

VOL. 37, NO. 2 | SPRING 2019

SUPERSTRUCTURE

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Capturing Reality

HOW TECHNOLOGY, PEOPLE,
AND PLANNING ARE COALESCING
IN THE AGE OF INFORMATION

CLARK
CONSTRUCTION

FROM THE CEO

“MEASURE TWICE, CUT ONCE.”

It's a classic phrase that encapsulates a comprehensive approach to quality construction, and it's a part of our company culture. As we plan for exponentially complex projects across the country, “measure twice, cut once” is more applicable than ever before. Here at Clark, we're driving a holistic approach to project planning and delivery that builds partnerships and leverages cross-functional expertise to create assets that meet our clients' needs and exceed their expectations.

In this issue, you'll see how proactive project planning is making all the difference for some of our most exciting projects. Our project at Kansas City International Airport is ready for takeoff as the largest single infrastructure project in the history of Kansas City, Missouri. More than a year of project development and planning with the local community and project stakeholders was critical to setting the stage for success on this complex project.

In Arlington, Virginia, planning was essential to a bridge installation at the Ballston Quarter Retail Renovation. Developing an iterative plan and partnering with Clark's Virtual Design and Construction Group helped our team

develop a solution to successfully install a pedestrian bridge while minimizing impact to the major Arlington thoroughfare that runs directly underneath the new bridge.

In this issue you'll also hear from Sameer Bhargava, our chief financial officer, on the intersection of innovation and productivity, and how our strategic efforts are increasing transparency and enhancing communication so our clients have a clear, real-time understanding of how we're addressing their needs. And as Sameer notes in his piece, when we build smarter, we also build safer. Better planning allows our teams to engineer safety into every operation before shovels ever hit the ground.

By building partnerships with our clients and project stakeholders early on, we can innovate and plan the work with purpose to provide the most value to our clients, while building smarter and safer.



ROBERT D. MOSER, JR.
PRESIDENT AND CEO

SUPERSTRUCTURE

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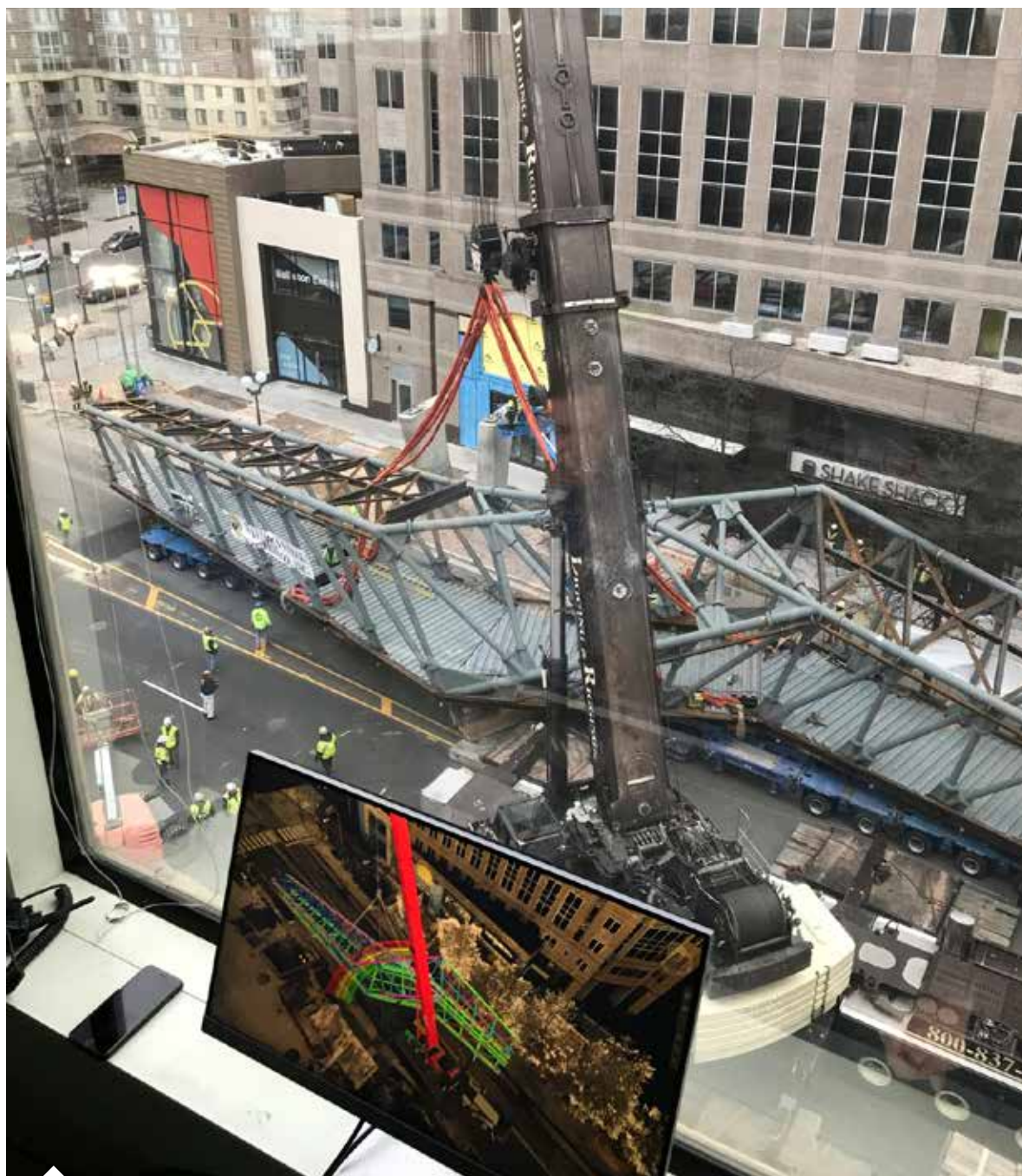
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CLARK
CONSTRUCTION

SUPERSTRUCTURE

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FEATURE



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Capturing Reality: How Technology, People, and Planning are Coalescing in the Age of Information

Clark teams across the country are leveraging reality capture technology to build complex jobs smarter and more efficiently than ever.

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On the Ballston Quarter Retail Renovation, Clark's Virtual Design and Construction Group utilized 3D laser scanning to create accurate point clouds that digitally recreated the complicated installation of a pedestrian bridge.

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Rendering courtesy of
Skidmore Owings & Merrill

Wheels Up on New Terminal at Kansas City International Airport

Clark Construction Group and its development arm, Edgemoor Infrastructure & Real Estate, are cleared for takeoff on a modern single terminal at Kansas City International Airport. The \$1.5 billion project is the largest single infrastructure project in Kansas City, Missouri's history and will transform air travel in the region when it opens in 2023.

