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Spring 2013  
VOL. 27, NO. 1

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# TIME TO GET STARTED ONCE AGAIN



**Mike Zagula**  
2013 TCA President

Job growth in Tennessee is strong in most areas and home inventories are low. Edsel Charles predicts a strong recovery in residential construction and that is welcome news.

**A**s I begin my opportunity to serve at this year's TCA President I am reflecting on the past five years of the economic downturn. We all scaled back to prepare to weather the storm, never expecting the duration or the depth of the recession. Most of us made cuts, then six months later we were cutting again as things continued to get worse. TCA and NRMCA meetings brought economists to talk about the future and they never seemed to bring good news. The Federal stimulus package brought work to a few of us but the overall impact seemed tiny as we waited for improvement that never seemed to come.

I attend several NRMCA meetings during this period and I was always glad to be from the Great State of Tennessee. Producers from different parts of the country reported the slowdown was worse for them—Atlanta contracted by 75 percent and most coastal areas reported 60 percent drops.

TCA's 2013 Annual Convention featured Edsel Charles, a residential economist who correctly predicted the huge drop in home building in Tennessee at past TCA conventions. This year he brought much better news—job growth in Tennessee is strong in most areas and home inventories are low. Mr. Charles predicts a strong recovery in residential construction and that is welcome news.

Right after the TCA Convention I attended the NRMCA Annual Convention. Companies I spoke with were more optimistic and most agreed that home building was starting to pick up. In Miami the condo foreclosures have been absorbed by foreign investors and tower cranes can once again be seen on the skyline. The sense of optimism is

widespread and everyone is talking about upcoming projects and the need for new staff.

So it's "Time to Get Started Once Again" to hire the front line staff to take care of our customers. It's tough to find good people, in spite of 7.7 percent unemployment, but this is a good problem to have after several years of contraction. The recovery rate is still slow but this gives us time to adjust our organizations to add staff and train new team members. TCA can help with certification classes from ACI and NRMCA plus TCA offers several areas of training related to concrete. My NRMCA peers recognize Tennessee as a leader in the use of pervious concrete and this has taken place over the last decade as Alan and the staff have stayed busy promoting, placing, researching and even cleaning pervious.

So yes, it is time to get started to grow our market share against other products and to grow our organizations. The TCA board has had several conversations about the future direction of the TCA and how we can work together to create a better future for our industry. It starts with your personal involvement in things like our Day on the Hill and your attendance at TCA meetings and events like this year's summer meeting at Wyndham Bay Point Resort, Panama City Beach, Florida. We have a great facility and an outstanding facilitator to help us define a new strategic plan for TCA. We need your input and participation.

Lastly I want to thank everyone for the opportunity to be your president this year. Let's take advantage of this improving economy to create an even better future for concrete in Tennessee!





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# SPRING: Brings Return to GROWTH



**Alan Sparkman**  
Executive Director

Big challenges  
and opportunities  
of the near future  
demand we  
work together  
as an industry  
and operate  
effectively going  
forward.  
I invite you to  
get involved.

It is refreshing to see the signs of spring arriving in Tennessee, in spite of the damp and cold weather that seem to be hanging on longer than usual. The dogwoods and the redbuds are finally blooming, and I gave my lawn its first cut of the year last weekend.

For those of us in the concrete industry, it's even more refreshing to see all the new construction projects that seem to be outpacing the arrival of spring in terms of their progress. Just as those budding dogwoods herald the arrival of spring, the new crop of tower cranes and freshly-turned dirt (or mud...) mean a new season for our industry.

This new season will bring a return to growth after a very long period of dormancy. It's exciting to think about growing again as opposed to just surviving. It is time to allow some optimism to creep back into our worldview and into the plans we are making for the coming year, and we should definitely enjoy that feeling.

It's also time to extend our thinking beyond survival mode and to start thinking about what the next few years will hold for our organizations and our industry. That will be a theme this year for TCA as we pause to celebrate surviving the Great Recession. Thanks to the support of our great members we were able to establish forward momentum even in the worst of the recession, and we arrive in this new spring season with excitement and anticipation about the positive future that lies ahead.

We know that the roadmaps we used in the past won't be much good in this new season. While we felt that the world was standing still because our industry was stuck in survival mode, the truth is that much has changed in the last five years. Attitudes and expectations about nearly every facet of life are markedly different today than they were in 2006. What is required to be successful going forward will be different than

what worked in the not-too-distant past.

Our industry work force, the ones that survived along with us, is much closer to retirement than they were before. Their replacements are no where to be found—at least inside most organizations. The new generation of workers expect more work/life balance than we are used to providing, nor are most of them actively seeking careers in our industry. Sustainability is changing the way architects design projects and the way that contractors build them—whether we like it or not. Increasingly, the people who are buying our product will be asking questions about how we produce it and how we manage our operations as a condition of their purchases.

