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NATIONAL ENGINEERS WEEK
“Let’s Make a Difference”

*San Diego County
Engineering Council
Presents:*

2014 Awards Banquet
February 28, 2014

Hosted by:
Department of Engineering – USD Sponsor
University of San Diego, California

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San Diego County Engineering Council (SDCEC)
NEW 2014 San Diego Planning Committee

Name	Society	Office, Sub-Committees
Dr. Gerald Gerace	IEEE	Gen Chair, Banquet MC
Jeniene Knight	ASCE	Vice Chair, Awards Chair/MC, E-Day at the Mall Chair
Ken Discenza	CSPE	Finance Chair/Treasurer, Proclamations Coordinator, Banquet Coordinator
Mehdi Khalili	CSPE	Publicity, Webmaster
Cathy Riley	ASCE/SEAOSD	Program Pamphlets, Secretary, Communications Chair
Peter Livingston	CSPE	MATHCOUNTS
Gregory Humora	APWA	Society Rep
Luke Burgan	SHPE	Society Rep
Grady Gordon	NSBE	Society Rep
Martin Miller	AIAA	Society Rep
James Powell	ASME/CSPE	Society Rep, Program Pamphlets
Phillip Young	ASME	Society Rep
Sandi Wong McKellips	SWE, SHPE	Society Rep
Dominic Gerace		Photographer

AGENDA

- 6:00-7:00 pm Reception: Forum at the Hahn University Center**
- 7:00 pm Dinner Served**
- 7:05 pm Welcome and Acknowledgements**
 Dr. Gerald Gerace, IEEE
 NEW SD 2014 General Chair, Banquet MC
- 8:00-8:30pm Awards Presentations**
 Jeniene Knight, ASCE, NEW SD 2014 Awards Chair
- 1) Outstanding Engineer
 - 2) Outstanding Engineering Educator
 - 3) Outstanding Engineering Project
 - 4) Dr. Thomas Avolt Kanneman Outstanding Engineering Service Award
 - 5) Co-sponsored Projects Awards
- 8:30-9:15pm Keynote Speaker:**
Todd P. Coleman, Ph.D., UCSD Bioengineering Dept.
 Introduction by Dr. Gerald Gerace
- 9:15 pm Closing Comments**

NEW 2014 SAN DIEGO SPONSORS

OUTSTANDING CIVIL ENGINEERING PROJECT AWARD (SDCEC/ASCE) Low Floor Stations Program Green Line Extension & Orange Line Improvement Project MTS, San Diego Association of Governments (SANDAG), CH2M HILL



The Green Line Extension & Orange Line Improvement Project is a critical component of the Trolley Renewal Program. The program is a huge undertaking by MTS and SANDAG to modernize the 30-year old San Diego trolley system, enhancing the transit passenger experience with comfortable, efficient and safe service. The Green Line Extension enables single seat service from Santee via Mission Valley to the downtown area. It begins at Old Town and terminates at 12th & Imperial Bayside station via Washington Street, Middletown, County Center/Little Italy, Santa Fe Depot, Seaport Village, Convention Center and Gaslamp Quarter stations. East of downtown San Diego, nine stations along the Orange Line were upgraded, benefitting transit patrons in the cities of San Diego, Lemon Grove and La Mesa. 25th & Commercial, 32nd & Commercial, 47th Street, Euclid Avenue, Encanto/62nd Street, Massachusetts Avenue, Lemon Grove Depot, Spring Street and La Mesa Blvd stations were vastly improved, with tracks reconstructed at two stations. Renovated stations provide FTA compliant platforms for low floor operations and enhanced station amenities. The project improves efficiency in trolley operations, reducing travel time and enabling reliable transfers to bus and other trolley lines, and Amtrak regional and Coaster commuter rail services at Santa Fe Depot.

The Green Line Extension & Orange Line Improvement Project is an outstanding civil engineering project because it enhances the form and function of an existing transportation resource, and a key element in regional mobility. It supports transit as a solution for reducing greenhouse gas emissions and improving air quality in the region. Seamless collaboration between owner, operator, engineers/architects and multiple contractors delivered the complex project successfully and quickly. The team effort demonstrated exceptional skills in architecture, engineering, construction and public/media relations.

The station renovations focused on accessibility and aesthetics. Amenities were designed to be functional and harmonious with the architectural context and character of station surroundings. New custom shade structures and seating provide enhanced passenger comfort. Replacement of failed platform slabs and the use of durable/maintenance-friendly paving systems improved accessibility for strollers and other personal mobility devices. Large duct banks for electrical and communication systems constructed under station platforms enable the installation of video surveillance, "next train" messaging and other service information announcements to patrons. Overall station safety was enhanced with the project improvements and improved trolley operations.

