“Driving the Economy Forward with Infrastructure”

CA INFRASTRUCTURE SYMPOSIUM

SEPTEMBER 24, 2020 - VIRTUAL

AWARDS RECOGNITION PROGRAM

Thursday September 24, 2020
1:00 pm to 4:30 pm

Organized by Region 9 and the Sacramento Section of the American Society of Civil Engineers
"Driving the Economy Forward with Infrastructure"

AWARDS RECOGNITION PROGRAM

WELCOME AND INTRODUCTION
Adam Killinger, GE, PE, M. ASCE
   Chair, ASCE Region 9 Awards Committee
Kenneth Rosenfield, PE, F. ASCE
   City of Laguna Hills
   Incoming Director, ASCE Region 9
Kwame Agyare, PE, ENV SP, M. ASCE, Region 9 Director
   Consulting Civil Engineer
   Director, ASCE Region 9

INDIVIDUAL AWARDS

PROJECT OF THE YEAR PRESENTATION
I-5/Genessee Avenue Interchange Reconstruction Project
Location: San Diego, California
Owner: Caltrans District 11
Engineer of Record: Kimley-Horn and Associates, Inc.

PROJECT AWARDS

CLOSING REMARKS

SPECIAL THANKS TO OUR MEDIA SPONSOR

GHD would like to congratulate all the ASCE 2020 Region 9 award winners

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ASCE REGION 9 BOARD OF GOVERNORS 2019-2020

Kwame Agyare, PE, ENV SP, M. ASCE
Consulting Civil Engineer
ASCE Region 9 Director/Chair

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L A County Dept. of Public Works
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Caltrans District 3 Design
Governor – Sacramento Section
# Driving the Economy Forward with Infrastructure

**REGION 9 SECTION PRESIDENTS 2019-2020**

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**ASCE REGION 9 & SACRAMENTO SECTION INFRASTRUCTURE SYMPOSIUM COMMITTEE**

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| Darren Mack, PE, M.ASCE, Water Subcommittee Chair                    |
| David Schwegel, PE, M.ASCE, Transportation Subcommittee Chair (1)   |
| Tapas Dutta, PE, F.ASCE, Transportation Subcommittee Chair (2)       |
| Adam Killinger, G.E., PE, M.ASCE, Awards Committee Chair            |
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| Anne Ettley, ASCE Region 9 Administrator                           |
| Richard Markuson, Pacific Advocacy Group, ASCE Legislative Advocate |

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SPECIAL THANKS TO THE AWARDS COMMITTEE

Kwame Agyare, PE, ENV SP, M.ASCE, Region 9 Director
Consulting Civil Engineer

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Geopier

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Region 9 Administrator

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Joshua Nelson, PE, M.ASCE
CNC Engineering, Inc.

Curtis Edwards, PE, M.ASCE
Retired

Renée Remillard (Graphic Design)
GHD, Inc.

Additional Plaques may be ordered online at www.caisregion9.org
OUTSTANDING CIVIL ENGINEER IN THE PUBLIC SECTOR

John (Jay) Schlosser, PE
City of Tehachapi
Tehachapi, California
Los Angeles Section

Jay Schlosser’s has established himself as an engineer that puts the needs of the community, the visual impact and the long-term planning as priorities in his projects. His work on public projects and the public assets of private development has ensured Tehachapi’s place as the most desirable community in Kern County. A success story coming from the private sector, his desire to help physically change the landscape of a community like Tehachapi has matured Tehachapi into what it is today.

His professional investment also gave way to a personal investment when his family relocated to this community four years ago so he could contribute even more to the community while living amongst the projects he helped create. While engineering is a profession, Jay continues to prove in his work, that it impacts far more than the bottom line, but helps shape a community. The City of Tehachapi would not be where it is today without the insight, professionalism and vision provided by Jay Schlosser and his engineering expertise.

OUTSTANDING CIVIL ENGINEER IN THE PRIVATE SECTOR

Ken Susilo, PE, D.WRE, CPSWQ, ENV SP
Geosyntec Consultants
Culver City, California
Los Angeles Section

Ken Susilo, PE, D.WRE, ENV SP, is the managing Vice President and founding Senior Principal of Geosyntec’s Los Angeles Operation. His 28-year professional career has included innovative award-winning projects for watershed planning and programs, water quality modeling tools, applied research, and stormwater Best Management Practice (BMP) Project implementation. These efforts have been recognized not only by ASCE, but also the California Stormwater Quality Association, American Public Works Association, and Water Environment Federation.

His recent work has focused on planning efforts and engineering projects that support social equity, environmental, and economic benefits. Implementation...
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Efforts have included particular attention to streamlined and optimized alternative delivery approaches that provide true community value. His focus on alternative delivery includes leading statewide efforts (and educational workshops) to explore true public-private partnership (P3) opportunities and risk management strategies. He has also been a key resource in the development of alternative compliance programs for municipal agencies.

Susilo’s efforts also have supported industry-changing funding measures for environmental water quality infrastructure with public agencies. This has included ad hoc educational efforts and fundraising for key ballot measures.

As both a Board Member of the Asian American Architects and Engineers Association and Project Director of a host of public-sector projects, he actively encourages small business participation and professional development, particular for public sector members.

Outstanding Civil Engineer in Community Service

Noe Martinez Diaz, EIT  
City of Lynwood  
Lynwood, California  
Los Angeles Section  

Originally from South L.A., Noe Martinez Diaz witnessed firsthand the lack of resources and health issues in his neighborhood. This inspired him to engage the community to address these issues through volunteering and civic engagement. He strives to use his knowledge and efforts to have a positive impact in the community and grow as a professional in the engineering field.

Outstanding Civil Engineer in Legislative Activities

Ruwanka Purasinghe  
Los Angeles Department of Water and Power  
Los Angeles, California  
Los Angeles Section  

Ruwanka Purasinghe is a Civil Engineer for the Los Angeles Department of Water & Power. Through ASCE, Ruwanka has been involved in numerous Legislative Activities including the LA City Drive In, Sacramento Fly In, and DC Fly In. Ruwanka is also on ASCE’s Committee on America’s Infrastructure who develops the National Infrastructure Report Card, and served as the Inland Waterways Chair for the 2019 California Infrastructure Report Card.
OUTSTANDING SECTION OFFICER

Edward J. Thometz, PE
California Department of Transportation.
Oakland, California
San Francisco Section

Ed is the founder and current Past Chair of the Structural Engineering Institute of ASCE, San Francisco Chapter (www.SEISF.org). Under his leadership, SEI SF Chapter grew steadily and expanded its program in serving the profession, the community and the students. The Chapter holds monthly events, alternating between technical seminars and social events, with activities ranging from technical presentations, construction sites and manufacturing plant tours, beach cleanups, happy hour socials, and student engineering competitions, to name a few.

