

TENNESSEE

Spring 2016
VOL. 30, NO. 1

CONCRETE

MAGAZINE



GRAND CHAMPION MARQUETTE PARK COLUMBUS TERRACE

Baltz & Sons Concrete
Memphis Ready Mix

See page 8

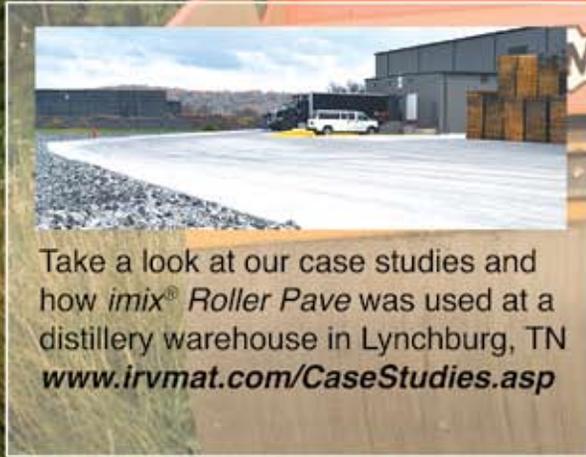




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Bobby Crass
2016 TCA President

PLEASED TO SERVE YOU

I am pleased to be serving as your Tennessee Concrete Association President in 2016 and want to welcome you to our Awards issue. I encourage everyone to start thinking now about the projects you will want to submit for the 2016 Concrete Design Awards competition—entry forms will be sent out later in the year but it's never too early to start thinking about the great projects you want to submit!

As I begin my term as TCA President, I am actually thinking back to the investment that TCA (then the Tennessee Ready Mixed Concrete Association) made in launching the Concrete Industry Management program at Middle Tennessee State University in the mid-1990's. This year, 2016, is actually the 20-year anniversary for the CIM program, but TRMCA and many of its member companies were working hard to make the program a reality in the years leading up to the CIM program's official launch in 1996.

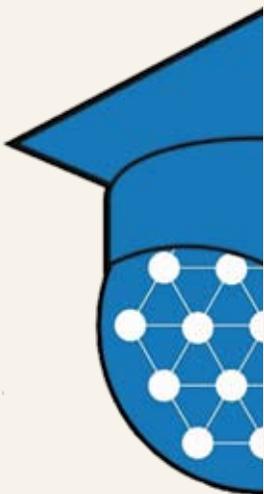
The investment of time and resources made by our association and its members over 20 years ago is paying important dividends for our entire industry today. Graduates from the program have no trouble finding jobs in our industry and many of them have the luxury of choosing from more than one attractive

opportunity. Our industry benefits from a talent pool that has been trained specifically for us so CIM grads can hit the ground running and quickly begin contributing to an organization's success.

I don't have to look far to see how TCA's past and present investments in the Concrete Industry Management program are paying dividends to concrete organizations in Tennessee. My family has two real world examples of those dividends. My nephew graduated from the CIM program two years ago (and received a TCA scholarship) and he is now working for another TCA ready mix producer member in Tennessee. My son entered the program last fall (also receiving a scholarship from TCA) and joins more than 20 other students who have benefited from receiving scholarships from TCA.

As I begin my term as your President, I encourage all of our TCA members to continue their investment and support of our association. The benefits are many and they make our industry better for every company and every person who makes their living from concrete in our great state.

-Bobby Crass



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WELCOME TO OUR 2016 AWARDS EDITION



Alan Sparkman
Executive Director

It gives me great pleasure to share that the Tennessee Concrete Association has been named as the **2015 State Association of the Year** by the National Ready Mixed Concrete Association.



Thomas Baird, NRMCA Executive Committee member, Darla and Alan Sparkman of TCA, and Alan Hamblen, Chairman of the NRMCA, at the awards presentation for NRMCA's 2015 State Association of the Year

Welcome to our 2016 Awards edition of Tennessee Concrete magazine! The focus of this issue is always to highlight the winners of our annual Concrete Design Awards competition and to show off great projects utilizing concrete in the Volunteer State. Also presented in this issue are the winners of our 2015 Concrete Essay contest that involves high school students from across the state. Be sure to take a few minutes and read these three excellent essays—you may find yourself inspired!

