

1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™



Burj Khalifa, Dubai →

Trump Tower, Chicago



Lawrence Novak, SE, SECB, F.ACI, F.SEI, LEED AP

Director of Structural Engineering



ACI International Forum  
April 17, 2016

**1916-2016**

Celebrating 100 Years of Excellence



America's Cement Manufacturers™



**PCA Members at the 2016 Spring Congress in  
Chicago, Illinois.**

In 2016, the Portland Cement Association (PCA) celebrates its centennial year.

During the last 100 years, PCA has become widely recognized as the authority on the technology, economics, and applications of cement and concrete.

**1916-2016**

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

# Back in 1916 ...



- Cement had emerged as a construction staple. The number of plants had doubled, and production had increased tenfold, to nearly 17 million tons.
- Concrete construction was rapidly expanding, and with it the need for reliable technical information, research, education, and uniform test methods and standards.
- PCA began operations with a headquarters office in Chicago. Fifty-three cement companies signed on as members.
- First chair was Ben F. Affleck, president of Atlas Universal Cement.



1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

# Testing ... Testing ... Testing

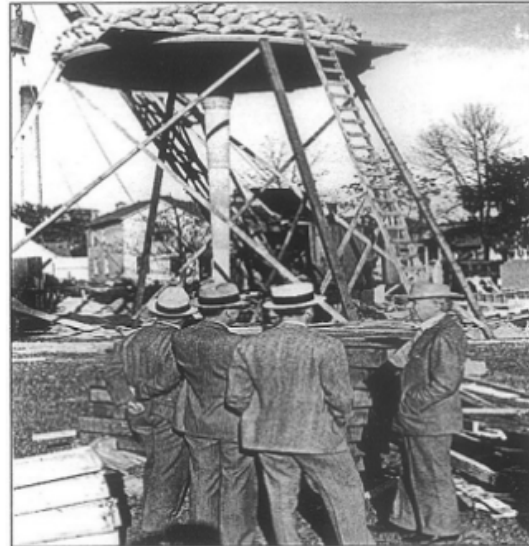
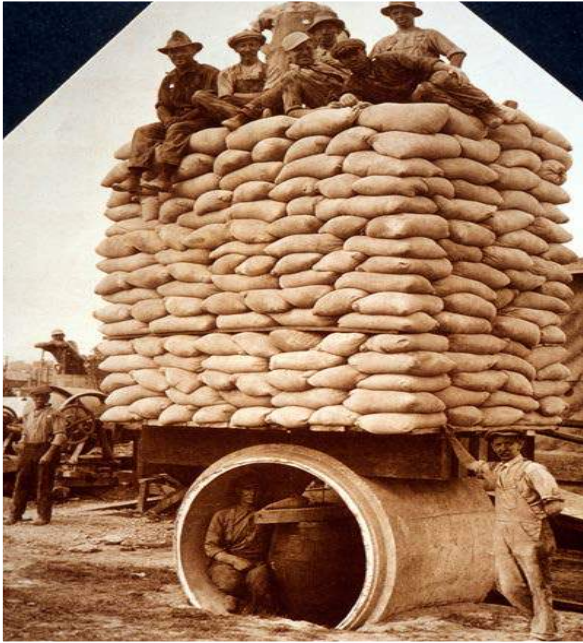


Figure 3. The concrete column load test was demanded by the Wisconsin Industrial Commission. Sandbags, loose sand, and finally pig iron were placed on top of the column until it supported a phenomenal 60 tons of weight. Wright is on the





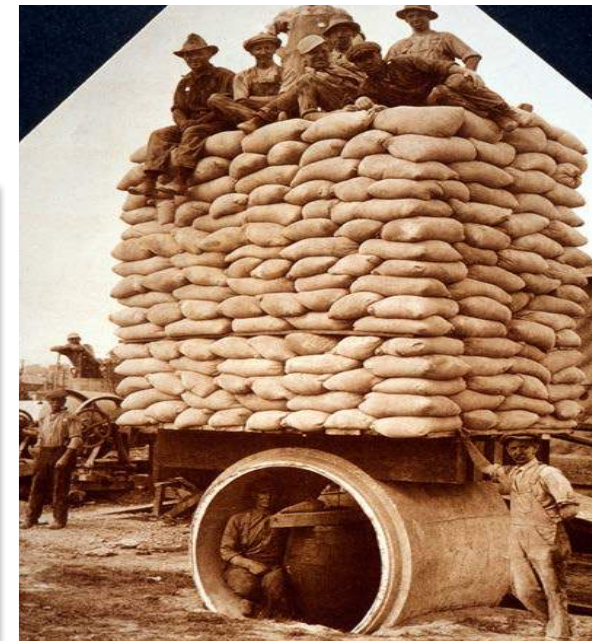
1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

- *One Test is Worth a Thousand Opinions*



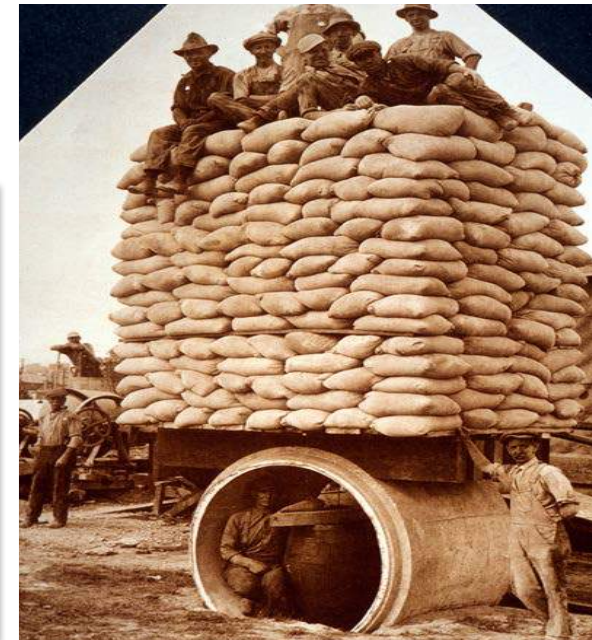
1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