Ed’s inclusiveness and endless enthusiasm, and his generosity with time and willingness to step in whenever needed, no matter what kind of personal or professional challenges he himself may be experiencing, resulted in a very dynamic and active Board that fully supports the SEI SF vision, which is to inspire and advance the art and practice of structural engineering, develop and implement programs to enhance knowledge exchange, networking, and other professional development and educational outreach activities.

As if that is not enough, Ed is also the current Vice-Chair of ASCE SF Section.

OUTSTANDING BRANCH OFFICER

Fred W. Blickle, PE
Horizon Environmental, Inc.
San Mateo, California
San Francisco Section

Fred’s career has spanned over 30 years in which he has remained active and supportive of ASCE throughout. Not only has he provided technical presentation at ASCE general meetings, he has served as the Chair, now past Chair, of the EWRI for the Section. He has worked diligently to keep the group accessible and relevant by organizing interesting topics for Section.
OUTSTANDING ASCE YMF OFFICER

Chirath “Chuck” Karunathilake
Mark Thomas
Irvine, California
Los Angeles Section

As a Civil Engineer Chuck’s journey has been quite unique. Chuck joined Shimmick Construction in 2015 after graduation, a Heavy Civil General Contractor where he had the opportunity to work on a 1 Billion Dollar Historic Design Build Caltrans Project at the Port of Long Beach; The New Gerald Desmond Bridge Project. He had the opportunity to work with the Civil Team where he was the Project Engineer for Caltrans Permanent and Temporary Roadway & Barriers while also being the coordinator for Temporary Stage Construction and Traffic Handling. After two and a half years on the job, he was responsible for 20 million dollars of work on the Engineering Construction Side in which he coordinated with multiple day/night time crews, superintendents and foremen and other construction disciplines.

Close to 3 years after his graduation Chuck joined his current employer Mark Thomas as a Design Engineer. Within his time at Mark Thomas Chuck has had the opportunity to work as stage construction/ traffic handling & drainage designer for the 101 Freeway widening through Santa Barbra, the 60 Freeway Widening through Potrero. He is currently working on the OCPW Bike Path Loop Seg, John Wayne Airport Landside Improvements & Port of Los Angeles Front Street Improvements.

Chuck attended California State University of Long Beach for his BS in Civil Engineering. During his tenure in he started with the Concrete Canoe Team at CSULB ASCE and eventually became a Co-President for the Student Chapter his Senior Year. After Graduation he continued his involvement with the local YMF group in OC where helped with the University Liaisons Team, Programs Team, Speaker Series Team and eventually led the YMF as President in the 2017-2018 Term. He is currently still active within the YMF Level while also contributing his efforts to the ASCE OC Branch level as a Social Committee Co-Chair by helping plan the Annual Golf Tourney, Awards Ceremony and History Heritage Student Scholarship Night.
OUTSTANDING ASCE PRACTITIONER ADVISOR

Nelson Tejada
MacKay & Stomps
Roseville, California
Sacramento Section

Nelson Tejada is an Assistant Engineer at MacKay & Stomps Civil Engineers where he has worked six years since graduating with a BS in Civil Engineering from Sac State. As a land development engineer, he has experience in subdivision design, master planning and project financing. His current projects include greenfield planning of several Sacramento County specific plans and for subdivision design of the Folsom Plan Area. Nelson is a former president of the Sacramento Younger Members Forum of the American Society of Engineers and continues to support the local Sacramento ASCE student chapter.

OUTSTANDING ASCE FACULTY ADVISOR

Dr. Sudarshan Kurwadkar, PhD, PE
California State University, Fullerton
Fullerton, California
Los Angeles Section

Dr. Sudarshan Kurwadkar is an Associate Professor in the Civil and Environmental Engineering Department at California State University, Fullerton. He is a licensed Professional Engineer and a Board Certified Environmental Engineer. He is a recipient of several awards, scholarships and fellowships including, Teaching Excellence Award; Excellence in Scholarly and Creative Activities Award; Chi-Epsilon Scholarship for academic excellence; Early Career Award, ASEE; Visiting Faculty Fellowship, Department of Energy; Summer Faculty Fellowship, Air Force Institute of Technology; John and Susan Mathes Doctoral Fellowship; and Global Initiative of Academic Networks Fellowship. Dr. Kurwadkar is an amazing ASCE Faculty Advisor, popularly called ‘Dr. K’ and highly regarded by students is an amazing advisor who flawlessly mixes humor and academic rigor and makes learning a pleasant experience. His dedication to student success, personalized attention to student design teams, and student rapport are simply unparalleled. His passion and commitment to student success are widely acknowledged. He is a serious researcher and engages undergraduate and graduate students in research activities and promotes environmental engineering education through field visits, workshops, and field demonstration. His student research presentations have won many distinguished awards at various University System Research Symposium Pathways and conferences. He is deeply committed to the advancement of the Civil Engineering Profession by
providing enhanced learning experiences for undergraduate and graduate students. He is a proponent of demonstration-based learning as recommended by Excellence in Civil Engineering Education (ExCEED) model of ASCE. Currently, he is implementing the National Science Foundation funded $1.5 Million Project to enhance graduation and retention rate of engineering students. His accomplishments clearly bear testimony to his efforts and dedication to student success. Dr. Kurwadkar has a very pleasant personality. Besides teaching and research, he enjoys outdoor activities such as swimming, kayaking, biking, fishing, and long-distance traveling. He has driven cross-country from Los Angeles, CA to Kittery, ME, visiting major tourist attractions all along.

OUTSTANDING ASCE LIFE MEMBER

Philip Earl George, PE
Expert Witness, Partnering Facilitator, Engineering & Construction Consultant, Throughout California Redding, California Sacramento Section

Mr. Philip George has worked in Construction as a Contractor since graduating from Chico State in 1976. Phil's primary focus has been on Heavy Engineering Projects and unfortunately included Construction Claims on State, Federal & Local Projects. Through his service as a Partnering Facilitator, Disputes Resolution Board (DRB) Member or Chair, a Disputes Resolution Advisor (DRA) and/or Arbitrator he has demonstrated skills in resolving disputes inherent in construction. Mr. George joined ASCE in 1974 and has been an active member of Associated General Contractors since 1984. His commitment to our profession makes him an Outstanding ASCE Life Member.