I always draw inspiration from our award winners and it is a privilege for me to present the awards each year at the TCA Annual Convention in February. We sometimes forget how amazing concrete is in terms of its unmatched ability to provide durability, strength, economy and beauty—our award winners remind us each year just how special the material is that serves as the foundation for success for all of our TCA members.

While we are on the topic of award winners, it gives me great pleasure to share that the Tennessee Concrete Association has been named as the 2015 State Association of the Year by the National Ready Mixed Concrete Association. I know first-hand how much great work our peer associations are doing all across the nation so that makes receiving this award even more special. State associations are judged in six different areas: Promotion, Education, Advocacy, Research, NRMCA Cooperation, and Innovative Thinking. You can take a look at our award submission and our activities in each of the six areas by visiting the TCA website: www.tnconcrete.org.

The award was presented at NRMCA's Annual Convention on April 11, and we are especially proud to be the first association ever to have earned this award for the third time.

—Alan Sparkman



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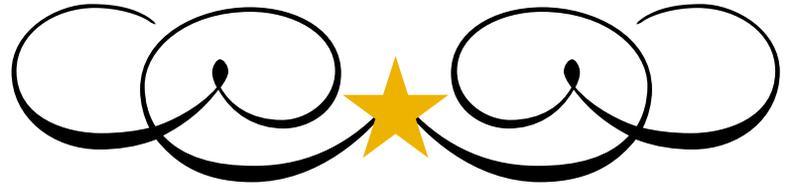
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2016 CONCRETE AWARD WINNERS



MARQUETTE PARK COLUMBUS TERRACE

.....
Baltz & Sons Concrete
Memphis Ready Mix
.....



BEST CONCRETE ARTISAN

Marquette Park Columbus Terrace

Baltz & Sons Concrete
Memphis Ready Mix
Michael Hatcher & Associates

This unique project, designed by Michael Hatcher and Associates, involved developing a new terrace within Marquette Park, an inner city green space in East Memphis. The park features a newly refurbished and relocated Christopher Columbus statue. Having collaborated in the past, Hatcher tapped Baltz & Sons Concrete to build the complex design. The terrace was to be a 35' diameter scale map of the Mediterranean countries, featuring Italy at its center, with a large concrete pedestal protruding from the middle to support the newly refurbished sculpture. To further delineate it as the central focal point of the map, Italy would actually "rise" out of the map by 18", which would in turn allow it to serve as a bench seat. Sardinia and Sicily would each rise 12" while the other adjacent countries would be represented on the surface of the terrace.

2016 CONCRETE AWARD WINNERS



Baltz started construction of the complex forms in their shop months before actually breaking ground on-site. They decided to use large foam blocks to form the undulating coastline of the raised countries— using overhead lighting projectors to cast the image, the perimeter coastlines were traced onto ten foam blocks, creating a massive 16'x26' "puzzle" of forms. Unable to find a large enough hot wire cutter to slice through the 24" thick slabs, Baltz constructed one specifically for this job. Each block was carefully sliced using an electrified hot wire cutting table, and then transported and reassembled on site around the concrete pedestal that they had cast previously.

Baltz consulted with Memphis Ready-Mix, as well as resources at the TCA, for insight on what design-mix would be best suited for this application, ultimately using a flowable, high strength mix, reinforced with Solomon UF-500. Once the elevated countries were poured and cured, the foam forms were then removed and then the surrounding

terrace was poured. Baltz applied a subtle slate texture to the terrace, and used a London pavestone pattern for the entry as well as a perimeter band. Each of the surrounding countries were then hand-drawn and scored into the surface, creating the huge scale map of the region. Each country was pigmented different colors, and the names of each were engraved into the surface. Baltz also included the larger cities of Italy, a nautical compass rose, a banner flag of Italy, and a distressed concrete finish to the pedestal base that evokes the old world plaster finishes for which Italy is known.

