

# INS&OUTS

## The Importance of Reliable Partners

General Contractor Spotlight

Vendor Spotlight

14-15

## Star Wars: Galaxy's Edge

Using the (work)force: How KHS&S helped redefine a theme park experience

- + 685,000 manpower hours, 329.5 human-years to complete
- + 40 unique plaster finishes across 200,000 square feet of surfaces
- + 35 domes spanning as large as 76 feet across
- + 80 themed paint recipes



# THIS YEAR *in review*



LEAN PRESIDENT'S AWARD - KENT TREEN

## OFFICE UPDATES

- + Anaheim
- + Concord
- + Denver
- + Las Vegas
- + Seattle
- + San Diego

## NEW THIS ISSUE

- + General Contractor Spotlight
- + Vendor Spotlight
- + OpDev and PA Awards



PRESENTATION OF THE YEAR - SEATTLE, WA



PROJECT OF THE YEAR - ANAHEIM, CA



SAN DIEGO LEAN STAND UP MEETING



NCA SAFETY AWARD FINALIST



WACA SAFETY AWARD WINNER

## #2 SPECIALTY CONTRACTOR WALL AND CEILING



## OPERATIONAL DEVELOPMENT 2019 KHS&S LEARNING CULTURE ALL-STAR AWARDS:

Pete Iverson	Michael Villar
Alex Harris	Kim Guzman
Daniel Stafford	Kelley Huss
Jarret Stockmar	Jerry Horton
Andy Neeper	Kevin Nanney



LCI CONGRESS - BEST PRESENTATION AWARD

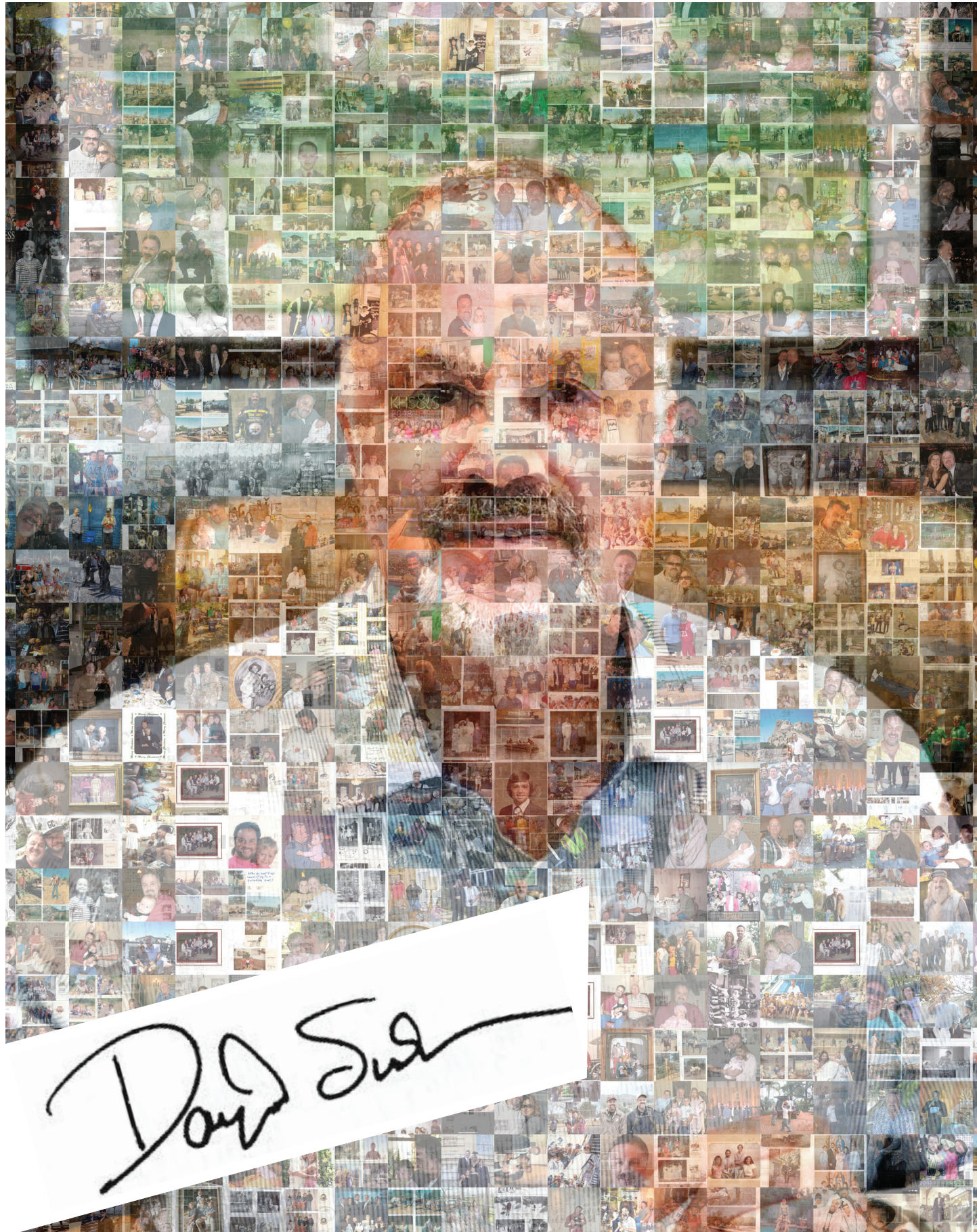
## PROJECT ADMINISTRATION AWARD - WA

- Consistent & Timely Communication
- Solid Adherence to SOP
- High Plexxis Utilization
- Accuracy in Work Product



# *leaving a legacy:* DAVID P SUDER - A LEADER, AN INDUSTRY LEADER, OUR LEADER

2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER



*David Suder*



"Do not go where the path may lead, go instead where there is no path and leave a trail."  
Ralph Waldo Emerson

2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER



*Safety is our priority.  
Others are taking notice.*

A safe workplace has always been the hallmark of KHS&S. Over the past two years, our Human Element safety program continues to help us raise the bar even higher with safety as our top priority.

As employees know from the all-so-familiar Human Element visual posters placed throughout work areas, our success is quantified by employees going home safe and sound to their loved ones. In addition, much like insurance companies and general contractors we work with, we measure safety in hard numbers, and that's why our low EMR or "experience modification rate" has others taking notice.

"Our EMR helps to actually set the standard for the industry," says Michael Cabrea, director, safety and risk control. Competitors are pressed to meet or exceed our rate, which ultimately results in a safer work environment.

For KHS&S, a lower EMR means lower insurance premiums. Cabrea says the savings from lower insurance premiums allows the company to reinvest into employees and be more competitive for new opportunities. "A general contractor can see in hard facts and numbers how safety conscious we are," he adds.

To help KS&S employees company-wide understand safety in those terms, every single injury throughout the company is classified and analyzed. Using a monthly visual displayed as a dashboard, everyone sees the data analysis that helps keep the entire company more informed.

"A well-trained workforce makes better, smarter and safer decisions," says Cynthia Garcia, vice president, risk management. "We want to provide the tools to make it easier for our team members to be safe and productive while building our amazing projects."

As we pay attention and continue to improve safety, the industry is taking notice. Recently, the Walls & Ceilings Association honored KHS&S with an award for "Safest Contractor" (within category). KHS&S was also chosen to receive the Association of Builders and Contractors (ABC) Gold Step Award for our safety training evaluation process. Additionally, KHS&S has been selected as a finalist, by the Nevada Contractors Association/Associated General Contractors of America (AGC), for the Safest Subcontractor of the Year award.

