



CONCRETE

INNOVATIONS & ANSWERS

News from High Concrete Group

Issue number 1



High Concrete Structures Acquires CTI and forms High Concrete Group

On November 9th, privately-held High Concrete Structures, Inc., the nation's top producer of precast parking garages, a leading precast innovator, and operator of the largest single-site precasting operation of its kind in the US, acquired employee-owned Concrete Technology Inc., of Springboro, OH, a premier mid-west architectural precast producer.

The two companies will operate as separate entities under the umbrella of the newly-formed High Concrete Group, one of the nation's largest structural and architectural precasters. High Concrete Group's five plants serve five of the nation's top ten largest metropolitan areas, employ more than 700 co-workers—of whom more than 60 are engaged in research, development and engineering.

High Concrete Structures, acquired in 1977 by High Industries, Inc.—a real estate and construction company—has plants in Denver, Williamsport, and Lebanon, PA serving southern New England and six mid-atlantic states, while the former Concrete Technology Inc.—now High Concrete Technology, LLC—with plants in Springboro, OH and Paxton, IL, serves the Ohio Valley and nine mid-western states. Since their inception,

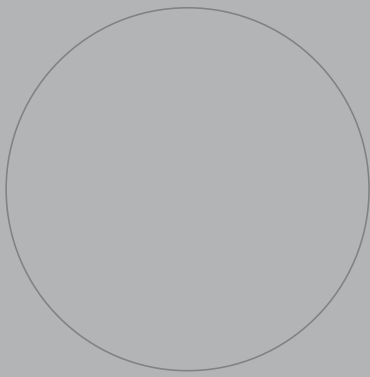
High Concrete Group companies have provided structural and architectural precast components for more than 5,000 buildings in 16 states.

High Concrete Structures, Inc. and High Concrete Technology, LLC are part of High Industries, Inc., a family-owned construction and real estate business founded in 1931 and headquartered in Lancaster, PA. For more information on High Industries, visit www.high.net.

High Concrete Structures, Inc., is the developer of the patented tilt-frame transporter used to haul its unique 15' and 16' wide MEGA-Tees™ which enable precast structures to be erected faster, with fewer joints, and for less cost. High Concrete is also a founding partner of AltusGroup, Inc., the nation's largest precasting entity and developer of C-GRID™ reinforced CarbonCast™ products—selected as one of the most innovative new products for 2004 by Architectural Record and Buildings magazines. For more information visit www.highconcrete.com.

High Concrete Technology, LLC, formerly Concrete Technology Inc. (CTI), was formed in 1969, and purchased by its employees in 1993. For more information visit www.ctiprecast.com.

Clarification: Kieran Timberlake Associates LLP is the design architect for Cornell University's West Campus Residential Initiative. Ewing Cole Cherry Brott is the Architect of Record for Phase II of this initiative, and the phase for which High Concrete is currently providing precast components.



Recent Projects >



Amtrak

Location: Philadelphia, PA
Owner: 30th Street Parking Association, Inc.
Architect: Bower Lewis Thrower
Structural Engineer: Timothy Haahs & Associates
Construction Manager: RM Shoemaker Co.

PRECAST NEWS

HCT PROJECT PROFILE



I am delighted to say that High Concrete and Concrete Technology, Inc. (CTI) are now operating under the umbrella of the High Concrete Group. The union of our two companies

joins two like-minded enterprises focused on customers, quality and doing what it takes to safely finish projects on time. Together, we're excited about serving the architectural and structural needs of our customers from Southern New England and the Mid-Atlantic to the Ohio Valley and the Mid-West.

Going forward we'll bring the experience of our companies—plus the power of AltusGroup, Inc. (www.altusprecast.com)—to bear on helping you solve an even broader array of design, cost and construction challenges. Toward this end, our marriage to CTI could not come at a better time. The past year's oil and steel price increases caught us by surprise and are generating increased demand for precast concrete structures and cladding.

Why? Because precast concrete has inherently superior characteristics such as fire-, moisture-, and mold-resistance, thermal mass and long-term durability that translate to safer, healthier, more energy-efficient, and lower life cycle cost building solutions. And, precast systems can be erected quickly resulting in faster project delivery and lower overhead costs.

Then why aren't more building teams taking advantage of precast? It's because we go with what we know -- and we know steel and cast-in-place concrete because they were taught in college. Precast, on the other hand, introduced to the US in 1947, is a relative newcomer and has not been so widely taught. So, we'll be hosting eight-credit CEU seminars in the Mid-Atlantic, Ohio Valley and Mid-West this year to help design teams learn to find the precast concrete innovations and answers they need to achieve their project objectives.

Stay tuned to this newsletter and look for our postcard mailings to find out how you can use precast to achieve your project goals. Or, in the meantime, call us at 1.800.PRECAST.