And our industry faces another critical sustainability challenge: How do we create a business model that sustains our industry? The concrete industry has lost \$4.5 billion over the last three years—in spite of the fact that we have seen the volume of production increase, albeit slightly over the past two years. In essence, we are selling more concrete while losing more money—obviously not a sustainable path.

The big challenges and opportunities of the near future demand that we be able to work together as an industry to be able to operate effectively going forward. The TCA Board of Directors will be working to chart a future course for our association that allows us to collectively create a sustainable future for the concrete industry in Tennessee. I invite you to get involved and contribute your talent and resources to the effort—attend one of our regional meetings this year, join one of our 'TCA work teams', and make plans to attend our 2013 Summer Meeting to participate in the crafting of a new strategic plan for our association.

I want to work with you to create a dynamic and sustainable future for the concrete industry.

**WILL YOU JOIN ME?**



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# 2013 CONCRETE AWARD WINNERS



## **BEST FINISHING**

COMMERCIAL DECORATIVE

# CUMBERLAND PLAY PARK

Hargreaves Associates • Hawkins Partners, Inc. • Irving Materials, Inc.  
Barge Cauthen & Associates • EMC Structural Engineering • Hardaway Construction  
Metropolitan Government of Nashville and Davidson County, Tennessee  
Project Yardage: 1,100+ cubic yards



# 2013 CONCRETE AWARD WINNERS



**N**ashville now boasts a fun new play park that offers families a great way to cool off in the summer heat. Cumberland Park, which was designed by Hargreaves Associates, is a 6.5-acre park filled with nature-inspired play spaces that get kids and parents moving. The site was once a riverfront wasteland, but through creative and adaptive reuse the space has been transformed into an exemplary sustainable development that includes geothermal energy, energy-efficient lighting, rainwater collection and habitat restoration.

The 6.5 acre adventure play park is located on the Cumberland River's east bank under the Shelby Street Bridge and is the flagship for the New Riverfront Revitalization Plan in Nashville.

"Inspired by the geology of Tennessee, the landscape provides all the fun needed with water, light, stone, rolling grass, trees, ridges and valleys. Kid's imaginations provide the rest so you don't have to rely so much on conventional play equipment," said landscape architect Gavin McMillan. "It is a park that turns its site specific qualities into a great place where families can spend a day, have fun and learn something of their riverfront history." The park includes a local stone climbing wall, sand play areas, made made out of plants, outdoor seating, meandering paths and other interactive play areas. There is also an outdoor amphitheater

for 1,200 people and the historic renovation of the Bridge Building, which holds public restrooms, a Metro Parks office, food concession, bike-share station and a soon to be announced restaurant.

The park is part of a much larger sustainable redevelopment project to transform the riverfront wasteland into beautiful recreational space for the downtown area. As part of the project, Hargreaves Associates incorporated adaptive reuse, renewable geo-thermal energy use,

efficient lighting, floodplain preservation and storage, brownfield remediation, water harvesting for irrigation, and improved biodiversity in the area. Each year, 1,000,000 gallons of storm water is captured and reused for irrigation and over

1.6 acres of meadow and riparian grasses were restored.

Placing color concrete during the winter months battling the elements to maintain consistent appearance was a challenge. However, those conditions were overcome by project Superintendent Randy Kimbrough diligently watching the weather channel. Site conditions and working on the banks of the Cumberland River made it difficult laying out this projects geometric design and purpose, but the project team did an excellent job with these extreme conditions. Cumberland Park was recently completed and is now open for fun to all ages!



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# 2013 CONCRETE AWARD WINNERS

## ARCHITECT/ENGINEER-COMMERCIAL BUILDING

Belmont University Randall and Sadie Baskin Center  
Irving Materials, Inc.  
Earl Swensson Associates  
Belmont University  
R.C. Mathews



Following 22 months of excavation and construction, Belmont University's new Randall and Sadie Baskin Center officially opened August 21, 2012 in a ribbon cutting celebration attended by Nashville Mayor Karl Dean, Congressman Jim Cooper and other special guests. The 75,000 square foot, three-story brick and limestone building sits atop a five-level underground garage and houses Belmont's College of Law.

The Baskin Center's copper-roofed dome features a skylight at the top, which appropriately represents the "Eye of God" guiding human law. The building offers four different porticos to represent the four types of law: local, state, federal and God's. Inside, the Baskin Center contains more than a dozen classrooms, a 21st Century trial courtroom, an appellate courtroom, a two-story law library and more than 20 faculty offices.

