Professional Construction Estimators Association of America, Inc. (PCEA) was chartered in 1956 with 35 members from various construction disciplines in Charlotte, North Carolina. Some of the Charter members remain active today. During our early years, members rallied together to exchange ideas, promote educational endeavors and high ethical standards, while simultaneously developing new friendships. Under the leadership of Charlotte’s early presidents, the members set forth many goals to promote and support the industry while expanding the voluntary association. As a result of these efforts, a second chapter was formed during 1958 in Greensboro, North Carolina (now called the Triad Chapter). The Raleigh-Durham Chapter (now called the Triangle Chapter) followed behind in 1963. Subsequent chapters were formed in Virginia, North Carolina, South Carolina and Georgia and Florida. Vern W. "Bill" Helms of the Charlotte Chapter was elected as our first National President in May 1975 during the first annual convention at Myrtle Beach, South Carolina. Since then, PCEA has grown to almost 1,000 members with twelve chapters in five states. Current goals include active expansion to other market areas.

PCEA members have always been active in the promotion of construction education for the betterment of the industry. Each chapter individually coordinates, develops and establishes programs to assist and enhance the educational endeavors in their community while pursuing the educational goals of membership. PCEA Chapters support educational programs ranging from, but not limited to, scholarships to local students, endowed scholarships at several Universities, providing construction instructors, purchasing equipment for use in technical training and introducing construction as a trade to "at risk" students.
Monthly meeting was held as a Social/Membership event at Pleasant Valley AMF Bowling. Event started at 6 PM and lasted until approximately 8 PM. A total of 13 people were present (10 members + 3 Guests). Chicken Wings, Nachos and Beer were provided. A good time was had by all in attendance. All normal meeting reports were suspended.

Respectfully submitted,
Chris Kelley
Chapter Secretary
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Ryan Degnan
Evan Smith
Adam Blalock
Thomas Von Cannon
Chris Kelley
Kevin Sherron
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Glenn Hessee
Wally Mills
Adam Blalock
Rick Embrey
Marc Marotta

Position
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Outgoing President
1st Vice President
2nd Vice President // News Letter Editor Secretary
Treasurer
National Director
At Large Director
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PCEA Triangle Chapter 3 Scholarships:

PCEA recognizes that one of the greatest problems facing our industry is a shortage of interested and well qualified employees at all levels. To that end, our mission is to extend Scholarships to persons interested in pursuing a career in the construction Industry.

The following Scholarships are funded by the PCEA Triangle Chapter fundraisers and events. (Please see a Faculty Representative at these schools to receive an application).

PCEA Member Dependent Scholarship
The PCEA Member Dependent Scholarship is available to immediate family members of PCEA members in good standing. The recipient of this Scholarship does not have to be pursing a degree in the Construction Industry.

Members Corner
Dedicated to our members and family
If you, or you know of someone having personal or health issues please let me know, so their needs can be noted.
Please keep the following members in your thoughts and prayers;

Our Soldiers and Sailors near and far
2017 Hurricane Harvey and Irma Victims
Harvey Slams Texas

Houston Under Water
AUSTIN — Texas officials said Thursday that they believe at least 82 people died as a result of Hurricane Harvey and the intense flooding it brought to Houston and coastal areas, although it could take weeks to determine the exact death toll.

The picture could have been much bleaker, given the amount of flooding and that entire communities were cut off for days. Hospitals had to be evacuated as water rose into buildings that had never before flooded; some residents found themselves trapped in their homes while chest-deep floods took over their streets; and emergency responders along the Texas coast were overwhelmed, leading civilians with watercraft to rescue one another.

Some worried that when floodwaters receded, the number of deaths would mount, but that didn’t materialize.

“The mass casualties have absolutely not happened,” John Hellerstedt, commissioner of the Texas Department of State Health Services, said in an interview Thursday.

In a typical week in Harris County, which encompasses Houston and its 2.3 million residents, there are about 4,300 deaths, Hellerstedt said. “The deaths that are attributable to this disaster is a very small portion,” he said.
The 2017 hurricane season has been a full-on assault from Mother Nature. We are under siege, and our attackers have benign names like Harvey and Irma and Maria. But they are callous, powerful, indiscriminate, terrifying, destructive, merciless and relentless.

Is Earth trying to eject us from the planet? Again and again and again the harshest of winds and hardest of rains has pounded on the most-defenseless territories we have. The Caribbean islands, hanging out in open sea. The Florida peninsula, jutting out into danger. The Texas coastline, low-lying and concrete-laden. Nearly a full month of back-to-back-to-back disasters.

