

2010 SPRING EDITION

# CONCRETEWORKS

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## OPTIMIZE & CUSTOMIZE

2

Chapman Sisson Architects utilized a concrete parking deck to meet their tight budget and time constraints when designing the Governors Medical Tower in Huntsville.

## SUCCESS WITH A TRADITIONAL LOOK

6

Concrete masonry units allowed Saraland High School designers to achieve the traditional look they desired and provide the durability needed to withstand the tough environment of the classroom.

## CONCRETE ON A GRANDER SCALE

11

John Gandy of PHJ Architecture selected precast concrete and concrete block to help attain the old world charm church members wanted on Holy Spirit Catholic Church in Tuscaloosa. *On the cover.*

## CONCRETE LEAVES NO QUESTIONS

15

Munroe Jenkins Architects chose concrete frame and masonry to conquer the unique challenges presented by the flagship building at Jefferson State Community College.

## WHERE ARE THEY NOW

22

Investing for the future does not carry guaranteed results. However, the ACIF's investment in these past scholarship winners have proven to be profitable for the concrete industry.

*ConcreteWorks* is a publication of the **Alabama Concrete Industries Association** and features articles and photographs pertaining to product applications, educational opportunities, as well as innovative construction techniques impacting the industry.

Please email [kward@alconcrete.org](mailto:kward@alconcrete.org) with any comments regarding featured articles in *ConcreteWorks* or to suggest a story idea or a future edition.

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# CUSTOMIZE AND OPTIMIZE

While planning for the construction of a new medical tower and adjacent parking deck on the campus of the existing Huntsville Hospital, there were a number of challenges to keep in mind. The new structures would need to complement several existing nearby facilities, space was limited on the site for the new buildings, and the project would be constructed next to a busy seven-lane roadway, Governors Drive. Additionally, the new building would be located at the entrance to the hospital campus, so it needed to be distinctive enough to serve as a landmark. For speed, efficiency, cost-effectiveness and beauty, project architect Mike Chapman of Chapman Sisson Architects chose concrete.

The Governors Medical Tower was completed in early 2009 after a 14-month construction period. The four-story, 124,500-square-foot tower is located at the corner of Governors Drive and Gallatin Street, and houses physician practices

as well as the Huntsville Hospital Outpatient Surgery and Center for Pain Management.

The public and physicians can access the new facilities by way of a five-and-a-half story attached pre-cast concrete parking deck, which provides 468 parking spaces. A pedestrian skywalk located on the

second floor connects the hospital and the parking deck.

The choice of pre-cast concrete for the parking deck was automatic, Chapman says. It was inexpensive, quick to install and allowed the structure to maximize the available space.

The speed of using pre-cast concrete was appealing to David Fowler, Principal with INKANA Health Care, which was the

developer for the project. Fowler also is owner and developer of the Medical Tower.

“We wanted concrete,” he says. “It is the most straightforward and







economical. The speed of using pre-cast was appealing to us as well. Logistically, we were building both the parking deck and the main building at the same time, but we wanted to use the parking deck as a platform for the medical office building, where we could store equipment and park workmen during the construction,” he says. Concrete is durable enough to stand up to such high-traffic and dual demands.

Concrete also allowed INKANA to customize the dimensions of the parking deck so that patients, visitors and physicians can enter from any floor of the building.

“We wanted to avoid having people in the deck go to a central point and then redistribute into the medical building,” Fowler said. “Concrete really allowed us to optimize the design of the facility and still achieve the custom elements we wanted. I don’t think we’d have achieved that with anything other than a concrete parking deck.”

Chapman agrees, “In the parking structures we’ve done in the past, we’ve usually done pre-cast when cost and time is a consideration. We’ve also been very successful using post-tensioning concrete decks, which provide a clean look and low maintenance. We’ve done





seven parking decks in the past 10 years, and we always choose concrete.”

The attached parking deck provides security, and it connects the Medical Office Building directly to Huntsville Hospital and HealthSouth Rehab Hospital with the elevated pedestrian bridges. This proximity allows doctors to effectively care for the patients in the office and in the hospital.

“Physicians and patients alike appreciate this convenience,” Chapman says.