We're proud of our safety performance and the recognition we've received because of that. However, it's most gratifying knowing our team members make safety in the field a priority every day. Because when it comes right down to it, safety isn't expensive – it's priceless.



*Design-to-installation production  
simplifies construction*

The Kaiser Permanente Medical Center in Baldwin Park, Calif., took about two and a half months to prefabricate steel studs at the Production Innovation Facility and just six days to assemble and install at the job. "It would have taken three times the manpower if completed on site," said Craig Couch, production innovation manager.

Three years ago, space at the Riverside Warehouse in Anaheim was dedicated to Lean production innovation and prefabrication. Just with the Howick steel roll-forming machine alone, the facility is on target to deliver close to 460,000 linear feet this year. That is up from about 70,000 linear feet last year. During peak production periods, the facility triples employees to 14 team members.

The Howick and PanelMax machines are the shining stars of Production Innovation. The Howick customized roll form machine manufactures steel studs with punch holes for internal and external framed panels. The facility currently has 3 5/8" and 6" capabilities and Couch has recently purchased equipment for 4" capabilities to accommodate more capacity and new opportunities. The PanelMax is used to create custom drywall assemblies with complex shapes and corners in a precise prefabricated assembly.

**Making an impact across all offices**  
Natomas Crossing – This large tenant improvement project in the Sacramento area encompasses more than 23,000 linear feet of partial height partitions. Natomas is the largest job to date from the Production Innovation Facility.

Wynn Convention Center – Las Vegas field operations had their first introduction to the Howick while assembling and installing 12,000 square feet of prefabricated ceiling and soffit panels. The field team and management staff received a solid understanding of how the Howick system works from inception to completion so future jobs will benefit from the knowledge gained.

Muckleshoot Casino – The Seattle operations team will have their first experience with Production Innovation while installing roughly 9,000 square feet of complex soffit and ceiling assemblies at this impressive project in Auburn, Wash.

**A new, more efficient inventory system**  
Michael Villar and Raul Zamarron have collaborated to create an inventory system that catalogs every KHS&S tool and tracks the job site where the tool is located in the Anaheim area. When the field needs a specific tool, they can easily check the inventory for availability or what individual job site has the item. This is an enormous time saver in the search for tools and the precise knowledge of inventory keeps KHS&S from purchasing unnecessary new equipment.

*Benefits of Production Innovation*

- Increases efficiency
- Reduces waste
- Lessens labor cost
- Simplifies job site logistics
- Decreases trades and laborers on site
- Improves consistency of materials
- Increases precision
- Improves quality control



2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER

2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER



## ANAHEIM

### *From dinosaur bones to the galaxy's edge, Anaheim's expertise takes center stage*

From painting scenes of dinosaurs ripping through cages to installing the prehistoric creature's bones, KHS&S Anaheim worked 24/7 on the Jurassic World™ water ride to complete the themed ride renovations in just five months.

"The fast-paced timeline required a tremendous team effort to deliver exterior metal framing, drywall, taping and theme carved plaster," said Pete Iverson, Anaheim area operations manager. "The experience is billed as an epic adventure ride, and we showcased our theme-environment expertise with ornamental fabrication and installation of dinosaur bones, steel cages, and faux tree roots and jagged rocks."

Starting in his new position at Anaheim in April 2019, Pete was previously a senior manager in the operations department in the Anaheim office since November 2018. Prior to KHS&S, he managed operations for an east coast wall, ceiling, and specialty contractor in Boston, MA since 2008. Pete quickly adapted to a very busy office with a pipeline of work through 2020. "We're on a good path to continue being a successful, efficient operation," he said. "With promotions, training and mentoring, we have an energized team in place."

2019 saw the completion of a major medical office, 60,000 sq. ft. building in Baldwin Park for Kaiser Permanente that demonstrated prefabrication and panelization abilities as well as Lean practices.

For developer Taubman Company, Anaheim completed a framing, drywall, taping, and GRG job that started over three years ago on the high-end, luxury Beverly Center mall in Beverly Hills.

As part of the University of California, Los Angeles, expansion of student housing, KHS&S is working on a 20-story tower on campus. Scope includes exterior façade, walls, and ultra-high performance concrete panels.

Then it's back to Hollywood with more opportunities at Universal Studios. A new ride, Secret Life of Pets, has the team providing exterior and interior work, plaster, framing, drywall and finishing. Starting in Jan. 2020, Nintendo Land will have expert KHS&S craftsmen delivering framing, drywall, taping, plaster, theming elements, and rockwork over a 2-year span.

And of course, last but not least, read about Anaheim's contributions to Star Wars: Galaxy's Edge in this issue's cover story. "That's a signature, showcase project and we're so proud to have played a significant role in its execution," said Iverson.



## CONCORD

### *The Bay Area trusts KHS&S to help deliver its most important work*

A long-standing partnership with Holder Construction, a nationwide construction management company, is one of many reasons the Concord office has been successful at earning high profile, substantially valuable contracts. Time and time again, Holder has trusted KHS&S to help deliver its most important work.

When Apple Campus 2 work was underway, KHS&S' reputation for high-performance execution on that complex undertaking quickly lent opportunities to build relationship with Holder offices in Denver. "We've never been content to rest on our achievements, and are always looking toward earning our customer's next job," said Don Archuleta, area operations manager. "We're fueled by our repeat business, and the all-in commitment we bring to the table ultimately sets the tone for how we approach business pursuits." With Holder Construction, that repeat work centers around CoreSite projects, which have included high-performance data centers that must meet the industry's most cutting-edge specifications to ensure efficiency and redundancy.

KHS&S completed CoreSite SV7 in Santa Clara, California, with more than 775,000 square feet of data center space in November of 2016. An \$11.1M contract was also completed at CoreSite SV8 in September of 2019, also in Santa Clara. The Concord office has a strong probability of being awarded Coresite SV9 with work beginning in the second quarter of 2020.