In keeping with Belmont University's commitment to environmental sustainability, the Baskin Center went beyond the projected LEED Silver to achieve LEED Gold Certification. The footprint of the Baskin Center is minimized with its underground parking accommodations, which include spaces dedicated to electric vehicle charging stations, while open



space and green space are maximized. Also, a geothermal system will provide heating and cooling for the building, which will allow 27 percent energy savings, based upon whole building energy modeling.

In addition to innovative design elements, there were several construction challenges which R.C. Mathews Contractor overcame to achieve the 22 month schedule. From excavating a 55-foot-deep hole into solid rock by line drilling the perimeter to minimize the effects of blasting in the middle of Belmont's Campus, to a careful sequence of installing 300 foot deep geothermal well holes around the foundations for the concrete structure, R.C. Mathews executed every move with precision.

The project was completed in 22 months from the start of excavation. Our project manager, Dan Calhoun, and superintendent, Jackie McPeak, did an excellent job of coordinating the construction in the middle of Belmont's campus. Safety was a constant due to the amount of vehicle and pedestrian traffic surrounding the construction site. We even developed specific truck routes for concrete trucks on pour days to minimize neighborhood congestion. Our trade workers parked three blocks away to keep the neighbors' on street parking spaces undisturbed.



# 2013 CONCRETE AWARD WINNERS



The true measure of success for this project is that it was completed on time for a phased move in schedule starting in early July in order for classes to begin on August 21.

.....

## ARCHITECT/ENGINEER, NON-BUILDING STRUCTURE

Meadow Park Dam Renovation  
Irving Materials, Inc.  
Environmental & Civil Engineering Services  
City of Crossville  
Brayman Construction Corporation



**T**he City of Crossville recognized the potential liability and tremendous impact failure of the dam could cause, and initiated the restoration and modification of the existing Meadow Park Dam to ensure that the structure would remain stable and functional, and comply with the Safe Dams Act.



Environmental & Civil Engineering Services (ECE Services) of Crossville, Tennessee was retained by the City of Crossville as the primary consultant. ECE Services provided a series of reports, investigations, geotechnical studies, design and construction services to address the dam's condition. ECE Services' recommendations for renovation of the dam was approved by the City and construction began in 2011. As you can imagine, this \$6.5 M dam renovation project was no simple undertaking. The renovation work included installation of post tension rock anchors into the underlying sandstone bedrock to address overall dam stability, and a complete grouting and concrete repair program to address the concrete deterioration, joint conditions and leakage through the dam.

The renovation construction contract was awarded to Brayman Construction Corporation of Saxonburg, Pennsylvania. Brayman Construction has over 60 years of public and private experience, specializing in complex heavy/civil infrastructure projects.

Irving Materials, Inc., of Crossville, Tennessee, was selected as the ready mix producer and supplier for the project. During the construction phase of the project, the outside temperature ranged anywhere from 20 degrees up to 105 degrees. IMI, Brayman Construction and ECE Services worked closely together in scheduling concrete placement around these drastic temperature ranges.

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# 2013 CONCRETE AWARD WINNERS

## ARCHITECT/ENGINEER-NON-BLDG. STRUCTURE, CONT.—

The Meadow Park Dam Renovation Project took a tremendous amount of cooperation and coordination between the City of Crossville, ECE Services, Irving Materials, Inc., and Brayman Construction Corporation. The project was deemed to be success for all involved, and it was finished on time and under budget.

The dam renovation project ultimately provided the City of Crossville with:

- A new and modern facade for the dam
- Stability of the dam
- Assurance of adequate water volume and quality
- Assurance of no serious safety and environmental consequences
- Compliance with the Safe Dams Act



## BEST CONCRETE HOME

The Hills Residence  
Williamson County Ready Mix  
Dusty and Sons Concrete, LLC  
Superior Custom Homes and Remodeling



**D**usty and Sons Concrete, LLC showed their versatility by placing all of the concrete at the Hills residence. Superior Custom Homes and Remodeling was the general contractor on the job. Dusty and Sons viewed this opportunity as yet another project the two companies could work

together on to create a quality home, this time for the Hills family. This job began early 2012 and was completed by summer. Williamson County Ready Mix was the supplier of all the concrete including a footing mix and wall mix. The remaining concrete was finished with a 3,000 psi mix.

Dusty and Sons dug the footings, placed rebar and poured the footings. They then placed rebar and formed and poured the cast-in-place concrete walls. These walls were 10 inches thick below a brick ledge. An engineered design for a retaining wall was used for the turn-around area coming out of the basement. They poured 134 yards of concrete poured in the footing and the wall, then sprayed the walls with waterproofing material. They also put a french drain around the house with pipe and gravel.