The end result is a stunning scale map of the region, where park-goers are encouraged to climb on and around the interactive concrete sculpture.

A modified #5500 psi, as well as #4000 psi limestone concrete mixes, reinforced with Solomon UF-500, were supplied by Memphis Ready Mix.

—Awards continue on page 10



2016 CONCRETE AWARD WINNERS

BEST ARCHITECT/ENGINEER COMMERCIAL BUILDING PROJECT

Crestview Elementary School

IMI
Kaatz, Binkley, Jones and Morris
The City of Springfield



Construction of the Crestview Elementary School project began in May of 2014. It was to be completed in the Fall of 2015 prior to the beginning of the 2015-2016 school year. The job was completed as planned in September 2015, on schedule. The school is a two-story, 117,000 square foot building. Students K-5 will be attending the new facility. The total cost of the school was in the vicinity of \$117,000,000. The architect was Jason Morris, with Kaatz, Binkley, Jones and Morris. The general contractor was awarded to Robert S. Biscan Company. The superintendent over the job was Hank Hubbs. They chose imi to supply all their concrete needs.

BEST ARCHITECT/ENGINEER, NON-BUILDING STRUCTURES

DeKalb Co. Sligo Bridge

TDOT
IMI



The construction of the new bridge started in May, 2013. The new bridge had an estimated cost of \$39.2 million dollars. Per the bidding process, the concrete supplier had to have a batch plant on each side of the constructed bridge because TDOT regulations do not allow crossing over the bridge loaded. Concrete had to be pumped around 300-400 feet thru a line pump. The lines ran down the embankment and out on the barges then down in the piers that were 100-125 ft. deep under the water. The top plate of the piers was pumped thru the lines down on a barge with a boom pump that was used to do the top caps of the piers. This project fought hot weather in the summer and cold weather in the winter. Ice had to be used in the summer to control concrete temperatures. IMI as the supplier poured over 10,000 yards of concrete on this project.

2016 CONCRETE AWARD WINNERS



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BEST CONCRETE HOME

Dessaline's View

Rocky Bue Construction
Dusty & Sons Concrete
Mid-South Concrete



Dusty and Sons Concrete, LLC was contacted by Rocky Bue Construction about pouring a foundation for a basement in the beautiful hills of Summertown, TN. On this job, Dusty and Sons Concrete, LLC poured the concrete footings, cast-in-place poured walls, acid stained a patio, and then poured lightly exposed aggregate using top cast on the rest of the concrete around the house. The ready mix supplier was Mid-South Concrete for all the concrete.

This house had unique angles, windows, a safe room, and features in the foundation. Some of the walls were 12 feet high with the walls stepping down. Into the wall and footing went 120 yards of concrete. A wall mix was used and the concrete was on time for the whole job.

Once the house was completed, the back patio was poured and prepared to be stained, and the front porch was colored and stamped. The acid stained patio was cut into borders around all of the pillars and around the house. All of the rest of the concrete was poured in exposed pea rock aggregate using the top cast to wash it off. This concrete was placed on a deck around the pool, front driveway, front, and rear sidewalks. Also, a retaining wall was placed on

one side of the pool and a decorative finish was sprayed on the wall. Approximately another 65 yards of concrete were placed in these areas. Dusty and Sons Concrete, LLC was under an extremely fast deadline for the pool retaining wall and flatwork so the pool could start being filled for an upcoming party. A Georgia buggy and wheelbarrows had to be used to place much of the concrete around the pool due to poor access.

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BEST FINISHING COMMERCIAL AWARD

St. Jude Children's Research Hospital-Kay Research & Care Center

Flintco
Memphis Ready Mix



—Continued on page 12



2016 CONCRETE AWARD WINNERS

The St. Jude Kay Research and Care Center consists of a global education conference center, surgery suites, an advanced ICU and the new computational biology department. Construction specifics include tight site constraints on an operational metropolitan hospital campus, and the deepest excavation that has ever taken place in Memphis.

