

Auburn University Student Chapter American Concrete Institute Student Forum – ACI Las Vegas

October 15th, 2018



Grant Cooper

OUTLINE

2

- 2017-2018 In Review
 - ▣ Lunch Seminars
 - ▣ Concrete Day
- Student Competition Trials
 - ▣ Salt Lake City


A Year in Review

LUNCH SEMINARS

4

FIGG

- Dwight Dempsey (PE, SE)
 - ▣ SE Regional Director
- Golpar Garmestani
 - ▣ Bridge Engineer
 - ▣ Auburn Alumnus




Creating Bridges As Art? Altogether.

FIGG is a family of engineering companies that specializes exclusively in bridges. Our focus on bridge design and construction engineering and inspection enables us to provide state-of-the-art technology, innovative and sustainable materials and world-class aesthetics. By capturing the powers of imagination, function, and technology, we design bridges that improve the nation's infrastructure, while enhancing the appearance of communities across America and the quality of life for the people who live in them.

3.22.18 @ 12:30
LOCATION: RAMSAY 314
INTERVIEW: HARBERT, 2:4 PM

PRESENTERS:
Dwight Dempsey, PE, SE
Regional Director,
Southeastern Regional Office
Golpar Garmestani
Auburn B.Arch. (2010) M.S. (2016)
Bridge Designer


FIGG
WWW.FIGGBRIDGE.COM

4th Annual Concrete Day

5

Speaker: Gregg A. Reese (P.E., C.E)

- President of Summit Engineering Group, Inc., A Modjeski and Masters Company
- Topic: “Introducing Innovation in Precast Concrete Bridge Design and Construction”

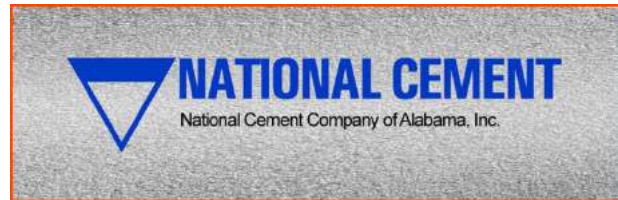
4th Annual Concrete Day

6

Summit Eng., Inc. Projects (Courtesy of Summit Eng., Inc.):



Thank You, Sponsors!



4th Annual Concrete Day

8



4th Annual Concrete Day

9



FRC Bowling Ball Comp Trials

10

- ❑ Winning team received \$500 and a funded trip to the SLC ACI conv.
- ❑ 2 teams entered



FRC Bowling Ball Comp Trials

11



VID_20180212_153913.mp4



FRC Bowling Ball Comp. Trials

12



ConcreteWorks Magazine

13

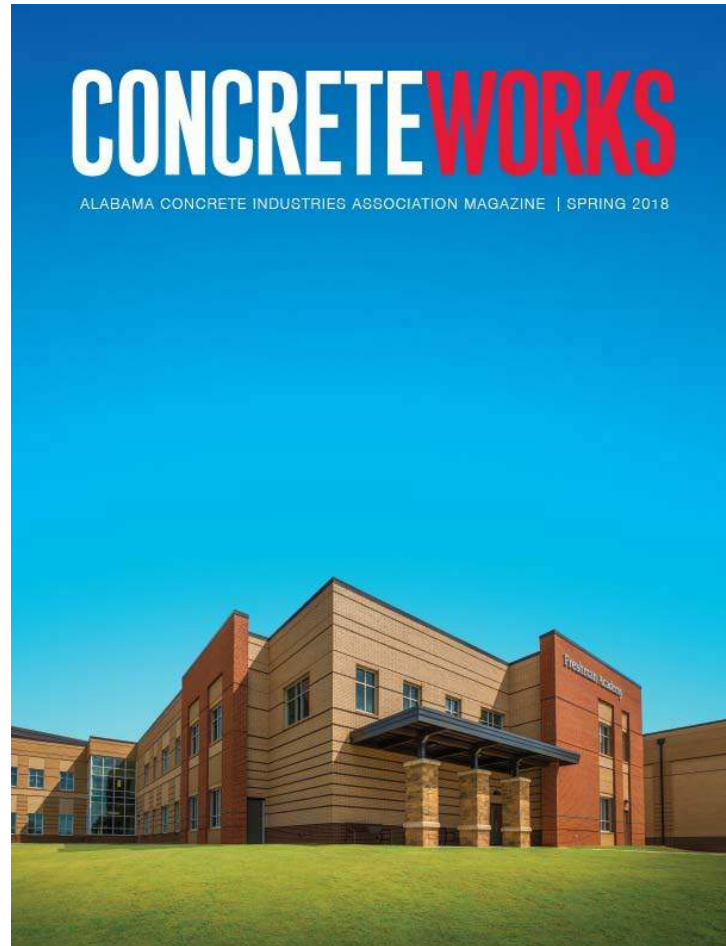


Photo courtesy of alconcrete.org

ConcreteWorks Magazine

14

TABLE OF CONTENTS



2



6



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 info@alconcrete.org with any comments regarding featured articles in ConcreteWorks or to suggest a story idea for a future edition.