Edgemoor was selected as Kansas City's development partner and is overseeing all aspects of the project, including its financing, development, design, and construction. Clark is leading design-build efforts as part of the construction joint venture, Clark | Weitz | Clarkson, which also includes the Weitz Company and Clarkson Construction Company. Skidmore Owings & Merrill is the project architect.

At just over one million square feet, the project will feature 39 gates with the ability

to accommodate future expansion up to 50 gates. The structure will be built in the footprint of the airport's existing Terminal A, which has been decommissioned and will be demolished this spring. The project team also will construct a 6,300-space parking structure, a central utility plant, and perform landside and airside improvements.

Clark and Edgemoor broke ground on the project in late March with a celebration that drew hundreds, including city and regional officials, representatives of the Kansas City Aviation Department and major airlines, as well as organized labor and business leaders. The event marked the start of demolition activities at Terminal A, which will continue into summer. Construction activities on the new facility will begin in earnest in late summer 2019. The new terminal is scheduled to be complete in spring 2023. ■

New Contracts

Across the country and in a variety of markets, Clark Construction Group and our subsidiaries have recently been selected to deliver a number of new projects. Our new work this quarter includes:

SPORTS

San Diego State University Multi-Use Stadium

Construction of a 35,000-seat stadium to host collegiate football, professional and collegiate soccer, NCAA championship games, concerts, and other events

Location: Mission Valley, California

Company: Clark Construction Group

Client: San Diego State University

Architect: Gensler

Delivery Method: Progressive Design-Build

Completion: Fall 2022

GOVERNMENT

Joint Base Andrews Hangar 21

Construction of a hangar complex with an aircraft access taxiway/parking apron, engine run-up pads, a hydrant refueling system, and administrative and warehouse support areas

Location: Camp Springs, Maryland

Company: Clark Construction Group

Client: Naval Facilities Engineering Command

Architect: Frankfurt Short Bruza-Pond, Joint Venture

Completion: Spring 2022



Rendering courtesy of Gensler

HEALTHCARE

The Medical Pavilion at White Oak

Construction of a state-of-the-art, Class A medical office pavilion for the new Adventist HealthCare White Oak Medical Center campus

Location: Silver Spring, Maryland

Company: Clark Construction Group

Client: White Oak AHF (Trammell Crow Company)

Architect: CallisonRTKL

Completion: Winter 2020

TRANSPORTATION

Vint Hill Road Extension

Widening of Vint Hill Road for 0.3 miles from Sudley Manor Drive to Glen Gary Drive including all associated sitework

Location: Prince William County, Virginia

Company: Shirley Contracting

Client: Prince William County Board of Supervisors

Engineer: RDA

Completion: Fall 2019

OFFICE

Global Home of the PGA TOUR

Construction of a new 187,000-square-foot headquarters building that will house more than 750 employees

Location: Ponte Vedra Beach, Florida

Company: Clark Construction Group

Client: PGA TOUR

Architect: Foster + Partners

Completion: 2020

Nashville Yards Parcel 4

Construction of a 25-story office tower and an associated parking garage

Location: Nashville, Tennessee

Company: Clark/Bell, a Joint Venture

Client: Southwest Value Partners

Architect: Gresham Smith

Completion: Winter 2021



Rendering courtesy of Foster + Partners

A Smarter Future is a Smart Investment

An Interview with Clark's Chief Financial Officer



The Strategic Investment Committee meets regularly to evaluate employee-submitted ideas, as well as foster new ideas.

Sameer Bhargava, executive vice president and chief financial officer, is part of Clark's executive leadership team responsible for the company's overall growth and financial health. Among his other responsibilities, Sameer oversees Clark's Strategic Investment Committee, a cross-functional team dedicated to supporting the company's innovation efforts.

DESCRIBE HOW YOUR ROLE AS CFO ALIGNS WITH INNOVATION AT CLARK.

Part of my responsibility is carefully managing the valuable resources of our company. Our capital provides us with the opportunity to invest in our future. As CFO, I am of course focused on generating the highest financial returns on our investments, but we are also evaluating how our investments are paying off in other ways – by improving the day-to-day lives of our team, adding value for our clients, or reducing risk for our company. Looking at our company and the industry, I see the potential for very attractive returns if we invest our resources wisely. That potential – paired with our experience and expertise – keeps me excited about the future.

WHAT HAVE YOU SEEN IN OTHER INDUSTRIES THAT CAN BE APPLIED TO THE CONSTRUCTION INDUSTRY TO INCREASE THE RATE AND ADOPTION OF INNOVATION?

I've been privileged to work with many successful companies and have learned that great companies follow best practices that are transferrable to every industry. Innovative companies have robust yet flexible plans that guide the work they do today and the decisions they make affecting tomorrow. At Clark, we are guided by our strategic roadmap, which ensures that we invest in the right ideas and commit the right resources so that our innovation efforts yield impactful and timely results aligned with our long-term vision.

WHAT DO YOU THINK ARE THE BIGGEST AREAS OF OPPORTUNITY FOR INNOVATION IN THE CONSTRUCTION INDUSTRY?

We think there is a great opportunity to transform productivity and operational excellence through digitization, 5D modeling, supply chain management, modular construction, internet of things, predictive analytics, and more. At Clark, we have dedicated teams working on some exciting initiatives tied to

each of these areas – we're very optimistic about how these developments will positively impact our clients and our people, as well as the larger construction community.

HOW CAN OUR INNOVATION EFFORTS HELP OUR CLIENTS?

Our clients are the lifeblood of our business and developing a robust, partnership-driven approach for them is one of our key strategic goals. Innovation is a critical component in getting us there. We are exploring ways to further leverage data, along with our broad, deep experience, to predict – and address – potential issues before they arise in the field. Similarly, we are capitalizing on the advancement of BIM capabilities. We are using robust models that allow all project stakeholders – designers, engineers, trade contractors, et al. – to work together to optimize the schedule and budget. Lastly, our innovation efforts are increasing transparency and enhancing communication so that our clients have a clear, real-time understanding of how we are addressing their needs.

WHAT ARE SOME OF THE MOST EXCITING INNOVATIONS THAT CLARK HAS IMPLEMENTED SINCE YOU JOINED THE COMPANY?

Safety is always top of mind for us. We have recently invested in some leading-edge enhancements to keep everyone on the jobsite safer – specifically, safety helmets and equipment seatbelt technology. It's been exciting to see the rest of the industry follow our lead and adopt these best-in-class standards. ■



Sameer Bhargava joined Clark in 2016 from the Carlyle Group, a publicly-held global alternative asset manager, where he served as managing director and director of corporate development. He received his MBA with distinction from Harvard Business School and graduated from Harvard University with an honors degree in biology.