Next, the basement and garage floor were prepped for the 44 yards of concrete poured into the slabs. A back patio and 9 yards of steps were placed and finished with a slate texture without color. Finally, 66 more yards of concrete were placed in the driveway, front sidewalk, steps and porch, all with a broom finish. In all, 253 yards were placed on the job site by Dusty and Sons Concrete, LLC. The homeowners as well as the general contractor were both very happy with the concrete work.



# 2013 CONCRETE AWARD WINNERS



## BEST PERVIOUS CONCRETE

Frogge Residence  
Memphis Ready Mix  
Baltz & Sons Concrete



This residential driveway project is a perfect application of pervious concrete at a residential level, and demonstrates that with a careful design, pervious concrete can be implemented seamlessly and beautifully into a residential setting. The driveway presented a challenge in that the property was positioned at one of the lowest points of the street and was the destination for a lot of the surrounding area's stormwater run-off. While a stormwater catch basin was present on the side of the residence, the immense amount of water would frequently submerge the driveway, making it unusable and flood the garage in extreme conditions. The water had also taken its toll on the condition of the conventional concrete driveway. The client approached Baltz & Sons Concrete seeking a solution, but communicating three criteria – first and foremost, she wanted a solution to the drainage run-off issues, but it was important the driveway blend in – she did not want the stark, somewhat utilitarian appearance usually associated with pervious concrete. And finally, being an avid gardener, the client wanted something that would not have a negative impact on her surrounding planter beds, trees, and vegetation.

Baltz developed a plan that would include the use of integrally pigmented pervious concrete panels, with a conventional concrete perimeter and cross banding. The bands would provide protection for the edges of the pervious concrete panels, while also helping to steer stormwater run-off into the driveway, all while serving as a decorative exposed aggregate element of the design. The detention stone base on this driveway was engineered to easily handle the immense stormwater events with water percolating and feeding the adjacent planter beds, and a "relief" drainage system that feeds to the storm drain when heavy rainfall events exceed the volume of the detention base. The end result is a beautiful and highly functional driveway that met all three of the clients expectations and serves as a successful demonstration of the value and use of pervious concrete. Memphis Ready Mix supplied the Buckeye UltraFiber 500 and Solomon Liquid integral pigment infused pervious concrete, as well as the 4,000 psi limestone and pea gravel exposed aggregate.

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Cement Ready-Mix Concrete Products

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# 2013 CONCRETE AWARD WINNERS

## BEST PERVIOUS PARKING LOT

West Nashville Precinct  
Irving Materials, Inc.  
Messer Construction  
Marcor Construction



**D**espite the 2010 May Flood of Nashville the New West Nashville Police precinct has been completed. Metro had purchased the land in 2009 with the intent to renovate the building for a new police precinct. Contractor had been invited to submit proposed budgets and designs. That all came to a stop as the property suffered over 900,000 dollars of damages due to the May floods. The mayor was forced to seek new plans and designs.

The new facility will be designed to meet LEED silver certification, the first such police precinct in Nashville built to that environmental standard. Messer Construction was hired by Metro Davidson County to construct the new facility. The new design will encompass several sustainability designs. Pervious concrete will be utilized in the parking area to help prevent flooding and redirect storm water from the sewer systems.

Marcor Construction was awarded the subcontract for the placement of the pervious concrete. Marcor placed over 600 yards of pervious concrete. The timing of this placement was challenging due to the cold winter months as well as having to pour around the paving company's schedule as they were trying to finish before the asphalt plants closed for the winter. Overcoming the challenges, the parking lot was completed and the precinct opened on time.

## BEST FINISHING, COMMERCIAL DECORATIVE

Villas at Gray's Creek  
Memphis Ready Mix  
Baltz & Sons Concrete



**T**his beautiful project is a great demonstration to architects, designers and builders alike that concrete can often be an economically and structurally superior option for achieving decorative finishes. In this case, the owners recognized the value of having a beautiful and unique venue for the community pool area, but had to work within the budget constraints dictated by their investors. The pool builder, Hawaiian Pools of Memphis, recommended Baltz & Sons Concrete for the job. After an initial consultation, Baltz designed a beautiful deck outlay that would include a variety of stamped textures and finishes, with an Arizona Flagstone pattern serving as the primary medium throughout the various areas of the community entertainment facility. The pool deck, patios, breezeways, covered porches and grilling areas were all interconnected using this random stone pattern, with strategically placed slate textured bands that served to delineate each area, but also provide me-



# 2013 CONCRETE AWARD WINNERS



chanical and expansion breaks within the large footprint of the hardscape. Another rewarding detail: Baltz refused to interrupt the beauty of the random stone pattern with linear saw cuts – instead opting to carefully “joint-chase” the lines between the patterned stones. These joints were subsequently caulked and seeded with sand so that they would blend in with the pattern of the concrete stamp. Run-off drains were also carefully disguised within the joints, another example of the great attention given to maintaining a natural and realistic appearance. The result is a beautiful seamless flow of “stone” terraces, walkways, and patios, all meticulously hand-pigmented to mimic the natural color range of actual stone. Memphis Ready Mix supplied the 4,000 psi limestone with Buckeye UltraFiber 500 mix.