OUTSTANDING YOUNGER CIVIL ENGINEER

Joyce Lin, EIT
AECOM Oakland, California San Francisco Section

Joyce Lin has been an integral and energetic member of the San Francisco YMF chapter. She currently serves as President and was involved in the planning committee for WRYMC 2020 as the Finance Chair. She has previously served as Vice President, Golf Tournament Treasurer, and Philanthropy Chair. Joyce's involvement with ASCE began as a college student when she became involved in the concrete canoe team. Since graduating from college, she has exhibited exceptional dedication to the field of civil engineering through her leadership in SF YMF, her professional performance and commitment to community service. She has made tremendous
contributions in the past 4 years from organizing student outreach activities with local schools, volunteering at the SF-Marin Food Bank and Habitat for Humanity, recruiting new members, and planning technical presentations. As a transportation engineer at AECOM, Joyce has worked on several major transportation projects ranging from grade separation projects, pedestrian and bicyclist undercrossings, express toll lanes, and interchange projects. Joyce received her B.S. in Civil Engineering from California Polytechnic State University, San Luis Obispo.

OUTSTANDING CIVIL ENGINEERING STUDENT

Roshanak Farshidpour  
California State University, Fresno  
Fresno, California  
Sacramento Section

Ms. Roshanak Farshidpour is a distinguished student in CSU Fresno Department of Civil & Geomatics Engineering, graduated in May 2019, and admitted to UCLA for graduate degree expecting MSCE in June 2020. She joined the program as a student of Smittcamp Family Honors College in 2015. She has been the president of SWE and Chi-Epsilon, and an officer of the ASCE Student Chapter. She has contributed to scholarly works in the area of structural engineering, mechanics, and materials with a focus on sustainable and resilient infrastructures. Her scholarly records include internationally recognized journal publications and conference proceeding papers, as well as local presentations. She has also worked as an intern in prestigious local firms, and provided volunteering services to more than twenty community events. She is the recipient of multiple research awards as well as the All University Leadership Award in 2017. Roshanak has already received admission offers from high rank universities, and has begun her graduate studies in the area of structural engineering.
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LIFETIME ACHIEVEMENT AWARD

John C Hogan, PE
David Evans and Associates, Inc.
Tustin, California
Los Angeles Section

John C. Hogan has enjoyed a rewarding 45-year career in civil engineering. He is currently Senior Vice President of David Evans and Associates, Inc. (DEA), a position he was named to in 2014 when DEA merged with Hall & Foreman, Inc. (H&F). John had been President and CEO of H&F since 1996. He joined H&F in 1987 as a project manager. He became a principal/shareholder in 1993, and President/CEO in 1996. He served over 20 years on H&F’s Board of Directors. John now serves on the Board of Directors of DEA’s parent corporation, a $170 million/year firm based in Portland, Oregon. Prior to joining H&F, John held positions of increasing responsibility with the Southern California Gas Company and AC Martin Partners.

During his tenure as H&F CEO, the company made three major acquisitions, grew from two offices to six and increased annual revenue eightfold from 1996 to 2006. He then successfully guided the company’s turnaround after the recent recession when revenues fell 85% in three years. John helped create H&F’s company culture that stressed “Heroic Client Service”, while also becoming a perennial Best Firm to Work For.

Throughout his career, John has maintained a hands-on project involvement. He has led the planning, engineering and surveying for projects involving more than 100,000 homes; tens of millions of square feet of retail centers, office buildings, and industrial facilities; hundreds of miles of roadways and other infrastructure; and scores of school, college, and civic facilities throughout southern California and beyond. Signature projects include Village of Heritage in Fontana, Ladera Ranch in south OC, and the new NFL stadium at Hollywood Park in Inglewood.

John has a BSCE from USC and a MSCE from CSULB. He is a registered Civil Engineer and a Life Member of ASCE. He has been active in ASCE since his college days. Over the years, he has held top leadership positions at the YMF, OC Branch, LA Section, and Region 9 levels of ASCE. He has also served on the boards for a variety of industry, non-profit, community, and academic organizations. In 2018, he was named Lifetime Director of the OC Chapter of the Building Industry Association. He served two terms as chair of the YMCA of Mission Viejo. John is currently co-chair of ASCE’s 2019 California Infrastructure Report Card, which was released in May 2019.

John has received multiple personal and project-related awards from ASCE, ACEC, OCEC, and APWA. His ASCE honors include the 2011 Engineer of the Year from the OC Branch and the 2012 Section Officer of the Year from Region 9.

John resides in Laguna Hills. He and his wife Becky have seven children and ten grandchildren. He enjoys playing and watching outdoor sports, coaching youth athletic teams, travel, and hiking. He also spends an increasing amount of time each year at the family’s vacation cabin in central Oregon.

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PROJECT OF THE YEAR
I-5/Genesee Avenue Interchange Reconstruction Project
Location: San Diego
Owner: Caltrans District 11
Engineer of Record: Kimley-Horn and Associates, Inc.
Los Angeles Section

The Interstate 5 (I-5)/Genesee Avenue Interchange Reconstruction Project is a premier project in the San Diego region that, through a unique partnership, incorporated freeway, active transportation, and complete street elements to improve mobility for all users. The project is in an area where accessibility and mobility are critical to the continued economic health of the region (the community boasts the second largest concentration of business/employment in the region) and to the mobility of people and goods across state lines and internationally. This project was an integral piece of the broader improvements planned along I-5 in the North Coast Corridor. The existing six-lane Genesee Avenue overcrossing was replaced with a ten-lane structure with bike lanes and 8-foot sidewalks. Along with the replacement of the overcrossing, the project replaced the freeway access ramps at Genesee Avenue and Roselle Street to provide more capacity, ramp meters, and HOV bypass lanes. The project widened the freeway to provide an auxiliary lane in the northbound direction on I-5 between Genesee Avenue and Roselle Street to improve weaving conditions. The project eliminated the need to allow bicycles on the freeway shoulders and constructed a Class I multi-use path with a grade separated crossing, using a unique horseshoe pedestrian bridge over Genesee Avenue. This multi-use path provides a critical link connecting the Trolley at UCSD to the Sorrento Valley Coaster Station and will be a vital piece of the paths needed to connect Mission Bay to Carmel Valley.