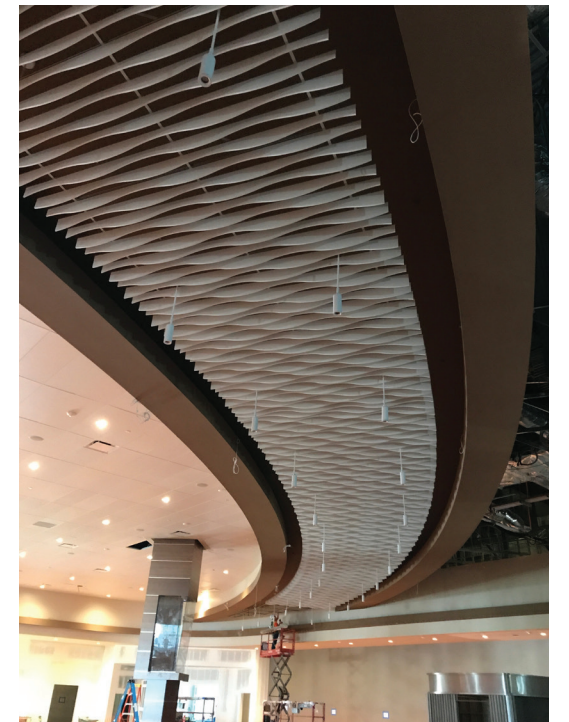
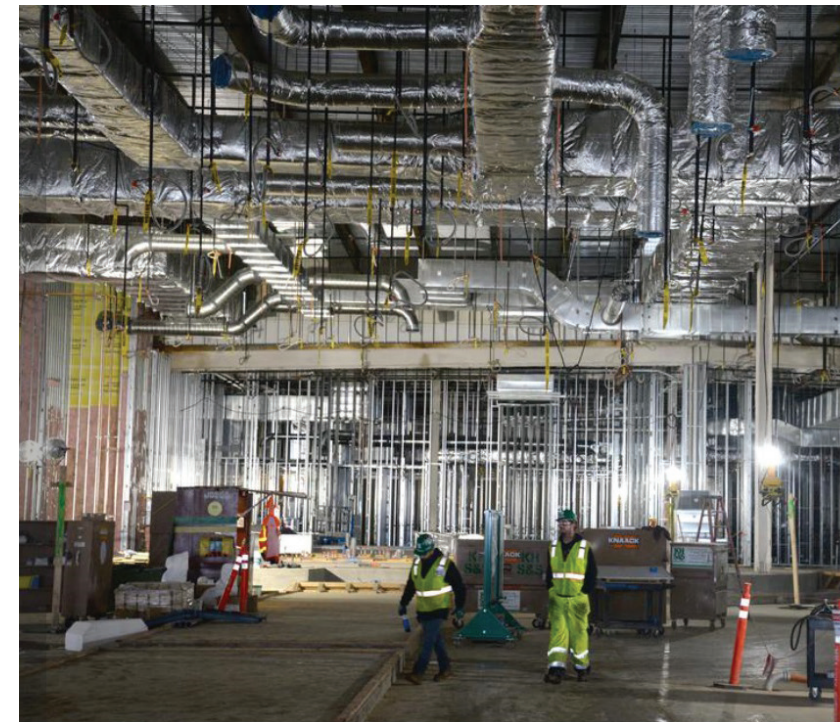
#### **Hard Rock Hotel and Casino at Fire Mountain**

The Concord office also recently completed construction of the Hard Rock Hotel and Casino at Fire Mountain in Sacramento. The project, included exterior panels with EIFS at the hotel, exterior framing and cladding on the casino, and the interior of the hotel and casino. It also included a significant amount of specialty finishes, including a unique acoustical ceiling over the gaming room floor. "We're the only group in KHS&S West Coast doing these very different acoustical ceilings with shapes, colors, and sound baffles," said Don.

Another specialty finish was faux wood grain painting on ceilings and soffits, which Don said turned out better than actual wood veneer. The team also installed 80,000 square feet of raised access flooring so electric could be run underneath instead of overhead, a design that's necessary in a business that runs 24/7, such as a casino.

#### **John Muir Hospital**

The Concord team also recently completed a \$2.7M exterior cladding project at John Muir Hospital on behalf of general contractor Swinerton. John Muir Health Concord Medical Center is a 244-licensed bed medical center. Together with John Muir Health Walnut Creek Medical Center, they are recognized as preeminent centers for neurosciences, orthopedics, cancer care, cardiovascular care and high-risk obstetrics. Swinerton is very happy with the quality of our work and with our Project Superintendent Richard Quinonez.





DENVER

Harnessing effective leadership skills heading into 2020

With many new team members joining the Denver office, including Mark Wachendorf who became general manager in January 2019, harnessing the power of his dedicated and talented team was priority number one.

Mark started thinking about ways to help the new core team members ramp up and gain confidence in their ability to create positive habits and interact well with one another and also with customers. He came up with the idea of a study group, reading and discussing a highly-regarded motivational book.

The first study action group met for seven weeks and included 11 people from all areas of the region, including estimating, safety, operations, and managers.

Mark's choice for the group to dig into was a book that influenced his professional career, Stephen Covey's best seller "The 7 Habits of Highly Effective People."

"It was great because it helped everyone's confidence and communication skills grow, including my own," said Mark. "Speaking in front of other KHS&S team members was a good way to feel comfortable implementing Covey's practices and then ultimately putting those into practice with our customers."

As group members facilitated meetings, different people had a chance to lead discussions. The result was an even more engaged team working seamlessly across all disciplines.

More study action groups are planned for 2020. "We all take so much pride in our job, and this experience made us even more collaborative," said Mark. "At KHS&S, we recognize the tremendous value in working together to achieve great outcomes for our customers."

Emerging projects in Colorado

For Holder Construction, the Denver office completed Project Sycamore, two large data centers located in Broomfield and Aurora, Colorado.

In addition, KHS&S just wrapped up core and shell work including exterior and interior framing, drywall, ghost wood panels, reclaimed wood ceiling panels and EIFS for the four-story S'Park Market, a unique retail, brew pub and office space in Boulder.

Meanwhile at Lockheed Martin in Littleton, the team continues to deliver excellent quality work with exterior and interior metal framing, exterior sheathing, interior drywall, and RFI/EMF shielding on the ATLO Project (satellite assembly and testing facility). This includes intricate work tying into the anechoic chamber (rooms that are designed to completely absorb reflections of either sound or electromagnetic waves) and the TVAC chamber (room that moves in all directions to simulate the harsh environment in space).

Our scope includes 80-foot high bay clean room partitions and partitions and ceilings around thermal vacuum and anechoic chambers. Targeted completion is end of 2019.



LAS VEGAS

A year of extraordinary accomplishments with extraordinary people

KHS&S is known, quite simply, for accomplishing the impossible given time constraints, job complexities and transforming the ordinary into the extraordinary. Case in point, the \$18M remodel of the expansive Palms Pool at the Palms Casino Resort in Las Vegas. Design and negotiations started in 2017 and continued for the next 11 months, which took as long as the job actually took to build. "The work required crews working around the clock on areas that, believe it or not, were built to stand the test of time since originally done by KHS&S in 2001," said Kevin Nanney, regional vice president.

This project features two pools, two levels of cabanas with a temporary 58' statue centered in one of the pools. Vegas is always in competition to have the best landmarks, noted Kevin, and this one has certainly topped the charts.

Another major project, The Wynn Convention Center, benefitted from KHS&S expertise on over 423,000 sq. ft. of floor space in 2019. This project includes over 2 million square foot of framing and drywall with over 43,000 GFRG elements on the walls and ceilings. The entire ballroom soffits (10,600 lf) were prefabricated into 8' sections and lifted into place. In addition, over 250,000 sq. ft. of EIFS on the exterior of the building, including 15' x 36' prefabricated panels, GFRG, and even installing mammoth 1,000 square foot awnings to round out contract deliverables.

When rockwork is supposed to look like cotton candy? That's a job for the talented craftsmen at KHS&S. Meow Wolf (no cats involved!) an anchor tenant of Area15, a re-imagined arts and entertainment complex, is planned to open in early 2020.

The immersive, interactive art installation will house an extraordinary collection of artwork, alongside theming and props created by KHS&S. Featured props include an old phone booth, an ice cooler visitors walk into and exit out the back (if you dare!), a tent structure, a crazy Slurpee machine (nonfunctional), and shopping isles including interactive happles (happy apples) just to name a few. We look forward to taking this "trip" when it opens.

When Sam's Town Hotel and Casino was built in 1995, there weren't many EIFS details in existence. With falling parts and eroding painted foam, Boyd Gaming reached out to KHS&S to the update the property and repair the decomposing hotel façade.

