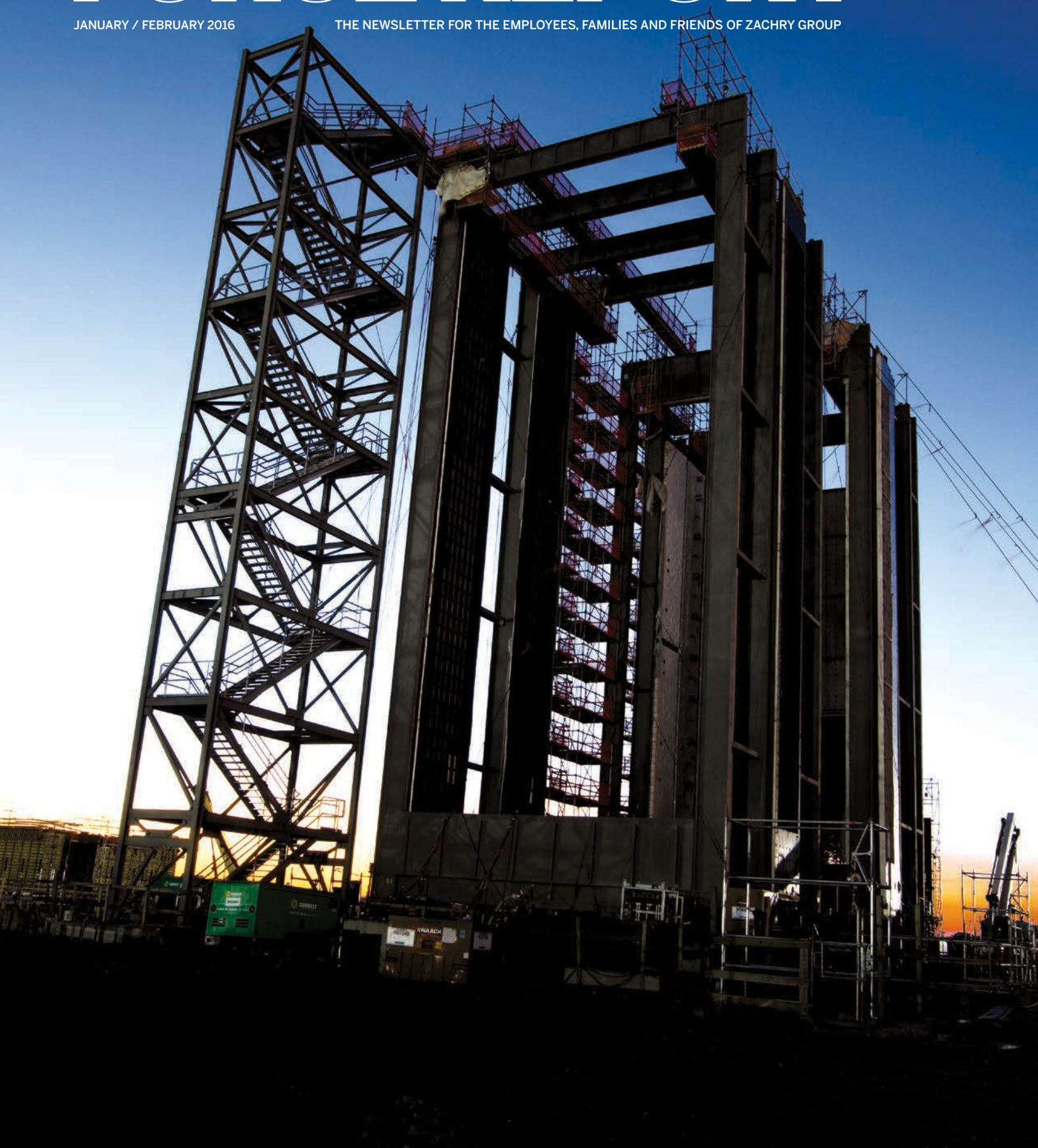


ZACHRY

# FORCE REPORT

JANUARY / FEBRUARY 2016

THE NEWSLETTER FOR THE EMPLOYEES, FAMILIES AND FRIENDS OF ZACHRY GROUP



**COVER:** The enormous steel frame for Exelon's new heat recovery steam generator at the Colorado Bend Generating Station near Wharton, Texas, stands ready for the flurry of activity that the new workday will bring at the job site. **Read more about the project on page 6.**  
Photo/Nick Grancharoff



## DEAR READERS,

*"Successful relationships are built on trust... Trust must be earned through actions... Trust takes years to build, seconds to break and forever to repair."*

We've all heard these quotes and probably even used them from time to time. They are very succinct, delivering a salient message highlighting one significant value that establishes an environment for effective and efficient business relationships.

Trust is one of our seven core values at Zachry Group. Our definition of trust is to continuously earn the support of others through our behavior and our organizational reliance on character, ability and strength.

The ability to execute large, complex projects requires significant trust between all parties involved. Customers place great trust in Zachry when they ask for our commitment to design, build and renew facilities that will determine the future success of their organizations. Our commitments frequently include a guaranteed price and a guaranteed schedule, which cannot be achieved without a high level of trust between Zachry employees, suppliers, partners and customers. Accordingly, we are very focused and put meaningful effort into developing relationships built on trust.

As I transition back into the engineering group after spending the last seven years in Zachry's financial and procurement areas, I am extremely encouraged to see the high level of trust exhibited across the organization. This hasn't happened without tremendous efforts by many. Engineering and Procurement groups have worked closely together to increase the value of supplier relationships. Engineering and Construction employees continue to focus on Craft Ready Engineering (CRE) and Engineering for Construction Safety (EfCS) opportunities as we hone our EPC execution model. Engineering employees and our fabrication teams at facilities in Moss Point and Charlotte are streamlining the processes for fabricated pipe and associated hangers/supports. These are just a few examples of how we are building an execution offering that is seamless to our customers and that creates confidence in our ability to stand behind our commitments, which ultimately creates trusting relationships.

This edition of *Force Report* highlights several examples of the role trust plays in our daily activities at Zachry Group. There may be no greater example than Exelon's decision to forego a competitive bidding process in favor of hiring Zachry on a negotiated basis to build two new combined-cycle generating stations that will



**"The objective of every Zachry team is to produce high-quality deliverables that meet customer requirements and enhance customer satisfaction."**

— Glenn Kloos,  
Senior Vice President,  
Engineering Operations

Photo/Nick Grancharoff

incorporate the most advanced technology in the industry (*read more on pages 6-11*). Trust was also vital in the Nuclear Energy Institute's decision to select Zachry as an early member of a special task force assembled to map an industry-wide plan to meet a critical new safety standard by 2018 (*read more on page 16*).