.....

## BEST CONCRETE ARTISAN

Memphis Botanic Gardens, Wildlife Photography Garden  
Memphis Ready Mix  
Baltz & Sons Concrete

**A**fter the successful outcome on a previous collaboration, Memphis Botanic Gardens once again invited Baltz & Sons Concrete to return to their gardens to help implement a new photography-themed garden development. Having employed the use of pervious concrete within a previous installation to great success, Baltz installed pervious footpaths with decorative stamped concrete cross-bands as the primary workhorse of the new garden. These paths connected vari-



ous terraces of different size and style. The central reflection pool is encompassed by a royal ashlar slate landing, acid-pigmented to complement the stone of the adjacent water feature. At the west pavilion, a large circular terrace of stamped Bavarian paver-stone encircles a decorative 24' diameter ring – featuring a meticulously hand scored four banded Celtic “bramble knot” – this intricate design of overlapping bands weaving over and under one another give the impression of a three-dimensional image on the flat surface of the concrete and highlights the central planter and tiered water fountain as its focal point. At a primary central intersection, Baltz created a lightly stamped texture “canvas” into which he later hand carved, using nothing more than a 4” grinder, a relief pictorial of a photographer catching nature. Below the depiction, Baltz added a thematically appropriate quote from Ralph Waldo Emerson. Various textures and colors are used throughout the garden paths, lending interest and beauty to the venue, while still allowing the gardens themselves to be the primary features.

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# 2013 CONCRETE AWARD WINNERS

## BEST CONCRETE ARTISAN, CONT.—



## BEST FINISHING – RESIDENTIAL DECORATIVE EXTERIOR

Atwood Residence  
B.T. Redi-Mix, Inc.  
Concrete Concepts of Jackson



**R**on Saddler, owner of Concrete Concepts of Jackson, TN was hired to complete this large, detailed, residential project. He selected B.T. Redi-Mix, Inc. to supply the 4,000 psi mix in this extensive project. The project encompasses the swimming pool deck and back patio, a NCAA regulation size half court basketball court, Nascar themed garage

floor, porte cochere, and a 1000' driveway that features a 64' circle drive.

The swimming pool deck and back patio feature sun buff integral color, slate textured stamp and walnut release accent color. It was scored in 4' diagonal tile design with saw cuts grouted black, and then sealed with clear sealer.

The basketball court also uses the sun buff integral color with a smooth trowel finish and walnut color hardener. The three point line, free throw, and out of bounds lines were scored and stained with walnut color, grouted black, and sealed.

Since the homeowner is a big Nascar fan, Ron thought it was only fitting to give him the Nascar logo with 3' cut diagonal tiles. The tiles were dyed using Red and Ebony Pro Dye Acetone. The logo was cut free hand with a diamond wheel on his angle grinder. The floor was sealed and waxed with a high traffic floor wax.

Also featuring the sun buff integral color, the porte cochere with a slate textured stamp and walnut release accent color. Ron then scored an area rug design with tile accents, stained with walnut and prada brown, saw cuts grouted with mocha grout, and sealed.

Ron then started the driveway portion – the circle was poured in four sections to keep the stamp depth consistent, using the same colors as the rest of the project and an ashlar slate stamp pattern. The driveway continues the use of the natural colors, the ashlar slate stamp, and also features a stamp brick border.



# 2013 CONCRETE AWARD WINNERS



The project includes a variety of stamp patterns, stain and scored concrete, and color variations, supplied by Williams Equipment. The artistic look and flow, along with the many variations easily makes the project stand out from others.

.....

## BEST PRECAST PROJECT

Nature Conservancy Bat Cave  
Oldcastle Precast  
Summit Constructors

Oldcastle Precast in Lebanon, TN was asked by Summit Constructors to build the first ever artificial bat cave for the nature conservancy to combat the spread of deadly "white nose syndrome" this project was originally thought to be made of a monolithic shot Crete segment, however once the idea of precast box culvert was introduced it became the clear choice based on cost, (The estimated savings over the shot -Crete method is about 10k) ease and speed of construction as well as the ability for other groups to easily



replicate the design elsewhere. The project needed to be complete in time for the October hibernation cycle.