There is one custom and particularly unusual feature of the parking deck, Fowler recounts with a chuckle. A below-ground private parking level is reserved for physicians. Fowler said the ramp to this level

had to be specially designed and poured to accommodate exact specifications for some particular and unusual automobiles, so they could be driven into the deck without bottoming out or damaging the frame.

The parking deck also allows for service access to the Medical Tower building from the rear and underneath the parking deck, which provides screened delivery. Also, the rear of the facility, shielded by the deck, provides discreet ambulance access to enhance patient modesty and privacy.

There were several other site challenges. A bridge network traverses the state highway next to the parking deck and Tower, which involved working with the Alabama Department of Transportation (ALDOT)





to coordinate activities. Additionally, there are individual tenants in the medical tower that comprised some ownership, necessitating individual contracts for the building shell and parking deck, each individual tenant suite, the bridge network and the hospital's surgery center.

"We had to layer in the construction and design of each individual aspect, while maintaining an overall budget and time schedule," Fowler explained.

Concrete also was used in traditional finishing features of the site, such as sidewalks and driveways. In all, the project had a price tag of around \$35 million. ■ Jennifer Kornegay



# Success

WITH A

# TRADITIONAL LOOK

Concrete is many things—durable, stable, cost-effective—but when you think about creating something to be a significant symbol, more “glamorous” materials might first spring to mind. Yet when the newly created Saraland School District in south Alabama made plans to build its first school, concrete was the obvious choice for several different reasons.

“Saraland, a city outside of Mobile, broke away from the Mobile School System and formed its own,” explained Robert Krchak of TAG Architecture in Mobile, the architect who designed and managed the new school project. “Because of that, they needed a new high school. The school building is in a very prominent place, facing a major interstate, so the school board wanted it to be very visible and to be a symbol for their new school system.”

The building was occupied in January 2010, and houses 900 students in the ninth through twelfth grades, with the capability for future expansion to serve 1,200 students. Krchak was tasked with coming up with a design that met the spatial needs required to serve

that many students, addressed the safety concerns inherent in any school project, fit the budget and satisfied the specific aesthetic wishes of the school board.

It was quite a tall order, but Krchak knew concrete was up to the challenge. “Concrete is a natural choice for a school; concrete block is pretty much standard,” he said. “It’s probably what is used most often today, but it really met the needs of this project.”

The school board wanted a very traditional style, nothing too contemporary or modern. To accomplish this, as well as meet the structural requirements, Krchak’s two-story design called for several different concrete products including load-bearing concrete masonry units (CMU) with a brick veneer and split-face CMU wainscot as well as a precast concrete watertable creating a border between the wainscot and veneer.

He explained his idea behind the finished look: “The use of the watertable visually divided the scale of building nicely, but we needed a product that could be load-bearing to hold the brick on top of it, so





precast concrete was a very easy choice. It has that very traditional look as it is a traditional material, but it's got the strength we needed as well."

The building also utilized concrete footings and slab on grade concrete for the first story with concrete on a metal deck for the second story. "All the walls are CMU," said Krchak. "The exterior walls are 12-inch CMU, and the interior walls are 8-inch CMU. A significant portion of walls are load-bearing walls, so there is good bit of grout." Since Saraland is so close to the Alabama coast, architects and contractors in the area have to use more grout and reinforcement to achieve the structural capacities required to withstand the wind speeds from a possible tropical storm or hurricane.

Krchak and his firm TAG have completed several school projects similar in size to Saraland High School, as well as government childcare facilities and hospitals. A lot of the work they do utilizes concrete, and specifically concrete block. "It is just such a cost-effective material," he said. And as today's education budgets dwindle in size, saving money is even more crucial. "We did evaluate several other ways







to construct this building,” Krchak said. “We looked at steel framing and steel studs, but we came back to concrete block as the more appropriate way to go on this. It really comes down to durability, and concrete’s durability is great.”

Krchak pointed out one more factor that made concrete the best option. “People are very familiar with it; they know what to expect,” he said. “That makes it even simpler to build with because contractors understand it and are used to the product. Owners’ maintenance on a concrete block structure is easier too. They know what they have to do to keep it up for the long term, and the long-term costs associated with maintenance on concrete block are cheaper.”