"The teamwork in our office has made all the difference," said Kevin. "Already, new additions to the staff are making significant contributions to the success of what's happening here, and that's sure to continue into 2020."



2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER

2019 KHS&S WEST COAST EMPLOYEE NEWSLETTER



## SEATTLE

### *Success breeds success: Repeat clients rely on KHS&S*

Onni Company brought in KHS&S to complete one of the largest residential projects in Seattle, WA. Adjacent to the historic Seattle Times Park, the contributions from KHS&S sped up the design and building process. At 41 stories tall connected by a 12-story podium, KHS&S craftsmen are working on framing and drywall for the 1,179 apartments.

In such a competitive market, KHS&S Seattle continues to earn an impressive list of repeat business. While a job well done doesn't guarantee repeat business, KHS&S has earned a steady flow of work by making sure each job stands on its own merits for future work.

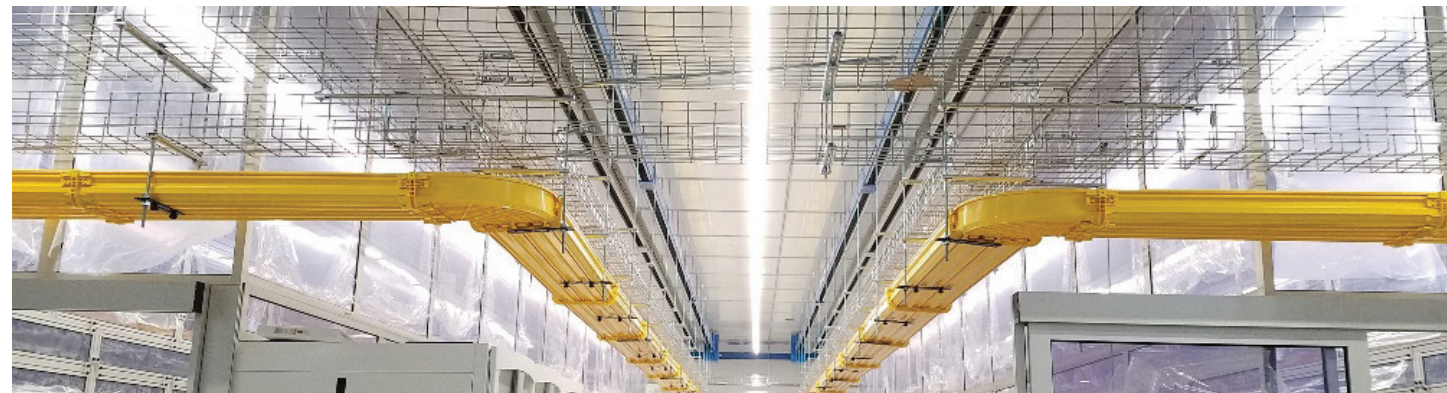
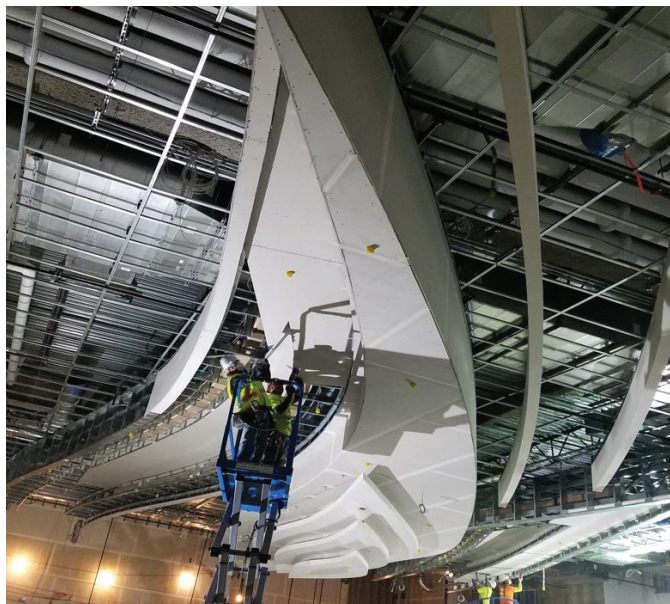
"For the Seattle team, every client, whether it's the first project or the ninth, receives the same level of attention to detail," said Jerry Horton, project manager.

Another repeat client for KHS&S Seattle is Swinerton, and KHS&S has exterior and interior framing, drywall and taping underway for the company at Muckleshoot Casino.

Work done at this fast-paced \$5M+ project casino expansion is on an accelerated delivery schedule. What would normally take 8-12 months to complete is being compressed to less than half that time frame, in part thanks to Lean efficiencies working with the Riverside Warehouse.

2019 completed projects for Microsoft and Angel of the Winds Casino utilized pre-fab techniques with the Howick, QML Layout Tool, GFRG, PanelMax, and PlanGrid technology and kept with the Lean approach. The lessons learned from these major accelerated projects and efficient techniques will speed up the delivery process and ensure superior job quality.

"We're collaborating with other KHS&S offices to share best practices such as Concord's daily production reporting approach which we've adopted giving us more real-time updates," said Horton. "This includes partnering with the Anaheim office to take advantage of the Howick framing system. It's a win-win for all of us as we join forces to stand out from the competition."



## SAN DIEGO

### *In San Diego, legacy of excellence leads to years-long partnership*

Repeat business is the ultimate compliment. More than just a "job well done," when customers hire KHS&S again, it means we've met their expectations and laid the groundwork for a trusting, mutually beneficial relationship. It means even more when a legend in the business trusts KHS&S over and over, for many years and many projects.

Swinerton Builders traces its roots in the building industry back to 1888, when the company was founded in Los Angeles to serve the growing city in the post-Gold Rush building boom.

These days, Swinerton regularly hires KHS&S for projects throughout the west coast to deliver quality craftsmanship with exceptional attention to detail.

Most recently, the Valley View Casino and Hotel renovation and expansion exterior job was completed for Swinerton in Valley Center, Calif., near San Diego. KHS&S installed sheathing, waterproofing, EIFS and plaster at the site, with a contract value of more than \$800,000.

"San Diego is a market that's experiencing a lot of growth and has so much potential," said Pete Iverson, area operations manager. "We're in position here to leverage the company's reputation and the relationships we're developing to maximize substantial opportunities in the year ahead."

For example, a significant project currently underway with Clark Construction is at the University of California at San Diego, called the North Torrey Pines Living and Learning Neighborhood.

The complex—expected to be completed for the fall semester in 2020—will become the new home for Sixth College. In the heart of UCSD, it will include 2,000 undergraduate beds, 1,200 underground parking spaces, a market, dining hall, retail space, craft center and more.