The entire project from the time the first scoop of dirt was removed until backfill was just over one month. The pieces were all cast in just over three weeks and the entire cave was set in just three days, utilizing a large off road crane and was completely ready for bats to move in in one week.

The cost of the pre-cast sections was just over 90k with the entire project budget at 300k, it consisted of 28 precast split box culvert sections, ranging in size from a 14' span on the ends to a 16' span in the middle portion, the sections weighing between 17-25 tons each. Holes were cast in various places for chimney vents in the top and water retention in the floor. The interior top sections were cast with a form liner on the roof to mimic a natural limestone cave and reduce the amount of manmade items needed in the cave for roosting. Oldcastle also provided a 6'x12'x7' modified utility vault

—Continued on page 18



# 2013 CONCRETE AWARD WINNERS

## BEST PRECAST PROJECT, CONT.—

with doors on the ends to provide a human entrance to the cave as well as 4'x6' vaults that were stacked on top to provide the bat entrance into the cave. Baffles were poured into the main body to provide a cold air trap and separation for the different species of bats.

As the owner said, precast concrete gave us the best shot at getting this project done quickly and economically and time is of the essence when you are talking about conservation.

.....

## BEST SPECIALTY CONCRETE PROJECT

LP Field Fan Enhancements  
Irving Materials, Inc.  
Charter Construction Inc.  
Powell Building Group



**LP** Field had a \$28 million dollar face lift this past year. New HD Video screens in each end zone and LED ribbon board with 600 speakers were strategically placed throughout the stadium. Included in this project were two banks of six high-speed elevators installed on the south end zone. The elevators hold about 15 people and take 15 seconds to reach the upper deck. An estimated 20,000 people can exit in an hour.

Due to LP Field's commitments (CMA Fan Fair and others) these commitments created an extremely condensed construction schedule and costly delays in rubbing could not be tolerated. imix 180 Self Consolidating Concrete (SCC) was specified on these two elevator structures and was critical to



the success of the project. imix 180 (SCC) virtually eliminated rubbing cost all together. With the rubbing cost virtually eliminated, this allowed Charter Construction to remove the forms the morning after a placement and move the forms up to the next section, keeping the project's aggressive schedule intact and allowing LP Field to keep it's event commitments during construction of these structures.

The two elevator shaft structures began on March 12th and the last placement on the two 100 Foot structures was completed on May 11, 2012 and over 1,100 cubic yards of imix 180 (SCC) was placed.

With the PGB Builders, Inc. and Charter Construction, Inc. willing to use concrete technology that has commonly been used in Pre-Cast for years, they were able to change standard construction practices into a "Game Changer" for future projects. LP Field has become an icon for our industry on how a construction team can use that "New Technology" to meet an owner's needs. Congratulations to PGB Builder & Charter Construction!





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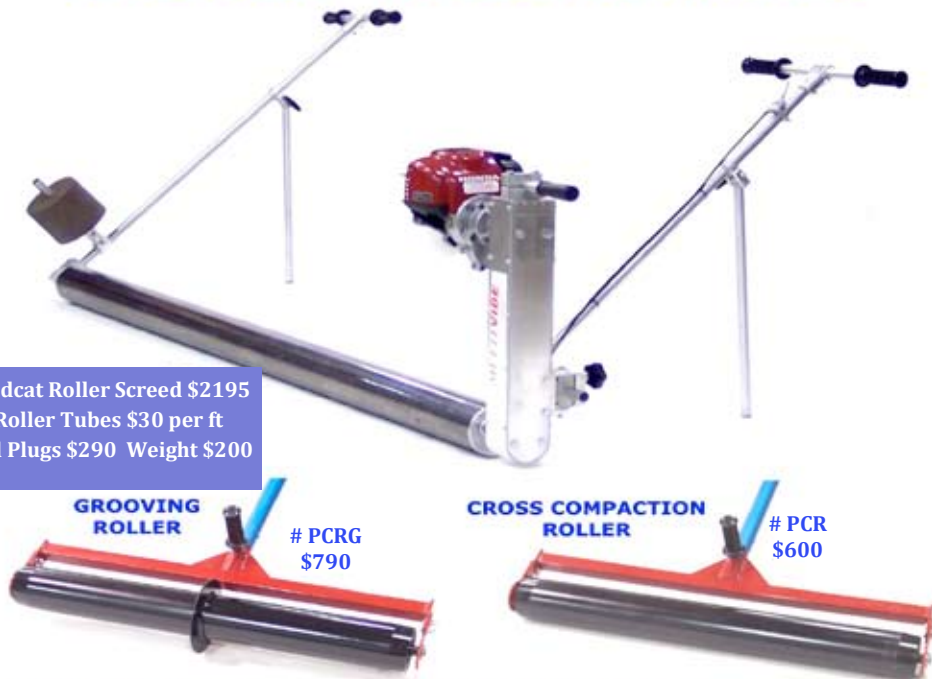