Zachry Group continues to grow and develop skill sets that best meet the needs of our customers across various industries, while maintaining the highest level of quality. Strategic acquisitions and hiring key personnel play a major role. We also continue to enhance processes and tools for collaboration and project execution across multiple locations.

Like the Zachry team as a whole, the engineering group is committed to achieving and maintaining customer satisfaction. Across the enterprise, we demonstrate our commitment to quality through the training of our employees, compliance with all requirements, obtaining customer feedback and maintaining a company culture that fosters continuous improvement. The objective of every Zachry team is to produce high-quality deliverables that meet customer requirements and enhance customer satisfaction. Meeting and exceeding this objective is what engenders trust and strengthens relationships.

As we begin a new year full of scheduled work and unbridled potential, it's an exciting time to be part of Zachry Group. We all benefit from the high level of trust that the Zachry name inspires, and it is our role throughout 2016 and beyond to protect that trust and continue to build upon it.

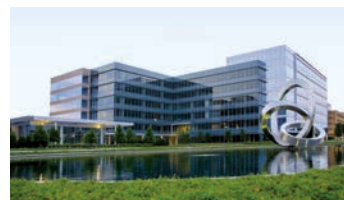
*Glenn* Glenn

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**The new West Houston office** brings together Zachry's Houston Design Center, Mid Cap Construction, Enterprise Strategic Development and Project Services groups. Photo/Site

## ZACHRY TALENT UNDER ONE ROOF

### NEW BUSINESS ADDRESS IN HOUSTON



Zachry recently made a strategic investment to continue growing its footprint in the refining and petrochemical industry by bringing together several business groups and functions in a new location near Houston's Energy Corridor.

Located in the city's Westchase District, the new office brings together Zachry's Houston Design Center, Mid Cap Construction, Enterprise Strategic Development and Project Services groups. Having all groups in one location will support design, project management and construction for mid-cap and large process projects in the Gulf Coast region and beyond.

"The new West Houston office represents the essence of Zachry Group's EPC mid-cap strategy, bringing together engineering, procurement, construction and startup under one roof," said **Chris Henry**, director of operations at the Houston Design Center. "This creates a truly integrated team."

Each unit serves a specific function within any given project. The Design Center focuses on engineering, Mid Cap provides a range of EPC services, and Enterprise Strategic Development is the company's business development arm.

The move offers distinct advantages for Zachry and its customers. For example, locating the Design Center and Mid Cap Construction side-by-side will improve efficiency, especially in the design phase of projects, when Construction's input helps ensure the most efficient, cost-effective and safe design and installation.

The new building at 3600 West Sam Houston Parkway South gives Zachry a 48,000-square-foot space to

accommodate all of the different groups while also allowing room for future growth. ■

## PREPARED FOR EMERGENCY

### SAVING A LIFE ON, AND OFF, THE JOB



When a Zachry manager recently suffered a massive stroke, and when in a separate incident a Zachry ironworker required CPR, it was the emergency medical readiness and quick actions of nearby employees that saved lives.

"We spend a lot of time in the office or on the job site, oftentimes more than at home," Director of Safety & Health **Dave Tolbert** said. "It's important for everyone to feel safe in their environment, knowing that if something does happen, there's a plan. It's extremely important to Zachry that employees feel a sense of well-being and know that their employer has their best interests at heart."

Recently, while an employee was meeting with a manager in the Denver Design Center to review plans, she recognized that the manager started exhibiting signs of a stroke. As a first responder, she knew to immediately call for help and initiate the emergency plan. This plan included calling 911, notifying the front desk, and having someone present at the main floor, elevator lobby and at the elevator door on the floor of the incident to help guide EMS to where they needed to go.

This quick response made a difference; if immediate action had been delayed, this manager's life would have been significantly impacted.

Another recent example of the importance of emergency medical readiness occurred when a foreman in the structural/rigging group at the HollyFrontier refinery in

Wyoming had to perform CPR on an ironworker. The two men happened to be together on a day off. Customer representatives are praising the foreman's life-saving actions, and physicians who treated the ironworker said that he would not have survived if CPR had not been performed as quickly as it was.

Zachry offers the American Heart Association First Aid and First Responder Certification to employees on a voluntary basis, and it is renewed every two years. Employees are also encouraged to learn the Emergency Action Plan specific to their location.

"I can't stress enough the importance of being prepared with this emergency medical training and knowing the emergency action plan," Tolbert said. "It can mean the difference between life and death. In these cases, due to the swift medical actions taken by our employees, two lives were saved." ■

## AWARD WINNER

### MORE THAN AN "A" FOR EFFORT



The Industrial Services Group at the Monsanto plant in Luling, Louisiana, recently received a Partners in Education award from the St. Charles Parish School Board for its contributions of time and donations to help advance education in the parish and throughout Louisiana.

The annual award recognizes businesses, industries, non-education associations and individuals for their significant contributions to education in the state of Louisiana.

"We have partnered with the school district for several years," Site Manager **Jody Horn** said. "From providing school supplies and student uniforms to helping bring awareness to craft careers, Zachry is committed to supporting education in the community where our employees live and work."

Zachry's contributions to the school district include:

- Providing mock job interviews to freshmen high school students each fall and spring
- Educating students about trade careers
- Donating school uniforms for students in need
- Contributing supplies for lockout/tagout simulators for a senior project
- Representing the construction trade on the advisory board
- Collecting box tops and Campbell's soup labels
- Painting furniture
- Sponsoring scoreboards and banner advertising for softball, football and soccer teams

"We reached at least 60 students during the first quarter of the school year through freshmen mock job interviews, classroom visits and job fairs," Horn said.

While Zachry's contributions reach many students in parish schools, a primary focus is reaching students who may be interested in craft careers.

"Our goal is to help prepare students to be successful in their careers, especially those who do not plan to attend college after high school," Business Manager **Jennifer Mayeaux** said. ■

## PROJECT OF THE YEAR

### DOMINION WARREN POWER STATION RECEIVES TOP HONORS AT POWER-GEN




When the sparkling 1,346-MW power plant in Warren County, Virginia, began commercial operation in December 2014, it was a marvel of modern design and engineering. A year later, the Dominion Warren Power Station remains one of the cleanest fossil-fuel-fired plants in the nation, with the latest technology and equipment. Built through a joint venture between Zachry and Burns & McDonnell, the Warren County power station is a standout and continues to receive accolades.