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NEW 2014 BANQUET TABLE PATRONS: Professional Societies

SD Societies: AIAA, ASCE, ASHRAE, ASME, CSPE, IEEE, INCOSE, NSBE, SAME, SEAOSD, SHPE

Universities: USD, UCSD

San Diego County Engineering Council (SDCEC): Official supporters of the annual

NEW SD Activities: AFCEA, AIAA*, AICHE, ANS, APWA*, ASCE*, ASHRAE*, ASM, ASME*, ASQ, CASA/SME, CELSOC, CSI, CSPE*, IEEE*, IESNA-SDS, IIE, INCOSE, SAMPE, SWE. The Chair is IEEE*. The Secretariat is CSPE*.

See: www.new-sandiego.org for more information.

(*Indicates those currently involved in NEW SD 2014)

EVENT SPONSORSHIP: The following organizations have contributed to the success of the National Engineers Week in San Diego with special projects or other assistance:

Engineering Day at the Mall, sponsored by ASCE/YMF, was held on Saturday, February 22, 2014 at the Grossmont Center Mall, 10:00 AM – 4:00 pm. <http://www.grossmontcenter.com/events.html>

MATHCOUNTS San Diego Competition: Was held on February 1, 2014, at the UCSD campus, hosted by CSPE, and other San Diego engineering societies. For more information see: <http://www.mathcounts-ca.org/sandiego.htm>

USD The Forum at the Hahn University Center and USD Catering:

Banquet event planning assistance. <http://peace.sandiego.edu/>

Outstanding Engineering Project (SDCEC) Santa Fe Bridge Pedestrian Undercrossing

**San Diego Association of Governments (SANDAG)
City of Encinitas
T.Y. Lin International**



As the second largest city in California, San Diego is home to 70 miles of world-renowned coastline. Visitors and residents alike enjoy the pristine beaches year-round. Popular surf spots dot the coast in North County, including major surfing destination, Swami's Beach in the city of Encinitas. However, beach and coastal access across the rail lines is limited mostly to major at-grade street crossings. The Santa Fe Pedestrian Undercrossing project improves pedestrian access, circulation, and safety across the San

Diego portion of the busy Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor. It is the first of four planned undercrossings along the corridor, which accommodates more than 50 passenger and freight trains daily on this busy segment of the coastal rail line.

Until recently, reaching this surf haven in Encinitas was dangerous and difficult due to the lack of safe pedestrian access over the nearby rail line and busy Pacific Highway. The nearest crossings to the beach were either half a mile north at E Street or 1.3 miles south at Chesterfield Drive. Unfortunately, pedestrians trespassing through the rail's right-of-way have resulted in fatalities. As such, safety became the most critical factor in envisioning the Santa Fe Pedestrian Undercrossing project. In addition, the project team desired to integrate a context-sensitive design approach, in which the theme for this site was developed with community input to reference the iconic Swami's Seaside Park surf area and the City of Encinitas Highway 101 Corridor Plan. The theme and fundamental issues, such as security, accessibility, railroad operations, construction cost, and architectural and cultural context helped steer the development of the project.

Project sustainability is important to the community and the City of Encinitas. Sustainability efforts included the inclusion of a native and Mediterranean low-water-use plant palette. A bioswale on the site helps the project meet stormwater regulations and is planted with natives that would be found in local creek or watershed areas. The bioswale plant materials serve to help remove silt and pollution from surface runoff water.

In terms of the structural engineering, TYLI chose spans that allow for maximum visibility from outside the crossing. Enhanced visibility addresses the community's desire for a crossing that provides pedestrians safe and spacious access. The three-span undercrossing is 60' long and uses NCTD standard 20" slab girders.

The project was a successful partnership between the City of Encinitas, SANDAG, NCTD, and Caltrans. The new rail undercrossing has significantly improved access to beaches, schools, commercial areas, and residential neighborhoods across a very active rail line.

DR. THOMAS AVOLT KANNEMAN OUTSTANDING ENGINEERING SERVICE AWARD: The award recognizes individuals who have given outstanding professional and/or public service in or for engineering that directly enhances the engineering profession. (SDCEC)

**Eric Kjolsing
UCSD Ph.D. Student in Structural Engineering**

OUTSTANDING CIVIL ENGINEERING PROJECT AWARD: Sponsored by the American Society of Civil Engineers, the award recognizes an outstanding civil engineering project that benefits the public. (SDCEC/ASCE)

**Low Floor Stations Program
Green Line Extension & Orange Line Improvement Project**

**MTS
San Diego Association of Governments (SANDAG)
CH2M HILL**

OUTSTANDING CIVIL ENGINEERING PROJECT AWARD: Sponsored by the American Public Works Association, the award recognizes an outstanding civil engineering project that benefits the public. (SDCEC/APWA)

Allison Avenue – A Complete and Green Street

**City of La Mesa
Kimley-Horn & Associates**