the boundary and topographic survey. In all, more than thirty trades and companies donated labor and materials valued at more than \$500,000 for this project.





## 1st Annual Sierra Chapter Excellence Awards

**Third Place: San Jose/Santa Clara Regional Wastewater Facility 3D Scanning**

**Kjeldsen, Sinnock & Neudeck, Inc.**

In the spring of 2015 Kjeldsen, Sinnock & Neudeck worked with Brown and Caldwell to complete surveys and 3D scans to support the Digester and Thickener Facilities Upgrade Project and the Secondary Blower Building Project at the San Jose/Santa Clara Regional Wastewater Facility. The project was selected for its complexity, benefit to society, and the value delivered to the public agency client.

The project involved the collection of 2 terrabytes of survey data for over 2,100 feet of piping and a 3 story building. It required the 3D modeling of over 550 objects. The project will allow for more efficient treatment of wastewater in the San Jose area. As a testament to the quality of the work performed the client authorized additional surveys shortly after the initial work was completed.



## Tim Fleming Memorial Scholarship – Now Accepting Applications

**By: Marco Palilla, State Director**



Tim Fleming, Sierra Chapter  
Past President, 1995–96

I am happy to announce that the Tim Fleming Memorial Scholarship is now accepting applications! Now in its 5th year, the annual scholarship is awarded to a Junior or Senior majoring in Civil Engineering/Transportation at California State University Sacramento, University of California Davis, or University of the Pacific. Last years winner,

Spencer Ord, was a Sac State student. Applications are due by December 11, 2015.

The official flyer is attached to this newsletter. The scholarship is administered by the California Transportation

Foundation. If you know a college student that qualifies, please pass the flyer on to them.

The Tim Fleming Memorial Scholarship was established in the name of our good friend and Sierra Chapter Past President, Tim Fleming, who passed away unexpectedly in November 2010 at the young age of 51. Tim was a graduate of the University of the Pacific and Stanford University and served our industry tirelessly as a leader and colleague. This scholarship honors his legacy and reminds us all that life is precious.

This year's winner will be selected and then honored at our next Past Presidents Dinner tentatively scheduled for February 2016.

## ACEC State News

By: Christian Anger, Membership Director

### 2016 Engineering Excellence Awards Competition

#### Save the Date

The 2016 ACEC CA Engineering Excellence Awards banquet will be held in San Diego, California at the Hard Rock Hotel on January 28, 2016. Many firms submitted projects that will be judged during the month of November. The Engineering Excellence Awards helps publicize the many significant contributions that engineers and surveyors make in the Industry. Join us to honor the firms for their achievements in design, skill and ingenuity. Click here for the save the date flyer.

Become a sponsor at our upcoming Engineering Excellence Awards Banquet.

Platinum Sponsor - \$4000

Gold Sponsor - \$2500

Silver Sponsor - \$1500

Bronze Sponsor - \$750

For questions, please contact Holly Cole at hcole@acec-ca.org or Sarah Sanders at ssanders@acec-ca.org or call (916) 441- 7991.

### Reforming 'Duty to Defend'

For over 12 months now, ACEC California has been thoughtfully proceeding down the path of initiating indemnity reform. We brought this to the attention of the Governor last summer and talked to state senators and assembly members during our Legislative Visit Day this spring. Now we are seeking your input. Please take a moment to participate in the survey below. We need this information in order to move forward!

[Click here](#) to participate in the survey.

## President's Message continued

*(Continued from page 1)*

requirements is to ensure that engineers have the knowledge and skills needed to effectively meet the challenges of the future.

Another issue used to justify a need for increasing the educational requirements is that a four-year undergraduate engineering degree used to require about 145 credit hours and now generally requires only 128 credit hours.

What is the real problem, or is there a real problem?

Issues that engineers need to address are getting more complicated. Sustainability, adaptability to climate change and resilience to disasters are relatively new concepts that make project design more challenging than in the past. New

technologies are changing the problems that need to be solved and the tools available for project evaluation and design. Engineering is evolving from a process of deriving appropriate solutions from limited information to computing optimized solutions from mind boggling quantities of data. Project requirements and regulations are changing frequently and vary by jurisdiction.