This hurricane season — not yet even close to finished — has generated more destructive, land-falling storms than the past few years combined. Four of this year’s monsters went on to become Category 4 or 5, and three of those made landfall in U.S. territory. The U.S. has never been hit by three storms this strong in the same season in modern records.

[Hurricane Maria expected to pass close to the Carolinas next week]

Hurricane Harvey seemed to spin up in an instant before hitting land on Aug. 26, only to come to rest for days over Southeast Texas and Southwest Louisiana. A mind-boggling 19 trillion gallons of rain fell in that storm, which triggered unprecedented flooding. Texas Gov. Greg Abbott estimates Harvey will cost the state up to $180 billion — more than epic Hurricane Katrina.
Hurricane Irma was one of the strongest ever recorded in the Atlantic Ocean. When Irma maintained 180 mph wind speeds for 37 hours, it set a record for most intense storm for such a long duration — anywhere on Earth. It made landfall Sept. 10, strafing the Florida Keys before terrorizing both Florida coasts in vastly different ways. It knocked out power to millions of people, and some are still waiting for the lights to come back on.

Hurricane Maria made landfall in Puerto Rico 10 days later as the strongest storm to hit the island since the 1928 San Felipe hurricane. It thrashed the U.S. territory with winds over 100 mph and more than 30 inches of rain. All of Puerto Rico lost power and was under flash flood warnings. The full extent of the damage, and the loss of life, might not be known for some time. It could take months to restore infrastructure.

The August Membership Meeting turned Social

PCEA Triangle Chapter
Bowling Social
AMF Pleasant Valley Lanes,
By all accounts this was a great event enjoyed by all who were able to attend.
Technology is on the rise in the construction industry, with an increasing number of construction companies deploying an array of leading-edge technologies across the project lifecycle. While traditional construction software has failed to solve construction’s productivity problem, mobile technology solves the two primary pain points driving digital transformation in the construction industry. Mobile construction apps not only reduce risk and help construction professionals maintain their bottom line, but also help teams communicate and share documents both in the field and office.

- The high return on investment construction professionals can expect from mobile technology
- How to craft a strategy to increase technology adoption within your organization
- How to determine the ROI from your investment in mobile construction apps
Will Buildings Become Spidey Strong?

*Synthetic spider silk is now being developed* by a startup called Bolt Threads. There are dozens of uses for this super material that is five times stronger than steel and more elastic than rubber bands. And frankly, than they've decided to make it synthetically. The thought of slave spiders in a lab being forced to spin more webs was worrisome.

Walls that act as air conditioners

This one's a bit technical (took me five times to read it right)... *Hydroceramic* is a composite made up of ceramic, fabric, and hydrogels. Hydrogels absorb water and then release it via evaporation. When the hydrogels evaporate, the ceramic absorbs the water, the fabric helps distribute it, and the result is a 5-degree cooler room!

Machines are probably using I of T to make fun of us

If you are afraid machines will take over the world... don't read this. The Internet of Things increases machine-to-machine communication by taking data-gathering sensors, and connecting everything in the cloud. The upside, really “smart” machines. The downside? They’re probably talking about how dumb we humans are.

Exoskeletons making heavy lifting a thing of the past

Coming from a generation before X, this suit reminds me of Starship Troopers (for the record). “*Ekso Works Industrial Exoskeleton* is an unpowered frame that lets a person heft heavy power tools as if they weighed nothing at all.” https://www.youtube.com/watch?v=TooZnDQWqRM
The Construction Industry

In the Construction Industry, no matter your position or job, we sell our labor or building components by units. We track our productivity by units, Labor Hours used, Bricks Sold, and by Cinder Blocks Laid.

We track our sales or productivity against our budgets and estimates. We forecast our revenue, We forecast our anticipated profits, and in some cases our potential loses.

As many industries selling products buy wholesale and sell retail, generally there are profits to be had, because of their limited liability. While their profits are affected by several of the components where the construction industry has exposure, retail businesses are able to adjust their pricing according to their cost. Their profits are not rarely directly related to finding and keeping skilled tradesman, weather induced delays, fuel cost, equipment availability and equipment breakdowns.

In the contraction industry we must develop estimates bases on incomplete drawings, boilerplate specifications, unforgiving schedules, anticipate the weather patterns six months in advance, utilizing an ever shrinking skilled labor force, and assume we know what the customer really wants or needs based on divine intervention.