The recently completed project has reduced congestion and greenhouse gas emissions and improved level of service along Genesee Avenue and at the interchange, which was previously failing operationally. It did this while also accommodating complex projects to be built simultaneously or in the future, including I-5 North Coast Corridor improvements and the Mid-Coast light rail line. The project has improved access and safety within the University Community Area for people biking, walking, and accessing transit. By providing links to transportation, employment centers, hospitals, and UC San Diego, the completed project has greatly improved the movement of people and goods through the area.
OUTSTANDING AIRPORTS & PORTS PROJECT

San Francisco International Airport Long Term Parking Garage No. 2

Location: San Francisco, California
Owner: San Francisco International Airport
Engineer of Record: Langan Engineering and Environmental Services, Inc.
San Francisco Section

As part of the San Francisco International Airport (SFIA) strategic plan to increase long-term parking capacity, SFIA is adding more than 3,000 long-term parking spaces for travelers. In 2018, SFIA experienced significant passenger growth, surpassing 57 million passengers. The Airport needed to address current and future parking capacity needs, as they were expecting to lose approximately 800 on-airport parking spaces due to other construction projects.

To address increased passenger growth and remedy parking capacity shortfalls, a new 6-story, 1.2 million SF parking structure with 3,600 stalls was designed to double the capacity of existing longterm parking and ensure airport passengers can always find a parking space.

This project is significant because it is the first technologically innovative parking structure at San Francisco International Airport (SFIA). The garage has an Automated Parking Guidance System, infrastructure for 20% electric vehicle charging, variable message signage, and wayfinding. The structure is a certified green Parksmart garage, and will achieve net-zero energy consumption via the use of photovoltaic panels, potentially non-potable water in the concrete mix, and other sustainability features. This facility includes a pedestrian and vehicle bridge that connects to the adjacent garage, and amenity spaces for baggage drop off, dry cleaning, valet parking, car wash, and kennel services.

The success of this progressive design-build project relied heavily on teamwork and innovation and a commitment to safety and social responsibility. The team completed the project on schedule, within budget, at high quality and safety and exceeded the local business and apprenticeship goals. Langan provided geotechnical and environmental engineering services through design and construction for this design-build project. Our team provided recommendations for the geotechnical and seismic aspects of the design and foundations, and recommended a ground vibration study to reduce the potential for vibration transmission to the sanitary sewer force main.
OUTSTANDING ARCHITECTURAL ENGINEERING PROJECT

ICE Block I
Location: Sacramento, California
Owner: Heller Pacific
Engineer of Record: Buehler Engineering, Inc.
Architect: RMW Architecture and Interiors
Sacramento Section

ICE Block I is the reincarnation of the historic ice manufacturing facility which was destroyed by fire on the same site. The new structure is an elegant blend of architecture and structural features, and now hosts retail and restaurant tenants on the concrete first floor, with office tenants on the second through fourth floors. Exposed heavy timber structure for the upper floors serves to recreate the character of the original historic building. The fourth floor “mezzanine” layout provides a 30-foot tall volume with expansive views of downtown through the full glass curtainwall. The second floor includes post-tensioned concrete transfer girders to adjust the column spacing to accommodate the basement parking layout. Exposed braced frames on the exterior of the north and south façades further serve to create a functional expression of the architecture.

OUTSTANDING BIKEWAYS & TRAILS PROJECT

Royer Park to Harding Boulevard Bike Trail Segment 3 Project
Location: Roseville, California
Owner: City of Roseville
Engineer of Record: AECOM
Sacramento Section

This project completes the last 650-feet of the Miner’s Ravine Trail, which runs along Dry Creek from Sierra College Boulevard to Royer Park, at the new Fire Station on Lincoln Street. This is an important connection in the City’s Downtown Bridges & Trail Project, which will result in a continuous 6-mile off-street trail through Roseville. The trail bypasses a hazardous at-grade crossing on Folsom Road by realigning the trail under the bridge over Dry Creek. The project required over 200-feet of gabion basket and cast-in-place retaining walls to maintain the trail grade along the creek bank. The CIP retaining wall features aesthetic treatment to match existing patterns and colors along the trail. Both environmental, nesting bird, and sensitive species monitoring was conducted. This project also included some property owner encroachments and provided for access to their properties throughout the project. Construction costs came in at $130,000 under budget!
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OUTSTANDING BRIDGE PROJECT

Gilman Drive Bridge
Location: La Jolla, California
Owner: UC San Diego
Engineer of Record: Moffat & Nichol Los Angeles Section

Over 40 years in the making, the Gilman Bridge unifies the UC San Diego campus with an elegant and modern concrete arch across the busy I-5 freeway. The 406-foot-long, prestressed concrete bridge carries three vehicle lanes, two bike lanes, and ample sidewalks for pedestrians. The landmark bridge is symbolic of the world class and cutting-edge research conducted on campus and serves as a visual cue to the public that they are now at UC San Diego!

OUTSTANDING COMMUNITY IMPROVEMENT PROJECT

Pine Avenue Community Center Park
Location: Carlsbad, California
Owner: City of Carlsbad
Engineer of Record: BergerABAM Los Angeles Section

The Pine Avenue Community Center and Gardens project was designed to bring people of all ages together in Carlsbad. Set on a 7.7-acre site in the City, it features a new 18,000 square-foot, two-story, multi-generational community center, botanical/ornamental garden, and community garden. The $11 million project was designed to create a visual and physical connection to the existing senior center, highlighting an intergenerational component important for residents of all ages.

Sustainable features contribute to the City’s Climate Action Plan and include photovoltaic panels, designs that take advantage of natural lighting, and smart lighting and temperature controls. In addition, solar panels and EV charging stations were installed in the new parking lot which features a pervious pavement filtration system that filters rain and runoff before it percolates into the ground. The porous concrete pavement encompasses a large area of the project site, capturing storm water runoff in infiltration trenches that go directly into the Pacific Ocean approximately 2600 feet away.