As an architect, when Krchak hears the word “traditional,” he instantly thinks about appearance, but traditional also refers to something that is time-honored and possesses a real permanence, elements the school board hopes their new school will convey for generations to come. Again, concrete block fit the bill and fulfilled both aspects of the word. “The school board wanted this place to be a true showcase, and that’s one reason they wanted the more traditional look, but it also meant that they wanted to use top-quality products,” he said. “So at the end of the day, that is why we chose CMU: the quality and durability. And the school board is really pleased with the results.” ■ Jennifer Kornegay





# CONCRETE

## ON A

# *Grand*

## SCALE

Some of the most beautiful examples of architecture can be seen in churches, both large and small, around the world. Graceful arches, magnificent domes, spires reaching toward heaven... All are rooted in spiritual significance. From grand entrances to even grander sanctuaries, the idea is to inspire awe and reverence, setting the mood for a church's primary purpose—worship.

Some churches constructed today have moved to a more contemporary style, sometimes forgoing the traditions of past church designs in favor of fiscal responsibility. But John Gandy, architect with PH&J Architects in Montgomery, recently designed a church in Tuscaloosa that hits all the hallelujah



marks and still fit perfectly into the congregation's building budget. And the material that helped him do the extraordinary? Concrete.

The Holy Spirit Catholic Church has been growing, and when it became obvious that its church facility could no longer adequately contain its membership, church leaders decided they needed a new building. "They wanted to stay on the same site, so we pulled down the old church, and built the new one right there," Gandy said. The old facility contained a 400-seat sanctuary; the new sanctuary seats 1,000 people.

Perched on a low hill, the church has classical features, but doesn't





conform to just one style. The spectacular bell tower makes an arresting statement, and the series of arch-topped windows on all sides of the second story flood the sanctuary with natural light. "We wanted it to feel like a cathedral, and we think it does on both the inside and out," Handy said. "The multiple large windows make it feel that way."

The sanctuary in particular has a dramatic feel. "The sanctuary is not exactly traditional from a Catholic standpoint because it is not linear; it's more of a fan shape. It is all exposed wood and steel on the inside; eight large steel beams support the roof structure composed of laminated wood arches and beams."

Nevertheless, it is the massive tower that first catches a viewer's eye. "They wanted it to be really large and impressive," Gandy said. "I like to think of it as a little Italianate, especially the top, but it is a purely original design. It is slightly tapered as it climbs, which allowed us to go taller."

Concrete also helped the tower grow all the way up to 100 feet. "We chose to use all precast concrete for the tower," Gandy said. "You can't do scaffolding up that high to lay brick. Plus, the concrete looks like limestone, which fit the style, but the concrete costs so much less."

In fact, while there are various veneers in use on parts of the exterior, the entire structure is composed of concrete blocks. "Concrete is simply much more cost effective than other materials," Gandy explained. "You can't get the versatility and durability for such a good price with anything else, so the down economy and the church's desire to keep their spending down really dictated the choice."

Gandy stressed that the size of the building also created needs that only concrete could meet. "The walls are 20-feet tall, with some brick and some limestone veneer covering them," he said. "Something so tall has to be extremely sturdy, and concrete is certainly sturdy."

Poured-in place concrete also aided Gandy's design. "The main entrance of the church is limestone over a piece of poured-in-place concrete, and I chose to do this for two reasons," he said. "First, poured-in-place concrete is solid and stable and won't crack later. It is very self-supporting. Second, the rose stained glass window that's at the entrance was a part of the original church that we reused. Using the poured-in-place allowed us to form the entry all at once and easily set the window into it. We didn't have to construct it piece by piece, so it saved time and money."





Concrete was not used for the clerestory; it is made of metal so it's maintenance free. According to Gandy, the two materials blend well. "Using metal in this way works very well with concrete block construction," he said.

Gandy has been an architect for 46 years and has used concrete often in the past. "We just finished the new RSA headquarters in downtown Montgomery, and it has columns on the perimeter and the core, but none in between," he said. "That's a 50-foot span. A post-tension concrete structure is what allowed us to do that."

He said the church is one of his favorite projects. "I'm really proud of it," he said. The church leaders and congregation seem to think he should be. "They had their first service in the new church on Easter Sunday 2009. They've told me that they are very happy with it."