The nine-story, state-of-the-art building is a cast-in-place concrete structure containing over 51,000 CY of concrete. The structure is over 200 feet tall with 60 feet of that being below grade. The building sits on a 31,000 sf, 8' thick floating concrete mat foundation. One of the most unique features of this project was a new Proton Therapy Center that is housed in the below grade floors. The proton therapy system can deliver a beam the size of a human hair within 1/2 mm of accuracy. The major components of the system that deliver the proton beam are large magnets (up to 20 tons each) and a rotating 'C'-arm gantry consisting of 120 tons of steel and magnets supported from the concrete structure. All of this work is attached to embedded steel plates up to 2" thick, and 15' in any direction with tolerances of 5 mm +/- . Steel structures were built to hold the embedded plates in place and plumb during the concrete pours. The plates were checked and double-checked for accuracy before any concrete was poured.

.....

BEST FINISHING-COMMERCIAL DECORATIVE

St. Ann Church Project

Baltz & Sons Concrete
Memphis Ready Mix



Baltz & Sons Concrete was approached by Integrity Landscapes to install this unique terrace on the campus of St. Ann Church and School in Bartlett, TN—a large labyrinth design that was to serve as a memorial to a member of the parish who had passed away. The terrace is a recreation of the stone floor of the Cathedral of Chartres, in France. The original labyrinth, which dates back to the 13th century, is just over 41 feet in diameter. This one, given the size of the courtyard that would house it, was to be 52 feet in diameter. Baltz and Sons painstakingly scaled up the dimension so that while larger, it would be a proportionate recreation of the original labyrinth.

Baltz placed and stamped the concrete, imparting a light slate texture to the surface—being mindful to introduce expansion joints so that they would align with the design of the labyrinth patterns. They then carefully scored in the lanes of the maze. Baltz designed and constructed a job-specific swing-arm dolly that would house a hand-held grinder—this allowed them to score the twenty-three concentric rings that formed the lanes of the maze quickly and accurately. The switch-back turns, central gothic features, and outer ornamentation were all carved by hand. After scoring, Baltz then

2016 CONCRETE AWARD WINNERS



pigmented the lanes and walls of the pattern in contrasting colors. Finally, a granite cross was installed in the very center/destination of the labyrinth. Now the church family, students, and visitors alike enjoy this unique interactive contribution to the Church and school grounds as a place of reflection and introspection.

#4000 psi limestone concrete, reinforced with Soloman UF-500, was supplied by Memphis Ready-Mix.

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BEST FINISHING RESIDENTIAL DECORATIVE EXTERIOR

The Fellman Residence

Baltz & Sons Concrete
Memphis Ready Mix



This dynamic backyard living project was designed and installed by Baltz & Sons Concrete, along with the collaborative work of Peaceful Settings, who built the cedar structures, and Travis Nabors Masonry, who constructed the kitchen and brick walls. The design called for demolition and removal of the existing patio, which was far too small to meet the client's needs. Baltz placed footers and raised block walls to expand the upper patio into a larger sitting area and dining terrace. A lower patio and outdoor kitchen area were added, as well as a slab on grade to house a new hot tub, and a broad walkway connecting the newly installed patio to the front driveway. The various finishes are what make this job spectacular: the dining terrace was stamped with a seamless slate texture, and then hand-scored into an intricate pattern of overlapping circles, making a striking floral pattern for this upper patio. The lower patio is also seamless slate texture, but here, Baltz implemented some of the most challenging hand-score work they have ever taken on. Winding curvilinear scrolls whimsically weave along the surface of the patio. Inspired by the client's wrought-iron front-entry door, this ivy-like pattern was hand drawn and then carefully scored with 4" grinders. Baltz then added a custom concrete countertop in the kitchen, bar area, using forms to mimic a fractured granite edge.

All of the concrete was then custom stained and sealed.

#4000 psi limestone concrete, reinforced with Soloman UP-500, was supplied by Memphis Ready-Mix.