The outdoor space features are sited on a 1.5-acre plot of land in the southwest corner of the park and include an ornamental garden with a community plaza, shade structure, drought tolerant plantings, picnic areas, artwork, a water feature, and seating. Community garden spaces feature raised beds leased to residents for growing flowers and vegetables, as well as demonstration beds for teaching, and two ADA-compliant beds. A welcoming entry lobby features a wall of photos.
capturing notable events in Carlsbad’s history. The multipurpose gymnasium is highlighted by striped hardwood courts used for regulation high school sports and pickleball. In addition, a low climbing wall spans one side of the gym. The space also includes a teen center, community/activity room and administrative spaces.

OUTSTANDING CONSTRUCTION PROJECT

I-5 HOV Improvement Project between Avenida Pico and Avenida Vista

Location: San Clemente, California
Owner: Orange County Transportation Authority
Engineer of Record: Parsons
Los Angeles Section

The I-5 / Avenida Pico Interchange Project consisted of the vertical and horizontal realignment and widening of the I-5 freeway and ramps, the horizontal realignment and widening of Avenida Pico, and various retaining walls and drainage improvements. The I-5 freeway was widened to provide for an HOV lane in each direction and auxiliary lanes for all the Avenida Pico ramps, improving freeway operations. The I-5 freeway was raised 9 feet to increase sight distance and flatten freeway grades. Avenida Pico was widened to include dedicated turning lanes for the freeway ramps and straightened to improve operations and safety.

OUTSTANDING ENERGY PROJECT

Sycamore to Peñasquitos 230kV Transmission Line

Location: San Diego, California
Owner: SDG&E
Engineer of Record: NV5, Inc.
Los Angeles Section

The Outstanding Energy Award goes to San Diego Gas & Electric and NV5 for the Sycamore to Peñasquitos (SX-PQ) 230kV Transmission Line project in San Diego County, CA. The new 15-mile electric transmission line improves the reliability of the transmission grid in Southern California and enables delivery of renewable energy generated in the desert areas east of San Diego to the load centers in the coastal regions where the power is in demand. The project, which traversed congested city of San Diego streets and crossed the 8-lane Interstate 15 freeway (I-15), used innovative approaches to solve obstacles encountered during the design and construction of the project. In addition to increasing energy reliability and efficiency, the project provides value to the public and environment because the underground transmission line is environmentally superior, more aesthetically pleasing, safer, and presents a very low fire risk since it is contained underground.
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OUTSTANDING ENVIRONMENTAL ENGINEERING PROJECT

Wallace Weir Fish Rescue Facility
Location: Yolo County, California
Owner: Reclamation District 108
Engineer of Record: Kjeldson, Sinnock & Neudeck, Inc.
Sacramento Section

Sacramento River winter-run Chinook salmon are particularly important among California’s salmon runs because they exhibit a life-history strategy found nowhere else on the West Coast. However, their population numbers have crashed in abundance from nearly 120,000 adult spawners in 1969 to a low of 186 spawners in 1993. Therefore helping winter-run salmon reach their spawning grounds is critical to the recovery effort for this species. The California Department of Water Resources (DWR) asked RD 108 to lead the planning, design and construction of a project to replace the Wallace Weir temporary berm with a permanent structure which would more effectively block fish from entering the Colusa Basin Drain. The project would also need to include a fish rescue facility so fish arriving at the Wallace Weir via the Yolo Bypass could be safely and effectively rescued and returned to the Sacramento River to resume their migration to upriver spawning grounds.

RD 108 selected Kjeldsen, Sinnock & Neudeck, Inc. (KSN) to lead the project planning, design and implementation. KSN was the prime consultant for the project, providing project management, grant administration, engineering design, and construction management and inspection for the project.

The project consists of constructing a permanent concrete weir structure with a fish barrier and a fish rescue facility. The Wallace Weir Fish Rescue Facility is a one-of-a-kind, highly complex structure which required

OUTSTANDING FLOOD MANAGEMENT PROJECT

West Sacramento Levee Improvements Program – Southport Early Implementation Project
Location: West Sacramento, California
Owner: West Sacramento Flood Control Agency
Engineer of Record: HDR, Inc.
Sacramento Section

The Southport Levee Improvement Project is a three-phase multi-benefit flood and ecosystem enhancement project that constructed 5.6 miles of flood risk-reduction measures along the Sacramento River South Levee, in the southern section of the City of West Sacramento, and restores this segment of the City’s levee system to at least

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200-year level of flood protection. Measures included a combination of 1.8 miles of fix-in-place levee improvements and a new 3.8-mile-long setback levee with cutoff walls, seepage berms, demolition, rock slope protection, utility relocation, and the use of borrow sites. Project transportation improvements included realigned roadways, new access roads and driveways, turnouts, cul-de-sacs, and maintenance corridors. Flood risk-reduction measures constructed addressed deficiencies of through-seepage, under-seepage, slope stability/geometry, erosion, encroachments, and noncompliant vegetation.

Phase I – Relocation Project was completed in 2016; Phase II – Levee/Flood Improvement Project was completed in 2018; Phase III – Restoration Project, the final phase of the project, is on schedule to begin construction in 2019 and will be completed in the summer of 2020 with the installation of more than 80,000 trees, shrubs, and other understory material.

In addition to providing a superior level of flood protection, the Project created approximately 150 acres of mixed floodplain and riparian habitat in the area between the new setback levee and the existing/remnant levee of the Project. This area provides floodplain restoration benefits to wildlife and native fish species. The restored floodplain area will enhance the ability of the River to meander into and across the floodplain, distributing soils and nutrients that sustains riparian vegetation and aquatic species.

The Southport Project also creates a host of recreation opportunities, including recreation trails/paths, views of the river and floodplain created by the setback levee, pedestrian-level habitat viewing, fishing, bird watching, and reconnections of cultural resources to the River.

OUTSTANDING GEOTECHNICAL ENGINEERING PROJECT

Chase Center
Location: San Francisco, California
Owner: Golden State Warriors
Engineer of Record: Langan Engineering and Environmental Services, Inc.
San Francisco Section

Chase Center, the new home of the Golden State Warriors, is a world class, state-of-the-art sports and entertainment destination. This project brought the Golden State Warriors back to San Francisco and contributes to the continued transformation of the Mission Bay district of business, technology, housing, and healthcare enterprises. The multi-purpose event center provides seating for 18,000 fans, has a view deck and two public plazas, and includes 580,000 SF of office/lab, event space, retail, restaurants, and underground parking. Chase Center anchors an 11-acre mixed-use district adjacent to a 5½-acre public waterfront park.