■ Jennifer Kornegay





# Concrete Leaves NO QUESTIONS

Jefferson State Community College images courtesy of  
Walt Hinchman of Viscom Photographics

When Munroe Jenkins Architects LLC was tapped for the job of creating a new flagship building for Jefferson State Community College's fast-growing Shelby Campus, architect Jay Jenkins said there was no question about materials in planning the project – concrete immediately came to mind. The building would need to be long-lasting, durable enough to withstand active college students – including a high-traffic and high-stress culinary school and working restaurant – and flexible enough to blend in with existing campus buildings while establishing its own unique presence. Concrete had the answers to all these challenges.

Established in 1965, Jefferson State Community College is one of Alabama's leading two-year colleges. It operates four campuses

providing education and workforce training for the greater Birmingham, Ala., area. The Shelby Campus is located in Hoover, on Valleydale Road. It was opened in 1993 with one 18,000-square-foot building. A second building of 64,000 square feet was added in Fall 2000.



But by 2007, the campus was at maximum capacity, while the number of students who wanted to attend the Shelby location was steadily growing.

The new four-story, \$25 million facility, which completed in 2008, provided an additional 143,000 square feet of space, and essentially doubled the capacity of Jefferson State's Shelby Campus. The unique

facility is constructed with a concrete frame building and concrete block fill, and interior corridor concrete scored block walls.



A unique feature of the school is its expansive Culinary and Hospitality Institute program, featuring six working kitchens, training kitchens including a demonstration kitchen with tiered lecture-style seating, and a functional restaurant where students put their learned skills to practical application. This results in an unusually high amount of traffic and special concerns for durability when equipment is moved around for meal preparations and classes.

“Concrete frame was an easy choice because of the size of the building and its desired life expectancy,” says Jenkins. “Durability-wise, we really don’t see a better product out there. With the massive amount of traffic and especially with the activity of the school’s culinary program in these spaces, concrete is ideally suited to handle that.”

The exterior features precast concrete that was tinted and architecturally cast to mimic the color and texture of natural stone and to provide an aesthetically pleasing façade at a much lower price point, fitting nicely into the overall budget. The building’s entrance also features precast “stone” columns and banding at the cornice, as well as intermediate bands set into the brickwork to break up the mass of the building.

“This is a new building on an existing campus, so there was a desire to match the existing building in color and material for efficiency and aesthetic appeal,” Jenkins explains. “There is a lot of cast stone at the front entry and breezeway, and the building has two 45-degree angle “L”s that break off to kind of cup into the site. These are significant features accomplished with concrete.”

Concrete also offers the added security of fire protection, says Mike Lanier, with Hoar Project Management, who served as construction manager for this project. Although all of the kitchens are set up to be non-combustible, concrete is a comfort. Additionally, he says, concrete is low maintenance and will allow the College to more easily expand or change the building if necessary.

“A cast-in-place structure provides a lot of flexibility. You can get decent column structure and a stable structure, where steel tends to have more vibration, which is sometimes not the best situation for different applications. Concrete also gives you a good fire rating on a multi-level building. Using concrete on the interior also lets you get a good finish on it, and it’s easy to paint, to dress it up when you’re getting ready for a new school year,” Lanier says.









In addition to the culinary program and restaurant, the building houses a new, expanded student enrollment services area; an expanded nursing program with three nursing labs, six hospital beds and the latest in nursing equipment; a microbiology lab serving nursing and allied health students; facilities for the Radiologic program, which moved from the Jefferson to the Shelby Campus; computer labs that provide space for both open labs and computer science classes; an expanded art program to include both wet and dry labs; and a graphic design lab. There also are a number of meeting rooms, administrative offices for the College President and Deans, faculty offices and a bookstore.

Interestingly, the interior of the facility features a glass-walled corridor with storefront glass that allows students and visitors to see into the working kitchens as they make their way down the hall. The building is literally high-visibility in that way and in the way it involves the public in its programs. The restaurant draws the public in on a daily basis for meals and has hosted a variety of special events, such as the American Culinary Federation, and partnerships with local high schools for “Iron Chef” student competitions.