- *One Test is Worth a Thousand Opinions*
- *Everyone trusts a TEST*
  - *Except the one who performed it*





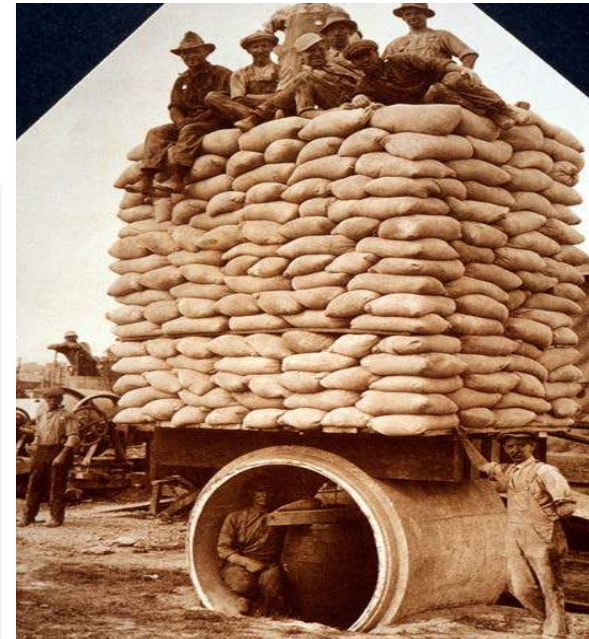
1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

- *One Test is Worth a Thousand Opinions*
  - *Everyone trusts a TEST*
    - *Except the one who performed it*
  - *No one trusts an ANALYSIS*
    - *Except the one who performed it*



**1916-2016**

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

*“Strength is essential, but otherwise unimportant”*

*- Hardy Cross  
1885-1959*





1916-2016

Celebrating 100 Years of Excellence



America's Cement Manufacturers™

# Concrete Roads and Lettuce Salad



**H**AVING lettuce salad when you want it may depend on the road. That may not interest you. But the road that makes certain you can have lettuce salad every day in the year also makes certain that you can get fresh eggs, milk, poultry, butter, potatoes and other things when you want them—and that should interest you. Think of the farm produce you would buy or sell if you could, but that now goes to waste because the roads prevent marketing.

The U. S. Food Administration estimates that bad roads in Erie Co., Pa., added at least \$2,000,000 to the food bill of Erie and other cities in the county last winter.

In 1905 the Zuck Greenhouse Co. built a small greenhouse several miles out of Erie. The problem then of transporting produce to Erie and to the express companies operating out of Erie was a serious one. In 1910 the Zuck Company bought a motor truck, but the earth roads were so bad in wet weather that a team of horses always accompanied the truck to pull it out of mudholes.

**Now the road has been paved with concrete.** The Zuck plant consists of 13 modern greenhouses and produces large quantities of vegetables yearly.

Read what F. J. Zuck says about this concrete road:

"Now we can deliver our produce free from bruises, blemishes and disarrangements caused by jolting over rough roads through mud."

"The cost of hauling over the concrete road, when compared with the original earth road, has been reduced 50 per cent. This is due to the greater speed and larger loads possible over the concrete road, together with the reduction in cost of operating and maintaining our trucks. Added to this is the availability of the concrete road during the winter and spring, when greenhouse food is in greatest demand."

"Upon receiving assurances that the road upon which our greenhouses are located would be permanently improved with reinforced concrete, we immediately awarded contracts for additions to our plant. These, together with plans for further improvements, have been made possible by the economy of transportation over the concrete road to Erie."

Erie can have lettuce salad any day—and the road that will bring you lettuce salad when you want it will bring you the other things you want when you want them. Is it necessary to ask whether concrete roads pay?

**PORTLAND CEMENT ASSOCIATION**

ATLANTA	DETROIT	MILWAUKEE	PITTSBURGH
CHICAGO	HELENA	MINNEAPOLIS	SALT LAKE CITY
DENVER	INDIANAPOLIS	NEW YORK	SEATTLE
DALLAS	KANSAS CITY	PARKERSBURG	WASHINGTON

**Concrete for Permanence**



Shortly after its founding in 1916, PCA launched an advertising campaign in 10 national weeklies, 23 trade magazines, and 59 farm journals.

These early ads brought concrete benefits home for dinner, stressing the role of paved roads for the distribution of food and other products.

"Concrete for Permanence" became a slogan that would endure through the 1950s.

**1916-2016**

Celebrating 100 Years of Excellence



America's Cement Manufacturers™



**PCA's original headquarters in Chicago, Illinois.**

In one way or another, PCA continues to follow the original charter of the organization.

We have always followed a three-pronged approach that supports promotion, technical expertise, and advocacy.

PCA still touts permanence today in the broader context of **resilience**.



**1916-2016**

Celebrating 100 Years of Excellence



America's Cement Manufacturers™



**PCA's campus in Skokie, IL circa 1968.**

The anniversary marks an occasion to not only celebrate the association, but where the industry has come and where it is heading into the next century.

Many of the roads and buildings promoted a century ago not only still exist, but remain in active use.

This is not just a testament to the resiliency of concrete, but also its role as a building block of society. Without concrete our homes, roads, schools, and cities would not exist as they are today.



**PCA's offices in Skokie, IL - 2015**