Rebecca Lindsey, Art Director & Editor
John Somell, Editor



16



TABLE OF CONTENTS

CONCRETEWORKS

WWW.ALCONCRETE.ORG
WWW.MYSAFEROOM.ORG

- 2 This Bud's for You** For more than 80 years, Adams Beverage, a family owned Anheuser-Busch Wholesaler, has been a fixture in the beer distribution market, and in June of 2017 cut the ribbon on their brand new building in Opelika, Alabama.
- 6 The Architecture of Jennifer Barber** Growing up in Montgomery, Jennifer Barber's parents spent time teaching their children about design by showing them art, photography and inspiring architecture. Shortly after starting collage, she knew she would follow in her father's footsteps.
- 11 Technicle Review** Architect Peter Porter in New Orleans was faced with a compressed construction schedule, on a site still at risk from future flooding. Read how masonry has taken a front seat as New Orleans continues to rebuild post-Hatline.
- 15 Throwing Rocks** The Auburn University Student Chapter of ACI is dedicated to promoting an interest in concrete in Auburn and in the surrounding community. Each spring, the chapter hosts a luncheon event called "Concrete Day" and this year a concrete bowling ball challenge was on the agenda.
- 19 We Have Liftoff** After four years of planning, design and construction, Huntsville City Schools opened the doors to Virgil I. Grissom High School, named for one of America's original Mercury astronauts, in the fall of 2017. **(Cover)**
- 24 2018 Spring Calendar**

Photo courtesy of alconcrete.org

ConcreteWorks Magazine

15

FEATURE

The Auburn University Student Chapter of ACI is dedicated to promoting an interest in concrete in Auburn and in the surrounding community. Each spring, the chapter hosts a luncheon event called "Concrete Day," where students, faculty, and concrete professionals are invited to hear a prominent speaker from the concrete industry and take part in a professional showcase.

This annual event also offers undergraduates, graduate students, professors, young engineers, experienced P.E.s, company presidents, and other groups of people to network, learn about state-of-the-art concrete practices, and gain a deeper appreciation for the concrete industry.

The idea to organize Concrete Day came up during the first general meeting because the Auburn chapter of ACI had a desire to promote its knowledge of concrete and network with concrete industry representatives. The event has taken place since 2018.

STUDENTS WISCU IN

How did the students decide to design concrete bowling balls?

Our chapter every year sends a student competition team to national convention of ACI. The next convention is on March 24-25 in Salt Lake City, UT, and the student competition is PRO Bowling ball competition. At ACI convention in Salt Lake City, UT, after the trials were announced, there were initially five teams registered and just two teams showed up on the day of the competition, which was held on Monday, Feb. 12th.

CONCRETEWORKS



FEATURE



Probably the most motivated were students interested in having hands-on experience. We had an introductory meet-up with the prospective contestants to inspire them by showing the previous year competition videos. Our faculty offered students their mentorship, which was also a significant factor when deciding to participate in the trials.

CONTEST FACTS

The objective of having the contest was to choose a team to represent Auburn University in PRO Bowling ball competition at ACI convention in Salt Lake City, UT. After the trials were announced, there were initially five teams registered and just two teams showed up on the day of the competition, which was held on Monday, Feb. 12th.

There were six categories of the competition, which included the real bowling with the concrete ball the students designed. They each had to meet certain criteria prescribed

by ACI based on the ball's weight and diameter. In addition, the students knew that the ball would exceed the weight capacity if the ball was solid concrete, so both teams included foam in the center to decrease weight. The competitors also made the balls as soon as they could in order to begin the curing process and get the most strength possible before the competition. Out of the six categories, the bowling and strength test were the most interesting. The competition was set up to look like a real bowling lane. The bowling was very exciting, not just for the contestants, but for the audience, too. They played three rounds; there were some strikes, spares, and missed bowls. Both teams performed well, and each team had their drawbacks. However, at the end of the competition, they had more confidence and learned from their experience.

What are some components of concrete that made it a good product to use for the bowling ball?

SPRING 2019 15

Photo courtesy ofalconcrete.org

ConcreteWorks Magazine

16

FEATURE



The teams were allowed to use only the materials that were specified and that meet respective ASTM specifications to use in the contest. Since the contest was to design bowling balls using fiber reinforcement, the teams used steel fibers, and it was one of the major factors for strength. They were free to use other types of fibers available on the market unless they meet ASTM specifications. The winning team used "Dremix 60 60-60 BD" steel fibers, sponsored by Borden company. The most important outcome is that the students were able to learn

about concrete materials, concrete design, communicating ideas with team members, and many other valuable skills.

How many students participated? In the bowling ball competition teams had 3-4 people. There were on each team, two people per team showed up at the competition. Overall, forty students participated in Concrete Day. **DW**

CONCRETEWORKS

PROJECT SPOTLIGHT

WE HAVE LIFTOFF

After four years of planning, design and construction, Huntsville City Schools opened the doors to Virgil I. Grissom High School, named for one of America's original Mercury astronauts, in the fall of 2017. The \$40,000 square foot building sits on a 61-acre campus, and has a capacity for up to 1,900 students with room for expansion.

Grissom High School serves the southern area of the Huntsville City Schools district. The new building relocated the 60-year-old campus about three miles west to a large greenfield site, and will be a catalyst for future economic development along the



Photo courtesy ofalconcrete.org

ACI SPRING CONVENTION

SALT LAKE CITY

17

6 Grad & 3 Undergrad Students



ACI SPRING CONVENTION

SALT LAKE CITY

18



Photo courtesy of springsaltlakecity.shutterfly.com

Questions?

Contact Information:

Grant Cooper

gmc0010@auburn.edu