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Sarah Egan  
TN Concrete Association  
NRMCA Certified Pervious Concrete  
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# 2013 ESSAY CONTEST

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## *First Place* **BRIDGES**

MIKAYLA CLARK  
Alcoa High School



**T**here is a bridge in the city next to where I live. In fact, there are several bridges, but this bridge is made of concrete. The Henley Street Bridge is undergoing the process of being rebuilt as I write this essay. Since 1931 this bridge has connected downtown to the south part of the city. The asphalt has eroded, the metal parts have rusted, and to rebuild it they have stripped it down to the supporting points. Those are the only original parts that remain. After eighty years of constant use, the concrete supports were still structurally sound and worthy to be built atop of again. It cut costs, but that is not the only reason the arches and supports were kept. They were not just functional. They were also beautiful—they were history.

That is what concrete does for our society. It allows us to create structures that last. Wood is organic and beautiful. It is renewable and easy to shape, but it is also short lived. Anything created in wood must be maintained, replaced, or torn down in a few years. Plastic is inexpensive and versatile, but it is not strong enough to build towering skyscrapers or span rivers. While steel is both a cheap and strong construction staple, it falls victim to mere water. Of all the construction materials available today, only concrete proves itself to be strong enough, durable enough, and versatile enough to build massive, functional works of art.

Much of what we study and know of ancient cultures does not come from what they wrote. It is not learned from the art they created or the knowledge they left behind to be passed down through generations. The greatest wealth of knowledge we have of cultures that are now gone comes from studying what is left of what they built. Consider the pyramids of Egypt and Mexico, the ruins of the Parthenon in Greece, the Coliseum in Rome. Architecture is the most lasting and permanent part of any society. Concrete is the most lasting and permanent part of our architecture. If someone wants to study our society long after it is gone, they will be studying the buildings, the bridges, the towers, and the statues we have made from concrete.

It is not simply for the people in the future that we use concrete, however. It is more so for the benefit of those who live today. No other material is made from such readily available raw materials. It is just as cost effective as it is permanent. This fact allows us to accomplish feats we could not otherwise accomplish. No matter how beautiful an idea is, if you cannot afford it, it will never be anything more than a dream. A stone carver can carve a block of granite into a statue, but what everyday person can afford such an expensive creation? Anyone, however, can afford a concrete work of art that is just as beautiful and lasts just as long. Buildings, bridges, and monuments that could never be afforded if made from solid stone become reality thanks to the versatility of concrete.

While modern chemistry and technology have made concrete durable, strong, and resistant to wear, it remains now what it has always been. Concrete is a medium through which we create our society. In a world that changes too quickly and is often disposable, concrete allows us to create structures and memories that endure.

## *Second Place* **STREETS PAST, STREET AHEAD**

AUBREY CASEY  
Soddy Daisy High



**I** was born essentially on June 29, 1956. I stretch from Seattle to Boston and from Miami to Main. I've seen Sketchers and Vans, segregation and hope, and the wandering and the searching. I'm a highway, the strongest, founded with concrete, and through it I founded this nation. Wars cannot stop me and age cannot cause me to crumble because I carry my people on my back daily, and they will support me. From that fateful June day 56 years ago when President Eisenhower commissioned my growth, I have been integral to the flourishing of this country. I stretch 160,000 miles across the country and am constantly being innovated. From subgrades of gravel and soil-cement in the 30's and 40's to present day dowel retrofitting, my concrete roots are only growing stronger and more durable. I am the living, breathing, backbone of this nation, and concrete runs in my veins.



# CONGRATULATIONS ESSAY WINNERS!

Let me tell you the story of my birth that my ancestors imparted on me. It's 1919 and the First World War has just come to a close. The country is in disrepair but awed at its strength. A group has just been commissioned to be the first American motor military convoy, and their journey is from Washington D.C. to San Francisco. Among the ranks is a young lieutenant colonel, Dwight D. Eisenhower, who would soon lead the 81 motorized military vehicles across the continent. The First Transcontinental Motor Convoy (FTMC) was meant to test the military's mobility in a state of war or turmoil. After nearly two months of struggling, the convoy achieved its goal and arrived in San Francisco with eyes open to their country's infrastructural need. Eisenhower was able to understand the logistics of moving large amounts of military across distances, but this mission would be disregarded for 21 years, as World War Two issues became a priority.