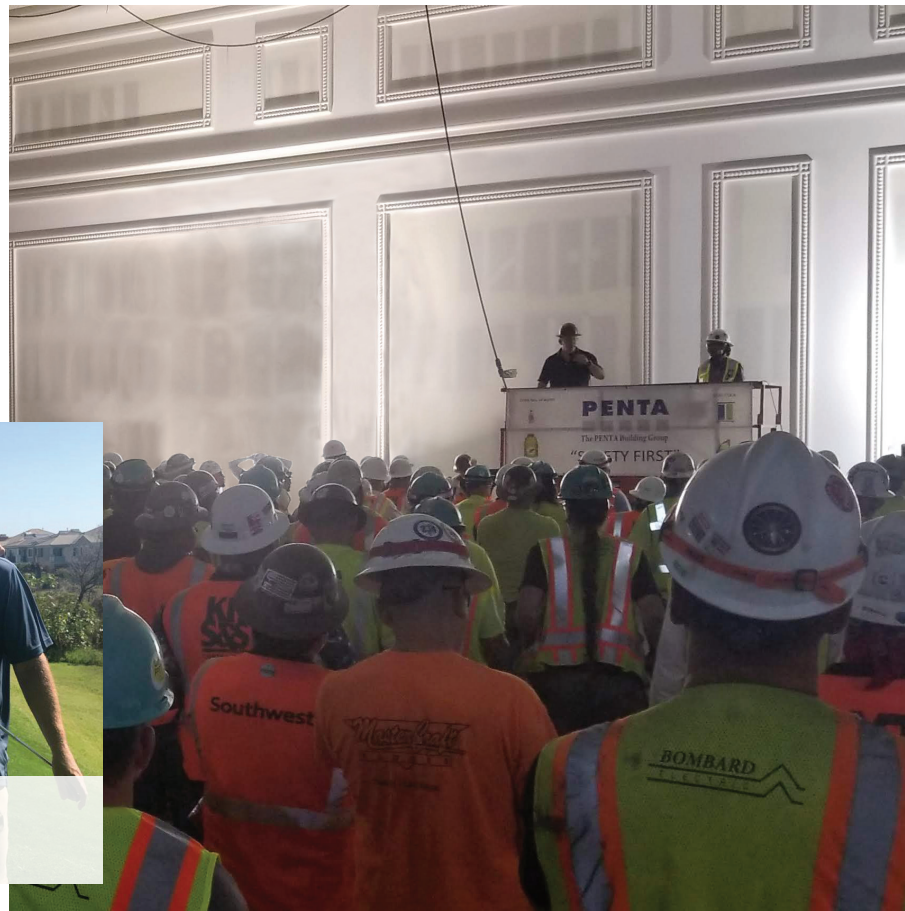
With a footprint covering more than 10 acres and 1.6 million square feet, it is the largest project in the history of the architecturally acclaimed campus. The \$14 million KHS&S contract includes framing, drywall, fire and water proofing, and plaster, and should wrap up by mid-2020.







PENTA 12TH ANNUAL SO CAL  
CHARITY GOLF CLASSIC



### ***Proud to partner with PENTA: a General Contractor that values the KHS&S way***

Fostering teamwork through all project phases, PENTA Building Group is known for investing in the success of its subcontractors. The valuable relationship KHS&S has built with this general contractor makes it the perfect GC to spotlight.

As one of the southwest's largest general contractors, PENTA's people-focused culture mirrors KHS&S culture, making for a well-matched business partnership.

"PENTA understands that we've been on the Lean journey for quite some time. Its management team values our experience and our approach, which leads to cost-effective delivery," said Ryan Louk, vice president, estimating. "PENTA has earned its business reputation on a number of exceptional projects, and we're proud to be part of its team."

One of the largest jobs currently underway for PENTA is the expansion of Wynn South Convention Center in Las Vegas. Lean practices are being implemented across the entire project, reinforcing the important common thread between the two companies' Lean philosophies. PENTA first brought KHS&S on board for the Wynn project and watched the Lean process unfold. The general contractor then hired KHS&S to start the preconstruction process of San Manuel Casino in Highland, CA.

Even with different projects and different teams, the same Lean practices are implemented in how KHS&S approaches the work. That same proven consistency has been highly efficient across all projects. "PENTA's reputation for providing excellent project management and oversight on all its projects promotes our success across the board," said Louk. "The PENTA team recognizes our specialty expertise along with our extremely accurate estimates, both of which add value and efficiency to their projects."

When it comes to working with a company that aligns with KHS&S' approach to building projects, PENTA has risen to the top of the list. The foundation of a seamless approach to working together, especially with the common thread of Lean cultures, has been established with PENTA. The momentum continues to build with PENTA, and KHS&S looks forward to future collaboration on significant, high profile contracts.



710 WILSHIRE RENDERINGS

### ***Unlimited Designs: When a Vendor is an Essential Partner***

To complete such remarkable work both on time and on budget such as Star Wars: Galaxy's Edge, 710 Wilshire, or George Lucas Museum of Narrative Art, KHS&S knows a team effort is required, with vendors working side-by-side, helping KHS&S meet tight deadlines and maintain strict quality control on signature projects.

That's where Unlimited Designs (UD) shines. The Salt Lake City-based specialty manufacturing company is an integral team member, contributing to the success of these projects and KHS&S is proud to spotlight their contributions.

"Unlimited Designs shares the same performance values that we do including doing whatever it takes to get the job done right," said Ryan Louk, vice president, estimating. "That's why we work together so well; they're a vendor who goes above and beyond." Unlimited Designs focuses on manufacturing quality products that are easy to install. This focus enables KHS&S to be innovative and efficient on iconic/complex projects. What KHS&S finds especially valuable is the UD team members' process to approaching design challenges. They ask themselves if there's a better or different way to complete a task, or a way to improve upon how it's been done before. Continuous process improvement is at the core of their thinking, and we thrive on that as well.

"Having a subcontractor who aligns with our customer-first, Lean building approach helps keep us competitive and profitable," said Ryan. Star Wars: Galaxy's Edge was the definition of a project that would require a team to execute, and UD's performance was exemplary from start to finish. Complex parts and finishes with extensive coordination made this project unique and complicated. UD took on this challenge and performed at the highest level. UD was also crucial to delivering the 710 Wilshire project to the finish line. UD took on risk to help KHS&S, and the 7 story GFRC panel project would not have been delivered successfully without the UD team's support.

Currently on the George Lucas Museum of Narrative Art project, UD has been a key team member in every aspect. Their willingness to produce bid time mockups, ability to price competitively, innovative mindset for manufacturing techniques and systems that provide maximum value to the Client (and more), all played an integral part to the awarding of this project. UD's continued dedication to innovation and imagination has enabled KHS&S to set the course for completion on a project where detail is key in every step and on every part.





Owner: Walt Disney Imagineering  
Architect: Cuningham + Morris, A Joint Venture  
Location: 1313 Disneyland Dr, Anaheim, CA 92802

## Using the (Work)force: How KHS&S Helped Redefine a Theme Park Experience

Entering Star Wars: Galaxy's Edge at Disneyland Resort, guests are transported directly into that iconic galaxy far, far away. No longer just a spectator viewing an attraction, fans become immersed into the entire experience, surrounded by details evoking nostalgia for every era of the Star Wars franchise.

From the distinctive white armor of the Stormtroopers and the life-size Millennium Falcon spacecraft to the towering spires leading to the Black Spire Outpost where fans can customize their own lightsaber, it's the entire experience that causes guests to gaze in awe at the out-of-this-world surroundings.

"Galaxy's Edge redefines what a Disney experience can be," said Rob Walter, senior vice president. "The project was not only a game changer for KHS&S, but will totally change the theme park fan experience." The scope of this \$68 million project was larger than any theme park attraction ever before tackled by KHS&S. As one of the primary trade partners, KHS&S completed the framing, drywall, EIFS, plaster, scenic paint and themed architectural ornamentation for the 14-acre Star Wars Land.