The modern design and theme of this planned development is a stark difference from its historic land use. The Mission Bay area has undergone several transformations, from its tidal cove beginnings 5,000 years ago, to the Gold Rush era in 1849, to a shipyard
and industrial zone in the 1900s. From 1860 to 1910, thousands of cubic yards of sand, rocks, dirt, and debris from the 1906 earthquake were used as fill to create more land for the growing city. Because of prior land use, poor soil conditions were present at the site, which complicated today’s design and construction of the Chase Center.

Langan engineers provided geotechnical, environmental, and civil excavation consulting services and helped address the soil conditions. Langan, the design team, and the construction team brainstormed solutions that included out-of-the-box ideas on foundations, cutoff wall design, soil treatment, and dewatering system design. We describe some of our solutions below.

In order to fit all the programming into the site, an excavation as deep as 30 feet was required. This depth and size of the excavation are unprecedented in Mission Bay and presented challenges with dewatering, maintaining a stable subgrade, and supporting the excavation.

The support of excavation system required a laterally restrained cement deep soil mixed (CDSM) cutoff wall along the entire perimeter, with an internal shoring wall where depth of excavation changed within the site. The CDSM wall also cut off groundwater into the excavation with panels extending into the low permeability Bay Mud. In the site’s southwest corner, the bottom of Bay Mud was shallower, and the highly permeable Colma Formation sand was exposed at the bottom of the excavation. This resulted in the perimeter CDSM panels being designed to extend deeper into the bedrock to cutoff the water. An internal CDSM wall extending to bedrock was constructed to create an isolated zone in the southwest portion of the site in which the groundwater could be drawn down into the Colma Formation sand.

For foundation support, a combination of large-diameter drilled shafts and augered cast-in-place piles were used. Due to the extreme variation in subsurface conditions with bedrock as shallow as 30 feet and as deep as 130 feet, total length of pile and/or embedment in bedrock needed to be identified on a case-by-case basis during construction. Langan developed a decision matrix for each field representative to determine in real time the required length/embedment to achieve the required capacity. We worked with the contractors during installation to develop a system whereby the reinforcement could be fabricated and installed in a timely fashion. Chase Center opened in time for the 2019-2020 NBA season.

OUTSTANDING HISTORICAL RENOVATION PROJECT

Pier 70 20th Street Historic Corridor
Location: San Francisco California
Owner: Orton Development
Engineer of Record: Langan Engineering and Environmental Services Inc.
San Francisco Section

Located within the National Register’s Union Iron Works Historic District, the Pier 70-20th Street Historic Corridor served as a major center for the premier West Coast shipbuilding company, Union Iron Works. It operated during the Spanish American War, WWI, and WWII. Being abandoned and deteriorating over decades resulted in...
an urgency to save the buildings, which are considered to be the most intact 19th-century industrial complex west of the Mississippi. The 20th Street Corridor became the fastest master planning project in the City’s history – from project approval to start of construction in six months.

Totaling over 200,000 SF, the Corridor consists of Union Iron Works Machine Shop – Building 113/114; Powerhouse – Building 102; Union Iron Works Office Building – Building 104; Union Iron Works Foundry – Building 115/116; and Heavy Warehouse – Building 14.

Two extraordinary challenges were the foundation design along the historic shoreline and integrating the new structural system into the existing structural system. The structure’s historic fabric had to be maintained while balancing structural and seismic safety. This demanded extensive coordination among the contractor, engineers and architects.

Building 113/114 anchors the former shipbuilding complex. Because no two parts of these structures are symmetric, field verification for nearly every new above-grade element and exploratory excavation for every below-ground element was required. Also, the buildings are seaward of the historic shoreline and are underlain by as much as 30 feet of fill susceptible to liquefaction and compressible Young Bay Mud. In other areas, bedrock is relatively shallow. A foundation system that included a combination of shallow footings into bedrock and micro-piles joined by grade beams allowed new columns to be placed in the architecturally desirable locations. The new foundations are next to, or even span over, existing foundations. Over 100 micropiles were installed within the various buildings at the site. Regarding the structural elements, new long-span steel bridges were incorporated. The bridges serve a key role in seismically linking the mezzanines throughout the building. This allows the building to behave more uniformly in a seismic event. NYASE performed a linear dynamic analysis of the seismic system. A global, capacity-based design approach was incorporated by designing the diaphragms, connections, beams, columns, and foundations based on the braces’ capacity. This allows the braces to act as the fuse in the seismic-force-resisting system while protecting other elements.

Completed in 2018, Building 113/114 and its annexes offers space for office, commercial, and light industrial. The center of Building 113/114 is today open to the public and links 20th Street to an internal public piazza for community events.

OUTSTANDING PARKS & RECREATION PROJECT

Orange County Great Park Sports Complex
Location: Irvine, California
Owner: City of Irvine / Five Point
Engineer of Record: Hunsaker & Associates
San Francisco Section

Situated in the Orange County Great Park, this multi-faceted sports and recreation complex encompasses 194 acres, and is the largest park west of the Mississippi, 3x the size of Disneyland. It reflects an exceptional public/private collaborative by the City of Irvine.
and FivePoint, developer of the adjacent Great Park Neighborhoods master-planned community. In concert with their outstanding project team of design, engineering, construction, landscaping and technical professionals, the City and FivePoint have created an extraordinary amenity for the Orange County Great Park.

An unmatched sports and recreation hub, the Great Park Sports Complex brings new opportunities to all residents of Orange County, with fields and facilities that serve a spectrum of sports enthusiasts. Such comprehensive and centralized public sports facilities are rare in our country, and the attention to integrated design and superior functionality and connectivity has generated a totality that is at the highest level.

The new sports park features professional, world level facilities for soccer and tennis. A mini-version of world level stadiums, the soccer stadium incorporates seating and amenities for 2500. Tennis courts meet national and international tournament criteria.

Flex fields complement dedicated use fields that include those for soccer, baseball, softball, volleyball and tennis. Accommodating year-around club sport tournaments, the complex eases the demands on local families to drive to Los Angeles, Riverside and San Diego counties, and other distant points for their children’s tournaments.

Also among built and planned amenities and attractions are: a children’s exploration playground, event lawns, pedestrian promenade, sporting plaza, pedestrian trails, bicycle paths, family barbecue area, memorial gardens, dog parks, a children’s fun zone, public respite areas and a maintenance facility.