“Overall, the building was necessary for us to meet the demands at our fastest growing campus,” says Keith Brown, Dean of Campus Development & Campus/Legal Services. “It is two years old and at





capacity already. It's just been phenomenal to see the heightened awareness in the community of what programs we offer, and it's definitely met all our expectations. If I could build another one, I'd do it right away. This one building has more than doubled our size in Shelby County. And now it's full!" ■ Wendi Lewis

# WHERE Are They Now?

PAST WINNERS OF THE ACIA SCHOLARSHIP



Most children go through a building phase. They construct elaborate forts from bedsheets and boxes, pile blocks to create their own colorful skyscrapers or peg together hundreds of Legos, TinkerToys and Lincoln Logs to bring the structures in their imaginations to life. For some, the dream of building never dies. It grows with them, and they are driven to experience the excitement and challenges of creating something bigger in the real world. The Alabama Concrete Industries Association Foundation (ACIF) is determined to help bring dreams like these to fruition.

In 1993, the Foundation was established to provide scholarships to deserving students who are pursuing a career in architecture, engineering or building sciences at universities in Alabama. It began with a single contribution to a memorial scholarship fund honoring one of the industry's bright young leaders, David F. Wright, who was killed in a plane crash.

Each year, the ACIF provides the funding for two \$8,000 scholarships, which are awarded to college seniors. The Foundation has presented 29 scholarships since the program's inception. That translates to a lot of ideas turned into reality.

How is our world different because of these creative minds? What impact have they had on the world around us? "Where are they now?"



# Jay Howard

General Manager  
Webb Concrete & Building Materials; Heflin, Ala.

Jay Howard received the ACIA Foundation scholarship in 1998, just before beginning his senior year at the University of Alabama at Birmingham (UAB). He graduated in 1999 with a Bachelor's degree in Civil Engineering and has a long history of experience in the concrete industry.

While in college, at the time Howard received the scholarship, he was working for Sherman ReadyMix, a subsidiary of Lehigh Cement Company. "It was great to receive it," he says of the scholarship. "It definitely helped me to complete my degree."

Upon graduation, he went to work for the company known at the time as Sherman Pre-Stress, also a subsidiary of Leigh Cement. Eventually, he was transferred to work for Lehigh, before joining Webb Concrete & Building Materials, where he has filled the role of General Manager for five and a half years.

He says he was inspired in his career field by his grandfather, who also was an engineer. "The concrete sort of came by accident, and it stuck," he says with a laugh of the specialty that has followed his own career.

Webb Concrete & Building Materials was established more than 60 years ago and today operates multiple locations throughout the state, serving Northeast Alabama as well as parts of West Georgia. The company can provide anything you need to build or remodel.

"We're a small company, so I do a little bit of everything," Howard explains. "That includes sales and day-to-day operations for four ReadyMix plants that supply concrete to various job sites, as well as three lumber yards, a couple of paint stores, a flooring store and a design center."

Because his company provides just about anything someone would need for a construction project, large or small, there is a lot of variety in



PROJECTS OF JAY HOWARD



## Jay Howard

continued

what he does, which is the most enjoyable aspect of his job, he says. In addition, he likes to watch a project grow and progress. "I like watching projects be built, watching the progress and going by jobs and knowing we were a part of that," he says. "I also like the challenge and competition of trying to sell product, and trying to be better than our competition. There's a real sense of accomplishment in what I do."

Jay has been married for 11 years, and he and his wife, Jessica, have two daughters, Ella, 6, and Betsy, who just turned 4. When not at work, he loves to spend time with his family, playing with his children and working in the yard.

## Josh Nooney

Project Manager  
Montgomery Martin Contractors, LLC; Memphis, Tenn.

Josh Nooney received an ACIA Foundation scholarship in 2004, which helped him complete his B.A. in Building Science at Auburn University. He went on to earn an M.A. in Building Construction from Auburn University as well. He began working with Montgomery Martin Contractors, LLC, as an intern while still in school, and accepted a full-time position with the firm after graduation in 2006. He began his work as a Project Manager at the company's Florida office in Rosemary Beach.

While in Florida, Nooney's projects included high-end, luxury condominiums like Barrett Place in Rosemary Beach, Magnolia Private Residence Club in Seacrest Beach, Fla. and some individual tenant build-outs. Montgomery Martin closed its Florida offices about 10 months ago, and Nooney moved to Memphis, location of the company's headquarters.