The power station received major recognition in early December, earning top honors at POWER-GEN's 2015 *Power Engineering* Projects of the Year awards. The Warren County project was named Gas-Fired Project of the Year and top overall Project of the Year, besting eight finalists. The awards were announced at the POWER-GEN International Conference in Las Vegas on Dec. 8.

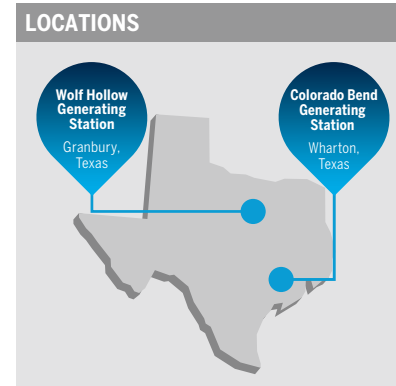
The Dominion Warren project is an amazing example of modern power station engineering, design and construction. The project uses a three-in-one configuration to bring together Mitsubishi 501G combustion turbines, among the largest in the world, a 573-MW steam turbine and Alstom heat recovery steam generators. The station also benefits from a 60-cell air-cooled condenser that reduces water consumption.

One groundbreaking feature of the project is its thermal energy storage system that chills the air supply to the combustion turbines, resulting in added power. A 10-million-gallon concrete tank stores chilled water that is pumped through the turbines' inlet air coils, which maximizes megawatt output. The system increases plant output by about 10 percent on a 92-degree day. The end result for Dominion is lower costs for its customers, because the chillers don't drain away power during peak demand, which leaves more power available for customers. ■

# ZACHRY POWERS AHEAD WITH DUAL POWER PLANT EXPANSIONS FOR EXELON

 **It's all systems go,** as Zachry forges ahead with the engineering, procurement and construction (EPC) of two nearly identical combined-cycle gas turbine projects for Exelon Generation.

When completed, the new units at Wolf Hollow Generating Station near Granbury, Texas, and Colorado Bend Generating Station near Wharton, Texas,



Bend Generating Station near Wharton, Texas, will allow Exelon to add more than 2,000 additional megawatts to the expanding Texas energy grid.

The projects represent a substantial investment by Exelon in Texas power generation, but rather than bidding the contract out to multiple contractors, the customer asked Zachry to negotiate a contract with them.

“The fact that they opted for a negotiated contract with Zachry instead of competitively bidding the contract is very significant,” Project Executive **Randy Allison** said. “Out of all the EPC contractors in the world, Exelon chose us. I believe they did so based on our reputation, safety record, competency and size, and the trust we’ve earned through the relationships we’ve developed.”

Zachry is the first in the United States to order and install GE’s new H-class gas turbines. Each plant will employ two GE 7HA.02 gas turbine generators, a GE-D600 steam turbine generator, two Alstom heat recovery steam generators and an air-cooled condenser. The air-cooled condenser feature enables each power plant to use as little as one-tenth the amount of water usually required to cool plants of this size—this will save millions of gallons of water per day.

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**Steel rises at the Colorado Bend Generating Station** near Wharton, Texas. The station is one of two nearly identical projects that together will add more than 2,000 megawatts of generating capacity to the Texas energy grid. Photo/Nick Grancharoff

## THE PHILOSOPHY OF “ENGINEER ONCE AND BUILD TWICE” HAS PROVEN SUCCESSFUL SO FAR AS BOTH EXPANSIONS ARE ON TRACK TO BE COMPLETED A MONTH APART IN 2017

CONTINUED FROM PAGE 6

### BEST COMBINED-CYCLE PROJECT ON THE PLANET

Exelon coined the term BCCPP, or best combined-cycle project on the planet, to describe the two projects because several attributes align to make these world-class projects, Allison said.

“First, we’re installing the world’s largest and most efficient 60-hertz gas turbines. Add to that the latest technology in GE’s new steam turbine, along with custom-built Alstom heat-recovery boilers,” he said. “Then, there’s Zachry’s construction plant experience and reputation. Finally, consider that these projects include air-cooled condensers that are substantially more environmentally friendly than the typical cooling tower, and it’s clear that BCCPP is a fair summation of the project.”

### ENGINEER ONCE, BUILD TWICE

The simultaneous execution of the two massive projects has demonstrated Zachry’s collaborative nature on a grand scale.

The philosophy from the beginning of development was to “engineer once and build twice,” and so far this philosophy has worked, with just minor modifications made for each site.

From the engineering side, unlike most of Zachry’s power projects in the past, which employed only a single design center or two, the approach here was to leverage talent across the enterprise. The centers in Denver, Amarillo, Minneapolis, Omaha, Charlotte and Houston have each been tasked with the engineering for a defined part of the project, with the Denver Design Center leading the coordination.

“The thought process was to mobilize our resources as much as possible,” Allison said. “This trains the company to be able to break up and execute a project regardless of location, and it has the benefit of fully integrating us as a company and helps level the resource loading of each design center,” Allison said.

With project completion scheduled for March 2017 at Wolf Hollow and a month later at Colorado Bend, the



**Above:** In November and December, the projects began putting up pipe racks and preparing to receive steam turbine generator sets in the first quarter of 2016.

**Above:** Workers at the Colorado Bend Generating Station put safety first and ensure the job’s done right.

**Below:** Dawn breaks at Exelon Generation’s Colorado Bend Generating Station.

projects are proceeding with the teams closely monitoring and adhering to that one-month differential.

### MARKING THE PROJECTS’ MILESTONES

By November 2015, both site teams finished laying major foundations and proceeded with installation of the heat recovery steam generators. By the end of the year, the project teams achieved the major milestone of getting out of the ground, allowing them to begin putting up pipe racks and preparing to receive steam turbine generator sets in the first quarter of 2016.

Beyond that, future milestones include the staggered deliveries of the combustion turbines in late spring and summer. In June and July, the plants will be working toward achieving backfeed, the first turnover package. Once that is done and the transformers are energized, the startup process can begin.

“The process leading up to commissioning flows from laying the foundations to setting the equipment,

achieving backfeed, powering up the motors, checking them out and getting them ready so we can clean the boiler and all the equipment, pressure-test the equipment and finally, begin the startup process. We have a target completion date and a guaranteed substantial completion date, and both projects are on track to meet our targets,” Allison said.

### ONGOING COLLABORATION

To support these project milestones and take advantage of the two staggered schedules, the Wolf Hollow and Colorado Bend project teams communicate frequently.

“We have weekly conference calls with Colorado Bend and also make monthly trips to alternating sites,” Wolf Hollow Project Manager **Sam Awalt** said. “These meetings and trips aren’t just about us sharing lessons with them. We also use these opportunities to pool our combined resources and talents to plan ahead and find synergies that will benefit us both in the future. In other

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## PROJECT TEAMS AT BOTH SITES STAY IN CLOSE CONTACT

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words, we don't limit our planning or thinking to just one job."