Clark Keeps Heavy Machinery Operators Safe with Keytroller Slingbelt

When faced with the dangers of operating heavy equipment on a jobsite, it seems like fastening a seatbelt would be second-nature for equipment operators. And yet, operators often skip the simple step to buckle up – usually as a result of forgetfulness, being hurried, or a preference for comfort. After the fatality of an unbuckled equipment operator highlighted this issue, Clark's National Equipment Group took action. Representatives from Clark, Shirley Contracting, Atkinson, and C3M researched possible solutions with equipment manufacturers and trade contractors. The group discovered a simple, but effective retrofit.

The Keytroller Slingbelt consists of a retractable half lap belt and a molded urethane hollow belt "sling" that encloses the receiving part of the belt, usually on the left

side. This bright orange sling is highly visible and cannot be easily pushed aside by the operator, making it a nuisance if it is not properly buckled. The design also makes it uncomfortable for the driver to sit on the belt instead of properly buckling it into place. Failing to fasten the slingbelt with the equipment in operation results in the emission of a blaring audible signal and visual probe.

To date, all Clark and Atkinson equipment has been retrofitted. Implementing this standard is a critical first step in a cycle of continuous improvement. However, Clark's National Equipment Group identified an opportunity to do more. Jobsite incidents involving heavy equipment operators reflect an industry-wide risk. By engaging three of the largest equipment rental companies in the country – United, Ahern, and Sunbelt – Clark

THE KEYROLLER SLINGBELT

The Keytroller Slingbelt is designed to ensure equipment operators fasten their safety belt each and every time they work. Three key intentional design elements make it virtually impossible to operate equipment unbuckled:

- 1 The bright orange sling is highly visible to both the operator and surrounding workers, allowing for a quick visual check to make sure it is buckled.
- 2 The sling, made of molded urethane, is a nuisance if it is not properly buckled. It cannot be easily pushed aside and is uncomfortable for the driver to sit on the belt instead of properly buckling it into place.
- 3 Failing to fasten the slingbelt with the equipment in operation results in the emission of a blaring audible signal and visual probe to alert both the operator and surrounding workers to unsafe work activity.



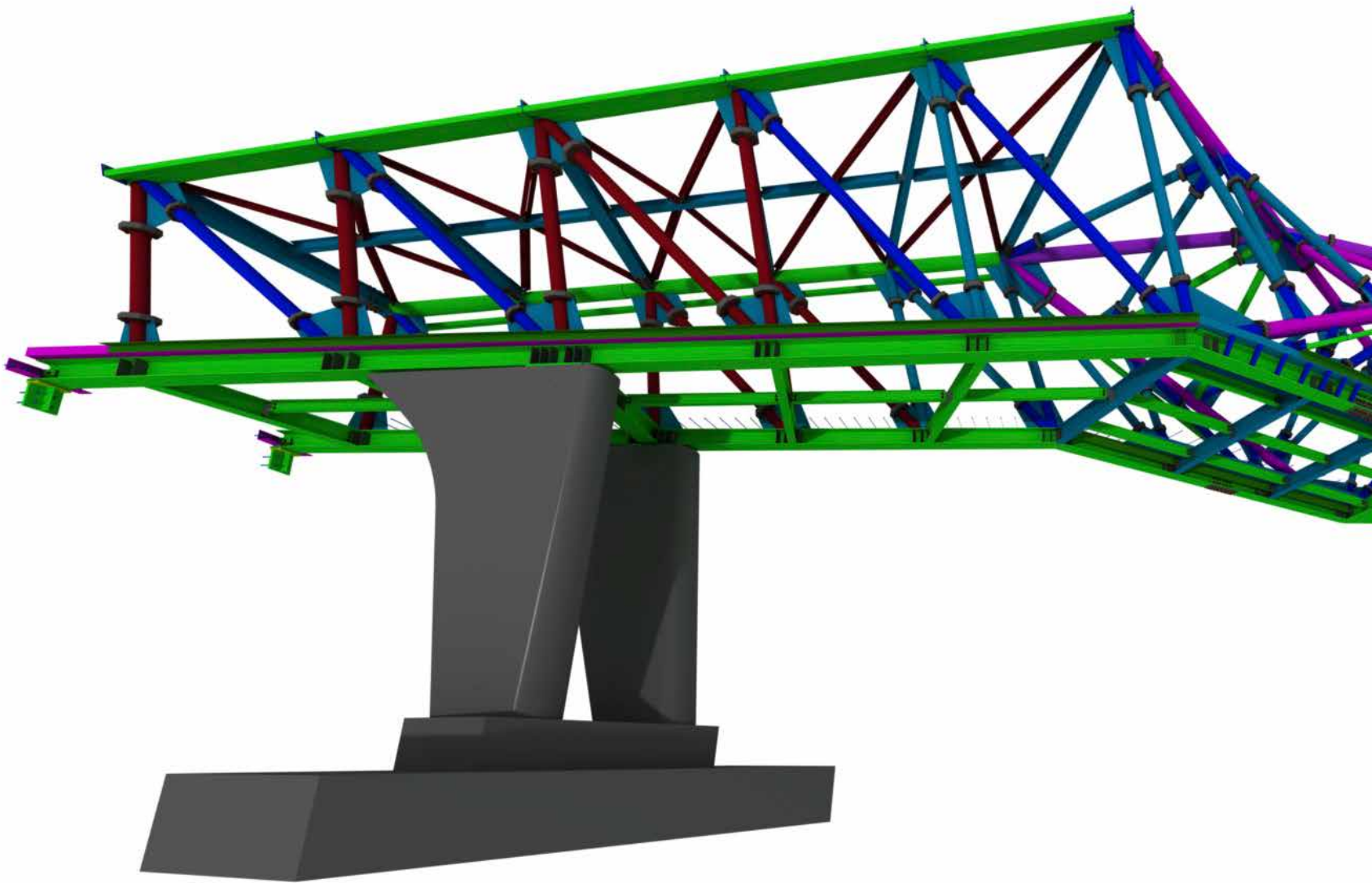
hopes to encourage manufacturers to retrofit existing heavy machinery with the Keytroller technology.

Extensive policies govern jobsites to ensure compliance with federal, state, and local construction equipment standards. While these guidelines establish an operational framework, they cannot eliminate all risks associated with a project. Only employees qualified by training are permitted to operate, inspect, or maintain equipment and machinery. Jobsite inspections by superintendents and safety managers are frequent and offer an additional layer of redundancy to reiterate the importance of buckling up.