—Continued on page 14



2016 CONCRETE AWARD WINNERS

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BEST PERVIOUS CONCRETE PARKING LOT

Eco-Pave Pervious Parking Lot

Bates Construction
Mid State Mobile Concrete
IMI



On July 27, 2015, a hot and humid day, around high noon— 54 yards of pervious driveway were placed to mitigate storm water run-off. Pervious concrete was selected because of its added benefits of filtering storm water pollutants and replenishing the aquifers below the surface. The surrounding sidewalks that lead into the townhomes' courtyard are also pervious concrete. The residential parking lot is located within the affluent Salemtown community, and the pervious concrete has added curb appeal.

Mid State Mobile Concrete was the contractor who placed and finished the pervious concrete. IMI Ready-Mix supplied proprietary Eco-Pave (Pervious Concrete) that was delivered on a 1-inch slump. Mid State Mobile Concrete, along with the help of Alan Sparkman from TCA to oversee the project, used a roller-screed to level the pavement into two separate ten foot lanes (2 passes) parallel to each other. The joints were cut with a finned roller (aka pizza cutter). The contractor was adamant that the pervious concrete cured properly

and moisture loss was minimized within the concrete during the curing process. Mid State Mobile Concrete covered and cured the pervious pavement with 4 mil poly to ensure optimal curing performance.

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BEST SPECIALTY PROJECT

Ryman Auditorium Box Office

IMI
R.C. Mathews Contractor



The connection to the Ryman Auditorium's roots in country music led to the design of exposed concrete walls constructed with form materials that mirror rough-cut lumber. The desire for detail established a need for concrete that could flow and fill voids while achieving the wood grain appearance dictating the use of self-consolidating concrete (SCC). In addition to textural requirements, black onyx liquid color was specified in order to match the appearance and color scheme of the existing structure.

In order to ensure the voids of the formwork were adequately filled, imi's quality control department closely monitored and maintained a 26" to 30" spread for the concrete. In addition, a moderate air content was maintained to assist with the flow of the concrete. The average of the 28 day strengths exceeded 7000 psi. The concrete was pumped into the walls which were placed in lifts leading to six placements throughout a five-month period. Upon completion, approximately 100 cubic yards of SCC was placed. The entire

—Continued on page 16

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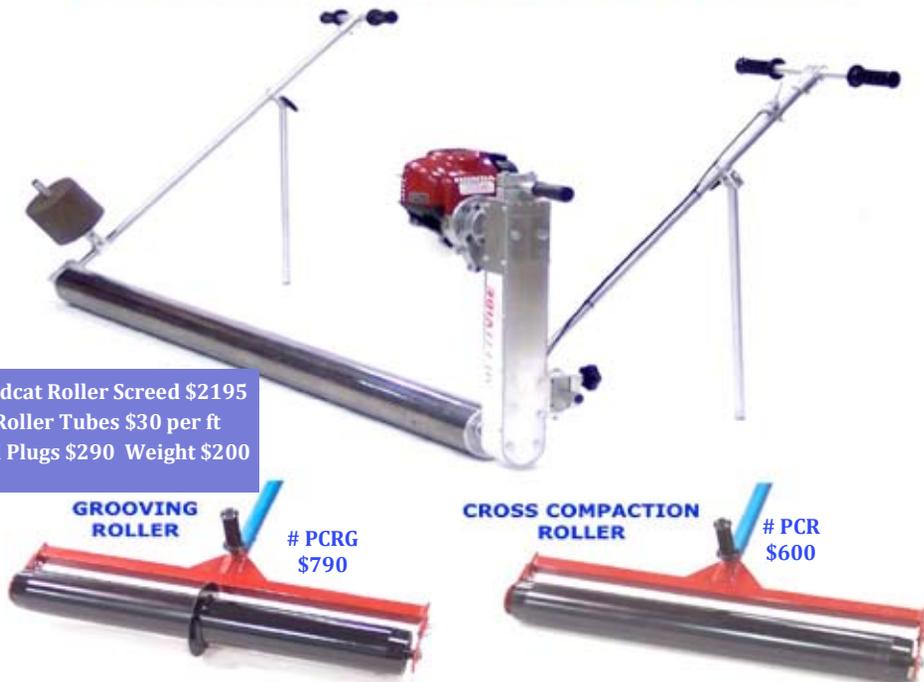


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project was completed by June 2015 making it available for debut during the 2015 Country Music Festival.