This is the industry we chose or some how chose us. There is not one central place to learn everything you would need to know to be a guaranteed success in this business.

That is where documentation, tracking, and forecasting comes in. By utilizing your teams records and history of productivity comes to bear. The better records you keep the better you will be able to forecast or estimate your actual cost in doing your work in a project.

There are several ways in which we can enhance our ability to become and maintain a profitable construction business. Higher Prices, or know your cost to perform a task. Since this is very competitive market, Higher prices are usually not an option.

Bottom line it comes down to better estimates, better productivity. To best know what your cost are it to track your cost on your work document your progress. Determine your best trade partners and build relationships. Utilize originations like ours, The PCEA to develop and grow your relationships.

The PCEA through our monthly membership meetings where we have informative Presentations each month, Our online University, and an informative monthly news letter that covers Construction related topics spiced with interesting current information.
How To Measuring Project Progress: 6 Methods You Should Know

Accurately measuring the progress of a project is always a challenge. There are many factors to account for in an progress update – type of measurement, accuracy of the data, frequency of the collect and the system of record are all important factor in accurate progress measurements.

And software packages like Primavera P6 don't always help us out. Sure there a 3 choices for Percent Complete Types, but how to we decide which one works best and under which conditions?

Inaccurate progress will foil your ability to spot early warning signs of trouble ahead, so to avoid that, here are 6 common methods for measuring project progress that will help you best measure performance and work completion. The methods below are summarized from “Project Control: Integrating Cost and Schedule in Construction,”

6 Ways to Measure Project Progress

1. Units Completed

The Units Completed lends itself well to tracking tasks that are done repeatedly, where each iteration can easily measured. Usually a task that is done repeatedly tends to take about the same amount of time, resources and effort, so tracking the units completed works well here. A simple example could be installing standard light fixtures. Each fixture takes roughly the same amount of time; if we had 100 fixtures to install then we can simply count the units installed. In this case there’s no subjective experience-based judgement involved.

2. Incremental Milestones

Also known as the ‘steps’ method, the incremental milestones method is predominantly used for cost accounts that involve subtasks that need to be completed in an orderly fashion. An example of this technique is the forming and placing of a concrete foundation wall. Laying the foundation wall on footings, erecting inside wall panels and brace, setting horizontal and vertical rebar in formwork and so forth needs to be done in sequence to complete the task appropriately.

So how do you calculate this data? The calculation is built on each single item step and the budgeted amount of time (labor hours) that is needed to complete the task by the construction crew. As each step is completed, that is documented as a mini-milestone which represents a percentage of the total installation process. The percentage given for each subtask can vary based on the project and this progress is usually agreed on to be used as a measuring took beforehand. A good way to implement this method in Primavera P6 is using Activity Steps.
3. Start/Finish

This method is only focused on capturing the starting point and the finishing point of the task and nothing in between. This method is best for tasks that are short in duration. You would implement this method if the task’s work estimations are not available or if the percent complete progress data is too difficult to collect.

“Classic examples include testing services such as load test on electric panels, flushing and cleaning of piping, and similar tasks.”

Using the Start/Finish technique, we earn a percentage of progress when the task starts and the other half is earned once the task is complete. These percentages are determined by the owner and contractor of the project.

Often, companies agree to use the standard 50/50 Rule or other rules:

- **50/50 Rule** – once started, the task is marked as 50% complete, and the balance is earned at final completion of the work.
- **20/80 Rule** – used to track higher value tasks that takes a longer time to reach completion.
- **0/100 Rule** – this rule illustrates that once 100 percent of the task is completed, only then will the value be earned. An example of this is in testing or experimental tasks since you cannot get results until the task is completed.

4. Cost Ratio

The Cost Ratio method is usually implemented on a project that has tasks that tend occur over a long phase or the entire project. Often used for Overhead costs, this technique is measured based on the budgeted allocation of dollars vs. the labor hours of production. This method gives the contractor the ability to earn value that is equal to the overall percent of project completion.

“For example, if the overall progress of the project was determined to be 42 percent, then the contractor would have earned 42 percent of the overhead and fees.”

5. Experience/Opinion

Unlike the methods above that rely on definitive data, this method is relies on the experience and subjectivity of the project manager. This technique is used for tasks such as dewatering or frost removal/protection. It’s not usually recommended and tends to be seen as the last resort because each individual’s experiences and opinions vary from one another and can cause conflict between owners, contractors and architect.
6. Weighted or Equivalent Units

This method was highlighted as the best technique in the text and is the one that requires more effort, but also extends to a wider data range. The tasks that are being calculated tend to occur over a longer duration time and includes multiple subtasks, where subtasks can have different units of measurements.