Dwight Eisenhower is now the commander of the "Operation Torch" which is aimed towards sending Axis troops out of North Africa via an invasion of Tunisia. Despite being slowed by difficult terrain, the "Operation" eventually achieved its goal and opened up a European invasion to the Allies. Once Eisenhower entered Germany, he was amazed by the autobahn system and the Allied forces took full advantage of the easy transportation routes. Eisenhower was inspired by the durability of a "ribbon-like" road system. It would be impossible to destroy every stretch.

Eisenhower was impressed with the need for America to have an established infrastructure system. Eisenhower was elected the 34<sup>th</sup> president of the United States in 1953, and three years later, our President Eisenhower officially signed the Federal Highway Act that was the catalyst for highway building nationwide. From the very first turnpike in Pennsylvania, our highways, my body, was made of concrete. Concrete was chosen for its durability and its ability to be transformed and innovated by brilliant American minds.

I am made of the toughest stuff, commissioned by one of America's strongest, most inspired presidents. Wars created my vision, but wars can never completely break me. I will never be irrelevant; I innovate with the growing technology. I am a beacon of hope for those devoid of life. I am made of the strongest, the best, and I will never forsake my country. To the lost, to the weary, to those who survive if our country crumbles around them—they need only see my sturdy surface or feel my cool embrace on their skin and they'll know they're on a road to their future.

## *Third Place* **A CONCRETE HAVEN**

AMANDA WILSON, Cannon Co. High



**T**he fragrance of honey suckle was all around. I closed my eyes and sucked in the sun bathed, country air. The birds tweeted soft melodies in rhythm with the waterfall tucked behind the trees. I put my hectic life on pause and lay down in the grass. In those moments I found peace, but it soon faded.

The back door swung open and my mother's eyes were filled with worry. "Get inside a tornado is coming," she said solemnly.

In my mind I did not believe that was possibly true; the sun was out, and the birds were singing. All was well in nature. Then, I looked to the east and to the south and saw the far off ominous, black clouds. They were creeping toward my home.

My family gathered around the T.V. The news anchor began announcing which areas needed to get to their safe place. We were next; its path was in line with out small town. When I thought it could not get worse, a new touchdown was reported. This new tornado was coming in from the west and, of course, moving our way.

It was then that we heard hail start falling. Branches from our big tree were thrust back and forth, and a few of the smaller trees' branches broke from the force of the wind. My dad went to look at the thrashing weather, while my mom rushed my brother and me to the basement.

We had the news pulled up on our laptops. The screen illuminated unbelievable information. Yet another tornado touchdown, only this time it was headed away from where I loved. I was not put at ease; tornadoes are very unpredictable. The wind roared and beat against our house for a long time.

About one and a half hours later we left our concrete haven and ascended up the stairs. We spent a good while stuck in the basement, but we were safe.

Often I look into the night sky and contemplate the orchestrator of something so breath-taking. In the same way, when I hear of a lifesaving operation, I think of the doctors who helped save a life. Some of the most captivating and intense moments of my life are in which I was defended by concrete walls, yet I never considered the brains and heart behind that marvel...until that storm. My concrete basement, and the hands that assisted in making it, protected my family and saved my life.

## CIM UPDATE

by Dr. Heather J. Brown



# CIM Storms the World of Concrete

The CIM program at MTSU has been very fortunate to attend the World of Concrete for the past 15 years. We have integrated our students throughout the show in creative ways to give them more exposure to the industry. A collection of 45 CIM students from the four universities made up our workforce throughout the week. Beyond our North Hall lobby CIM booth, we now have a CIM MBA booth near the bookstore ([www.concrete-mba.com](http://www.concrete-mba.com)). The students were asked to staff booths at Con-E-Co, Vector Corrosion, Hilti, Pervious LIVE, RCC LIVE, and Concrete Cares. The students were able to roll up their sleeves in many cases placing pervious concrete, running adhesive anchor certification testing, staining and etching decorative concrete and wearing company logo shirts in the indoor booths as interns. The students are all given business cards by NRMCA so that they are

marketing themselves for positions while at the show. Each student chooses one seminar to attend as well to round out their experience. The week is highlighted with our annual CIM Auction. A total of 116 companies gave items for the LIVE and SILENT auction that netted \$610,000 after the bidding was complete. Again this year, the signature item was a ready-mix truck donated by Mack Trucks Inc. and McNeilus Co. Auction attendees also bid on a variety of construction equipment, materials such as cement, software packages, safety equipment, and tools available. There also were tickets to sporting events and vacation packages. A warm thank you to all the TCA members who donated items: Argos Cement, BASF, Buzzi Unicem, CEMEX, Grace Construction Products, IMI Inc., Metro Ready Mixed Inc., MTSU CIM Patrons, Multiquip, Sika Corp, Stephens Manufacturing, Vulcan Materials. ❖



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