BIM project design, drones, GIS, LiDAR, computational fluid dynamics, GPS and machine guidance for construction are examples of technologies that have advanced engineering since the current industry leaders were in college. Air and water quality regulation are constantly getting more stringent and building codes have been revised. Engineers have been adapting to these technologies and changes

*(Continued on page 8)*



**An ACEC-CA Company Profile**

Established in 2007, Drake Haglan and Associates, Inc. (DHA) is a full service civil engineering firm specializing in the initiation, management, design, environmental clearance, delivery and construction management of transportation infrastructure. As a certified small business, DHA has grown to include 40 full-time technical and administrative staff in three offices that are all focused on transportation projects. We have become one of the largest local transportation-oriented civil engineering firms. Today, we serve local agency clients throughout California.



City College Light Rail Station Pedestrian and Bicycle Overcrossing,  
City of Sacramento



North County Corridor | Stanislaus County

DHA transportation staff is comprised of professional engineers with extensive experience in a wide range of transportation infrastructure work. From large corridor projects with numerous interchanges to local agency widenings in challenging terrain, the DHA transportation team has the know-how to deliver any transportation element a project may require.

Our staff has an unmatched understanding of the local agency transportation project delivery process, and in particular we specialize in projects that are funded through federal transportation funding programs. Our transportation project experience includes interchanges, intersections/roundabouts, local roadway widenings, streetscapes, long expressway corridors, highway, bridges, retaining walls, and transportation planning/feasibility studies. This depth allows for continued reliability, excellent quality control, and the resources to provide a team which is capable of delivering projects on time and on budget.



Capital Southeast Connector, Sacramento & El Dorado Counties

**Company Contact**

Dennis Haglan, PE, President, Founding Partner, Principal Engineer

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## President's Message continued

*(Continued from page 6)*

without increasing course credit requirements for licensure or sacrificing safeguards to life, health, property, and public welfare.

Will more academic courses help solve the perceived problem?

Additional courses could expose students to more current issues and computer tools than if they had fewer classes. But, what would need to be taught will be continuously changing. Not so long ago (okay, maybe it was), engineering students took a drafting class. Computer aided drafting replaced that, and three dimensional computer design and geospatial information systems are now being used. New, complex tools have increased capabilities and efficiencies, but do not necessarily take longer to teach than older methods. It is not necessary or appropriate for an engineer to be taught all of the features of a particular computer program as part of a required curriculum. In a few hours, or maybe a three-day short course, an engineer can gain the knowledge necessary to use a particular tool necessary for a particular assignment. Therefore, while appropriate course work has certainly changed, arguments for educational requirements do not seem to demonstrate that additional coursework will be necessary for an engineer to provide services that safeguard life, health, property, and public welfare.

Student internships should be considered in the discussions about increased educational requirements. Internships have become more common and exposure to real work conditions during education may improve the value and applicability of coursework to a student's career.

No engineer is an expert at all facets of their area of practice. Even within specialties, there are narrow sub-specialties that require advanced education and experience to be qualified to do certain work. The key to practicing engineering is to ensure that you are qualified to do the work that you do, and, if you

are the engineer in responsible charge of a complex project, that all aspects of the project have been designed by engineers that have the qualifications for their respective roles. In my opinion, it is fundamentally more important for an engineer to be able to ask the right questions than it is to know answers in order to provide services that safeguard life, health, property, and public welfare. Maybe classes in asking questions would help the profession. Unfortunately, this "ask the right questions" skill does not come automatically with four years of experience.

When a patient arrives at an emergency room, the patient's life depends on the attending physician quickly taking appropriate steps. The doctor needs to have the ability to immediately take the right actions, without researching articles or consulting with an expert to help with a procedure. Taking the wrong action can be considered to be medical malpractice.

Engineers do not operate like emergency room doctors. As engineers, we need to recognize the need to research articles to find appropriate solutions to unique circumstances, and spend the time to do it. We need to team with experts as needed to fulfill the needs of each project. Engineers need to demonstrate application of an appropriate standard of care. Applying the appropriate standard of care within the schedule and budget constraints of a particular project can be challenging. But, failure to use an appropriate standard of care due to schedule and budget constraints is a management issue, not an educational one.

I've thought about some relatively recent engineering failures in the U.S. and I can't think of any that would likely have been avoided even if each of the engineers involved had had a master's degrees. And, it has been a while since I used anything from the classes I took for my master's.



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