This approach is part of a conscious effort to use as many internal Zachry resources as possible and limit reliance on subcontractors. Awalt explained that this extends from the previously mentioned integrated engineering effort, to the fabrication of all balance-of-plant pipe by the Moss Point fabrication shop and the Charlotte hanger design and fabrication shop, to the employment of the High Voltage team to do the collector yards and high voltage interconnects at both sites.

### SMALL SITE DIFFERENCES

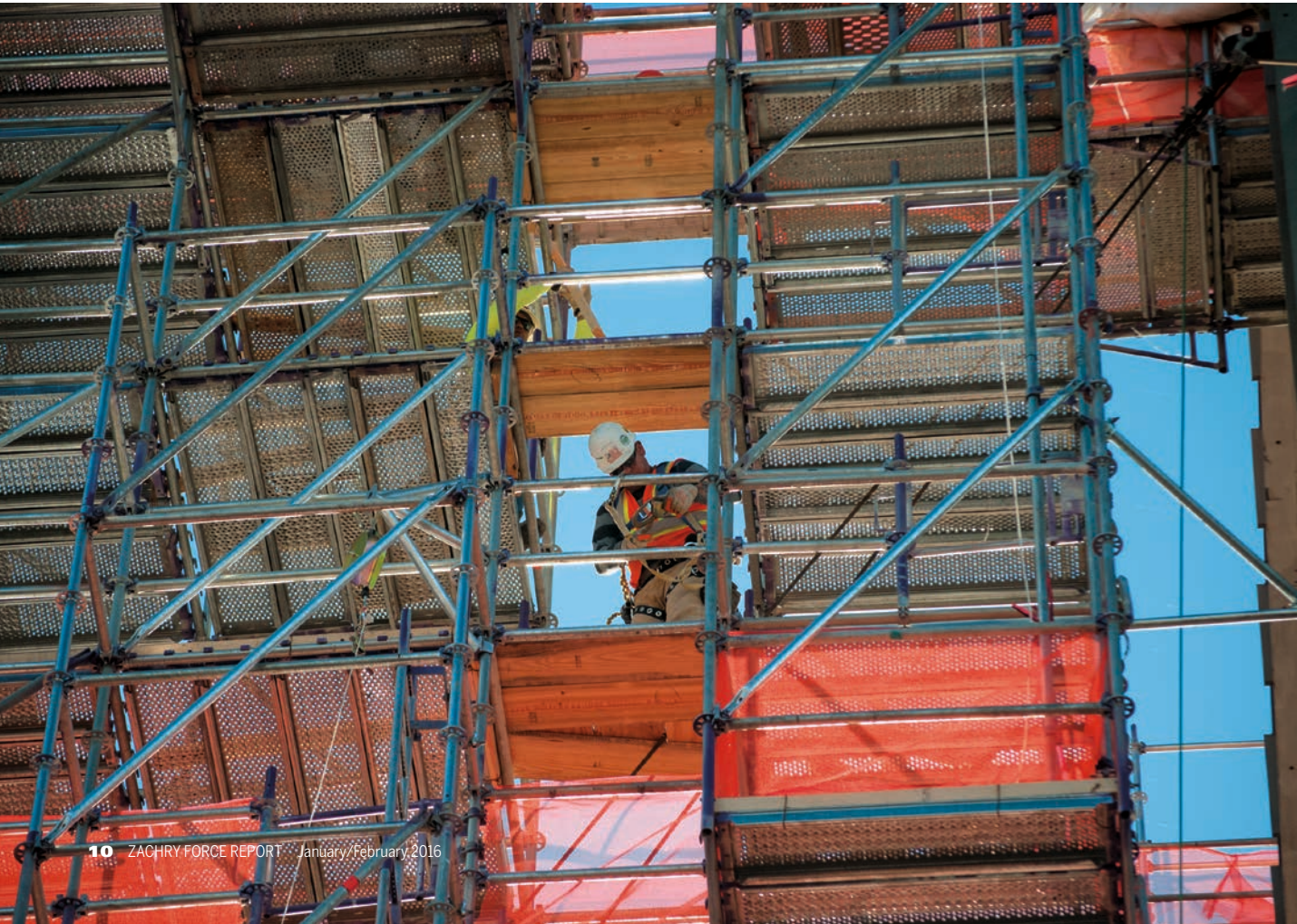
Despite the many similarities, some differences between the projects do exist. The greatest site-preparation challenge at Wolf Hollow was to clear the small amounts of shallow rock before breaking ground. At the heavily wooded Colorado Bend site, located in a 100-year flood plain, the ground work posed a different challenge.

"We had to clear the woods, mulch the timber and clear the site. By the time we were done removing the roots, it was the lowest point in the county and the record spring rainfall was draining into our site," Colorado Bend Project Manager **Greg Davis** said. "We're still busy raising the elevation and are carefully sequencing which areas are raised first, to stay in front of our erection order. When we're done, we will have added about 390,000 cubic yards of soil, and the average fill will be about seven feet of select fill on top of the native soil."

Like Awalt, Davis is quick to note the benefits of sharing resources and lessons between the sites.

"While the timing is too close together and the locations too far apart to share labor resources, we are benefiting tremendously from the discoveries Wolf Hollow is sharing with us, and from our combined efforts to improve sequencing and find better ways to do things at both sites," he said. ■

A harnessed worker focuses on the task at hand high up in a temporary tower of scaffolding at the Colorado Bend Generating Station.



The massive steel frame of the new heat recovery steam generator takes shape behind scaffolding towers at the Colorado Bend Generating Station in Wharton, Texas. Photos/Nick Grancharoff



# REACH FOR THE SKY

## CRANES KEEP ZACHRY JOBS MOVING



**Approach any major project site,** and the most notable pieces of equipment you'll see are cranes, towering high over all visible structures. Cranes are among the most crucial pieces of equipment, vital to the site's overall progress and to achieving committed delivery dates. Without cranes, work on a project site could be severely impacted.

"Cranes are very important components in making project sites successful," Crane Services Manager **Danny Wiggins** said.

Due to the cranes' critical importance to all project sites, Zachry maintains a diversified, state-of-the-art fleet of cranes.

"Zachry has invested a great deal in a strategically designed fleet matrix," Wiggins said. "Today, we have a matrix that allows us to support and execute a variety of projects in industries that include the power, petrochemical, refining and processing

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Early morning light creates an imposing silhouette of the new air-cooled condenser unit—and the cranes that helped it take shape—at the Wolf Hollow Generating Station near Granbury, Texas.