As reflected in Clark's core values, championing worker safety remains a top priority. ■

CAPTURING REALITY

How Technology,
People, and
Planning are Coalescing in the Age of Information



On the Ballston Quarter Retail Renovation project, being developed by Brookfield Properties, the team used 3D laser scanning to plan the pedestrian bridge installation.

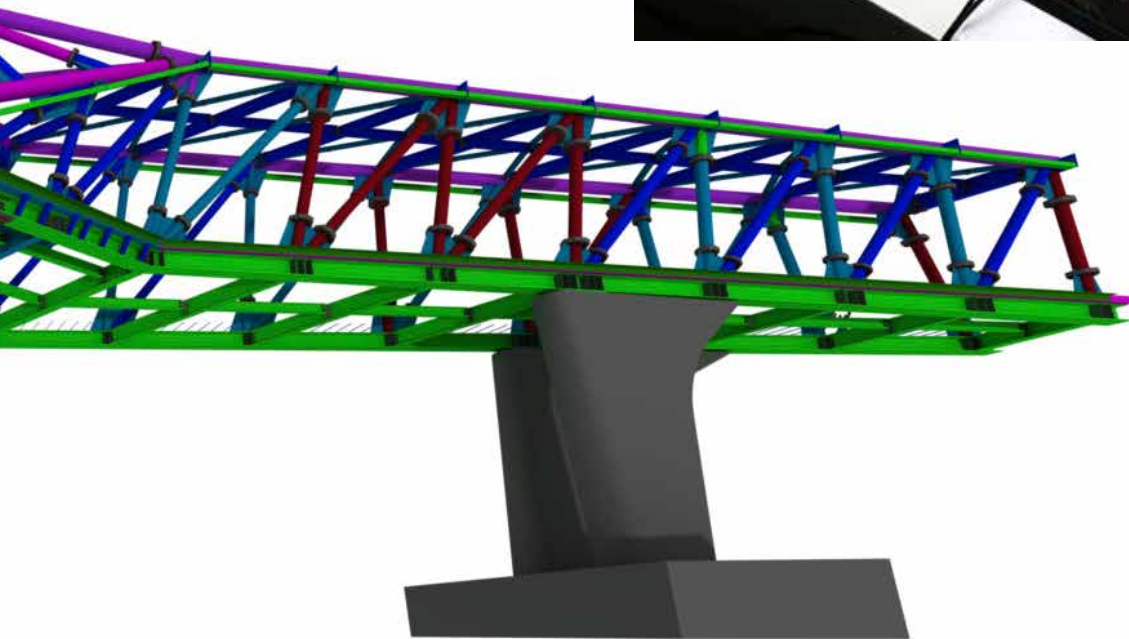
THERE ARE ALWAYS UNKNOWN FACTORS IN CONSTRUCTION. As we build in increasingly constrained urban environments or deliver projects that inspire the imagination, unforeseen conditions and complex operations challenge teams to dive deep into the planning process. That's where reality capture comes in.

Reality capture technology, while it sounds futuristic, isn't far-fetched. Clark teams across the country are leveraging reality capture tools to build complex jobs smarter and more efficiently than ever.

BALLSTON QUARTER RETAIL RENOVATION

At the Ballston Quarter Retail Renovation project in Arlington, Virginia, Clark's team collaborated with Clark's Virtual Design and Construction (VDC) Group to plan and model every single detail in a complex pedestrian bridge move, pick, and installation.

The new Ballston Quarter pedestrian bridge is situated on a major Arlington thoroughfare and connects the redeveloped Ballston Quarter to the Ballston Metrorail station.



After working together on multiple iterations of the installation plan, Clark and project stakeholders decided to build the bridge off-site, then transport it and install it overnight.

The pedestrian bridge was fabricated at nearby Mosaic Park, 2.5 blocks from the project site. While this minimized the amount of time required to close the roadway for assembly and erection, it created a challenge in coordinating the bridge move. From planning the pick for placing the bridge on the trailer to determining if existing trees, traffic signals, and buildings would be in conflict with the bridge as it traveled, the project team dove into the details to ensure the smooth execution of the move and installation.

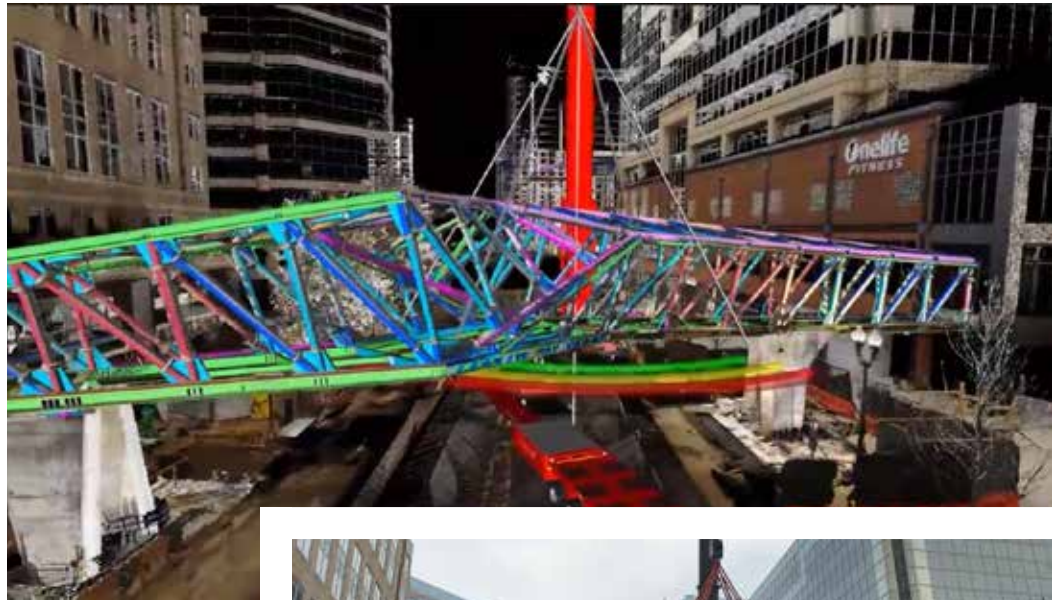
Davin Charlton and John Swagart, Clark team members on the project, worked with VDC's Shaun Lewis and Eric Liming to plan every inch of the complicated operation. Lewis and Liming utilized 3D laser scanning to create accurate point clouds that digitally

recreated not just the installation, but also the entire path of the bridge from Mosaic Park to its final resting place – down to the tiniest detail. They collaborated with the onsite team to develop a plan that would take into account the trailer’s turning radius, the location of underground utilities, and critical clearances to make sure the bridge could be moved and installed without a hitch.