In addition to scheduled uses, the park accommodates open play and drop-in opportunities that expand choices for all. Thoughtful pedestrian routes connect all interior points. Sequenced perimeter parking optimizes convenient access to all use areas.

**OUTSTANDING ROADWAY & HIGHWAY PROJECT**

**Truxton Avenue Operational Improvements**

**Location: Bakersfield, California**

**Owner: City of Bakersfield**

**Los Angeles Section**

The $8 million Truxton Avenue Operational Improvements project added a lane in each direction on a busy commuter route, improved safety by modifying a curve and constructing a right turn deceleration lane at Westwind Drive, and widened one of the busiest intersections in Bakersfield, California’s ninth largest city. Truxton Avenue is one of the most heavily-traveled arterials within metropolitan Bakersfield. Following the construction of a new freeway that opened in 2013, this 4-lane section of Truxton Avenue became a daily bottleneck for commuters.
With a daily traffic count of more than 50,000 vehicles and few alternatives for east-west travel to and from downtown, it was necessary to keep all lanes open during daytime hours. The majority of work was performed at night, except for the section of roadway bordering residential homes where night work was impractical. Unavoidable daytime lane closures were limited to no-peak hours with advanced public notification.

Due to the proximity of established businesses along the north side of the roadway, construction was pushed to the south side of Truxton Avenue. At the State Route 99 undercrossing, an existing embankment was replaced with a tie-back wall to create the necessary space for the new lanes. Truxton Avenue was also lowered beneath the undercrossing to meet Caltrans' current vertical clearance standards.

Construction of an extension for existing Carrier Canal culvert was constrained into a 30-day shutdown while still in the rainy season. To meet the deadline, crews were scheduled around-the-clock and the canal work was completed with a week to spare.

The Truxton Avenue Operational Improvements project was managed by the Thomas Roads Improvement Program (TRIP), a unique partnership between the City of Bakersfield, County of Kern, Caltrans and the Kern Council of Governments. This partnership provides a structure whereby staff from each agency build inter-agency work cooperatively to evaluate, design and ultimately construct major transportation improvement projects. Housed together in one office and working closely with projects' consultants, TRIP’s multi-agency staff approaches project issues for diverse viewpoints, draws upon a wealth of expertise, and works as a team to find solutions and expedite project completion.

During construction, the team expands to include the contractor, construction management consultants and the utility representatives (as necessary). Weekly meetings provided a forum in which challenges are met head on and addressed at the table. This spirit of cooperation advanced the completion date by four months, and the completed project has improved traffic flow and significantly reduced congestion in and out of downtown Bakersfield.

OUTSTANDING SMALL PROJECT

Central Avenue Bridge
Location: Newark, California
Owner: City of Newark
Engineer of Record: Cornerstone Structural Engineering Group, Inc.
San Francisco Section

The Central Avenue Bridge Project included the construction of a new 64 foot long clear span prestressed concrete voided slab superstructure. The bridge spans over an environmentally sensitive channel operated by the Alameda County Flood Control District. Precast construction was selected to limit environmental impacts that would have been caused by temporary falsework and construction equipment needed for cast-in-place construction located in the channel. Improvements to the roadway adjacent to the...
bridge included construction of a traffic circle. Due to the proximity of the bridge to a proposed traffic circle, the bridge was required to have curved edges of deck to match the geometry of the traffic circle. This curved geometry was achieved with a custom designed and fabricated triangular-shaped precast concrete element supported on two sides by the abutment and a ledge fabricated into an adjacent precast slab. After much discussion between the Owner, Engineer, and precast subcontractor, and to ensure uniform bearing of the custom element on the ledge fabricated into the adjacent precast slab, the precast subcontractor fabricated the element using the “match-casting” technique. The Project was managed by William Lyon Homes, Civil Engineering was performed by Carlson, Barbee & Gibson, Structural Engineering was performed by Cornerstone Structural Engineering Group, and Geotechnical Engineering was performed by ENGEO. Construction of the bridge began in May 2018 and was substantially completed by November 2018.

OUTSTANDING STRUCTURAL ENGINEERING PROJECT

Jaye Street / Tule Bridge Rehabilitation
Location: Porterville, California
Owner: City of Porterville
Engineer of Record: TRC Engineers, Inc.
Los Angeles Section

Jaye Street is a major thoroughfare in Porterville, CA, connecting local roadways to Highway 190 and the surrounding commercial district. For years, traffic bottlenecked where the roadway crosses over Tule River. To improve mobility, the city completed a long-planned infrastructure improvement that expanded the number of traffic lanes from 2 to 4 and enhanced pedestrian and bicycle access. TRC served as the prime consultant and bridge designer, providing widening, scour countermeasures and seismic retrofitting of the original structure built in 1970, as well as retaining walls and a culvert. Design features included:

- 49-foot deck widening with 5-foot-wide barrier-protected sidewalks
- Abutment reinforcement, new approach slabs, and bridge column lengthening for seismic protection
- Cast-in-place concrete box culvert and headwalls to help convey an irrigation source
- Pile-supported retaining walls along the newly aligned Tule River Parkway recreational trail
- Widening of the bridge approaches
- Utility conveyance across the bridge

TRC collaborated with a multidisciplinary team and coordinated with multiple agencies to meet design requirements, maintain traffic flow during construction and secure federal funds.
LADOT Downtown Bus Maintenance and CNG Fueling Facility
Location: Los Angeles, California
Owner: City of Los Angeles
Engineer of Record: Gonzales Goodale Architects
Los Angeles Section

The LADOT Bus Maintenance and CNG Fueling Facility is located at 454 E. Commercial Street, Los Angeles, CA 90012. The project consists of a maintenance and operation building, a service building with CNG fueling stations, a bus wash building with recycled water system, a bus parking lot with solar panel shade structures and bus charging stations, and a parking structure. The detailed project scope includes:

- a 2-story, 21,625 square-foot (sq-ft) maintenance and operation building;
- a 1-story, 4,550 sq-ft bus service building with CNG fueling station, fuel storage, and compressors;
- a 1-story, 1,903 sq-ft bus wash building;
- a 2-story, 39,104 sq-ft parking garage; and,
- a parking lot with solar panel shade structures for up to 70 DASH buses and layover parking capacity for 64 Commuter Express buses.

With its CNG fueling stations, electrical charging infrastructure, and hallmark use of solar panels across the site, this facility is an exemplary model of energy efficiency and sustainable design.

