



State of the Industry

Observations, trends and information for the construction industry

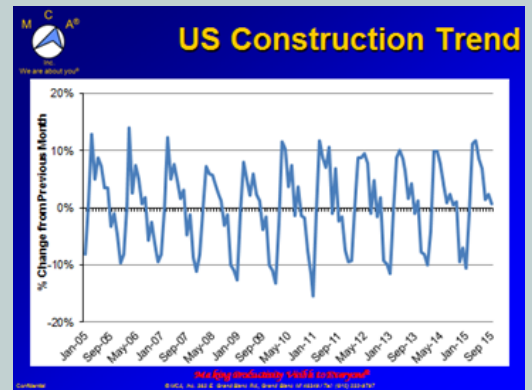
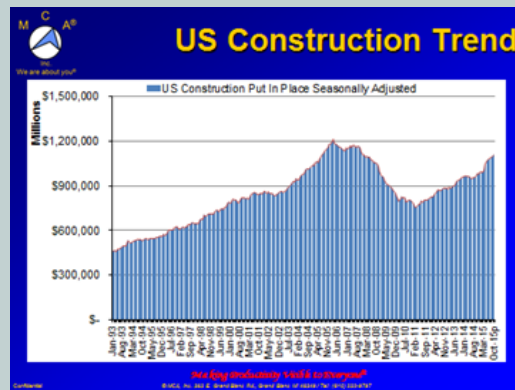
December 2015

Volume 3 Issue 3

Welcome to our *Third State of the Industry* report of 2015. Please let us know what you think by sending us a quick email—click [HERE](#).

Observations, Trends and Information for the Construction Industry

Construction continued to show signs of stable growth through the third quarter. Overall year to date construction for the US through the month of October came in at \$888 billion, an increase of almost 11% from what it was a year ago. Construction spending in September and October were over the \$100 billion mark, coming in at levels not seen since October 2007. Analysts continue to predict this upward trend through 2017.



The Construction Put In Place (CPI) trend indicates overall continued stable growth of the US Construction Industry. The month to month percent change shows the seasonal variation, with the trend indicating the industry has reached its' peak and is winding down for the year.

Detailed Construction Categories

The chart below looks at the trend of some of the more popular detailed categories within the commercial segment for the past 14 years. Education the largest of the select detailed categories had been steadily declining since its' peak in 2008, in 2015 it has been showing steady growth. Not surprisingly, the general commercial market showed the greatest decline at the onset of the 2008 financial crisis. Likewise it is showing one of the strongest recoveries since bottoming out in 2010. The office category lags behind the general commercial following a similar trend, showing signs of stable growth since 2013. While the health care category declined the least at the



MCA Spring Symposium

See sidebar on Page 2, 4 & 6

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Making Productivity Visible to Everyone®

**Register for the
Spring 2016
Symposium**

**Workforce Training
to Manage Work**
(Segregation and Externalizing Work® through Prefabrication and VMI.)

This Symposium will consist of train in various stakeholders, including but not limited to: project managers, estimators, pre-fab shop managers, field supervision, field technicians, vendor and supplier points of interface, project support such as drafting/detailing, coordinators, administrators, owners, executives, Vice Presidents, etc.

**Mark your calendars,
and REGISTER NOW!**

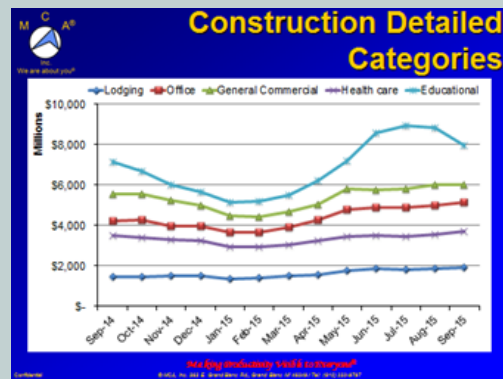
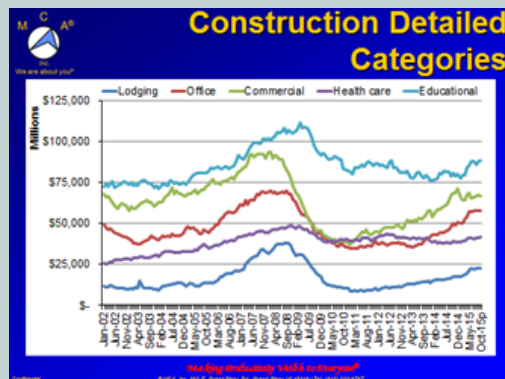
April 20—22 in Atlanta, Georgia, with Agile Construction® Training and user forum on April 20th