The team then modeled the crane set up in relation to the bridge to minimize the amount of movement and confirm proper weight distribution. They created as-built conditions and walked through the entire move and installation from start to finish, checking for everything and anything.

The planning paid off.

During the modeling process, Liming discovered that a 30-foot ledge on a building to



Utilizing 3D laser scanning to digitally recreate the pedestrian bridge and its complete installation path, the Clark team precisely calculated and confirmed the installation plan down to the tiniest detail.



the north of the bridge was critical to clear for proper installation. This discovery required a very specific crane model to achieve the required clearance while maintaining the load distribution at grade.

“If you can’t do it on paper, then you can’t do it in real life,” commented Ryan Flaherty, Clark senior project manager. “This model

was critical. It taught us that, based on real conditions, we had to carry out this installation in a very exacting way. There were so many little precise movements in the crane operation to pivot the bridge into place, and we had to use a very specific piece of equipment for it to work.”

The Ballston pedestrian bridge began its

journey from Mosaic Park to its permanent location starting at 8:00 p.m. on February 15. The bridge was transported from Mosaic Park on a 16-axle self-leveling platform trailer, and was lifted into place by a Liebherr LTM1500 crane.

Without a hitch.

THE BIG PICTURE

The Ballston pedestrian bridge is just one example of how Clark is using reality capture to better plan and execute work in the field. VDC’s team has partnered with Clark’s Field Engineering Group on a number of laser scanning projects, including Midtown Center, the International Spy Museum, and CSX Virginia Avenue Tunnel.

In addition to laser scanning, Clark’s team is expanding in-house capabilities to take project planning and documentation to new heights. Every day at the North Torrey Pines Living and Learning Neighborhood (NTPLLN) site, licensed pilots fly drones over the 34-acre UC San Diego project site to capture hundreds of aerial photos. The images are processed to produce high-resolution orthomosaic photos and 3D point cloud data, effectively creating a repository of useful and

WHAT IS REALITY CAPTURE?

The digital documentation of an existing condition at a specific moment in time. Common reality capture tools include 3D laser scanners, drone technology, 360-degree cameras, and certain applications of photogrammetry. Reality capture and VDC go hand-in-hand, as they both live in a 3D digital world.

accessible information.

“A key benefit of drone data is the enhanced progress documentation it provides to the entire project team including our clients, architects, and trade and consultant entities. Via a web interface, the team can view and compare 2D and 3D data collected on different dates, create overlays, and take 2D/3D measurements,” explained Clark VDC Manager Ali Kashani. “The daily aerial views also give all the project entities – even those that are not physically present at the site – an overview of the project progress,” he adds.

Drone data has been useful for logistics planning, quality control of underground utilities, and tracking excavation productivity. The ability to overlay drawings on top of aerial photos and check the elevations and coordinates alongside drone data helps the team confirm that the work going in place is correct and on schedule.

“There is a large spectrum of technologies that all contribute to reality capture in construction,” explains Shaun Lewis, Clark’s reality capture specialist. From 360-degree cameras to imaging laser scanners, the industry is rapidly evolving and experimenting with technology to build smarter, and safer.

“For me,” comments Lewis, “Clark’s reality capture program is drilling down to the details a lot more than other programs out there, and it’s making all of the difference. On complex jobs like the Ballston Quarter bridge installation, you need to know that your team has accounted for every possible detail and reality capture helps them do just that.”

THE NEXT GENERATION

In addition to cultivating Clark’s in-house expertise, the VDC team is dedicated to preparing the next generation of field leaders to take advantage of and recognize the possibilities of reality capture and the larger umbrella of virtual design and construction.

In 2018, Clark began a rotational program in which engineers spend three months in the VDC Group learning the technology and producing project-specific deliverables. After completing the program, engineers return to jobsites with a deeper knowledge of Clark’s VDC capabilities and the expertise to leverage them onsite.

This program is fostering a coalition of field leaders with an understanding of how to harness technology and combine those resources with the knowledge of people in the field.

“VDC is a huge resource for the company



and our clients. It pays its weight in gold to sort out issues ahead of time and account for other options, rather than making those costly discoveries the day of an operation,” comments Swagart. “But reality capture and VDC isn’t a magic wand. Project teams find the most successful results when they combine their knowledge of project requirements and site constraints with VDC’s expertise. The magic happens when our VDC team collaborates hand-in-hand with the experts on the ground.” ■

Licensed pilots on the UC San Diego North Torrey Pines Living and Learning Neighborhood project fly a drone over the site each day to capture hundreds of aerial photos that are processed to produce orthomosaic photos and 3D point cloud data.



EARTH DAY 2019: FORWARD-THINKING WASTE HAULING PRACTICES

By **Fernando Arias**

As we look back at Earth Day 2019, I cannot help but think of how the waste and recycling landscape has evolved.

Since China announced in January 2018 that it would no longer accept contaminated recyclables from anywhere in the world, we've seen the technology industry expand into the waste management space at a rapid pace as waste management companies enhance their recycling capabilities to grow new markets for recycled materials. Additionally,

Leveraging Clark's in-house hauling capabilities benefits our clients by minimizing the cost of waste management operations and expediting the process of obtaining LEED documentation, all while reducing the environmental impacts associated with construction and demolition waste.

we've seen major cities across the United States and around the world pledge to significantly cut the amount of waste they generate by signing on to C40's Advancing Towards Zero Waste Declaration.

With these shifts in markets and policies affecting the landscape of the waste management sector, there are opportunities for our industry to drive innovations that optimize these systems. Findings from a research initiative managed by Clark's Sustainability Department analyzed how our active green building project teams are implementing innovative processes to haul construction and demolition waste from jobsites to waste management facilities.

These efficient hauling processes, such as densely packing similar material streams inside dumpsters and leveraging Clark's in-house hauling capabilities, mitigate the rising costs of waste management operations, help our clients meet their LEED project goals, and ultimately reduce the environmental impacts associated with hauling construction and demolition waste. In addition to decreasing costs by nearly 10%, leveraging Clark's in-house hauling capabilities also expedites the process of obtaining LEED documentation, hauling tickets, and waste reports.

When our teams do use a third-party hauling service, they

are leveraging smart contracting practices to choose the right provider based on their proximity to jobsites. This selection process, which involves analyzing miles traveled, road traffic, and wait times, helps reduce fuel consumption and driver fees – two of the largest variable costs associated with transferring waste.

Implementing these forward-thinking practices has allowed Clark to divert over 75% of construction and demolition waste from landfills on its 450-plus green projects and earn exemplary performance points on LEED projects. We look forward to continuing to integrate new techniques to optimize our waste management practices while helping our client's meet their project goals and reduce the environmental impacts associated with construction. ■



Fernando Arias is Clark's Director of Sustainability. Fernando's extensive experience in environmental policy combined with his holistic focus on the resilience of buildings and the health and wellness of occupants provides long-term operational benefits and adds value to our clients' green objectives.