As a hallmark project that pushed creative and technical boundaries, it touched every scope of work KHS&S performs, in every area, in a more intricate and difficult way.

"Yes, we did framing and drywall, but it required multifaceted shapes with carved plaster finishes and ornamental parts," said Walter. "We exercised every muscle we had to meet an aggressive timeline to produce this level and volume of complexity."

At any one time there could be up to 264 KHS&S craftsmen and crew on site being supported by more than 75 people from the non-field side. With 685,000 manpower hours in the books, that translates to 329.5 human-years to complete, without a single droid to help with the work.

## The Rise of an Empire

The first boots hit the ground in April 2017 and the last team member stepped off the site in June 2019.

However, the actual project pursuit began in October 2015 when Walter and his team worked with Disney to bid both the Anaheim and Orlando Star Wars: Galaxy's Edge projects under a D1 – B2 project strategy (design once, build twice).

"KHS&S had a unique position because we could leverage the Anaheim and Orlando capacity together," said Walter. "Having East and West coast divisions was a factor in the KHS&S win and



the efficiencies gained had a major impact on project success and meeting the aggressive deadline." Other factors were KHS&S West Coast division's Lean leadership along with preconstruction and creative capabilities. Being in close proximity to Walt Disney Imagineering headquarters in Glendale also played into the win.

Walter, who served as the executive in charge of pursuit and preconstruction efforts, attributes the ongoing relationship with Disney to KHS&S continually exceeding two important challenges:

1. Ability to handle creative elements.
2. Meeting the project demand in volume and labor.

## The First Order of Building a Republic

Star Wars: Galaxy's Edge was built using the IPD (Integrated Project Delivery) method where trade partners work in Lean methods focused on collaboratively reducing waste and inefficiency while driving up quality and value. It requires a culture of trust where individuals and companies work as a team for a common goal.

"KHS&S played a large role from a true IPD perspective as our work touched so many parts of the job," said Zach Fink, chief estimator. "We became a center point with project coordination which took continuous commitment from all parties to get multiple trade partners on the same page and ultimately trust the process."



# STAR WARS: *galaxy's edge*



## The Force Awakens

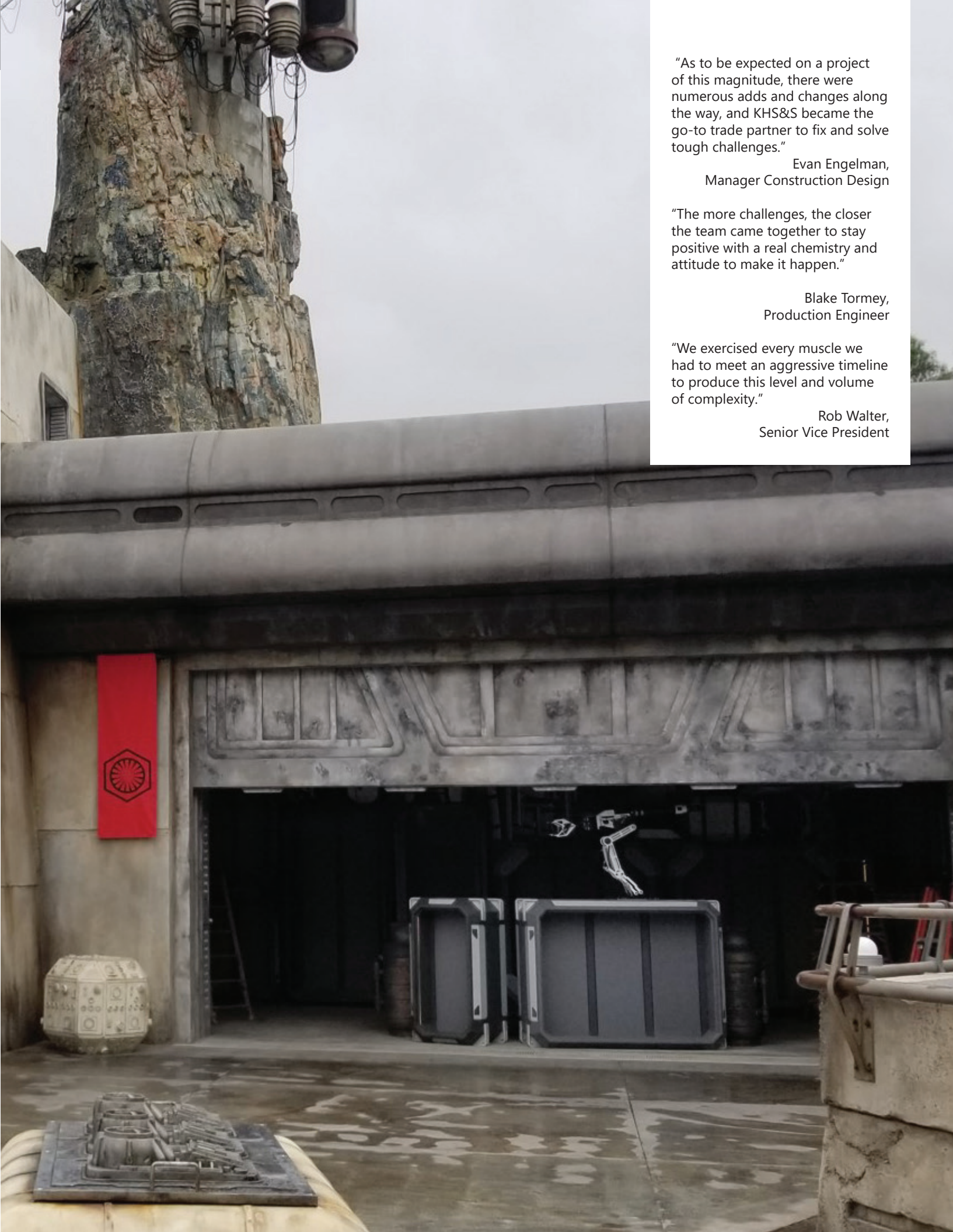
The Star Wars: Galaxy's Edge experience takes place on the distant planet of Batuu, once a vibrant trading post that fell into disarray. Showcasing Disney's commitment to immersive entertainment, project execution required taking what the Disney imagineers designed and executing it with precision. "It's a feat of engineering and creativity to visually articulate their vision," said Walter.

The 35 domes throughout Star Wars Land are a prime example of ingenuity. To create the unique landscape of a far-off planet, project architecture required domes to be prefabricated and flown into place. The massive dome of the Millennium Falcon: Smugglers Run attraction weighs 44,000 lbs., requiring extensive coordination with other trade partners. Spanning 76 feet across, the dome at Oga's Cantina is the largest single piece that KHS&S has ever assembled.

To the fan's eye, the domes are architectural ornamentation, but they also serve as a functional surface and act as a roof complete with water management systems and scars from take-offs and landings of the Millennium Falcon.

Already recognized for its success in production innovation and prefabrication, KHS&S reached new heights adapting the Howick and PanelMax machines for the complex geometries of curves, tapers and angles unique to this project.

"Through a collaborative effort, we were able to prefabricate more designs than we thought possible," said Evan Engelman, manager construction design. "By pushing the limits and evolving our capabilities, what we achieved and learned can now be applied on future projects."



"As to be expected on a project of this magnitude, there were numerous adds and changes along the way, and KHS&S became the go-to trade partner to fix and solve tough challenges."