The example used to illustrate this method is building a structural steel package. In order to complete this project it requires various units, labor hours, resources and subtasks. So to calculate the subtasks, it’s weighted on the estimated level of efforts in labor hours or by monetary value that is particular to each subtask. Once the weighted value is determined, it’s converted to reflect that value in units of measure specific to the task – and for this example, the units of measure would be tons. So once each subtask has been completed, the weighted tons (units of measure) is then converted to the equivalent units of percentage complete of the overall project.
HIRING IN THE NEXT SIX MONTHS
Two-thirds of contractors expect to employ more workers in the next six months. However, access to talent remains a challenge.

VARIANCE BY GEOGRAPHY
The Midwest (79%) and West (75%) have much higher percentage of contractors who expect to hire more employees in the next six months compared with the Northeast (48%).

WORKFORCE SKILL LEVEL
Most contractors have a moderate to high level of concern about the skill level of workers, with the majority (56%) expressing high concern.

DIFFICULTY FINDING SKILLED WORKERS
Nearly two-thirds (61%) of contractors report difficulty finding skilled workers.

VARIANCE BY COMPANY SIZE
Over two-thirds (69%) of small firms reported difficulty finding skilled workers, compared with 59% of midsize firms and 50% of large firms.

The Construction Work Force Gets Older

Between 1985 and 2010, the average age of all U.S. construction workers jumped from 36 to 41.5 years old. As these baby boomers continue to age out of the workforce, we are going to need a succession plan to begin developing new quality talent.

Although there are several self-proclaimed manuals, "How to Be a Good Project Manager in 10 Easy Steps", there are no silver bullets for becoming a good leader. So how do we go about training the leaders of tomorrow?

We can't wait for the next generation of construction professionals to come in and learn how to be the good leaders we need. It has to start with us. We can start by analyzing the characteristics of great project leaders. And when it comes to pioneers of architecture, engineering, and construction, there is no shortage of emulatable figures.

Learning from History

James P. McHugh led from the front, putting his vision and team-building ability together to create some of Chicago's most iconic buildings. He championed the use of innovations like fiberglass, concrete, and the climbing tower crane that are now staples in the construction industry.

Legendary architect, Frank Lloyd Wright had vision. He designed over 1,000 residential homes and pioneered an "outlandish" style of organic architecture that gave birth to the concept of living rooms, carports, and open floorplans.
PCEA—Triangle Presents
5th Annual "Meat, Skeet, Greet" FUNDRAISER
&
Sporting Clay Spectacular

Hosted by the Professional Construction Estimators Association -
Triangle Chapter

OCT. 20th - DRAKE LANDING
1:00 - 2:00 PM - Registration & Practice
2:00 PM - Event kickoff
4:30 PM - Steak Dinner catered by Drake Landing

➢ $150 person - includes Ammo, Clays, Snacks and Dinner!
➢ All ammo and sporting days must be provided by
  Drake Landing. (Please include Shell Gauge with
  Registration)
➢ Prizes will be awarded individually
  ❖ Fundraiser supports PCEA-Triangle
    Programs and Scholarships
➢ Can you offer more support? On site, you can
  Purchase Practice Tickets - $5 for five shots

Become a Sponsor!
Level 1 – Station Sponsor $100.00 Sponsor’s Name __________________________
Level 2 – Special Activity Sponsor $200.00 Sponsor’s Name __________________________
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Complete this Form and mail (along with payment) to PCEA-Triangle, PO Box 18701,
Raleigh, NC 27619

Please make checks to PCEA-Triangle Chapter;
Registration and payment by credit card is also available online
@ http://www.pcea-triangle.org

Questions, Call Rick Embrey @ 919-572-7102 or rick@mr-dirt.com
Money and form must be received Friday, October 7th

Name __________________________ Company __________________________ E-Mail __________________________
Name __________________________ Company __________________________ E-Mail __________________________
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Have you ever wondered how a barrel “Choke“ affects your shot pattern? Below you will see examples of a choke pattern.
Space For Rent

Customers will not call
If they don’t know who to

With over forty years of professional experience in all types of Water Based Fire Sprinkler Systems, Gaseous Fire Suppression Systems, Fire Alarm, and Air Sampling Systems. One call will take care of all of your Fire Protection Needs. Let my experience work for you. No one will work harder to earn your business, than VSC-Fire & Security and Me!

Respectfully,

Thomas A. Von Cannon
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