CLARK RECOGNIZES THE ACHIEVEMENTS OF BAY AREA SMALL BUSINESS OWNERS

San Francisco-area Strategic Partnership Program graduates share their accomplishments at networking celebration

This past winter, Clark toasted the achievements of graduates of its San Francisco Strategic Partnership Program (SPP) during the company's first-ever "Cheers to Your Success" networking event. Designed as a forum for program alumni to share their professional accomplishments and make connections with other SPP graduates, current participants, and city and community leaders, the event drew more than 70 attendees. Key partners from San Francisco's Office of Community Investment and Infrastructure, Contract Monitoring Division, and Office of Economic and Workforce Development, as well as the Northern California Chapter of the National Association of Minority Contractors, Merriwether and Williams, the Renaissance Entrepreneurship Center, and Aboriginal Blackman United, gathered to show their support.

Marivic Bamba Chennault, director of community relations and small business development for Clark, administers the company's San Francisco and Seattle SPP courses and served as emcee for the event. Throughout the evening, several graduates



of the Strategic Partnership Program offered compelling testimonies about the transformative impact the program has had on their businesses, their professional aspirations, and on their lives. "Clark has provided me with a network of smart, phenomenal individuals who are going to transform how construction is done in San Francisco," stated Jeanine Cotter, owner of Luminault, a solar energy solutions firm based in Potrero Hill. "This is an economy that is growing because of our inclusiveness. When companies like Clark invest in us and amplify our skill sets so that we are prepared to succeed, that is the best kind of pairing."

"One of our goals with the Strategic Partnership Program is to increase the capacity of local small businesses so they are highly qualified to enter the pipeline of firms that are in-demand to contribute to large-scale construction projects in the Bay Area," said Mike Ricker, senior vice president in charge of Clark's San Francisco office. "We've witnessed numerous graduates from this program go on to grow their businesses and contribute to building San Francisco – many

times on our jobsites. Seeing this fills us with tremendous pride and reaffirms just how important it is to continue to invest in this program and in the local small business community."

Current SPP participant Tana Harris, owner of Harris Hoisting, joined select alumni in sharing words of inspiration during the event. As the only African-American woman in San Francisco to own and operate a hoisting company, Harris is breaking industry barriers. She previously worked as a hoist operator on Clark's Salesforce Tower project and credits the company for offering her the opportunity to develop the skills she needs to succeed as a contractor, as well as for giving her the confidence to pursue her dream of entrepreneurship. "I am going to make you proud," Harris noted.

"We strive to give local small firms the support and training they need to take their businesses to the next level," said Bamba Chennault. "This is something we believe in; it's about being a good builder, and a good community partner." ■

Above: Ashley Rhodes of Master Painting and Decorating addresses event attendees. Below: The networking event was attended by SPP graduates and key business partners, including Darolyn Davis of D&A Communications (left) and Judy Singharath of Merriwether and Williams (right).



Clark Installs First AirPrex Phosphorus Precipitation System in the United States

at Howard County's Little Patuxent Water Reclamation Plant



Clark Civil, a division of Clark Construction Group, and the Howard County Department of Public Works celebrated a major milestone at the Little Patuxent Water Reclamation Plant (Little Patuxent) with the installation of the first AirPrex phosphorus precipitation system in the United States. The successful process commissioning was the 11th of 12 new plant process systems to go online at Little Patuxent as part of the largest upgrade in the plant's history.

The AirPrex system targets the phosphorus sludge accumulation common in biological phosphorous removal systems. Phosphorus buildup is a byproduct of the plant's anaerobic processes that can accumulate in piping and equipment. Over time, it can limit a plant's operation capacity and cause unnecessary damage. The AirPrex system converts phosphorous into struvite crystals, which can be harvested and used as fertilizer – turning a byproduct of the Plant into a valuable resource.

Clark utilized a tandem pick to lift the AirPrex system's 52-foot-tall, 25-ton reactor tank into position. Once the reactor tank was in place, the team installed the additional system equipment including two blowers, a progressive cavity pump, two chemical dosing skids, an 8,000-gallon insulated chemical tank, multiple process instruments, a chemical fill station, and all the interconnecting piping. With the process complete, Clark Civil's Water Group became the first team in the United States to successfully start up an AirPrex phosphorous precipitation system.

As part of the scope of the Little Patuxent Water Reclamation Plant project, Clark will also add direct heat drying, centrate treatment, enhanced odor control facilities, and other process and electrical upgrades to the facility. Once the upgrade is complete, biosolids leaving the Little Patuxent facility will meet EPA's Class A, Exceptional Quality requirement. The Little Patuxent Water Reclamation Plant project is scheduled to complete in 2020. ■

PROJECT MILESTONES

This quarter, our project teams across the country reached some exciting milestones:

UNDERWAY

PRTC Western Bus Maintenance and Operations Facility

Clark joined representatives from state and local transportation agencies to break ground on the Potomac and Rappahannock Transportation Commission (PRTC)'s new Western Bus Maintenance and Operations Facility in Manassas, Virginia. Once complete, this new facility will allow PRTC to expand its commuter bus service along I-66 and dispatch buses to western Prince William County more efficiently. Substantial completion is slated for March 2020.

P-714 Unaccompanied Housing at Naval Station Great Lakes

Clark, joint venture partner Blinderman Construction, and the Naval Facilities Engineering Command celebrated the start of work on the P-714 Unaccompanied Housing project at Naval Station Great Lakes. The new, 166,000-square-foot barracks will be capable of housing more than 600 enlisted military personnel. Completion is slated for August 2020.

Grand Hyatt Nashville

The Clark/Bell joint venture team delivering the new Grand Hyatt recently completed the underground parking structure and the first level of the hotel. The 784,000-square-foot Grand Hyatt will stand 24 stories tall and feature 591 guest rooms, making it among the largest hotels in downtown Nashville. The team is expected to reach substantial completion in 2020.

The Boro

In February, Clark delivered the B3 office building at The Boro for tenant fit-out. Once complete, the 1.7-million-square-foot mixed-use complex will feature a 5-story office tower and three residential towers ranging in size from 12 to 32 stories.

National Air and Space Museum Artifact Move Coordination

Clark/Smoot/Consigli's Artifact Move Coordination team at the National Air and Space Museum recently completed their work at the "Looking at Earth" Gallery. In addition to performing an extensive renovation of the Smithsonian's most popular museum, the team is relocating the Smithsonian's collection of artifacts and aircrafts currently housed at the museum to the Udvar-Hazy Center in Chantilly, Virginia.