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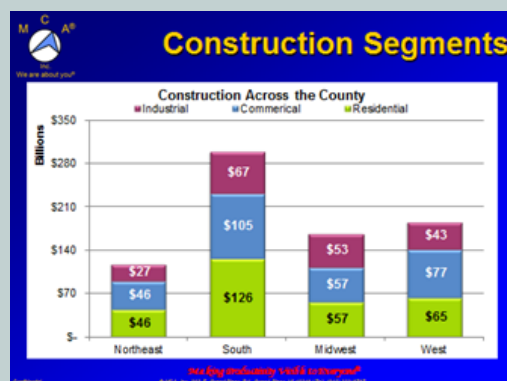
Detailed Construction Categories (cont'd)

onset of the financial crisis, it remains relatively constant level. The smallest of the select detailed categories, lodging has been showing the most stable growth pattern since 2011. The next chart gives us a zoomed in view of the same detailed categories, and the markets bottoming out in January and February before they take off again.



Construction Across the Country

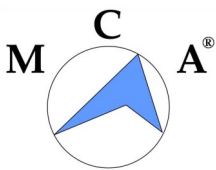
The next chart gives us a look at the value of CPIP in the industrial, commercial, and residential construction segments within different US Census regions across the county through September 2015. The south continues to show the most activity with the residential market almost twice the size than other areas across the county. Construction in the West is primarily commercial, while construction in the Northeast and Midwest is evenly split between residential and commercial work.



Employment numbers continued to climb through October, however the month to month growth has slowed down. Seasonally Adjusted Construction employment has increased 1.9% since the beginning of the year. A year to year comparison shows October's employment to be up 3.8% from a year ago.

Training for Industrialization

Industrialization of Construction® is just beginning and it's here to stay. When we look at the value of CPIP that has taken place this year and compare it to years with similar ranges. Then compare the employment levels within those years to the employment level of this year we see the average CPIP per employee increase. In July 2005, September 2006, and May 2007 the average CPIP per employee was \$150 thousand, compare that to today's figures where in August and September the



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Articles Volume I

Dr. Perry Daneshgari
Dr. Heather Moore
& Contributors

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average CPIP per employee is \$171 thousand. In other words, companies are adapting to the missing million workers in the construction industry by adopting lean operations focusing on prefabrication and efficiency of installation.

In April, the team at MCA will join others at the MCA Symposium on “Workforce Training to Manage Work Segregation and Externalizing Work® through Prefabrication and VMI”, which will be held Thursday, April 20th through the 22nd 2016 in Atlanta, Georgia in conjunction with a training and users forum focusing on the tools of Agile Construction® (taking place Wednesday, April 20th). This is the second in a series of five Symposiums focusing on training the workforce on the five steps of Industrialization:

1. Management of Labor,
2. Management of Work,
3. Lean Operations,
4. Simulation and Modeling,
5. Feedback from the Source.

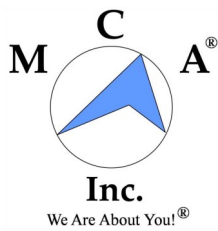
The focus of the topic this spring will be: **Workforce Training to Manage Work Segregation and Externalizing Work® through Prefabrication and VMI**. The Symposium will consist of training various stakeholders, including but not limited to: project managers, estimators, prefab shop managers, field supervision, field technicians, vendor and supplier points of interface, project support such as drafting/detailing, coordinators, administrators, etc.

Client News

LiveWire Electrical Systems Inc. recently joined the ranks of Agile Construction®. Following Shon Harris’s (owner/CEO) visit to MCA’s Fall 2015 Symposium in Chicago, he undertook the journey of taking his already-successful company to the next level by implementing the processes and practices of Agile. Look for tenacious JPAC® and SIS® usage on their projects in the next few months!

Bronco Electric Inc. continues to implement Agile Construction®, touting their first Work Breakdown Structures at both the job and project level. They have focused on the Process of Procurement as well by using SIS® to look ahead for what material is needed and avoid “next day” ordering.

Several UA’s ([mechanical](#) union organization) on the west coast recently completed high level market share studies to help their members understand their overall position in the markets to increase their market share during this next cycle.



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Client News (cont'd)

Graybar's Partnership Team in Glendale Heights is working on developing and supporting services that its customers ask for, or perhaps don't ask for, that will help reduce the cost of construction.