He is excited to be working on the new \$21 million Salvation Army Kroc Center. Memphis was selected in 2005 as one of only 25 cities across the nation to receive a matching gift from the Ray & Joan Kroc Trust (Ray Kroc founded McDonald's) for a project like this. The Salvation Army's 100,000-square-foot Kroc Center will be a hub for arts, education, recreation and worship. Ground was broken in April 2010, and the project is scheduled for completion in Fall 2011.

"It's an amazing project," Nooney says. "It's an honor that Memphis got one, and Memphis had to match the funds raised by the Salvation Army to have the center here." It will feature a





300-seat auditorium and an indoor pool with water slides, he says.

Nooney says he was attracted to the construction industry because of the details involved in managing a job from start to finish.

"Everybody says, 'I like to build things.' To me, it's getting to handle all the aspects of a job – handling the billing, working with the architects and engineers, and looking at the big picture of the whole project," he explains. "I really like the details. Things have gotten very complex, and there are so many types of products and materials you can use. I like knowing what color every wall is going to be painted and the finish of every doorknob," he says with a chuckle.

His interest in the construction business was a natural result of working alongside his father, David Nooney, while growing up, he says. His father was in the concrete business, working for Kirkpatrick Concrete in the Hoover area of Birmingham, Ala. Today David Nooney owns his own business, R.E. Grills Construction in Birmingham, a road-building contractor.

Josh is fascinated by the technology aspect of his profession. He is exploring new Building Information Modeling software, which allows a project manager to do 3-D modeling. "Rather than seeing it on paper, you can see it three dimensionally, so if you change one door it changes everything, and you can really get a perspective on where you might run into problems."

He also is interested in new "green" building techniques, and his current projects are going for silver LEED green building certification. LEED is an internationally recognized green building certification system. "The advantages are obvious – less waste, more energy efficient buildings that in the long run will save the owner money," Josh says. "It pays dividends in the life cycle of the building."

When not at work, Josh enjoys spending time with his family. He met his wife, Meredith, while they were both students at Auburn, and they have two daughters, Olivia and Caroline.



PHOTOGRAPH OF  
MICHAEL GRANBERRY

# Jeff Howell, P.E.

Director of Operations  
S.A. Graham Co. Inc.; Brundidge, Ala.



Jeff Howell was the recipient of the ACIA Foundation scholarship in 2003, the summer before he began his senior year at the University of Alabama. He graduated in May 2004 with a degree in Civil Engineering. He says there are two sides to the fence as an engineer – the design side and the construction side.

Upon graduation, he went to work for Barge Waggoner Sumner and Cannon, Inc., where he worked in design for two years. In 2006, he joined S.A. Graham Company, Inc., where he moved to the construction side of the fence and today serves as Director of Operations. S.A. Graham was established in 1954 and specializes in state highway construction, wastewater facility improvements, airport runway improvements, lakes, land clearing, landfill improvements and more. Howell received his professional engineering license in 2008.

“On most days I am either at the office bidding new projects or on the job site helping insure that construction is going as planned,” Howell says. “One of the greatest assets of my job is the opportunity to meet various people from different organizations that make each project complete. Another benefit is that each project is unique in its own way, so there’s never really a sense of monotony from one job to the next.”

Howell grew up in Geneva, Ala., a small town in southeast Alabama. Early on, he was interested in the construction business, as his dad, Bud, is employed with Couch Ready Mix USA. As he began to think about college, Jeff says he knew he would go into the field in some way.

“After visiting the University of Alabama’s Engineering Campus in high school, I realized that engineering and construction would be my career of choice,” he says. “I was exposed to the construction industry at an early age by my father at Couch USA, and combined with my interests in math and science, it made sense to pursue the profession.”

The ACIA Foundation scholarship was a welcome surprise to help him complete his journey. “I am so appreciative to ACIA for the scholarship opportunity,” Howell says. “It had a tremendous impact on helping me complete my college career and getting started in the construction industry.”

Howell is still close with his family, although, sadly, his mom Jan passed away in October 2008 after a battle with cancer. His younger brother, Clay, will begin classes at the University of Alabama in the fall, and his sister Hillary is currently enrolled at Auburn University Montgomery. When he is not working, Jeff enjoys hunting, fishing and attending University of Alabama football games.