BEST SPECIALTY PROJECT

University of Memphis Student Housing Building

Brooks & Mazzola
Memphis Ready Mix
Rentenbach Construction



The U of M Housing building is located at 3615 Central Avenue in Memphis. The building is a 285,000 sf five story new building, capable of housing over 700 students while also providing 16,000 sf of office space for the residents. The building utilizes Insulated Concrete Forms which are a system of formwork for reinforced concrete usually made with a rigid thermal insulation. These pieces are stacked and interlocked like Lego bricks, and stay in place as permanent interior and exterior substrate. ICF construction has been used for both low rise commercial and high performance residential construction, creating a more energy efficient building and more resistant to natural disasters. ICF is a relatively new construction practice, and one more example of how versatile the number one building material in the world can be.

CONCRETE AMBASSADOR

Robert L. Tunstall
Memphis Ready Mix



Robert L. Tunstall has been a full-time ready mix driver for Memphis Ready Mix since February 4, 2008. Robert has 26 years of driving experience (both in dump and ready mix trucks), and prior to that he was a concrete finisher for seven years and a batch operator for six years. Needless to say, he has carved out a career for himself in the ready mix industry.

Mr. Tunstall is a very outgoing individual who is always positive and upbeat; one of those people who has never met a stranger. When you couple his winning personality with his years of experience and his driving ability, it's very easy to see why he is a favorite among Memphis Ready Mix's com-

—Continued on page 19

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First Place
**IT ALL BEGAN WITH
 THE CONCRETE**
 ANGELE LATHAM



A gnarled, sun-bronzed hand slid caressingly over the muddy surface, finding comfort in the warmth seeming to radiate from it. The Arabian sun lit the burned-limestone and clay walls, warmly illuminating the damp material. Even as the man watched, the wet sheen slowly receded, leaving behind a pale surface of reinforced clay. He smiled, eyeing his creation with pride as his knuckles tapped a rhythm on the hard surface. The mixture of water, burned-limestone and clay was a new method the Bedouins had been experimenting with, and the level of security it offered was astounding. The smile pressed harder against his weathered cheekbones as he turned to look at the myriad of workers behind him, constructing a city. The first city. A true civilization. *This* was progress.

Far into the future, the same sun beat almost audibly down on a winding snake of creation, concrete mixing with stone and rice. Men flowed over the structure like ants. One man, in particular, hung off the edge of a turret-like edifice, he strangely reminiscent of the monkeys that probably lived in the jungles surrounding him. Sweat ran in a salty stream down his sinewy arm, dripping onto the concrete mixture with an audible *plop*. His small hands, roughened from months of work, pressed into the gritty gray mixture that had become his life. He rolled a small morsel around between his fingers, really feeling the texture of the concrete. While it had seemed menial and unfulfilling at first, it had evolved into something more. This material was the future. It was the hope of his country, and in all of its rough glory, it would protect them like nothing else could. *The Great Wall*, they called it. Quite fitting, he called it.

Even farther into time, the sun did not shine, as here it was overcast by a strangely persistent dreariness. The slight rain did nothing to dim the excitement of the couple standing on the veranda of their stately home. Awe shown clearly in the woman's face, her hand gently running down the mock, castle-like masonry that was actually concrete. Her husband smiled with clear pride, eyes sparkling as he tugged her hand and pulled her into the foyer. After utilizing concrete to make a home, and a fashionable one at that, his wife's fear of fire would be laid to rest. As his fingers entwined with hers, he could sense that she felt it as well: *safety*. Something that wood nor traditional construction materials could offer them—true safety.