Aldridge Electric Inc. has kicked off full-force the "third and fourth" legs of Agile, with the startup of a dedicated prefabrication facility and embarking on its first project with a dedicated vendor for supporting Lowest Installed Cost.

Hardt Electric Inc. just wrapped up their second year of implementing Agile Construction®, celebrated with an annual review of progress and planning. Peter Hardt, with David Hardt's endearing support, is putting company infrastructure in place that will help Hardt prosper and grow in 2016.

ConneXion® is working through a process design team to connect customer needs to operational support, with a strong focus on growth and increased service levels.

Testimonials & Customer Results

Aldridge Electric

"It presented a new way of thinking and approach to all that I do."

"Coming from a Lean Manufacturing background, it was great to see our company breaking these barriers before it is too late."

"It reiterated the importance of willingness to change and to continue thinking of new and better ways to do the work."

Aldridge Electric, Agile Construction® Training Series

"I could not help to notice today (MCA 2015 Spring Symposium) the culture that each speaker and their company now have after partnering with MCA. Each of these companies have built a tremendous team minded culture that I am sure was not present before their transformation. "

Jayson Lange, Foreman Aldridge Electric

Bronco Electric

"I think the process went very well and the 30 min max that it took us to sit down and go over all of this will end up saving Bronco so much money and productivity on the job site. 1st procedure change, in my opinion is a VERY BIG/GOOD change and should only look to put us more in the GREEN at the end of the projects."

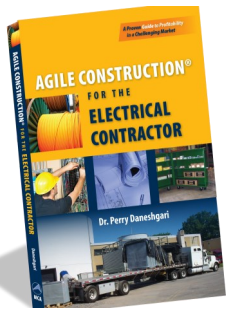
Robbie Judd, Estimator/Project Manager, Bronco Electric Inc.

"Hiring you guys was the best decision we have ever made as a company."

Bret Smith, Owner and COO, Bronco Electric



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Agile Construction® For The Electrical Contractor

by
Dr. Perry
Daneshgari

\$55.95

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information
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Independent Electrical Contractors, Inc. – National Office

“Your sessions were a great addition to our program and were certainly appreciated by our members. (Your scores were outstanding!) Thank you again for sharing your time and expertise and elevating our educational program standards.”

Lysa E. Egly, Director of Education, Independent Electrical Contractors, Inc.

Oregon Pacific—Cascade Chapter of NECA

“On December 1st 2015, Dr. Perry Daneshgari of MCA, Inc. flew to Oregon to hold an Advanced Project Management: Risk Identification and Mitigation Workshop for Oregon Pacific - Cascade Chapter of NECA. The primary goal was to provide an understanding of how to identify the risks within their companies and then how to minimize these risks. The students ranging from Project Managers, to VP's, to CEO's all strongly agreed that the topic presented was spot-on and delivered to exceed all expectations. They all walked away with a new mindset and wanting to attend additional classes with similar topics.”

~ Oregon Pacific - Cascade Chapter of NECA

Holmes Electric

“(with SIS®)...We develop a 3 day look ahead EACH day, and at the end of each day we review that day's events and report on the obstacles that allowed or kept us from working that days planned activity. That also allows us to project a new plan for the next 3 days.”

“On our larger projects at Holmes we normally run 2 programs with weekly and sometimes daily tracking updates that measure 2 key components. One is to track productivity as compared to budgeting, called “JPAC®” which is “Job Productivity Assurance and Control®... The second program which I have been running ... is simply called “SIS®”, “Short Interval Scheduling®”. This program simply tracks the flow of a project by showing our ability to work a planned project based on the interruptions to that planning.”

Ed Hillman, Field Superintendent, Holmes Electric

Oregon-Columbia NECA Chapter Market Share Study and Analysis

“We have had very good results we are using the study to make changes to improve our competitive position.”

Tim Gauthier—Executive Manager, Oregon-Columbia NECA Chapter

Calendar of Events

Upcoming MCA, Inc. events can always be found on our website www.mca.net/events/

Tuesday's SIS® Mini Class @ 10:00am and **Thursday** JPAC® Mini Class @ 3:00pm
Wednesday's- SIS® Mini-Classes @ 9am. SIS® Executive Management Mini Class 4 pm
March 2- Operation Model for Maximizing Productivity, Advanced Project Management, Agile Construction®, and Work Breakdown Structure – ABC Workforce Development Conference – Fort Lauderdale, FL