## ZACHRY CRANES ARE ESSENTIAL TOOLS FOR PROJECT SUCCESS

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sectors. In addition, with our designed matrix of cranes, we are more strategically proficient at relocating our fleet throughout the country in support of our projects.”

“Cranes are strategic pieces of equipment that often dictate a project’s critical path,” Equipment Operations Manager **Sammy Adams Jr.** said. “The continued ownership of these assets ensures consistent project execution.”

### PLANNING AHEAD

Each time a crane lifts an object, whether placing it atop a structure several stories tall, or simply moving an item from one place to another on a job site, there’s a plan in place designed specifically to execute that movement safely and effectively.

Construction Engineering Manager **Sam Baki** designs the plans for every crane lift on every Zachry job site. Civil/Structural Designer **Billy Gould** taps into Zachry’s LiftPlanner crane library software to prepare the final lift plans for approval and distribution.

Based on data provided by the crew on site, Baki and Gould begin a multi-step process that evaluates the position of the crane, vertical and horizontal clearances, and weight loads and distribution prior to selecting the most suitable crane for the job. Baki evaluates the stress distribution and deflection for the item being lifted. Factors include finding the cranes with the right capacity to lift the items, designing the right rigging to safely lift the object without damaging it, designing the connection points and checking the ground bearing pressure distribution versus the ground allowable bearing pressure. Other considerations include structural crane matting and preparing temporary foundations to serve as stable work sites for crawler cranes and tower cranes.

After all of these steps are complete, Baki oversees preparation of lift plans, signs and seals them, and sends them to the job site.

“You have to do your homework before you can do this,” Baki said. “There are a lot of small things that get involved in the process.”

An assortment of cranes tower over construction at the Port Everglades Clean Energy Center near Fort Lauderdale, Florida.



### LEADERS IN TRAINING

According to Baki, the painstaking measures are all done in the name of safety.

“I always say we are in the business of saving lives,” Baki said. “We are like doctors, only we save lives by preventing accidents.”

Zachry requires all riggers and signal persons to be qualified through training and testing. All crane operators must be certified by an accredited certification organization. Along with passing rigorous written exams, the operator must maneuver a test weight through an obstacle course.

Riggers, the workers who affix the load to the cranes, also go through Zachry’s in-house training and exam process.

At one time, no one in the industry had even considered certifying crane operators. While OSHA made certification mandatory for crane operators six years ago, Zachry chose to be much more proactive, certifying its crane operators for the past 14 years.

This gives employees a third-party credential that they can use on any crane job for any customer.

Zachry is ahead of most companies in standards and requirements for crane operators, said **Don Hurley**, director of safety for the Construction Group. The company helps to maintain the validity of written exams for operators through its close involvement with certification organizations.

### SPEAKING UP ABOUT SAFETY

The emphasis on credentials gives crane operators both the responsibility and the authority to speak up about safety on the job, said Adams, who oversees operations for the Equipment/Yard Department. At one time, crane operators may have been reluctant to speak up when given an order under questionable safety conditions, such as too-heavy loads or bad weather. Today, certified operators have the authority to stop operations until a qualified person can assess the situation.

Training is more important than ever, Adams said, especially with the complexity of today’s cranes.

Three decades ago, operating a crane may not have been more difficult than operating a farm tractor. Today, cranes are much more complex, with operating consoles that look more like a high-tech cockpit.

Zachry stays on the forefront of the ever-evolving crane industry, with more than 60 percent of its fleet consisting of 2014 or newer models of cranes. These current models feature technology that helps with fleet maintenance, management and safety.

Computerized onboard systems allow managers to closely monitor everything from maintenance and oil-change alerts to how the operator is using the crane, such as exceeding the weight limit.

### MATCHING THE CRANE TO THE JOB

Zachry continuously works to perfect processes and procedures governing its crane activities. Crane Services, Construction Engineering and project sites work in collaboration to strategically determine the correct crane required for project execution.

Once a crane is selected, the Crane Services team coordinates equipment deliveries with the site teams located throughout the country. Because these crane durations can vary from a single day to multi-year deployments, it is critical that this collaboration and strategy be constantly re-evaluated for optimal performance of fleet resources.

The process of crane procurement and deployment is truly a team effort, according to Wiggins.

“For every site crew supporting an outbound operation, there is another crew supporting the inbound operation,” he said. “These crews can consist of assembly/disassembly directors, crane operators, riggers, site supervisors, site technicians and any additional support personnel needed. Based on the type and size of the crane, it can take a single day or several weeks to assemble or disassemble one crane. With the emphasis on supporting Zachry’s successful execution of all projects, meticulous crane procurement is a top priority for Zachry.” ■



## ZACHRY SUPPORTS U.S. NUCLEAR INDUSTRY THROUGH INNOVATIVE SOLUTIONS TO INDUSTRY-WIDE VULNERABILITY



**There are no acceptable vulnerabilities** in nuclear power plants when it comes to meeting Nuclear Regulatory Commission (NRC) safety standards. Every potential threat to a plant's smooth operation must be mitigated with a solution that preferably offers multiple redundancies.

An open phase condition (OPC) is one such vulnerability, which could prevent the functioning of important safety systems due to an open phase (unbalanced voltage) in off-site power circuits. In early 2012, the failure of a porcelain insulator at a plant in the northern United States caused an OPC that resulted in an automatic reactor trip from full power. A month later, another failure at a European plant resulted in an OPC. These incidents resulted in the NRC performing a special inspection of the northern U.S. plant, in part to determine the relevance of the plant failure to the industry as a whole.

### NRC ISSUES NEW BULLETIN

"These events caused the NRC to issue a bulletin alerting U.S. plants to this design flaw in the electrical power system protection scheme that allowed an OPC to impact safety systems, resulting in the shutdown of a plant," said **Jon Neuhoff**, manager of Zachry's nuclear engineering office in Chicago.

By Dec. 31, 2018, all nuclear plants in the U.S. must have a system in place to detect and protect against an OPC, as well as demonstrate how their electrical power system complies with the plant's licensing requirements.

### INDUSTRY-WIDE COLLABORATION

The industry, under the Nuclear Energy Institute (NEI), quickly assembled a task force to bring utilities and other industry stakeholders together to map a path for

meeting the 2018 deadline. Zachry was among the first to become involved in this NEI initiative.

"By getting in on the ground floor, on our own time and our own dime, and by collaborating with our peers, equipment vendors and utilities, we've contributed to finding solutions, and we are now acknowledged as having significant expertise in this area," Neuhoff said. "The industry trusts our expertise in this area, and this has resulted in a lot of new business for us."