TOPPING OUT

UC Hastings Academic Replacement Building

On February 7, Clark's project team placed the last beam atop UC Hastings' new academic building. The state-of-the-art academic facility, located in San Francisco's historic Civic Center District, will enable UC Hastings to provide a more cohesive campus experience by replacing and consolidating student, faculty, and staff spaces.

45 L Street, NE

The Clark team celebrated the topping out of 45 L Street, NE, the third and final phase of the Sentinel Square development in Washington, DC's NoMa neighborhood. Once complete, the 728,000-square-foot building will be the largest of the Sentinel Square structures and will include office space, common amenity areas, a penthouse, and three levels of below-grade parking.



Photo by: White Cloud Drones



Photo by: Mark Holtzman - West Coast Aerial Photography

SUBSTANTIAL COMPLETION

Location 64 Maintenance of Way Building

The Clark team celebrated substantial completion of the 3-story, 86,500 square-foot Location 64 Maintenance of Way (MOW) Building for the Los Angeles Metropolitan Transportation Authority (LACMTA) in downtown Los Angeles. The new MOW Building houses track vehicles that service the transit system's Red and Purple Lines.

Kaiser Permanente New Carrollton Administrative Building

In April, the Clark team delivered a new administrative building in Prince George's County, Maryland, to Kaiser Permanente. The 216,000-square-foot, eight-story building will house 850 employees, and features a fitness center, ground-level retail space, a loading dock, and a 273,000-square-foot, seven-story parking garage.

Ellington Airport Traffic Control Tower and Utility Building

The Clark team delivered the new air traffic control tower at the Ellington Airport in Harris County, Texas, replacing the airport's previous air traffic control tower that was irreparably damaged by Hurricane Ike in 2008. The 130-foot concrete structure is topped with a steel cab enclosed by a curtain-wall and metal panel system. In addition to the air traffic control tower, the team constructed a utility building that houses two chillers, a boiler, a back-up generator, a fuel storage tank system, and a fire pump to serve the fire protection system.

Frost Tower

The Clark team reached substantial completion on Frost Tower, the first new office tower to rise in downtown San Antonio since 1989. The 24-story octagonal building tapers up to a curtain wall "crown" supported by structural steel at the roof. Located in the heart of San Antonio's Central Business District, Frost Tower features 440,000 square feet of leasable office space and an additional 20,000 square feet of street retail. The structure also includes a 1,000-space parking facility which wraps around the west side of the building.

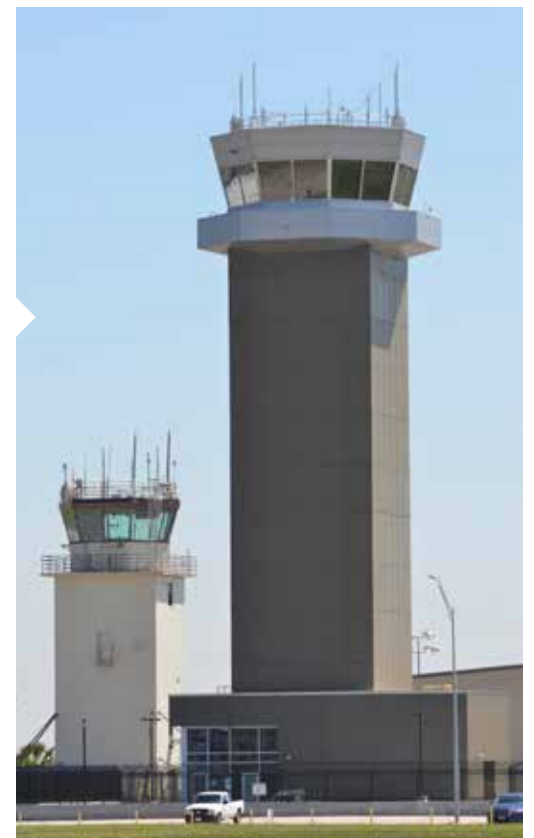




Photo by: Nic Lehoux



Photo by: Judy Davis / Hoachlander Davis Photography

International Spy Museum and Midtown Center Recognized at 2019 Build America Awards

The International Spy Museum and Midtown Center were recently recognized with an Associated General Contractors (AGC) Build America Award and an AGC Build America Merit Award, respectively.

Build America Awards honor AGC members who build the nation's most impressive construction projects ranging across the building, highway and transportation, utility infrastructure, federal, and heavy civil divisions.

The International Spy Museum is a 140,000-square-foot museum situated on top of L'Enfant Plaza in Southwest Washington, DC. The museum includes three floors of exhibits, an interactive theater, retail and office space, and a rooftop terrace with sweeping views of

Washington, DC. The design features a glass veil suspended in front of an enclosed "black box" exhibition space that allows the movement of people to be visible inside and outside, evoking the theme of hiding in plain sight.

Midtown Center is a 14-story, 875,000-square-foot mixed-use office, dining, and retail complex in downtown Washington, DC. The structure's façade is comprised of a unique curtain wall, including multiple elevations of 3D panels with pre-patinated copper cladding assembled at varied depths to create a distinct pattern. Three structural steel bridges span more than 110 feet across the site's courtyard and connect the east and west towers with interior and open-air walkways. ■

CLARK WELCOMES MARK HAMBERLIN AS CHIEF PEOPLE OFFICER

Mark Hamberlin has joined Clark Construction as executive vice president and chief people officer. Mark will lead Clark's human resources strategy and operations across the country including talent acquisition and management, training and development, organization development, engagement, benefits, and employee policies.

"People are at the center of who we are as a company," said Robert Moser, president and chief executive officer at Clark. "Mark's experience and leadership will allow us to continue to attract, retain, and engage the best talent."

Mark most recently served as vice president of global talent acquisition for Danaher, a global science and technology company based in Washington, DC. Before joining Danaher, Mark's career



included human resources and finance leadership roles at Cisco Systems and organizational design and development consulting roles at Coach Leather and Hallmark Cards.

Mark earned a bachelor's degree in French, with minors in business and psychology from Brigham Young University. He also earned a master's degree in organizational behavior from Brigham Young University. ■

BRIAN FLEGEL NAMED EXECUTIVE VICE PRESIDENT OF ACQUISITION AND DEVELOPMENT

Brian Flegel has been promoted to executive vice president, national acquisition and development. In this role, Brian will support priority clients nationwide with a focus on new regional markets such as Atlanta and Nashville. From client identification and cultivation to strategic staffing, Brian will be an active leader of the pursuit planning and development processes to ensure the best opportunities for our company and our people.