Evan Engelman,  
Manager Construction Design

"The more challenges, the closer the team came together to stay positive with a real chemistry and attitude to make it happen."

Blake Tormey,  
Production Engineer

"We exercised every muscle we had to meet an aggressive timeline to produce this level and volume of complexity."

Rob Walter,  
Senior Vice President



# STAR WARS: *galaxy's edge*

## It Takes a Galactic Army

Over the course of a multifaceted project spanning multiple years, the contributions of the hundreds of people who worked together on this project are difficult to quantify. "The more challenges, the closer the team came together to stay positive with a real chemistry and attitude to make it happen," said Blake Tormey, production engineer.

The project had seven distinct construction areas that required continuous preconstruction management and estimating. Starting with a baseline estimate, constant updates and the FTC (final target cost), the team had to take preliminary plans as well as countless ideas from multiple individuals and wrap everything into one functioning set of documents. "When looking back, I'm most proud of how the estimating and precon team came together to ultimately hit dates and the established FTC," said Fink. The in-house themed resources group was also responsible for managing 35,000 prefabricated and molded elements from more than 10 vendors across three states.

The plastering team was also instrumental in meeting the established deadlines. With more than 40 unique plaster finishes and 80 themed paint finishes across 200,000 square feet of surfaces, Jesus Rendon, plastering superintendent, was involved in the early design stage working to achieve the finishes to make the facades appear aged and from another dimension. Mockups were then created to show even more level of detail before proceeding to construction.

While KHS&S has used Building Information Modeling (BIM) for years, it was the first time for the plaster crews that 3D modeling technology was taken to the project site to improve construction accuracy and reduce unknown project variables. "Instead of paging through hundreds of cumbersome blueprints, this technology was instrumental to the plastering team as we could zoom in, spin around and see a structure from all angles," said Rendon.

Confined by a small footprint for equipment and materials at the construction site, maximizing limited space was an ongoing challenge. All plastering materials were stored off site and restocked each night.

"This required daily coordination with the night crew and weekly meetings with suppliers to ensure materials were procured on time," said Rendon. "There was no room for error." With a plaster crew of nearly 50 craftsmen, the exact materials had to be delivered for that day's task in order to stay on schedule.





# STAR WARS: *galaxy's edge*

## A Star Wars Victory

It was an incredible challenge to execute a project that activates all the senses, so visitors experience a far-off world instead of just walking through an attraction. Star Wars: Galaxy's Edge does just that. Every wall, nook and cranny has a purpose.

As Tormey reflects on the success of the massive build, he's not talking about Vader's efforts to put down the rebellion when he says, "We really crushed it!"

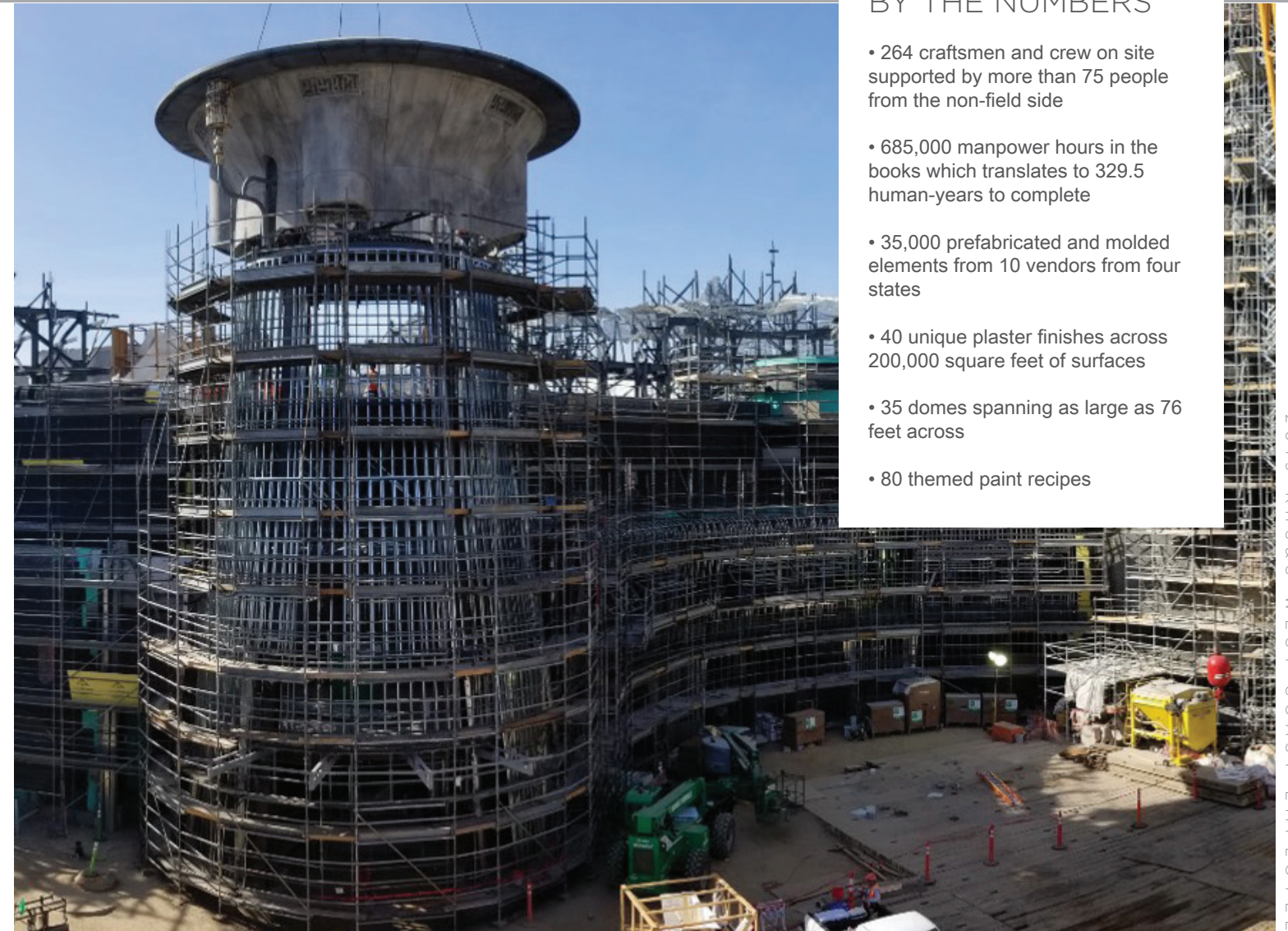
To deliver the vision designers and architects had in mind, countless KHS&S team members contributed to finished product – a masterful blend of art, science, creativity, and total devotion to getting the job done right.

"Managing up to 5 crews of 50 team members on any given day, Mikey Morales, lead plaster sculptor, oversaw both the people and the complex processes that helped KHS&S achieve the look that Disney envisioned," said Kevin Wirsch, director, specialty finishes. "Mikey's energy, diligence, and persistence was a huge difference maker on this team."

Dustin Cardwell, lead art director on themed character plaster, worked very closely with Mikey, and also served as the liaison between Disney's art directors and the project management team. "As the primary point of contact on both sides, Dustin kept the team on budget, on task, and this job could never have been completed without him," said Kevin.

Other key players included Brent Canfield II, themed finishes superintendent and Faith Lhotka, themed project manager. Brent Canfield, Sr., director of project management, among many other responsibilities, had the mammoth task of coordinating with 12 vendors in 4 states.