According to Electrical Engineer **Tom Solinsky**, Zachry is also working with the Institute of Electrical and Electronics Engineers (IEEE) to develop new standards for resolving OPCs that will become the benchmark for both new and existing plants.

### NO ONE-SIZE-FITS-ALL SOLUTION

Solinsky says there is no single solution that meets everyone's requirements.

"It's not something you can pull off the shelf, connect the wires and then walk away," he explained. "What we have instead is a standardized concept on how to solve the issue, and we have technology available from three different vendors to make it happen."

Zachry steps in to provide the detailed engineering needed to create a customized solution. Then, the team installs the solution and makes it work.

"Consider also that all plants are different and have unique power distribution systems and licensing requirements," he said. "You can see how necessary our expertise is to take these applications being developed out there and fit them to the customer's plant in a manner that addresses the issue of detection and protection, and satisfies the plant's licensing requirements."

Some of the OPC detection and protection systems Zachry is involved with are unique in that they provide both active and passive detection. Most relay protection

systems are traditionally passive. They have a sensor and monitor for a set of standards, and when those standards occur, they trip. Solinsky explained that the new equipment has that technology, plus an active component.

"These systems are able to inject a signal into the power system and evaluate it upon its return. If there's a significant shift in the signal compared to what was sent out, we can determine if there's an open phase," Solinsky said. "We are also looking at installing redundant systems for some of our customers at their request."

### CUSTOMER INSTALLATIONS ALREADY UNDERWAY

Working toward the late-2018 deadline, Zachry is busy developing design changes to install systems at several customer plants. Doing so now will allow a year of testing prior to the deadline to verify that the solutions work.

According to Project Manager **Ron Ploof**, Zachry is designing OPC detection and protection solutions for one customer at nine of its nuclear plants.

**"By getting in on the ground floor, on our own time and our own dime, and by collaborating with our peers, equipment vendors and utilities, we've contributed to finding solutions, and we are now acknowledged as having significant expertise in this area."**

— Jon Neuhoff, manager of Zachry's nuclear engineering office in Chicago

"This customer put out an Engineer of Choice tender for contract engineering services, and we were one of three companies that won," Ploof said. "Thereafter, they put out individual projects for the winners to quote on, and one of these was for developing designs for OPC detection and protection solutions at all of its nuclear units. Zachry won that contract based on our extensive experience with transmission systems, and because we are heavily involved with the NEI on the OPC issue," Ploof said.

Perhaps more than anything, the OPC issue has highlighted Zachry's unique electrical analysis capabilities and deep industry experience. In addition to Zachry's experience in designing modifications of this sort for electrical distribution systems at nuclear power plants, Zachry Group also offers substantial substation and high-voltage expertise. These capabilities make the company uniquely positioned to engineer best-in-class solutions to the OPC detection and protection requirements of its nuclear customers. ■

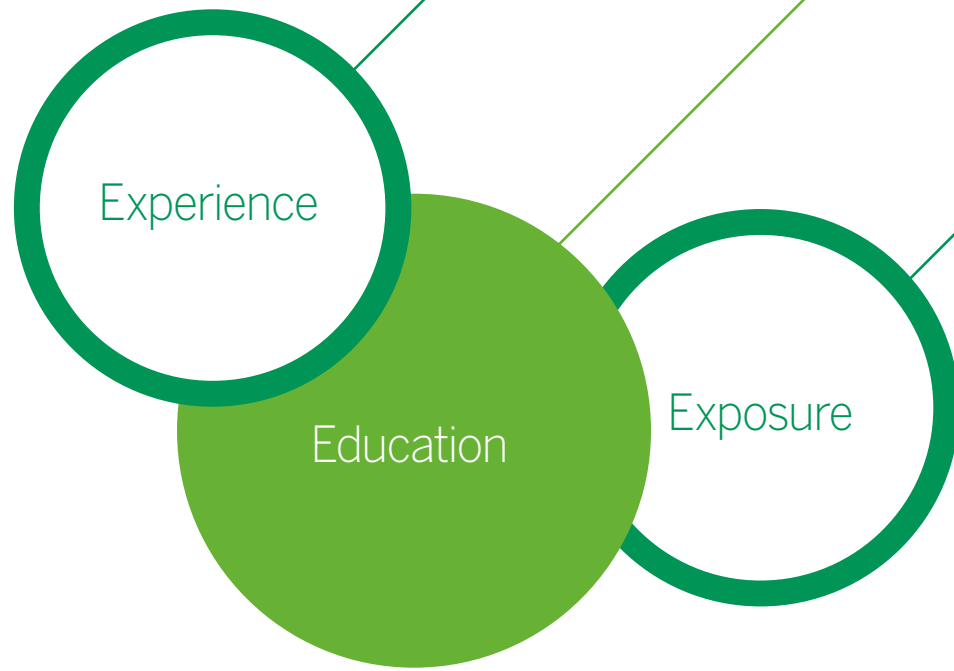


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# ZACHRY LAUNCHES FIRST PROJECT MANAGEMENT ACADEMY

NEW ACADEMY TARGETS EMPLOYEES WITH APTITUDE, INTEREST IN BECOMING PROJECT MANAGERS

At Zachry, a project manager can play a role somewhat akin to an air traffic controller. He or she leads a diverse group of Zachry managers, craft workers, engineers and contractors, manages customer communication and timelines, and executes complex plans on budget. Keeping everything in flight is a big job, one that requires a unique set of skills and abilities.

"A project manager has significant demands on his or her time," Construction Operations Senior Vice President **Buddy Myers** said. "I have worked within the project management field, both on site and at the corporate office, for 33 years. Today, the project manager's job is tougher, more complex and more sophisticated."

That's one reason Zachry decided to develop the Project Management Academy (PMA).

## IDENTIFYING IDEAL CANDIDATES

An accelerated learning program administered by Zachry's Talent Development Department, the academy

is designed to bring together select employees to advance their project management skill set.

"Using Zachry's Career Strategy Toolkit, we identified employees whose reviews and individual development plans showed potential for growth as project managers," Leadership and Professional Development Director **Gregg Tanoff** said. "We then worked with their managers to determine eligibility for PMA. It was a rigorous selection process."

When tracking and selecting employees for growth and enhancement, the Talent Development Department uses the Triple E motto: Experience, Education and Exposure. An employee needs all three elements to move forward in his or her career path. The Project Management Academy was created using this principle.

The 19 employees who were selected represent a diverse cross-section of the company; eight within construction and 11 from varied professions such as

engineering, project controls, business development, execution planning and procurement.