Best Regards,

Tom McEvoy
Tom McEvoy
President

High Concrete Group's newest family member, High Concrete Technology, is completing the Lewis and Clark Memorial Tower in Hartford, Illinois. This location, overlooking the Mississippi River, was the departure point of Lewis and Clark's westward expedition 200 years ago.

The Lewis and Clark Memorial Tower consists of two all precast towers, each approximately 15' square and about 180' tall. The towers are connected by three observation platforms located about 50', 100', and 150' above the tower base. One tower incorporates a stairway, and the other an elevator. This striking architectural project includes a total of 265 precast pieces, totaling almost 23,000 square feet.

Due to the shape, height and orientation of the towers, High Concrete Technology suggested that wind tunnel testing be part of the engineering analysis. As a result, a scale model was built and

tested by an independent testing laboratory to confirm structural design requirements. For a summary of the test results, please call 1.800.PRECAST.





AIG Beaver Valley Parking Garage

Location: *Wilmington, DE*

Owner: *AIG*

Architect: *Carl Walker, Inc.*

Structural Engineer:
Carl Walker, Inc.

Construction Manager:
Nason Construction, Inc.

Project Highlight:
First project to use 16' MEGA-Tee



Riverview Medical Center Garage

Location:
Red Bank, NJ

Owner:
Meridian Hospital Corporation

Architect:
N-K Architects

Structural Engineer:
Structure Studio at N-K Architects

Construction Manager: *Torcon, Inc.*

MARKETING AND INNOVATION

Gary Graziano, AIA—Vice President of Marketing



In our Winter newsletter, we wrote about how “a marketing mindset” can help you pick the best “waves” to ride by focusing on what you can do really well, defining your target markets, developing unique and valuable branded offers for target markets. In our Spring issue, we explored how if your firm is unfocused, and tries to be everything to everyone, it will be of no interest or value to anyone. Then, in our last issue we shared how to apply your knowledge, cost or service position to target profitable geographic, product/service or end-use markets and customers.

In this article we’ll discuss how to develop unique, valuable and branded offers—products and services that are in some way unique to your firm and can be tied to a name. Name-branded offers are what you really want to sell – and are the things that you can deliver better than anybody else. They should also be hard for competitors to copy exactly, and, more importantly, they must be valued by your customers and priced accordingly. An important point in developing offers is to avoid the generally unprofitable trap of solving problems customers don’t know, and don’t want to know, are available to them.

“How,” you may wonder, “in a world where everybody is an architect or an engineer, or a contractor, or maybe even a property owner, can you develop unique valuable and branded offers?”

First, you have to understand the power of branding. Branding is a kind of shorthand that helps people remember or describe complicated offers easily. And, surprising as it may seem, you can brand just about anything you can think of from a service, to software, to a design, or a process.

To develop unique and branded offers, start with your firm’s focus (e.g., innovative precast structural and architectural products) and target market(s) (e.g., parking garages or architectural cladding). Then look for problems worth solving within the focus area and among the target market(s)—and find ways to solve them uniquely. Problems worth solving are things that are genuinely meaningful to your customers, and can translate into additional revenues or profits for you.

As examples, at High Concrete we’ve focused on finding innovative ways to reduce shipping and erection costs—and consequently, installed costs for parking garages, multi-story buildings, and architectural cladding. These problems worth solving led us to develop the patented tilt-frame transporter which enabled 15’ & 16’ wide MEGA-Tees™, and the patented technology behind our new line of lighter weight CarbonCast™ C-GRID™ reinforced precast products. As a result of these unique developments, which we have also trademarked, we are able to offer customers branded and better performing products—at installed prices equal to or less than the alternatives provided by our competitors.

So, how can you find problems worth solving? It’s simple. Look at the things that cost you time or money, or create work-around, hassles or customer complaints—and identify the problems that if solved could make the biggest difference for your customers and your firm. Take nothing for granted because almost anything can be changed if you really want to make it happen. Then conduct some brainstorming sessions that include people from your team, customers, other industry experts, and a wild card or two, i.e., people from outside the industry who may push you to think about things you know in ways you haven’t considered before.

Once you have some ideas, “do the math” to see if they make financial sense. If they “pencil out,” get going right away to make them happen—because every day you delay means lost sales or profits—or worse still, lost customers.

If you’d like to learn more about the “concrete innovations and answers” that can help you with your total precast or architectural cladding needs, please call 1.800.PRECAST, or send an e-mail to: concrete.answers@highconcrete.com.

If you’d like one of our new High Concrete or CarbonCast™ brochures—or a reprint from “Construction Specifier” magazine on CarbonCast technology, call 1.800.PRECAST, or send us an e-mail at concrete.answers@high.net.