March 10- Procurement Chain Management – Dartmouth, Nova Scotia

March 11- Strategic Planning for Sub-Contractors – Dartmouth, Nova Scotia

April 20 – 22- MCA Spring Symposium “Workforce Training to manage Work

Segregation and Externalizing Work® through Prefabrication and VMI”–Atlanta GA



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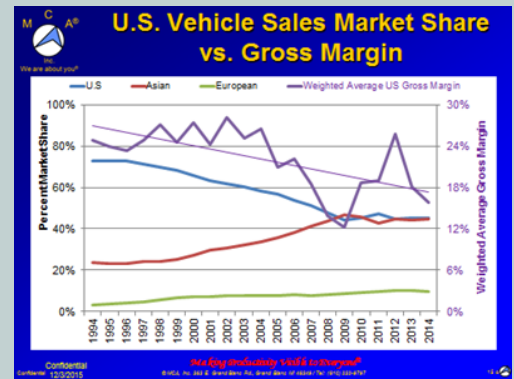
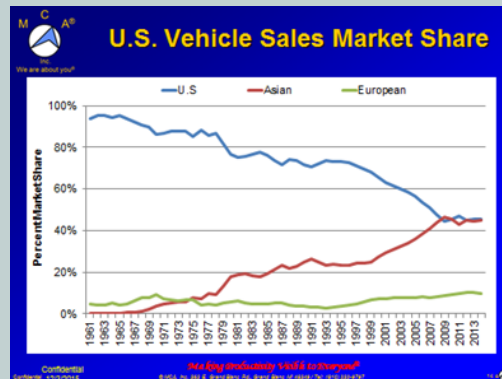
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Market Share vs Profitability

With construction coming back, and industrialization of the industry beginning to take off like wildfire, signatory contractors not only have to worry about competition from the local open shops. They now have to be prepared against competition from abroad https://www.youtube.com/watch?v=N6f_sayw0mM. Already now there are foreign owned construction companies operating here in the US. Shanghai Zhenhua Heavy Industries built the San Francisco Bay Bridge in modules, and then shipped the modules 6,500 miles here to the US for installation. A \$400 million repair project to the Alexander Hamilton Bridge in New York City went to the subsidiary of a Chinese state controlled construction company. Our research in the construction industry has lead us to examine another industry that has experienced the same evolutionary phases, becoming industrialized and followed by the threat of foreign competition. Much like the automotive industry of the 1960's, competition from abroad didn't seem probable or real. Jump ahead 50 years and the situation is completely different. The first chart below shows a trend comparison of the market share between the US, Asian, and European Automotive manufactures. In the 60's through the mid 70's US automotive manufactures literally dominated the market. Enter the 80's and Asian manufactures begin to take hold and begin to capture market share from the US manufactures. No longer controlling the automotive market, US manufactures began to see their bottom line erode with their market share, as foreign competition embracing lean operations perfected their manufacturing processes. This paints an eerily similar situation of what is ahead for all contractors here in the US, not just the union contractors.



Recent Publications

Financial Implications of VMI for Electrical Contractors and Their Distribution Partners - Contractors and distributors achieve top performance by minimizing both



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their variable and mixed costs through error reduction, process improvement and customer awareness.

Agile Construction® for the Electrical Contractor - Agile Construction for the Electrical Contractor provides the tools and guidance needed to transform a traditional, reactive project management style to a new, proactive, profitable, and productive business management model - one that can quickly respond to changing industry needs and remain a profitable enterprise, even during the toughest of times.

MCA Articles Vol I Ebook - Agile Construction® related articles on Transformation, Productivity, Profitability, Process, Procedures and Tools, and Measurements

Impact of Prefabrication on Industrial Construction Work - Prefabrication is no longer a standalone approach to construction decided only by the “shop foreman” or “our prefab catalog.”

Reducing Labor Waste With Short Interval Scheduling - Labor waste is a negative term from both workers’ and managers’ perspectives. They agree waste should not exist, but they define it differently.

Competing in the New Construction Environment - Book I- Competing in the New Construction Environment A Compilation to Lead the Way - Book I: The Here and Now-How to Be Competitive Construction is facing a revolution. No industry will remain untouched by the technological improvements in communication, processes, and tools.

Reducing Labor Waste With Short Interval Scheduling - Labor waste is a negative term from both workers’ and managers’ perspectives. They agree waste should not exist, but they define it differently.

The CEO’s Role in Information Management - Often we believe that processes and information management will happen by themselves – but they don’t. Each company’s products and services are a direct reflection of its management’s commitment to time, cost and quality, as well as their customers, employees, communities and owners or shareholders.

Access to more publications can be found on our website at www.mca.net/resources/publications/