"We worked with outside consultant Pathfinder to develop the study paradigm for PMA, and we turned to our internal source subject experts to help build the content," Talent Development Program Manager **Crystal Morales** said. "Buddy and his team wanted to develop a program that highlighted the life cycle of the project—from contract to completion—showcasing what each department was responsible for on the project, both on site and at the corporate level."

## PROGRAM LAUNCH

PMA kicked off in January 2015 with a reception for participants to get to know each other. "One of the most important aspects of the program was providing opportunities for each employee to build relationships," Tanoff said.

Tanoff and his team also developed a mentor process within PMA, so participants had a seasoned Zachry professional they could turn to for advice and guidance. "We chose individuals as mentors who were well networked and respected throughout the company—those employees who knew the Zachry enterprise and could be a conduit for the emerging project manager," Tanoff explained.

The seven-month program includes three three-day instructor-led training sessions at the Home Office, coupled with a continual case study consisting of eight assignments broken out between the three instructor-led sessions. Participants work in teams and individually. Before graduation in October, participants presented to an executive review team, which included Myers and two other senior leaders.

"It was clear from the beginning that a key skill for project managers is understanding the entire enterprise, so that they gain an appreciation and understanding of how the members of Zachry Group work together to deliver the very best experience for our customers," Morales said.

## PROJECT MANAGEMENT ACADEMY

## EDUCATION FOR THE FUTURE



The Project Management Academy is designed to bring together select employees to **advance their project management skill set.**

- Employees are identified using the **Zachry Career Strategy Toolkit**—annual reviews and individual development plans show potential for growth as project managers.
- Mentors are available within the academy, so participants have seasoned Zachry professionals as a **resource for advice and guidance.**

Since October's graduation, one academy participant already has been promoted to project manager.

"Two other participants had been promoted to project manager shortly before the academy began," Myers said. "Overall, the program was successful. It did what it was supposed to do—provide a broader and keener understanding of the enterprise, while aligning the right people in the right place to move forward in their careers." ■



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# I AM ZACHRY



Photos/Nick Grancharoff

## MY NAME IS CARON GIPSON AND I AM ZACHRY.

I AM ZACHRY

My career with Zachry spans 35 years, which is pretty much my whole lifetime. I began with Zachry at the Home Office in an equipment office. After one year, I moved to a field site, where I started out in new construction. I've spent the last 20 years working in the Industrial Services Group (ISG) on maintenance projects.

During my time with the company, I've done everything from running a tool room to becoming an administrative business manager within ISG. I've also worked with the Pulp & Power and Petrochemical & Refining areas. Zachry has blessed me with wonderful opportunities and helped me gain valuable experience as I moved up through the ranks, and that's why I am so grateful and proud to be a Zachry employee for so many years.

In my current role, I serve in various HR and accounting roles at the Citgo Refinery maintenance site in Corpus Christi, Texas. My top priorities are the success of our team and the satisfaction of our customers.

During my time with Zachry, the last 18 months really stand out as a challenging period for me. There have been major changes at our job site. Some key players on our team have changed, and the subsequent transition has required a lot of extra effort from everyone involved. When these transitions occur, it requires a high level of trust from the customer and a strong showing of commitment on our part.

We've worked very hard to assure the customer that we are fully committed to them and to the project, and to show that the changes they're seeing are for the better.

Because I've been here so long, I felt an extra sense of responsibility to help us through this transition period. I was able to offer valuable insights and provide historical information and context that made a difference during the transition.

**"Caron is an extremely dedicated employee. She has a wealth of knowledge and an impressive recollection of historical facts that she can recount off the top of her head. Caron's integrity, commitment and trustworthiness reassure the client to have an unwavering faith that the job will not only get done, but get done correctly."**

— Brent Turner, Site Manager

Over the years, I have remained loyal to Zachry for many reasons, but the greatest reason is that I identify strongly with the company's values and ethics. I don't know of many other companies that truly put their employees first. Working for a large business, it's easy for an employee to feel as if he or she is just one among the masses. But no matter the job title, when an employee works hard at his or her job and does it well, Zachry recognizes that employee's contributions.

Zachry took a chance on me all those years ago, and I'm grateful for the mentoring and opportunities I've been offered. I'm proud to have built a lifelong career with a company whose core values match up with mine, and that is why I AM ZACHRY. ■

## MY NAME IS KEITH PARANISH, AND I AM ZACHRY.

I AM ZACHRY

I am a proud American citizen, but soon I hope to also become a citizen of Ukraine, the land of my forefathers. My grandparents immigrated to the United States from Ukraine, and I have always felt a special connection to my family's native country. In 2004, I moved to Ukraine to teach English. There, I met my wife, who was the director of the Children's Center where I taught. We have lived in the U.S. and Zaporizhzhya, Ukraine, where my wife currently lives to take care of her father.

My commitment to Zachry keeps me in the U.S., but I travel between the two countries when I am able. It is Zachry's commitment to me that makes the distance between my wife and me easier.

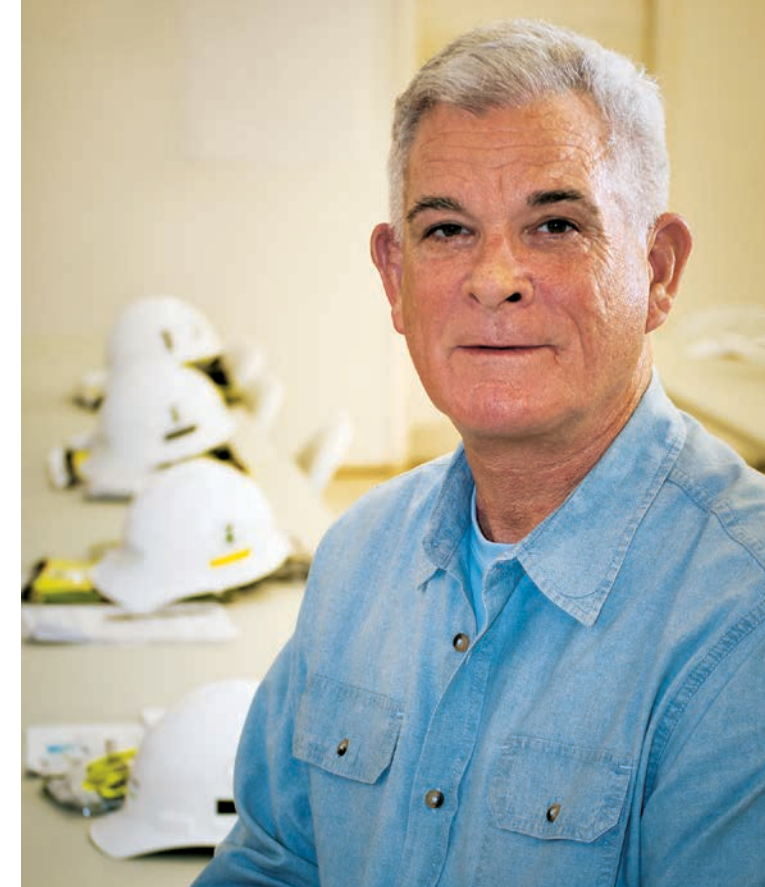
As training coordinator at Zachry's Brazoria County West Columbia Training Center in Old Ocean, Texas, I have the honor of teaching young Zachry craftworkers important skills that keep them safe and help them excel in their careers. I also help older craftspeople overcome bad habits; when you learn something the wrong way, it's important to re-learn it the right way.