STRUCTURECARE™

Franc Genoese—Sr. Director of Project Management and Engineering

It’s that time of year when parking garage owners and managers should be preparing for the onslaught of bad weather. Snow, ice, freeze-thaw cycles, de-icing chemicals and wear-and-tear from snow removal equipment can damage your garage and reduce its useful life. To prevent or minimize damage, here’s what you can do to protect your investment.

Before it snows:

Before it snows ensure that all drains are free and clear of debris so that melting snow and ice don’t pond on the deck and create a safety hazard—or burst clogged pipes. It’s also a good idea to give the garage a pre-winter cleaning by sweeping or washing away trash, leaves and dirt that can clog drains.

Freeze-thaw cycles wreak havoc when water finds its way into joints and cracks in the concrete.

As part of your pre-winter preparations, have a knowledgeable professional identify cracks and failed joints and make the necessary repairs.

When it snows:

Promptly and properly remove snow and ice and apply anti-skid media to ensure the safety of your garage users – and to increase the life of your structure.

When plowing, use only rubber-tipped plow blades mounted on frames with steel runners or shoes to carry the weight of the plow. Even with rubber tipped blades, care should be taken around expansion joints and raised toppings. Vehicle size should also be limited to avoid wheel loads over 2,000 pounds. This is of particular concern if you choose to remove snow using loading equipment,

which can expose the garage deck to high front axle loads. If you remove the snow by dumping it over the side of your structure, be sure to move piled snow away from the structure so that it doesn’t cause damage to the structure. Lastly, don’t pile snow more than a few feet high. Anything more than this can cause excessive loading of the garage floor and moisture damage as it melts.

Use non-chloride materials like sand to provide traction. If you choose to use a chemical de-icing material, we recommend that you do so selectively in and around stair towers and elevators.

You play an important role in protecting your garage investment. If you would like additional information about this subject, please call us at 1.800.PRECAST.



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 Call 1.800.PRECAST to register!**

CONCRETE ANSWERS

Ken Baur—Director of Research & Development



New Generation of Double Tees Resists Corrosion

Last year, High Concrete Structures, Inc., along with the Pennsylvania State University, was awarded a PCI fellowship grant to test 4" thick pre-topped double tee flanges. The program included a study of reinforcing commonly used in the industry and testing of tee flanges to validate the heavier point load requirements of the IBC 2003.

The heavier point load (3,000 lbs.) was initiated by the SEI/VASCE-7 Committee due to the increasing prevalence of heavy Sport Utility Vehicles. The test

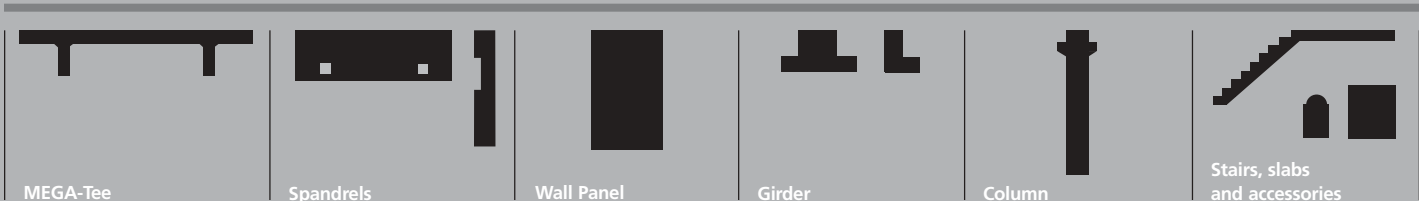
program was completed in September of this year. A report was made during the October PCI Convention; a written report is forthcoming in the *PCI Journal*.

As part of the test program, High Concrete also tested four full-size, 15' wide CarbonCast™ double tees with 1-hour rated, 3 1/4" pre-topped, C-GRID™ reinforced flanges. C-GRID, a large aperture carbon fiber mesh, is seen as an important improvement for double tee flanges because it will not corrode, and requires only 1/4" of concrete cover to engage structurally.

For the purpose of this test, two tees were welded together—as they would be on a real structure. The C-GRID reinforced tee flanges performed much like thicker, steel-reinforced flanges with only a slight

reduction in capacity. Even so, the load greatly exceeded design requirements: The average load at first crack was 7+ kips when the load was placed near a connected corner, and 11+ kips when the load was placed at mid-span.

C-GRID reinforcing is currently more costly than epoxy-coated steel reinforcing, but the installed cost of a CarbonCast double tee can be made comparable to the installed cost of a steel-reinforced tee by eliminating corrosion inhibitors and deck sealer rendered unnecessary because C-GRID will not corrode. And, because CarbonCast tees are 12% lighter than steel-reinforced tees, superstructure and foundation costs can be reduced by decreasing the size of other structural members and connections.



MEGA-Tee

Spandrels

Wall Panel

Girder

Column

Stairs, slabs and accessories