A final jump in time, this time to a woman kneeling firmly in the dusty ground, she sliding a trowel in repetitive sweeps across the foundation of a tower. It was an unprecedented project in the views of history, a tower aptly named *Kingdom Tower*. It was practically scraping the stars. The woman squinted up at the sun, imagining the tall expanse of metal and concrete that would soon be there. But...it all began with the foundation. She smiled as her hand ran down the smooth, gray material, the dampness marking its formability and strength. The structure, built on the shifting sands of the Saudi Arabian desert as it was, would have never gotten anywhere if not for this base. Throughout history, construction was the backbone of civilization. Countless abodes, marvels, and curiosities were made by this simple mixture. Civilization relied on it. Civilization built on it. Civilization *needed* it.

It *all* began with the concrete.

Concrete
 Civilization

ADVANCING THE CONCRETE INDUSTRY

by Many Degrees, and Counting



It started as an RMC 2000 movement to build a talent pipeline for the ready mixed concrete industry. Three men—Bob Elliott, Jim Speakman and Ward Poston—were the local boots on the ground working with the flagship university to ensure success. Middle Tennessee State University and the administration understood the partnership from the beginning. Dean Earl Keese recognized that time and talent from industry professionals would play as much of a role as treasure. Tennessee Concrete Association members rallied around the program providing guest lecturers, plant tours, scholarships, summer internships and guidance on the curriculum. TCA member support has not wavered in 20 years by continually providing resources even through the lean years. Approximately 40 percent of the 800 graduates make their livelihood in the state of TN and it has been a timely progression of alumni taking positions of leadership in the concrete industry. These leaders are critical in ensuring the continued growth and success of CIM going forward.

An effort that was sparked just as the recession was hitting the industry was to provide a facility for CIM that could showcase the greatest building material. After many start and stops the building program finally seems to have taken permanent shape landing on MTSU's Master Plan for 2016-2026. It has been recognized as a priority for campus and has been relocated near the new Science Building, Library and Student Union. This year, Tennessee Concrete Association voted at their annual meeting to donate \$50,000 over a 10 year period. This is an important gift for the membership to support. The flexibility of organizations to donate over a 3 to 10 year period of time should ensure a successful campaign as the CIM program needs 25 percent of the building costs to position the building on the state funding list. Thank you for all the support and guidance you have shown the flagship CIM program at MTSU. Together we have advanced the concrete industry by many degrees (and counting).

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AWARDS

New South Concrete has been awarded numerous awards and accolades:

- 2014 Best Concrete Parking Lot, Comfort Inn Pulaski, Tenn.
- 2011 Best Concrete Home, Deer Valley Farms Concrete Contractor
- 2011 Best Concrete Parking Lot, Berkley Springs Multifamily Housing Complex

SERVICES

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2016 CONCRETE AWARD WINNERS

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CONCRETE AMBASSADOR

Robert L. Tunstall
 Memphis Ready Mix



mercial contractors and homebuilders alike. "I have rarely been on the jobsite with him when a concrete finisher or jobsite foreman didn't stop what they were doing for at least a moment to greet him and strike up a brief conversation," said Neil Burton of Memphis Ready Mix.

Mr. Tunstall is well-liked and respected by his co-workers. He is both willing and infinitely capable of

training new hires in the proper way to do things. Robert is always engaged during their safety meetings and is quick to contribute on the topic at hand if warranted. Robert stands prepared to work for as long as needed on any given day, but is also willing to bow out and let junior men finish the day when things slow down to allow them to get more hours.

Robert is a longstanding member of the Brown Missionary Baptist Church in Southaven, Mississippi, where he is actively involved in youth ministries. Every Saturday since 2006, he has taken a group of underprivileged and at-risk youth on an outing to the local bowling alley for fun, exercise and Christian fellowship.

At Memphis Ready Mix, they feel Robert embodies the term "Concrete Ambassador" and lives out the role on a daily basis. ♦

Systems & Controls

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