This project attained LEED Platinum Certification, the highest level granted by the U.S. Green Building Council. The facility will harvest 500,000 kwh per year to both power the entire facility and sell back to the grid. It will provide solar power to charge 26 buses, and with the design capacity to expand for another 44 buses. The extroverted, gestural form of the building, along with its unique exterior textural material, provided both identity and icon to the public where both the 101 Freeway and the Gold Line elevated rails traverse across, north of the project site. The layout of the buildings reflects the design principle of pride-of-workplace and sustainability.
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OUTSTANDING TRANSPORTATION PROJECT

State Route 4 / Balfour Road Interchange  
Location: Brentwood, California  
Owner: Contra Costa Transportation Authority  
Engineer of Record: Quincy Engineering  
San Francisco Section
The State Route 4/Balfour Road Interchange Project was a $40 million interchange construction, roadway widening and realignment project that removed the last at-grade intersection between Brentwood and Walnut Creek, allowing for a significantly greater throughput of vehicles and eliminating and intersection that fostered a high accident rate. Construction was completed in five stages.

The project included significant revisions to State Route 4, three new bridges including two over a sensitive creek, and one that carries State Route 4 traffic over Balfour Road. The project also included protection of a critical 84-inch Contra Costa Water District water main. Extensive utility relocation was performed by Kinder Morgan gas, which included, drainage structures, a box culvert extension, new and temporary signalized intersection, and improvements to Balfour Road. The structures included two precast concrete, California Wide Flange girder bridges, a cast in place, reinforced concrete, box girder bridge and a Mechanically Stabilized Earth (MSE) retaining wall.

Project management features centered around a focus on partnering that would result in awards at the conclusion of the project and managing the project in a completely paperless fashion. Caltrans agreed to the paperless approach, making this the first local agency project with Caltrans Oversight to be completed in paperless fashion.

Techniques to produce this result included the use of iPads by field personnel, web hosting of meetings, use of electronic file-share systems to manage correspondence, submittals, Request For Information, change orders, estimates and electronic tracking of all material testing.

OUTSTANDING URBAN/LAND DEVELOPMENT PROJECT

Righetti Ranch  
Location: San Luis Obispo, California  
Owner: Ambient  
Engineer of Record: Cannon  
Los Angeles Section
Righetti Ranch will provide more than 300 much needed single and multi-family residences, creating additional housing options for the highly impacted market within the City of San Luis Obispo. With an emphasis on preserving the heritage of Righetti Hill, which the development surrounds, this community will feature bike paths and walking trails, protected wildlife and riparian areas, and ample open

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space to make it a desirable community. Cannon’s scope of work for this project includes land planning and engineering services, beginning at the specific plan process all the way through construction.

OUTSTANDING WASTEWATER TREATMENT PROJECT

3rd Street Sewer Interceptor Rehabilitation Phase 2
Location: Oakland, California
Owner & Engineer of Record: East Bay Municipal Utility District San Francisco Section

The District’s South Interceptor in Oakland was rehabilitated with construction of 3rd Street Interceptor Rehabilitation Phase 2 Project in 2019. This $14M project includes rehabilitation of approximately 4,700 feet of the 105-inch diameter pipe and five manholes, located in a congested urban area. Due to the large pipe size and lack of redundancy in the system, it could not be taken out of service for rehabilitation, and external bypasses were not feasible. Rehabilitation was completed using sliplining with a 96-in diameter fiberglass reinforced polymer mortar pipe. Construction was originally planned for two years using five sliplining pits. The contractor purchased special high-capacity equipment to allow for longer pipe pushes so that the project can be completed in one year and with only three sliplining pits. This significantly reduced costs and community impacts from the construction, including traffic, noise and odors.

Construction cost savings for sliplining is estimated at 40% compared to other rehabilitation methods previously used by the District. The cost of the previous Phase 1 construction was $4,000 per linear feet (LF) using a pipe crown lining system, compared to $2,700 per linear feet in Phase 2 using sliplining. This equated to a $6M cost savings, helping keep customer rates affordable.

OUTSTANDING WATER PROJECT

Upas Street Pipeline Replacement Project
Location: Bakersfield, California
Owner: California Water Service Company
Engineer of Record: AECOM
Los Angeles Section

This is a design-build project for California Water Service Company performed by W.M. Lyles Construction Company and AECOM to design and install granular activated carbon (GAC) systems to treat 1,2,3-Trichloropropane (1,2,3-TCP) at 36 individual groundwater wells located in Bakersfield, Visalia, Tulare, and Selma, California. The project involved a very tight timeline imposed by the Division of Drinking Water and the treatment systems were installed and commissioned within the compliance deadline set by the State.
OUTSTANDING EMERGENCY RESPONSE PROJECT

Oroville Emergency Recovery Spillways Project

Location: Oroville, California
Owner & Engineer of Record: California Department of Water Resources
Sacramento Section

In February 2017, Lake Oroville’s main spillway was compromised after record levels of rain and snowfall. The main spillway suffered severe damage and after the emergency spillway was used for the first time in its history, the hillside began eroding and 188,000 people were evacuated from surrounding communities. Due to the emergency nature of the project the bid period was only 10 days and required complete mobilization less than 30 days. Kiewit was the successful bidder and once mobilized the actual construction time frame was less than 165 days to repair and rebuild the 3,000-foot main spillway back to functional condition before a November 1, 2017 regulatory agency deadline. Despite this shortened construction season and significant foundation excavation and concrete placement quantity growth the team finished placing the final one-foot layer of enriched Roller Compacted Concrete at noon on Nov. 1, leaving plenty of time for the concrete to properly cure before the spillway could be needed. The Oroville Spillway project was an enormous undertaking with an extremely compressed schedule and many unique characteristics requiring crews to work around the clock 7 days per week. Kiewit reconstructed both the main and the emergency spillways using over 1.6 million craft manhours, 2.3 million tons of aggregates, 130,000 tons of cement and 110,000 tons of fly ash. The phase 1 work completed in 2017 represented only 40 percent of the total scope of work to permanently repair both spillways. The phase 2 work in the second season completed the main spillway slab and walls required an even more accelerated schedule than the first year. There was nearly double the amount of concrete to place in Phase 2, and the same November 1st public safety deadline. Again, through extensive planning and enormous resources allocated to the project the Kiewit team safely delivered the completed main spillway 2-weeks ahead of the November 1, 2018 milestone date reaching substantial completion for the main spillway reconstruction.
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