Since joining Clark as a project engineer in 1995, Brian has worked on a number of monumental projects throughout the Washington, DC metropolitan area, including the Women in Military Service for America Memorial, the Investment Building, and the Smithsonian



National Museum of African-American History and Culture.

He was promoted to vice president in 2005 and assumed leadership of Clark's Interiors Division in 2007. In 2010, he was promoted to senior vice president.

Brian holds a bachelor's degree in architectural engineering from Pennsylvania State University. ■

LARRY STOVICEK RECOGNIZED WITH INDUSTRY ACHIEVEMENT AWARD

Clark Senior Vice President Larry Stovicek, a 46-year industry veteran, was recognized by the American Subcontractors Association of Metro Washington (ASAMW) with an Industry Achievement Award. The award, which was presented at the 55th Annual Subby Awards, honors an individual who has made a significant contribution to the construction industry during their career.

After graduating from Carnegie Mellon University in 1974, Larry joined Clark Construction as a payroll clerk on the Rosslyn Metro Station. At the completion of the project, Larry returned to school to study architecture at Virginia Tech.

Larry rejoined Clark in 1979 and over the next four years worked in a variety of roles including precast concrete design and production, estimating, and

project management. In 1986, Larry joined a national contractor as the director of purchasing and in 1996 returned to Clark as a project executive on the Tyler House Renovations and Franconia Springfield Parking Garage projects. Larry later became a purchasing manager and was then asked to lead Clark's Mid-Atlantic Purchasing Department in 1999.

Larry's contributions to Clark's Purchasing Department include stressing the importance of treating trade contractors fairly and that "when one party prevails tremendously, it's not a good deal."

"Larry is invaluable. His insight into projects, his experience purchasing, and his process in getting deals done is a benchmark that sets standards all should follow," said Greg Deweese, president of Total Civil Construction and Engineering and a Clark trade contractor for over 18 years.



Larry Stovicek, left, accepts the Industry Achievement Award at the Annual Subby Awards Gala.

"With all these years working with Larry there is an attribute that is far more valuable than his professionalism, and it's his sincere friendship that he shares with all." ■

ASHLEY KELLY RECOGNIZED AS AN OUTSTANDING WOMAN IN CONSTRUCTION

Ashley Kelly, a senior project manager on Clark's Long Beach Civic Center project was recently named to the Los Angeles Business Journal's list of Outstanding Women in Construction and Design.

Ashley joined Clark as an estimator in 2011 and has played a key role in supporting Clark's operations on complex projects throughout Southern California, including the Governor George Deukmejian Courthouse, The Forum Renovation, and the LAX Tom Bradley International Terminal Apron Demolition and Renovation. ■



RYAN HAWORTH AND PASCO UMBRIAC NAMED TOP YOUNG PROFESSIONALS

Project Executive Ryan Haworth and Construction Executive Pasco Umbriac were recently named Top Young Professionals by ENR California and ENR MidAtlantic, respectively.

Ryan, who started out as a field engineer in Clark Concrete 13 years ago, has led project teams on several landmark projects



in San Francisco, including Salesforce Tower and Chase Center.

Pasco, who joined Clark in 2001, has helped pave the way for some of the Washington Metropolitan area's most complex high-rise buildings including Central Place in Rosslyn, Virginia. Pasco is currently leading construction for The Wilson and The Elm, a landmark three-tower mixed-use development in Bethesda, Maryland. ■



Clark Gives Back During Inaugural Nationwide Week of Service

As part of Clark's inaugural Week of Service, team members from across the country volunteered more than 2,500 hours to make an impact on their local communities. Held in conjunction with Martin Luther King, Jr. Day, the Week of Service benefited more than 50 organizations across the country.

"Our commitment has always been to give back to the communities in which we work and live," said Brian Flegel, executive vice president at Clark. "Our Week of Service is an extension of that commitment and allows our employees to come together and support causes they are passionate about."

Throughout the week, Clark teams across the country made an impact in the community by:

- Partnering with the Greater Chicago Food Depository to sort food donations that support vulnerable families in Chicago.
- Donating essential items and filling "Clean Start" bags at the Lorton Community Action Center to support low-income families in Fairfax, Virginia.
- Partnering with Pike Market Food Bank to distribute groceries to low-income families, seniors, and individuals in Seattle, Washington.
- Organizing and cataloging clothing donations at Support the Enlisted Project to support active duty enlisted members and recently discharged veterans and their families in Southern California.
- Installing bird netting and cleaning the zoo grounds at the El Paso Zoo in Texas.
- Helping For Love of Children with office improvements like painting, building storage, hanging shelves, and more, in Washington, DC.



- Collecting critically-needed household items to benefit the Basic Needs Program at the Child Abuse Prevention Center in Southern California.
- Landscaping, planting trees, picking up debris, and collecting leaves at Seattle's Skyway Park.

- Working alongside A Wider Circle in Washington, DC to sort household items for individuals and families transitioning out of homelessness and fleeing domestic abuse.
- Teaming up with Luke 14:12 to serve hot, nutritious meals to homeless individuals in Nashville, Tennessee.
- Partnering with Inova Blood Donor Services to host a blood drive in Bethesda, Maryland.



"Volunteering alongside others on the Clark Team is a wonderful experience," said Megan Barrett, a Clark engineer who spent time at Luke 14:12 serving meals to the homeless and underserved population in Nashville, Tennessee. "It feels good to know we are doing our part and giving back to the local community." ■

THE WAY WE WERE



CLARK'S SELECTION TO CONSTRUCT THE NEW PGA TOUR HEADQUARTERS

in Ponte Vedra Beach, Florida, comes 11 years after the company's completion of one of the most iconic facilities on the PGA TOUR – the clubhouse at THE PLAYERS Championship [TPC] Sawgrass.

The Mediterranean Revival style facility pays homage to the historic architecture of nearby St. Augustine, with arches, columns, decorative stone, and a Spanish-style tiled roof. With prime views of the 9th and 18th holes of THE PLAYERS Stadium Course, the interior craftsmanship of the 77,000-square-foot clubhouse features wrought iron lighting, custom mahogany woodwork, and a grand staircase of imported limestone. The building's twin 65-foot towers are visible from 12 of the course's 18 holes.

Clark delivered the project within a tight timetable for the PGA so that its annual THE PLAYERS Championship would not be impacted. "Under a normal construction schedule, a clubhouse of this size would have required between 18 to 24 months to complete. However, it was finished 10 months after the demolition of the old clubhouse," stated David Pillsbury, the president of PGA TOUR Golf Course Properties at the time. Clark began work on the project after the last round of THE PLAYERS Championship in March 2006; the facility was finished in time to host the tournament in 2007. ■



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