KHS&S is proud to have built something that draws emotion and provides such an immersive experience to entertain fans for years to come. Knowing all the people who poured their hearts and hard work into this project makes it even more monumental.



## BY THE NUMBERS

- 264 craftsmen and crew on site supported by more than 75 people from the non-field side
- 685,000 manpower hours in the books which translates to 329.5 human-years to complete
- 35,000 prefabricated and molded elements from 10 vendors from four states
- 40 unique plaster finishes across 200,000 square feet of surfaces
- 35 domes spanning as large as 76 feet across
- 80 themed paint recipes





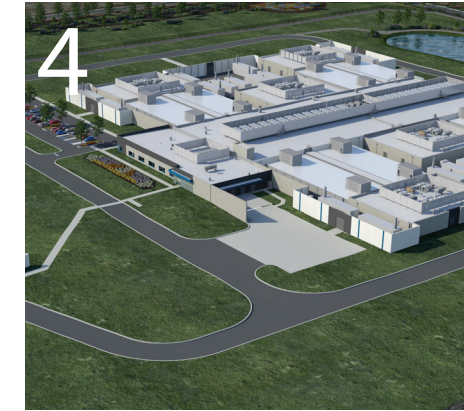
# PROJECT *gallery*

## COMPLETED PROJECTS



1. Jurassic World
2. Beverly Center
3. Microsoft Campus Renovations
4. Lawrence Berkeley Livermore Lab
5. Hard Rock Fire Mountain
6. 710 Wilshire
7. Gaylord Rockies
8. Palms Casino Resort
9. 333 Dexter

## CURRENT PROJECTS



1. Lucas Museum of Narrative Art
2. Casino Morongo
3. UCLA Le Conte
4. Project Sycamore
5. Natomas Crossing
6. Wynn Convention Center
7. Meow Wolf
8. UCSD
9. Muckleshoot Casino





HELLO  
I'M NEW HERE

- 1. Amairani Casillas and family welcomes Enzo Cruz Pedregon on 8/10/2019
- 2. Chris Watne and family welcomes Wrengly Watne
- 3. Ymmar Brown and family welcomes Yara Marie Brown on 10/12/2018
- 4. Shane Hastain and family welcomes Maize Lee Hastain on 3/2/2019
- 5. Zach Fink and family welcomes Joey Jean Fink on 11/13/2018

HAPPILY EVER AFTER

- 1. Gina Smith marries Todd Woolever on 9/1/2019. Gina and Todd tied the knot in Lake Tahoe
- 2. Rula Andriessen marries Drew Richardson on 7/12/2019. Rula and Drew tied the knot at La Casita del Arroyo in Pasadena
- 3. David Volcansek marries Marissa Huato on 10/6/2018. David and Marissa tied the knot on a yacht in Newport Beach



\*REFLECTING 10/1/18 THROUGH 9/30/19

WELCOME TO OUR TEAM

Ashley Amaral  
Anaheim, Payroll Clerk

Chanel Howard  
Seattle, Project Coordinator

Chris Sietsema  
Anaheim, Estimator

Elvira Arellano  
Las Vegas, Administration Clerk

Fernando Morales  
Denver, Project Manager

Frank Lindsay  
Concord, Area Operations Manager

Gary Truesdill  
Concord, Senior Project Manager

Harry Osawe  
Anaheim, Project Controls

Jackie Figueroa  
Anaheim, Project Coordinator

Jarret Stockmar  
Anaheim, Junior CAD Draftsperson

Jason Lewis  
Anaheim, Payroll Clerk

John Gutierrez  
Anaheim, Warehouse Clerk

Kelly Knoper  
Anaheim, Regional Safety Manager

Kelsey McBride  
Anaheim, CAD Draftsperson

Kristina Kelley  
Las Vegas, CAD Draftsperson

Melissa Flannery  
Las Vegas, Area Administrative Assistant

Michael Hancock  
Anaheim, Project Engineer

Michael Mahaffey  
Concord, Senior Project Manager

Mikaella Gustilo  
Anaheim, Jobcost Accounting Assistant

Mike King  
Concord, Senior Estimator

Mike Tibbetts  
Concord, Project Manager

Monika Gustilo  
Anaheim, Risk Management Coordinator

Naomi Martin  
Anaheim, Marketing & Communications Manager

Nicole Rios  
Concord, Project Engineer

Pete Iverson  
Anaheim, Senior Manager

Raymond Choi  
Anaheim, Art Director

Robert Von Bargaen  
Anaheim, Project Engineer

Ryan Athey  
Anaheim, I.T. Technician

Steven Yocky  
Anaheim, Project Engineer

Andrew Zaragoza  
Anaheim, Project Executive

Brian Harris  
Las Vegas, Project Superintendent

Craig Cameron  
Anaheim, Senior Estimator

Don Archuleta  
Concord, SR VP of Operations

Erick Hernandez  
Las Vegas, Trade Superintendent

Genevieve Carpio  
Anaheim, Accounts Payable Accountant

Jaime Mudd  
Las Vegas, Specialty Finishes Coordination Manager

Jason Lewis  
Anaheim, Jobcost Accounting Assistant

Jason Pierson  
Las Vegas, Project Manager

Jeff Cleary  
Anaheim, General Superintendent

Jeffrey Thompson  
Denver, General Superintendent

Jose Moncada  
Anaheim, Project Superintendent

Kevin Nanney  
Las Vegas, Regional Vice President

Kim Guzman  
Las Vegas, Manager, Project Administration

Mark Wachendorf  
Denver, General Manager

Mark Wagner  
Seattle, Project Superintendent

Matt James  
Seattle, Chief Estimator

Michael Hancock  
Anaheim, Senior Project Engineer

Pete Iverson  
Anaheim, Area Operations Manager

Rebecca Suzuki  
Anaheim, Senior Project Engineer

Rob Walter  
Anaheim, Sr Vice President

Sami Ferrando  
Las Vegas, Project Administration

Stone Suder  
Anaheim, Project Manager

Zach Fink  
Las Vegas, Chief Estimator

POSITION CHANGE

Andy Neepor  
Anaheim, Constructabilty Coordinator

Bryant Cherne  
Anaheim, Marketing Assistant

Michael Davis  
Anaheim, Trade Superintendent

Evan Engelman  
Anaheim, Project Manager

Kaylee Gieser  
Anaheim, Specialty Finishes Coordinator

WELCOME BACK

Bruce Holleran  
Anaheim, Vice President, Marketing & Business Development

Donna Calabrese  
Concord, Project Coordinator

Robert Parker  
Las Vegas, Warehouse Manager

Kelley Huss  
Denver, Senior Project Manager

\*REFLECTING 10/1/18 THROUGH 9/30/19





Published by the Marketing Department  
of KHS&S Contractors, West Coast

Comments and suggestions are welcome.  
Please contact: [Marketing@khsswest.com](mailto:Marketing@khsswest.com)

© 2019 KHS&S Contractors. All rights reserved.

STAY CONNECTED WITH KHS&S WEST COAST :



[@KHSS\\_Contractors](https://www.instagram.com/KHSS_Contractors)



[KHS&S Contractors](https://www.linkedin.com/company/KHS&S_Contractors)



[KHS&S Contractors](https://www.facebook.com/KHS&S_Contractors)



[@KHSSContractors](https://twitter.com/KHSSContractors)