You might say that I came to work for Zachry through divine intervention. While studying at the Southwestern Baptist Theological Seminary in San Antonio between 1998 and 2007, I met **John Hornsby**, senior director of talent development. He encouraged me to apply for a job with Zachry, and I am so glad I did.

My first position at Zachry involved working in the iron department at Calaveras Lake in San Antonio. I have also worked in the civil department as a carpenter, boilermaker and millwright.

You can move up with Zachry, as they say, if you come to work, do your job and take care of business. For me, taking care of business is inspiring others. As training coordinator, I teach safety orientation, fall protection training and electrical tool training. I also teach math and blueprint reading after work hours so that I can help craftspeople excel in the construction field.

I have a unique position working as a craftworker and safety trainer, and I have two supervisors, Superintendent **Kenneth McElwee** and Senior Safety Manager **Cole Wilson**. Although it's unusual to have two supervisors, I consider it a blessing. Both have been instrumental in my career advancement at Zachry. Their support allows me to perform my job at the highest level.



**"Keith exemplifies two traits Zachry values highly in its employees: dedication and hard work. He begins each training session by saying, 'Mr. Zachry pays me to work safely, and you should too.' It has become Keith's motto. He has an excellent rapport with the employees he teaches, and he wants to see them succeed and advance in their careers."**

— Rodney Girlinghouse, Project Safety Support Coordinator

In my spare time, I lead missions to Ukraine. As an ordained minister-at-large from Weidner Road Baptist Church in San Antonio, I am dedicated to helping and growing people, especially those in my family's homeland of Ukraine.

It's because of Zachry's investment in me, both personally and professionally, that I am able to give and teach. Zachry believes in its people, as do I. And that's why I AM ZACHRY. ■

## NOMINATE A PEER

Do you have a co-worker who lives the Zachry values? We want to hear from you—especially craft employees! Send your nominations to [ForceReport@Zachrygroup.com](mailto:ForceReport@Zachrygroup.com).

## ZACHRY HOLDINGS, INC., ITS SUBSIDIARIES AND AFFILIATES OBSERVE EEO, HARASSMENT POLICIES

### EQUAL EMPLOYMENT OPPORTUNITY POLICY (EEO)

It is the policy of Zachry to assure that employees and applicants for employment are to be treated without regard to their race, religion, sex, color, national origin or age. The company will not discriminate against individuals because of a physical or mental disability, or status as a disabled veteran or veteran of the Vietnam Era. Zachry's policy of nondiscrimination applies to all work-related actions; including but not limited to employment, upgrading or promotion, demotion, transfer, layoff or termination; rates of pay or other forms of compensation; recruitment or recruitment advertising; selection for training; and apprenticeship and pre-apprenticeship programs.

Reasonable accommodations will be made for qualified disabled persons according to existing state and federal law. Requests by qualified disabled persons for reasonable accommodation are encouraged by the company.

All employees are requested to encourage women, persons of minority races and disabled persons to apply for employment with the company or to apply for training under available programs.

### POLICY AGAINST HARASSMENT

Zachry is firmly committed to a work environment free from all forms of harassment of any employee or applicant for employment by anyone, including supervisors, co-workers, clients/customers, other contractors or visitors. Such harassment may be in violation of the harassment policy as well as state and federal discrimination laws.

This policy prohibits any conduct (verbal, physical or visual) by an employee or within the work environment that belittles or demeans an individual on the basis of race, religion, national origin, sex, age, color and disability. This policy specifically prohibits sexual harassment as well as all other forms of harassment. Sexual harassment includes any unwelcome sexual advances, requests for sexual favors or other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is an explicit or implicit condition of employment;
- Employment decisions are based on an employee's submission to or rejection of such conduct; or
- Such conduct unreasonably interferes with an individual's work performance or creates an intimidating, hostile or offensive work environment.

### RESPONSIBILITY

All employees are responsible for complying with the company's Equal Employment Opportunity Policy and its Policy Against Harassment and for reporting possible violations of these policies.

### WHO TO CALL:

Dispute Resolution Program  
P.O. Box 240130  
San Antonio, Texas 78224-0130  
1-877-350-0129

### COMPLAINTS

Any employee or applicant for employment who feels that they have encountered a situation that may be in violation of these policies is encouraged to make known their concern as soon as possible. Applicants for employment are encouraged to utilize the Dispute Resolution Process by contacting a Dispute Resolution Manager. Employees are encouraged to discuss their concern or complaint of alleged discrimination with their immediate supervisor. The supervisor's obligation is to try to resolve the concern or complaint. If it is not resolved at the supervisory level, or if the employee is uncomfortable discussing the issue with their supervisor, the employee should either contact the project/department manager or utilize the company's Dispute Resolution Process. Supervisors who fail to act on employee questions or complaints brought to them under these policies are subject to disciplinary action, up to and including discharge.

The Dispute Resolution Process is coordinated by the company's Corporate Responsibility Department at the Home Office. Employees must comply fully with any lawful investigation under these policies. In the event of questions about, or an investigation of, alleged discrimination by any governmental agency, the Corporate Responsibility Department must be promptly notified.

### CONFIDENTIALITY

In handling complaints, every effort will be made to maintain confidentiality. However, certain laws require the company act on information brought to its attention, and it will sometimes be necessary to do a full investigation in order to comply with the law. Investigations are intended to be a confidential process and every effort will be made to maintain confidentiality to the extent possible.

### RETALIATION

Retaliation against individuals who report violations of these policies is strictly prohibited. Employees who violate these policies or who attempt to retaliate against individuals acting under these policies will be subject to immediate disciplinary action up to and including discharge.

The FSC® label identifies products that come from an environmentally and socially responsible source.